Pedernales
Electric Cooperative, Inc.

Underground Developers Specifications

Date: 12-12-2011

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Trench Specifications

A. Installation of conduit

1. Minimum cover to be 30” from top of primary conduit to sub-grade. (See attached drawings.)
2. Bottom of trench shall be sanded to provide smooth, even support for conduits. (See attached drawings.)
3. Sand to be placed directly around conduits for initial backfill. (See attached drawings.)
4. There is to be a minimum of 12” separation between electrical conduits and all other conduits.
5. Warning tape to be a minimum of 12” above electrical conduits.
6. Concrete to be poured around all conduit crossings and 90 degree bends. (See attached drawings.)
7. Trench may be used jointly if adequate separation is provided. (See attached drawings.)
8. Conduit may be under pavement if a depth of 30” cover to sub-grade is maintained.
9. Trench may be on property if adequate depth is maintained. "Adequate depth" is defined as the lowest point between the edge of pavement and property line.

B. Inspection Schedule

1. After primary conduit installation
2. After initial backfill
3. After secondary conduit installation
4. After remainder of initial backfill and warning tape
5. After secondary backfill (rock free dirt)

Failure to receive inspection will require removal of the backfill to allow inspection.

Developer/Contractor contribution

1. Payment to PEC for materials per the Line Extension Policy.
2. Trench
3. Conduit:
   a. 2” conduit and accessories
   b. 3” conduit, schedule 40 conduit bends with 3", 36" min. radius and accessories
   c. 4” conduit, schedule 40 conduit bends with 4", 48" min. radius and accessories
   d Conduits for service will be sized as needed

NOTE: Contractor may be required to pull a mandrel, of a diameter not less than 80% of the inside diameter of the conduit, through all conduits, under the supervision of a PEC representative.

4. Conduit spacers
5. Transformer pads
6. Meter pedestal pads
7. Underground secondary enclosures and extensions
8. Ground rods and clamps
9. Polyester pulling tape (unused 2500lb tensile strength) in all conduit
10. Red electric warning tape
11. Sand for initial backfill
12. Rock free dirt over initial backfill
13. 1/2" to 3/4" gravel for the bottom of vaults and secondary enclosures
14. Concrete, where necessary
15. Install meter socket when metering on building
16. Furnish and install any gang type meter sockets
17. Primary enclosures
18. Meter Sockets (Available at PEC District Office)
19. Switchgear (If applicable)

Member's Responsibility

Meter Pedestals are presently not approved for use except under special circumstances designated by Pedernales Electric Cooperative, Inc. In situations where meter pedestals are required the following conditions will apply.

1. Purchase and install circuit breaker in box. Circuit breakers are the bolt-in type. The box will accommodate 150 and 200 amp breakers. The breaker must have an interrupting capacity of 10,000 amps rated at 240 volts. GE Cat. No. TQD22 (amp needed) WL and Westinghouse CA2200W or equal.
2. Install insulated jumpers from bottom of meter socket to top of breakers.
3. Install galvanized rigid conduit, schedule 40 PVC or an approved equal from pedestal pad to bottom of box.
4. Member will be responsible for the installation of underground cable from the meter pedestal to the house and the connections to the bottom of the circuit breakers. The underground cable used from the meter pedestal to the house shall be an approved type for underground installation (USE or UF type). Conductor size will be based upon Member load, location of meter, and National Electric Code for size of conduit.
5. Underground conductor from secondary enclosure/transformer to meter shall be buried 24" deep. This depth may be reduced to 18" when a 2" supplemental protective covering of concrete is provided. If rigid conduit is used, the depth can be reduced to 6". Red electric warning tape is also required in the ditch.
6. Apply and receive all applicable inspections.
7. When all work is completed according to specifications, notify the Pedernales Electric Cooperative, Inc. in your area that you are ready for electric service. A serviceman will make the connect and set the meter on a routine connect order.
8. For Commercial and Residential applications the Member shall supply the CT enclosure (if needed) and all secondary cable in accordance with the National Electric Code.

Pedernales Electric Cooperative, Inc. contribution paid for by developer/member as indicated on the Line Extension Policy.

1. Primary conductors
2. Secondary conductors
3. Cable terminations
4. Transformers
5. Meter pedestals
6. Switchgear
7. Secondary Gelport Connectors

PEC Responsibility

1. Furnish and install meter pedestal.
2. Install combination meter socket and breaker box.
3. PEC serviceman will install jumper wires from top of meter socket to pedestal connector and set meter on

Typical All Pads

1) Require 3" conduit (unless otherwise specified by PEC) with bell end fittings to extend 1 ½" to 2" above pad.
2) Pads must extend a minimum of 4" above final grade and 1½" below final grade. All pads must be placed on a slope less than or equal to 3:1. If greater than 3:1 contractor must bring slope to required grade.
3) All disturbed soil underneath pad must be replaced by concrete.
4) All ground rods shall be ¾" X 10' Copper clad with clamp and must extend 3" above top of pad.
5) Wood float finish leaving pad square and level with no dips or crown.

Typical For Single Phase Transformer, Combination, Sectionalizer, and Secondary Pads

6) Concrete to have minimum strength of 3000 PSI.
7) Steel reinforcing shall be 6" X 6" No. 10 wire mesh or ⅜" rebar on 12" center to stop 1" from the sides.

Typical For 3 Phase Transformer Pads

8) Concrete testing, 4000 PSI; 4%-6% entrained air, ¾" maximum size aggregate.
9) Steel reinforcement shall be ⅜" rebar on 12" center to stop 1" from sides.
10) Minimum concrete cover over reinforcing steel 2" unless noted.
11) Consult with PEC before pouring concrete.

Typical Trench Details

12) Schedule 40 electrical grade PVC conduit. Schedule 80 electrical grade conduit can be used in place of sand in secondary only trenches.
13) Initial backfill shall be manufactured or commercial sand. Minimum ⅜" pea gravel may be used for initial backfill in flood prone areas.
14) With PEC approval minimum cover requirements may be reduced by six inches with every two inches of 3000 PSI concrete poured directly onto conduit. ***CONTACT PEC BEFORE POURING CONCRETE***
15) If any type of vault or pedestal for the underground electric is planned then all other utilities should be routed around these facilities.
16) For 2" and larger waterlines special permission must be granted by PEC.

Legend

Typical in all Drawings

P	Primary Conduit	CW	Communications or water
S	Secondary Conduit	G	Gas Line
AS	Alternate Secondary Conduit		

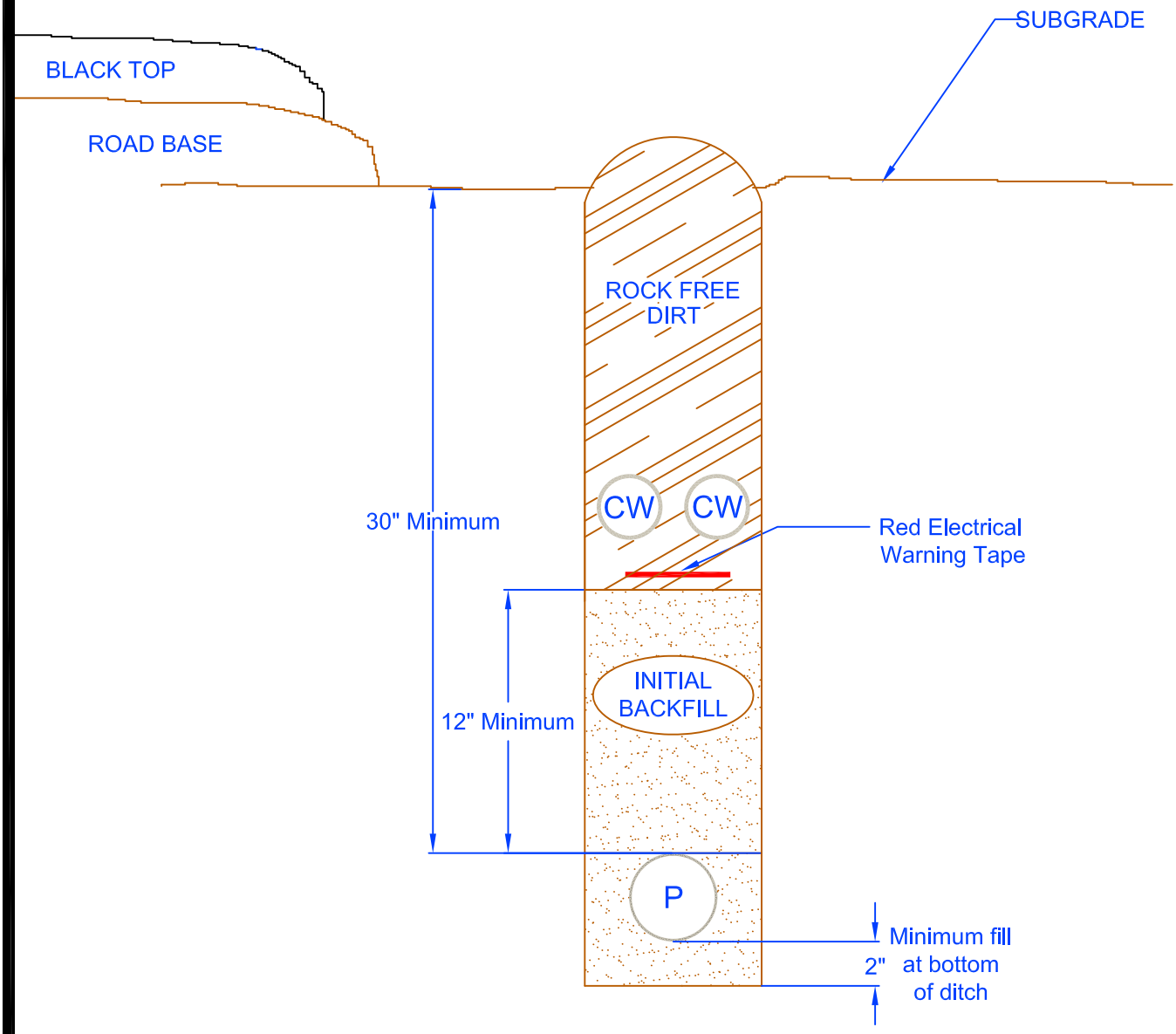
Pedernales Electric Cooperative, Inc.

PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

Typical Notes Reference Page

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-009-0911

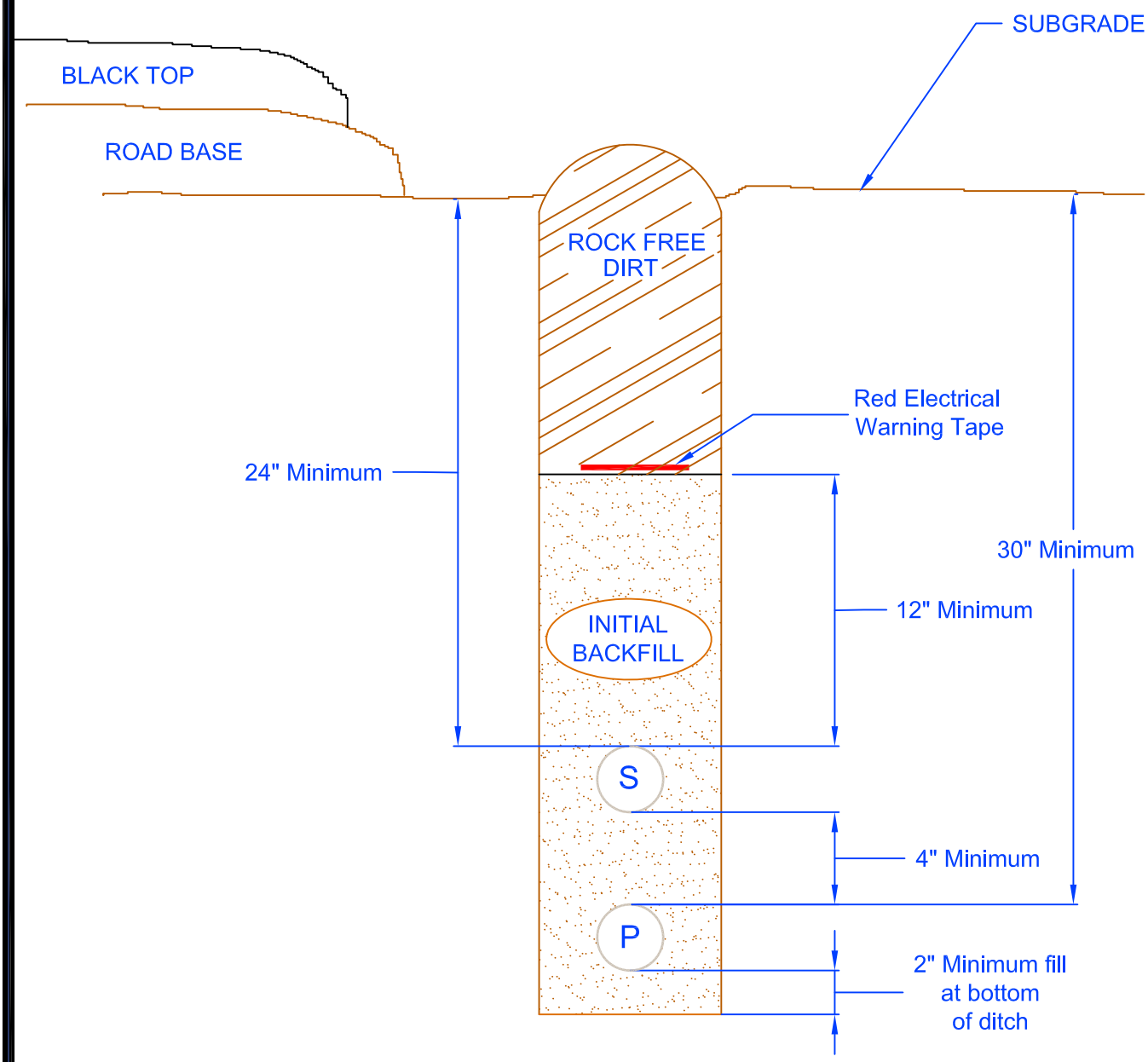


Reference Drawing
510-009-0911 for
Typical Trench Details

PEDERNALES ELECTRIC
COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

1Ø Conduit Arrangement for Primary 601 to 50,000 Volts

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-010-0911

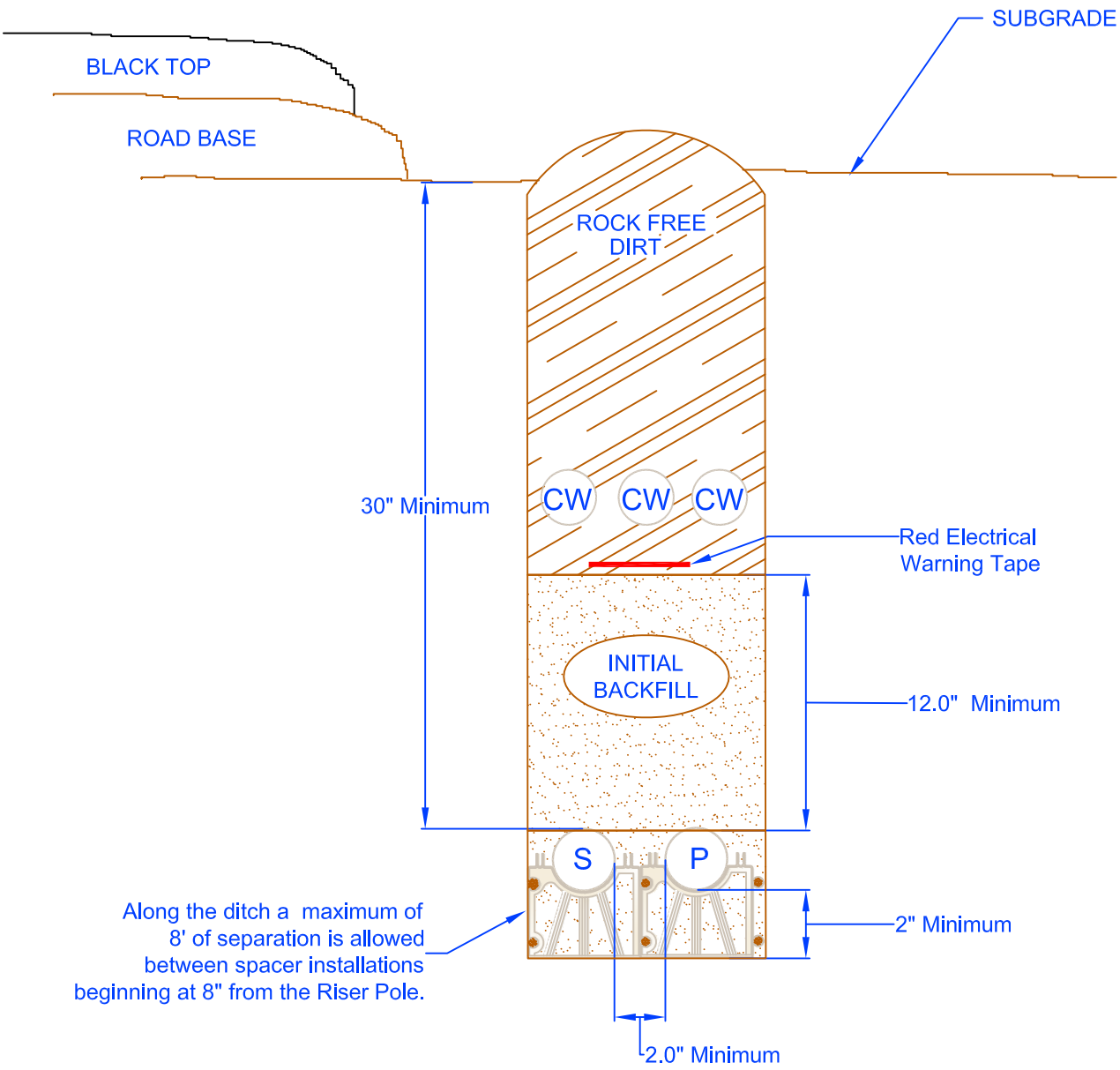


Reference Drawing
510-009-0911 for
Typical Trench Details

PEDERNALES ELECTRIC
COOPERATIVE, INC.
URD DEVELOPERS SPECIFICATIONS

1Ø Conduit Arrangement for Primary and Secondary

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-012-0911

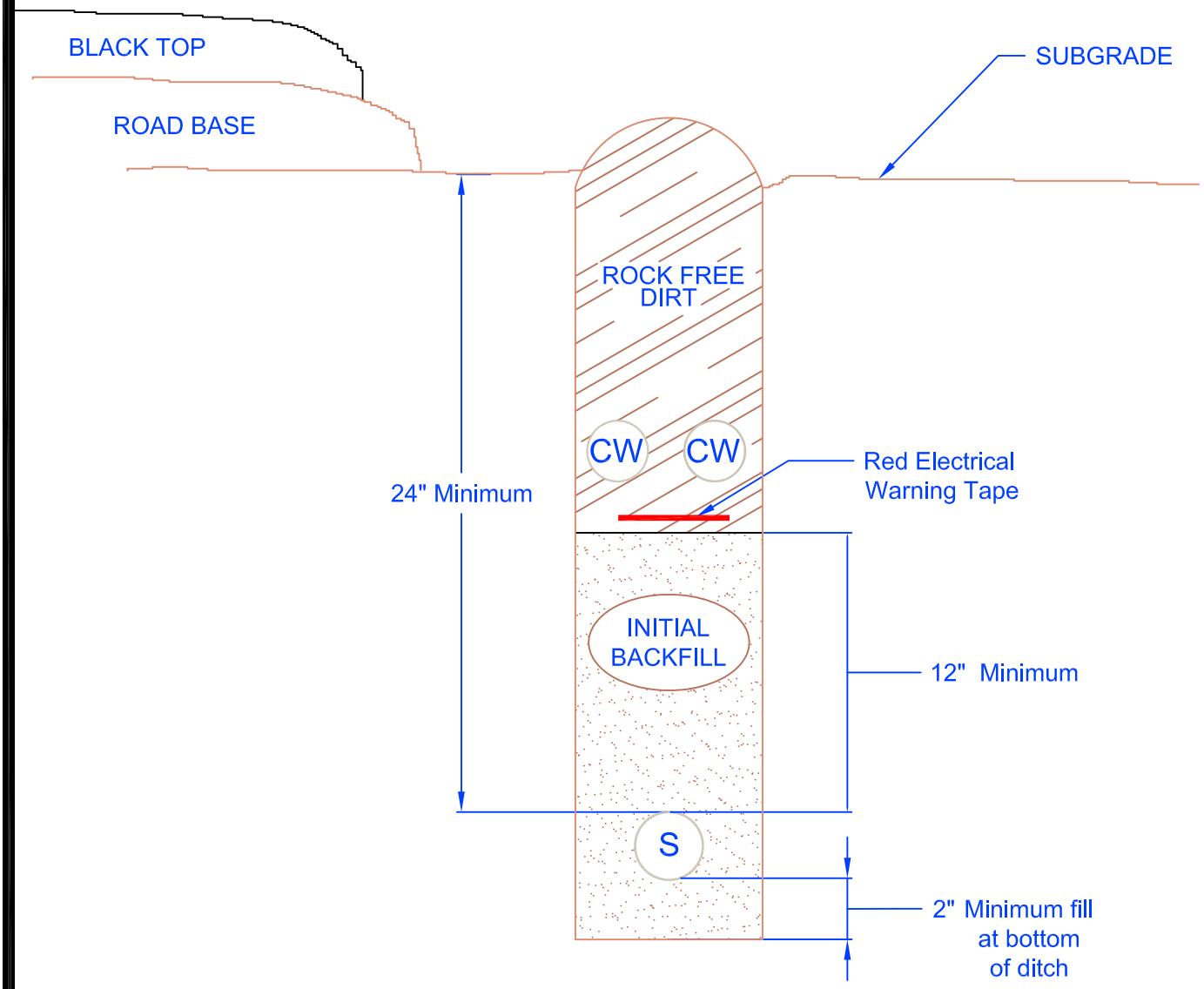


Reference Drawing
510-009-0911 for
Typical Trench Details

PEDERNALES ELECTRIC
COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

1Ø Conduit Arrangement Joint with other Utilites

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-014-0911



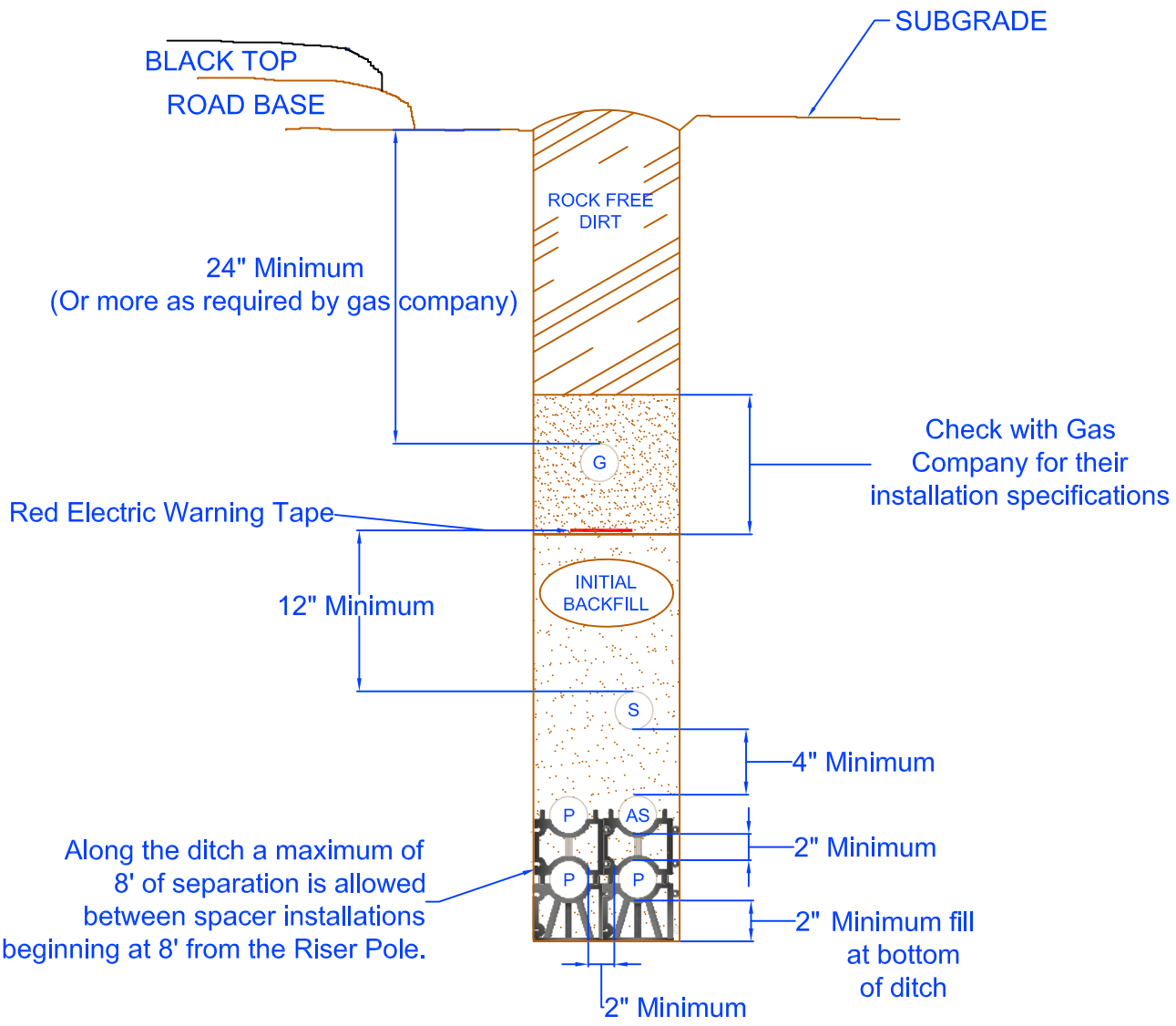
Reference Drawing
510-009-0911 for
Typical Trench Details

