

This is a sample of the typical construction surveying requirements for a City of Las Vegas capital improvement project. Surveys performed for any particular project should adhere **ONLY to the specific language included within that project's contract documents.*

ADD THE FOLLOWING SECTION TO DIVISION II – CONSTRUCTION DETAILS

SECTION 622 – CONSTRUCTION SURVEYING BY THE CONTRACTOR

DESCRIPTION

622.01.01 GENERAL

- A. The Contractor shall, under supervision of a Professional Land Surveyor, registered in the state of Nevada, furnish and set construction stakes establishing locations, lines, and slope stakes for roadway, storm drain, drainage structures, sewer, laterals, and for all other improvements for project necessary to ensure conformance of work to lines, elevations, locations, and grades as shown on the Plans and in these Special Provisions. Any horizontal or vertical discrepancies shall be reported to Engineer prior to commencement of construction. Any revisions or changes approved by Engineer that affect lines, grades, elevations or locations of any improvement shall be indicated on As-Built (Record) Drawings.
- B. If necessary, the Contractor shall also perform and provide to the Engineer those items described in subsection 203.04.01 of the USS. Any revisions or changes approved by the Engineer that affect the lines, grades, elevations or locations of any improvement shall be indicated on the As-Built (Record) Drawings.
- C. Contractor shall preserve property line and corner survey monuments whenever possible. If their destruction is determined by Engineer to be unavoidable, and their replacement is not called for on the plans, they shall be replaced by the Engineer. Survey monuments that are disturbed or destroyed by Contractor's operations without prior approval by the Engineer shall be replaced by the Engineer at the Contractor's expense.
- D. When a concrete survey monument well is located within the construction area of any roadway, storm drain, drainage structures, sewer line or channel improvement, the Contractor shall adjust the cover if noted on the plans. The cost of adjustment of said monument well covers shall be included in the lump sum bid for Construction Survey.

MATERIALS

622.02.01 BLANK

CONSTRUCTION

622.03.01 GENERAL

- A. Prior to all work in this section, the Contractor shall carefully inspect all installed work and

PROJECT NAME

Bid No. YY.XXXXX
CLVRev061721

verify that all such work is complete to a point where this installation may properly commence.

- B. The Contractor shall verify that all work can be installed in accordance with all pertinent codes and regulations, Contract Drawings and referenced standards.
- C. The Contractor shall verify that there are no conflicts with existing utilities prior to the start of work.
- D. In event of a discrepancy, the Contractor shall immediately notify the Engineer in writing.
- E. Installation of work in areas of discrepancy shall not proceed until all such discrepancies have been fully resolved.
- F. After stakes and marks have been set, it shall be the responsibility of the Contractor to protect the stakes and marks. Should any of the stakes or marks be destroyed or disturbed by the Contractor's operations or otherwise, the costs of replacing said stakes or marks shall be paid by the Contractor.
- G. The Engineer, at his discretion, may periodically have survey work performed to verify conformance to the construction plans. Any nonconformity found to be the fault of the Contractor, or the Professional Land Surveyor, shall be corrected at no additional cost to the Owner.
- H. Upon completion of the project and as a condition for final payment authorization, the Contractor shall furnish to the Engineer a certification attested to by the Professional Land Surveyor that the work performed for this contract has been constructed to the lines and grades as described in the As-built (Record) Drawings. When requested, the Contractor shall also provide the Engineer with copies of all cut sheets, field notes, computations, and other related work performed by the Professional Land Surveyor.

622.03.02 FINAL ACCURACY

- A. No tolerance will be allowed for any Pedestrian Pathway or sidewalk identified on the plans to exceed a 2.00% max cross slope. If final slope in these situations is above 2.00%, then sidewalk shall be removed and replaced at the expense of the contractor in accordance with USS Section 105.12.
- B. Surface Drainage Structures (including all concrete or asphalt gutters and drains) shall be installed within 0.05 feet horizontally and 0.05 feet vertically from the location taken from the project plans, and shall not vary more than 10 percent of the gradient shown on the plans.
- C. Sanitary and Storm Drainage Sewer Systems shall be installed within 0.05 feet horizontally and 0.05 feet vertically of the exact location taken from the project plans. In addition, the gradient of any 10-foot section of pipe shall not vary by more than 10 percent of the gradient shown the project plans

- D. Field verification surveys may be conducted by the city of Las Vegas at any given time during construction progress to ensure compliance with positional accuracy requirements per NAC 625, the contract documents, and this special provision.

622.03.03 INSTALLED/EXPOSED UTILITY SURVEYING

- A. All measurements are to be made by the Engineer who will be certifying the project as constructed.
- B. The contractor is responsible for coordinating the Engineer during construction and shall provide access to all underground sanitary sewer, storm drain, and reuse water facilities prior to being buried; allowing accurate horizontal and vertical measurements to be acquired by the Engineer. In the event of any discrepancies identified by CLV and at no cost to CLV, the Contractor shall verify the location and measurements of any buried utilities.
- C. Contractor shall provide a minimum 24-hours' notice to Engineer for necessary survey work in accordance with this section.

METHOD OF MEASUREMENT

622.04.01 MEASUREMENT

The quantity of CONSTRUCTION SURVEYING will be measured per lump sum.

BASIS OF PAYMENT

622.05.01 PAYMENT

The accepted quantity of CONSTRUCTION SURVEYING will be paid for at the contract unit price per lump sum and shall include all materials, equipment and labor, including, but not limited to, construction staking, as-built drawings and all other incidentals necessary to complete this work as described herein.

Unless otherwise provided in these Special Provisions, no payment will be made for monumentation surveys or installed/exposed utility final location surveys. These services are to be provided by the Engineer.

Monthly payments will be made in an amount equal to the percent of total contract complete multiplied times the lump sum price bid for construction surveying minus previous Construction Surveying monthly payments.

Payment will be made under:

<u>ITEM NO.</u>	<u>ITEM DESCRIPTION</u>	<u>UOM</u>
622.0005	CONSTRUCTION SURVEYING	LS

PROJECT NAME

Bid No. YY.XXXXX
CLVRev061721

END OF SECTION 622

SAMPLE