

7220 Trade Street, Suite 350, San Diego, CA 92121 > p 619-650-0010 > mulhernkulp.com

# **CALCULATION PACKAGE**

September 13, 2022

## Design Built Homes Lot 1 86<sup>th</sup> Ave SE

Mercer Island, WA

### **MULHERN & KULP STRUCTURAL ENGINEERING, INC.**

Prepared By: John C. Leone Richard J. Zabel, P.E.

Staff Engineer Project Manager + Director of Engineering





M&K Project #:

#### LOT 1 86TH AVE SE DESIGN BUILT HOMES 244-22008 JCL 07-SEPT-22

**BEAM & HEADER CALCULATIONS** 



LOT 1 86TH AVE SE DESIGN BUILT HOMES 244-22008 JCL 07-SEPT-22



M&K Project #: Engineer: Date:





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#### **BEAM & HEADER CALCULATIONS**



MULHERN+KULP RESIDENTIAL STRUCTURAL ENGINEERING PROJECT NAME:

M&K PROJECT #:

ENGINEER:

DATE:

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MULHERN+KULP RESIDENTIAL STRUCTURAL ENGINEERING PROJECT NAME:

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CALCS FOR LOAD

MULHERN+KULP

PROJECT NAME:

86TH AVE SE LOT M&K PROJECT #: 244-22008

MCCULLOUGH ARCH

| LIC# : KW-06017913, Bu                      | uild:20.22.8.17 MU                           | LHERN & KULP STRU      | CTURAL ENGINEI            | ERING INC                                 | (c) ENER  | CALC INC 1983-2022                      |
|---|--|------------------------|---------------------------|---|---|---|
| DESCRIPTION:                                | B23 - 2ND FLR FRMG -                         | FLUSH BM @ C           | GARAGE FR                 | ONT                                       |   |   |
| CODE REFERENC                               | CES  |                        |                           |   |   |   |
| Calculations per NE<br>Load Combination S   | DS 2018, IBC 2018, CBC 20<br>Set : ASCE 7-16 | 19, ASCE 7-16          |                           |   |   |   |
| Material Propertie                          | es   |                        |                           |   |   |   |
| Analysis Method : A<br>Load Combination : A | Ilowable Stress Design<br>SCE 7-16           |                        | Fb +<br>Fb -<br>Fc - Prll | 2,880.0 psi<br>2,220.0 psi<br>1,980.0 psi | <i>E : Modulus of Elast</i><br>Ebend- xx<br>Eminbend - xx | <i>ticity</i><br>1,800.0ksi<br>950.0ksi |
| Wood Species : D<br>Wood Grade : 2          | 0F/DF<br>4F - V4                             |                        | Fc - Perp<br>Fv<br>Ft     | 780.0 psi<br>318.0 psi<br>1.320.0 psi     | Ebend- yy<br>Eminbend - yy<br>Density                     | 1,600.0ksi<br>850.0ksi<br>31,210pcf     |
| Beam Bracing : B                            | eam is Fully Braced against late             | eral-torsional bucklin | g                         | .,  | Donoty  | 01121000                                |
|   |  |                        | D(4.319)(2.63), E80.5     | 0≬3.74)                                   |   |   |
| \$  | D(0.135) L(0.04)                             | S(0.05)                | v                         |   | 03) S(0.05)<br>∲  | \$                                      |
|   |  |                        | ·                         |   |   |   |
|   |  | 5.                     | 5x24                      |   |   |   |
| •   |  | Span -                 | = 22.50 ft                |   |   |   |

#### **Applied Loads**

Wood Beam

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

Project File: beam calcs with overstrength.ec6

Beam self weight calculated and added to loading

Load for Span Number 1

Uniform Load : D = 0.1350, L = 0.040, S = 0.050 k/ft, Extent = 0.0 -->> 13.0 ft, Tributary Width = 1.0 ft Uniform Load : D = 0.030, S = 0.050 k/ft, Extent = 13.0 -->> 22.50 ft, Tributary Width = 1.0 ft Point Load : D = 4.390, L = 3.380, S = 3.740 k @ 13.0 ft Point Load : D = 2.30, E = 0.90 k @ 13.0 ft

#### DESIGN SUMMARY

| DESIGN SUMMARY   |        |  |   |  |         | Design OK                                 |
|--|--------|--|---|--|---------|---|
| Maximum Bending Stress Ratio<br>Section used for this span   | =      | <b>0.572</b> 1<br><b>5.5x24</b>                                      | Maximum S<br>Section                        | hear Stress Ratio<br>used for this span                    | =       | 0.259:1<br>5.5x24                         |
| fb: Actual   | =      | 1,742.50psi  |   | fv: Actual   | =       | 94.88 psi                                 |
| Fb: Allowable  | =      | 3,047.36psi  |   | Fv: Allowable  | =       | 365.70 psi                                |
| Load Combination<br>Location of maximum on span<br>Span # where maximum occurs   | =<br>= | +D+0.750L+0.750S<br>12.974ft<br>Span # 1                             | Load C<br>Locatio<br>Span #                 | ombination<br>n of maximum on span<br>where maximum occurs | =<br>=  | +D+0.750L+0.750S<br>20.529 ft<br>Span # 1 |
| Maximum Deflection<br>Max Downward Transient Deflection<br>Max Upward Transient Deflection<br>Max Downward Total Deflection<br>Max Upward Total Deflection | ion    | 0.156 in Ratio =<br>0 in Ratio =<br>0.556 in Ratio =<br>0 in Ratio = | 1727 >=360<br>0 <360<br>485 >=300<br>0 <300 | Span: 1 : S Only<br>n/a<br>Span: 1 : +1.090D+0.750<br>n/a  | )L+0.75 | 0S+0.5250E                                |

#### **Maximum Forces & Stresses for Load Combinations**

| Load Combination  | Ν      | /lax Stre | ess Ratio | S    |                  |      |      |                |                |      | Mor   | nent Values | 6       | S    | hear Val | ues    |
|-------------------|--------|-----------|-----------|------|------------------|------|------|----------------|----------------|------|-------|-------------|---------|------|----------|--------|
| Segment Length    | Span # | М         | V         | Cd   | C <sub>F/V</sub> | Ci   | Cr   | с <sub>т</sub> | C <sub>t</sub> | CL _ | М     | fb          | F'b     | V    | fv       | F'v    |
| D Only            |        |           |           |      |                  |      |      |                |                |      |       |             | 0.00    | 0.00 | 0.00     | 0.00   |
| Length = 22.50 ft | 1      | 0.420     | 0.191     | 0.90 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00 | 44.03 | 1,000.60    | 2384.89 | 4.80 | 54.59    | 286.20 |
| +D+L              |        |           |           |      | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00 |       |             | 0.00    | 0.00 | 0.00     | 0.00   |
| Length = 22.50 ft | 1      | 0.549     | 0.247     | 1.00 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00 | 63.97 | 1,453.94    | 2649.88 | 6.91 | 78.48    | 318.00 |
| +D+Lr             |        |           |           |      | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00 |       |             | 0.00    | 0.00 | 0.00     | 0.00   |
| Length = 22.50 ft | 1      | 0.302     | 0.137     | 1.25 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00 | 44.03 | 1,000.60    | 3312.35 | 4.80 | 54.59    | 397.50 |
| +D+S              |        |           |           |      | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00 |       |             | 0.00    | 0.00 | 0.00     | 0.00   |
| Length = 22.50 ft | 1      | 0.504     | 0.231     | 1.15 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00 | 67.60 | 1,536.46    | 3047.36 | 7.43 | 84.41    | 365.70 |
| +D+0.750Lr+0.750L |        |           |           |      | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00 |       |             | 0.00    | 0.00 | 0.00     | 0.00   |

