REVISION	New Drawing

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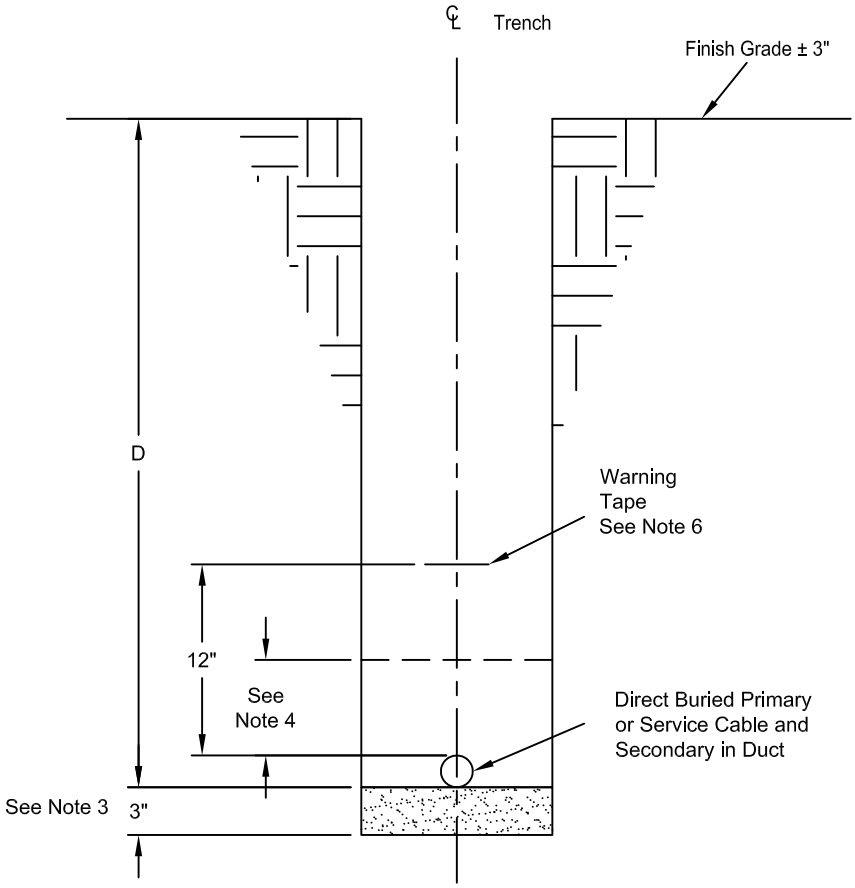

NOTES

(1) Where applicable, compaction in city or state right-of-way shall meet or exceed minimum requirements.
(2) Shading and bedding material to be Type IV, Class 2 for cable in conduit. Type III material is suitable for either type of installation. Refer to DS-10-12.4 for fill material requirements.
(3) If trench-run material meets backfill material type requirements, 3" bedding may be omitted provided the trench bottom is smooth, flat, and without surface irregularities.
(4) A minimum of 6" of shading over the primary cable is required.
(5) Latest OSHA trench safety requirements must be strictly observed.
(6) Warning tape shall be placed a minimum of 12" above all secondary and primary direct buried cable.
(7) Direct buried cable shall not be used in any cable run in combination with cable in duct installation.

Depth Schedule-For Direct Bury	
Cable Type	"D"
Service and Secondary	36" Minimum
Primary	42" Minimum

Backhoe or Trencher Installation

This burial method must be used for the entire trench length, from equipment to equipment.

