

LAND SURVEYING SERVICES

EXHIBIT A TO CONTINUING SERVICES AGREEMENT

ARTICLE 1 – SERVICE PROVIDER’S BASIC SERVICES

1.1 GENERAL RESPONSIBILITIES. Service Provider accepts the relationship of trust and confidence established between it and Owner by this Agreement and covenants to use Service Provider's best professional efforts, skill, judgment, and abilities in performing the Services, and to further the interests of Owner in accordance with the usual and customary standards of Service Provider's profession and in compliance with all Applicable Law (the "*Standard of Care*"). Service Provider will allocate adequate time, personnel and resources to each Project to perform the Services as and when required, and will ensure that all documents bear the seal of the licensed professional who prepared them. With respect to each Project and in satisfaction of the foregoing, Service Provider shall:

1.1.1 Inspect the site where services are to be performed and satisfy itself regarding all general and local conditions that may affect the cost of Service Provider’s performance, to the extent that the information is reasonably obtainable.

1.1.2 Coordinate the Services with services related to the Project provided by Owner and Owner's consultants, including the *Civil Engineer*, the individual retained by the Owner to develop detailed design layout of new capital improvements.

1.1.3 Take reasonable precautions to verify the accuracy and suitability of any drawings, plans, sketches, instructions, information, requirements, procedures, and other data supplied to Service Provider (by Owner or any other party that Service Provider uses for the Project), and promptly alert Owner in writing of any error, omission or inconsistency in services or information, whether such services are, or information is, provided by Owner or Owner's consultant(s). Service Provider shall identify to Owner in writing any such documents or data which, in Service Provider's professional opinion, are unsuitable, improper, or inaccurate in connection with the purposes for which such documents or data are furnished. Nothing shall excuse or detract from Service Provider's responsibilities or obligations hereunder in a case where such documents or data are furnished unless Service Provider advises Owner in writing that in Service Provider's professional opinion such documents or data are unsuitable, improper, or inaccurate and Owner confirms in writing that it wishes Service Provider to proceed in accordance with the documents or data as originally given.

1.1.4 Correct, at its own cost, any Services rendered by Service Provider and/or any Consultants that do not meet the Standard of Care.

1.1.5 At no cost to Owner, furnish and deliver to Owner complete printed and electronic copies of each document made or furnished by Service Provider or its consultant in connection with the Project, in formats and quantities as described in Section 2.2 below, which copies shall become the property of Owner.

1.1.6 At Owner's request, distribute additional copies of all documents for use by Service Provider and the Consultants (defined in Contract Section 2.4) to any Owner employee, agent or contractor requiring them, all at no cost to Owner.

1.2 LAND SURVEYING SERVICES.

1.2.1 Typical survey types and requirements

1.2.1.1. Land (Boundary) survey. Service Provider shall:

- a. 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.
- b. Furnish a legal description that conforms to the record title boundaries. Prior to making this survey and insofar as is possible, the Surveyor 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.
- c. Give area in square feet if less than one acre; in acres (to nearest 0.001 acre) if over one acre.
- d. Note identity, jurisdiction and width of adjoining street and highways, width and type of pavement. Identify street monuments and show distance to the nearest intersection.
- e. 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 feet and inches to nearest 0.5 inch.
- f. Show encroachments, including cornices, belt courses, etc., either way across property lines.
- g. Describe fences and walls and locate them with respect to property lines. Include identification of party walls.
- h. Upon request by Owner, provide additional detail on location of landscaping design elements and irrigation lines.
- i. Show recorded or otherwise known easements and rights-of-way and identify owners (holders).
- j. Note planned rights-of-way and the nature of each.
- k. Note planned street widenings.
- l. Show individual lot lines and lot block numbers; show street numbers of buildings if available.

- m. 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).
- n. Show building line and setback requirements, if any.
- o. Give names of owners of adjacent property.

