

CITY OF PORTLAND, MAINE
MEMORANDUM

334-A-014

TO: Mike Nugent, Inspections Services Manager
FROM: Sarah Hopkins, Development Review Services Manager
DATE: November 14, 2000
RE: Megquier Hill Farm

You have asked for a certification that Megquier Hill has met their requirements under site plan review.

The conditions, as set by the Board, are as follows:

- i. **The design engineer of record, BH2M, shall provide a certification upon completion of construction that the work is in substantial conformance to the approved plans and that all conditions of approval have been satisfied.**

Steve Bushey has inspected the site and has provided his sign-off separately to you on site work for the Certificate of Occupancy. According to Steve, he spoke with Les Berry regarding the compliance of the site, during his final inspection, but never received a written certification from BH2M. (I spoke to Les Berry of BH2M and asked him to fax over a final written certification.)

- ii. **That all floor drains in the building be permanently sealed to the satisfaction of the Public Works Department, Engineering Division.**

Attached is a memo from Public Works regarding the adequacy of the sealed floor drains.

- iii. **That prior to issuance of a building permit, the applicant will submit for Planning staff review and approval the lighting specifications for the proposed wall mounted fixtures.**

Attached, are the specs for the lights that we approved. From my inspection, these lights were installed.

- iv. **That the Planning Board approval is for a "grain-related" process only.**

Notes were added to the plan limiting the use to grain-related process only.

Outside Storage

When we were out at the site last week, we noticed that there was outside storage to the side of the building. Megquier Hill submitted a revised plan for a temporary storage area in this location and the approval letter is also attached.

Odor

Attached is Martha O'Brien's odor evaluation of MHF.

Noise

Attached are two letters from the Onix Corp. regarding noise abatement. I will call an acoustical engineer to get recommendations on Best Practicable Measures.



CITY OF PORTLAND

1 August 2000

Ms Mercer M. Bonney,
Mitchell and Associates,
70 Center Street,
Portland, Maine 04101

RE: Floor Drains, Megquier Hill Farm, No.66 Milliken Street.

Dear Ms. Bonney:

On Friday 28 July 2000, to my amazement, instead of inspecting floor drains, I found that Megquier Hill Farm had poured an entirely new six-inch concrete floor. Now that is a permanent sealing of floor drains!

Sincerely,
CITY OF PORTLAND

Frank Brancely
Frank J Brancely, B.A., and M.A.
Senior Engineering Technician

FJB

cc: Joseph E. Gray, Director, Department of Planning, and Urban Development, City of Portland
✓ Sarah Hopkins, Senior Planner, Department of Planning, and Urban Development, City of Portland
Katherine A. Staples, P.E., City Engineer, City of Portland
Bradley A. Roland, P.E., Environmental Projects Engineer, City of Portland
Anthony W. Lombardo, P.E., Project Engineer, City of Portland
Stephen K. Harris, Assistant Engineer, City of Portland
Desk file

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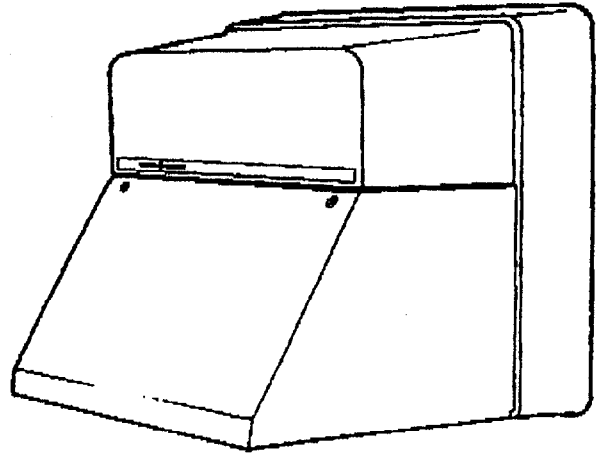
WALLIGHTER 250 CUTOFF LUMINAIRE


APPLICATIONS

Building perimeters, entrances, walkways, residential yards, loading docks and many other wall mounted area lighting applications.

