

MEMORANDUM

To: Cuyler Feagles, AIA
City of Portland

Copy: Roy Williams, City of Portland(email)
Jim Stanislaski, Gensler. (email)
Cliff Takara, Gensler (email)
Lacey Fogg, AMEC (email)
Mike Fusco, Turner Construction Company (email)
Geoff Mitchell, Turner Construction Company (email)

From: Matthew T. Grady, P.E. *MTG*

Robert W. Gillespie, P.E.
R.W. Gillespie & Associates, Inc.

Date: 17 November 2010

Subject: Floor Flatness Testing Slab #11 and #12
Terminal Enhancement, Portland International Jetport
Portland, Maine
RWG&A Project No. 557-14

R.W. Gillespie & Associates, Inc., (RWG&A) is submitting the attached information for owner review and approval. On 25 October 2010, RWG&A subcontracted F-Number Testing of New Ipswich, New Hampshire to perform floor flatness testing on Slab #11 Sections 3-3a and 3-3b and on Slab #12, Section 4-6 at the subject project. Slabs #11 and #12 were placed on 22 and 23 October 2010, respectively.

Attached are the letter reports along with individual survey line floor profile data from F-Number Testing. Floor flatness testing was performed in accordance with ASTM 1155-96 and ACI 117 using the Dipstick Auto Read Profiler. Specifications require overall FF value of 40 and overall FL value of 20 for the test surface. It is our understanding that the overall FL value is not enforceable on unshored elevated slabs. The following is a summary of the test results:

<u>Placement Date</u>	<u>Date of Testing</u>	<u>Slab #</u>	<u>Section</u>	<u>FF Value</u>	<u>FL Value</u>	<u>Unshored Elev. Slab</u>
10/22/10	10/25/10	11	3-3a, 3-3b	40.61	24.69	Yes
10/23/10	10/25/10	12	4-6	39.38*	21.36	Yes

R. W. Gillespie & Associates, Inc.

Geotechnical Engineering • Geohydrology • Materials Testing Services

Corporate Office

200 International Dr., Ste 170
Portsmouth, NH 03801
603-427-0244 • Fax 603-430-2041

86 Industrial Park Rd., Ste 4
Saco, ME 04072
207-286-8008 • Fax 207-286-2882

P.O. Box 289
Augusta, ME 04344
207-623-4914 • Fax 207-623-3429

R. W. Gillespie & Associates, Inc.

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Note:* Indicates below specification.

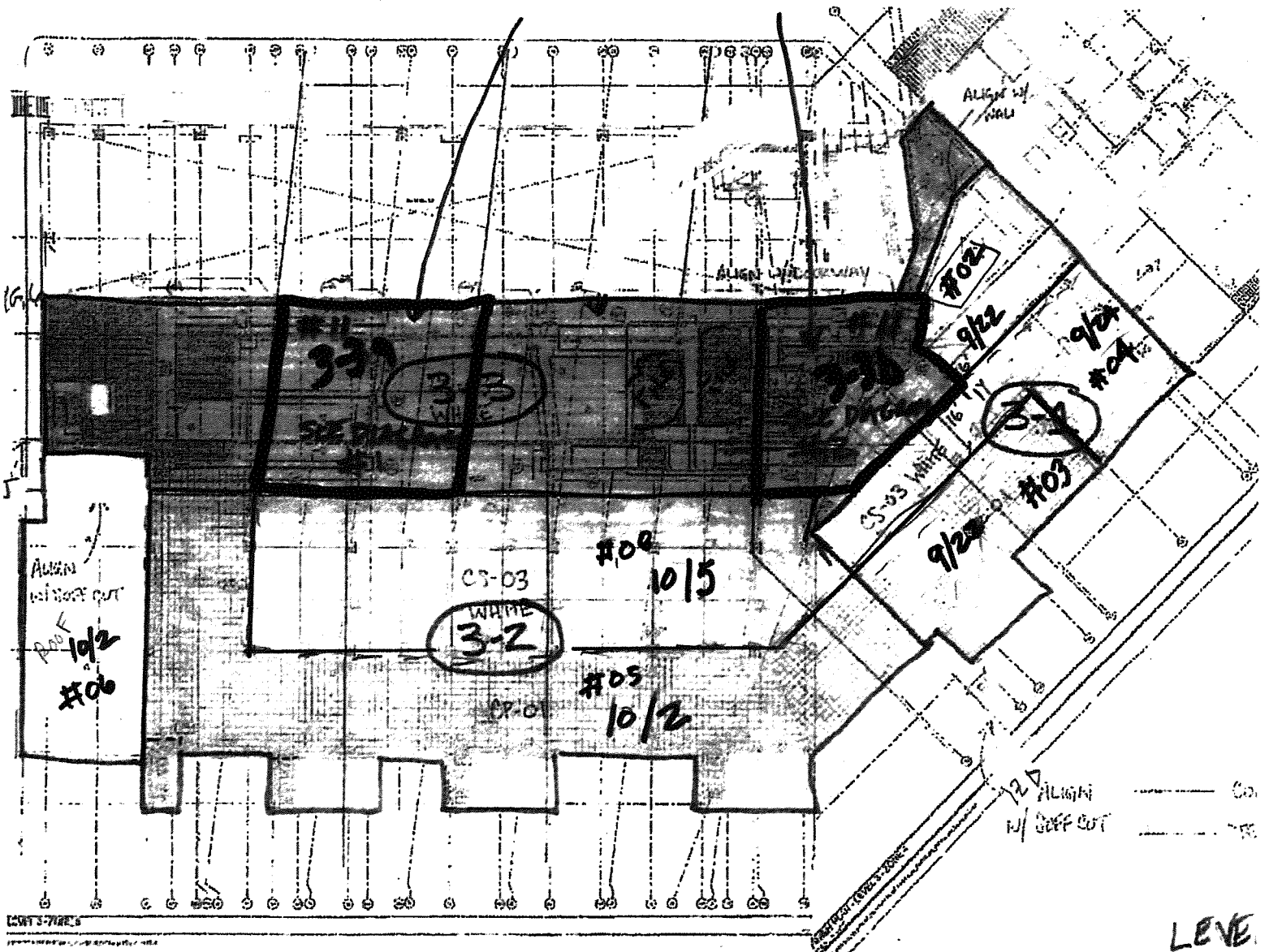
Results meet specification except the FF value for slab #12 is slightly below the required overall FF value of 40. If you have any questions, please contact us.

Encl: Location & Date of Floor Flatness Testing Sketches - Level 3 and Level 4
F-Number Testing Report dated 30 October 2010 - Slab #11
F-Number Testing Report dated 30 October 2010 - Slab #12

MTG:md

G:\MattGdocs\Projects\500\2010-11-16 557-14 Floor Flatness Testing Slab #11 12.wpd

SLAB # 11
 SECTION 3-3a, 3-3b
 FLATNESS TESTING LOCATIONS

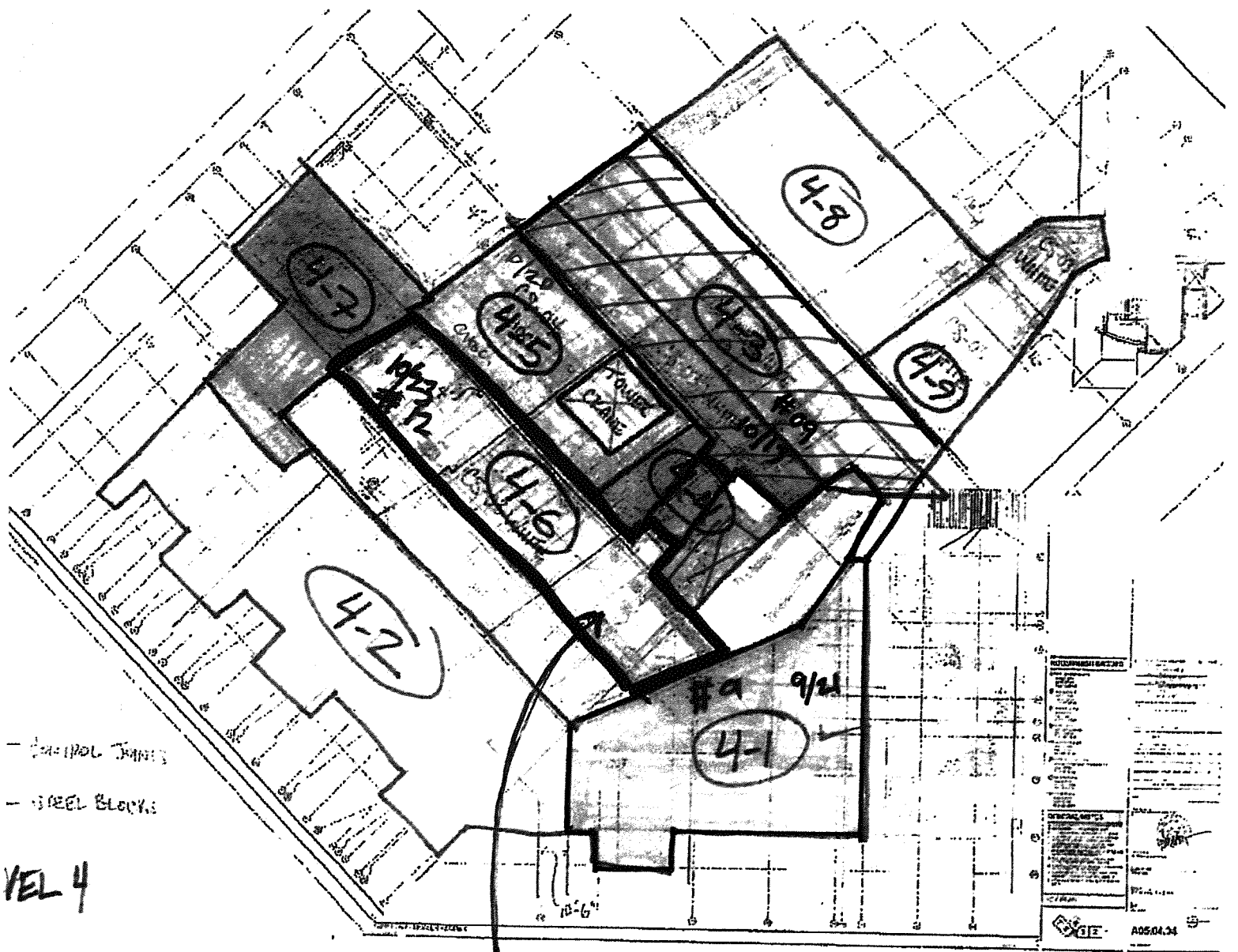


Y8

Y0.5

LEVEL
 3

PROJECT: PORTLAND INTERNATIONAL
 JETPORT
 PROJECT #: 55714
 DATE: 10/25/10



- CONTROL JOINTS
 - STEEL BLOCKS
 VEL 4

SLAB # 12
 SECTION 4-6 TESTED
 LOCATION OF FLOOR FLATNESS TESTING

PROJECT: PORTLAND INTERNATIONAL
 JOYPOOT.
 PROJECT #: 557-14
 DATE: 10/25/10

F - NUMBER TESTING

surface flatness/levelness

a division of Earl R. Somero & Associates, Inc.

October 30, 2010

RECEIVED
NOV 15 2010

Mr. Mathew Grady
R W Gillespie & Associates, Inc.
86 Industrial Park Road, Suite 4
Saco, ME 04072

Slab #12
Level 4, SECTION 4-6, WHITE
Col lines Z1-Z6 & XL-XM
RWGGA# : 557-14

RE: F-Number Tolerance Testing
Portland Jetport, Portland, ME

Dear Mr. Grady:

The purpose of this letter is to notify you of the F-Number test results for the above referenced slabs. The floor slabs were tested in accordance with the provisions set forth in ASTM-1155-96 and ACI 117 Standard using the DIPSTICK AUTO-READ PROFILER. This slab was placed on or about Friday October 22, 2010, and tested on Monday, October 25, 2010. Blankets covered the slab, and I tested over poly vapor barrier.

