Subject: Re: 640 Seashore
Date: Tuesday, June 6,2006 4:29 PM
From: Eric <eric@whittenarchitects.com>
To: Tammy Munson TMM@portlandmaine.gov

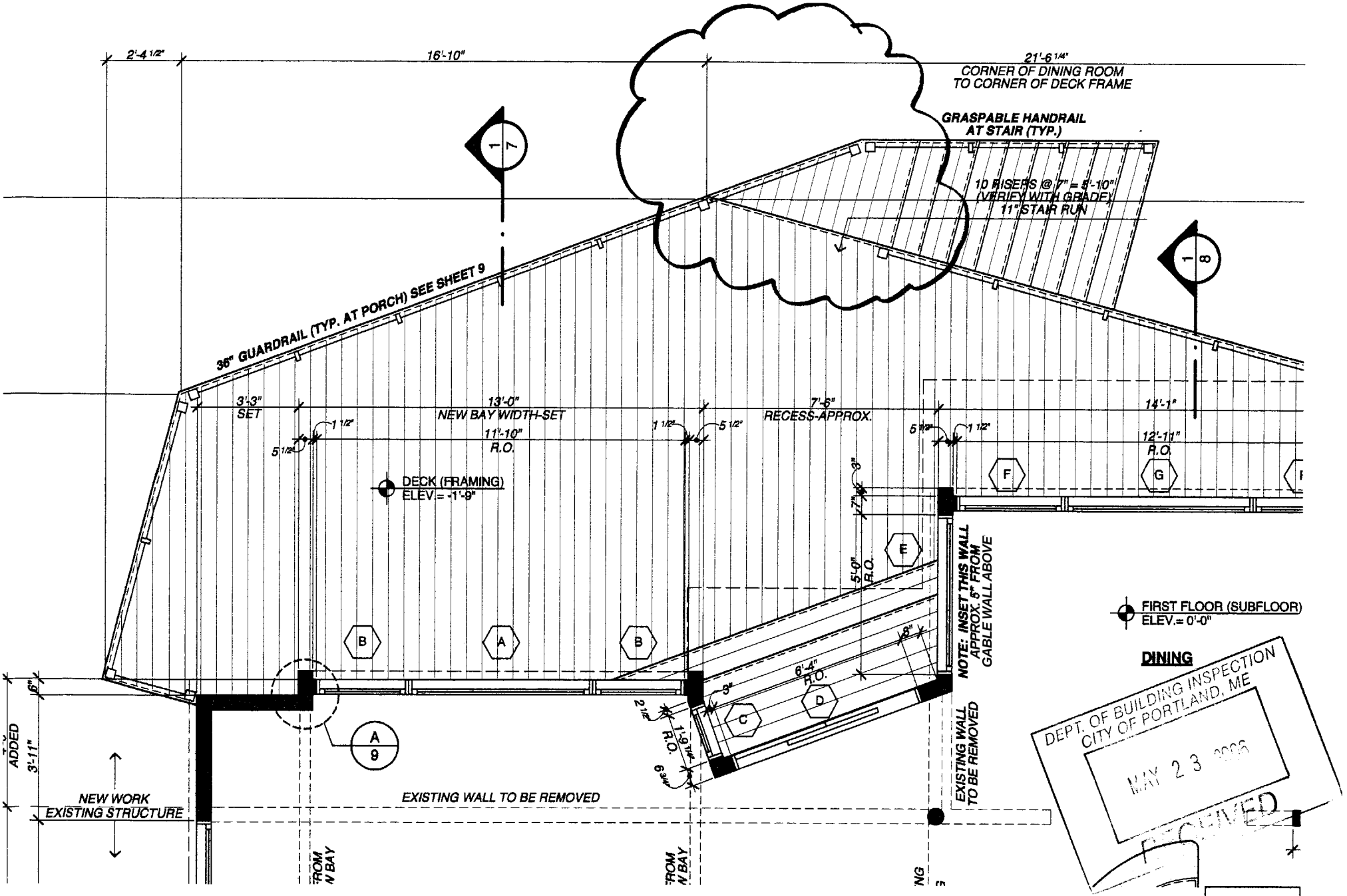
Hi Tammy,
Thanks for your email...Will Winkelman and I have worked through the detail and found that it is in compliance with section **1607.7.1.1** of the IBC. I have attached a stamped drawing of the handrail detail for your records. Please let me know if you have other questions.