REFERENCES

(1) NESC rule 352, 353, 354

Direct Buried Cable - Trench Details

DS-10-8.1
Page 1
01/01/17 E

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REVISION	New Drawing

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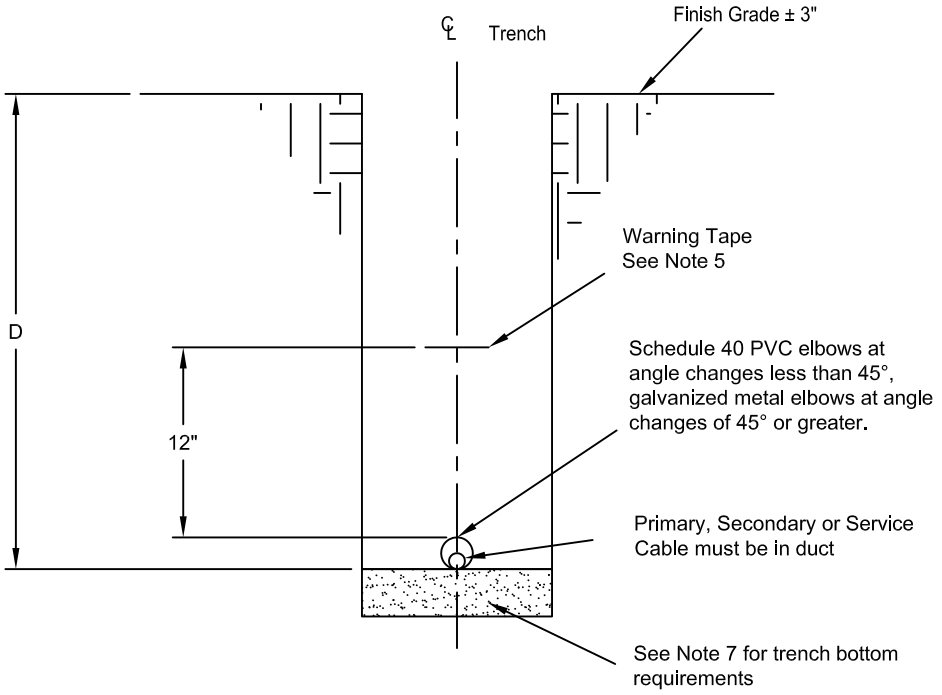

NOTES

(1) Cable in duct shall remain intact, not to be used in combination with direct buried cable.
(2) Where applicable, compaction in city or state right-of-way shall meet or exceed minimum requirements.
(3) Shading and bedding material to be Type IV, Class 2 for cable in conduit. Type III material is suitable for either type of installation. Refer to DS-10-12.4 for fill material requirements.
(4) Latest OSHA trench safety requirements must be strictly observed.
(5) Warning tape shall be placed a minimum of 12" above the top of duct.
(6) Trench bottom shall be smooth, flat and without surface irregularities, and shall be free and clear of debris or any organic material. If trench bottom cannot, with reasonable effort, be made without surface irregularities, then a sufficient amount of bedding material as required by Note 2 shall be installed to provide the required surface. In no event shall the top of duct be less than 24" below finish grade.
(7) Maximum change in the trench bottom elevation shall not exceed 2" over a 10' length. Bedding materials required by Note 3 may be used to meet this requirement.

Depth Schedule - For Cable in Duct	
Cable Type	"D"
Service and Secondary	36" Minimum
Primary	42" Minimum

