



Welcome to Bluebonnet Electric Cooperative

Bluebonnet Electric Cooperative Inc. was incorporated in 1939 as the Lower Colorado River Electric Cooperative. The name of the Cooperative was changed to Bluebonnet Electric Cooperative, Inc. in 1964, to enhance a separate identity from the Lower Colorado River Authority (LCRA).

Bluebonnet serves all or part of 14 counties, covers over 3,800 square miles and serves more than 120,000 meters. Bluebonnet operates five retail centers: Bastrop, Brenham, Lockhart, Giddings and Manor. Bluebonnet is one of the largest electric cooperatives in Texas. A distribution cooperative, Bluebonnet purchases most of its power wholesale from the LCRA. Bluebonnet operates and maintains approximately 12,000 miles of distribution lines. Bluebonnet owns 26 substations and purchases power at 22 additional substations owned by the LCRA.

Bluebonnet provides this packet to all developers and their agents and it should be used as a guide in planning the installation of electrical equipment for receiving electrical power from the distribution system of Bluebonnet.

The information presented is subject to change and will be revised periodically to reflect any changes which may develop. Please refer to our website at bluebonnet.coop for any additional information as well as an online source of this packet.

Thank you. We look forward to working with you as your electrical provider.

Bluebonnet Project Coordination Staff

Table of Contents

Detailed Commercial Load Data Request Form.	Page 5 and 6
Developer's Checklist	Page 7
Developer's Fees and Information.	Page 8
➤ Development Fees	
Easements/Right-of-Way	Page 9
➤ Location of Facilities.	
Developer Installed Conduit Guidelines and Procedures	Page 10
Developer's Checklist	Page 11
➤ Responsibility of Developer.	
➤ Developer's Fees and Information.	
 Bluebonnet Specifications	
➤ Ditch and Conduit Placement . J-3	Page 12
➤ Road Crossing. J-4	Page 13
➤ Dimensions and Wiring Single-Phase Transformer. A-2	Page 14
➤ Dimensions and Wiring Single-Phase Sectionalizer. C-2	Page 15
➤ Three-Phase Transformer Pad 45-750 kVA. B-5	Page 16
➤ Three-Phase Transformer Pad 1000-2500 kVA. B-6	Page 17
➤ Dimensions for Three-Phase Sectionalizer 600A. D-2B	Page 18
➤ Secondary Junction Box Construction Standards E-1	Page 19
➤ Secondary Junction Box Dimensions E-2	Page 20
➤ Dimensions for Pad Mounted Switchgear.	Page 21
➤ Right-of-Way Clearing Guide	Page 24
 Meter Specifications	
➤ (MS-10115) - 15' METER LOOP, Single Phase or Three Phase, 60-200 Amp Meter Loop on Meter Pole.	Page 25
➤ (MS-10119) - 19' METER LOOP, Single Phase or Three Phase, 60-200 Amp Meter Loop on Meter Pole.	Page 26
➤ (MS-102) - Single phase or Three Phase, 60-200 Amp Meter Loop on Transformer Pole.	Page 27
➤ (MS-103MT) - Single Phase or Three Phase, 60-200 Amp Meter Loop on	Page 28

building, Mast Type.

Meter Specifications

- **(MS-103WT)** - Single Phase or Three Phase, 60-200 Amp Meter Loop on Building, Wall Type. Page 29
- **(MS-105)** - Single Phase or Three Phase, 60-200 Amp Multiple Meters on Rack or building not to exceed a Total of 800 Amps. Page 30
- **(MS-106)** - Single Phase or Three Phase, 60-200 Amp Meter on building. Page 31
- **(MS-106A)** - Single Phase or Three Phase, 60-200 Amp Meter on building or Rack. Page 32
- **(MS-107MT)** - Single Phase, 400 Amp Service with Meter Loop on building, Mast Type. Page 33
- **(MS-107WT)** - Single Phase, 400 Amp Service with Meter Loop on Building, Wall Type. Page 34
- **(MS-108)** - Single Phase, 400 Amp Service on Meter Rack or Building with K Base bolted in Meter Socket. Page 35
- **(MS-112B1)** - Single Phase >400-800 Amp, Service on building with CT Meter Metering on Building or Rack. Page 36
- **(MS-112B3)** - Three Phase >200-800 Amp, Service on building with CT Meter Metering on Building or Rack. Page 37
- **(MS-113B1)** - Single Phase 400-800 Amp Service with CT Metering on Rack. Page 38
- **(MS-113B3)** - Three Phase 200-800 Amp Service with CT Metering on Rack. Page 39
- **(MS-114A1)** - Single Phase 400-800 Amp, Multiple Metering Points with CT Metering on Building. Page 40
- **(MS-114B3)** - Three Phase 400-800 Amp, Multiple Metering Points with CT Metering on Building. Page 41
- **(MS-115)** - Single Phase 400-800 Amp or Three Phase 200-800 Amp Service with Multiple Metering Points on Building. Page 42
- **(MS-201)** - Single Phase or Three Phase, 60-200 Amp URD Service on Rack or Building. Page 43
- **(MS-202A1)** - Single Phase Greater than 400 Amp, Underground with Multiple Metering Points with on Building. Page 44

- **(MS-202B3)** - Three Phase Greater than 200 Amps, Underground with Multiple Metering Points with on Building. Page 45
- **(MS-203)** - Single Phase, 400 Amp URD Service on Rack or Building with K Base Bolted in Meter Socket. Page 46
- **(MS-204A3)** -Three Phase Greater than 200 Amp URD Service with Disconnect on Rack or Building. Page 47
- **(MS-204B1)** - Single Phase Greater than 400 Amp or with CT Metering on Building or Rack. Page 48
- **(MS-204B3)** - Three Phase Greater than 200 Amp with CT Metering on Building or Rack. Page 49

Meter Specifications

- **(MS-205)** - Single Phase or Three Phase, 60-200 Amp URD Gang Mounted Meters on Rack or Building. Page 50
- **(MS-207)** - Single phase, 60-200 Amp Underground Multi-Pack Meters on Building. Page 51
- **(MS-207B)** -Three Phase 60-200 Amp URD Multi-Pack Meters & Three Phase Less or Greater Than 200 Amp Service on Building. Page 52
- **(MS-301A)** - Three Phase 480 Volt 3W Corner Ground Delta 60-200 Amps. Page 53
- **(MS-301C)** - Three Phase 480 Volt 3W Corner Ground Delta 60-200 Amps. Page 53
- **(MS-302)** - Temporary Meter Loop for Underground. Page 55
- **(MS-303)** - Single or Three Phase 60-200 Amp Temporary Meter Loop for Transformer and Service Poles. Page 56

Material Standards Page 57

Timeline and Contacts Page 58



Bluebonnet

MEMBER RESPONSIBILITY

BLUEBONNET RESPONSIBILITY

Deliver essential project documents to Bluebonnet Electric Coop. - Site plan files (CAD Format), load information, information request form(s), project schedule.	BEFORE THE CLOCK STARTS	Facilitate correspondence with member/developer to discuss needs and review available information.
Host a site visit and/or Pre-design Meeting/Call with Bluebonnet Representative(s). Provide up to date and accurate Project Schedule for all stages, including desired energization date. **Bluebonnet Electric cannot begin design of project until all required documentation is received.** Expedite payment to Bluebonnet Electric for project. Provide any required third party easements and outstanding information. **Bluebonnet Electric will not release project for scheduling (apartments and subdivisions) until addressing information is received.** **Bluebonnet Electric cannot begin construction of project until Site Ready documentation is received.** Construction crews will leave the site if suitable construction conditions are unsatisfactory. Member completes preparation for final electric service delivery. Member requests initiation of final electric service.		Provide Bluebonnet Developer’s Package (Commercial/Residential); including standard Bluebonnet Easement.
		Collect information from Member/Developer.
		Verify a complete member package has been received, including all required documentation.
	WEEK #1	Attend site visit or Pre-design meeting, evaluate site layout, utility coordination, member construction coordination, jobsite construction access, etc.
	WEEKS #2-#5	Design electric service layout; coordinate with the electric system (circuit capacity, fuses). Size equipment, determine rate class for Community Representative to communicate to Member.
	WEEKS #6-#7	Prepare and submit any necessary permits. Schedule and complete field staking of project. Finalize and secure all easements.
	WEEK #8	Create cost estimate and deposit and send cost letter and Site Ready Letter to developer.
	WEEK #9	Process project payment.
	WEEKS #10-#11	
	WEEK #12	Prepare for and release project to construction. Verify material availability and receipt of developer’s Site Ready Letter.
	WEEKS #13-#28	Upon release, Construction Lead (Contract Coordinator or Bluebonnet Construction) will contact member within two business days to provide anticipated construction start date, duration, planned completion, etc.
		Request crew scheduling from construction. Complete inspections and accept installations. Verify site is prepared and ready for construction.
Construct Bluebonnet Electric Facilities.		
WEEKS #29-#30	Inspect final installation. Energize project and initiate electric service.	

- A. If a Member step is late, the project clock **STOPS**. Members/Developers are highly encouraged to stay on top of payments, required easements, and all crucial deliverables and documentation.
- B. Elapsed times are not a guarantee. More than thirty weeks may be needed for larger scope projects or projects that require significant upgrades to Bluebonnet Electric's system infrastructure.
- C. Member/Developer is required to provide Bluebonnet Electric with any and all required easements, including third party, prior to commencing construction.
- D. Bluebonnet Engineering staff are responsible for all steps from project inception through Week #12. Weeks #13 - #30 are managed by Bluebonnet Construction Staff and are denoted in **BLUE**.
- E. Permitting schedule is contingent on regulatory agency approval (response times vary).
- F. Member/Developer is required to notify construction once site is ready by returning a signed Site Ready Letter. **Projects will not be released for scheduling until this document has been returned.**

During the **planning, engineering, and design phase** of your project your main point of contact will be one of Bluebonnet's Project Coordinators. If the Project Coordinator for your project is not available, one of the other team members will be glad to assist you.

Shawn Ely
shawn.ely@bluebonnet.coop
Office: (979) 542-8518
Cell: (979) 540-7361

Scott Iselt
scott.iselt@bluebonnet.coop
Office: (979) 542-8522
Cell: (979) 540-0195

Dalton Voight
dalton.voight@bluebonnet.coop
Cell: (512) 629-3771

Rodney Gerik
rodney.gerik@bluebonnet.coop
Office: (979) 542-8527
Cell: (979) 540-8814

Shane Mathison
shane.mathison@bluebonnet.coop
Office: (979) 542-8540
Cell: (512) 577-6817

Jorge Varillas
jorge.varillas@bluebonnet.coop
Office: (512) 764-2838
Cell: (512) 376-8291

Clemente Verastegui
clemente.verastegui@bluebonnet.coop
Office: (979) 542-8542
Cell: (512) 578-6393

Thomas Ellis (Manager)
thomas.ellis@bluebonnet.coop
Office: (979) 542-8545
Cell: (979) 540-6146

Wyatt Rosenauer
wyatt.rosenauer@bluebonnet.coop
Office: (979) 542-8665
Cell: (512) 629-5924

During the **construction, inspection, and metering phase** of your project your main point of contact will be Bluebonnet's Contractor Coordinator OR Assistant Superintendent. Bluebonnet's personnel cover specific areas of the service territory; areas are listed with their contact information.

Joey Tobola (Contractors)
joey.tobola@bluebonnet.coop
Cell: (979) 540-7162

Randall Bownds (Giddings Area)
randall.bownds@bluebonnet.coop
Office: (979) 542-8516
Cell: (979) 540-6418

Chad Lewis (Brenham Area)
chad.lewis@bluebonnet.coop
Office: (979) 277-8558
Cell: (979) 277-4041

Aaron Seeliger (Red Rock Area)
aaron.seeliger@bluebonnet.coop
Office: (512) 764-2788
Cell: (512) 227-2281

Kenneth Roush (Underground – All Areas)
kenneth.roush@bluebonnet.coop
Cell: (512) 468-5088

Tim Mittasch (Underground- All Areas)
tim.mittasch@bluebonnet.coop
Cell: (979) 540-7159

Daniel Fritsche (Bastrop Area)
daniel.fritsche@bluebonnet.coop
Office: (979) 542-8514
Cell: (979) 542-8546

Carl Miller (Underground Inspector)
carl.miller@bluebonnet.coop
Cell: (979) 540-6495

Joe Hernandez (Underground Inspector)
jose.hernandez@bluebonnet.coop
Cell: (720) 670-7299

Jose Villarreal (Underground Inspector)
jose.villarreal@bluebonnet.coop
Cell: (512) 988-1885

Martin Dorantes (Underground Inspector)
martin.dorantes@bluebonnet.coop
Cell: (512) 748-4453

Developer's Checklist

Responsibility of Developer:

- ☐ Developer must fill out a Development Information Request Form and submit to Bluebonnet along with design fee if required.
- ☐ Developer is responsible for confirming all Bluebonnet easement requirements with Bluebonnet prior to platting.
- ☐ Developer must have an engineering firm submit preliminary plan of development in digital (AutoCAD) format to Bluebonnet Engineering Department. These plans must include streets, wet utilities, and grading plans as well as any other utilities planned for said development. BBEC will not accept removable media devices for file submissions. For files that are too large to send via email, a BBEC FTP Site will be provided.
- ☐ A design/re-design fee of \$50/hr. could be required either prior to or following the design process. This decision will be made at the discretion of Bluebonnet on a case by case basis. These fees are non-refundable and are subject to revision at Bluebonnet's discretion.
- ☐ Prior to Bluebonnet construction, two (2) hard copies of the approved plat must be submitted.
- ☐ Developer must provide and install all underground conduits at road crossings in the designated locations per Bluebonnet Crossing Plans, and if applicable, all electrical conduits in designated locations per Bluebonnet Construction Plans. See Bluebonnet Specifications. **If project design includes overhead primary lines and transformers in conjunction with underground meter pedestals, Developer may install road crossings ONLY. Bluebonnet contractors shall complete installation from road crossings to point of termination and this labor and material will be figured into the respective Contribution In Aid of Construction (CIAC).**
- ☐ Developer is responsible for following Bluebonnet inspection policies and procedures prior to and during conduit installation if using his own contractor (see Page 8).
- ☐ Property pins must be set and clearly visible at all property corners, at developer's expense, prior to Bluebonnet commencing construction.
- ☐ Developer is responsible for submitting contribution-in-aid of construction (CIAC) to cover Bluebonnet's construction costs prior to Bluebonnet commencing construction. Bluebonnet department will contact developer to communicate planned construction start date and duration following project being released for scheduling.
- ☐ Developer is responsible for all right-of-way clearing and grubbing to Bluebonnet specifications. Bluebonnet will clear the right-of-way for proposed overhead facilities for an additional charge (\$10.00 per linear foot). See Bluebonnet Specifications.
- ☐ Developer is responsible for ensuring conduit contractor and/or subcontractor adherence to all Bluebonnet Construction Specifications at all times.
- ☐ Developer is to provide ALL materials necessary for the conduit system he installs for his Bluebonnet Underground System. Bluebonnet will own these materials after proper installation is certified by a Bluebonnet Inspector.

Developer's Fees and Information

Development Fees

1. A design/re-design fee of \$50/hr. could be required either prior to or following the design process. This decision will be made at the discretion of Bluebonnet on a case by case basis. These fees are non-refundable and are subject to revision at Bluebonnet's discretion.
2. Every request for design and every alteration to all initial requests for design services may be considered as an individual request and, therefore are subject to additional fees to be determined by Bluebonnet.
3. When the developer or prospective developer enters into a line extension agreement with Bluebonnet for service, monies received for engineering design estimates of service will be applied to the cost of construction. Bluebonnet's Line Extension Policy can be found in the enclosed Member Handbook or on the "Residential Development" link on our website at www.bluebonnetelectric.coop
4. If the developer or prospective developer does not notify Bluebonnet within a 180 day period of initial design with the intent to proceed, then any design fees paid to date will be forfeited and the prospective project will be treated as new.
5. A maintenance fee of \$1 per linear foot of trench will be required at the time of contribution by the developer to cover the cost of any necessary repairs in the first year following the completion of Bluebonnet facilities installation.

Additional Notes

Underground electrical lines in residential developments (including apartment complexes and any commercial service) shall be looped to accommodate the ability to feed from two or more directions so that in the event of an outage the most number of customers can be provided power until the failed line or equipment is restored. Avoid looping back in the same ditch. Never loop back to the same riser pole, sectionalizing cabinet, or switchgear.

Easements / Right-of-Way

1. Bluebonnet shall be granted, at no cost and in writing suitable for recording, all rights-of-way and easements necessary to serve member, overhead or underground for the erection, maintenance, repair, replacement, removal or use of all wires, poles, machinery, fixtures, or equipment needed to supply and deliver electric service to the member.
2. A signed easement granted to Bluebonnet will be required before construction will commence. Once Bluebonnet facilities are installed, the easement will adhere to the facilities, from the installation point with a 15 foot easement on each side of the centerline (30 feet of easement) of overhead facilities and 20 foot easement (10 feet on each side of the centerline), for underground facilities.
3. Only Bluebonnet equipment or material is allowed to be attached to Bluebonnet property, except where said equipment and/or materials is required to provide electrical service and said equipment and/or material has been authorized by Bluebonnet.
4. Please note that Bluebonnet facilities must be installed in easements that are exclusive to Bluebonnet with no other utilities being allowed in these easements except for buried crossings.

Location of Facilities

All overhead or underground distribution lines and equipment will be located in an area that is easily accessible by Bluebonnet vehicles and personnel.

The main electrical disconnect for each electrical service shall be installed on the exterior of the building, in a location approved by Bluebonnet Electric. (2015 International Fire Code, 509.3)

Developer Installed Conduit Guidelines and Procedures

1. Developer will review Bluebonnet's construction specifications prior to trenching and conduit installation (specifications included in this document). Developer is encouraged to contact Bluebonnet inspector listed in #3 below with any questions.
2. Developer must provide and install all underground material in the designated locations per Bluebonnet's design. Bluebonnet will provide and install the associated hardware such as sectionalizers and transformers that will be located above ground.
3. Developer will contact the Bluebonnet Project Coordinator when conduit and stub-ups are installed prior to filling the ditch (open ditch inspection). Bluebonnet will respond within 48 hours of notification. Please choose from the list of Bluebonnet Project Coordinators to schedule an inspection.
 - **Project Coordinator Rodney Gerik, may be reached at (979) 540-8814 (cell), or at rodney.gerik@bluebonnet.coop.**
 - **Project Coordinator Shawn Ely, may be reached at (979) 540-7361 (cell), or at shawn.ely@bluebonnet.coop.**
 - **Project Coordinator Dalton Voight, may be reached at (512) 629-3771 (cell), or at dalton.voight@bluebonnet.coop**
 - **Project Coordinator Shane Mathison, may be reached at (979) 542-8540, or at shane.mathison@bluebonnet.coop.**
 - **Project Coordinator Jorge Varillas, may be reached at (512) 764-2838, or at Jorge.Varillas@bluebonnet.coop.**
 - **Project Coordinator Scott Iselt, may be reached at (979) 542-8522, or at Scott.Iselt@bluebonnet.coop.**
 - **Project Coordinator Wyatt Rosenauer, may be reached at (512) 332-8665, or at Wyatt.Rosenauer@bluebonnet.coop.**
4. Trenches will remain open until inspected and approved by the Bluebonnet inspector. Upon inspection, developer will be advised as to what may or may not be backfilled.
5. Bluebonnet retains the right to terminate any conduit installation if inspection reveals non-compliance with Bluebonnet inspection policies, procedures, or specifications until said issues are resolved and approved through re-inspection.
5. Equipment location and conduit stubs must meet clearance requirements on all sides as outlined in Bluebonnet Specifications.

6. Developer or his/her contractor is responsible for acquiring any and all permits and remitting any necessary fees for trench and conduit installation (excavation plans, traffic control plans, digging permits, etc.)

Developer's Checklist

Responsibility of Developer:

- ☐ Developer is responsible for confirming all easement requirements with Bluebonnet prior to installation.
- ☐ Developer is responsible for following Bluebonnet's inspection policies and procedures prior to and during conduit installation.
- ☐ Developer is responsible for all right-of-way clearing or grubbing to Bluebonnet's specifications.
- ☐ Developer is responsible for adherence to all Bluebonnet's Construction Specifications.

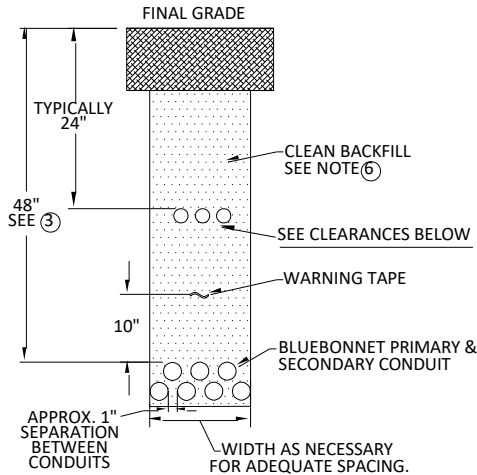
Developer's Fees and Information

1. Every request for alteration to initial requests for design services are subject to additional fees to be determined by Bluebonnet.
2. Bluebonnet's Line Extension Policy can be found in the Member Handbook.
3. A maintenance fee of \$1 per linear foot of trench will be required at the time of contribution by the member to cover the cost of any necessary repairs in the first year following the completion of Bluebonnet's underground facilities installation.
4. Cost estimate given to developer will be good for **60** days.

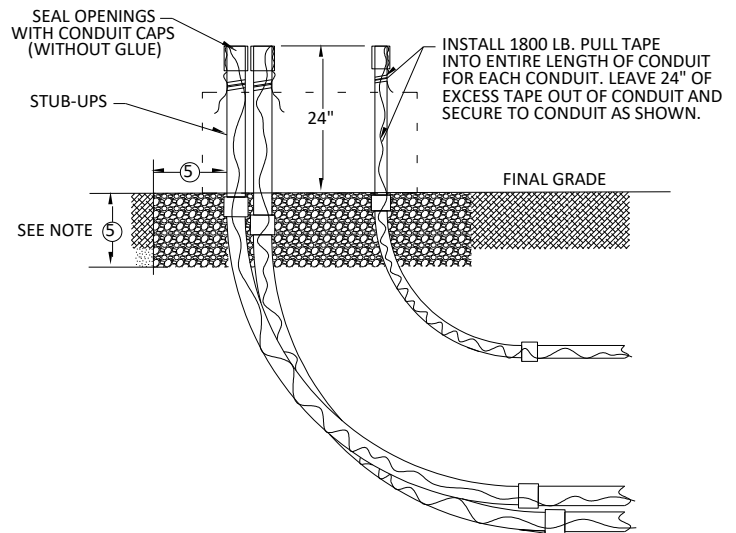
DITCH AND CONDUIT PLACEMENT

NON-ROAD CROSSING

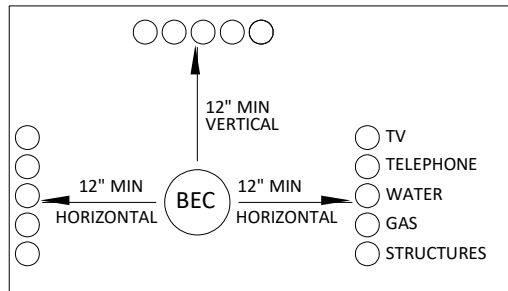
DITCH ASSIGNMENT
FRONT VIEW



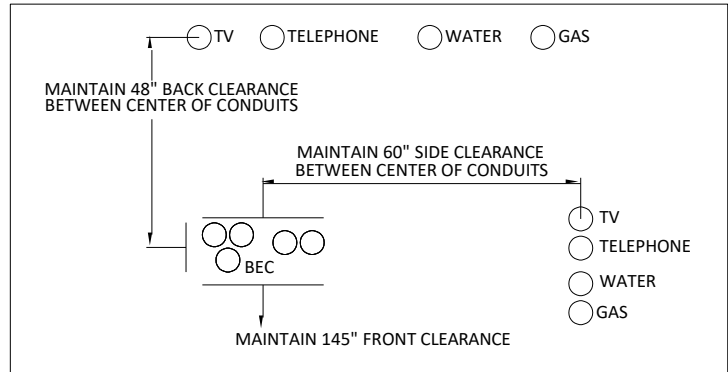
CONDUIT STUB-UP
SIDE VIEW



CONDUIT CLEARANCES
FRONT VIEW



CONDUIT STUB-UP CLEARANCES
TOP VIEW



ANY CONDUITS STUBBED OUT FOR FUTURE USE SHALL EXTEND A MINIMUM OF 5' FROM EQUIPMENT. ENDS SHALL BE MARKED WITH 3" DIAMETER GREY PVC CONDUIT, EXTENDING 4' ABOVE GRADE AND PAINTED RED.

NOTES:

1. CONDUIT SHALL BE GREY SCHEDULE 40 PVC. | PRIMARY & SECONDARY= 3" | LIGHTING= 2"
2. CONDUIT ELBOW: PRIMARY & SECONDARY= 90°, 48" SWEEP | STREETLIGHT = 90°, 24" SWEEP
3. NORMAL DITCH COVER DEPTH IS 48". ADJUSTMENTS MAY BE MADE TO 48" DEPTH IF NECESSARY UPON BLUEBONNET APPROVAL.
4. SEPARATION FROM OTHER UTILITIES SHALL BE 12" MINIMUM OR SUFFICIENT TO PREVENT ANY FORESEEN DAMAGE OF EITHER FACILITY TO THE OTHER.
5. GRAVEL FOR PADS SHALL BE 3/8" WASHED PEA GRAVEL. DEPTH AND WIDTH SHALL BE TO EQUIPMENT SPECIFICATION.
6. **BACKFILL MATERIAL SHALL BE CLEAN AND FREE FROM ALL ORGANIC MATERIAL, UNSTABLE MATERIALS, DEBRIS, LUMPS, OR BROKEN PAVING. NO ROCKS OR STONES SHALL BE GREATER THAN 1" IN ANY BACKFILL. THE BACKFILL MUST PROVIDE AN EVEN SUPPORT FOR CONDUITS. MATERIAL FOR BACKFILL MAY BE MATERIAL RESULTING FROM EXCAVATION, IF SUITABLE IN THE OPINION OF THE BBEC INSPECTOR OR BBEC PROJECT COORDINATOR.**



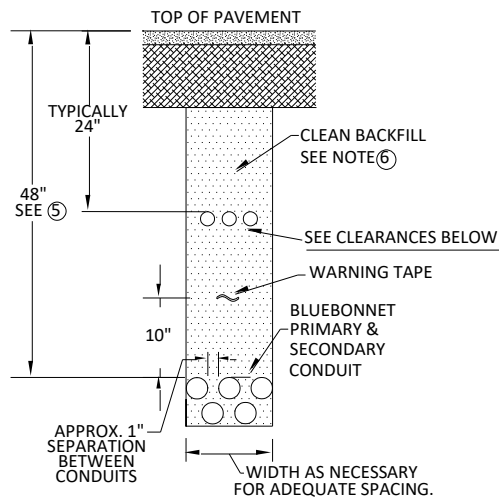
Drawn:	Approved:	Date:
CV	Project Coordinators	Oct. 31, 2019

UNDERGROUND DISTRIBUTION

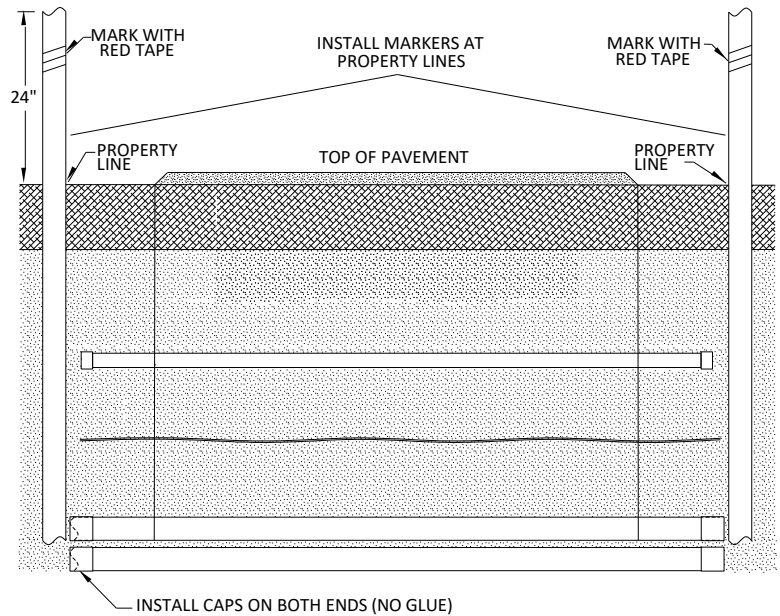
J-3

DITCH AND CONDUIT PLACEMENT ROAD CROSSING

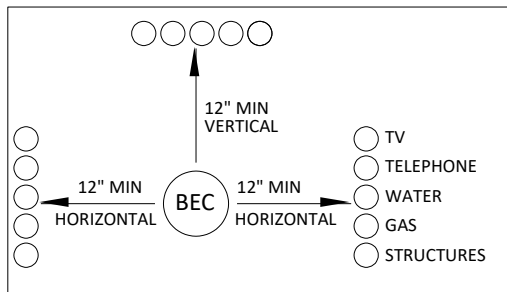
CONDUIT
FRONT VIEW



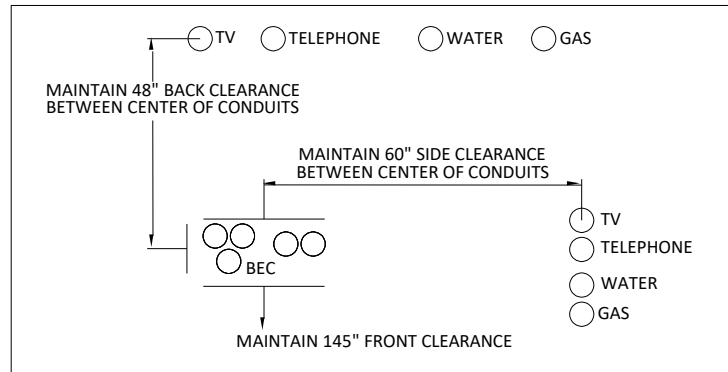
CONDUIT
SIDE VIEW



CONDUIT CLEARANCES
FRONT VIEW



CONDUIT STUB-UP CLEARANCES
TOP VIEW



ANY CONDUITS STUBBED OUT FOR FUTURE USE SHALL EXTEND A MINIMUM OF 5' FROM EQUIPMENT. ENDS SHALL BE MARKED WITH 3" DIAMETER GREY PVC CONDUIT, EXTENDING 4' ABOVE GRADE AND PAINTED RED.

NOTES:

- STATE AND LOCAL CODES MAY REQUIRE DIFFERENT STANDARDS, IN WHICH CASE THE MOST STRINGENT CODE SHALL TAKE PRECEDENCE.
- CONDUIT SHALL BE MINIMUM GRAY SCHEDULE 40 PVC. | PRIMARY & SECONDARY = 3" | LIGHTING = 2"
- CONDUIT ELBOW: PRIMARY & SECONDARY = 90°, 48" SWEEP | LIGHTING = 90°, 24" SWEEP
- LENGTH OF CONDUITS SHALL BE FROM PROPERTY LINE TO PROPERTY LINE.
- NORMAL COVER DEPTH IS 48". ADJUSTMENTS MAY BE MADE TO 48" DEPTH IF NECESSARY UPON BLUEBONNET APPROVAL.
- BACKFILL MATERIAL SHALL BE CLEAN AND FREE FROM ALL ORGANIC MATERIAL, UNSTABLE MATERIALS, DEBRIS, LUMPS, OR BROKEN PAVING. NO ROCKS OR STONES SHALL BE GREATER THAN 1" IN ANY BACKFILL. THE BACKFILL MUST PROVIDE AN EVEN SUPPORT FOR CONDUITS. MATERIAL FOR BACKFILL MAY BE MATERIAL RESULTING FROM EXCAVATION, IF SUITABLE IN THE OPINION OF THE BBEC INSPECTOR OR BBEC PROJECT COORDINATOR.