SPECIFICATION FEATURES

- UL1572 Listed SUITABLE FOR WET LOCATIONS
- CSA Certified
- Three-piece die-cast aluminum housing protected inside and out with dark bronze electrocoat finish
- Enclosed, gasketed, with anodized aluminum reflector and tempered glass bottom closure
- Standard and tamper resistant hardware included
- Thru-feed conduit entrance on side with built-in conduit clamps
- Front access to ballast components when installed
- Mogul (E39 standard) or medium base (E26 standard) sockets




 Turtle-friendly luminaires available for coastal nesting areas. Contact factory.

ORDERING NUMBER LOGIC



W25C 25 S 0 A 1 G MGL DB Q

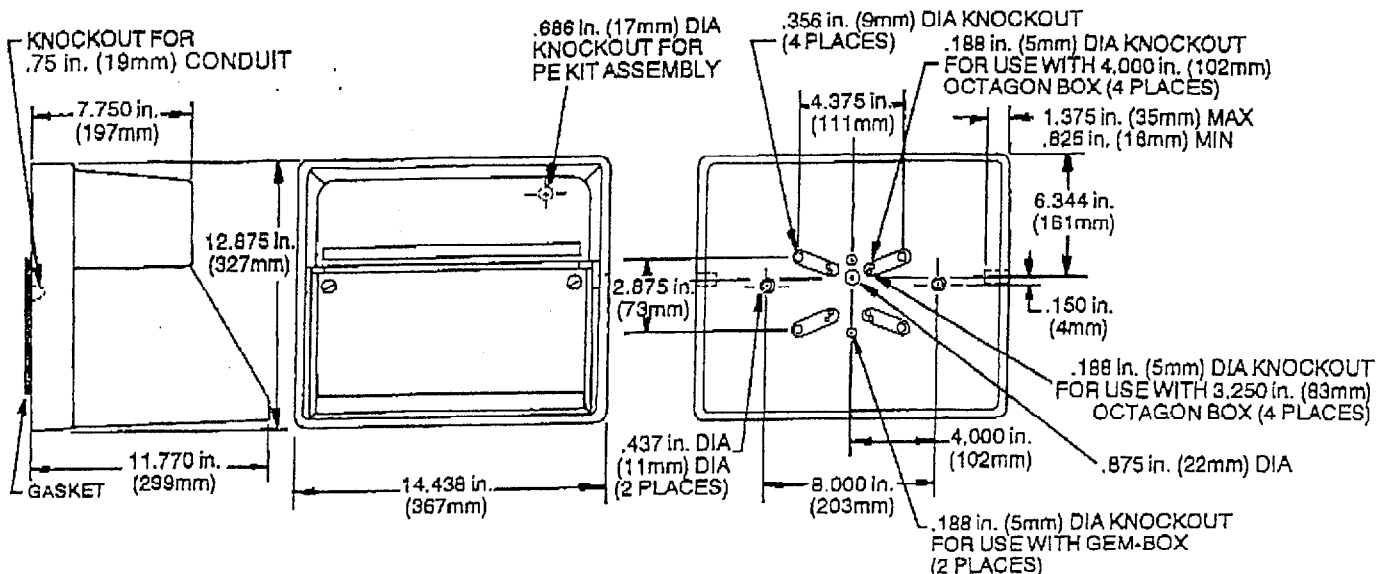
PRODUCT ID. XXXX	WATTAGE XX	LIGHT SOURCE X	VOLTAGE X	BALLAST TYPE X	PE FUNCTION X	LENS TYPE X	LAMP BASE XXX	COLOR XX	OPTIONS X
W25C = Wallighter 250 (250 watt max.) luminaire with cutoff optics	See Ballast and Photo- metric Selection Table 05=50 07=70 10=100 15=150 (55V) 17=175 20=200 25=250 77=70/75	See Ballast and Photo- metric Selection Table S =HPS M=MH or Merc (with 175W only)	See Ballast and Photo- metric Selection Table 60Hz 0=120/208/ 240/277 Multivolt 1=120 2=208 3=240 4=277 5=480 D=347 F=120X347	See Ballast and Photometric Selection Table A =Autoreg G =Mag-Reg with Grounded Socket Shell H =HPF Reactor or Lag K =Hot Restart M=Mag-Reg N =NPF Reactor or Lag P =CWI with Grounded Socket Shell	1 = None For PE Kit, see Accessories	G = Glass	For IES Optical Configuration See Ballast and Photometric Selection Table MGL = Mogul base E39 (Standard without lamp) MED = Medium base E26 (Standard with lamp)	DB = Dark Bronze	B =Time Delay Automati- cally Switched Quartz F =Fusing (Not available with multivolt) Q =Non-Time Delay Automati- cally Switched Quartz

 The catalog numbers, options and modifications on this page are UL Listed unless otherwise noted. Data subject to change without notice.



