



# City of Portland, Oregon - Bureau of Development Services

1900 SW Fourth Avenue · Portland, Oregon 97201 | 503-823-7300 | [www.portlandoregon.gov/bds](http://www.portlandoregon.gov/bds)



## Permit Revision Submittal Requirements and Application

A Permit Revision is required when there are proposed changes to the project after the permit has been issued. This may arise due to discrepancies between the city-approved permit drawings and actual field conditions, or the customer has changed their mind about an aspect of the project. In all cases, a revision to the existing permit must be submitted, reviewed and approved.

### Applicants will provide:

☒ A copy of this application

☐ Three (3) sets of plans that clearly reflect the proposed change(s).

Drawings and calculations must be stamped and signed by the Architect and/or the Engineer of Record, if applicable.

☐ One (1) copy of the original city approved permit drawings. (NOTE: If your project has an assigned process manager please contact them regarding submittal of the revision).

☐ Two (2) sets of calculations, if applicable

☐ Inspector's correction notice, if revision is due to an inspection correction

☐ Revision fee (paid at time of submittal)

### Contact Information:

Contact name Mario Mata

Address 291 S 6<sup>th</sup> Ave

City Cornelius State OR Zip Code 97113

Phone 503 709-7933 Email EmeraldEdc@outlook.com

Value of proposed revision 19,000 Issued permit # 18-155258-000-00-RS

Job site address 3613 NW Chapin Dr. Portland, OR 97229

Description of revision adjust to correct length of Deck that will be replaced

### Fees:

The Permit Revisions are subject to fees associated with plan review, processing and any increase in project value. Additional fees may apply if adding plumbing fixtures.

The Bureau of Development Services fee schedule is available under the fees tab on the BDS web site at: [www.portlandoregon.gov/bds](http://www.portlandoregon.gov/bds). Fees are updated annually on July 1st.

### Helpful Information:

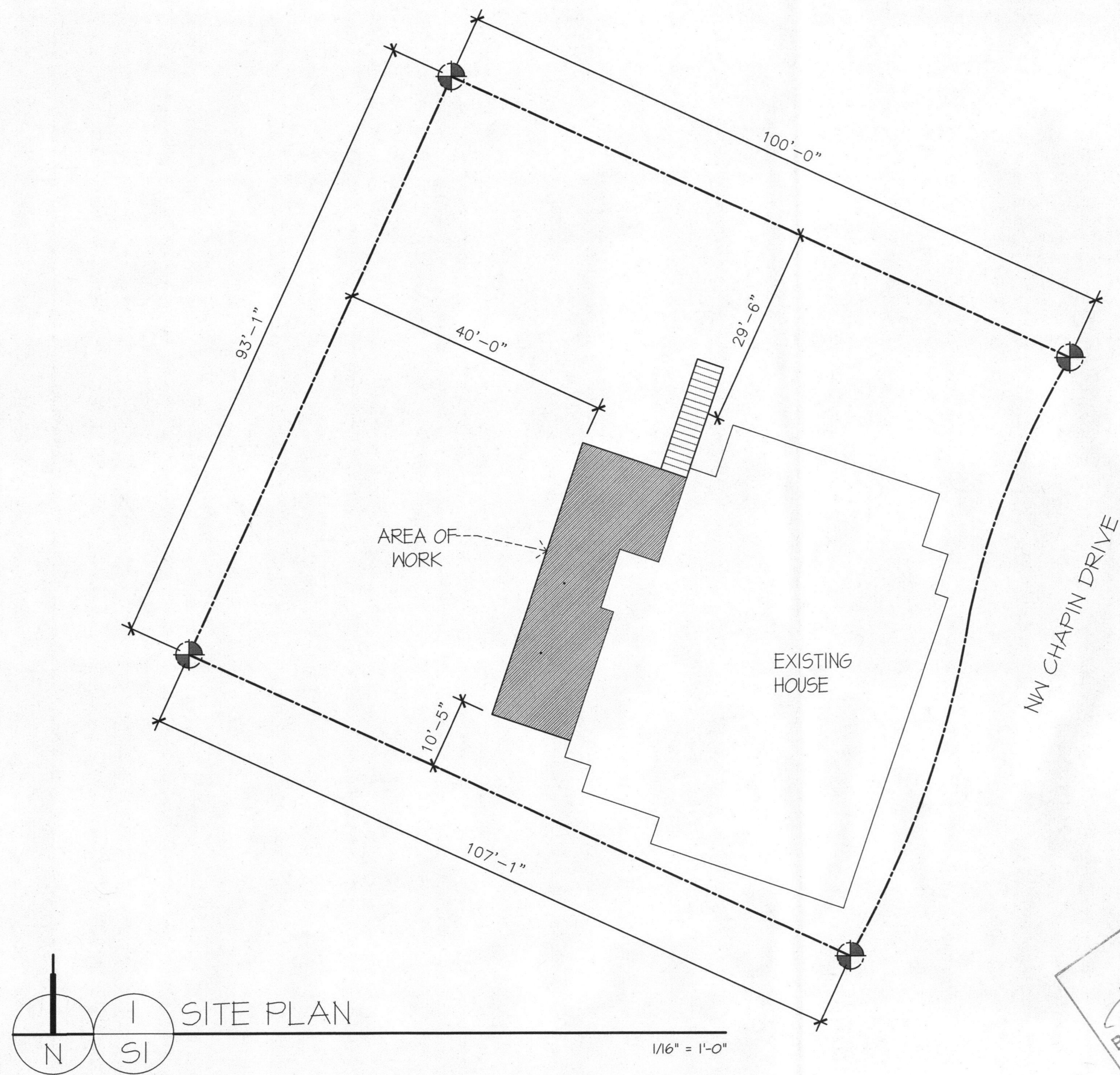
**Bureau of Development Services**  
City of Portland, Oregon  
1900 SW 4th Avenue, Portland, OR 97201  
[www.portlandoregon.gov/bds](http://www.portlandoregon.gov/bds)

### Submit your plans in person to:

Development Services Center (DSC), First Floor,  
For Hours Call 503-823-7310

### Important Telephone Numbers:

BDS main number ..... 503-823-7300  
DSC automated information line ..... 503-823-7310  
Building code information ..... 503-823-1456  
BDS 24 hour inspection request line ..... 503-823-7000  
Residential information for  
one and two family dwelling ..... 503-823-7388  
General Permit Processing and  
Fee Estimate info ..... 503-823-7357  
City of Portland TTY ..... 503-823-6868