Thank you,
Eric

Eric Sokol
Whitten + Winkelman Architects
37 Silver Street
Portland, ME 04101
Ph. 207.774.0111x114
Fax 207.774.1668
eric@ww-architects.com

On 6/6/06 3:26 PM, "Tammy Munson" <TMM@portlandmaine.gov> wrote:

> Hi Eric, I have reviewed the plans. I have one question that we need
> addressed.
> The guard rail must comply with section 1607.7.1 (read exception #1) which
> sends you to 1607.7.1.1. of the IBC 2003.
> Basically, we need something stamped stating compliance with this section. You
> can send a PDF via email if this is easier/quicker for you. Thanks Eric!
> Please call if you have any questions.
>
>



DEPT. OF BUILDING INSPECTION
CITY OF PORTLAND, ME
MAY 23 2006
RECEIVED

SK
RAIL
"A"

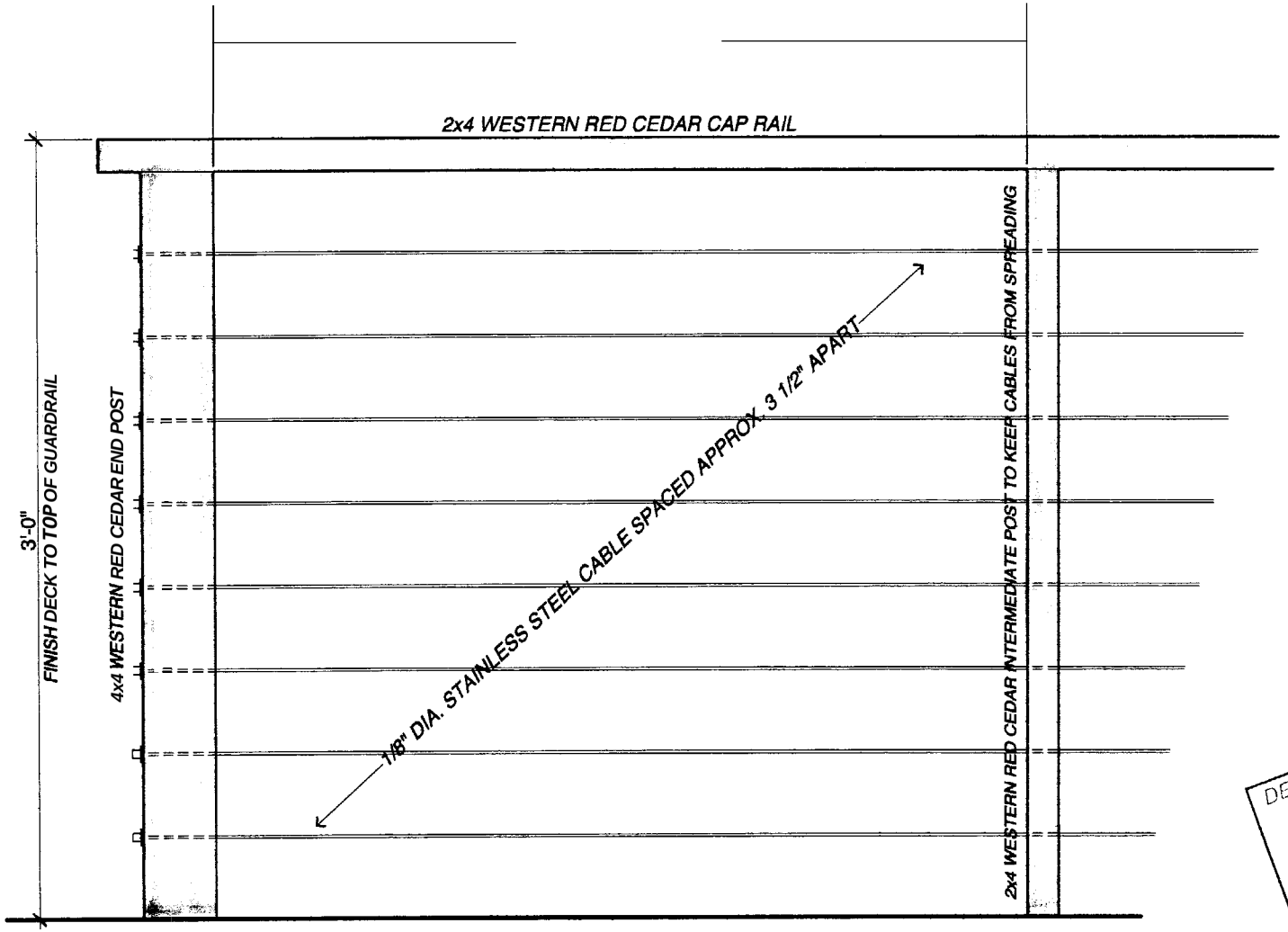
Project: Karlsen Residence
640 Seashore Ave.
Peaks Island, Portland, Maine

