



QUAILE ENGINEERING LTD.

38 Parkside Drive
UNIT 7
Newmarket, ON
L3Y 8J9

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Toll Free: 1-877-364-5209
Email: quaile.eng@rogers.com

March 11, 2022

Mr. John Teller
Deckorators Inc.
2801 East Beltline NE
Grand Rapids, MI
USA
49525

**Re: Deckorators and Veranda Brand Railing Systems
supplied by Deckorators Inc.**

Dear Mr. Teller:

Further to your request, we have reviewed the Deckorators and Veranda railing system for conformance to the 2012 Ontario Building Code, OBC Standard Guideline SB-7 "Guards for Housing and Small Buildings", and the 2015 National Building Code of Canada.

The specifications for the railing system components are as follows:

- J Classic balusters (part 104.3), which are 32" tall, 3/4" diameter x 0.05" thick painted aluminum grade 6063-T6 (minimum yield strength of 25 ksi).
- J Estate balusters (part 114.3), which are 32" tall, 3/4" x 3/4" square x 0.05" thick painted aluminum grade 6063-T6 (minimum yield strength of 25 ksi).
- J Colonial balusters (part 113.1), which are 26" tall, 3/4" diameter (at the ends) x 0.05" thick painted aluminum grade 6063-T6 (minimum yield strength of 25 ksi).
- J Baroque balusters (part 110.2), which are 32" tall, 1" wide x 0.19" thick " thick painted aluminum grade 6063-T6 (minimum yield strength of 25 ksi).
- J Arc balusters (part 112.2), which are 32.25" tall, 1" wide x 0.19" thick " thick painted aluminum grade 6063-T6 (minimum yield strength of 25 ksi).
- J Traditional balusters (part 111.2) , which are 32" tall, 1" wide x 1/2" deep x 0.05" wall painted aluminum tubes, grade 6063-T6 (minimum yield strength of 25 ksi).
- J Glass Balusters (part 116.1), which are 32" tall and marked with the following:
 - Deckorators Inc. 8mm
 - Single-fully tempered Glass
 - 6 CFR 1201. Part II Standard ANSI Z97.1-1984 (R-1994)

-) Deckorators connectors for attachment of the classic and colonial balusters (parts 107.1 and 107.2), and estate balusters (part 108.1). Deckorators fastball connectors (part 66017) for attachment of the classic and colonial balusters.
-) Liv Outdoor nylon rail brackets c/w screws for attachment of the vertical rails to the support posts, and the pipe rails to the posts.
-) Deckorators aluminum rail (part 101.4), which is 1.5" x 3.5" x 0.075" thick painted aluminum grade 6063-T6 (minimum yield strength of 25 ksi).

This system will conform to the Ontario Building Code and the National Building Code provided they are used as outlined on the attached drawings S1 to S12 sealed March 11, 2022.

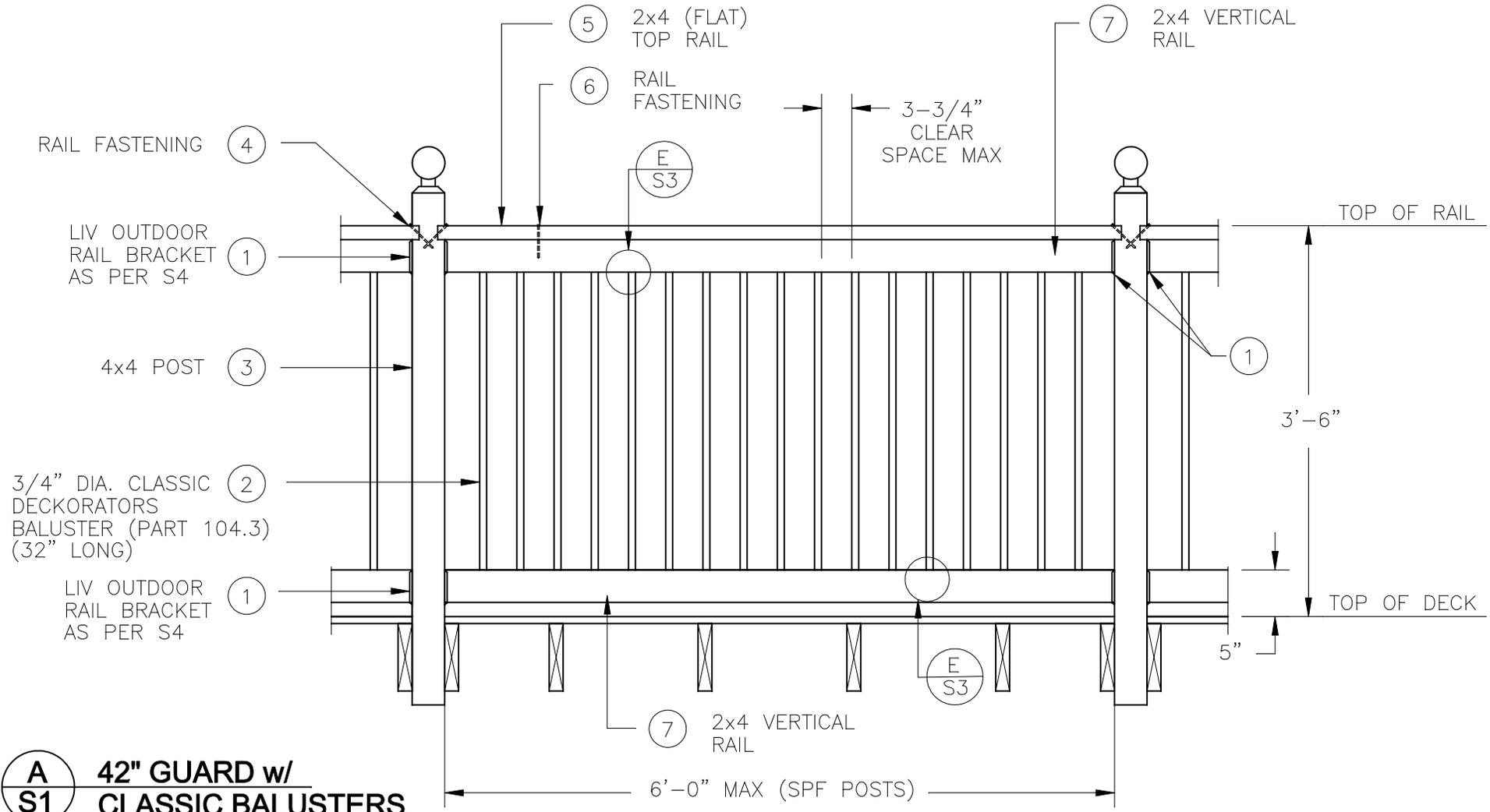
I trust this is the information you require.

Yours truly,



Stephen Boyd, P.Eng.

C:\Users\Steve\Documents\SJB-3\Drawings\2011\11-029 Deckorail\Mar, 2022 update\11-029 Deckorail Mar 11-22.docx



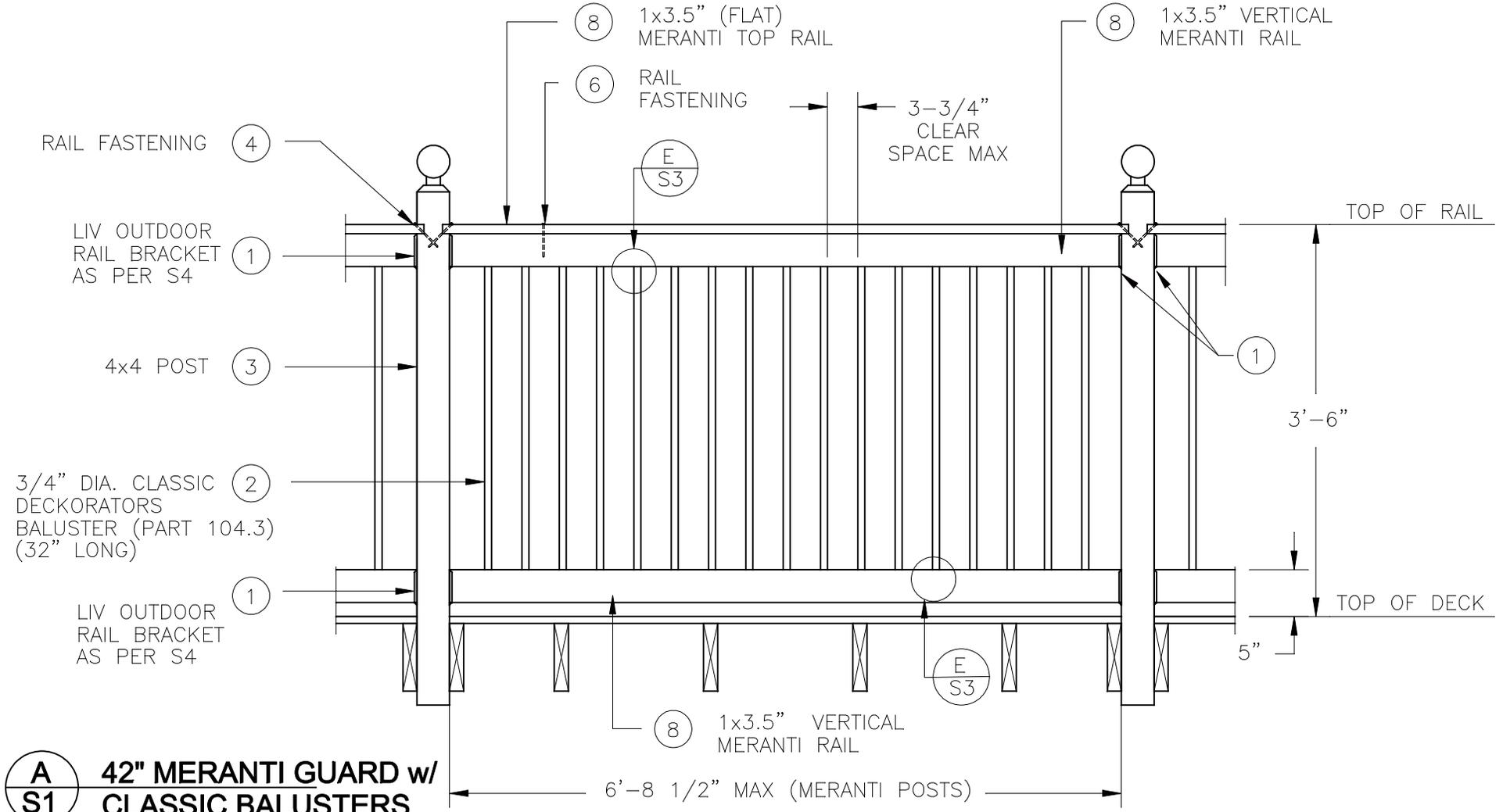
NOTE: THE MAXIMUM SPACING FOR CEDAR POSTS IS 3'-7" AS PER SB-7 OF THE ONTARIO BUILDING CODE