WALLIGHTER 250 CUTOFF LUMINAIRE

DIMENSIONS



BALLAST AND PHOTOMETRIC SELECTION TABLE

All light sources are clear unless otherwise indicated.

Wattage	Light Source	Ballast Type/Voltage							IES Distribution Type	Photometric Curve Number 35-17----
		60Hz Multivolt	120	208	240	277	480	347, 120X347		
MOGUL BASE LAMP (NOT INCLUDED)										
50	HPS	H	H, K, N	H	H	H	H	H	SC3	8825
70, 100, 150(55V)	HPS	H	G, H, K, M	G, H, M	G, H, M	G, H, M	G, H, M	G, H, M	SC3	8825
200*	HPS	A	A	A	A	A	A	A	SC3	8830
250*	HPS	A	A	A	A	A	A	A	SC3	8830
175	MH	A	A	A	A	A	A	A	SC3	8826
250*	MH	A	A, P	A, P	A, P	A, P	A, P	A, P	SC3	8831
MEDIUM BASE LAMP (INCLUDED)										
50, 70, 100, 150(55V)	HPS	N	N	N/A	N/A	N/A	N/A	N/A	SC3	8833
70, 100	MH	H	N/A	N/A	N/A	N/A	N/A	N/A	SC3	8835
175	MH	A	N/A	N/A	N/A	N/A	N/A	N/A	SC3	8837

*NOTE: Horizontal lamp operation C/F = Contact Factory N/A = Not Available **347 Volt Only

DATA

Approximate Net Weight	15-30 lbs (8-14 kgs)
Suggested Mounting Height	8-20 ft (2-6 M)

REFERENCES

See Page 66 for start of Accessories
 See Page 73 for Explanation of Options and Other Terms Used

NOV-10-00 12:48 (000) 243-9431 P.02

MAGQUIER HILL RE: odor

Conclusions:

Based on my downwind odor observations of 11/1/00, the highest odor intensity of Maguire Hill-related odors was a butanol level of 1.5. This was described as a "burnt electrical" type odor. Occasionally a less intense (intensity 1.0) "bread/meal" type odor could also be detected. At the observed levels the odors were readily detectable if one was looking to find them - yet would be at an intensity level that would be in compliance with the City's Odor Ordinance limit of 3.0

Based on a plant tour and process review the apparent source of the off-site odors were:

"Burnt Electrical"- associated with the product drying and subsequent thermal incineration of the dryer exhaust. The odor character appears to be due to the use of sawdust as fuel.

"Bread/Grain" - associated with the cooler exhaust stack.

Other potential odor sources would be fugitive odors escaping from the general production area either through the open doors or by the roof exhaust fans (if used). The roof fans were not in operation during the 11/01/00 site visit.

Thursday, November 02, 2000

Barber Foods - Site Visit, Downwind Monitoring & Meeting

8:30 - 10:10 AM: Meeting with Ben Palaima Director of Engineering, Barber Foods, Plant Tour and collection of fryer exhaust sample:

I reviewed the process with Ben and was updated on the recent odor mitigation efforts and odor control research by Barber.

The high intensity odor emission sources at Barber are limited to the 3 fryer exhaust stacks. There are oil mist eliminators in each stack which consist of a 6" thick stainless steel mesh. Currently these are changed 2x/day with cleaning of the filters being conducted during 3rd shift. Ben mentioned that others in the industry are changing the filters more frequently and he is considering purchasing more filter to allow for more frequent changing.

The fryer stacks are cleaned 2x/week (Wednesday & Saturday PM). This is done by spraying a caustic solution in the stack through fixed spray nozzles to remove any oil build-up from the stack walls.