Architect: Whitten + Winkelman Architects
37 Silver Street
Portland, Maine 04101
207-774-0111 fax: 774-1668

Scale: 1/4"=1'-0"

Date: Monday, May 22, 2006

0 1 2 4 8 16



DEPT. OF BUILDING INSPECTION
CITY OF PORTLAND, ME
MAY 23
RECEIVED

"C" TYPICAL PORCH GUARDRAIL DETAIL (HANDRAIL SIM.)

Project: Karlsen Residence
640 Seashore Ave.
Peaks Island, Portland, Maine

Architect: Whitten + Winkelman Architects
37 Silver Street
Portland, Maine 04101
207-774-0111 fax: 774-1668

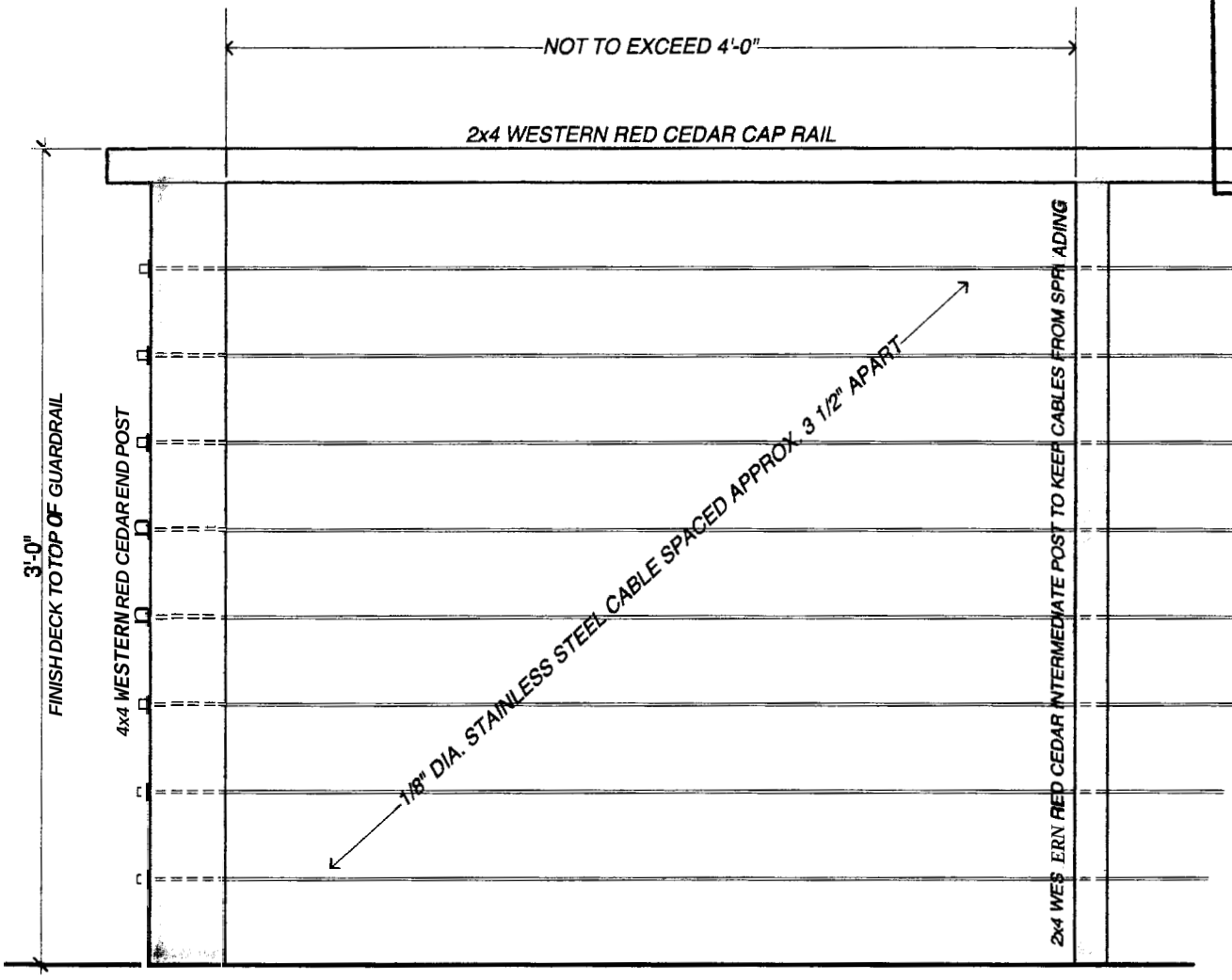
Scale: 1 1/2"=1'-0"

