



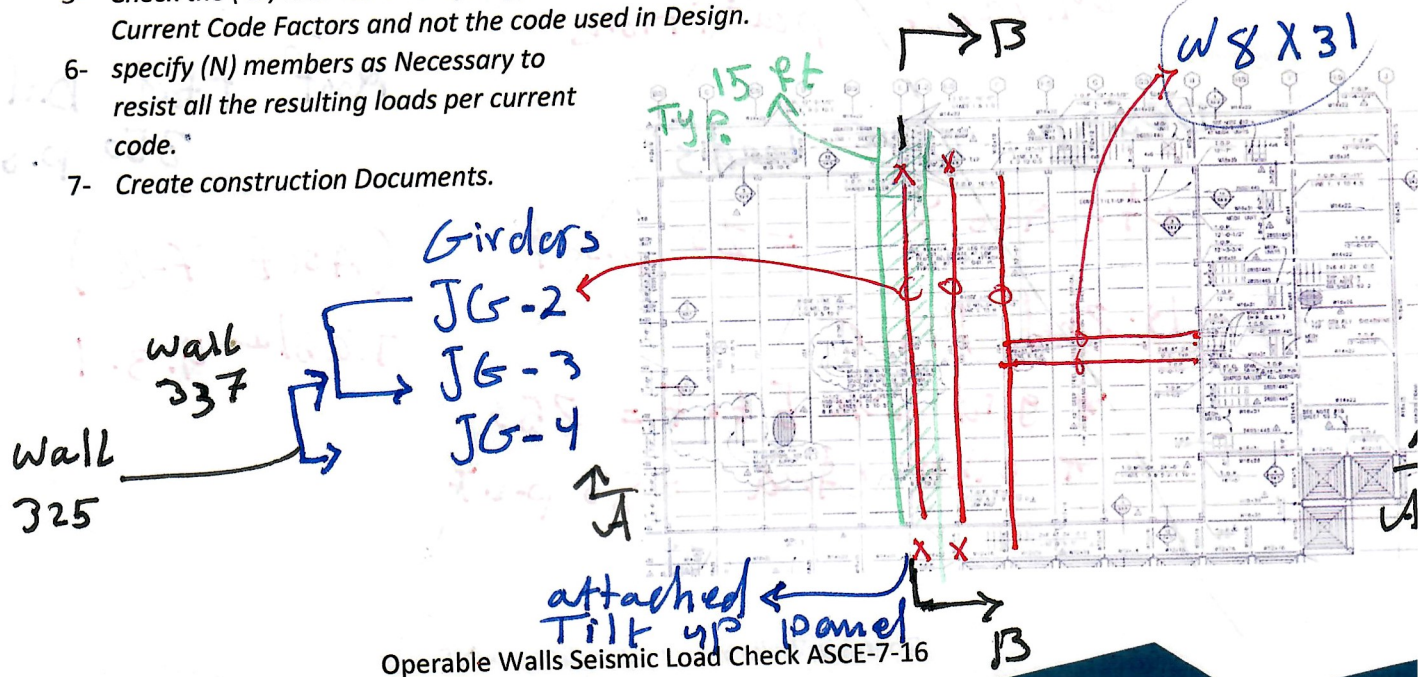
Project# ACC121222  
 Prepared City of Ridgecrest Community Center  
 Project Location# 100 W California Ave, Ridgecrest, CA 93555  
 Design Engineer: Ben Hamed  
 Design Review: M.H Bayoumi

RidgeCrest Community Center  
 100 W California Ave, Ridgecrest, CA 93555, USA  
 Latitude, Longitude: 35.6213525, -117.6732653

| Date                           | 12/14/2022, 10:00:52 PM          |                                                |  |
|--------------------------------|----------------------------------|------------------------------------------------|--|
| Design Code Reference Document | ASCE7-16                         |                                                |  |
| Risk Category                  | II                               |                                                |  |
| Site Class                     | D - Default (See Section 11.4.3) |                                                |  |
| Type                           | Value                            | Description                                    |  |
| $S_s$                          | 1.424                            | $MCE_R$ ground motion. (for 0.2 second period) |  |
| $S_1$                          | 0.478                            | $MCE_R$ ground motion. (for 1.0s period)       |  |
| $S_{MS}$                       | 1.709                            | Site-modified spectral acceleration value      |  |
| $S_{M1}$                       | null -See Section 11.4.8         | Site-modified spectral acceleration value      |  |
| $S_{D5}$                       | 1.139                            | Numeric seismic design value at 0.2 second SA  |  |
| $S_{D1}$                       | null -See Section 11.4.8         | Numeric seismic design value at 1.0 second SA  |  |

### Structural Calculation Check & Procedures: L.F.R.D

- 1- Identify the Existing bearing Members (Joist Girders or Joists) that are attached to the ( E ) Partitions.
- 2- Identify the Tributary Area for each bearing member.
- 3- Calculate (N) Partitions resultant Loads per current code.
- 4- Add The Partition loads to the ( E ) Applicable Live & Dead Loads.
- 5- Check the ( E ) Members adequacy for the new system (Including Dead, Live, Seismic) per Current Code Factors and not the code used in Design.
- 6- specify (N) members as Necessary to resist all the resulting loads per current code.
- 7- Create construction Documents.





2]

Project# ACC121222  
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 Design Engineer: Ben Hamed  
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- Non-Structural walls -

Panel length  $\Rightarrow$  4 feet

panel height  $\Rightarrow$  14 feet

Top and bottom connection  $\Rightarrow$  per man

Panel weight  $\Rightarrow$  7.5 p.s.f  $\Rightarrow$  per man. 10' out # 23-T

Panel wt. total = 4' x 7.5 x 14' = 420 pounds

Total wall length = 102' 10"

Total wall weight = 102.9' x 14' x 7.5 = 10.8

Total Dead load causing seismic kips  
unit load

$$= \frac{10.8}{0.42} = 25.7 \text{ p.s.f Total Dead load per section}$$

load per linear feet = 104.9  $\approx$  105 lbs

\* Existing walls  $D_L = 16 \text{ kips}$  > new wall  $D_L$   
 0. K # 10.8 kips



3

\* Calculate seismic force / base shear

Total dead load causing seismic  $D_L = 10.8$  kip  
Total

$$SD_s = 1.139$$

$$S_1 = 0.478$$

walls are not structural so it's not part of any Resistance system, However

Since the Diaphragm it is attached to is existing Reinforced Concrete shear wall in both directions. Then  $R_{Factor} = \underline{5}$

$$I = 1$$

importance Factor  
per ASCE 7-16 table 11.5-1

(table 12.2-1)

$$C_s = \frac{SD_s}{(R/I)} = \frac{1.139}{5} = 0.227$$

$P = 1.3$  Redundancy factor per ASCE 12.8-1

$$V_{total\ wall} = 0.7P(C_s \cdot D_{L_{tot}}) = 3.36 \text{ kip}$$

$$V_{panel} = 1.1 \text{ kip Total base}$$



Total shear / X = point load (V) / shear spacing.

Total vertical = 10800 pounds / spacing = min str.

vertical per ~~space~~ inch =  $\frac{10800}{103 \times 12} = 8.7$  PSI

use 10 PSI for  
spacing.

② 24 o.c - point resisting = 240 pounds min.  
at (3) safety factor = 720 pound min.

• Connection min capacity = 720 lb / unistrut o.k.  
P1546

• For shear use 6 PSI

+ for 48" spacing . point = 130 pound min  
at (3) safety factor = 391 pound min

2 (vertical spacing)  $\gg$  seismic bracing  
spacing

O. K



## Existing structure Beam load checks

1] 12 x 4 steel joist @ 7' 6" -- o.k./see enercalc  
add  $\frac{1.1 \text{ kips}}{\text{members used}} = 220 \text{ pounds per}$   
each Beam

2] W 8 x 31  
at 15' span

adding point loads every 2 feet -- o.k./see  
adding distributed uniform load enercalc

3] Existing Truss assumed o.k. per existing  
conditions

## Steel Beam

Project File: ridgecrest operable partition walls.ec6

LIC# : KW-06018864, Build:20.22.10.25

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DESCRIPTION: --None--

## CODE REFERENCES

Calculations per AISC 360-16, IBC 2018, CBC 2019, ASCE 7-16

Load Combination Set : ASCE 7-16

## Material Properties

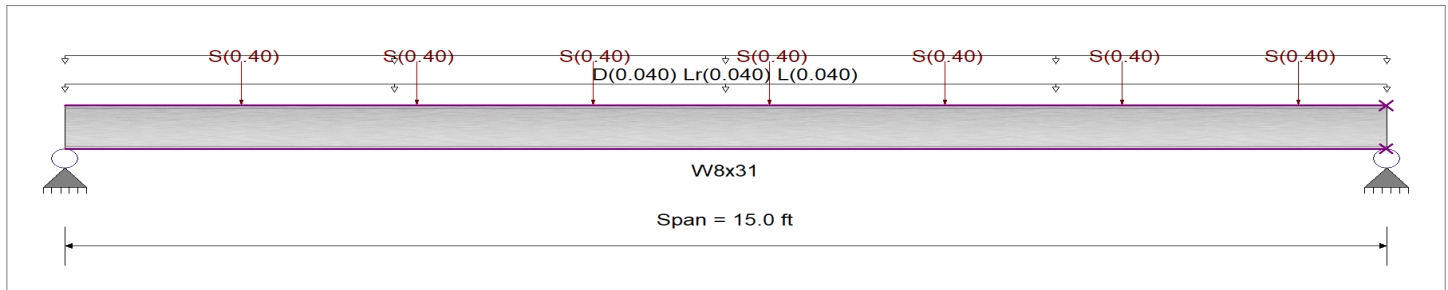
Analysis Method Load Resistance Factor Design

Fy : Steel Yield : 36.0 ksi

Beam Bracing : Beam is Fully Braced against lateral-torsional buckling

E: Modulus : 29,000.0 ksi

Bending Axis : Major Axis Bending



## Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading

Uniform Load : D = 0.040, Lr = 0.040, L = 0.040 k/ft, Tributary Width = 1.0 ft, (assumed existing)

Point Load : S = 0.40 k @ 2.0 ft, (Bracing)

Point Load : S = 0.40 k @ 4.0 ft, (Bracing)

Point Load : S = 0.40 k @ 6.0 ft, (Bracing)

Point Load : S = 0.40 k @ 10.0 ft, (Bracing)

Point Load : S = 0.40 k @ 8.0 ft, (Bracing)

Point Load : S = 0.40 k @ 12.0 ft, (Bracing)

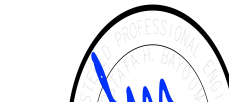
Point Load : S = 0.40 k @ 14.0 ft, (Bracing)

Uniform Load : D = 1.575, S = 0.40 ksf, Tributary Width = 0.0 ft, (Bracing)

## DESIGN SUMMARY

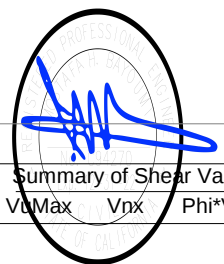
Design OK

|                                   |  |                |                              |       |                |
|-----------------------------------|--|----------------|------------------------------|-------|----------------|
| Maximum Bending Stress Ratio =    |  | 0.153 : 1      | Maximum Shear Stress Ratio = |       | 0.068 : 1      |
| Section used for this span        |  | W8x31          | Section used for this span   |       | W8x31          |
| Mu : Applied                      |  | 12.548 k-ft    | Vu : Applied                 |       | 3.328 k        |
| Mn * Phi : Allowable              |  | 82.080 k-ft    | Vn * Phi : Allowable         |       | 49.248 k       |
| Load Combination                  |  | +1.20D+L+1.60S | Load Combination             |       | +1.20D+L+1.60S |
| Span # where maximum occurs       |  | Span # 1       | Location of maximum on span  |       | 15.000 ft      |
| Span # where maximum occurs       |  | Span # 1       | Span # where maximum occurs  |       | Span # 1       |
| Maximum Deflection                |  |                |                              |       |                |
| Max Downward Transient Deflection |  | 0.071 in       | Ratio =                      | 2.518 | >=360          |
| Max Upward Transient Deflection   |  | 0.000 in       | Ratio =                      | 0     | <360           |
| Max Downward Total Deflection     |  | 0.097 in       | Ratio =                      | 1857  | >=240.         |
| Max Upward Total Deflection       |  | 0.000 in       | Ratio =                      | 0     | <240.0         |



