



INCORPORATED

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March 14, 2005

G.F.R. Enterprises, Inc.

Job No. 04568-1

434 North Second Avenue

Upland, California 91786

Attention: Mr. Felix Robles

Subject: Compaction Report
 Water Line Trench Backfill Tests
 Tract No. 16443
 San Bernardino, California

Dear Mr. Robles:

This report covers the results of in-place density tests taken to date on the water line trench backfill at the above subject location.

All tests were taken in coordination with and as requested by the client's representative.

FIELD PROCEDURE:

A total of 33 in-place density tests were taken by the sand volume and nuclear methods between February 3 and February 8, 2005. Representative samples of the soils encountered were returned to the laboratory for determination of the optimum moisture content - maximum dry density curves.

The locations of the in-place density tests are indicated on the attached Field Compaction Test Summary Sheets and Plats.

OPTIMUM MOISTURE - MAXIMUM DENSITY RELATION:

ASTM D 1557

<u>Soil Type</u>	<u>Classification</u>	<u>Optimum Moisture (Percent)</u>	<u>Maximum Dry Density (PCF)</u>
1	Silty Sand, fine to medium, with coarse and gravel to 1/8", brown (SM)	10.0	125.5
2	Silty Sand, fine to medium, with coarse, brown (SM)	9.5	121.0
3	Silty Sand, fine to medium, with coarse and gravel to 3/4", brown (SM)	9.0	131.5
5	Silty Sand, fine to medium, with coarse and gravel to 3/4", brown (SM) Import	8.0	133.5

RESULTS:

The results of the in-place density tests taken to date, and the relative compaction in each case, are shown on the attached Field Compaction Test Summary Sheets.

LIMITATIONS:

C.H.J., Incorporated has striven to perform our services within the limits prescribed by our client, and in a manner consistent with the usual thoroughness and competence of reputable geotechnical engineers practicing under similar circumstances. No other representation, express or implied, and no warranty or guarantee is included or intended by virtue of the services performed or reports, opinion, documents, or otherwise supplied.

This report reflects the testing conducted on the site as the site existed during the preparation of the water line trench backfill, which is the subject of this report. However, changes in conditions can occur with the passage of time, due to natural processes or the works of man, on this or adjacent properties. Changes in applicable or appropriate standards may also occur whether as a result of legislation, application, or the broadening of knowledge. Therefore, this report is indicative of only those conditions tested at the time testing was performed, and the findings of this report may be invalidated fully or partially by changes outside of the control of C.H.J., Incorporated. This report should not be relied upon after a period of one year.

The test results presented herein represent an independent sample of the compaction achieved by the contractor who performed the actual compaction operation. Certain information concerning the depth and location of the water line trench backfill tested was furnished by persons representing themselves as knowledgeable of those conditions. In many cases, independent verification of that information furnished to us by others, or the knowledge of that information by any person representing themselves as knowledgeable, is not possible. That information is relied upon during the performance of these tests.

The contractor performing the work on this project remains primarily responsible and liable for the compaction achieved at this project. Compaction testing by our firm in no way relieves the contractor from his obligation to properly perform his work, and this report does not serve as a warranty or guarantee of the contractor's work or the information supplied to us by the contractor.

The results in this report are based upon testing performed and data collected at separate locations, and interpolation between these locations, carried out for the project and the scope of services described. It is assumed and expected that the conditions between locations of tests are similar to those encountered at the individual locations where testing was performed. However, conditions between these locations may vary significantly. Should conditions be encountered in the field, by the client, any firm performing services for the client, or the client's assign, that appear different than

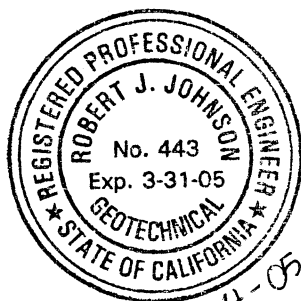
those described herein, this firm should be contacted immediately in order that we might evaluate their effect.

