



TYPICAL TRENCH DETAIL

LEGEND & ESTIMATE OF QUANTITIES

Underground power	
□	Transformer Pads 1 ea.
□	Junction Boxes 3 ea.
---	1 1/2" A.B.S. (D/B) Conduit 440 L.F.
---	3" A.B.S. (D/B) Conduit 230 L.F.
Street Lighting	
⊕	400 Watt Mercury Vapor Luminaire 3 ea.
⊕	175 Watt Mercury Vapor Luminaire 1 ea.
⊕	Exist. Street Light
⊕	11 ga. Light Standard 4 ea.
---	1 1/4" P.V.C. Conduit Schedule 40 280 L.F.
Telephone:	
---	2" x 3' x 3' Main distribution spl. box 1 ea.
---	3' x 4' Main Feeder Splice box 1 ea.
---	service wire box 3 ea.

NOTES & SPECIFICATIONS

- Underground Power:
- High voltage cable shall be one conductor 15 KV #2 cu. High Molecular weight polyethylene insulated with concentric neutral. Cable shall be purchased in accordance with Nev. Power Co. Dwg. #2-501, sh. 1-3 and bid list.
  - All secondary cable shall be rated 600 volt and shall be stranded aluminum conductor type THW or XLP.
  - All conduit shall be ABS plastic and meet Western Underground Specifications, No. 31, Rev. No. 7. Conduit shall be installed per Nevada Power Co. Specifications. All duct installed in traveled areas shall be encased in a 3" red concrete envelope.
  - See attached Specifications on cable, conduit, transformer pads, pull boxes, etc. Ref. - Nev. Power Co. Dwg. No. 3-101, 3-301, 3-510, 5-510, 3-10, 2-501, & 5-100.
  - All secondary cable shall be 3" unless shown otherwise.
  - All primary conduit shall be 1 1/2" unless shown otherwise.
  - Nevada Power Co. shall furnish all transformers & install.
  - Wires for the primary circuit shall conform to Nevada Power Co. Dwg. No. 3-10.
- Street Lighting
- All construction & materials to meet City of Las Vegas Specs.
  - All street light power source to be placed underground.
  - All wires in conduit shall be 600 volt #2 120/240 v 3 wires - 2 ins. - 1 bare
  - See trench detail on sheet 1

APPROVALS

<i>Keshav Thomas</i>	3-13-68
Nevada Power Co. (Street Lighting)	Date
<i>Bob Bennett</i>	9-26-68
Las Vegas City Electrician	Date
<i>Bob Jones</i>	10-9-68
Las Vegas City Engineer	Date
<i>J. D. DeBru</i>	9-27-68
Las Vegas Field Engineer	Date
<i>E. K. Gamm</i>	5-29-68
Nevada Power Co. (Underground) Coordinated with:	Date
<i>R.C. Anderson</i>	5/29/68
Central Telephone Co.	Date

**STREET LIGHTING SPECIFICATIONS**  
 UNDERGROUND 120-240 VOLT SINGLE PHASE THREE WIRE MULTIPLE SYSTEM

Street lighting standards shall be as shown by drawing No. 400.1, page 40 of Uniform Std. Drawings and must conform to Sections 400 and 405 and any other applicable sections of the Uniform Standard Specifications.

On 80' R/W streets there shall be 2 poles on diagonal corners.

On 100' R/W streets there shall be one pole at each corner.

Mercury Vapor Luminaires to be used on 51' R/W and 60' R/W streets, except at intersections, shall be 175 Watt, 120/240 Volt constant wattage, I.E.S. Distribution Type 3, similar to Line Material Catalog #LM482, or approved equal.

Mercury Vapor Lamps to be used on 51' R/W and 60' R/W streets, except at intersections shall be 175 Watt, clear, 16,000 Hours, Westinghouse, Catalog #H39-22KC/W or approved equal.

Mercury Vapor Luminaires to be used on 51' R/W and 60' R/W streets, at intersecting minor streets shall be 250 Watt 120/240 Volt, constant wattage, I.E.S. Distribution Type 2, similar to General Electric Type M-250R, Catalog #C706G012, or approved equal.

Mercury Vapor Lamps to be used on 51' R/W or 60' R/W streets at intersecting minor streets shall be 250 Watt, Clear, 16,000 Hours, Westinghouse Catalog #H-37-5KC/W or approved equal.

Mercury Vapor Luminaires to be used on 80' R/W streets and over, shall be 400 Watt 120/240 Volt constant wattage, I.E.S. Distribution Type 3, similar to General Electric Type M-400, Catalog #C704G002, or approved equal.

Mercury Vapor Lamps to be used on 80' R/W streets and over shall be 400 Watt, Clear, 16,000 Hours Westinghouse Catalog #H33-1GL/W, or approved equal.

Integral Conductor and Duct shall be two 600 Volt insulated conductors and one neutral conductor of the size specified in the applicable plans pre-assembled in a loose fitting flexible polyethylene duct and buried in the ground.

At the discretion of the Field Engineer, Sch. 40 Rigid Non-Metallic Conduit (PVC) or approved equal complying with Article 347 of the national electrical code may be used for underground applications.

Fuse Holders and Connectors shall be installed in the bases of all lighting standards, the fuse holders shall be water tight construction and shall be separable (pull-a-part) to provide a disconnecting means for circuit repairs.

Base covers for lighting standards are not to be installed before breakout caps are placed and inspected. All material used in underground wiring, in breakout caps and underbase covers to be inspected before installation.

Foundations shall be constructed and located to line and grade as directed by Field Engineer.

Lighting Standard and Mast Arm Cable to luminaire shall be two conductor #10 standard 600 Volt copper cable. Each conductor shall be plasticized polyvinyl chloride insulated, with an out jacket of black polyethylene.

Spacing of standards on 51' R/W and 60' R/W streets shall be on one side to provide .43 F.C.

Spacing of standards on 80' R/W streets shall be on both sides staggered, to provide .9 F.C.

Spacing of standards on 100' R/W streets or more shall be on both sides staggered to provide 1.4 to 2.0 F.C.

The contractor shall be responsible for avoiding damage to property, either public or private and in the event of such damage, shall make satisfactory repairs at his own expense.

The contractor shall furnish complete service to transformers and control systems if required.

The feed-in service when shown is subject to availability of power at the specified location.

Standards used on 51' R/W and 60' R/W streets to be set within 3' utility easements back of property line.

Standards used on 80' R/W streets and over to be set 18" back of curb.

These specifications shall be superseded by any revised specifications in existence at the time of installation.

In the selection of 175, 250, and 400 Watt Mercury Vapor Luminaires to be used in a particular development one approved manufacturer shall be specified. The specifications to become effective on all city of Las Vegas Multiple Street Lighting Designs approved on or after June 1, 1965.

**VOORHEIS-TRINDLE CO. OF NEVADA**  
 2209 Paradise Rd., Las Vegas, Nevada

**CHARLESTON-RAINBOW UNIT No. 8**  
 MASTER ELECTRICAL & ST. LIGHTING

Submitted By: *Victor O. Kramerbauer* 3/12/69 Date  
 Victor O. Kramerbauer, RCE 1511

Sheet **6** of **6**