0 3" 6" 1'-0" 2'-0"

Date: Monday, May 22, 2006

SK
RAIL "B"

DEPT. OF BUILDING INSPECTION
CITY OF PORTLAND, ME
JUN 12 2006
RECEIVED



CONFORMS TO IBC SECT. 1607.7.1.1 TO RESIST SINGLE LOAD OF 200 LBS. IN ANY DIRECTION.

REGISTERED ARCHITECT
WILLIAM R. WINKELMAN #1543
STATE OF MAINE

"C" TYPICAL PORCH GUARDRAIL DETAIL (HANDRAIL SIM.)

ERIC Sokol

Project: Karlsen Residence
640 Seashore Ave.
Peaks Island, Portland, Maine

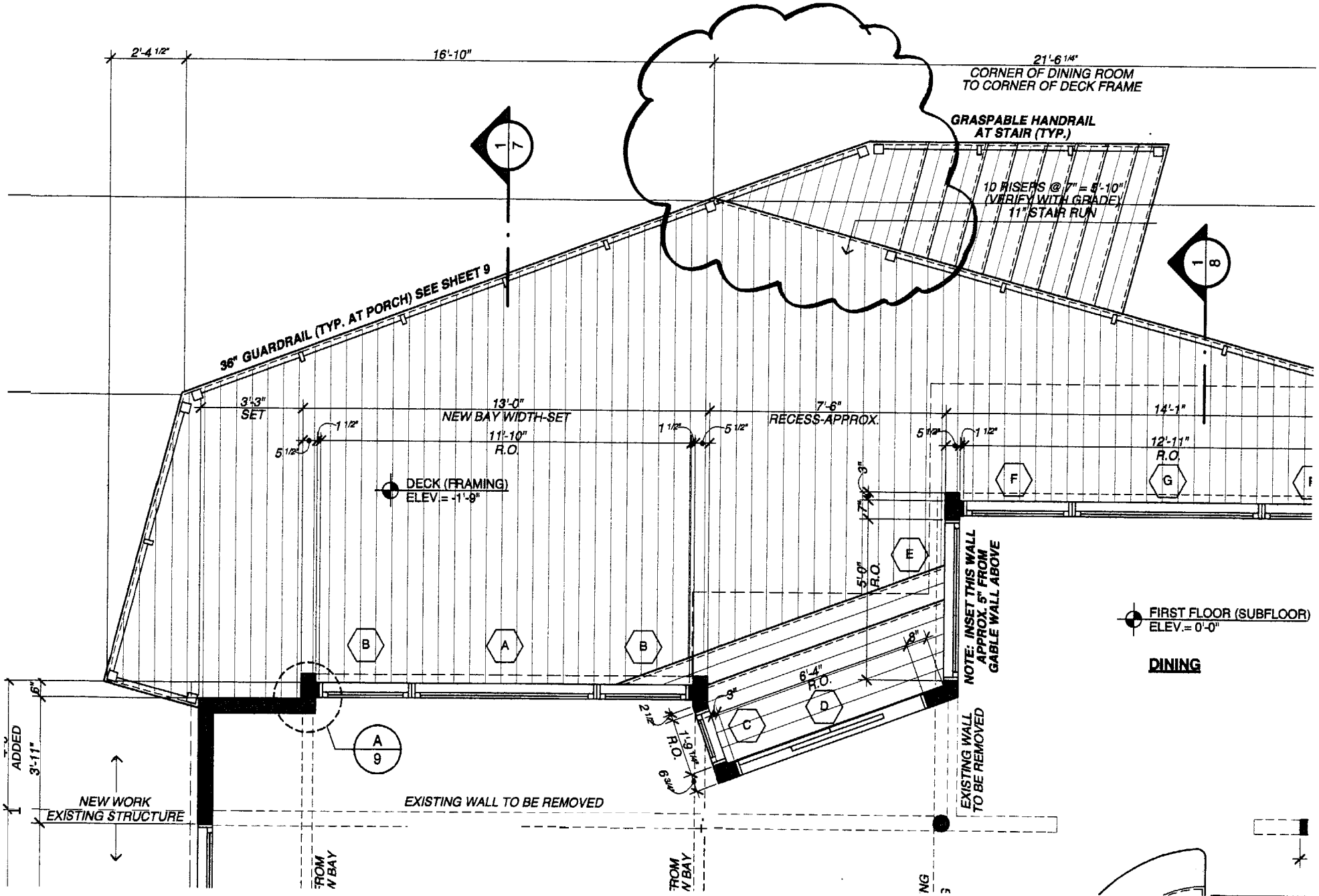
Architect: Whitten + Winkelman Architects
37 Silver Street
Portland, Maine 04101
207-774-0111 fax: 774-1668

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

0 3" 6" 1'-0" 2'-0"

Date: Monday, May 22, 2006

SK
RAIL "B"



Project: Karlsen Residence
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Scale: 1/4"=1'-0"

Date: Monday, May 22, 2006

0 1 2 4 8 16

SK
RAIL
"A"

Notes to Table 1607.1

For SI: 1 inch = 25.4 mm, 1 square inch = 645.16 mm^2, 1 pound per square foot = 0.0479 kN/m^2, 1 pound = 0.004448 kN.
1 pound per cubic foot = 16 kg/m^3

a. Floors in garages or portions of buildings used for the storage of motor vehicles shall be designed for the uniformly distributed live loads of Table 1607.1 or the following concentrated loads: (1) for garages restricted to vehicles accommodating not more than nine passengers, 3,000 pounds acting on an area of 4.5 inches by 4.5 inches; (2) for mechanical parking structures without slab or deck which are used for storing passenger vehicles only, 2,250 pounds per wheel.
b. The loading applies to stack room floors that support nonmobile, double-faced library bookstacks, subject to the following limitations:
   1. The nominal bookstack unit height shall not exceed 90 inches;
   2. The nominal shelf depth shall not exceed 12 inches for each face; and
   3. Parallel rows of double-faced bookstacks shall be separated by aisles not less than 36 inches wide.
c. Design in accordance with the ICC *Standard on Bleachers, Folding and Telescopic Seating and Grandstands*.
d. Other uniform loads in accordance with an approved method which contains provisions for truck loadings shall also be considered where appropriate.
e. The concentrated wheel load shall be applied on an area of 20 square inches.
f. Minimum concentrated load on stair treads (on area of 4 square inches) is 300 pounds.
g. Where snow loads occur that are in excess of the design conditions, the structure shall be designed to support the loads due to the increased loads caused by drift buildup or a greater snow design determined by the building official (see Section 1608). For special-purpose roofs, see Section 1607.11.2.2.
h. See Section 1604.8.3 for decks attached to exterior walls.