1 SITE PLAN  
SCALE: 1/8" = 1'-0"

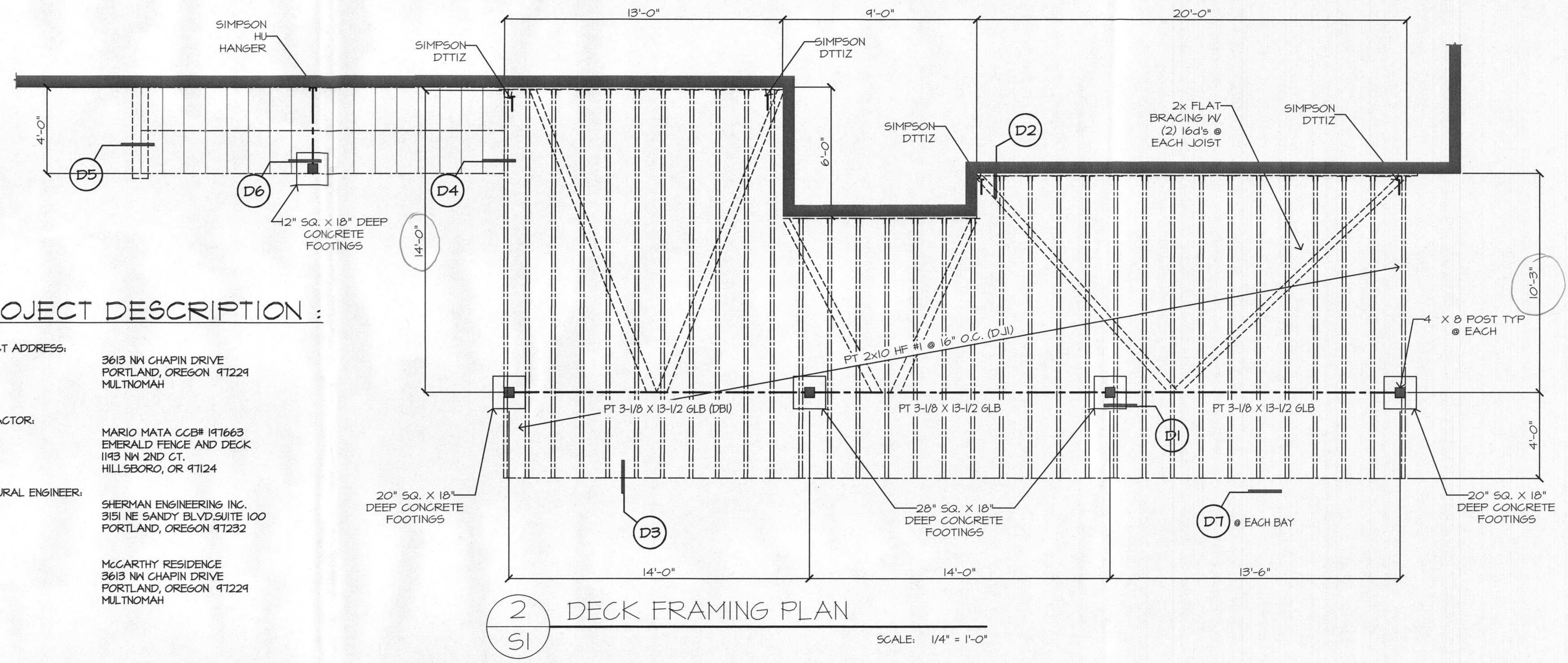
PROJECT DESCRIPTION:

PROJECT ADDRESS: 3613 NW CHAPIN DRIVE  
PORTLAND, OREGON 97224  
MULTNOMAH

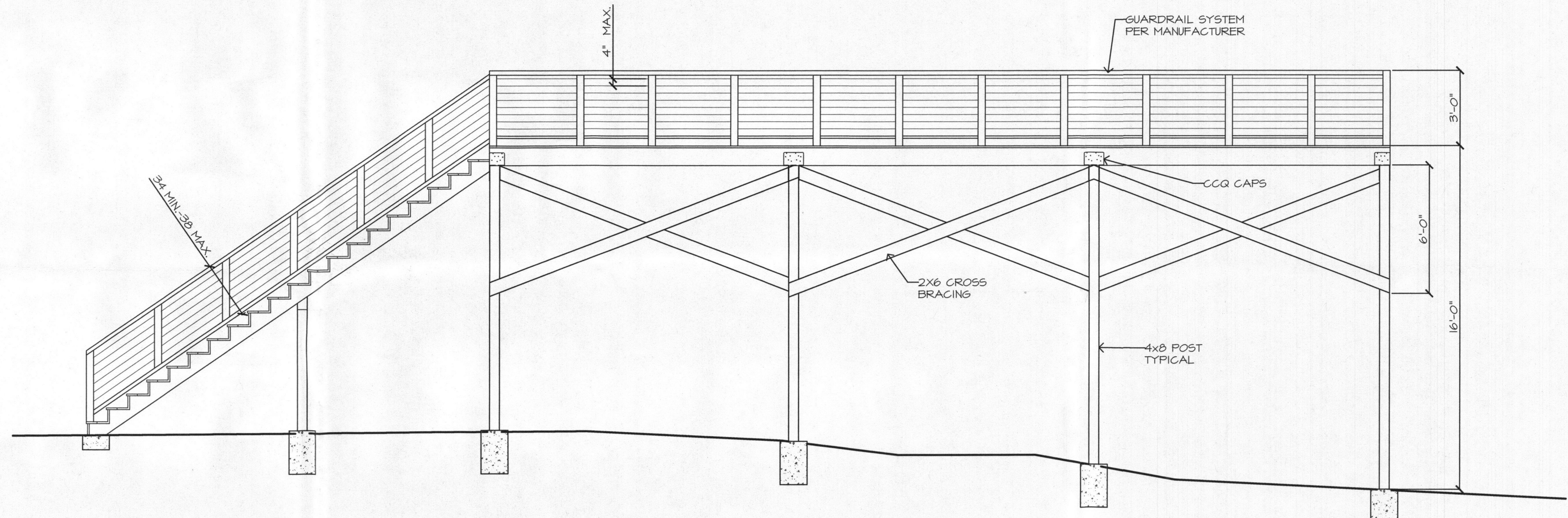
CONTRACTOR: MARIO MATA CCB# 191663  
EMERALD FENCE AND DECK  
1145 NW 2ND CT.  
HILLSBORO, OR 97124