SPECIFICATIONS: Floors shall conform to the following surface profile tolerances:

POLISHED FLOORS (COLORED CONCRETE) FF: 40 FL:

RANDOMLY TRAFFICKED FLOOR SURFACE:

Specified Overall FF Value: 25	Specified Overall FL Value: 20
Minimum Local FF Value: 17	Minimum Local FL Value: 15

TEST SECTION RESULTS FOR SLAB #12 (COLORED CONCRETE)

The overall FF value is 39.38, with a 90% Confidence Interval <37.32-41.45>
which is ~~ABOVE~~
BELOW the Specified Overall Value.

The overall FL value is 21.36, with a 90% Confidence Interval <20.08-22.64>
which is not enforceable on unshored elevated slabs

Mr. Mathew Grady
R W Gillespie & Associates, Inc,
Jetport, Portland, ME – Slab #12
October 30, 2010
Page 2

Individual survey lines are as follows:

LINE #	FF #	FL #	Rdgs	LINE #	FF #	FL #	Rdgs
12ACR1	43.26	26.78	29	12UP06	45.87	15.14	29
12ACR2	55.95	31.56	29	12UP07	30.95	22.14	29
12ACR3	50.81	27.30	29	12UP08	36.23	23.16	29
12ACR4	24.67	20.72	29	12UP09	51.27	22.90	29
12ACR5	43.38	20.45	51	12UP10	44.07	19.16	51

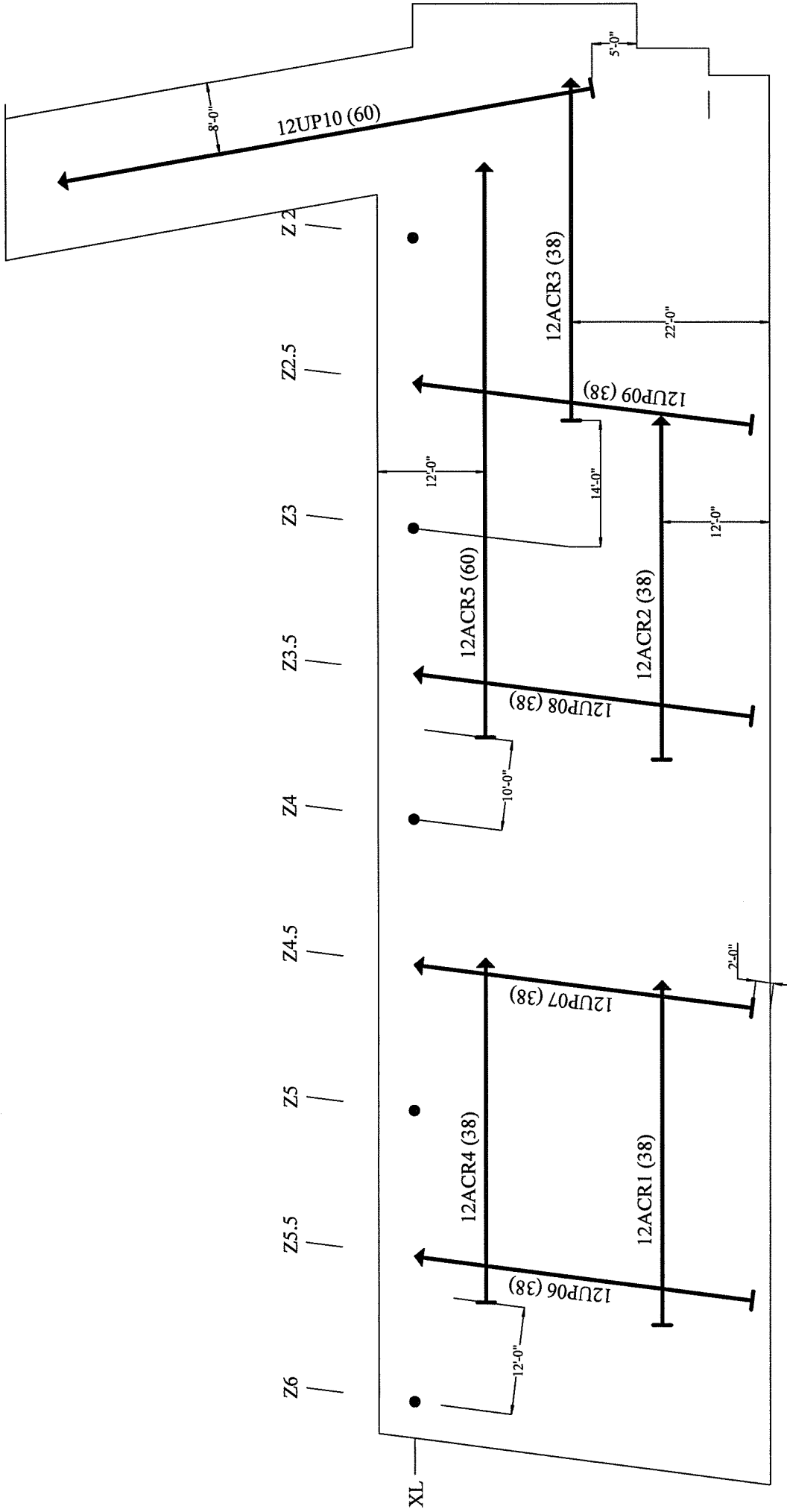
Number of Readings required: 230 Actual: 334

Please do not hesitate to call if you have any questions.

