S E A M

Structural Engineering Association of Maine

STATEMENT OF SPECIAL INSPECTIONS

PROJECT: Waterville Street Condominium Building C

LOCATION: Portland, Maine

PERMIT APPLICANT: Casco Bay Ventures, Inc

APPLICANT'S ADDRESS: 223 Woodville Road
Falmouth, Maine 04105

STRUCTURAL ENGINEER OF RECORD. Timothy S Dean, P.E. (*NAME*) Pinkham & Greer Engineers (*FIRM*)

ARCHITECT OF RECORD: Scott Teas, R.A. (*NAME*) TFH Architects (*FIRM*)

This Statement of Special Inspections is submitted in accordance with Section 1705.0 of the 1999 BOCA National Building Code. It includes a listing of special inspections applicable to this project as well as the name of the Special Inspector(s), and the names of other agencies intended to be retained for conducting these inspections.

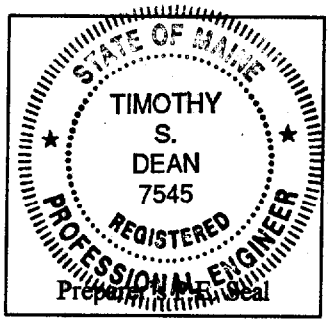
The Special Inspector shall keep records of all inspections listed herein, and shall furnish inspection reports to the Code Official and to the Registered Design Professional of Record. All discrepancies shall be brought to the immediate attention of the Contractor for correction. If the discrepancies are not corrected the discrepancies shall be brought to the attention of the Code Official and to the Registered Design Professional of Record. Interim reports shall be submitted to the Code Official and to the Registered Design Professional of Record monthly, unless more frequent submissions are requested by the Code Official.

Job site safety is solely the responsibility of the Contractor. Materials and activities to be inspected are not to include the Contractor's equipment and methods used to erect or install the materials listed.

Prepared By:

Timothy S Dean, P.E.
NAME

SIGNATURE *DATE* 8/7/03



Prepared for Seal

Applicant's Authorization:

SIGNATURE *DATE* 8-2-03

Casco Bay Ventures INC

Building Code Official:

SIGNATURE *DATE*

SCHEDULE OF SPECIAL INSPECTION SERVICES

PROJECT: WATERVILLE STREET CONDOMINIUMS

MATERIAL / ACTIVITY	ITEM	SERVICE	APPLICABLE TO THIS PROJECT Y/N	EXTENT (All, Sample,Other, None)	COMMENTS	AGENT #	DATE COMPLETED	REV. #
1705.3 STEEL CONSTRUCTION	1.00							
Steel Fabrication		In-plant review Part A - Fabrication procedures	Y		Spec 5120 1.02B	1,2,3		
		Part B - Procedures implementation Review conformance to Part A	Y/N	SER to determine extent after completion of Part A		1,2,3		
	1.01	Review material certificates of compliance (structrual steel & weld filler material)	N	ALL		1,2,3		
		Review connections	N					
		Review welding of seismic-resisting system in Cat. "C" buildings	N					
Steel Erection	1.02	Review welder certification	Y	ALL		1,2,3		
	1.03	Review materials certificates of compliance (Bolts, nuts, washers, & weld filler material)	Y	ALL		1,2,3		
		Review primary steel connections	Y	ALL		1,2,3		
	1.04	Moment connections	N					
	1.05	Shear connections	Y	VISUAL, INITIAL SAMPLE 10%		1,2,3,5		
	1.06	Bracing connections	N					
		Review welded Cat. "C" seismic connections	N					
		Review welded columd splices	N					
		Review base metal testing for "t" > 1 1/2"	N					
		Review secondary steel connections						
		Girts	N					
	1.07	Steel deck	Y	VISUAL, INITIAL SAMPLE 25%		1,2,3,5		
	1.08	Lintels	Y	VISUAL, INITIAL SAMPLE 10%		1,2,3		
		Review installation of shear studs	N					
	1.09	Review Details / Steel Frame	Y	SAMPLE		1,2,3,5		

All Steel Construction Special Inspections have been completed in accordance with BOCA Section 1705.3 Special Inspector_____

SCHEDULE OF SPECIAL INSPECTION SERVICES

PROJECT: WATERVILLE STREET CONDOMINIUMS

MATERIAL / ACTIVITY	ITEM	SERVICE	APPLICABLE TO THIS PROJECT Y/N	EXTENT (All, Sample,Other, None)	COMMENTS	AGENT #	DATE COMPLETED	REV. #
1705.3 STEEL CONSTRUCTION (CONTINUED)	1.00							
Light Gage Steel Framing Fabrication		In-plant review Part A - Fabrication procedures	N	Unless excepted by 1705.2 review fabrication Q/A proceedures per 1705.2				
		Part B - Procedures implementation Review conformance to Part A	N	SER to determine extent after completion of Part A				
	1.10	Review material certificates of compliance (structrual steel & weld filler material)	Y	ALL		1,2,3		
		Review connections	N					
Light Gage Steel Framing Installation	1.11	Review welder certification	Y	ALL		1,2,3		
	1.12	Review joist bearing connection	Y	SAMPLE (INITIAL SAMPLE 25%) VISUAL		1,2,3		
	1.13	Review joist bearing length	Y	SAMPLE (INITIAL SAMPLE 25%) VISUAL		1,2,3,5		
	1.14	Review joist bridging	Y	SAMPLE (INITIAL SAMPLE 25%) VISUAL		1,2,3,5		
	1.15	Shear connections	Y	SAMPLE (INITIAL SAMPLE 25%) VISUAL		1,2,3,5		
	1.16	Bracing connections	Y	ALL		1,2,3		
	1.17	Review Details / Steel Frame	Y	SAMPLE (INITIAL SAMPLE 25%) VISUAL		1,2,3,5		

All Steel Construction Special Inspections have been completed in accordance with BOCA Section 1705.3 Special Inspector_____

SCHEDULE OF SPECIAL INSPECTION SERVICES

PROJECT: WATERVILLE STREET CONDOMINIUMS

MATERIAL/ACTIVITY	ITEM	SERVICE	APPLICABLE TO THIS PROJECT Y/N	EXTENT (All, Sample,Other, None)	COMMENTS	AGENT #	DATE COMPLETED	REV. #
1705.4 CONCRETE CONSTRUCTION	2.00							
Concrete Materials	2.01	Review materials (ACI Chapter 3)	Y	ALL		1,2,3		
	2.02	Review mix design (ACI Chapter 4)	Y	ALL		1,2,3		
		Review reinforcing certification & weldability (ASTM A 706) if required	N					
Placing Reinforcement	2.03	Review condition & placement of reinforcing and prestressing steel (ACI 318 7.4-7.7)	Y	SAMPLE		1,2,3		
		Review welding of reinforcing in Cat "C" seismic-resisting systems	N					
Formwork		Review formwork (ACI 318 6.1)	N					
		Review form removal & reshoring (ACI 318 6.2)	N					
Concrete Operations	2.04	Review concrete strength tests (ACI 318 5.6)	Y	ALL		1,2,3		
		Review mix proportions and technique (ACI 318 5.2, 5.3, 5.4, & 5.8)	N					
	2.05	Review concrete placement (ACI 318 5.9 & 5.10)	Y	SAMPLE		1,2,3,5		
	2.06	Review curing technique & temperature (ACI 318 5.11, 5.12, & 5.13)	Y	SAMPLE		1,2,3		
Prestressing Operations		Review application of prestressing force (ACI 318 18.18)	N					
		Review grouting of bonded prestressing tendons in Cat. "C" seismic-resisting systems	N					
Precast Manufacturing		In-plant review Part A - Fabrication procedures	N					
		Part B- Procedures implementation Review conformace to Part A	N					
Erection of Precast Concrete		Review erection of precast units	N					
		Review key reinforcement	N					
		Review key grouting	N					
		Review concrete topping	N					
		Review connections	N					

All Steel Construction Special Inspections have been completed in accordance with BOCA Section 1705.3 Special Inspector_____

SCHEDULE OF SPECIAL INSPECTION SERVICES

PROJECT: WATERVILLE STREET CONDOMINIUMS

MATERIAL/ACTIVITY	ITEM	SERVICE	APPLICABLE TO THIS PROJECT Y/N	EXTENT (All, Sample,Other)	COMMENTS	AGENT #	DATE COMPLETED	REV. #
1705.5 MASONRY CONSTRUCTION	3.00							
Masonry Materials	3.01	Review materials certification Masonry units	N					
	3.02	Review grout materials & mix design	Y			1,2,3		
	3.03	Review mortar materials & mix design	N					
		Review strength determination Unit strength method. Review unit strengths & grout, mortar mixes	N					
		Review strenth method. Review pre construction test results. Field tests during construction.	N					
	3.04	Grout testing Determine compressive strength	Y			5		
		Mortar testing Field test compressive strength ASTMC780 (Reqd. only if property reqs of ASTM C270 are used)	N					
General Masonry work	3.05	Review mortar mix proportions & mixing (ACI 530.1; 2.3.2.5)	N					
	3.06	Review grout mix proportions & mixing (ACI 530.1; 4.2.2)	Y			1,2,3		
	3.07	Review general installation of mortar, grout, masonry units.	N					
	3.08	Review installation of horiz., vert., & joint reinforcing (incl. Location, sizes, splices, & positioning devices)	N					
	3.09	Review hot/cold weather procedures (ACI 530.1; 2.3.2.2, 2.3.2.3)	Y			1,2,3		
		Review installation of anchorage devices (ACI 530; 4.2, 5.14)	N					
	3.10	Review installation of lintels	N					