NOTE: ESTATE BALUSTERS (PART 114.3) AND ESTATE CONNECTOR (PART 108.1) MAY ALSO BE USED WITH THIS DRAWING

A
S1 **42" GUARD w/ CLASSIC BALUSTERS**

SCALE: 3/4" = 1'-0"		QUAILE ENGINEERING LTD.  38 Parkside Drive, UNIT 7 Newmarket, ON L3Y 8J9 T: 905-853-8547 F: 905-853-7682 E: quaile.eng@rogers.com	ENGINEER'S SEAL  S. J. BOYD MAR 11, 2022	PROJECT: DECKORATORS RESIDENTIAL GUARD	
DATE: MAY, 2011				CLASSIC BALUSTER AND RAIL DETAIL	
DRAWN SJB	CHECKED SJB			PROJECT No.: 11-029	DRAWING No.: S1

SEE NOTES ON DRAWING S6



A S1 42" MERANTI GUARD w/ CLASSIC BALUSTERS

NOTE: THE MAXIMUM SPACING FOR CEDAR POSTS IS 3'-7" AS PER SB-7 OF THE ONTARIO BUILDING CODE

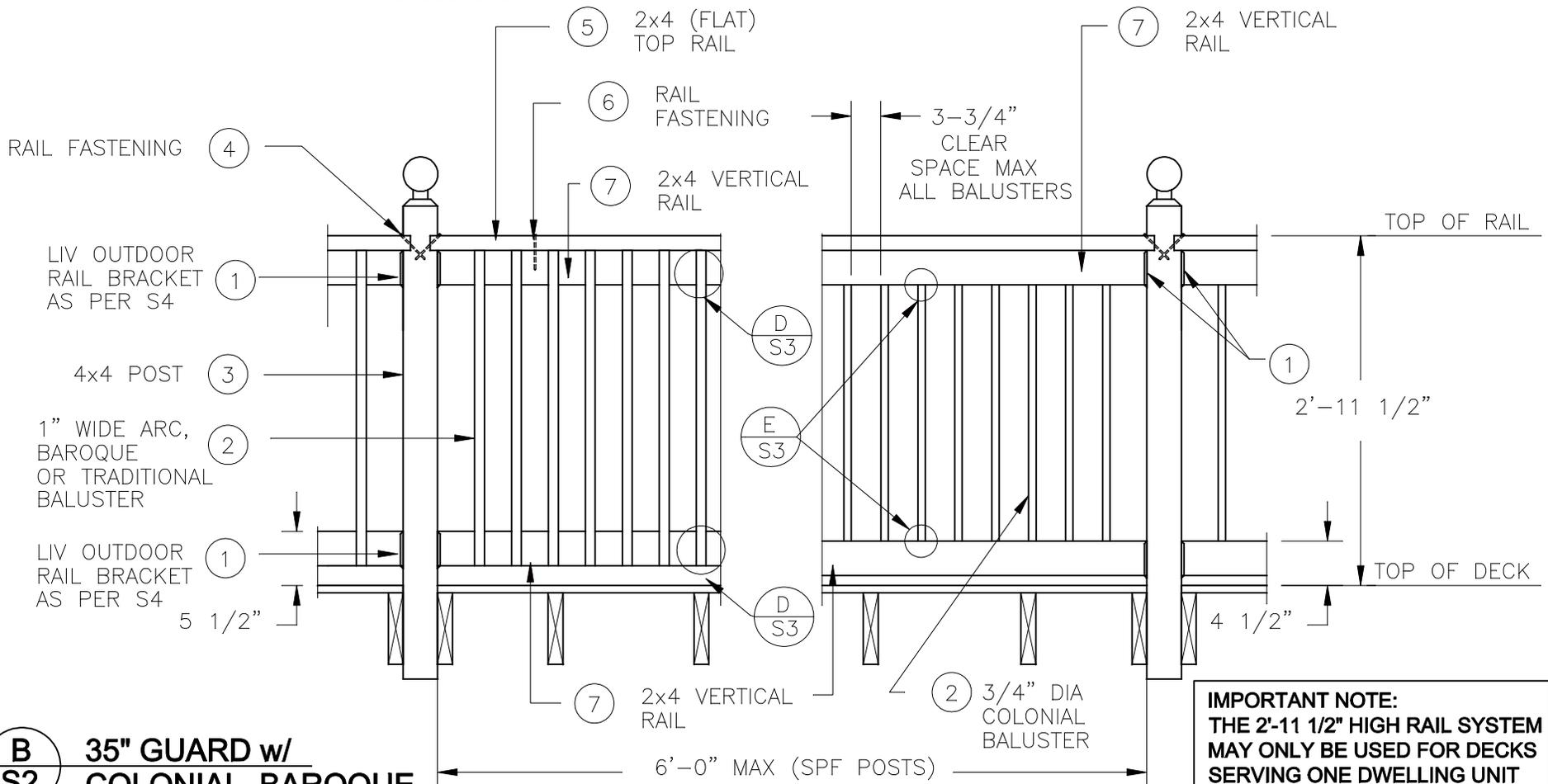
NOTE: ESTATE BALUSTERS (PART 114.3) AND ESTATE CONNECTOR (PART 108.1) MAY ALSO BE USED WITH THIS DRAWING

SCALE: 3/4" = 1'-0"		QUAILE ENGINEERING LTD.  38 Parkside Drive, UNIT 7 Newmarket, ON L3Y 8J9 T: 905-853-8547 F: 905-853-7682 E: quaile.eng@rogers.com	ENGINEER'S SEAL  S. J. BOYD LICENSED PROFESSIONAL ENGINEER PROVINCE OF ONTARIO MAR 11, 2022	PROJECT: DECKORATORS RESIDENTIAL GUARD
DATE: MAY, 2011			42" GUARD WITH MERANTI RAILS AND CLASSIC BALUSTERS	
DRAWN SJB	CHECKED SJB		PROJECT No.: 11-029	DRAWING No.: S1 A

SEE NOTES ON DRAWING S6

32" TALL
 BAROQUE (PART 110.2)
 ARC (PART 112.2)
 TRADITIONAL (PART 111.2)
 BALUSTERS

26" TALL
 COLONIAL BALUSTERS (PART 113.1)



B
S2
35" GUARD w/
COLONIAL, BAROQUE
TRADITIONAL OR ARC
BALUSTERS

NOTE: THE MAXIMUM SPACING FOR CEDAR POSTS IS 3'-7" AS PER SB-7 OF THE ONTARIO BUILDING CODE

IMPORTANT NOTE:
 THE 2'-11 1/2" HIGH RAIL SYSTEM
 MAY ONLY BE USED FOR DECKS
 SERVING ONE DWELLING UNIT
 AND WHERE THE TOP OF THE
 DECK IS NOT MORE THAN 5'-11"
 ABOVE GROUND LEVEL.

