

**Green Acres**  
**Scope of Work for Professional Land Surveying Services**  
**State Land Acquisition**  
**March 17, 2005**

## **1.0 GENERAL INFORMATION**

### **1.1 PURPOSE AND INTENT**

The purpose of the Green Acres Scope of Work for Professional Land Surveying Services is to standardize work prepared by various land surveying firms that are qualified by experience and personnel to provide professional land surveying services necessary for the acquisition or evaluation of properties for the Department of Environmental Protection and other agencies in participating with funding through the Green Acres Program.

### **1.2 BACKGROUND**

The New Jersey Department of Environmental Protection (NJDEP), Green Acres Program is responsible for acquiring lands for conservation and recreation purposes. Land surveys are conducted by NEW JERSEY licensed professional land surveyors, and corresponding metes and bounds descriptions are prepared for each parcel of land being acquired pursuant to the program rules using the Green Acres Guidelines for Land Surveys.

In addition other state agencies require professional land surveying services or property surveys that:

- mark the location of the parcel on the ground
- locate and map any natural and man-made physical features as may be found on the parcel
- measure the property lines and determine the area of the parcel;
- identify any conflicts with adjoining deeds, locate and dimension any encroachments affecting the parcel and show findings in detail;
- provide a plan depicting the findings of the survey;
- describe the parcel in terms of New Jersey State Plane Coordinate System (NJSPCS) to facilitate mapping the parcel in the NJDEP Geographic Information System/Land Information System (GIS/LIS)
- provide an accurate, unambiguous and modern metes and bounds description that includes the NJSPCS coordinate value of the survey's point of beginning and corresponds to the survey, written in the same bearing system as the survey. The description, with a reduced copy of the survey plan attached, will be used in the deed of conveyance;
- locate and identify easements, locatable restrictions, and rights-of-way lines affecting the parcel
- assist in the fair market value appraisal process by providing information regarding suitability of the parcel for a particular purpose or by providing notice when the size, shape, area, condition, utility, marketability and insurability or location and extent of encroachments of the parcel are factors in the acquisition process;
- resolve or explain issues that serve to eliminate patent and latent deed ambiguities as may exist in the description found in the present deed of record.

#### **1.2.1 REGIONS**

The Green Acres Program has identified six (6) regions that best support the work of the program as follows:

##### **1.2.1.1 NORTHEAST REGION**

Bergen County, Morris County, Passaic County and Somerset County.

##### **1.2.1.2 NORTHWEST REGION**

Warren County, Sussex County

##### **1.2.1.3 URBAN ACQUISITION REGION**

Essex County, Hudson County, Union County

#### **1.2.1.4 CENTRAL REGION**

Hunterdon County, Mercer County, Middlesex County, Monmouth County.

#### **1.2.1.5 SOUTH CENTRAL REGION**

Atlantic County, Burlington County, Camden County, Gloucester County, Ocean County

#### **1.2.1.6 SOUTHERN REGION**

Cape May County, Cumberland County, Salem County

## **2.0 DEFINITIONS**

### **2.1 STANDARD SURVEY CONTRACT DEFINITIONS**

**Addendum** – Written clarification or revision to a RFP issued by the Purchase Bureau.

**Amendment** – A change in the scope of work to be performed by the Contractor. An amendment is not effective until it is signed by the Director, Division of Purchase and Property.

**Bidder** - An individual or business entity submitting a bid proposal in response to a RFP.

**Contract** - A RFP, any addendum to a RFP, and the bidder's proposal submitted in response to a RFP, as accepted by the State.

**Contractor** - The Contractors are the successful bidders awarded contracts under a RFP, who will be required to have at least one New Jersey licensed surveyor on its staff.

**Evaluation Committee** - A committee established by the Director to review and evaluate bid proposals submitted in response to a RFP and to recommend a contract award to the Director.

**May** - Denotes that which is permissible, not mandatory.

**Project** - The undertaking or services that are the subject of a RFP.

**Request for Proposal (RFP)** – This document which establishes the bidding and contract requirements and solicits bid proposals to meet the purchase needs of the using Agencies as identified herein.

**Shall or Must** – Denotes that which is a mandatory requirement. Failure to meet a mandatory requirement will result in the rejection of a bid proposal as materially non-responsive.

**Should** - Denotes that which is recommended, not mandatory.

**State Contract Manager** – The individual responsible for the approval of all deliverables, i.e., tasks, sub-tasks or other work elements in the Scope of Work.

**Subtasks** – Detailed activities that comprise the actual performance of a task.

**State** - State of New Jersey.

**Task** – A discrete unit of work to be performed.

**Using Agency or Agency** - The entity for which the Division has issued a RFP and will enter into a contract.

### **2.2 CONTRACT SPECIFIC DEFINITIONS**

**Acquisition** – Generally used to refer to the parcel or parcels to be acquired in fee (although the term may be used loosely to refer to any interests in land, fee or easement, that may be purchased); project area. This term also refers to the act of acquiring lands by contract for sale or condemnation proceedings.

**Additions** - Additional properties (parcels, blocks, lots) to be added to a project.

**Administering Agency** – The agency who will have the overall management responsibility for the property or property interests following acquisition.

**All-inclusive Hourly Rate** - All direct and indirect costs including, but not limited to factors for: overhead, fee or profit, clerical support, travel expenses, safety equipment, materials, supplies, managerial support and all documents, forms, and reproductions thereof. Hourly rates also include portal to portal expenses. Time spent in traveling to and from the work site or employee's normal work station shall not be included in any estimates.

**Board of Proprietors** (of East and West New Jersey) - For the purpose of a RFP and resultant contract, the original owners of New Jersey from grants derived from the King of England and whose land title transfers form the basis of modern land titles in New Jersey. Note: The General Board of Proprietors of Eastern Division of New Jersey was dissolved in 1998 following the State of New Jersey, Department of Environmental Protection's acquisition of all land and record holdings of the General Board of Proprietors of Eastern Division of New Jersey on July 10, 1998 and their Surveyor General's office in Perth Amboy, NJ was conveyed to the City of Perth Amboy. The General Board of Proprietors of Western Division of New Jersey continues to operate as a corporation and is located in the City of Burlington, NJ.

**Control Survey** – A survey performed to obtain the basis of bearing system, north reference, and coordinate values for the description point of beginning for a property survey. A Control Survey may be completed using conventional surveying methods such as traversing, triangulation or trilateration, or by utilizing Global Positioning System (GPS) surveying methods. Regardless of the method utilized, all Control Surveys must meet the standards and requirements established in the contract between the Using Agency and the Contractor.

**Corner Marker Description Sheet** – A form used to identify corner markers set for a site-specific engagement. Use of this form is only required if specified at the time of request for a site-specific engagement.

**Corner Number** - The number used to identify corner markers set in the field. The Corner Number consists of the four-digit file number or owner identification number, followed by a dash, followed by a sequential number of the corner. The description point of beginning is point number one, and each corner shall be numbered in sequence thereafter in a clockwise manner.

**Cover** – See Impervious Cover Calculations.

**Deed Overlap** – The situation that exists when the deed descriptions of adjoining parcels, when laid out on the ground, both describe and include the same lands; lands claimed by adjoining parties.

**Due Date** – Relative to a site-specific engagement, this is the date that all materials specified in the contract are to be delivered in accordance with the requirements spelled out on the Detail Sheet.

**Detail Sheet** – The document transmitted with site-specific engagements that provide specific project information and requirements for the land survey. The Detail Sheet may serve to clarify or modify standard requirements for a site-specific engagement.

**Entire Taking** - The acquisition of an entire parcel as indicated by a single municipally designated tax lot.

**File #** - a sequence number that identifies the seller of the property. Same as Offer # or Owner ID#.

**Formal Date of Award** – The effective date of a site-specific engagement contract and work initiation.

**Geographic Information System/Land Information System (GIS/LIS)** – For the purpose of a RFP and contract, the system within NJDEP or other New Jersey state agencies consisting of computer hardware, software and resources that integrates a wide variety of data and explores interrelationships between different types of complex information compiled in geographic and associated tabular databases.

**Green Acres Administration or Green Acres Program** – The division within the NJDEP that provides funding to non-profit groups, or municipal and county governments to acquire land for recreation or open space and serves as the real estate agent for the DEP, acquiring land for state parks, forests, natural areas, and wildlife management areas.

**Green Acres Participation Limit Lines** - Survey lines defined by metes and bounds within the surveyed deed lines that identify the limits of covenants and restrictions pursuant to Green Acres rules. Defined buffer lines for areas that are not encumbered by Green Acres restrictions.

**Green Acres Survey** - A property survey of land conducted for the purpose of open space acquisition in cooperation with the State of New Jersey, Department of Environmental Protection, Green Acres Program. A Green Acres Survey follows specific guidelines and specifications promulgated by the Green Acres Program that define the scope of work, desired format, research requirements, field methodology and the presentation of findings on the plan of survey and in the corresponding metes and bounds description of property and other deliverables. A Green Acres Survey is performed in accordance with Green Acres Guidelines (as per Section 3.5 of this document).

**Green Acres Encumbrance Area** - The net area for which funding has been expended for the acquisition or development of land, pursuant to Green Acres rules and regulations. The area subject to restrictive covenants within the NJDEP Green Acres Program.

**Green Acres Partners** – The parties entering a tenancy in common for the common preservation of a parcel of land. The percentage of undivided interest for each Green Acres Partner, generally stated to two decimal places, may be used to derive the acreage of partner participation for each funding source that contributed to the acquisition.

**Impervious Cover Calculations** – Generally, the sum and total calculation in square feet for any macadam or concrete roads, parking areas, walkways or driveways; structures or buildings (calculated to drip lines of buildings) or any permanent man-made obstacle that impedes the flow of rain directly into the soil below for any such object within the perimeter lines of the survey. This information is required on the plan of survey, only if requested on the Detail Sheet for a site-specific engagement. A more specific definition may accompany any request for Impervious Cover Calculations requested on the Detail Sheet.

**Interest** – Relative to the Green Acres Land Survey Guidelines, the extent and nature of the acquisition of interests in a tax lot. The extent is either E/T –(entire taking) or P/T –(partial taking), and the nature of the acquisition is Fee –(fee simple absolute), CE –(conservation easement or restriction without public access), PE (permanent easement of conservation with public access), or AG –(conservation restriction specific to agricultural). e.g. E/T Fee; P/T Fee; E/T CE; P/T CE; etc.

**Mathematical Survey Expressions** – Units of measurement to define lines of survey. Angular units shall be stated as bearings in degrees, minutes, and whole seconds of arc. Horizontal distances, radii of curves, or lengths of arc shall be stated in US survey feet to two decimal places. All curves shall be defined by radius, arc length, delta, chord bearing, and chord distance.

**NJDEP** – New Jersey Department of Environmental Protection

**New Jersey State Plane Coordinate System (NJSPCS)** – North American Datum 1983 83. For surveys prepared pursuant to a RFP and contract, coordinate values (Northing or Y values and Easting or X values) for the description point of beginning shall be provided in US Survey feet, rounded to two decimal places after application of the grid

factor. All bearings are provided in degrees, minutes, and rounded to whole seconds of arc. Distances are to be stated for horizontal ground distance with no grid factor applied in US Survey feet, stated to two decimal places.

**Notification of Engagement** - Written authorization for the designated bidders to commence the site-specific engagement.

**Offer #** - A sequence number that identifies the seller of the property. Same as Owner# or File#.

**Owner ID #** - A sequence number that identifies the seller of the property. Same as Offer# or File#.

**Partial Taking** - The acquisition of a part of a municipally designated lot where the remaining portion of the lot is of the same ownership as the portion to be acquired.

**Project Manager** – Responsible party within the Using Agency who is responsible for coordinating the acquisition of the project between the using agency and the seller.

**Purchase Order** - A Purchase Bureau document formalizing a purchase transaction with a Contractor. The result of a contract award, it is a contract between the Contractor and the State of New Jersey.

**Project Area** - One or more tax lots being surveyed simultaneously or as part of the same site-specific engagement.

**Quotation** - based upon the price lists in the contract, the contractor's cost to perform the work required in the Site Specific Engagement request for proposal.

**Revision** - A change made in the scope of acquisition, either in the area of an individual parcel or the interest to be acquired, i.e., fee or easement.

**Site-Specific Engagement** – (a) The body of work performed after notification of engagement has been sent by the State to a Contractor on a specific site, pursuant to the terms and conditions of this contract, including performance in accordance with Green Acres Guidelines if applicable); (b) a land survey contract for a particular project area and the detail sheet.