REFERENCES

(1) NESC rule 352, 353, 354

Cable in Duct - Trench Details

DS-10-8.1
Page 2
01/01/17

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REVISION	New Drawing

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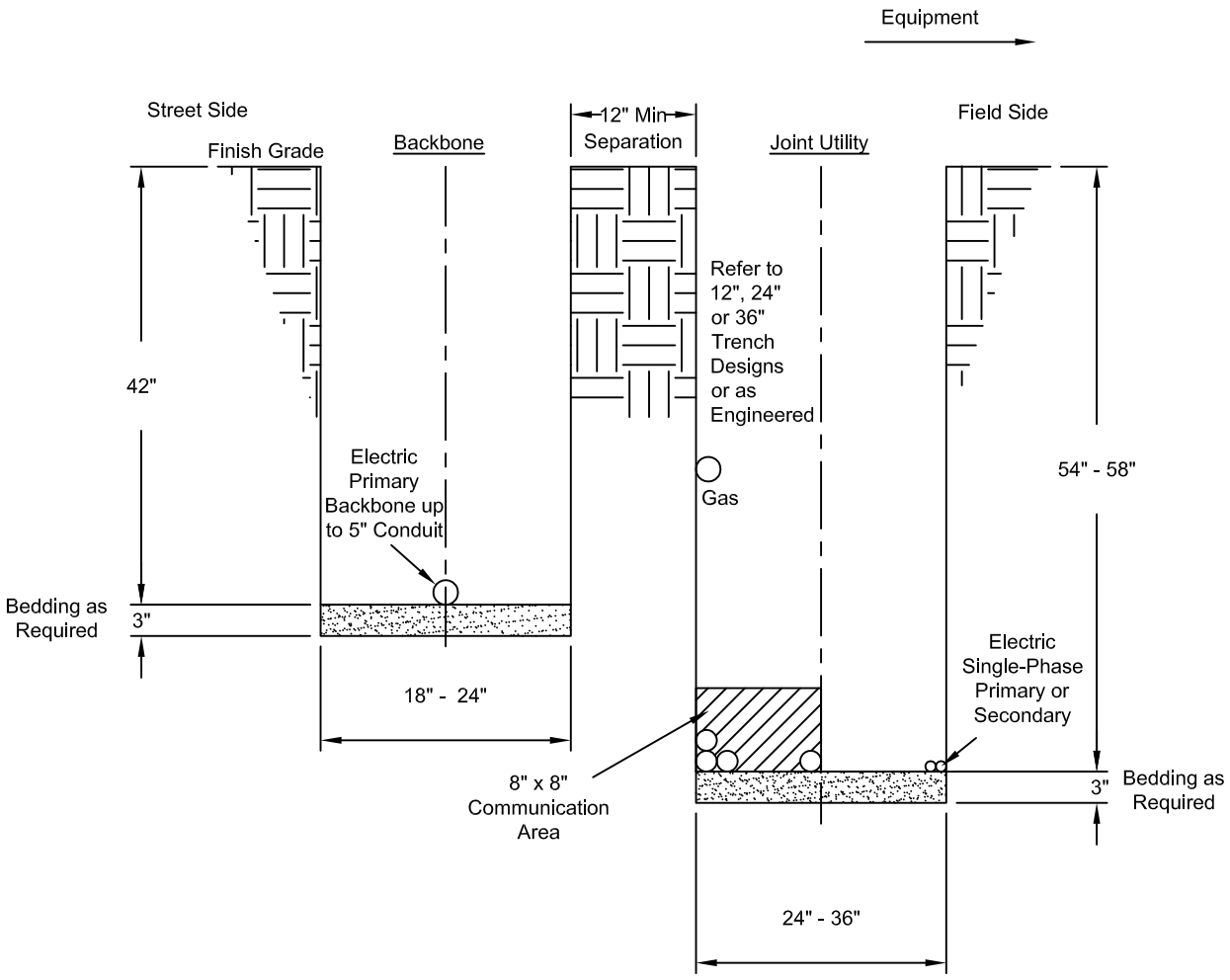

NOTES

(1) Compaction in city or state right-of-ways shall meet or exceed minimum specified requirements.
(2) Shading and bedding material to be Type IV, Class 2 for cable in conduit. Type III material is suitable for either type of installation. Refer to DS-10-12.4 for fill material requirements.
(3) If trench-run material meets back fill material type requirements, 3" bedding may be omitted provided the trench bottom is smooth, flat and without surface irregularities.
(4) Separation between jacketed primary and communication cables shall be at least 12".
(5) Spoil pile shall be placed on the field side a minimum of 2' from the trench edge.
(6) Latest OSHA trench safety requirements shall be strictly observed.
(7) Warning tape shall be placed a minimum of 12" above the upper level of utilities at the center of the trench.
(8) Electric secondary will include streetlight cable if applicable. Must be PNM owned or maintained.
(9) Private streetlight circuits or private area lighting circuits must maintain 12" separation from all other joint trench occupants.
(10) Single circuit per trench back bone, separate trench.
(11) If in rocky areas, consult with PNM Engineering prior to performing the work. Rocky areas is where earth requires the user of rock saw, rock trencher, jackhammers or explosives to reach the proper depth.