SCALE: AS NOTED	
DATE: MAY, 2011	
DRAWN SJB	CHECKED SJB

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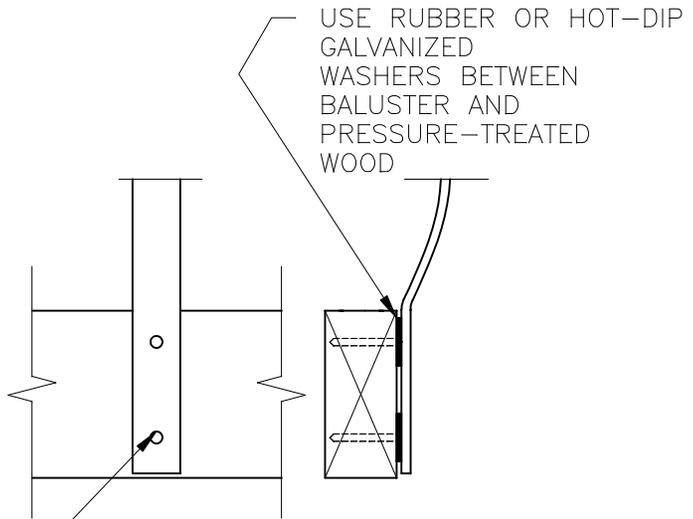
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ENGINEER'S SEAL

MAR 11, 2022

PROJECT: DECKORATORS RESIDENTIAL GUARD	
BALUSTER AND RAIL DETAILS COLONIAL, BAROQUE AND ARC	
PROJECT No.:	DRAWING No.:
11-029	S2

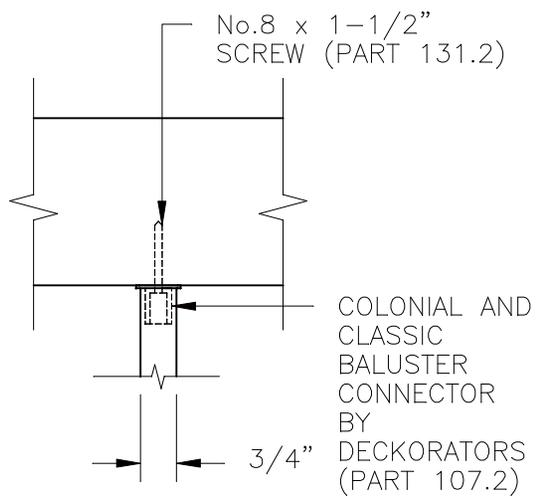
SEE NOTES ON DRAWING S6



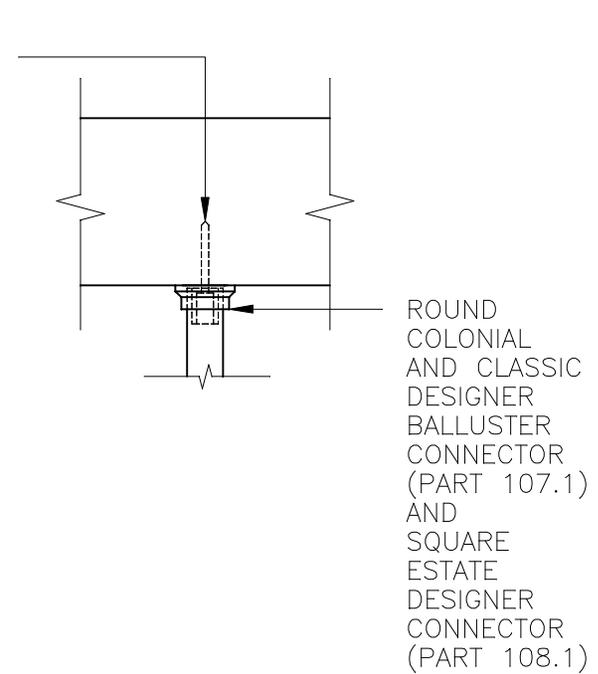
No.8 x 1-1/2" (BAROQUE - PART 131.1)
 No.8 x 1-1/2" (ARC - PART 131.1)
 No.10 x 1-1/2" (TRADITIONAL - PART 131.2)
 STAINLESS STEEL
 SCREWS BY DECKORATORS

D
S3 **BAROQUE, ARC OR TRADITIONAL CONNECTION**

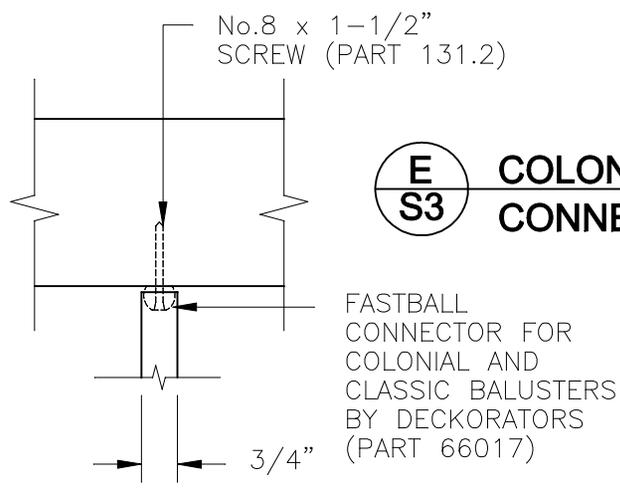
REGULAR BALLUSTER CONNECTOR



DESIGNER BALLUSTER CONNECTOR



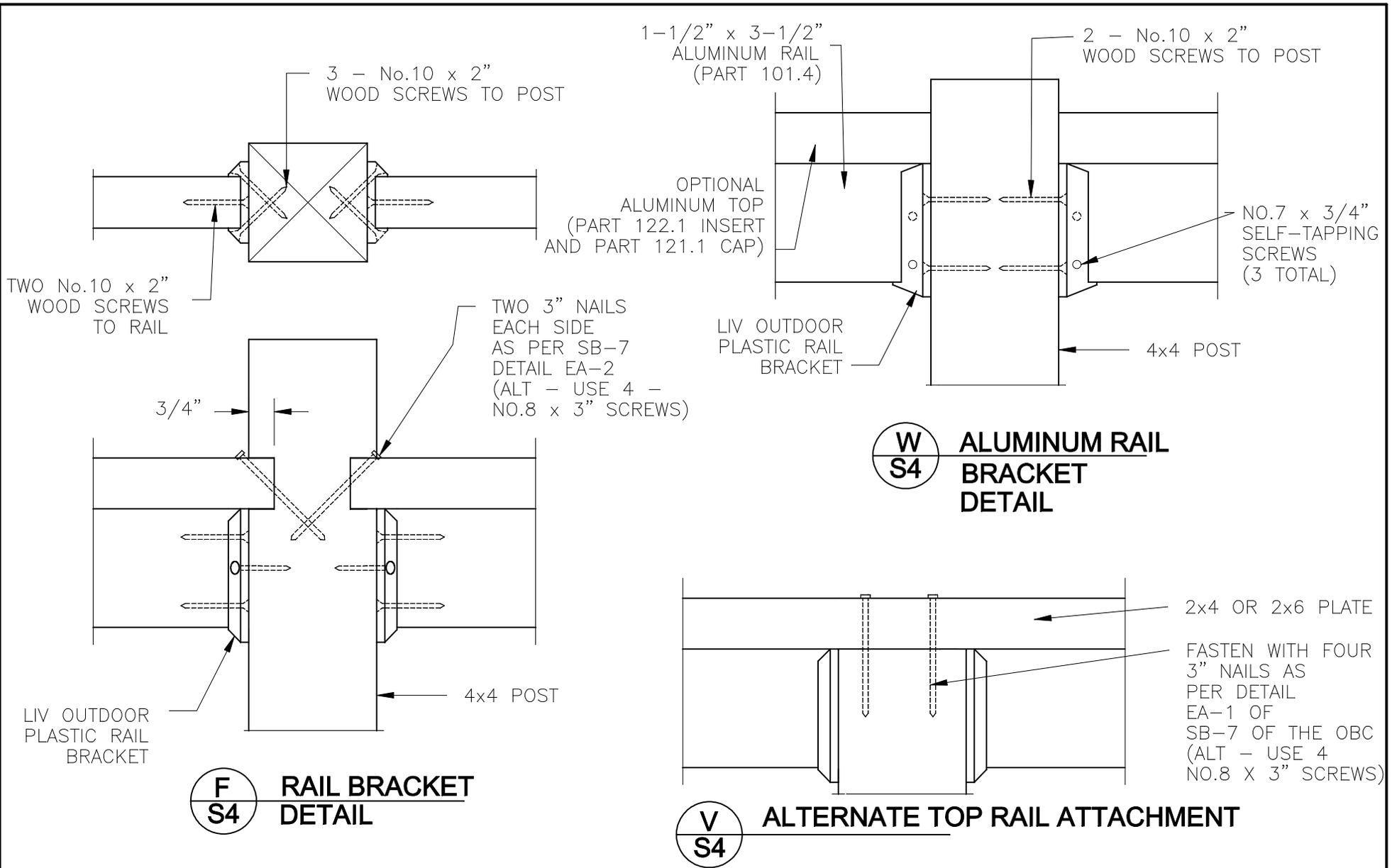
FASTBALL CONNECTOR



E
S3 **COLONIAL, CLASSIC AND ESTATE CONNECTIONS**

METAL PICKETS MUST NOT BE IN DIRECT CONTACT WITH TREATED WOOD.