All Steel Construction Special Inspections have been completed in accordance with BOCA Section 1705.3 Special Inspector_____ D

SCHEDULE OF SPECIAL INSPECTION SERVICES

PROJECT: WATERVILLE STREET CONDOMINIUMS

MATERIAL/ACTIVITY	ITEM	SERVICE	APPLICABLE TO THIS PROJECT Y/N	EXTENT (All, Sample,Other, None)	COMMENTS	AGENT #	DATE COMPLETED	REV. #
1705.7 PREPARED FILL	**4.00**							
Site Preparation	4.01	Review site preparation prior to prepared fill placement	Y	ALL		4		
During Fill Placement	4.02	Review compliance to soils report Material	Y	SAMPLE		4		
		Lift thickness	N					
Evaluation of In-Place Density	4.03	Review in-place dry density for compliance with soils report	Y	SAMPLE		4		

All Steel Construction Special Inspections have been completed in accordance with BOCA Section 1705.3 Special Inspector_____

S E A M

Structural Engineering Association of Maine

LIST OF AGENTS

PROJECT: WATERVILLE STREET CONDOMINIUMS

STRUCTURAL ENGINEER OF RECORD: Timothy S Dean P.E. Pinkham & Greer Engineers
NAME *FIRM*

170 U. S. Route One, Falmouth, Maine 04105
ADDRESS

ARCHITECT OF RECORD: Scott Teas R.A. TFH Architects
NAME *FIRM*

100 Commercial Street Portland, ME, 04101
ADDRESS

Following is the List of Agents selected for performance of Special Inspections for this project.

	Name	Firm
1. Special Inspector	Timothy S Dean P.E.	Pinkham & Greer Engineers
2. Special Inspector	David K Pinkham P.E.	Pinkham & Greer Engineers
3. Special Inspector	Kenneth I Marsh	Pinkham & Greer Engineers
4. Geotechnical Eng.	Matthew T. Grady P.E.	R. W. Gillespie & Associates
5. Testing Agency		R. W. Gillespie & Associates

Memorandum

Project:	Waterville Street Condominiums	Project No.	0111
Date:	August 13, 2003		
To:	Mr. Michael Nugent Inspection Services Manager City of Portland City Hall Room 315 389 Congress Street Portland, ME 04101	Phone No. Fax No.	(207) 874-8700 (207) 874-8716
From:	Will Tinkelenberg TFH Architects	Phone No. Fax No.	(207) 775-6141 (207) 773-0194
Re:	Parking Garage Ventilation	Copy to:	File

Mike:

Included here is a letter from Dick Whitney, mechanical engineer, that outlines the code requirements for providing ventilation for the parking garage, along with proposed design parameters based on these requirements.

Where Mr. Whitney refers to locating the CO detector above the door to the "Utility" Room, he is actually referring to the room identified on the plans as the Maintenance Room (such that the CO detector remains located as shown on the E1-1 plan).

Please let us know if this does not address you concerns.

Thank you,

Will

Whitney Engineering, P.A.
10 Danforth Street
Portland, Me 04101
(207) 874-7449
(207) 874-7849-fax
e-mail: whiteng@maine.rr.com

Date: August 12, 2003 **CASCO BAY CONDOMINIUMS BUILDING C**

To: Scott Teas, TFH Architects
Project: Casco Bay Condominiums Building C
Re: Garage Ventilation

Scott,

A. Code Requirements

1. BOCA National Mechanical Code 1993, International Mechanical Code 1998 ("BOCA" with new name) and ASHRAE Standard, ANSI/ASHRAE 62-1992, "Ventilation for Acceptable Indoor Air Quality" all specify 1.5 CFM/Sq. Ft. floor area for common garages serving several units in residential facilities.

2. A ventilation code per automobile applies to separate garages for each dwelling unit, not a common garage serving several units as we are looking at.

3. Ventilation requirement is for "outdoor air", that is air taken from outdoors circulated previously through the ventilation system. This means that if an exhaust fan is used, it presumes that outdoor air will enter the garage in some manner to "make-up" air exhausted. By definition in BOCA, "ventilation" as defined, includes removal of air from any space by natural or mechanical means. Note 2 in BOCA for Private Dwellings specifically requires that garage exhaust be mechanical.

4. BOCA requires that the garage exhaust:

a. locates exhaust fan inlet in the area of heaviest concentration of contaminants
b. exhaust directly outdoors without recirculation
c. operate when air is required to be exhausted.

(Note: BOCA allows exhaust fan for Public Garages to not operate continuously if an automatic CO detector is set to 25 PPM and exhaust fan is capable of providing not less than 1.5 CFM per square foot garage floor area. Interpretation: BOCA prevents variable

Garage Ventilation
Casco Bay Condominiums Building C
Portland, Maine
August 12, 2003

ventilation based on PPM of CO. If 25 PPM CO is detected, the exhaust fan is reqired to provide 1.5 CFM/Sq. Ft minimum until concentration drops below 25 PPM).
d. operate when motor vehicles operate for a time period greater than 10 seconds (or is controlled by a CO detector)
e. Fan exhaust discharge cannot be located to "create a nuisance" or directed onto walkways.

B. Proposed Design to Meet Code Requirements:

1. Provide a wall propeller or centrifugal type exhaust fan with a minimum capacity of 1.5 CFM/Square Foot garage floor area, or 1,462 square feet garage floor area x 1.5 CFM per square feet = 2,193 CFM.

2. Locate fan high as possible to pick up less dense CO-air mixture.

3. Locate fan discharge to avoid nuisance discharge.

4. Provide opening for outdoor air for make-up air to exhaust fan, for example, open doors into the garage.

5. Provide CO detector and operate fan from at detection of CO level of 25 PPM or higher. Locate CO detector above door to utility room.

If you have any questions please do not hesitate to call.

Regards,

WHITNEY ENGINEERING, P.A.
Dick Whitney
Richard P. Whitney, P.E.

file: Code Requirements 1.doc

Transmittal Letter

Project: Waterville Street Condominiums — Project No. 0111

Date: August 7, 2003

To: Mr. Michael Nugent
Inpection Services Manager
City Hall Room 315
389 Congress Street
Portland, Maine 04101

Fax No.:

If enclosures are not as noted, please inform us immediately.

We transmit:

(x) herewith ( ) under separate cover via UPS
( ) in accordance with your request _____

For your:

( ) approval ( ) distribution to parties ( ) information
( ) Review and Comm ( ) record
(x) use ( ) Signature

The following:

( ) Drawings ( ) Shop Drawing Prints/Specificatio ( ) Samples
( ) Specifications ( ) Shop Drawing Reproducibles ( ) Product Literature
( ) Change Order ( ) Slides

Copies	Date	Rev. No.	Description	Action
1	4/29/03		Specifications	
"	2/27/03		R. W. Gillespie Geotechnical Investigation	
"	3/10/03		Gillespie Letter re: Report Errata	
"	"		Gillespie Letter re: Slab/Footing Insulation	
"	8/6/03		City of Portland Building Code Certificate	
"	"		City of Portland BOCA Certificate	
3	8/7/03		Special Inspections Statement	

Action Cod: A. Action indicated on item transmitted
B. No action required
C. For signature and return to this office
D. For signature and forwarding as noted below under Remarks
E. See Remarks below

Remarks: _____

Copies to: (with enclosures)

File

DEPT. OF BUILDING INSPECTION
CITY OF PORTLAND, ME
AUG - 8 2003
RECEIVED

TFH Architects, P. A.
100 Commercial Street
O Portland Maine 04101
O Telephone 207-775-6141
X Fax 207-773-0194
O By: Will Tinkelenberg

PORTLAND, MAINE
ING BOARD OF APPEALS

June 2, 2001

Casco Bay Ventures, Inc
223 Woodville Road
Falmouth, Maine 04105

RE: 3 St. Lawrence Street
CBL: 16-F-024
ZONE: R-6 Zone

Dear Casco Bay Ventures, Inc;