If this report, or portions thereof, are provided to contractors or included in specifications, it should be understood by all parties that they are provided for information only and should be used as such.

This report and its contents are not intended or represented to be suitable for reuse on extensions or modifications of the project or for use on any other project.

Respectfully submitted,

C.H.J., INCORPORATED



A handwritten signature in black ink, appearing to read "Ben Williams".

Ben Williams, P.G.
Senior Staff Geologist

A handwritten signature in black ink, appearing to read "Robert J. Johnson".

Robert J. Johnson, G.E. 443
President

AL/BW/RJJ:al

Enclosures: Field Compaction Test Summary Sheets
Plats

FIELD COMPACTION TEST SUMMARY SHEET

Job No. 04568-1

Sheet 1 of 2

PROJECT:

G.F.R. ENTERPRISES, INC. - WATER LINE TRENCH BACKFILL TESTS
TRACT NO. 16443, SAN BERNARDINO, CALIFORNIA

Date	Test No.	Location of Test	Depth Of Cut (ft.)	Depth Of Fill (ft.)	Depth Of Test (ft.)	DENSITIES			MC (%)	Soil Type	Remarks or Retest of
						Dry (lbs./cu. ft.)	Max. (lbs./cu. ft.)	Rel. (%)			
02/03/05	BF-1	Opposite Lot No. 51, Main	2.0	2.0	1.0-1.5	126.4	131.5	96	6.0	3	12% RX
	BF-2	Opposite Lot No. 52, Main	2.0	2.0	1.0-1.5	127.0	131.5	97	7.3	3	
	BF-3	Opposite Lot No. 56, Main	2.0	2.0	1.0-1.5	124.1	131.5	94	8.2	3	
	BF-4	Opposite Lot No. 60, Main	2.0	2.0	1.0-1.5	130.2	133.5	98	5.0	5	6% RX
	BF-5	Opposite Lot No. 18, Main	2.0	2.0	1.0-1.5	115.1	131.5	88	7.0	3	* See BF-19
	BF-6	Opposite Lot No. 77, Main	2.0	2.0	1.0-1.5	126.9	131.5	97	6.8	3	5% RX
	BF-7	Opposite Lot No. 73, Main	2.0	2.0	1.0-1.5	123.5	131.5	94	7.9	3	7% RX
	BF-8	Opposite Lot No. 90, Main	2.0	2.0	1.0-1.5	124.5	131.5	95	9.0	3	15% RX
	BF-9	Opposite Lot No. 127, Main	2.0	2.0	1.0-1.5	116.5	125.5	93	9.0	1	
	BF-10	Opposite Lot No. 33, Main	2.0	2.0	1.0-1.5	120.7	131.5	92	8.0	3	
02/04/05	BF-11	Opposite Lot No. 29, Main	2.0	2.0	1.0-1.5	123.0	131.5	94	8.2	3	9% RX
	BF-12	Opposite Lot No. 118, Main	2.0	2.0	1.0-1.5	109.9	121.0	91	6.2	2	
	BF-13	Opposite Lot No. 114, Main	2.0	2.0	1.0-1.5	119.8	131.5	91	4.2	3	
	BF-14	Opposite Lot No. 110, Main	2.0	2.0	1.0-1.5	125.3	131.5	95	4.0	3	20% RX
	BF-15	Opposite Lot No. 100, Main	2.0	2.0	1.0-1.5	114.5	121.0	95	4.5	2	
	BF-16	Opposite Lot No. 96, Main	2.0	2.0	1.0-1.5	117.7	131.5	90	7.3	3	
	BF-17	Opposite Lot No. 92, Main	2.0	2.0	1.0-1.5	128.7	131.5	98	7.2	3	
	BF-18	Opposite Lot No. 22, Main	2.0	2.0	1.0-1.5	121.2	131.5	92	7.5	3	
	BF-19	Opposite Lot No. 18, Main	2.0	2.0	1.0-1.5	124.1	131.5	94	8.2	3	
	BF-20	Opposite Lot No. 26, Main	2.0	2.0	1.0-1.5	122.3	131.5	93	7.8	3	