SEE NOTES ON DRAWING S6	SCALE: 3" = 1'-0"		QUAILE ENGINEERING LTD.  38 Parkside Drive, UNIT 7 Newmarket, ON L3Y 8J9 T: 905-853-8547 F: 905-853-7682 E: quaile.eng@rogers.com	ENGINEER'S SEAL  MAR 11, 2022	PROJECT: DECKORATORS RESIDENTIAL GUARD	
	DATE: MAY, 2011				BALUSTER TO RAIL CONNECTION DETAILS	
	DRAWN SJB	CHECKED SJB			PROJECT No.:	DRAWING No.:
					11-029	S3



SCALE: 3" = 1'-0"	
DATE: MAY, 2011	
DRAWN SJB	CHECKED SJB

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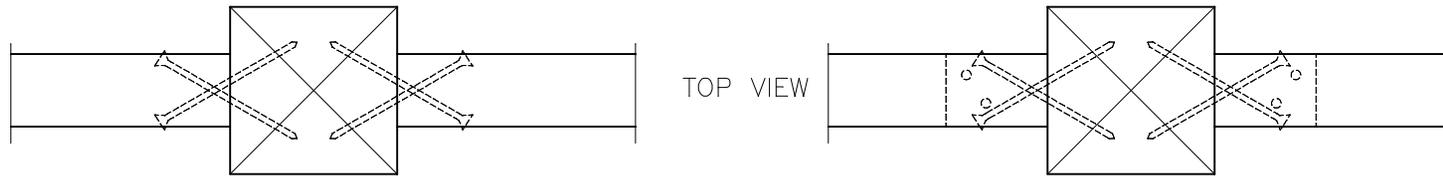
ENGINEER'S SEAL



MAR 11, 2022

PROJECT: DECKORATORS RESIDENTIAL GUARD	
RAIL BRACKET DETAIL	
PROJECT No.:	DRAWING No.:
11-029	S4

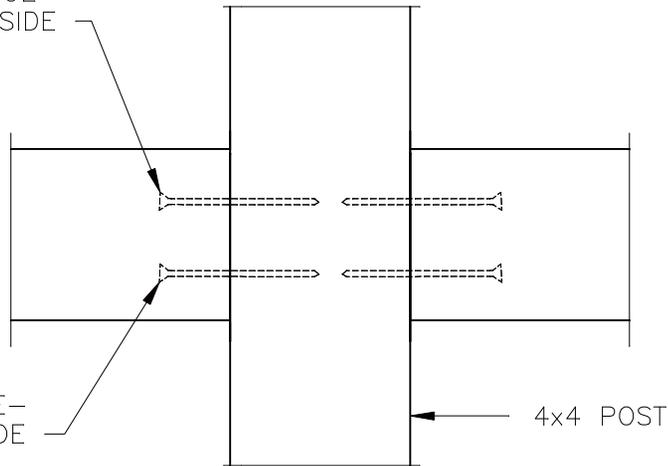
SEE NOTES ON DRAWING S6



TOP VIEW

FLAT TOP RAIL FASTENED TO POST AS PER SB-7 OF THE OBC

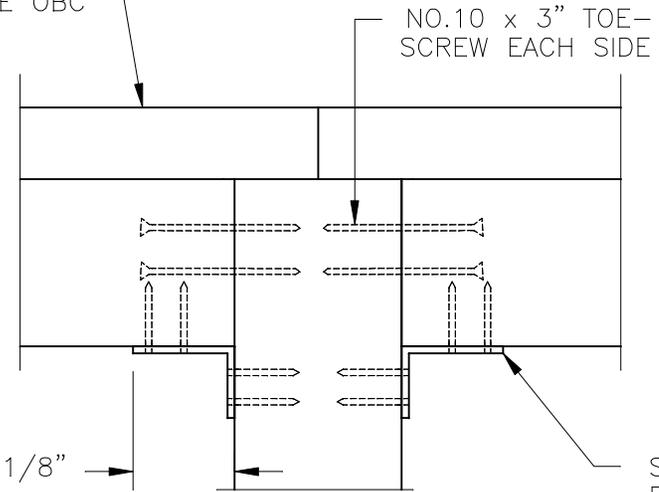
NO.10 x 3" TOE-SCREW NEAR SIDE



NO.10 x 3" TOE-SCREW FAR SIDE

4x4 POST

BOTTOM RAIL CONNECTION



NO.10 x 3" TOE-SCREW EACH SIDE

ELEVATION

2 1/8"

TOP RAIL CONNECTION

SIMPSON A21 FRAMING ANGLE (Z-MAX COATING) C/W NO.8 x 1-1/2" LONG SCREWS

X
S4A

ALTERNATE WOOD RAIL TO POST DETAIL

SCALE: 3" = 1'-0"

SCALE: 3" = 1'-0"	
DATE: MAY, 2011	
DRAWN SJB	CHECKED SJB

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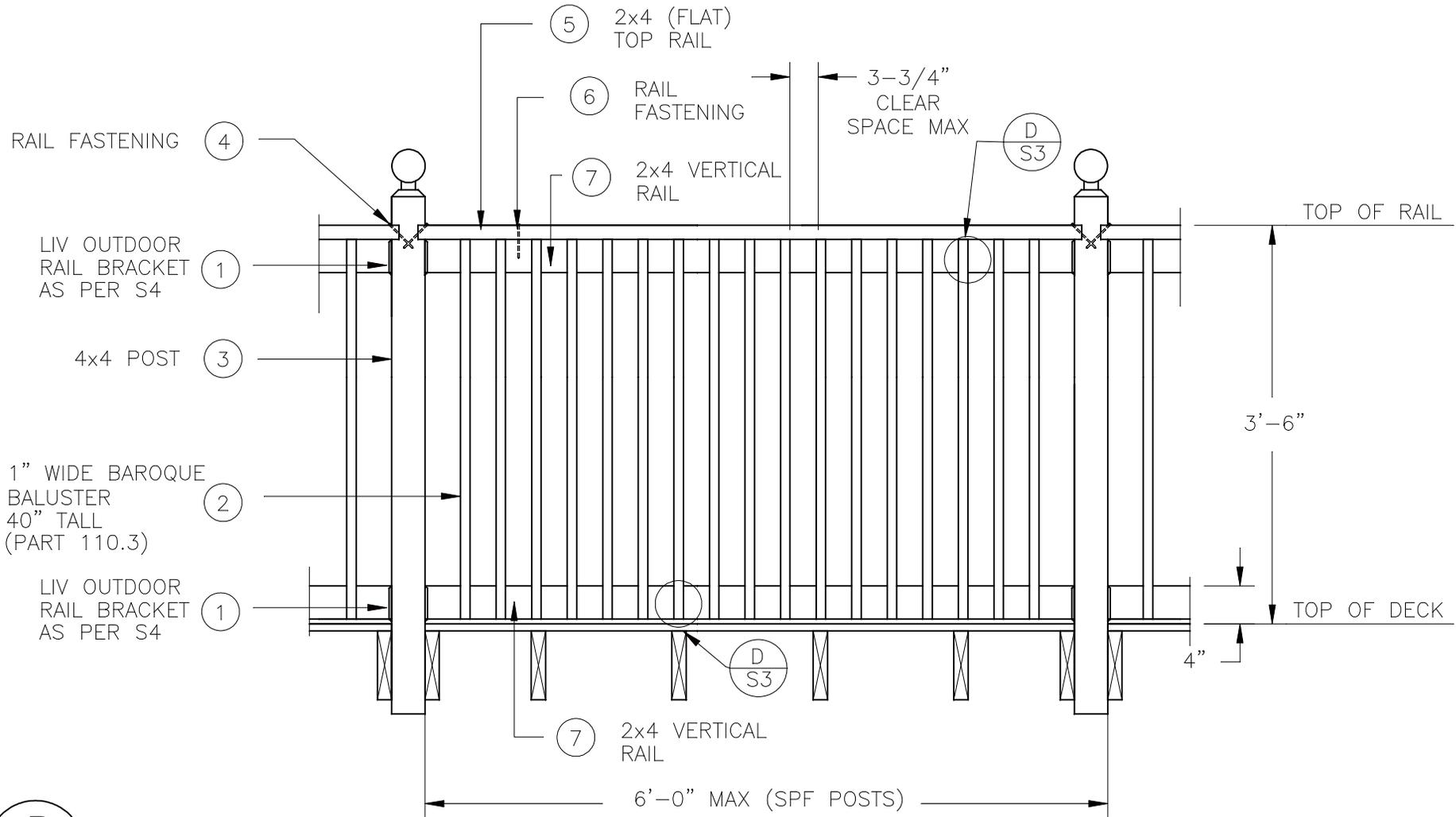
ENGINEER'S SEAL