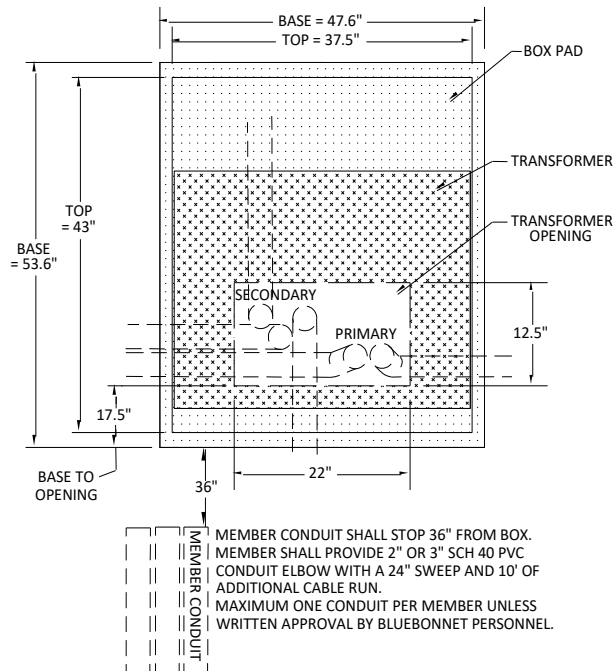
Drawn:	Approved:	Date:
CV	Project Coordinators	Oct. 31, 2019

UNDERGROUND DISTRIBUTION

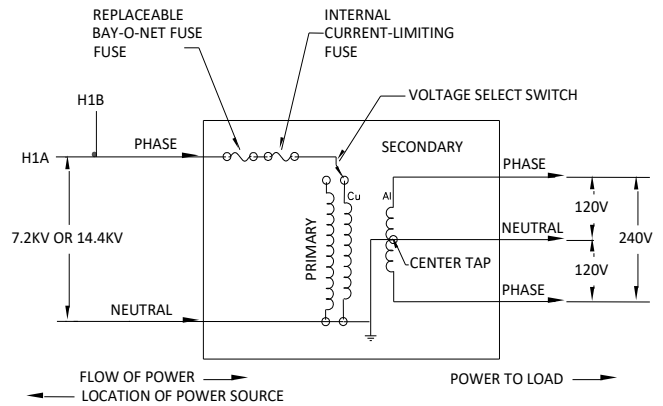
J-4

1PH PADMOUNT TRANSFORMER DIMENSIONS AND WIRING

TOP VIEW

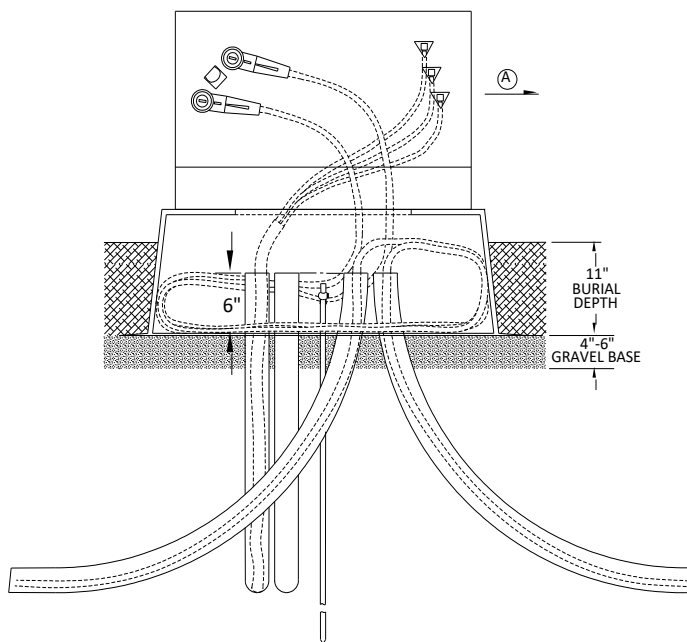


WIRING DIAGRAM

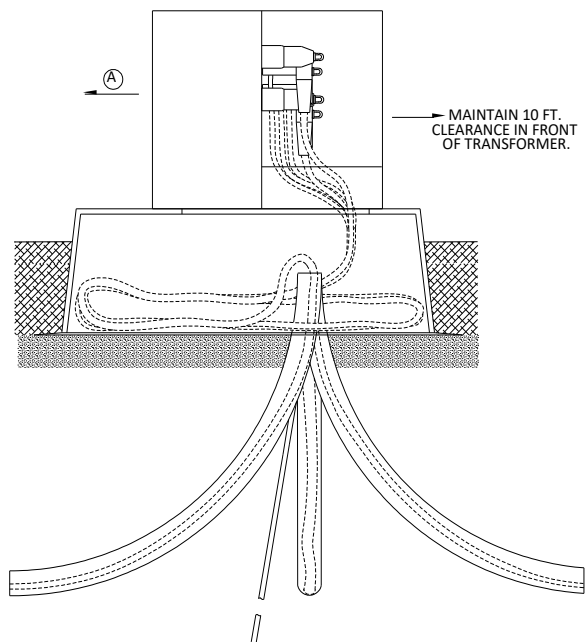


- Ⓐ CLEARANCE BETWEEN WALLS AND TRANSFORMER:
NON-COMBUSTIBLE - 3 FT.
COMBUSTIBLE: UP TO 75 kVA - 10 FT.
GREATER THAN 75 kVA - 20 FT.

FRONT VIEW



SIDE VIEW



DATE APPROVED:
SEPTEMBER 8, 2016

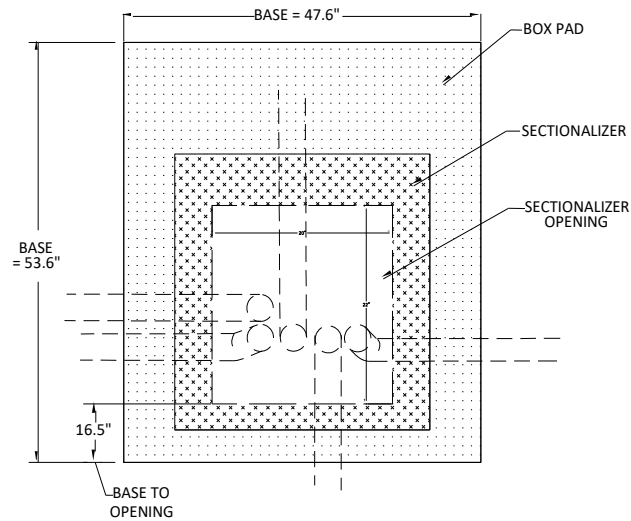
UNDERGROUND DISTRIBUTION

A-2

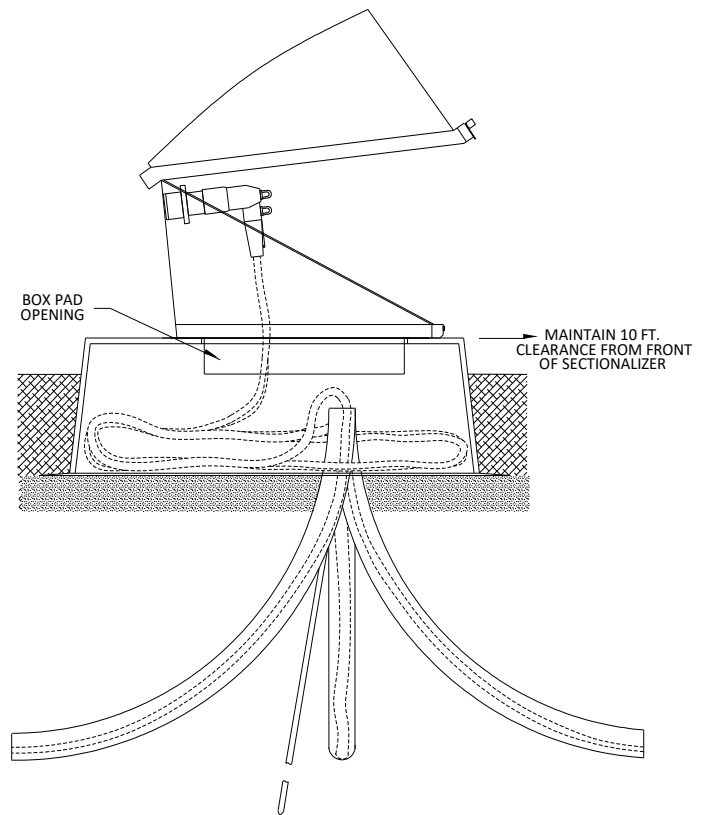
1PH PADMOUNT SECTIONALIZER

DIMENSIONS AND WIRING

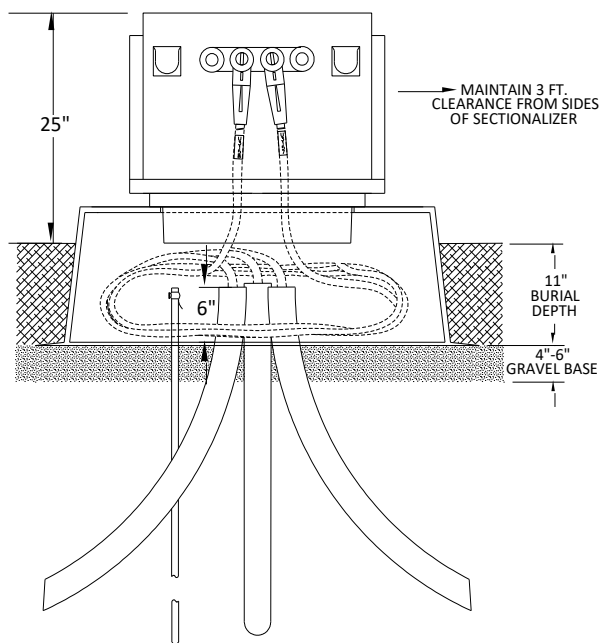
TOP VIEW



SIDE VIEW



FRONT VIEW



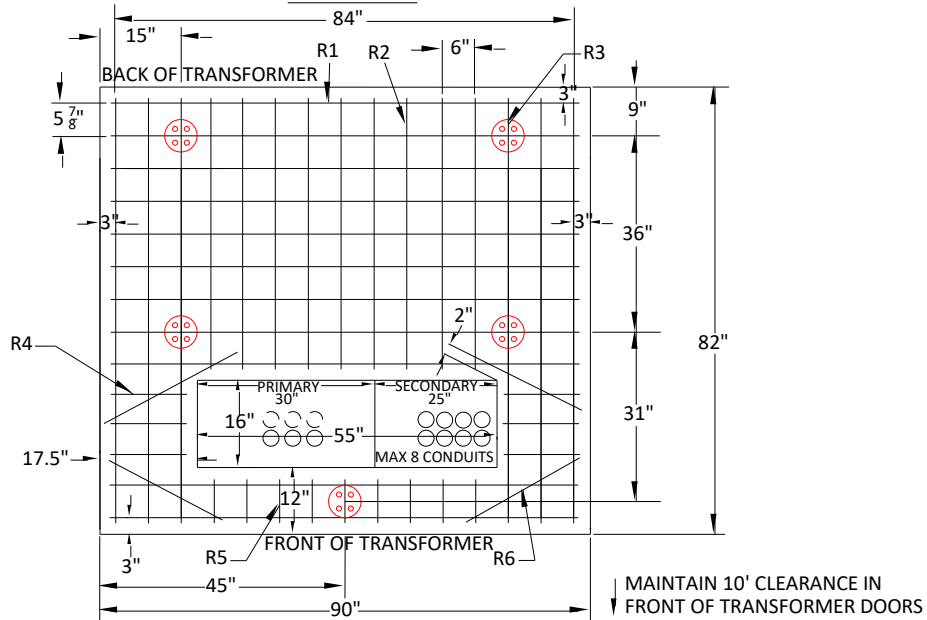
DATE APPROVED:
SEPTEMBER 8, 2016

UNDERGROUND DISTRIBUTION

C-2

3PH TRANSFORMER PAD 45 - 750 KVA (UM3-A)

TOP VIEW



MAINTAIN CLEARANCE FROM TRANSFORMER SIDES:

OTHER TRANSFORMERS - 5 FT.

NON-COMBUSTIBLE WALLS - 5 FT.

COMBUSTIBLE WALLS:

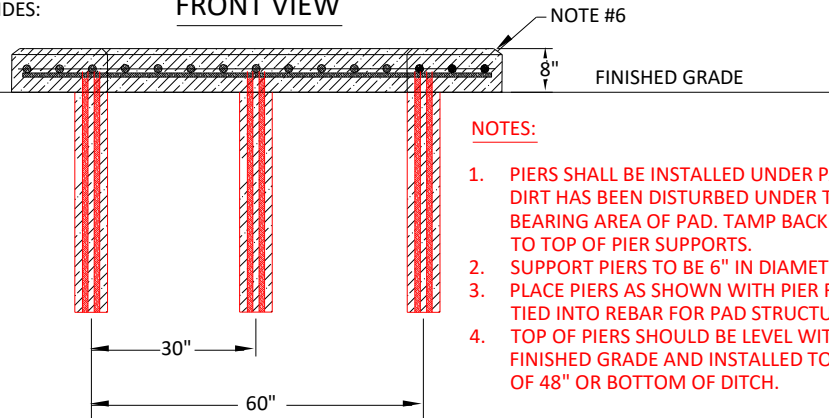
0 TO 75 KVA - 10 FT.

>75 KVA - 20 FT.

REINFORCING BARS; 1/2"					
R1	R2	R3	R4	R5	R6
11 X 86"	9 X 50"	6 X 78"	6 X 14"	9 X 8"	4 X 25"

SEE NOTE #3

FRONT VIEW



NOTES:

- PIERS SHALL BE INSTALLED UNDER PAD WHEN DIRT HAS BEEN DISTURBED UNDER THE LOAD BEARING AREA OF PAD. TAMP BACKFILL (95%) TO TOP OF PIER SUPPORTS.
- SUPPORT PIERS TO BE 6" IN DIAMETER.
- PLACE PIERS AS SHOWN WITH PIER REBAR TIED INTO REBAR FOR PAD STRUCTURE.
- TOP OF PIERS SHOULD BE LEVEL WITH FINISHED GRADE AND INSTALLED TO A DEPTH OF 48" OR BOTTOM OF DITCH.

ANY CONDUITS STUBBED OUT FOR FUTURE USE SHALL EXTEND A MINIMUM OF 5' FROM EQUIPMENT. ENDS SHALL BE MARKED WITH 3" DIAMETER GREY PVC CONDUIT, EXTENDING 4' ABOVE GRADE AND PAINTED RED.

NOTES:

- TAMP GROUND UNDER PAD BEFORE SETTING TO PREVENT UNEVEN SETTLING.
- CONCRETE: 3000 POUNDS MIN. PER SQUARE INCH; 4% TO 6% ENTRAINED AIR, 3/4" MAX. SIZE AGGREGATE.
- REINFORCING STEEL: ATSM-A615 GRADE 60; EVENLY SPACE APPROXIMATELY 6" O.C. EACH WAY AND SECURELY TIED TOGETHER.
- MINIMUM 2 INCH CONCRETE COVER OVER REINFORCING STEEL.
- WOOD FLOAT LEVEL FINISH LEAVING NO DEPRESSIONS.
- 3/4" CHAMFER ALL EDGES.
- PRIMARY AND SECONDARY CONDUIT SHALL BE INSTALLED AND SEALED BEFORE POURING PAD.
- IF FUTURE EXPANSION TO A TRANSFORMER LARGER THAN 750 KVA IS POSSIBLE, BLUEBONNET MAY REQUEST THE CONSTRUCTION OF THE PAD ON PAGE B-6.
- MAXIMUM OF 8 CONDUITS, 4" SCHEDULE 40 PVC PIPES ARE ALLOWED IN THE SECONDARY COMPARTMENT.**
- STUB THE SECONDARY PIPES AS CLOSE TO THE EDGE SECONDARY CUTOUT AS POSSIBLE. (SEE DRAWING)
- MAXIMUM OF 6 CONDUITS, 3" SCHEDULE 40 PVC PIPES ARE ALLOWED IN THE PRIMARY COMPARTMENT.

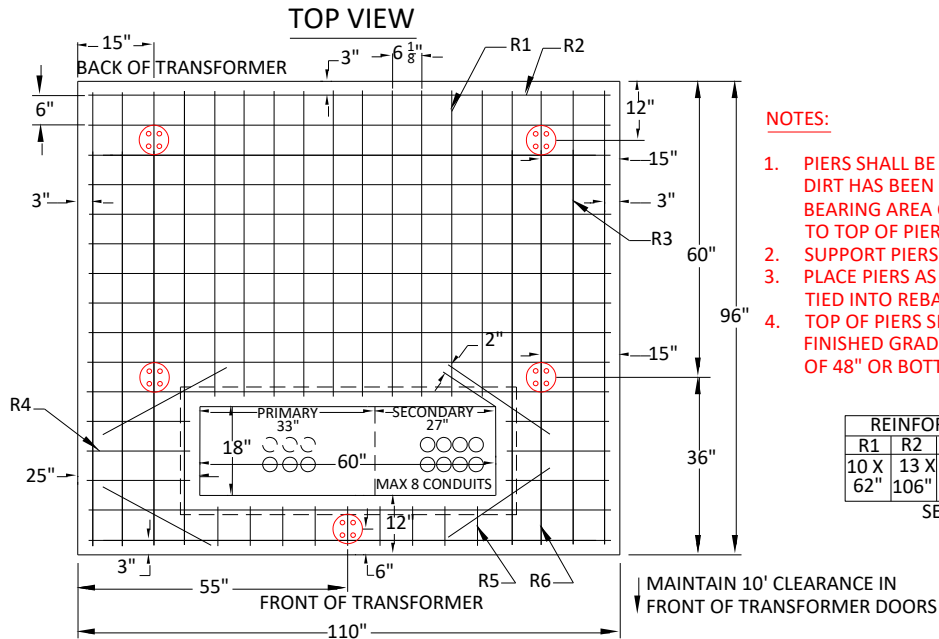


Drawn: Approved: Date:
SF Coordinators Nov. 12, 2019

UNDERGROUND DISTRIBUTION

B-5

3PH TRANSFORMER PAD 1000 - 2500 KVA (UM3-B)

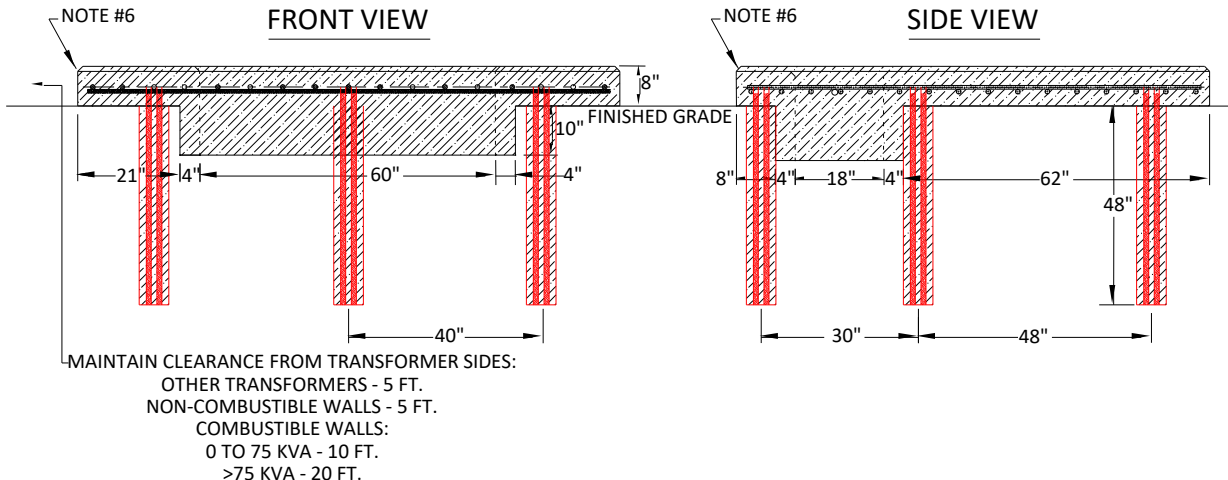


NOTES:

- PIERS SHALL BE INSTALLED UNDER PAD WHEN DIRT HAS BEEN DISTURBED UNDER THE LOAD BEARING AREA OF PAD. TAMP BACKFILL (95%) TO TOP OF PIER SUPPORTS.
- SUPPORT PIERS TO BE 6" IN DIAMETER.
- PLACE PIERS AS SHOWN WITH PIER REBAR TIED INTO REBAR FOR PAD STRUCTURE.
- TOP OF PIERS SHOULD BE LEVEL WITH FINISHED GRADE AND INSTALLED TO A DEPTH OF 48" OR BOTTOM OF DITCH.

REINFORCING BARS; 1/2"					
R1	R2	R3	R4	R5	R6
10 X 62"	13 X 106"	8 X 92"	6 X 21"	9 X 8"	4 X 25"

SEE NOTE #3



NOTES:

- TAMP GROUND UNDER PAD BEFORE SETTING TO PREVENT UNEVEN SETTLING.
- CONCRETE: 3000 POUNDS MIN. PER SQUARE INCH; 4% TO 6% ENTRAINED AIR, 3/4" MAX. SIZE AGGREGATE.
- REINFORCING STEEL: ATSM-A615 GRADE 60; EVENLY SPACE APPROXIMATELY 6" O.C. EACH WAY AND SECURELY TIED TOGETHER.
- MINIMUM 2 INCH CONCRETE COVER OVER REINFORCING STEEL.
- WOOD FLOAT LEVEL FINISH LEAVING NO DEPRESSIONS.
- 3/4" CHAMFER ALL EDGES.
- PRIMARY AND SECONDARY CONDUIT SHALL BE INSTALLED AND SEALED BEFORE POURING PAD.
- MAXIMUM OF 8 CONDUITS, 4" SCHEDULE 40 PVC PIPES ARE ALLOWED IN THE SECONDARY COMPARTMENT.
- STUB THE SECONDARY PIPES AS CLOSE TO THE EDGE SECONDARY CUTOUT AS POSSIBLE. (SEE DRAWING)
- MAXIMUM OF 6 CONDUITS, 3" SCHEDULE 40 PVC PIPES ARE ALLOWED IN THE PRIMARY COMPARTMENT.



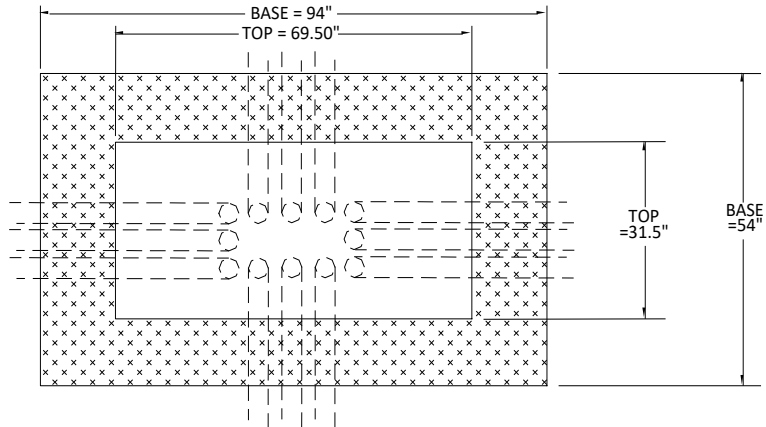
Drawn: Approved: Date:
SF Coordinators Nov. 12, 2019

UNDERGROUND DISTRIBUTION

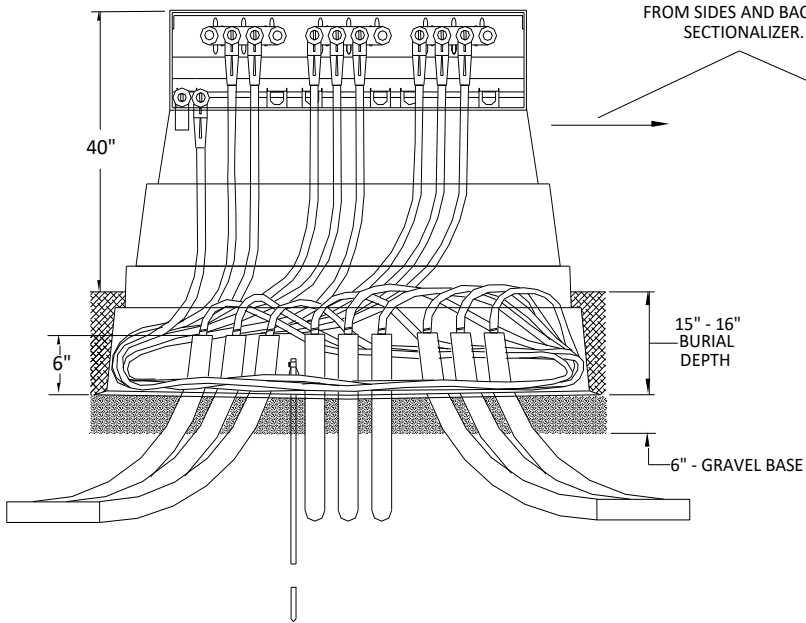
B-6

3PH 600A SECTIONALIZER - DIMENSIONS

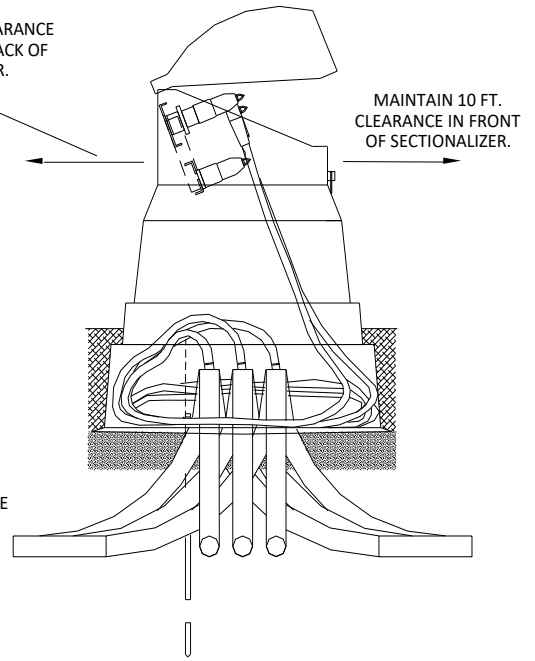
TOP VIEW



FRONT VIEW



SIDE VIEW



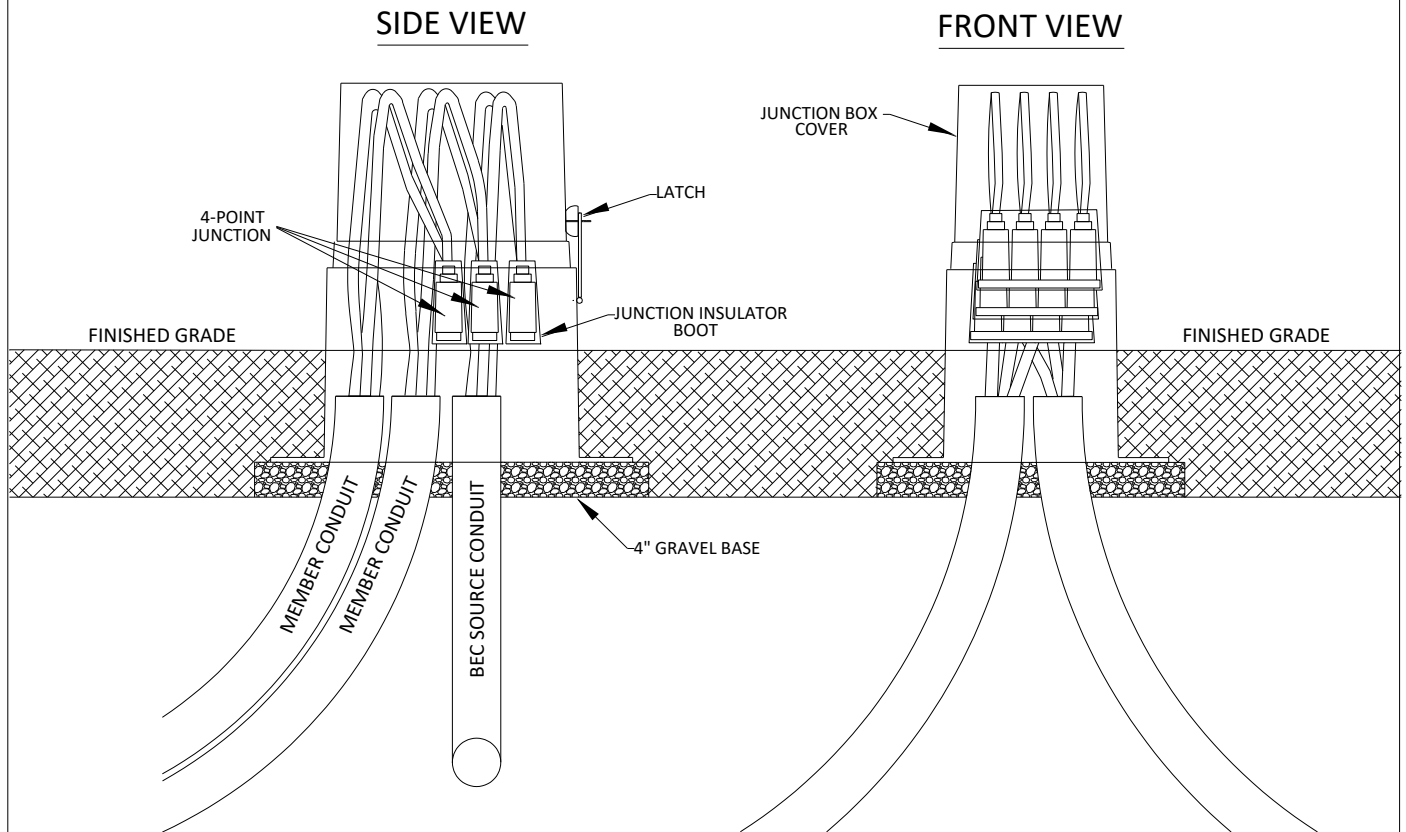
ANY CONDUITS STUBBED OUT FOR FUTURE USE SHALL EXTEND A MINIMUM OF 5' FROM EQUIPMENT. ENDS SHALL BE MARKED WITH 3" DIAMETER GREY PVC CONDUIT, EXTENDING 4' ABOVE GRADE AND PAINTED RED.



DATE APPROVED:
SEPTEMBER 8, 2016

UNDERGROUND DISTRIBUTION D-2B

SECONDARY JUNCTION BOX CONSTRUCTION STANDARD



NOTES:

1. A MAXIMUM OF 1 INPUT AND 3 TRIPLEX OUTPUTS AND CAN BE CONNECTED IN JUNCTION BOX.
MAX CABLE SIZE CONNECTOR ACCOMMODATES 350 KCM.
2. INSTALL INSULATED PROTECTIVE BOOT ON ALL SECONDARY JUNCTIONS.
3. EVENLY DISPERSE 4OZ. OF INSECTICIDE GRANULES IN PAD OPENING.