Barber has installed an atomized spray system using a dilute solution of an odor neutralizer product in each of the 3 fryer exhaust stacks. It has been in use for 5-6 months now. The effect of this is unknown - in Barber's opinion it has been effective and they feel it is beneficial to continue its use. The observations made by the resident odor observers in the Western Promenade neighborhood show little or no reduction in on odors since the spray system has been installed.

**Odor Science & Engineering, Inc. 1350 Blue Hills Avenue Bloomfield, CT 06002
www.odorscience.com phone: (860) 243-9380 fax: (860) 243-9431**

In order to address an opacity problem at the fryer exhaust stacks, Barber is considering installing a Rotoclone on one (or each) of the fryer stacks. The Rotoclone is designed for particulate removal and its effect in reducing stack odors is not known nor can be guaranteed by the supplier. It may be that by reducing the particulate in the exhaust stream and by having the exhaust stream come in contact with a fine water spray that there would be some reduction in the fryer stack odor emissions as well.

In our meeting later that afternoon, Barber proposed to go ahead with the purchase and installation of one Rotoclone unit. OS&E will then be asked to return to Barber and collect odor emission samples from locations before and after the Rotoclone. The samples will be returned to OS&E's Olfactory Laboratory to be quantified and characterized by a trained and screened odor panel. This will quantify the odor removal efficiency of the Rotoclone. If further odor reduction efforts are required, other potential odor control methods must be investigated.

Due to the high intensity of the fryer emissions together with the unique topography surrounding the site location (the elevation of the receptors on the West Prom.) dilution techniques that are sometimes achieved by raising the height of the exhaust stacks or adding dilution air to the stacks would not be effective in the Barber situation.

Odor control of the fryer exhaust odors is difficult due to the complex nature of the emissions and expensive due to the relatively high volume of exhaust air to be treated. Although they may not be considered to be economically feasible, add-on odor control alternatives would be:

Add-on Odor Control Technologies	Limitations
Thermal Incineration	Cost
Wet Scrubbing	cost, cooling, chemical usage, odor removal efficiency
Dry Scrubbing (carbon adsorption)	cost, cooling, replacement of media
Biofilter	cost, cooling/humidification, space limitations

Ben has investigated what others in the food frying industry are currently doing for odor control of the fryer emissions. Ben described a system that has been installed at the Fishery Products plant in Danvers, MA. This is a system that involves a multistage process of cooling, conditioning, filtering and finally dry scrubbing (carbon) the exhaust gas prior to release to atmosphere. In the Danver's installation the fish fryer exhaust is first cooled in NH₃ condenser units. It is then conditioned by adding ambient air from the general plant area. It then passes through a series of filters (fabric, electrostatic, HEPA) for removal of particulate followed filtration by carbon for removal of residual odorous compounds. The effectiveness of the odor removal of the carbon greatly depends of the design of the carbon filters. Thin bed filters would have limited effectiveness. Filtration by a deep bed carbon unit

at this stage of the treatment could provide extremely efficient odor control. Technical feasibility of this type of system may be investigated further by Barber.

Downwind Odor Monitoring

Odor surveys were conducted by OS&E in the areas surrounding Barber Foods on November 2, 2000. During the surveys winds were from the north at approximately 10-15 MPH. Skies were clear with an ambient temperature of 48-50°F. Barber was in a full production mode and running their Italian Finger product which is thought by some to be a more odorous flavor. Given the wind direction, the Barber odors were detected in areas to the south of the facility. The strongest odors detected off-site were on RT 1 and beneath RT 1 on Commercial Street between Portland Welding Supply and the entrance to the scrap yard. The intensity of the odors in these areas exceeded 3.0 on the butanol scale and were fairly consistent. Access to areas further downwind was limited due to the water. Areas on the other side of the RT 1 Bridge in South Portland were surveyed along Lincoln Street from Broadway to Central. The only odors detected in these areas were that of petroleum, gasoline and garbage due to emissions from terminal tanks and storage/transfer stations. The intensity of these odors was in the 1-2 range.