MAR 11, 2022

PROJECT: DECKORATORS RESIDENTIAL GUARD	
ALTERNATE RAIL BRACKET DETAIL	
PROJECT No.: 11-029	DRAWING No.: S4A

SEE NOTES ON DRAWING S6



R
S5 **42" GUARD w/**
BAROQUE BALUSTERS

NOTE: THE MAXIMUM SPACING FOR CEDAR POSTS IS 3'-7" AS PER SB-7 OF THE ONTARIO BUILDING CODE

SCALE: 3/4" = 1'-0"	
DATE: MAY, 2011	
DRAWN SJB	CHECKED SJB

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ENGINEER'S SEAL



S. J. BOYD
PROVINCE OF ONTARIO
MAR 11, 2022

PROJECT: DECKORATORS RESIDENTIAL GUARD	
42" HIGH GUARD WITH BAROQUE BALUSTERS	
PROJECT No.:	DRAWING No.:
11-029	S5

SEE NOTES ON DRAWING S6

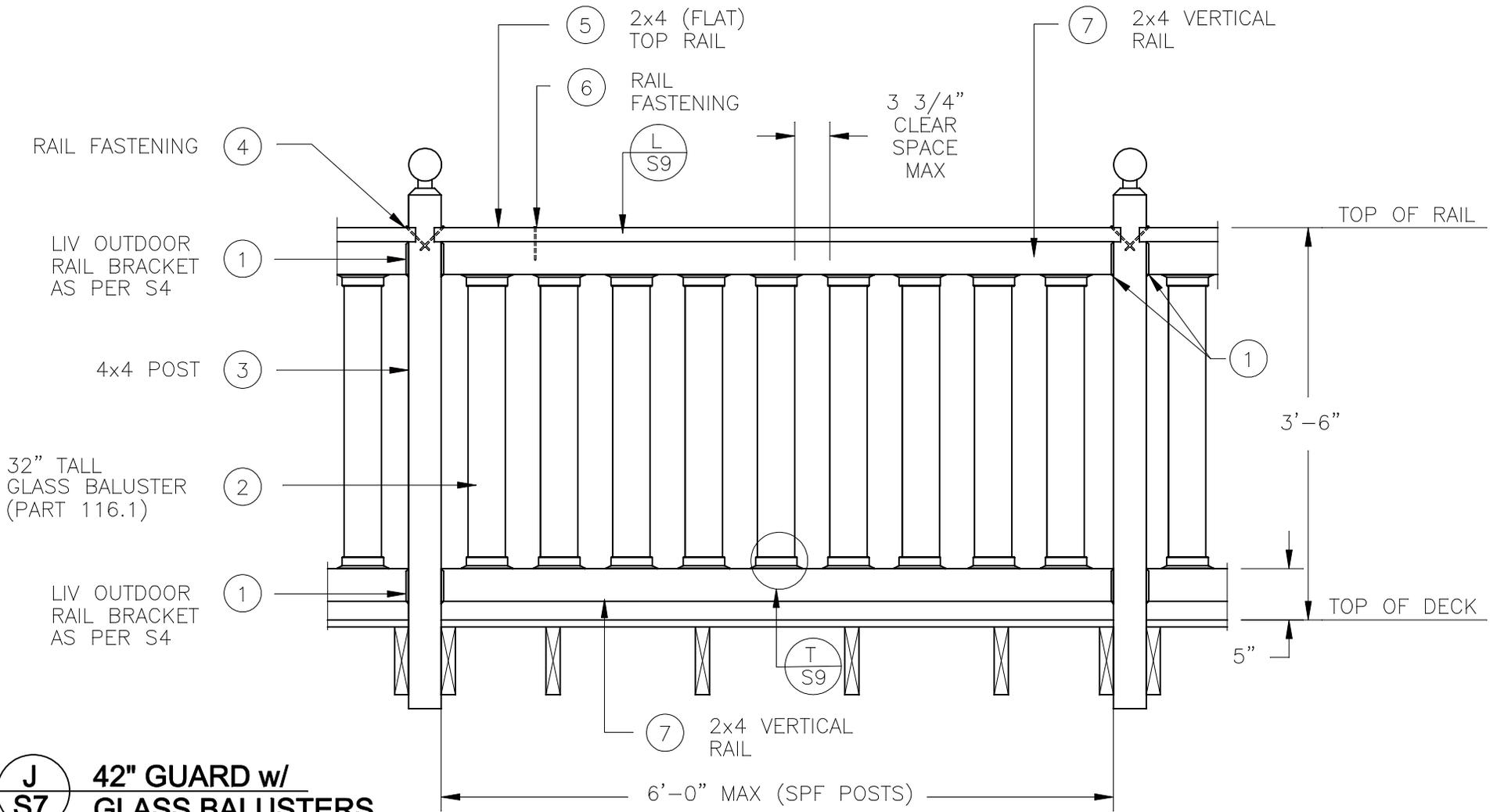
GENERAL NOTES:

1. CONFORM TO THE REQUIREMENTS OF SUPPLEMENTARY STANDARD SB-7 OF THE 2012 ONTARIO BUILDING CODE.
2. ALL WOOD MATERIALS TO BE S-P-F PRESSURE-TREATED WITH A WATER-BORNE PRESERVATIVE, OR UNTREATED CEDAR AS PER SB-7. GRADES AS INDICATED ON DRAWINGS.
3. ALL FASTENERS TO HAVE A CORROSION RESISTANT COATING AS PER SB-7, SUITABLE FOR USE WITH PRESSURE TREATED WOOD.
4. VERTICAL RAILS AND BALUSTERS HAVE BEEN DESIGNED IN ACCORDANCE WITH 2012 OBC AND 2015 NBCC SECTION 9.8.8.2 FOR THE FOLLOWING LOADS:
 - (i) 113 LB (0.5 kN) HORIZONTAL CONCENTRATED LOAD AT ANY POINT APPLIED OVER THREE BALUSTERS (COLONIAL, CLASSIC, BAROQUE, ARC, TRADITIONAL). LOAD IS APPLIED OVER TWO GLASS BALUSTERS.
 - (ii) A UNIFORM VERTICAL LOAD OF 100 PLF (1.5 kN/m) APPLIED TO THE TOP OF THE GUARD.
5. FLAT TOP RAIL IS DESIGNED TO RESIST THE FOLLOWING HORIZONTAL LOADS:
 - (i) 0.5 kN/m (34 lb/ft)
OR
 - (ii) 1.0 kN (225 lb)
CONCENTRATED LOAD AT ANY POINT,
WHICHEVER GOVERNS.
6. DRAWINGS S-1 TO S-12 ARE FOR THE DESIGN OF THE RAILS, BALUSTERS AND RAIL BRACKETS ONLY. ALL OTHER COMPONENTS SHALL CONFORM TO THE REQUIREMENTS OF THE ONTARIO BUILDING CODE.
7. METAL PICKETS SHALL NOT BE IN DIRECT CONTACT WITH PRESSURE TREATED WOOD.
8. THESE DETAILS ARE FOR USE IN HOUSES AND SMALL BUILDINGS CONFORMING TO THE REQUIREMENTS OF PART 9 OF THE 2012 ONTARIO BUILDING CODE AND THE 2015 NATIONAL BUILDING CODE. THESE DETAILS ARE FOR GUARDS NOT SERVING NOT MORE THAN TWO DWELLING UNITS.
9. DESIGN IS VALID UNTIL AUGUST 1, 2022.

COMPONENTS

- ① LIV OUTDOOR NYLON RAIL BRACKET c/w 3-No.10 x 2" STAINLESS STEEL WOOD SCREWS TO POST AND 2-No.10 x 2" WOOD SCREWS TO END OF RAIL.
- ② 3/4" DIAMETER CLASSIC AND COLONIAL BALLUSTER, 3/4" x 3/4" SQUARE ESTATE BALUSTERS ALL WITH BALUSTER CONNECTORS, 1" WIDE x 1/2" FLAT TRADITIONAL BALUSTERS, 1" WIDE FLAT BAROQUE OR ARC BALUSTERS, 4" WIDE x 0.31" THICK TEMPERED GLASS BALUSTERS, ALL BY DECKORATORS
- ③ 4x4 POSTS (MINIMUM) ANCHORED TO FLOOR STRUCTURE IN ACCORDANCE WITH DETAIL EB-5 TO EB-6 OF SB-7 OF THE ONTARIO BUILDING CODE.
- ④ 2x4 (FLAT) TOP RAIL FASTENED TO POSTS USING TWO 3" TOE-NAILS AS PER DETAIL EA-2 OF SB-7 OF THE ONTARIO BUILDING CODE.
- ⑤ 2x4 (FLAT) TOP RAIL - NO.2 OR BETTER PRESSURE TREATED S-P-F, OR SELECT STRUCTURAL CEDAR.
- ⑥ FASTEN 2x4 (FLAT) RAIL TO 2x4 VERTICAL RAIL WITH 3" LONG NO. 8 WOOD SCREWS AT 16" o/c. FACE SCREW FROM TOP OR TOE-SCREW FROM BELOW.
- ⑦ 2x4 VERTICAL RAIL - NO.2 OR BETTER PRESSURE TREATED S-P-F, OR SELECT STRUCTURAL CEDAR, OR 1-1/2" x 3-1/2" ALUMINUM.
- ⑧ 1" x 3-1/2" CLEAR, STRAIGHT GRAIN, DARK RED MERANTI