REFERENCES

(1) NESC rule 352, 353, 354

Backbone and Joint Utility - Trench Detail

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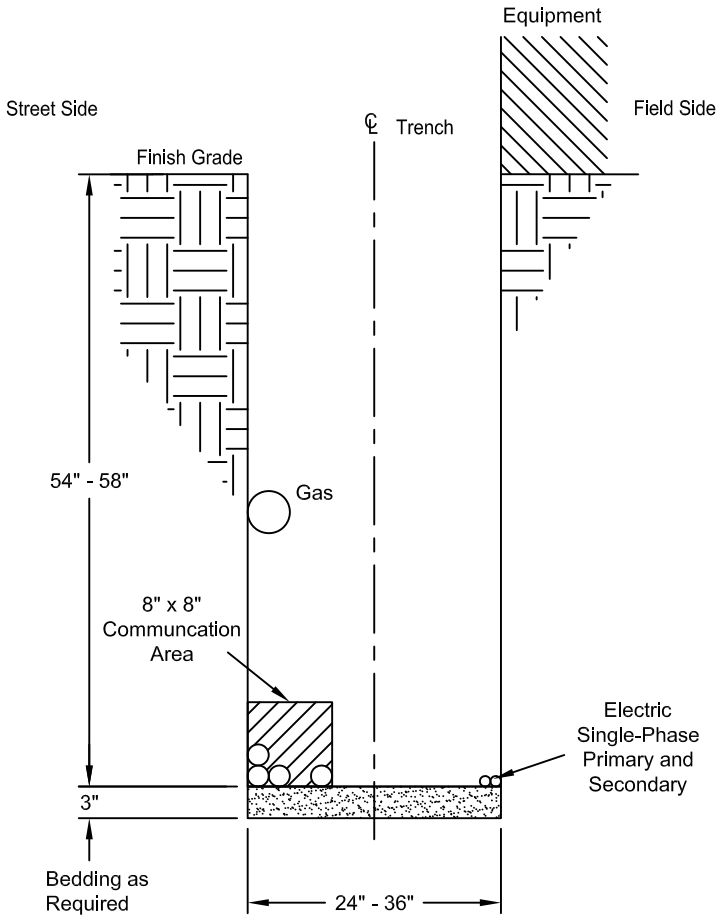

