

GIBBS LAND SURVEYORS

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sseeley@gibbslandsurveyors.com

June 25, 2010

Richard M. Labinsky, P.E.
City of Hallandale Beach
DPW/Utilities & Engineering
630 NW 2 Street
Hallandale Beach, FL 33009

**RE: SW QUADRANT – FROM DIXIE HIGHWAY TO SW 8 AVENUE;
AND FROM SW 3rd STREET TO SW 11th STREET
DRAINAGE STUDY – LAND SURVEY SERVICES**

Dear Rick:

Pursuant to our existing Continuing Services and Comprehensive Services Contract with the City (RFP #FY2007-2008-004), we are pleased to submit the following proposal for Professional Land Surveying services on the above referenced project.

LIMITS OF WORK

From Dixie Highway, west to SW 8 Avenue; and from SW 3rd Street, south to SW 11 Street.

SCOPE OF WORK

Land Survey Services:

1. Provide Control points at photo-identifiable points for photogrammetrist. State Plane Coordinates (NAD83/90) and National Geodetic Vertical Datum of 1929 (NGVD29). These points will number the specific areas requested by Southern Resource Mapping, Inc. - \$8,700.00
2. Provide Quality Check after Aerial flight for missing drainage structures, blank or covered areas missing from Aerial maps - \$5,000.00
3. Provide Finish Floor elevations for 800 buildings. - \$48,000.00

The above SCOPE OF WORK will be performed for a fee of **\$61,700.00**

Richard Labinsky
City of Hallandale Beach
SW Quadrant
June 25, 2010
Sheet 2 of 2

Digital Aerial Topographic Mapping:

1. Color Aerial Photography at 1"=167'
2. Analytical Triangulation
3. Digital Mapping at 1"=20'
4. CAD edit, Final review and Translation
5. Color Digital Orthophotos at 1"=20'

The above SCOPE OF WORK will be performed for a fee of **\$22,090.00**

TOTAL FEES: **\$83,790.00**

Any additional services outside of the above scope will be performed at the following hourly rates:

Principal	\$125.00/hour
Survey Crew Supervisor	\$60.00/hour
Field Crew	\$85.00/hour
Cad Drafter - Survey Technician	\$60.00/hour
Secretary	\$35.00/hour

Sincerely,
GIBBS LAND SURVEYORS



Stephen K. Seeley, PSM
(For the Firm)

LORI PARRISH
BROWARD COUNTY
PROPERTY APPRAISER



- Streets
- Parcels
- Aerials (2010)
- County Boundary

SW QUAD REV. 6/25/10

0 294 ft

Created on 6/25/2010 8:00:04 AM using ArcIMS 4.0.1. © Copyright 2003 Broward County Property Appraiser



Southern Resource Mapping, Inc.

June 16, 2010

Mr. Stephen K. Seeley, P.S.M.
Gibbs Land Surveyors
2131 Hollywood Blvd.
Suite 204
Hollywood, FL 33020

Subject: Digital Aerial Topographic Mapping of the City of Hallandale Beach
SW Quadrant Drainage Project
SRM Estimate Number: 10-0028R-1

Dear Steve,

Southern Resource Mapping (SRM) is pleased to submit this proposal to Gibbs Land Surveyors, (GLS) to provide new digital mapping of the City of Hallandale Beach. Project limits are defined in red on the attached "SW Quad Hallandale.jpg" file attached and consists of approximately +/- 215 acres.

SCOPE OF WORK

Aerial Photography

SRM will obtain new color vertical photography with a precision calibrated aerial camera equipped with a 9" x 9" format and 6" focal length lens cone. This camera is also equipped with a gyro-stabilized suspension mount and Forward Motion Compensation (FMC).

The photography will be flown at 1,000' above mean terrain, resulting in a contact negative scale of 1"=167 or (1:2000).

All mapping photography will be flown with a 60% forward overlap and will not contain excessive tip, tilt, crab or cloud cover.

Ground Control Surveys

The horizontal and vertical ground control locations required for the mapping are shown on the .jpg file that has been forwarded to you. The Twelve (12) locations shown in blue can be photo identifiable points such as sidewalk corners, stop bars, etc.

SRM requests the control survey data be accompanied by a signed and sealed report certified to Florida Minimum Technical Standards under Chapter 5J-17. The control information and datum supplied will be the basis for controlling the photography for the digital mapping. It is our understanding that GLS will be responsible for supplying the control survey information to SRM at no charge.

Analytical Triangulation

Utilizing the ground control surveys, SRM will densify and supplement the ground control by performing analytical triangulation of the new photography.

Digital Mapping

SRM will utilize first order soft copy stereo plotters to provide topographic mapping at 1"=20' for the project area. A Digital Terrain Model (DTM) will be generated from the collection of breaklines and spot elevations for this Drainage Study. Contours at a 0.5' interval will be generated for SRM's internal use to QC any irregularities or "spikes" in the elevation data however, they are not a deliverable item. The only planimetric data to be delivered with the DTM data will be road edges and road centerlines. Spot elevations will be shown on all visible inlet grates.

Areas obscured by dense vegetation or shadow will be defined and delivered as a closed polygon to indicate the areas within may not meet the accuracy standards for 0.5' contours.

A CAD Edit will be performed to verify and confirm the database contents and layering structure. A final quality control review will be performed by our Florida Registered Surveyor and Mapper.

Elevations of well-defined planimetric features collected at from the new photography will have a relative vertical accuracy of +/- 0.1 feet.

Translation and delivery of the database will be on CD ROM in AutoCAD 2000. The DTM can be delivered as a TIN, or as 3D breaklines and spot elevations. The final database will also have corresponding color digital orthophoto to use as a backdrop to the digital mapping.

Digital Orthophotos

Using the digital terrain model (DTM) analytical control points and the ground control survey points, SRM will produce a seamless digital orthophoto of the project area at 1"=20'. Pixel size will be 0.1 foot. Delivery will be on CD Rom in .tif format along with corresponding .tfw file for geo-referencing.

Deliverables

- DTM consisting of breaklines and spot elevations delivered as a TIN, ASCII, or as 3D breaklines and spots in AutoCAD format
- Road edges and road centerlines in AutoCAD format.
- Color Digital Orthophotos at 1"=20' in .TIF format.

Accuracy

All services provided by SRM will be in compliance with the Minimum technical Standards for Surveying and Mapping in the State of Florida and will meet or exceed MTS standards set forth in Chapter 5J-17.

PROFESSIONAL FEES

New Color Aerial Photography at 1"=167'.....	\$3,495.00
Control Surveys	by GLS
Analytical Triangulation.....	\$1,510.00
Digital Mapping at 1"=20' as described.....	\$12,900.00
CAD Edit, Final Review and Translation.....	\$1,290.00
Color Digital Orthophotos at 1"=20'.....	<u>\$2,895.00</u>
	Total \$22,090.00

Delivery Schedule

The digital mapping will be delivered within 45 days after receipt of acceptable ground control surveys, or completion of the aerial photography, whichever is the later. Should you require a more expeditious delivery, please call. We will then review our current production schedule so that we may accommodate your requirements.

Payment terms

SRM will invoice monthly in accordance with percent complete. Payment terms are 30 days. SRM reserves the right to charge 1.5% per month (18% per annum) on all past due accounts.

Authorization

SRM looks forward to working with Gibbs Land Surveyors on this important project. If this proposal letter is acceptable, please have an authorized representative sign the acceptance block below.

Sincerely,
Southern Resource Mapping



Joseph Ricke, PSM

FIRM

NAME AND TITLE

SIGNATURE

DATE