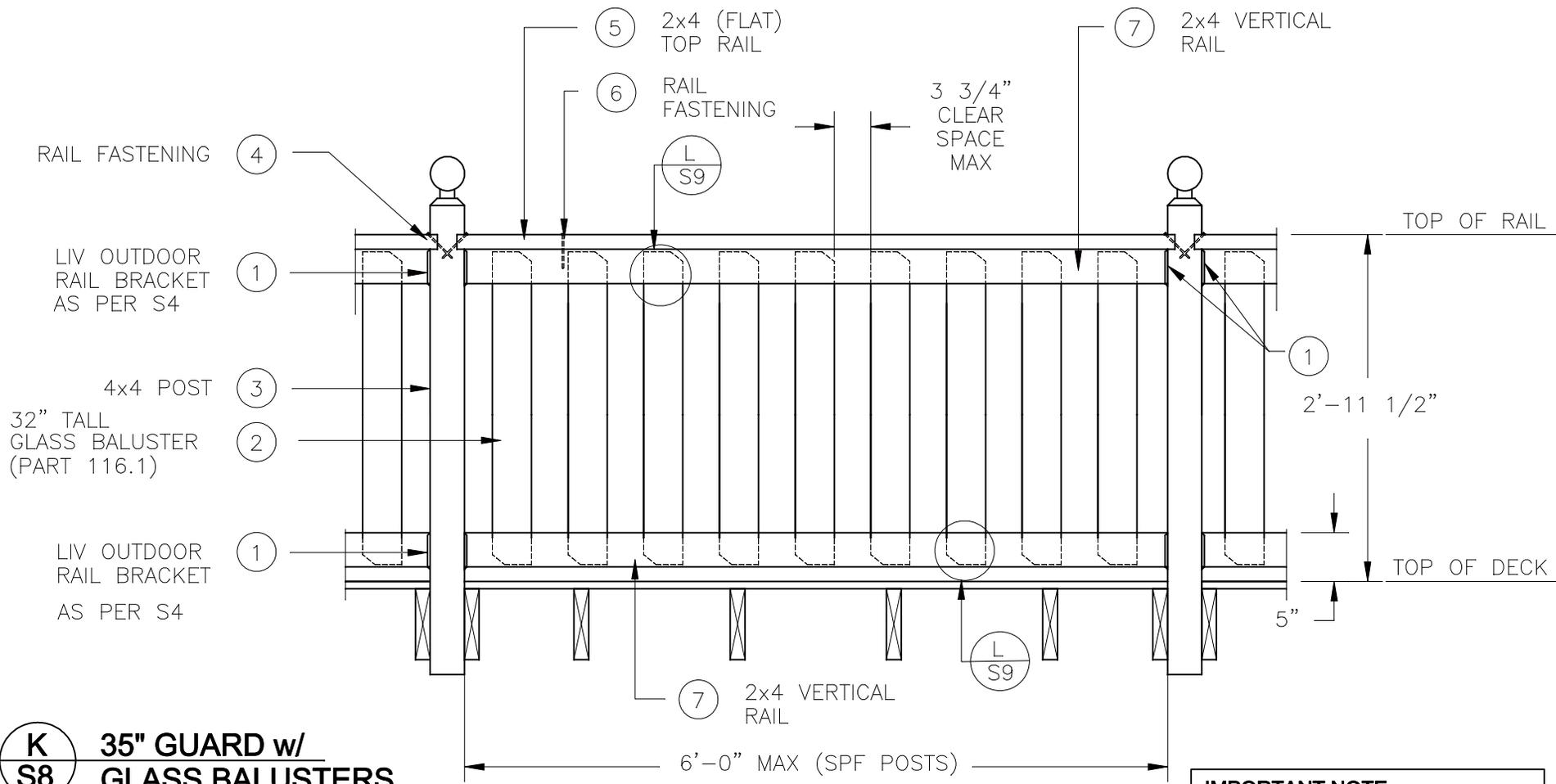
SCALE: NTS		 <p>QUAILE ENGINEERING LTD.</p> <p>38 Parkside Drive, UNIT 7 Newmarket, ON L3Y 8J9 T: 905-853-8547 F: 905-853-7682 E: quaile.eng@rogers.com</p>	ENGINEER'S SEAL	PROJECT:
DATE: MAY, 2011			 <p>S. J. BOYD MAR 11, 2022</p>	DECKORATORS RESIDENTIAL GUARD
DRAWN SJB	CHECKED SJB			GENERAL NOTES
			PROJECT No.:	DRAWING No.:
			11-029	S6



**J S7 42" GUARD w/
GLASS BALUSTERS**

NOTE: THE MAXIMUM SPACING FOR CEDAR POSTS IS 3'-7" AS PER SB-7 OF THE ONTARIO BUILDING CODE

SCALE: 3/4" = 1'-0"		QUAILE ENGINEERING LTD.  38 Parkside Drive, UNIT 7 Newmarket, ON L3Y 8J9 T: 905-853-8547 F: 905-853-7682 E: quaile.eng@rogers.com	ENGINEER'S SEAL  S. J. BOYD PROVINCE OF ONTARIO MAR 11, 2022		PROJECT: DECKORATORS RESIDENTIAL GUARD 42" GUARD WITH GLASS BALUSTERS	
DATE: MAY, 2011			PROJECT No.: 11-029		DRAWING No.: S7	
DRAWN SJB	CHECKED SJB		SEE NOTES ON DRAWING S6			

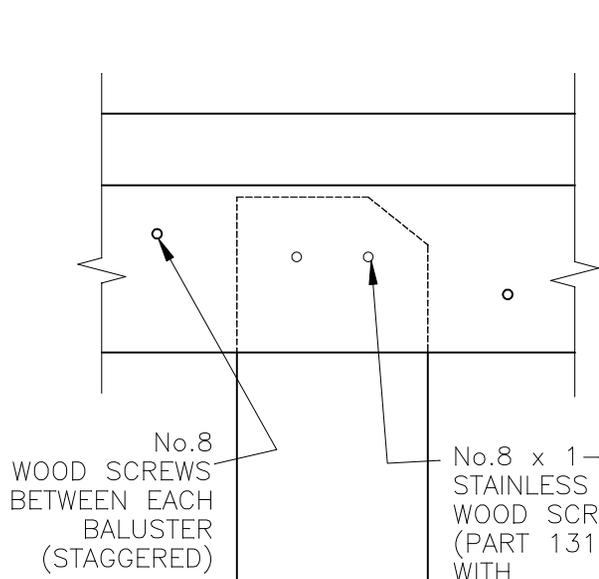


K
S8 **35" GUARD w/
GLASS BALUSTERS**

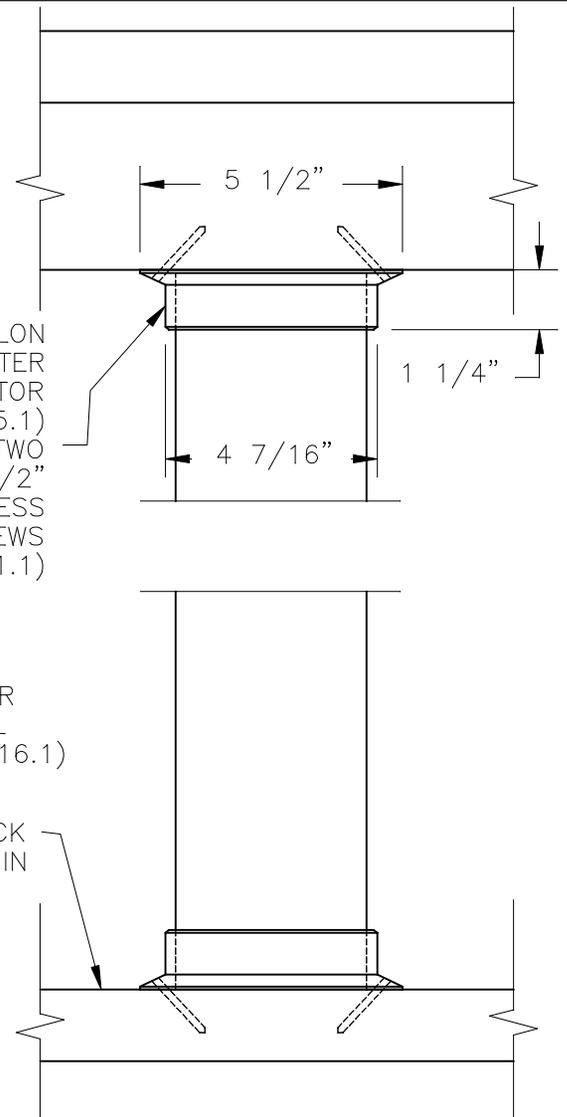
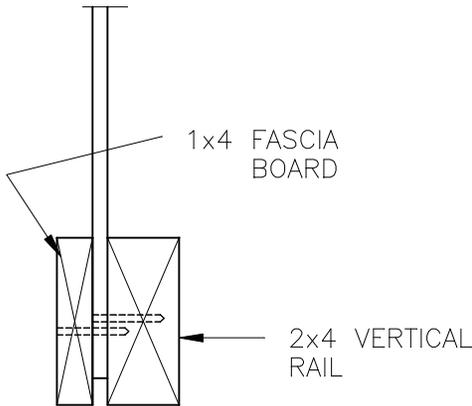
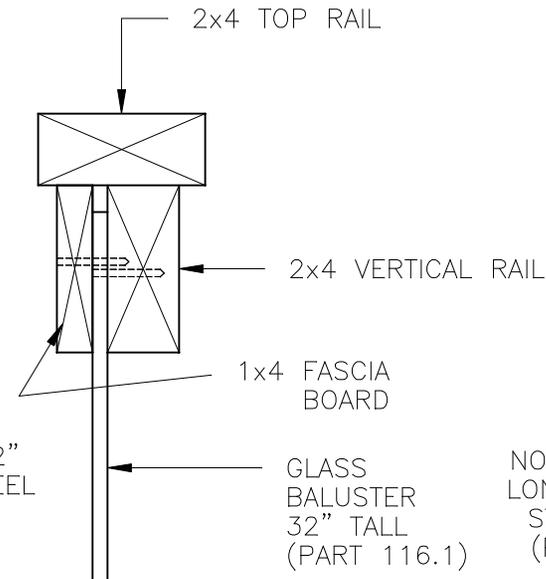
NOTE: THE MAXIMUM SPACING FOR CEDAR POSTS IS 3'-7" AS PER SB-7 OF THE ONTARIO BUILDING CODE

