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NAS CECIL FIELD, FL
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SAMPLING AND ANALYSIS WORK PLAN FOR OLD GOLF COURSE NAS CECIL FIELD FL
11/5/1999
TETRA TECH NUS INC

Sampling and Analysis Work Plan
Old Golf Course
Naval Air Station Cecil Field
Jacksonville, Florida

November 5, 1999

Sampling and analysis of surface soils is proposed for the Old Golf Course, as shown in Figure A. Sometime during the 1950s, the old golf course was abandoned. The area is now overgrown, and there may be no visual evidence of the greens, tee boxes, or other golf course components. Samples will be collected at greens and tee boxes as identified on aerial photos from 1952 and 1960. Areas with identified greens and tee boxes that were subsequently reworked by building, parking lot, or road construction will not be sampled. A total of 12 surface soil samples will be collected during this investigation from the approximate locations identified on Figure A and described in Table 1.

The sampling locations are to be surveyed prior to sample collection. Because the purpose of this sampling is to assess impacts at the former greens and tee boxes, the field crew should try to confirm that the locations are on the greens or tee boxes by looking for the adjacent sand traps or bunkers. At a minimum, the samples should be collected from flat soil areas, rather than sandy or sloped former traps or bunkers.

The sampling activities and procedures described in this work plan will be performed in accordance with the U.S. EPA Region 4 Environmental Investigation Standard Operating Procedures and Quality Assurance Manual (EISOPQAM) and the Base-Wide Generic Work Plan for Naval Air Station (NAS) Cecil Field. Specifically, the Base-Wide Generic Work Plan includes procedures for management of investigation-derived wastes in Volume I and standard operating procedures in the Project Operations Plan in Volume II.

The surface soil samples will be collected as grab samples using plastic, disposable trowels. The proposed soil sample locations shall be located by a registered land surveyor and marked with a wooden stake or pin flag labeled with the sample identification. The sampling crew will work with the survey crew to establish the best procedures to limit the time between the marking of the location and collecting the sample. Personnel protection equipment and other waste trash (e.g. disposable trowels) will not be considered hazardous and will be disposed in a municipal landfill. Such trash will be collected in a plastic bag and disposed in a suitable trash receptacle. Removed soil from the surface soil sampling in excess of sampling volume requirements will be placed back on the ground and the turf replaced or repaired.

Sampling handling requirements, the bottleware required, preservation, and holding time requirements for the analysis proposed for this sampling event are as identified in the following table:

Analysis	Analytical Method	Bottleware	Preservation	Holding Time(1)
Pesticides and Herbicides	SW-846 8081A , 8141A, and 8151A	3 8-oz. glass jars	Cool to 4°C	14 days to extraction, except organophosphorus pesticides (7 days); 40 days to analysis
Arsenic	SW-846 6010B	8-oz. glass jar	Cool to 4°C	180 days to analysis

(1) Holding times are measured from the date/time of sample collection.

Analytical results will be reported on a 14-day turn around basis.

The laboratory contracted to do this work is as follows:

ACCUTEST SOUTHEAST
4405 Vineland Road, Suite C-15
Orlando, Florida 32881
Attention: Susan Gaudios
(407) 425-5700
Fax: (407) 425-0707

As agreed upon by the BCT, the collection of rinsate and trip blanks has been eliminated at NAS Cecil Field. In addition, field blanks will not be collected during this sampling program because there will be minimal decontamination of sampling equipment. In accordance with these changes, the following table summarizes the frequency and type of field Quality Assurance/Quality Control (QA/QC) samples to be collected for this sampling program.

Type of Samples	Frequency	Samples to be Collected
Field Duplicate	1/10 sample/matrix	2
Lab MS/MSD	1/20 samples/matrix	1(1)

(1) MS/MSD is a laboratory QA/QC requirement, separate samples not required, only additional volume (2x).

As agreed upon by the BCT, formal data validation has been eliminated from the installation restoration program at NAS Cecil Field. However, the analytical data packages generated by the analytical laboratory will be reviewed by Tetra Tech NUS personnel to eliminate false positives and false negative results.