PEDERNALES ELECTRIC
COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

1Ø Conduit Arrangement for Service 0 to 600 Volts

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-016-0911

OPTION 2



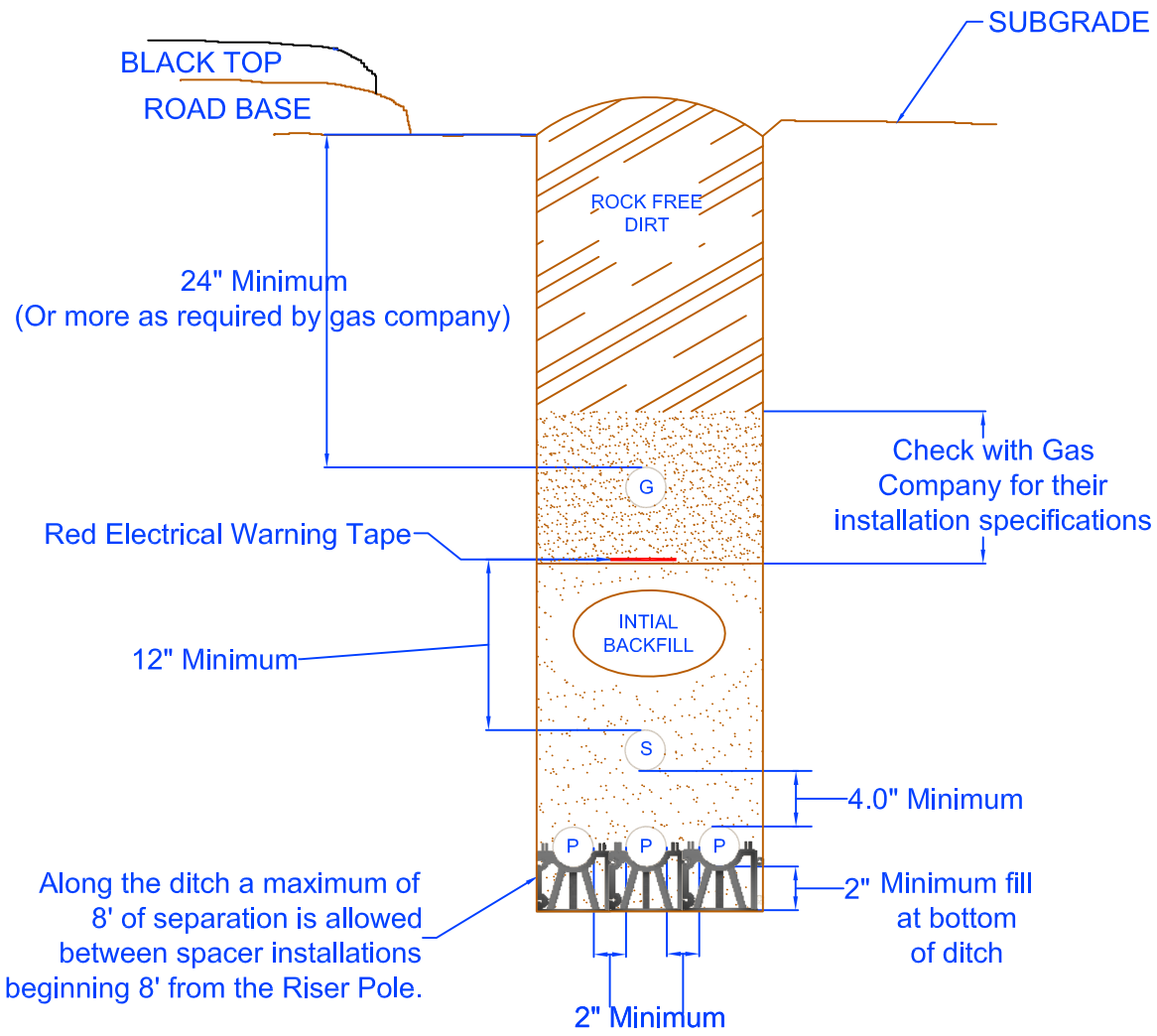
Reference Drawing
510-009-0911 for
Typical Trench Details

PEDERNALES ELECTRIC COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

3Ø Conduit Arrangement
Joint with Natural Gas/Propane

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-017-0911

OPTION 1



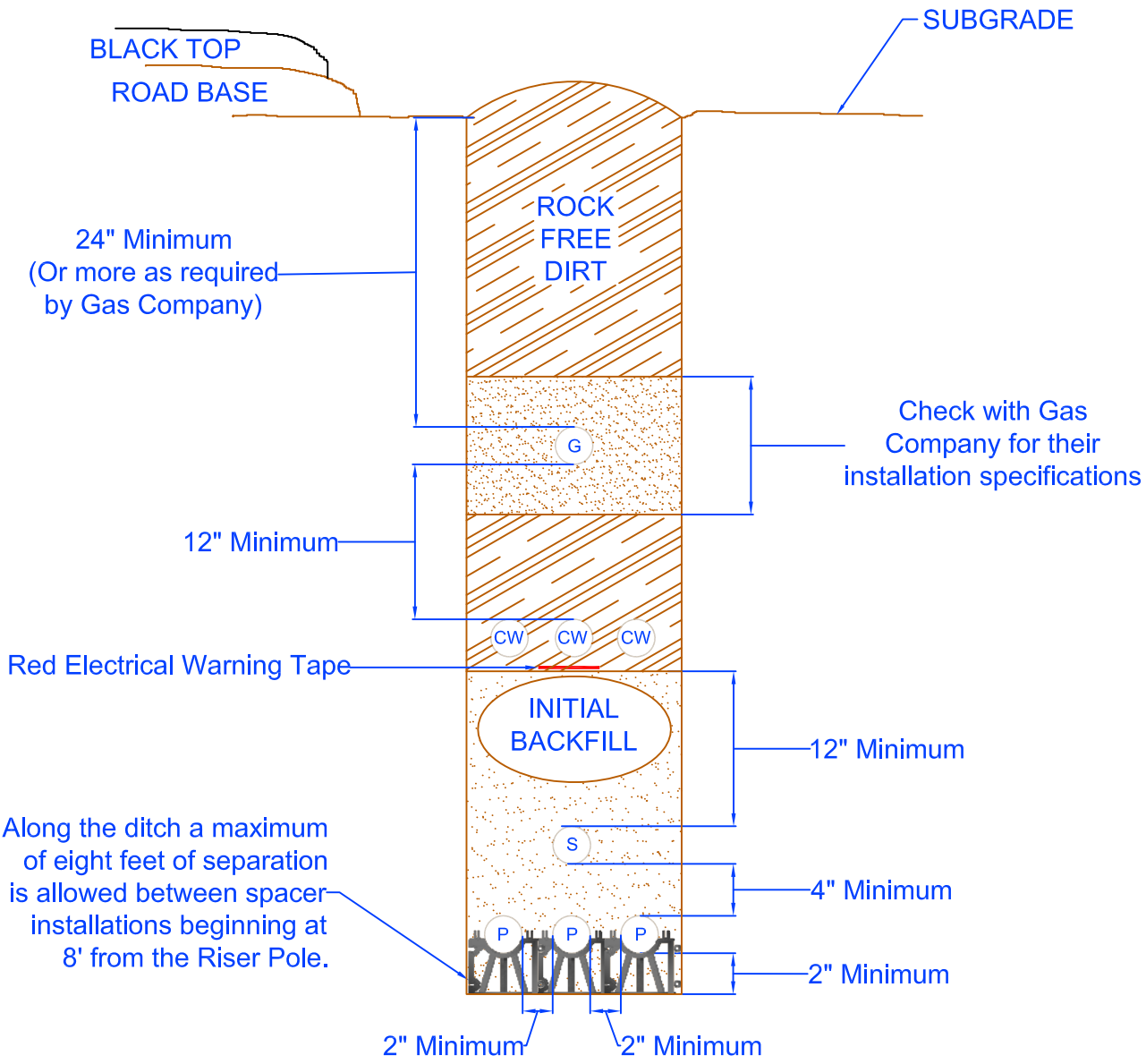
Reference Drawing
510-009-0911 for
Typical Trench Details

PEDERNALES ELECTRIC COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

3Ø Conduit Arrangement
Joint with Natural Gas/Propane

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-017-0911

OPTION 1



Reference Drawing
510-009-0911 for
Typical Trench Details

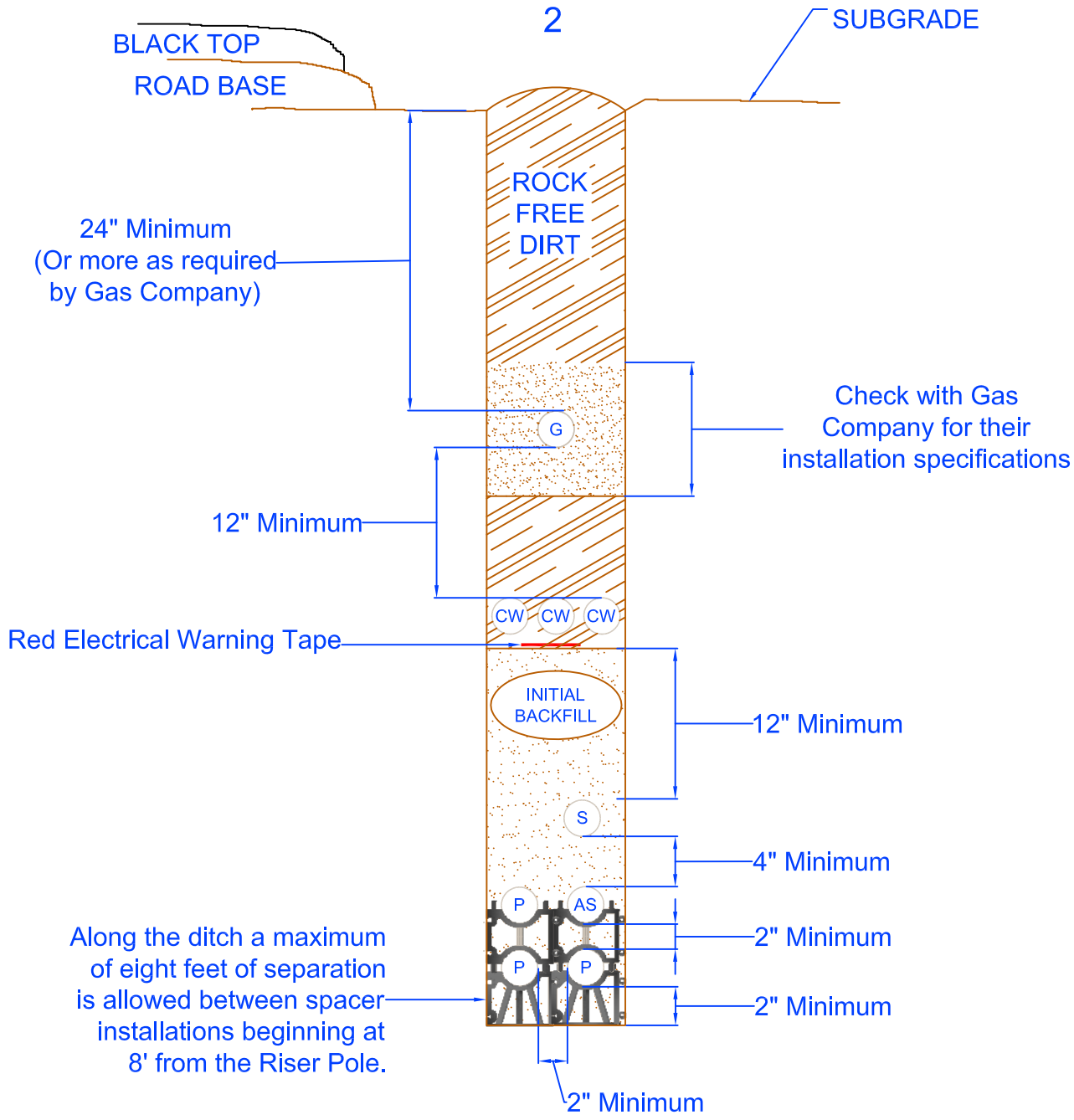
PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

3Ø Conduit Arrangement
Joint with Natural Gas/Propane
and other utilities

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-018-0911

OPTION 2



Reference Drawing
510-009-0911 for
Typical Trench Details

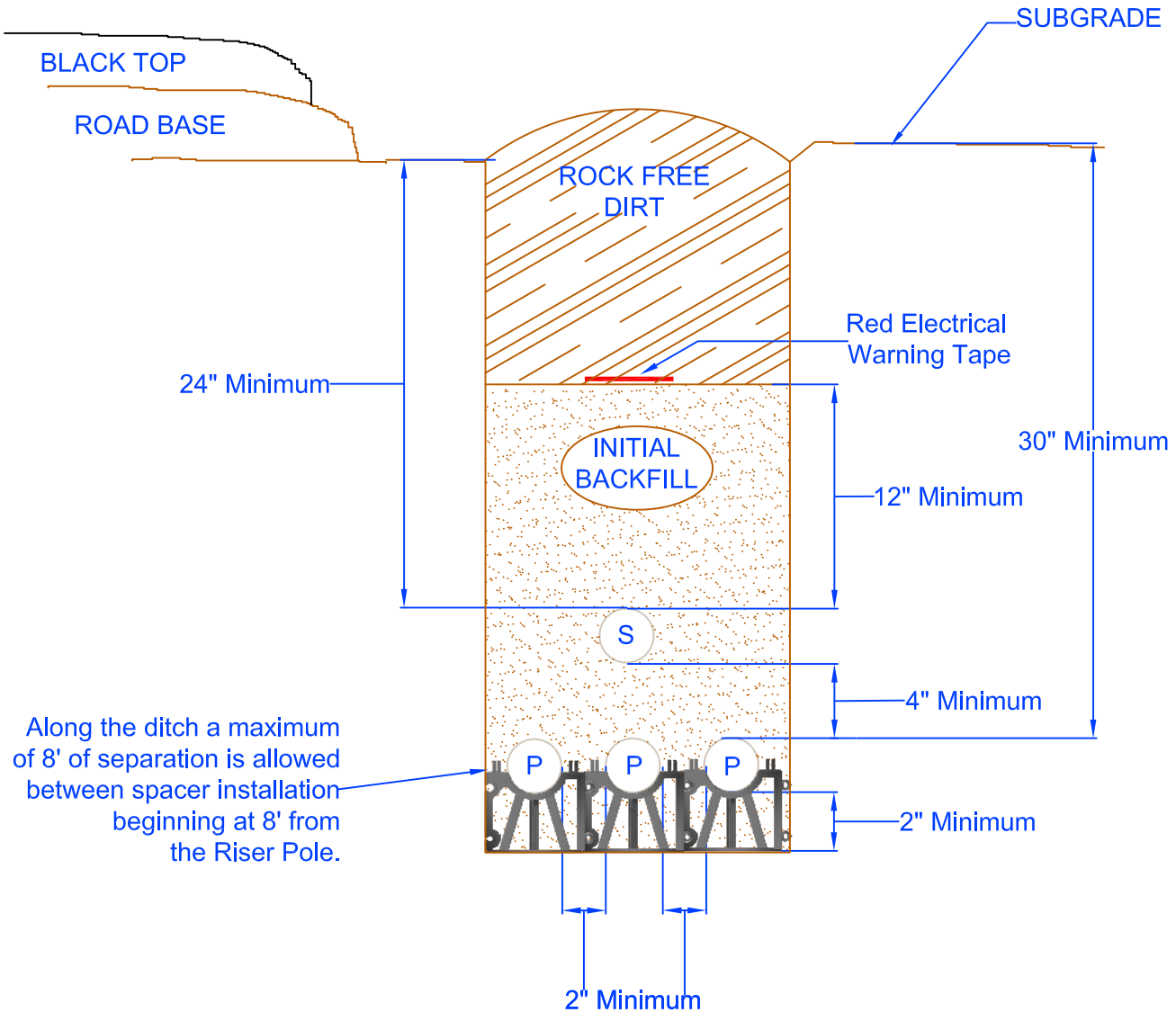
PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

3Ø Conduit Arrangement
Joint with Natural Gas/Propane
and other utilities

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-018-0911

OPTION 1



Reference Drawing
510-009-0911 for
Typical Trench Details

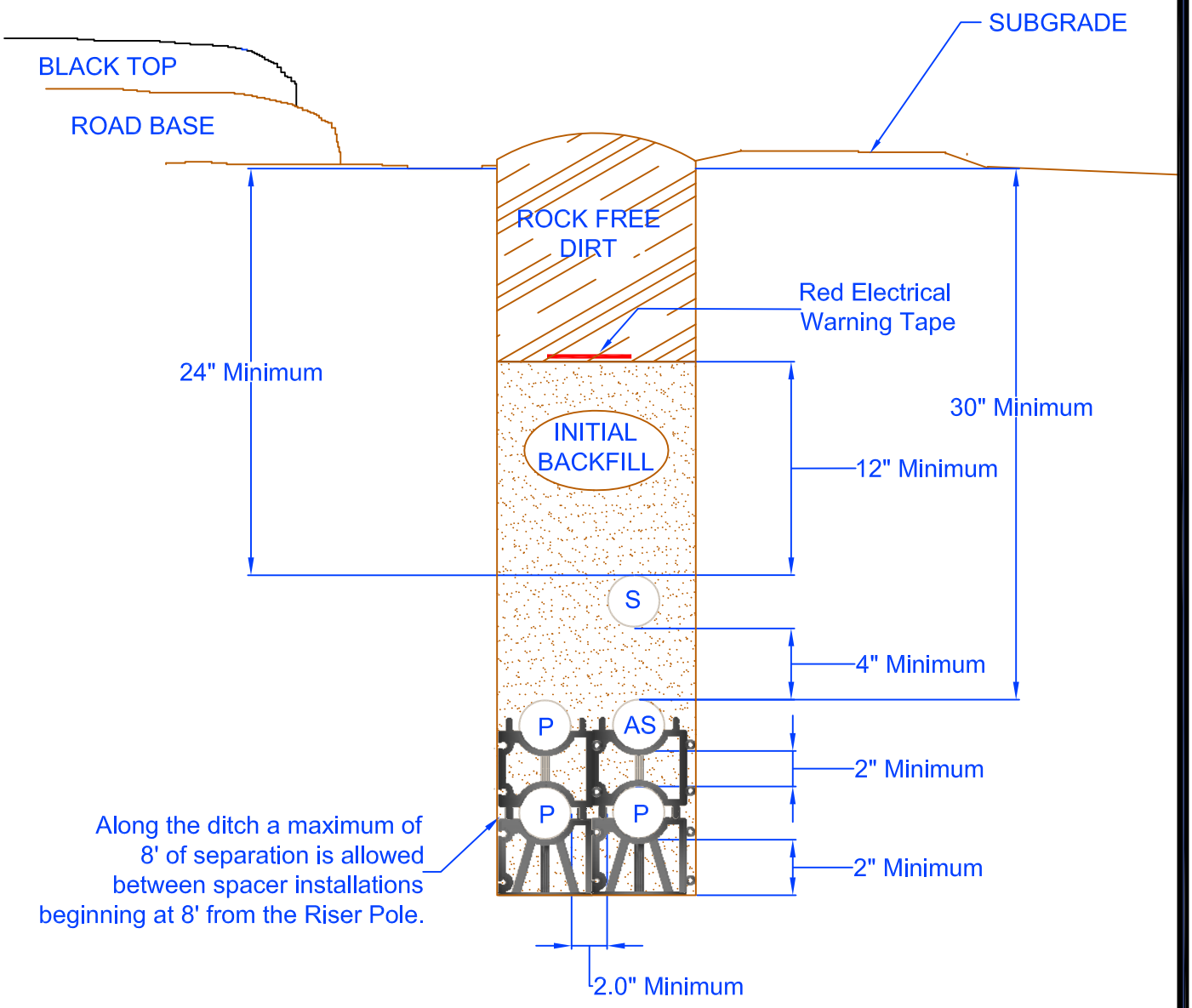
PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

3Ø Conduit Arrangement
Electric Only
Primary and Secondary

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-020-0911

OPTION 2



Reference Drawing
510-009-0911 for
Typical Trench Details

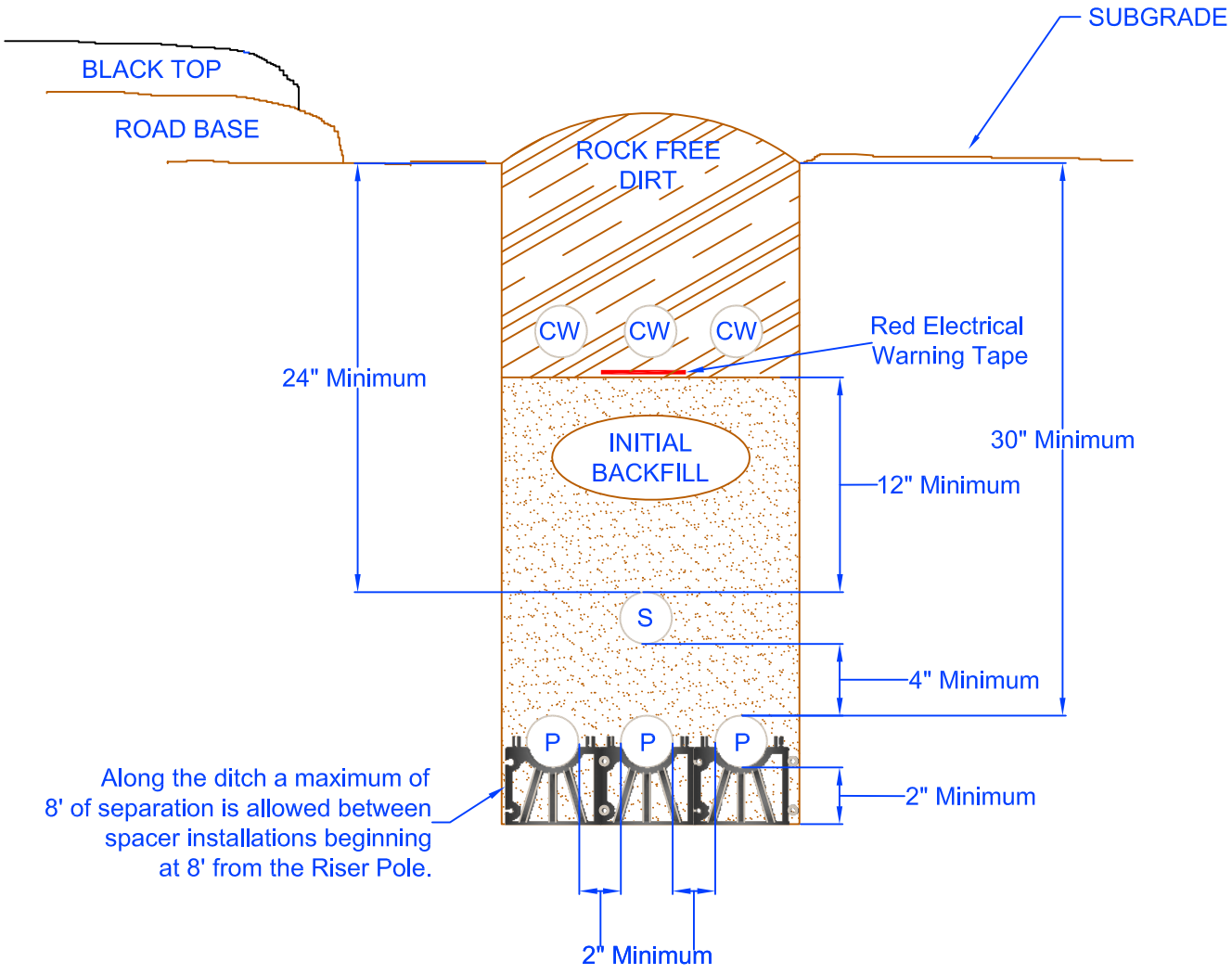
PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

3Ø Conduit Arrangement
Electric Only
Primary and Secondary

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-020-0911

OPTION 1



Reference Drawing
510-009-0911 for
Typical Trench Details

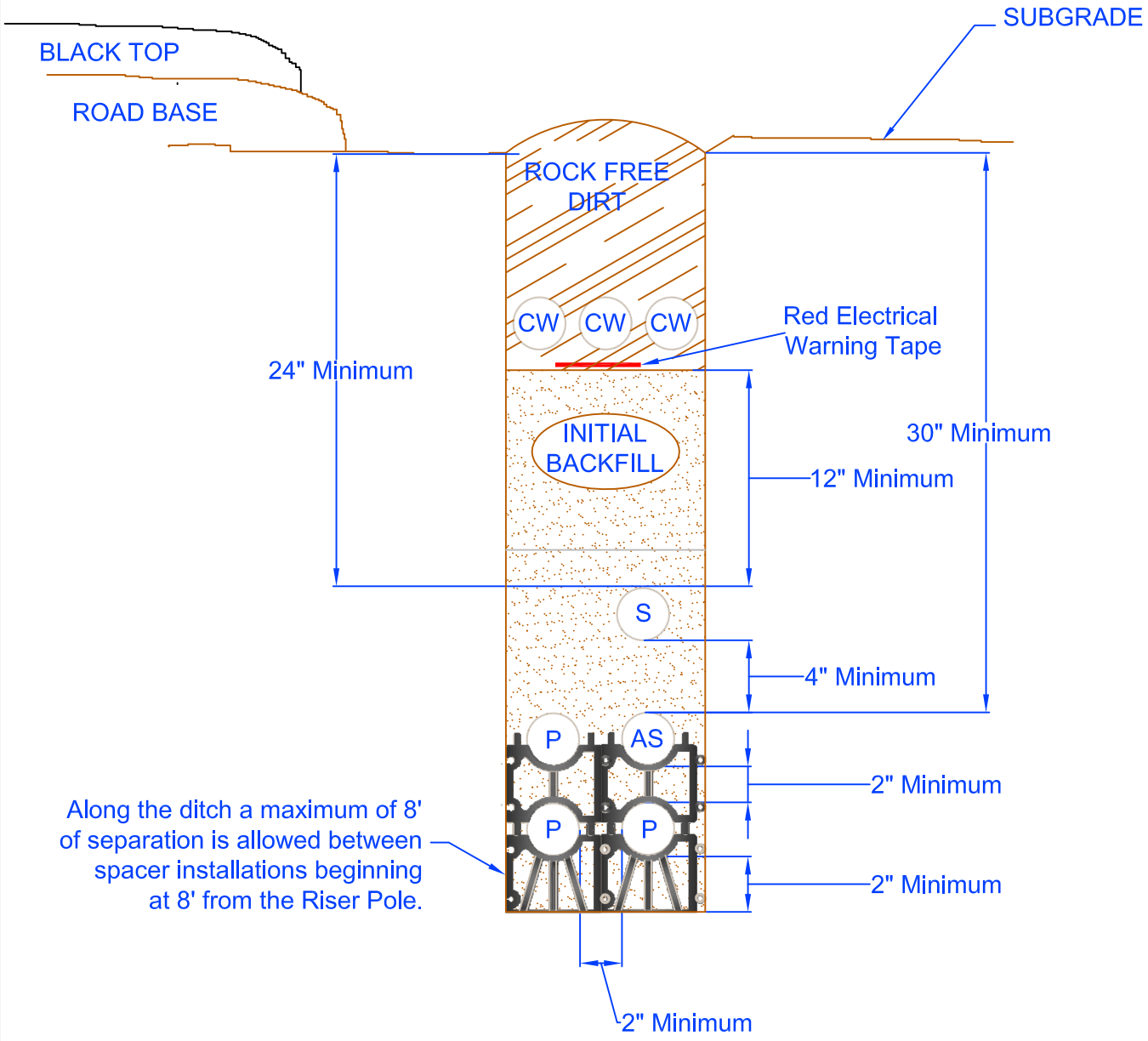
PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

3Ø Conduit Arrangement
Joint with Other Utilities

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-022-0911

OPTION 2



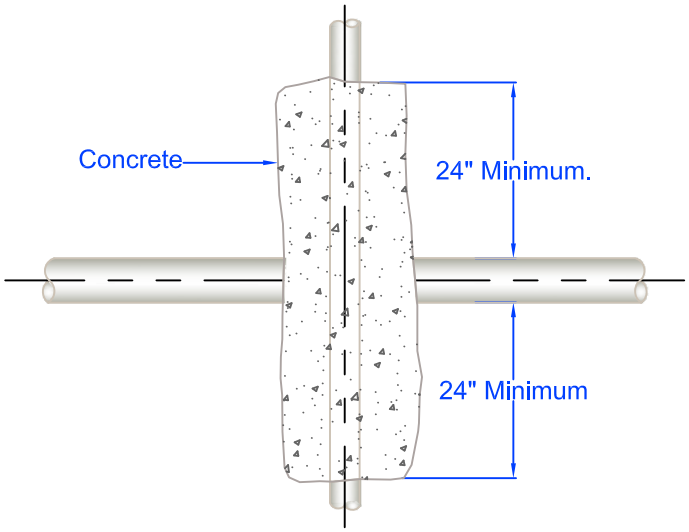
Reference Drawing
510-009-0911 for
Typical Trench Details

PEDERNALES ELECTRIC COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

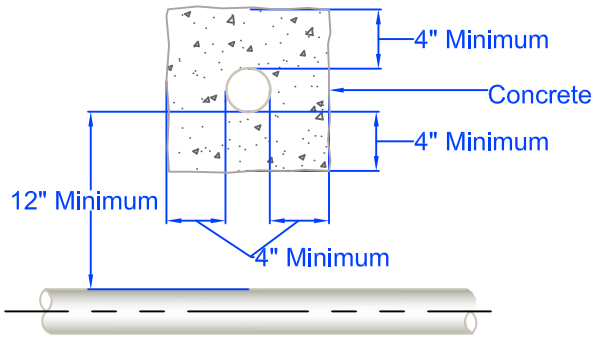
3Ø Conduit Arrangement
Joint with Other Utilities

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-022-0911

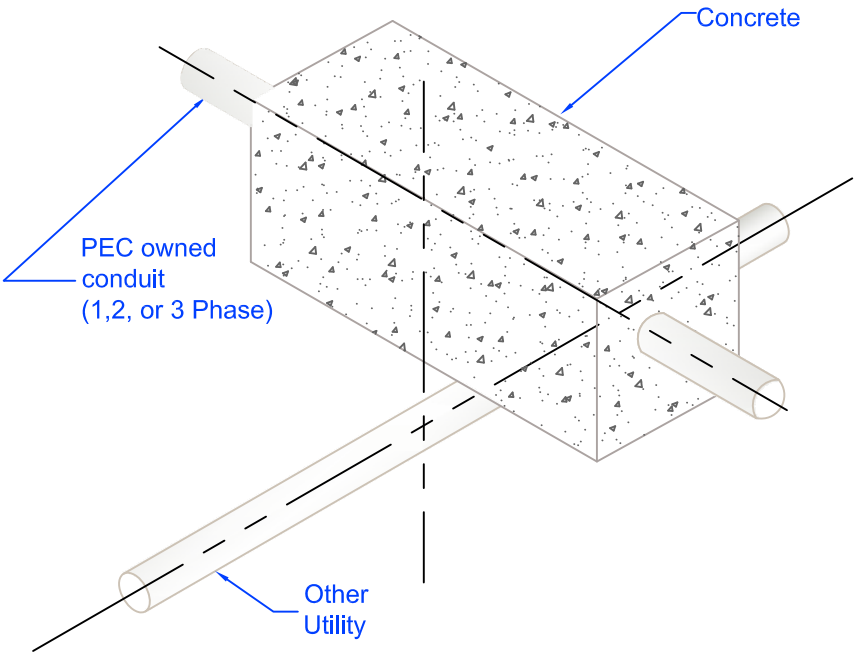
TOP VIEW



SIDE VIEW



ISOMETRIC VIEW



NOTES:

1) Refer to appropriate conduit arrangement drawing for correct embedment depth.