Sincerely yours,



Earl R. Somero
F-Number Testing



JETPORT
 PORTLAND, ME
 SLAB #12
 LEVEL 4

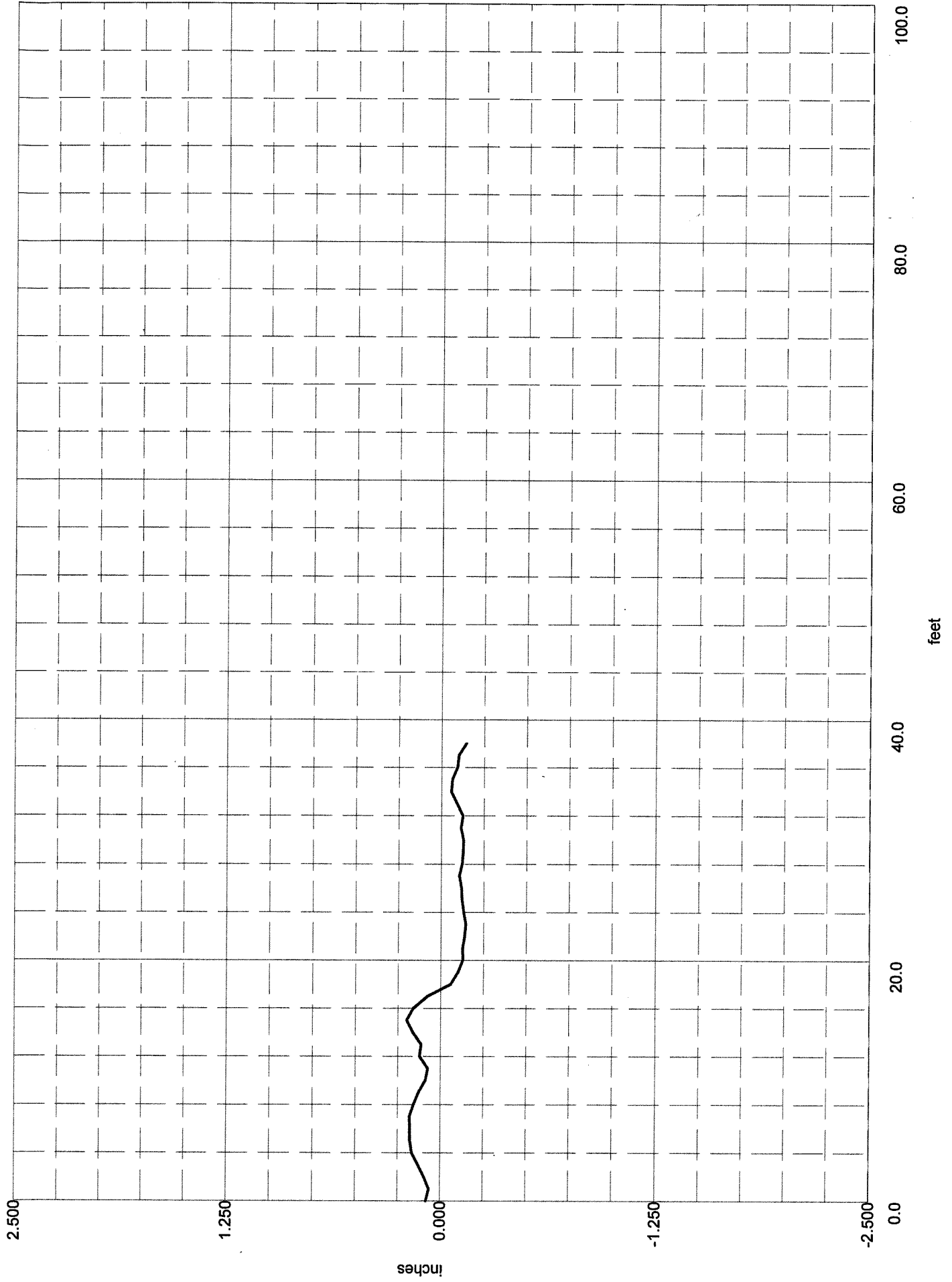
Earl R. Somero



PO Box 486 New Ipswich, NH 03071
 603-878-1634

SECTION 4-6, WITH

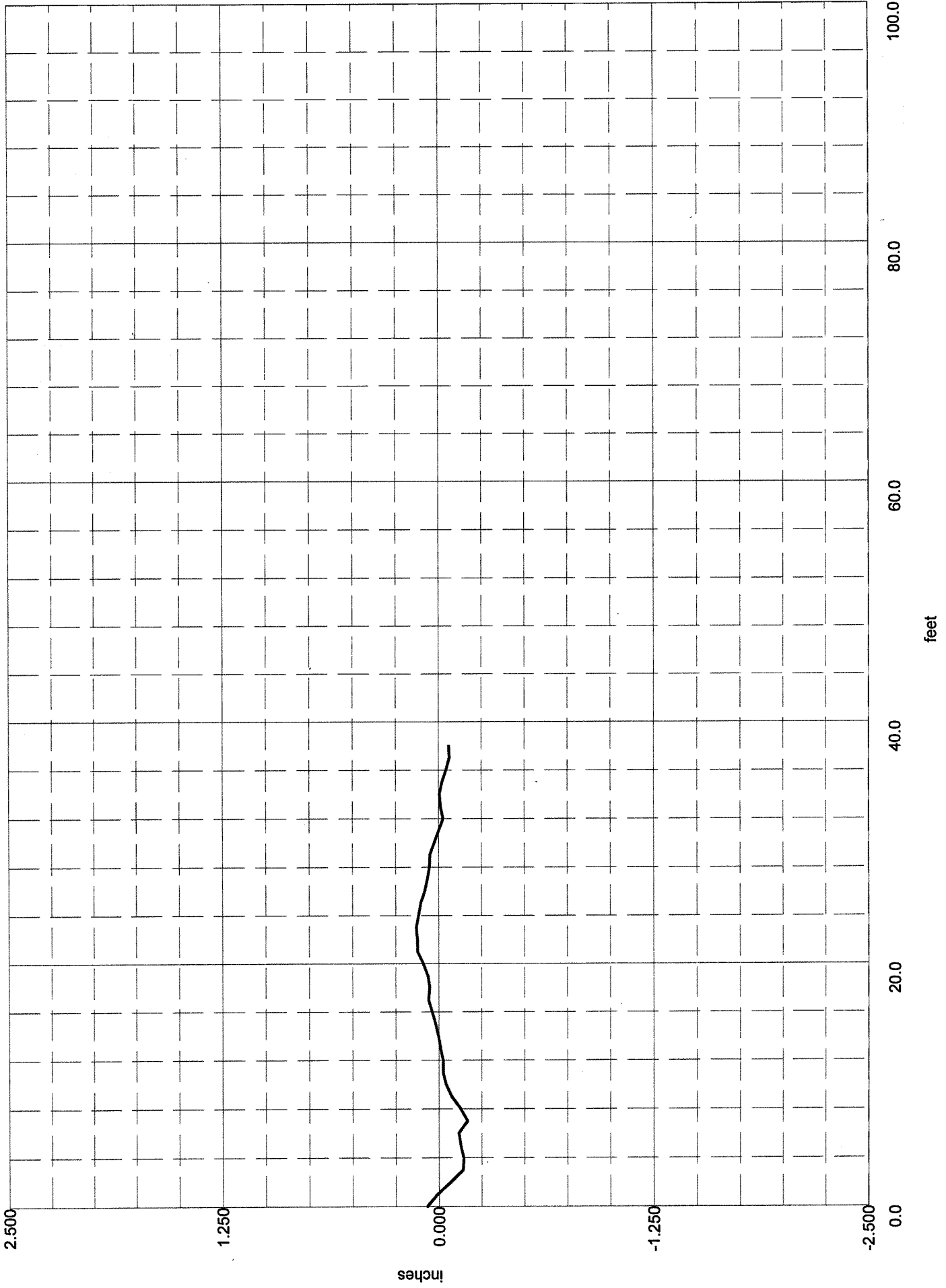
JETPORT PORTLAND12 12ACR1



F-NUMBER TESTING

FF = 43.3 <34.5 - 52.1> FL = 26.8 <20.5 - 33.1>

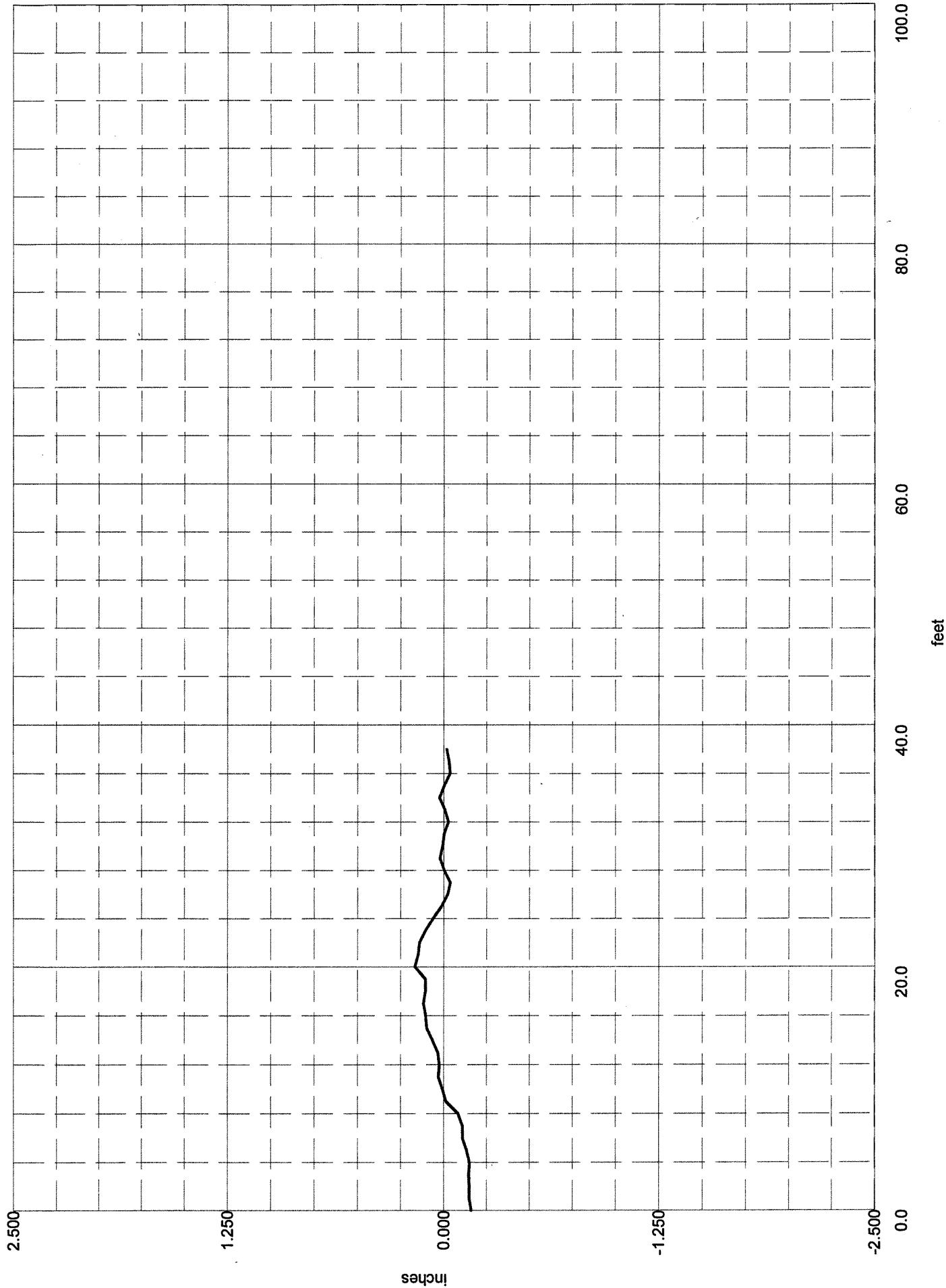