Table 1

Sampling and Analysis
Old Golf Course

Sample ID CEF-OGC-	Location	Analysis		
		Pesticides	Herbicides	Arsenic
SS-001-01	Approximately 500 feet southeast of Quarters A (0 to 1 foot)	X	X	X
SS-002-01	Approximately 15 feet south of CEF-OGC-001-01 (0 to 1 foot)	X	X	X
SS-003-01	Approximately 220 feet northeast of CEF-OGC-SS-001-01 (0 to 1 feet)	X	X	X
SS-004-01	Approximately 15 feet south of CEF-OGC-SS-004-01 (0 to 1 foot)	X	X	X
SS-005-01	Approximately 700 feet southeast of CEF-OGC-SS-002-01 (0 to 1 feet)	X	X	X
SS-006-01	Approximately 15 feet south of CEF-OGC-SS-005-01 (0 to 1 foot)	X	X	X
SS-007-01	Approximately 240 feet southeast of CEF-OGC-SS-003-01 (0 to 1 foot)	X	X	X
SS-008-01	Approximately 15 feet south of CEF-OGC-007-01 (0 to 1 foot)	X	X	X
SS-009-01	Approximately 180 feet south of Facility 331 (0 to 1 feet)	X	X	X
SS-010-01	Approximately 15 feet south of CEF-OGC-SS-009-01 (0 to 1 foot)	X	X	X
SS-011-01	Approximately 260 feet southeast of CEF-OGC-SS-005-01 (0 to 1 feet)	X	X	X
SS-012-01	Approximately 15 feet south of CEF-OGC-SS-011-01 (0 to 1 foot)	X	X	X