2) 3000 PSi concrete to be a minimum thickness of 4" around conduit.

3) This installation applies wherever the electrical conduit crosses above any other conduit.

4) If another utility crosses over a PEC conduit system the other utility must comply with the NESC rules 353B1 and 353B2. (NESC THE IEEE NATIONAL ELECTRIC SAFETY CODE)

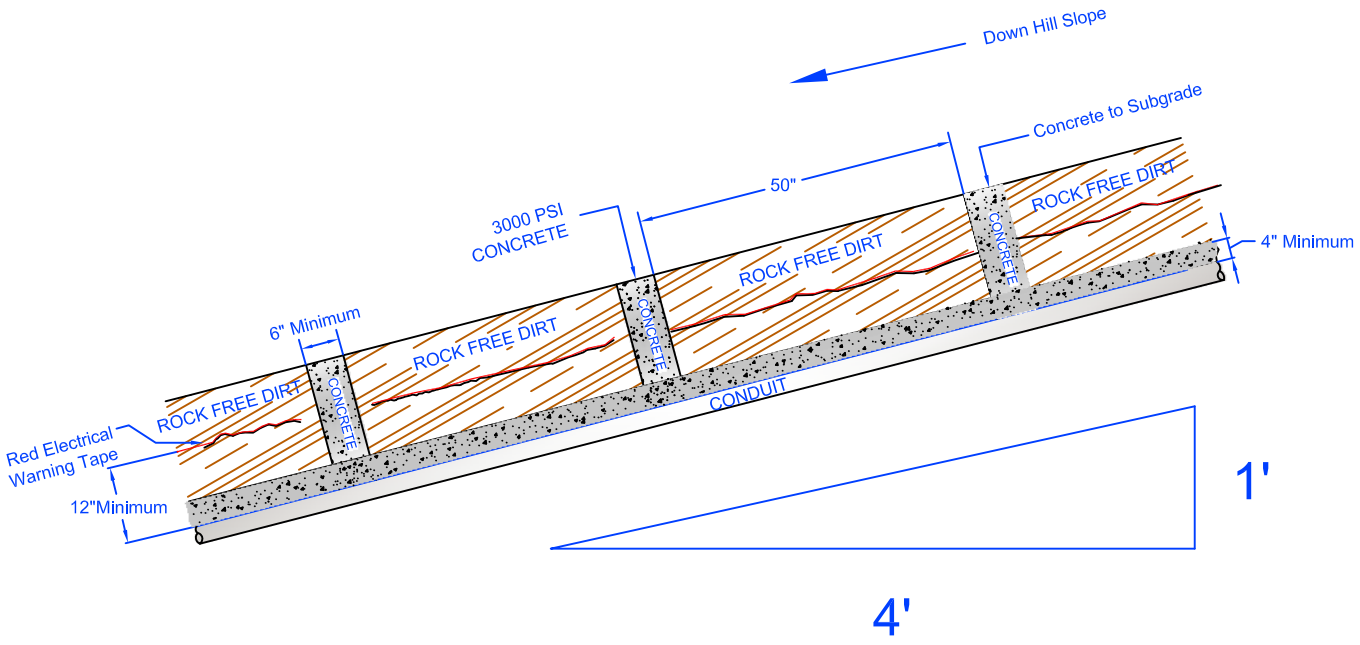
Pedernales Electric Cooperative, Inc.

PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

Conduit Crossing Detail For PEC above other Utilities

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-024-0911



NOTES:

1) Refer to appropriate conduit arrangement drawing for correct embedment depth.

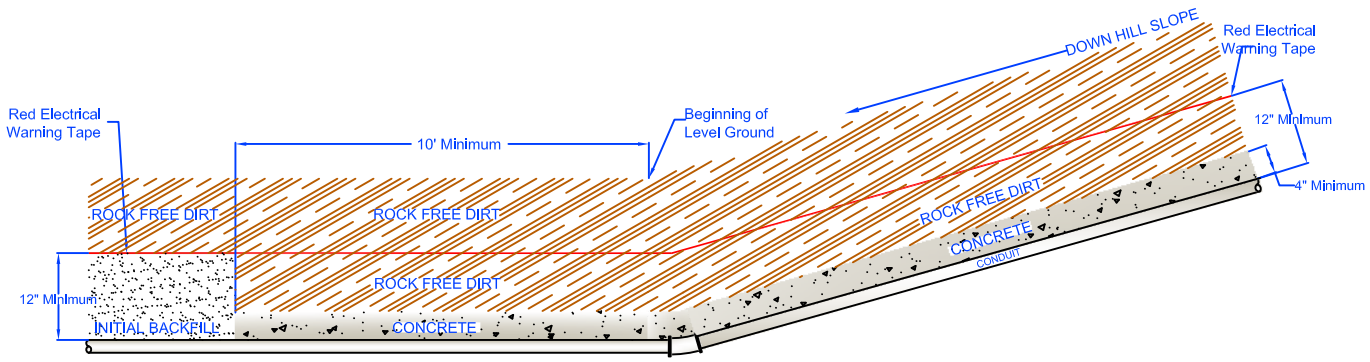
2) As an alternative see Drawing 510-027-0911.

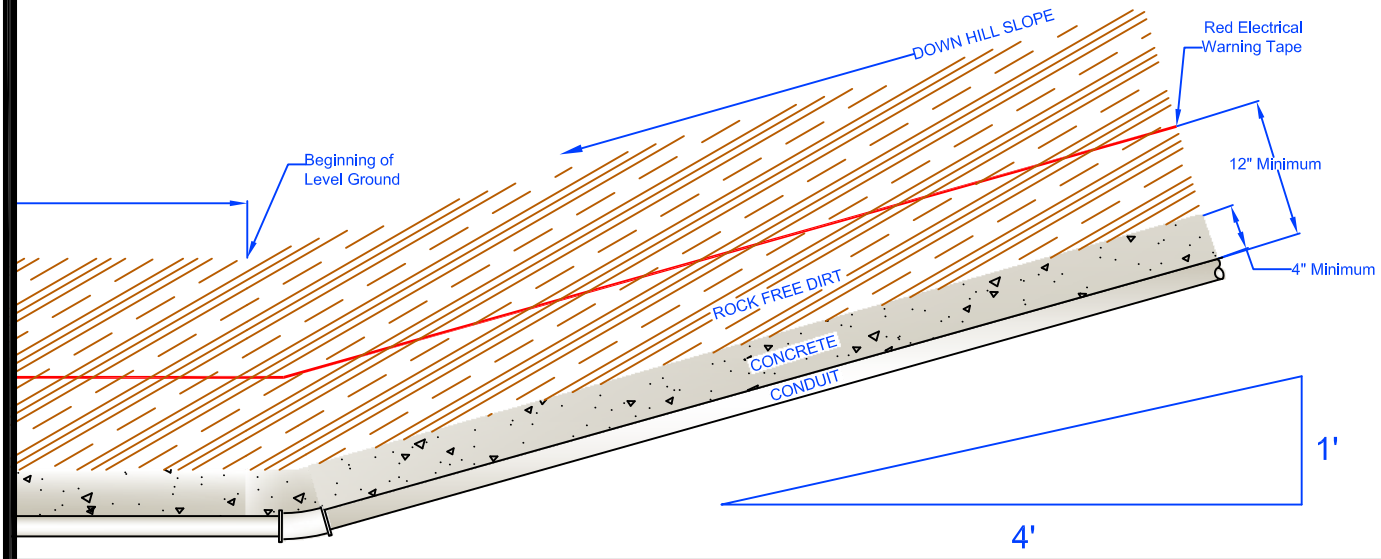
PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

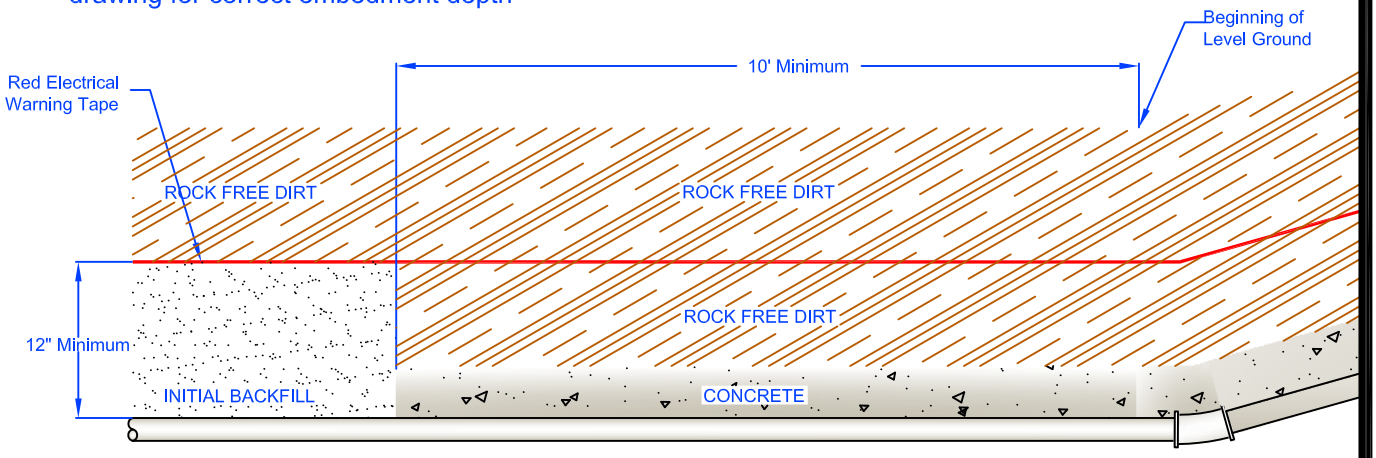
Conduit Installation in area with Greater than 25% Slope

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-026-0911





NOTE: Refer to appropriate conduit arrangement drawing for correct embedment depth



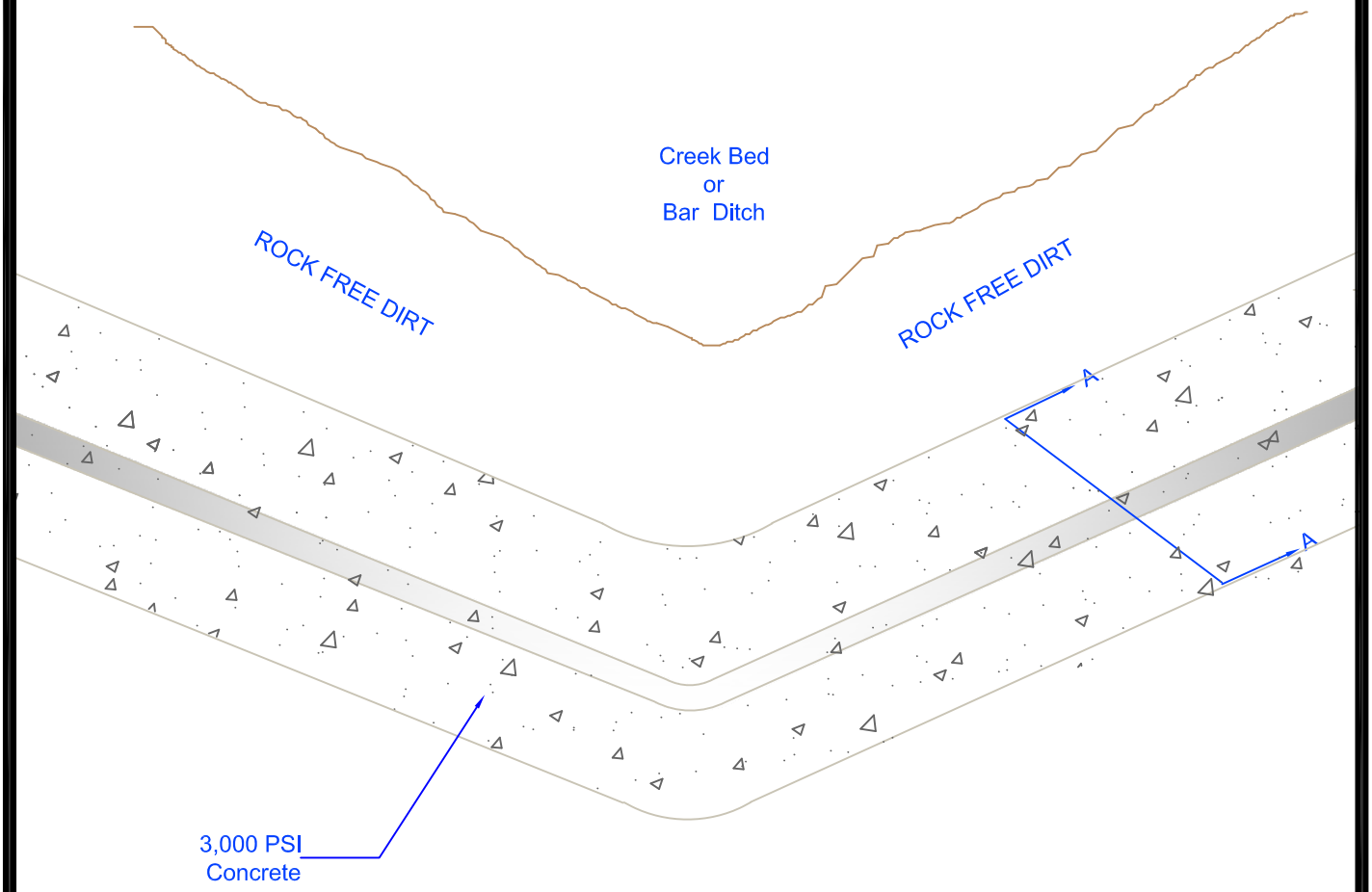
Pedernales Electric Cooperative, Inc.

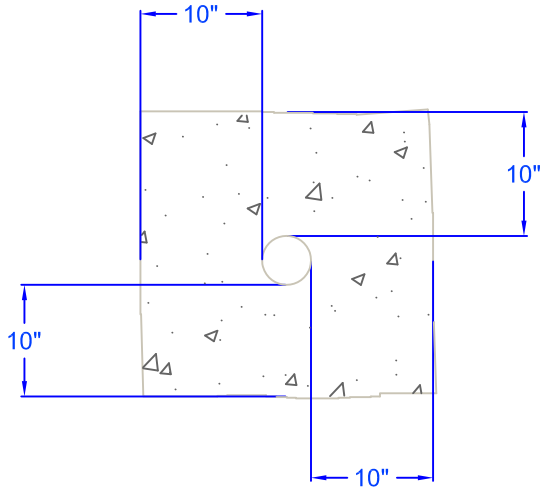
PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

Conduit Installation on Sloped area Greater than 25%

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-027-0911





SECTION A-A

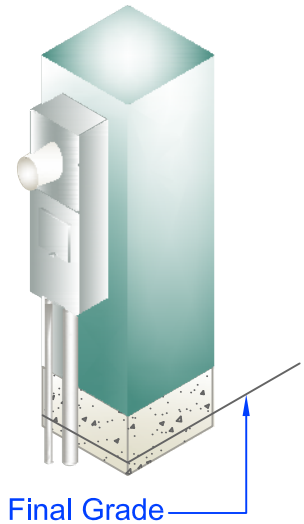
NOTE: Refer to appropriate conduit arrangement drawing for correct embedment depth.

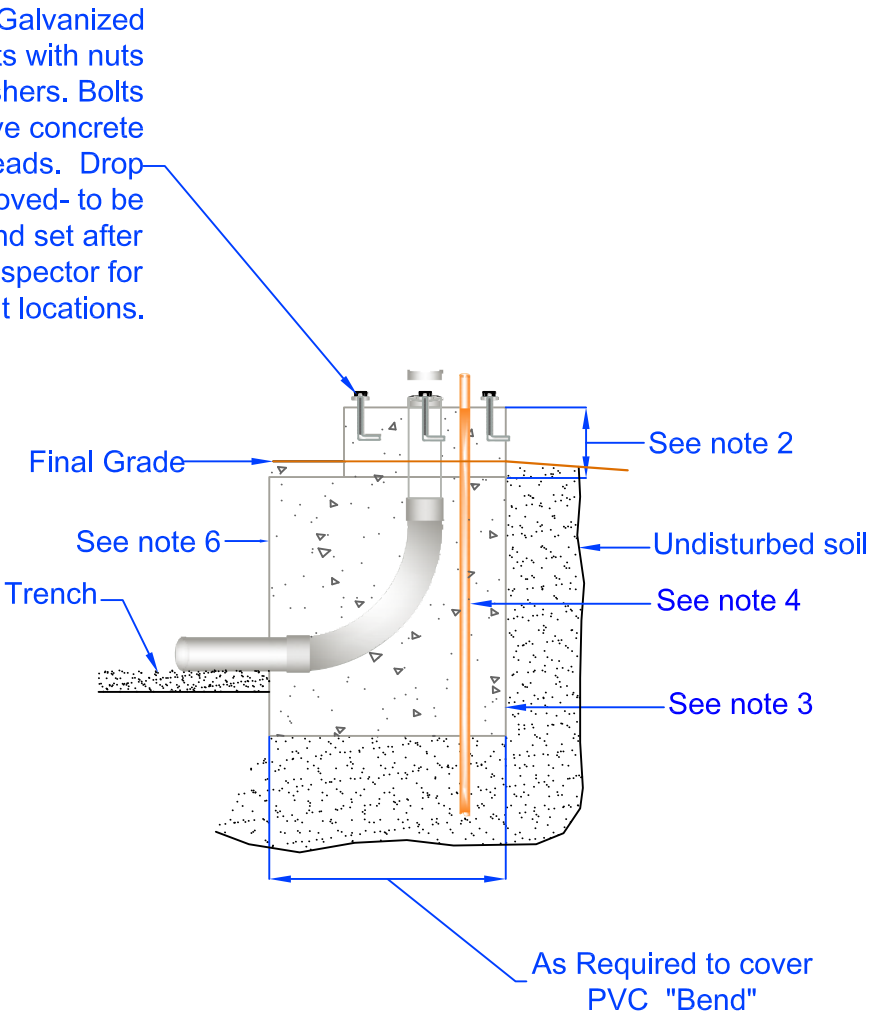
PEDERNALES ELECTRIC COOPERATIVE, INC.

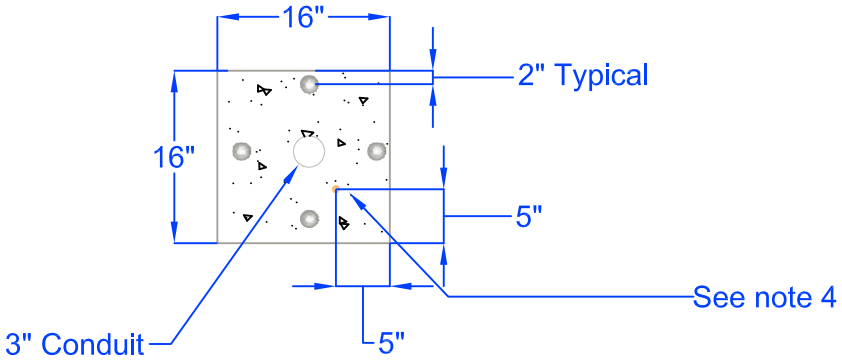
URD DEVELOPER'S SPECIFICATIONS

Conduit Installation in Flood Prone Areas

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	510-029-0911







Reference Drawing
510-009-0911 for
Typical Notes

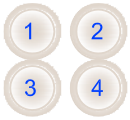
PEDERNALES ELECTRIC
COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

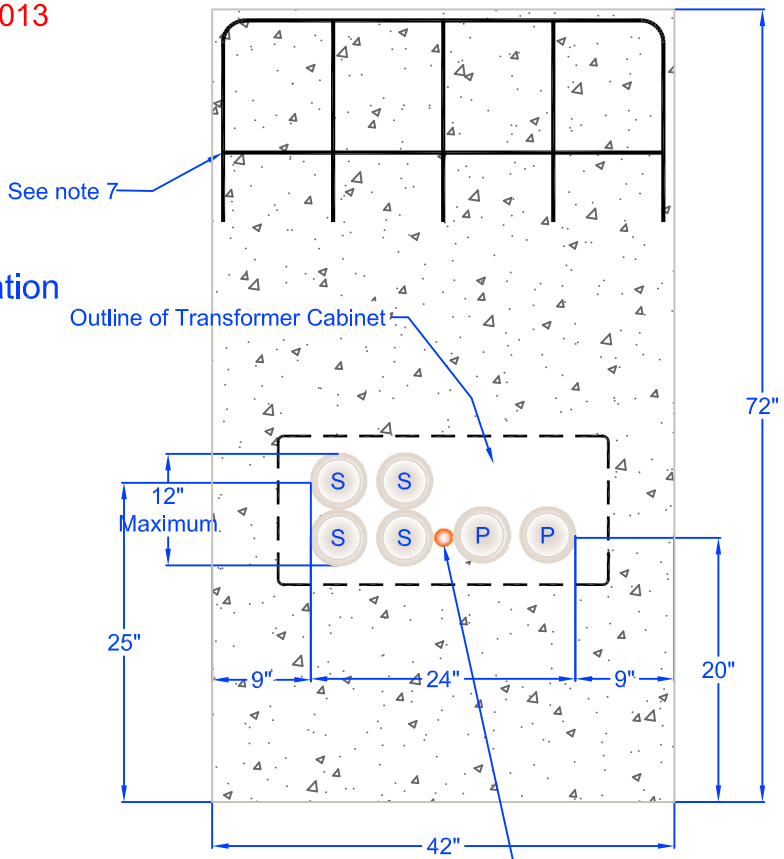
Pad for Service Meter Pedestal

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	520-010-0911

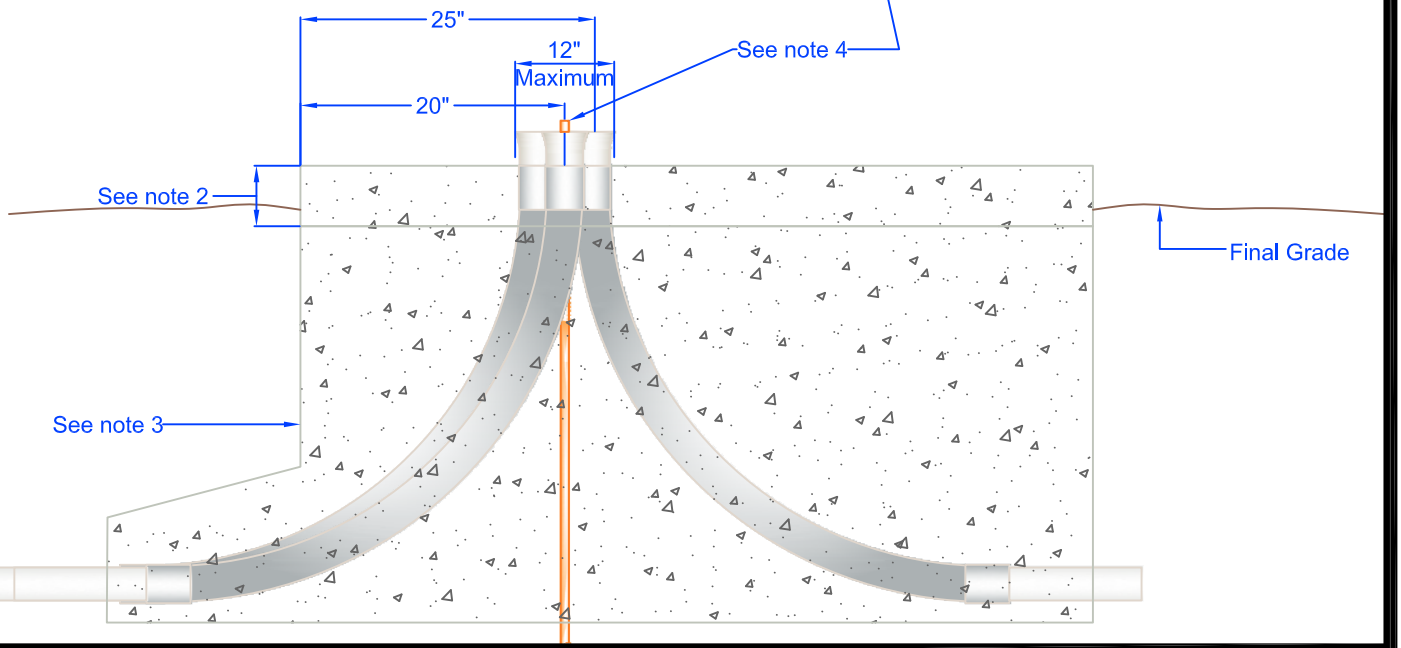
Changed placement of secondary conduits, effective as of March 20, 2013

Conduit Configuration





Reference Drawing
510-009-0911
for all notes



PEDERNALES ELECTRIC COOPERATIVE, INC.