UJB SECONDARY JUNCTION BOX	INSECTICIDE GRANULES
UJ1-4A OR UJ1-4B 4PT SECONDARY JUNCTION BOX - QTY 3	U3P90-48 PVC ELBOW
GRAVEL	ID TAGS, COLORED TAPE, LABELS



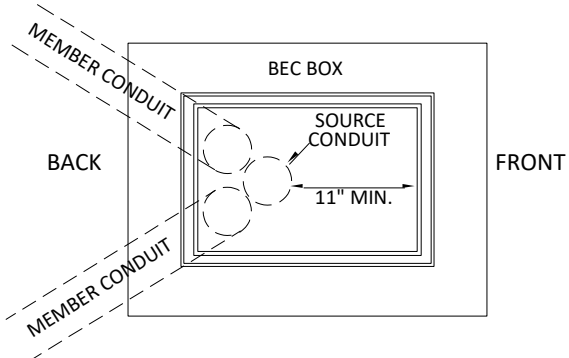
DATE APPROVED:
AUGUST 15, 2015

UNDERGROUND DISTRIBUTION

E-1

SECONDARY JUNCTION BOX DIMENSIONS

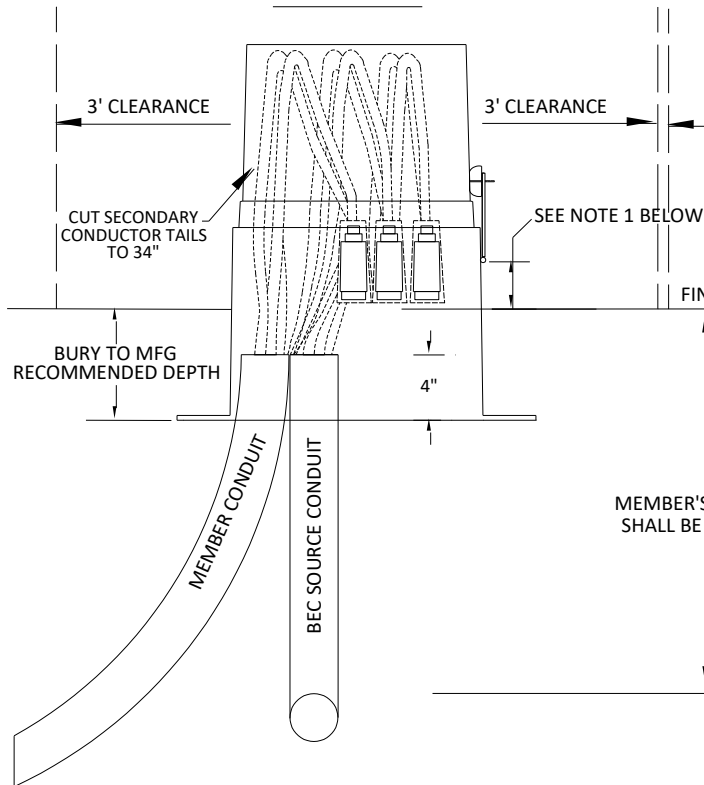
TOP VIEW



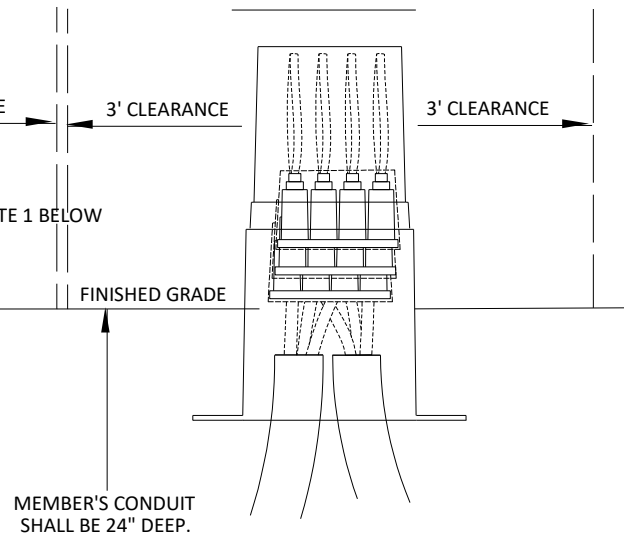
MEMBER SHALL PROVIDE 2" OR 3" SCH 40 PVC CONDUIT ELBOW WITH 10' OF ADDITIONAL CABLE RUN.

MAX ONE CONDUIT PER MEMBER UNLESS WRITTEN APPROVAL BY BEC PERSONNEL.

SIDE VIEW



FRONT VIEW



NOTES:

1. LATCH AND LOCK SHALL REMAIN ABOVE GROUND LEVEL.
2. MAINTAIN 3FT CLEARANCE FROM ALL SIDES OF JUNCTION BOX.



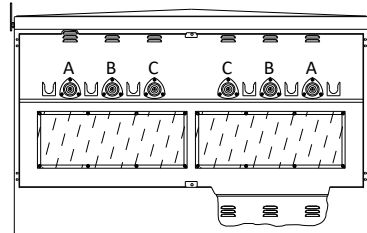
DATE APPROVED:
SEPTEMBER 22 , 2015

UNDERGROUND DISTRIBUTION

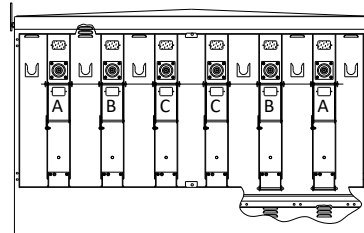
E-2

USGE-9 SWITCHGEAR CONSTRUCTION STANDARD

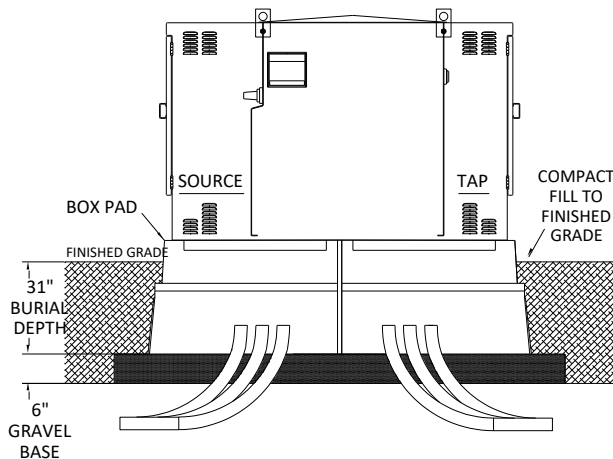
SOURCE



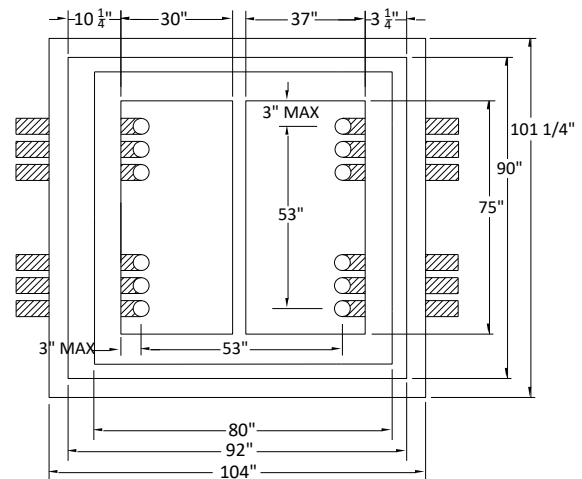
TAP



FRONT VIEW



TOP VIEW



BEC STK#:	QTY:	MATERIAL USGE-9:
13119	1	SWITCHGEAR, AIR, 2-200 FUSE, 2-600 SWITCHES
10988	2	ROD, GROUND 5/8" X 8', 13 MIL CU CLAD
10262	2	CLAMP, GRD ROD GALV 3/4 L
10333	13	CONN, SPLIT BOLT CC #2 L
11196	6.148	WIRE, COPPER BARE S.D. #2 7 STR L
10732	4	INSECTICIDE ANT CONTROL L
10779	6	LOCK, PADLOCK, STANDARD WITH BEC LOGO
10386	6	CONN,INSUL.L.B.PARKING STAND L
10237	6	CAPS, ASSY GRD TERMINATION L
11202	26.12	WIRE, COPPER BARE 4/0 19 STR L
10172	6	BUSHING, LB INSERT 25KV L
14300	6	FITTING, FUSE END, SM-20, 15/25 KV L

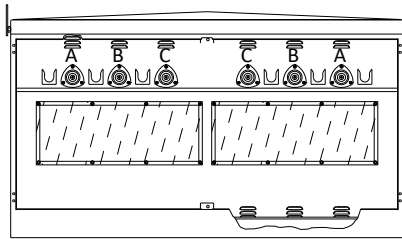


DATE APPROVED:
MARCH 8, 2017

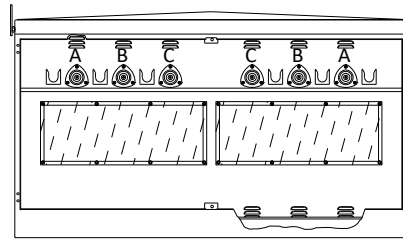
UNDERGROUND DISTRIBUTION

USGE-10 SWITCHGEAR CONSTRUCTION STANDARD

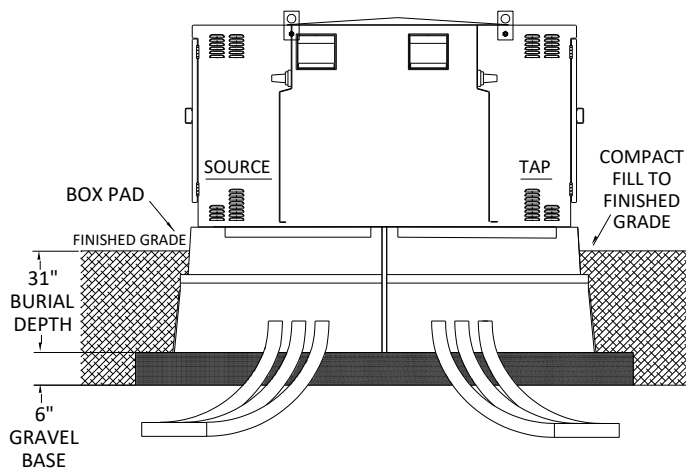
SOURCE



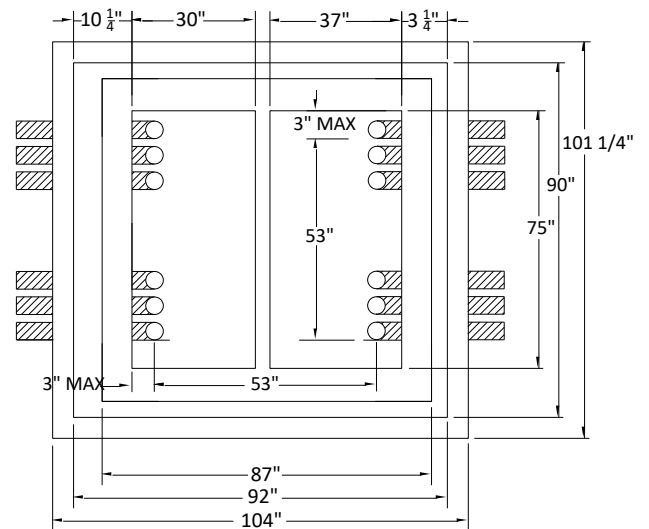
TAP



FRONT



TOP VIEW



BEC STK#:	QTY:	MATERIAL USGE-10:
13130	1	SWITCHGEAR, AIR, PADMOUNTED, 4-600 SWITCHES
10988	2	ROD, GROUND 5/8" X 8', 13 MIL CU CLAD
10262	2	CLAMP, GRD ROD GALV 3/4 L
10333	13	CONN, SPLIT BOLT CC #2 L
11196	6.148	WIRE, COPPER BARE S.D. #2 7 STR L
10732	4	INSECTICIDE ANT CONTROL L
10779	10	LOCK, PADLOCK, STANDARD WITH BEC LOGO
11202	26.12	WIRE, COPPER BARE 4/8 19 STR L

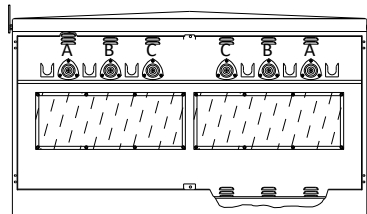


DATE APPROVED:
MARCH 8, 2017

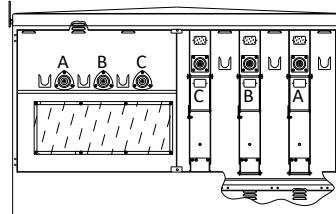
UNDERGROUND DISTRIBUTION

PME-11 SWITCHGEAR CONSTRUCTION STANDARD

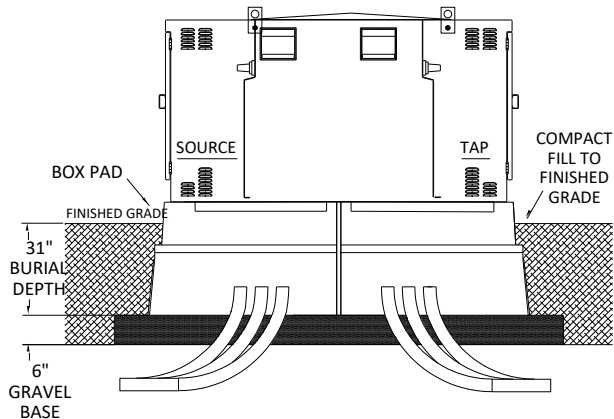
SOURCE



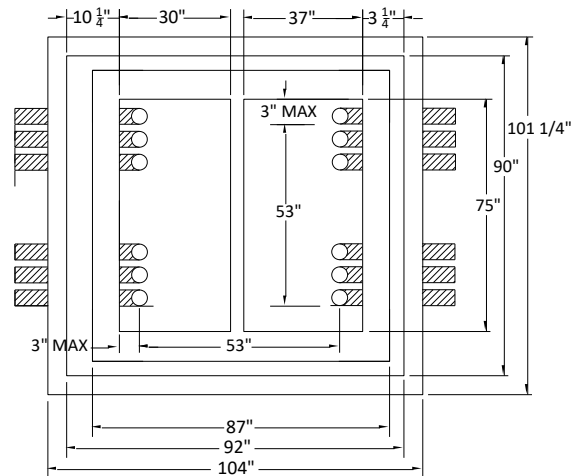
TAP



FRONT



TOP VIEW



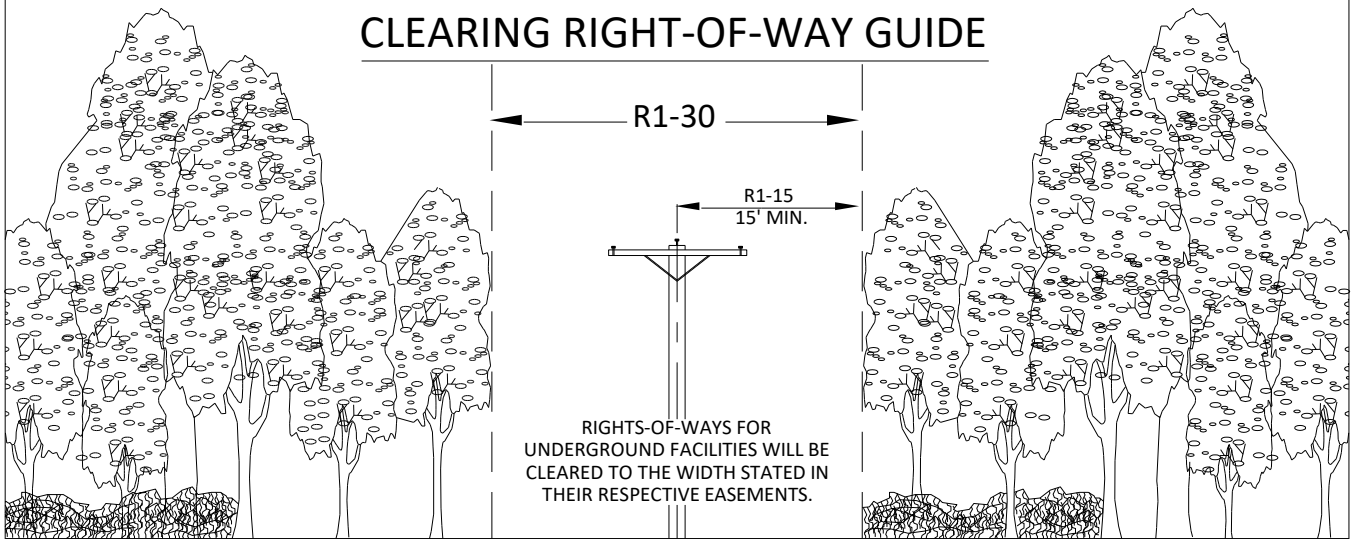
BEC STK#:	QTY:	MATERIAL USGE-9:
12971	1	SWITCHGEAR, AIR, 1-200 FUSE, 3-600 SWITCHES
10988	2	ROD, GROUND 5/8" X 8', 13 MIL CU CLAD
10262	2	CLAMP, GRD ROD GALV 3/4 L
10333	13	CONN, SPLIT BOLT CC #2 L
11196	6.148	WIRE, COPPER BARE S.D. #2 7 STR L
10732	4	INSECTICIDE ANT CONTROL L
10779	8	LOCK, PADLOCK, STANDARD WITH BEC LOGO
10386	3	CONN, INSUL. L.B. PARKING STAND L
10237	3	CAPS, ASSY GRD TERMINATION L
11202	26.12	WIRE, COPPER BARE 4/0 19 STR L
10172	3	BUSHING, LB INSERT 25KV L
14300	3	FITTING, FUSE END, SM-20, 15/25 KV L



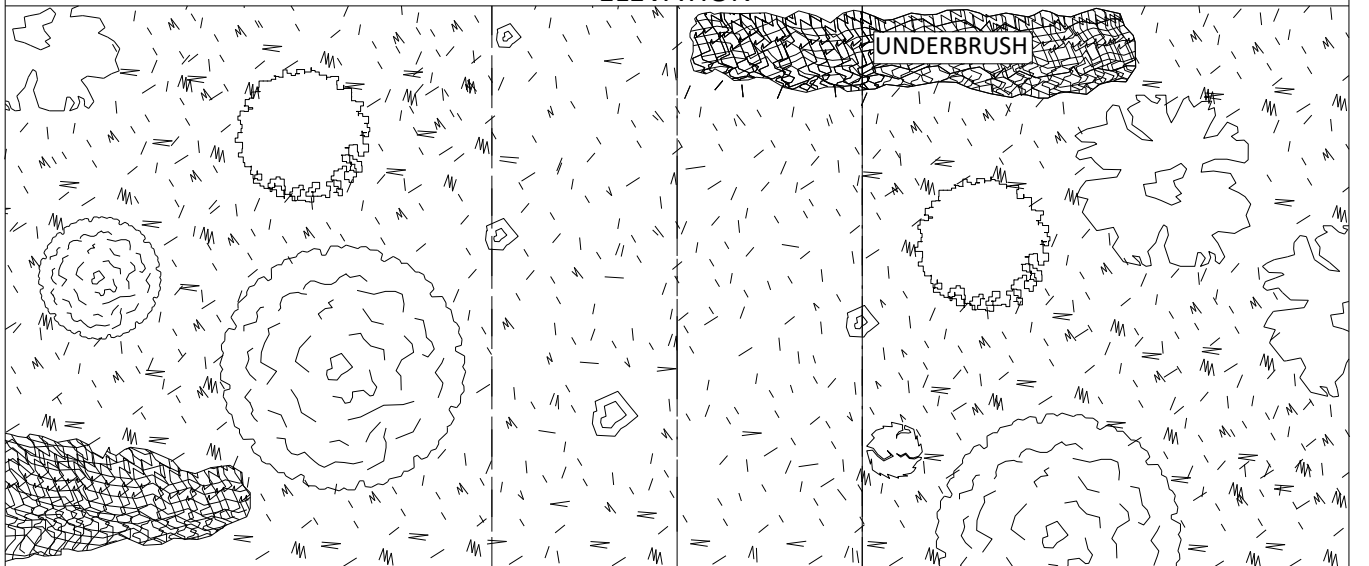
DATE APPROVED:
MARCH 8, 2017

UNDERGROUND DISTRIBUTION

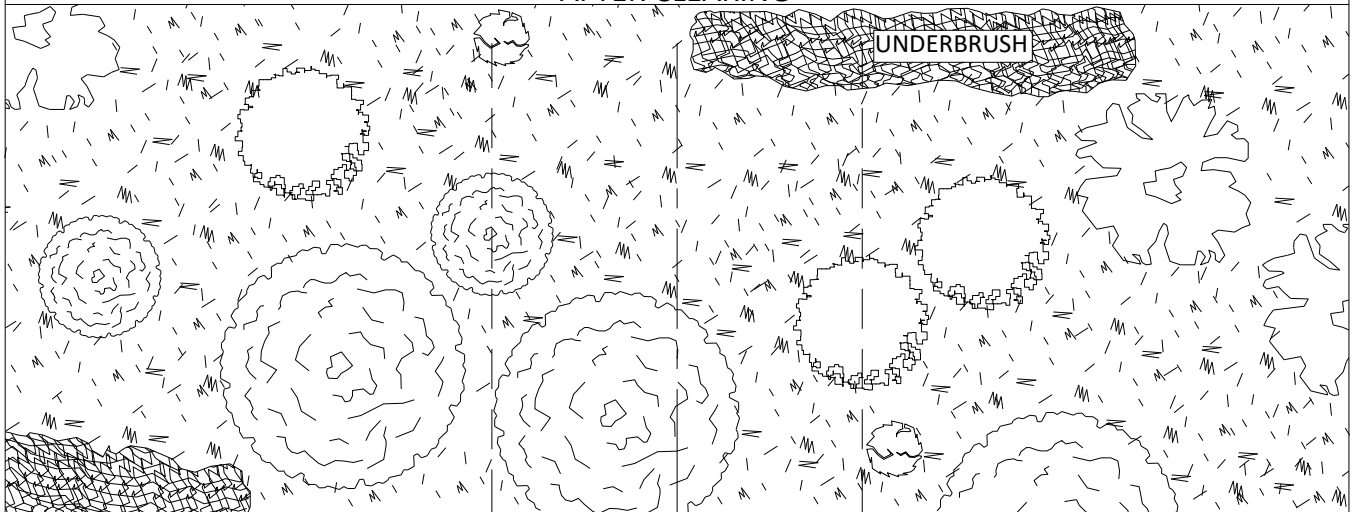
CLEARING RIGHT-OF-WAY GUIDE



ELEVATION



AFTER CLEARING



BEFORE CLEARING



UNDERGROUND DISTRIBUTION

Notes:

1. Neutral (must be insulated) may be reduced no more than two sizes on residential application. No reduction of the neutral is allowed on commercial applications.
2. Weatherproof fittings required.
3. This meter loop specification is good for the following voltages: 120/240, 120/208, 240/480 & 277/480. Please use MS-301 for straight 480 Delta applications only.
4. Meter pole must remain free of structures and private attachments other than meter loop.
5. Bluebonnet Electric will supply ground rod.
6. On steel poles use a 3/8" X 1 1/2" self tapping screw.
7. For your safety, only Bluebonnet personnel are authorized to install meter loops or other BEC equipment on a Bluebonnet pole. Members shall have loop assembled and available for installation by Bluebonnet.

FOR SINGLE PHASE TRAFFIC CONTROL DEVICES:

200amp, 4 terminal, 1-phase, will require a lever by-pass meeting ANSI C12.7, UL 414, and NEMA 3R rating. Lever by-pass is only required for meter installations serving traffic control devices, including railroad, that need to remain functional at all times.

FOR THREE PHASE APPLICATIONS DESCRIPTION:

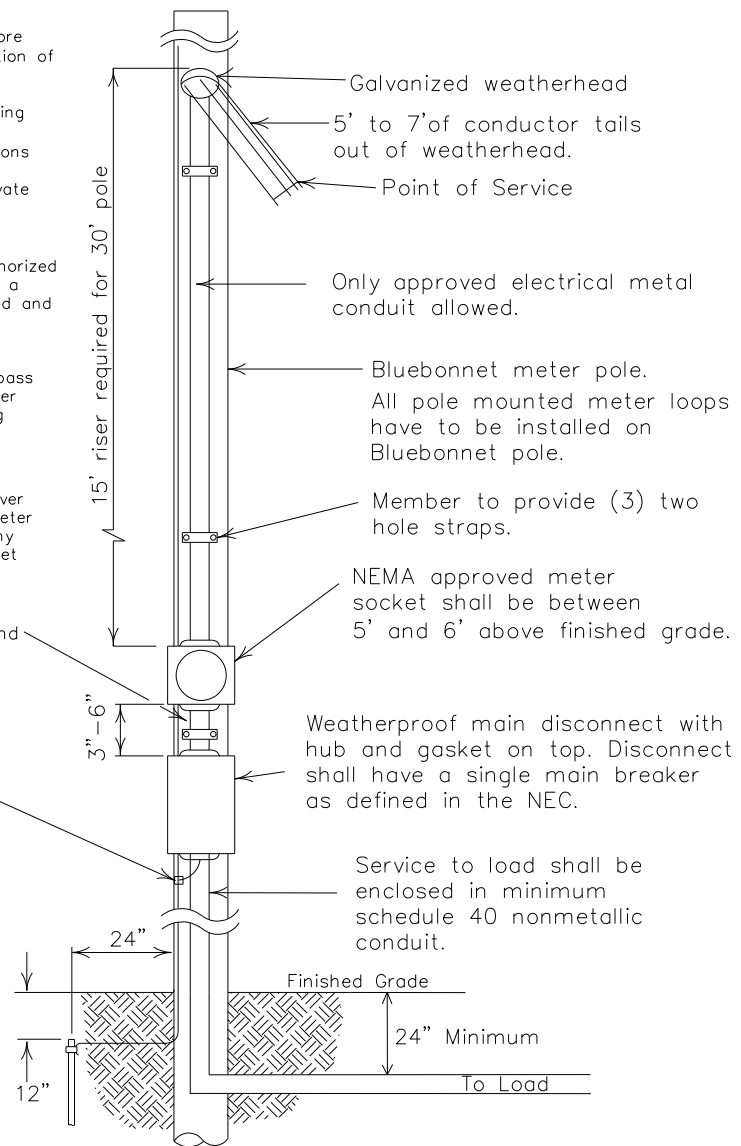
200amp, 7 terminal, 3-phase, 4-wire will require a lever by-pass meeting ANSI C12.7, UL 414, and NEMA 3R. Meter cans are available for purchase through Techline or any other electrical supplier provided it meets all Bluebonnet Electric Cooperative specifications.
Techline (512-332-2978)

Galvanized metal conduit with (1) locknut and fiber bushing inside meter can on nipple and (1) locknut under meter can. Maintain 3-6" distance between the meter can and the disconnect. Member shall use a metal nipple. A Straight or offset nipple is acceptable.

#6 solid, bare ground wire and clamp attached to Bluebonnet's pole ground. Ground rod provided by Bluebonnet.

WIRING INSTALLATIONS MUST MEET LOCAL GUIDELINES, IF APPLICABLE, SET FORTH BY CITY, COUNTY, OR OTHER GOVERNING ENTITY IN THE EVENT THESE REQUIREMENTS ARE MORE STRINGENT THAN BLUEBONNET SPECIFICATIONS.

FOR THE MEMBER'S SAFETY, WIRING INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF THE NEC, TDLR AND NESC.



Latest update can be found at <http://www.bluebonnetelectric.coop>

CURRENT CARRYING CAPACITIES AND CONDUIT/NIPPLE SIZE REQUIREMENTS OF STANDARD WIRE SIZES (RHH, RHW, THW, THWN, THHN, AND XHHW) REFER TO NEC FOR OTHER CALCULATIONS.

<u>COPPER CONDUCTOR</u>			<u>ALUMINUM CONDUCTOR</u>		
Wire Size	Breaker Size	Conduit/Nipple Size	Wire Size	Breaker Size	Conduit/Nipple Size
#6	60 Amp	1¼" Conduit	#4	60 Amp	1¼" Conduit
#4	100 Amp	1¼" Conduit	#2	100 Amp	1¼" Conduit
#2	125 Amp	1½" Conduit	#1/0	125 Amp	1½" Conduit
#1	150 Amp	2" Conduit	#2/0	150 Amp	2" Conduit
#2/0	200 Amp	2" Conduit	#4/0	200 Amp	2" Conduit

<u>15' METER LOOP</u> 1Ø OR 3Ø 60–200 AMP METER LOOP ON METER POLE (GOOD FOR VOLTAGES: 120/240, 120/208, 240/480, 277/480)		 Bluebonnet	
DATE	REVISIONS	Drawn By : RG	Checked By : MS COMMITTEE
11–27–17	ADDED NIPPLE AFTER CONDUIT SIZE		Approved By : MS COMMITTEE
03–31–20	ADDED NOTE 7		
11–04–21	ADDED MAIN BREAKER NOTE	Scale : NONE	Date: 11–04–2021
			MS–10115

Notes:

1. Neutral (must be insulated) may be reduced no more than two sizes on residential application. No reduction of the neutral is allowed on commercial applications.
2. Weatherproof fittings required.
3. This meter loop specification is good for the following voltages: 120/240, 120/208, 240/480 & 277/480. Please use MS-301 for straight 480 Delta applications only.
4. Meter pole must remain free of structures and private attachments other than meter loop.
5. Bluebonnet Electric will supply ground rod.
6. On steel poles use a 3/8" X 1 1/2" self tapping screw.
7. For your safety, only Bluebonnet personnel are authorized to install meter loops or other BEC equipment on a Bluebonnet pole. Members shall have loop assembled and available for installation by Bluebonnet.

FOR SINGLE PHASE TRAFFIC CONTROL DEVICES:

200amp, 4 terminal, 1-phase, will require a lever by-pass meeting ANSI C12.7, UL 414, and NEMA 3R rating. Lever by-pass is only required for meter installations serving traffic control devices, including railroad, that need to remain functional at all times.