## Maximum Forces & Stresses for Load Combinations

| Load Combination    |        | Max Stress Ratios |   |          | Summary of Moment Values |        |     |         |    |    | Summary of Shear Values |     |         |
|---------------------|--------|-------------------|---|----------|--------------------------|--------|-----|---------|----|----|-------------------------|-----|---------|
| Segment Length      | Span # | M                 | V | max Mu + | max Mu -                 | Mu Max | Mnx | Phi*Mnx | Cb | Rm | Vu Max                  | Vnx | Phi*Vnx |
| +1.20D+0.50Lr+1.60L |        |                   |   |          |                          |        |     |         |    |    |                         |     |         |



## Steel Beam

Project File: ridgecrest operable partition walls.ec6

LIC# : KW-06018864, Build:20.22.10.25

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DESCRIPTION: --None--

### Maximum Forces & Stresses for Load Combinations

| Load Combination   |        |  | Max Stress Ratios |       | Summary of Moment Values |          |        |       |         |      | Summary of Shear Values |       |       |         |
|--------------------|--------|--|-------------------|-------|--------------------------|----------|--------|-------|---------|------|-------------------------|-------|-------|---------|
| Segment Length     | Span # |  | M                 | V     | max Mu +                 | max Mu - | Mu Max | Mnx   | Phi*Mnx | Cb   | Rm                      | VuMax | Vnx   | Phi*Vnx |
| Dsgn. L = 15.00 ft | 1      |  | 0.058             | 0.026 | 4.76                     |          | 4.76   | 91.20 | 82.08   | 1.00 | 1.00                    | 1.27  | 49.25 | 49.25   |
| +1.20D+1.60L+0.50S |        |  |                   |       |                          |          |        |       |         |      |                         |       |       |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.085             | 0.038 | 7.01                     |          | 7.01   | 91.20 | 82.08   | 1.00 | 1.00                    | 1.87  | 49.25 | 49.25   |
| +1.20D+1.60Lr+L    |        |  |                   |       |                          |          |        |       |         |      |                         |       |       |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.065             | 0.029 | 5.32                     |          | 5.32   | 91.20 | 82.08   | 1.00 | 1.00                    | 1.42  | 49.25 | 49.25   |
| +1.20D+1.60Lr      |        |  |                   |       |                          |          |        |       |         |      |                         |       |       |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.051             | 0.023 | 4.20                     |          | 4.20   | 91.20 | 82.08   | 1.00 | 1.00                    | 1.12  | 49.25 | 49.25   |
| +1.20D+L+1.60S     |        |  |                   |       |                          |          |        |       |         |      |                         |       |       |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.153             | 0.068 | 12.55                    |          | 12.55  | 91.20 | 82.08   | 1.00 | 1.00                    | 3.33  | 49.25 | 49.25   |
| +1.20D+1.60S       |        |  |                   |       |                          |          |        |       |         |      |                         |       |       |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.139             | 0.061 | 11.43                    |          | 11.43  | 91.20 | 82.08   | 1.00 | 1.00                    | 3.03  | 49.25 | 49.25   |
| +1.20D+0.50Lr+L    |        |  |                   |       |                          |          |        |       |         |      |                         |       |       |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.050             | 0.022 | 4.08                     |          | 4.08   | 91.20 | 82.08   | 1.00 | 1.00                    | 1.09  | 49.25 | 49.25   |
| +1.20D+L+0.50S     |        |  |                   |       |                          |          |        |       |         |      |                         |       |       |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.077             | 0.034 | 6.33                     |          | 6.33   | 91.20 | 82.08   | 1.00 | 1.00                    | 1.69  | 49.25 | 49.25   |
| +0.90D             |        |  |                   |       |                          |          |        |       |         |      |                         |       |       |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.022             | 0.010 | 1.80                     |          | 1.80   | 91.20 | 82.08   | 1.00 | 1.00                    | 0.48  | 49.25 | 49.25   |
| +1.20D+L+0.20S     |        |  |                   |       |                          |          |        |       |         |      |                         |       |       |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.057             | 0.025 | 4.64                     |          | 4.64   | 91.20 | 82.08   | 1.00 | 1.00                    | 1.24  | 49.25 | 49.25   |

### Overall Maximum Deflections

| Load Combination | Span | Max. "-" Defl | Location in Span | Load Combination | Max. "+" Defl | Location in Span |
|------------------|------|---------------|------------------|------------------|---------------|------------------|
| +D+S             | 1    | 0.0970        | 7.543            |                  | 0.0000        | 0.000            |

### Maximum Deflections for Load Combinations

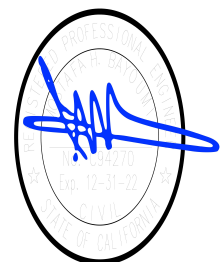
| Load Combination  | Span | Max. Downward Defl | Location in Span | Span | Max. Upward Defl | Location in Span |
|-------------------|------|--------------------|------------------|------|------------------|------------------|
| D Only            | 1    | 0.0255             | 7.543            |      | 0.0000           | 0.000            |
| +D+L              | 1    | 0.0398             | 7.543            |      | 0.0000           | 0.000            |
| +D+Lr             | 1    | 0.0398             | 7.543            |      | 0.0000           | 0.000            |
| +D+S              | 1    | 0.0970             | 7.543            |      | 0.0000           | 0.000            |
| +D+0.750Lr+0.750L | 1    | 0.0470             | 7.543            |      | 0.0000           | 0.000            |
| +D+0.750L+0.750S  | 1    | 0.0898             | 7.543            |      | 0.0000           | 0.000            |
| +0.60D            | 1    | 0.0153             | 7.543            |      | 0.0000           | 0.000            |
| Lr Only           | 1    | 0.0143             | 7.543            |      | 0.0000           | 0.000            |
| L Only            | 1    | 0.0143             | 7.543            |      | 0.0000           | 0.000            |
| S Only            | 1    | 0.0715             | 7.543            |      | 0.0000           | 0.000            |

### Vertical Reactions

Support notation : Far left is #:

Values in KIPS

| Load Combination                    | Support 1 | Support 2 |
|-------------------------------------|-----------|-----------|
| Max Upward from all Load Conditions | 1.839     | 2.026     |
| Max Upward from Load Combinations   | 1.839     | 2.026     |
| Max Upward from Load Cases          | 1.307     | 1.493     |
| D Only                              | 0.533     | 0.533     |
| +D+L                                | 0.833     | 0.833     |
| +D+Lr                               | 0.833     | 0.833     |
| +D+S                                | 1.839     | 2.026     |
| +D+0.750Lr+0.750L                   | 0.983     | 0.983     |
| +D+0.750L+0.750S                    | 1.738     | 1.878     |
| +0.60D                              | 0.320     | 0.320     |
| Lr Only                             | 0.300     | 0.300     |
| L Only                              | 0.300     | 0.300     |
| S Only                              | 1.307     | 1.493     |



Project Title: Ridgcrest non Structural Operable walls replacem  
Engineer:  
Project ID:  
Project Descr:

## Steel Beam

Project File: ridgcrest operable partition walls.ec6

LIC# : KW-06018864, Build:20.22.10.25

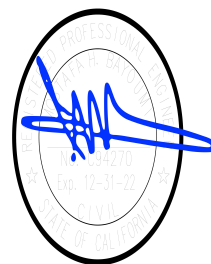
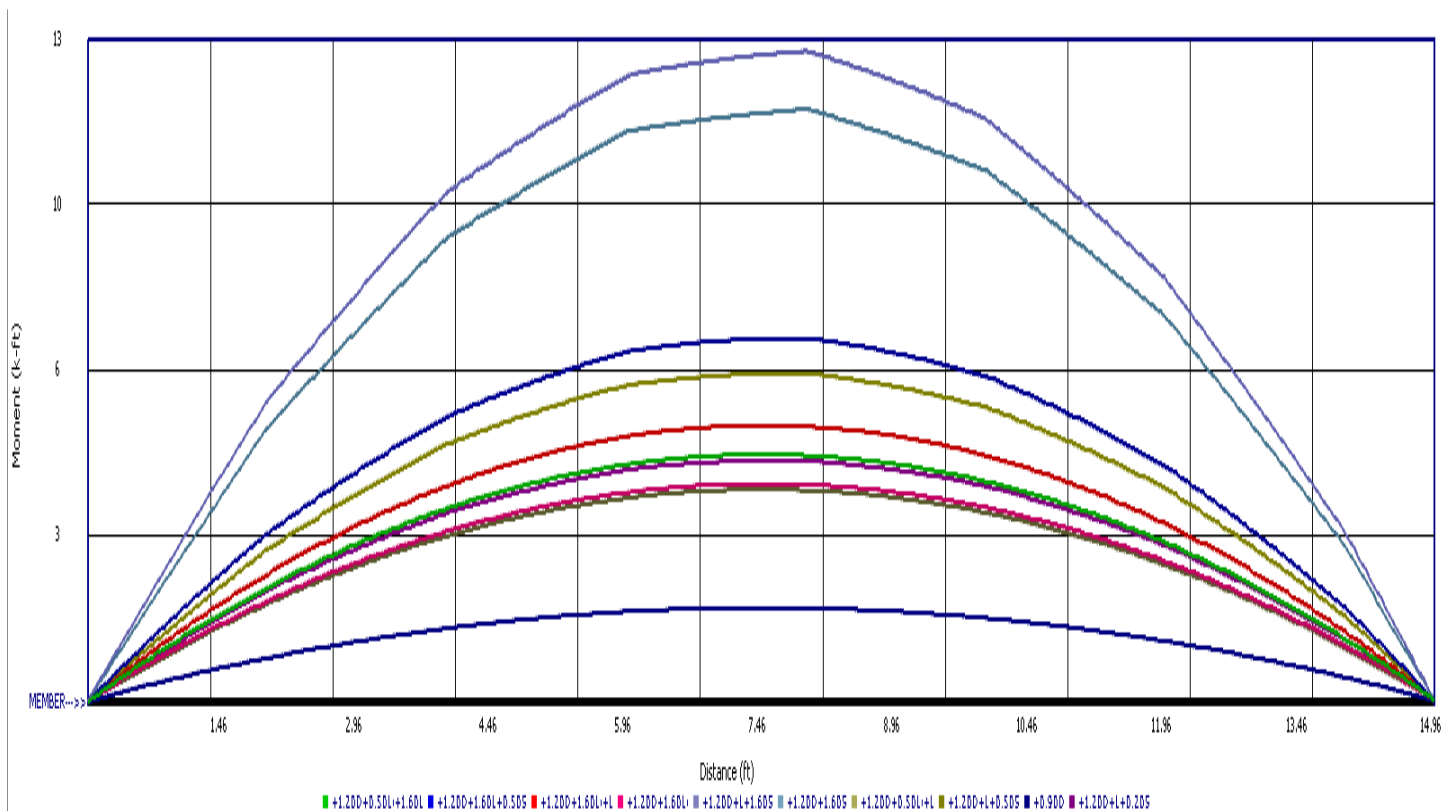
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DESCRIPTION: --None--