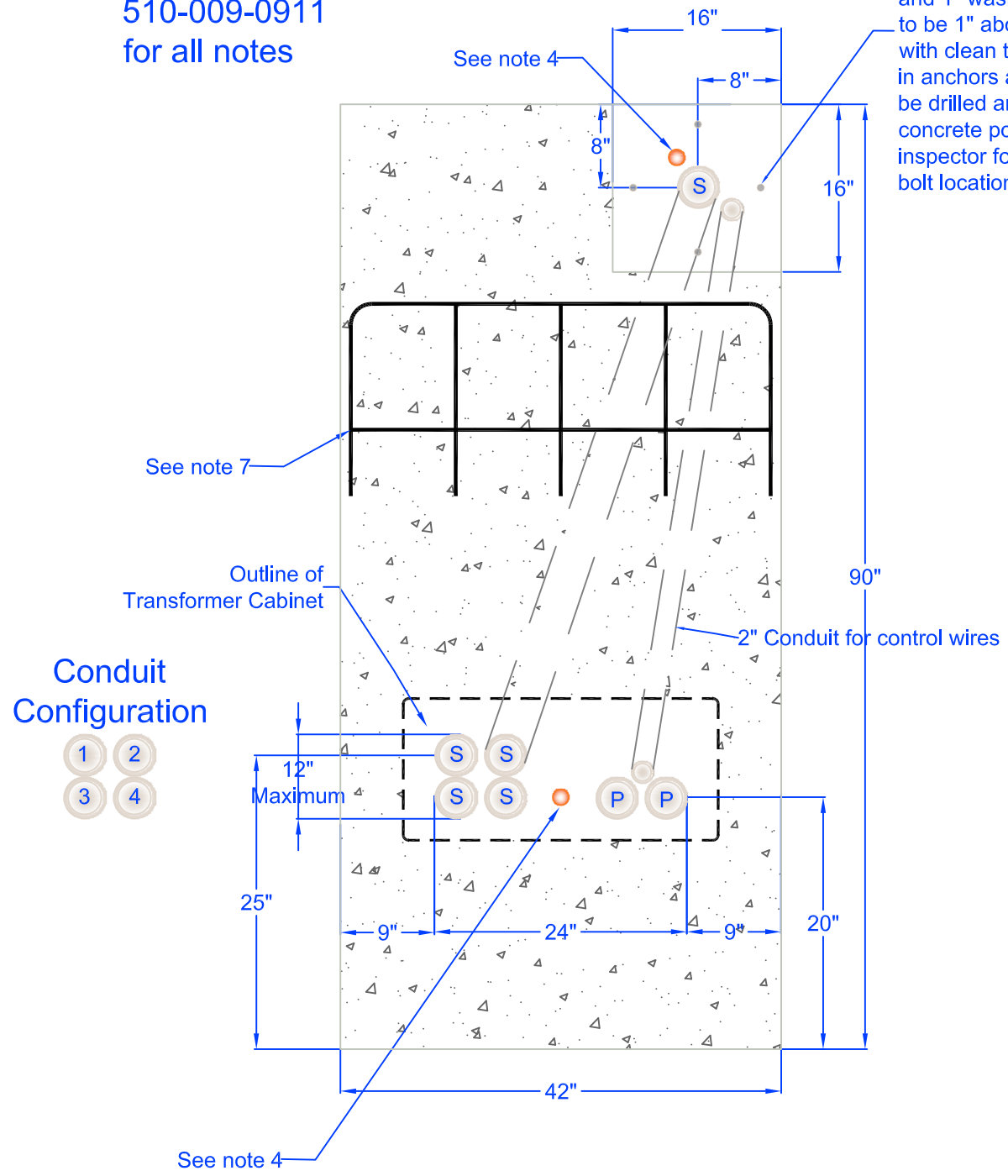
URD DEVELOPER'S SPECIFICATIONS

Pad for 1Ø Transformer, 1Ø Transformer with VFI, Small Sectionalizing Enclosure

drawn:	approved	date:	drawing number:
JBS	MJB	March 20, 2013	520-030-0911

Changed placement of secondary conduits, effective as of March 20, 2013

Reference Drawing 510-009-0911 for all notes



PEDERNALES ELECTRIC COOPERATIVE, INC.

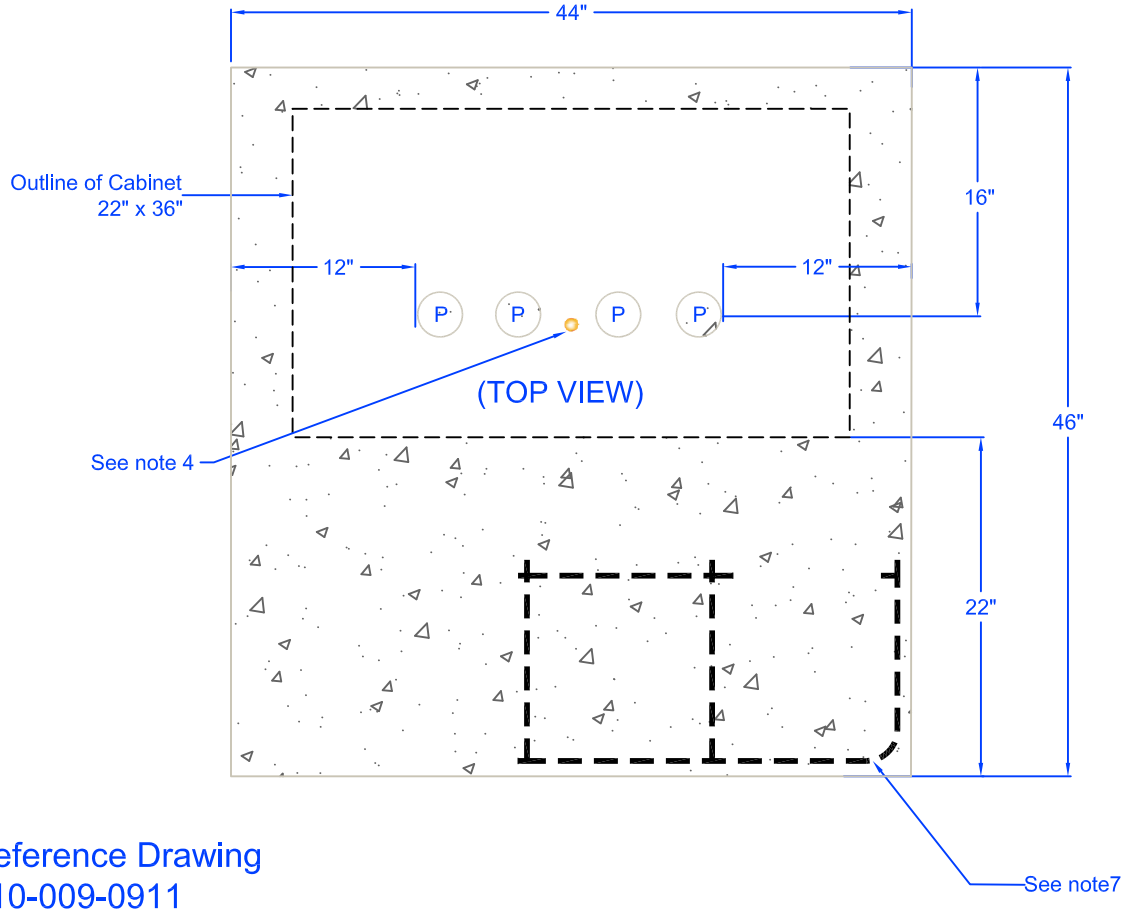
URD DEVELOPER'S SPECIFICATIONS

Pad for 1Ø Transformer, and pedestal for CT Metering

drawn:	approved	date:	drawing number:
JBS	MJB	March 20, 2013	520-034-0911

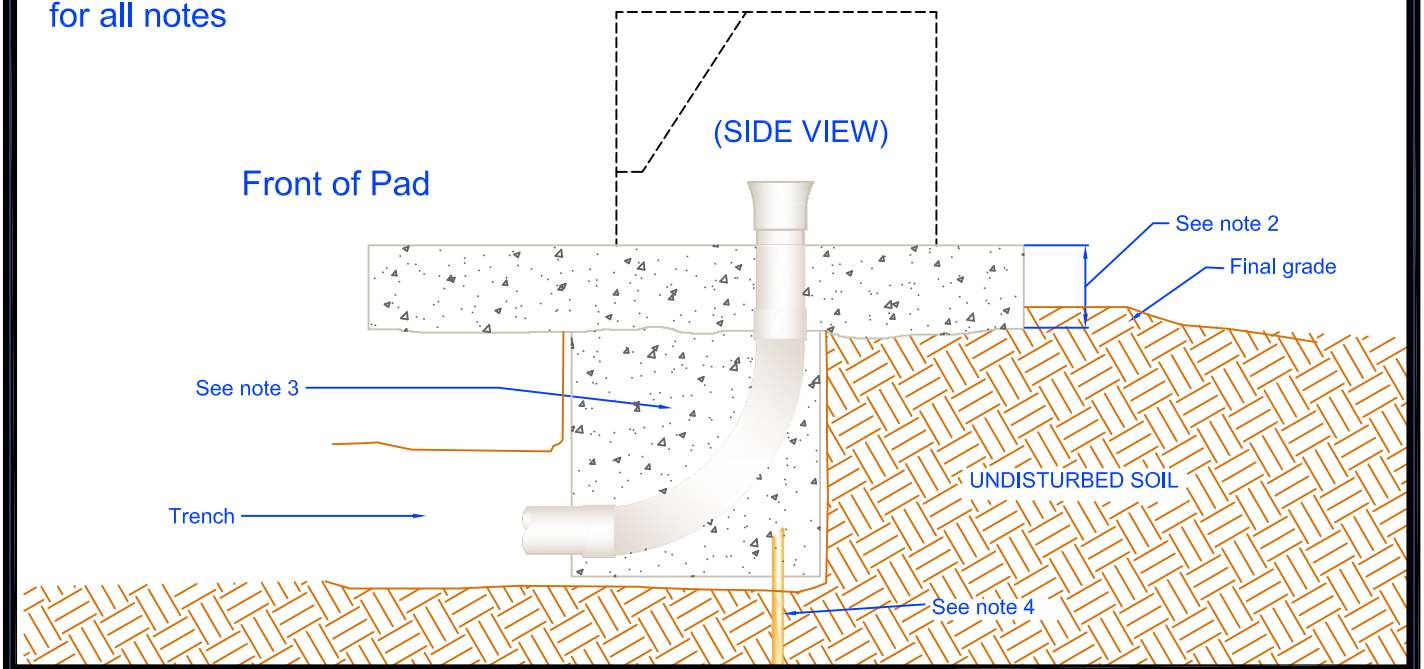
Approved Sectionalizers:
Maysteel CW336-22TH
Maysteel CC336-22TH

Back of Pad



Reference Drawing
510-009-0911
for all notes

Front of Pad



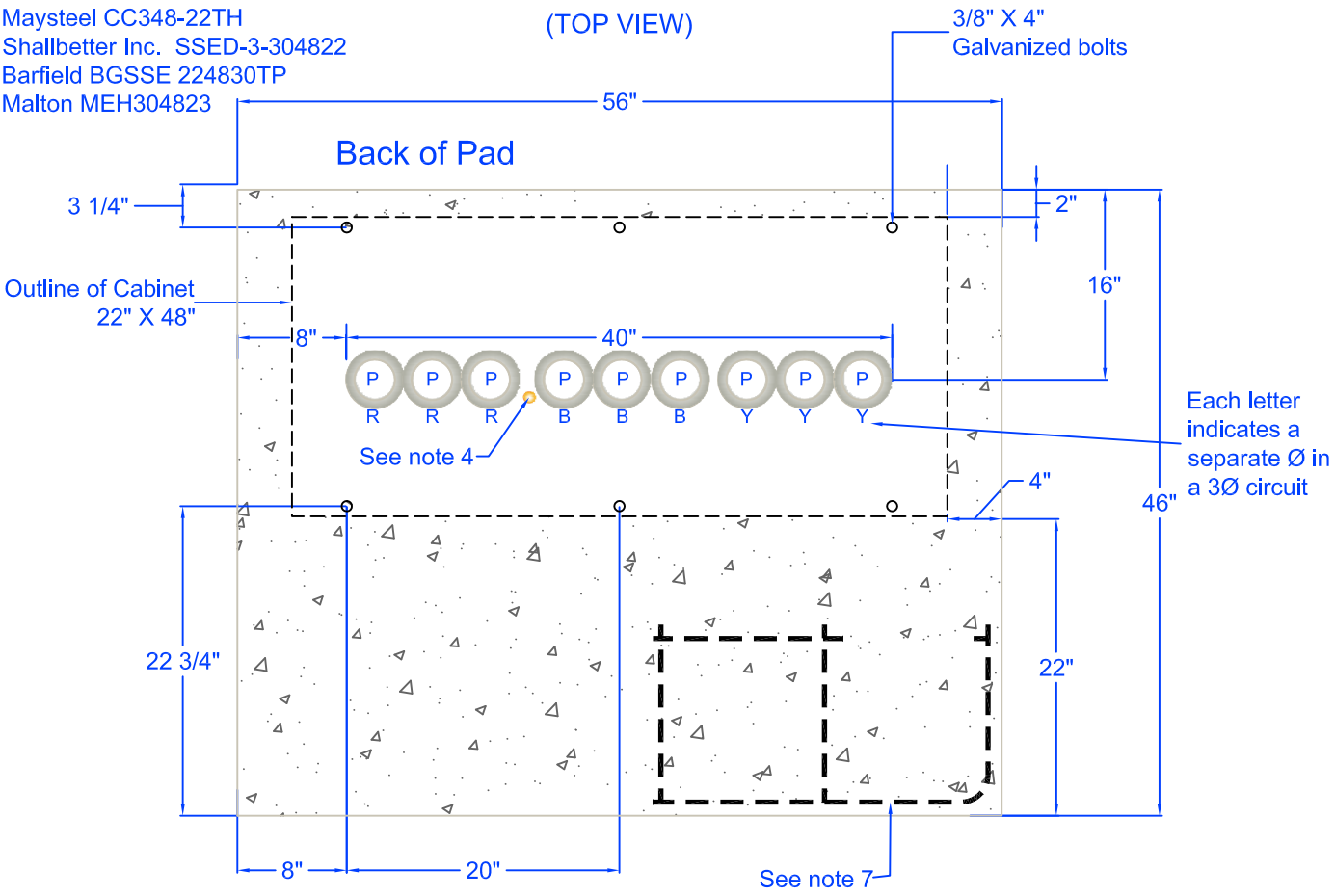
PEDERNALES ELECTRIC
COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

Small Pad for 1Ø Sectionalizing Enclosure

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	530-010-0911

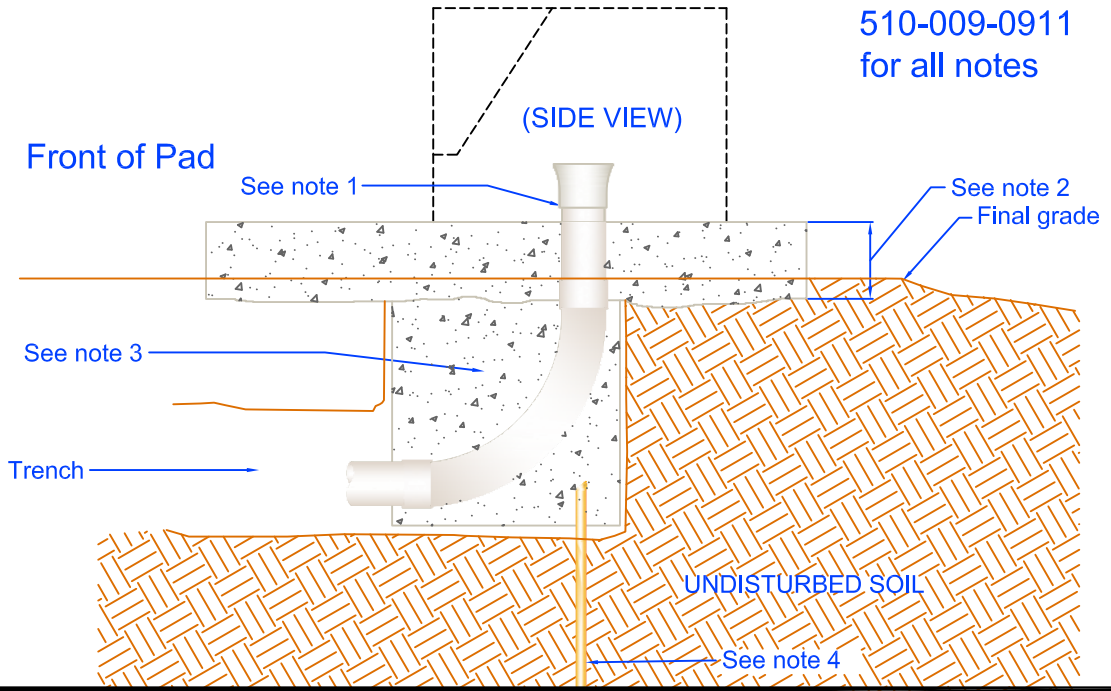
Approved Sectionalizers:
Durham 1010188
Maysteel CC348-22TH
Shallbetter Inc. SSED-3-304822
Barfield BGSSE 224830TP
Malton MEH304823

(TOP VIEW)



Reference Drawing
510-009-0911
for all notes

(SIDE VIEW)

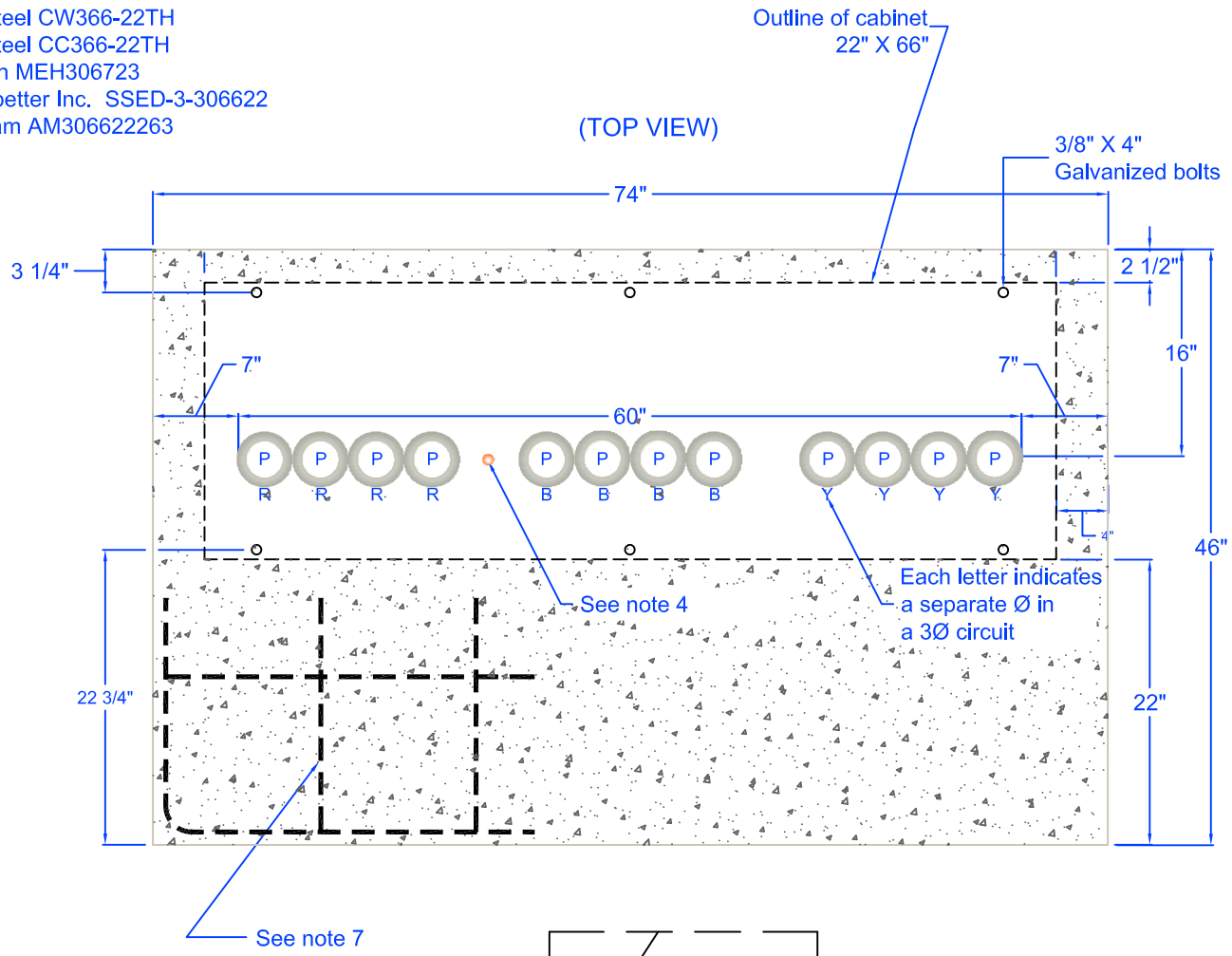


PEDERNALES ELECTRIC COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

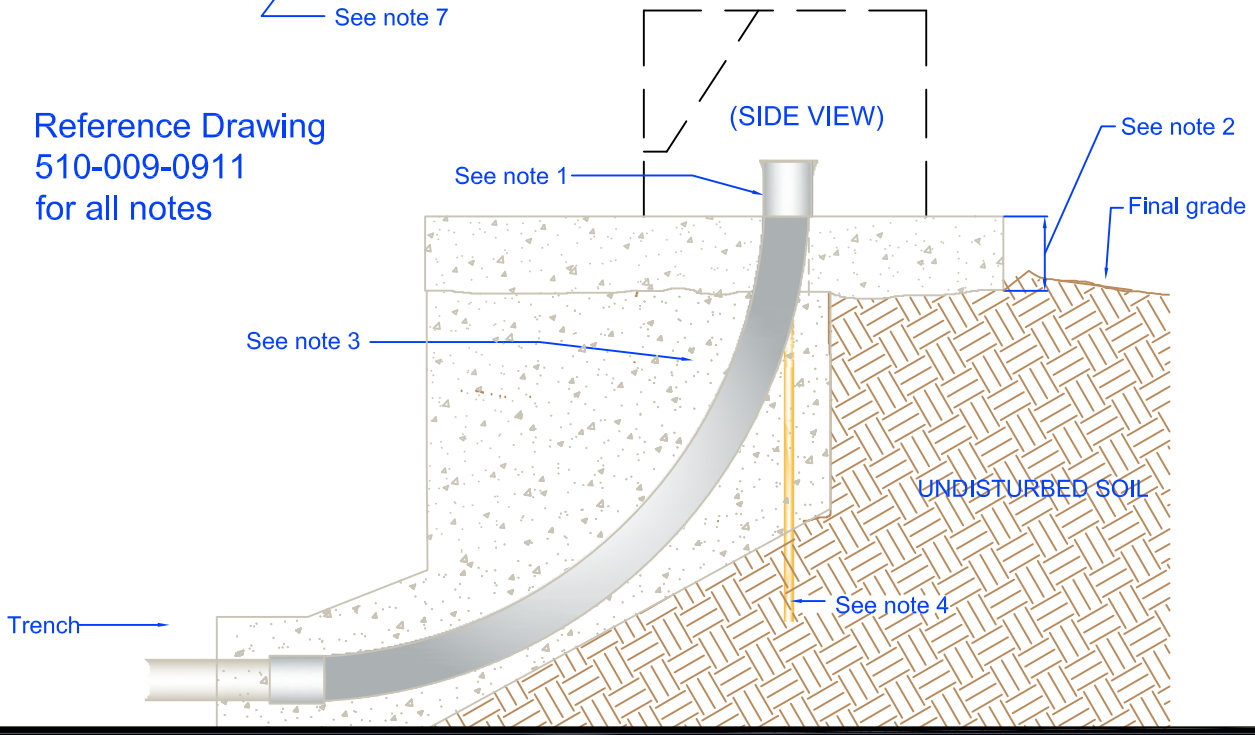
Small Pad for 3Ø Sectionalizing Enclosure

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	530-020-0911

Approved Sectionalizers:
Maysteel CW366-22TH
Maysteel CC366-22TH
Malton MEH306723
Shallbetter Inc. SSED-3-306622
Durham AM306622263



Reference Drawing
510-009-0911
for all notes



PEDERNALES ELECTRIC
COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

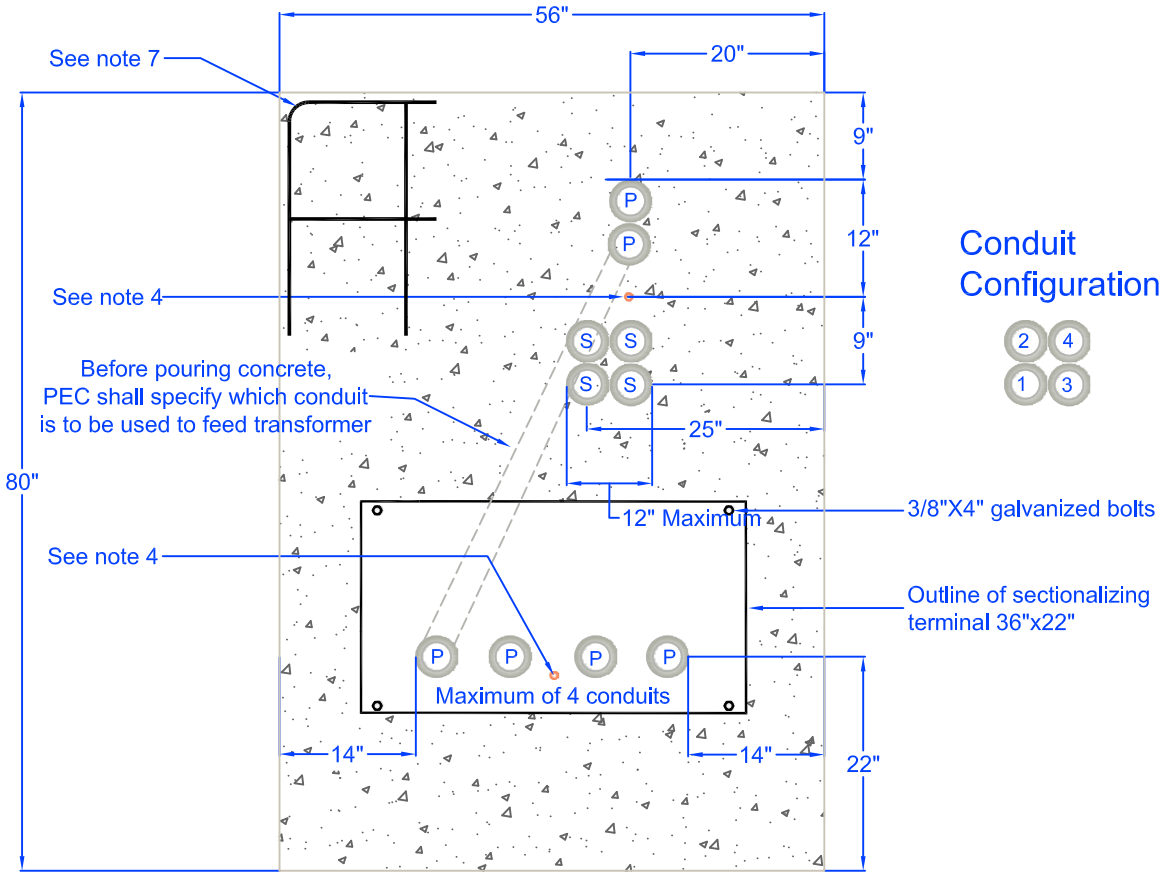
Large Pad for 3Ø Sectionalizing Enclosure

