

EXHIBIT D – LAND SURVEYOR REQUIREMENTS

- A. Protection of Property.** The **CONSULTANT** shall contact the **NATION** for information regarding the site and shall take all reasonable precautions to prevent damage to property, visible and concealed, and shall reasonably restore the site to the condition existing prior to the **CONSULTANT'S** use, including, but not limited to, repair of lawns and plantings.
- B. Qualifications.** All services shall be performed by qualified personnel under the supervision of a licensed professional or otherwise qualified by the state to practice land surveying, and all resulting documentation submitted shall bear the **CONSULTANT'S** seal and statement to that effect.
- C. Use of Surveyor's Drawings.** The **NATION** may reproduce the **CONSULTANT'S** drawings without modification and distribute such prints in connection with the use or disposition of the property without incurring obligation for additional compensation to the **CONSULTANT**. The original drawings shall remain the property of the **CONSULTANT**.
- D. Accuracy Standards.** Precision of the survey shall be based on the positional accuracy concept. The **CONSULTANT** shall recommend in the proposal the positional accuracy limits and error of closure limits for the property being surveyed.
- E. Property Lines and Access.** Property lines and means of access are shown on the attached drawings, identified herein as _____, which includes a total of ___ pages. The **NATION** has title to this property and the right of entry for this survey.
- F. Drawing Requirements.** Requirements for land survey drawings are as indicated by the selected items below:
- 1. Drawings shall note all dimensions and elevations in:
 - imperial units at _____ scale.
 - metric units at _____ scale.
 - 2. Drawing sheets shall be trim size _____ x _____ with left binding edge and _____ borders.
 - 3. Show NORTH arrow and locate magnetic North:
 - directed to the top of the sheet;
 - OR
 - as specified: _____.
 - 4. Include legend of symbols and abbreviations used on the drawing(s).
 - 5. Spot elevations on paving or other hard surfaces shall be to the nearest .01 foot; on other surfaces, to the nearest .10 foot. If required by Section 3.1, use equivalent metric units.
 - 6. Boundary and topographic information, where both are required, shall be on the same drawing unless otherwise requested by the **NATION**.
 - 7. State elevation datum on each drawing:
 - use National Vertical Geodetic Datum (NVGD) 1929 and give location of benchmark used;
 - OR
 - use assumed elevation _____ at _____;

OR

use official town datum;

OR

as specified in Section H below.

8. Furnish to the **NATION** one (1) reproducible transparency and three (3) prints of each drawing. The **CONSULTANT** shall sign and seal each drawing and shall state that to the best of the **CONSULTANT'S** knowledge, information and belief, all information thereon is true and accurately shown.

G. Land (Boundary) Survey Requirements. Survey requirements shall be established as indicated by the selected items below:

1. Show boundary lines, giving length and bearing (including reference or basis) on each straight line; interior angles, radius, point of tangency and length of curved lines. Unless otherwise prohibited by law, where no monument exists, set permanent iron pin (monument) or other suitable permanent monument at property corners; drive pin adequately into ground to prevent movement and mark with wood stake; state on the drawing(s) whether corners were found or set and describe each.
2. Furnish a legal description that conforms to the record title boundaries. Prior to making this survey and insofar as is possible, the **CONSULTANT** shall acquire data including, but not limited to, deeds, maps, certificates or abstracts of title, section line and other boundary line locations in the vicinity.
- Reconcile any discrepancies between the survey and the recorded legal description.
3. Give area in square feet if less than one acre; in acres (to .001 acre) if over one acre. If required by Section F(1), use equivalent metric units.
4. Note identity, jurisdiction, and width of adjoining streets and highways, width and type of pavement. Identify street monuments and show distance to the nearest intersection.
5. Plot location of structures on the property. Dimension to property lines and other buildings. Note vacant parcels as VACANT. Describe building materials and note number of stories.
- Dimension perimeters in feet and inches to nearest 1/2 inch;
- OR
- dimension perimeters in feet and decimals to .05 foot;
- OR
- dimension perimeters in metric units to the nearest millimeter.
- Include adjacent properties within (*indicate feet or meters*) _____.
6. Show encroachments, including cornices, belt courses, etc., either way across property lines.
7. Describe fences and walls and locate them with respect to property lines.
- Include identification of party walls.
8. Show recorded or otherwise known easements and rights-of-way and identify owners (holders).
9. Note planned rights-of-way and the nature of each.
10. Note planned street widenings.
11. Show individual lot lines and lot block numbers; show street numbers of buildings if available.

- 12. Show zoning of property. If more than one zone, show the extent of each. Show zoning of adjacent property and property across the street(s) or highway(s).
- 13. Show building line and setback requirements, if any.
- 14. Give names of owners of adjacent property.
- 15. Other: _____

H. Topographical Survey Requirements. *If applicable*, all lines of levels shall be checked by separate check level lines, or on previous turning points or benchmarks. If required by Section F(1), use equivalent metric units. Topographical survey requirements shall be established as indicated by the selected items below:

- 1. A minimum of one permanent benchmark on site for each four acres and a description and elevation to nearest .01 foot.
- 2. Contours at _____ foot intervals; error shall not exceed one-half contour interval.
- 3. Spot elevation at each intersection of a _____ foot square grid covering the property.
- 4. Spot elevations at street intersections and at _____ feet on center of curb, sidewalk and edge of paving, including far side of paving. If elevations vary from established grades, also state established grades.
- 5. Plotted location of structures, paving and improvements above and below ground.
- 6. Floor elevations and elevations at each entrance of buildings on the property.
- 7. **Utility information.** The following information is to be shown based on record information and on surface evidence. Inadequate record data requiring the surveyor to employ techniques of subsurface exploration to locate utilities will be an additional service subject to **NATION** approval.
 - Location, size, depth, and pressure of water and gas mains, central steam and, other utilities including, but not limited to, buried tanks and septic fields serving, or on, the property.
 - Location of fire hydrants available to the property and the size of the main serving each.
 - Location, elevation and characteristics of power, cable television, street lighting, traffic control facilities, and communications systems above and below grade.
 - Location, size, depth, and direction of flow of sanitary sewers, combination sewers, storm drains and culverts serving, or on, the property; location of catch-basins and manholes, and inverts of pipe at each.
 - Name of the operating authority, including contact person and phone number, for each utility indicated above.
- 8. Mean elevation of water in any excavation, well or nearby body of water.

- 9. Location of flood plain and flood level of streams or adjacent bodies of water.
- 10. Extent of watershed onto the property.
- 11. Location of test borings if ascertainable, and the elevation of the tops of holes.
- 12. Location of trees _____ inches and over (caliper three feet above ground); locate within one foot tolerance and identify species in English and botanical terms.
- 13. Location of specimen trees flagged by the **NATION** (_____ in number); locate to center within six inches tolerance; give species in English and botanical terms, give caliper three feet above ground and ground elevation on upper slope side.
- 14. Perimeter outline only of thickly wooded areas unless otherwise directed.
- 15. Description of natural features.
- 16. Location(s) of suspected or confirmed soil contamination(s).
- 17. Other: _____