STRUCTURAL ENGINEER: SHERMAN ENGINEERING INC.  
3151 NE SANDY BLVD. SUITE 100  
PORTLAND, OREGON 97232

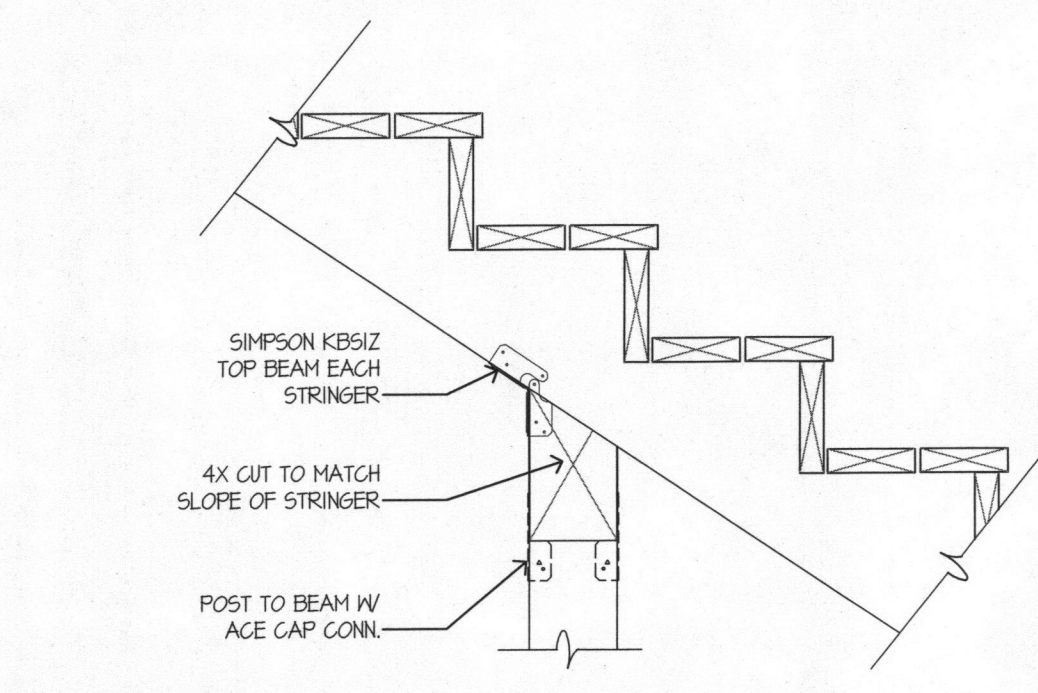
OWNER: MCCARTHY RESIDENCE  
3613 NW CHAPIN DRIVE  
PORTLAND, OREGON 97224  
MULTNOMAH



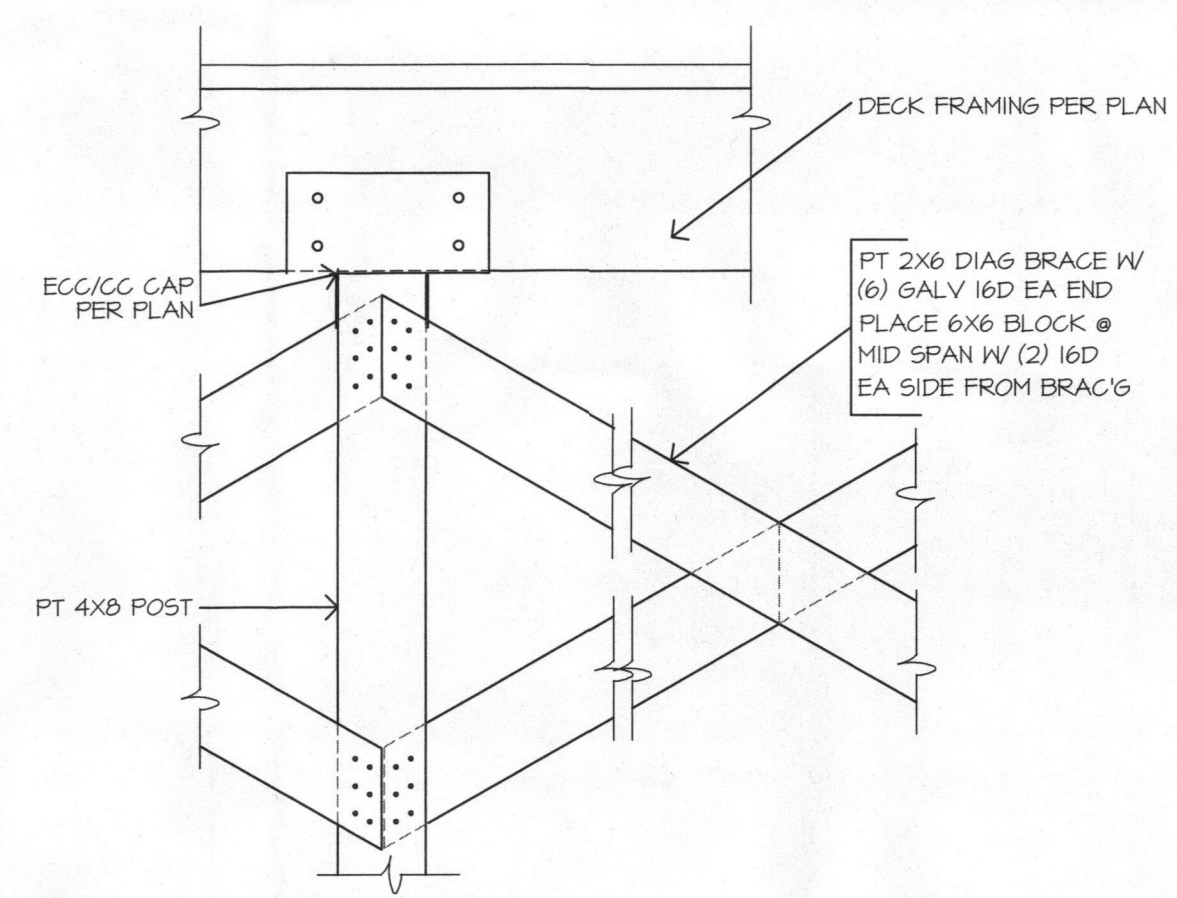
2 DECK FRAMING PLAN  
SCALE: 1/4" = 1'-0"



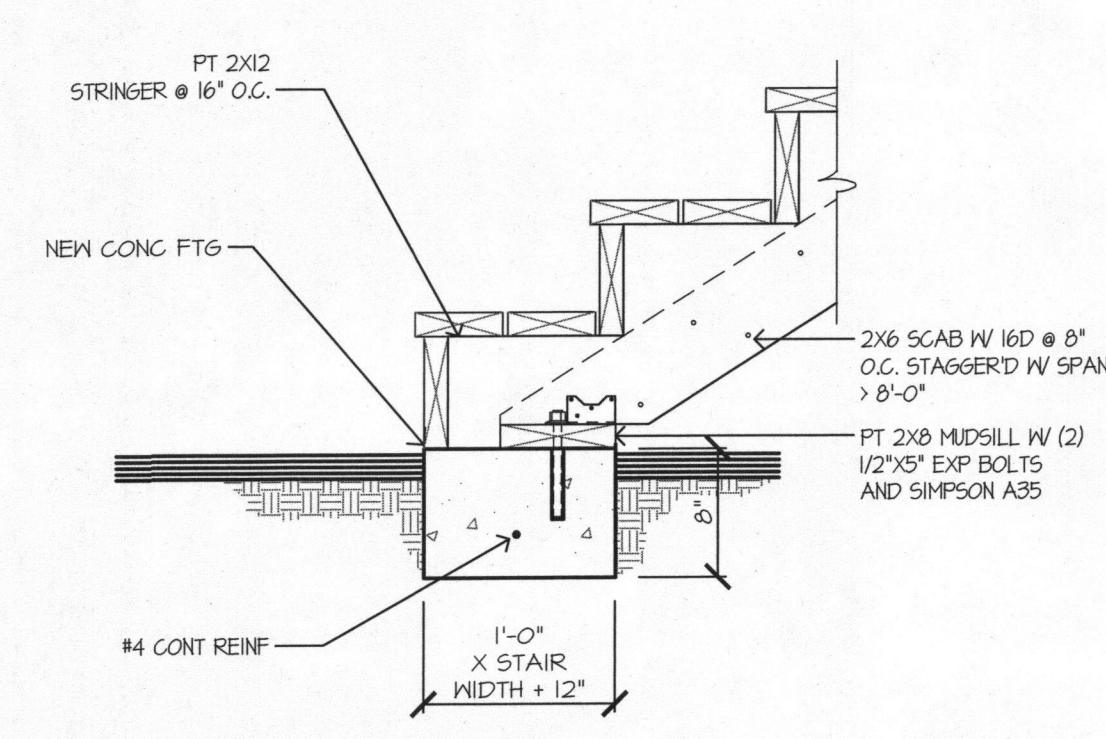
3 DECK ELEVATION  
SCALE: 1/4" = 1'-0"