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	530-022-0911

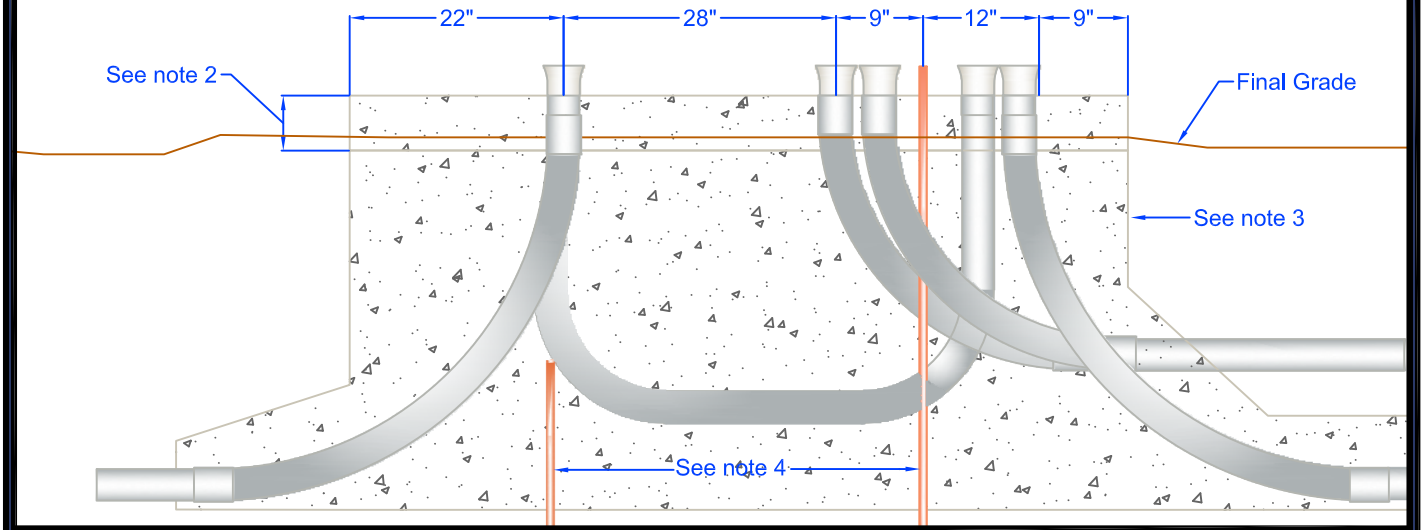
Approved Sectionalizer:
Maysteel CC336-22TH

Reference Drawing
510-009-0911
for all notes

Changed placement of secondary conduits, effective as of March 20, 2013



Conduit Configuration



PEDERNALES ELECTRIC COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

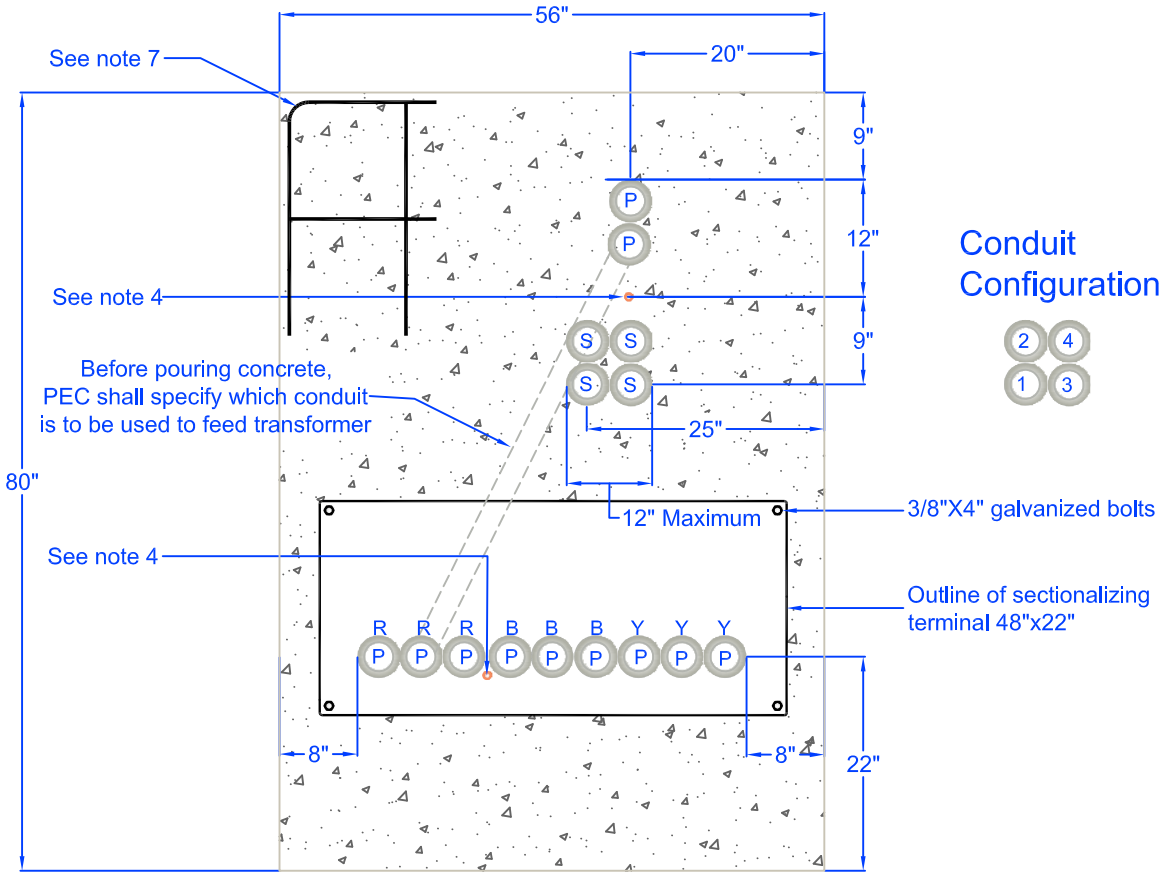
1Ø Combination Sectionalizing Enclosure and Transformer Pad

drawn:	approved	date:	drawing number:
JBS	MJB	October 28, 2013	530-023-1013

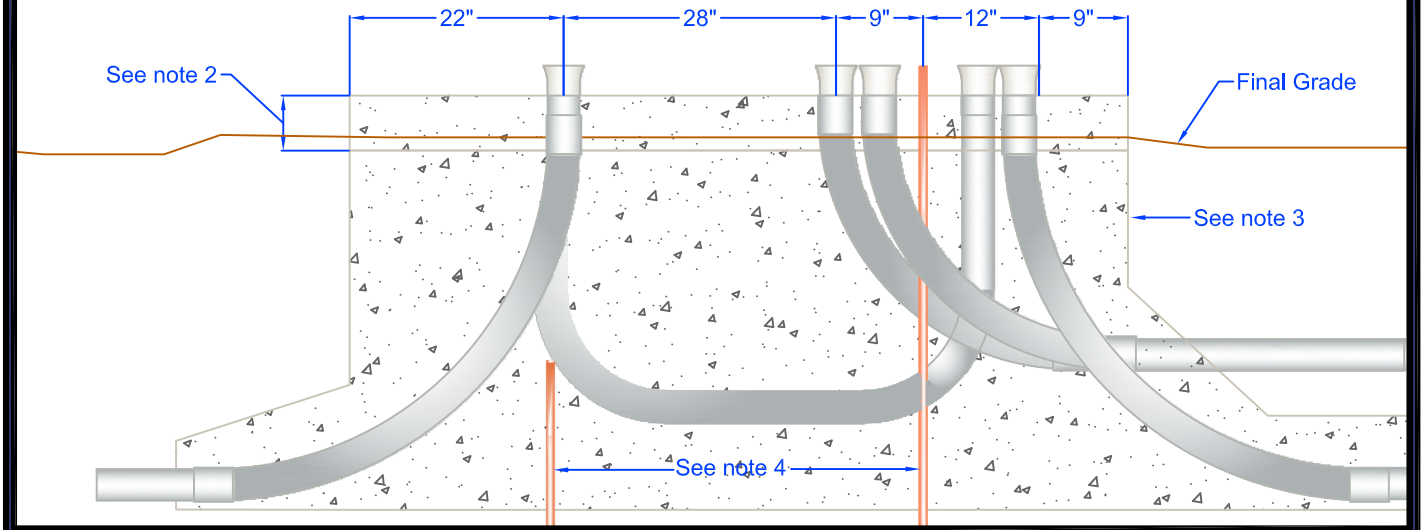
Approved Sectionalizers:
Durham 1010188
Maysteel CC348-22TH
Malton MEH304823
Shallbetter Inc. SSED 3-304822
Barfield BGSSE 224830TP

Reference Drawing
510-009-0911
for all notes

Changed placement of secondary conduits, effective as of March 20, 2013



Conduit Configuration



PEDERNALES ELECTRIC COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

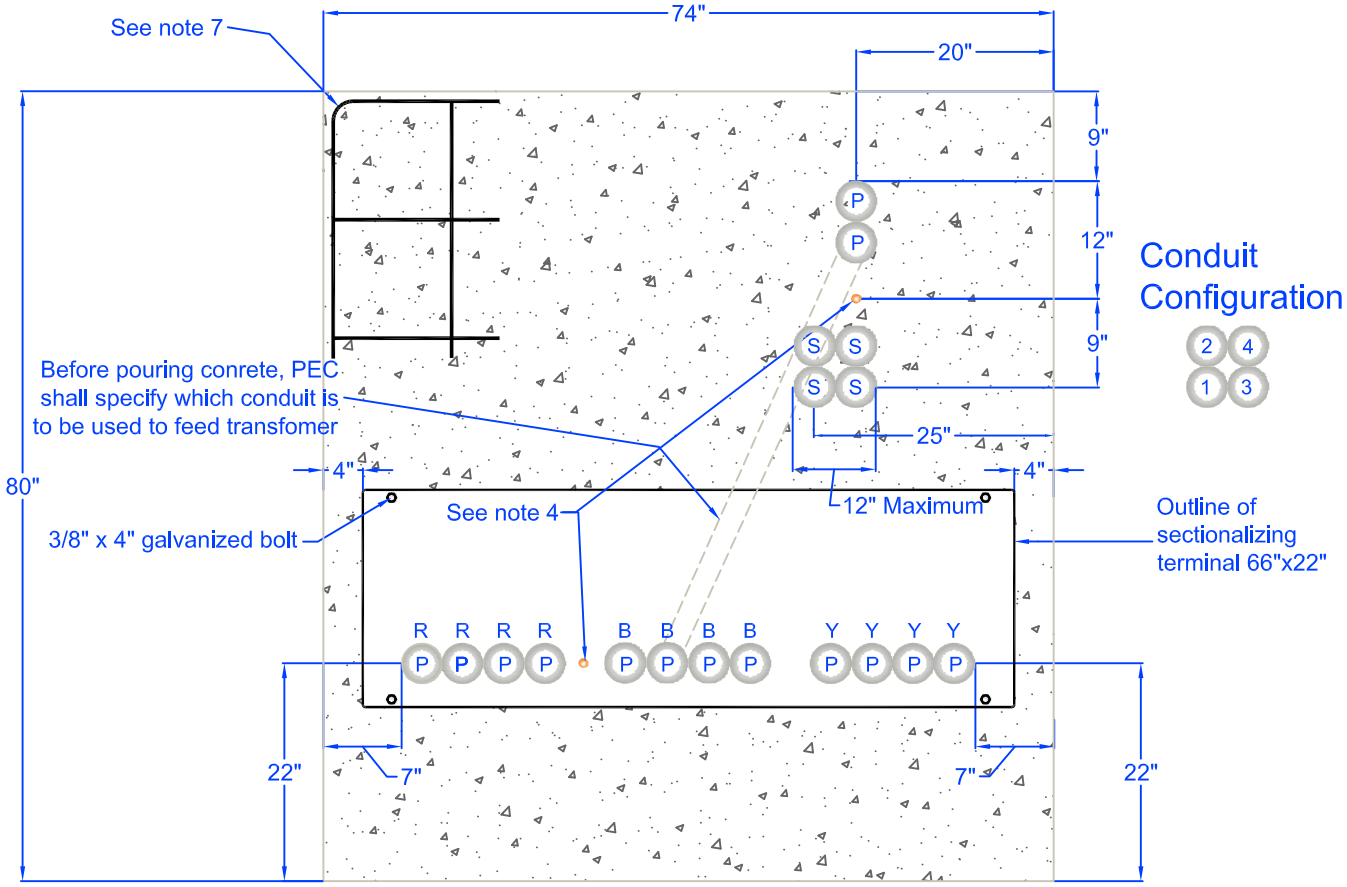
Small Combination Sectionalizing Enclosure and Transformer Pad

drawn:	approved	date:	drawing number:
JBS	MJB	March 20, 2013	530-024-0911

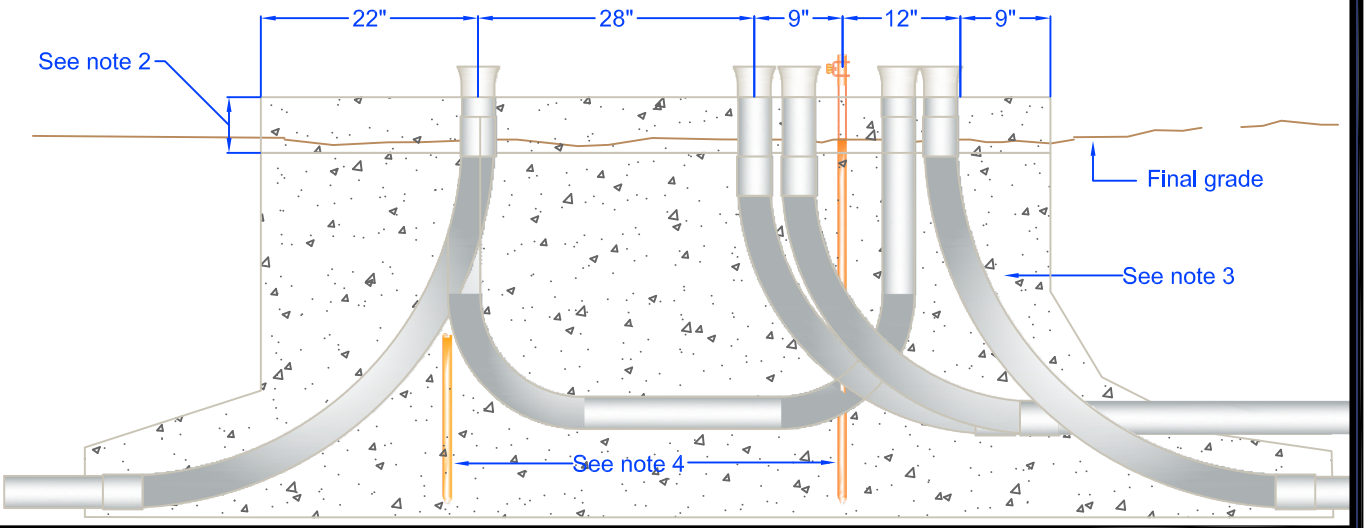
Approved Sectionalizers:
Maysteel CW366-22TH
Maysteel CC366-22TH
Malton MEH306723
Shallbetter Inc. SSED-3-306622
Durham AM306622263

Changed placement of secondary conduits, effective as of March 20, 2013

Reference Drawing 510-009-0911 for all notes



Conduit Configuration



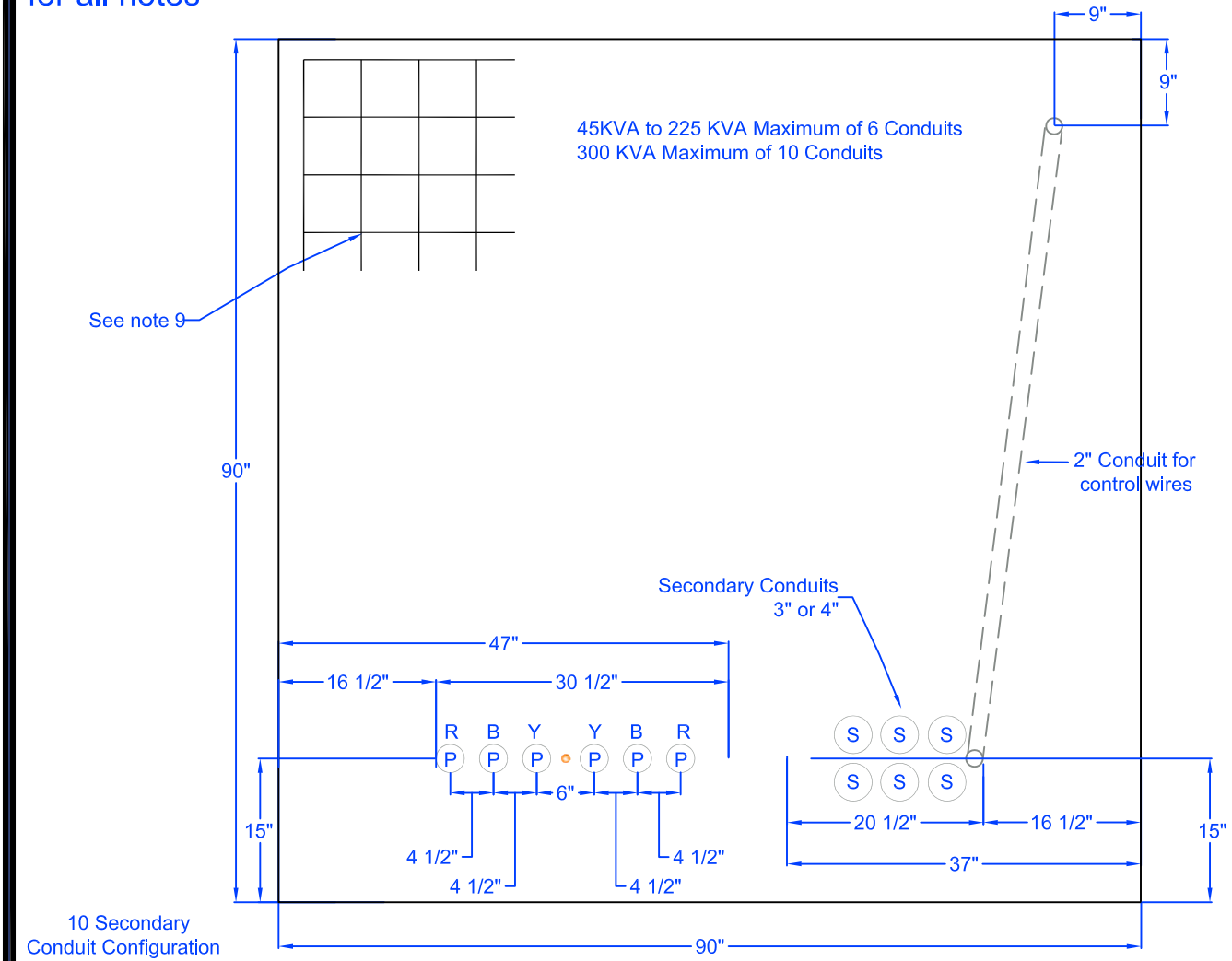
PEDERNALES ELECTRIC COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

Large Combination Sectionalizing Enclosure and Transformer Pad

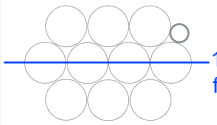
drawn:	approved	date:	drawing number:
JBS	MJB	March 20, 2013	530-026-0911

Reference Drawing
510-009-0911
for all notes

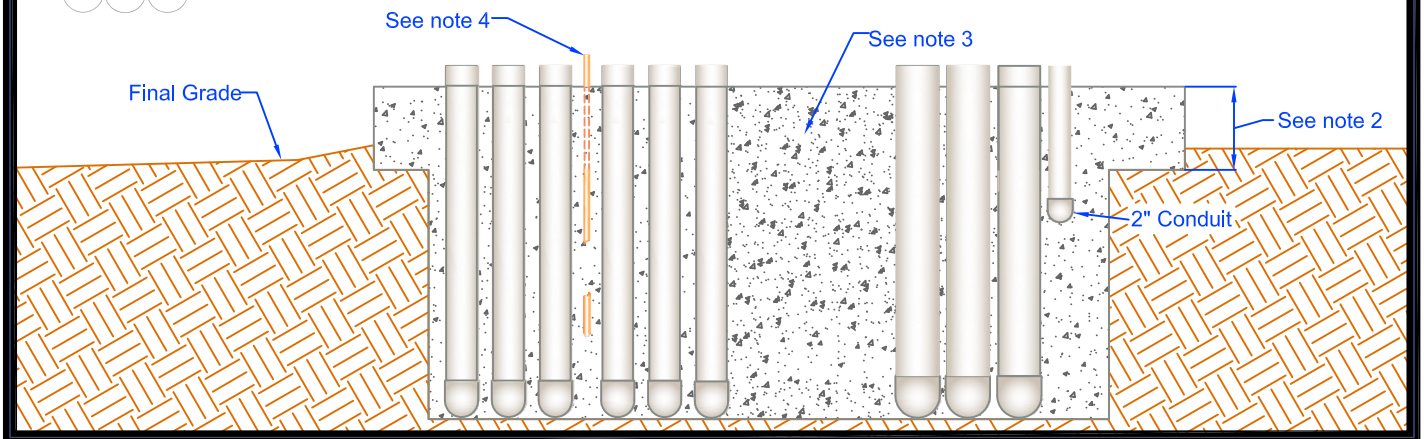
12' GATE REQUIRED IF PAD ENCLOSED IN FENCE OF ANY KIND.



10 Secondary
Conduit Configuration
for 300KVA if requested



15" From
front of pad



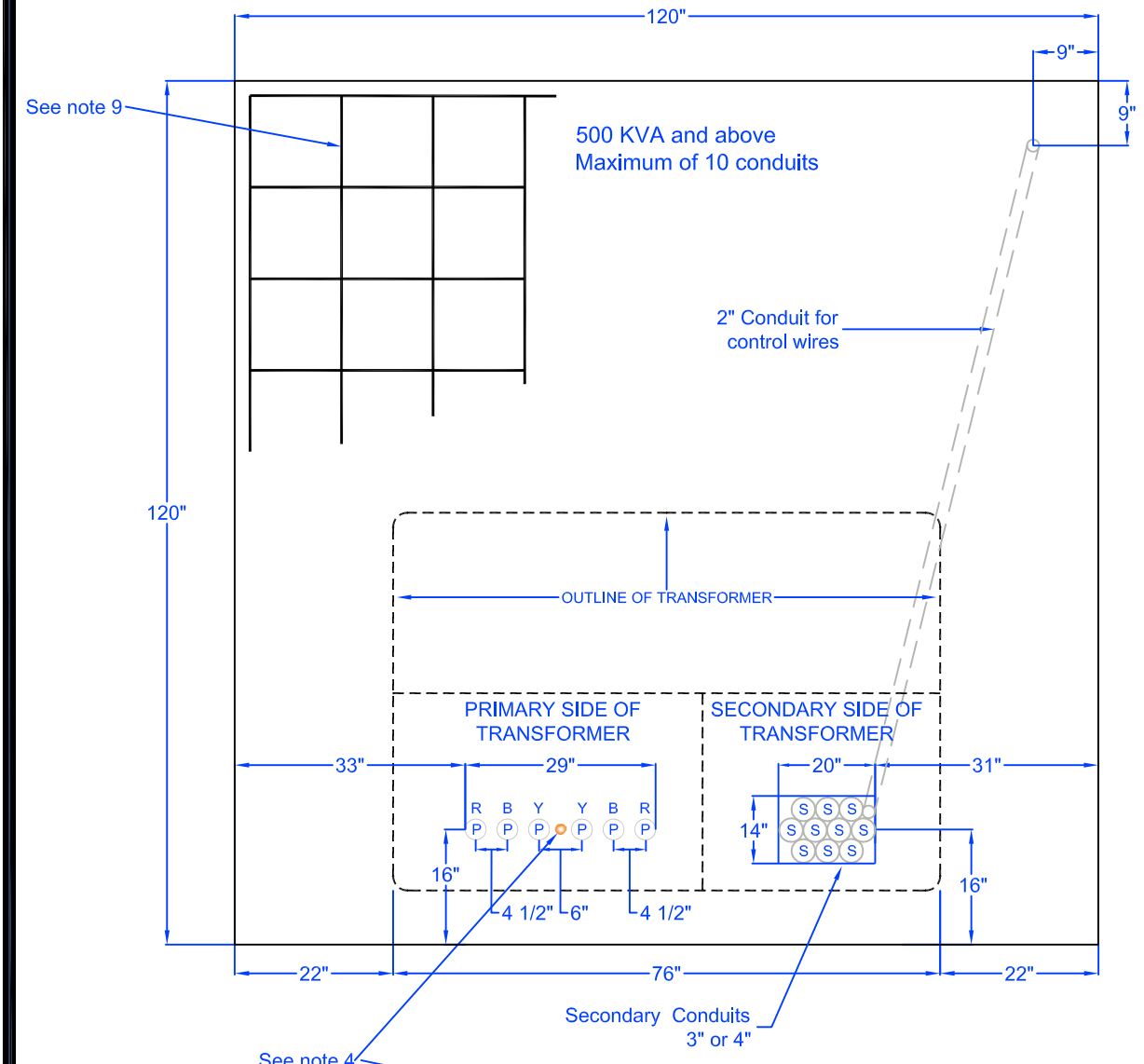
PEDERNALES ELECTRIC
COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

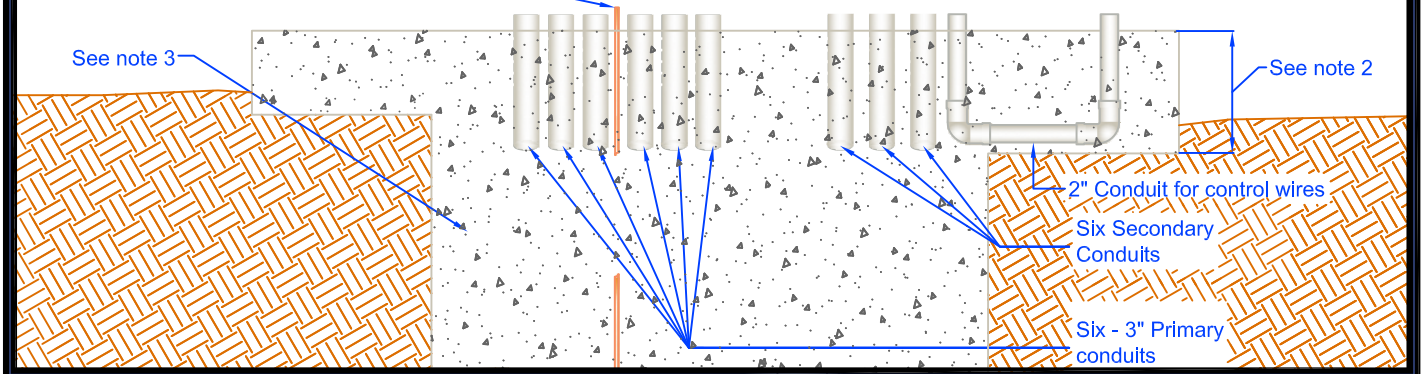
3Ø Transformer Pad
45-300 KVA

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	530-030-0911

Reference Drawing
510-009-0911
for all notes

12' GATE REQUIRED IF PAD ENCLOSED IN FENCE OF ANY KIND.





Pedernales Electric Cooperative, Inc.