1.2.1.2. Topographic survey. Service Provider shall:

- a. Tie all benchmarks and elevations to the current Federal Emergency Management Administration (“*FEMA*”) datum.
- b. Appropriately check lines of levels by separate check level lines or by previous running points or benchmarks.
- c. Provide a minimum of one permanent benchmark on site for each four acres and a description and elevation to the nearest 0.01 foot.
- d. Establish contours at one foot intervals; error shall not exceed one-half contour interval.
- e. Spot elevations at each intersection of a 100-foot square grid covering the property and additional spot elevations as necessary to depict any changes in elevation. Grid shall extend 100-foot minimum onto adjacent property as necessary to establish overall drainage pattern.
- f. Spot elevations at street intersections, including all PCs, PTs and midpoints of radii, and at 100 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.
- g. Plot location of structures, paving and improvements above and observed evidence of below ground structures.
- h. Provide floor elevations and elevations at each entrance of buildings on the property.
- i. Plot location and type of all pavement.
- j. For utilities, show the following information based on record information, or on surface evidence, or in accordance with documentation provided by utility companies or agencies, their representatives or Owner. Inadequate record data requiring the surveyor to employ techniques of subsurface exploration to locate utilities will be an additional service subject to Owner 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.
- k. Show location of fire hydrants available to the property and the size of the main serving each.
- l. Show location, elevation and characteristics of power, cable television, street lighting, traffic control facilities and communications systems above and below grade.

- m. Show 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 name of the operating authority, including contact person and phone number, for each utility indicated above.
- n. Show mean elevation of water in any excavation, well or nearby body of water.
- o. Plot location of flood plain and provide flood level of streams or adjacent bodies of water. Include any flood zone designation with proper annotation based on the FEMA Flood Insurance Rate Maps or the state or local equivalent and any lines of delineation between the zones by the following:
 - Scaled map location and graphic plotting
 - Based on the flood elevations, if shown on the map. If the lines of delineation based on graphic plotting and on the base flood elevations differ, this fact shall be noted on the survey.
- p. Plot extension of watershed onto the property.
- q. Plot location of test borings if ascertainable, and indicate the elevation of the tops of holes.
- r. Confirm soil boring locations if Service Provider has been provided a map indicating approximate soil boring locations.
- s. Locate trees 4-inches and over, measuring the caliper at three feet above ground, located to the center within a 6-inch tolerance, and identify species in English and botanical terms. Give caliper and ground elevation on upper slope side to the best of Service Provider's knowledge.
- t. Locate specimen trees flagged by the Owner or Architect.
- u. Provide perimeter outline only of thickly wooded areas unless otherwise directed.
- v. Describe natural features.
- w. Plot location(s) of confirmed soil contamination(s).

1.2.1.3. Other typical surveys as follows shall meet the minimum standards of the Texas Board of Professional Land Surveying ("**TBPLS**").

- Physical survey
- Land surveying with GIS mapping
- ALTA/ACSM Land Title Survey
- Foundation surveys
- As-built survey

1.2.2 Drawing Requirements.

1.2.2.1. Drawings shall note all dimensions and elevations in imperial units.

1.2.2.2. Drawing sheets shall be formatted to 30" x 42" with left binding edge and ¾ inch minimum borders.

1.2.2.3. Show North arrow and locate magnetic North directed to the top of the sheet.

1.2.2.4. Include legend of symbols and abbreviations used on the drawing(s).

1.2.2.5. Spot elevations on paving or other hard surfaces shall be to the nearest 0.01 foot; on other surfaces to the nearest 0.10 foot.

1.2.2.6. Where both are required, boundary and topographic information shall be on the same drawing unless otherwise requested by the Owner.

1.2.2.7. State elevation datum on each drawing by use of the National Vertical Geodetic Datum (NVDG) 1988 and give location of benchmark used.

1.2.2.8. The Surveyor shall sign and seal each drawing and shall state that to the best of the Surveyor's knowledge, information and belief, all information thereon is true and accurately shown.

1.2.3 Reports.

1.2.3.1. Upon request of Owner, Service Provider shall submit to UH Project Representative and the Civil Engineer a preliminary report at the 75% stage of development for review and comment.

1.2.3.2. At conclusion of the Services, Service Provider shall submit to Owner a final survey report meeting or exceeding the requirements of the TBPLS Professional and Technical Standards (Texas Administrative Code, Title 22, Part 29, Chapter 663, Subchapter B, Professional And Technical Standards) and the Texas Society of Professional Surveyors *Manual of Practice*; and complying with Owner's survey report formatting and electronic base survey integration requirements.