FOR THREE PHASE APPLICATIONS DESCRIPTION:

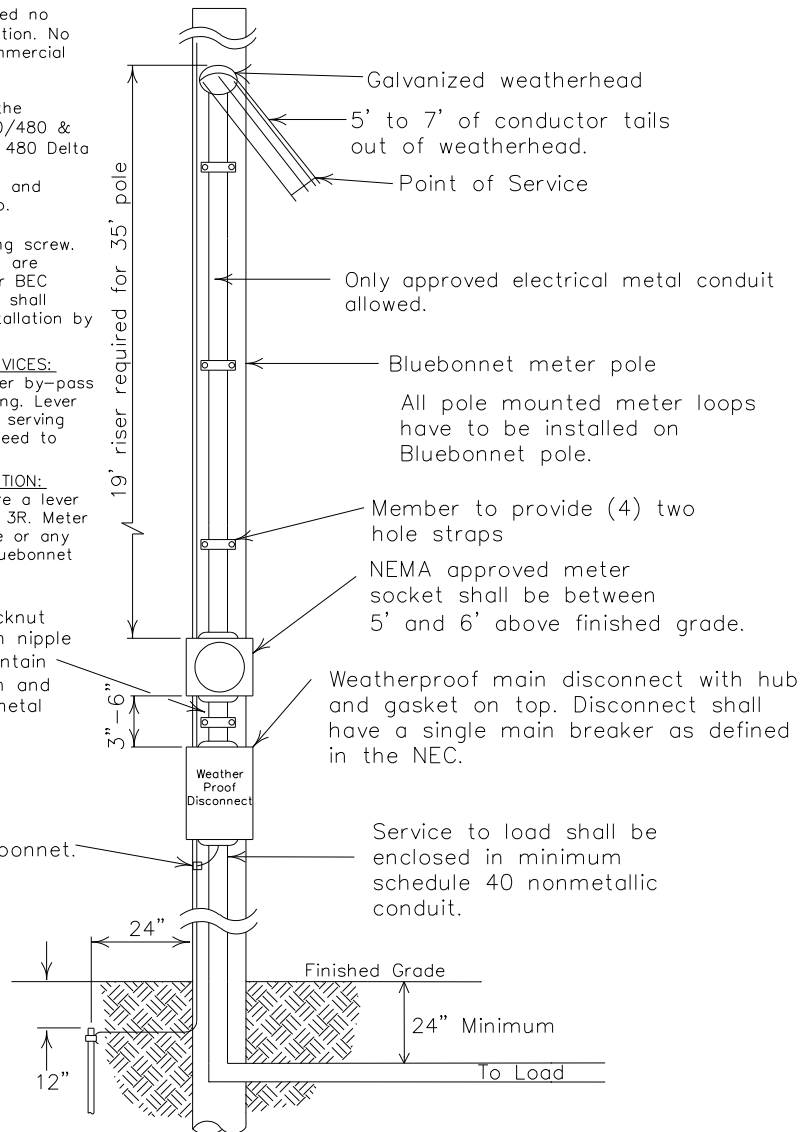
200amp, 7 terminal, 3-phase, 4-wire will require a lever by-pass meeting ANSI C12.7, UL 414, on NEMA 3R. Meter cans are available for purchase through Techline or any other electrical supplier provided it meets all Bluebonnet Electric Cooperative specifications. Techline (512-332-2978)

Galvanized metal conduit with (1) locknut and fiber bushing inside meter can on nipple and (1) locknut under meter can. Maintain 3-6" distance between the meter can and the disconnect. Member shall use a metal nipple. A Straight or offset nipple is acceptable.

#6 solid, bare ground wire and clamp attached to Bluebonnet's pole ground. Ground rod provided by Bluebonnet.

WIRING INSTALLATIONS MUST MEET LOCAL GUIDELINES, IF APPLICABLE, SET FORTH BY CITY, COUNTY, OR OTHER GOVERNING ENTITY IN THE EVENT THESE REQUIREMENTS ARE MORE STRINGENT THAN BLUEBONNET SPECIFICATIONS.

FOR THE MEMBER'S SAFETY, WIRING INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF THE NEC, TDLR AND NESC.



Latest update can be found at <http://www.bluebonnetelectric.coop>

CURRENT CARRYING CAPACITIES AND CONDUIT/NIPPLE SIZE REQUIREMENTS OF STANDARD WIRE SIZES

(RHH, RHW, THW, THWN, THHN, AND XHHW)
REFER TO NEC FOR OTHER CALCULATIONS.

COPPER CONDUCTOR			ALUMINUM CONDUCTOR		
Wire Size	Breaker Size	Conduit/Nipple Size	Wire Size	Breaker Size	Conduit/Nipple Size
#6	60 Amp	1 1/4" Conduit	#4	60 Amp	1 1/4" Conduit
#4	100 Amp	1 1/4" Conduit	#2	100 Amp	1 1/4" Conduit
#2	125 Amp	1 1/2" Conduit	#1/0	125 Amp	1 1/2" Conduit
#1	150 Amp	2" Conduit	#2/0	150 Amp	2" Conduit
#2/0	200 Amp	2" Conduit	#4/0	200 Amp	2" Conduit

19' METER LOOP		
1Ø OR 3Ø 60-200 AMP METER LOOP ON METER POLE (GOOD FOR VOLTAGES: 120/240, 120/208, 240/480, 277/480)		
DATE	REVISIONS	
11-27-17	ADDED NIPPLE AFTER CONDUIT SIZE	
03-31-20	ADDED NOTE 7	
11-04-21	ADDED MAIN BREAKER NOTE	

		
Drawn By : RG	Checked By : MS COMMITTEE	Approved By : MS COMMITTEE
Scale : NONE	Date: 11-04-2021	MS-10119

**FOR THREE PHASE APPLICATIONS
DESCRIPTION:**

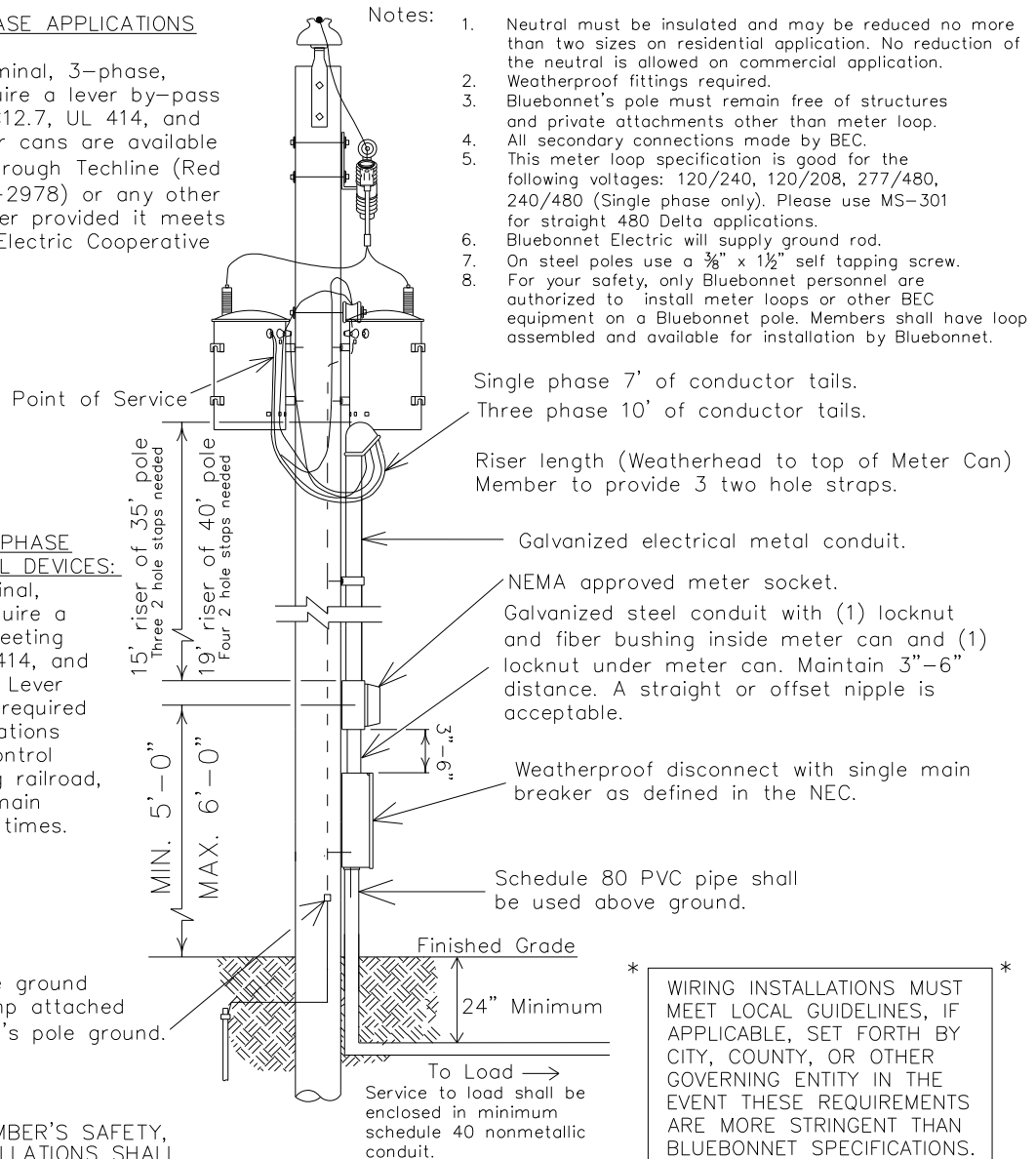
200amp, 7 terminal, 3-phase, 4-wire will require a lever by-pass meeting ANSI C12.7, UL 414, and NEMA 3R. Meter cans are available for purchase through Techline (Red Rock 512-332-2978) or any other electrical supplier provided it meets all Bluebonnet Electric Cooperative specifications.

**FOR SINGLE PHASE
TRAFFIC CONTROL DEVICES:**

200amp, 4 terminal, 1-phase, will require a lever by-pass meeting ANSI C12.7, UL 414, and NEMA 3R rating. Lever by-pass is only required for meter installations serving traffic control devices, including railroad, that need to remain functional at all times.

#6 solid, bare ground wire and clamp attached to Bluebonnet's pole ground.

FOR THE MEMBER'S SAFETY,
WIRING INSTALLATIONS SHALL
CONFORM TO THE REQUIREMENTS
OF THE NEC, TDLR AND NESC.



Notes:

1. Neutral must be insulated and may be reduced no more than two sizes on residential application. No reduction of the neutral is allowed on commercial application.
2. Weatherproof fittings required.
3. Bluebonnet's pole must remain free of structures and private attachments other than meter loop.
4. All secondary connections made by BEC.
5. This meter loop specification is good for the following voltages: 120/240, 120/208, 277/480, 240/480 (Single phase only). Please use MS-301 for straight 480 Delta applications.
6. Bluebonnet Electric will supply ground rod.
7. On steel poles use a $\frac{3}{8}$ " x $1\frac{1}{2}$ " self tapping screw.
8. For your safety, only Bluebonnet personnel are authorized to install meter loops or other BEC equipment on a Bluebonnet pole. Members shall have loop assembled and available for installation by Bluebonnet.

* WIRING INSTALLATIONS MUST MEET LOCAL GUIDELINES, IF APPLICABLE, SET FORTH BY CITY, COUNTY, OR OTHER GOVERNING ENTITY IN THE EVENT THESE REQUIREMENTS ARE MORE STRINGENT THAN BLUEBONNET SPECIFICATIONS. *

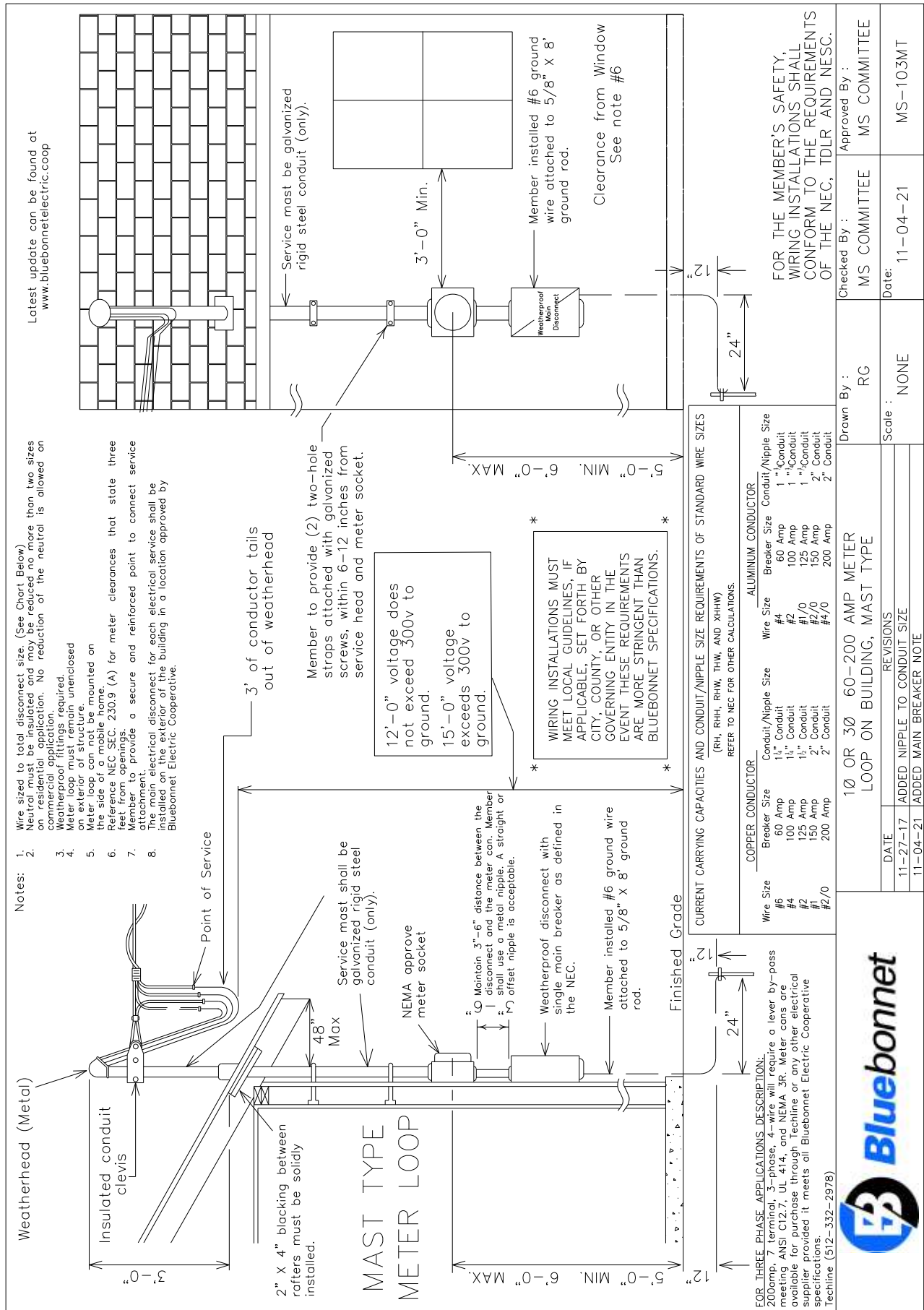
Latest update can be found at
<http://www.bluebonnetelectric.coop>

CURRENT CARRYING CAPACITIES AND CONDUIT/NIPPLE SIZE REQUIREMENTS OF STANDARD WIRE SIZES

(RHH, RHW, THW, THWN, AND XHHW)

REFER TO NEC FOR OTHER CALCULATIONS.

COPPER CONDUCTOR			ALUMINUM CONDUCTOR		
Wire Size	Breaker Size	Conduit/Nipple Size	Wire Size	Breaker Size	Conduit/Nipple Size
#6	60 Amp	1 $\frac{1}{4}$ " Conduit	#4	60 Amp	1 $\frac{1}{4}$ " Conduit
#4	100 Amp	1 $\frac{1}{4}$ " Conduit	#2	100 Amp	1 $\frac{1}{4}$ " Conduit
#2	125 Amp	1 $\frac{1}{2}$ " Conduit	#1/0	125 Amp	1 $\frac{1}{2}$ " Conduit
#1	150 Amp	2" Conduit	#2/0	150 Amp	2" Conduit
#2/0	200 Amp	2" Conduit	#4/0	200 Amp	2" Conduit
1Ø OR 3Ø 60-200 AMP METER LOOP ON TRANSFORMER POLE					
DATE	REVISIONS		Drawn By :	Checked By :	Approved By :
11-27-17	ADDED NIPPLE AFTER CONDUIT SIZE		RG	MS COMMITTEE	MS COMMITTEE
03-18-20	ADDED NOTE 8		Scale :	Date:	
11-04-21	ADDED MAIN BREAKER NOTE		NONE	11-04-2021	MS-102



1. Wire sized to total disconnect size.
2. Neutral may be reduced no more than two sizes on residential application. No reduction of the neutral is allowed on commercial application.
3. Weatherproof fittings required.
4. Meter loop must remain unclosed on exterior of structure.
5. Meter loop cannot be mounted on the side of a mobile home.
6. Reference NEC SEC. 230.9 (A) for meter clearances that state three feet from openings.
7. Member to provide a secure and reinforced point to connect service attachment.
8. The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.

200amp, 7 terminal, 3-phase, 4-wire will require a lever by-pass meeting ANSI C12.7, UL 414, and NEMA 3R. Meter cans are available for purchase through Tecline or any other electrical supplier provided it meets all Bluebonnet Electric Cooperative specifications. Tecline (512-332-2978)



CURRENT CARRYING CAPACITIES AND CONDUIT/NIPPLE SIZE REQUIREMENTS OF STANDARD WIRE SIZES					
(PH, RHH, RHW, THW, AND XHHW)					
REFER TO NEC FOR OTHER CALCULATIONS.					
COPPER CONDUCTOR			ALUMINUM CONDUCTOR		
Wire Size	Breaker Size	Conduit/Nipple Size	Wire Size	Breaker Size	Conduit/Nipple Size
#6	60 Amp	1 1/4" Conduit	#4	60 Amp	1 1/4" Conduit
#4	100 Amp	1 1/2" Conduit	#2	100 Amp	1 1/2" Conduit
#2	125 Amp	1 3/4" Conduit	#1/0	125 Amp	1 3/4" Conduit
#1	150 Amp	2" Conduit	#2/0	150 Amp	2" Conduit
#2/0	200 Amp	2 1/2" Conduit	#3/0	200 Amp	2 1/2" Conduit

Latest update can be found at
www.bluebonnetelectric.coop



Bluebonnet

	#	7	200	METER
1Ø OR 3Ø	60-200	AMP	AMP	METER
LOOP ON BUILDING	WALL TYPE			

Drawn By :

Checked By :

Approved By :

MS-103WT

Notes:

- Line taps shall be made in the galvanized trough by the electrical contractor.
- No more than (2) conductors per phase shall be allowed.
- No more than (2) risers will be connected per installation.
- Weatherproof fittings required.
- Wire sized to total disconnect sizes.
- Neutral(s) may be reduced no more than two sizes on residential application. No reduction of the neutral is allowed on commercial application.
- Bluebonnet pole must remain free of structures and private attachments other than meter loop riser assembly.
- Meter assembly must remain unenclosed on exterior of structure.
- Meter assembly cannot be mounted on a mobile home.
- If secondary service exceeds (2) 2", 3", or 4" approved electrical metal conduit; BEC will install a primary underground transformer at member's expense.
- Maintain 3"-6" distance between the disconnect and the meter can. Member shall use a metal nipple. A straight or offset nipple is acceptable.
- #6 solid, bare ground copper wire and clamp attached to Bluebonnet's pole ground.
- The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.

FOR THREE PHASE APPLICATIONS

DESCRIPTION:

200amp, 7 terminal, 3-phase, 4-wire will require a lever by-pass meeting ANSI C12.7, UL 414, and NEMA 3R. Meter cans are available for purchase through Techline or any other electrical supplier provided it meets all Bluebonnet Electric Cooperative specifications. Techline (512-332-2978)

No more than four 60-200 amp metersockets and weatherproof main disconnects. No more than one disconnect per enclosure.

8' ground rod to be driven 12" below grade

3000 PSI. Concrete Min.

To Load

Service to load cable enclosed in minimum schedule 40 nonmetallic conduit.

FOR THE MEMBER'S SAFETY, WIRING INSTALLATION AND MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF THE NEC, TDLR AND NESC.

RISER ONLY

Only 2", 3", or 4" approved electrical metal conduit allowed above finished grade. Risers will not exceed 2 risers per pole. Member will provide 10' of conductor tails from top of weatherhead. BEC to supply Stand-Offs. (Bluebonnet to mount risers to pole)

Equipment rack 2" or 3" steel pipe with uni-strut horizontal support.

Minimum schedule 40 rigid nonmetallic service conduit below finished grade. No schedule 40 conduit allowed above ground level on source side of main disconnect.

Transformer Pole Riser Length:

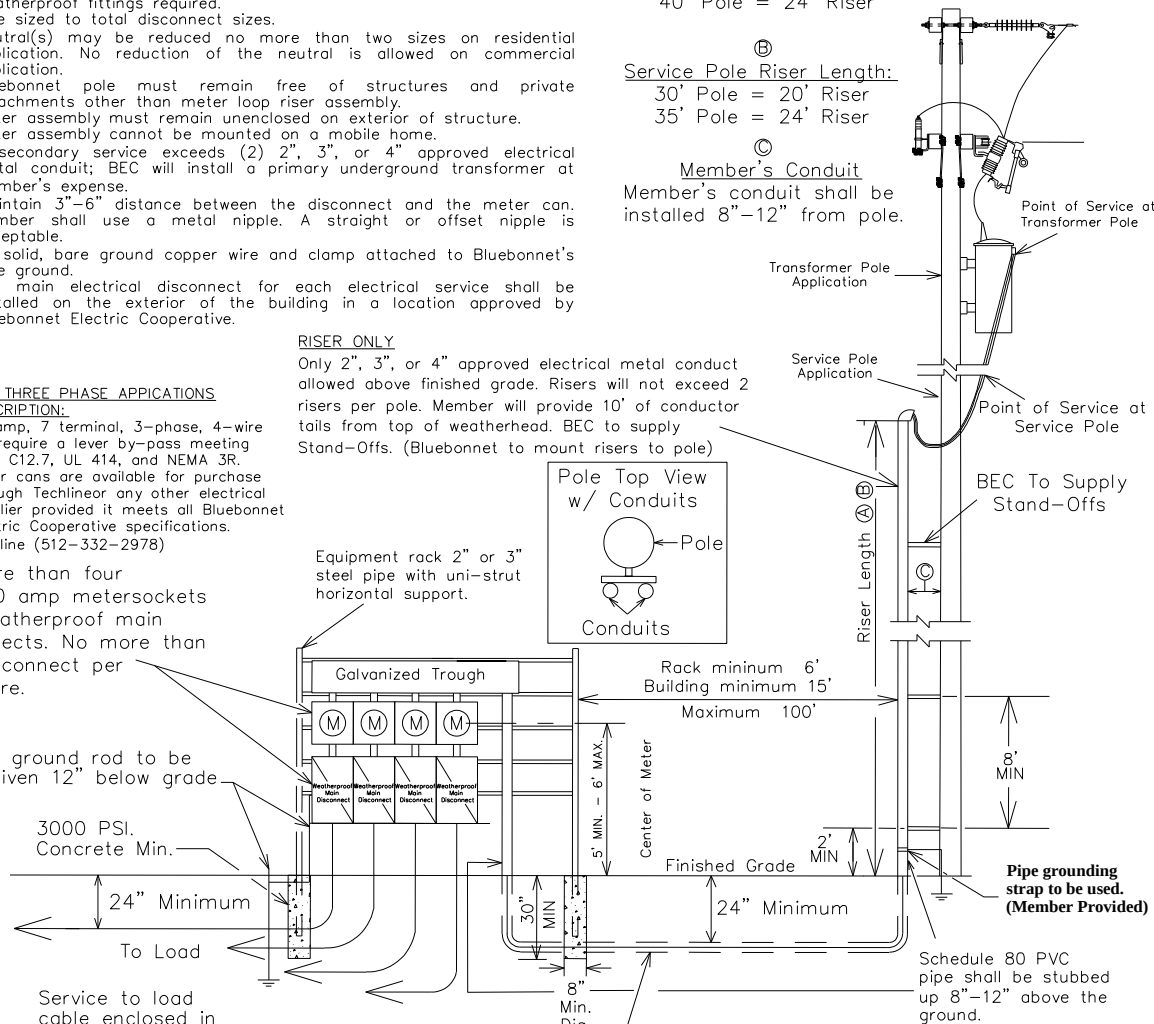
35' Pole = 20' Riser
40' Pole = 24' Riser

Service Pole Riser Length:

30' Pole = 20' Riser
35' Pole = 24' Riser

Member's Conduit

Member's conduit shall be installed 8"-12" from pole.



* WIRING INSTALLATIONS MUST MEET LOCAL GUIDELINES, IF APPLICABLE, SET FORTH BY CITY, COUNTY, OR OTHER GOVERNING ENTITY IN THE EVENT THESE REQUIREMENTS ARE MORE STRINGENT THAN BLUEBONNET SPECIFICATIONS. *

Latest update can be found at www.bluebonnetelectric.coop

CURRENT CARRYING CAPACITIES AND CONDUIT/NIPPLE SIZE REQUIREMENT OF STANDARD WIRE SIZE. (RHH, RHW, THW, THWN, THHN, AND XHHW) REFER TO NEC FOR OTHER CALCULATIONS.					
WIRE SIZE	COPPER CONDUCTOR/ BREAKER SIZE	CONDUIT/NIPPLE SIZE	WIRE SIZE	ALUMINUM CONDUCTOR/ BREAKER SIZE	CONDUIT/NIPPLE SIZE
#6	60 AMP	1½" CONDUIT	#4	60 AMP	1½" CONDUIT
#4	100 AMP	1½" CONDUIT	#2	100 AMP	1½" CONDUIT
#2	125 AMP	1½" CONDUIT	#1/0	125 AMP	1½" CONDUIT
#1	150 AMP	2" CONDUIT	#2/0	150 AMP	2" CONDUIT
#2/0	200 AMP	2" CONDUIT	#4/0	200 AMP	2" CONDUIT

1Ø OR 3Ø 60-200 AMP MULTIPLE METERS ON RACK OR BUILDING NOT TO EXCEED A TOTAL OF 800 AMPS



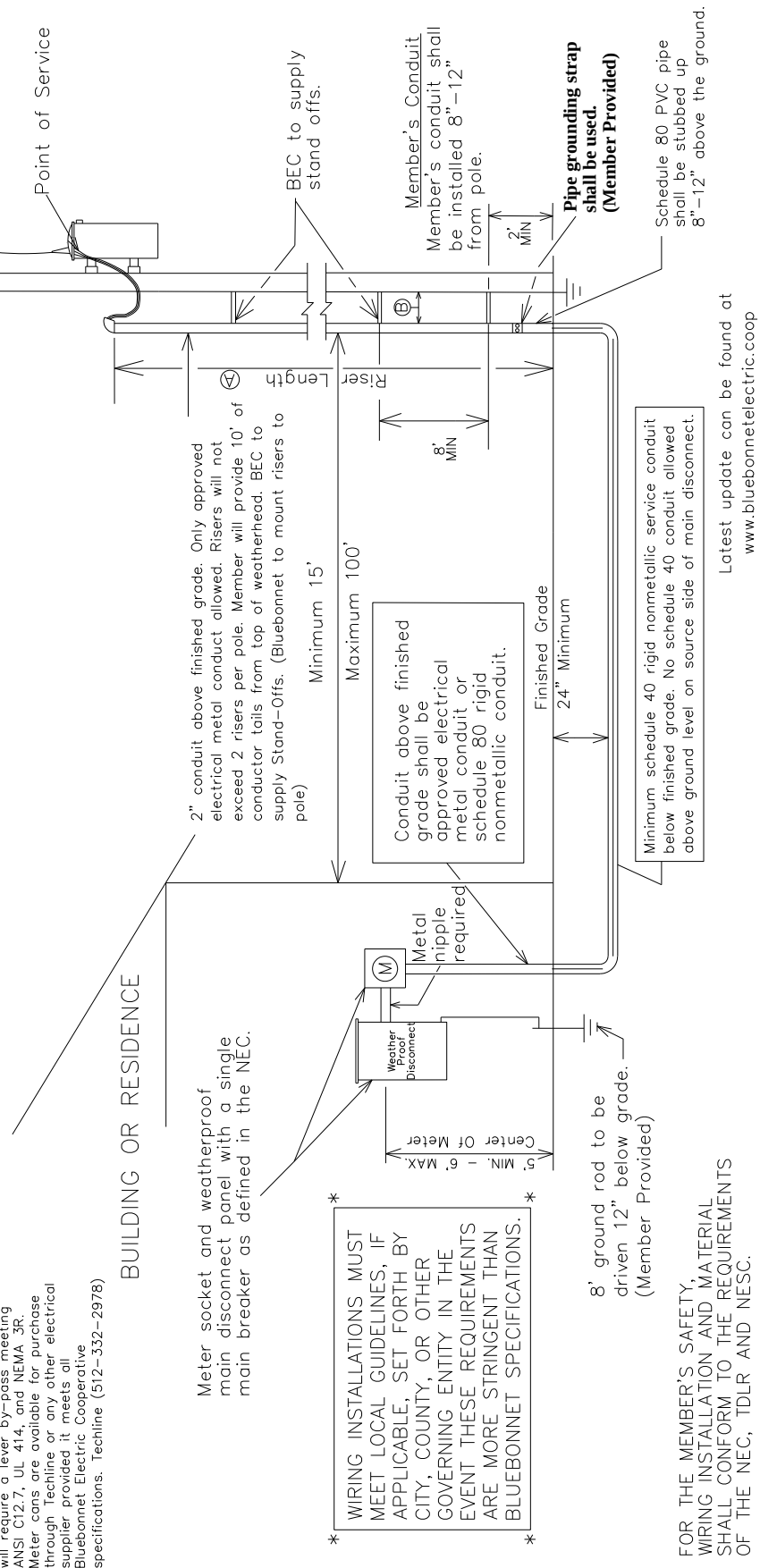
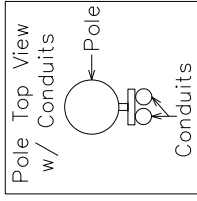
DATE	REVISIONS	Drawn By :	Checked By :	Approved By :
12-07-2017	ADDED WIRE SIZING CHART.	RG	MS COMMITTEE	MS COMMITTEE
11-19-2019	ADDED SOLID COPPER NOTE.	Scale :	Date :	MS-105
11-04-2021	ADDED MAIN BREAKER NOTE.	NONE	11-04-2021	

CURRENT CARRYING CAPACITIES AND CONDUIT/NIPPLE SIZE REQUIREMENT OF STANDARD WIRE SIZE (RHH, RHW, THW, THWN, THHN, AND XHHW) REFER TO NEC FOR OTHER CALCULATIONS.		
WIRE SIZE	COPPER CONDUCTOR BREAKER SIZE	CONDUIT/NIPPLE SIZE
#6	60 AMP	1 1/4" CONDUIT
#4	100 AMP	1 1/4" CONDUIT
#2	125 AMP	1 1/2" CONDUIT
#1	150 AMP	2" CONDUIT
#2/0	200 AMP	2" CONDUIT
WIRE SIZE	ALUMINUM CONDUCTOR BREAKER SIZE	CONDUIT/NIPPLE SIZE
#4	60 AMP	1 1/4" CONDUIT
#2	100 AMP	1 1/4" CONDUIT
#1	125 AMP	1 1/2" CONDUIT
#2/0	150 AMP	2" CONDUIT
#4/0	200 AMP	2" CONDUIT

FOR THREE PHASE APPLICATIONS
DESCRIPTION:
200amp, 7 terminal, 3-phase, 4-wire
will require a lever by-pass meeting
ANSI C12.7, UL 414, and NEMA 3R.
Meter cans are available for purchase
through Techline or any other electrical
supplier provided it meets all
Bluebonnet Electric Cooperative
specifications. Techline (512-332-2978)

- Notes:
- Weatherproof fittings required.
 - Wire sized to total disconnect size.
 - Neutral may only be reduced two sizes on residential application. No reduction of the neutral is allowed on commercial application.
 - Bluebonnet pole must remain free of structures and private attachments other than meter loop riser assembly.
 - Meter assembly must remain unenclosed on exterior of structure.
 - Meter assembly cannot be mounted on a mobile home.
 - All secondary connections made by BEC.
 - #6 solid, bare ground copper wire and clamp attached to Bluebonnet's pole ground.
 - The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.

