

PART 1 GENERAL

1.1 RELATED REQUIREMENTS

- .1 Not used.

1.2 REFERENCES

- .1 Departmental Representative's documents indicating property boundaries and existing survey reference points.

1.3 QUALIFICATIONS OF SURVEYOR

- .1 Qualified registered land surveyor, licensed to practice in Place of Work, acceptable to Departmental Representative.

1.4 SURVEY REFERENCE POINTS

- .1 Locate, confirm and protect control points prior to starting site work. Preserve permanent reference points during construction.
- .2 Make no changes or relocations without prior written notice to Departmental Representative.
- .3 Report to Departmental Representative when reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
- .4 Require surveyor to replace control points in accordance with original survey control.
- .5 AutoCAD drawings are available to Contractor to establish electronic staking logs

1.5 SURVEY REQUIREMENTS

- .1 Establish two (2) permanent bench marks on site, referenced to established bench marks by survey control points. Record locations, with horizontal and vertical data in Project Record Documents.
- .2 Establish lines and levels, locate and lay out, by instrumentation.
- .3 Stake for grading, fill and topsoil placement and landscaping features.
- .4 Stake slopes and berms.
- .5 Establish pipe invert elevations.
- .6 Stake batter boards for foundations.
- .7 Establish foundation column locations and stair elevations.
- .8 Establish lines and levels for systems and mechanical and electrical installations.

1.5 SURVEY REQUIREMENTS (cont'd)

- .9 The Contractor shall implement on site, using survey stakes, each project elements while checking their location indicated in the plans and reporting, if applicable, any discrepancy or inconsistency between the possible and the actual values indicated in the plans. The position of each element must be validated on site after picketing by the Departmental Representative. In addition, the Contractor shall provide the representative of the Ministry GPS tracking items once implanted picket for design validation. Nothing needs to be installed without the approval of the Departmental Representative following the interventions mentioned above.

The Contractor shall provide an analysis within 48 hours by the Departmental Representative after making picketing and send GPS coordinates for approval. In addition, the Contractor shall validate the final picket by the Representative of the Ministry before work

- .10 Establish lines and levels for mechanical and electrical work.

1.6 EXISTING SERVICES

- .1 Before commencing work, establish location and extent of service lines in area of Work and notify Departmental Representative of findings.
- .2 Remove abandoned service lines within 2 m of structures. Cap or otherwise seal lines at cut-off points as directed by Departmental Representative.

1.7 LOCATION OF EQUIPMENT AND FIXTURES

- .1 Location of equipment, fixtures and outlets indicated or specified are to be considered as approximate.
- .2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance.
- .3 Inform Departmental Representative of impending installation and obtain approval for actual location.
- .4 Submit field drawings to indicate relative position of various services and equipment when required by Departmental Representative.

1.8 RECORDS

- .1 Maintain a complete, accurate log of control and survey work as it progresses.
- .2 On completion of foundations and major site improvements, prepare a certified survey showing dimensions, locations, angles and elevations of Work.
- .3 Record locations of maintained, re-routed and abandoned service lines.

1.9 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit name and address of Surveyor to Departmental Representative.
- .2 On request of Departmental Representative submit documentation to verify accuracy of field engineering work.
- .3 Submit certificate signed by surveyor certifying and noting those elevations and locations of completed Work that conform and do not conform with Contract Documents.

1.10 SUBSURFACE CONDITIONS

- .1 Promptly notify Departmental Representative in writing if subsurface conditions at Place of Work differ materially from those indicated in Contract Documents, or a reasonable assumption of probable conditions based thereon.
- .2 After prompt investigation, should Departmental Representative determine that conditions do differ materially; instructions will be issued for changes in Work as provided in Changes and Change Orders.

PART 2 PRODUCTS

2.1 NOT USED.

- .1 Not Used.

PART 3 EXECUTION

3.1 NOT USED.

- .1 Not Used.

END OF SECTION