JETPORT PORTLAND12 12ACR2



F-NUMBER TESTING

FF = 56.0 <44.6 - 67.3> FL = 31.6 <24.1 - 39.0>

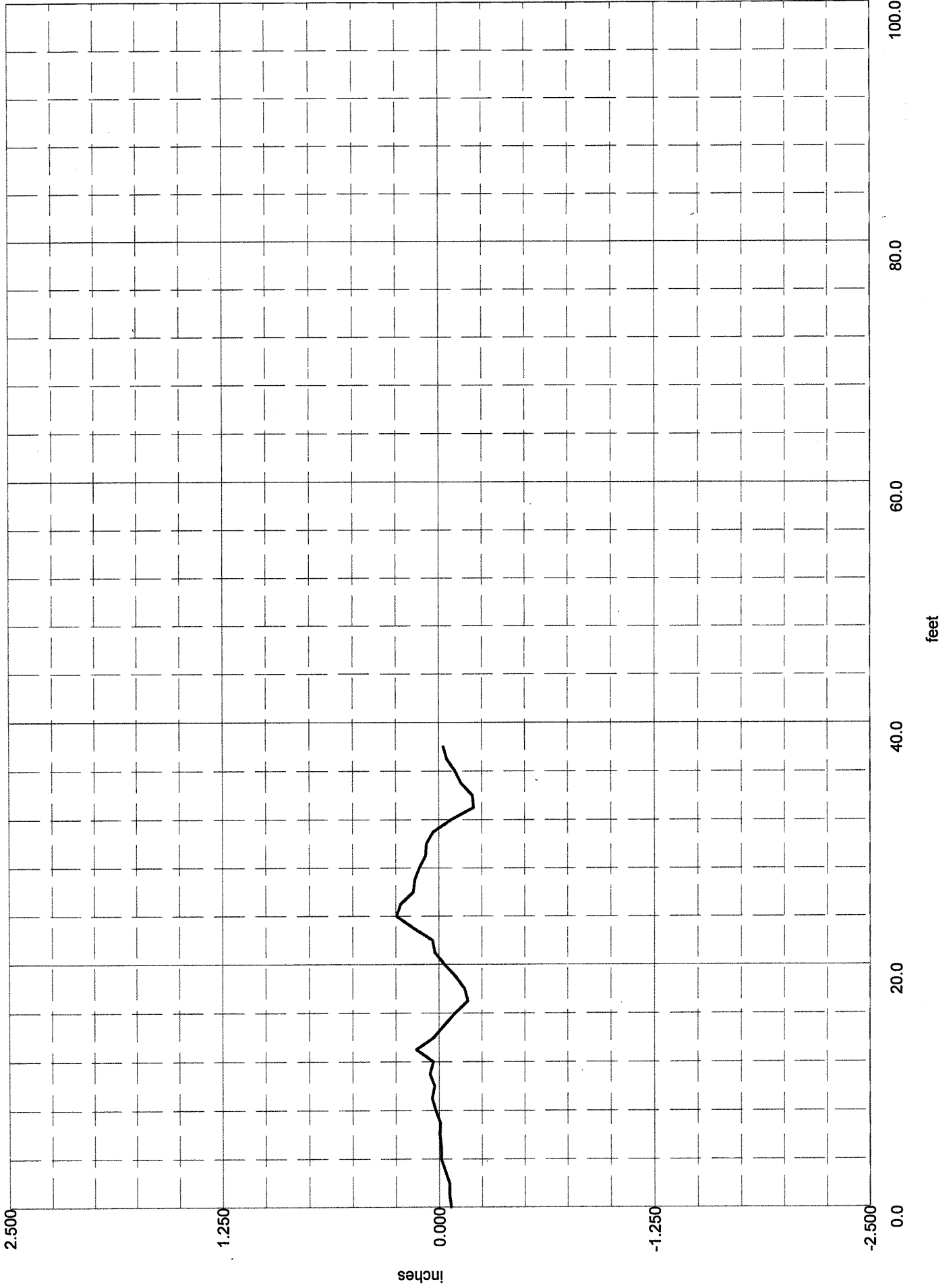
JETPORT PORTLAND12 12ACR3



F-NUMBER TESTING

FF = 50.8 <40.5 - 61.1> FL = 27.3 <20.9 - 33.7>

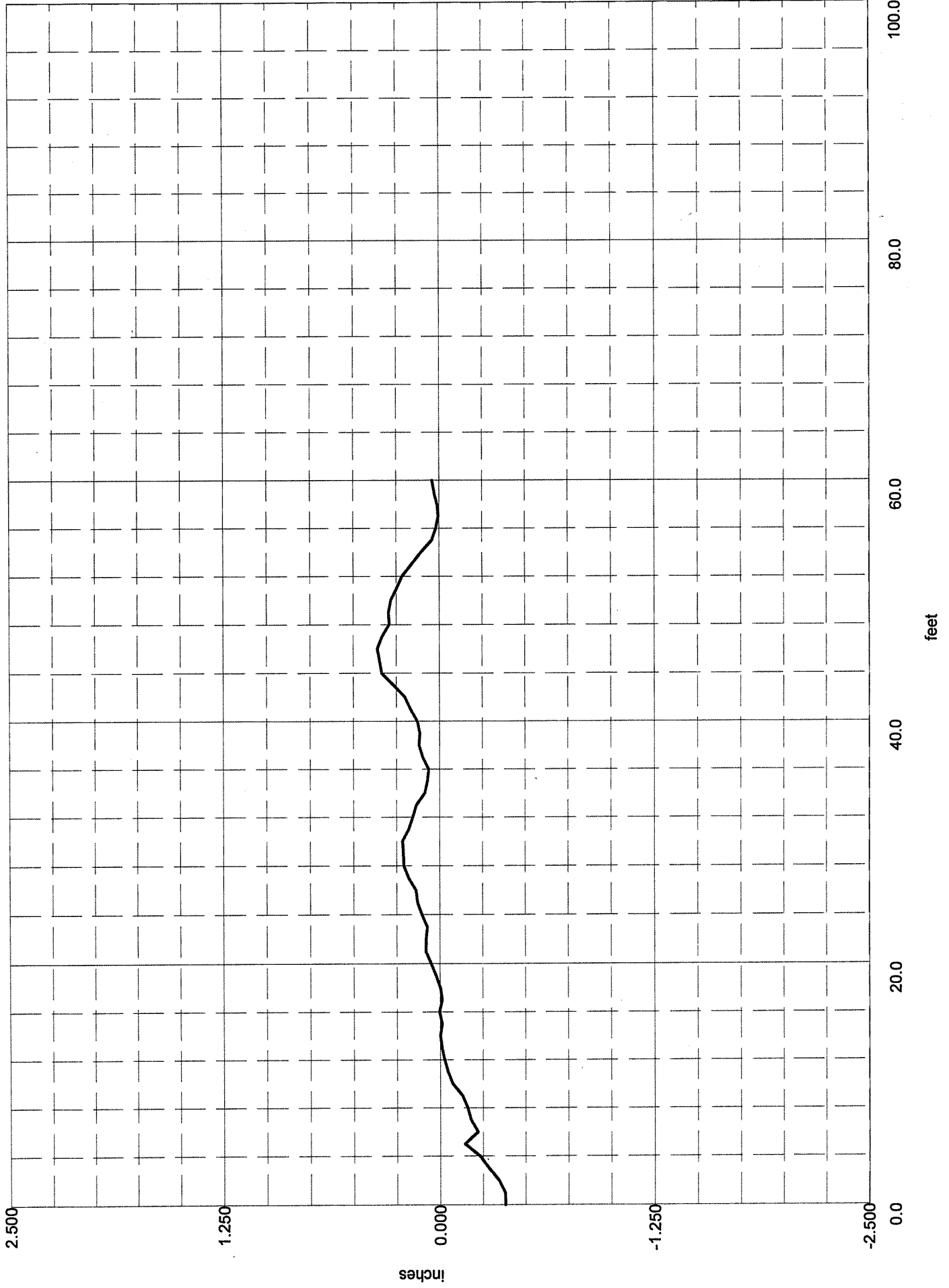
JETPORT PORTLAND12 12ACR4



F-NUMBER TESTING

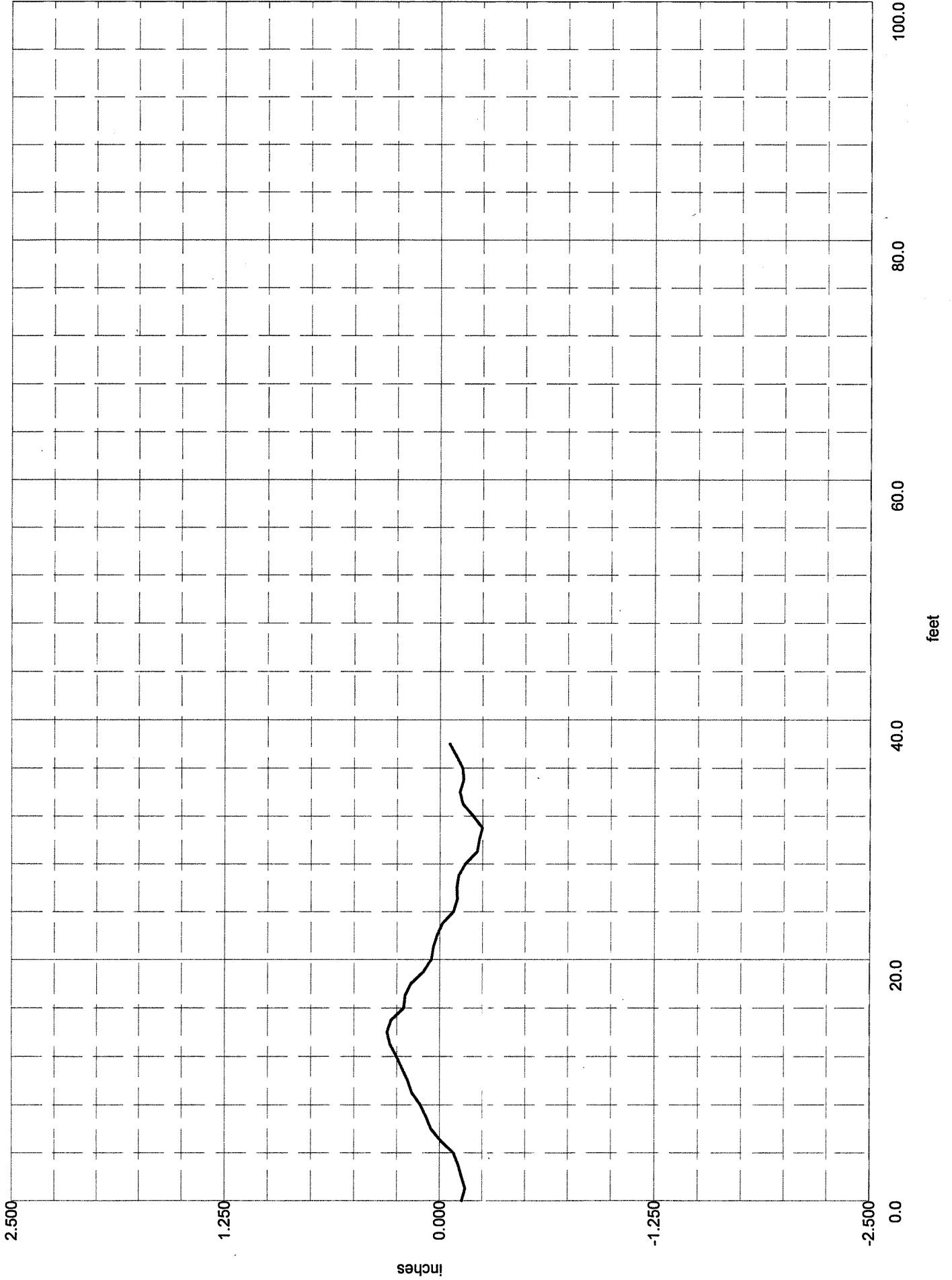
FF = 24.7 <19.7 - 29.7> FL = 20.7 <15.8 - 25.6>