Ⓐ Riser Length:
35' Pole = 20' Riser
40' Pole = 24' Riser

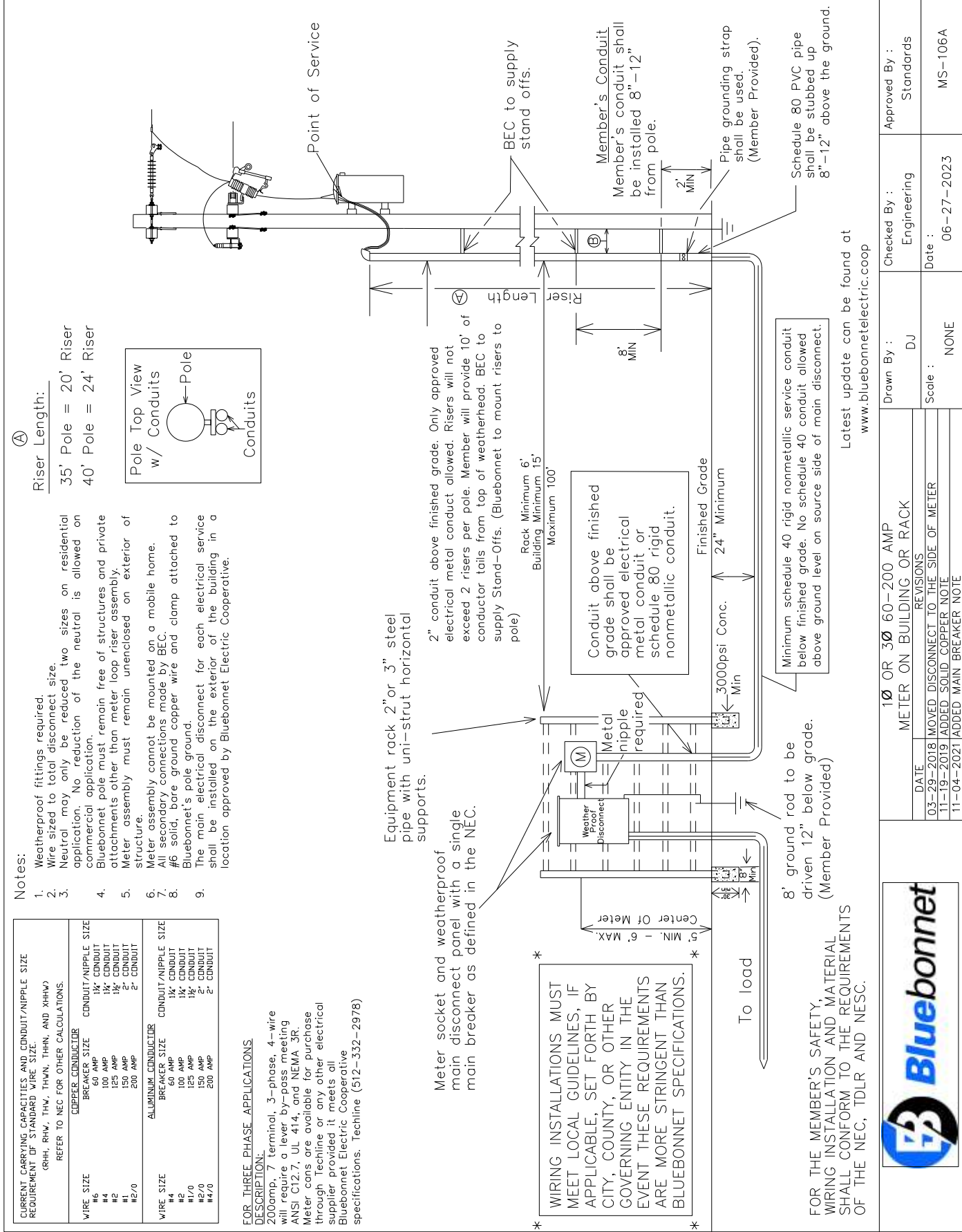


* WIRING INSTALLATIONS MUST MEET LOCAL GUIDELINES, IF APPLICABLE, SET FORTH BY CITY, COUNTY, OR OTHER GOVERNING ENTITY IN THE EVENT THESE REQUIREMENTS ARE MORE STRINGENT THAN BLUEBONNET SPECIFICATIONS. *

FOR THE MEMBER'S SAFETY,
WIRING INSTALLATION AND MATERIAL
SHALL CONFORM TO THE REQUIREMENTS
OF THE NEC, TDLR AND NESC.

Latest update can be found at
www.bluebonnetelectric.coop

			10 OR 30 60-200 AMP METER ON BUILDING OR RACK			Drawn By :	MS COMMITTEE	Checked By :	MS COMMITTEE	Approved By :	MS COMMITTEE
			DATE	REVISIONS		CV					
			03-29-2018	MOVED DISCONNECT TO THE SIDE OF METER							
			11-19-2019	ADDED SOLID COPPER NOTE							
			11-04-2021	ADDED MAIN BREAKER NOTE							
						Scale :	NONE	Date :	11-04-2021		MS-106



FOR THE MEMBER'S SAFETY, WIRING INSTALLATION AND MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF THE NEC, TDLR AND NESC.

1. Main disconnect panel may not be used as an electrical race way.
2. Any combination of six disconnects totaling no more than 400 amp. REF. NEC, SEC. 230.71.
3. Wire sized to total disconnect sizes.
4. Neutral(s) may be reduced no applications. No reduction of the neutral(s) is allowed on commercial applications.
5. A galvanized trough will have to be used if more than two disconnects are installed. Line electrical contractor by the
6. Reference NEC SEC. 230.9 (A) for meter clearances that state, three feet from openings.
7. Weatherproof fittings required.

3' of conductor tails
out of weatherhead.

Clearance from Window
See note #6

Top Feed Application
(See note #10)

300v to ground.

Only approved electrical metal conduit allowed.

Weatherproof disconnect with single main breaker as defined in the NEC.

Maintain 3–6" distance between the disconnect and the meter can. Member shall use a metal nipple. A Straight or offset nipple is acceptable.

Member installed #6 ground wire attached to 5/8" x 8' ground rod.

Latest update can be found at
<http://www.bluebonnetelectric.coop>



1Ø 400 AMP SERVICE WITH
METER LOOP ON BUILDING - WALL TYPE

DATE	REVISIONS
11-04-2021	Added Main Breaker Note

Drawn By :

Scale :

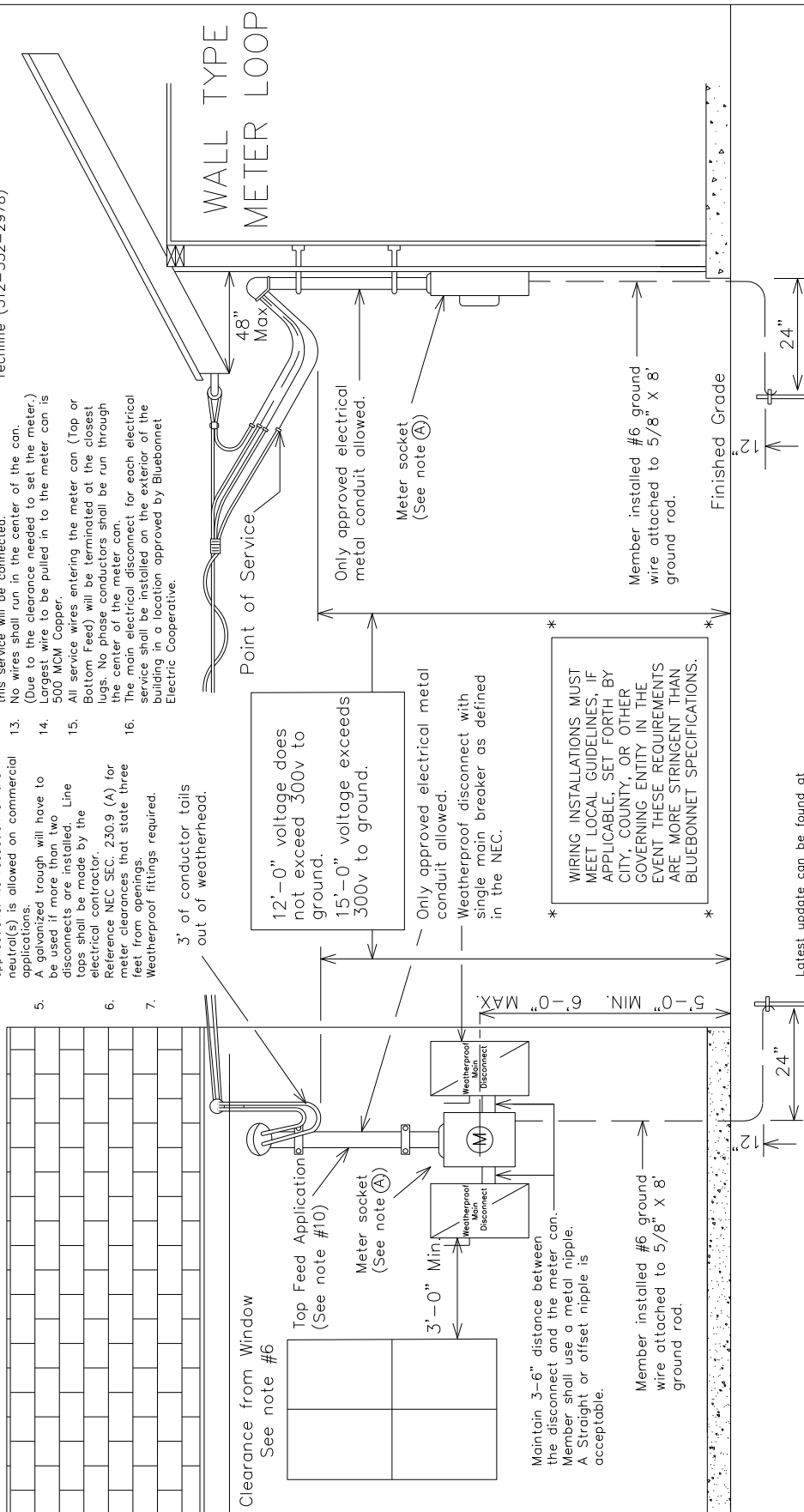
Date: 11-04-2021

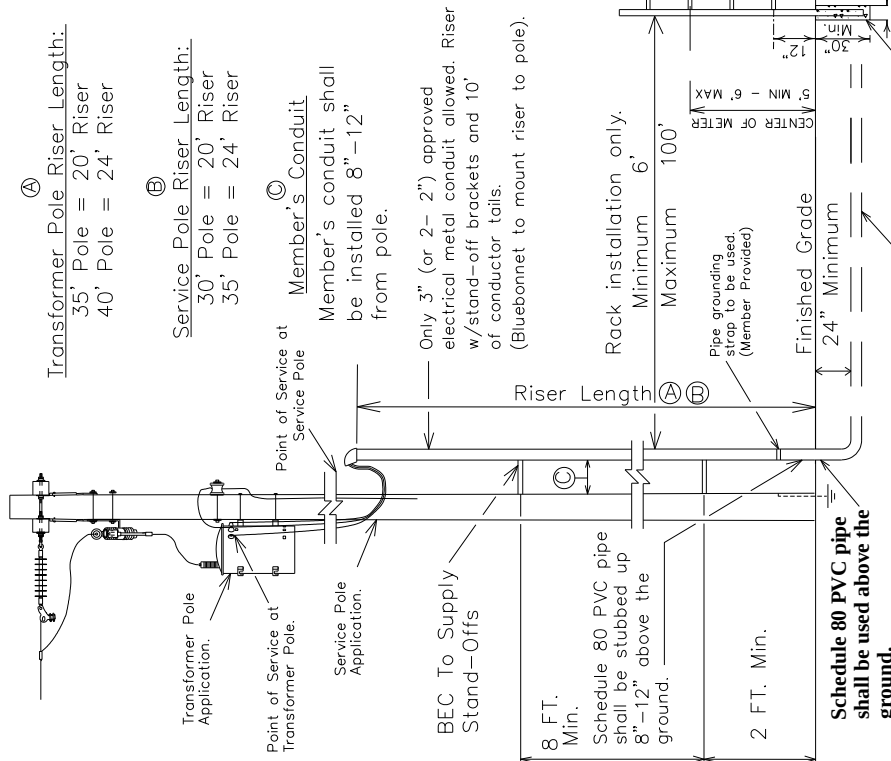
Approved By :

MS-107WT

8. Meter loop must remain unclosed on exterior of structure.
9. Meter loop cannot be mounted on the side of a mobile home.
10. All services entering the meter can from a riser will be top fed.
11. Only 400 amp meter can is allowed, 320 amp meter cans are not allowed.
12. A detailed color sheet shall be filled out and returned to Bluebonnet before this service will be connected.
13. No wires shall run in the center of the can. (Due to the clearance needed to set the meter.)
14. Largest wire to be pulled in to the meter can is 500 MCM Copper.
15. All service wires entering the meter can (Top or Bottom Feed) will be terminated at the closest lugs. No phase conductors shall be run through the center of the meter can.
16. The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.

(A) Type K-4, Bolt-in, Type Meter. Can
Description: 400 amp, 4 terminals, 3 wire,
residential/commercial socket singlephase
self-contained, large coverplate. These me-
ters are available for purchase through Tel-
co or any other electrical supplier provided it
all Bluebonnet Electric Cooperative specifica-
tion (512-332-2978)

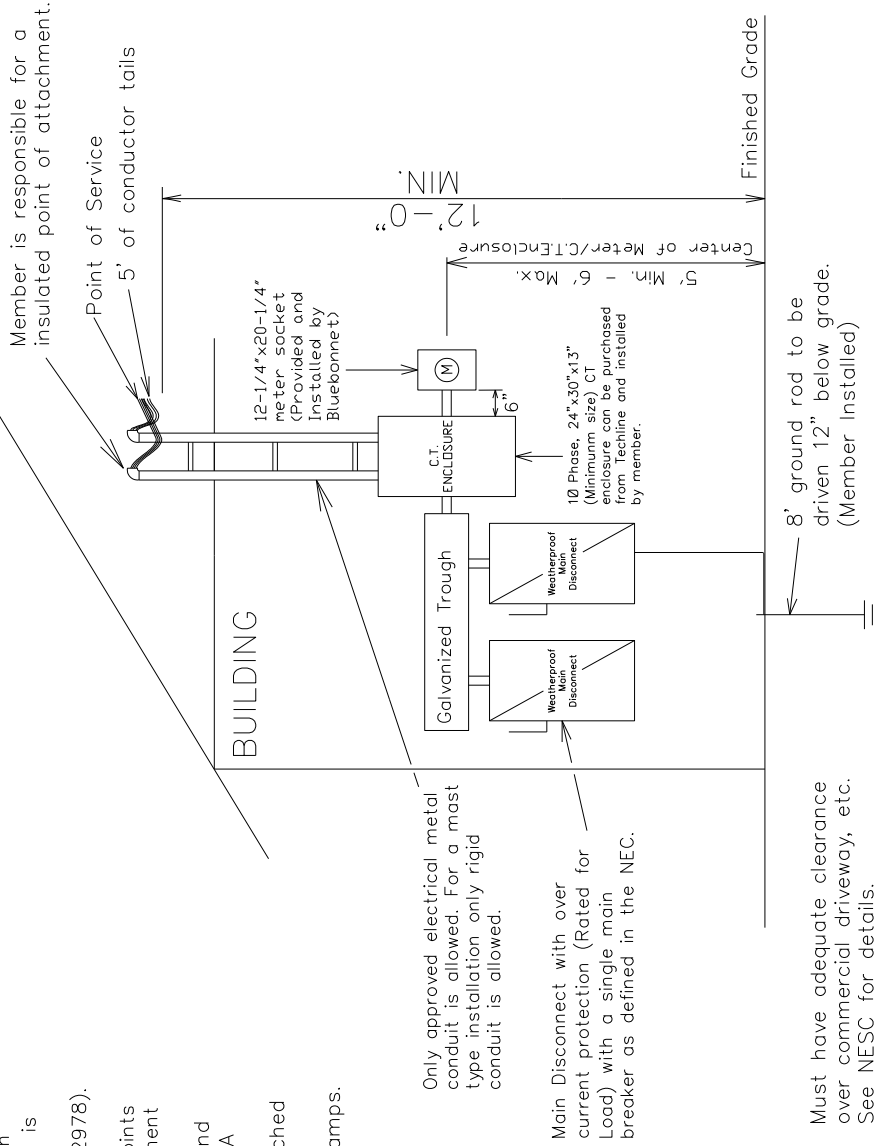




Notes:

1. When more than (1) disconnect is used, a galvanized trough system shall be installed.
2. Line taps shall be made in the galvanized wire trough by the electrical contractor. (See Article 310.10 (H) Per NEC).
3. (2) disconnects can be substituted with (1) disconnect.
4. All disconnects shall have over current protection installed.
5. No more than (2) risers or (2) conductors per phase shall be allowed.
6. Wire shall be sized to total disconnect sizes.
7. Neutral(s) may be reduced no more than two sizes on residential applications. No reduction of the neutral(s) is allowed on commercial application.
8. CT Cans can be purchased from Techline (512-332-2978). Bluebonnet to install meter can, meter and current transformers unless there will be multiple metering points from the trough. Contact the support service department on this type of installation.
9. Maintain 3"-6" distance between the disconnect and the meter can. Member shall use a metal nipple. A straight or offset nipple is acceptable.
10. #6 solid, bare ground copper wire and clamp attached to Bluebonnet's pole ground
11. Total disconnect's will not exceed a total of 800 amps.

12. The electrical contractor will notify Bluebonnet 72 hours in advance to schedule Bluebonnet personnel to deliver the CT's before the service wire is pulled. The electrician shall install them on the rack with the correct polarity before the conductor is brought thru the 30"x42"x16" (minimum size) CT enclosure. Call 800-842-7708 to schedule a connect.
13. The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.



Latest update can be found at
<http://www.bluebonnetelectric.coop>

* WIRING INSTALLATIONS MUST MEET LOCAL GUIDELINES, IF APPLICABLE, SET FORTH BY CITY, COUNTY, OR OTHER GOVERNING ENTITY IN THE EVENT THESE REQUIREMENTS ARE MORE STRINGENT THAN BLUEBONNET SPECIFICATIONS. *

FOR THE MEMBER'S SAFETY, WIRING INSTALLATION AND MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF THE NEC, TDLR AND NESC.

		1 PHASE >400-600 AMP SERVICE ON BUILDING WITH CT METERING ON BUILDING OR RACK		Drawn By : RG	Checked By : MS COMMITTEE	Approved By : MS COMMITTEE
DATE	REVISIONS			Scale :	Date :	
11-19-2019	Added #6 copper note.				11-04-2021	MS-112B1
11-04-2021	Added Main Breaker Note			NONE		

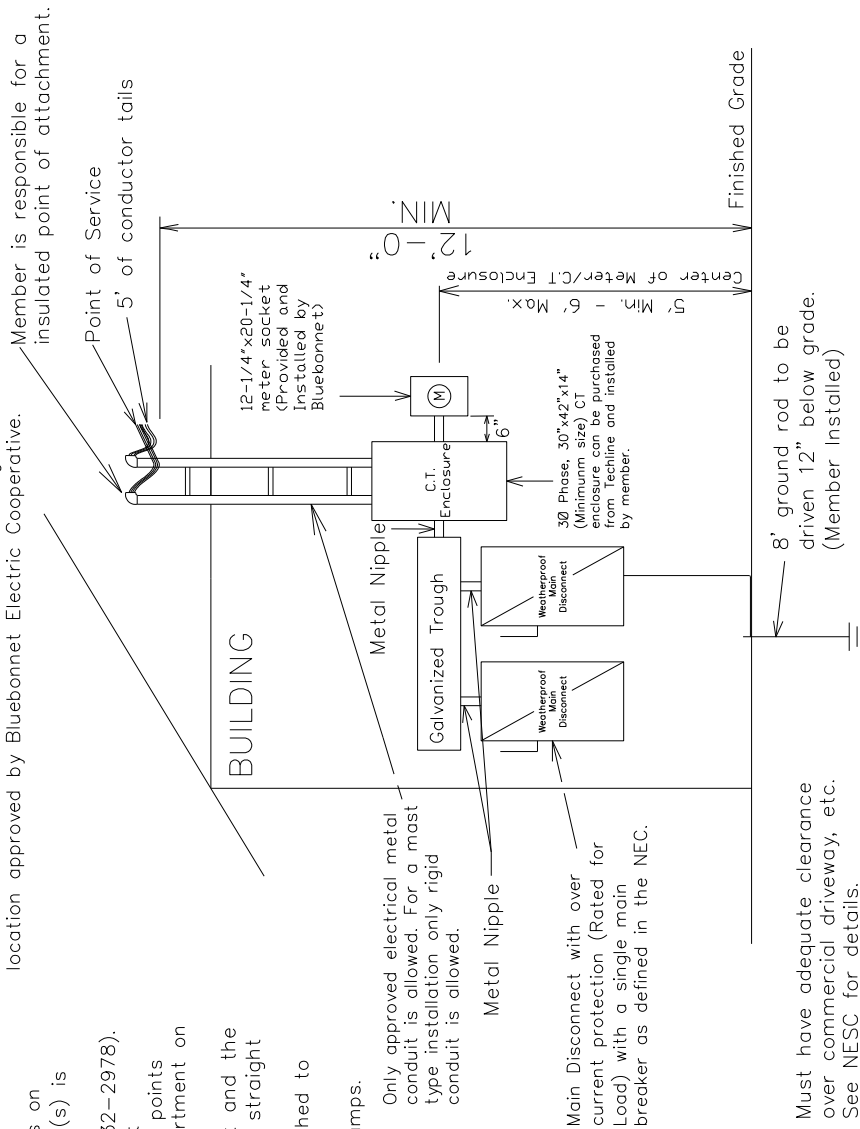
Notes:

- When more than (1) disconnect is used, a galvanized trough system shall be installed.
- Line taps shall be made in the galvanized wire trough by the electrical contractor. (See Article 310.10 (H) Per NEC).
- (2) disconnects can be substituted with (1) disconnect. All disconnects shall have over current protection installed.
- No more than (2) risers or (2) conductors per phase shall be allowed.
- Wire shall be sized to total disconnect sizes.
- Neutral(s) may be reduced no more than two sizes on residential applications. No reduction of the neutral(s) is allowed on commercial application.
- CT Cans can be purchased from Techline (512-332-2978).
- Bluebonnet to install meter can, meter and current transformers unless there will be multiple metering points from the trough. Contact the support service department on this type of installation.
- Maintain 3"-6" distance between the disconnect and the meter can. Member shall use a metal nipple. A straight or offset nipple is acceptable.
- #6 solid, bare ground copper wire and clamp attached to Bluebonnet's pole ground.
- Total disconnect's will not exceed a total of 800 amps.

* WIRING INSTALLATIONS MUST MEET LOCAL GUIDELINES, IF APPLICABLE, SET FORTH BY CITY, COUNTY, OR OTHER GOVERNING ENTITY IN THE EVENT THESE REQUIREMENTS ARE MORE STRINGENT THAN BLUEBONNET SPECIFICATIONS. *

FOR THE MEMBER'S SAFETY, WIRING INSTALLATION AND MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF THE NEC, TDLR AND NESC.

- The electrical contractor will notify Bluebonnet 72 hours in advance to schedule Bluebonnet personnel to deliver the CT's before the service wire is pulled. The electrician shall install them on the rack with the correct polarity before the conductor is brought thru the 30"x42"x16" (minimum size) CT enclosure. Call 800-842-7708 to schedule a connect. The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.
-
-



Latest update can be found at <http://www.bluebonnetelectric.coop>



3 PHASE >200-600 AMP SERVICE ON BUILDING WITH CT METERING ON BUILDING OR RACK REVISIONS			Drawn By :	Checked By :	Approved By :
DATE			RG	MS COMMITTEE	MS COMMITTEE
11-19-2019	Added solid copper note.				
04-16-2021	Removed Single phase from CT enclosure note.				
11-04-2021	Added Main Breaker Note				
			Scale :	Date :	
			NONE	11-4-2021	MS-112B3

Notes:

1. Line taps shall be made in the galvanized wire trough by the electrical contractor.
2. When more than (1) disconnect is used, a galvanized trough system shall be installed.
3. Weatherproof fittings are required.
4. Two (2) disconnects could be substituted with (1) disconnect. All disconnects shall have over current protection installed.
5. No more than two (2) risers or two (2) conductors per phase shall be allowed.
6. Wire shall be sized to total disconnect sizes.
7. Neutral(s) may be reduced no more than two sizes on residential applications. No reduction of the neutral(s) is allowed on commercial application.
8. Bluebonnet pole must remain free of structures and private attachments other than service riser assembly.
9. All secondary connections on pole will be made by Bluebonnet.
10. The electrical contractor will notify Bluebonnet 72 hours in advance to schedule Bluebonnet personnel to deliver the CT's before the service wire is pulled. The electrician shall install them on the rack with the correct polarity before the conductor is brought thru the 30"x42x16" (minimum size) CT enclosure. Call 800-842-7708 to schedule a connect.
11. CT enclosures can be purchased from Techline (512-332-2978).
12. Maintain 3"-6" distance between the disconnect and the meter can. Member shall use a metal nipple. A straight or offset nipple is acceptable.
13. #6 solid, bare ground copper wire and clamp attached to Bluebonnet's pole ground.
14. The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.

Transformer Pole Riser Length:

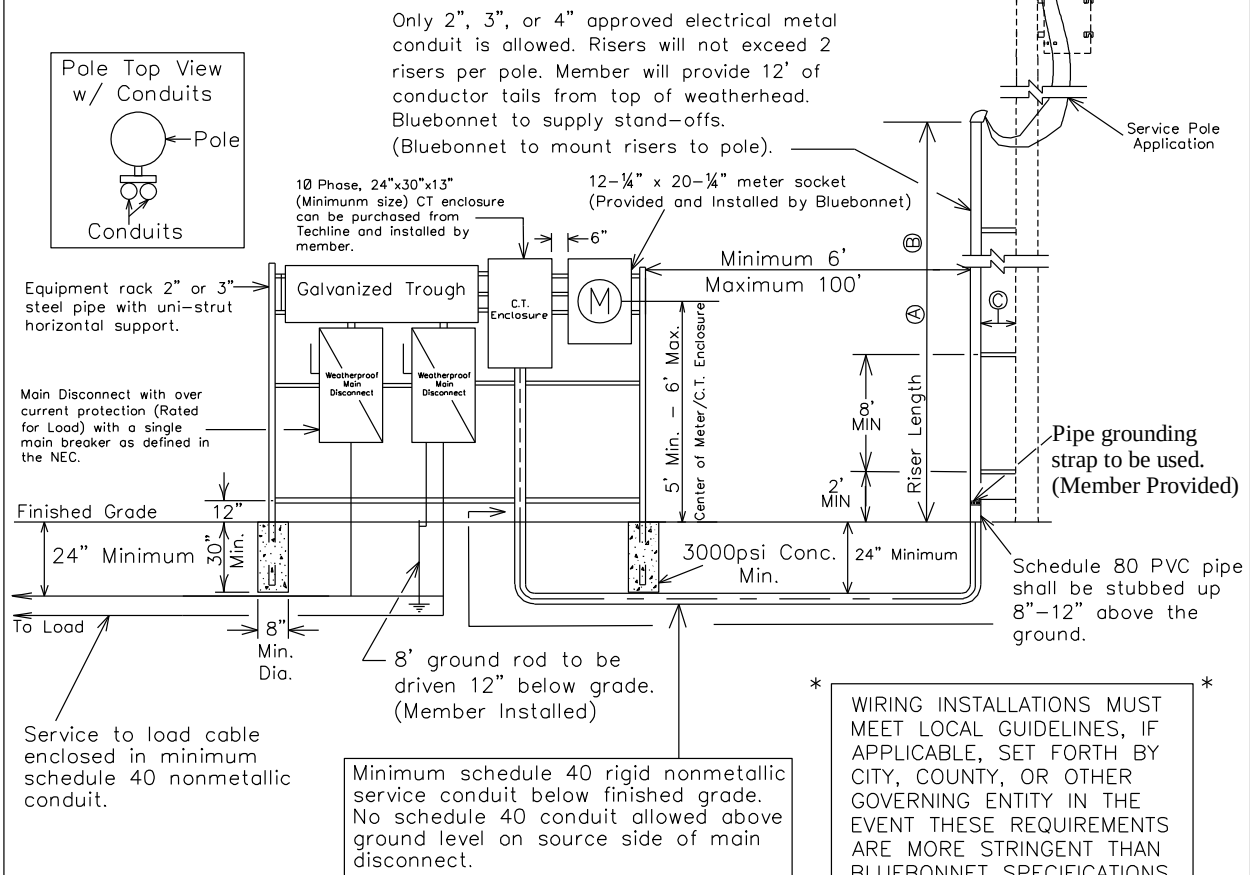
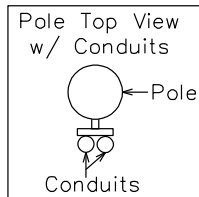
35' Pole = 20' Riser
40' Pole = 24' Riser

Service Pole Riser Length:

30' Pole = 20' Riser
35' Pole = 24' Riser

Member's Conduit

Member's conduit shall be installed 8"-12" from pole



* WIRING INSTALLATIONS MUST MEET LOCAL GUIDELINES, IF APPLICABLE, SET FORTH BY CITY, COUNTY, OR OTHER GOVERNING ENTITY IN THE EVENT THESE REQUIREMENTS ARE MORE STRINGENT THAN BLUEBONNET SPECIFICATIONS. *

FOR THE MEMBER'S SAFETY, WIRING INSTALLATION AND MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF THE NEC, TDLR AND NESC.