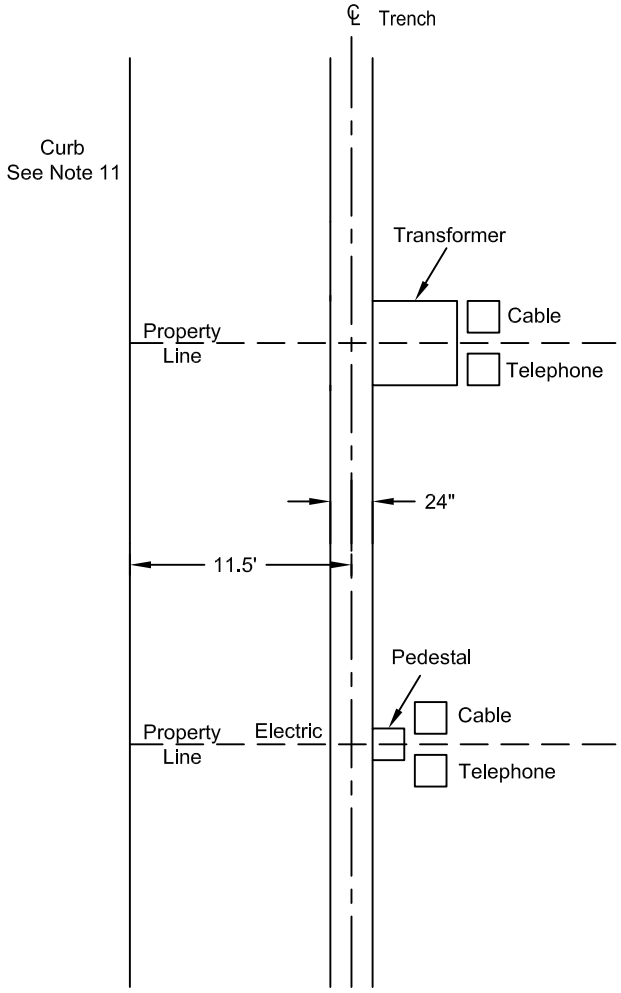

NOTES

(1) Compaction in city or state right-of-ways shall meet or exceed minimum specified requirements.
(2) Shading and bedding material to be Type IV, Class 2 for cable in conduit Type III material is suitable for either type of installation. Refer to DS-10-12.4 for fill material requirements.
(3) If trench-run material meets back fill material type requirements, 3" bedding may be omitted provided the trench bottom is smooth, flat and without surface irregularities.
(4) Maximum change in the trench bottom elevation shall not exceed 2" over a 10' length.
(5) Spoil pile shall be placed on the field side a minimum of 2' from the trench edge.
(6) Latest OSHA trench safety requirements shall be strictly observed.
(7) When bringing cables to pedestals, 12" separation must be maintained from the gas line.
(8) PNM owned or maintained streetlight circuits may be installed in trench next to electric cables.
(9) Private area lighting or private streetlight circuits must maintain 12" separation from all other joint occupants.
(10) Check with local gas utility for minimum separation but, in no case it should be less than 12".
(11) Typical subdivision where property line is 9' from back of curb and 10' Public Utility Easement (PUE).
(12) Warning tape shall be placed a minimum of 12" above the upper level of utilities at the center of the trench.
(13) Additional cutback from main trench required at transformer and pedestal locations.

REFERENCES

(1) NESC rule 352, 353, 354
(2) DS-7-16.12 Minimum Working Space and Fire Safety Requirements for Transformers
(3) DS-7-17.0 Working Space and Fire Safety Requirements Supplement

Typical Residential - Trench Details

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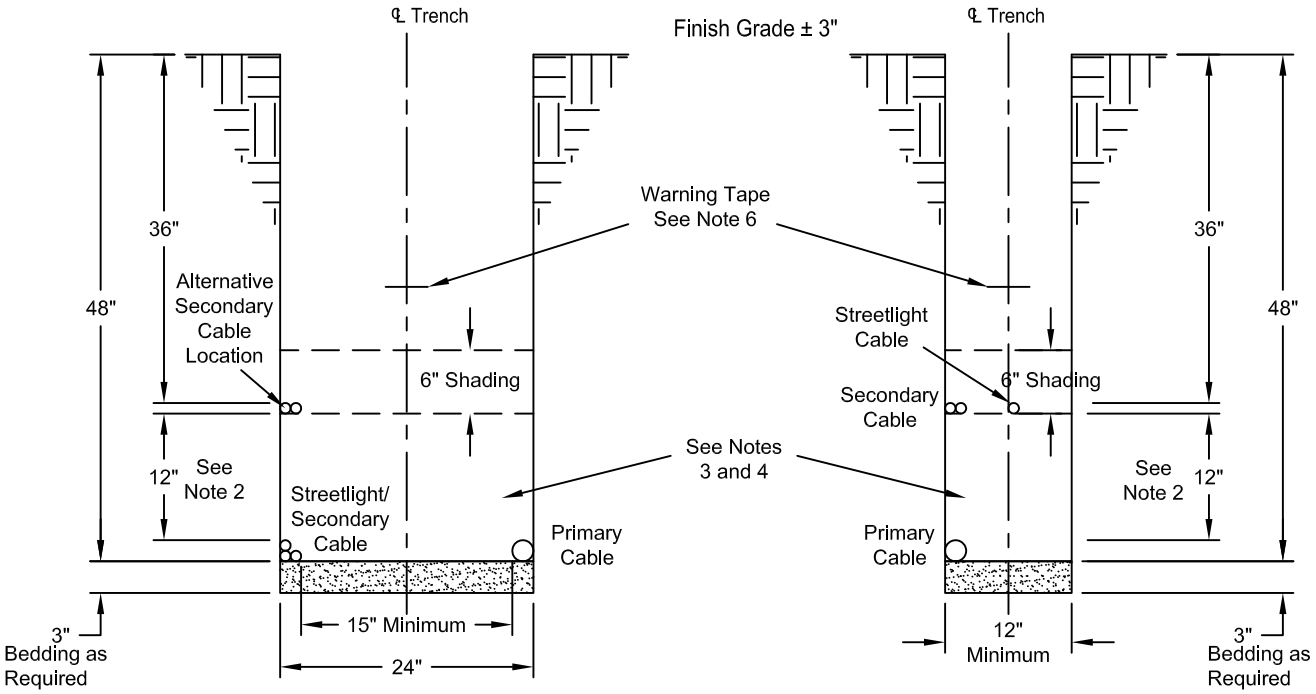