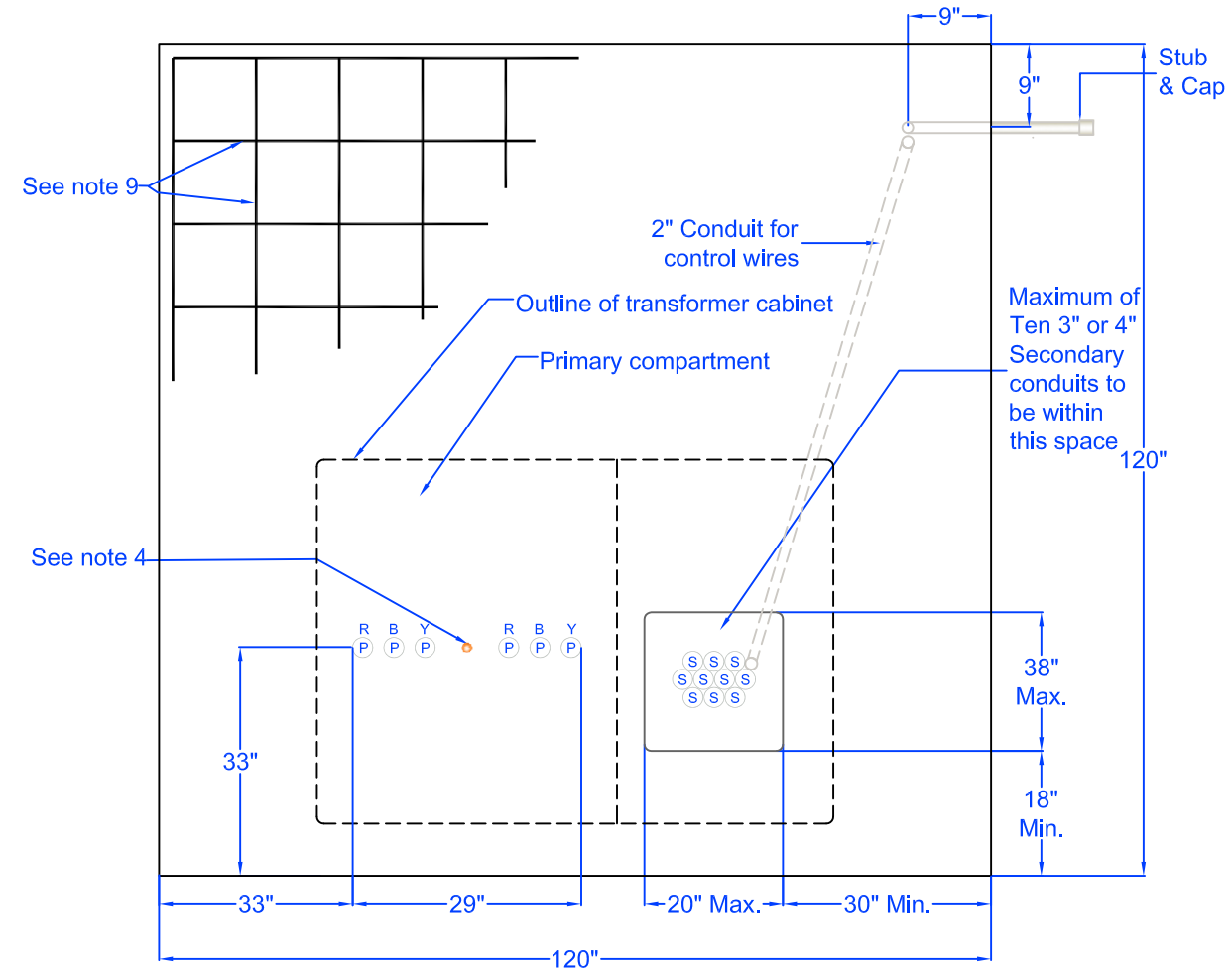
PEDERNALES ELECTRIC
COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

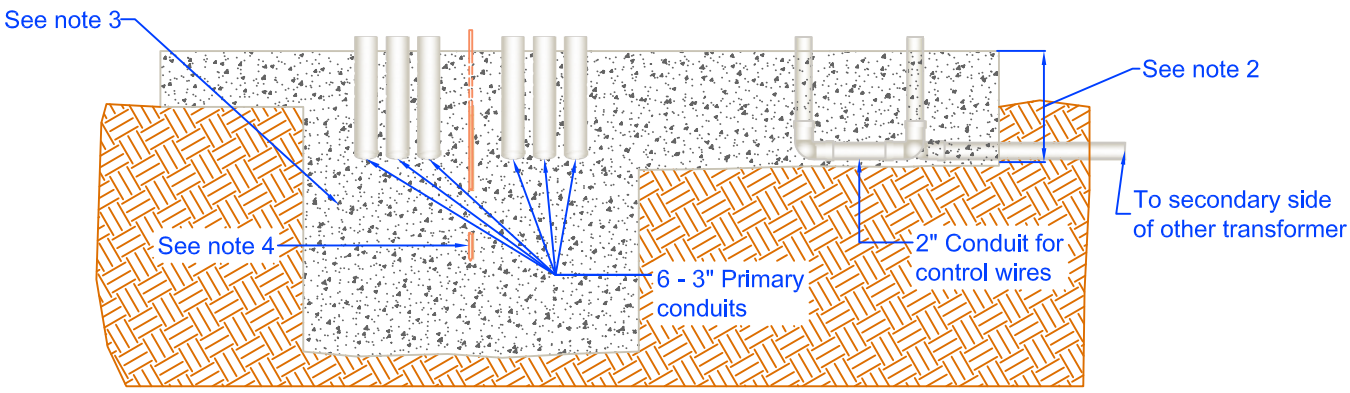
3Ø Transformer Pad
500-1500 KVA

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	530-032-0911

Reference Drawing
510-009-0911
for all notes

12' GATE REQUIRED IF PAD ENCLOSED IN FENCE OF ANY KIND.





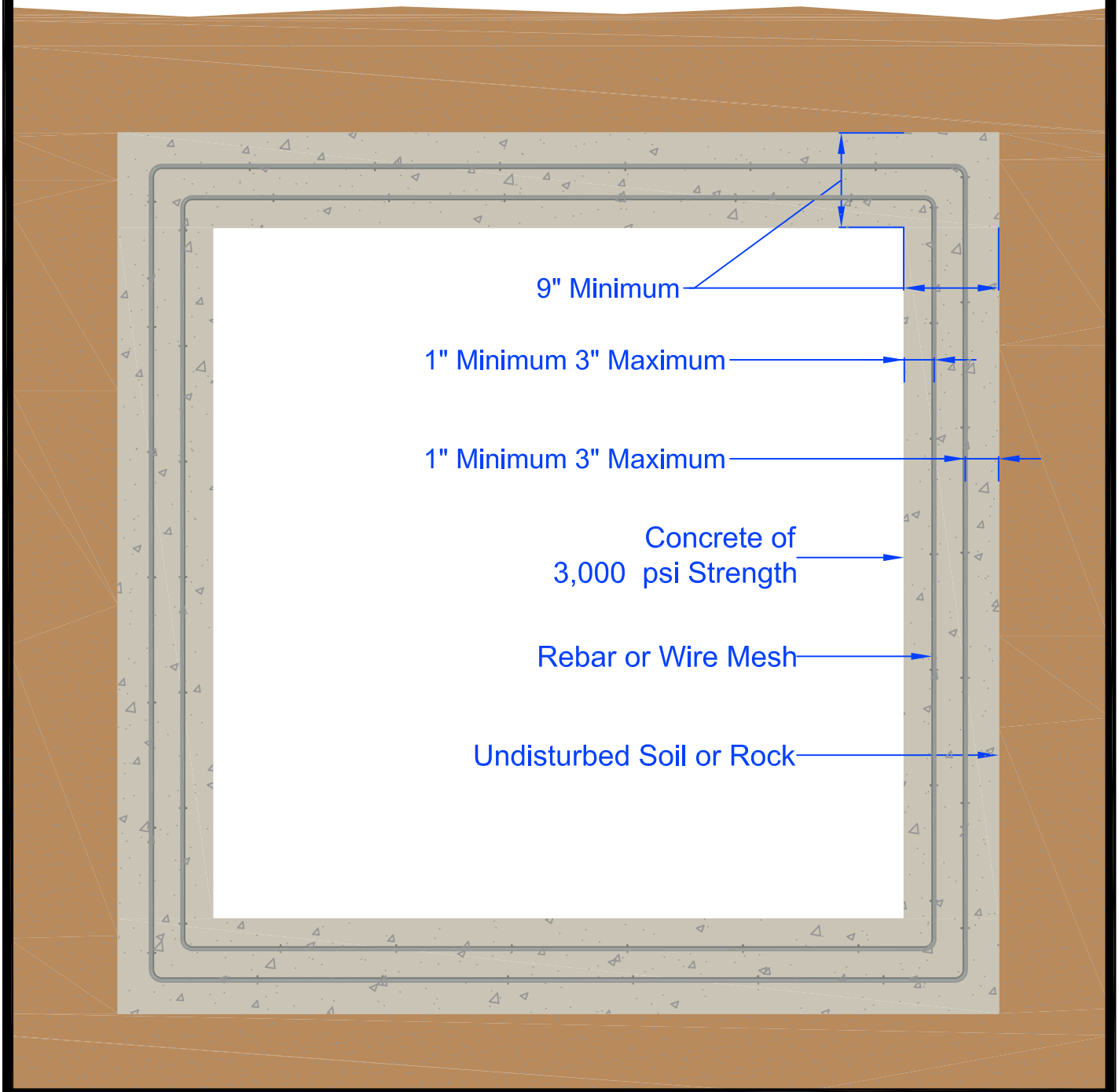
PEDERNALES ELECTRIC
COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

3Ø Transformer Pad
2000-3000 KVA

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	530-034-0911

Notes:

1.) Concrete to be a minimum of 3,000 psi design strength.
2.) All walls to be a minimum of 9" thick.
3.) ⅜"steel rebar minimum spaced a maximum 12" apart..
4.) Footing to extend to undisturbed soil or rock.
5.) See individual vault drawings for actual dimensions.



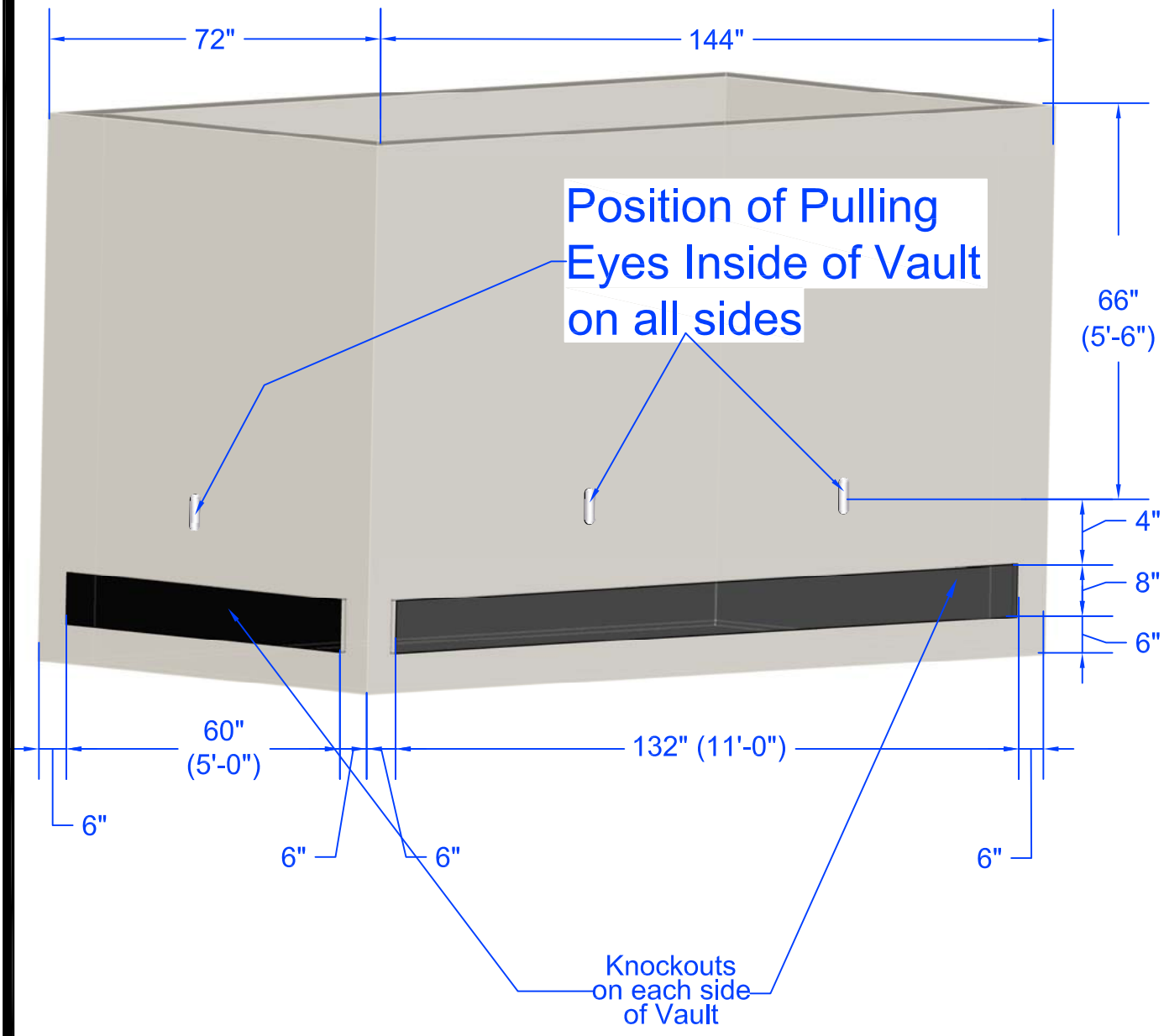
PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

General Specifications for Poured in Place Vaults

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	530-040-0911

1) The 144" side wall shall have two pulling eyes located 48" apart, evenly space between inside side walls, and 18" from the bottom of the vault.
2) The 72" side wall shall have one pulling eye located in the center of the wall and 18" from the bottom of the vault.
3) All pulling eyes to be rated for a minimum of 5,000 pounds each.
4) 6" above the bottom of the vault, an 8" knockout shall extend around the entire perimeter of the vault (except for 6" from each corner) for conduits to be brought in. Knockouts should be 1" thick and flush with the inside of the vault.
5) The vault shall be 7' deep.
6) The vault shall be installed on a minimum 6" deep bed of ½" to ¾" diameter gravel.
7) Each vault shall be supplied with either a 10' ground rod driven in the vault floor or a minimum 100' of #6 bare copper wire buried no less than 18" deep in the earth and meeting the National Electric Safety Code Rule #094B3.

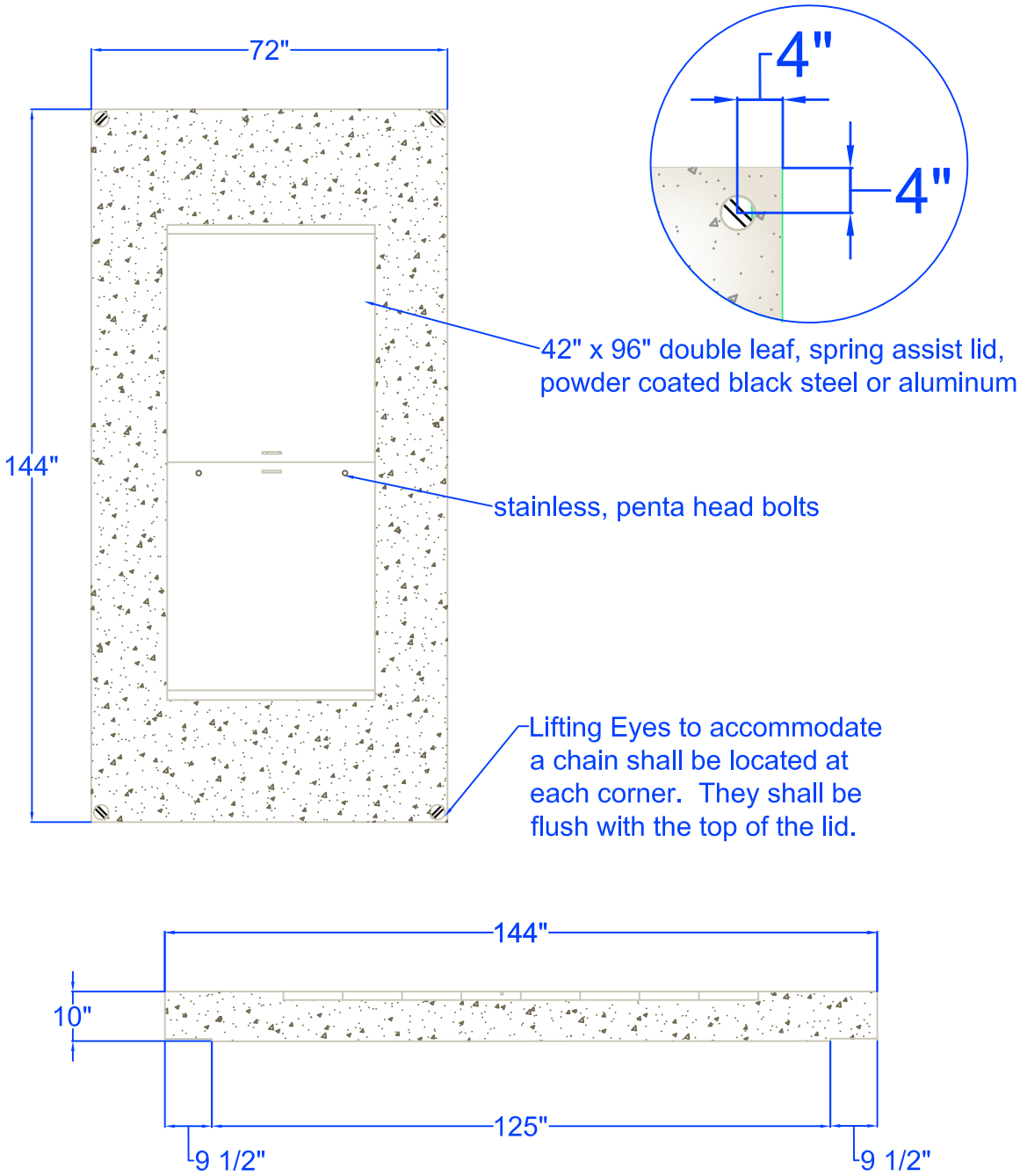


PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

Vault for Submersible Switchgear and Splicebox

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	530-050-0911



Specifications:

- Concrete has a 28 day strength of 5,000 psi
- Steel reinforcement is ASTM A615 grade 60
- Load design is H-20
- Access Lid shall be identified "ELECTRIC"

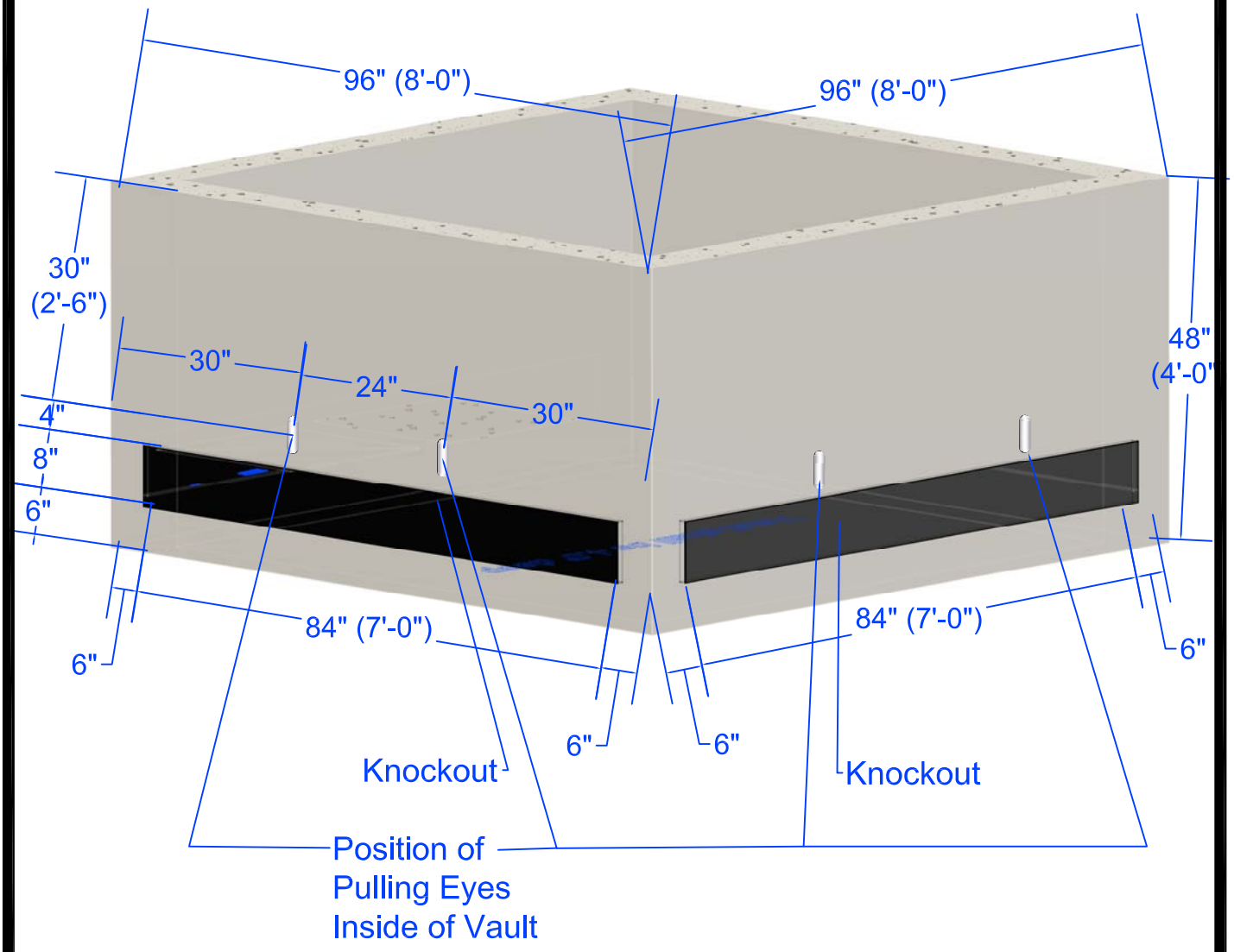
PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

Lid for Submersible Switchgear and Splicebox (For use with Vault 530-050)

drawn:	approved	date:	drawing number:
JBS	MJB	July 3, 2013	530-051-0911

1) Each side wall shall have two pulling eyes located 24" apart, evenly space between inside walls, and 18" from the bottom of the vault.
2) All pulling eyes to be rated for a minimum of 5,000 pounds each.
3) 6" above the bottom of the vault, an 8" knockout shall extend around the entire perimeter of the vault (except for 6" from each corner) for conduit to be brought in. Knockouts should be1" thick and flush with the inside of the vault. The vault shall be 4' deep.
4) The vault shall be installed on a minimum 6" deep bed of ½" to ¾" diameter gravel.
5) Each vault shall be supplied with either a 10' ground rod driven in the vault floor or a minimum 100 feet of #6 bare copper wire buried no less than 18" deep in the earth and meeting the National Electric Safety Code Rule #094B3.



PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

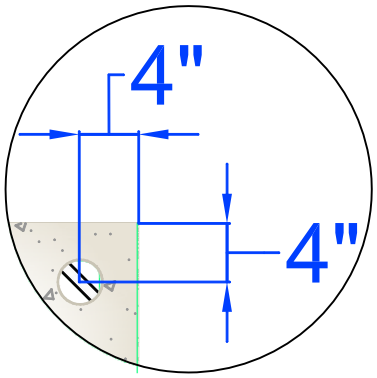
Vault for Deadfront, above ground Switchgear

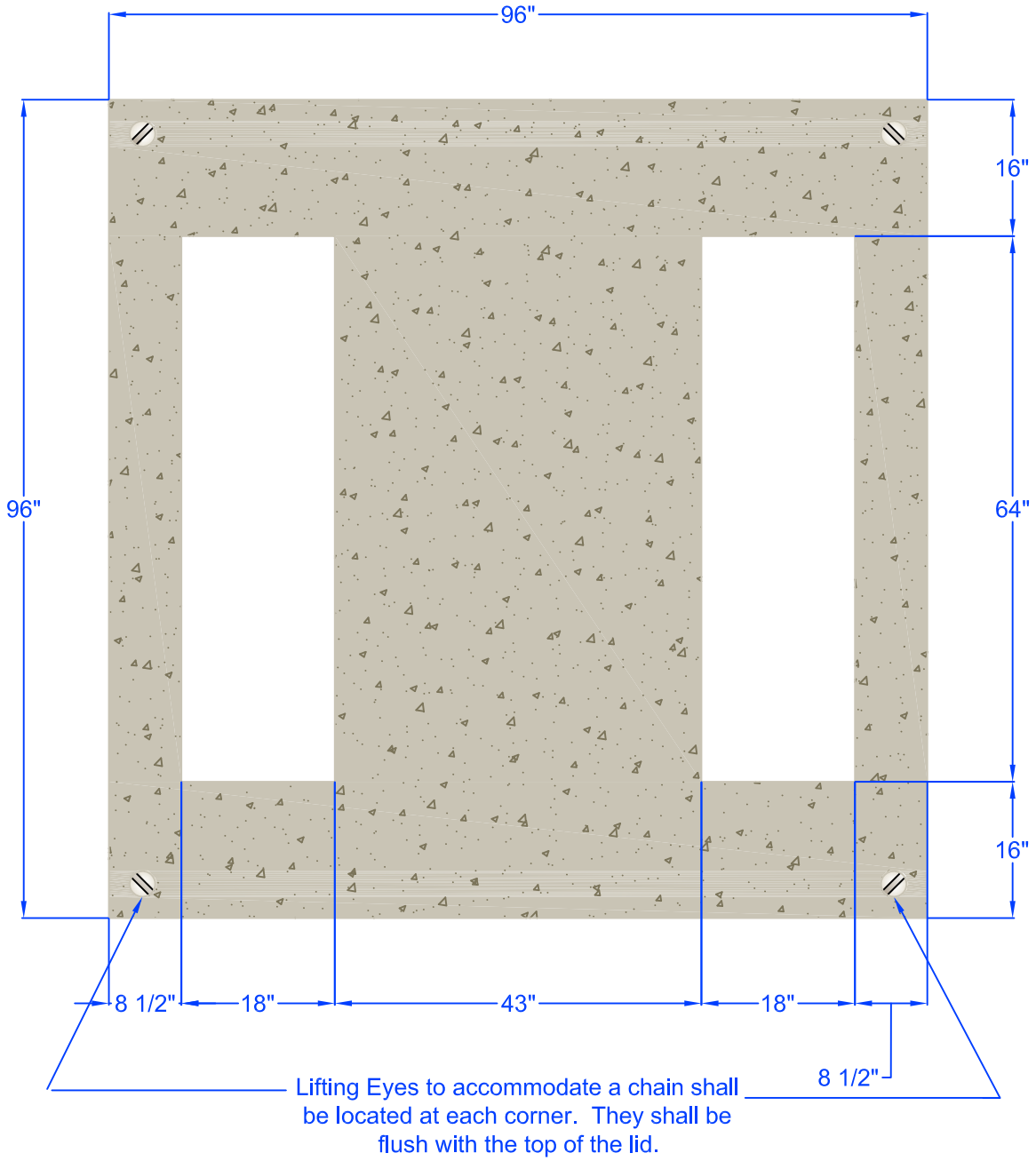
drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	530-090-0911

Note:

-Vault lid to be 8" thick.

Lifting Eye Location





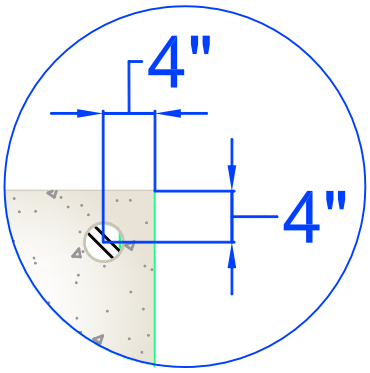
Lifting Eyes to accommodate a chain shall be located at each corner. They shall be flush with the top of the lid.