Latest update can be found at <http://www.bluebonnetelectric.coop>

1 PHASE >400-800 AMP SERVICE WITH CT METERING ON RACK



DATE	REVISIONS	Drawn By :	Checked By :	Approved By :
11-28-2017	Bold lettering of schedule 80 PVC	RG	MS COMMITTEE	MS COMMITTEE
11-19-2019	Added Solid Copper Note.			
04-16-2021	Changed the size of the CT Meter Can requirements.	Scale :	DATE:	MS-113B1
11-04-2021	Added Main Breaker Note	NONE	11-04-2021	

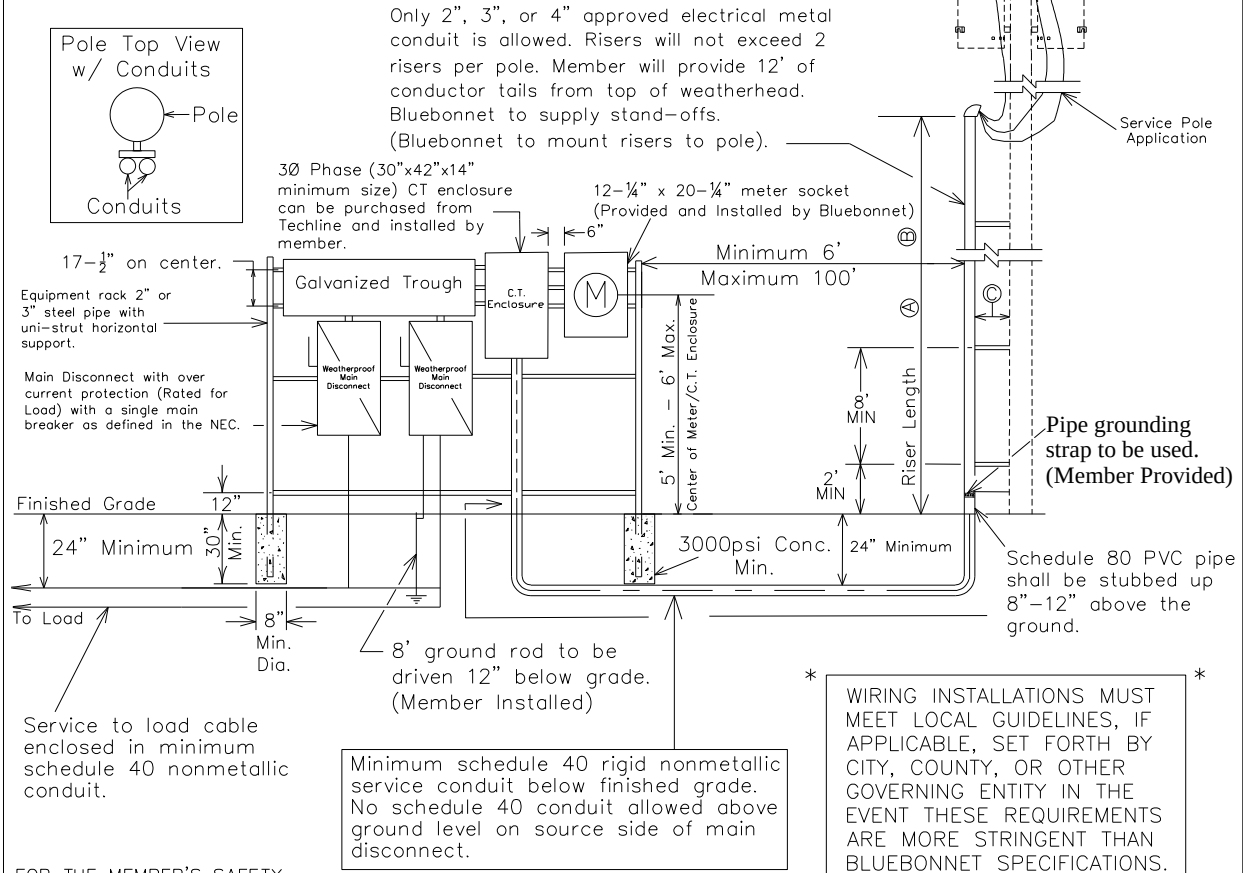
Notes:

- Line taps shall be made in the galvanized wire trough by the electrical contractor.
- When more than (1) disconnect is used, a galvanized rough system hall be installed.
- Weatherproof fittings are required.
- Two (2) disconnects could be substituted with (1) disconnect. All disconnects shall have over current protection installed.
- No more than two (2) risers or two (2) conductors per phase shall be allowed.
- Wire shall be sized to total disconnect sizes.
- Neutral(s) may be reduced no more than two sizes on residential applications. No reduction of the neutral(s) is allowed on commercial application.
- Bluebonnet pole must remain free of structures and private attachments other than service riser assembly.
- All secondary connections on pole will be made by Bluebonnet.
- The electrical contractor will notify Bluebonnet 72 hours in advance to schedule Bluebonnet personnel to deliver the CT's before the service wire is pulled. The electrician shall install them on the rack with the correct polarity before the conductor is brought thru the 30"x42" (minimum size) CT enclosure. Call 800-842-7708 to schedule a connect.
- CT enclosures can be purchased from Techline (512-332-2978).
- Maintain 3"-6" distance between the disconnect and the meter can. Member shall use a metal nipple. A straight or offset nipple is acceptable.
- #6 solid, bare ground copper wire and clamp attached to Bluebonnet's pole ground.
- The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.

Transformer Pole Riser Length:
35' Pole = 20' Riser
40' Pole = 24' Riser

Service Pole Riser Length:
30' Pole = 20' Riser
35' Pole = 24' Riser

Member's Conduit
Member's conduit shall be installed 8"-12" from pole



Latest update can be found at
<http://www.bluebonnetelectric.coop/myHome/electricServices/meterLoop.aspx>

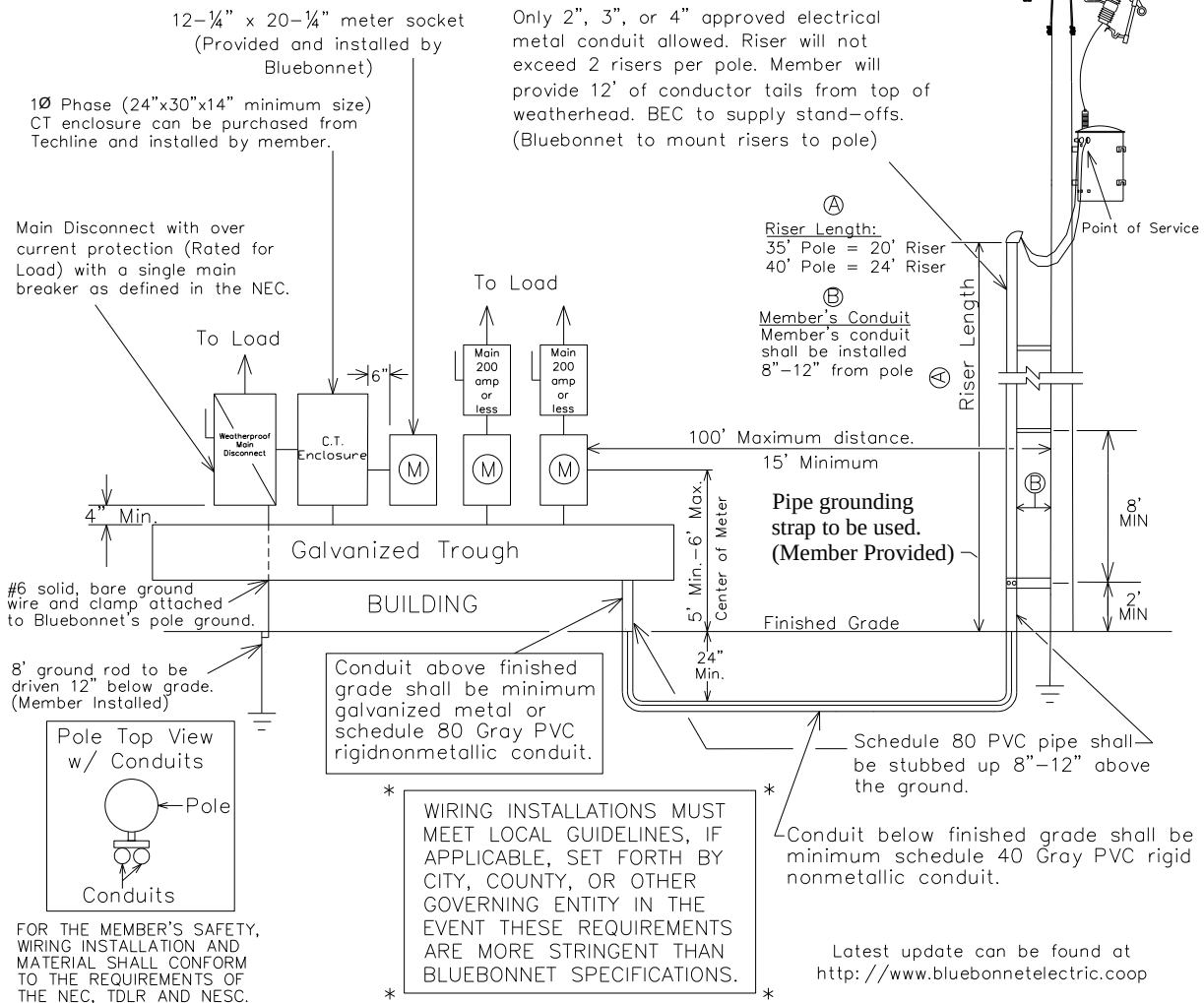
3 PHASE >200-800 AMP SERVICE
WITH CT METERING ON RACK



DATE	REVISIONS	Drawn By :	Checked By :	Approved By :
11-28-2017	Bold lettering of schedule 80 PVC	RG	MS COMMITTEE	MS COMMITTEE
11-19-2019	Added Solid Copper Note.			
04-16-2021	Removed Single Phase from the CT Enclosure Note.			
11-04-2021	Added Main Breaker Note			
		Scale :	DATE:	
		NONE	11-04-2021	MS-113B3

Notes:

- Line taps shall be made in the galvanized wiring trough by the electrical contractor.
- Weatherproof fittings Required.
- (2) disconnects could be substituted with (1) disconnect. All disconnects shall have over current protection installed.
- No more than (2) risers or (2) conductors per phase shall be allowed.
- Wire shall be sized to total name plate disconnect sizes.
- Neutral(s) may be reduced no more than two sizes on residential application. No reduction of the neutral(s) is allowed on commercial application.
- The electrical contractor will notify Bluebonnet 72 hours in advance to schedule Bluebonnet personnel to deliver the CT's before the service wire is pulled. The electrician shall install them on the rack with the correct polarity before the conductor is brought thru the 30"x42" (minimum size) CT enclosure. Call 800-842-7708 to schedule a connect.
- More than (6) main disconnects require a properly sized main disconnect ahead of the galvanized trough.
- Bluebonnet pole must remain free of structures and private attachments other than meter loop riser assembly.
- Meter assembly must remain unenclosed on exterior of structure.
- Type K-4, Bolt-in type meter can: Description: 400 amp, 4 terminals, 3-wire, residential/commercial socket single phase self-contained, large cover plate. These meter cans are available for purchase through Techline (512-332-2978) or any other electrical supplier provided it meets all Bluebonnet Electric Cooperative specifications.
- Maintain 3"-6" distance from the disconnect and the meter can. Member shall use a metal nipple. A straight or offset nipple is acceptable.
- The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.



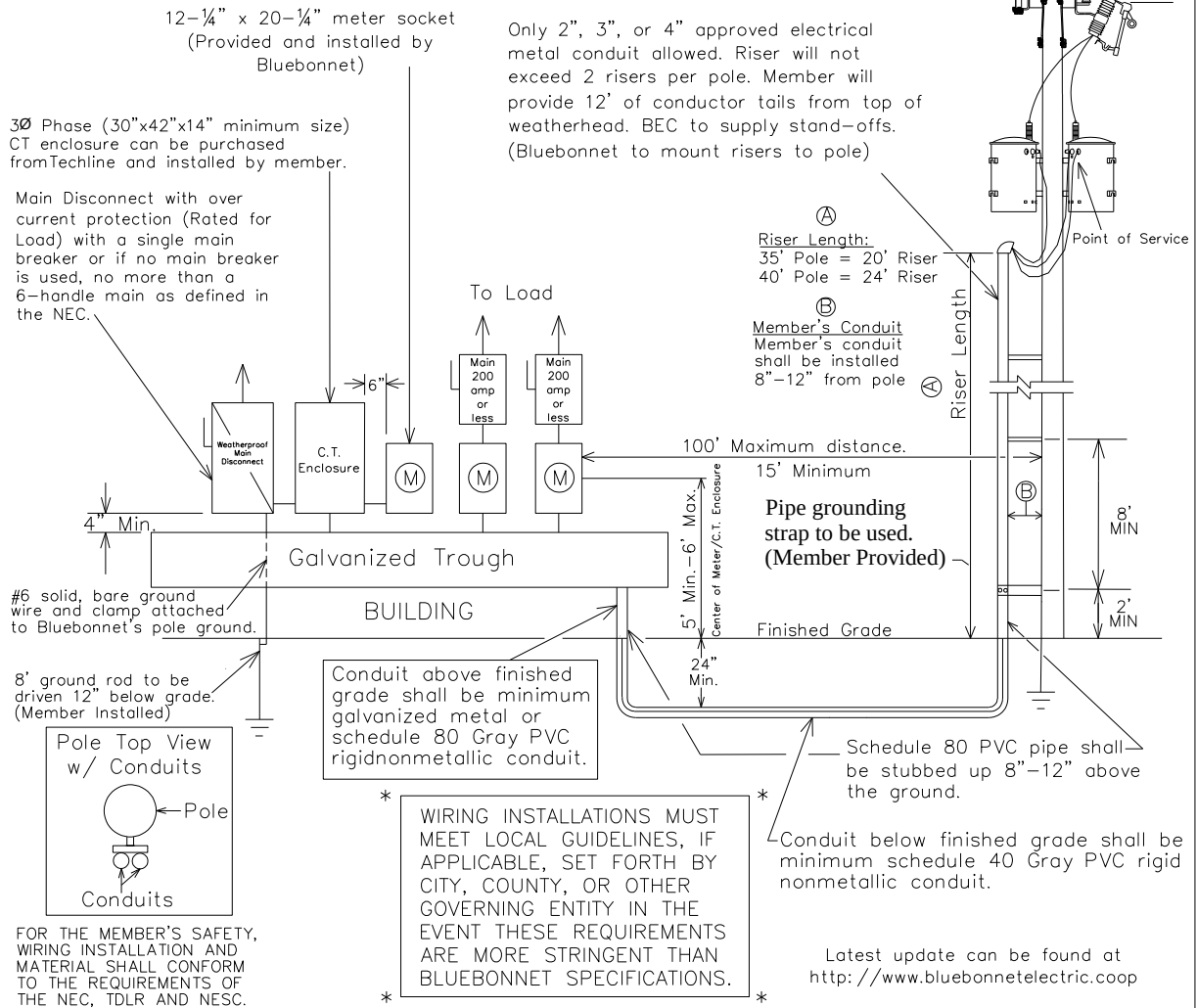
1Ø 400-800 TOTAL AMPS WITH MULTIPLE METERING POINTS ON BUILDING. (RISER TYPE)



DATE	REVISIONS	Drawn By :	Checked By :	Approved By :
11-28-2017	Bold lettering of Pipe grounding Strap	RG	MS COMMITTEE	MS COMMITTEE
11-19-2019	Added Solid Copper Note.			
04-19-2021	Changed the size of the CT Meter Can requirements.	Scale :	Date :	MS-114A1
11-04-2021	Added Main Breaker Note	NONE	11-04-2021	

Notes:

1. Line taps shall be made in the galvanized wiring trough by the electrical contractor.
2. Weatherproof fittings Required.
3. (2) disconnects could be substituted with (1) disconnect. All disconnects shall have over current protection installed.
4. No more than (2) risers or (2) conductors per phase shall be allowed.
5. Wire shall be sized to total name plate disconnect sizes.
6. Neutral(s) may be reduced no more than two sizes on residential application. No reduction of the neutral(s) is allowed on commercial application.
7. The electrical contractor will notify Bluebonnet 72 hours in advance to schedule Bluebonnet personnel to deliver the CT's before the service wire is pulled. The electrician shall install them on the rack with the correct polarity before the conductor is brought thru the 30"x42" (minimum size) CT enclosure. Call 800-842-7708 to schedule a connect.
8. More than (6) main disconnects require a properly sized main disconnect ahead of the galvanized trough.
9. Bluebonnet pole must remain free of structures and private attachments other than meter loop riser assembly.
10. Meter assembly must remain unenclosed on exterior of structure.
11. Type K-4, Bolt-in type meter can: Description: 400 amp, 4 terminals, 3-wire, residential/commercial socket single phase self-contained, large cover plate. These meter cans are available for purchase through Techline (512-332-2978) or any other electrical supplier provided it meets all Bluebonnet Electric Cooperative specifications.
12. Maintain 3"-6" distance from the disconnect and the meter can. Member shall use a metal nipple. A straight or offset nipple is acceptable.
13. No more than one disconnect per enclosure.
14. The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.



3 PHASE 200-800 TOTAL AMPS WITH
MULTIPLE METERING POINTS ON BUILDING.
(RISER TYPE)



DATE	REVISIONS	Drawn By :	Checked By :	Approved By :
11-28-2017	Bold lettering of pipe grounding strap	RG	MS COMMITTEE	MS COMMITTEE
11-19-2019	Added Solid Copper Note.			
04-19-2021	Removed Single Phase from the CT Enclosure Note.	Scale :	Date :	
11-04-2021	Added Main Breaker Note	NONE	11-04-2021	MS-114B3

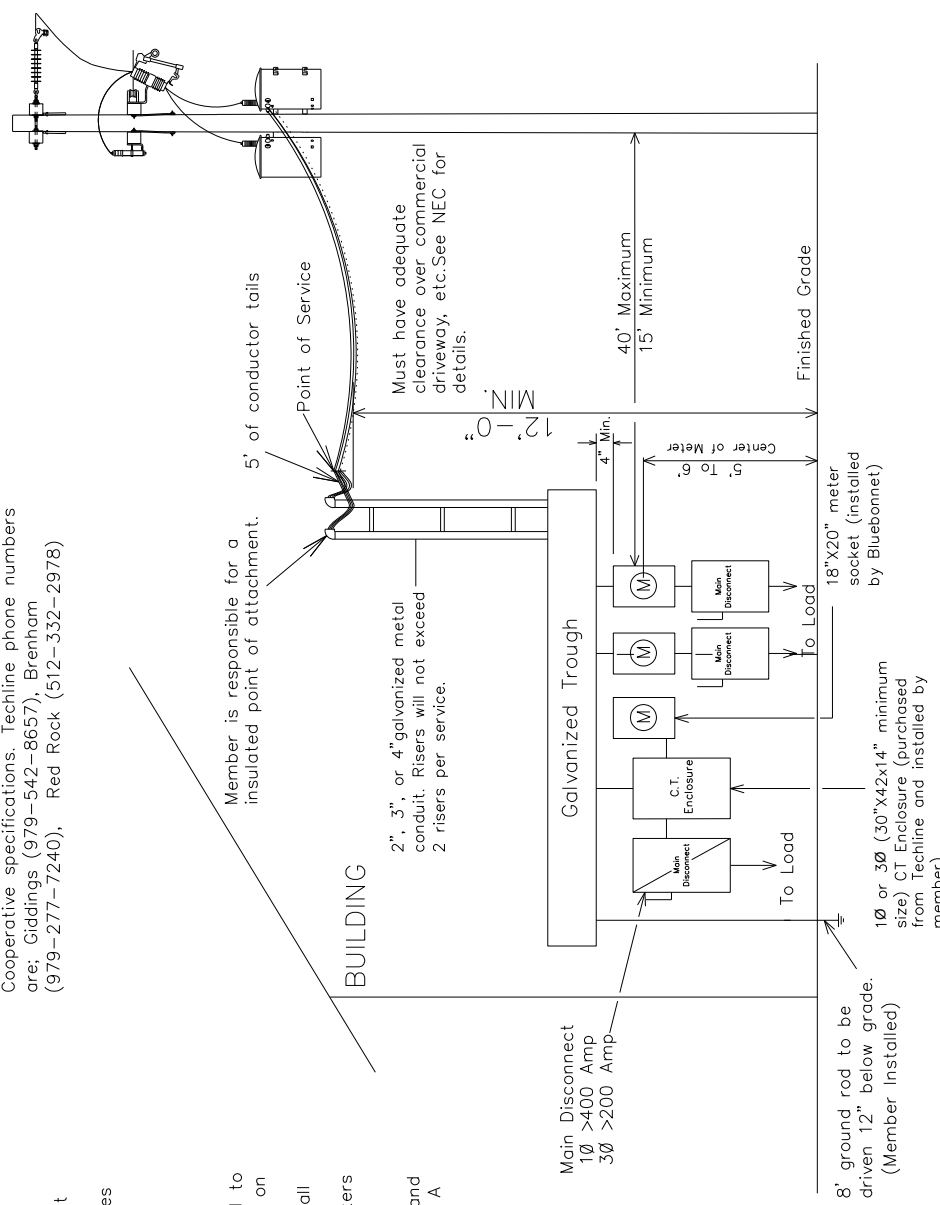
Notes:

- When more than (1) disconnect is used, a galvanized trough system shall be installed.
- Line taps shall be made in the galvanized wire trough by the electrical contractor.
- (2) disconnects can be substituted with (1) fused disconnect.
- No more than (2) risers or (2) conductors per phase shall be allowed.
- Wire shall be sized to total name plate disconnect sizes.
- Neutral(s) may be reduced no more than two sizes on residential applications. No reduction of the neutral(s) is allowed on commercial application.
- Total disconnect's will not exceed a total of 800 amps.
- The electrical contractor will notify Bluebonnet 72 hours in advance to schedule Bluebonnet personal to deliver the CT's. The electrician shall install them on the rack with the correct polarity before the conductor is brought thru the 30"x42" CT can. Call 800-842-7708 to schedule a connect.
- Gutter can be mounted on top or bottom of meters as long as the center of the meter distance in 5'-6".
- Maintain 3"-6" distance between the disconnect and the meter can. Member shall use a metal nipple. A straight or offset nipple is acceptable.

* WIRING INSTALLATIONS MUST MEET LOCAL GUIDELINES, IF APPLICABLE, SET FORTH BY CITY, COUNTY, OR OTHER GOVERNING ENTITY IN THE EVENT THESE REQUIREMENTS ARE MORE STRINGENT THAN BLUEBONNET SPECIFICATIONS. *

FOR THE MEMBER'S SAFETY, WIRING INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF THE NEC, TDLR AND NESC.

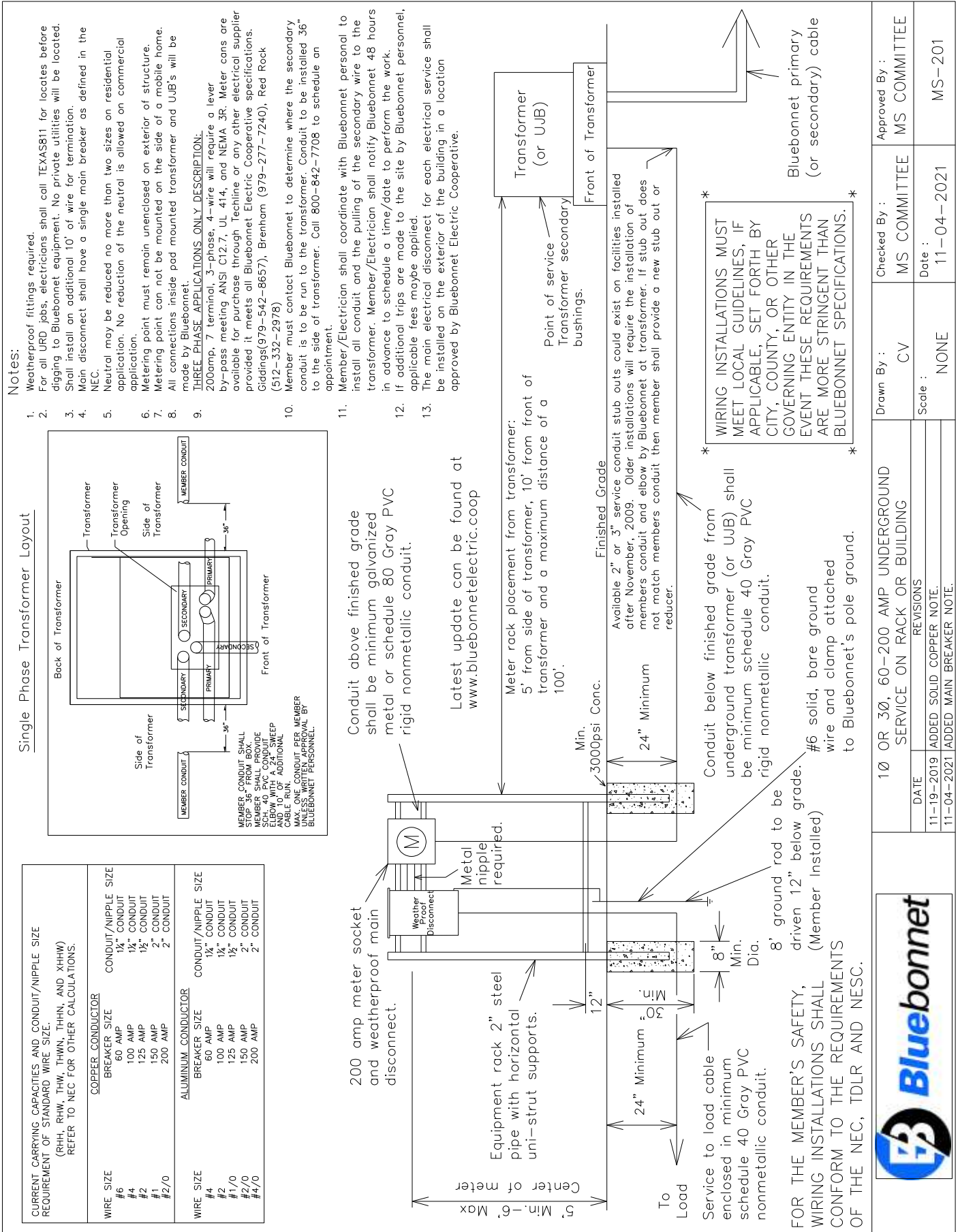
- Type K-4, Bolt-in type meter can:
Description: 400 amp, 4 terminals, 3-wire, residential/commercial socket self-contained, large coverplate. These meter cans are available for purchase through Techline or any other electrical supplier provided it meets all Bluebonnet Electric Cooperative specifications. Techline phone numbers are; Giddings (979-542-8657), Brenham (979-277-7240), Red Rock (512-332-2978)



Latest update can be found at

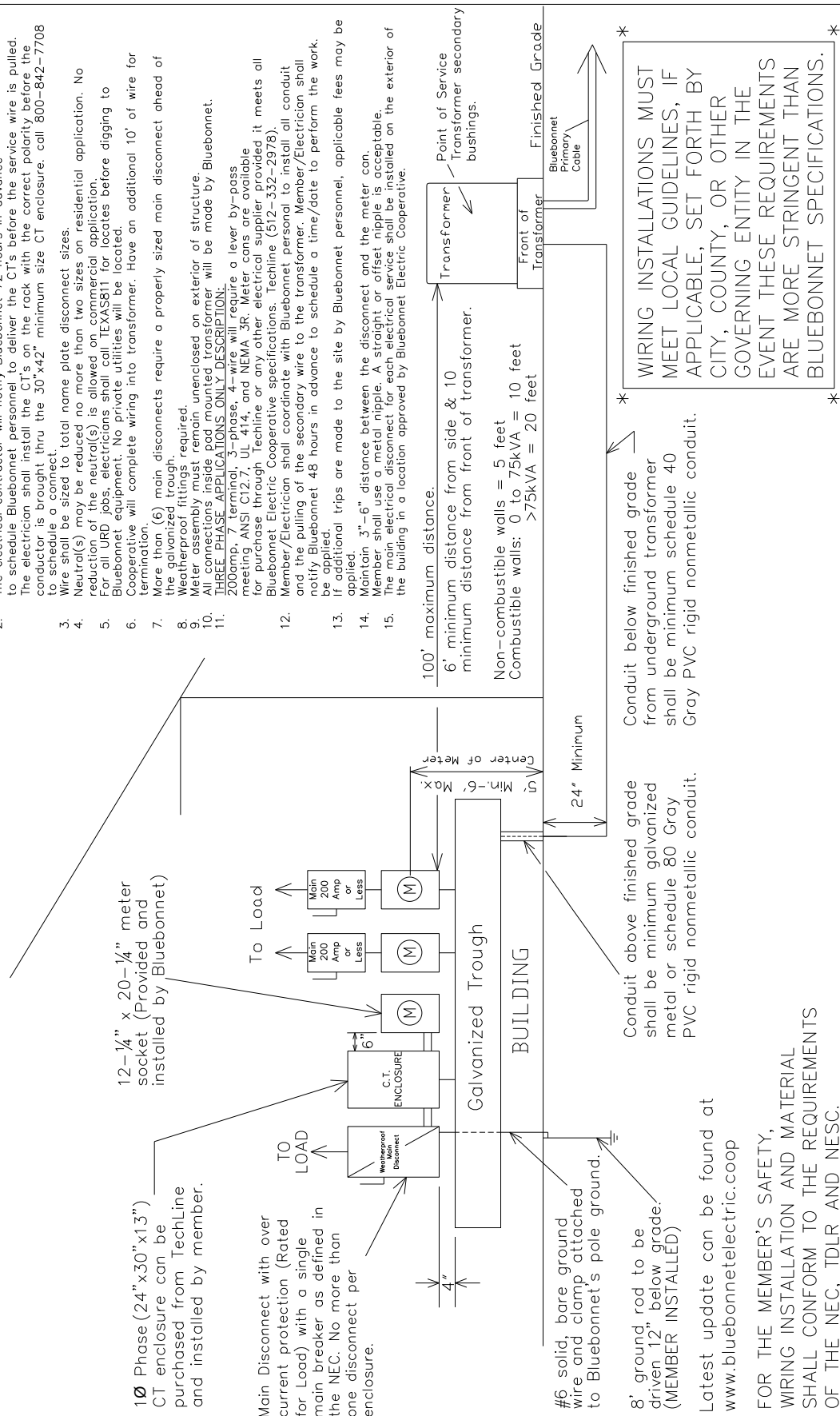
<http://www.bluebonnetelectric.coop/myHome/electricServices/meterLoop.aspx>

		10 400-800 TOTAL AMP OR 300 200-800 TOTAL AMP WITH MULTIPLE METERING POINTS ON BUILDING. SERVICE TYPE		Drawn By : RG	Checked By : MS COMMITTEE	Approved By : TE
DATE	11/29/2017	Changed the dimension on the CT Enclosure.	REVISIONS	Scale : NONE	Date : 11/29/2017	MS-115



Notes:

- Line taps shall be made in the galvanized wiring trough by the electrical contractor. The electrical contractor will notify Bluebonnet 72 hours in advance.
- To schedule Bluebonnet personnel to deliver the CT's before the service wire is pulled. The electrician shall install the CT's on the rack with the correct polarity before the conductor is brought thru the 30"x42" minimum size CT enclosure, call 800-842-7708 to schedule a connect.
- Wire shall be sized to total name plate disconnect sizes.
- Neutral(s) may be reduced no more than two sizes on residential application. No reduction of the neutral(s) is allowed on commercial application.
- For all URD jobs, electricians shall call TEXAS811 for locates before digging to Bluebonnet equipment. No private utilities will be located.
- Cooperative will complete wiring into transformer. Have an additional 10' of wire for termination.
- More than (6) main disconnects require a properly sized main disconnect ahead of the galvanized trough.
- Weatherproof fittings required.
- Meter assembly must remain unenclosed on exterior of structure.
- All connections inside pad mounted transformer will be made by Bluebonnet.
- THREE PHASE APPLICATIONS ONLY DESCRIPTION:
2000amp, 7 terminal, 3-phase, 4-wire will require a lever by-pass meeting ANSI C12.7, UL 414, and NEMA 3R. Meter cans are available for purchase through Techline or any other electrical supplier provided it meets all Bluebonnet Electric Cooperative specifications. Techline (512-332-2978).
- Member/Electrician shall coordinate with Bluebonnet personnel to install all conduit and the pulling of the secondary wire to the transformer. Member/Electrician shall notify Bluebonnet 48 hours in advance to schedule a time/date to perform the work. be applied.
- If additional trips are made to the site by Bluebonnet personnel, applicable fees may be applied.
- Maintain 3"-6" distance between the disconnect and the meter can.
- Member shall use a metal nipple. A straight or offset nipple is acceptable.
- The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.



WIRING INSTALLATIONS MUST MEET LOCAL GUIDELINES, IF APPLICABLE, SET FORTH BY CITY, COUNTY, OR OTHER GOVERNING ENTITY IN THE EVENT THESE REQUIREMENTS ARE MORE STRINGENT THAN BLUEBONNET SPECIFICATIONS.