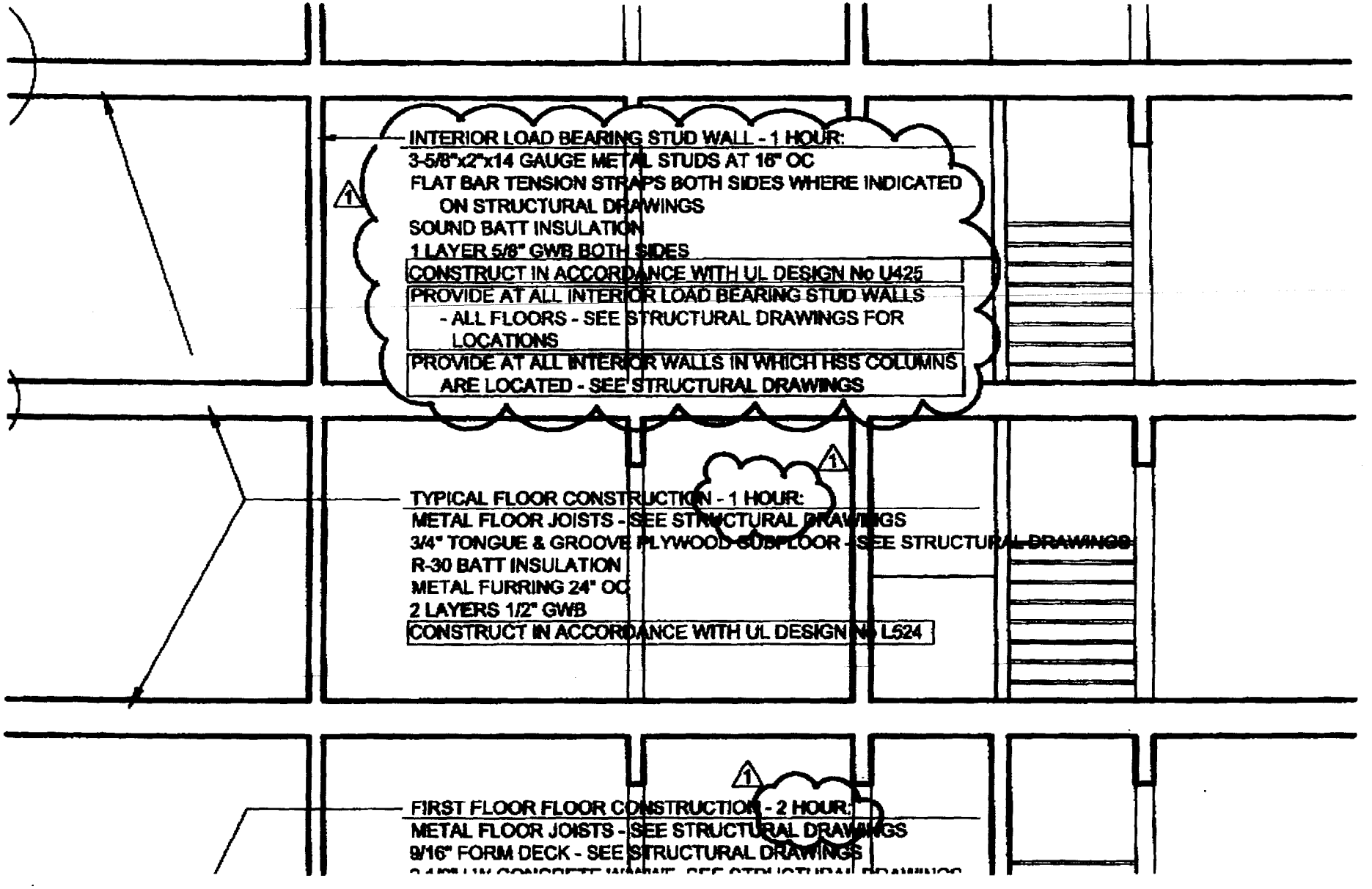
As you know, at its May 17, 2001 meeting, **the Board of Appeals voted 4-1 to grant** your Conditional Use Appeal. Enclosed please find a copy of the Board's decision.

Should you have any questions please do not hesitate to contact Jodine Adams, Office Manager or myself.

Sincerely,

Marge Schmuckal
Zoning Administrator

MS/jla
Enclosure


INTERIOR LOAD BEARING STUD WALL - 1 HOUR:
3-5/8"x2"x14 GAUGE METAL STUDS AT 16" OC
FLAT BAR TENSION STRAPS BOTH SIDES WHERE INDICATED ON STRUCTURAL DRAWINGS
SOUND BATT INSULATION
1 LAYER 5/8" GWB BOTH SIDES
CONSTRUCT IN ACCORDANCE WITH UL DESIGN No U425
PROVIDE AT ALL INTERIOR LOAD BEARING STUD WALLS - ALL FLOORS - SEE STRUCTURAL DRAWINGS FOR LOCATIONS
PROVIDE AT ALL INTERIOR WALLS IN WHICH HSS COLUMNS ARE LOCATED - SEE STRUCTURAL DRAWINGS
1
TYPICAL FLOOR CONSTRUCTION - 1 HOUR:
METAL FLOOR JOISTS - SEE STRUCTURAL DRAWINGS
3/4" TONGUE & GROOVE PLYWOOD SUBFLOOR - SEE STRUCTURAL DRAWINGS
R-30 BATT INSULATION
METAL FURRING 24" OC
2 LAYERS 1/2" GWB
CONSTRUCT IN ACCORDANCE WITH UL DESIGN No L524
1
FIRST FLOOR FLOOR CONSTRUCTION - 2 HOUR:
METAL FLOOR JOISTS - SEE STRUCTURAL DRAWINGS
9/16" FORM DECK - SEE STRUCTURAL DRAWINGS

3

The fourth test was performed on two 4"x4" sleeved wooden posts anchored to the wood deck according to criteria in SBCCI-99 section 1608.2.2.4 which states: "Loading conditions shall not be applied to produce maximum stress in each of the respective components or any of the supporting components." The wood posts anchorage was performed by cutting a 4"x4" hole in the wood deck, passing the post through the hole and bolting it to the 2"x6" wood joists supporting the deck structure. Testing consisted of applying a 400-pound load at 42-inches and 36-inches from the face of the wood deck. The force was applied at a 90-degree angle with a 2-inch strap connected in line with a load application device and calibrated load cell. As the load was applied, there was visible deformation of the deck system, but there was no cracking or breaking at attachment points or separation of the mounting fixture. Upon removal of the load, the post returned to its original shape without permanent deformation.

4.0 Test Results

Test Identification	First Test	Second Test	Third Test	Fourth Test
12' PVC Rail	Compliant	Compliant	Compliant	Compliant

5.0 Deflection Data

	First Test		Second Test		Third Test		Fourth Test	
Test Identification	Maximum	Permanent	Maximum	Permanent	Maximum	Permanent	Maximum	Permanent
12' PVC Rail	0.75"	0.00"	0.5"	0.00"	n/a	n/a	1.00"	0.38"