#### Wood Beam

Project File: beam calcs with overstrength.ec6

(c) ENERCALC INC 1983-2022

LIC# : KW-06017913, Build:20.22.8.17 MULHERN & KULP STRUCTURAL ENGINEERING INC **DESCRIPTION:** B23 - 2ND FLR FRMG - FLUSH BM @ GARAGE FRONT

#### **Maximum Forces & Stresses for Load Combinations**

| Load Combination   | M         | Max Stre | ess Ratio | )S   |                  |      |      |                |                |                | Mor   | ment Value | S       |      | Shear Val | ues    |
|--------------------|-----------|----------|-----------|------|------------------|------|------|----------------|----------------|----------------|-------|------------|---------|------|-----------|--------|
| Segment Length     | Span #    | Μ        | V         | Cd   | C <sub>F/V</sub> | Сi   | Cr   | с <sub>т</sub> | C <sub>t</sub> | C <sub>L</sub> | М     | fb         | F'b     | V    | fv        | F'v    |
| Length = 22.50 ft  | 1         | 0.405    | 0.182     | 1.25 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           | 58.99 | 1,340.60   | 3312.35 | 6.38 | 72.51     | 397.50 |
| +D+0.750L+0.750S   |           |          |           |      | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           |       |            | 0.00    | 0.00 | 0.00      | 0.00   |
| Length = 22.50 ft  | 1         | 0.572    | 0.259     | 1.15 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           | 76.67 | 1,742.50   | 3047.36 | 8.35 | 94.88     | 365.70 |
| +D+0.60W           |           |          |           |      | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           |       |            | 0.00    | 0.00 | 0.00      | 0.00   |
| Length = 22.50 ft  | 1         | 0.236    | 0.107     | 1.60 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           | 44.03 | 1,000.60   | 4239.81 | 4.80 | 54.59     | 508.80 |
| +1.126D+0.70E      |           |          |           |      | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           |       |            | 0.00    | 0.00 | 0.00      | 0.00   |
| Length = 22.50 ft  | 1         | 0.284    | 0.129     | 1.60 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           | 53.02 | 1,205.11   | 4239.81 | 5.77 | 65.60     | 508.80 |
| +1.126D-0.70E      |           |          |           |      | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           |       |            | 0.00    | 0.00 | 0.00      | 0.00   |
| Length = 22.50 ft  | 1         | 0.247    | 0.113     | 1.60 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           | 46.12 | 1,048.24   | 4239.81 | 5.04 | 57.33     | 508.80 |
| +D+0.750Lr+0.750L+ | +0.450W   |          |           |      | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           |       |            | 0.00    | 0.00 | 0.00      | 0.00   |
| Length = 22.50 ft  | 1         | 0.316    | 0.143     | 1.60 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           | 58.99 | 1,340.60   | 4239.81 | 6.38 | 72.51     | 508.80 |
| +D+0.750L+0.750S+  | 0.450W    |          |           |      | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           |       |            | 0.00    | 0.00 | 0.00      | 0.00   |
| Length = 22.50 ft  | 1         | 0.411    | 0.186     | 1.60 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           | 76.67 | 1,742.50   | 4239.81 | 8.35 | 94.88     | 508.80 |
| +1.090D+0.750L+0.7 | 250S+0.5  |          |           |      | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           |       |            | 0.00    | 0.00 | 0.00      | 0.00   |
| Length = 22.50 ft  | 1         | 0.446    | 0.202     | 1.60 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           | 83.22 | 1,891.38   | 4239.81 | 9.05 | 102.90    | 508.80 |
| +1.090D+0.750L+0.7 | 750S-0.52 |          |           |      | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           |       |            | 0.00    | 0.00 | 0.00      | 0.00   |
| Length = 22.50 ft  | 1         | 0.418    | 0.190     | 1.60 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           | 78.04 | 1,773.73   | 4239.81 | 8.51 | 96.69     | 508.80 |
| +0.60D+0.60W       |           |          |           |      | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           |       |            | 0.00    | 0.00 | 0.00      | 0.00   |
| Length = 22.50 ft  | 1         | 0.142    | 0.064     | 1.60 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           | 26.42 | 600.36     | 4239.81 | 2.88 | 32.75     | 508.80 |
| +0.470D+0.70E      |           |          |           |      | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           |       |            | 0.00    | 0.00 | 0.00      | 0.00   |
| Length = 22.50 ft  | 1         | 0.129    | 0.059     | 1.60 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           | 24.14 | 548.72     | 4239.81 | 2.62 | 29.79     | 508.80 |
| +0.470D-0.70E      |           |          |           |      | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           |       |            | 0.00    | 0.00 | 0.00      | 0.00   |
| Length = 22.50 ft  | 1         | 0.092    | 0.042     | 1.60 | 0.920            | 1.00 | 1.00 | 1.00           | 1.00           | 1.00           | 17.24 | 391.85     | 4239.81 | 1.89 | 21.52     | 508.80 |

#### **Overall Maximum Deflections**

| Load Combination             | Span | Max. "-" Defl Loca | ation in Span | Load Combination             | Max. "+" Defl Loc | ation in Span |
|------------------------------|------|--------------------|---------------|------------------------------|-------------------|---------------|
| +1.090D+0.750L+0.750S+0.525  | 0E 1 | 0.5556             | 11.661        |                              | 0.0000            | 0.000         |
| Vertical Reactions           |      |                    | Suppor        | rt notation : Far left is #1 | Values in KIPS    |               |
| Load Combination             |      | Support 1          | Support 2     |                              |                   |               |
| Overall MAXimum              |      | 8.009              | 9.255         |                              |                   |               |
| Overall MINimum              |      | 0.380              | 0.520         |                              |                   |               |
| D Only                       |      | 4.455              | 4.919         |                              |                   |               |
| +D+L                         |      | 6.252              | 7.022         |                              |                   |               |
| +D+Lr                        |      | 4.455              | 4.919         |                              |                   |               |
| +D+S                         |      | 6.596              | 7.642         |                              |                   |               |
| +D+0.750Lr+0.750L            |      | 5.802              | 6.496         |                              |                   |               |
| +D+0.750L+0.750S             |      | 7.409              | 8.539         |                              |                   |               |
| +D+0.60W                     |      | 4.455              | 4.919         |                              |                   |               |
| +1.126D+0.70E                |      | 5.282              | 5.903         |                              |                   |               |
| +D+0.750Lr+0.750L+0.450W     |      | 5.802              | 6.496         |                              |                   |               |
| +D+0.750L+0.750S+0.450W      |      | 7.409              | 8.539         |                              |                   |               |
| +1.090D+0.750L+0.750S+0.5250 | )E   | 8.009              | 9.255         |                              |                   |               |
| +0.60D+0.60W                 |      | 2.673              | 2.951         |                              |                   |               |
| +0.470D+0.70E                |      | 2.360              | 2.676         |                              |                   |               |
| D Only                       |      | 4.455              | 4.919         |                              |                   |               |
| L Only                       |      | 1.797              | 2.103         |                              |                   |               |
| S Only                       |      | 2.142              | 2.723         |                              |                   |               |
| E Only                       |      | 0.380              | 0.520         |                              |                   |               |
| H Only                       |      |                    |               |                              |                   |               |