LEGEND: (BF) Tests on Backfill; (Max.) Maximum; (Rel.) Relative; (MC) Moisture Content; (RX) Rock Corrected; (*) Denoted Failure

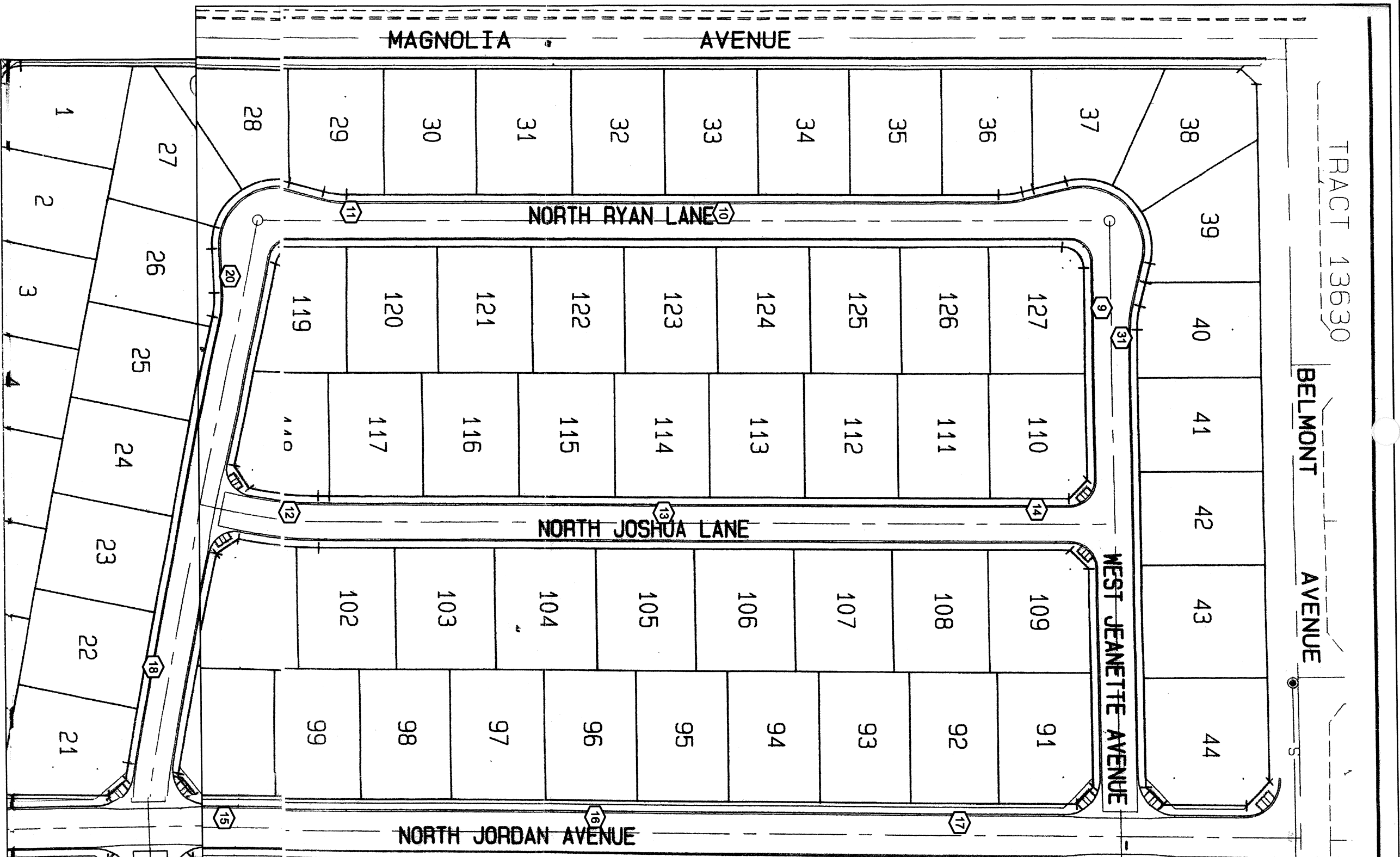
FIELD COMPACTION TEST SUMMARY SHEET

Job No. 04568-1
Sheet 2 of 2

PROJECT: G.F.R. ENTERPRISES, INC. - WATER LINE TRENCH BACKFILL TESTS
TRACT NO. 16443, SAN BERNARDINO, CALIFORNIA

Date	Test No.	Location of Test	Depth Of Cut (ft.)	Depth Of Fill (ft.)	Depth Of Test (ft.)	DENSITIES			MC (%)	Soil Type	Remarks or Retest of
						Dry (lbs./cu. ft.)	Max. (lbs./cu. ft.)	Rel. (%)			
02/04/05	BF-21	Opposite Lot No. 127, Lateral	1.6	1.6	0.9-1.2	121.2	131.5	92	7.5	3	14% RX
	BF-22	Opposite Lot No. 123, Lateral	1.6	1.6	0.9-1.2	122.4	131.5	93	8.0	3	
	BF-23	Opposite Lot No. 107, Lateral	1.6	1.6	0.9-1.2	123.0	131.5	94	8.0	3	
	BF-24	Opposite Lot No. 102, Lateral	1.6	1.6	0.9-1.2	120.8	131.5	92	6.8	3	