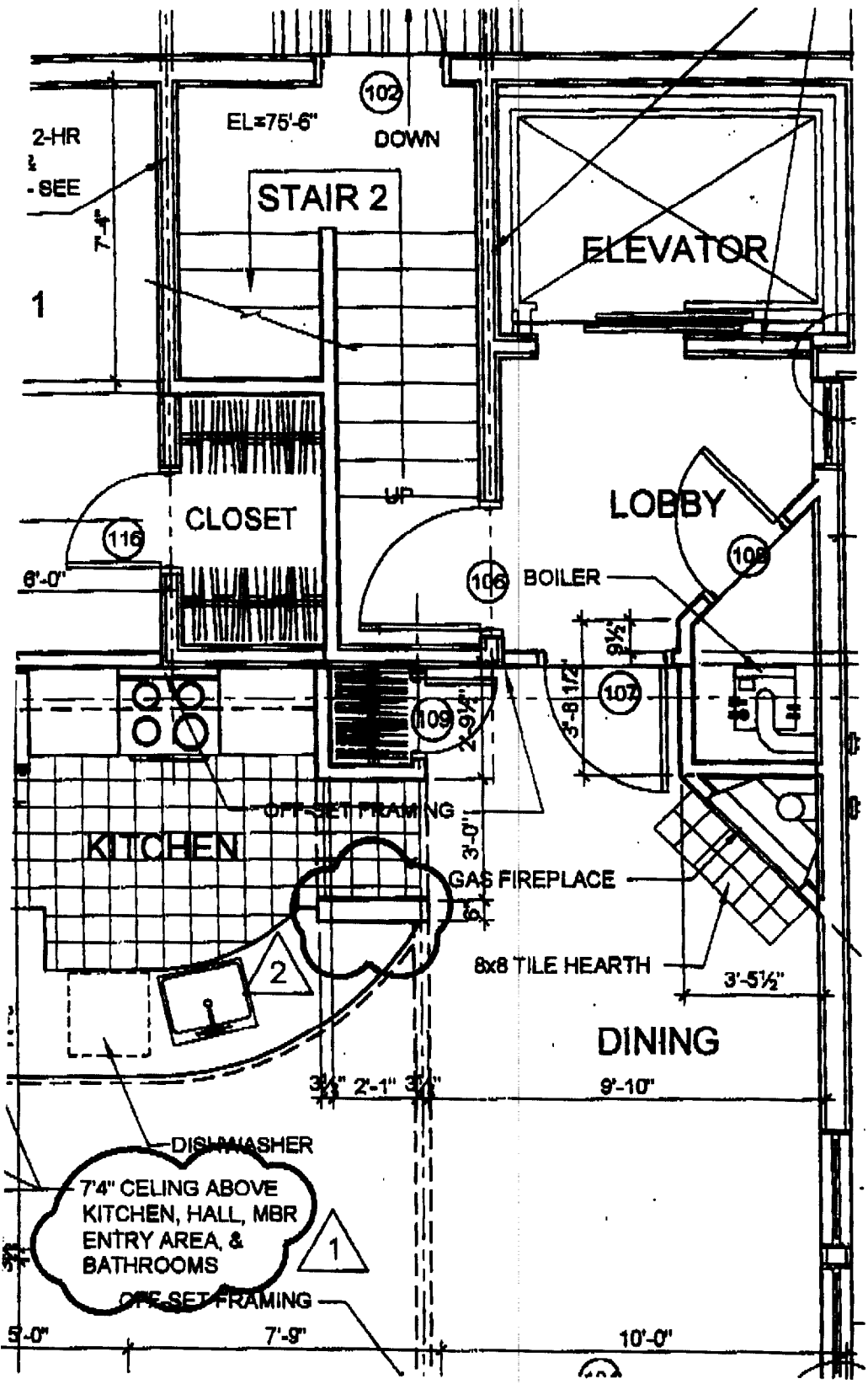
6.0 Conclusion

In our professional opinion, these test results indicate the rail sections outlined above performed in accordance with test criteria for guardrails outlined in SBCCI-99, BOCA-99, ASCE 7-95, IBC-00 and UBC-97.

WILL
TSH ARCHITECTS
FAX 207 773 0194

7c

TOTAL P.09

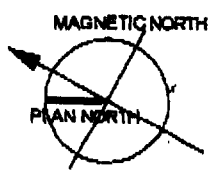


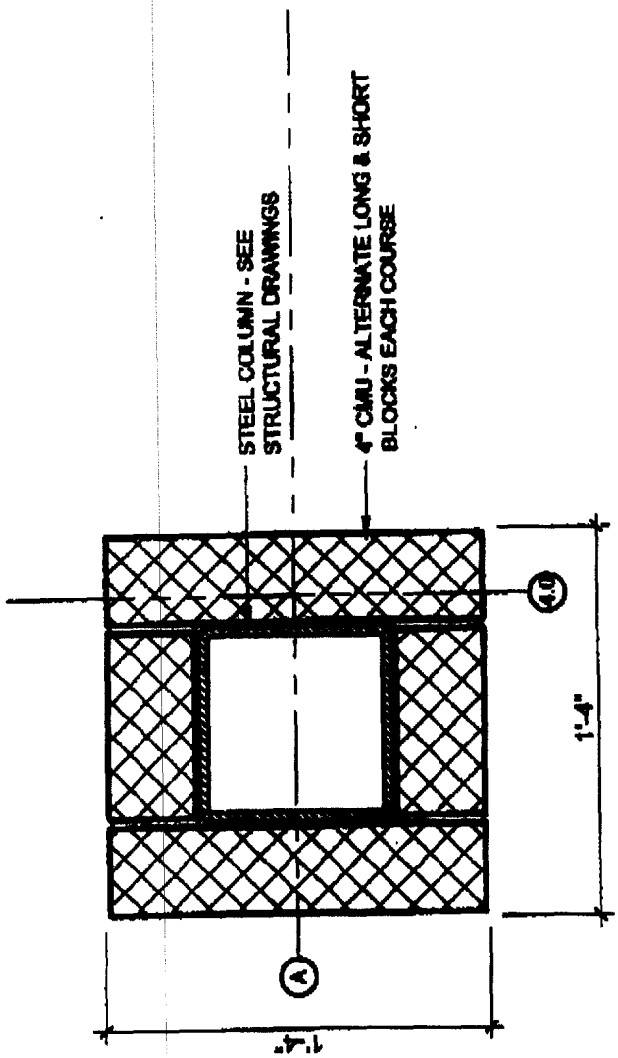
rd & 4th FLOORS SIMILAR)

MODIFICATIONS SUMMARY

1 CEILING HEIGHTS IN BATHROOMS REDUCED

2 COLUMN REPLACED WITH 6" STUD WALL TO ACCOMMODATE PLUMBINC





PLAN DETAIL AT PARKING GARAGE COLUMN

SCALE: 1 1/2" = 1'-0"

5

170 U.S. Route One
Falmouth, Maine 04105
Tel: (207) 781-5242
Fax: (207) 781-4245

FAX MEMORANDUM

TO: Will Tinkelenberg, TFH Architects

FAX #: 773-0194

FROM: Tim Dean

DATE: August 14, 2003

RE: Waterville Street
FILE: 02205

# of Pages (including this one): 1

In response to the memo from Mike Nugent, the following items address the structural comments:

5. The design is in accordance with section 7.3 of ASCE 7.
6. My calculations have been done for a roof thermal factor of 1.1 but the drawings indicate it to be 1.0. I will revise drawing S1 to include this correction. The ground snow load for this area in 1999 BOCA is 50 not 60 psf, I will correct this also.
7. The C_s factor for roof slope is 1.0 for this project. The sloped roof snow load is the same as the flat roof snow load.
8. The seismic soil profile type is S_1.
9. The basic structural system is a load bearing wall system. The seismic resisting system is light frame walls with shear panels.
10. The seismic analysis procedure is the equivalent lateral force procedure per section 1610.4.
11. The note regarding nailing on S6 will be revised to read "1999 BOCA".
12. The roof framing is 2x10 rafters at 16"oc as per note 1 on the roof framing plan.

METALS & MATERIALS
ENGINEERS
1039 Industrial Court • Suwanee, Georgia 30024 • (678) 730-2000 • (678) 482-9677 • www.mmelab.com

PRODUCT TESTING REPORT

PROJECT:	Cross Industries	JOB NO.:	3021
CLIENT:	Cross Industries	LAB NO.:	10285
SAMPLE ID:	Various Guardrail Systems & Components	TEST DATE:	July 28, 2003
SPECIFICATION:	SBCCI, BOCA, IBC, UBC	TOTAL PAGES:	3

Load Testing of Several Guardrail Systems to the Standard Building Code Congress International (SBCCI), Building Officials Code Administration (BOCA), International Building Code (IBC) and Uniform Building Code (UBC) Specifications

Prepared for:

Cross Industries
6685 Jimmy Carter Blvd.
Norcross, GA. 30071

Submitted By:

Scott Lowrie, PE
Chief Product Analysis Engineer

GEORGIA REGISTERED No. 026708 PROFESSIONAL ENGINEER SCOTT L. LOWRIE

Reviewed By:

Ralph Bowman, PE
Senior Metallurgist

7A

1.0 Introduction

Load testing, as requested by Cross Industries, was performed at their facility in Norcross, Georgia by the technical staff of Metals & Materials Engineers, LLC (MME) on one 12-foot section of guardrail, constructed using the standard fabrication methods for PVC railing.

2.0 Test Samples

Standard attachments are two 1 ½" x 5 ½" PVC nailers routed to receive top and bottom rails. The nailers are attached to the wood column with four 2.5-inch deck screws per nailer.

3.0 Test Procedure

MME, Inc. performed three testing procedures on each rail system in accordance with SBCCI, BOCA and IBC specification. For each test, the most stringent requirement from the following building codes was selected:

Building Code	Year	Applicable Section	Safety Factor
BOCA	1999	1606.4	2.5
ASCE 7	1995	4.4.2.A	2.5
IBC	2000	1607.7.1	2.5
UBC	1997	Table 3	2.0
SBCCI	1999	1608.2.2	2.0