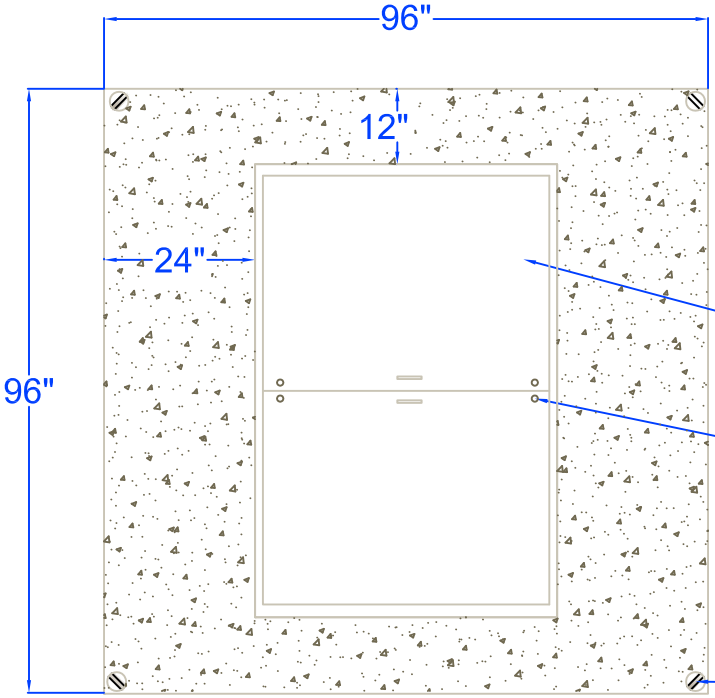
PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

Lid for Deadfront and above ground Switchgear (For use on Vault 530-090)

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	530-091-0911

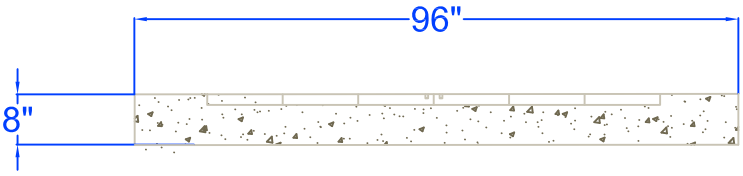




48" x 72" double leaf, spring assist lid, powder coated black steel or aluminum

stainless, penta head bolts

Lifting Eyes to accommodate a chain shall be located at each corner. They shall be flush with the top of the lid.



Specifications:

- Concrete has a 28 day strength of 5,000 psi
- Steel reinforcement is ASTM A615 grade 60
- Load design is H-20
-Access lid shall be identified "ELECTRIC"

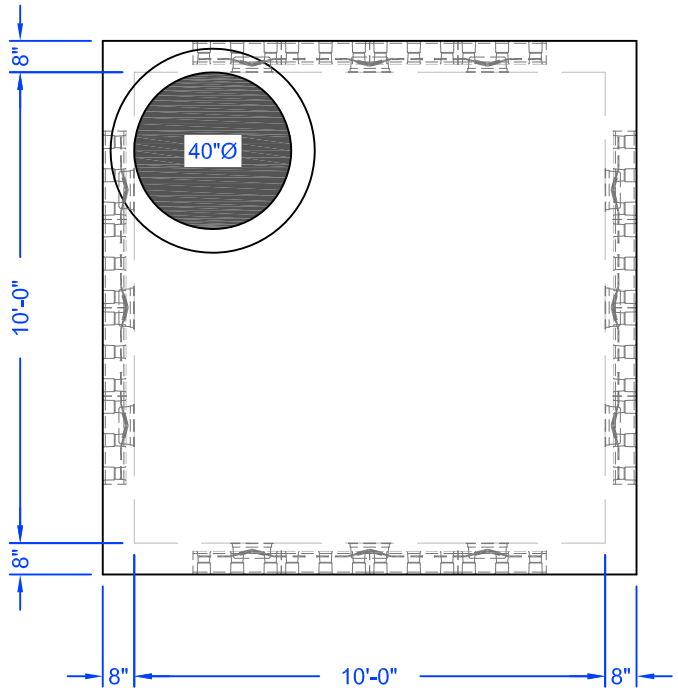
PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

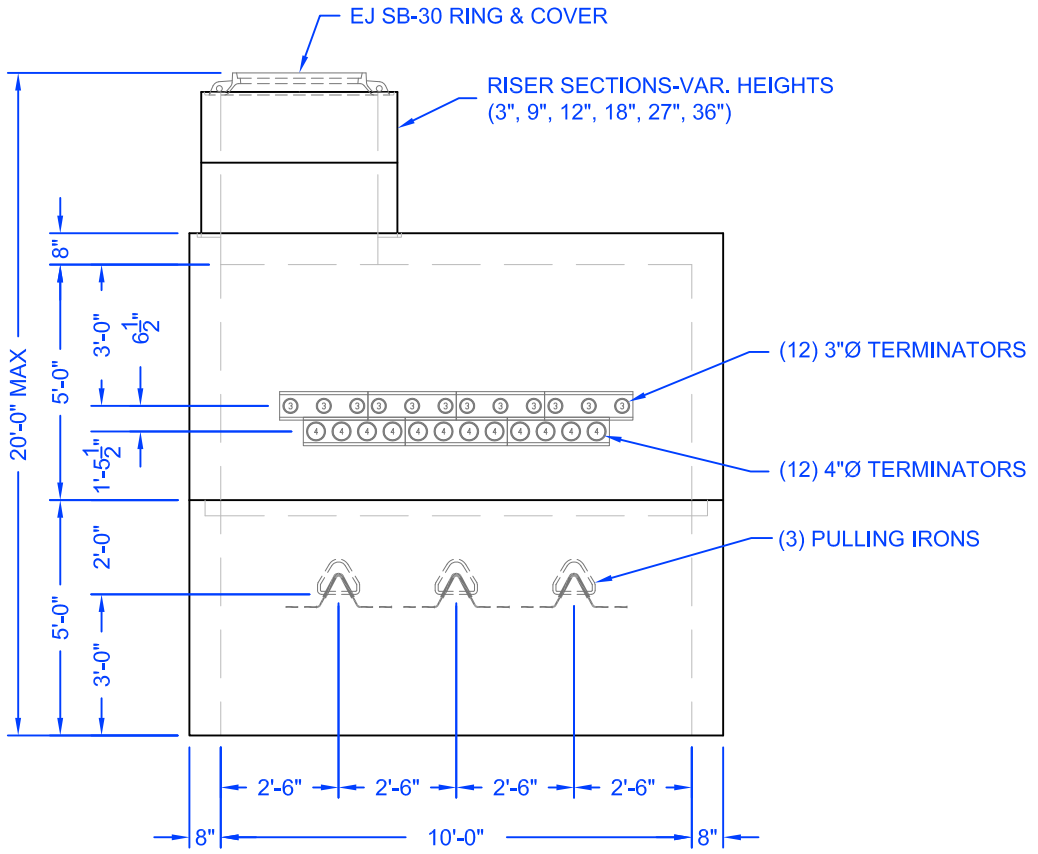
Lid for Submersible Switchgear and Splicebox (For use with Vault 530-090)

drawn:	approved	date:	drawing number:
JBS	MJB	July 3, 2013	530-092-0512

Approved Manholes:
Hanson Pipe & Precast PEC-#120120-2



PLAN VIEW
(RING/COVER & RISERS NOT SHOWN)



ELEVATION VIEW
(TYPICAL ALL 4 SIDES)

Notes:

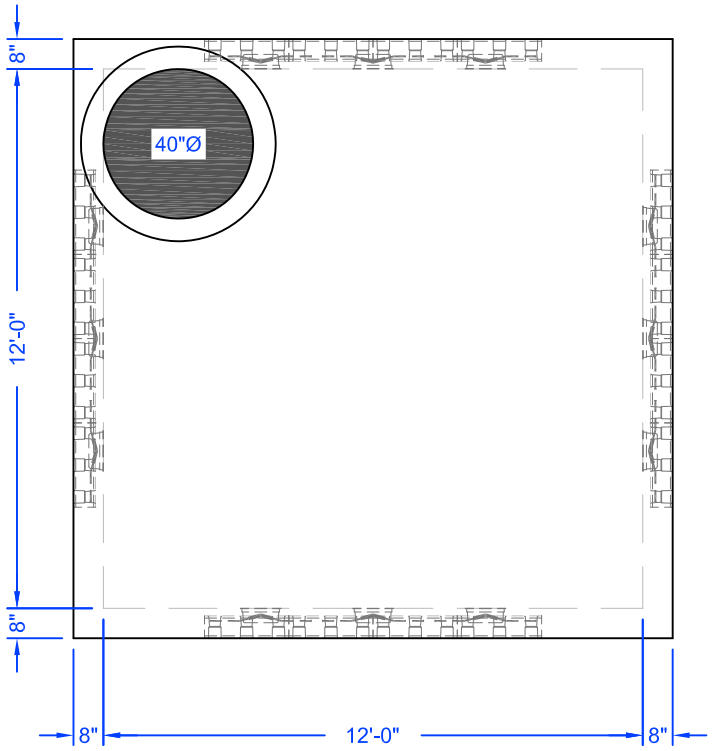
1.) **Depth of manhole dependent upon application. Access point can be moved as needed with district approval. Must have district approval before use.**
2.) **The vault shall be installed on a minimum 6" deep bed of 1/2" to 3/4" diameter gravel.**
3.) **Each vault shall be supplied with either a 10' ground rod driven in the vault floor or a minimum 100' of #6 bare cooper wire no less than 18" deep in the earth and meeting the National Electric Safety Code Rule #094B3.**

PEDERNALES ELECTRIC
COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

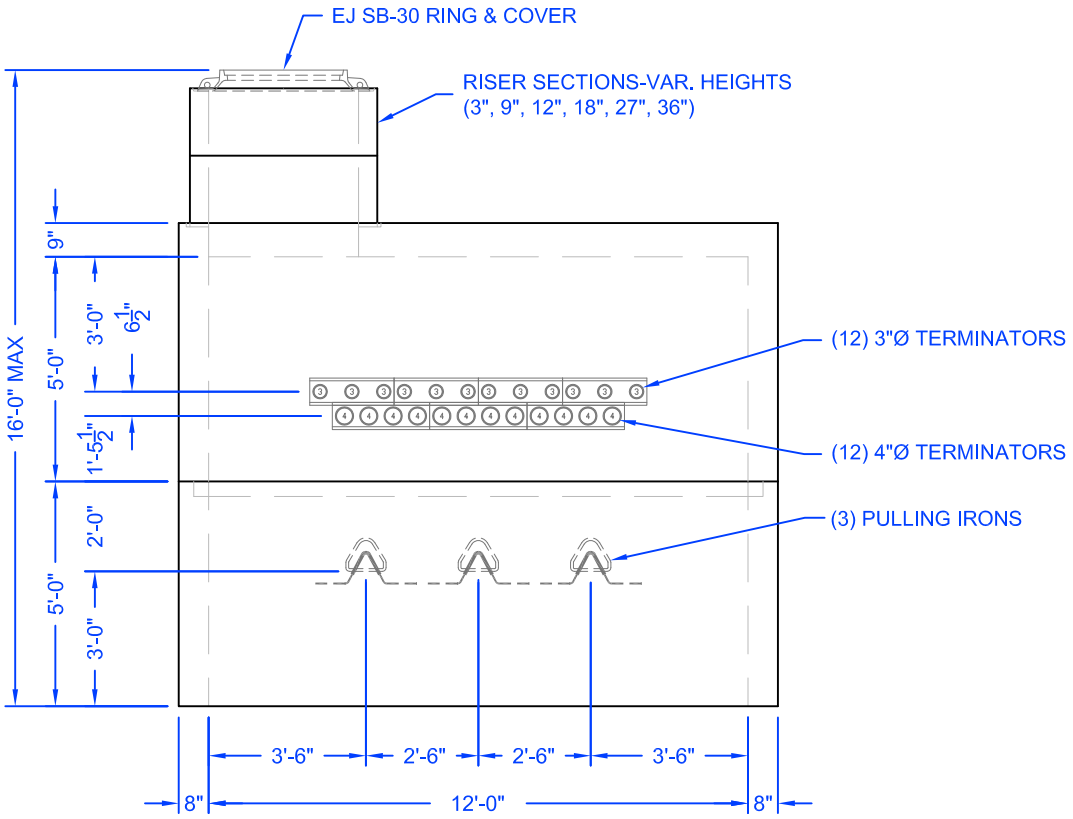
Typical 10 X 10 Manhole

drawn:	approved	date:	drawing number:
JBS	MJB	November 7, 2013	540-010-0713

Approved Manholes:
Hanson Pipe & Precast PEC-#144144-2



PLAN VIEW
(RING/COVER & RISERS NOT SHOWN)



ELEVATION VIEW
(TYPICAL ALL 4 SIDES)

Notes:

1.) **Depth of manhole dependent upon application. Access point can be moved as needed with district approval. Must have district approval before use.**
2.) **The vault shall be installed on a minimum 6" deep bed of 1/2" to 3/4" diameter gravel.**
3.) **Each vault shall be supplied with either a 10' ground rod driven in the vault floor or a minimum 100' of #6 bare cooper wire no less than 18" deep in the earth and meeting the National Electric Safety Code Rule #094B3.**

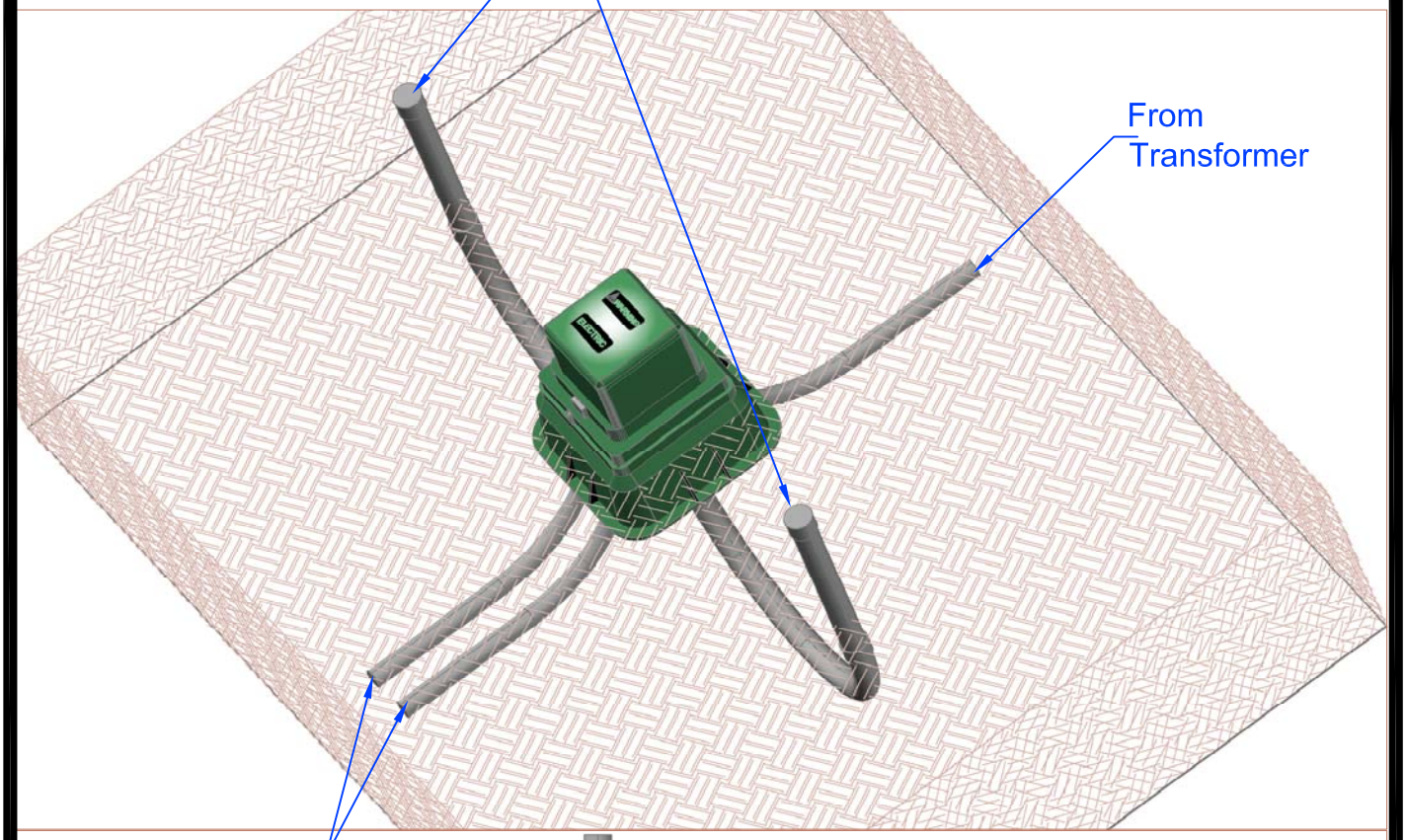
PEDERNALES ELECTRIC COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

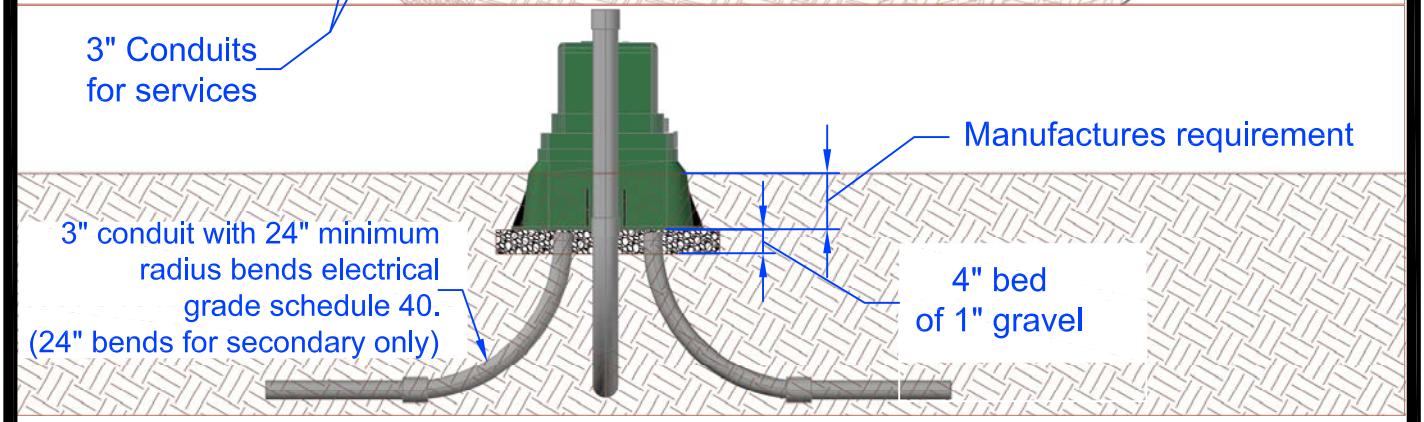
Typical 12 X 12 Manhole

drawn:	approved	date:	drawing number:
JBS	MJB	November 7, 2013	540-012-0713

Approved Enclosures:
Nordic PSP-151530-MG
Pencell AG18HDX-PECEWB

2-2" x 24" Radius Bends with Cap end. For each temporary hookup (two places). As required by Member. All conduits to enter vertically thru gravel bed in bottom of enclosure.





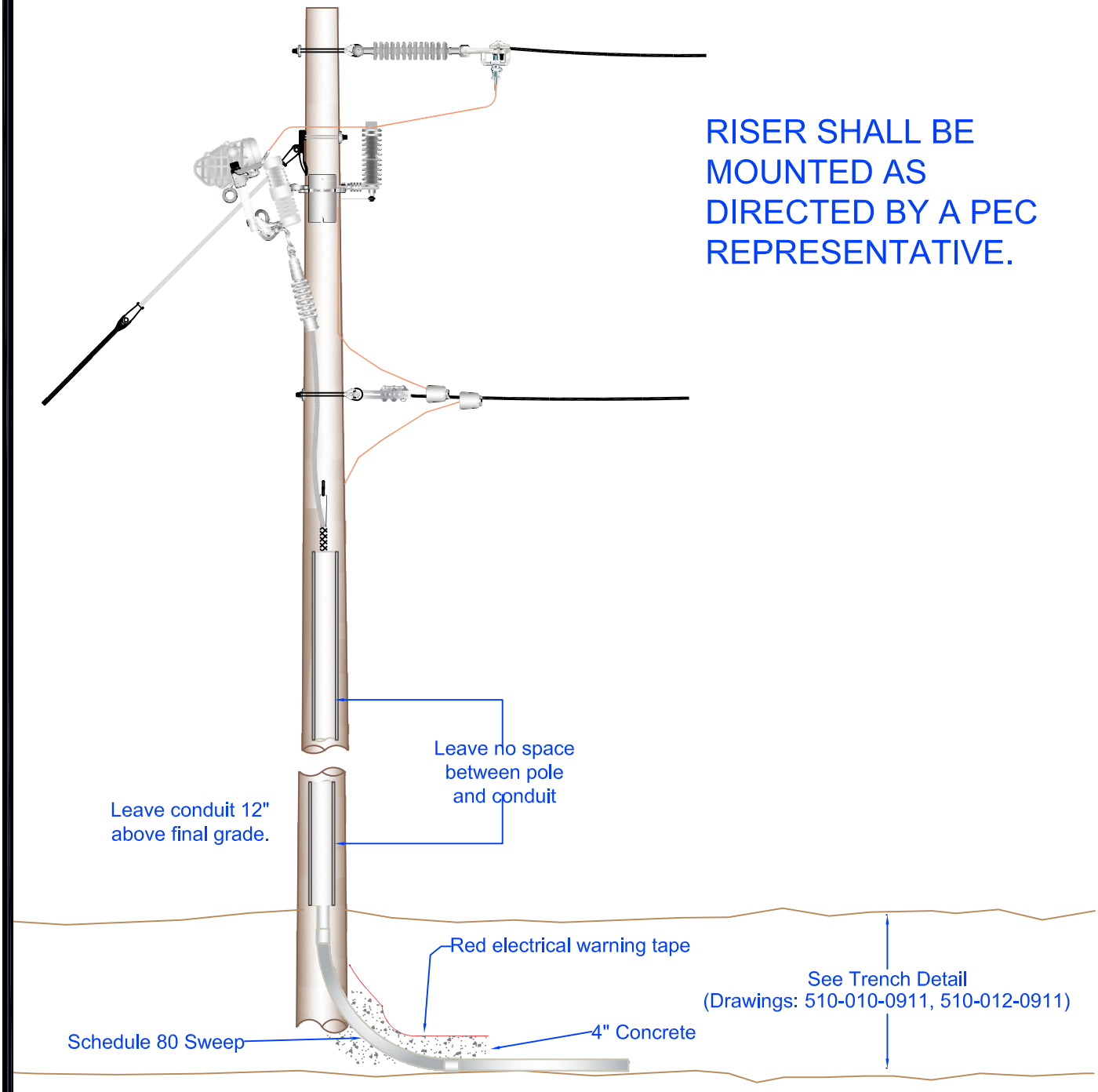
Secondary Enclosure Installation Instructions

1) Excavate the hole approximately four inches deeper than the suggested pedestal Burial Depth.
2) Compact the soil.
3) Add approximately four inches of 1" gravel to the bottom of the hole.
4) Compact and level the ground.
5) Place the pedestal into the hole.
6) Level the pedestal.
7) Back-fill with loose earth material.
8) Do not back-fill with chunks of frozen material or large rocks next to the pedestal.
9) Pack the back-fill material by foot tamping.

PEDERNALES ELECTRIC COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

Secondary Enclosure

drawn:	approved	date:	drawing number:
JBS	MJB	March 8, 2013	550-020-0911

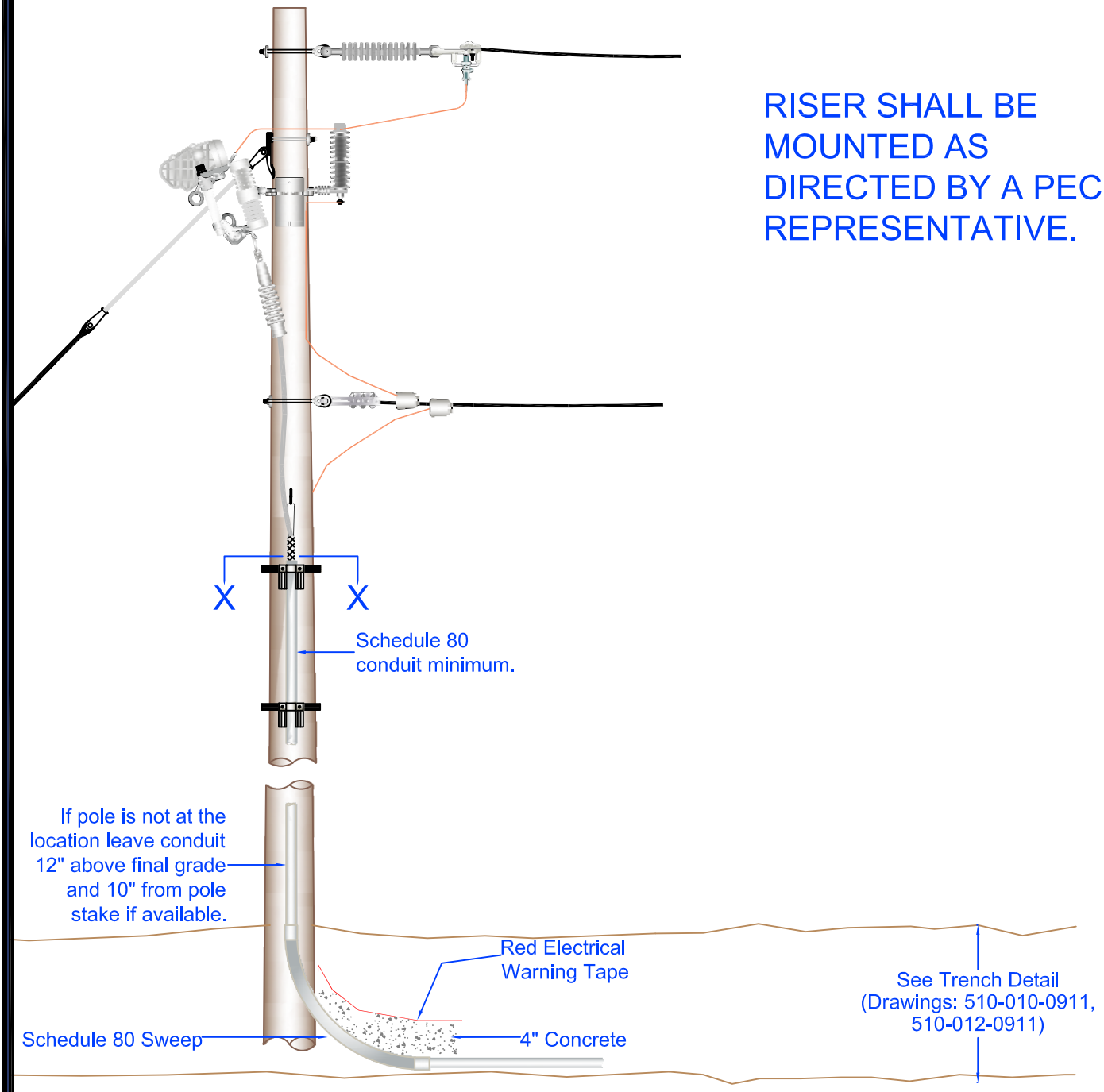


PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

1Ø Riser Pole

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	560-010-0911

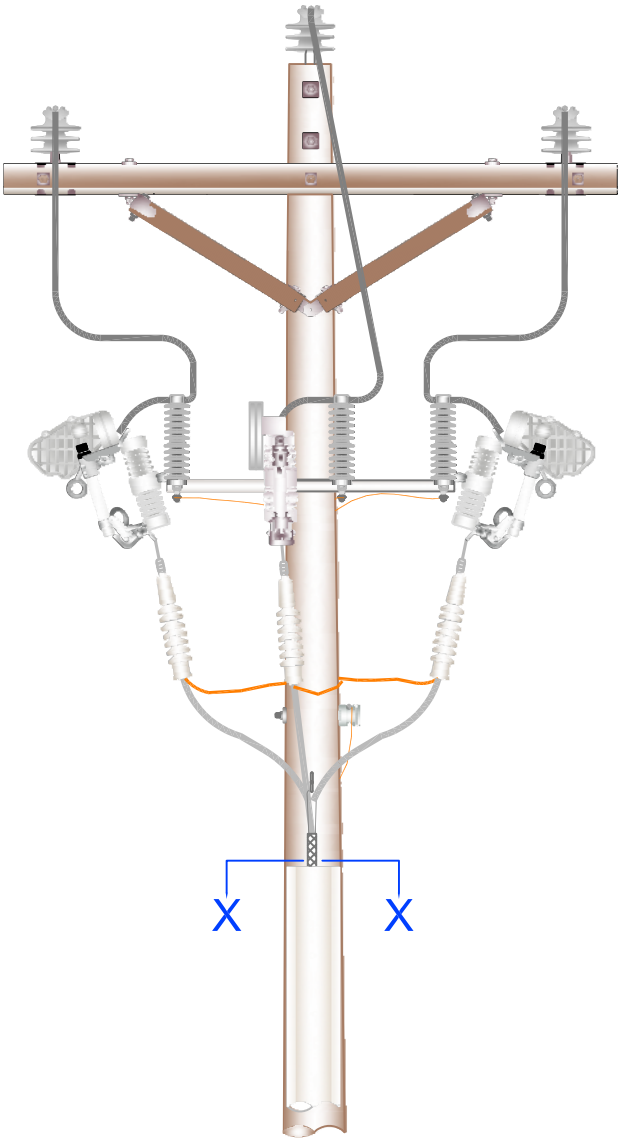


PEDERNALES ELECTRIC COOPERATIVE, INC.