	1 PHASE >400 AMP UNDERGROUND WITH MULTIPLE METERING POINTS AND CT METERING ON BUILDING.		Drawn By :	Checked By :	Approved By :
	DATE	REVISIONS	RG	MS COMMITTEE	MS COMMITTEE
	04-19-2021	Changed the size of the CT Meter Can requirements.	Scale :	Date :	
	11-04-2021	Added Main Breaker Note	NONE	11-04-2021	MS-202A1

Notes:

- Line taps shall be made in the galvanized wiring trough by the electrical contractor.
- The electrical contractor will notify Bluebonnet 72 hours in advance to schedule Bluebonnet personnel to deliver the CT's before the service wire is pulled. The electrician shall install the CT's on the rack with the correct polarity before the conductor is brought thru the 30"x42" minimum size CT enclosure. call 800-842-7708 to schedule a connect.
- Wire shall be sized to total name plate disconnect sizes.
- Neutral(s) may be reduced no more than two sizes on residential application. No reduction of the neutral(s) is allowed on commercial application. For all URD jobs, electricians shall call TEXAS811 for locates before digging to Bluebonnet equipment. No private utilities will be located.
- Cooperative will complete wiring into transformer. Have an additional 10' of wire for termination.
- More than (6) main disconnects require a properly sized main disconnect ahead of the galvanized trough.
- Weatherproof fittings required.
- Meter assemblies must remain unenclosed on exterior of structure.
- All connections inside pad mounted transformer will be made by Bluebonnet.
- THREE PHASE APPLICATIONS ONLY DESCRIPTION:
200amp, 7 terminal, 3-phase, 4-wire will require a lever by-pass meeting ANSI C12.7, UL 414, and NEMA 3R. Meter cans are available for purchase through Techline or any other electrical supplier provided it meets all Bluebonnet Electric Cooperative specifications. Techline (512-332-2978).
- Member/Electrician shall coordinate with Bluebonnet personnel to install all conduit and the pulling of the secondary wire to the transformer. Member/Electrician shall notify Bluebonnet 48 hours in advance to schedule a time/date to perform the work.
- If additional trips are made to the site by Bluebonnet personnel, applicable fees may be applied.
- Maintain 3"-6" distance between the disconnect and the meter can. Member shall use a metal nipple. A straight or offset nipple is acceptable.
- The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.

3Ø Phase CT enclosure

(30"x42"x14" minimum size)

can be purchased from

TechLine and installed by

member.

12-1/4" x 20-1/4" meter
socket (Provided and installed
by Bluebonnet).

Main Disconnect with over
current protection (Rated
for Load) with a single
main breaker as defined in
the NEC. No more than
one disconnect per
enclosure.

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

To Load

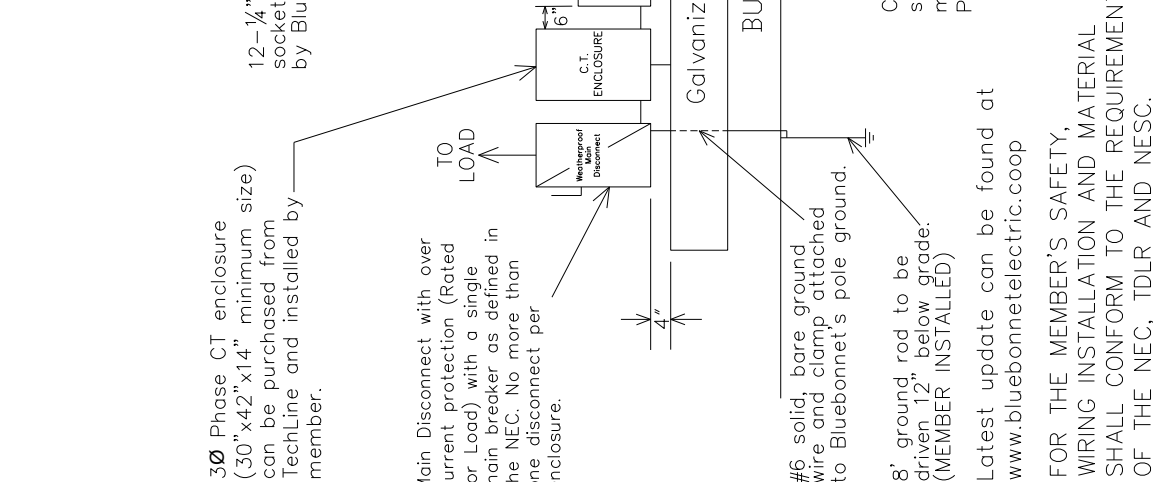
To Load

To Load

To Load

To Load

To Load



Conduit above finished grade
shall be minimum galvanized
metal or schedule 80 Gray
PVC rigid nonmetallic conduit.

Conduit below finished grade
from underground transformer
shall be minimum schedule 40
Gray PVC rigid nonmetallic conduit.

Latest update can be found at
www.bluebonnetelectric.coop

FOR THE MEMBER'S SAFETY,
WIRING INSTALLATION AND MATERIAL
SHALL CONFORM TO THE REQUIREMENTS
OF THE NEC, TDLR AND NESC.

WIRING INSTALLATIONS MUST
MEET LOCAL GUIDELINES, IF
APPLICABLE, SET FORTH BY
CITY, COUNTY, OR OTHER
GOVERNING ENTITY IN THE
EVENT THESE REQUIREMENTS
ARE MORE STRINGENT THAN
BLUEBONNET SPECIFICATIONS.



3 PHASE >200 AMP UNDERGROUND WITH MULTIPLE METERING POINTS AND CT METERING ON BUILDING.		Drawn By :	Checked By :	Approved By :
DATE	REVISIONS	RG	MS COMMITTEE	MS COMMITTEE
04-19-2021	Removed Single Phase from the CT Enclosure Note.	Scale :	Date :	MS-202B3
11-04-2021	Added Main Breaker Note	NONE	11-04-2021	

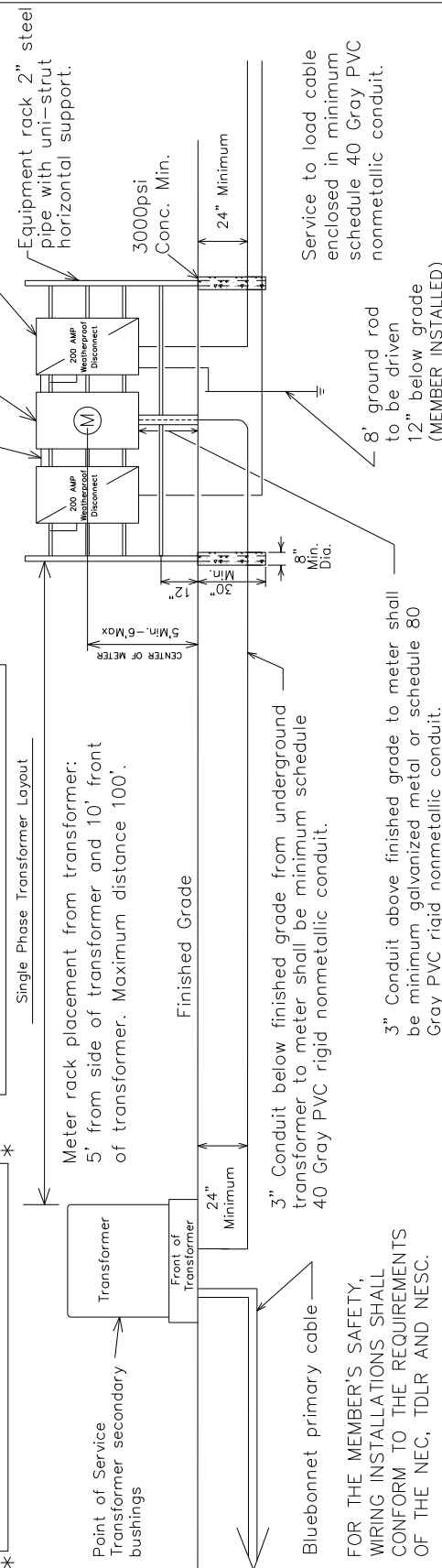
1. Main disconnect panel may not be used as a electrical race way.
2. Line taps shall be made by the electrical contractor if a galvanized wiring trough is used.
3. Weatherproof fittings required.
4. Any combination of six disconnects totaling no more than 400 amps can be used. REF. NEC, SEC 230.71
5. Recommended wire size is either parallel 2/0 THHN copper or parallel 4/0 THHN aluminum.
6. Neutrals may be reduced no more than two sizes on residential applications. No reduction of the neutrals is allowed on commercial applications.
7. Member shall install an additional of 10' wire for termination.
8. Weatherproof main disconnect panels shall have a single main breaker or 6-handle main as defined in the NEC.
9. Metering point must remain unenclosed on exterior of structure.
10. Metering cannot be mounted on the side of a mobile home.

11. All secondary connections in transformer. No made by Bluebonnet.
12. Only 400 Amps meter cans are allowed. No 320 Amp Meter Cans are allowed.
13. All service wires entering the meter can (Top or Bottom Feed) will be terminated at the closest lugs. No phase conductors shall be run through the center of the meter can.
14. Member must contact Bluebonnet to determine where the secondary conduit is to be run to the transformer. Conduit to be installed 36" to the side of transformer. Call 800-842-7708 to schedule an appointment.
15. Member/Electrician shall coordinate with Bluebonnet personnel to install all conduit and the pulling of the secondary wire to the transformer. Member/Electrician shall notify Bluebonnet 48 hours in advance to schedule a time/date to perform the work.
16. If additional trips are made to the site by Bluebonnet personnel, applicable fees may be applied.
17. Maintain 3"-6" distance between the disconnect and the meter can. Member shall use a metal nipple. A straight or offset nipple is acceptable.
18. Largest wire to be pulled in to the meter can is 500 MCM Cooper.
19. A detailed load sheet shall be filled out and returned to Bluebonnet before the service will be connected.
20. #6 solid, bare ground copper wire and clamp to Bluebonnet's pole ground.
21. The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.

[illegible]

WIRING INSTALLATIONS MUST MEET LOCAL GUIDELINES, IF APPLICABLE, SET FORTH BY CITY, COUNTY, OR OTHER GOVERNING ENTITY IN THE EVENT THESE REQUIREMENTS ARE MORE STRINGENT THAN BLUEBONNET SPECIFICATIONS.

Landis & Gyr, Type K-4. Description: 400 amp, 4 terminals, 3 wire, residential/commercial socket single phase self-contained, large coverplate. The meter lugs can accommodate up to 500 MCM. These meter cans are available for purchase through Tecline or any other electrical supplier provided it meets all Bluebonnet Electric Cooperative specifications. Tecline phone numbers: Red Rock (512)332-2978.



FOR THE MEMBER'S SAFETY,
WIRING INSTALLATIONS SHALL
CONFORM TO THE REQUIREMENTS
OF THE NEC, TDLR AND NESC.

	1Ø 400 AMP URD SERVICE ON RACK OR BUILDING WITH K BASE BOLTED IN METER SOCKET		Drawn By : RG	Checked By : MS COMMITTEE	Approved By : MS COMMITTEE
	DATE	REVISIONS	Scale :	Date :	
	11-20-19	Added Solid Copper Note.		11-04-2021	MS-203
	11-04-21	Added Main Breaker Note			

Notes:

1. Line taps shall be made in the galvanized trough by the electrical contractor.
2. Weatherproof fittings required.
3. Two disconnects could be substituted with (1) disconnect. All disconnects shall have over current protection.
4. Wire shall be sized to total disconnect sizes.
5. Neutral(s) may be reduced no more than two sizes on residential application. No reduction of the neutral(s) is allowed on commercial application.
6. Member shall contact Bluebonnet Electric to determine the secondary conduit location. Conduit to be installed 36" to the side of transformer. Call 800-842-7708 to schedule an appointment.
7. Bluebonnet will complete wiring into transformer. Have sufficient amount of wire for termination. Member shall install an additional 10' of wire for termination.
8. All secondary connections to be made inside transformer by Bluebonnet.
9. Bluebonnet to provide the CT's.
10. Meter assembly must remain unenclosed on exterior of structure.
11. Member/Electrician shall coordinate with Bluebonnet personnel to install all conduit and the pulling of the secondary wire to the transformer. Member/Electrician shall notify Bluebonnet 48 hours in advance to schedule a time/date to perform the work.
12. If additional trips are made to the site by Bluebonnet personnel, applicable fees may be applied.
13. Maintain 3"-6" distance between the disconnect and the meter can. Member shall use a metal nipple. A straight or offset nipple is acceptable.
14. The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.

Equipment rack 2" or 3" steel pipe with uni-strut horizontal supports.

Main Disconnect with over current protection (Rated for Load) with a single main breaker as defined in the NEC.

Min. 3000 psi Concrete

24" Minimum

Service to load cable enclosed in minimum schedule 40 Gray PVC nonmetallic conduit.

#6 solid, bare ground wire and clamp attached to Bluebonnet's pole ground.

8' ground rod to be driven 12" below grade (Member installed)

Conduit above finished grade shall be minimum galvanized metal or schedule 80 Gray PVC rigid nonmetallic conduit.

Finished Grade

24" Minimum

Conduit below finished grade from underground transformer shall be minimum schedule 40 rigid nonmetallic conduit.

Latest update can be found at
www.bluebonnetelectric.coop

WIRING INSTALLATIONS MUST MEET LOCAL GUIDELINES, IF APPLICABLE, SET FORTH BY CITY, COUNTY, OR OTHER GOVERNING ENTITY IN THE EVENT THESE REQUIREMENTS ARE MORE STRINGENT THAN BLUEBONNET SPECIFICATIONS.

FOR THE MEMBER'S SAFETY, WIRING INSTALLATION AND MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF THE NEC, TDLR AND NESC.

Three phase application, the CT's & meter can be located on/in the transformer.

Non-combustible walls = 5 feet
Combustible walls: 0 to 75kVA = 10 feet
>75kVA = 20 feet

Meter rack placement from transformer: 6' from side of transformer, 10' from front of transformer and 100' maximum distance.

Primary Side

Secondary Side

Point of Service Transformer secondary bushings

Front of Transformer

Transformer Pad

Bluebonnet Primary Cable



3 PHASE >200 AMP UNDERGROUND
SERVICE WITH DISCONNECT ON RACK OR BUILDING

DATE	REVISIONS
11-20-19	Added Solid Copper Note.
11-04-21	Added Main Breaker Note

Drawn By :

RG

Checked By :

MS COMMITTEE

Approved By :

MS COMMITTEE

Date :

11-04-2021

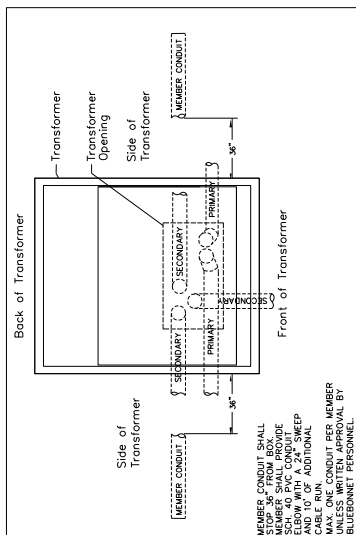
Scale :

NONE

MS-204A3

Notes:

- Line taps shall be made in the galvanized wiring trough by the electrical contractor.
- The electrical contractor will notify Bluebonnet 72 hours in advance to schedule Bluebonnet personnel to deliver the CT's. The electrician shall install the CT's (provided by BEC) on the rack with the correct polarity before the conductor is brought thru the 30"x42" (minimum size) CT enclosure. Call 800-842-7708 to schedule a connect.
- Wire shall be sized to total name plate disconnect sizes.
- Neutral(s) may be reduced no more than two sizes on residential application. No reduction of the neutral(s) is allowed on commercial application. For all URD jobs, electricians shall call TEXAS811 for locates before digging to Bluebonnet equipment. No private utilities will be located.
- Cooperative will complete wiring into transformer or UJB. Have an additional 10' of wire for termination.
- Weatherproof fittings required.
- Meter assembly must remain unenclosed on exterior of structure.
- All connections inside pad mounted transformer will be made by Bluebonnet.
- Member/Electrician shall coordinate with Bluebonnet personnel to install all conduit and the pulling of the secondary wire to the transformer.
- Member/Electrician shall notify Bluebonnet 48 hours in advance to schedule a time/date to perform the work.
- If additional trips are made to the site by Bluebonnet personnel, applicable fees may be applied.
- CT enclosure can be purchased from Techline (512-332-2978).
- Maintain 3"-6" distance between the disconnect and the meter can. Member shall use a metal nipple. A straight or offset nipple is acceptable.
- #6 solid, bare ground copper wire and clamp attached to Bluebonnet's pole ground.
- The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.



Single Phase Transformer Layout

1Ø Phase (24"x30"x13" minimum size) CT enclosure (purchased from Techline and installed by member).

12-1/4" x 20-1/4" meter socket (Provided and installed by Bluebonnet).

Main Disconnect with over current protection (Rated for Load) with a single main breaker as defined in the NEC.

BUILDING

8' ground rod to be driven 12" below grade. (MEMBER INSTALLED)

FOR THE MEMBER'S SAFETY, WIRING INSTALLATION AND MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF THE NEC, TDLR AND NESC.

Latest update can be found at www.bluebonnetelectric.coop

100' Maximum distance.
6' Minimum Distance
Non-combustible walls = 5 feet
Combustible walls: 0 to 75kVA = 10 feet
>75kVA = 20 feet

Center of Meter/CT Enclosure
Min. 6"
Max.
24" Minimum

Point of Service
Transformer secondary bushings.

Front of Transformer
Finished Grade
Bluebonnet Primary Cable

Conduit below finished grade from underground transformer shall be minimum schedule 40 Gray PVC rigid nonmetallic conduit.

Conduit above finished grade shall be minimum galvanized metal or schedule 80 Gray PVC rigid nonmetallic conduit.

WIRING INSTALLATIONS MUST MEET LOCAL GUIDELINES, IF APPLICABLE, SET FORTH BY CITY, COUNTY, OR OTHER GOVERNING ENTITY IN THE EVENT THESE REQUIREMENTS ARE MORE STRINGENT THAN BLUEBONNET SPECIFICATIONS.



1 PHASE >400 AMP SERVICE WITH CT METERING ON BUILDING OR RACK

11-20-2017 Added Solid Copper Note.

04-16-2021 Changed the size of the CT Meter Can requirements.

11-04-2021 Added Main Breaker Note

Approved By :