NOTES

(1) Where applicable, compaction in city or state right-of-way shall meet or exceed minimum requirements.
(2) Shading and bedding material to be Type IV, Class 2 for cable in conduit. Type III material is suitable for either type of installation. Refer to DS-10-12.4 for fill material requirements.
(3) If trench-run material meets backfill material type requirements, 3" bedding may be omitted provided the trench bottom is smooth, flat, and without surface irregularities.
(4) For installation without the upper layer of cable, a minimum of 6" of shading over the primary cable is required.
(5) Latest OSHA trench safety requirements must be strictly observed.
(6) Warning tape shall be placed a minimum of 12" above the upper level of electrical cable at the center of the trench.
(7) PNM owned or maintained streetlight circuits may be installed in trench next to electric cables.
(8) Private area lighting or private streetlight circuits must maintain 12" separation from all other joint occupants.

REFERENCES

(1) NESC rule 352, 353, 354

Electric Only Trench - PNM Owned

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REVISION	New Drawing

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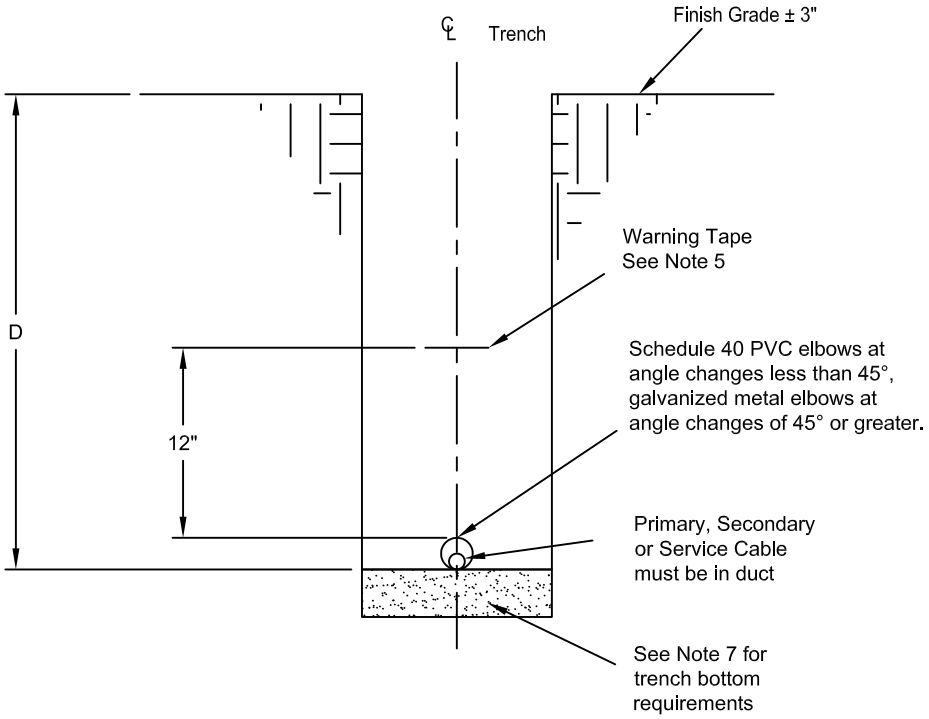

NOTES

(1) Trench detail for PNM owned cable in duct installation. This drawing shows the minimum recommended requirements for cable in duct installations.
(2) Where applicable, compaction in city or state right-of-way shall meet or exceed minimum requirements.
(3) Shading and bedding material to be Type IV, Class 2 for cable in conduit. Type III material is suitable for either type of installation. Refer to DS-10-12.4 for fill material requirements.
(4) Latest OSHA trench safety requirements must be strictly observed.
(5) Warning tape shall be placed a minimum of 12" above the top of duct.
(6) Trench bottom shall be smooth, flat and without surface irregularities, and shall be free and clear of debris or any organic material. If trench bottom cannot, with reasonable effort, be made without surface irregularities, then a sufficient amount of bedding material as required by Note 2 shall be installed to provide the required surface. In no event shall the top of duct be less than 24" below finish grade.
(7) Maximum change in the trench bottom elevation shall not exceed 2" over a 10' length. Bedding materials required by Note 3 may be used to meet this requirement.
(8) Cable in duct shall remain intact, not to be used in combination with direct buried cable.
(9) Rocky area is where earth requires the use of rock saw, rock trencher, jackhammers or explosives to reach proper depth.
(10) Special use Rocky areas detail see DS-10-8.7.