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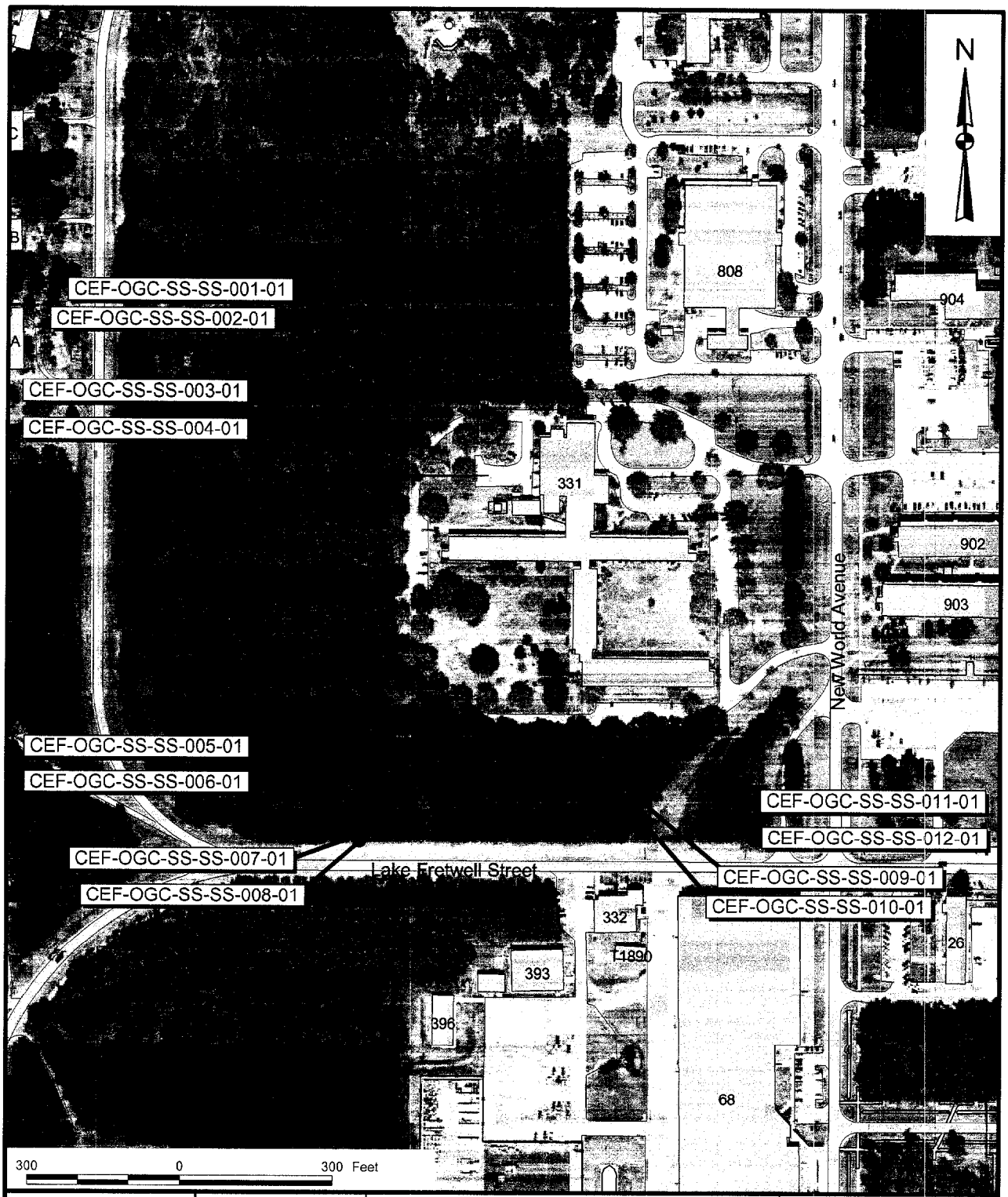
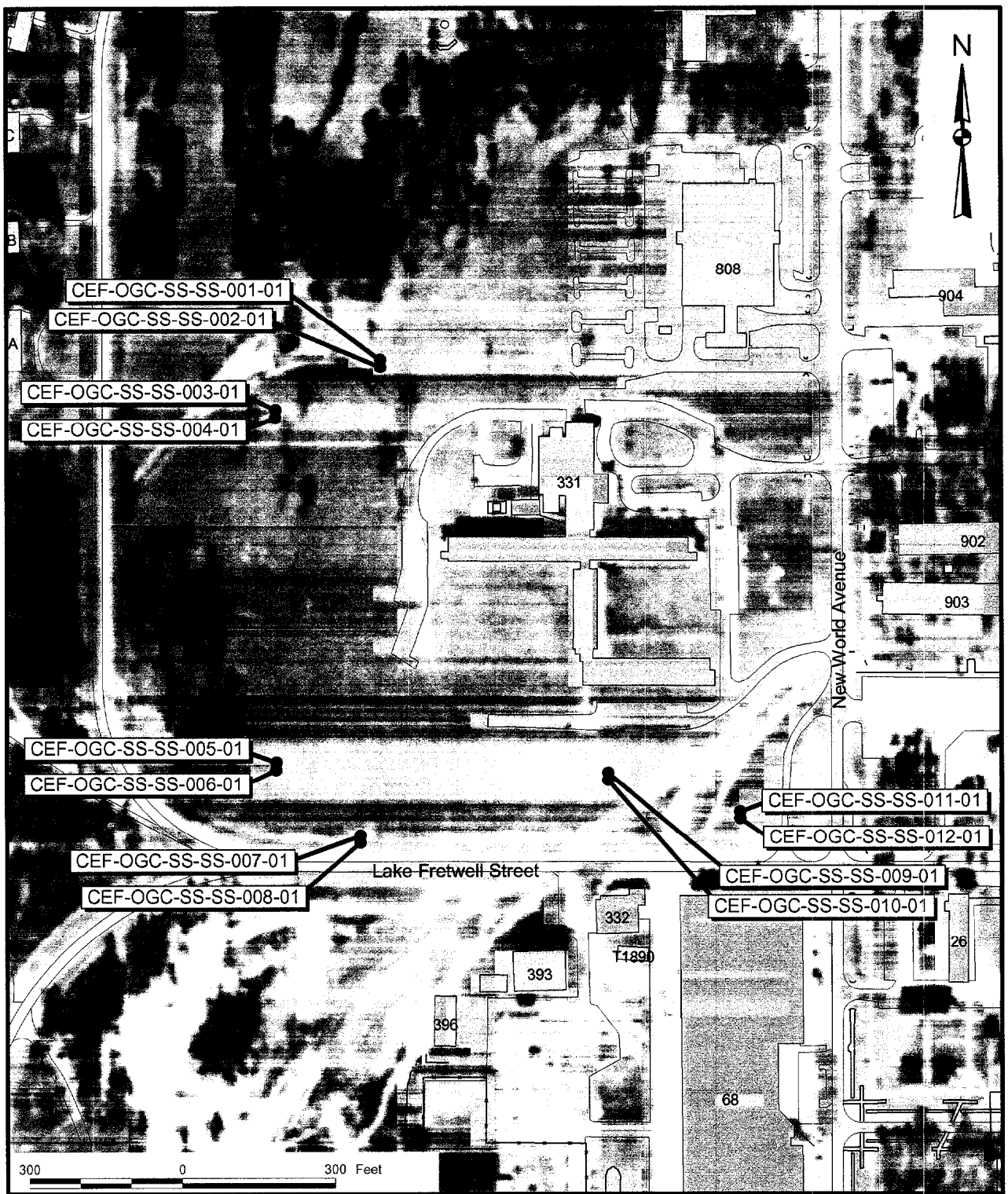


DRAWN BY MJJ	DATE 01Nov99	PROPOSED SAMPLE LOCATIONS CURRENT AERIAL PHOTO OLD GOLF COURSE NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY	DATE		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. — REV 0