IMPORTANT NOTE:
THE 2'-11 1/2" HIGH RAIL SYSTEM MAY ONLY BE USED FOR DECKS SERVING ONE DWELLING UNIT AND WHERE THE TOP OF THE DECK IS NOT MORE THAN 5'-11" ABOVE GROUND LEVEL.

SCALE: 3/4" = 1'-0"		QUAILE ENGINEERING LTD.  38 Parkside Drive, UNIT 7 Newmarket, ON L3Y 8J9 T: 905-853-8547 F: 905-853-7682 E: quaile.eng@rogers.com	ENGINEER'S SEAL  S. J. BOYD LICENSED PROFESSIONAL ENGINEER PROVINCE OF ONTARIO MAR 11, 2022	PROJECT: DECKORATORS RESIDENTIAL GUARD	
DATE: MAY, 2011	DRAWN SJB			CHECKED SJB	35" GUARD WITH GLASS BALUSTERS
SEE NOTES ON DRAWING S6				PROJECT No.: 11-029	DRAWING No.: S8



No.8 x 1-1/2" STAINLESS STEEL WOOD SCREW (PART 131.1) WITH RUBBER GROMMET (PART 135.1)



L
S9

GLASS BALUSTER CONNECTION

T
S9

ALT GLASS BALUSTER CONNECTION

SEE NOTES ON DRAWING S6

SCALE: 3" = 1'-0"	
DATE: MAY, 2011	
DRAWN SJB	CHECKED SJB

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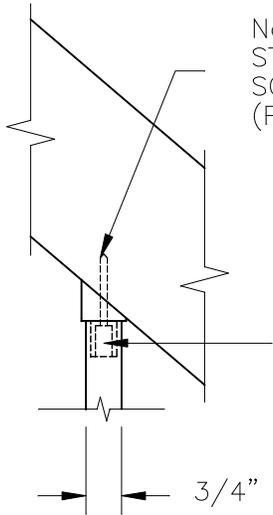


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ENGINEER'S SEAL



PROJECT: DECKORATORS RESIDENTIAL GUARD	
GLASS BALUSTER CONNECTION DETAILS	
PROJECT No.:	DRAWING No.:
11-029	S9

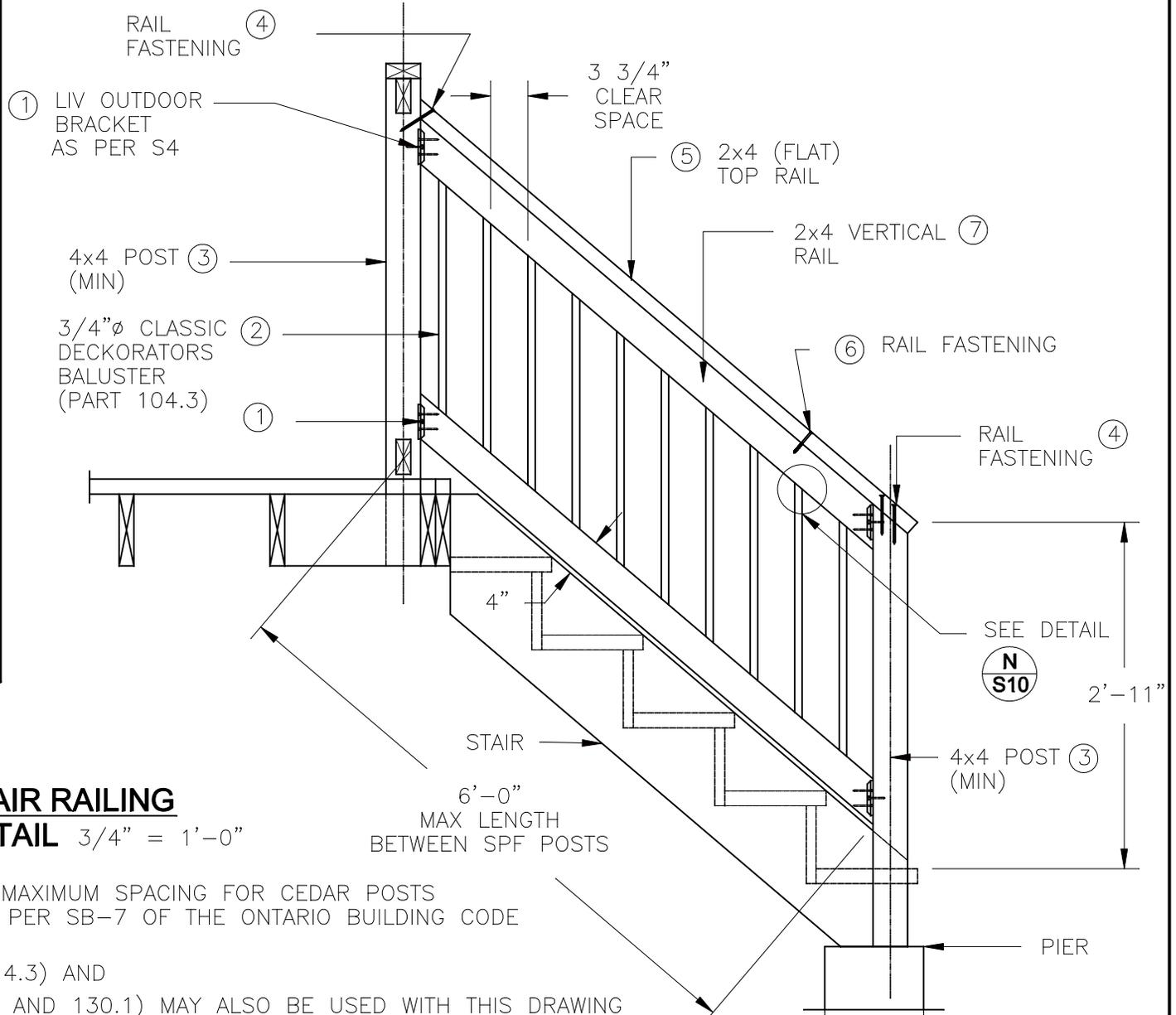


No. 8 x 1-1/2"
STAINLESS STL
SCREW
(PART 131.1)

DESIGNER
CONNECTOR
(PART 129.1)
OR
REGULAR
BALUSTER
CONNECTOR
(PART 107.3)
BY
DECKORATORS

3/4"

N
S10 **BALUSTER
CONNECTION**
3" = 1'-0"



M
S10 **STAIR RAILING
DETAIL** 3/4" = 1'-0"

NOTE: THE MAXIMUM SPACING FOR CEDAR POSTS IS 3'-7" AS PER SB-7 OF THE ONTARIO BUILDING CODE

NOTE: ESTATE BALUSTERS (PART 114.3) AND DESIGNER CONNECTOR (PART 108.1 AND 130.1) MAY ALSO BE USED WITH THIS DRAWING

SCALE: AS NOTED	
DATE: MAY, 2011	
DRAWN SJB	CHECKED SJB

QUAILE ENGINEERING LTD.