**State Surveyor** – A Contractor employed by the New Jersey Department of Environmental Protection or other Using Agencies who is responsible for the technical aspects of the land survey contract and land survey document review for the Green Acres Program or other Using Agencies.

**State's Project Manager** - The individual assigned by the State to be responsible for coordinating the activities of the Contractors.

**Survey Contract Manager** – Responsible party within the Using Agency who is responsible for the administration of the land survey contract. The Green Acres Survey Contract Manager solicits the request for quotation on site-specific engagements, receives all contract deliverables, and processes vouchers for final payment.

**Sweep Survey** – (a) In the context of land surveys and title in New Jersey, a survey of lands previously held by the Board of Proprietors of Eastern New Jersey or the Board of Proprietors of Western New Jersey for the purpose of including any “vacancies” or unconveyed parcels that may exist between survey returns or prior conveyances from the Boards of Proprietors. (b) A similar process applied by the Using Agency when the survey on the ground indicates that more land exists than may be described within the deed of record for the parcel being surveyed.

**Survey Update** - A report or survey reflecting the current physical status of the property, showing alterations caused by the passage of time since the original survey. Updates shall include but not be limited to physical changes in fences, tree rows, hedges, streams, ditches or buildings which influence property line determination, property value, or tax lot designations.

**Vacancy** – In the context of land surveys and title in New Jersey, the sliver of land that exists between “survey returns”, or conveyances, made by The Board of Proprietors of Eastern New Jersey or The Board of Proprietors of Western New Jersey such that, having never been conveyed, is still owned by the respective Board of Proprietors.

### 3.0 SCOPE OF WORK

Scope of Work for Professional Land Surveying Services

#### 3.1 REFERENCE TO LAWS

All survey work will be performed in accordance with New Jersey laws, court rulings and administrative codes pertaining to land surveying: NJSA 45:8 et seq., NJAC 13:40-1.1 et seq., the Map Filing Law, NJSA 46:23-9.9, and other laws pertaining to this professional activity. State Government is exempted from certain statutory laws and administrative rules. The Contractor shall be required to obtain and maintain, during the term of this contract, all licenses, permits, certifications, authorizations, or any documents required by federal authorities, State authorities, county and municipal governments, whenever necessary, to perform this contract.

#### 3.2 REFERENCE TO SPECIFICATIONS

All requirements of accuracy for conventional or Global Positioning System (GPS) surveying shall meet or exceed a positional accuracy defined as the federal classification for Third Order, Class I accuracy as stated in "**Standards and Specifications for Geodetic Control Networks**", Federal Geodetic Control Committee (FGCC) September 1984 downloadable from the publication section of the Wisconsin State Cartographer's Office:  
[http://www.geography.wisc.edu/sco/surveying/data\\_access.php](http://www.geography.wisc.edu/sco/surveying/data_access.php)

#### 3.3 BASIS OF BEARINGS

The basis of bearings for all surveys performed under this contract will be the New Jersey Plane Coordinate System NAD 1983, unless the Site-Specific Engagement or Notification of Engagement award specifies an alternate bearing system. NAD 1927 Datum may be projected/converted to NAD 1983 Datum using the Federal CORPCON software, or its substantial equivalent, to make this conversion. **The grid factor shall be applied to the Northing and Easting values in US Survey Feet of the parcel's description point of beginning, but not to horizontal survey distances in US Survey Feet.** The north arrow shown on the plan must indicate the Bearing Base or reference north.

#### 3.4 TYPES OF SURVEY ACTIVITIES THAT MAY BE REQUIRED BY THIS CONTRACT:

##### 3.4.1 CONTROL SURVEYS – NEW JERSEY STATE PLANE COORDINATE SYSTEM NAD 83

The Using Agency shall provide specific guidelines and specifications to the Contractor for any control/GPS surveys that may be requested, independent of property survey work in a Site-Specific Engagement.

Relative to property surveys, Control Survey work is required to obtain the basis of the bearing system or north reference. **The description point of beginning shall also include NJSPCS Grid coordinate values stated in US Survey feet, stated to two decimal places. All property surveys shall be described in this modified NJSPCS NAD 83 bearing system with all ground distances in US Survey feet stated to two decimal places.**

Published State and federal control monument location and control data are the preferred starting data for Control Surveys, and can be obtained from the New Jersey Department of Transportation, Geodetic Survey division. Prior land survey work prepared for NJDEP may also be used for starting data; however the Contractor's surveyor will be obligated to verify that bearing base and coordinate values are correct whenever published information is not used as the source and basis of the NJSPCS NAD 83 coordinate system. The data used and other requirements may be specifically waived or modified by the Using Agency.

In all cases, the graphic north arrow on the plan must identify the bearing system and, when applicable, NJSPCS NAD 83 and adjustment basis. Additionally the plan must contain a factual note that explains how the bearing system for the Project Area was established and identifies the state or federal control stations used. If an alternate system is specified by the Using Agency, the filed map number or recording information of the deed used must be stated in a note and labeled on the north arrow.

All requirements for positional accuracy shall meet or exceed the former Federal Standard for Third Order, Class I accuracy whether conventional surveying methods including traversing, triangulation or trilateration or modern surveying methods of using Global Positioning System GPS are used.

### **3.4.2 PROPERTY SURVEYS**

Control Survey work is also required to obtain the basis of bearings or north reference and beginning coordinate values, which shall be NJSPCS NAD 83 for all property surveys, unless specifically waived or modified by the Using Agency at the time a site-specific engagement is requested.

All property lines of the surveyed parcel must form closed polygons: all sides must be defined by mathematical survey expressions with angular units being degrees, minutes, and whole seconds of arc. **Horizontal distances, vertical elevations, radii of curves, lengths of arc, and New Jersey Plane Coordinate values of Northing and Easting shall be stated in horizontal ground US Survey feet stated to two decimal places.**

All requirements of accuracy and standards, whether conventional surveying methods of traversing, triangulation, trilateration, or Global Positioning System (GPS) methods are used, shall provide similar positional accuracy that would meet or exceed the former Federal Standard for Third Order, Class I accuracy.

Unless otherwise directed by the Using Agency in any Site-Specific Engagement, a separate plan of survey and description of property shall be prepared for each tax lot or group of contiguous tax lots in common ownership. Lots that are in common ownership but are not contiguous may be grouped onto a single plan only if detail and clarity of information is not sacrificed when the scale of the plan is reduced.

The Contractor shall, on behalf of the Using Agency, file each plan of survey that has been prepared in accordance with Green Acres Guidelines for open space or recreational use of property with the county recording officer in accordance with specific portions of the New Jersey Map Filing Law, unless otherwise directed by the Using Agency in any Site-Specific Engagement. Such plans shall be presented for filing within 30 days of notification of closing by the Using Agency.

A metes and bounds description of the property surveyed is required for every property survey conducted, unless specifically waived or modified by the Using Agency at the time a Site-Specific Engagement is requested. The description shall be a separate document apart from the plan of survey and shall be prepared on company letterhead that includes the survey contract vendor's name, street and mailing addresses, telephone and fax numbers, company Email address, and company webpage (if any), and shall be signed, sealed and dated by the surveyor responsible for the survey. Each description shall have attached a reduced copy (8-1/2" by 11") of the survey plan from which it was written.

### **3.4.3 TOPOGRAPHIC SURVEYS**

When topographic surveys are specifically requested as part of any Site-Specific Engagement, the topographic surveys, as a minimum, will be performed using conventional or GPS leveling methods that shall provide similar positional accuracy that would meet or exceed the former Federal Standard for Third Order, Class I accuracy for published NGVD 1988. The contour interval shown on any plans shall be ten (10) feet unless the Site-Specific Engagement specifies an alternate interval. Unstable spot elevations on ground positions must be stated in feet to one decimal place (0.1'), and stable positions such as on monuments or concrete must be stated in feet to two decimal places (0.01'), unless the specifications and guidelines being furnished with the detail sheet for a Site-Specific Engagement request specifies an alternative increment.

### **3.4.4 FRESHWATER WETLANDS SURVEY SERVICES**

When work involving wetlands is specifically requested, it shall be one of two types identified at the time that price quotes are solicited for a Site-Specific Engagement: SHOW WETLANDS or DELINEATE WETLANDS.

#### **3.4.4.1 SHOW FRESHWATER WETLANDS**

Site-Specific Engagements requesting that the wetlands be shown on the final plan of survey requires that the Contractor obtain copies of the appropriate New Jersey Freshwater Wetlands map for the area from the office of the county recorder or clerk. The upland limit line for those areas coded "01" on the Wetlands map must be reproduced, and an approximate estimate of wetlands area in acres on the plan must be derived to one decimal place (0.1 acre).

The upland limit lines may be digitized or mechanically reproduced. The areas may be derived from the digitizing process or by planimeter, provided that the duplicated line is within 0.5 percent accuracy of the depiction of that upland limit line on the original source material. The mapped or digital source of upland limit line information must be provided (title of data or map, date, preparer, etc.).

#### **3.4.4.2 FRESHWATER WETLANDS DELINEATION SURVEY**

Site-Specific Engagements requesting that the wetlands be surveyed delineated or field investigated require that the Contractor engage an environmentalist, on file with NJDEP as proficient in New Jersey freshwater wetlands investigations. The environmentalist shall delineate the wetland areas in the field in accordance with adopted wetlands criteria in New Jersey. The Contractor shall field-locate each marked position, add the wetlands areas to the survey plan, provide areas in acres to two decimal places (0.01 acre), and label the wetlands area on the survey. Additionally, the wetlands buffer areas of 50 feet, 100 feet, or 150 feet as indicated by the environmentalist must be shown on the survey, with buffer areas calculated to two decimal places (0.01 acre).

The survey plan shall contain a Wetlands Delineation Information block that includes the environmental firm's name, street and mailing addresses, telephone and fax numbers, and company Email address. The Wetlands Delineation Information block shall be signed and signed by the individual environmentalist responsible for the delineation. The date of the delineation and for whom it was prepared must appear in the Wetlands Delineation block on the survey. The environmentalist shall provide an original signature in the Wetlands Delineation Information block on the original survey plan and on each paper copy or print made. Other specifications and guidelines, if any are needed, shall be furnished at the time wetlands delineation is requested as part of a Site-Specific Engagement.

**SEE Exhibit #1 WETLANDS DELINEATION INFORMATION**

### **3.4.5 GEOGRAPHIC INFORMATION SYSTEM/LAND INFORMATION SYSTEM (GIS/LIS) SURVEY COVERAGE DATA DEVELOPMENT**

When GIS/LIS Survey coverage data development is requested by the Using Agency, the Contractor is required to prepare a single layer digital drawing of the surveyed parcel property lines and any interior lot lines of the surveyed property from land survey plans, deed descriptions, or maps provided by the Using Agency. The file must be created at its true New Jersey Plane Coordinates NAD 1983 position and the view must be un-rotated so that the NJPCS north points orthographically vertical in the screen. The polygon shall be created from the coordinate geometry of its survey point of beginning through the final course of survey and terminus point using deeds or surveys or digitized from mapping supplied.

The file is to be named using the four-digit owner Offer or File number or the first eight letters of the property owner's last name, unless multiple files are combined in a project area. If this is the case, the first eight letters of the project name shall be used. The file must be devoid of text annotation, color, symbol, or special text codes, and in a single layer. The data must be converted to a .dxf format and submitted on 3.5- inch high-density diskette or CDR media. Additional specifications and guidelines for a specific data collection activity may be furnished at the time that price quotes are solicited for a Site-Specific Engagement.

### **3.4.6 OTHER SURVEYS**

When other types of surveys such as ALTA or other professional surveying or geographic/land information system services are requested, specifications and guidelines will be furnished at the time that price quotes are solicited for a Site-Specific Engagement.

### **3.5 GREEN ACRES GUIDELINES FOR LAND SURVEYS**

#### **3.5.1 GENERAL REQUIREMENTS FOR ALL WORK**

##### **3.5.1.1 RESPONSIBILITY FOR WORK**

The Contractor shall be the primary point of contact for this contract. The Contractor shall be responsible for obtaining all deeds, records, maps, measurements, and evidence to conduct a correct and accurate land survey and for providing all deliverables according to the contract. The Contractor shall insure that the plan of survey and corresponding Description of Property shall be prepared and presented in the format as specified, attested to by the New Jersey Licensed Land Surveyor's embossed seal and original signature. The Contractor is responsible for checking all work and insuring that the deliverables are forwarded in the format specified in the Deliverables section of the contract to the Using Agency within the time period specified in the engagement award.