	BF-25	Opposite Lot No. 85, Lateral	1.6	1.6	0.9-1.2	126.8	131.5	96	10.4	3	
02/07/05	BF-26	Opposite Lot No. 81, Lateral	1.6	1.6	0.9-1.2	124.1	131.5	94	8.2	3	5% RX 7% RX
	BF-27	Opposite Lot No. 70, Lateral	1.6	1.6	0.9-1.2	121.4	131.5	92	7.3	3	
	BF-28	Opposite Lot No. 66, Lateral	1.6	1.6	0.9-1.2	121.9	131.5	93	9.0	3	
	BF-29	Opposite Lot No. 58, Lateral	1.6	1.6	0.9-1.2	129.2	131.5	98	8.4	3	
	BF-30	Opposite Lot No. 53, Lateral	1.6	1.6	0.9-1.2	117.5	131.5	90	7.0	3	
02/08/05	BF-31	Opposite Lot No. 40, Lateral	1.6	1.6	0.9-1.2	121.4	131.5	92	8.6	3	
	BF-32	Opposite Lot No. 45, Lateral	1.6	1.6	0.9-1.2	122.3	131.5	93	7.8	3	
	BF-33	Opposite Lot No. 51, Lateral	1.6	1.6	0.9-1.2	121.9	131.5	93	8.2	3	

LEGEND: (BF) Tests on Backfill; (Max.) Maximum; (Rel.) Relative; (MC) Moisture Content; (RX) Rock Corrected



PLAT

LEGEND:

— BACKFILL TESTS

FOR: G.F.R. HOMES

WATERLINE TRENCH BACKFILL TESTS

ENCLOSURE

DATE:

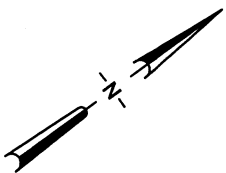
MARCH 2004

SOUTH OF BELMONT AND MAGNOLIA AVENUES

SAN BERNARDINO, CALIFORNIA

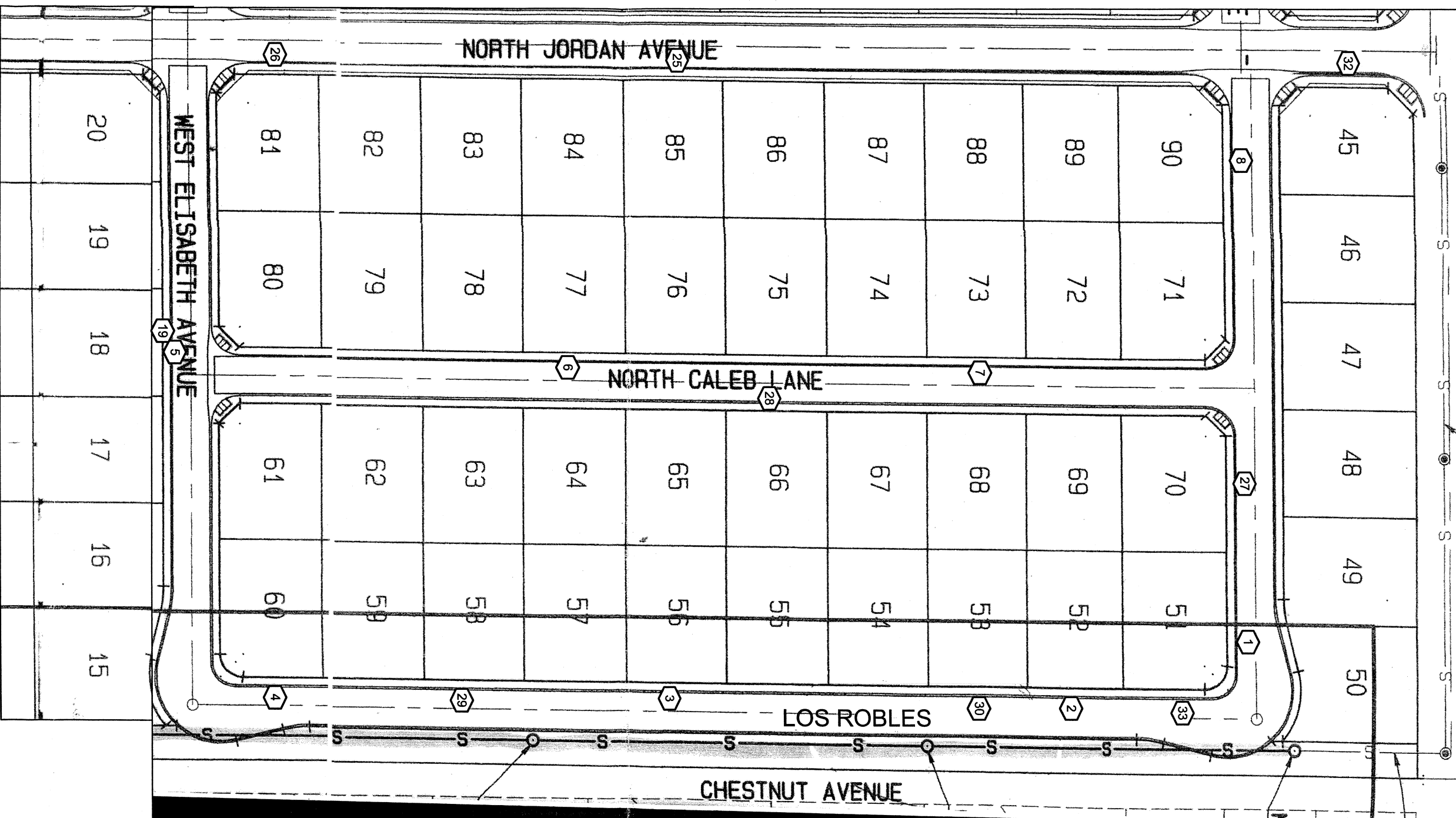
JOB NUMBER
04568-1

SCALE 1"= 100'



C.H.J. INCORPORATED

TRACT 13630
FUTURE SEWER



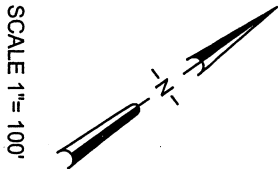
LEGEND:

○ - BACKFILL TESTS

PLAT

FOR: G.F.R. HOMES	WATERLINE TRENCH BACKFILL TESTS	ENCLOSURE
DATE: MARCH 2004	TRACT NO. 16443	JOB NUMBER
	SOUTH OF BELMONT AND MAGNOLIA AVENUES	04568-1
	SAN BERNARDINO, CALIFORNIA	

C.H.J. INCORPORATED



SCALE 1"= 100'