P:\GIS\CECIL\oldgolfcourse.apr 01Nov99 MJJ Layout - Proposed Sample Locations



DRAWN BY MJJ	DATE 01Nov99	PROPOSED SAMPLE LOCATIONS 1960 AERIAL PHOTO OLD GOLF COURSE NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY	DATE		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. — REV 0

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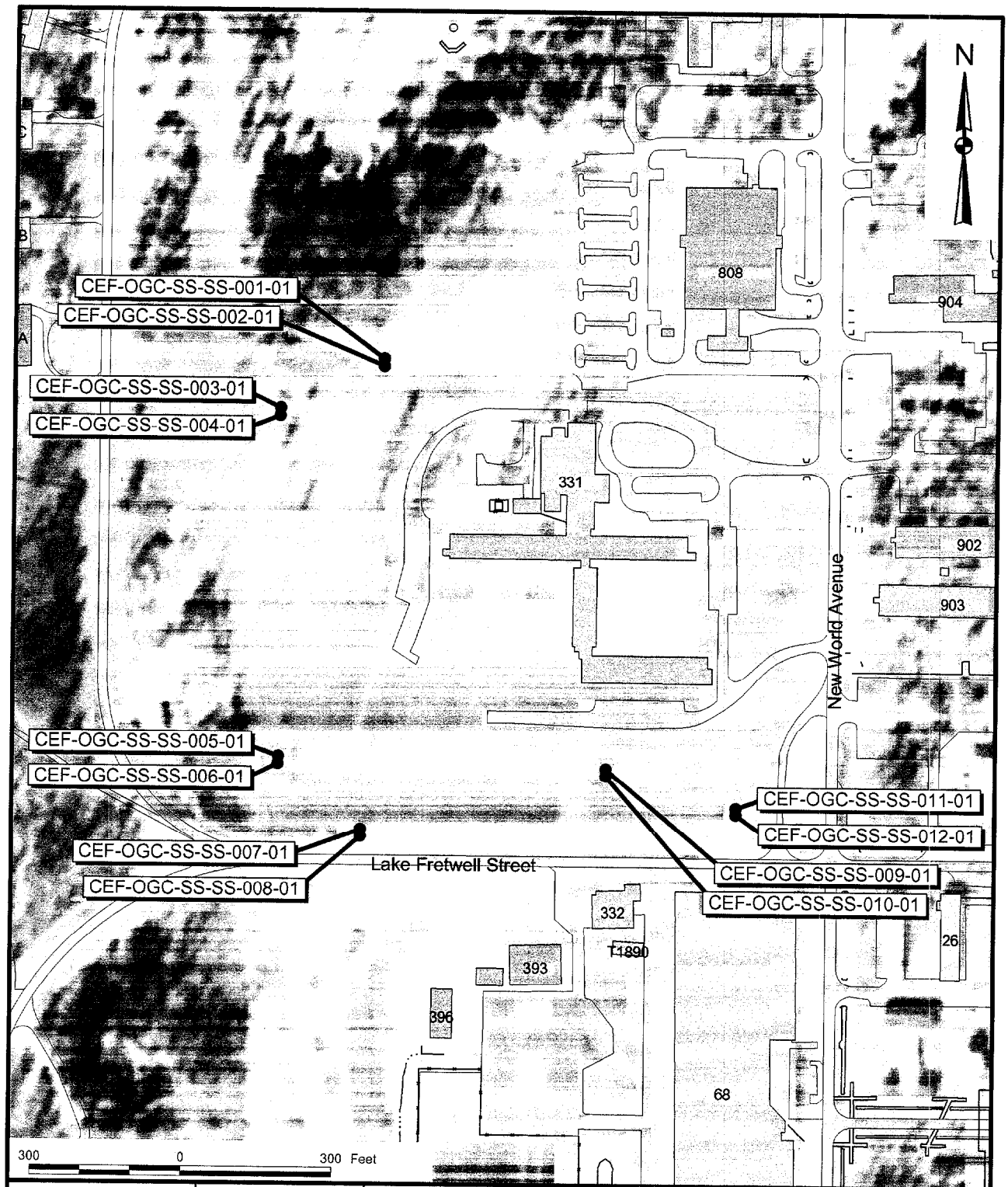

DRAWN BY MJJ	DATE 01Nov99	PROPOSED SAMPLE LOCATIONS 1952 AERIAL PHOTO OLD GOLF COURSE NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY	DATE		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. — REV 0

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