Friday, November 3, 2000

Odor Training

Four individuals (one City employee and three employees from Portland-based environmental consulting firms) were screened for their olfactory acuity to determine if they would be acceptable candidates for participating in odor monitoring and enforcement activities as may be required to determine compliance with the City's Odor Ordinance. At the invitation of the City two representatives from Barber Foods also took part in the odor training program. The screening tests have documented each individual's sensitivity to odors. The classroom instruction and field training exercises have instructed them in the techniques and procedures to be used in responding to community odor complaints and/or determining compliance with the City Odor Ordinance.

The olfactory screening took place on Friday, November 3, 2000 in the Green Room of the Portland's Downtown Auditorium. During this session, each candidate was evaluated using OS&E's standard odor evaluation procedure. This procedure involved:

- Triangle test of aqueous butanol solutions to determine that the subject is not anosmic (unable to smell). In this test the subject is presented with three (3) flasks two of which contain only distilled water while the third contains a very dilute aqueous solution of 1-butanol. With each presentation the concentration of the 1-butanol solution is increased. The subject must select the flask containing the 1-butanol solution.

Odor Science & Engineering, Inc. 1350 Blue Hills Avenue Bloomfield, CT 06002
www.odorscience.com phone: (860) 243-9380 fax: (860) 243-9431

- 8-point butanol odor intensity scale (ASTM E-544) training which includes becoming familiar with the odor of butanol and the perceived odor intensity at the first six of the eight bottles, along with sniffing procedures.
- Matching "unknown" aqueous butanol samples to the butanol intensity scale.
- Evaluation of samples on the forced-choice triangular dilution olfactometer to determine each subject's sensitivity to various Portland-related odors. For screening purposes, a sample was obtained from Barber Foods as a representative "frying" type odor. A second sample was prepared using trimethyl amine to test each individual's sensitivity to a "fishy" odor character.

Additionally, the group participated in odor character referencing activities using a variety of odor samples prepared from OS&E's chemical library of odorants.

Each candidate was scored on their ability to:

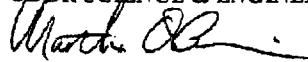
- correctly select the butanol samples in the aqueous triangle test,
- correctly match butanol unknowns on the butanol scale, and
- detect the frying & fishy odor emission samples at diluted levels on the dynamic olfactometer.

All candidates successfully passed the odor screening tests. The list of qualified odor monitors is provided in Table 1 and their odor training certificates are attached.

Course manuals were distributed to each attendee during the training sessions. The manuals contain the information presented by OS&E during the training session including the properties of odor, odor measurement methodology, meteorological factors affecting odor dispersion, proposed odor monitoring procedures and complaint response forms.

We appreciate the opportunity to be of continued service to the City of Portland. Please feel free to call me if you have any comments or questions regarding the issues addressed during my November 2000 trip.

Sincerely,
ODOR SCIENCE & ENGINEERING, INC.


Martha O'Brien
Principal

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Odor Science & Engineering, Inc. 1350 Blue Hills Avenue Bloomfield, CT 06002
www.odorscience.com phone: (860) 243-9380 fax: (860) 243-9431

The Onix Corporation

Industrial Consulting

Energy Management

.....
<http://www.thecourier.com/onix/index.htm>
 e-mail: onix@agate.net

November 02, 2000

FAXED

11:36 AM
11-2-00

Mr. Michael Nugent
 City of Portland, Inspections
 Via fax @ 207-874-8716

RE: Megquier Hill Farm, 66 Milliken Street

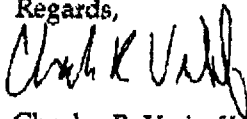
Mr. Nugent:

This letter is to update you on actions taken in response to past complaints of odor emanating from the Megquier Hill Farm facility. We have installed and are now operating a thermal oxidizer. Having tested this oxidizer for the past three weeks, we have found it to eliminate excessive odors from the drying process.

We have also permanently installed an acoustic lining around the single component at MHF which produced excessive noise, rendering the entire plant well below acceptable limits in the residential zone.

I believe that the City of Portland, as well as our residential neighbors, will find these recent additions satisfactory. I trust that you will contact me with any further questions or concerns.

Regards,



Charles R. Verhoff
 President / C.E.O.