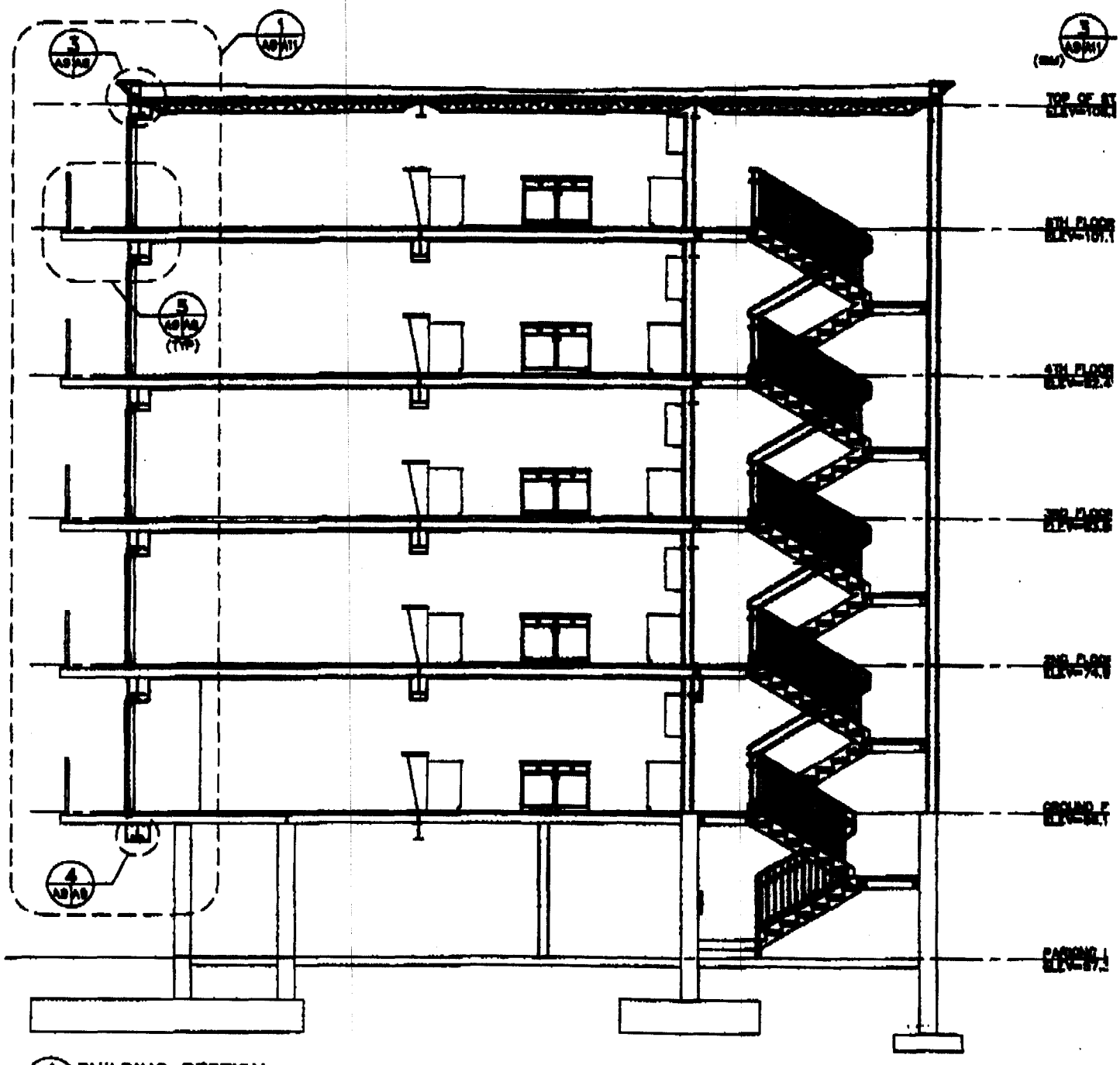
The method of test procedure selection corresponds to the following overall procedure:

The first test was performed according to criteria in the IBC-00 section 1607.7.1.1, BOCA-99 section 1606.4 and the ASCE 7-95 section 4.4.2.A which states: "Guardrail systems shall be able to resist a single concentrated load of 200 lb. applied in any direction at any point along the top of the rail." Testing consisted of applying a horizontal 500-pound load at one position at the midpoint of the rail on each guardrail. The force was applied at a 85-degree angle using a force-application device in line with a calibrated load cell. As the force was applied, there was visible bowing of the rails at their centers but no separation of material from grooves or joints and no cracking or breaking at attachment points. When the loads were released, the guardrails returned to their original configuration without excessive permanent deformation. Deflection data is given at the end of this report.

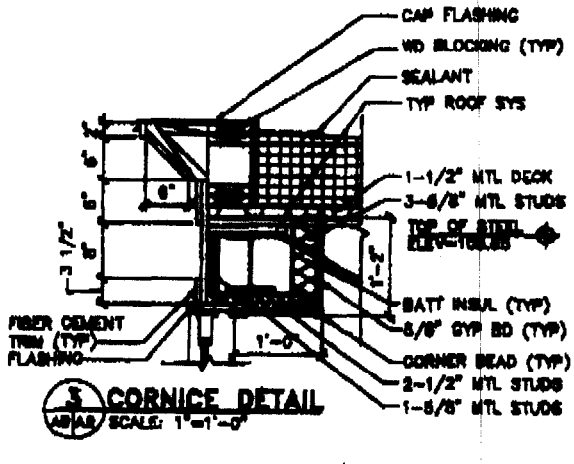
The second test was performed according to criteria in SBCCI-99 section 1608.2.2.2 which states: "Guardrail systems shall be designed and constructed for a load of 50 pounds/foot (730N/M) applied horizontally at the required guardrail height and a simultaneous load of 100 pounds/foot (1459 N/M) applied vertically downward at the top of the guardrail." Testing consisted of applying a 200 pound/foot vertical load utilizing 60-pound and 120-pound lead sheets placed on a rigid bar taped to the top rail of the guardrail section. Simultaneously, a 100-pound/foot horizontal force was applied at the top of the guardrail along its entire length through a rigid 2" x 2" metal beam using a force application device in line with a calibrated load cell. For each test, there was visible vertical and horizontal bowing of the guardrails along their length but no separation of material from grooves or joints and no cracking or breaking at attachment points. When the loads were released, the guardrails returned to their original configuration without excessive permanent deformation. Deflection data is given at the end of this report.

The third test was performed on both the square baluster and colonial baluster according to criteria in SBCCI-99 section 1608.2.2.3 which states: "The guardrail system shall also be designed and constructed to resist a 200-pound (890N) concentrated horizontal load applied on a 1-foot square area at any point in the system including intermediate rails or other element serving the purpose." Testing consisted of applying a 500-pound load at the center point between the top and bottom rails. The force was applied at an 80-degree angle with a 1-foot square bracket connected in line with a load application device and calibrated load cell. As the load was applied, there was visible deformation of the pickets, but there was no cracking or breaking at attachment points or separation of square tubing from grooves or joints. Upon removal of the load, the pickets returned to their original shape without permanent deformation.