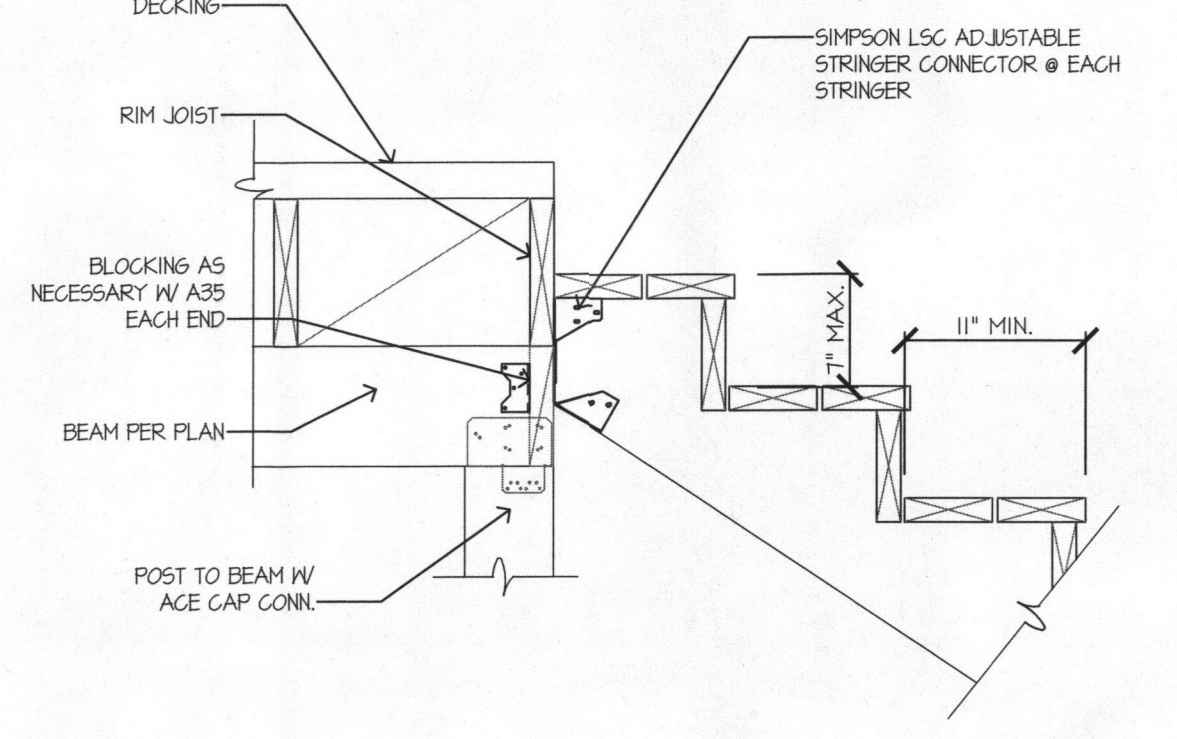
D6 STAIR CONN. @ LANDING  
SCALE: 1" = 1'-0"



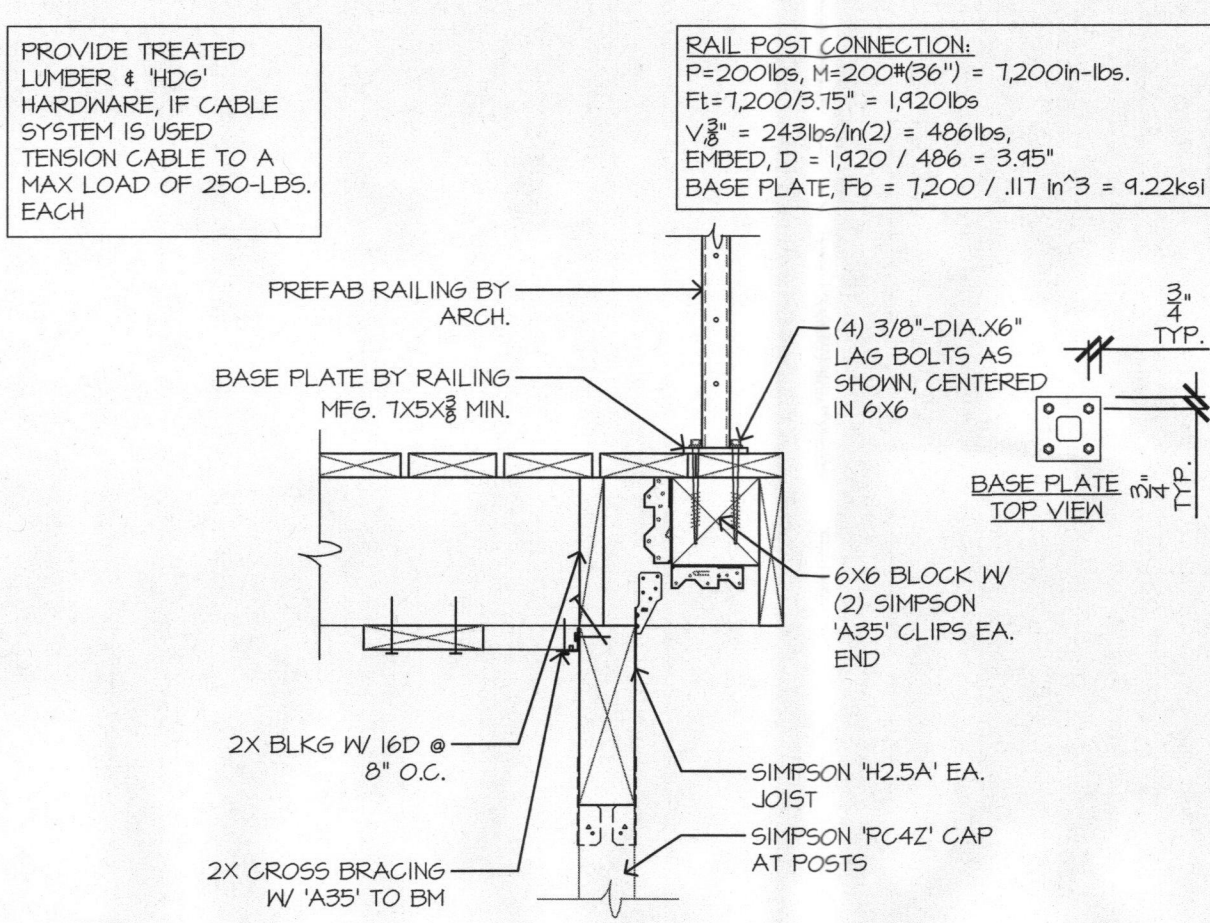
D7 DIAGONAL BRACING/SUPPORT POST  
SCALE: 1" = 1'-0"