# DESIGN BUILT HOMES

### 86TH AVE SE

MERCER ISLAND, WA

### SHEAR WALL CALCULATIONS - WIND

REVIEWED BY: RJZ

September 7, 2022

<u>Parameters:</u>

SINGLE FAMILY HOME

DESIGN WIND SPEED: 100 MPH

WIND EXPOSURE CATEGORY: B

Seismic Design Category: D

CODE & DESIGN STANDARD: 2018 IBC CH. 1609, ASCE 7-16 CH. 26-30





#### PROJECT NAME: LOT 1 - 86TH AVE SE M&K PROJECT #: 244-22008

ENGINEER: JCL

DATE: 25-Aug-22







- 1. PLATE HEIGHT @ CLERESTORY IS 15'-1", U.N.O.
- PLATE HEIGHT @ MAIN FLOOR IS 11'-0", U.N.O. PLATE HEIGHT @ LOWER FLOOR IS 10'-1" U.N.P.
- 2. DIMENSION LINES ARE TO FACE OF STUD U.N.O.
- WINDOW SIZES & ROUGH OPENINGS TO BE VERIFIED BY CONTRACTOR.
   WINDOW HEAD HEIGHT AT MAIN FLOOR IS 8'-O" ABOVE
- SUBFLOOR, U.N.O. IF NOMINAL DOOR AND WINDOW HEIGHTS ARE SIMILAR, COORDINATE WITH DOOR AND WINDOW SPEC'S TO LOCATE FINAL ELEVATION OF THE HEAD HEIGHTS SO THAT ALL DOOR AND WINDOW TRIM ALIGN. 5. WINDOW AND DOOR SIZES ARE DIMENSIONED IN FEET AND
- INCHES (E.G. 2828= 2'-8"W X 2'-8"H) 6. EXTERIOR WALLS TO BE 2X6 STUDS AT 16" O.C., INTERIOR
- WALLS TO BE 2X4 STUDS AT 16" O.C., U.N.O.
- FIREBLOCK ALL PLUMBING PENETRATIONS AND STAIR RUNS PER IRC SEC. R302.11.
   SAFETY GLAZING PER IRC SEC. R308.4.
- 9. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE
- TREATED PER IRC SEC. R317.1. 10. PROVIDE UNDER-STAIR PROTECTION (1/2" GWB) PER IRC SEC
- R302.7.
  11. PROVIDE (1) LAYER OF 1/2" GWB AT THE GARAGE SIDE OF ALL WALLS SEPARATING THE GARAGE FROM THE RESIDENCE, ALL WALLS SUPPORTING A FLOOR CEILING ASSEMBLY BETWEEN THE GARAGE AND RESIDENCE, AND BETWEEN THE GARAGE AND ITS ATTIC. PROVIDE (1) LAYER 5/8" TYPE X GWB TO GARAGE CEILING IF BELOW HABITABLE ROOMS.
- 12. HOUSE/GARAGE DOOR SHALL BE 1-<sup>3</sup>/<sub>8</sub>" THICK WOOD SOLID CORE, OR 1-<sup>3</sup>/<sub>8</sub>" THICK SOLID OR HONEYCOMB CORE STEEL DOOR, OR 20-MINUTE RATED FIRE DOOR W/ SELF CLOSING DEVICE.
- DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS AND CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE MIN. 26 GUAGE GALVANIZED STEEL.
   PER IRC SEC R311.7.5. MAX. RISER HEIGHT SHALL BE 7-3/4". MIN. TREAD DEPTH SHALL BE 10". STAIR NOSINGS: 3/4" MIN.,
- 1-1/4" MAX. RADIUS @ LEADING EDGE OF TREAD: 9/16" MAX. 15. PROV HAND 1.85k (50%) S THAN 34" OR MORE THAN 38"
- ABOV CONT R311. R311. R311.7.7.3.
- 16. PROVIDE GUARDS (MIN. 36" HEIGHT) IN LOCATIONS PER IRC SEC. R312.
  17. FACTORY BUILT FIREDUACES & CHIMMEYS SHALL BE LISTED \$
- 17. FACTORY BUILT FIREPLACES & CHIMNEYS SHALL BE LISTED & LABELED AND SHALL BE INSTALLED & TERMINATED IN ACCORDANCE TO THE CONDITIONS OF THE LISTINGS. FACTORY BUILT FIREPLACES SHALL MEET EMISSION STANDARDS PER CH. 51-51 WAC.
- 18. PROVIDE EXTERIOR AIR SUPPLY TO ANY FACTORY-BUILT FIREPLACE PER IRC SEC R1006.