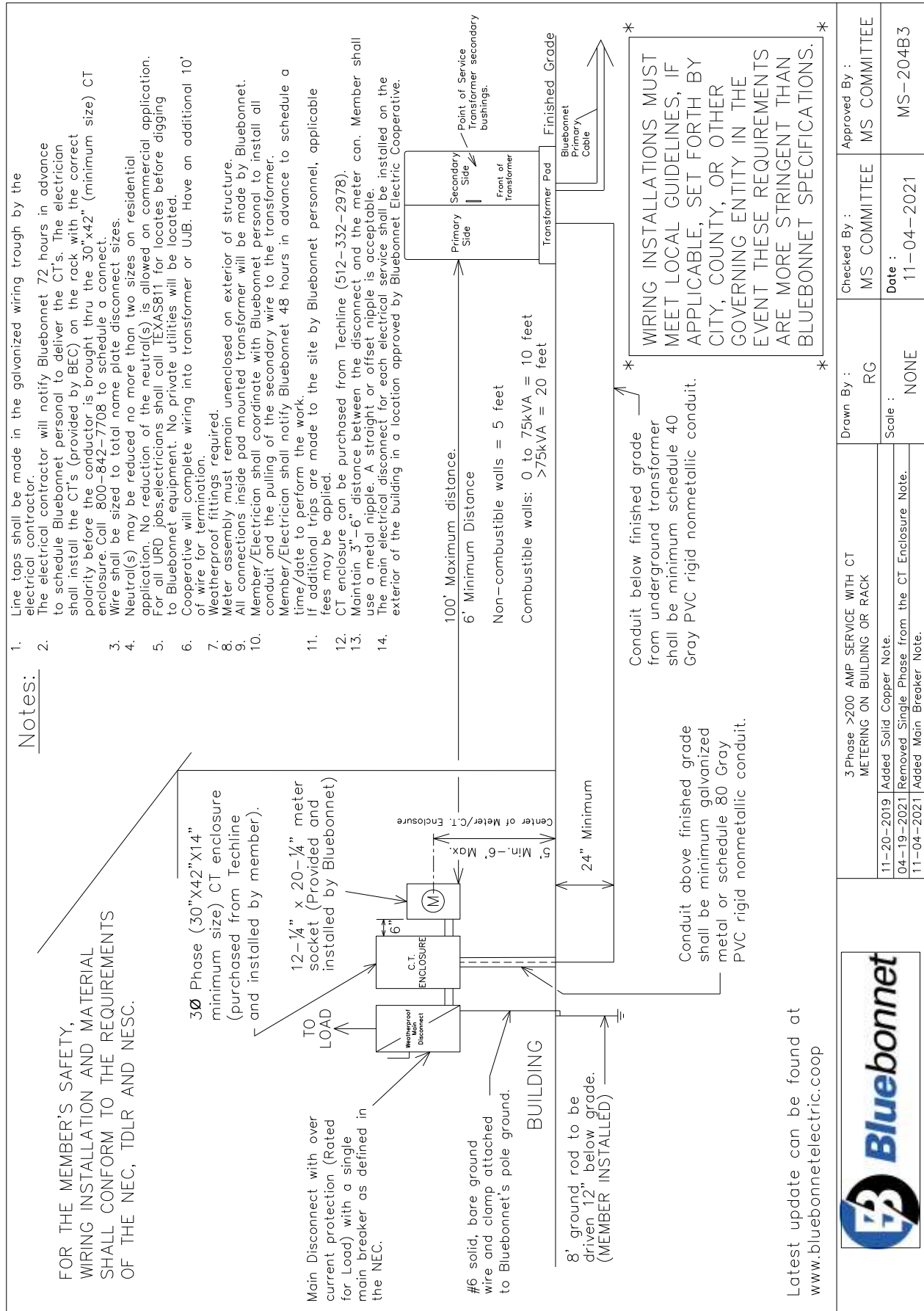
Checked By :
MS COMMITTEE

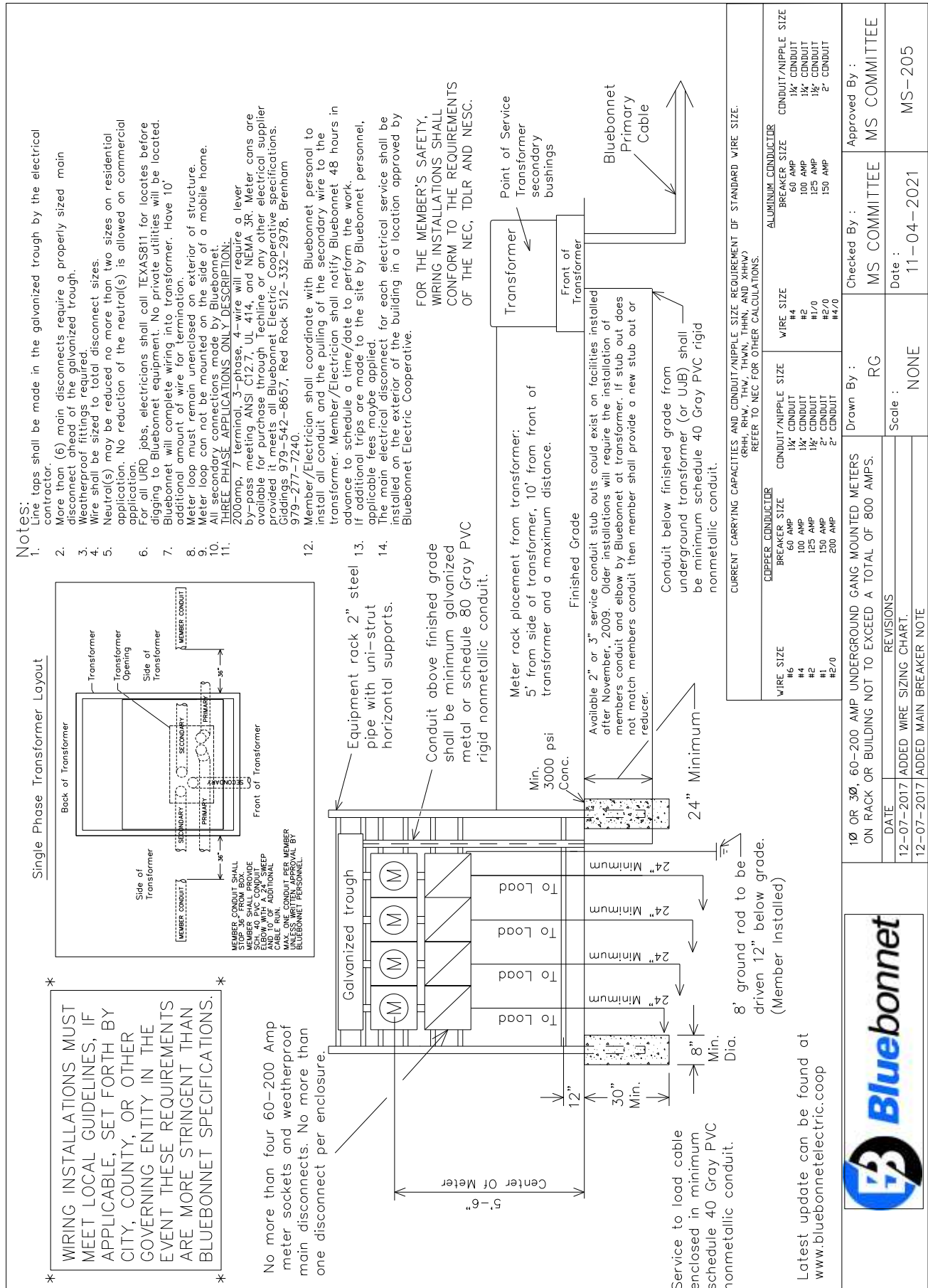
Drawn By :
RG

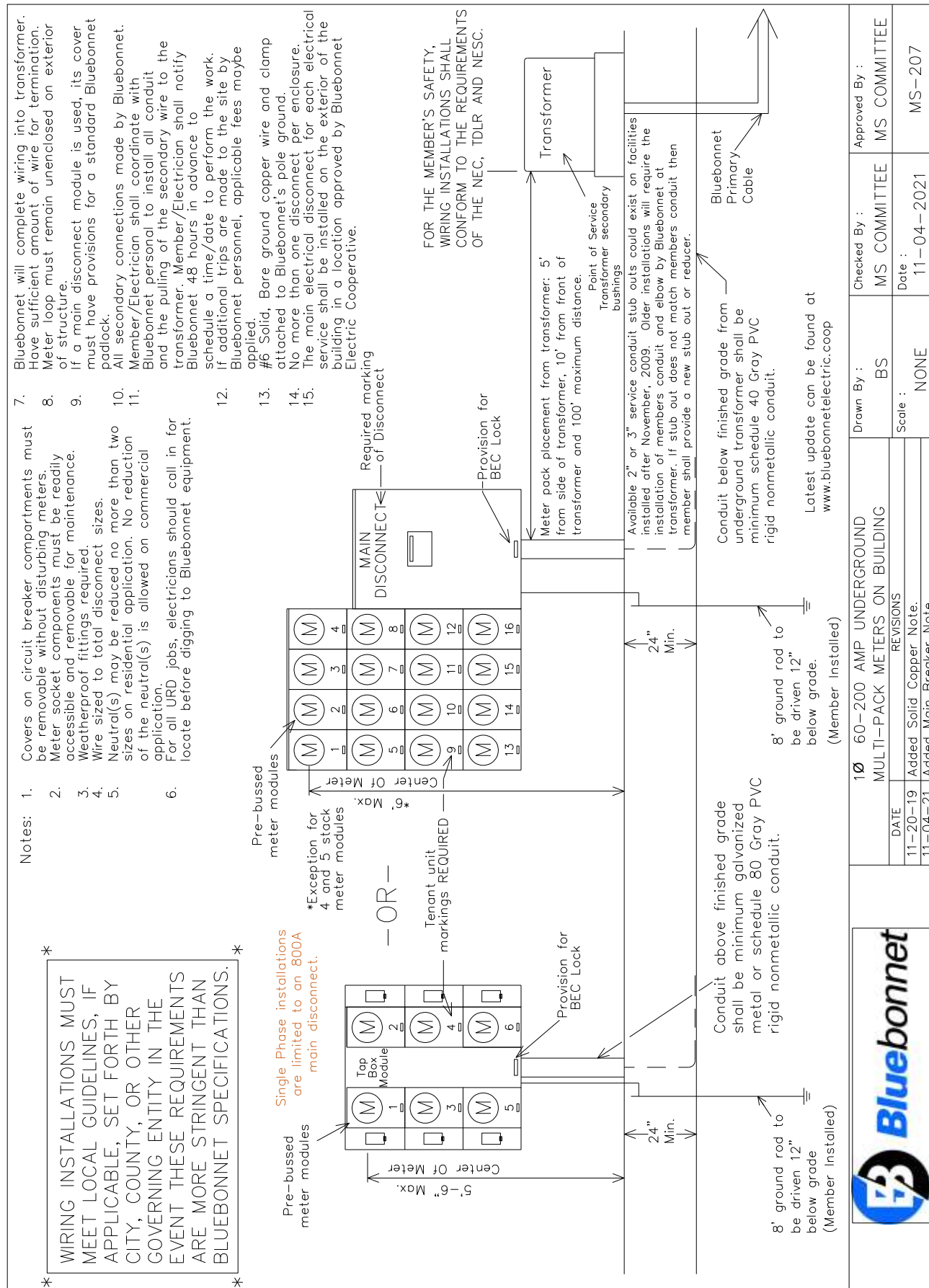
Scale :
NONE

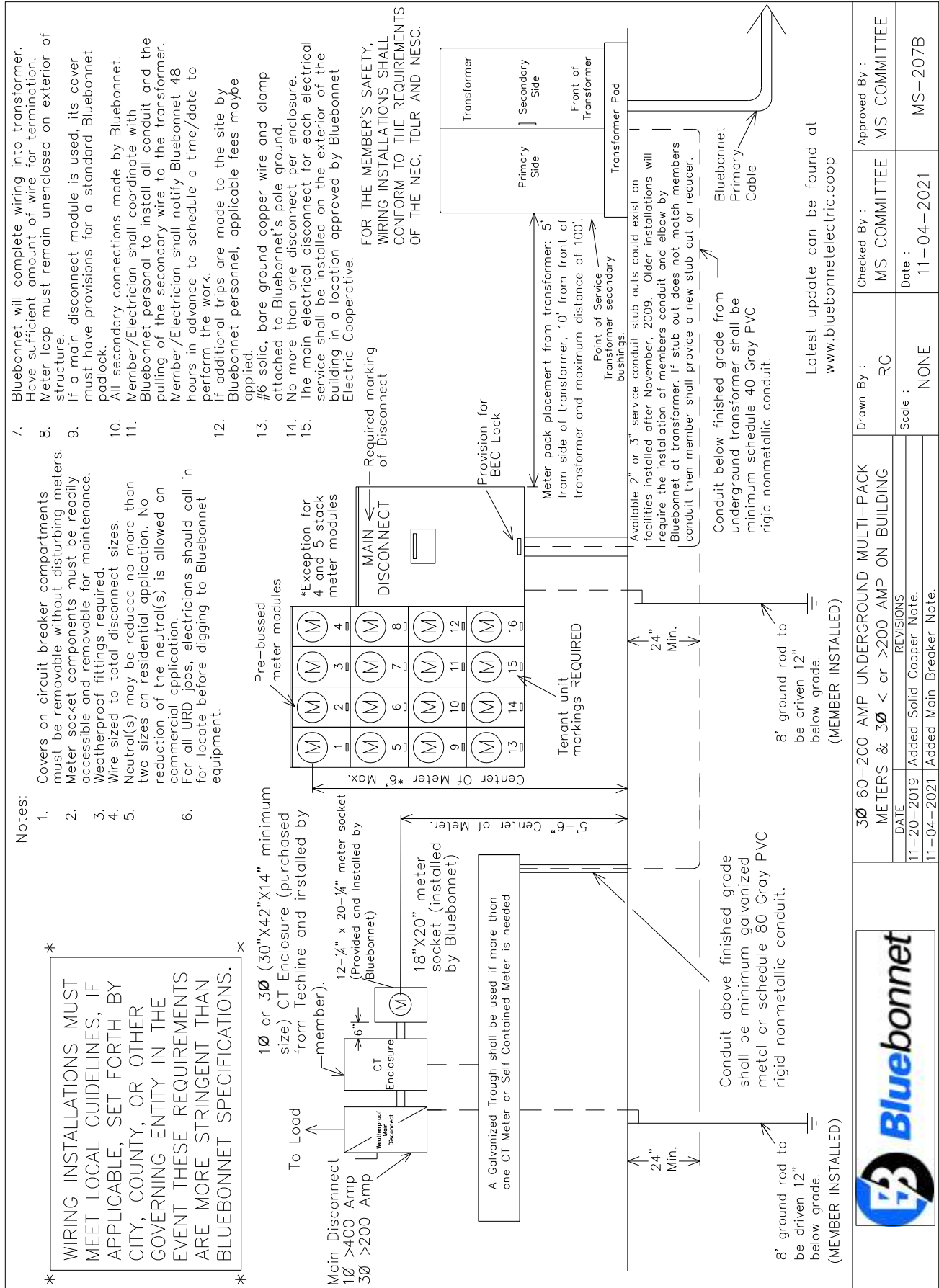
Date :
11-04-2021

MS-204B1





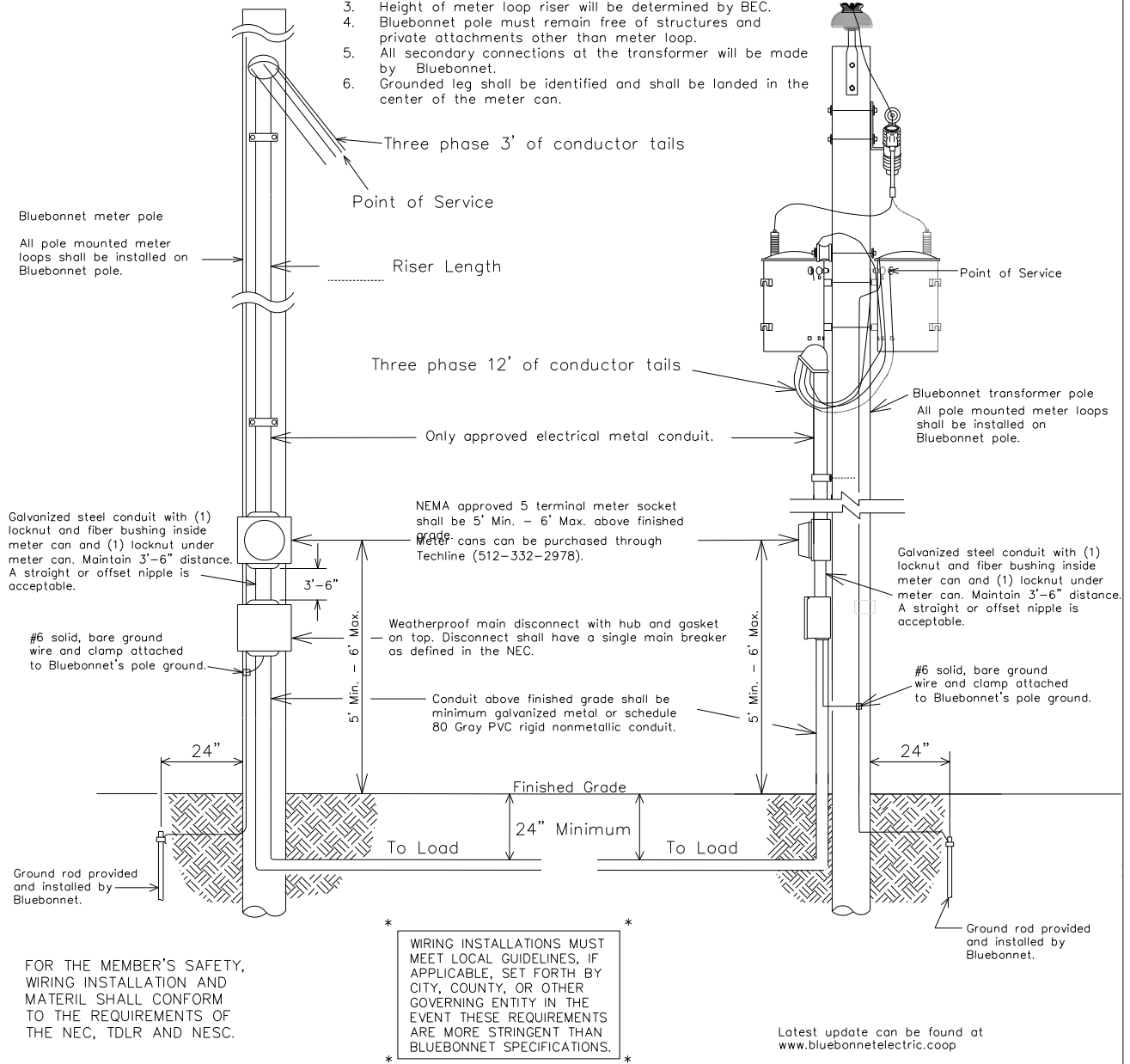




30 60-200 AMP UNDERGROUND MULTI-PACK METERS & 30 < or >200 AMP ON BUILDING		Drawn By :	MS COMMITTEE	Checked By :	MS COMMITTEE	Approved By :	MS COMMITTEE
DATE	REVISIONS	Scale :	NONE	Date :	11-04-2021		MS-207B
11-20-2019	Added Solid Copper Note.						
11-04-2021	Added Main Breaker Note.						

Notes:

1. A Bond wire shall be used, see NEC Table 250.66 for Bond Wire sizing.
2. Weatherproof fittings required.
3. Height of meter loop riser will be determined by BEC.
4. Bluebonnet pole must remain free of structures and private attachments other than meter loop.
5. All secondary connections at the transformer will be made by Bluebonnet.
6. Grounded leg shall be identified and shall be landed in the center of the meter can.



CURRENT CARRYING CAPACITIES AND CONDUIT SIZE REQUIREMENT OF STANDARD WIRE SIZE-(RHH, RHW, THW, THWN, THHN, AND XHHW REFER TO NEC FOR OTHER CALCULATIONS.

COPPER CONDUCTOR			ALUMINUM CONDUCTOR		
WIRE SIZE	BREAKER SIZE	CONDUIT SIZE	WIRE SIZE	BREAKER SIZE	CONDUIT SIZE
#6	60 AMP	1 1/4" CONDUIT	#4	60 AMP	1 1/4" CONDUIT
#4	100 AMP	1 1/2" CONDUIT	#2	100 AMP	1 1/2" CONDUIT
#2	125 AMP	1 3/4" CONDUIT	#1/0	125 AMP	1 3/4" CONDUIT
#1	150 AMP	2" CONDUIT	#2/0	150 AMP	2" CONDUIT
#2/0	200 AMP	2" CONDUIT	#4/0	200 AMP	2" CONDUIT

3Ø, STRAIGHT 480 VOLT
3W CORNER GROUND DELTA
60-200 AMP



DATE	REVISIONS	Drawn By :	Checked By :	Approved By :
12-07-2017	Changed the wording on Note # 6.	RG	MS COMMITTEE	MS COMMITTEE
11-04-2021	Added Main Breaker Note	Scale : NONE	Date: 11-04-2021	MS-301A

Notes:

- Line taps shall be made in the galvanized wire trough by the electrical contractor.
- When more than (1) disconnect is used, a galvanized rough system shall be installed.
- Weatherproof fittings are required.
- Two (2) disconnects could be substituted with (1) disconnect. All disconnects shall have over current protection installed.
- No more than two (2) risers or two (2) conductors per phase shall be allowed.
- Wire shall be sized to total disconnect sizes.
- Bluebonnet pole must remain free of structures and private attachments other than service riser assembly.
- All secondary connections on pole will be made by Bluebonnet.
- The electrical contractor will notify Bluebonnet 72 hours in advance to schedule Bluebonnet personnel to deliver the CT's before the service wire is pulled. The electrician shall install them on the rack with the correct polarity before the conductor is brought thru the 30"x42" (minimum size) CT enclosure.
- CT enclosures can be purchased from Techline (512-332-2978).
- Maintain 3"-6" distance between the disconnect and the meter can. Member shall use a metal nipple. A straight or offset nipple is acceptable.
- #6 solid, bare ground copper wire and clamp attached to Bluebonnet's pole ground.
- High leg on a Delta System shall be landed on the right side of the meter can and taped with orange tape.
- The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.

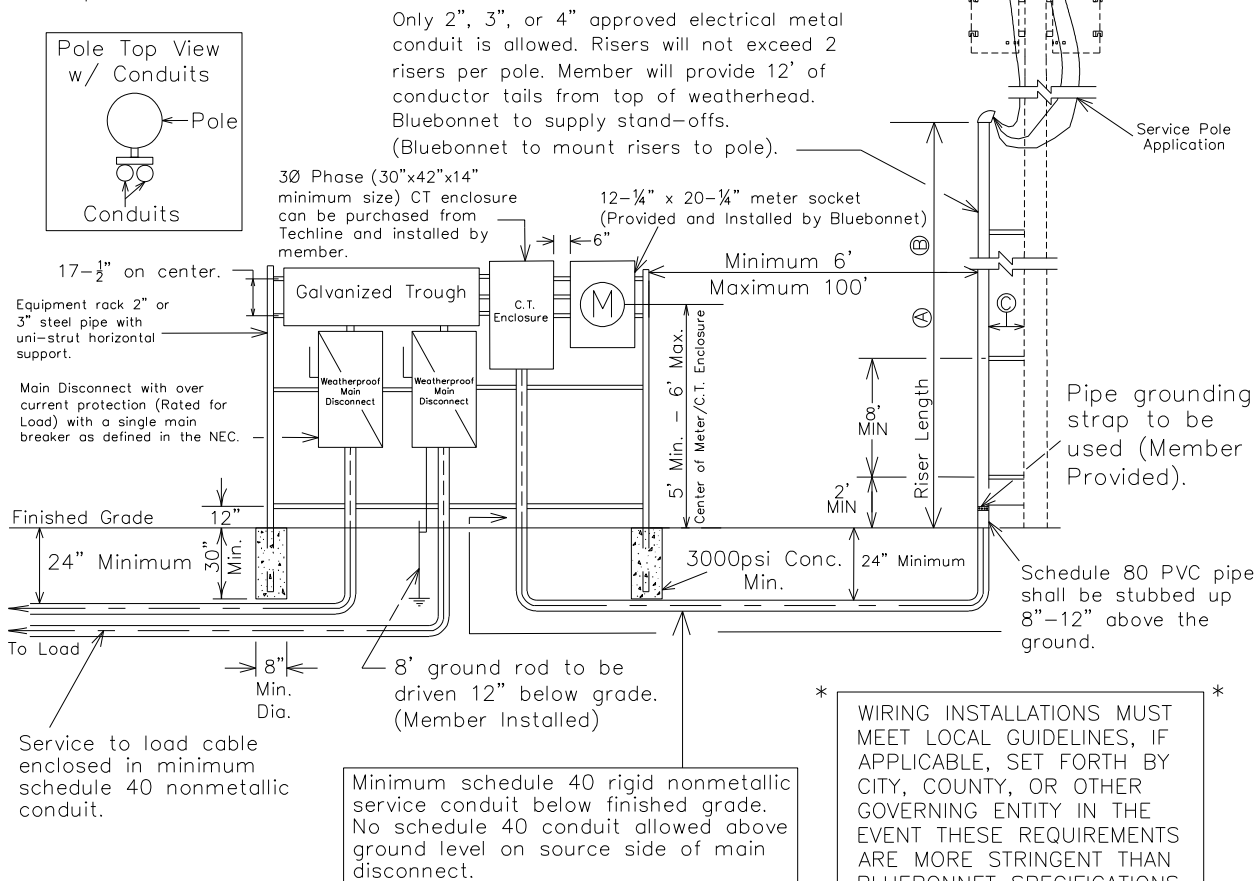
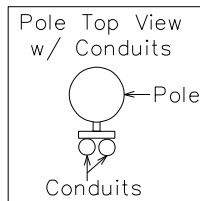
Transformer Pole Riser Length:

35' Pole = 20' Riser
40' Pole = 24' Riser

Service Pole Riser Length:

30' Pole = 20' Riser
35' Pole = 24' Riser

Member's Conduit
Member's conduit shall be installed 8"-12" from pole



Latest update can be found at <http://www.bluebonnetelectric.coop>

3PH, STRAIGHT 480 VOLT 3W CORNER GROUND
DELTA >200 AMP ON RACK OR BUILDING

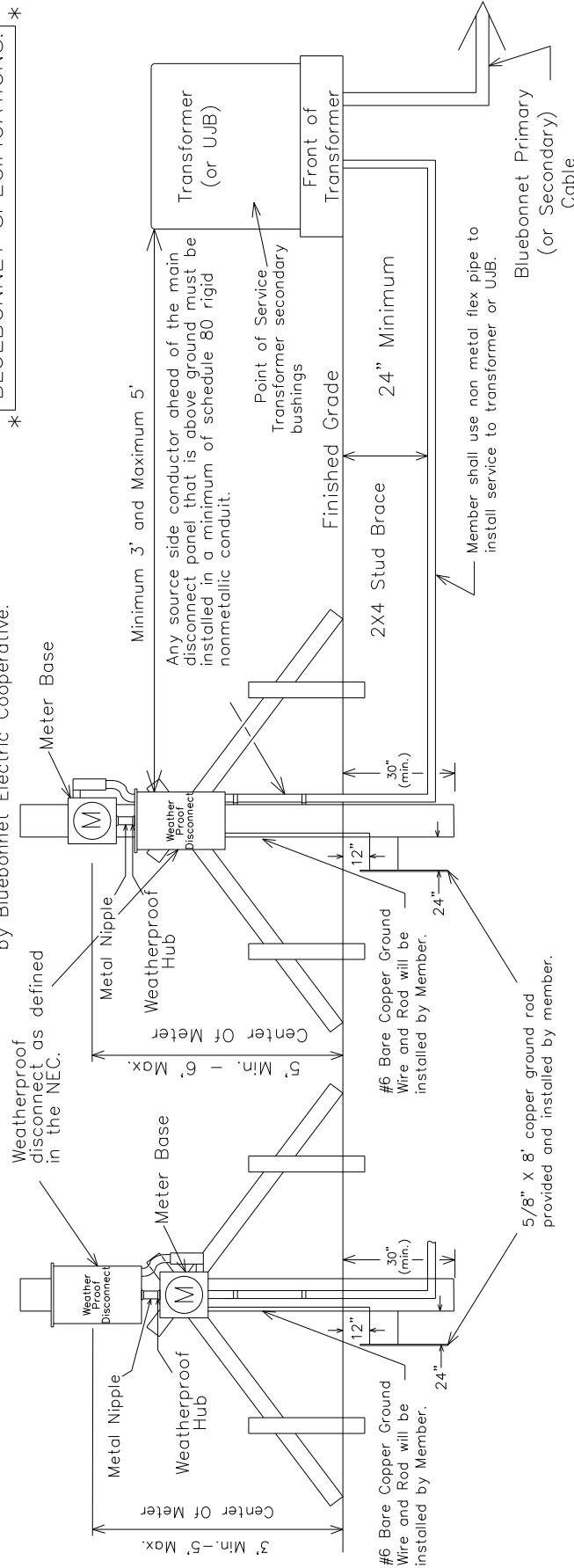


Drawn By : DK	Checked By : CV	Approved By : STANDARDS
Scale : NONE	DATE: Jun. 27, 2023	MS-301C

Notes:

1. All temporary wiring shall meet national electrical code standards.
2. All outlets attached to meter loop shall have ground-fault circuit interrupter protection.
3. For all URD jobs, electricians shall call TEXAS811 for locates before digging to Bluebonnet equipment. No private utilities will be located.
4. Service wires shall be brought to the top side of the meter base.
5. Bluebonnet does inspect temporary meter loops and a fee shall be charged per trip for wiring inspection. Bluebonnet will refuse service if hazardous conditions exist and/or if connections do not meet specifications.
6. Bluebonnet will complete wiring into transformer or UJB. Member shall have sufficient amount of wire for termination.
7. All connections inside pad mounted transformer and UJB's will be made by Bluebonnet.
8. Temporary Meter Loop Services are good for up to 24 months of service or less.
9. The main electrical disconnect for each electrical service shall be installed on the exterior of the building in a location approved by Bluebonnet Electric Cooperative.

WIRING INSTALLATIONS MUST MEET LOCAL GUIDELINES, IF APPLICABLE, SET FORTH BY CITY, COUNTY, OR OTHER GOVERNING ENTITY IN THE EVENT THESE REQUIREMENTS ARE MORE STRINGENT THAN BLUEBONNET SPECIFICATIONS.



FOR MEMBER SAFETY,
WIRING INSTALLATION AND
MATERIAL SHALL CONFORM
TO THE REQUIREMENTS OF
THE NEC, TDLR AND NESC.

Latest update can be found at
www.bluebonnetelectric.coop

CURRENT CARRYING CAPACITIES AND CONDUIT/NIPPLE SIZE REQUIREMENT OF STANDARD WIRE SIZE (RHH, RHW, THW, THWN, THHN, AND XHHW) REFER TO NEC FOR OTHER CALCULATIONS.					
COPPER CONDUCTOR			ALUMINUM CONDUCTOR		
WIRE SIZE	BREAKER SIZE	CONDUIT SIZE	WIRE SIZE	BREAKER SIZE	CONDUIT SIZE
#6	60 AMP	1 1/4" CONDUIT	#4	60 AMP	1 1/4" CONDUIT
#4	100 AMP	1 1/2" CONDUIT	#2	100 AMP	1 1/2" CONDUIT
#2	125 AMP	1 1/2" CONDUIT	#1/0	125 AMP	1 1/2" CONDUIT
#1	150 AMP	2" CONDUIT	#2/0	150 AMP	2" CONDUIT
#2/0	200 AMP	2" CONDUIT	#4/0	200 AMP	2" CONDUIT



TEMPORARY METER LOOP FOR UNDERGROUND SERVICE

DATE	REVISIONS
03-29-2018	ADDED ADDITIONAL METER SETUP.
11-04-2021	ADDED MAIN BREAKER NOTE

Drawn By :	RG	Checked By :	MS COMMITTEE	Approved By :	MS COMMITTEE
Scale :	NONE	DATE:	11-04-2021		MS-302

Notes:

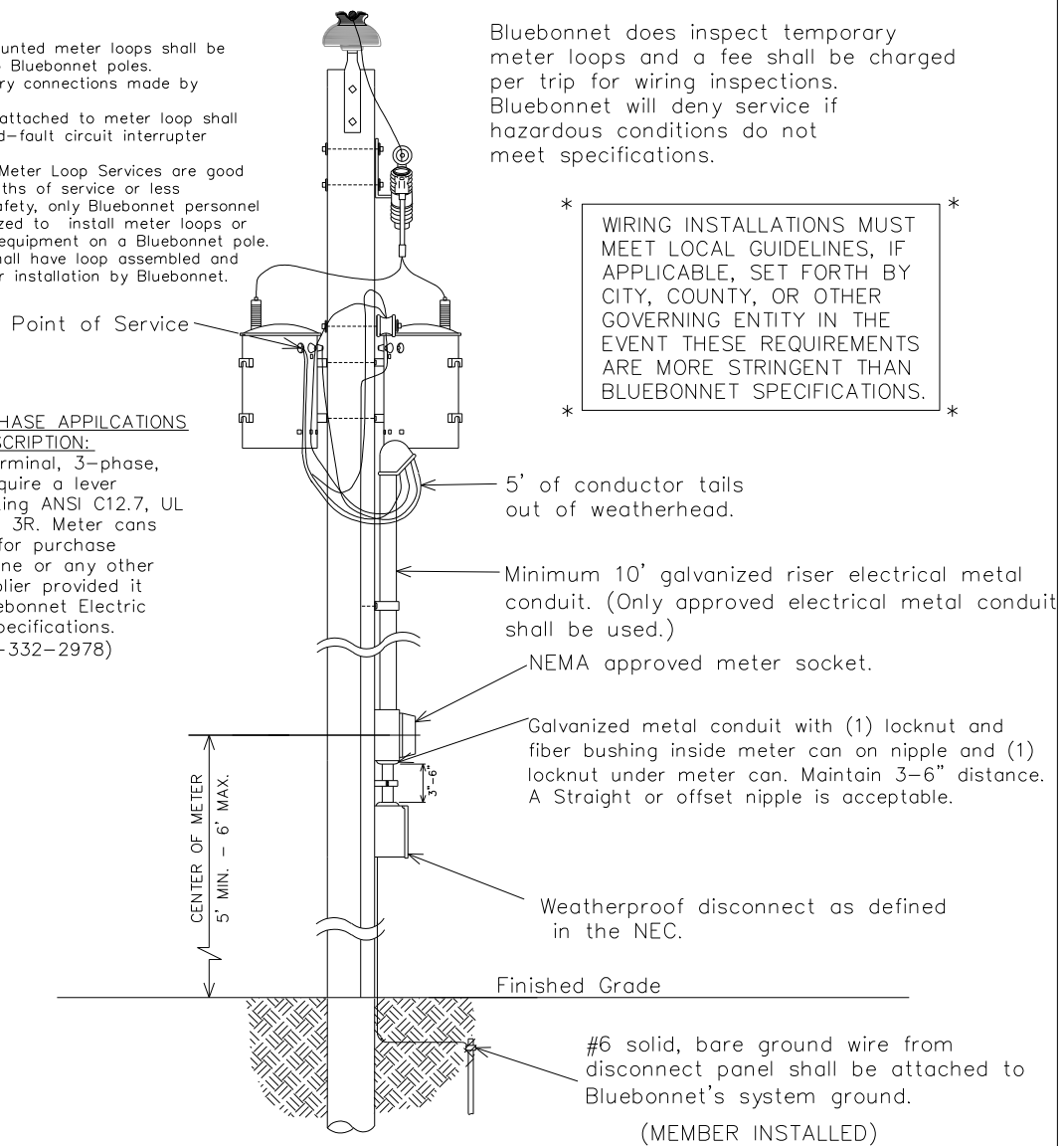
1. All pole mounted meter loops shall be mounted to Bluebonnet poles.
2. All secondary connections made by Bluebonnet.
3. All outlets attached to meter loop shall have ground-fault circuit interrupter protection.
4. Temporary Meter Loop Services are good for 24 months of service or less.
5. For your safety, only Bluebonnet personnel are authorized to install meter loops or other BEC equipment on a Bluebonnet pole. Members shall have loop assembled and available for installation by Bluebonnet.

Bluebonnet does inspect temporary meter loops and a fee shall be charged per trip for wiring inspections. Bluebonnet will deny service if hazardous conditions do not meet specifications.

* WIRING INSTALLATIONS MUST MEET LOCAL GUIDELINES, IF APPLICABLE, SET FORTH BY CITY, COUNTY, OR OTHER GOVERNING ENTITY IN THE EVENT THESE REQUIREMENTS ARE MORE STRINGENT THAN BLUEBONNET SPECIFICATIONS. *

FOR THREE PHASE APPLICATIONS
DESCRIPTION:

200amp, 7 terminal, 3-phase, 4-wire will require a lever by-pass meeting ANSI C12.7, UL 414, an NEMA 3R. Meter cans are available for purchase through Techline or any other electrical supplier provided it meets all Bluebonnet Electric Cooperative specifications. Techline (512-332-2978)



FOR THE MEMBER'S SAFETY, WIRING INSTALLATION AND MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF THE NEC, TDLR AND NESC.

Latest update can be found at www.bluebonnetelectric.coop

CURRENT CARRYING CAPACITIES AND CONDUIT SIZE REQUIREMENT OF STANDARD WIRE
SIZE - (RHH, RHW, THW, THWN, THHN, AND XHHW)
REFER TO NEC FOR OTHER CALCULATIONS.

<u>COPPER CONDUCTOR</u>			<u>ALUMINUM CONDUCTOR</u>		
Wire Size	Breaker Size	Conduit Size	Wire Size	Breaker Size	Conduit Size
#6	60 Amp	1¼" Conduit	#4	60 Amp	1¼" Conduit
#4	100 Amp	1¼" Conduit	#2	100 Amp	1¼" Conduit
#2	125 Amp	1½" Conduit	#1/0	125 Amp	1½" Conduit
#1	150 Amp	2" Conduit	#2/0	150 Amp	2" Conduit
#2/0	200 Amp	2" Conduit	#4/0	200 Amp	2" Conduit

1Ø OR 3Ø 60–200 AMP TEMPORARY METER LOOP FOR TRANSFORMER AND SERVICE POLES					
DATE	REVISIONS				
03–31–20	Added note 5.				
11–04–21	Added main breaker note				

Drawn By : RG	Checked By : MS COMMITTEE	Approved By : MS COMMITTEE
Scale : NONE	DATE: 11–04–2021	MS–303

Material Standards:



Underground warning tape must be 6” width, RED in color with BLACK lettering, and read “Caution Buried Electric Underground”. *Normally, this material is only sold in 1000’ rolls.*



Bluebonnet

MEMBER RESPONSIBILITY

BLUEBONNET RESPONSIBILITY

Deliver essential project documents to Bluebonnet Electric Coop. - Site plan files (CAD Format), load information, information request form(s), project schedule.	BEFORE THE CLOCK STARTS	Facilitate correspondence with member/developer to discuss needs and review available information.
		Provide Bluebonnet Developer's Package (Commercial/Residential); including standard Bluebonnet Easement.
		Collect information from Member/Developer.
		Verify a complete member package has been received, including all required documentation.
Host a site visit and/or Pre-design Meeting/Call with Bluebonnet Representative(s). Provide up to date and accurate Project Schedule for all stages, including desired energization date.	WEEK #1	Attend site visit or Pre-design meeting, evaluate site layout, utility coordination, member construction coordination, jobsite construction access, etc.
Bluebonnet Electric cannot begin design of project until all required documentation is received.	WEEKS #2-#5	Design electric service layout; coordinate with the electric system (circuit capacity, fuses). Size equipment, determine rate class for Community Representative to communicate to Member.
	WEEKS #6-#7	Prepare and submit any necessary permits. Schedule and complete field staking of project. Finalize and secure all easements.
	WEEK #8	Create cost estimate and deposit and send cost letter and Site Ready Letter to developer.
Expedite payment to Bluebonnet Electric for project. Provide any required third party easements and outstanding information.	WEEK #9	
Bluebonnet Electric will not release project for scheduling (apartments and subdivisions) until addressing information is received.	WEEKS #10-#11	Process project payment.
	WEEK #12	Prepare for and release project to construction. Verify material availability and receipt of developer's Site Ready Letter.
Bluebonnet Electric cannot begin construction of project until Site Ready documentation is received. Construction crews will leave the site if suitable construction conditions are unsatisfactory.	WEEKS #13-#28	Upon release, Construction Lead (Contract Coordinator or Bluebonnet Construction) will contact member within two business days to provide anticipated construction start date, duration, planned completion, etc.
Member completes preparation for final electric service delivery.		Request crew scheduling from construction. Complete inspections and accept installations. Verify site is prepared and ready for construction.
		Construct Bluebonnet Electric Facilities.
Member requests initiation of final electric service.	WEEKS #29-#30	Inspect final installation. Energize project and initiate electric service.

- A. If a Member step is late, the project clock **STOPS**. Members/Developers are highly encouraged to stay on top of payments, required easements, and all crucial deliverables and documentation.
- B. Elapsed times are not a guarantee. More than thirty weeks may be needed for larger scope projects or projects that require significant upgrades to Bluebonnet Electric's system infrastructure.
- C. Member/Developer is required to provide Bluebonnet Electric with any and all required easements, including third party, prior to commencing construction.
- D. Bluebonnet Engineering staff are responsible for all steps from project inception through Week #12. Weeks #13 - #30 are managed by Bluebonnet Construction Staff and are denoted in **BLUE**.
- E. Permitting schedule is contingent on regulatory agency approval (response times vary).
- F. Member/Developer is required to notify construction once site is ready by returning a signed Site Ready Letter. **Projects will not be released for scheduling until this document has been returned.**

During the **planning, engineering, and design phase** of your project your main point of contact will be one of Bluebonnet's Project Coordinators. If the Project Coordinator for your project is not available, one of the other team members will be glad to assist you.

Shawn Ely
shawn.ely@bluebonnet.coop
Office: (979) 542-8518
Cell: (979) 540-7361

Scott Iselt
scott.iselt@bluebonnet.coop
Office: (979) 542-8522
Cell: (979) 540-0195

Dalton Voight
dalton.voight@bluebonnet.coop
Cell: (512) 629-3771

Rodney Gerik
rodney.gerik@bluebonnet.coop
Office: (979) 542-8527
Cell: (979) 540-8814

Shane Mathison
shane.mathison@bluebonnet.coop
Office: (979) 542-8540
Cell: (512) 577-6817

Jorge Varillas
jorge.varillas@bluebonnet.coop
Office: (512) 764-2838
Cell: (512) 376-8291

Clemente Verastegui
clemente.verastegui@bluebonnet.coop
Office: (979) 542-8542
Cell: (512) 578-6393

Thomas Ellis (Manager)
thomas.ellis@bluebonnet.coop
Office: (979) 542-8545
Cell: (979) 540-6146

Wyatt Rosenauer
wyatt.rosenauer@bluebonnet.coop
Office: (979) 542-8665
Cell: (512) 629-5924

During the **construction, inspection, and metering phase** of your project your main point of contact will be Bluebonnet's Contractor Coordinator OR Assistant Superintendent. Bluebonnet's personnel cover specific areas of the service territory; areas are listed with their contact information.

Joey Tobola (Contractors)
joey.tobola@bluebonnet.coop
Cell: (979) 540-7162

Randall Bownds (Giddings Area)
randall.bownds@bluebonnet.coop
Office: (979) 542-8516
Cell: (979) 540-6418

Chad Lewis (Brenham Area)
chad.lewis@bluebonnet.coop
Office: (979) 277-8558
Cell: (979) 277-4041

Aaron Seeliger (Red Rock Area)
aaron.seeliger@bluebonnet.coop
Office: (512) 764-2788
Cell: (512) 227-2281

Kenneth Roush (Underground – All Areas)
kenneth.roush@bluebonnet.coop
Cell: (512) 468-5088

Tim Mittasch (Underground- All Areas)
tim.mittasch@bluebonnet.coop
Cell: (979) 540-7159

Daniel Fritsche (Bastrop Area)
daniel.fritsche@bluebonnet.coop
Office: (979) 542-8514
Cell: (979) 542-8546

Carl Miller (Underground Inspector)
carl.miller@bluebonnet.coop
Cell: (979) 540-6495

Joe Hernandez (Underground Inspector)
jose.hernandez@bluebonnet.coop
Cell: (720) 670-7299

Jose Villarreal (Underground Inspector)
jose.villarreal@bluebonnet.coop
Cell: (512) 988-1885

Martin Dorantes (Underground Inspector)
martin.dorantes@bluebonnet.coop
Cell: (512) 748-4453