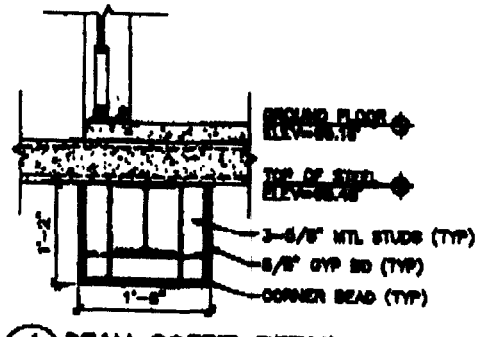
7B



1 BUILDING SECTION
SCALE: 1/4"=1'-0"

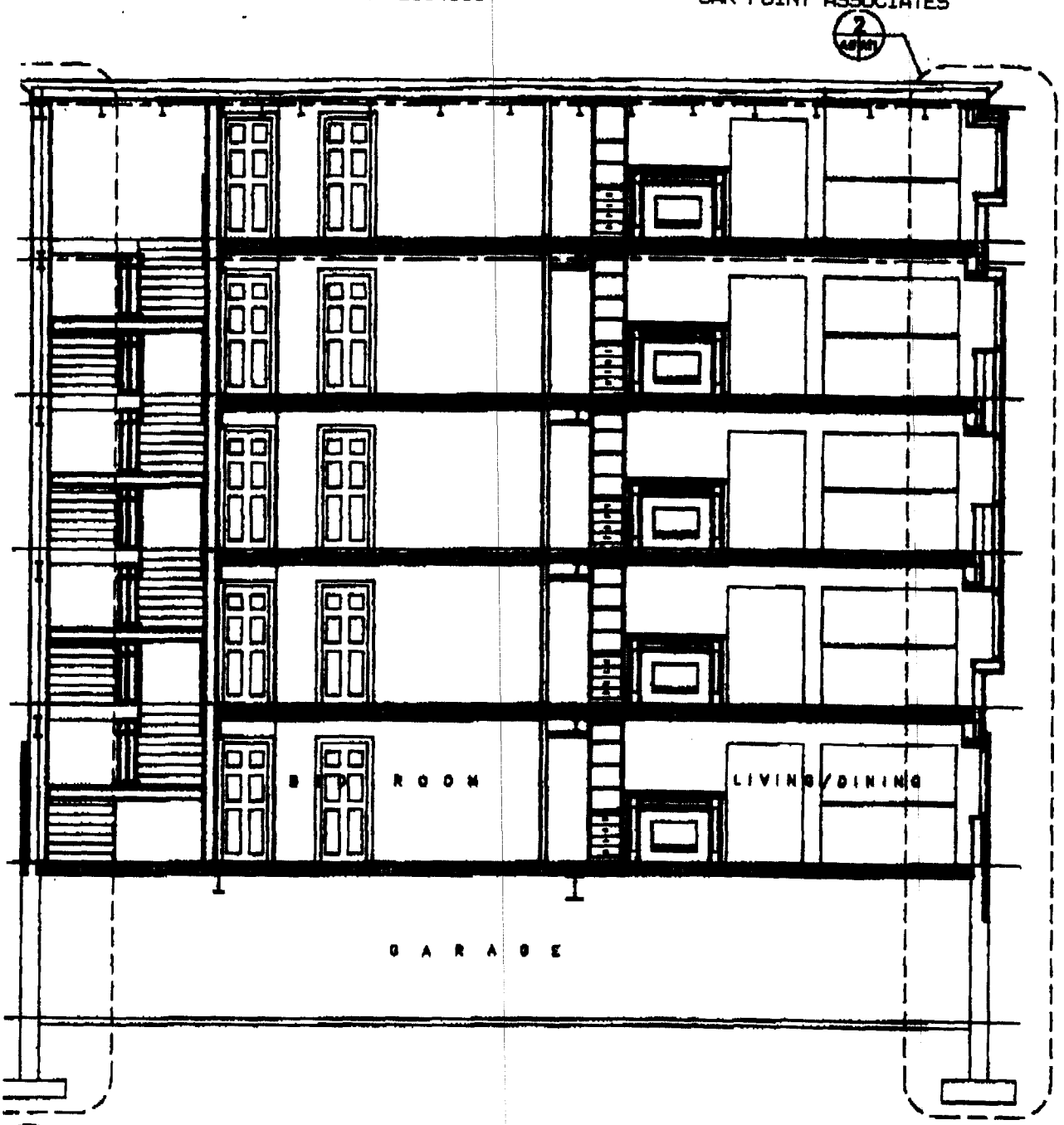


3 CORNICE DETAIL
SCALE: 1"=1'-0"

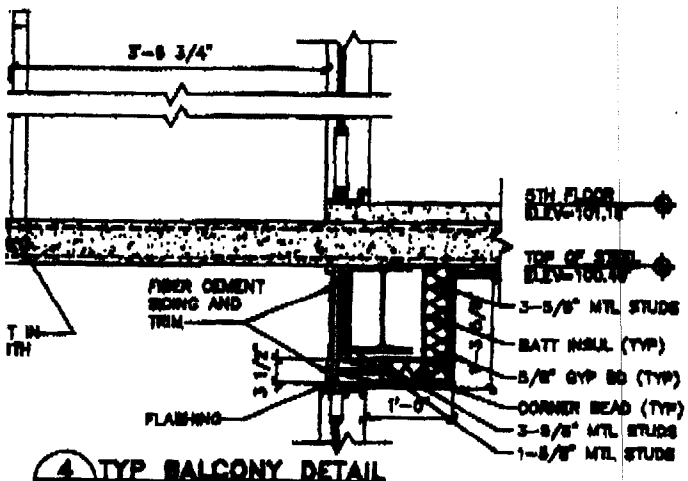


4 BEAM SOFFIT DETAIL
SCALE: 1"=1'-0"

GALVANIZED SI
PLANK. DOOR
PLANK MANUF.



2 BUILDING SECTION
A1/A9 SCALE: 1/4"=1'-0"



4 TYP BALCONY DETAIL
A9/A9 SCALE: 1"=1'-0"

GENERAL NOTE:
HANDRAIL SIZE, LOCATION AND CONSTRUCTION TO BE DESIGNED BY OTHERS. COORDINATE SLEEVE LOCATION AND RAILING CONSTRUCTION WITH CONTRACTOR AND PLANK MANUFACTURER.

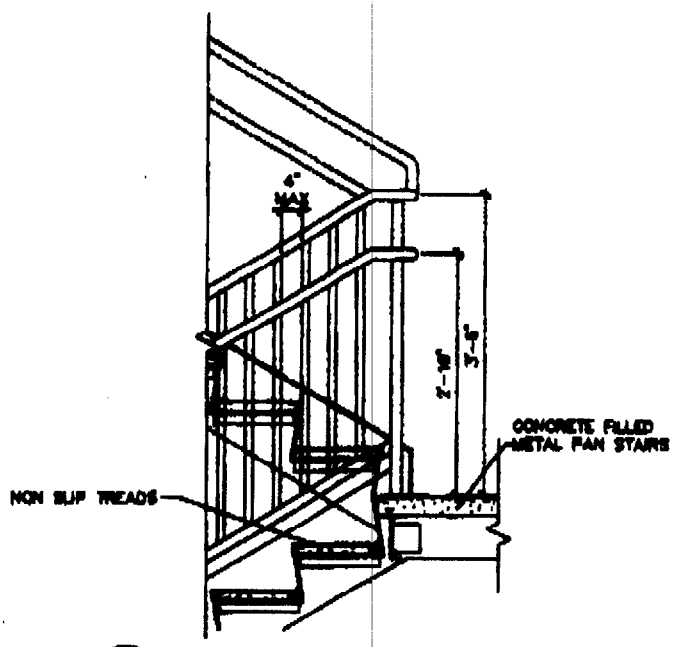
GRAPHIC SCALE
1/4"=1'-0" 0 2" 4" 8" 12"
1"=1'-0" 0 6" 1' 2' 3' 4'
CHECK GRAPHIC SCALE BEFORE USING

OAK POINT ASSOCIATES

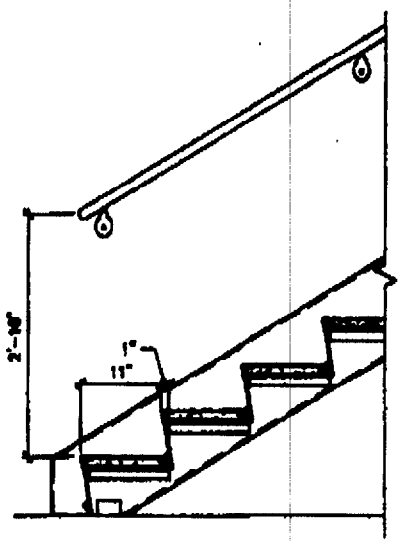
5 UNIT CONDOMINIUMS
20-24 BRACKETT STREET
PORTLAND, MAINE
OWNER:
KEVEL, LLC
28 CHESTNUT STREET, OLD ORCHARD BEACH, MAINE 04064

BUILDING SECTIONS

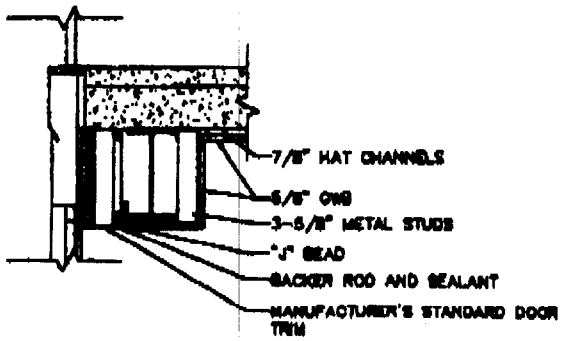
A9
15 OF 29



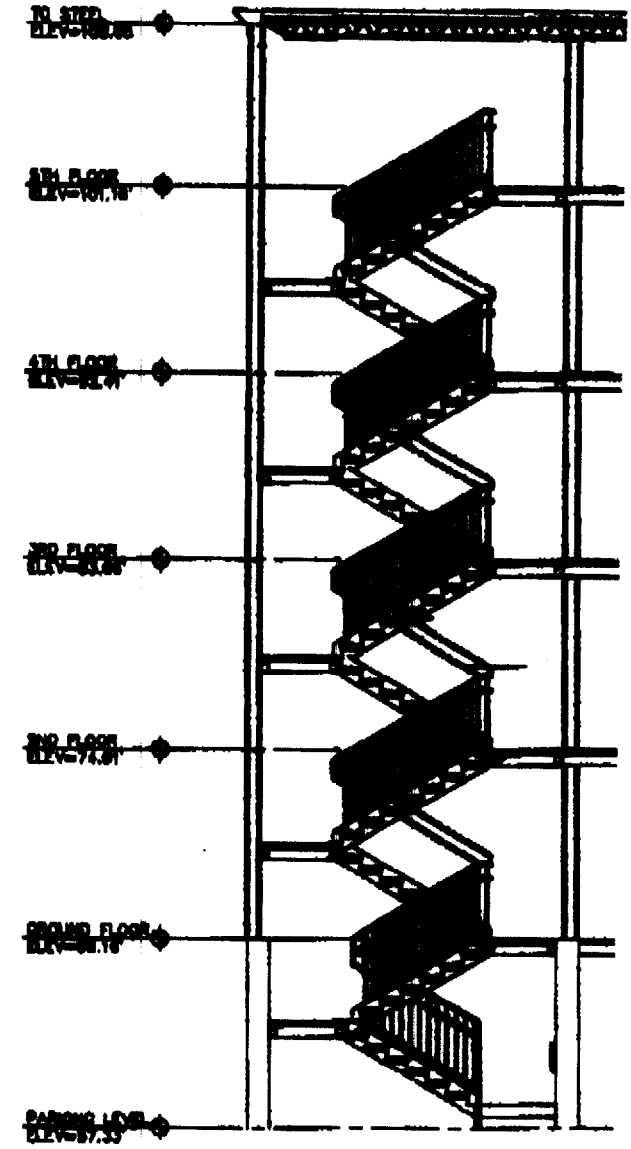
1 TYPICAL HAND RAIL DETAIL
SCALE: 1"=1'-0"