86TH AVE SE

M&K PROJECT #: 244-22008

Engineer: JCL Date: 07-Sep-22

| SHEARWALL 201: 2ND - REAR EXT BONUS / MASTER   |            |
|--|------------|
| SHEARWALL PROPERTIES:  |            |
| Wall Height, H     9.1     FT.     Max wall opening ht, H <sub>c</sub> 7.5     FT.       Wall Length, L     32.5     FT.     Qualifying Wall Length, L     21.3     FT.     Shearwall Assembly     P1  |            |
| CAPACITY EVALUATION:   |            |
| TOTAL SHEAR LOAD ON WALL   Allowable Shearwall Capacity     1850   LBS   |            |
| SHEARWALL ASSEMBLY SPECIFICATION   |            |
| P1 - 1-SIDE 7/16" DSB<br>Fastened W/ 8d nails at 6"0.c. panel edges & 12"0.c. panel field - edges blocked<br><u>ADEQUATE</u>   |            |
|  |            |
| Dverturning evaluation.         Resistive DL       200       plf       Overturning Moment       16.8       K-FT       Hold Down Design Load       0       1         DL at ends of wall       200       LBS       Resistive Moment       67.3       K-FT       Holdown Capacity       0       1   | _85<br>_85 |
| HOLD-DOWN SPECIFICATION  |            |
| No Holdown Required  |            |
|  |            |
|  |            |
|  |            |
| SHEARWALL 202: 2ND - FRONT EXT BED 2 / 3   |            |
| SHEARWALL       202:       2ND - FRONT EXT BED 2 / 3         SHEARWALL PROPERTIES:       SHEARWALL PROPERTIES:         Wall height, H       9.1       FT.       Max wall opening ht, Hc       5.0       FT.         Wall Length, L       33.2       FT.       QUALIFYING WALL LENGTH, L       17.5       FT.       SHEARWALL ASSEMBLY       P1   |            |
| SHEARWALL       202:       2ND - FRONT EXT BED 2 / 3         SHEARWALL PROPERTIES:       Wall Height, H       9.1       FT.       Max wall opening ht, Hc       5.0       FT.         Wall Length, L       9.1       FT.       Qualifying Wall Length, L       5.0       FT.       Shearwall Assembly       P1         Capacity Evaluation:  |            |
| SHEARWALL       202:       2ND - FRONT EXT BED 2 / 3         SHEARWALL PROPERTIES:       SHEARWALL PROPERTIES:         Wall Height, H       9.1       FT.       MAX WALL OPENING HT, HC       5.0       FT.         Wall Length, L       9.1       FT.       QUALIFYING WALL LENGTH, L       17.5       FT.       SHEARWALL ASSEMBLY       P1         Capacity Evaluation:       Total Shear Load on Wall       Allowable Shearwall Capacity       1850       LBS       5877       LBS   |            |
| SHEARWALL       202:       2ND - FRONT EXT BED 2 / 3         SHEARWALL PROPERTIES:       Image: Stream of the stre |            |
| SHEARWALL       202: 2ND - FRONT EXT BED 2/3         SHEARWALL PROPERTIES:         WALL HEIGHT, H       9.1       FT.         WALL LENGTH, L       9.1       FT.         MALL LENGTH, L       9.1       FT.         SHEARWALL ASSEMBLY       P1         CAPACITY EVALUATION:       P1         Mathematic Action       Allowable Shearwall Capacity         Mathematic Action       P1         Mathematic Action       Allowable Shearwall Capacity         Mathematic Action       P1         Mathematic Action       Allowable Shearwall Capacity         Mathematic Action       P1         Mathematic Action       SB77         Mathematic Action       P1         P1       1-Side 7/16"         Mathematic Action       P1         Mathematic Actin       P1  |            |
| SHEARWALL       202: 2ND + FRONT EXT BED 2/3         SHEARWALL PROPERTIES:         WALL HEIGHT, H       9.1       FT.         WALL DPENING HT, L       5.0       FT.         WALL LENGTH, L       9.1       FT.         MAX WALL OPENING HT, L       5.0       FT.         SHEARWALL CAPACITY       9.1       FT.         MALL LENGTH, L       9.1       ST.         SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY         1850       1850       5877         BERENCH LOAD ON WALL       P1 - 1-SIDE 7/16 <sup>#</sup> ISB         FASTENED W/ BD NAILS AT 6 <sup>#</sup> O.C. PANEL EDGES & 12 <sup>#</sup> O.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE       ALLOWABLE SHEARWALL FIELD - EDGES BLOCKED  |            |
| SHEARWALL       202: 2ND - FRONT EXT BED 2/3         SHEARWALL PROPERTIES:         WALL HEIGHT, H       0.1       r.       MAX WALL OPENING HT, HC       5.0       r.         WALL LENGTH, L       0.1       r.       MAX WALL DPENING HT, HC       5.0       r.         WALL LENGTH, L       0.1       r.       MAX WALL DPENING WALL LENGTH, L       17.5       FT.         SHEARWALL CAPACITY       0.1       r.       MAX WALL DPENING WALL LENGTH, L       17.5       FT.         SHEARWALL CAPACITY       0.1       r.       MAX WALL DPENING WALL LENGTH, L       17.5       FT.       SHEARWALL ASSEMBLY       P1         SHEARWALL LENGTH, L       0.1       7.5       FT.       SHEARWALL CAPACITY       P1         MAX MALL LENGTH, L       0.1       18.5       C       5877       LBS         SHEARWALL CAPACITY       18.5       28       5877       LBS         SHEARWAL MARK       P1 - 1-SIDE 7/16 <sup>4</sup> SB       SB       SB         STATENED W/ BD NAILS AT 6 <sup>10</sup> OL, PANEL EDGERS & 12 <sup>10</sup> OL, PANEL FIELD - EDGERS BLOCKED       ALEQUATE         DLAT ENDS OF WALL       200       PLF       OVERTURNING MOMENT       16.8       K-FT       HOLD DOWN DESIGN LDAD       D         DLAT ENDS OF WALL   | _85<br>_85 |
| SHEARWALL       202: 2ND - FRONT EXT BED 2/3         SHEARWALL PROFENSION:         WALL HEIGHT, H       9.1       Tr.       MAX WALL DOPENING HT, HC       5.0       Tr.         WALL LENGTH, L       9.1       Tr.       MAX WALL DOPENING HT, HC       17.5       Fr.       SHEARWALL ASSEMBLY       P1         CHARMALL ENGTH, L       9.1       Tr.       QUALIFYING WALL LENGTH, L       17.5       Fr.       SHEARWALL ASSEMBLY       P1         CHARMAL ENGTH, L       9.2       Tr.       QUALIFYING WALL LENGTH, L       17.5       Fr.       SHEARWALL CAPACITY         CHARMAL ENGTH, L       9.1       17.5       Fr.       SHEARWALL CAPACITY       P1         CHARMAL ENGTH, L       1850       LBS       SB77       LBS         CHARMAL ENGTH ENGL       1850       SB77       LBS         DI - 1-SIDE 7/16"       DSB       SB77       LBS         DI - 1-SIDE 7/16"       DSB       FASTENED W/ BD NAILS AT 6"0.6. PANEL EDGES & 12"0.6. PANEL FIELD - EDGES BLOCKED         DI - 1-SIDE 7/16"       DSB       C       DEGULATE         DL AT ENDS OF WALL       200       PL       OVERTURNING MOMENT       16.8       K-FT       HOLD DOWN DESIGN LDAD       D         DL AT ENDS OF WALL       400       L   | -85        |
| SHEARWALL       202: 2ND + FRONT EXT BED 2/3         SHEARWALL PROPERTIES:         WALL HEIGHT, H       9.1         33.2       FF. QUALIFYING WALL LENGTH, L       5.0         SHEARWALL ASSEMBLY       P1         CAPACITY EVALUATION:         TOTAL SHEAR LOAD ON WALL         1850       LBS         ALLOWABLE SHEARWALL CAPACITY         1850       LBS         SHEARWALL OPENING MALL         DEMERVENCE SHEAR LOAD ON WALL         1850       LBS         ALLOWABLE SHEARWALL CAPACITY         1850       LBS         SHEARWALL ASSEMBLY SPECIFICATION         DEMERVENCE FAIL         ALLOWABLE SHEARWALL CAPACITY         DUERTURNING MOMENT         16.8         MOMENT         ALLOWAN DESIGN LOAD         OVERTURNING MOMENT         COLSPANE CAPACITY         DUERTURNING MOMENT         ALLOWAN DESIGN LOAD         OUTRETURNING MOMENT         ALLOWAN SPECIFICATION   | -85        |