Depth Schedule for Cable in Duct in Rocky Areas	
Cable Type	"D"
Service and Secondary	24" Minimum
Primary	30" Minumum

REFERENCES

(1) NESC rule 352, 353, 354

Cable in Duct - Trench Details (Rocky Areas Only)

DS-10-8.1
Page 6
01/01/17

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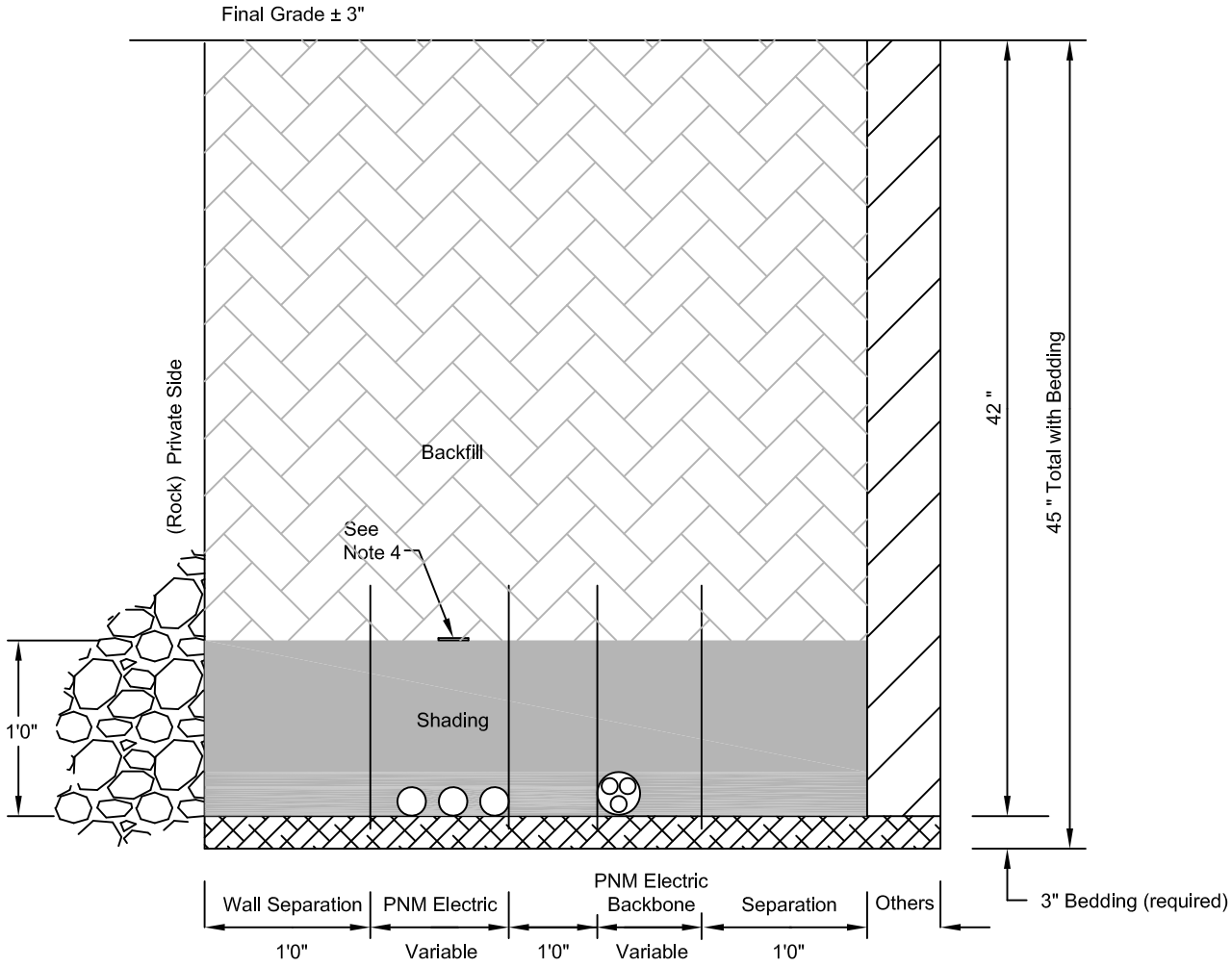
For Rocky Areas Only