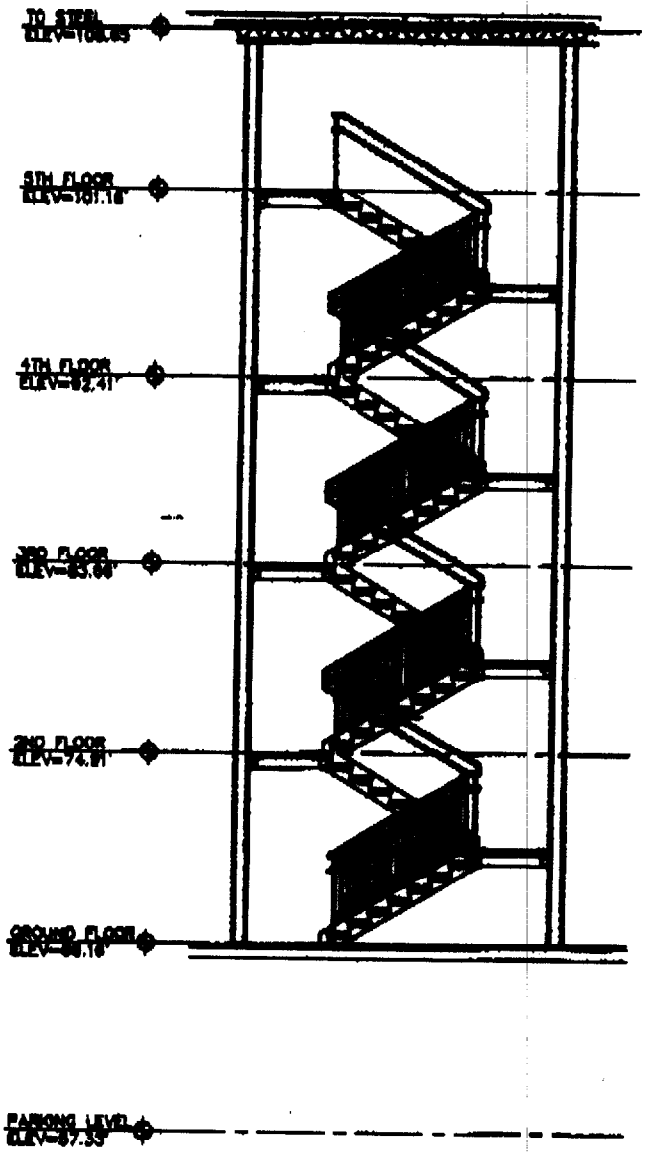
2 TYPICAL STAIR DETAIL
SCALE: 1"=1'-0"



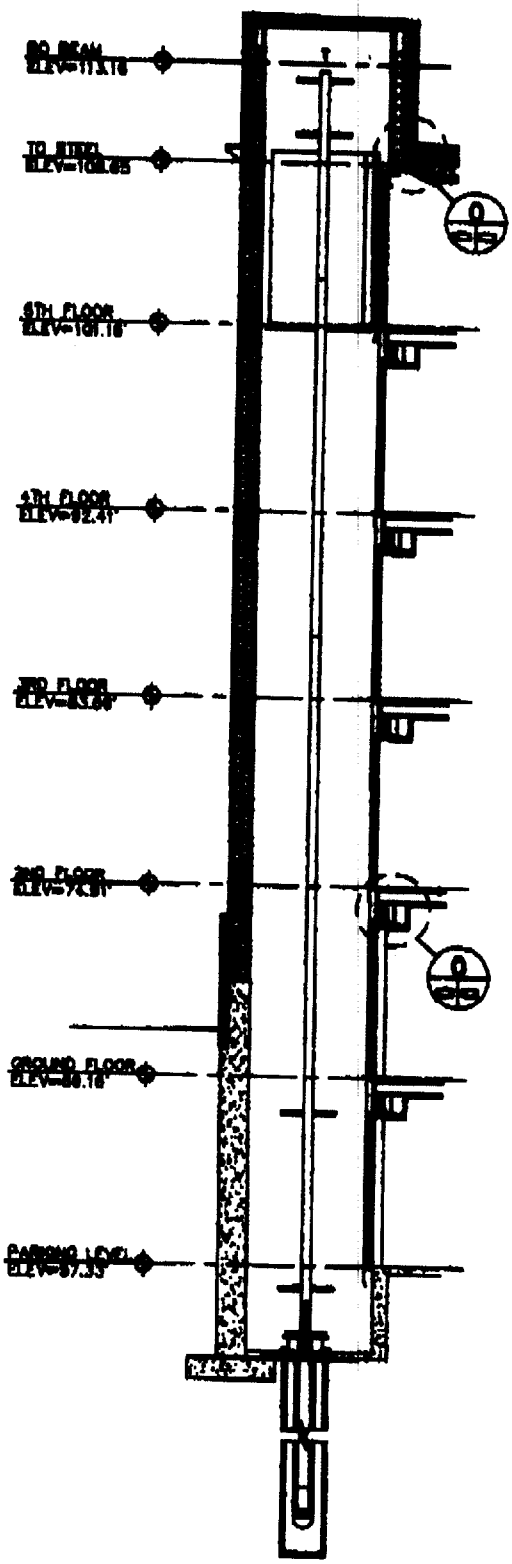
6 TYPICAL STAIR DETAIL
SCALE: 1"=1'-0"



3 STAIR #1 SECTION
SCALE: 1/8"=1'-0"



4 STAIR #2 SECTION
A2, A3 A1/M9 SCALE: 1/4"=1'-0"



5 ELEVATOR SECTION
A2, A3 A1/M9 SCALE: 1/4"=1'-0"

OAK POINT ASSOCIATES

5 UNIT CONDOMINIUMS
20-24 BRACKETT STREET
PORTLAND, MAINE
RECORD OWNER
MEMORIAL, LLC
28 CHESTNUT STREET, OLD ORCHARD BEACH, MAINE 04064