86TH AVE SE

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M&K Project #: 244-22008

ENGINEER: JCL DATE: 07-SEP-22

| <u>Shearwall</u> | DESIGN | <u>Summary</u> |   |
|------------------|--------|----------------|---|
|                  |        |                | - |

| <b>DHEARWALL 200</b> . ZND - SIDE EXT STAIRS  |  |  |  |  |  |
|---|--|--|--|--|--|
| SHEARWALL PROPERTIES:   |  |  |  |  |  |
| Wall height, H       9.1       FT.       Max wall opening ht, H <sub>c</sub> D.0       FT.         Wall length, L       7.0       FT.       Qualifying Wall length, L       7.0       FT.       Shearwall Assembly       P1   |  |  |  |  |  |
| CAPACITY EVALUATION:  |  |  |  |  |  |
| TOTAL SHEAR LOAD ON WALL ALLOWABLE SHEARWALL CAPACITY   |  |  |  |  |  |
|   |  |  |  |  |  |
| SHEARWALL ASSEMBLY SPECIFICATION  |  |  |  |  |  |
| P1 - 1-SIDE 7/16" DSB<br>Fastened W/ 8d nails at 6"0.c. panel edges & 12"0.c. panel field - edges blocked<br><u>ADEQUATE</u>  |  |  |  |  |  |
| OVERTURNING EVALUATION:   |  |  |  |  |  |
| Resistive DL134PLFOverturning Moment14.6K-FTHold Down Design Load1559LBSDL AT ENDS OF WALL400LBSResistive Moment3.6K-FTHoldown Capacity1705LBS  |  |  |  |  |  |
| Hold-down Specification   |  |  |  |  |  |
| SIMPSON CS16 STRAP TIE (14" END LENGTH)   |  |  |  |  |  |
|   |  |  |  |  |  |
|   |  |  |  |  |  |
| SHEARWALL XXX: - NOT USED   |  |  |  |  |  |
| SHEARWALL XXX: - NOT USED   |  |  |  |  |  |
| SHEARWALL XXX: - NOT USED   |  |  |  |  |  |
| SHEARWALL       XXX:       - NOT USED         SHEARWALL PROPERTIES:       Wall height, H       O.O       FT.       Max wall opening ht, Hc       O.O       FT.         Wall Length, L       O.O       FT.       Qualifying Wall Length, L       O.O       FT.       Shearwall Assembly       PO   |  |  |  |  |  |
| SHEARWALL       XXX:       - NOT USED         SHEARWALL PROPERTIES:       Wall height, H       D.D       FT.       Max wall opening ht, Hc       D.D       FT.         Wall Length, L       D.D       FT.       Qualifying Wall Length, L       D.D       FT.       Shearwall Assembly       PD         Capacity Evaluation:       Evaluation:       Evaluation:       Evaluation:       Evaluation:       Evaluation:  |  |  |  |  |  |
| SHEARWALL       XXX:       • NOT USED         SHEARWALL PROPERTIES:   |  |  |  |  |  |
| SHEARWALL       XXX:       • NOT USED         SHEARWALL PROPERTIES:   |  |  |  |  |  |
| SHEARWALL       XXX: - NOT USED         SHEARWALL PROPERTIES:   |  |  |  |  |  |
| SHEARWALL       XXX: - NOT USED         SHEARWALL PROPERTIES:         Wall Height, H       O.O., FT. WAX WALL OPENING HT, HC       O.O., FT.         Wall Length, L       O.O., FT. WIALIFYING WALL LENGTH, L       O.O., FT.         SHEARWALL CAPACITY       PO.         CAPACITY EVALUATION:       D.O., FT. WIALIFYING WALL LENGTH, L       O.O., FT.         Dirac Shearwall Capacity       PO.         Capacity Evaluation:       Allowable Shearwall Capacity         Dirac Shearwall Capacity       B.S.         Bearwall Assembly       PO.         Dirac Shearwall Capacity       B.S.         Bearwall Assembly       PO.         PO.       1.95         Bearwall Assembly       PO.         Dirac Shearwall Capacity       B.S.         Bearwall Assembly Specification       B.S.         PO.       1.95       C.S.         PO.       1.95       C.S.         PO.       PO.       S.S.         Astened W/ BD NAILS AT 6°C.C. PANEL EDGES & 12°C.C. PANEL FIELD - UNBLOCKED       #DIV/O.         #DIV/O.       #DIV/O.       #DIV/O.   |  |  |  |  |  |
| SHEARWALL       XXX: • NOT USED         SHEARWALL PROPERTIES:         WALL HEIGHT, H  |  |  |  |  |  |
| SHEARWALL       XXX: ONOT USED         BHEARWALL PROPERTIES:         WALL HEIGHT, H       O.O. FT.         WALL LENGTH, L       O.O. FT.         SHEARWALL ASSEMBLY       PO         CEARCITY EVALUATION:       O.O. FT.         DIAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY         O       J.BS         ####       #DIV/O!         J.BS       ####         #DIV/O!       LBS         SHEARWALL FOR UNT DESIGN LOAD       O.O. FT.         DIV/O!       DIV/O!         DIV/O!       DIV/O!         DIV/O!       DIV/O!         DI AT ENDS OF WALL       O.O. FT.  |  |  |  |  |  |
| SHEARWALL       XXX: • NOT USED         BHEARWALL PROPERTIES:         WALL HEIGHT, H       O.D       FT.       MAX WALL OPENING HT, HC       O.D       FT.         WALL LENGTH, L       O.D       FT.       QUALIFYING WALL LENGTH, L       O.D       FT.       SHEARWALL ASSEMBLY       PO         DEPOSITION:         ALLOWABLE SHEARWALL DAPACITY         D       BS       ####       #DIV/D:       LBS         DEFORMER LOAD ON WALL         D       BS       ####       #DIV/D:       LBS         DIAL SHEAR LOAD ON WALL         D       BS       ####       #DIV/D:       LBS         DIAL SHEAR LOAD ON WALL         D       BS       ####       #DIV/D:       LBS         DIAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL DAPACITY         D       BS       ####       #DIV/D:       LBS         SHEARWALL DAPACITY         D       C       SHEARWALL ASSEMBLY DAPACITY       LBS         DIAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL DAPACITY         D       LBS       CASTENDER       MOLD ON NO DESIGN LOAD       D         D       LBS       RE   |  |  |  |  |  |
| SHEARWALL       XXX: - NOT USED         BLEARWALL PROPERTIES:         WALL HEIGHT, H       D.D. FT. MAX WALL OPENING HT, HD       D.D. FT. GUALIFYING WALL LENGTH, L       D.D. FT. SHEARWALL ASSEMBLY       PD         DATE       D.D. FT. QUALIFYING WALL LENGTH, L       D.D. FT. SHEARWALL ASSEMBLY       PD         DATE       D.D. FT. QUALIFYING WALL LENGTH, L       D.D. FT. SHEARWALL ASSEMBLY       PD         DATE       D.D. FT. QUALIFYING WALL LENGTH, L       D.D. FT. SHEARWALL CAPACITY       PD         DATE       D.D. FT. QUALIFYING WALL LENGTH, L       D.D. FT. SHEARWALL CAPACITY       PD         DATE       D.D. FT. QUALIFYING WALL LENGTH, L       D.D. FT. SHEARWALL CAPACITY       PD         DATE       D.D. FT. QUALIFYING WALL LENGTH, L       MLDWABLE SHEARWALL CAPACITY       PD         DATE       D.D. FT. QUALIFYING WALL       ALLOWABLE SHEARWALL CAPACITY       PD         DATE       D.G. ST       ####       #DIV/0!       LBS         STELENCE       D.G. ST       PD - 1-SIDE 7/16" OSB       PG       PG         STENED W/ BO NAILS AT 6"D.C. PANEL DEGEES & 12"O.C. PANEL FIELD - UNBLOCKED       BUIV/0!       BUIV/0!       BUIV/0!         DL AT ENDS OF WALL       PLS       OVERTURNING MDMENT       #DUV.C. FT       HOLD DOWN DESIGN LDAD       LSS         DL AT |  |  |  |  |  |