CRV/jlm

cc: P. Bolduc ✓

The Onix Corporation

Industrial Consulting

Energy Management

.....
<http://www.thecourier.com/onix/index.htm>

e-mail: onix@agate.net

November 14, 2000

Ms. Sarah Hopkins
City of Portland
Via fax @ 207-756-8258

RE: Megquier Hill Farm noise abatement

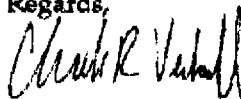
Ms. Hopkins:

This letter is in response to your request for my opinion of MHF's sound abatement techniques. Let me preface my opinion by stating that sound abatement falls outside my area of expertise. I do not address this issue in proposing or designing systems, therefore I do not keep abreast of the changing trends in this field.

That being said, it is my layman's opinion that MHF has utilized a practical, cost-effective technique to minimize sounds to the specific limits set out in Portland Code, Sec. 14-252(c)(i). I have been involved in this industry all of my life and have toured, designed, manufactured and/or been consulted regarding literally hundreds of similar facilities. MHF is far and above the best and most conscientious of these in the area of sound abatement. The entire facility is contained inside a building with only the exhaust stacks issuing from the building, and they have been lined to further reduce noise.

I am sure that there are cutting-edge techniques being developed almost daily. Would these techniques eliminate tonal and impulse sounds? I highly doubt it. Would they *significantly* further reduce tonal and impulse sounds? Are they cost-prohibitive to MHF? I am sure that the acoustical engineer you refer to in your letter is better qualified to answer these questions.

Regards,



Charles R. Verhoff
President / C.E.O.

CRV/jlm

cc: P. Bolduc
D. Carroll



CITY OF PORTLAND

November 9, 2000

Dan Carroll
Megquier Hill Corp.
66 Milliken Street
Portland, ME 04103

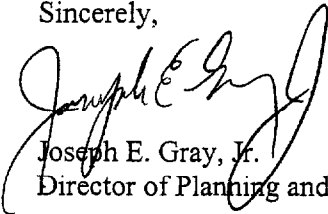
RE: 66 Milliken Street

Dear Mr. Carroll:

This letter is to confirm the revision to the approved plan of the Megquier Hill project located at 66 Milliken Street. The approved revision includes a 20 ft x 100 ft temporary storage area for machinery parts. This area will be used for temporary storage for up to one year. At the end of one year, the stored machinery will be removed or Megquier Hill will submit a revised plan for permanent storage at the site. The revised plan has been reviewed and approved by the project review staff including representatives of the Planning, Public Works, Building Inspections, Fire and Parks Departments.

If you have any questions regarding the revision please contact the planning staff at 874-8720.

Sincerely,



Joseph E. Gray, Jr.
Director of Planning and Urban Development

- cc:
- ✓ Alexander Jaegerman, Chief Planner
 - ✓ Sarah Hopkins, Senior Planner
 - P. Samuel Hoffses, Building Inspector
 - Jeff Tarling, City Arborist
 - William Bray, Director of Public Works
 - Tony Lombardo, Project Engineer
 - Lt. Gaylen McDougall, Fire Prevention
 - Penny Littell, Associate Corporation Counsel
 - Inspection Department
 - Development Review Coordinator
 - Lee Urban, Director of Economic Development
 - Susan Doughty, Assessor's Office
 - Approval Letter File

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CITY OF PORTLAND

November 9, 2000

Dan Carroll
Megquier Hill Corp.
66 Milliken Street
Portland, ME 04103

RE: 66 Milliken Street

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November 02, 2000

334-A-014

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City of Portland, Inspections
Via fax @ 207-874-8716

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I believe that the City of Portland, as well as our residential neighbors, will find these recent additions satisfactory. I trust that you will contact me with any further questions or concerns.

Regards,

Charles R. Verhoff
President / C.E.O.

CRV/jlm

cc: P. Bolduc

CITY OF PORTLAND
APPROVED SITE PLAN

SUBJECT TO DEPARTMENTAL
CONDITIONS

DATE OF APPROVAL Nov. 9, 2000

NOW
ALU OPERATIONS, INC.
TERAU PROPERTIES, INC.)
BOOK 11458
PAGE 221

Area outlined in blue will
be used for temporary storage
20ft deep x 100ft long area.