JETPORT PORTLAND12 12ACR5

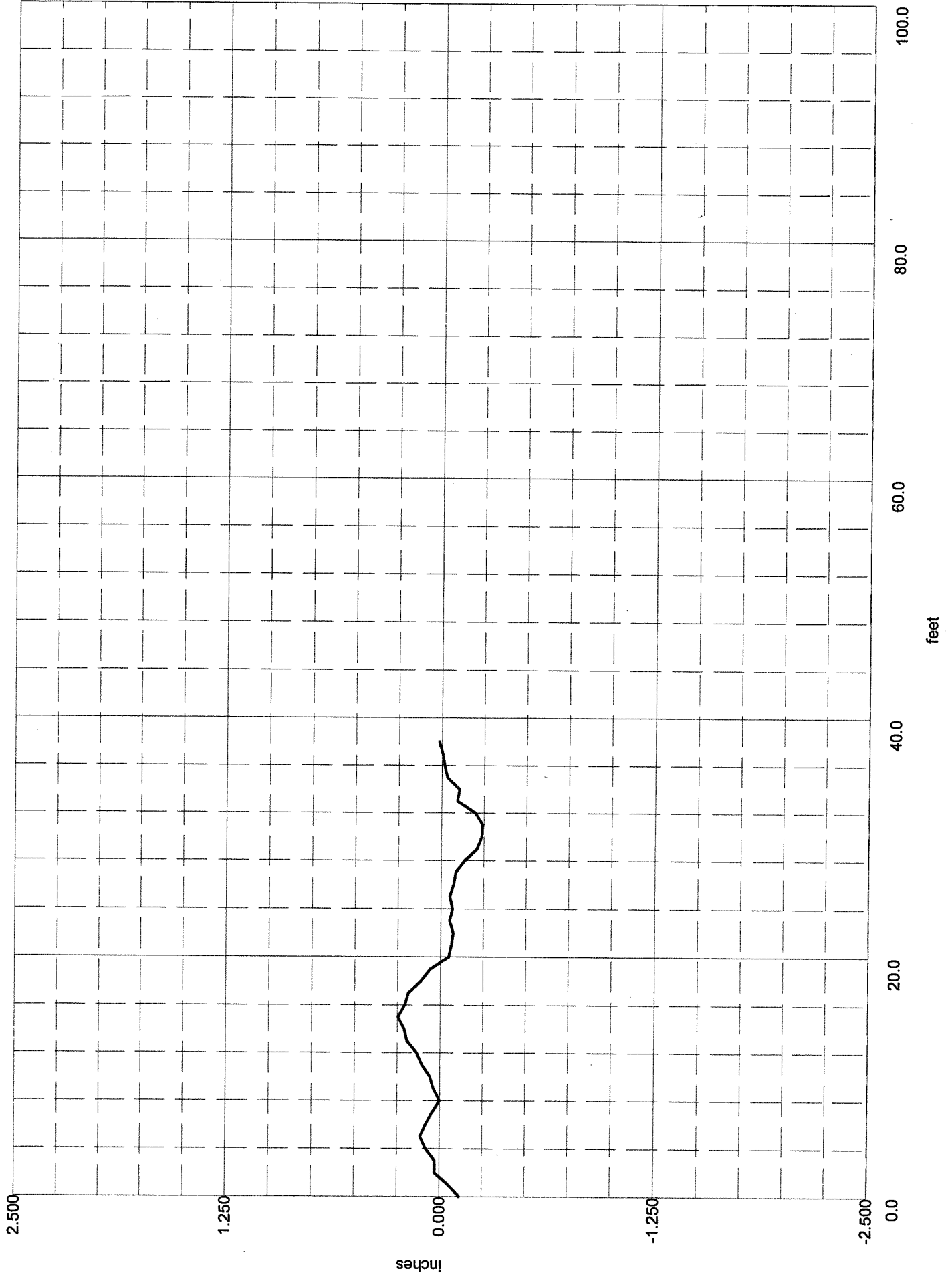


F-NUMBER TESTING

FF = 43.4 <36.4 - 50.4> FL = 20.4 <16.8 - 24.1>



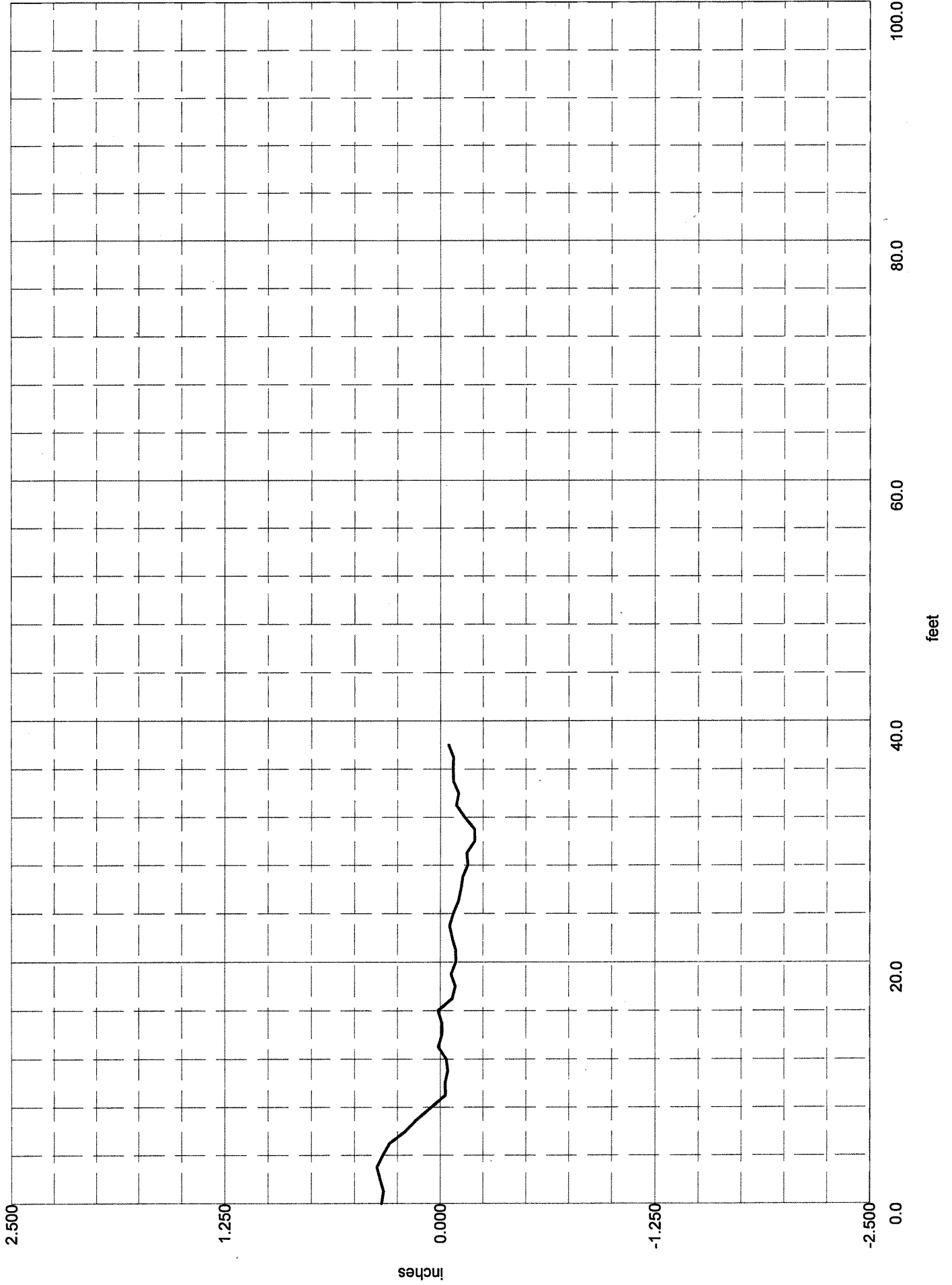
JETPORT PORTLAND12 12UP07



F-NUMBER TESTING

FF = 31.0 <24.7 - 37.2> FL = 22.1 <16.9 - 27.4>

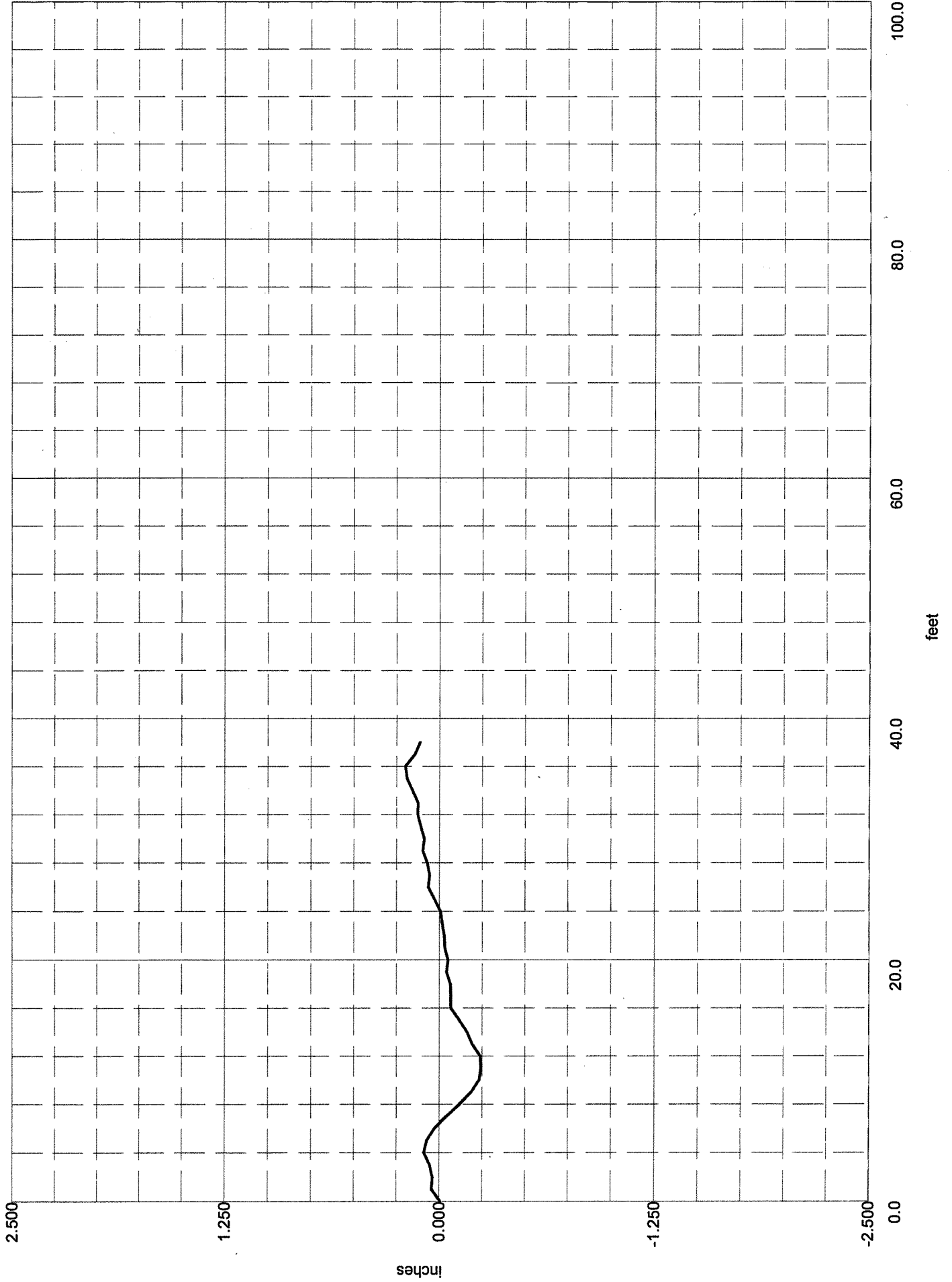
JETPORT PORTLAND12 12UP08



F-NUMBER TESTING

FF = 36.2 <28.9 - 43.6> FL = 23.2 <17.7 - 28.6>

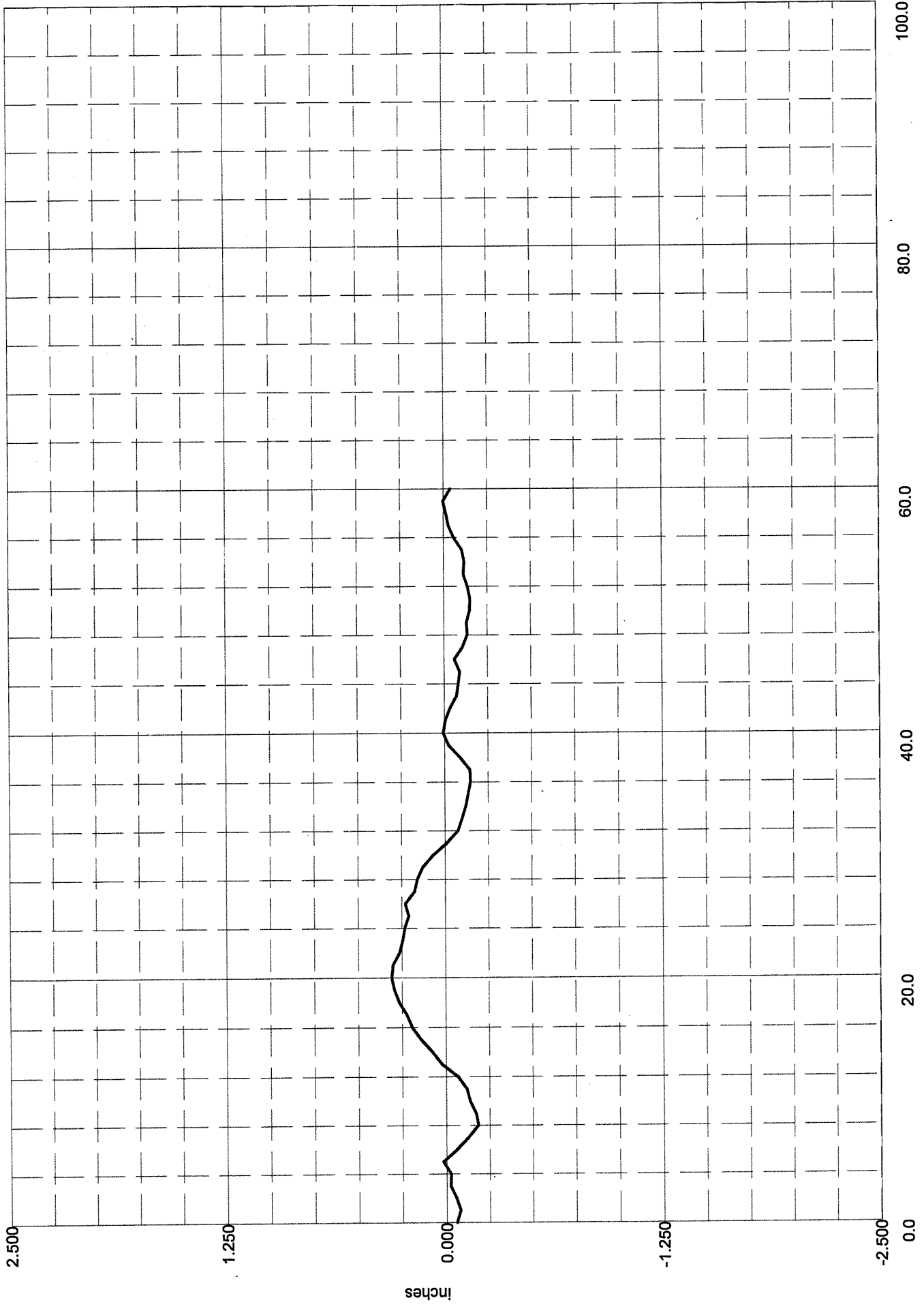
JETPORT PORTLAND12 12UP09



F-NUMBER TESTING

FF = 51.3 <40.8 - 61.7> FL = 22.9 <17.5 - 28.3>

JETPORT PORTLAND12 12UP10



feet

F-NUMBER TESTING

FF = 44.1 <37.0 - 51.2> FL = 19.2 <15.8 - 22.6>

F - NUMBER TESTING

surface flatness/levelness

a division of Earl R. Somero & Associates, Inc.

October 30, 2010

RECEIVED
NOV 15 2010

Mr. Mathew Grady
R W Gillespie & Associates, Inc.
86 Industrial Park Road, Suite 4
Saco, ME 04072

Slab #11
Level 3, SECTION 3-3a & 3-3b, WHITE
Col lines XG.6-XJ & Y8-YO.5
and A-C & 1ZC.3-1Y
RWG#A #: 557-14

RE: F-Number Tolerance Testing
Portland Jetport, Portland, ME

Dear Mr. Grady:

The purpose of this letter is to notify you of the F-Number test results for the above referenced slabs. The floor slabs were tested in accordance with the provisions set forth in ASTM-1155-96 and ACI 117 Standard using the DIPSTICK AUTO-READ PROFILER. This slab was placed on or about Friday October 22, 2010, and tested on Monday, October 25, 2010. Blankets covered the slab, and I tested over poly vapor barrier.

SPECIFICATIONS: Floors shall conform to the following surface profile tolerances:

POLISHED FLOORS (COLORED CONCRETE) FF: 40 FL:

RANDOMLY TRAFFICKED FLOOR SURFACE:

Specified Overall FF Value: 25	Specified Overall FL Value: 20
Minimum Local FF Value: 17	Minimum Local FL Value: 15

TEST SECTION RESULTS FOR SLAB #11 (COLORED CONCRETE)

The overall FF value is 40.61, with a 90% Confidence Interval <37.94-43.27>
which is ABOVE the Specified Overall Value.

The overall FL value is 24.69, with a 90% Confidence Interval <22.85-26.54>
which is not enforceable on unshored elevated slabs

Mr. Mathew Grady
R W Gillespie & Associates, Inc,
Jetport, Portland, ME – Slab #11
October 30, 2010
Page 2

Individual survey lines are as follows:

LINE #	FF #	FL #	Rdgs	LINE #	FF #	FL #	Rdgs
11ACR1	35.59	27.58	41	11DIAG5	54.56	113.17	7
11ACR2	44.36	15.90	41	11DIAG6	53.93	38.27	23
11UP03	35.34	25.51	41	11DIAG7	63.16	53.49	39
11UP04	33.01	23.67	41				

Number of Readings required: 140* Actual: 233

* for the areas tested

PLEASE NOTE:

Due to the irregularity of the footprint of this slab, I was not able to gather parallel and perpendicular survey lines in a balanced pattern. I sampled the two areas as shown on the prints. This data gives an indication of the surface of this slab if similar placing and finishing techniques were used throughout the slab.