### Steel Section Properties : W8x31

|              |   |                       |      |   |                        |     |   |                        |
|--------------|---|-----------------------|------|---|------------------------|-----|---|------------------------|
| Depth        | = | 8.000 in              | I xx | = | 110.00 in <sup>4</sup> | J   | = | 0.536 in <sup>4</sup>  |
| Web Thick    | = | 0.285 in              | S xx | = | 27.50 in <sup>3</sup>  | Cw  | = | 530.00 in <sup>6</sup> |
| Flange Width | = | 8.000 in              | R xx | = | 3.470 in               |     |   |                        |
| Flange Thick | = | 0.435 in              | Zx   | = | 30.400 in <sup>3</sup> |     |   |                        |
| Area         | = | 9.130 in <sup>2</sup> | I yy | = | 37.100 in <sup>4</sup> | Wno | = | 15.100 in <sup>2</sup> |
| Weight       | = | 31.000 plf            | S yy | = | 9.270 in <sup>3</sup>  | Sw  | = | 13.200 in <sup>4</sup> |
| Kdesign      | = | 0.829 in              | R yy | = | 2.020 in               | Qf  | = | 6.350 in <sup>3</sup>  |
| K1           | = | 0.750 in              | Zy   | = | 14.100 in <sup>3</sup> | Qw  | = | 15.000 in <sup>3</sup> |
| rts          | = | 2.260 in              |      |   |                        |     |   |                        |
| Ycg          | = | 4.000 in              |      |   |                        |     |   |                        |



Steel Beam

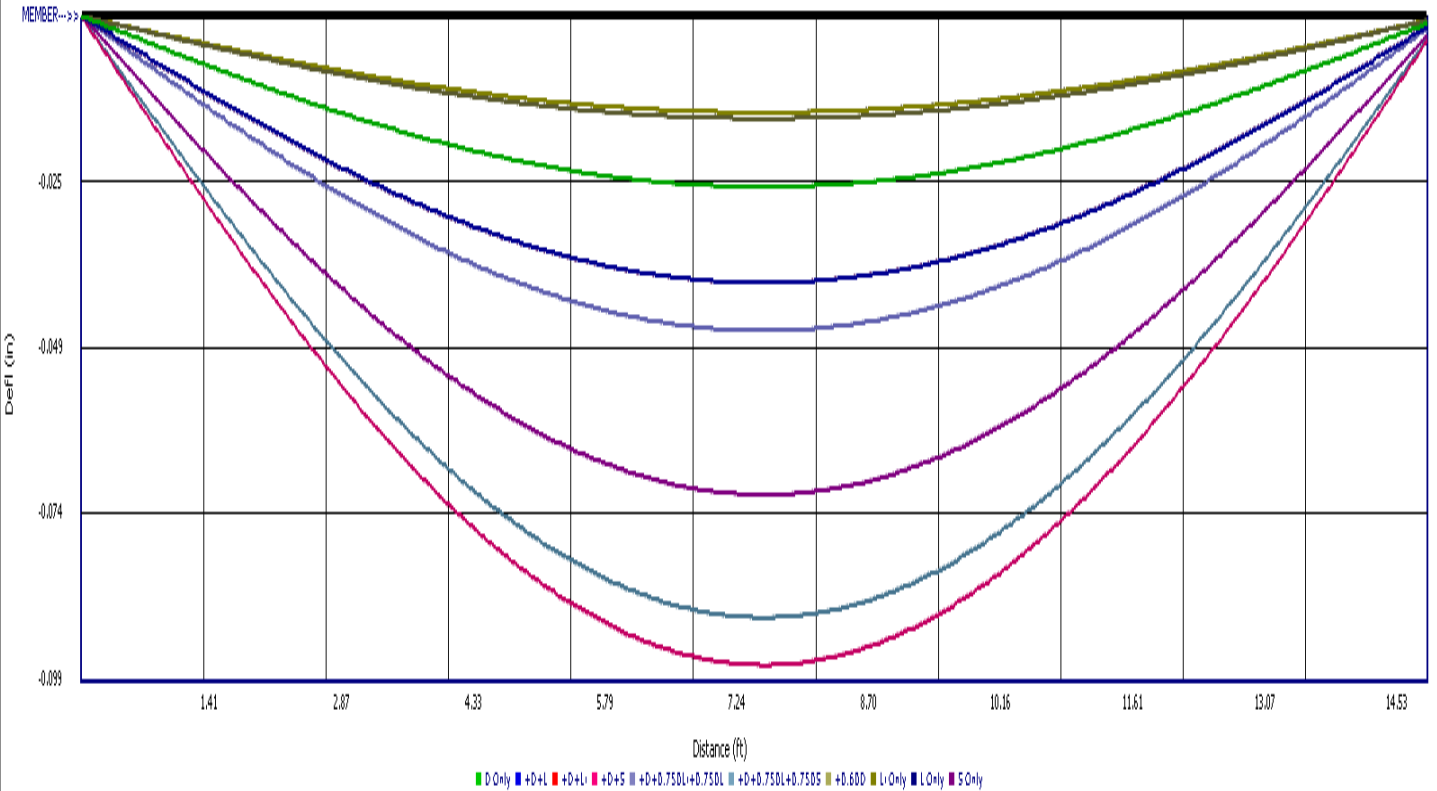
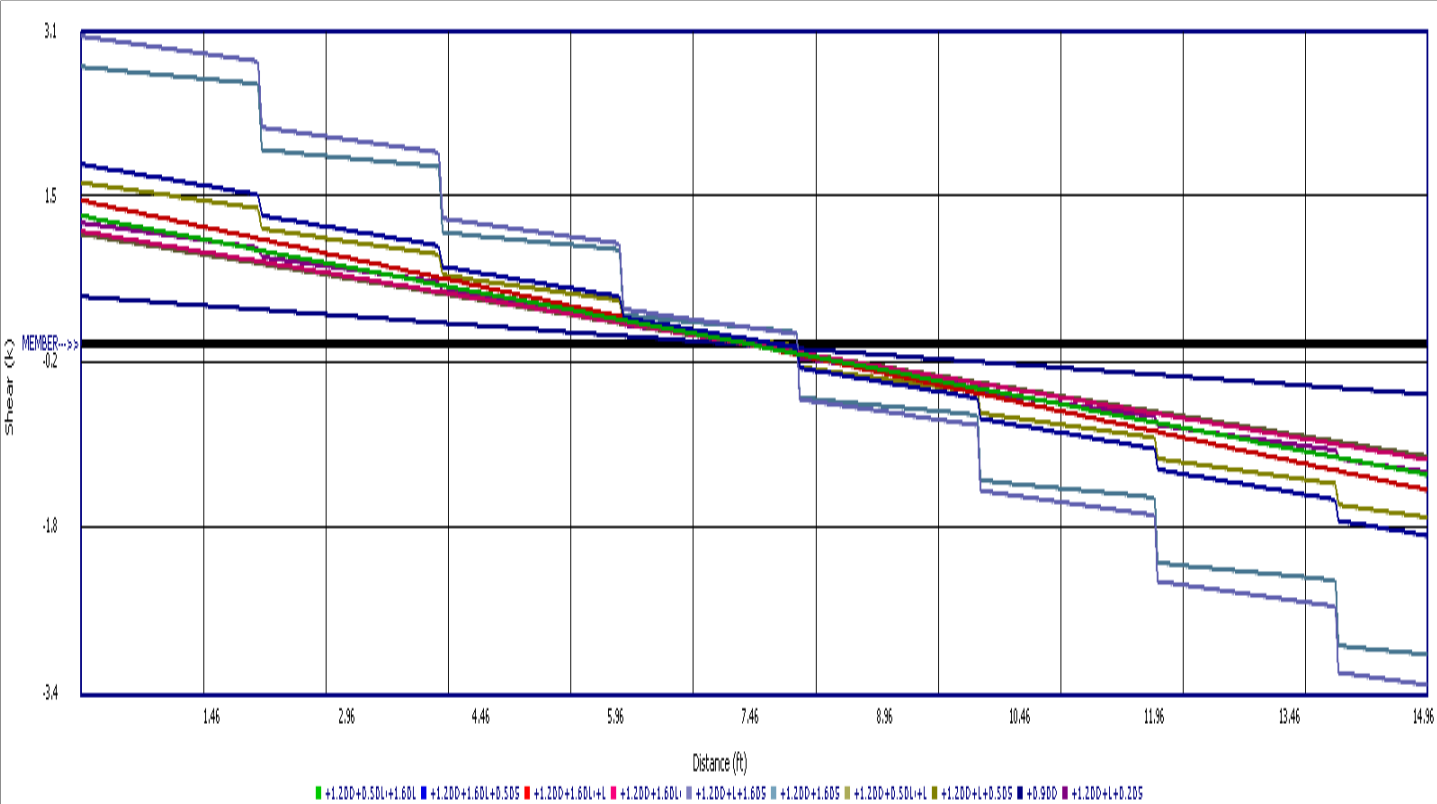
Project File: ridgecrest operable partition walls.ec6

LIC# : KW-06018864, Build:20.22.10.25

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DESCRIPTION: --None--



Beam Span Moments & Shears at Incremental Locations

| Load Type/ Combination | Span Location (ft) | Span ID | Shear (k) | Moment (ft-k) |
|------------------------|--------------------|---------|-----------|---------------|
| +1.20D+0.50Lr+1.60L    | 0.00               | Span 1  | 1.269     | 0.000         |



## Steel Beam

Project File: ridgecrest operable partition walls.ec6

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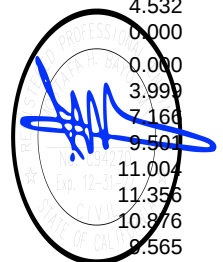
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DESCRIPTION: --None--