1607.5 Partition loads. In office buildings and in other buildings where partition locations are subject to change, provision for partition weight shall be made, whether or not partitions are shown on the construction documents, unless the specified live load exceeds 80 psf (3.83 kN/m^2). Such partition load shall not be less than a uniformly distributed live load of 20 psf (0.96kN/m^2).

1607.6 Truck and bus garages. Minimum live loads for garages having trucks or buses shall be as specified in Table 1607.6, but shall not be less than 50 psf (2.40 kN/m^2), unless other loads are specifically justified and approved by the building official. Actual loads shall be used where they are greater than the loads specified in the table.

1607.6.1 Truck and bus garage live load application. The concentrated load and uniform load shall be uniformly distributed over a 10-foot (3048 mm) width on a line normal to the centerline of the lane placed within a 12-foot-wide (3658 mm) lane. The loads shall be placed within their individual lanes so as to produce the maximum stress in each structural member. Single spans shall be designed for the uniform load in Table 1607.6 and one simultaneous concentrated load positioned to produce the maximum effect. Multiple spans shall be designed for the uniform load in Table 1607.6 on the spans and two simultaneous concentrated loads in two spans positioned to produce the maximum negative moment effect. Multiple span design loads, for other effects, shall be the same as for single spans.

1607.7 Loads on handrails, guards, grab bars and vehicle barriers. Handrails, guards, grab bars as designed in ICC A117.1 and vehicle barriers shall be designed and constructed to the structural loading conditions set forth in this section.

TABLE 1607.6
UNIFORM AND CONCENTRATED LOADS

LOADING CLASS[a]	UNIFORM LOAD (pounds/linear foot of lane)	CONCENTRATED LOAD (pounds)[b]	
		For moment design	For shear design
H20-44 and HS20-44	640	18,000	26,000
H15-44 and HS15-44	480	13,500	19,500

For SI: 1 pound per linear foot = 0.01459 kN/m, 1 pound = 0.004448 kN, 1 ton = 8.90 kN.

a. An H loading class designates a two-axle truck with a semitrailer. An HS loading class designates a tractor truck with a semitrailer. The numbers following the letter classification indicate the gross weight in tons of the standard truck and the year the loadings were instituted.
b. See Section 1607.6.1 for the loading of multiple spans.

1607.7.1 Handrails and guards. Handrail assemblies and guards shall be designed to resist a load of 50 plf (0.73 kN/m) applied in any direction at the top and to transfer this load through the supports to the structure.

Exceptions:

1. For one- and two-family dwellings, only the single, concentrated load required by Section 1607.7.1.1 shall be applied.
2. In Group I-3, F, H and S occupancies, for areas that are not accessible to the general public and that have an occupant load no greater than 50, the minimum load shall be 20 pounds per foot (0.291 kN/m).

1607.7.1.1 Concentrated load. Handrail assemblies and guards shall be able to resist a single concentrated load of 200 pounds (0.89 kN), applied in any direction at any point along the top, and have attachment devices and supporting structure to transfer this loading to appropriate structural elements of the building. This load need not be assumed to act concurrently with the loads specified in the preceding paragraph.

1607.7.1.2 Components. Intermediate rails (those except the handrail), balusters and panel fillers shall be designed to withstand a horizontally applied normal load of 50 pounds (0.22 kN) on an area equal to 1 square foot (0.093m^2), including openings and space between rails. Reactions due to this loading are not required to be superimposed with those of Section 1607.7.1 or 1607.7.1.1.

1607.7.1.3 Stress increase. Where handrails and guards are designed in accordance with the provisions for allowable stress design (working stress design) exclusively for the loads specified in Section 1607.7.1, the allowable stress for the members and their attachments are permitted to be increased by one-third.

1607.7.2 Grab bars, shower seats and dressing room bench seats. Grab bars, shower seats and dressing room bench seat systems shall be designed to resist a single concentrated load of 250 pounds (1.11 kN) applied in any direction at any point.

1607.7.3 Vehicle barriers. Vehicle barrier systems for passenger cars shall be designed to resist a single load of 6,000 pounds (26.70 kN) applied horizontally in any direction to