Commercial or Residential Trench Detail



Minimum Standard Requirement for PNM Electric with backbone

NOTES

(1) Where applicable, compaction in city or state right-of-way shall meet or exceed minimum requirements. If additional compaction is required, a non-refundable contract must be executed.
(2) Shading and bedding material to be Type IV, class 2 for cable in duct. Backfill material shall be free of debris and have no gravel larger than 3". Refer to DS-10-12.4 for fill material requirements.
(3) Latest OSHA trench safety requirements must be strictly observed.
(4) Warning tape shall be placed in a minimum of 12" above the top of duct.
(5) Trench bottom shall be smooth, flat and without surface irregularities, and shall be free and clear of debris or any organic material. If trench bottom cannot, with reasonable effort, be made without surface irregularities, then additional bedding material as required by Note 2 shall be installed to provide the required surface.
(6) Maximum change in the trench bottom elevation shall not exceed 2" over a 10' length. Bedding materials required by Note 2 may be used to meet this requirement.
(7) Cable in duct shall not be used in any cable run in combination with direct buried cable.
(8) This detail (For Rocky Areas Only) is only to be used upon approval of PNM Distribution Engineering.

REFERENCES

(1) NESC rule 352, 353, and 354.

Rocky Areas

Where earth requires the use of rock saw, rock trencher, jackhammers, or explosives to reach the proper depth.

Rocky Areas-Trench Detail (Prior Approval Required)

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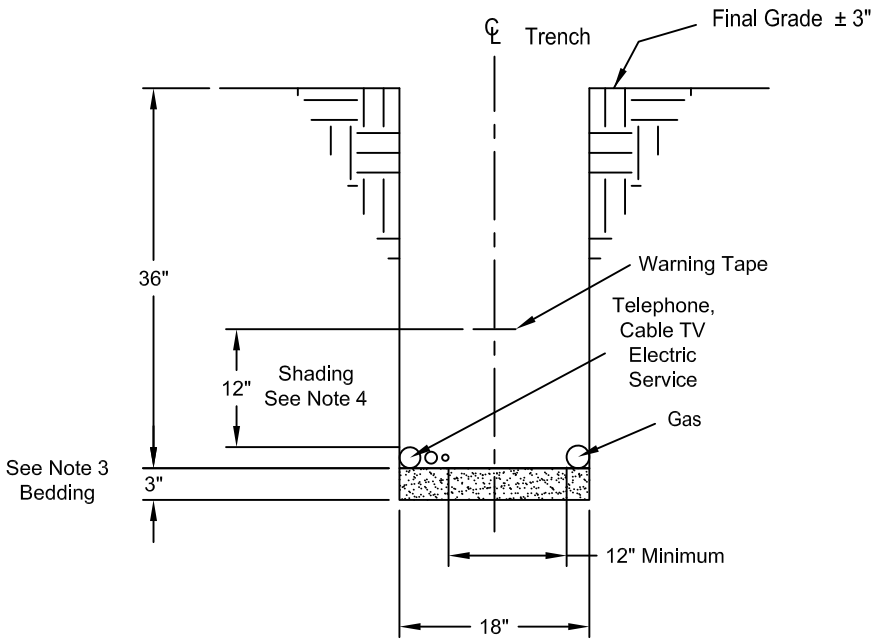
Residential Underground
Joint Service Trench Detail



NOTES

(1) Where applicable, compaction in city or state right-of-way shall meet or exceed minimum requirements.
(2) Shading and bedding material to be Type III: sand-free of silt, clay and loam or Type IV: class 2, soil-reused or imported, free of debris and gravel larger than 2".
(3) If trench-run material meets back fill material type requirements, 3" bedding may be omitted provided the trench bottom is smooth, flat, and without surface irregularities.
(4) A minimum of 12" of approved back fill shading over the utilities is required.
(5) For rocky areas installation burial depth for service cable can be reduced to a minimum of 24".
(6) Latest OSHA trench safety requirements must be strictly observed.
(7) Where utilities cross a minimum 12" separation is required.
(8) Check with local gas utility for minimum separation from electric duct but in no case shall it be less than 12".
(9) Check with cable and phone companies for minimum separation from electric duct, if any.

Joint Service Trench

Not to Scale