### Beam Span Moments & Shears at Incremental Locations

| Load Type/ Combination | Span Location (ft) | Span ID | Shear (k) | Moment (ft-k) |
|------------------------|--------------------|---------|-----------|---------------|
| +1.20D+0.50Lr+1.60L    | 1.50               | Span 1  | 1.015     | 1.713         |
| +1.20D+0.50Lr+1.60L    | 3.00               | Span 1  | 0.761     | 3.046         |
| +1.20D+0.50Lr+1.60L    | 4.50               | Span 1  | 0.508     | 3.997         |
| +1.20D+0.50Lr+1.60L    | 6.00               | Span 1  | 0.254     | 4.568         |
| +1.20D+0.50Lr+1.60L    | 7.50               | Span 1  | 0.000     | 4.759         |
| +1.20D+0.50Lr+1.60L    | 9.00               | Span 1  | -0.254    | 4.568         |
| +1.20D+0.50Lr+1.60L    | 10.50              | Span 1  | -0.508    | 3.997         |
| +1.20D+0.50Lr+1.60L    | 12.00              | Span 1  | -0.761    | 3.046         |
| +1.20D+0.50Lr+1.60L    | 13.50              | Span 1  | -1.015    | 1.713         |
| +1.20D+0.50Lr+1.60L    | 15.00              | Span 1  | -1.269    | 0.000         |
| +1.20D+1.60L+0.50S     | 0.00               | Span 1  | 1.772     | 0.000         |
| +1.20D+1.60L+0.50S     | 1.50               | Span 1  | 1.549     | 2.491         |
| +1.20D+1.60L+0.50S     | 3.00               | Span 1  | 1.125     | 4.446         |
| +1.20D+1.60L+0.50S     | 4.50               | Span 1  | 0.701     | 5.865         |
| +1.20D+1.60L+0.50S     | 6.00               | Span 1  | 0.477     | 6.748         |
| +1.20D+1.60L+0.50S     | 7.50               | Span 1  | 0.053     | 6.996         |
| +1.20D+1.60L+0.50S     | 9.00               | Span 1  | -0.370    | 6.708         |
| +1.20D+1.60L+0.50S     | 10.50              | Span 1  | -0.794    | 5.885         |
| +1.20D+1.60L+0.50S     | 12.00              | Span 1  | -1.218    | 4.526         |
| +1.20D+1.60L+0.50S     | 13.50              | Span 1  | -1.442    | 2.531         |
| +1.20D+1.60L+0.50S     | 15.00              | Span 1  | -1.866    | 0.000         |
| +1.20D+1.60Lr+L        | 0.00               | Span 1  | 1.419     | 0.000         |
| +1.20D+1.60Lr+L        | 1.50               | Span 1  | 1.135     | 1.916         |
| +1.20D+1.60Lr+L        | 3.00               | Span 1  | 0.851     | 3.406         |
| +1.20D+1.60Lr+L        | 4.50               | Span 1  | 0.568     | 4.470         |
| +1.20D+1.60Lr+L        | 6.00               | Span 1  | 0.284     | 5.108         |
| +1.20D+1.60Lr+L        | 7.50               | Span 1  | 0.000     | 5.321         |
| +1.20D+1.60Lr+L        | 9.00               | Span 1  | -0.284    | 5.108         |
| +1.20D+1.60Lr+L        | 10.50              | Span 1  | -0.568    | 4.470         |
| +1.20D+1.60Lr+L        | 12.00              | Span 1  | -0.851    | 3.406         |
| +1.20D+1.60Lr+L        | 13.50              | Span 1  | -1.135    | 1.916         |
| +1.20D+1.60Lr+L        | 15.00              | Span 1  | -1.419    | 0.000         |
| +1.20D+1.60Lr          | 0.00               | Span 1  | 1.119     | 0.000         |
| +1.20D+1.60Lr          | 1.50               | Span 1  | 0.895     | 1.511         |
| +1.20D+1.60Lr          | 3.00               | Span 1  | 0.671     | 2.686         |
| +1.20D+1.60Lr          | 4.50               | Span 1  | 0.448     | 3.525         |
| +1.20D+1.60Lr          | 6.00               | Span 1  | 0.224     | 4.028         |
| +1.20D+1.60Lr          | 7.50               | Span 1  | 0.000     | 4.196         |
| +1.20D+1.60Lr          | 9.00               | Span 1  | -0.224    | 4.028         |
| +1.20D+1.60Lr          | 10.50              | Span 1  | -0.448    | 3.525         |
| +1.20D+1.60Lr          | 12.00              | Span 1  | -0.671    | 2.686         |
| +1.20D+1.60Lr          | 13.50              | Span 1  | -0.895    | 1.511         |
| +1.20D+1.60Lr          | 15.00              | Span 1  | -1.119    | 0.000         |
| +1.20D+L+1.60S         | 0.00               | Span 1  | 3.030     | 0.000         |
| +1.20D+L+1.60S         | 1.50               | Span 1  | 2.842     | 4.404         |
| +1.20D+L+1.60S         | 3.00               | Span 1  | 2.014     | 7.886         |
| +1.20D+L+1.60S         | 4.50               | Span 1  | 1.186     | 10.446        |
| +1.20D+L+1.60S         | 6.00               | Span 1  | 0.998     | 12.084        |
| +1.20D+L+1.60S         | 7.50               | Span 1  | 0.171     | 12.481        |
| +1.20D+L+1.60S         | 9.00               | Span 1  | -0.657    | 11.956        |
| +1.20D+L+1.60S         | 10.50              | Span 1  | -1.485    | 10.510        |
| +1.20D+L+1.60S         | 12.00              | Span 1  | -2.313    | 8.142         |
| +1.20D+L+1.60S         | 13.50              | Span 1  | -2.501    | 4.532         |
| +1.20D+L+1.60S         | 15.00              | Span 1  | -3.328    | 0.000         |
| +1.20D+1.60S           | 0.00               | Span 1  | 2.730     | 0.000         |
| +1.20D+1.60S           | 1.50               | Span 1  | 2.602     | 3.999         |
| +1.20D+1.60S           | 3.00               | Span 1  | 1.834     | 7.166         |
| +1.20D+1.60S           | 4.50               | Span 1  | 1.066     | 9.501         |
| +1.20D+1.60S           | 6.00               | Span 1  | 0.938     | 11.004        |
| +1.20D+1.60S           | 7.50               | Span 1  | 0.171     | 11.356        |
| +1.20D+1.60S           | 9.00               | Span 1  | -0.597    | 10.876        |
| +1.20D+1.60S           | 10.50              | Span 1  | -1.365    | 9.565         |



## Steel Beam

Project File: ridgecrest operable partition walls.ec6

LIC# : KW-06018864, Build:20.22.10.25

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DESCRIPTION: --None--

### Beam Span Moments & Shears at Incremental Locations

| Load Type/ Combination | Span Location (ft) | Span ID | Shear (k) | Moment (ft-k) |
|------------------------|--------------------|---------|-----------|---------------|
| +1.20D+1.60S           | 12.00              | Span 1  | -2.133    | 7.422         |
| +1.20D+1.60S           | 13.50              | Span 1  | -2.261    | 4.127         |
| +1.20D+1.60S           | 15.00              | Span 1  | -3.028    | 0.000         |
| +1.20D+0.50Lr+L        | 0.00               | Span 1  | 1.089     | 0.000         |
| +1.20D+0.50Lr+L        | 1.50               | Span 1  | 0.871     | 1.470         |
| +1.20D+0.50Lr+L        | 3.00               | Span 1  | 0.653     | 2.614         |
| +1.20D+0.50Lr+L        | 4.50               | Span 1  | 0.436     | 3.430         |
| +1.20D+0.50Lr+L        | 6.00               | Span 1  | 0.218     | 3.920         |
| +1.20D+0.50Lr+L        | 7.50               | Span 1  | 0.000     | 4.084         |
| +1.20D+0.50Lr+L        | 9.00               | Span 1  | -0.218    | 3.920         |
| +1.20D+0.50Lr+L        | 10.50              | Span 1  | -0.436    | 3.430         |
| +1.20D+0.50Lr+L        | 12.00              | Span 1  | -0.653    | 2.614         |
| +1.20D+0.50Lr+L        | 13.50              | Span 1  | -0.871    | 1.470         |
| +1.20D+0.50Lr+L        | 15.00              | Span 1  | -1.089    | 0.000         |
| +1.20D+L+0.50S         | 0.00               | Span 1  | 1.592     | 0.000         |
| +1.20D+L+0.50S         | 1.50               | Span 1  | 1.405     | 2.248         |
| +1.20D+L+0.50S         | 3.00               | Span 1  | 1.017     | 4.014         |
| +1.20D+L+0.50S         | 4.50               | Span 1  | 0.629     | 5.298         |
| +1.20D+L+0.50S         | 6.00               | Span 1  | 0.441     | 6.100         |
| +1.20D+L+0.50S         | 7.50               | Span 1  | 0.053     | 6.321         |
| +1.20D+L+0.50S         | 9.00               | Span 1  | -0.334    | 6.060         |
| +1.20D+L+0.50S         | 10.50              | Span 1  | -0.722    | 5.318         |
| +1.20D+L+0.50S         | 12.00              | Span 1  | -1.110    | 4.094         |
| +1.20D+L+0.50S         | 13.50              | Span 1  | -1.298    | 2.288         |
| +1.20D+L+0.50S         | 15.00              | Span 1  | -1.686    | 0.000         |
| +0.90D                 | 0.00               | Span 1  | 0.479     | 0.000         |
| +0.90D                 | 1.50               | Span 1  | 0.383     | 0.647         |
| +0.90D                 | 3.00               | Span 1  | 0.288     | 1.150         |
| +0.90D                 | 4.50               | Span 1  | 0.192     | 1.510         |
| +0.90D                 | 6.00               | Span 1  | 0.096     | 1.725         |
| +0.90D                 | 7.50               | Span 1  | 0.000     | 1.797         |
| +0.90D                 | 9.00               | Span 1  | -0.096    | 1.725         |
| +0.90D                 | 10.50              | Span 1  | -0.192    | 1.510         |
| +0.90D                 | 12.00              | Span 1  | -0.288    | 1.150         |
| +0.90D                 | 13.50              | Span 1  | -0.383    | 0.647         |
| +0.90D                 | 15.00              | Span 1  | -0.479    | 0.000         |
| +1.20D+L+0.20S         | 0.00               | Span 1  | 1.200     | 0.000         |
| +1.20D+L+0.20S         | 1.50               | Span 1  | 1.013     | 1.660         |
| +1.20D+L+0.20S         | 3.00               | Span 1  | 0.745     | 2.958         |
| +1.20D+L+0.20S         | 4.50               | Span 1  | 0.477     | 3.894         |
| +1.20D+L+0.20S         | 6.00               | Span 1  | 0.289     | 4.468         |
| +1.20D+L+0.20S         | 7.50               | Span 1  | 0.021     | 4.641         |
| +1.20D+L+0.20S         | 9.00               | Span 1  | -0.246    | 4.452         |
| +1.20D+L+0.20S         | 10.50              | Span 1  | -0.514    | 3.902         |
| +1.20D+L+0.20S         | 12.00              | Span 1  | -0.782    | 2.990         |
| +1.20D+L+0.20S         | 13.50              | Span 1  | -0.970    | 1.676         |
| +1.20D+L+0.20S         | 15.00              | Span 1  | -1.238    | 0.000         |

### Beam Span Deflections at Incremental Locations

| Load Type/ Combination   | Span Location (ft) | Span ID | Deflection (in) |
|--------------------------|--------------------|---------|-----------------|
| Overall MAXimum Envelope | 0.00               | Span 1  | 0.000           |
| Overall MAXimum Envelope | 1.54               | Span 1  | 0.031           |
| Overall MAXimum Envelope | 3.09               | Span 1  | 0.059           |
| Overall MAXimum Envelope | 4.63               | Span 1  | 0.080           |
| Overall MAXimum Envelope | 6.17               | Span 1  | 0.093           |
| Overall MAXimum Envelope | 7.71               | Span 1  | 0.097           |
| Overall MAXimum Envelope | 9.26               | Span 1  | 0.091           |
| Overall MAXimum Envelope | 10.80              | Span 1  | 0.076           |
| Overall MAXimum Envelope | 12.34              | Span 1  | 0.052           |
| Overall MAXimum Envelope | 13.89              | Span 1  | 0.024           |
| Overall MAXimum Envelope | 15.00              | Span 1  | 0.001           |