86TH AVE SE

M&K PROJECT #: 244-22008

Engineer: JCL Date: 07-Sep-22

| SHEARWALL   | 204: 2ND - SIDE EXT MASTER BEDROOM   |
|---|--|
| SHEARWALL PROPE   | RTIES:   |
| Wall height, H<br>Wall Length, L  | 9.1     FT.     Max wall opening ht, H <sub>c</sub> 2.0     FT.       16.3     FT.     Qualifying Wall Length, L     12.3     FT.     Shearwall Assembly     P1  |
| CAPACITY EVALUATI   | DN:  |
|   | TOTAL SHEAR LOAD ON WALL     ALLOWABLE SHEARWALL CAPACITY       700     LBS  |
|   | SHEARWALL ASSEMBLY SPECIFICATION   |
|   | P1 - 1-SIDE 7/16" OSB<br>Fastened w/ 8d nails at 6"0.c. panel edges & 12"0.c. panel field - edges blocked<br><u>ADEQUATE</u>   |
|   |  |
| RESISTIVE DL  | 134     PLF     Overturning Moment     6.4     K-FT     Hold Down Design Load     0     LBS       50     LBS     Resistive Moment     11.1     K-FT     Holdown Capacity     0     LBS   |
|   | Hold-down Specification  |
|   | No Holdown Required  |
|   |  |
|   |  |
|   |  |
| SHEARWALL   | <b>205:</b> 2ND - SIDE EXT/INT BONUS TO BED 3  |
| SHEARWALL PROPER  | 205: 2ND - SIDE EXT/INT BONUS TO BED 3   |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L   | 205:       2ND - SIDE EXT/INT BONUS TO BED 3         STIES:       9.1         9.1       FT.         9.1       FT.         40.5       FT.         QUALIFYING WALL LENGTH, L       33.0         FT.       Shearwall Assembly         P1  |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATI  | <b>205:</b> 2ND - SIDE EXT/INT BONUS TO BED 3<br><b>RTIES:</b><br>9.1 FT. Max wall opening ht, Hc B.O FT.<br>40.5 FT. Qualifying Wall Length, L 33.0 FT. Shearwall Assembly P1<br><b>DN:</b>   |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATI  | 205: 2ND - SIDE EXT/INT BONUS TO BED 3         STIES:         9.1       FT.         9.1       FT.         40.5       FT.         QUALIFYING WALL LENGTH, L       33.0         DN:       TOTAL SHEAR LOAD ON WALL         1500       LBS         110B1       LBS  |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATI  | 205:       2ND - SIDE EXT/INT BONUS TO BED 3         STIES:       9.1         9.1       FT.         40.5       FT.         QUALIFYING WALL LENGTH, L       B.0         FT.       SHEARWALL ASSEMBLY         P1         DN:         1500         LBS         SHEARWALL ASSEMBLY         SHEARWALL ASSEMBLY  |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATI  | 205:       2ND - SIDE EXT/INT BONUS TO BED 3         STIES:       9.1       FT.         9.1       FT.       MAX WALL OPENING HT, HC         40.5       FT.       QUALIFYING WALL LENGTH, L         33.0       FT.       SHEARWALL ASSEMBLY         DN:       ALLOWABLE SHEARWALL CAPACITY         1500       LBS         LBS       110B1         LBS         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16"         SB         FASTENED W/ 8D NAILS AT 6"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE   |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATI  | 205:       2ND - SIDE EXT/INT BONUS TO BED 3         STIES:       9.1         9.1       FT. MAX WALL OPENING HT, HC         40.5       FT. QUALIFYING WALL LENGTH, L         33.0       FT.         SHEARWALL ASSEMBLY       P1         ON:       1500         LBS       11081         LBS       11081         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16"         P1 - 1-SIDE 7/16"         CON:   |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATI  | 205:       2ND - SIDE EXT/INT BONUS TO BED 3         STIES:       9.1       FT.         9.1       FT.       MAX WALL OPENING HT, HD       B.D       FT.         40.5       FT.       QUALIFYING WALL LENGTH, L       33.0       FT.       SHEARWALL ASSEMBLY       P1         ON:         TOTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY         1500       LBS       11081       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16" OSB         FASTENED W/ BD NAILS AT 6"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - EDGES BLOCKED         JATION:         UATION:         134       PLF       OVERTURNING MOMENT       13.7       K-FT       HOLD DOWN DESIGN LOAD       O       LBS         134       PLF       OVERTURNING MOMENT       13.7       K-FT       HOLD DOWN CAPACITY       O       LBS  |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATI<br>CAPACITY EVALUATI<br>CAPACITY EVALUATI<br>CAPACITY EVALUATI<br>CAPACITY EVALUATION<br>COVERTURNING EVAL | 205: 2ND - SIDE EXT/INT BONUS TO BED 3         STIES:         9.1       FT.         40.5       FT.         9.1       FT.         40.5       FT.         QUALIFYING WALL LENGTH, L       33.0         STES       P1         ON:       ALLOWABLE SHEARWALL CAPACITY         1500       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16"         P1 - 1-SIDE 7/16"         DSB         FASTENED W/ BD NAILS AT 6"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - EDGES BLOCKED ADEQUATE         DATION:         134       PLF         OVERTURNING MOMENT       13.7         K-FT       HOLD DOWN DESIGN LOAD         D       LBS         HOLD-DOWN SPECIFICATION   |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATI  | 205: 2ND - SIDE EXT/INT BONUS TO BED 3         STIES:         9.1       FT. MAX WALL DPENING HT, HC         40.5       FT. QUALIFYING WALL LENGTH, L         33.0       FT. SHEARWALL ASSEMBLY         91       TOTAL SHEAR LOAD ON WALL         1500       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16"         P1 - 1-SIDE 7/16"         P1 - 1-SIDE 7/16"         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16"         P2 - 1-SIDE 7/16"         DATE         P3 - 1-SIDE 7/16"         P4 - 1-SIDE 7/16"         DATE         P3 - 1-SIDE 7/16"         DATE         P4 - 1-SIDE 7/16"         DATE         P1 - 1-SIDE 7/16"         DATE         P1 - 1-SIDE 7/16"         DATE         P3 - 1-SIDE 7/16"         DATE         DATE      < |