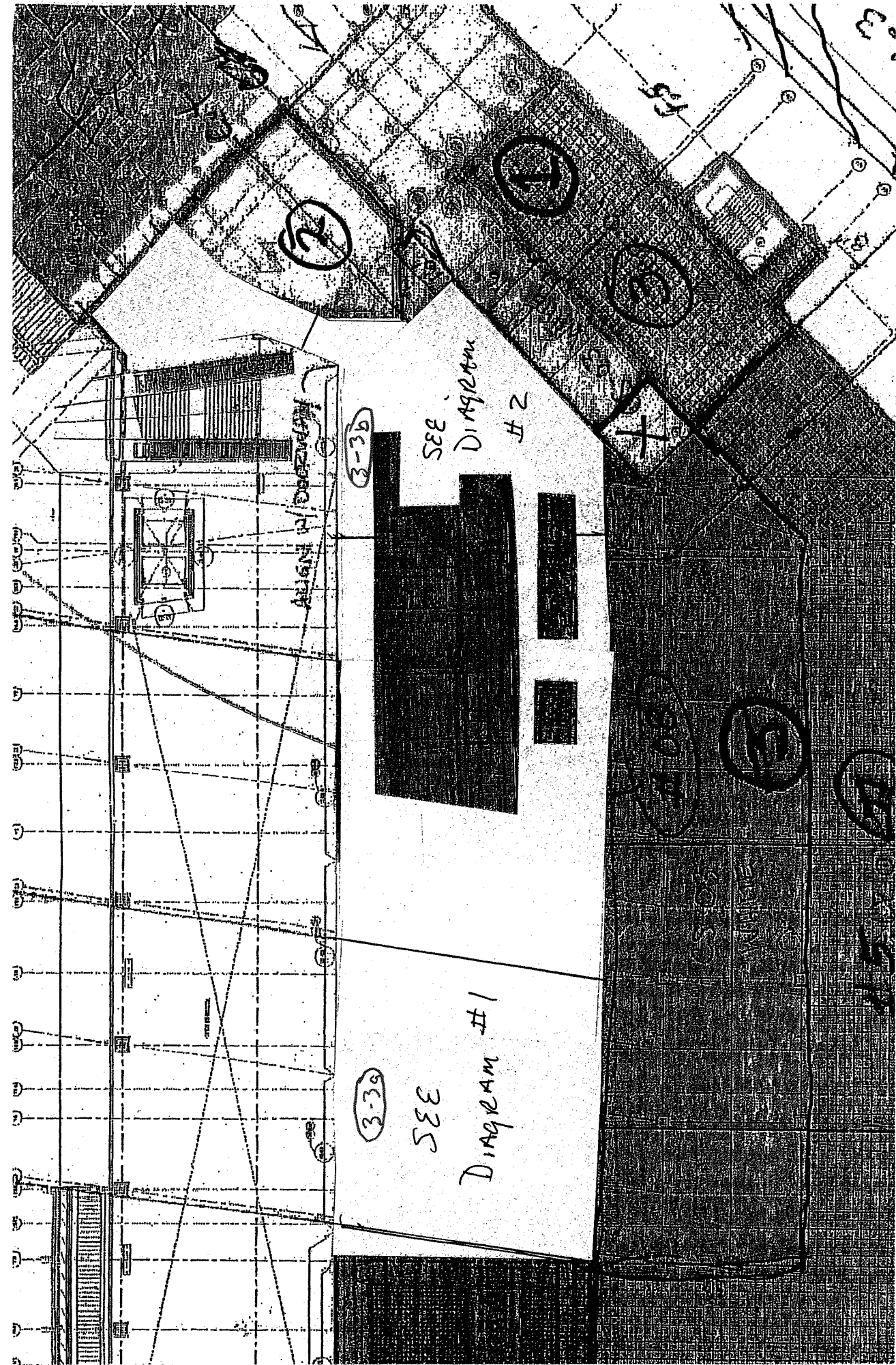
Please do not hesitate to call if you have any questions.