## Steel Beam

Project File: ridgecrest operable partition walls.ec6

LIC# : KW-06018864, Build:20.22.10.25

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DESCRIPTION: --None--

### Beam Span Deflections at Incremental Locations

| Load Type/ Combination | Span Location (ft) | Span ID | Deflection (in) |
|------------------------|--------------------|---------|-----------------|
| D Only                 | 0.00               | Span 1  | 0.000           |
| D Only                 | 1.54               | Span 1  | 0.008           |
| D Only                 | 3.09               | Span 1  | 0.015           |
| D Only                 | 4.63               | Span 1  | 0.021           |
| D Only                 | 6.17               | Span 1  | 0.024           |
| D Only                 | 7.71               | Span 1  | 0.025           |
| D Only                 | 9.26               | Span 1  | 0.024           |
| D Only                 | 10.80              | Span 1  | 0.020           |
| D Only                 | 12.34              | Span 1  | 0.014           |
| D Only                 | 13.89              | Span 1  | 0.006           |
| D Only                 | 15.00              | Span 1  | 0.000           |
| +D+L                   | 0.00               | Span 1  | 0.000           |
| +D+L                   | 1.54               | Span 1  | 0.013           |
| +D+L                   | 3.09               | Span 1  | 0.024           |
| +D+L                   | 4.63               | Span 1  | 0.033           |
| +D+L                   | 6.17               | Span 1  | 0.038           |
| +D+L                   | 7.71               | Span 1  | 0.040           |
| +D+L                   | 9.26               | Span 1  | 0.037           |
| +D+L                   | 10.80              | Span 1  | 0.031           |
| +D+L                   | 12.34              | Span 1  | 0.022           |
| +D+L                   | 13.89              | Span 1  | 0.010           |
| +D+L                   | 15.00              | Span 1  | 0.000           |
| +D+Lr                  | 0.00               | Span 1  | 0.000           |
| +D+Lr                  | 1.54               | Span 1  | 0.013           |
| +D+Lr                  | 3.09               | Span 1  | 0.024           |
| +D+Lr                  | 4.63               | Span 1  | 0.033           |
| +D+Lr                  | 6.17               | Span 1  | 0.038           |
| +D+Lr                  | 7.71               | Span 1  | 0.040           |
| +D+Lr                  | 9.26               | Span 1  | 0.037           |
| +D+Lr                  | 10.80              | Span 1  | 0.031           |
| +D+Lr                  | 12.34              | Span 1  | 0.022           |
| +D+Lr                  | 13.89              | Span 1  | 0.010           |
| +D+Lr                  | 15.00              | Span 1  | 0.000           |
| +D+S                   | 0.00               | Span 1  | 0.000           |
| +D+S                   | 1.54               | Span 1  | 0.031           |
| +D+S                   | 3.09               | Span 1  | 0.059           |
| +D+S                   | 4.63               | Span 1  | 0.080           |
| +D+S                   | 6.17               | Span 1  | 0.093           |
| +D+S                   | 7.71               | Span 1  | 0.097           |
| +D+S                   | 9.26               | Span 1  | 0.091           |
| +D+S                   | 10.80              | Span 1  | 0.076           |
| +D+S                   | 12.34              | Span 1  | 0.052           |
| +D+S                   | 13.89              | Span 1  | 0.024           |
| +D+S                   | 15.00              | Span 1  | 0.001           |
| +D+0.750Lr+0.750L      | 0.00               | Span 1  | 0.000           |
| +D+0.750Lr+0.750L      | 1.54               | Span 1  | 0.015           |
| +D+0.750Lr+0.750L      | 3.09               | Span 1  | 0.029           |
| +D+0.750Lr+0.750L      | 4.63               | Span 1  | 0.039           |
| +D+0.750Lr+0.750L      | 6.17               | Span 1  | 0.045           |
| +D+0.750Lr+0.750L      | 7.71               | Span 1  | 0.047           |
| +D+0.750Lr+0.750L      | 9.26               | Span 1  | 0.044           |
| +D+0.750Lr+0.750L      | 10.80              | Span 1  | 0.037           |
| +D+0.750Lr+0.750L      | 12.34              | Span 1  | 0.025           |
| +D+0.750Lr+0.750L      | 13.89              | Span 1  | 0.011           |
| +D+0.750Lr+0.750L      | 15.00              | Span 1  | 0.000           |
| +D+0.750L+0.750S       | 0.00               | Span 1  | 0.000           |
| +D+0.750L+0.750S       | 1.54               | Span 1  | 0.029           |
| +D+0.750L+0.750S       | 3.09               | Span 1  | 0.054           |
| +D+0.750L+0.750S       | 4.63               | Span 1  | 0.074           |
| +D+0.750L+0.750S       | 6.17               | Span 1  | 0.086           |



Project Title: Ridgcrest non Structural Operable walls replacem  
 Engineer:  
 Project ID:  
 Project Descr:

## Steel Beam

Project File: ridgcrest operable partition walls.ec6

LIC# : KW-06018864, Build:20.22.10.25

ACC & Engineering

(c) ENERCALC INC 1983-2022

DESCRIPTION: --None--

### Beam Span Deflections at Incremental Locations

| Load Type/ Combination | Span Location (ft) | Span ID | Deflection (in) |
|------------------------|--------------------|---------|-----------------|
| +D+0.750L+0.750S       | 7.71               | Span 1  | 0.090           |
| +D+0.750L+0.750S       | 9.26               | Span 1  | 0.084           |
| +D+0.750L+0.750S       | 10.80              | Span 1  | 0.070           |
| +D+0.750L+0.750S       | 12.34              | Span 1  | 0.049           |
| +D+0.750L+0.750S       | 13.89              | Span 1  | 0.022           |
| +D+0.750L+0.750S       | 15.00              | Span 1  | 0.001           |
| +0.60D                 | 0.00               | Span 1  | 0.000           |
| +0.60D                 | 1.54               | Span 1  | 0.005           |
| +0.60D                 | 3.09               | Span 1  | 0.009           |
| +0.60D                 | 4.63               | Span 1  | 0.013           |
| +0.60D                 | 6.17               | Span 1  | 0.015           |
| +0.60D                 | 7.71               | Span 1  | 0.015           |
| +0.60D                 | 9.26               | Span 1  | 0.014           |
| +0.60D                 | 10.80              | Span 1  | 0.012           |
| +0.60D                 | 12.34              | Span 1  | 0.008           |
| +0.60D                 | 13.89              | Span 1  | 0.004           |
| +0.60D                 | 15.00              | Span 1  | 0.000           |
| Lr Only                | 0.00               | Span 1  | 0.000           |
| Lr Only                | 1.54               | Span 1  | 0.005           |
| Lr Only                | 3.09               | Span 1  | 0.009           |
| Lr Only                | 4.63               | Span 1  | 0.012           |
| Lr Only                | 6.17               | Span 1  | 0.014           |
| Lr Only                | 7.71               | Span 1  | 0.014           |
| Lr Only                | 9.26               | Span 1  | 0.013           |
| Lr Only                | 10.80              | Span 1  | 0.011           |
| Lr Only                | 12.34              | Span 1  | 0.008           |
| Lr Only                | 13.89              | Span 1  | 0.003           |
| Lr Only                | 15.00              | Span 1  | 0.000           |
| L Only                 | 0.00               | Span 1  | 0.000           |
| L Only                 | 1.54               | Span 1  | 0.005           |
| L Only                 | 3.09               | Span 1  | 0.009           |
| L Only                 | 4.63               | Span 1  | 0.012           |
| L Only                 | 6.17               | Span 1  | 0.014           |
| L Only                 | 7.71               | Span 1  | 0.014           |
| L Only                 | 9.26               | Span 1  | 0.013           |
| L Only                 | 10.80              | Span 1  | 0.011           |
| L Only                 | 12.34              | Span 1  | 0.008           |
| L Only                 | 13.89              | Span 1  | 0.003           |
| L Only                 | 15.00              | Span 1  | 0.000           |
| S Only                 | 0.00               | Span 1  | 0.000           |
| S Only                 | 1.54               | Span 1  | 0.023           |
| S Only                 | 3.09               | Span 1  | 0.043           |
| S Only                 | 4.63               | Span 1  | 0.059           |
| S Only                 | 6.17               | Span 1  | 0.069           |
| S Only                 | 7.71               | Span 1  | 0.071           |
| S Only                 | 9.26               | Span 1  | 0.067           |
| S Only                 | 10.80              | Span 1  | 0.056           |
| S Only                 | 12.34              | Span 1  | 0.039           |
| S Only                 | 13.89              | Span 1  | 0.017           |
| S Only                 | 15.00              | Span 1  | 0.001           |



## Steel Beam

Project File: ridgecrest operable partition walls.ec6

LIC# : KW-06018864, Build:20.22.10.25

ACC & Engineering

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DESCRIPTION: --None--

## CODE REFERENCES

Calculations per AISC 360-16, IBC 2018, CBC 2019, ASCE 7-16

Load Combination Set : ASCE 7-16

## Material Properties

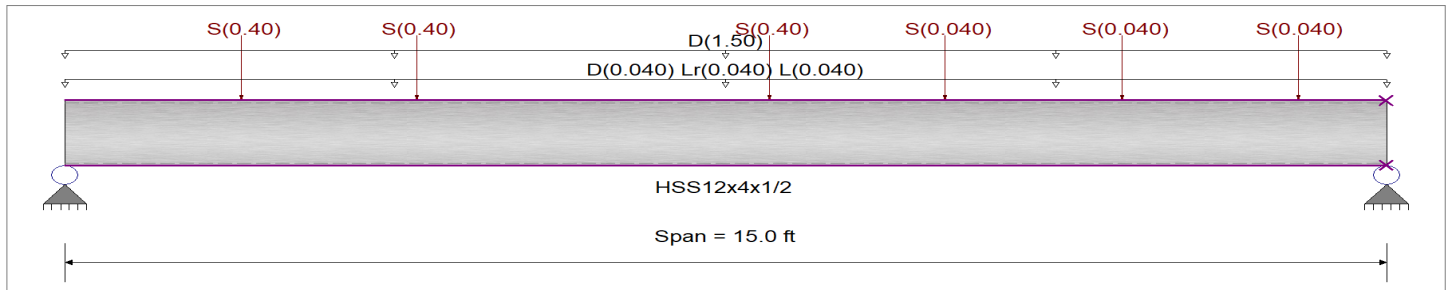
Analysis Method Load Resistance Factor Design

Fy : Steel Yield : 50.0 ksi

Beam Bracing : Beam is Fully Braced against lateral-torsional buckling

E: Modulus : 29,000.0 ksi

Bending Axis : Major Axis Bending



## Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading

Uniform Load : D = 0.040, Lr = 0.040, L = 0.040 k/ft, Tributary Width = 1.0 ft, (Existing assumed)

Uniform Load : D = 1.50 k/ft, Tributary Width = 1.0 ft, (15x14x7.5)

Point Load : S = 0.40 k @ 2.0 ft, (15x14x7.5)

Point Load : S = 0.40 k @ 4.0 ft, (15x14x7.5)

Point Load : S = 0.40 k @ 8.0 ft, (15x14x7.5)

Point Load : S = 0.040 k @ 10.0 ft, (15x14x7.5)

Point Load : S = 0.040 k @ 12.0 ft, (15x14x7.5)

Point Load : S = 0.040 k @ 14.0 ft, (15x14x7.5)

## DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio = **0.338** : 1  
 Section used for this span **HSS12x4x1/2**  
 Mu : Applied 59.198 k-ft  
 Mn \* Phi : Allowable 175.125 k-ft  
 Load Combination +1.20D+L+1.60S  
 Span # where maximum occurs Span # 1

Maximum Shear Stress Ratio = **0.060** : 1  
 Section used for this span **HSS12x4x1/2**  
 Vu : Applied 15.961 k  
 Vn \* Phi : Allowable 266.292 k  
 Load Combination +1.20D+L+1.60S  
 Location of maximum on span 0.000 ft  
 Span # where maximum occurs Span # 1

### Maximum Deflection

Max Downward Transient Deflection 0.018 in Ratio = **9,870** >=360  
 Max Upward Transient Deflection 0.000 in Ratio = **0** <360  
 Max Downward Total Deflection 0.318 in Ratio = **566** >=180  
 Max Upward Total Deflection 0.000 in Ratio = **0** <180  
 Span: 1 : S Only  
 Span: 1 : +D+0.750L+0.750S

## Maximum Forces & Stresses for Load Combinations

| Load Combination                          |        | Max Stress Ratios |       | Summary of Moment Values |          |        |        |         |      | Summary of Shear Values |       |        |         |
|-------------------------------------------|--------|-------------------|-------|--------------------------|----------|--------|--------|---------|------|-------------------------|-------|--------|---------|
| Segment Length                            | Span # | M                 | V     | max Mu +                 | max Mu - | Mu Max | Mnx    | Phi*Mnx | Cb   | Rm                      | VuMax | Vnx    | Phi*Vnx |
| +1.20D+0.50Lr+1.60L<br>Dsgn. L = 15.00 ft | 1      | 0.320             | 0.056 | 55.99                    |          | 55.99  | 194.58 | 175.13  | 1.00 | 1.00                    | 14.93 | 295.88 | 266.29  |
| +1.20D+1.60L+0.50S<br>Dsgn. L = 15.00 ft  | 1      | 0.324             | 0.057 | 56.81                    |          | 56.81  | 194.58 | 175.13  | 1.00 | 1.00                    | 15.20 | 295.88 | 266.29  |

