



#19,850

WELSH ENGINEERING & LAND SURVEYING, P.C.

Jan. 3, 2012

Village of Croton on Hudson

1 Van Wyck Street
Croton on Hudson, NY 10520
914-271-4848
www.crotononhudson-ny.gov

ATTENTION: Janine King
Assistant Village Manager

RE: **Water Infrastructure Survey: Various Streets within the Village of Croton**
Land Surveying Services
Westchester County Area, New York

Dear Ms. King:

On behalf of WELSH Engineering & Land Surveying, P.C., I am pleased to submit this letter proposal with **Schedule and Summary of Cost** for Land Surveying Services in connection with the above referenced project. The survey will be for a site located in the vicinity of Cleveland Avenue, along numerous streets as shown on provided site map titled "Water Infrastructure Improvement Survey Area" as shown in attachment of e-mail, sent to us by you on Dec. 12, 2011. The marked route on the attachment is the proposed survey length of approx. 16,800 Linear Feet. The survey to be prepared by WELSH Engineering & Land Surveying, P.C. will contain Field Survey from building face to building face where water service lines exist or are planned.

SCOPE OF WORK

The survey will contain those items as requested on the e-mail provided by mentioned above. Field Surveys will be performed to measure existing conditions of site features including the following:

1. Roads, edge of pavement, curbs, all driveway aprons within site area;
2. Site features on the homeowner's side of the curb will not be shown with the exception of areas within 25 feet on either side of fire hydrants and ten feet on either side of water service lines;
3. **R.O.W. of streets surveyed will be provided;**
4. Property lines (metes and bounds) tied into established reference control points;
5. Contours at two foot intervals;

SCOPE OF WORK – cont.

6. Scale at 1"=20'0" or as otherwise requested or noted;
7. Easements (permanent or temporary access, emergency, etc. found), if any;
8. Drainage pipes, drains, invert elevations, manholes;
9. Permanent Bench Mark will be set in the field;
10. All utilities within the right of way, including above and below ground within the right of way (i.e. gas, water, sewer, storm) including but not limited to all pipe sizes, material, inverts, rim elevations, curb boxes, hydrants, and valve boxes. Welsh will also call Code 753 (1-800-962-7962) to have utilities marked on the ground prior to Field Survey.
11. Maps will be done in digital form (AutoCAD 2004 or 2008 versions), AutoCAD 2000, and PDF
12. Deliverables:
 - a. Welsh will provide a final map showing metes and bounds, structures, topographic data, and all the above listed information.
 - b. Typed description of layer format (i.e. Existing curb = EC101)Welsh will submit a draft survey in paper (four sets) and digital format for review and comment.

CAD METHODOLOGY

The survey will contain within the Survey Map digital file, the following methodology in defining layers formatted for AutoCAD use [See ATTACHMENT "A"].

2.0 COMPLETION SCHEDULE

WELSH Engineering & Land Surveying, P.C. is prepared to commence work on this project immediately upon receipt of written Notice-to-Proceed. The Map will be provided within nine (9) weeks of notice to proceed.

3.0 FEE FOR SERVICES

We propose to provide the services described above for a Lump Sum Fee as follows:

COST: SITE FIELD SURVEY: \$ 19,580.00

We appreciate the opportunity to submit this proposal. If you have any questions, please call me at (914) 773-1701 or e-mail me at bwelsh@welshpc.com. Thank you for considering us for your survey needs.

Sincerely,

WELSH ENGINEERING & LAND SURVEYING, P.C.



William Welsh, P.E., I.L.S.
President

Attachment “A”