STAIR & ELEVATOR SECTIONS & DETAILS

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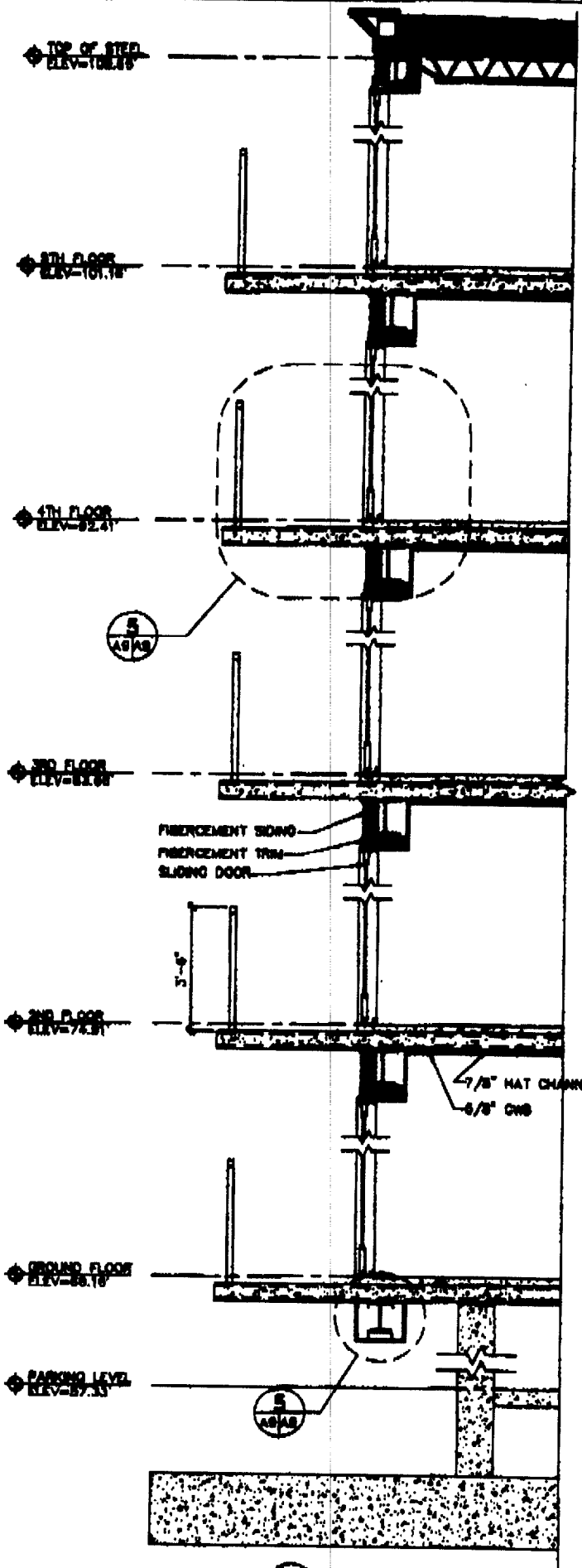
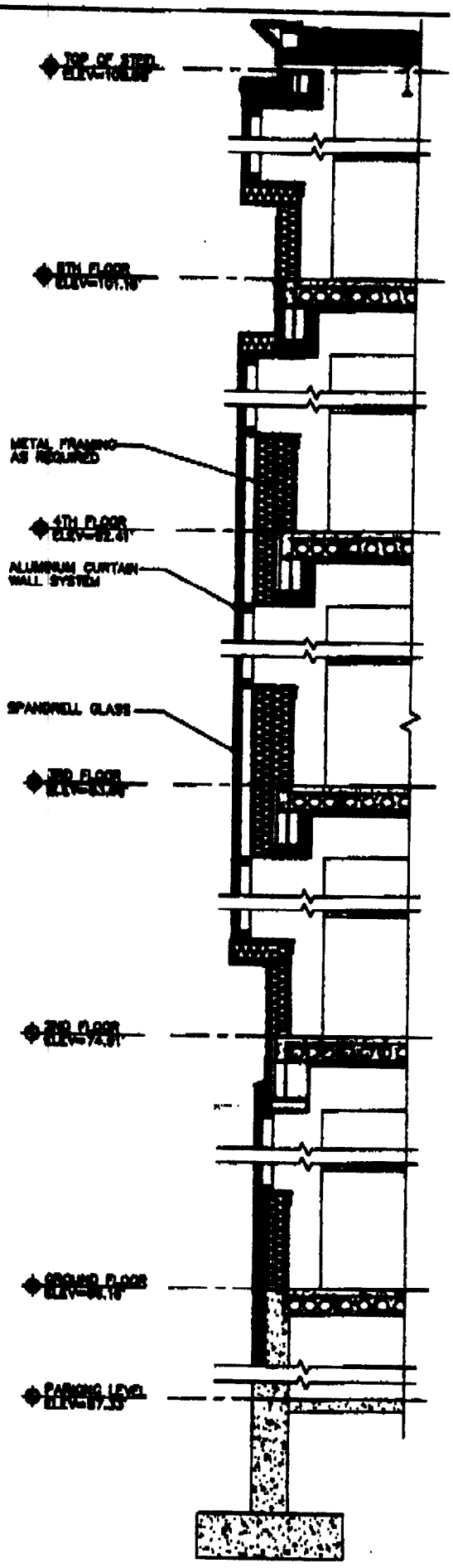
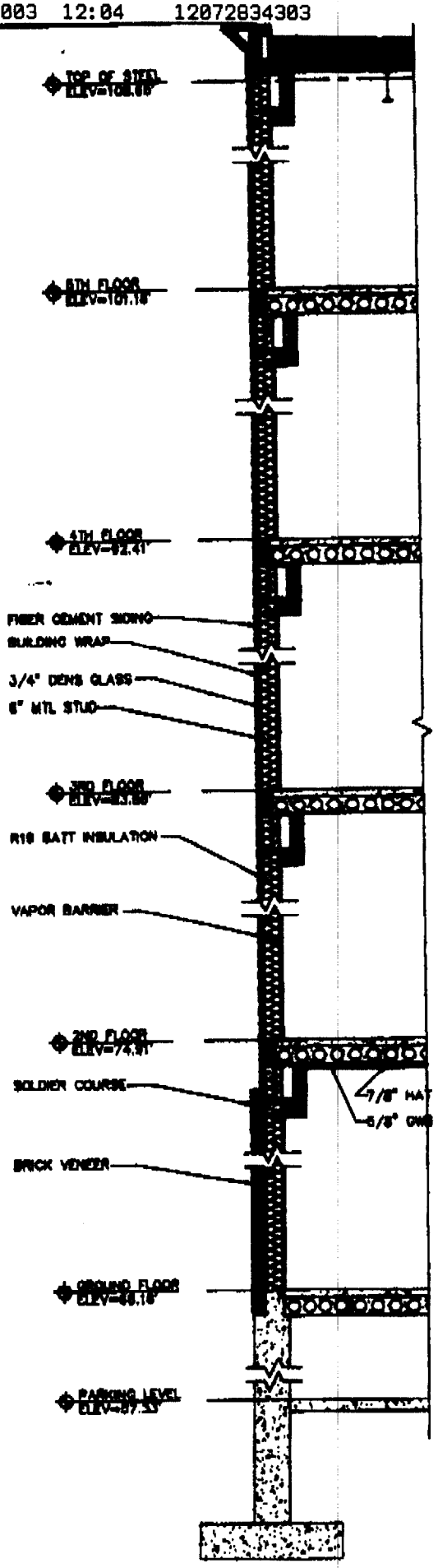


1 WALL SECTION
A9/A11 SCALE: 1/2"=1'-0"



2 WALL SECTION
A9/A11 SCALE: 1/2"=1'-0"



5 WALL SECTION
A9/A11 SCALE: 1/2"=1'-0"

GENERAL NOTE:

1. HANDRAIL SIZE, LOCATION AND CONSTRUCTION TO BE DESIGNED BY OTHERS. COORDINATE SLEVE LOCATION AND RAILING CONSTRUCTION WITH CONTRACTOR AND PLANK MANUFACTURER.
2. CURTAIN WALL DESIGN BY OTHERS. CURTAIN WALL SYSTEM SHALL BE DESIGNED TO ACCOMODATE WINDOW AND DOOR OPENINGS AS WELL AS OREL AND BOX WINDOW PROTRUSIONS. COORDINATE FRAMING WITH STRUCTURAL STEEL.

GRAPHIC SCALE

1/2"=1'-0" 0 1' 2' 4' 8'

CHECK GRAPHIC SCALE BEFORE USING

OAK POINT ASSOCIATES

5 UNIT CONDOMINIUMS
20-24 BRACKETT STREET
PORTLAND, MAINE
RECORD OWNER
MESSER, LLC
26 CHESTNUT STREET, OLD ORCHARD BEACH, MAINE 04064

DATE 12/04/03
DRAWN BJH
CHECKED AJC
SCALE AS SHOWN
JOB 2003A.20

WALL SECTIONS

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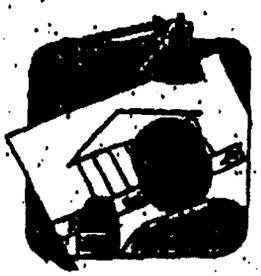


CITY OF PORTLAND MAINE

389 Congress St., Rm 315
Portland, ME 04101
Tel. – 207-874-8704
Fax – 207-874-8716

TO: Inspector of Buildings City of Portland, Maine
Planning & Urban Development
Division of Housing & Community Services

FROM DESIGNER: T. Scott Teas, NCARB, AIA
TFH ARCHITECTS

DATE: August 6, 2003

Job Name: Waterville Street Condominiums - Building "C"

Address of Construction: 3 Waterville Street, Portland

THE BOCA NATIONAL BUILDING CODE/1999 FourteenthEDITION

Construction project was designed according to the building code criteria listed below:

Building Code and Year: BOCA NBC 1999 Use Group Classification(s): R-2/S-2

Type of Construction: 3A Bldg. Height: 45' Bldg. Sq. Footage: 9,043

Seismic Zone: NA Group Class: II

Roof Snow Load Per Sq. Ft.: 42 Dead Load Per Sq. Ft.: 20

Basic Wind Speed (mph): 85 Effective Velocity Pressure Per Sq. Ft.: 30 PSF @ 36 FT

Floor Live Load Per Sq. Ft.: 40

Structure has full sprinkler system? Yes: ✓ No: ___ Alarm System? Yes: ✓ No: ___
Sprinkler & Alarm systems must be installed according to BOCA and NFPA Standards with approval from the Portland Fire Department.

Is structure being considered unlimited area building: Yes: ___ No: ✓

If mixed use, what subsection of 313 is being considered: 313.1.2

List Occupant loading for each room or space, designed into this Project.

4 Units x 3 Bed Rooms x 2 Occupants = 24
Per 1008.1.2 Occupant Load = 43
PSH 6/07/04 (-Garage: 1918 SF/300 = 7
-Upper Floors: 7125 SF/200 = 36)
Design Occupant Load = 43

(Designers Stamp & Signature)

LICENSED ARCHITECT
T. SCOTT TEAS
No. 802
STATE OF MAINE

389 Congress St.Rm 315
Portland, ME 04101
Phone: (207)874-8700
Fax: (207)874-8716

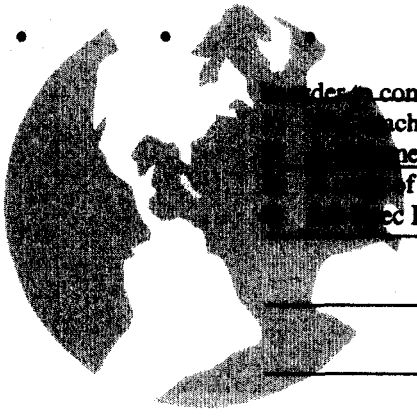
To: Scott Teas **From:** Mike Nugent

Fax: 773-[illegible]6194 **Date:** August 5, 2003

Phone 775-6141 **Pages:** 2

Re: 3 Waterville St. Condo's (016-F024)

☐ Urgent ☐ For Review ☐ Please Comment ☑ Please Reply ☐ Please Recycle



[illegible] commence the review of the above project please submit :

[illegible]ached Certifications completed

[illegible]ment of Special Inspection pursuant to section 1705

[illegible]f the Gillespie reports on soils w/foundation recommendations

[illegible]c Book