86TH AVE SE

M&K Project #: 244-22008

ENGINEER: JCL DATE: 07-Sep-22

|  | <u>i</u>  | <u>SHEARWALE DES</u>  |  | -  |           |
|--|---|---|--|--|-----------|
| SHEARWALL  | <b>206:</b> 2ND -   | SIDE EXT BED 4  |  |  |           |
| SHEARWALL PROPI  | RTIES:  |   |  |  |           |
| Wall height, H<br>Wall Length, L   | 9.1 FT. MA<br>26.5 FT. QUALII   | x wall opening ht, H <sub>c</sub><br>fying Wall Length, L   | 5.0 FT.<br>21.5 FT.  | SHEARWALL ASSEMBLY   | P1        |
| CAPACITY EVALUAT   |   |   |  |  |           |
|  | TOTAL SH  | TOD LBS   |  | 7220 LBS   |           |
|  |   | SHEARWALL ASS   | EMBLY SPECIFICA  |  |           |
|  | FASTENED W/ 8D  | P1 - 1-5<br>Nails at 6 <sup>"</sup> d.c. panel<br><b>A</b>  | BIDE 7/16 <sup>®</sup> OSB<br>. edges & 12 <sup>®</sup> o.c. p<br><b>dequate</b>   | ANEL FIELD - EDGES BLOCKEC   |           |
|  |   |   |  |  |           |
| <b>DVERTURNING EVA</b><br>RESISTIVE DL<br>DL AT ENDS OF WALL   | LUATION:<br>170 PLF<br>400 LBS  | Overturning Moment<br>Resistive Moment  | 6.4 к-ft<br>42.2 к-ft  | Hold Down Design Load<br>Holdown Capacity  | C LBS     |
|  |   | Hold-down   | N SPECIFICATION  |  |           |
|  |   | No Hold   | DWN REQUIRED   |  |           |
|  |   |   |  |  |           |
| SHEARWALL<br>Shearwall Prope<br>Wall height, H<br>Wall length, L   | <b>207:</b> 2nd -<br><b>RTIES:</b><br>9.1 FT. MAX<br>20.5 FT. QUALIN  | SIDE INT BONUS<br>( wall opening ht, Hc<br>fying Wall Length, L   | 0.0 FT.<br>20.5 FT.  | SHEARWALL ASSEMBLY   | P1        |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT   | 207: 2ND -<br><b>RTIES:</b><br>9.1 FT. MAX<br>20.5 FT. QUALIN<br>ION:   | SIDE INT BONUS<br>( WALL OPENING HT, HC<br>FYING WALL LENGTH, L   | 0.0 FT.<br>20.5 FT.  | SHEARWALL ASSEMBLY   | P1        |
| SHEARWALL<br>Shearwall Prope<br>Wall height, H<br>Wall length, L<br>Capacity Evaluat   | 207: 2ND -<br>RTIES:<br>9.1 FT. MAX<br>20.5 FT. QUALIN<br>ION:  | SIDE INT BONUS<br>( WALL OPENING HT, HC<br>FYING WALL LENGTH, L<br>HEAR LOAD ON WALL<br>2000 LBS  | 0.0 FT.<br>20.5 FT.<br>ALLOWABLE 5   | SHEARWALL ASSEMBLY<br>SHEARWALL GAPACITY<br>6884 LBS   | Ρ1        |
| SHEARWALL<br>SHEARWALL PROPI<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT   | 207: 2ND -<br>STIES:<br>9.1 FT. MAX<br>20.5 FT. QUALIN<br>ION:<br>TOTAL SH  | SIDE INT BONUS<br>WALL OPENING HT, HC<br>FYING WALL LENGTH, L<br>HEAR LOAD ON WALL<br>2000 LBS  | O.O FT.<br>20.5 FT.<br>ALLOWABLE S<br>C EMBLY SPECIFICA  | SHEARWALL ASSEMBLY   | P1        |
| SHEARWALL<br>SHEARWALL PROPI<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT   | 207: 2ND -<br>TRTIES:<br>9.1 FT. MAX<br>20.5 FT. QUALIN<br>ION:<br>TOTAL SH<br>FASTENED W/ 8D                                   | SIDE INT BONUS<br>WALL OPENING HT, HC<br>FYING WALL LENGTH, L<br>HEAR LOAD ON WALL<br>2000 LBS<br><u>SHEARWALL ASS</u><br>P1 - 1-S<br>NAILS AT 6 <sup>th</sup> O.C. PANEL<br>A  |  | SHEARWALL ASSEMBLY<br>SHEARWALL CAPACITY<br>6884 LBS<br>TION<br>ANEL FIELD - EDGES BLOCKED                             | P1        |
| SHEARWALL<br>SHEARWALL PROPI<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT   | 207: 2ND -<br>RTIES:<br>9.1 FT. MAX<br>20.5 FT. QUALIN<br>ION:<br>TOTAL SF<br>FASTENED W/ 8D                                    | SIDE INT BONUS<br>( WALL OPENING HT, HC<br>FYING WALL LENGTH, L<br>MEAR LOAD ON WALL<br>2000 LBS<br>SHEARWALL ASS<br>P1 - 1-S<br>NAILS AT 6 <sup>10</sup> .C. PANEL<br>A  |  | SHEARWALL ASSEMBLY<br>SHEARWALL CAPACITY<br>6884<br>LBS<br>TION<br>ANEL FIELD - EDGES BLOCKED                          | P1        |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT<br>CAPACITY EVALUAT<br>CAPACITY EVALUAT<br>CAPACITY EVALUAT<br>CAPACITY EVALUAT | 207: 2ND -<br>SETIES:<br>9.1 FT. MAX<br>20.5 FT. QUALIN<br>ION:<br>TOTAL SH<br>FASTENED W/ 8D<br>LUATION:<br>134 PLF<br>600 LBS | SIDE INT BONUS<br>WALL OPENING HT, HC<br>FYING WALL LENGTH, L<br>LEAR LOAD ON WALL<br>2000 LBS<br>SHEARWALL ASS<br>P1 - 1-S<br>NAILS AT 6"0.C. PANEL<br>A<br>OVERTURNING MOMENT<br>RESISTIVE MOMENT   | 0.0 FT.<br>20.5 FT.<br>ALLOWABLE 5<br>C<br>EMBLY SPECIFICA<br>SIDE 7/16" OSB<br>EDGES & 12"0.C. P<br>DEQUATE<br>18.2 K-FT<br>24.3 K-FT | SHEARWALL GAPAGITY<br>6884 LBS<br>TION<br>ANEL FIELD - EDGES BLOCKED<br>HOLD DOWN DESIGN LOAD<br>HOLDDOWN CAPACITY     | P1        |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT   | 207: 2ND -<br>RTIES:<br>9.1 FT. MAX<br>20.5 FT. QUALIN<br>ION:<br>TOTAL SH<br>FASTENED W/ 8D<br>LUATION:<br>134 PLF<br>600 LBS  | SIDE INT BONUS<br>(WALL OPENING HT, HC<br>FYING WALL LENGTH, L<br>HEAR LOAD ON WALL<br>2000 LBS<br><u>SHEARWALL ASS</u><br>NAILS AT 6"O.C. PANEL<br>A<br>OVERTURNING MOMENT<br>RESISTIVE MOMENT<br>RESISTIVE MOMENT   |  | SHEARWALL ASSEMBLY SHEARWALL CAPACITY 6884 LBS STION ANEL FIELD - EDGES BLOCKED HOLD DOWN DESIGN LOAD HOLDOWN CAPACITY | P1<br>LB5 |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT<br>CAPACITY EVALUAT<br>COVERTURNING EVA<br>RESISTIVE DL<br>DL AT ENDS OF WALL   | 207: 2ND -<br>RTIES:<br>9.1 FT. MAX<br>20.5 FT. QUALIN<br>ION:<br>TOTAL SF<br>TOTAL SF<br>LUATION:<br>134 PLF<br>600 LBS        | SIDE INT BONUS<br>( WALL OPENING HT, HC<br>FYING WALL LENGTH, L<br>MEAR LOAD ON WALL<br>2000 LBS<br>SHEARWALL ASS<br>P1 - 1-S<br>NAILS AT 6"O.C. PANEL<br>A<br>OVERTURNING MOMENT<br>RESISTIVE MOMENT<br>RESISTIVE MOMENT<br>RESISTIVE MOMENT<br>RESISTIVE MOMENT<br>RESISTIVE MOMENT<br>RESISTIVE MOMENT<br>RESISTIVE MOMENT<br>RESISTIVE MOMENT |  | SHEARWALL ASSEMBLY SHEARWALL CAPACITY 6884 LBS TION ANEL FIELD - EDGES BLOCKED HOLD DOWN DESIGN LOAD HOLDOWN CAPACITY  | P1        |