AUTOCAD LAYERS SUMMARY

PAGE 1 OF 2

Layer Name	Theme	Color	Linetype	Description
0			CONTINUOUS	
ABUT	RIGHTS	3	CONTINUOUS	ABUTTER
BC	WAYS	122	CONTINUOUS	BOTTOM OF CURB
BD	STRUCTURE	4	CONTINUOUS	BUILDING
BHATCH	STRUCTURE	VARIES	VARIES	BUILDING/BOUNDARY HATCH
BL	GEOMETRY	3	DASHED	BASELINE
BLTIE	GEOMETRY	7		BASELINE TIES
BLTXT	GEOMETRY	3		BASELINE TEXT
BM	CONTROL	2		BENCHMARK
BORDER	BORDER	6	CONTINUOUS	TITLE SHEET BORDER
BOUNDARY	DTM	50	CONTINUOUS	DTM SURFACE BOUNDARY
BR	STRUCTURE	4	CONTINUOUS	BRIDGE STRUCTURES
BS	GROUND	240	CONTINUOUS	BOTTOM OF SLOPE
CBD	GEOMETRY	2		CURVES, BEARINGS, DISTANCES
CC	STRUCTURE	2	CONTINUOUS	CONCRETE SLAB OR PAD
CD	WAYS	216	CENTER1	CENTERLINE OF DRIVE
CG	WAYS	216	CENTER1	CENTERLINE OF GRAVEL
CL	GEOMETRY	1	CENTER	CENTERLINE (calculated)
CONT-MJR	ELEVATIONS	20	HIDDEN	EXISTING INDEX CONTOURS
CONT-MNR	ELEVATIONS	8	DASH10	EXISTING INTERMEDIATE CONTOURS
CP	WAYS	216	CENTER1	CENTERLINE OF PAVEMENT
CR	WAYS	216		CROWN OF ROAD
DE	MANMADE	7	CONTINUOUS	MISCELLANEOUS TOPO (labeled)
DETAIL	INSET	161		AREA OF EXPANDED DETAIL
DR	UTILITY	100	CONTINUOUS	DRAIN (subsurface)
EASE	RIGHTS	3	HIDDEN	EASEMENT
EC	WAYS	122	DASH14	EDGE OF COBBLESTONE
ED	WAYS	122	DASH14	EDGE OF DIRT
EG	ELEVATIONS	8	DASH10	EX GRADE CONTOURS
EGH	ELEVATIONS	20	HIDDEN	EX HIGHLIGHTED CONTOURS
EGT	ELEVATIONS	2		EXISTING GRADE TEXT
EL	UTILITY	10	CONTINUOUS	ELECTRIC (subsurface)
EM	GROUND	4	DOT3	EARTH/DEBRIS MOUND
EP	WAYS	122	CONTINUOUS	EDGE OF PAVEMENT
ER	WAYS	122	CONTINUOUS	EDGE OF ROAD
ES	WAYS	242	DASH14	EDGE OF (CRUSHED) STONE
FENCE	MANMADE	21	CONTINUOUS	FENCES
FO	UTILITY	30	CONTINUOUS	FIBER OPTIC (subsurface)
GA	UTILITY	50	CONTINUOUS	GAS (subsurface)
GE	UTILITY	201	CONTINUOUS	GEOTECHNICAL
GR	MANMADE	1	CONTINUOUS	GUARD RAIL
ITXT	UTILITY	120		INVERT TEXT
LE	NATURAL	250	CONTINUOUS	LEDGE
LEGEND	NOTES	7		LEGEND
LOGO	BORDER	160		SMC LOGO
LS	MANMADE	101	CONTINUOUS	LANDSCAPE STRUCTURES
MATCH	BORDER	6	CONTINUOUS	MATCH LINE
MI	DETAIL	42	CONTINUOUS	MISCELLANEOUS (labeled)
MO	GEOMETRY	2	CONTINUOUS	MONUMENTS
NE_GRID	CONTROL	8	CONTINUOUS	COORDINATE GRID
NORTH	CONTROL	1	CONTINUOUS	NORTH ARROW

for R14
deliveries only

WELSH
ENGINEERING & LAND SURVEYING P.C.
 343 Manville Road
 Pleasantville NY 10570

AUTOCAD LAYERS SUMMARY

PAGE 2 OF 2

Layer Name	Theme	Color	Linetype	Description
NOTES	NOTES	7		TITLE SHEET NOTES
P_*	POINTS			POINT LAYERS
PI	UTILITY	140	CONTINUOUS	PIPES
PL	RIGHTS	5	CONTINUOUS	PROPERTY LINES
PM	WAYS	41	CONTINUOUS	PAVEMENT MARKINGS
RB	RAILROAD	201	CONTINUOUS	RAILROAD BALLAST
RK	NATURAL	201	CONTINUOUS	ROCK
RM	RAILROAD	141	CONTINUOUS	RAILROAD MAIN LINE
ROW	RIGHTS	6	DASHED	RIGHT-OF-WAY
RR	RAILROAD	241		RAILROAD DATA
RS	RAILROAD	1	CONTINUOUS	RAILROAD SPUR
RTXT	WAYS	2	CONTINUOUS	ROAD TEXT
S_*				SYMBOL LAYERS
SCALE	NOTES	1		DRAWING SCALE
SE	UTILITY	130	CONTINUOUS	SEWER (subsurface)
SG	UTILITY	30	CONTINUOUS	SIGNAL (subsurface)
SL	RIGHTS	1	DOT	SETBACK LINES
SN	WAYS	41	CONTINUOUS	SIGNS
SP	ELEVATIONS	21	CONTINUOUS	SPOT ELEVATIONS
SRF-FLT	DTM	7	CONTINUOUS	SURFACE FAULT LINES
SRF-VIEW	DTM	VARIES	CONTINUOUS	SURFACE VECTORS
SS	WAYS	181	CONTINUOUS	STREET STUCTURES (labeled)
ST	UTILITY	40	CONTINUOUS	STEAM (subsurface)
STALBL	GEOMETRY	3		STATION LABELS
SW	WAYS	1	CONTINUOUS	SIDEWALK
TC	WAYS	42	CONTINUOUS	TOP OF CURB
TE	UTILITY	30	CONTINUOUS	TELEPHONE (subsurface)
TL	NATURAL	100	CONTINUOUS	TREE LINE
TM	MANMADE	7	CONTINUOUS	TOPOGRAPHY--MANMADE
TOWNL	RIGHTS	6	CENTER	TOWN LINE
TR	CONTROL	1	CONTINUOUS	TRAVERSE/CONTROL
TREE	NATURAL	100	CONTINUOUS	TREES
TS	GROUND	200	CONTINUOUS	TOP OF SLOPE
TV	UTILITY	30	CONTINUOUS	CABLE TV (subsurface)
TXT	TEXT-GEN	1	CONTINUOUS	GENERAL TEXT
UP	UTILITY	140	CONTINUOUS	UTILITY POLES
UT	UTILITY	20	CONTINUOUS	MISCELLANEOUS UTILITIES (subsurface)
VIEW	BORDER	255		VIEW WINDOW
WA	UTILITY	140	CONTINUOUS	WATER (subsurface)
WALL	MANMADE	21	CONTINUOUS	WALLS
WB	NATURAL	142	STREAM	WATER BODIES
WE	NATURAL	2	DIVIDE 2	WETLAND
WETSYM	NATURAL	140		WETLAND SYMBOL