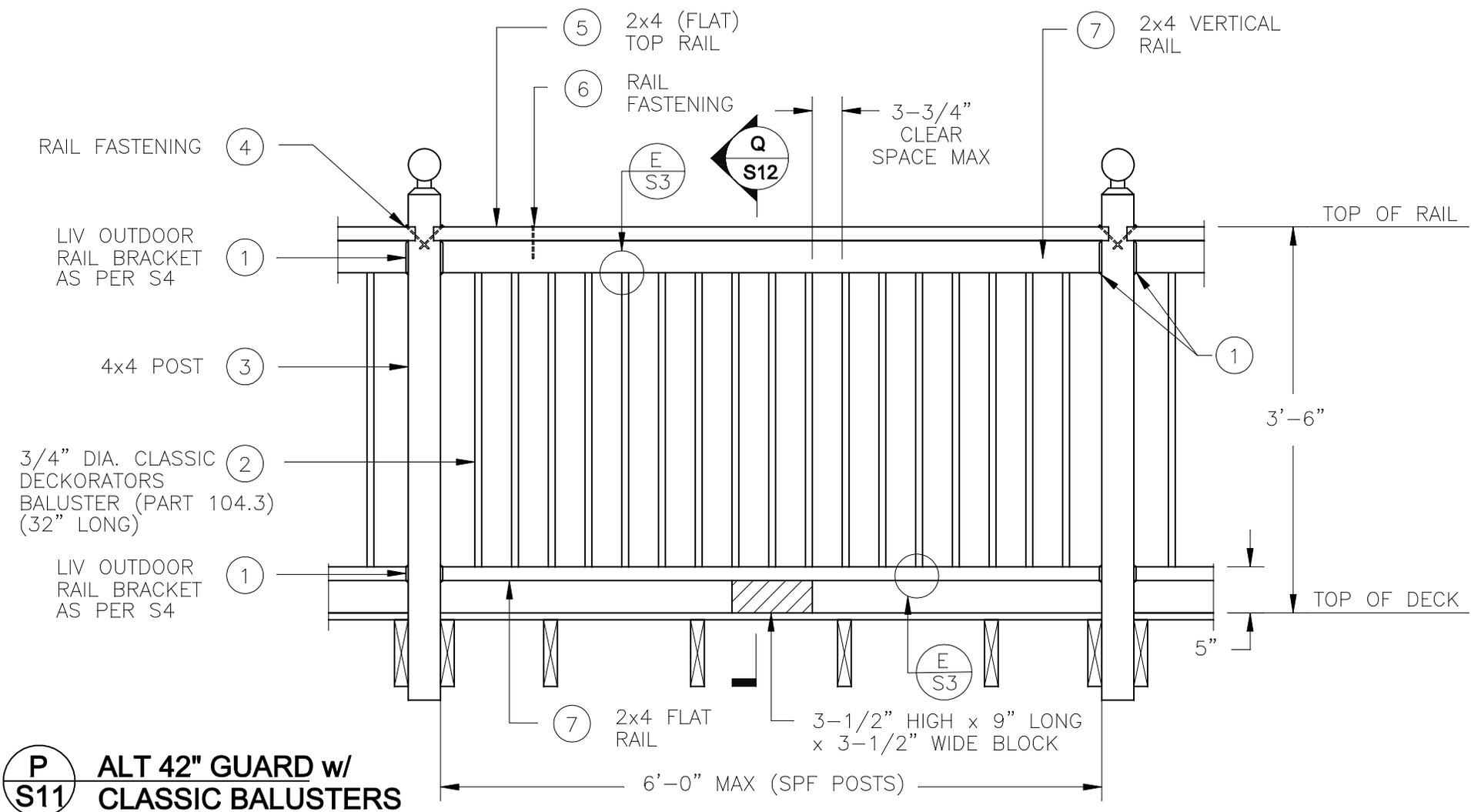
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ENGINEER'S SEAL



PROJECT: DECKORATORS RESIDENTIAL GUARD	
STAIR RAILING DETAIL	
PROJECT No.:	DRAWING No.:
11-029	S10

SEE NOTES ON DRAWING S6



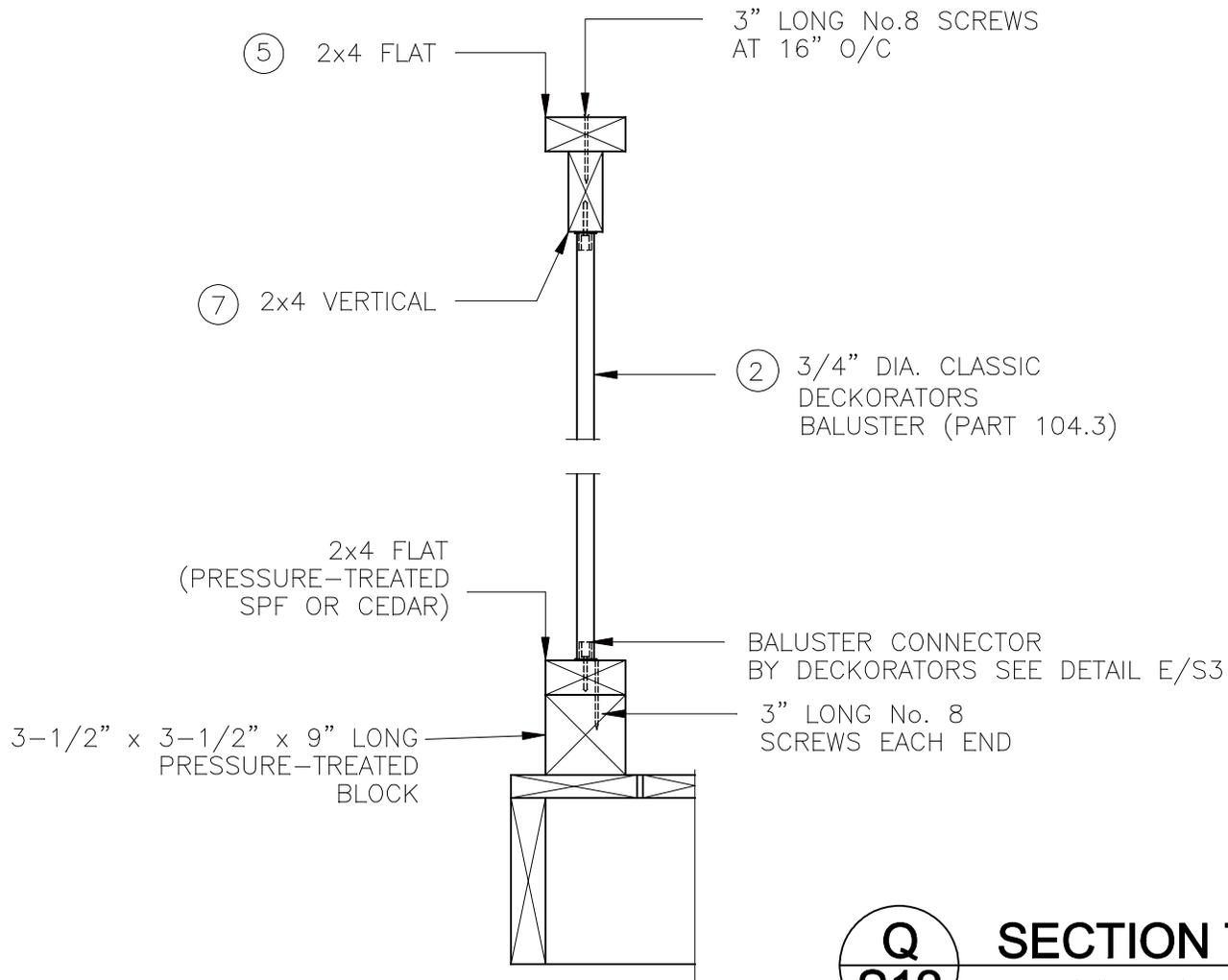
P S11 ALT 42" GUARD w/ CLASSIC BALUSTERS

NOTE: THE MAXIMUM SPACING FOR CEDAR POSTS IS 3'-7" AS PER SB-7 OF THE ONTARIO BUILDING CODE

NOTE: ESTATE BALUSTERS (PART 114.3) AND ESTATE CONNECTOR (PART 108.1) MAY ALSO BE USED WITH THIS DRAWING

SCALE: 3/4" = 1'-0"		QUAILE ENGINEERING LTD.	 38 Parkside Drive, UNIT 7 Newmarket, ON L3Y 8J9 T: 905-853-8547 F: 905-853-7682 E: quaile.eng@rogers.com	 ENGINEER'S SEAL MAR 11, 2022	PROJECT: DECKORATORS RESIDENTIAL GUARD	
DATE: MAY, 2011					ALTERNATE 42" GUARD WITH 3-1/2" SPACE AT BOTTOM	
DRAWN SJB	CHECKED SJB				PROJECT No.: 11-029	DRAWING No.: S11

SEE NOTES ON DRAWING S6



Q
S12

SECTION THRU ALT 42" GUARD

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

NOTE: ESTATE BALUSTERS (PART 114.3) AND ESTATE CONNECTOR (PART 108.1) MAY ALSO BE USED WITH THIS DRAWING

SCALE: 1-1/2" = 1'-0"	
DATE: MAY, 2011	
DRAWN SJB	CHECKED SJB

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ENGINEER'S SEAL



PROJECT:
DECKORATORS
RESIDENTIAL GUARD

ALTERNATE CLASSIC BALUSTER
AND RAIL DETAIL

PROJECT No.:
11-029

DRAWING No.:
S12

SEE NOTES ON DRAWING S6