1.3 SCHEDULE OF SERVICES. Service Provider shall prepare and submit to Owner as part of each Project Proposal a performance schedule that shows the order in which Service Provider proposes to carry out the Services (the "**Schedule**"). Once approved by Owner and incorporated as part of a Project Agreement, time limits established by the Schedule shall not be exceeded by Service Provider or Owner, except for reasonable cause; provided, however, reasonably foreseeable occurrences, such as typical adverse weather conditions, vacation time, and standard attrition, shall not constitute reasonable cause for purposes of extending time limits established by the Schedule. If Service Provider determines that the Schedule should be adjusted at any point prior to commencement of a Project, then Service Provider shall submit to Owner a revised Schedule and an explanation of the change(s) and the reason(s) for the change(s) for

Owner's written approval. If approved in writing by Owner, the revised Schedule shall replace the prior Schedule for all purposes under this Agreement for such Project.

ARTICLE 2 – DOCUMENTS

2.1 DOCUMENT FORMAT.

2.1.1 Each report must be submitted in hard and electronic versions as follows:

2.1.1.1. two (2) bound reports printed on 8.5” x 11” paper, and

2.1.1.2. one (1) copy of each report stored on a flash drive or in searchable PDF format (maximum 15MB in size)

2.1.2 Each survey map must be submitted in hard and electronic versions as follows:

1.2.2.1. two (2) maps plotted at convenient scale

1.2.2.2. one (1) copy of each map stored on a flash drive in searchable PDF format (maximum 15MB in size) and in CAD format pursuant to Owner’s Design Guidelines.

2.2 USE OF DOCUMENTS. Field records, survey narratives, and survey plats and descriptions are deemed to be instruments of service and Service Provider shall retain ownership to such documents subject to the provisions of this Section 2.2.

2.2.1 Ownership. Upon Owner's final payment for Services performed by Service Provider with respect to a Project, the report documents for such Project shall become the property of Owner to the extent allowed by Applicable Law. Additionally, Service Provider shall furnish Owner copies of all research data (deeds, easements, plats, etc.), control information, field notes, electronic files, utility records, photographs, and any other information required for the performance of the Services.

2.2.2 Required Disclosures. Owner’s submission or distribution of any or all of the report documents to meet official regulatory requirements or for other purposes in connection with the Project publication in derogation of Service Provider's rights, and is here specifically authorized and permitted by Service Provider.

2.2.3 Inspection by Others. In the event a federal grant or other federal financing participates in the funding of a Project, Service Provider shall permit access to and grant the right to examine its books covering its Services for such Project, comply with all federal agency requirements as to work hours, overtime compensation, nondiscrimination, contingent fees, etc., and attend meetings, prepare reports and submit data for approval, as required by the agency involved.

ARTICLE 3 – ADDITIONAL SERVICES

3.1 GENERAL. If authorized in writing by Owner, Service Provider shall provide any or all of the Services listed in Section 3.2 (the "*Additional Services*") in accordance with this Section 3.1. Prior to commencing any Additional Service, Service Provider shall submit to Owner an Additional Services Proposal. The Additional Services Proposal shall describe in detail (a) the

nature and scope of the Additional Services, (b) the basis upon which Service Provider believes such services constitute Additional Services rather than Basic Services, (c) the maximum amount of fees and Reimbursable Expenses for Service Provider's performance of the Additional Services, and (d) a proposed schedule for performance of the Additional Service. At Owner's request, Service Provider shall deliver to Owner a proposal in a form acceptable to Owner for performance of any proposed Additional Services on a fixed- price basis. Upon acceptance by Owner, each Additional Services Proposal shall become part of this Agreement and shall be subject to all terms and conditions of this Agreement, as fully and completely as though the same had been included in this Agreement as a Basic Service at the original execution of this Agreement, except that payment for any such accepted Additional Service shall be in accordance with Section 3.3.

3.2 ADDITIONAL LAND SURVEYING SERVICES.

- 3.2.1 Soil mapping in conjunction with environmental services
- 3.2.2 GIS database creation
- 3.2.3 Subsurface utility exploration
- 3.2.4 Survey mapping services/aerial surveying
- 3.2.5 Other surveying services requested by Owner not included within Section 1.2.

3.3 COMPENSATION. As compensation for any Additional Services rendered in compliance with the provisions of this ARTICLE 3, Service Provider shall receive a fee (a) equal to the DSE with multiplier per Continuing Services Agreement 5.1 for such Additional Service, or (b) fixed price agreed to by the parties prior to Service Provider's performance of such Additional Services.