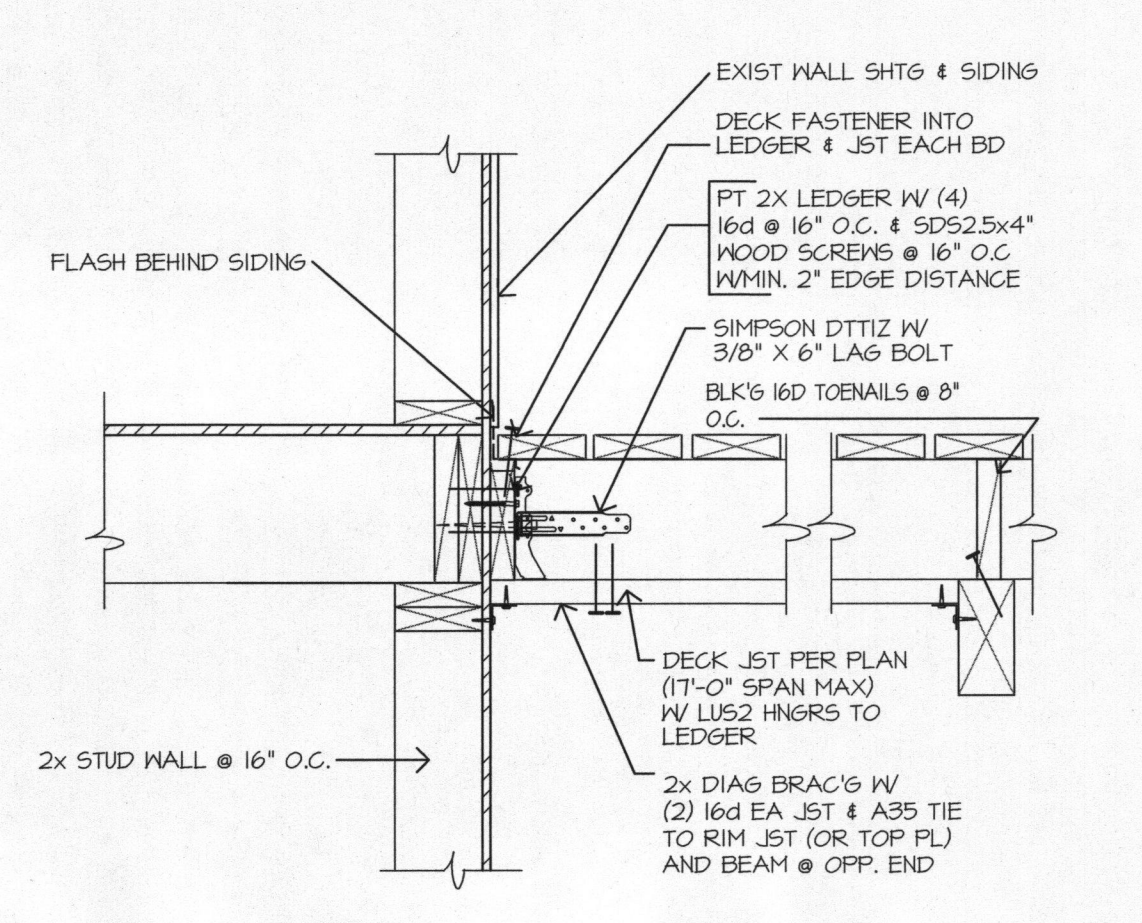
D5 LANDING PAD @ STRINGER  
SCALE: 1" = 1'-0"



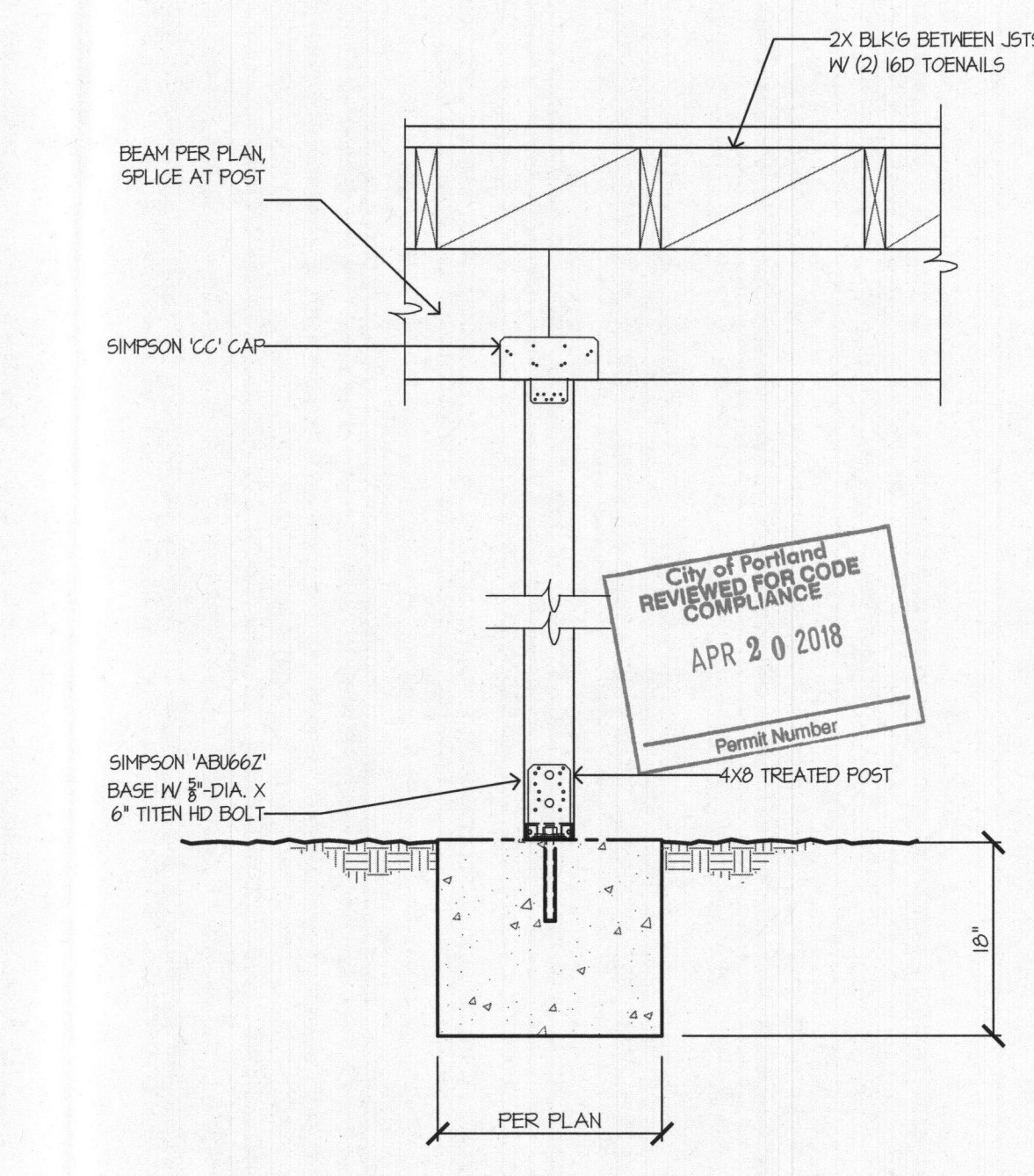
D4 STAIR CONN. @ LANDING  
SCALE: 1" = 1'-0"