Sincerely yours,



Earl R. Somero
F-Number Testing

MR



SEE
Diagram #1

SEE
Diagram #2

JETPORT
PORTLAND, ME
SLAB #11

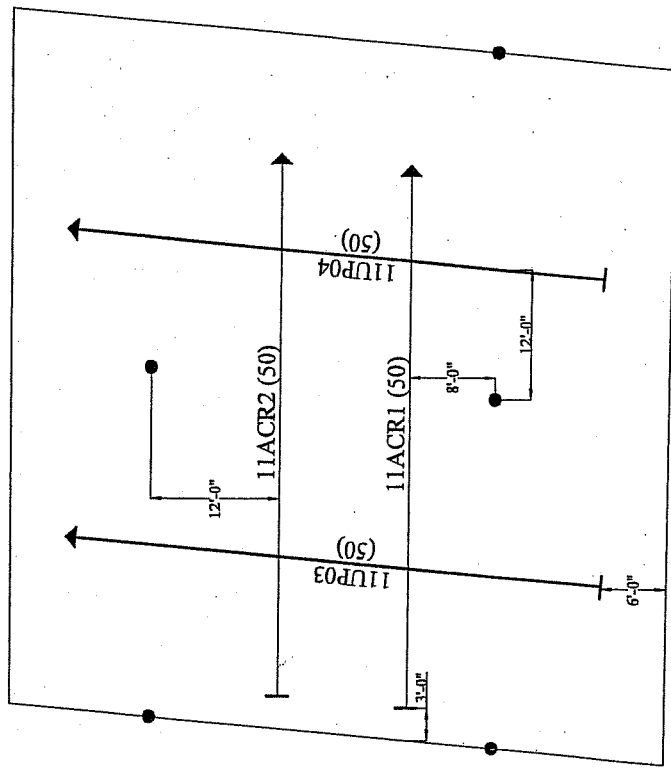


Diagram #1

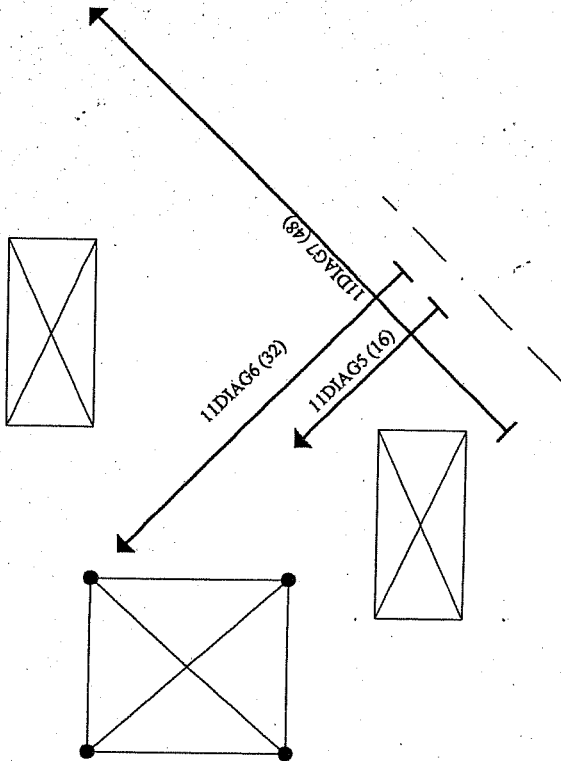


Diagram #2

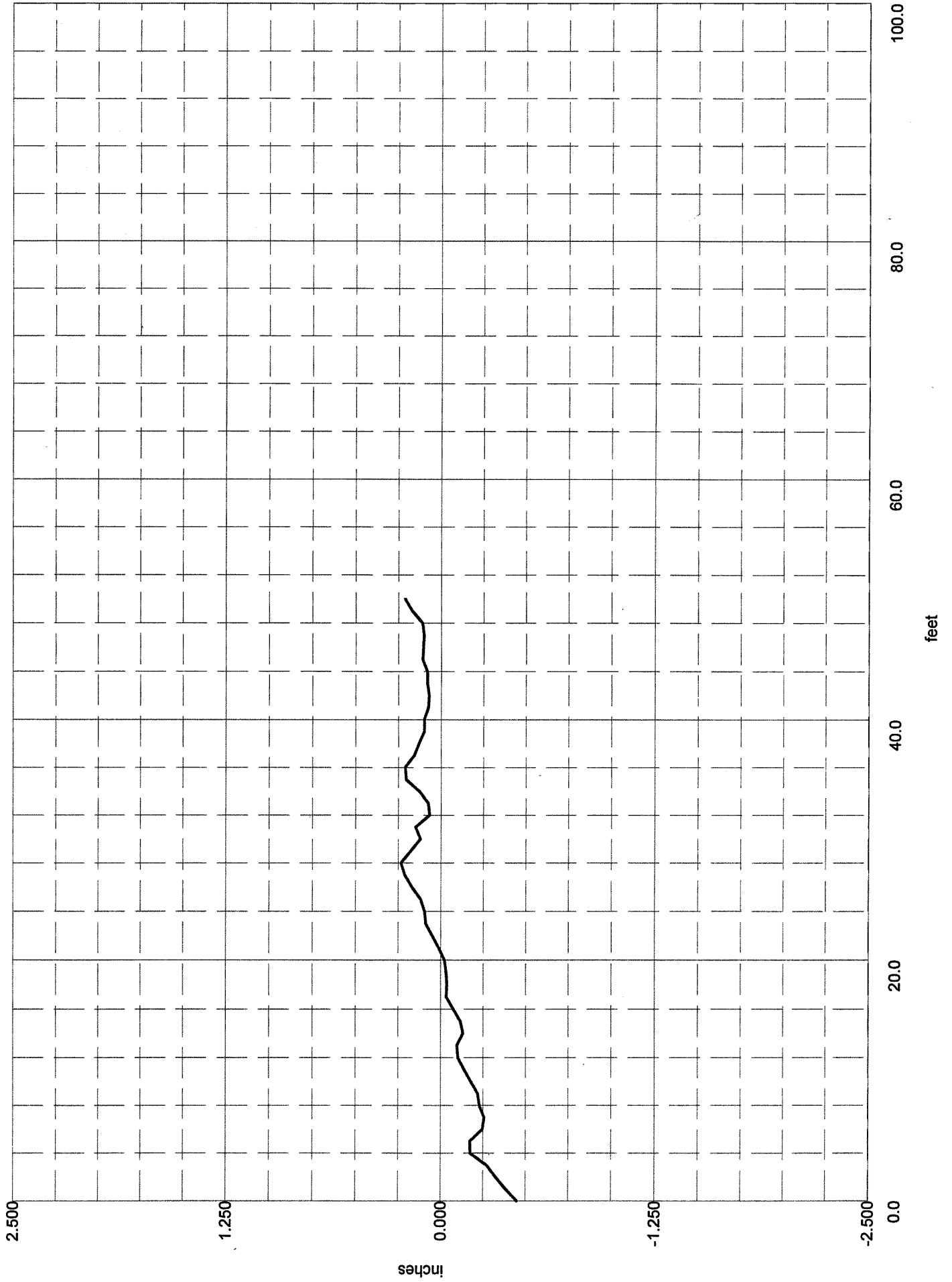
JETPORT
 PORTLAND, ME
 SLAB #11

Earl R. Somero



NUMBER TESTING
 P.O. Box 486 New Ipswich, NH 03071
 603-878-1634

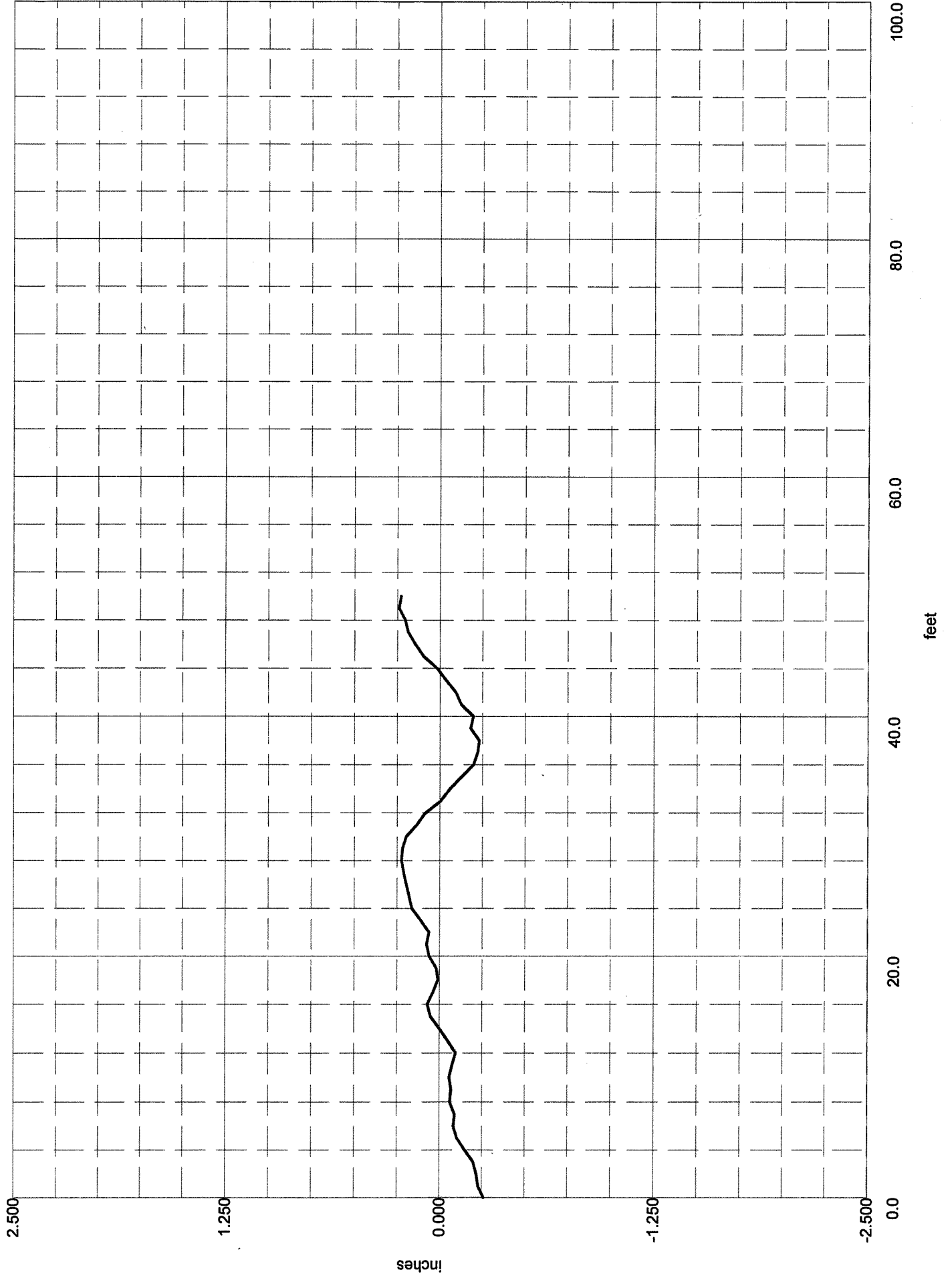
JETPORT PORTLAND11 11ACR1



F-NUMBER TESTING

FF = 35.6 <29.3 - 41.9> FL = 27.6 <22.1 - 33.0>

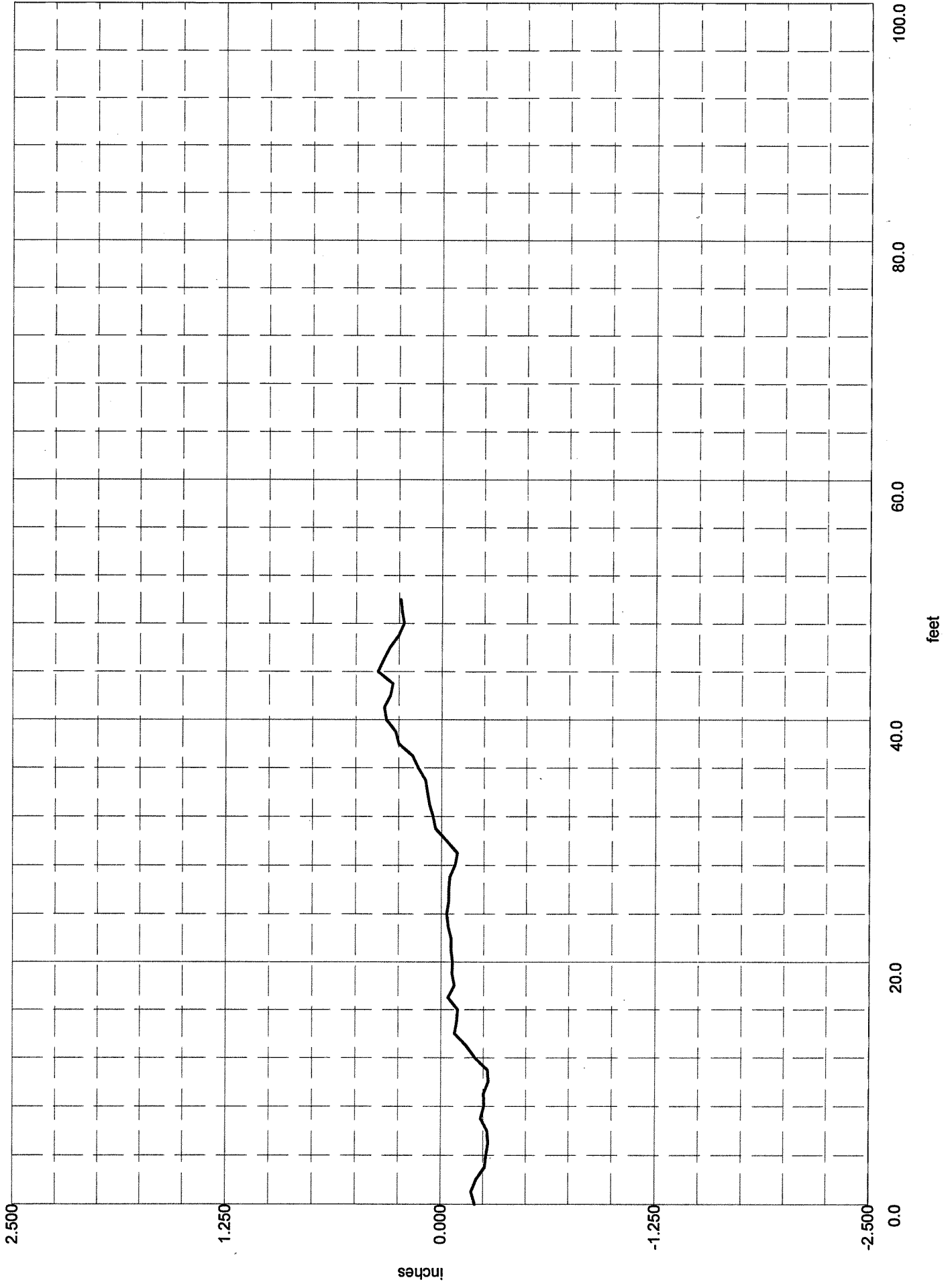
JETPORT PORTLAND11 11ACR2



F-NUMBER TESTING

FF = 44.4 <36.5 - 52.2> FL = 15.9 <12.7 - 19.1>