REFERENCES – 2012 (– cont.)

George Moglia, P.E., PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
One Penn Plaza
New York, N.Y. 10119

Tel. # (212) 465-5778

Project highlights: U.S. Mission to the United Nations Project (years 2000 to 2011), First Avenue, E. 44th, 45th Streets, Manhattan, N.Y., Topographic, Boundary, Utility & Construction Surveys.

Bruce Savik, P.E., SAVIK & MURRAY, Consulting Engineers
Thomas Murray, P.E., SAVIK & MURRAY, Consulting Engineers
2150 Smithtown Avenue
Ronkonkoma, NY 11779

Tel. # (631) 467-7775

Project highlights: Road Improvement Projects, Town owned Airport Improvement Projects, 1993 to 2012, various municipalities, Town of Babylon, Village of Babylon, Town of Brookhaven, Village of Sag Harbor, Town of Southampton, Town of Islip, Nassau County for G.P.S., Topographic, Boundary, Utility, Acquisition Map, Subdivision Surveys.

Paul Fraioli, P.E., Village Engineer
Village of Ossining
101 Route 9A
Ossining, N.Y. 10562

Tel. # (914) 941-4660

Project highlight: Spring Street SEWERLINE Improvement Project, Topographic, Boundary, Utility Survey [2006];

WELSH ENGINEERING & LAND SURVEYING, P.C.

343 Manville Road, Pleasantville, N.Y. 10570

REFERENCES - 2012

Dave Turiano, P.E., Village Engineer for Village of Briarcliff Manor
1111 Pleasantville Road
Briarcliff Manor, N.Y. 10510

Tel. # (914) 941-4800/**944-2770**

Project highlights: Washburn Road, Todd Lane, Todd School WATERLINE Improvement Project, Topographic, Boundary, Utility, G.P.S. Survey;
Sleepy Hollow Road, DRAINAGE Improvement Project, Topographic, Boundary & Utility Survey.

Joe Carpenter, Survey Dept. Operating Supervisor,
Con Edison
1601 Bronxdale Ave.,
Bronx, N.Y. 10462

Tel. # (646) 772-0535

Project highlights: Utility Improvement Projects at numerous Con Edison Facilities & miles of various street locations, (2006-2012) including Town of Cortlandt, miles of Topographic, Boundary, Utility, Surveys and 3 miles of survey for Route 9A, Topographic, Boundary, Utility, G.P.S. Surveys within the **Village of Croton on Hudson**. [See also Daniel F. O'Conner, P.E., Village Engineer, Village of Croton on Hudson]. Also, more than 9 miles of N.Y. S. Route 22, from Mt. Vernon to White Plains, Westchester County (2007-2008).

Wendy Johnston, M.T.A./Metro-North Railroad
M.T.A. Real Estate/Parking Facilities
347 Madison Avenue
New York, N.Y.

Tel. # (212) 340-2342

Project highlights: Parking Improvement Projects at 39 Metro-North Railroad Stations, (1996-2012) including Town of Cortlandt Parking Expansion, Topographic, Boundary, G.P.S., Utility, Acquisition Map Surveys for MTA property, Route 9A, Trinity Avenue, etc. [2005 to 2012] and Topographic, Boundary, Utility Surveys for Croton Harmon Station in the **Village of Croton on Hudson**.

Jim Timmings, Town & Village Assessor, Mt. Pleasant/Village of Pleasantville
Mount Pleasant Town Hall
Columbus Avenue
Valhalla, N.Y.

Tel. # 742-2345

[Misc. Surveys within Town/Village]