## Steel Beam

Project File: ridgecrest operable partition walls.ec6

LIC# : KW-06018864, Build:20.22.10.25

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DESCRIPTION: --None--

### Maximum Forces & Stresses for Load Combinations

| Load Combination   |        |  | Max Stress Ratios |       | Summary of Moment Values |          |        |        |         |      |      | Summary of Shear Values |        |         |
|--------------------|--------|--|-------------------|-------|--------------------------|----------|--------|--------|---------|------|------|-------------------------|--------|---------|
| Segment Length     | Span # |  | M                 | V     | max Mu +                 | max Mu - | Mu Max | Mnx    | Phi*Mnx | Cb   | Rm   | VuMax                   | Vnx    | Phi*Vnx |
| +1.20D+1.60Lr+L    |        |  |                   |       |                          |          |        |        |         |      |      |                         |        |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.323             | 0.057 | 56.55                    |          | 56.55  | 194.58 | 175.13  | 1.00 | 1.00 | 15.08                   | 295.88 | 266.29  |
| +1.20D+1.60Lr      |        |  |                   |       |                          |          |        |        |         |      |      |                         |        |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.316             | 0.056 | 55.42                    |          | 55.42  | 194.58 | 175.13  | 1.00 | 1.00 | 14.78                   | 295.88 | 266.29  |
| +1.20D+L+1.60S     |        |  |                   |       |                          |          |        |        |         |      |      |                         |        |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.338             | 0.060 | 59.20                    |          | 59.20  | 194.58 | 175.13  | 1.00 | 1.00 | 15.96                   | 295.88 | 266.29  |
| +1.20D+1.60S       |        |  |                   |       |                          |          |        |        |         |      |      |                         |        |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.332             | 0.059 | 58.07                    |          | 58.07  | 194.58 | 175.13  | 1.00 | 1.00 | 15.66                   | 295.88 | 266.29  |
| +1.20D+0.50Lr+L    |        |  |                   |       |                          |          |        |        |         |      |      |                         |        |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.316             | 0.055 | 55.31                    |          | 55.31  | 194.58 | 175.13  | 1.00 | 1.00 | 14.75                   | 295.88 | 266.29  |
| +1.20D+L+0.50S     |        |  |                   |       |                          |          |        |        |         |      |      |                         |        |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.321             | 0.056 | 56.14                    |          | 56.14  | 194.58 | 175.13  | 1.00 | 1.00 | 15.02                   | 295.88 | 266.29  |
| +0.90D             |        |  |                   |       |                          |          |        |        |         |      |      |                         |        |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.230             | 0.040 | 40.22                    |          | 40.22  | 194.58 | 175.13  | 1.00 | 1.00 | 10.72                   | 295.88 | 266.29  |
| +1.20D+L+0.20S     |        |  |                   |       |                          |          |        |        |         |      |      |                         |        |         |
| Dsgn. L = 15.00 ft | 1      |  | 0.316             | 0.055 | 55.30                    |          | 55.30  | 194.58 | 175.13  | 1.00 | 1.00 | 14.77                   | 295.88 | 266.29  |

### Overall Maximum Deflections

| Load Combination | Span | Max. "-" Defl | Location in Span | Load Combination | Max. "+" Defl | Location in Span |
|------------------|------|---------------|------------------|------------------|---------------|------------------|
| +D+0.750L+0.750S | 1    | 0.3178        | 7.500            |                  | 0.0000        | 0.000            |

### Maximum Deflections for Load Combinations

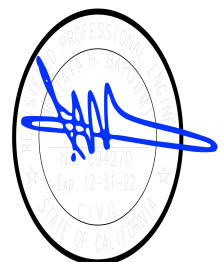
| Load Combination  | Span | Max. Downward Defl | Location in Span | Span | Max. Upward Defl | Location in Span |
|-------------------|------|--------------------|------------------|------|------------------|------------------|
| D Only            | 1    | 0.2985             | 7.543            |      | 0.0000           | 0.000            |
| +D+L              | 1    | 0.3060             | 7.543            |      | 0.0000           | 0.000            |
| +D+Lr             | 1    | 0.3060             | 7.543            |      | 0.0000           | 0.000            |
| +D+S              | 1    | 0.3167             | 7.500            |      | 0.0000           | 0.000            |
| +D+0.750Lr+0.750L | 1    | 0.3098             | 7.543            |      | 0.0000           | 0.000            |
| +D+0.750L+0.750S  | 1    | 0.3178             | 7.500            |      | 0.0000           | 0.000            |
| +0.60D            | 1    | 0.1791             | 7.543            |      | 0.0000           | 0.000            |
| Lr Only           | 1    | 0.0075             | 7.543            |      | 0.0000           | 0.000            |
| L Only            | 1    | 0.0075             | 7.543            |      | 0.0000           | 0.000            |
| S Only            | 1    | 0.0182             | 7.243            |      | 0.0000           | 0.000            |

### Vertical Reactions

Support notation : Far left is #:

Values in KIPS

| Load Combination                    | Support 1 | Support 2 |
|-------------------------------------|-----------|-----------|
| Max Upward from all Load Conditions | 12.779    | 12.493    |
| Max Upward from Load Combinations   | 12.779    | 12.493    |
| Max Upward from Load Cases          | 11.916    | 11.916    |
| D Only                              | 11.916    | 11.916    |
| +D+L                                | 12.216    | 12.216    |
| +D+Lr                               | 12.216    | 12.216    |
| +D+S                                | 12.767    | 12.386    |
| +D+0.750Lr+0.750L                   | 12.366    | 12.366    |
| +D+0.750L+0.750S                    | 12.779    | 12.493    |
| +0.60D                              | 7.150     | 7.150     |
| Lr Only                             | 0.300     | 0.300     |
| L Only                              | 0.300     | 0.300     |
| S Only                              | 0.851     | 0.469     |



Steel Beam

Project File: ridgecrest operable partition walls.ec6

LIC# : KW-06018864, Build:20.22.10.25

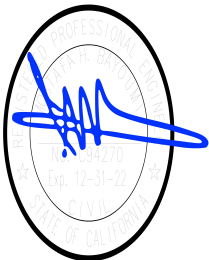
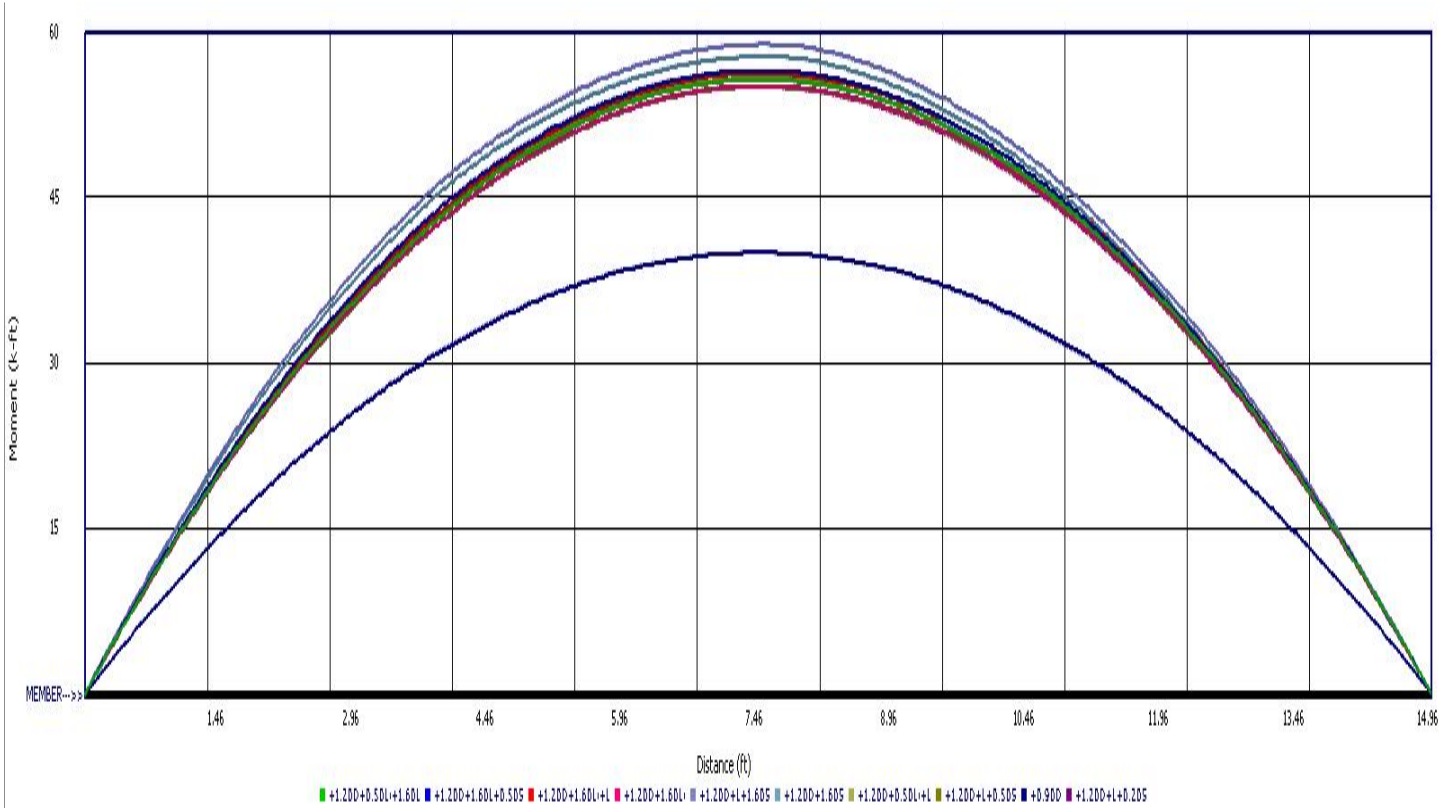
ACC & Engineering

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DESCRIPTION: --None--

Steel Section Properties : HSS12x4x1/2

|            |   |             |      |   |             |    |   |              |
|------------|---|-------------|------|---|-------------|----|---|--------------|
| Depth      | = | 12.000 in   | I xx | = | 210.00 in^4 | J  | = | 105.000 in^4 |
|            |   |             | S xx | = | 34.90 in^3  | Cw | = | 37.50 in^6   |
| Width      | = | 4.000 in    | R xx | = | 3.950 in    |    |   |              |
| Wall Thick | = | 0.465 in    | Zx   | = | 46.700 in^3 | C  | = | 0.000 in^3   |
| Area       | = | 13.500 in^2 | I yy | = | 35.300 in^4 |    |   |              |
| Weight     | = | 48.850 plf  | S yy | = | 17.700 in^3 |    |   |              |
|            |   |             | R yy | = | 1.620 in    |    |   |              |
|            |   |             | Zy   | = | 20.900 in^3 |    |   |              |
| Ycg        | = | 6.000 in    |      |   |             |    |   |              |