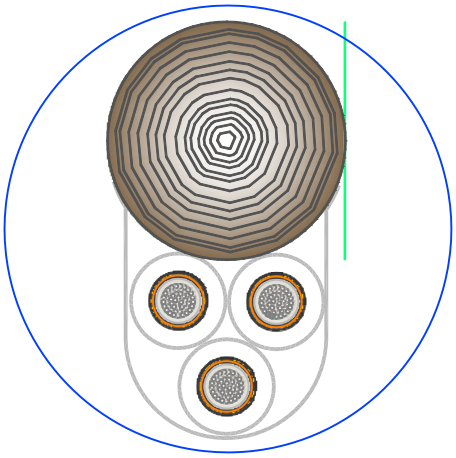
URD DEVELOPER'S SPECIFICATIONS

1Ø Riser Pole Using Standoff Brackets

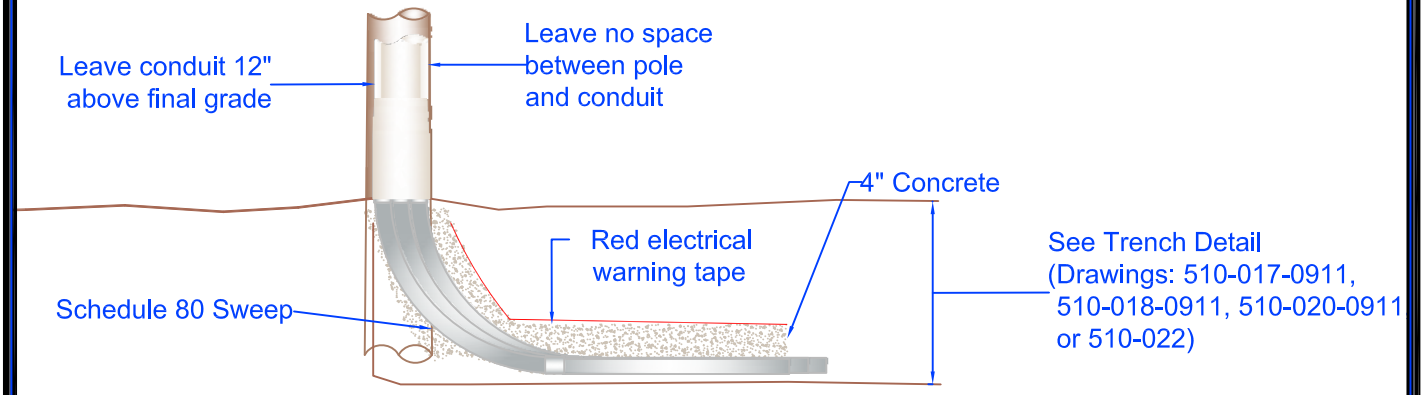
drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	560-015-0911



Section X-X



RISER SHALL BE MOUNTED AS DIRECTED BY A PEC REPRESENTATIVE.

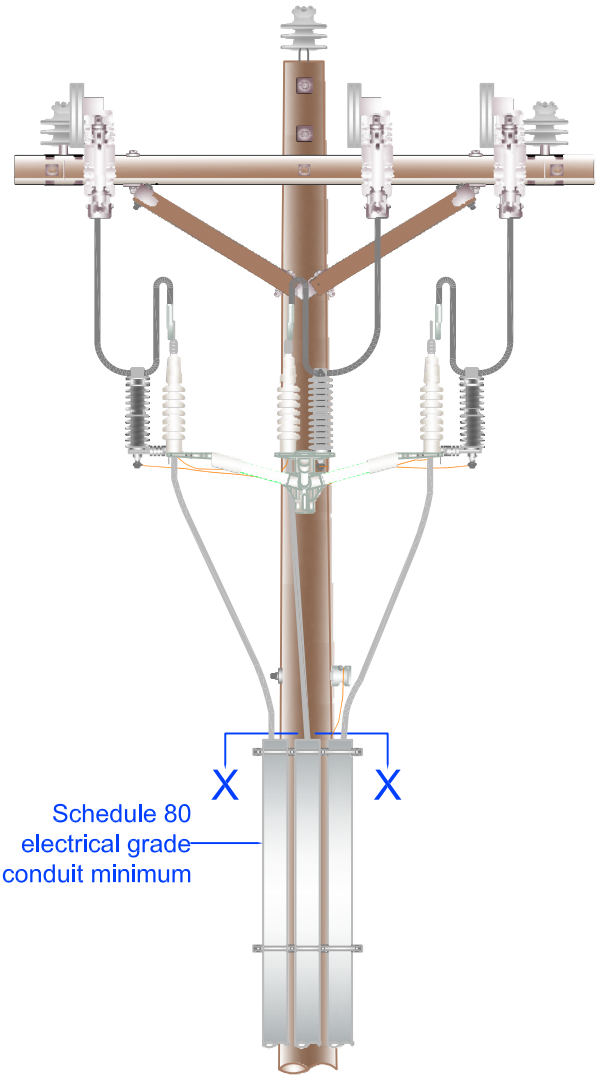


PEDERNALES ELECTRIC COOPERATIVE, INC.

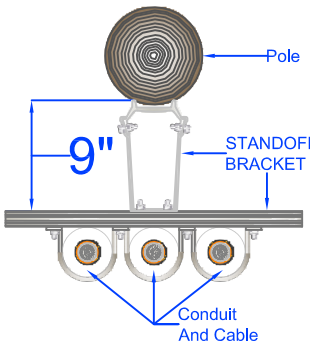
URD DEVELOPER'S SPECIFICATIONS

3Ø Riser Pole

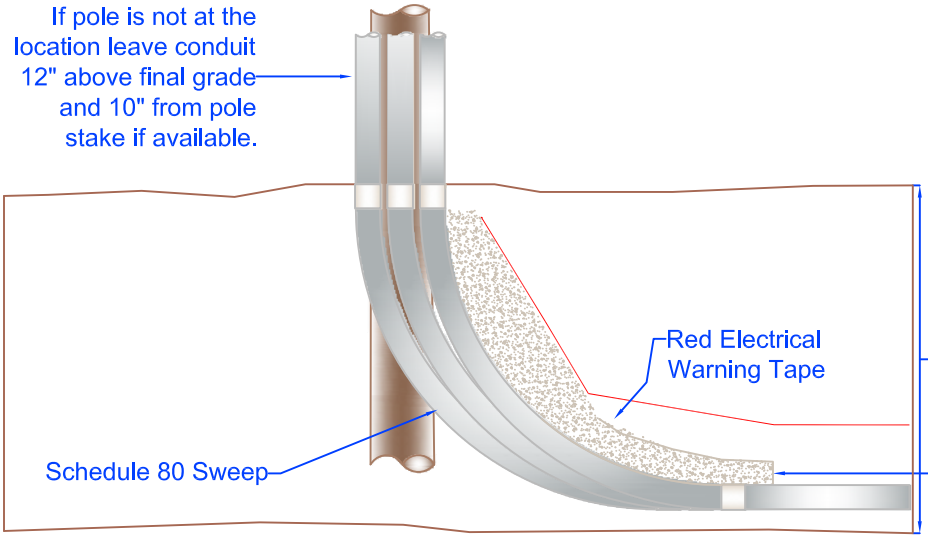
drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	560-020-0911



Section X-X



RISER SHALL BE MOUNTED AS DIRECTED BY A PEC REPRESENTATIVE.



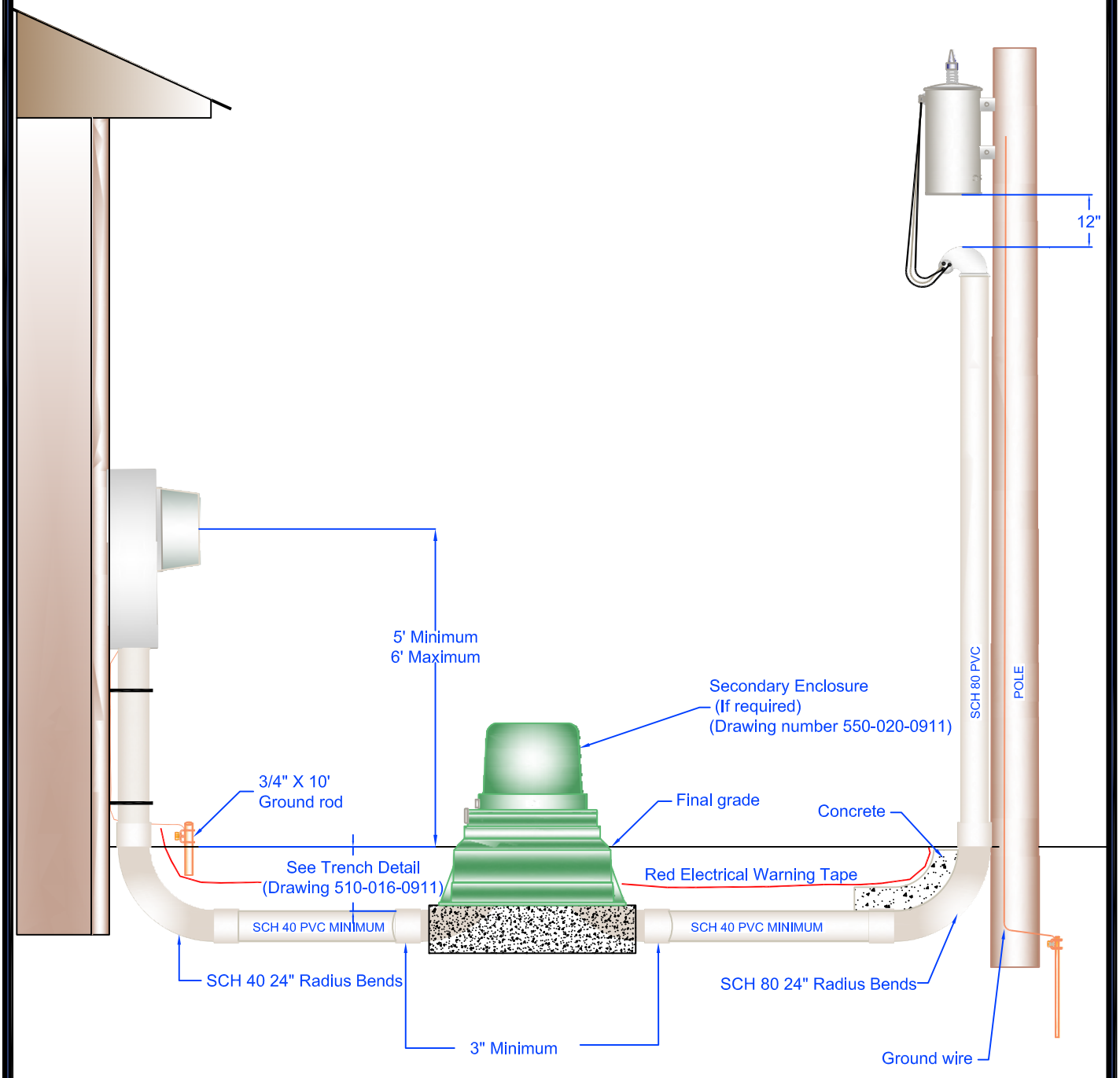
See Trench Details
Drawings: 510-017-0911,
510-018-0911, 510-020-0911,
or 510-022-0911

PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

3Ø Riser Pole Using Standoff Brackets

drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	560-025-0911



PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

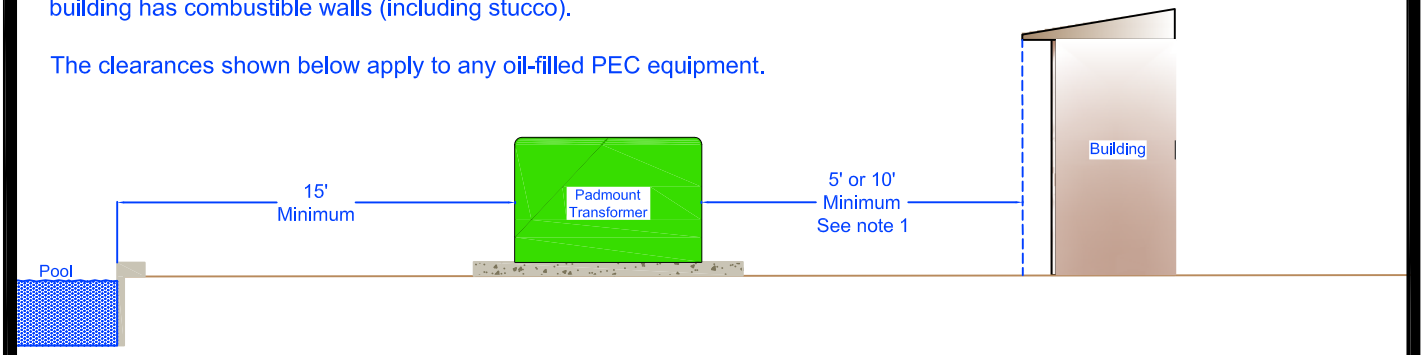
600 Volt Underground Service from Overhead Transformer

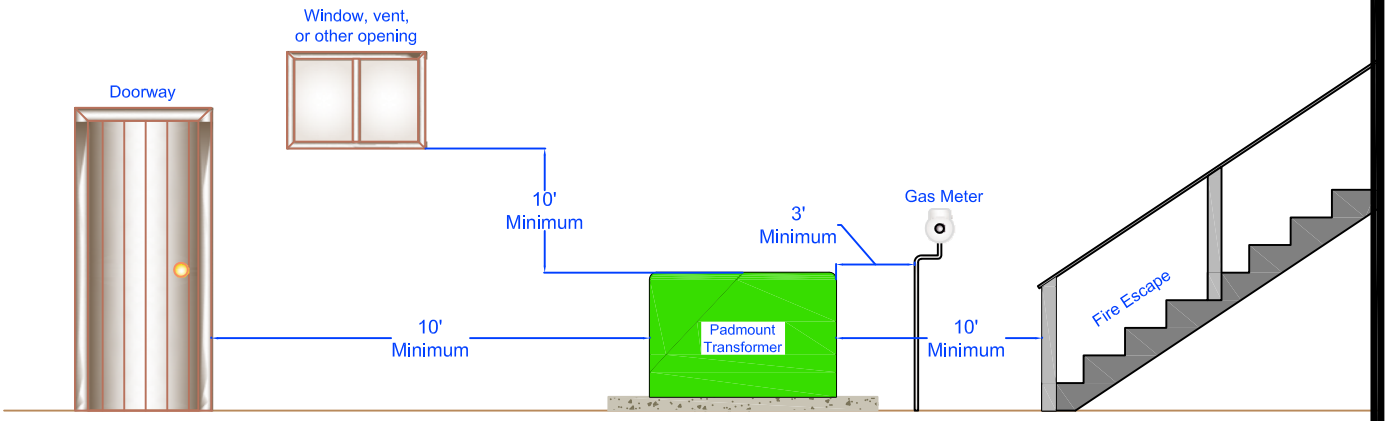
drawn:	approved	date:	drawing number:
JBS	MJB	December 12, 2011	560-050-0911

Note 1: Clearance from padmount transformers to structures measured from the nearest metal portion of the transformer, to the structure or any overhang.

The clearance from a building is three feet if the building has non-combustible walls (brick, concrete, steel, or stone), ten feet if the building has combustible walls (including stucco).

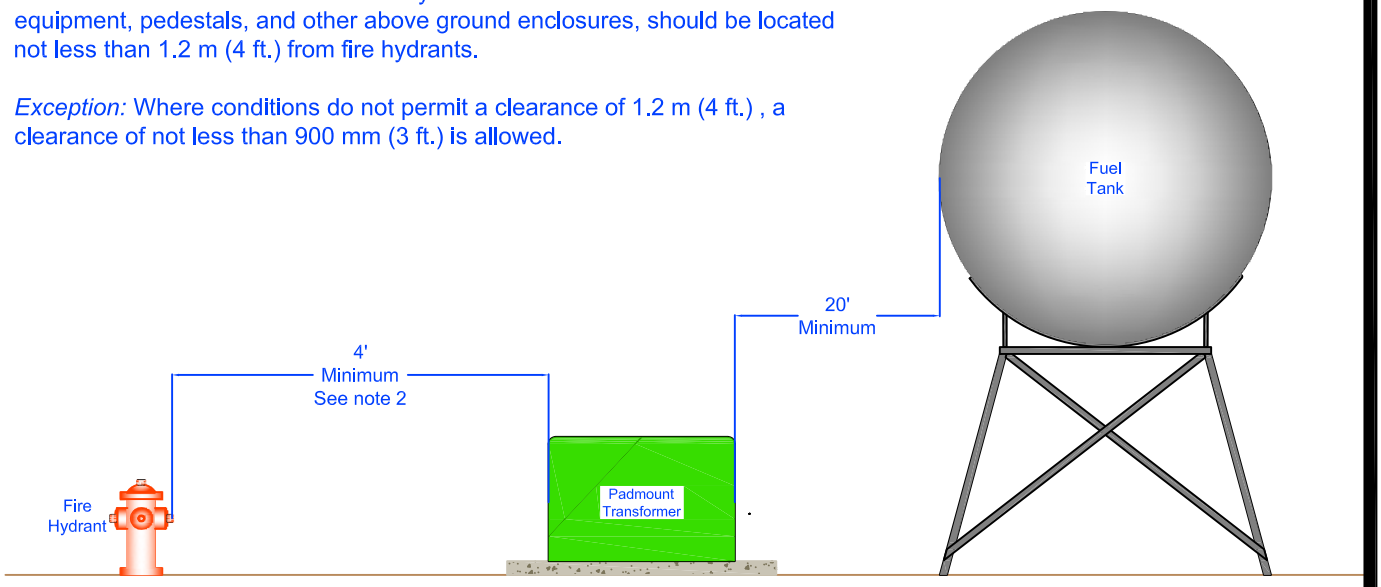
The clearances shown below apply to any oil-filled PEC equipment.





Note 2: Per the National Electric Safety Code rule 380D Pad mounted equipment, pedestals, and other above ground enclosures, should be located not less than 1.2 m (4 ft.) from fire hydrants.

Exception: Where conditions do not permit a clearance of 1.2 m (4 ft.) , a clearance of not less than 900 mm (3 ft.) is allowed.



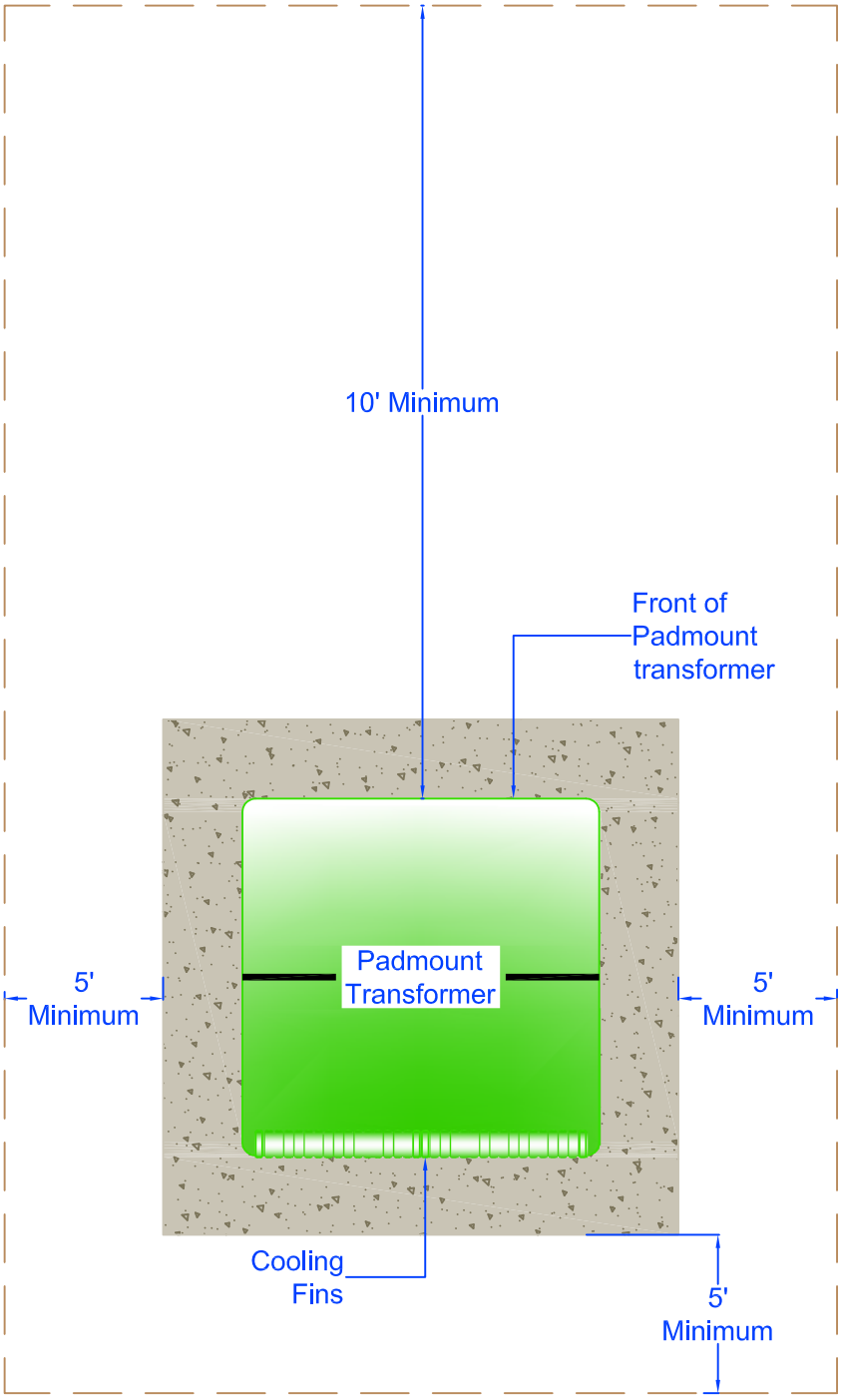
PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

Safety Clearances around Padmount Transformers

drawn:	approved	date:	drawing number:
JBS	MJB	April 23, 2013	570-010-0911

A minimum clearance of ten feet of clear, level, unobstructed working space is required in front of a padmount transformer, to allow use of hot sticks.
OSHA Rule 1910.303



The clearances shown above applies to any oil-filled PEC equipment.

PEDERNALES ELECTRIC COOPERATIVE, INC.
URD DEVELOPER'S SPECIFICATIONS

Working Clearances around Padmount Transformers

drawn:	approved	date:	drawing number:
JBS	MJB	October 2, 2013	570-015-0911

Developer/Applicant Approved Maufacturer List				
Type of Material	Manufacturer	Telephone Number	Address	e-mail
Conduit spacers	Cantex	(817) 215-7000 (817) 215-7001 Fax	301 Commerce Street Suite 200 Fort Worth, Texas 76102	
Ground Rod Clamp	Penn Union	(814) 734-1631 (814) 734-4946 Fax	229 Waterford Street Edenboro, Pennsylvania 16412-2398	
Manholes	Hanson Pipe & Precast	(512) 385-3950	8043 Highway 164 West Mart, Texas 76664-5187	
Secondary Enclosure	Nordic Fiberglass, Inc.	(218)745-5095 (218) 745-4990 Fax	21415 US Hwy 75 NW Warren, Mnnesota 56762	
Secondary Enclosure	Pencell	(800) 257-9448 252-467-2210 252-467-2212 Fax	546 English Road Rocky Mount, North Carolina 27804	info@pencell.com
Sectionalizing Terminals	Durham	(417) 532-7121 (417) 532-2366 Fax	PO Box 908 Lebanon, Missouri 65536	Street Address: 722 Durham Rd. Lebanon, Missouri 65536
Sectionalizing Terminals	Malton Equipment Co.	(218) 714-8252	1505 West Chestnut Street Virginia, Minnesota 55792	
Sectionalizing Terminals	Maysteel	(800) 255-1427 (262) 251-1632 Fax	N89 W14700 Patrita Dr. Menomonee Falls, Wisconsin 53051	
Sectionalizing Terminals	Shallbetter Inc.	(920) 232-8888 (920) 232-8977 Fax	3100 Progress Dr Oskosh, Wisconsin 54901	
Vaults and Lids	CDR Systems Corp.	(386) 615-9510 (386) 615-9606 Fax	146 South Atlantic Avenue Ormond Beach, Florida 32176	
Vaults and Lids	Electric Vault Company, LLC (*Hanson Pipe & Precast)	(254) 876-2860 * (800)613-8274 (254) 876-3787 Fax	8043 Highway 164 West Mart, Texas 76664-5187	rwengineering@rwengineering-rwpm.com
Vaults and Lids	Capital Precast, Inc.	(830) 606-6200	800 Watson Lane East New Braunfels, Texas 78130	
Vaults and Lids	Halliday Products	(800) 298-1027	6401 Edgewater Drive Orlando, Florida 32810	Sales@HallidayProducts.com

PEDERNALES ELECTRIC COOPERATIVE, INC.

URD DEVELOPER'S SPECIFICATIONS

Approved Manufacturers

drawn:	approved	date:	drawing number:
JBS	MJB	July 3, 2013	