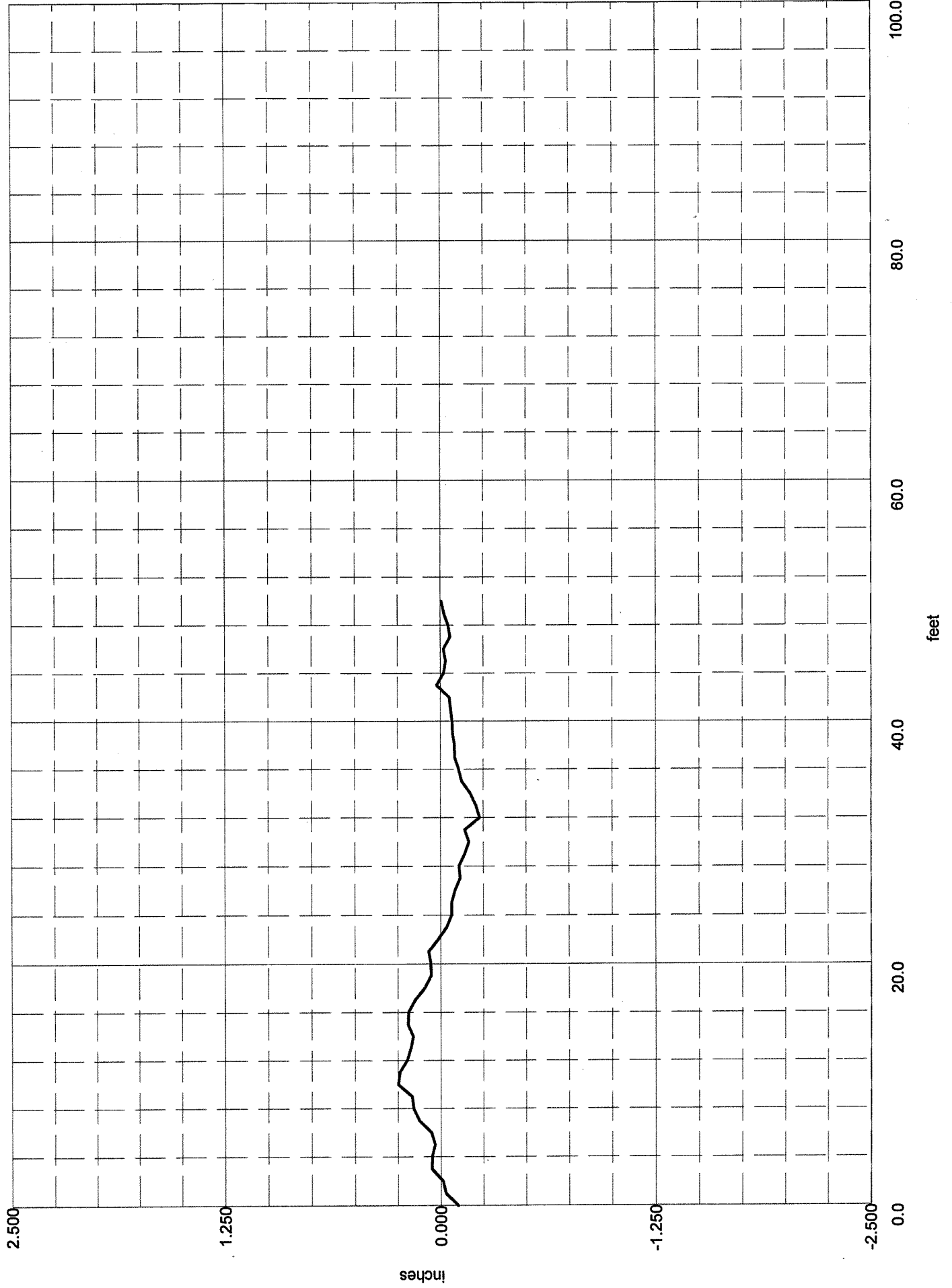
JETPORT PORTLAND11 11UP03



F-NUMBER TESTING

FF = 35.3 <29.1 - 41.6> FL = 25.5 <20.5 - 30.6>

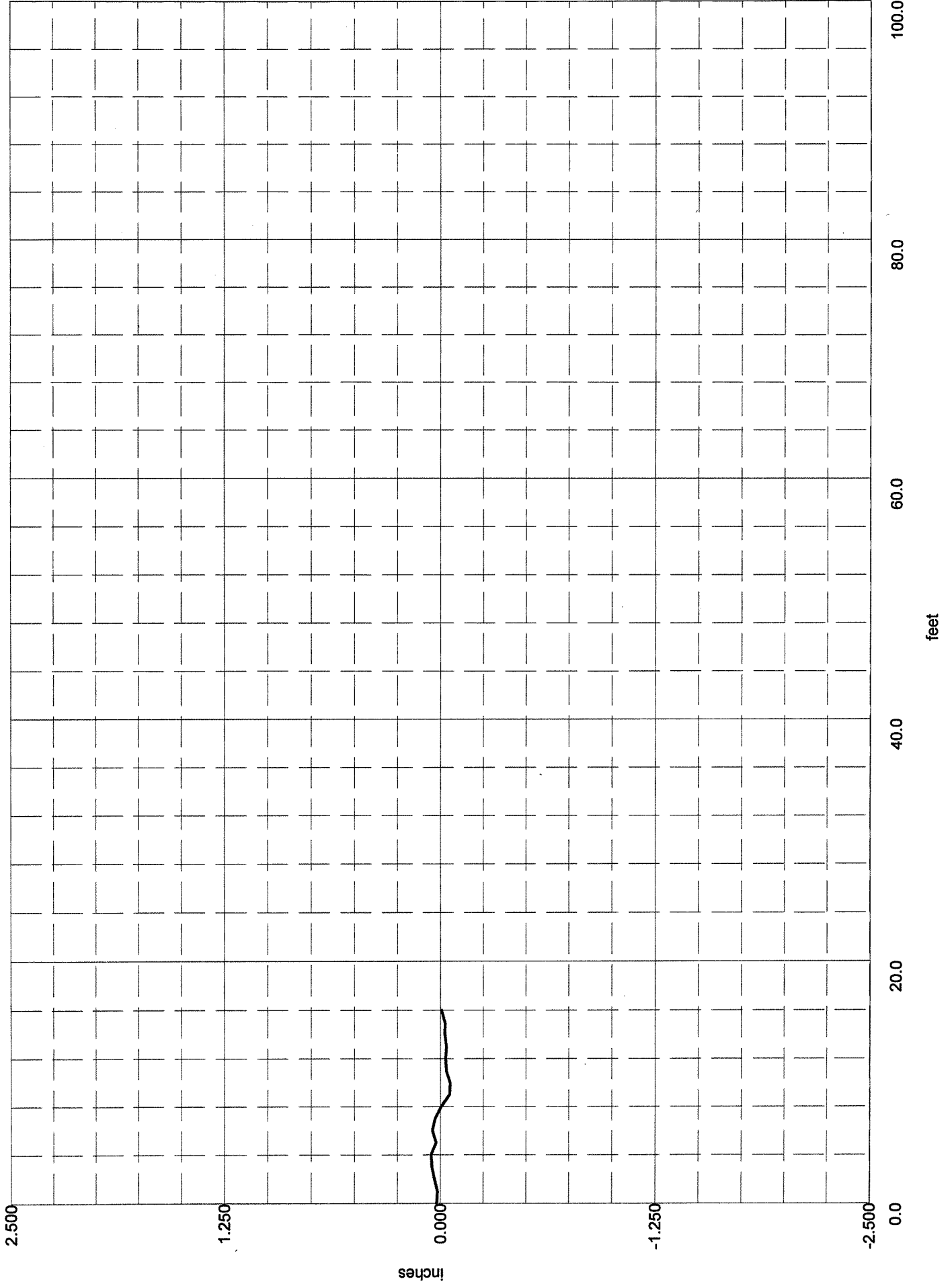
JETPORT PORTLAND11 11UP04



F-NUMBER TESTING

FF = 33.0 <27.2 - 38.9> FL = 23.7 <19.0 - 28.4>

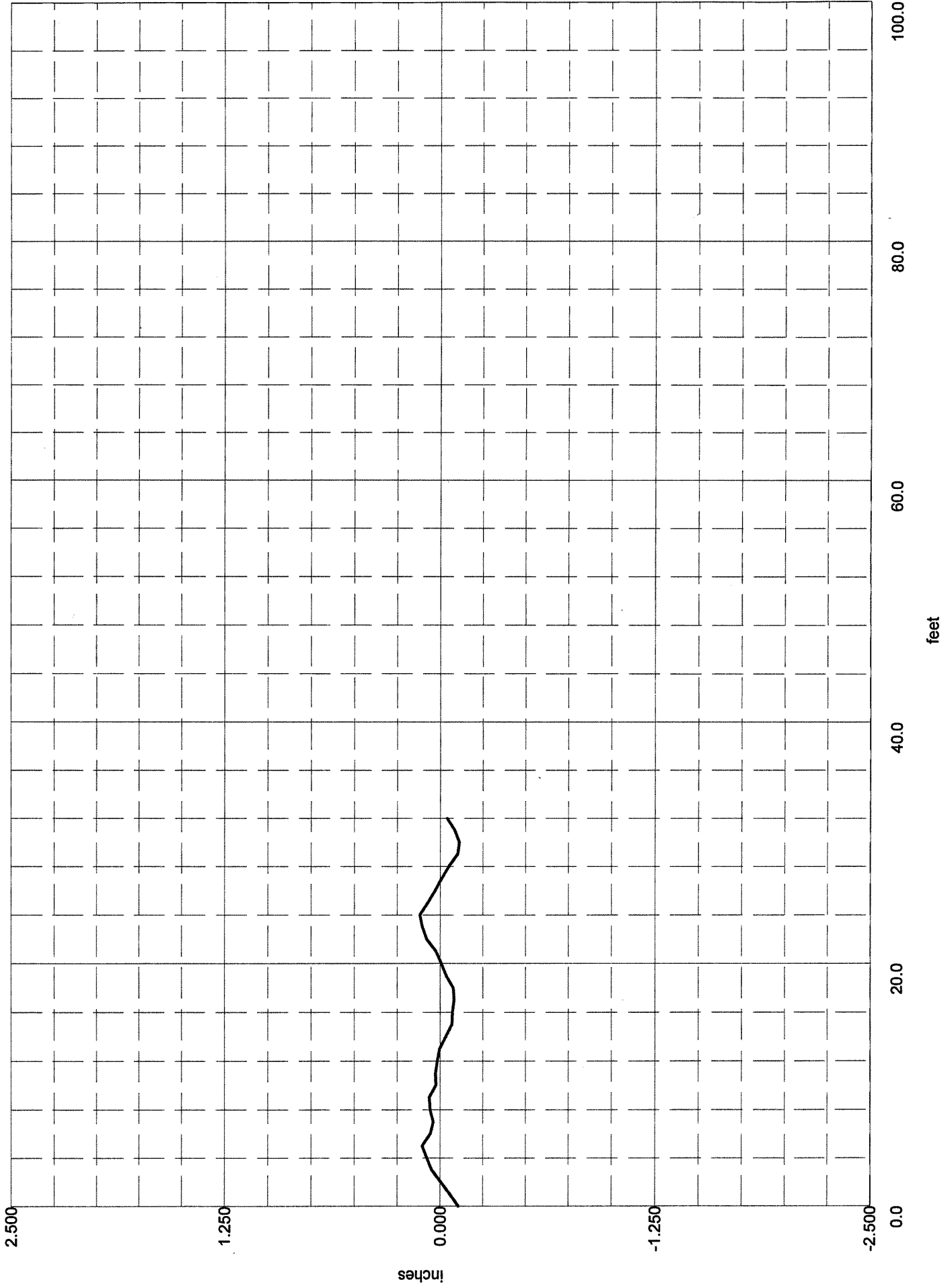
JETPORT PORTLAND11 11DIAG5



F-NUMBER TESTING

FF = 54.6 <38.0 - 71.1> FL = 113.2 <62.5 - 163.9>

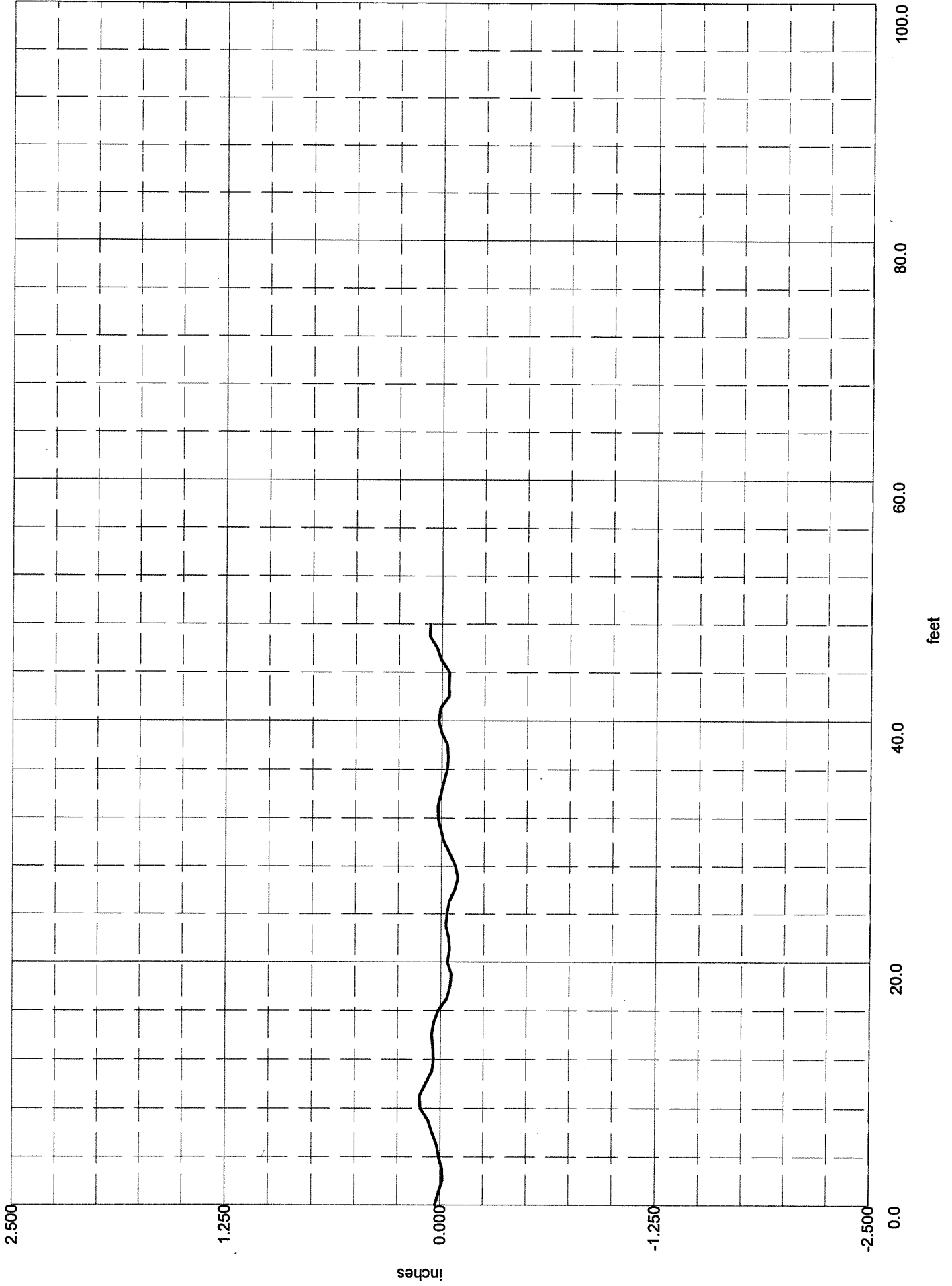
JETPORT PORTLAND11 11DIAG6



F-NUMBER TESTING

FF = 53.9 <42.0 - 65.9> FL = 38.3 <28.2 - 48.4>

JETPORT PORTLAND11 11DIAG7



F-NUMBER TESTING

FF = 63.2 <51.7 - 74.6> FL = 53.5 <42.6 - 64.4>