##### **3.5.1.2 SUPERVISION**

The Contractor is responsible for coordinating the research and supervising the field work and document preparation associated with the land survey. Evidence of personal supervision is signified by the original signature and raised seal of the Land Surveyor on each land survey document submitted, except as may be provided in these guidelines. It is for this reason that rubber stamps or digital signatures of the Land Surveyor are not acceptable.

##### **3.5.1.3 RESEARCH**

The Contractor is responsible for coordinating the research necessary to obtaining sufficient documentation and evidence to render a survey plan that is correct as well as accurate to the stated specifications and standards. For Site-Specific Engagement bidding purposes, the Contractor shall be prepared to conduct all the research required to complete the work by the due date. Land survey plans for adjoining state owned property may be obtained from the administering division or from the original survey firm that prepared the work for the NJDEP.

##### **3.5.1.4 FIELD PROCEDURES AND CREW RESPONSIBILITIES**

The Contractor shall be responsible for the work of all survey crews operating from the firm. The survey crew shall endeavor to cause as little inconvenience as possible to property owners when conducting the field survey.

Whenever possible, random traverse lines shall be run within the property being surveyed rather than upon the lands of an adjoiner. If traverse lines are run upon the lands of an adjoiner, no clearing of lines shall be conducted without the prior written consent of the party whose name appears as the property owner on the tax rolls of that municipality. Painting and flagging evidence shall be kept to a minimum, and permanent paint shall not be used on lands of the adjoiner without prior written consent of that landowner. Littering or damaging any property may subject the offending contractor to possible civil action.

Large trees shall not be cut to clear line without the prior consent of the Using Agency. Brushing-out of lines on adjoining land shall be kept to a minimum and is only permitted with the prior written consent of the owner. Brushing-out of lines on future State property shall be kept to a minimum. The Contractor is responsible for compliance with regulations, including procuring permits with regard to disturbance of wetland vegetation. Copies of the written consent documents, if any, must be forwarded to the Using Agency with the final deliverables.

##### **3.5.1.5 COST ESTIMATING**

The Contractor shall be responsible for preparing accurate proposals to cover all projected costs associated with the completion of work in accordance with the contract and the Site-Specific Engagement request to the satisfaction of the Using Agency. Failure on the part of the Contractor to adequately forecast costs will not be accepted as a justification for payment beyond the original cost proposal.

##### **3.5.1.6 NOTIFICATION OF PARTIES AND SURVEYORS' RIGHT OF ENTRY**

The Contractor shall prepare and send fax and written notices as prescribed herein that their firm has been awarded a contract to conduct a land survey of the property and the scheduled period of time that survey crews are scheduled to be present on the property.

#### **3.5.1.6.1 AGENCY FAX NOTIFICATION**

Prior to starting any field work, the Contractor must notify the Administering Agency BY FAX that the survey firm has been engaged to perform property survey work on the site identified by the notice and the dates that field crews will be present. The notification is to be made using the sample division notification and sent by facsimile transmission (fax) to the appropriate Using Agency representative. The paper copy of the fax letter is to be forwarded to the using agency as a deliverable with all other notifications.

**SEE Exhibit 2 – AGENCY FAX NOTIFICATION**

#### **3.5.1.6.2 PROPERTY OWNER, ADJOINERS AND POLICE NOTIFICATION**

The Contractor must send written notice to the property owner (or designated representative), and any adjacent property owners upon whose land it may be necessary to enter to complete the survey. The notice shall be reproduced as prescribed on company letterhead with a copy being sent to the police department of the municipality where the job is located and to the Using Agency as a deliverable.

**SEE Exhibit 3 –NOTIFICATION OF ENTRY LETTER**

#### **3.5.1.6.3 OTHER NOTIFICATIONS**

It shall be the responsibility of the Contractor to determine if other notifications shall be necessary. Copies of any notices shall be provided to the Using Agency as confirmation with all other survey deliverables.

When digging will be necessary, the Underground Facility Protection Act, NJSA 2C:17-5, requires a phone call to 1-800-272-1000 three (3) business days prior to digging to request that underground utilities be marked out on site.

If it becomes necessary to enter the property without the permission of the owner, there are three (3) statutory provisions allowing entry:

- 1) The Surveyor's Trespass Law, NJSA 45:8-44.1, to go on, over and upon lands of others during reasonable hours to make a land survey;
- 2) As an agent of the Commissioner of the Department of Environmental Protection, pursuant to NJSA 13:8A-16, land surveyors may enter on any lands for the purpose of making surveys and/or other inspections;
- 3) Pursuant to the provisions of Preliminary Entry of the Eminent Domain Statute, NJSA 20:3-16, agent surveyors of a prospective condemner may enter lands during reasonable business hours to make a land survey.

Each statute requires that written notice must be sent via the United States Postal Service as Certified Mail, Return Receipt Requested. Such notice, if required, shall be sent prior to entry and the notice shall be reproduced on the letterhead of the survey firm, substantially in accordance with sample Notification of Entry Letter.

**SEE Exhibit 3 –NOTIFICATION OF ENTRY LETTER**

### **3.5.2 GENERAL LAND SURVEY REQUIREMENTS AND ACQUISITION CONCEPTS**

#### **3.5.2.1 GREEN ACRES GUIDELINES FOR LAND SURVEYS**

The plan of survey must provide all of the information required for the acquisition of land in fee or easement with funding provided under the Green Acres Program and not just the minimum standards for land surveyors defined by the State Board at N.J.A.C. 13:5.1 et seq.

#### **3.5.2.2 SURVEY REPORT**

The plan of survey is the survey report. The Contractor is responsible for preparing a plan of survey that serves to identify the results of the land survey and provides the basis for the preparation of a separate legal metes and bounds

type description of property which shall not in any way be construed as modifying the apparent intention of the parties. Most special boundary or title situations found in the course of research or used as the basis of the survey may be explained in factual notes that are included on the plan of survey. Some special situations discovered in the course of conducting the survey may necessitate preparation of a separate factual letter for clarification.

If specified by the Using Agency in a Site-Specific Engagement, the Contractor shall prepare a separate Corner Marker Description Sheet for each property corner marker that has been set under the Notification of Engagement. The sheet shall include the Corner Number, physical description of mark set, project information, seller information, location of mark, and information regarding the firm or individual surveyor that set the marker. The sheet shall also include a cap detail, a sketch showing proximity to field witness marks and a photograph of the mark that views the south side of the marker, looking northward. The Corner Marker Description Sheet shall be in a form specified by the Using Agency.

### **3.5.2.3 NEW JERSEY MAP FILING LAW**

Surveys prepared for the acquisition of land in fee or easement with funding provided under the Green Acres Program shall be presented to the county recording officer for filing on behalf of the Using Agency by the Contractor within thirty (30) days of notification by Using Agency that the property has been acquired. Since all surveying, mapping, and certification requirements of the Green Acres Guidelines for Land Surveys are substantially in accordance with the New Jersey Map Filing Law NJS 46:23-9.9), only the surveyor's certification and certification by the municipal clerk relative to planning board or zoning board views or approvals shall be required pursuant to the New Jersey Map Filing Law, unless this requirement is waived or modified by the Using Agency.

### **3.5.2.4 DEGREE OF CARE**

Special care shall be taken to insure accuracy, consistency, and clarity in all documents being prepared, since Green Acres participation and resultant restrictions insures that lands are retired from development pressure and the land survey plan and corresponding metes and bounds description will likely be the last ones prepared or recorded for that parcel. The liability for this work extends indefinitely, because the Surveyor's Statute of Limitations does not apply to survey work prepared for governmental agencies.

### **3.5.2.5 MUNICIPAL TAX LOTS**

The Detail Sheet supplied with the Site-Specific Engagement will indicate the municipal tax block and lots to be surveyed. A copy from a tax map indicating the area and lots to be surveyed may also be supplied. From this information, the surveyor is required to obtain recorded deeds and other evidence to conduct the survey. The Contractor shall maintain the integrity of the municipal tax lots. Internal lot lines and individual areas per lot shall be stated on the plan, and individual lot area shall be restated in the metes and bounds description. If the Site-Specific Engagement dictates the acquisition of a portion of a tax lot, no attempt shall be made by the Contractor to assign new lot numbers to remaining lands, unless this provision is modified by the Using Agency.

### **3.5.2.6 SURVEY TO FOLLOW DEED LINES**

The lines of the survey are to run with the lines indicated in the deeds of the chain of title for the subject property. Survey lines for lots created by a filed map extend to centerlines of paper streets. When no metes and bounds deed description for the subject property exists, the survey may be conducted from adjoining deed information and the plan must be annotated, "SURVEYED AS IN POSSESSION FROM ADJOINING RECORD DEEDS". The entire lot shall be surveyed and described by metes and bounds.

Any lands to remain with the grantor shall become an exception to the description of the entire lot. The total area as surveyed is then also subject to other existing conditions, such as paramount public rights in road rights-of-way, public rights in rivers or claims of the State of New Jersey in tidelands as shown on public claims maps, or private access or utility easements found in the course of preparing the survey.

### **3.5.2.7 PUBLIC ROAD RIGHTS-OF-WAY AND RIVERS**

The principles of dedication of land for road purposes shall be considered by the Contractor. The survey lines and corresponding metes and bounds description are to run with the lines of the deed description as written in the record unless the site-specific engagement request directs some other course of action. If the fee title extends to the center of a public road or river, the survey lines shall run to the center of the public road or river.

The property will be acquired in fee, **SUBJECT TO THE PARAMOUNT RIGHTS OF THE PUBLIC**, with the area(s) of those public rights stated. For areas of easement to be obtained, the area of easement shall not extend into public road rights-of-way, but shall extend into the river or watercourse. The survey must also provide the bearings and distances of the road right-of-way sidelines, as well as the area within the public right-of-way. If there has been no dedication information found or the tax map (which is a document of last resort) does not define the width for the sidelines of the right-of-way, the area of the right-of-way is defined as the area of the paved or traveled portion of the road bed. The survey must indicate recording information for maps, deed book number and page number, or other pertinent information regarding the dedication of public ways. The area in a public road right-of-way or a navigable river is subject to the paramount rights of the public and also possible private rights. The area of each shall be stated on both the plan and in the description, and is deducted from any net area stated for the lot.

### **3.5.2.8 PRIVATE RIGHTS-OF-WAY AND EASEMENTS**

Private rights-of-way and easements for roads crossing the parcel being surveyed must also be shown with record or physical width provided. If record information exists regarding the creation and dimensions of private rights in the project area, that information is to be provided. Only if no record data as to location and width exists shall the physical location and width of the use by any individual or entity other than the record owner suffice. The survey must indicate recording information for maps, deed book and page number, or other pertinent information regarding the creation of the private easements. Calculation of the area of private easements is not required on the plan or in the description. The new metes and bound description may generally refer to the easement rights in a qualifying clause, i.e. **SUBJECT TO**, without actually describing, the easement by metes and bounds.

### **3.5.2.9 DEED CONFLICTS**

The Contractor is responsible for obtaining all records, measurements and evidence to prepare a correct and accurate land survey, and shall present information on the plan of survey to show how the record condition now exists or fits on the ground. As a result of this research, the Contractor may uncover areas of title uncertainty such as a gore area between deeds, deed overlaps, or other areas of ambiguity. To demonstrate that adjoining records have been examined, the plan of survey must indicate information for all adjoining, including the name of the record owner, the municipal tax block and lot, and the deed book and page number for adjoining parcels. The Contractor may be able to render a professional opinion as to how a deed problem was created. Conflicts with adjoining deeds that are not resolved in the process of boundary analysis by the Contractor must be shown as deed overlaps or deed gores on the plan of survey. Descriptions prepared by the Contractor may enable the Using Agency to correct the records and clear title to land.

#### **3.5.2.9.1 RECORD GORE AREAS**

A gore between adjoining deeds may be the result of a true **VACANCY** dating back to a conveyance out of the Board of Proprietors of Eastern or Western Divisions of New Jersey. Deed gores are to be defined by bearings, distances, and area, both on the survey plan and in a separate metes and bounds description, with references to tax lot and block numbers. A separate metes and bounds description of the gore area with appropriate copies shall be prepared in every case to provide the Using Agency the opportunity to obtain a quit claim deed to the gore area from the Board of Proprietors or the sellers and the adjoining as appropriate. The gore area shall be drawn on all survey plans of lots being surveyed. This description shall agree with the results of the survey plan to which it refers in every particular, and for that reason, the description must not include any information that does not appear either graphically or in a factual note on the survey plan. A reduced copy of the survey plan (8-1/2" by 11") must also be attached to each copy of the description.