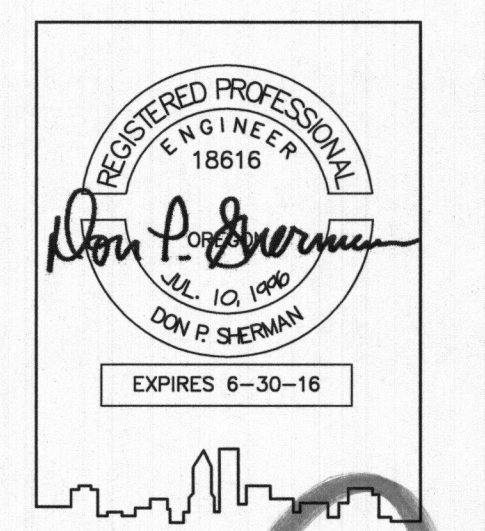
D3 RAIL POST/DECK CONN.  
SCALE: 1" = 1'-0"



D2 DECK JOIST/WALL CONNECTION  
SCALE: 1" = 1'-0"



D1 DECK POST/FTG. CONN.  
SCALE: 1" = 1'-0"



3151 NE SANDY BLVD.  
SUITE 100  
PORTLAND, OR 97232  
P: (503) 230-8876  
JOBS@SHERMANENGINEERS.COM

REVISIONS

| NO. | DESCRIPTION                 | DATE    |
|-----|-----------------------------|---------|
| 1   | ISSUED FOR PERMIT           | 4/10/18 |
| 2   | REVISED FOR CODE COMPLIANCE | 4/10/18 |
| 3   | REVISED FOR CODE COMPLIANCE | 4/10/18 |
| 4   | REVISED FOR CODE COMPLIANCE | 4/10/18 |
| 5   | REVISED FOR CODE COMPLIANCE | 4/10/18 |
| 6   | REVISED FOR CODE COMPLIANCE | 4/10/18 |
| 7   | REVISED FOR CODE COMPLIANCE | 4/10/18 |
| 8   | REVISED FOR CODE COMPLIANCE | 4/10/18 |
| 9   | REVISED FOR CODE COMPLIANCE | 4/10/18 |
| 10  | REVISED FOR CODE COMPLIANCE | 4/10/18 |

PROJECT #  
18-MSMA-05-539

PROJECT ADDRESS  
3613 NW CHAPIN DR  
PORTLAND, OR.  
MULTNOMAH COUNTY

PROJECT TITLE  
MCCARTHY  
RESIDENCE  
FOR:  
EMERALD FENCE AND DECK

STRUCTURAL  
DECK PLANS  
3/25/18  
S1  
OF -



3151 NE SANDY BLVD., SUITE 100  
PORTLAND, OR 97232  
PHONE (503) 230-8876  
SHERMANENGINEERS.COM

## Structural Calculations

April 16, 2018

### McCarthy Residence Deck

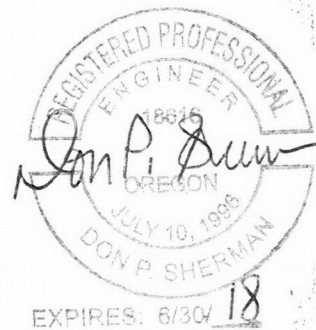
3613 NW Chapin Drive  
Portland, OR 97229

SEI Project # 18-MSMA-05-539

Prepared For:

Emerald Fence Decks and Construction LLC

1193 NW 2nd Ct.  
Hillsboro, OR 97124



#### Subject

#### Sheet No.

|                |       |
|----------------|-------|
| Plans:         | S1    |
| Details:       | D1-D7 |
| Foundation:    | FD1   |
| Deck Ledger:   | DF1   |
| Framing:       |       |
| Deck Beam      | DB1   |
| Deck Joists    | DJ1   |
| Deck Post      | DP1   |
| Stair Stringer | SS1   |



155258. Rev01

Mc CARTHY RESIDENCE

FD 1  
4-16-18

GRAVITY LOAD

FTG 1

$$R = 3922 \# (DBI)$$

$$AREA = 3922 \# / 1500 \# = 2.6 \text{ FT}^2$$

USE: 20"  $\phi$  X 18" DEEP  
CONC. FTG.

FTG 2

$$R = 3922 \# (DBI)$$

$$P_{MAX} = 3922 \# (2) = 7844 \#$$

$$AREA = 7844 \# / 1500 \# = 5.2 \text{ FT}^2$$

USE: 28"  $\phi$  X 18" DEEP  
CONC. FTG.