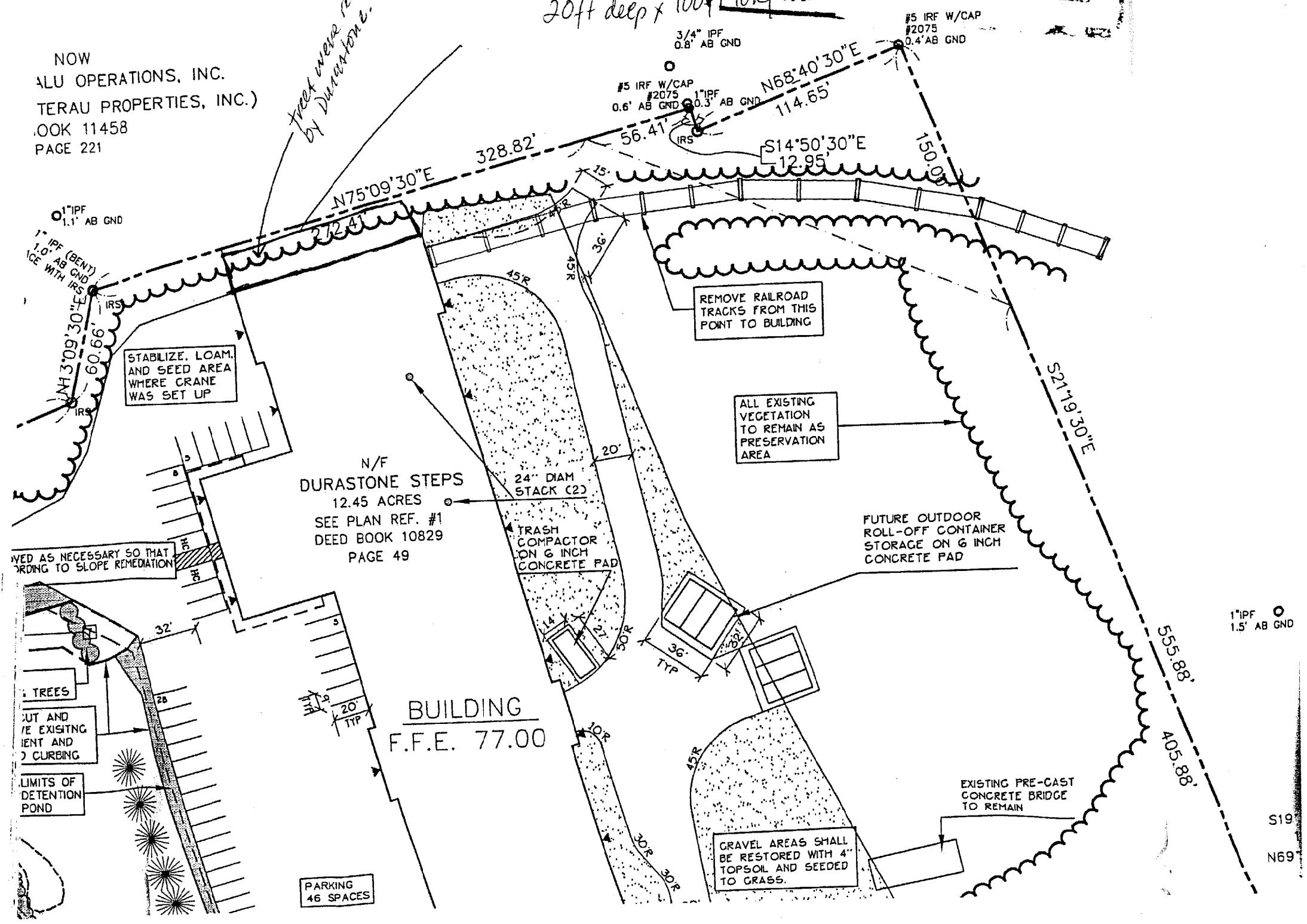
*trees were removed
by Durastone.*

Auburn St

Allen Ave.
Morrills Corner

Portland, Maine

HILL FARM



S19
N69