#### **3.5.2.9.2 RECORD OVERLAP AREAS**

Areas of deed description overlaps are to be defined by mathematical survey expressions and area, both on the survey plan and following a qualifying clause in the metes and bounds description of the property, with references to

tax lot and block numbers stated. The overlap area shall be drawn on all adjoining survey plans of lots being surveyed. The overall metes and bounds description of a property shall agree with the results of the survey plan to which it refers in every particular, and the overlap area shall be described by metes and bounds following a qualifying clause (i.e. SUBJECT TO AN OVERLAP...). The area of overlap shall also be stated for each Tax Block and lot, so that the net area of each surveyed lot is known and stated both on the plan and in the corresponding metes and bounds description. The description must not include any information that does not appear either graphically or in a factual note on the survey plan. A reduced copy of the survey plan (8-1/2" by 11") must also be attached to each copy of the description.

### **3.5.2.10 CORNER MARKING AND LINE MARKING**

Pursuant to rules of the New Jersey State Board of Professional Engineers and Land Surveyors, the Contractor is responsible for determining the Ultimate User (Purchaser(s)) of the survey, the survey plan, and the corresponding description. The Ultimate User shall be considered to be the Using Agency and the State of New Jersey. To clearly define where corner markers must be set and where they may be omitted, the following sub-sections shall apply.

#### **3.5.2.10.1 SETTING CORNER MARKERS**

Corner markers shall be set at the perimeter limits of a fee simple project area where the property being surveyed adjoins private lands not owned in fee by the Using Agency or not being acquired in fee as a part of the same project. Corner markers shall also be set at the perimeter limits of all public access easement corridors except where the public access easement corridor adjoins lands owned in fee by the Using Agency or is being acquired in fee as a part of the project. Corner markers shall also be set at the perimeter limits of all conservation easements. Corner markers shall be set at the intersection of a public road right-of-way line with a perimeter limit line of the project. These provisions shall apply to both fee acquisition and easement area acquisitions. Internal lines within a lot marking a public access easement corridor limit shall be marked under the same guidelines as a fee acquisition. Corners of exception areas shall also be marked. Corner markers for such residential exception areas that fall in a tilled field shall, in addition to having a surface marker set, have a detectable subsurface marker set not less than 1.5 feet below the surface. The requirement to mark corners may be clarified or modified by the Using Agency in a Site-Specific Engagement.

#### **3.5.2.10.2 OMITTING MARKERS**

Corner markers shall be omitted where the corners are within the right-of-way or along the right-of-way line of a public road (except at the intersection of the right-of-way line with a perimeter limit line of the project, common with a private adjoiner). Corner markers may also be omitted where such corners are common with other lands owned by the Using Agency, the corners are within the project area limits (i.e. internal tax lot corners), the corners are common with other lands being acquired as part of the overall project area being surveyed, or where the corners fall within a waterway, water impoundment, or vertical escarpment, unless, in the professional judgment of the Contractor, the corners should be set. Corner markers that are omitted must be identified on the plan as omitted by contractual agreement using the language required by the State Board of Professional Engineers and Land Surveyors. (See NJAC 13:40-5.1/d)

#### **3.5.2.10.3 FOUND MARKERS**

In instances where a corner marker would otherwise be set but during the course of conducting the survey, a corner marker is found in the field to be within a radius of 1.5 feet of the true corner as calculated by the Contractor, such corner shall be considered as marked. No new corner marker shall be set, except if this corner is the only alternative for use as the description point of beginning. The plan of survey shall clearly indicate the relationship of the found marker to the true calculated corner per the Contractor's calculations. Such relationship shall be shown graphically on the plan by north or south and east or west offset distances from the true corner and in a corner detail, if necessary for clarification. Provide the size, type and description of the marker, including cap color and identity. If a marker is found on a corner for which a monument is specified to be set, the Contractor may set the monument as a line marker, set the monument on an alternate corner, or reduce the fee for the Site-Specific Engagement if no new monument is set.

#### **3.5.2.10.4 OFFSET MARKERS**

At the time of the survey, any marker that cannot be set because the location of the corner is inaccessible must be set on an offset. The marker must be set on the property line as near to the corner as is practical.

The disk or cap shall be stamped OFFSET and the actual distance in US Survey Feet to the corner shall be clearly indicated on the plan, stated to two decimal places.

### **3.5.2.10.5 PUBLIC ACCESS CORNER MARKERS**

Corner markers shall be set to physically identify the location of all public access trail corridors whether such corridors are being acquired in fee or by easement interest, unless this requirement is specifically waived or modified by the Using Agency in the Site-Specific Engagement. All such corridors shall be marked on both sidelines at each angle point and where the corridor sidelines intersect a public road right-of-way or the subject property boundary.

### **3.5.2.10.6 THREE MONUMENT MINIMUM**

To maintain the coordinate system for potential future surveys or re-surveys, the Contractor shall set a minimum of three new monuments for corner markers, visible from one to another if at all possible, at each grouping of contiguous parcels that constitute a project area. The NJSPCS Northing and Easting values must be stated for each of the three monuments set under this provision. It is highly preferred that one new set monument be selected as a description point of beginning for which the NJSPCS Northing and Easting values must be stated. If the corner selected to be the Description Point of Beginning was found previously marked, then a monument must be set on an alternate corner to maintain the three monument minimum requirement. If all original corner markers are found undisturbed, concrete monuments shall be set as line markers and added as accessories to those corners to fulfill the requirement for three new monuments. If original undisturbed corner markers are found within 1.5 feet of the record location, the corner is considered marked by a monument pursuant to the Map Filing Law. A detail of the relation of the found mark to the calculated corner must be provided. If the marker is greater than 1.5 feet from the calculated corner, an additional marker may be set at the surveyed corner. Do not replace corner markers that are found or markers considered Monuments under the "Map Filing Law."

### **3.5.2.10.7 CAP DETAIL**

To indicate the casting and stamping of each type of cap, disk, shiner, etc. actually set to mark corners, a detailed enlargement, not necessarily drawn to scale, shall be depicted on the survey plan. Each corner marker set in the field shall bear the name of the Contractor's firm and shall be stamped with the year set and the corner number.

### **3.5.2.10.8 ACCEPTABLE CORNER MARKERS**

All corner markers shall contain a standard 3-1/2 inch or 2-1/2 inch bronze or aluminum disk that bears the name of the Contractor's firm and shall be stamped with the year set and the corner number. Corner markers shall generally be set flush with the ground except in rural, unimproved areas where the top of the marker may extend not more than 0.2 foot above the ground surface. The Using Agency reserves the right to specify the cap design and marker type or to supply corner markers or monuments in a site-specific engagement RFP.

#### **3.5.2.10.8.1 DISKS**

Disks may be used for corner markers if the calculated survey corner falls on a large boulder or on poured concrete slabs, curbs, bridges, or walls. Each disk shall be a standard 3-1/2 inch or 2-1/2 inch bronze or aluminum disk set and cemented in a drill hole. The disk may be of such other materials or design approved by the Using Agency for the site-specific engagement.

#### **3.5.2.10.8.2 MONUMENTS**

All monuments set shall be one of two types: pre-cast or poured in place and set flush, but not more than 0.2 foot above the ground surface. Monuments shall be constructed of reinforced concrete, detectable with a ferrous or magnetic locator, not less than 4 inches square on top, not less than 4 inches square on the bottom, not less than 30 inches in length, and displaying a standard 3-1/2 inch or 2-1/2 inch bronze or aluminum disk. Monuments may be prefabricated of other materials or design if pre-approved by the Using Agency for the site-specific engagement.

### **3.5.2.10.8.3 SUBSURFACE MARKERS**

Corner markers for a residential exception area to an easement acquisition that fall in a tilled field shall, in addition to having a surface marker set, have a ferrous or other metal detectable subsurface marker set not less than 1.5 feet below the surface. The requirement to set subsurface markers or mark these corners may be clarified or modified by the Using Agency in a Site-Specific Engagement or by mutual agreement of the Using Agency and the Contractor at the time of the survey.

### **3.5.2.10.8.4 REBAR**

All other corner markers other than disks or monuments shall consist of minimum 1/2 inch diameter rebar pins, driven to a point of refusal but shall not be less than 24 inches in length. Larger diameters or longer lengths may be necessary to deter vandalism or removal. All rebar pins when set shall contain a standard 3-1/2 inch or 2-1/2 inch bronze or aluminum disk. Plastic caps are not acceptable for marking corners.

Corner markers shall generally be set flush with the ground except in rural, unimproved areas where the top of the marker may extend not more than 0.2 foot above the ground surface. The Using Agency reserves the right to specify the cap design and marker type or to supply corner markers or monuments in a Site-Specific Engagement.

### **3.5.2.10.9 FLAGGING CORNERS**

For each corner marker that is found or set in the field, a witness lath shall be placed within the surveyed property not more than 2 feet from the marker. To aid the Using Agency with identification and recovery of corner markers, the lath shall extend above the ground by 2 feet, labeled with the corner number, and three bands of orange surveyor's flagging shall be attached to the lath. This requirement for lath and flagging shall also apply to markers set on an offset to corner or pins set on line except that only one band of flagging is required. This does not apply to random traverse points set in the field, and it is recommended that an alternate flagging color be selected for each purpose. It is strongly recommended that the colors of each type of flagging used for each purpose be communicated to the Using Agency contact person.

### **3.5.2.10.10 SETTING LINE MARKERS**

In addition to corner markers, line markers shall be set when the perimeter of a project area being surveyed and acquired in fee simple or as a public access corridor adjoins private lands not owned by the Using Agency in fee or as part of a public access corridor easement. Line markers may be omitted when the adjoining land is being acquired by the Using Agency as a part of the same project. Line markers must be set when the adjoining land is owned by an agency other than the Using Agency. These provisions shall apply to both fee acquisitions and easement with public access area acquisitions. Additionally, public access easement corridors shall be marked under the same guidelines as a fee acquisition. Line markers shall be set at approximately 250 feet to 300 feet intervals to aid the agencies in identifying and locating long property lines in excess of 500 feet between corner markers. Only long lines for which corner markers must be set shall be further marked in this manner. The distances between line markers shall be noted on the plan of survey, stated as a horizontal distance in US Survey Feet to two decimal places. This requirement to set line markers may be modified or waived by the Using Agency in a Site-Specific Engagement.

### **3.5.2.10.11 OMITTING LINE MARKERS**

Line markers shall be omitted where the line is within or along the right-of-way line of a public road, or where the line falls within a waterway, water impoundment, or vertical escarpment. Individual line markers may be omitted when the line runs along a physical wall, a fence, or other physical feature, provided that the physical feature is identifiable in the field and the distance to the line can be clearly identified on the plan of survey. Line markers may also be omitted along lines that are common with other lands owned by the Using Agency in fee simple or as a public access easement, or lands being acquired by the Using Agency as part of the overall project area being surveyed. The Contractor may omit line markers on lines that are internal to the perimeter of the survey lines or when this requirement is modified by the Using Agency in a Site-Specific Engagement.

### **3.5.2.10.12 ACCEPTABLE LINE MARKERS**

### **3.5.2.10.12.1 REBAR**

When used for marking the line, rebar shall consist of minimum 1/2 inch diameter rebar pins, driven to the point of refusal, but shall not less than 24 inches in length. Larger diameters or longer lengths may be necessary to deter vandalism or removal. All rebar pins when set shall contain a standard 3-1/2 inch or 2-1/2 inch bronze or aluminum disk or a plastic cap, any of which are acceptable for line markers when marked with the surveyor's identification. However, plastic caps on rebar are not acceptable for marking corners and not acceptable for marking offsets to inaccessible corners.

### **3.5.2.10.12.2 DURABLE FIBERGLASS POST**

When a pin and cap are not practical to mark the line, such as through a field or marsh, the perimeter lines may be marked by setting durable orange or white fiberglass posts, Carsonite or similar material, six (6) feet in length. If fiberglass posts are set, the flattest side of the post shall face away from the property being surveyed, to allow for the attachment of signage.

### **3.5.2.10.13 FLAGGING LINE MARKERS**

For each line marker that is set (or found in the field within 1.5 feet of line), a witness lath shall be placed within the surveyed property not more than 2 feet from the marker. To aid the Using Agency with identification and recovery of corner markers, the lath shall extend above the ground by 2 feet, be labeled as line marker, and one band of orange surveyors flagging shall be attached to the lath. This does not apply to random traverse points set in the field, and it is recommended that an alternate flagging color be selected for that purpose.