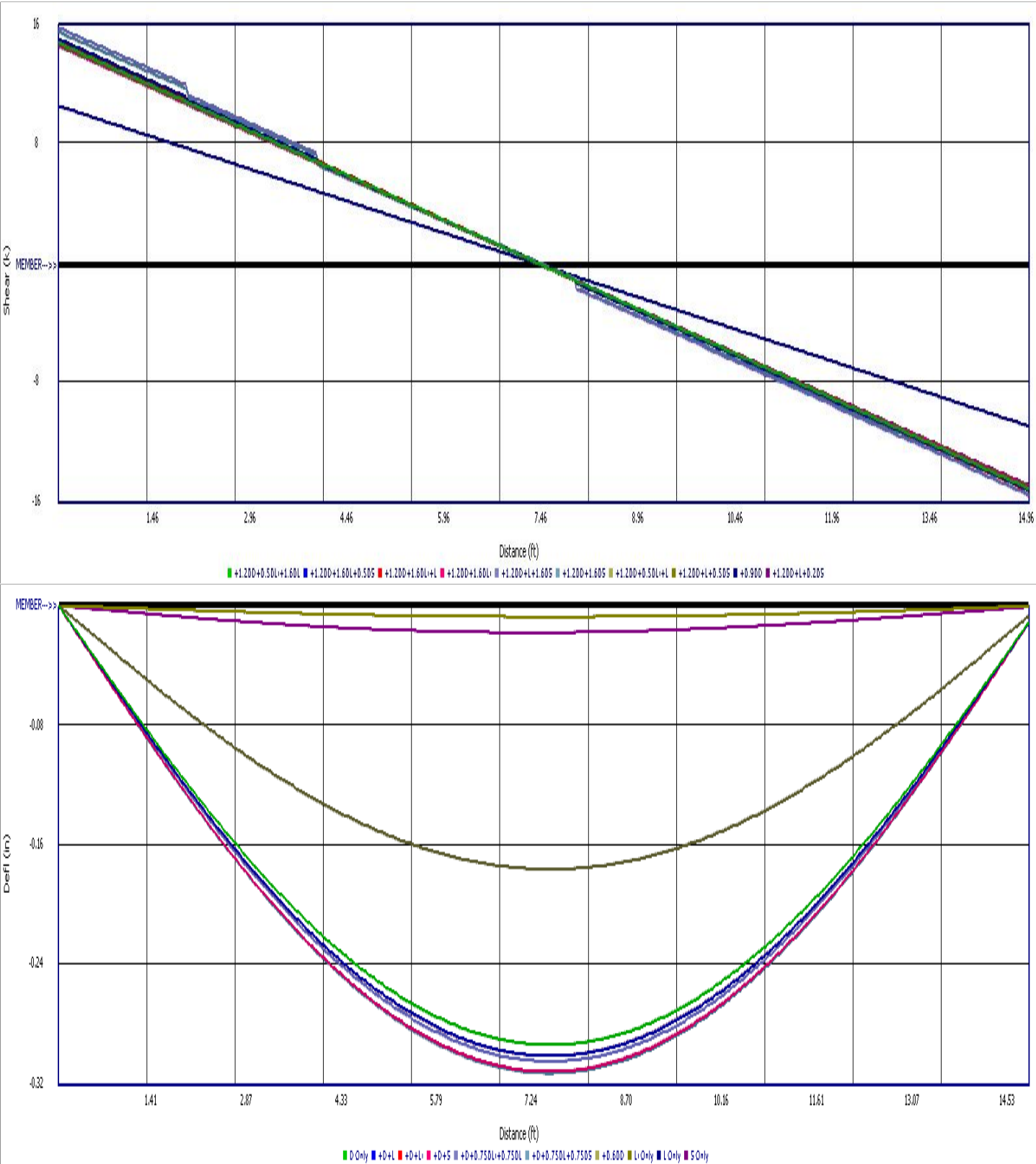


Steel Beam

Project File: ridgecrest operable partition walls.ec6

LIC# : KW-06018864, Build:20.22.10.25ACC & Engineering(c) ENERCALC INC 1983-2022

DESCRIPTION: --None--



Beam Span Moments & Shears at Incremental Locations

| Load Type/ Combination | Span Location (ft) | Span ID | Shear (k) | Moment (ft-k) |
|------------------------|--------------------|---------|-----------|---------------|
| +1.20D+0.50Lr+1.60L    | 0.00               | Span 1  | 14.930    | 0.000         |



## Steel Beam

Project File: ridgcrest operable partition walls.ec6

LIC# : KW-06018864, Build:20.22.10.25

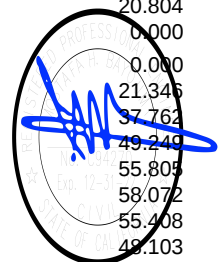
ACC & Engineering

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DESCRIPTION: --None--

### Beam Span Moments & Shears at Incremental Locations

| Load Type/ Combination | Span Location (ft) | Span ID | Shear (k) | Moment (ft-k) |
|------------------------|--------------------|---------|-----------|---------------|
| +1.20D+0.50Lr+1.60L    | 1.50               | Span 1  | 11.944    | 20.155        |
| +1.20D+0.50Lr+1.60L    | 3.00               | Span 1  | 8.958     | 35.831        |
| +1.20D+0.50Lr+1.60L    | 4.50               | Span 1  | 5.972     | 47.028        |
| +1.20D+0.50Lr+1.60L    | 6.00               | Span 1  | 2.986     | 53.747        |
| +1.20D+0.50Lr+1.60L    | 7.50               | Span 1  | 0.000     | 55.986        |
| +1.20D+0.50Lr+1.60L    | 9.00               | Span 1  | -2.986    | 53.747        |
| +1.20D+0.50Lr+1.60L    | 10.50              | Span 1  | -5.972    | 47.028        |
| +1.20D+0.50Lr+1.60L    | 12.00              | Span 1  | -8.958    | 35.831        |
| +1.20D+0.50Lr+1.60L    | 13.50              | Span 1  | -11.944   | 20.155        |
| +1.20D+0.50Lr+1.60L    | 15.00              | Span 1  | -14.930   | 0.000         |
| +1.20D+1.60L+0.50S     | 0.00               | Span 1  | 15.205    | 0.000         |
| +1.20D+1.60L+0.50S     | 1.50               | Span 1  | 12.249    | 20.591        |
| +1.20D+1.60L+0.50S     | 3.00               | Span 1  | 9.093     | 36.547        |
| +1.20D+1.60L+0.50S     | 4.50               | Span 1  | 5.937     | 47.870        |
| +1.20D+1.60L+0.50S     | 6.00               | Span 1  | 2.981     | 54.559        |
| +1.20D+1.60L+0.50S     | 7.50               | Span 1  | 0.025     | 56.814        |
| +1.20D+1.60L+0.50S     | 9.00               | Span 1  | -3.131    | 54.435        |
| +1.20D+1.60L+0.50S     | 10.50              | Span 1  | -6.107    | 47.512        |
| +1.20D+1.60L+0.50S     | 12.00              | Span 1  | -9.082    | 36.135        |
| +1.20D+1.60L+0.50S     | 13.50              | Span 1  | -12.038   | 20.295        |
| +1.20D+1.60L+0.50S     | 15.00              | Span 1  | -15.014   | 0.000         |
| +1.20D+1.60Lr+L        | 0.00               | Span 1  | 15.080    | 0.000         |
| +1.20D+1.60Lr+L        | 1.50               | Span 1  | 12.064    | 20.358        |
| +1.20D+1.60Lr+L        | 3.00               | Span 1  | 9.048     | 36.191        |
| +1.20D+1.60Lr+L        | 4.50               | Span 1  | 6.032     | 47.501        |
| +1.20D+1.60Lr+L        | 6.00               | Span 1  | 3.016     | 54.287        |
| +1.20D+1.60Lr+L        | 7.50               | Span 1  | 0.000     | 56.549        |
| +1.20D+1.60Lr+L        | 9.00               | Span 1  | -3.016    | 54.287        |
| +1.20D+1.60Lr+L        | 10.50              | Span 1  | -6.032    | 47.501        |
| +1.20D+1.60Lr+L        | 12.00              | Span 1  | -9.048    | 36.191        |
| +1.20D+1.60Lr+L        | 13.50              | Span 1  | -12.064   | 20.358        |
| +1.20D+1.60Lr+L        | 15.00              | Span 1  | -15.080   | 0.000         |
| +1.20D+1.60Lr          | 0.00               | Span 1  | 14.780    | 0.000         |
| +1.20D+1.60Lr          | 1.50               | Span 1  | 11.824    | 19.953        |
| +1.20D+1.60Lr          | 3.00               | Span 1  | 8.868     | 35.471        |
| +1.20D+1.60Lr          | 4.50               | Span 1  | 5.912     | 46.556        |
| +1.20D+1.60Lr          | 6.00               | Span 1  | 2.956     | 53.207        |
| +1.20D+1.60Lr          | 7.50               | Span 1  | 0.000     | 55.424        |
| +1.20D+1.60Lr          | 9.00               | Span 1  | -2.956    | 53.207        |
| +1.20D+1.60Lr          | 10.50              | Span 1  | -5.912    | 46.556        |
| +1.20D+1.60Lr          | 12.00              | Span 1  | -8.868    | 35.471        |
| +1.20D+1.60Lr          | 13.50              | Span 1  | -11.824   | 19.953        |
| +1.20D+1.60Lr          | 15.00              | Span 1  | -14.780   | 0.000         |
| +1.20D+L+1.60S         | 0.00               | Span 1  | 15.961    | 0.000         |
| +1.20D+L+1.60S         | 1.50               | Span 1  | 13.041    | 21.751        |
| +1.20D+L+1.60S         | 3.00               | Span 1  | 9.481     | 38.482        |
| +1.20D+L+1.60S         | 4.50               | Span 1  | 5.921     | 50.194        |
| +1.20D+L+1.60S         | 6.00               | Span 1  | 3.001     | 56.885        |
| +1.20D+L+1.60S         | 7.50               | Span 1  | 0.081     | 59.197        |
| +1.20D+L+1.60S         | 9.00               | Span 1  | -3.479    | 56.488        |
| +1.20D+L+1.60S         | 10.50              | Span 1  | -6.463    | 49.048        |
| +1.20D+L+1.60S         | 12.00              | Span 1  | -9.447    | 37.164        |
| +1.20D+L+1.60S         | 13.50              | Span 1  | -12.367   | 20.804        |
| +1.20D+L+1.60S         | 15.00              | Span 1  | -15.351   | 0.000         |
| +1.20D+1.60S           | 0.00               | Span 1  | 15.661    | 0.000         |
| +1.20D+1.60S           | 1.50               | Span 1  | 12.801    | 21.345        |
| +1.20D+1.60S           | 3.00               | Span 1  | 9.301     | 37.762        |
| +1.20D+1.60S           | 4.50               | Span 1  | 5.801     | 49.249        |
| +1.20D+1.60S           | 6.00               | Span 1  | 2.941     | 55.805        |
| +1.20D+1.60S           | 7.50               | Span 1  | 0.081     | 58.072        |
| +1.20D+1.60S           | 9.00               | Span 1  | -3.419    | 55.408        |
| +1.20D+1.60S           | 10.50              | Span 1  | -6.343    | 49.103        |



## Steel Beam

Project File: ridgecrest operable partition walls.ec6

LIC# : KW-06018864, Build:20.22.10.25

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**DESCRIPTION: --None--**

### Beam Span Moments & Shears at Incremental Locations

| Load Type/ Combination | Span Location (ft) | Span ID | Shear (k) | Moment (ft-k) |
|------------------------|--------------------|---------|-----------|---------------|
| +1.20D+1.60S           | 12.00              | Span 1  | -9.267    | 36.444        |
| +1.20D+1.60S           | 13.50              | Span 1  | -12.127   | 20.399        |
| +1.20D+1.60S           | 15.00              | Span 1  | -15.051   | 0.000         |
| +1.20D+0.50Lr+L        | 0.00               | Span 1  | 14.750    | 0.000         |
| +1.20D+0.50Lr+L        | 1.50               | Span 1  | 11.800    | 19.912        |
| +1.20D+0.50Lr+L        | 3.00               | Span 1  | 8.850     | 35.399        |
| +1.20D+0.50Lr+L        | 4.50               | Span 1  | 5.900     | 46.461        |
| +1.20D+0.50Lr+L        | 6.00               | Span 1  | 2.950     | 53.099        |
| +1.20D+0.50Lr+L        | 7.50               | Span 1  | 0.000     | 55.311        |
| +1.20D+0.50Lr+L        | 9.00               | Span 1  | -2.950    | 53.099        |
| +1.20D+0.50Lr+L        | 10.50              | Span 1  | -5.900    | 46.461        |
| +1.20D+0.50Lr+L        | 12.00              | Span 1  | -8.850    | 35.399        |
| +1.20D+0.50Lr+L        | 13.50              | Span 1  | -11.800   | 19.912        |
| +1.20D+0.50Lr+L        | 15.00              | Span 1  | -14.750   | 0.000         |
| +1.20D+L+0.50S         | 0.00               | Span 1  | 15.025    | 0.000         |
| +1.20D+L+0.50S         | 1.50               | Span 1  | 12.105    | 20.348        |
| +1.20D+L+0.50S         | 3.00               | Span 1  | 8.985     | 36.115        |
| +1.20D+L+0.50S         | 4.50               | Span 1  | 5.865     | 47.303        |
| +1.20D+L+0.50S         | 6.00               | Span 1  | 2.945     | 53.911        |
| +1.20D+L+0.50S         | 7.50               | Span 1  | 0.025     | 56.139        |
| +1.20D+L+0.50S         | 9.00               | Span 1  | -3.095    | 53.787        |
| +1.20D+L+0.50S         | 10.50              | Span 1  | -6.035    | 46.945        |
| +1.20D+L+0.50S         | 12.00              | Span 1  | -8.974    | 35.703        |
| +1.20D+L+0.50S         | 13.50              | Span 1  | -11.894   | 20.052        |
| +1.20D+L+0.50S         | 15.00              | Span 1  | -14.834   | 0.000         |
| +0.90D                 | 0.00               | Span 1  | 10.725    | 0.000         |
| +0.90D                 | 1.50               | Span 1  | 8.580     | 14.478        |
| +0.90D                 | 3.00               | Span 1  | 6.435     | 25.739        |
| +0.90D                 | 4.50               | Span 1  | 4.290     | 33.783        |
| +0.90D                 | 6.00               | Span 1  | 2.145     | 38.609        |
| +0.90D                 | 7.50               | Span 1  | 0.000     | 40.218        |
| +0.90D                 | 9.00               | Span 1  | -2.145    | 38.609        |
| +0.90D                 | 10.50              | Span 1  | -4.290    | 33.783        |
| +0.90D                 | 12.00              | Span 1  | -6.435    | 25.739        |
| +0.90D                 | 13.50              | Span 1  | -8.580    | 14.478        |
| +0.90D                 | 15.00              | Span 1  | -10.725   | 0.000         |
| +1.20D+L+0.20S         | 0.00               | Span 1  | 14.770    | 0.000         |
| +1.20D+L+0.20S         | 1.50               | Span 1  | 11.850    | 19.965        |
| +1.20D+L+0.20S         | 3.00               | Span 1  | 8.850     | 35.470        |
| +1.20D+L+0.20S         | 4.50               | Span 1  | 5.850     | 46.514        |
| +1.20D+L+0.20S         | 6.00               | Span 1  | 2.930     | 53.100        |
| +1.20D+L+0.20S         | 7.50               | Span 1  | 0.010     | 55.305        |
| +1.20D+L+0.20S         | 9.00               | Span 1  | -2.990    | 53.050        |
| +1.20D+L+0.20S         | 10.50              | Span 1  | -5.918    | 46.371        |
| +1.20D+L+0.20S         | 12.00              | Span 1  | -8.846    | 35.305        |
| +1.20D+L+0.20S         | 13.50              | Span 1  | -11.766   | 19.846        |
| +1.20D+L+0.20S         | 15.00              | Span 1  | -14.694   | 0.000         |