SHERMAN ENGINEERING, INC.  
3151 NE Sandy Blvd. Ste. 100  
Portland, OR 97232

JOB: McCarthy Residence Deck  
CLIENT: Emerald Fence and Decking

DFI  
4/19/2018  
JML

DECK LEDGER

|          |                                                     |        |           |           |
|----------|-----------------------------------------------------|--------|-----------|-----------|
| Loading: | DL psf                                              | LL psf | Total psf |           |
|          | 10                                                  | 40     | 50        |           |
|          | Tributary: 7 ft                                     |        |           |           |
|          | 7 ft                                                | x      | 50 psf    | = 350 plf |
|          | 350 plf                                             | x      | 1.33 ft   | = 465.5 # |
|          | V 16d = 139 #                                       |        |           |           |
|          | USE:                                                |        |           |           |
|          | $\frac{465.5}{139} = 3.35$ (4) 16d NAILS @ 16" O.C. |        |           |           |

|          |                                        |  |  |  |
|----------|----------------------------------------|--|--|--|
| Seismic: |                                        |  |  |  |
|          | $S_{ds} = 0.73$                        |  |  |  |
|          | $R = 6.5$                              |  |  |  |
|          | $V = \frac{1.2 S_{ds}}{R} W = 0.135 W$ |  |  |  |

|       |                                                  |   |    |                 |
|-------|--------------------------------------------------|---|----|-----------------|
| Load: |                                                  |   |    |                 |
|       | 10 psf                                           | x | 14 | x 40 = 5.6 kips |
|       | $(V)*(W) = 0.13 \times 5.60 = 0.75 \text{ kips}$ |   |    |                 |

|                                                                           |                            |            |      |        |
|---------------------------------------------------------------------------|----------------------------|------------|------|--------|
| Lag Bolts:                                                                | V 1/4" SDS SCREW           | 340 #      | =    | 340    |
|                                                                           | W 1/4" SDS SCREW:          | 340 # x 3" | =    | 1020   |
| V Governs:                                                                | 0.75                       | /          | 0.34 | = 2.22 |
|                                                                           | 2.22 = (3) 1/4" SDS SCREWS |            |      |        |
| USE 2x LEDGER W/ (4) 16d NAILS @ 16" O.C. AND (1) 1/4" SDS SCREWS 4' O.C. |                            |            |      |        |

DB1  
4.19.18

McCarthy Residence

Deck Beam

DB1

Date: 4/19/18

Selection

PT 3-1/8x 13-1/2 GLB 24F-V4 DF/DF

Lu = 0.0 Ft

Conditions

NDS 2005

Min Bearing Area R1= 6.0 in<sup>2</sup> R2= 6.0 in<sup>2</sup> (1.5) DL Defl= 0.13 in Recom Camber= 0.20 in

Data

|                |         |                 |         |               |        |
|----------------|---------|-----------------|---------|---------------|--------|
| Beam Span      | 14.0 ft | Reaction 1 LL   | 3080 #  | Reaction 2 LL | 3080 # |
| Beam Wt per ft | 10.25 # | Reaction 1 TL   | 3922 #  | Reaction 2 TL | 3922 # |
| Bm Wt Included | 144 #   | Maximum V       | 3922 #  |               |        |
| Max Moment     | 13726 # | Max V (Reduced) | 3291 #  |               |        |
| TL Max Defl    | L / 240 | TL Actual Defl  | L / 362 |               |        |
| LL Max Defl    | L / 360 | LL Actual Defl  | L / 510 |               |        |

Attributes

|          | Section (in <sup>3</sup> ) | Shear (in <sup>2</sup> ) | TL Defl (in) | LL Defl |
|----------|----------------------------|--------------------------|--------------|---------|
| Actual   | 94.92                      | 42.19                    | 0.46         | 0.33    |
| Critical | 68.63                      | 20.57                    | 0.70         | 0.47    |
| Status   | OK                         | OK                       | OK           | OK      |
| Ratio    | 72%                        | 49%                      | 66%          | 71%     |

Values

|                  | Fb (psi) | Fv (psi) | E (psi x mil) | Fc <sub>I</sub> (psi) |
|------------------|----------|----------|---------------|-----------------------|
| Reference Values | 2400     | 240      | 1.8           | 650                   |
| Adjusted Values  | 2400     | 240      | 1.8           | 650                   |

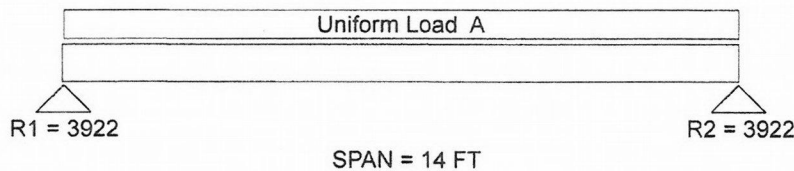
Adjustments

|                 |        |           |              |      |
|-----------------|--------|-----------|--------------|------|
| Cv Volume       | 1.000  |           |              |      |
| Cd Duration     | 1.00   | 1.00      |              |      |
| Cr Repetitive   | 1.00   |           |              |      |
| Ch Shear Stress |        | N/A       |              |      |
| Cm Wet Use      | 1.00   | 1.00      | 1.00         | 1.00 |
| CI Stability    | 1.0000 | Rb = 0.00 | Le = 0.00 Ft |      |

Loads

Uniform LL: 440

Uniform TL: 550 = A



Uniform and partial uniform loads are lbs per lineal ft.

DJ1  
4.19.18

McCarthy Residence

Deck Joist

Date: 4/19/18

DJ1

Selection PT 2x 10 HF #1 @ 16 in oc Lu = 0.0 Ft Lu @OH = 0.0 Ft

Conditions NDS 2005, Overhang, Repetitive Use, Incised  
Min Bearing Area R1= 1.1 in<sup>2</sup> R2= 1.9 in<sup>2</sup> (1.5) DL Defl= 0.10 in.

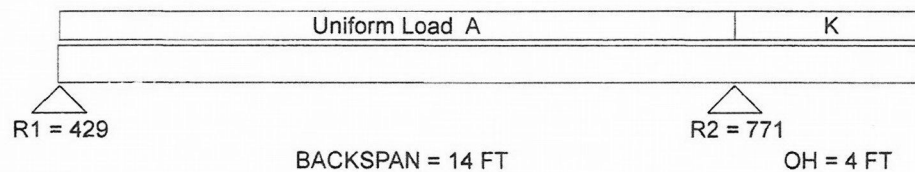
|             |                |         |                 |         |                   |         |
|-------------|----------------|---------|-----------------|---------|-------------------|---------|
| <u>Data</u> | Beam Span      | 14.0 ft | Reaction 1 LL   | 343 #   | Reaction 2 LL     | 617 #   |
|             | Beam Wt per ft | 0 #     | Reaction 1 TL   | 429 #   | Reaction 2 TL     | 771 #   |
|             | Bm Wt Included | 0 #     | Maximum V       | 505 #   | Overhang Length   | 4.0 ft  |
|             | Max Moment     | 1378 #  | Max V (Reduced) | 453 #   | Total Beam Length | 18.0 ft |
|             | TL Max Defl    | L / 240 | TL Actual Defl  | L / 467 | OH TL Actual Defl | L / 287 |
|             | LL Max Defl    | L / 360 | LL Actual Defl  | L / 643 | OH LL Actual Defl | L / 395 |