### **3.5.2.11 ORIGINAL SIGNATURE AND SEAL**

All original type mylars and all paper copies of full size survey plans (not reduced plans) and all metes and bounds descriptions shall be signed and sealed by the New Jersey Licensed Professional Land Surveyor who is responsible for the preparation of the field survey, the survey plan, and the metes and bounds descriptions. To assure that the products are those of the licensee, the signature must be handwritten in ink on each original and paper copy of the plan of survey and on each metes and bounds description.

Rubber stamp signatures or computer-generated signatures are unacceptable.

## **3.5.3 SPECIFIC STANDARDS FOR PLAN OF SURVEY**

### **3.5.3.1 PLAN SIZE**

The full-size final Mylar and paper copies of the survey plan shall be either 30 inches by 42 inches or 24 inches by 36 inches, as provided by the New Jersey Map Filing Law. Prior to submittal to the Using Agency, all paper copies of the survey plan shall be folded to a size of approximately 8-1/2 inches by 11 inches, with the Standard Title Block facing up. Unfolded paper copies of the survey plan are not acceptable. The full-size reproducible Mylar of the survey plan shall be rolled and submitted without any creases. The reduced survey plan attached to each metes and bounds description shall be no smaller than 8-1/2 inches by 11 inches from cut edge to cut edge and include all of the image of the original survey plan, including border lines. If it becomes necessary to produce a booklet type plan of the area surveyed, the first sheet or cover sheet of any such booklet must be an index to show alignment with the remaining sheets of the survey. Each sheet must contain the required elements of the survey such as title block, north arrow, signature and seal, Legend of Acquisition, etc.

### **3.5.3.2 ORIENTATION**

Survey information and the graphic depiction of the parcel on the plan shall be drawn so that north points generally upward or to the left when viewing the plan in a landscape view, or generally upward or to the right when viewing the plan in a portrait view.

### **3.5.3.3 CLOCKWISE BEARINGS**

Bearings shall be drawn on the map so that the corresponding metes and bounds description of the parcel will read in a clockwise fashion. Bearings may have to be indicated in both forward and reverse directions on the plan of

survey, with a small arrow to show the direction that the bearing runs, to provide both quadrants when needed for the description.

#### **3.5.3.4 SCALE**

Clarity of information will determine the actual scale of the plan. Standard engineering scales in feet in increments of 10 feet between 10 feet and 100 feet increments of 100 feet between 100 feet and 500 feet are required, unless an alternate scale is requested in the Site-Specific Engagement or by the Using Agency. A bar scale of the overall plan shall be drawn on the plan. An enlargement detail may be drawn to an alternate scale from the overall plan but a detail drawn to show encroachment or marker dimensions relative to the survey line is not required to be drawn to scale. Enlargement details are recommended in many instances to show relationships of calculated corners to evidence found.

#### **3.5.3.5 LINE AND CURVE TABLES**

Line and Curve Tables are confusing and difficult for lay persons to use and understand. For this reason, Line and Curve Tables are not acceptable alternatives to labeling line and curve data directly on the drawn lines, unless specifically authorized by the Using Agency in the Site Specific Engagement.

#### **3.5.3.6 SIGNIFICANT FIGURES**

Bearings shall be rounded to whole seconds of arc. Distances in US Survey Feet for survey courses shall be rounded to two decimal places. NJSPCS Coordinate Values in US Survey Feet shall be rounded to two decimal places. Areas of closed survey polygons shall be stated in acres and rounded to three decimal places. Square footage shall be rounded to the whole square foot but is only to be provided if the calculated area is less than 50 square feet or the survey is in an area of extremely high property values. If the latter, the Contractor shall provide square footage and acres for area.

#### **3.5.3.7 MATHEMATICAL CLOSURE**

All property surveys must form closed polygons with all sides defined by mathematical survey expressions being bearings and distances on all straight line segments and tie lines: radius, arc length, delta, chord bearing and chord distance on all curved lines. General calls along roads or waterways are unacceptable without a tie line and are only permitted for existing deed calls or if specifically required in a Site-Specific Engagement specified by the Using Agency. Tie lines are to be provided along waterways, and riparian claim lines.

#### **3.5.3.8 MATHEMATICAL SURVEY EXPRESSIONS**

The Contractor is responsible for defining all courses of the parcel being surveyed by mathematical survey expressions. All straight-line courses will be defined by bearings and distances with angular units stated in degrees, minutes and whole seconds of arc. Curves will be defined by radius, arc length, chord bearing and chord length, and the horizontal distances, radii of curves or lengths of arc must be stated in US Survey Feet to two decimal places.

#### **3.5.3.9 AREA**

The areas calculated in association with the property land survey shall be stated in acres and rounded to three decimal places unless the parcel is bounded, all or in part, by a waterway or a Tidelands Claim of the State of New Jersey. In such cases, the area shall be given to one decimal place (0.1 acre). If the entire parcel is less than one (1) acre, the area shall be stated in square feet as well as acres. If the surveyed area is less than 50 square feet, then the area is to be stated in square feet only and rounded to the nearest square foot. If the survey is in an area of extremely high property values, the Contractor shall provide both square feet and acreage. The Contractor should consult the Using Agency for guidance in any Site-Specific Engagement.

#### **3.5.3.10 AERIAL PHOTOGRAPHS AND PLANIMETRIC MAPPING**

Aerial photographs or planimetric maps or manuscripts, when used to locate physical features upon the survey plan, will be georeferenced to NJPCS NAD 83, planimetrically depicted in conformance with National Map Accuracy Standards, and be current to within two (2) years of the date of the survey plan, unless this time restriction is waived or modified by the Using Agency. If Digital Aerial Orthophotography is obtained from NJDEP, this requirement is

modified to allow the most recent photography available, even if older than two years, provided that the features must be field verified. An Aerial Information block shall be placed on the plan whenever aerial data has been used. **SEE Exhibit # 4 – AERIAL PHOTO INFORMATION BLOCK**

### **3.5.3.11 AREAS OF CLAIM OF TIDELANDS OWNERSHIP BY STATE OF NEW JERSEY**

The Contractor is responsible for obtaining the official state maps showing riparian claims of the State of New Jersey and reproducing these claim lines on the survey plan. The area of the New Jersey claim is to be stated in acres to one-tenth acre (0.1 acre). The sources to be used will be maps entitled “Lands Subject To Investigation for Areas Now Or Formerly Below Mean High Water”, which have been filed in the office of the county recorder or clerk. The Contractor shall contact the Land Use Regulation Program for further information.

### **3.5.3.12 WATERWAYS**

The Contractor is responsible for providing mathematical tie lines for survey courses that follow a meandering water line by a general call. If the survey follows a Mean High or Low Water Line, the contractor must state on the plan the date and time of that the survey data had been collected. The Contractor shall be advised that the terms “trash-line” and “debris line” are neither appropriate nor acceptable survey terms. The tie lines may be eliminated from the plan when the water line is physically surveyed and defined by bearings and straight line distances that are indicated on the plan. Do not provide a line table. It is also not advisable to calculate curves along waterways.

### **3.5.3.13 ROADS**

The Contractor is responsible for preparing a survey and corresponding metes and bounds description, which must reflect the intention of the parties. Road rights-of-way and the principles of dedication of land for road purposes shall not be taken lightly by the Contractor. The lines of surveys prepared for the acquisition of land are to run with the lines of the deed description as written in the record, unless the Site-Specific Engagement request directs some other course of action. If the fee title extends to the center of a public road, the survey lines should run to the center of the public road. The survey must also provide the bearings and distances of the right-of-way sidelines, as well as the area of the public right-of-way. The area in the right-of-way is subject to the paramount rights of the public and possible private rights and the area shall be stated as a separate item on both the plan and in the description. If there has been no dedication to define the sidelines of the right-of-way, the area of the right-of-way is defined as the area of the paved or traveled portion of the road bed. Private roads crossing the parcel being surveyed must also be shown. The survey shall indicate recording information for maps, deed book number and page number, or other pertinent information regarding the dedication of public ways or private easements.

### **3.5.3.14 SUBDIVISION OF LANDS**

The State of New Jersey and, as an extension thereof, any State Using Agencies are exempted from municipal subdivision ordinances. Other entities, such as municipal, county, or non-profit groups operating under the Green Acres Program or county agricultural programs that may be using this Scope of Work for Professional Surveying Services, may not be exempted, and municipal subdivision laws would apply and supersede these provisions. The interest to be acquired in an entire lot is known as an Entire Taking in Fee or E/T Fee and the interest to be acquired in a portion of a tax lot is known as a Partial Taking in Fee or P/T Fee. This subsection applies to Partial Takings in Fee.

A subdivision, known as partial taking, shall be effectuated by surveying and describing the entire property and tax lots of the seller, then excepting out, by a metes and bounds description of the exception, all lands that remain to the seller. Monuments shall be set on corners of new lines, and line markers shall be set on new lines that are 500 feet or longer. Monuments set for corners shall be called for in the exception description. Severance lines shall project to the limits of the deed and may extend into public road rights-of-way. For this reason, any Site-Specific Engagement that specifies an exact acreage to remain with the seller shall be presumed to be exclusive of any fee interest in an adjoining public right-of-way included in the exception area.

The bearings and distances of the dividing line must be shown on the plan. The plan shall not be labeled to suggest that any lots will be consolidated or lot lines will be removed or to suggest proposed lot numbering, which shall remain a function of the municipal government in which the parcel is located. The integrity of the original lot shall

be maintained by using terms such as “Part of Lot \_\_\_”, “Area to be Acquired”, and “Area of Exception to Remain”. This terminology shall be clearly labeled on the plan. The plan shall include the area tabulation on the graphic portion of the plan and in the Area Summary of the Legend of Acquisition, including the percentage of each portion of lot being acquired rounded to two decimal places. This requirement may be modified by the Using Agency in a Site-Specific Engagement.

### **3.5.3.15 TITLE BLOCK**

The Contractor is responsible for providing a standard title block as required by rules of the State Board of Professional Engineers and Land Surveyors. In addition to the elements required by the State Board of Professional Engineers and Land Surveyors, all title blocks shall include the telephone number of the Contractor firm and an email address. Information included in the title block supersedes presenting information also required in the Legend of Acquisition.

### **3.5.3.16 LEGEND OF ACQUISITION**

In addition to the surveyor's standard title block, all plans shall contain a Legend of Acquisition that provides the project number, funding source, Project Name, acquisition partner, seller name and ID#, municipality, county, list of each tax block and lot surveyed, interest being obtained for each lot, an area summary, etc. This legend is in addition to any legend of symbols/line type that may also be required.

**SEE Exhibit # 5 - LEGEND OF ACQUISITION BLOCKS**

### **3.5.3.17 CORNER MARKING**

All corner marking shall be made in accordance with “Corner Marking and Line Marking” as set forth in “General Land Survey Requirements and Acquisition Concepts”(as ref., in Section 3.5.2 of this document).

Detailed enlargements made to show a corner marker set or the relationships between any markers found and the actual calculated survey corner shall include all information shown on the full-scale plan. It is not necessary to indicate witness lath in the detail.

### **3.5.3.18 PLAN CERTIFICATION**

The Contractor shall provide standard certifications that shall appear on the plan of survey. The first portion of the certification is to the seller, purchaser, and purchaser's title insurance company. The second portion of the certification is made to present the plan for filing with regard to the Map Filing Law.

“I HEREBY CERTIFY TO (state name of seller) AND TO PURCHASER, State of New Jersey (as appropriate, state all acquisition partner names as specified by the Using Agency) AND ON BEHALF OF PURCHASER, TO

PURCHASER'S TITLE INSURER THAT THIS PLAN, SURVEY AND A CORRESPONDING METES AND BOUNDS DESCRIPTION HAVE BEEN PREPARED UNDER MY IMMEDIATE SUPERVISION IN ACCORDANCE WITH A WRITTEN CONTRACT WITH (state name of Using Agency); THAT THIS PLAN IS A CORRECT AND ACCURATE REPRESENTATION OF CONDITIONS EXISTING AS OF (month and year of field work), SUBJECT TO SUCH NOTES AS MAY APPEAR HEREON.”