### Beam Span Deflections at Incremental Locations

| Load Type/ Combination   | Span Location (ft) | Span ID | Deflection (in) |
|--------------------------|--------------------|---------|-----------------|
| Overall MAXimum Envelope | 0.00               | Span 1  | 0.000           |
| Overall MAXimum Envelope | 1.54               | Span 1  | 0.102           |
| Overall MAXimum Envelope | 3.09               | Span 1  | 0.193           |
| Overall MAXimum Envelope | 4.63               | Span 1  | 0.263           |
| Overall MAXimum Envelope | 6.17               | Span 1  | 0.306           |
| Overall MAXimum Envelope | 7.71               | Span 1  | 0.318           |
| Overall MAXimum Envelope | 9.26               | Span 1  | 0.297           |
| Overall MAXimum Envelope | 10.80              | Span 1  | 0.247           |
| Overall MAXimum Envelope | 12.34              | Span 1  | 0.171           |
| Overall MAXimum Envelope | 13.89              | Span 1  | 0.077           |
| Overall MAXimum Envelope | 15.00              | Span 1  | 0.003           |



## Steel Beam

Project File: ridgcrest operable partition walls.ec6

LIC# : KW-06018864, Build:20.22.10.25

ACC & Engineering

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DESCRIPTION: --None--

### Beam Span Deflections at Incremental Locations

| Load Type/ Combination | Span Location (ft) | Span ID | Deflection (in) |
|------------------------|--------------------|---------|-----------------|
| D Only                 | 0.00               | Span 1  | 0.000           |
| D Only                 | 1.54               | Span 1  | 0.096           |
| D Only                 | 3.09               | Span 1  | 0.181           |
| D Only                 | 4.63               | Span 1  | 0.247           |
| D Only                 | 6.17               | Span 1  | 0.287           |
| D Only                 | 7.71               | Span 1  | 0.298           |
| D Only                 | 9.26               | Span 1  | 0.280           |
| D Only                 | 10.80              | Span 1  | 0.233           |
| D Only                 | 12.34              | Span 1  | 0.161           |
| D Only                 | 13.89              | Span 1  | 0.073           |
| D Only                 | 15.00              | Span 1  | 0.003           |
| +D+L                   | 0.00               | Span 1  | 0.000           |
| +D+L                   | 1.54               | Span 1  | 0.098           |
| +D+L                   | 3.09               | Span 1  | 0.186           |
| +D+L                   | 4.63               | Span 1  | 0.253           |
| +D+L                   | 6.17               | Span 1  | 0.294           |
| +D+L                   | 7.71               | Span 1  | 0.306           |
| +D+L                   | 9.26               | Span 1  | 0.287           |
| +D+L                   | 10.80              | Span 1  | 0.238           |
| +D+L                   | 12.34              | Span 1  | 0.165           |
| +D+L                   | 13.89              | Span 1  | 0.074           |
| +D+L                   | 15.00              | Span 1  | 0.003           |
| +D+Lr                  | 0.00               | Span 1  | 0.000           |
| +D+Lr                  | 1.54               | Span 1  | 0.098           |
| +D+Lr                  | 3.09               | Span 1  | 0.186           |
| +D+Lr                  | 4.63               | Span 1  | 0.253           |
| +D+Lr                  | 6.17               | Span 1  | 0.294           |
| +D+Lr                  | 7.71               | Span 1  | 0.306           |
| +D+Lr                  | 9.26               | Span 1  | 0.287           |
| +D+Lr                  | 10.80              | Span 1  | 0.238           |
| +D+Lr                  | 12.34              | Span 1  | 0.165           |
| +D+Lr                  | 13.89              | Span 1  | 0.074           |
| +D+Lr                  | 15.00              | Span 1  | 0.003           |
| +D+S                   | 0.00               | Span 1  | 0.000           |
| +D+S                   | 1.54               | Span 1  | 0.102           |
| +D+S                   | 3.09               | Span 1  | 0.193           |
| +D+S                   | 4.63               | Span 1  | 0.262           |
| +D+S                   | 6.17               | Span 1  | 0.305           |
| +D+S                   | 7.71               | Span 1  | 0.316           |
| +D+S                   | 9.26               | Span 1  | 0.296           |
| +D+S                   | 10.80              | Span 1  | 0.246           |
| +D+S                   | 12.34              | Span 1  | 0.171           |
| +D+S                   | 13.89              | Span 1  | 0.077           |
| +D+S                   | 15.00              | Span 1  | 0.003           |
| +D+0.750Lr+0.750L      | 0.00               | Span 1  | 0.000           |
| +D+0.750Lr+0.750L      | 1.54               | Span 1  | 0.100           |
| +D+0.750Lr+0.750L      | 3.09               | Span 1  | 0.188           |
| +D+0.750Lr+0.750L      | 4.63               | Span 1  | 0.256           |
| +D+0.750Lr+0.750L      | 6.17               | Span 1  | 0.298           |
| +D+0.750Lr+0.750L      | 7.71               | Span 1  | 0.310           |
| +D+0.750Lr+0.750L      | 9.26               | Span 1  | 0.290           |
| +D+0.750Lr+0.750L      | 10.80              | Span 1  | 0.241           |
| +D+0.750Lr+0.750L      | 12.34              | Span 1  | 0.167           |
| +D+0.750Lr+0.750L      | 13.89              | Span 1  | 0.075           |
| +D+0.750Lr+0.750L      | 15.00              | Span 1  | 0.003           |
| +D+0.750L+0.750S       | 0.00               | Span 1  | 0.000           |
| +D+0.750L+0.750S       | 1.54               | Span 1  | 0.102           |
| +D+0.750L+0.750S       | 3.09               | Span 1  | 0.193           |
| +D+0.750L+0.750S       | 4.63               | Span 1  | 0.263           |
| +D+0.750L+0.750S       | 6.17               | Span 1  | 0.306           |



Project Title: Ridgcrest non Structural Operable walls replacem  
 Engineer:  
 Project ID:  
 Project Descr:

## Steel Beam

Project File: ridgcrest operable partition walls.ec6

LIC# : KW-06018864, Build:20.22.10.25

ACC & Engineering

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DESCRIPTION: --None--

### Beam Span Deflections at Incremental Locations

| Load Type/ Combination | Span Location (ft) | Span ID | Deflection (in) |
|------------------------|--------------------|---------|-----------------|
| +D+0.750L+0.750S       | 7.71               | Span 1  | 0.318           |
| +D+0.750L+0.750S       | 9.26               | Span 1  | 0.297           |
| +D+0.750L+0.750S       | 10.80              | Span 1  | 0.247           |
| +D+0.750L+0.750S       | 12.34              | Span 1  | 0.171           |
| +D+0.750L+0.750S       | 13.89              | Span 1  | 0.077           |
| +D+0.750L+0.750S       | 15.00              | Span 1  | 0.003           |
| +0.60D                 | 0.00               | Span 1  | 0.000           |
| +0.60D                 | 1.54               | Span 1  | 0.058           |
| +0.60D                 | 3.09               | Span 1  | 0.109           |
| +0.60D                 | 4.63               | Span 1  | 0.148           |
| +0.60D                 | 6.17               | Span 1  | 0.172           |
| +0.60D                 | 7.71               | Span 1  | 0.179           |
| +0.60D                 | 9.26               | Span 1  | 0.168           |
| +0.60D                 | 10.80              | Span 1  | 0.140           |
| +0.60D                 | 12.34              | Span 1  | 0.097           |
| +0.60D                 | 13.89              | Span 1  | 0.044           |
| +0.60D                 | 15.00              | Span 1  | 0.002           |
| Lr Only                | 0.00               | Span 1  | 0.000           |
| Lr Only                | 1.54               | Span 1  | 0.002           |
| Lr Only                | 3.09               | Span 1  | 0.005           |
| Lr Only                | 4.63               | Span 1  | 0.006           |
| Lr Only                | 6.17               | Span 1  | 0.007           |
| Lr Only                | 7.71               | Span 1  | 0.008           |
| Lr Only                | 9.26               | Span 1  | 0.007           |
| Lr Only                | 10.80              | Span 1  | 0.006           |
| Lr Only                | 12.34              | Span 1  | 0.004           |
| Lr Only                | 13.89              | Span 1  | 0.002           |
| Lr Only                | 15.00              | Span 1  | 0.000           |
| L Only                 | 0.00               | Span 1  | 0.000           |
| L Only                 | 1.54               | Span 1  | 0.002           |
| L Only                 | 3.09               | Span 1  | 0.005           |
| L Only                 | 4.63               | Span 1  | 0.006           |
| L Only                 | 6.17               | Span 1  | 0.007           |
| L Only                 | 7.71               | Span 1  | 0.008           |
| L Only                 | 9.26               | Span 1  | 0.007           |
| L Only                 | 10.80              | Span 1  | 0.006           |
| L Only                 | 12.34              | Span 1  | 0.004           |
| L Only                 | 13.89              | Span 1  | 0.002           |
| L Only                 | 15.00              | Span 1  | 0.000           |
| S Only                 | 0.00               | Span 1  | 0.000           |
| S Only                 | 1.54               | Span 1  | 0.006           |
| S Only                 | 3.09               | Span 1  | 0.012           |
| S Only                 | 4.63               | Span 1  | 0.016           |
| S Only                 | 6.17               | Span 1  | 0.018           |
| S Only                 | 7.71               | Span 1  | 0.018           |
| S Only                 | 9.26               | Span 1  | 0.017           |
| S Only                 | 10.80              | Span 1  | 0.014           |
| S Only                 | 12.34              | Span 1  | 0.009           |
| S Only                 | 13.89              | Span 1  | 0.004           |
| S Only                 | 15.00              | Span 1  | 0.000           |