|                   |                            |                          |              |         |            |            |
|-------------------|----------------------------|--------------------------|--------------|---------|------------|------------|
| <u>Attributes</u> | Section (in <sup>3</sup> ) | Shear (in <sup>2</sup> ) | TL Defl (in) | LL Defl | OH TL Defl | OH LL Defl |
| Actual            | 21.39                      | 13.88                    | 0.36         | 0.26    | -0.33      | -0.24      |
| Critical          | 16.75                      | 5.67                     | 0.70         | 0.47    | 0.40       | 0.27       |
| Status            | OK                         | OK                       | OK           | OK      | OK         | OK         |
| Ratio             | 78%                        | 41%                      | 51%          | 56%     | 84%        | 91%        |

|                  | Fb (psi) | Fv (psi) | E (psi x mil) | Fc <sub>I</sub> (psi) |
|------------------|----------|----------|---------------|-----------------------|
| <u>Values</u>    |          |          |               |                       |
| Reference Values | 975      | 150      | 1.5           | 405                   |
| Adjusted Values  | 987      | 120      | 1.4           | 405                   |

|                    |                   |        |           |              |      |
|--------------------|-------------------|--------|-----------|--------------|------|
| <u>Adjustments</u> | CF Size Factor    | 1.100  |           |              |      |
|                    | Cd Duration       | 1.00   | 1.00      |              |      |
|                    | Cr Repetitive     | 1.15   |           |              |      |
|                    | Ch Shear Stress   |        | N/A       |              |      |
|                    | Ci Incised        | 0.80   | 0.80      | 0.95         | 1.00 |
|                    | CI Stability      | 1.0000 | Rb = 0.00 | Le = 0.00 Ft |      |
|                    | CI Stability @ OH | 1.0000 | Rb = 0.00 | Le = 0.00 Ft |      |

|              |                |                    |                          |     |
|--------------|----------------|--------------------|--------------------------|-----|
| <u>Loads</u> | Uniform LL: 53 | Uniform TL: 67 = A | (Uniform Ld on Backspan) |     |
|              | Par Unif LL    | Par Unif TL        | Start                    | End |
|              | 53             | K = 67 (OH)        | 0                        | 4.0 |



Uniform and partial uniform loads are lbs per lineal ft. Overhanging load distances are from R2.

DP1  
4.12.18

BeamChek v2007 licensed to: SHERMAN ENGINEERING INC Reg # 7992-66413

McCarthy Residence

Prepared by:

Date: 4/19/18

Selection

4x 8 Hem-Fir #2 Solid Wood Column

Conditions

NDS 2005, Using values for 2x and 4x solid sawn, Dimension Lumber.

Data

|               |         |                    |                       |     |      |
|---------------|---------|--------------------|-----------------------|-----|------|
| Load          | 7844 #  | Column Area        | 25.38 in <sup>2</sup> | Kf  | 1.00 |
| Actual Height | 16.0 ft | le d1 Effective Ht | 120 in                | c   | 0.80 |
| Unbraced L1   | 10.0 ft | le d2 Effective Ht | 120 in                | KcE | 0.30 |
| Unbraced L2   | 10.0 ft | Ke Buckling Mode   | 1.0                   | FcE | 332  |

Attributes and Values

Controlling d is 3.5 inches

Fc || (psi) E (psi x mil)

|          |      |     |                         |                  |      |      |
|----------|------|-----|-------------------------|------------------|------|------|
|          | le/d | psi | Area (in <sup>2</sup> ) | Reference Values | 1300 | 1.3  |
|          |      |     |                         | Adjusted Values  | 315  | 1.3  |
| Actual   | 34   | 309 | 25.38                   | CF Size Factor   | 1.15 |      |
| Critical | 50   | 315 | 24.88                   | Cd Duration      | 1.00 |      |
| Status   | OK   | OK  | OK                      | Cm Wet Use       | 1.00 | 1.00 |
| Ratio    | 68%  | 98% | 98%                     | Cp Stability     | 0.21 |      |

Note: A wood plate under this column must have an Fc value, perpendicular to the grain, greater than 309 psi.

551  
4-16-18

McCarthy Residence

Stair Stringer

SS1

Date: 4/16/18

Selection

PT (2) 2x 6 HF #2 @ 16 in oc

Lu = 0.0 Ft

Conditions

NDS 2005, Repetitive Use, Incised

Min Bearing Area R1= 0.7 in<sup>2</sup> R2= 0.7 in<sup>2</sup> (1.5) DL Defl= 0.04 in

Data

|                |         |                 |           |               |         |
|----------------|---------|-----------------|-----------|---------------|---------|
| Beam Span      | 8.0 ft  | Reaction 1 LL   | 213 #     | Reaction 2 LL | 213 #   |
| Beam Wt per ft | 0 #     | Reaction 1 TL   | 267 #     | Reaction 2 TL | 267 #   |
| Bm Wt Included | 0 #     | Maximum V       | 267 #     |               |         |
| Max Moment     | 533 #   | Max V (Reduced) | 236 #     |               |         |
| TL Max Defl    | L / 240 | TL Actual Defl  | L / 731   |               | L / 457 |
| LL Max Defl    | L / 360 | LL Actual Defl  | L / >1000 |               |         |

Attributes

|          | Section (in <sup>3</sup> ) | Shear (in <sup>2</sup> ) | TL Defl (in) | LL Defl |
|----------|----------------------------|--------------------------|--------------|---------|
| Actual   | 15.13                      | 16.50                    | 0.13         | 0.10    |
| Critical | 6.30                       | 2.95                     | 0.40         | 0.27    |
| Status   | OK                         | OK                       | OK           | OK      |
| Ratio    | 42%                        | 18%                      | 33%          | 36%     |

Values

|                  | Fb (psi) | Fv (psi) | E (psi x mil) | Fc <sub>I</sub> (psi) |
|------------------|----------|----------|---------------|-----------------------|
| Reference Values | 850      | 150      | 1.3           | 405                   |
| Adjusted Values  | 1017     | 120      | 1.2           | 405                   |

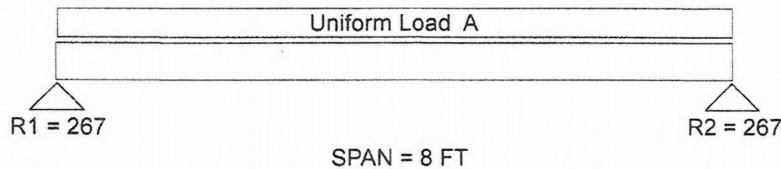
Adjustments

|                 |        |           |              |      |
|-----------------|--------|-----------|--------------|------|
| CF Size Factor  | 1.300  |           |              |      |
| Cd Duration     | 1.00   | 1.00      |              |      |
| Cr Repetitive   | 1.15   |           |              |      |
| Ch Shear Stress |        | N/A       |              |      |
| Ci Incised      | 0.80   | 0.80      | 0.95         | 1.00 |
| CI Stability    | 1.0000 | Rb = 0.00 | Le = 0.00 Ft |      |

Loads

Uniform LL: 53

Uniform TL: 67 = A



Uniform and partial uniform loads are lbs per lineal ft.