“I hereby certify that to the best of my knowledge and belief this map and land survey dated \_\_\_\_\_ meets the minimum survey detail requirements, with corners found, set or omitted as indicated according to rules promulgated by the State Board of Professional Engineers and Land Surveyors and has been made under my supervision, and complies with the provisions of THE MAP FILING LAW except that outbound corner markers as shown have been found, or set or omitted according to a written contract with the State of New Jersey.”

“I do further certify that the monuments as designated and shown hereon have been set.

\_\_\_\_\_  
Signature and seal of NJ Licensed Land Surveyor

\_\_\_\_\_  
Date

Additional certification blocks required under the New Jersey Map Filing Law may be eliminated from plans prepared for state Using Agencies except for the municipal certification as follows:

“I, the Municipal Clerk of \_\_\_\_\_, do hereby certify that this plan is not the subject of any planning or zoning board reviews or approvals.”

\_\_\_\_\_  
Signature of Municipal Clerk

\_\_\_\_\_  
Date

The Contractor shall obtain the signature of the Municipal Clerk upon notification by the Using Agency that the property has been acquired, and within thirty (30) days of the actual acquisition shall present two Mylar copies of the approved drawing, signed and sealed by the surveyor, to the County Clerk’s office for recording on behalf of the Using Agency.

If a county recorder refuses to accept a map for filing, the State may determine an alternative course of action on a case-by-case basis.

Final payment for services will not be withheld due to filing delays associated with this section unless this provision is modified by the Using Agency in any site-specific engagement RFP.

### 3.5.3.19 LOCATION MAP

A location map shall be provided in the upper right hand corner of the plan. The perimeter of survey shall be drawn on the location map and an arrow shall indicate the site. A portion of a USGS Quadrangle (1 inch equals 2000 feet, 1:24,000 scale) is preferred. The Contractor shall state the name of the quad and provide the scale and graphic north arrow.

### 3.5.3.20 LINE WEIGHT AND TYPE

The Contractor is responsible for presenting all of the findings on the final survey plan in a clear, concise manner. Recognizing that surveys may be used for multiple purposes or clients, the relative significance of line and text weights and types shall represent all findings and intents in a clear and concise manner.

Perimeter survey lines shall be depicted as the solid, most prominent line weight of the main drawing.

### 3.5.3.21 MISCELLANEOUS ITEMS ON PLAN

In addition to all the State Board of Professional Engineers and Land Surveyors requirements and those previous requirements specified above, the Contractor must show the following items:

**3.5.3.21.1 Street address** of the subject parcel being surveyed only if the municipality has assigned a common street number;

**3.5.3.21.2 Tax Block and Lot number** of the parcel being surveyed, and those of adjoining; Note: If the survey findings indicate that the tax map is erroneous, so state. If a lot is not shown on the map, the lot shall be designated on the survey plan with the correct block number from the tax map and shall be identified as having NO LOT NUMBER ASSIGNED.

**3.5.3.21.3 Any permanent type buildings**, paved or concrete improvements, structures or foundations must be shown. In particular, residences must be identified and labeled in coordination with the Using Agency.

**3.5.3.21.4 Any utility easements**, visible or known of record, overhead wires or pole lines within the parcel being surveyed must be identified and shown on the plan of survey. If such easements are within the lines of a dedicated public road right-of-way, they may be omitted.

**3.5.3.21.5 Encroachments** shall be clearly drawn, labeled and dimensioned to the property line. A detailed enlargement of any encroachment may be necessary to clearly show sheds, buildings, decks, or other structures or areas of adverse use such as stone parking areas or areas of mowed lawn.

Encroachments must be brought to the attention of the Using Agency prior to finalizing the plan of survey and metes and bounds description of property, as the interest in the area may be reduced to leave the area of encroachment with the seller.

**3.5.3.21.6 Watercourses**, including the name and showing the direction of flow and area contained within the bed must be drawn and labeled on the plan. In particular, water bodies located on the boundary of the property must be shown in a hatched pattern on the plan, and the area calculated and stated on the plan.

**3.5.3.21.7 Show all drains and sewers** that are visible on the surface of and within the limits of the parcel. Drains and sewers within a dedicated public road right-of-way need not be shown.

**3.5.3.21.8 Provide the name of record owners** and the latest deed book and page reference for adjoining lands to indicate that those records had been examined in the survey process and that there are no areas of confusion in the record, except for those that may be shown on the plan, if any.

**3.5.3.21.9 Roads not open** are to be so indicated. Paper streets that have not been vacated are subject to possible public and or private rights, and the area contained by them must be indicated on the plan.

**3.5.3.21.10** If the survey indicates that the municipal **tax map** erroneously locates the parcel, this discrepancy should be noted on the plan.

**3.5.3.21.11** The **deed book and page** number of the reference deeds actually used must be indicated in the graphic portion of the plan to which they apply. This information shall not be excluded or limited in appearance through the use of notes, except that the Contractor may limit its search of records to the obvious and reasonable (after consultation with the Using Agency), and may produce a plan noting that the work is subject to the findings of an accurate and up-to-date title search by a competent title company.

This note shall not appear if the title report has been supplied to the Contractor by the Using Agency prior to delivery of the final plans.

**3.5.3.21.12** The **point of beginning** used in the metes and bounds description must be clearly labeled "Description Point of Beginning" or "P.O.B." or similar notation, and must be tied into a corner of record or road intersection. The NJPCS NAD 1983 Northing and Easting coordinate values stated in US Survey Feet to two decimal places must be labeled on the plan and stated in the description. The Contractor must set a monument at the point of beginning for each parcel, unless this requirement is waived or modified by the Using Agency at the time that the bids for a Site-Specific Engagement are solicited.

### **3.5.4 DEED DESCRIPTION FORMAT**

The metes and bounds description with reduced plan attached shall be inserted into the deed document by the seller's attorney without being retyped so that each description shall be written from the perspective of the Using Agency as purchaser, in accordance with the following:

#### **3.5.4.1 DEED DESCRIPTION TYPE**

The Contractor is responsible for preparing a separate metes and bounds type description of property pursuant to the survey of the property and with reference to the information contained on the plan of survey. This description is to agree with the results of the survey from which it written in every particular, and for this reason, the description shall not include any information that does not appear graphically or in a factual note on the survey plan. The metes and bounds description shall not be produced on the plan of survey but shall consist of a separate document. A copy of the survey plan reduced in size to 8-1/2 inches by 11 inches shall be stapled to the back of each copy of the description for recording. A separate metes and bounds description document shall be prepared by the Contractor for each fee acquisition area as defined by the survey. One description may include several contiguous lots in common ownership grouped together into one or more survey tracts, but the area of each tax lot shall be stated in addition to the total area contained at the end of the description. A separate metes and bounds description document shall be prepared by the Contractor for recording in a deed of easement if, in addition to a fee area of acquisition, there is also an easement acquisition area as defined by the survey.

#### **3.5.4.2 LETTERHEAD OF SURVEY FIRM**

The Contractor shall prepare an original metes and bounds type description of property, separate and apart from the prepared final plan of survey. The first page shall be submitted on an original company letterhead 8 1/2 inches by 11 or 14 inches. The letterhead must contain the name of the Contractor, mailing address and street address (if different), and telephone, fax, and email address of the company.



be included in the description using the term TOGETHER WITH such easement and describing its location and utility.

Another example of an augmenting clause to be included in the description if appropriate is if the State of New Jersey had issued a Tidelands Grant and rights associated with the grant are to pass with the parcel being surveyed. This situation would necessitate using the augmenting clause TOGETHER WITH and continuing with the qualifying clause AND SUBJECT TO THE TERMS OF A TIDELANDS GRANT, etc.

An easement located upon the parcel being surveyed that benefits an adjoiner shall be mentioned in a qualifying clause in the description using the term SUBJECT TO such easement, describing its location and utility, and the area shall also be stated.

Qualifying clauses shall also include the area in acres when the parcel being acquired is subject to public rights in a road right-of-way, subject to public rights in a navigable waterway such as a river, subject to a Tidelands Claim of the State of New Jersey, or subject to an overlap of deed description with an adjoining parcel. Such areas shall further be described with metes and bounds following the qualifying clause.

A minor deed gore area may be included in a conveyance by inserting in the deed an augmenting clause of quit claim attached to the surveyor's description at the request of the Using Agency. A deed gore area shall be described in a separate metes and bounds description prepared by the Contractor.

#### **3.5.4.8 RECITE AREAS DESCRIBED**

The metes and bounds description shall contain a paragraph that recites the total area contained within the metes and bounds description, then specifies the area of each included tax lot. This paragraph shall precede any exception description or any augmenting or qualifying clauses. Exception descriptions shall also contain a paragraph as to the total area of described exception, further specifying the area of each included portion of tax lot.

The total net area and individual net area of each included tax lot shall be restated following an exception description or qualifying clause of paramount public rights, deed overlaps, or Tidelands Claims of the State of New Jersey.

#### **3.5.4.9 CLOSING PARAGRAPH AND CALL FOR SURVEY**

To provide a uniform closing of all metes and bounds descriptions, the final paragraph shall contain the following language:

The above description was written pursuant to a survey of property designated as Block \_\_\_\_\_, Lot \_\_\_\_\_, on the municipal tax map of (\_\_\_\_ municipality name \_\_\_\_\_), County of (\_\_\_\_ county name \_\_\_\_\_), State of New Jersey. Said survey was prepared by (\_\_\_\_ Your firm's name and address \_\_\_\_\_), (\_\_\_\_ date \_\_\_\_\_), revised through (\_\_\_\_ last revision date, if any \_\_\_\_ ) and is marked as file No. \_\_\_\_\_. A reduced copy of said plan is attached hereto and made a part hereof.

#### **3.5.4.10 ORIGINAL SIGNATURE, EMBOSSED SEAL AND DATE SIGNED**

Each separate metes and bounds description shall bear the date, original ink signature and embossed seal of the surveyor who prepared the survey plan. A rubber stamp facsimile, mechanically reproduced, or computer generated signature is not acceptable.

### **3.6 DELIVERABLES**

The Contractor is responsible for submitting all deliverable work products on or before the date specified in a site-specific engagement to the Using Agency or to such other location or entity as may be specified in the site-specific RFP. As appropriate for the type of survey ordered, the deliverables shall include all of the following or such other items as may be directed in the Site-Specific Engagement.

### **3.6.1 COPIES OF NOTIFICATIONS**

Copies of all written notices that were originally prepared on company letterhead and sent to the administering division, property owners or designated representatives and occupants, if any, the municipal police department, adjacent property owners upon whose land it may have been necessary to enter to complete the survey:

#### **3.6.1.1 DIVISION FAX NOTIFICATION**

SEE Exhibit 2 – AGENCY FAX NOTIFICATION

#### **3.6.1.2 PROPERTY OWNER NOTIFICATION**

SEE EXHIBIT 3 – NOTIFICATION OF ENTRY LETTER

#### **3.6.1.3 POLICE DEPARTMENT NOTIFICATION.<sup>36</sup>**

SEE EXHIBIT 3 – NOTIFICATION OF ENTRY LETTER

#### **3.6.1.4 ADJOINER NOTIFICATION**

SEE EXHIBIT 3 – NOTIFICATION OF ENTRY LETTER

#### **3.6.1.5 MISC. NOTIFICATION (UTILITY, ETC.)**

SEE EXHIBIT 3 – NOTIFICATION OF ENTRY LETTER

### **3.6.2 COPIES OF WRITTEN CONSENT**

The Contractor shall submit copies of any written consent obtained from adjacent property owners or the Using Agency to cut brush lines or large trees, if necessary.

#### **3.6.2.1 ADJOINER CONSENT TO CUT BRUSH OR TREES**

#### **3.6.2.2 USING AGENCY CONSENT TO CUT TREES**

### **3.6.3 TRAVERSE CLOSURE**

The Contractor shall submit a computer printout of the coordinate geometry COGO survey data files demonstrating that the mathematical survey expressions used to define the parcel as used on the plan and in the description of the property form a closed polygon and verify that the areas as stated are correct. The precision of the survey must be stated and the bearing and distance of the radial error of closure of the adjusted survey distance from the terminus of the final course to the point of beginning must be given.

Traverse closure routine print-outs are required for the perimeter of each surveyed area defined by lines of the survey as a check that the bearings and distances as shown on the survey form a closed traverse and the stated area is correct.

