***ADD THE FOLLOWING SECTION TO DIVISION II – CONSTRUCTION DETAILS***

### SECTION 671 – UTILITY SUBSTRUCTURES

**DESCRIPTION**

**671.01.01 GENERAL**

A. The work to be done consists of furnishing all labor, materials, equipment, transportation and services required to install NV Energy and CenturyLink substructure and other miscellaneous conduits as shown on the plans and in accordance with these special provisions.

**MATERIALS**

**671.02.01 GENERAL**

A. All materials furnished and used for the installation of NV Energy and CenturyLink substructure shall conform to NV Energy and CenturyLink service requirements, latest edition.

B. All conduit used for miscellaneous installations shall be Schedule 40 PVC.

C. Casing material shall be ¼ inch steel and shall conform to steel casing requirements in accordance with the Las Vegas Valley Water District Standards.

**CONSTRUCTION**

**671.03.01 GENERAL**

A. All utility substructures shall be installed in accordance with NV Energy and CenturyLink service requirements, latest edition.

**671.03.02 REMOVAL AND REPLACEMENT OF EXISTING IMPROVEMENTS**

A. Existing improvements, such as sidewalks, curbs, gutters, Portland cement concrete and asphalt concrete pavement, and other improvements removed, broken or damaged by the CONTRACTOR, shall be replaced or reconstructed in compliance with the applicable sections of these specifications.

B. The outline of all areas to be removed in Portland cement concrete sidewalks and in pavements shall be cut to a minimum depth of 1‑1/2 inches (38 millimeters) with an abrasive type saw prior to removing the sidewalk and pavement material.

1. Cut for the remainder of the required depth may be made by any method satisfactory to the ENGINEER.
2. Cuts shall be neat and true with no shatter outside the removal area.

**METHOD OF MEASUREMENT**

**671.04.01 MEASUREMENT**

The quantity of PULL BOXES, MANHOLES and TRANSFORMER PADS will be measured per each.

The quantity of [FILL IN ITEM DESCRIPTION] will be measured per [UNIT].

No direct measurement shall be made for [FILL IN ITEM DESCRIPTION].

**BASIS OF PAYMENT**

**671.05.01 PAYMENT**

The accepted quantity of PULL BOXES, MANHOLES and TRANSFORMER PADS will be paid for at the contract unit price of each and shall include all materials, equipment and labor required including, but not limited to, [FILL IN] and all other items necessary to complete the work as shown on the Plans, as specified herein and as directed by the Engineer.

The accepted quantity of 2-INCH CONDUIT, 4-INCH CONDUIT, 6-INCH CONDUIT for NV Energy, CenturyLink and City of Las Vegas will be paid for at the contract unit price of linear foot and shall include all materials, equipment and labor required including, but not limited to, excavation; bedding; backfill; concrete encasement; colored concrete ; spacers; fittings; stubs; bends; caps; sweeps; risers; installation in 30” steel casing; warning tape; pull stings; conductors; connections to pads, vaults, manholes and pull boxes, existing or new; temporary asphalt concrete patching and all other items necessary to complete the work in accordance with the latest NV Energy and CenturyLink service requirements, as shown on the Plans, as specified herein and as directed by the Engineer

The contractor shall supply a crane or other suitable equipment and operator to support existing utility poles number 63025 and 31616 as noted on the plans in a static condition during the installation of new conduit adjacent to these poles. The cost of supplying equipment and operator for the duration of the conduit installation shall not be paid for separately but shall be considered as incidental to all other pay items and no additional compensation shall be allowed.

The accepted quantity of NV Energy and CenturyLink PULL BOXES, MANHOLES and HAND HOLES will be paid for at the contract unit price of each and shall include all materials, equipment and labor required including, but not limited to, new precast pull boxes, manholes and hand holes; excavation; bedding; backfill; frames; lids; cones; concrete collars; grade rings; risers; steps; grout; sealants and temporary and final adjustments to grade and all other items necessary to complete the work in accordance with the latest NV Energy and CenturyLink service requirements, as shown on the Plans, as specified herein and as directed by the Engineer.

The accepted quantity of 30-INCH DIAMETER CASING AT [GIVE LOCATION] will be paid for at the contract unit price of [linear foot] and shall include all materials, equipment and labor required including, but not limited to, steel casing by tunneling methods; boring; excavation; pipe jacking; annular grouting of casing; excavating and backfilling; jacking and receiving pits; steel casing material; casing spacers; dewatering; disposal of waste material from site including disposal fees and all other items necessary to complete the work in accordance with the latest NV Energy and Century Link service requirements as shown on the Plans, as specified herein and as directed by the Engineer .

The cost for the removal and replacement of permanent asphalt concrete and Portland cement concrete surfaces associated with the installation of conduit, pull boxes or manholes shall be paid for under separate pay items.

The accepted quantity of [FILL IN ITEM DESCRIPTION] will be paid for at the contract unit price of [UNIT] and shall include all materials, equipment and labor required including, but not limited to, [FILL IN] and all other items necessary to complete the work as shown on the Plans, as specified herein and as directed by the Engineer.

Unless otherwise provided in the Special Provisions, no payment will be made for [FILL IN ITEM DESCRIPTION] as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items to which [FILL IN ITEM DESCRIPTION] is required.

Payment will be made under:

|  |  |  |
| --- | --- | --- |
| **ITEM NO.** | **ITEM DESCRIPTION** | **UOM** |
| 671.0030 | 3’x7’x4’ NV ENERGY PULL BOX (RS-82) | EA |
| 671.XXXX | 5’x10.5’x7’ NV ENERGY MANHOLE FOR SWITCH (RS-98) | EA |
| 671.XXXX | 17”x30” NV ENERGY HAND HOLE (RS-1) | EA |
| 671.XXXX | NV ENERGY INTERCEPT PULL BOX (RS-85) | EA |
| 671.XXXX | 2’6”x4’x3’ CENTURYLINK PULL BOX | EA |
| 671.XXXX | 2” CLV POWER CONDUIT | LF |
| 671.XXXX | 4” NV ENERGY CONDUIT  | LF |
| 671.XXXX | 4” CENTURYLINK CONDUIT  | LF |
| 671.XXXX | (2) 6” NV ENERGY CONDUITS | LF |
| 671.XXXX | (3) 6” NV ENERGY CONDUITS (CONCRETE ENCASED) | LF |
| 671.XXXX | (6) 6” NV ENERGY CONDUITS (CONCRETE ENCASED) | LF |
| 671.XXXX | (8) 6” NV ENERGY CONDUITS (CONCRETE ENCASED) | LF |

**END OF SECTION 671**