### **3.6.4 FULL-SIZE PAPER COPIES OF SURVEY PLAN**

For each acquisition partner identified in the Site-Specific Engagement, the Contractor shall submit fifteen (15) signed, sealed, and dated paper copies of the survey plan depicting the results of the field and record investigation to the Using Agency, prior to the due date for the site-specific engagement. Prior to submittal, these plans shall be FOLDED to approximately 8-1/2 inches by 14 inches legal size with the title block or Legend of Acquisition facing up. NOTE: PLANS NOT BEARING ORIGINAL SIGNATURE OR NOT FOLDED PRIOR TO SUBMISSION ARE UNACCEPTABLE.

### **3.6.5 FULL-SIZE MYLAR SURVEY PLAN**

For each acquisition partner identified in the Site-Specific Engagement, the Contractor shall submit one (1) full size original type mylar of the survey plan prior to the due date for the Site-Specific Engagement. This plan shall be rolled and submitted to the Using Agency. Additional plans suitable for filing shall be presented to the County Clerk's Office on behalf of Using Agency.

### **3.6.6 METES AND BOUND DESCRIPTION AND REDUCED SURVEY PLAN**

The Contractor shall submit for each acquisition partner that is identified in the site-specific RFP, fifteen (15) original quality metes and bounds descriptions corresponding to and derived from the plan of survey. Each description shall be signed and sealed as prescribed.

Prior to submittal, there shall be stapled to the back of each description a photographically reduced copy of the survey plan, reproduced onto paper stock. This reduced plan must be a true reduction of the original plan as submitted and shall not be altered from the full sized plan to provide clarity of data. This reduced plan may be signed by the Contractor prior to reduction but shall not be sealed, to minimize further distortion when recording. The plan shall be attached by a single staple in the upper left-hand corner of the description packet with the title block of the reduced plan being located near the bottom when viewed in a portrait orientation.

### **3.6.7 DIGITAL FILES**

The Contractor shall submit media storage devices, either HD 1.44 MB 3.5 inch floppy diskettes or standard 5.25 inch or Mini CD-R compact disks produced to be read by any CD-ROM. This media shall contain three (3) files that are not zipped or compressed in any way.

The Contractor shall label the diskettes or CDs with the name and File ID of the Property Owner, the Project Name and Number, Municipal Tax Block and Lot numbers, the Municipality and County, the Name of the Survey Firm, the Date of Survey, and Survey Reference Number.

#### **3.6.7.1**

One file shall be the exact text of each metes and bounds description prepared for the site-specific engagement. The format shall be MS Word 6.0 file in **.doc** format or other text file extension format that may be acceptable to the Using Agency.

#### **3.6.7.2**

One file shall be a digital file in AutoCAD **.dwg** format containing the full survey drawing. This drawing must be created at its real New Jersey State Plane Coordinates NAD 1993 position and the view shall be unrotated from the coordinate system so that the NJPCS NORTH points orthographically vertical in the screen.

#### **3.6.7.3**

One file shall be a **.dxf** format single layer digital drawing containing the closed line polygon of the perimeter survey lines and certain other lines that are internal to the survey. Specifically, internal lines shall include public road or other public right-of-way lines, survey exception area lines, new survey tract lines created by this survey, funding participation limit lines, internal navigable or tidal water edge or mean high water lines, survey tie lines, New Jersey Tidelands Claims lines, clouded title lines, overlapping deed lines from adjoiner deeds, or limit lines of new conservation or public access easements being created by this project of the Using Agency.

This file shall not be a complete drawing file of the survey and shall contain no text. This file shall be created at its real New Jersey Plane Coordinates NAD 1983 position and the view shall be unrotated from the coordinate system so that the NJPCS NORTH points orthographically vertical in the screen. The polygon shall be created from the coordinate geometry of its survey point of beginning through the final course of survey and terminus point.

To provide a uniform method of closure without degrading the quality of bearings used, enter the radial error of closure as a final closing arc between the survey point of beginning and the survey point of ending. Add this additional course by inverting from the point of ending to the point beginning as a final course.

### **3.6.8 SURVEYOR'S CERTIFICATION AND SUMMARY FORM**

The Contractor shall submit the Surveyor's Certification and Summary Form that shall be completed by the surveyor where indicated, which shall be signed and sealed by the contractor's surveyor who prepared the survey, survey plan, and property descriptions.

**SEE Exhibit # 6 – SURVEYOR'S CERTIFICATION AND SUMMARY FORM**

### **3.6.9 CHECKLIST OF WORK COMPLETED, DETAIL SHEET AND TAX MAP**

The Contractor shall submit one (1) checklist, signed by the contractor's surveyor who prepared the survey, survey plan, and property description(s) to assure that the specified items have been completed and that all deliverables are submitted. The Contractor shall also attach a copy of the Detail Sheet and copy of tax map originally provided by the Using Agency when the site-specific engagement RFP was solicited.

**SEE Exhibit # 7 – CHECKLIST OF WORK COMPLETED**

### **3.6.10 FILE SURVEY PLAN ON BEHALF OF USING AGENCY**

The Contractor, within thirty (30) days of notification by Using Agency that the property has been acquired, shall present for recording, on behalf of the Using Agency, two original quality full size survey plans to the County Recording Officer for the County in which the parcel is located pursuant to the New Jersey Map Filing Law. A letter of confirmation from the contractor's surveyor shall serve as the deliverable in this regard. If the property has not been acquired by the Using Agency or the contractor's surveyor has not been notified to file within twelve (12) months of the Notification of Engagement, the Contractor is ultimately released from this obligation without further notice.

### **3.6.11 OPTIONAL CORNER MARKER DESCRIPTION SHEETS**

If specified by the Using Agency in a Site-Specific Engagement, the Contractor shall prepare a separate Corner Marker Description Sheet for each corner marker that has been set under the Site-Specific Engagement award. The sheet shall include the corner number, character of mark, project information, seller information, location of mark, and information regarding the firm that set the marker. The sheet shall include a cap detail, a sketch showing proximity to field witness marks, and a photograph of the mark that views the south side of Using Agency.

## **3.7 METHOD OF ENGAGEMENT**

### **3.7.1 SITE-SPECIFIC ENGAGEMENT**

The Survey Contract Manager shall contact all of the term contract vendor firms that have been awarded contracts for the region for which survey work is required, informing them of the nature, special circumstances, completion time, and bid proposal due date for each Site-Specific Engagement. The Survey Contract Manager reserves to the right to solicit additional bids from term contract vendors assigned to adjacent regions or term contract vendors from other regions who may have previously worked in the vicinity of the project.

### **3.7.2 SITE-SPECIFIC BIDS**

The Contractor shall submit firm fixed costs by the bid due date for the Site-Specific Engagement to perform professional land surveying services by the survey due date specified by the Survey Contract Manager. The proposals shall include a detailed cost proposal by task or function, calculated using the professional rate schedule bid in response to a RFP. Bids shall be provided for work to be completed within three timeframes from the date of authorization: 60 days, 90 days, or 120 days, or such other period specified in the Site-Specific Engagement Tasks or functions to be charged shall be highlighted in yellow on copies of the rate schedule, indicating the number of hours charged and the extended rate for such service. The bid cover letter shall provide the total amount to be charged and the copies of rate schedule sheets with highlighted tasks shall be attached.

### **3.7.3 SURVEY COST**

The Contractor's bid shall include all costs to the Using Agency and includes all licenses, permits, insurance, costs associated with obtaining consent, all research, notifications, postage and delivery costs, office and field work, supplying and setting all corner markers, line markers, and all deliverables specified in Section 3.6 CONTRACT DELIVERABLES or as modified on the Detail Sheet for a Site-Specific Engagement.

### **3.7.4 NOTIFICATION OF ENGAGEMENT**

The Contractor with the most responsive, responsible bid proposal, price and other factors considered, will be given the authorization to proceed by Notification of Engagement.

### **3.7.5 SURVEY CONTRACT MANAGER DISCRETION**

The Survey Contract Manager shall have the flexibility to invite any one or more Contractors to submit proposals for a Site-Specific Engagement across regional boundaries when the project area extends across such regional boundaries.

### **3.7.6 TIME FOR DELIVERABLES**

All deliverables and delivery times shall be specified by the Using Agency in the Site Specific Engagement. Bidders unable to comply with the time frame will not be penalized for future quotations, provided that they respond with a no-bid to that situation. The Using Agency will be responsible for the approval of all deliverables for each element of the tasks in the scope of work.

### **3.7.7 DEFICIENCY CONVERSION/ CORRECTON COST**

The Using Agency and Survey Contract Manager shall have the option to mitigate deficiencies in any deliverable or any portion thereof as set forth in Section 3.0, "Scope of Work" in this document. The Using Agency may offer the Contractor an opportunity to correct deficiencies or may choose to convert or correct the deficiencies in house. If the correction of deficiencies results in a delay of delivery beyond the due date, the Using Agency may elect to file a PB36 NJ State Using Agency Formal Complaint Report.

## EXHIBIT 1 - WETLANDS DELINEATION INFORMATION

SAMPLE WETLANDS DELINEATION INFORMATION BLOCK IS FOR USE IN THE EVENT OF AN ACTUAL WETLANDS DELINEATION ON THE SURVEYED PROPERTY MADE AS PART OF A SITE-SPECIFIC ENGAGEMENT FOR THE USING AGENCY:

The following information shall be provided substantially in accordance with this format:

<b>WETLANDS DELINEATION INFORMATION</b>	
ENVIRONMENTALIST: _____(individual name)_____	
ORGANIZATION: _____(organization name)_____	
ADDRESS: _____(address)_____	
PHONE: _____(area code & number)_____ FAX: _____(area code & number)_____	
E-MAIL: _____	
DELINEATION PREPARED FOR: _____	
DATE OF DELINEATION: _____	
_____	_____
Signature of Environmentalist	Date Signed.

EXHIBIT 2 – AGENCY FAX NOTIFICATION

GREEN ACRES STATE LAND ACQUISITION  
**DIVISION NOTIFICATION FAX TRANSMITTAL**

DATE: \_\_\_\_\_

FAX NOTIFICATION TO:

\_\_\_\_\_ **Division of Parks and Forestry**  
**Lynn Fleming**  
Assistant Director  
State Park Service  
Fax (609) 984-0503 Voice (609) 292-2772

OR \_\_\_\_\_ **Division of Fish and Wildlife**  
**Lisa Carben**  
Administrative Assistant III  
Bureau of Lands Management  
Fax (609) 984-1414 Voice (609) 984-0547

FROM:

**Name of Survey Firm** \_\_\_\_\_  
**Address** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Name of Surveyor** \_\_\_\_\_  
**Phone Numbers:** \_\_\_\_\_ **FAX:** \_\_\_\_\_ **VOICE:** \_\_\_\_\_

**RE: Green Acres Survey Reference No.** \_\_\_\_\_  
**Administrative Authorization No.** \_\_\_\_\_  
**Project Name** \_\_\_\_\_  
**Name of Facility** \_\_\_\_\_  
**Property Owner** \_\_\_\_\_  
**Municipality** \_\_\_\_\_ **County** \_\_\_\_\_  
**Tax Block No(s)** \_\_\_\_\_ **Tax Lot No(s)** \_\_\_\_\_  
**Street Address or location** \_\_\_\_\_

Our firm is under contract to provide Professional Land Surveying Services to GREEN ACRES STATE LAND ACQUISITION in connection with the above referenced land acquisition project.

Be advised that members of our field crew expect to initiate the survey work on the subject property starting on \_\_\_\_\_.

We would greatly appreciate you loaning to us copies of any prior surveys or deed documents that may be in the possession of your staff that would assist in the completion of this project. Please call me here at the office to advise if you have any such documents.

RETAIN THIS FORM TO SUBMIT AS CONTRACT DELIVERABLE FOLLOWING FAX TRANSMITTAL

### EXHIBIT 3 – NOTIFICATION OF ENTRY LETTER

(Company Letterhead)  
(Date)

(To Property Owner, Lessee/Occupant)  
(Postal Address)  
(Postal Address)

RE: Project No. \_\_\_\_\_ Project Name \_\_\_\_\_  
Lands N/F of \_\_\_\_\_  
Municipality \_\_\_\_\_, County \_\_\_\_\_  
Block \_\_\_\_\_ Lot \_\_\_\_\_  
Street Address \_\_\_\_\_  
Survey Reference No. \_\_\_\_\_

Dear \_\_\_\_\_:

Our firm is under contract to provide Professional Land Surveying Services to \_\_\_\_\_ as the Using Agency in connection with the above referenced land acquisition project.

In order to perform the land survey, our staff must gather field evidence, make measurements, and obtain data relative to existing physical characteristics and conditions of the lands being surveyed and sometimes on those lands that adjoin the project. It may be necessary for our land survey crew to enter upon your property for this purpose.

Be advised that there are several laws that provide specific authority for land surveyors to enter property for the purpose of making surveys. This letter is being provided to you as written notice that members of this office may be on your property during the period between (\_\_\_\_ time period\_\_\_\_) and (\_\_\_\_ time period\_\_\_\_\_).

Your cooperation in this success of this engagement is important to us. We would greatly appreciate you loaning to us copies of any prior surveys or deed documents that you may have in your possession that would assist in the completion of this project. Please call me here at the office to advise if you have any such documents.

If you have any questions concerning this project, please call (\_\_\_\_project coordinator identified in the site-specific RFP\_\_\_\_), who can be reached by calling (\_\_\_\_area code and phone number\_\_\_\_\_). While the work is being performed, we will make every effort to cause as little inconvenience as possible.

Very truly yours,

\_\_\_\_\_  
CC Police Department  
Using Agency  
Using Agency Project Manager.

## EXHIBIT 4 – AERIAL PHOTO INFORMATION BLOCK

The following information shall be provided substantially in accordance with this format:

<b>AERIAL PHOTO INFORMATION BLOCK</b>	
Source of Mapping	_____
Panel or Identification Number	_____
Date of Photography	_____

## EXHIBIT 5 – LEGEND OF ACQUISITION

The following information shall be provided substantially in accordance with this format:

### LEGEND OF ACQUISITION

#### PROJECT INFORMATION

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION (if Tenancy-in-Common, include % interest as below)

PROJECT NAME: \_\_\_\_\_

GREEN ACRES SOURCE OF FUNDING/ PROJECT NUMBER: \_\_\_SA\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

GREEN ACRES PARTICIPATION ACRES THIS FUNDING SOURCE: \_\_\_\_\_

SELLER'S NAME: \_\_\_\_\_

MANAGING AGENCY/ENTITY: \_\_\_\_\_

(Add only if a Tenancy-in-Common with Acquisition Partners identified on Detail Sheet - add lines for other partners)

ACQUISITION PARTNER: \_\_\_\_\_ as to \_\_\_% interest, Tenants-in-Common

PROJECT NAME: \_\_\_\_\_

GREEN ACRES SOURCE OF FUNDING/ PROJECT NUMBER: \_\_\_\_\_

GREEN ACRES PARTICIPATION ACRES THIS FUNDING SOURCE: \_\_\_\_\_

#### AREA SUMMARY

TOTAL GROSS AREA SURVEYED \_\_\_\_\_ ACRES

SUBJECT TO:

AREA IN PUBLIC ROADS: \_\_\_\_\_ ACRES

AREA SUBJECT TO RIPARIAN CLAIM OF NEW JERSEY: \_\_\_\_\_ ACRES

TOTAL AREA UNDER NAVIGABLE FRESH WATERS: \_\_\_\_\_ ACRES

MUNICIPALITY: \_\_\_\_\_ COUNTY: \_\_\_\_\_

TAX BLOCK: \_\_\_ LOT: \_\_\_

ENTIRE\_\_or PART\_\_ (OF LOT)

FEE\_\_ PERCENT of LOT: \_\_\_\_\_ ACRES: \_\_\_\_\_

EASEMENT\_\_ TYPE OF EASEMENT \_\_\_\_\_ PERCENT of LOT: \_\_\_\_\_ ACRES:

\_\_\_\_\_

MUNICIPALITY: \_\_\_\_\_ COUNTY: \_\_\_\_\_

TAX BLOCK: \_\_\_ LOT: \_\_\_

ENTIRE\_\_or PART\_\_ (OF LOT)

FEE\_\_ PERCENT of LOT: \_\_\_\_\_ ACRES: \_\_\_\_\_

EASEMENT\_\_ TYPE OF EASEMENT \_\_\_\_\_ PERCENT of LOT: \_\_\_\_\_ ACRES:

\_\_\_\_\_

**EXHIBIT 6 – SURVEYOR’S CERTIFICATION AND SUMMARY FORM**

**NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
GREEN ACRES PROGRAM  
SURVEYOR’S CERTIFICATION AND SUMMARY FORM  
PROJECT INFORMATION**

PROJECT NAME: \_\_\_\_\_  
GREEN ACRES SOURCE OF FUNDING/ PROJECT NUMBER: SA- \_\_\_\_\_ - \_\_\_\_\_  
GREEN ACRES PARTICIPATION ACRES THIS FUNDING SOURCE: \_\_\_\_\_  
SELLER’S NAME: \_\_\_\_\_  
MANAGING AGENCY/ENTITY: \_\_\_\_\_  
ACQUISITION PARTNER: \_\_\_\_\_  
PROJECT NAME: \_\_\_\_\_  
GREEN ACRES SOURCE OF FUNDING/ PROJECT NUMBER: \_\_\_\_\_  
GREEN ACRES PARTICIPATION ACRES THIS FUNDING SOURCE: \_\_\_\_\_  
ACQUISITION PARTNER: \_\_\_\_\_  
PROJECT NAME: \_\_\_\_\_  
GREEN ACRES SOURCE OF FUNDING/ PROJECT NUMBER: \_\_\_\_\_  
GREEN ACRES PARTICIPATION ACRES THIS FUNDING SOURCE: \_\_\_\_\_

**ACQUISITION PARCEL INFORMATION**

**BLOCK:** \_\_\_\_\_ **LOT:** \_\_\_\_\_ **MUNICIPALITY:** \_\_\_\_\_ **COUNTY:** \_\_\_\_\_  
ENTIRE\_\_ or PART\_\_ (OF LOT) FEE\_\_ PERCENT of LOT: \_\_\_\_\_ ACRES: \_\_\_\_\_  
EASEMENT\_\_ TYPE OF EASEMENT \_\_\_\_\_ PERCENT of LOT: \_\_\_\_\_ ACRES: \_\_\_\_\_  
**BLOCK:** \_\_\_\_\_ **LOT:** \_\_\_\_\_ **MUNICIPALITY:** \_\_\_\_\_ **COUNTY:** \_\_\_\_\_  
ENTIRE\_\_ or PART\_\_ (OF LOT) FEE\_\_ PERCENT of LOT: \_\_\_\_\_ ACRES: \_\_\_\_\_  
EASEMENT\_\_ TYPE OF EASEMENT \_\_\_\_\_ PERCENT of LOT: \_\_\_\_\_ ACRES: \_\_\_\_\_  
**BLOCK:** \_\_\_\_\_ **LOT:** \_\_\_\_\_ **MUNICIPALITY:** \_\_\_\_\_ **COUNTY:** \_\_\_\_\_  
ENTIRE\_\_ or PART\_\_ (OF LOT) FEE\_\_ PERCENT of LOT: \_\_\_\_\_ ACRES: \_\_\_\_\_  
EASEMENT\_\_ TYPE OF EASEMENT \_\_\_\_\_ PERCENT of LOT: \_\_\_\_\_ ACRES: \_\_\_\_\_

**ACQUISITION SURVEY INFORMATION**

PREPARED FOR: NJDEP GREEN ACRES PROGRAM \_\_\_\_\_  
SURVEY FIRM: \_\_\_\_\_ CONTRACT No. S- \_\_\_\_\_  
SURVEYOR: \_\_\_\_\_ NJPLS No. \_\_\_\_\_  
DATE ON SURVEY PLAN: \_\_\_\_\_ DATE SIGNED: \_\_\_\_\_ DATE LAST REVISED: \_\_\_\_\_

**ACQUISITION TITLE INFORMATION**

TITLE COMPANY \_\_\_\_\_  
COMMITMENT No. \_\_\_\_\_ DATE OF COMMITMENT \_\_\_\_\_

**CERTIFICATION**

I hereby certify that I have completed the above survey(s) in accordance with the Green Acres Survey Guidelines contained in a written contract as indicated. Based upon an actual field survey and my examination of evidence, the above parcels consist of a total surveyed area of \_\_\_\_\_ acres subject to the following:

EASEMENTS \_\_\_\_\_  
RESTRICTIONS \_\_\_\_\_  
CONDITIONS \_\_\_\_\_  
PUBLIC ROAD \_\_\_\_\_ AC. CLAIMED NJ TIDELANDS \_\_\_\_\_ AC. CLOUDED TITLE \_\_\_\_\_ AC.  
UNDERWATER \_\_\_\_\_ AC. ENCROACHMENTS: YES \_\_\_\_\_ NO \_\_\_\_\_ NUMBER OF DESCRIPTIONS: \_\_\_\_\_

\_\_\_\_\_  
SURVEYOR’S SIGNATURE, DATE & SEAL

\_\_\_\_\_  
REVIEW BY GREEN ACRES, NJDEP

NET AREA OF ENCUMBRANCE DETERMINED BY GREEN ACRES \_\_\_\_\_ AC.

## EXHIBIT 7 - CHECKLIST OF WORK COMPLETED

### NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GREEN ACRES PROGRAM

#### 3.6 SURVEY CONTRACT DELIVERABLES

##### 3.6.1 Copies of Notifications – Letterhead Standard Notice

- 3.6.1.1 Division Fax Notification – Required -
- 3.6.1.2 Property Owner Notification – Required -
- 3.6.1.3 Police Department Notification – Required -
- 3.6.1.4 Adjoiner Notification – If Necessary -
- 3.6.1.5 Misc. Notification (Utility, etc.) – If Necessary

##### 3.6.2 Copies of Written Consent – Letterhead Request with Reply

- 3.6.2.1 Adjoiner Consent to Cut Brush or Trees
- 3.6.2.2 Using Agency Consent to Cut Trees

- 3.6.3 Traverse Closure - Precision/Radial Error/Area**

##### 3.6.4 Full size Paper Copies of Survey Plan

- 15 Folded Copies for EACH ACQUISITION PARTNER

##### 3.6.5 Full size Mylar Survey Plan

- Submit one for EACH PARTNER, Rolled
- (File Two Additional)

##### 3.6.6 Metes and Bound Description and Reduced Survey Plan

- 15 copies for EACH ACQUISITION PARTNER with reduced plan as last sheet and stapled together

##### 3.6.7 Digital Files for EACH ACQUISITION PARTNER

- Cover Label:
- Property Owner Name and Owner ID#
- Project Number & Name
- Municipal Tax Block and Lot numbers
- Municipality & County
- Survey Firm
- Date of Survey
- Survey Reference Number.

Contains:

- 3.6.7.1 Descriptions
- 3.6.7.2 AutoCAD .dwg
- 3.6.7.3 Linework .dxf format

- 3.6.8 Surveyor's Certification and Summary Form**

- 3.6.9 This Checklist of Work completed, Detail Sheet and tax map from Site-Specific Engagement**

- 3.6.10 File Survey Plan on behalf of Using Agency HOLD TWO MAPS FOR FILING**

- The Contractor shall submit copy of County Receipt within 30 days of notification of closing by Using Agency.

##### 3.6.11 Optional Corner Marker Description Sheets (if requested on Detail Sheet)

- Corner Number /Character of Mark
- Project Information/Seller Information
- Location of Mark
- Survey Firm
- Cap Detail
- Sketch with field witness marks
- Photograph of south side of mark, looking northward.

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Prepared by PLS

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Date

**EXHIBIT 8 – DETAIL OF GREEN ACRES CAP 3 ½ INCH NOMINAL DIAMETER  
BRASS (PREFERED) OR ALUMINUM FOR MONUMENTS OR  
½ INCH X MINIMUM 24 INCH REBAR**



**(00000) = LEAVE BLANK FOR END USER**

EXHIBIT 9 - DETAIL OF GREEN ACRES CORNER DESCRIPTION SHEET

## GREEN ACRES PROGRAM CORNER DESCRIPTION SHEET

PROJECT NUMBER: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

OWNER ID#: \_\_\_\_\_

SELLER: \_\_\_\_\_

CORNER NUMBER \_\_\_\_\_ - \_\_\_\_\_ DESCRIPTION OF MARK: \_\_\_\_\_

N.J.S.P.C.S. N.A.D. '83 (92) VALUES:

N \_\_\_\_\_ U.S. SURVEY FEET  
E \_\_\_\_\_ U.S. SURVEY FEET

## **CORNER I.D. PHOTO**

INSERT PHOTO HERE

NORTH ARROW  
BEARING BASE  
DATUM SHOWN

PHOTO TAKEN FROM SOUTH OF MARKER, FACING NORTH.

## **CORNER MARKER RECOVERY TIES** NO SCALE

DRAW SKETCH HERE