86TH AVE SE

M&K PROJECT #: 244-22008

ENGINEER: JCL Date: 07-Sep-22

| SHEARWALL DESIGN SUMMARY  |            |
|---|------------|
| SHEARWALL XXX: - NOT USED   |            |
| SHEARWALL PROPERTIES:   |            |
| Wall Height, H       D.O       FT.       Max wall opening ht, H <sub>o</sub> D.O       FT.         Wall Length, L       D.O       FT.       Qualifying Wall Length, L       D.O       FT.       Shearwall Assembly       PO   |            |
| GAPACITY EVALUATION:  |            |
| TOTAL SHEAR LOAD ON WALL ALLOWABLE SHEARWALL GAPACITY   |            |
| SHEARWALL ASSEMBLY SPECIFICATION  |            |
| PO - 1-SIDE 7/16" OSB<br>Fastened w/ 8d nails at 6"o.c. panel edges & 12"o.c. panel field - UNBLOCKED<br><u>#DIV/0!</u>   |            |
|   |            |
| Resistive DL       D       plf       Overturning Moment       #DIV/0!       K-FT       Hold Down Design Load       D         DL at ends of wall       D       lbs       Resistive Moment       D.D       K-FT       Holdown Capacity       D  | _BS<br>_BS |
| Hold-down Specification   |            |
| NO HOLDOWN REQUIRED   |            |
|   |            |
| SHEARWALL 101: 1st - FRONT EXT DINING / PDR   |            |
| SHEARWALL PROPERTIES:   |            |
| Wall height, H       10.1       FT.       Max wall opening ht, Hc       0.0       FT.         Wall Length, L       3.9       FT.       Qualifying Wall Length, L       3.9       FT.       Shearwall Assembly       P3  |            |
| CAPACITY EVALUATION:  |            |
| TOTAL SHEAR LOAD ON WALL   Allowable Shearwall Capacity     1300   LBS  |            |
| SHEARWALL ASSEMBLY SPECIFICATION  |            |
| P3 - 1-side 7/16" OSB<br>fastened w/ 8d nails at 3"d.c. panel edges & 12"d.c. panel field - edges blocked<br><u>ADEQUATE</u>  |            |
|   |            |
| Dverturning evaluation:         Resistive DL       450       plf       Overturning Moment       13.1       K-FT       Hold Down Design Load       2420         DL at ends of wall       700       lbs       Resistive Moment       3.7       K-FT       Holdown Capacity       4935 | _85<br>_85 |
| HOLD-DOWN SPECIFICATION   |            |
| SIMPSON STHD14RJ HOLDOWN  |            |
|   |            |



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M&K PROJECT #: 244-22008

Engineer: JCL Date: 07-Sep-22

| DATE. | υ, | O E F |
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|       |    |       |

| SHEARWALL 102: 1st - FRONT EXT PDR / OFFICE  |
|--|
| SHEARWALL PROPERTIES:  |
| Wall Height, H 10.1 ft. Max wall opening ht, H <sub>d</sub> 0.0 ft.<br>Wall Length, L 6.0 ft. Qualifying Wall Length, L 6.0 ft. Shearwall Assembly P3  |
| CAPACITY EVALUATION:   |
| TOTAL SHEAR LOAD ON WALL ALLOWABLE SHEARWALL CAPACITY  |
| SHEARWALL ASSEMBLY SPECIFICATION   |
| P3 - 1-SIDE 7/16" DSB<br>Fastened W/ 8d nails at 3"d.c. panel edges & 12"d.c. panel field - edges blocked<br><u>ADEQUATE</u>   |
| OVERTURNING EVALUATION:  |
| Overturning Lyacontidity       PLF       Overturning Moment       20.2       K-FT       Hold Down Design Load       2137       Lbs         DL AT ENDS OF WALL       700       Lbs       Resistive Moment       7.4       K-FT       Hold Down Capacity       4935       Lbs  |
| HOLD-DOWN SPECIFICATION  |
| SIMPSON STHD14RJ HOLDOWN   |
|  |
|  |
| SHEARWALL 103: 1st - Side Ext Stairs   |
|  |
| SHEARWALL PROPERTIES:  |
| Shearwall Properties:         Wall height, H       10.1       FT.         Wall length, L       7.0       FT.         Wall length, L       7.0       FT.  |
| Shearwall Properties:         Wall height, H       10.1       ft.       Max wall opening ht, Hc       0.0       ft.         Wall length, L       7.0       ft.       Qualifying Wall length, L       7.0       ft.       Shearwall Assembly       P1         Gapacity Evaluation:  |
| SHEARWALL PROPERTIES:         Wall Height, H       10.1       FT.       Max wall opening ht, Hc       0.0       FT.         Wall Length, L       7.0       FT.       Qualifying Wall Length, L       7.0       FT.       Shearwall Assembly       P1         CAPACITY EVALUATION:         Total Shear Load on Wall       Allowable Shearwall Capacity         1800       LBS       2351       LBS  |
| SHEARWALL PROPERTIES:         WALL HEIGHT, H       10.1       FT.       MAX WALL OPENING HT, HC       0.0       FT.         WALL LENGTH, L       7.0       FT.       SHEARWALL ASSEMBLY       P1         CAPACITY EVALUATION:         TOTAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         1800       LBS       2351         SHEARWALL ASSEMBLY SPECIFICATION   |
| SHEARWALL PROPERTIES:         Wall HEIGHT, H       10.1       FT.       MAX WALL DPENING HT, HC       0.0       FT.         Wall LENGTH, L       7.0       FT.       QUALIFYING WALL LENGTH, L       7.0       FT.         SHEARWALL ASSEMBLY       P1    CAPACITY EVALUATION:          TOTAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         1800       LBS       2351       LBS         SHEARWALL ASSEMBLY SPEcification    P1 - 1-SIDE 7/16 <sup>#</sup> OSB FASTENED W/ 8D NAILS AT 6 <sup>#</sup> O.C. PANEL EDGES & 12 <sup>#</sup> O.C. PANEL FIELD - EDGES BLOCKED <u>ADEQUATE</u>   |
| SHEARWALL PROPERTIES:         Wall Height, H       10.1       FT.       Max wall opening ht, Hc       0.0       FT.         Wall Length, L       7.0       FT.       Qualifying Wall Length, L       7.0       FT.       Shearwall Assembly       P1         Capacity Evaluation:         DTAL Shear Load on Wall       Allowable Shearwall Capacity         1800       LBS       2351       LBS         DEarwall Assembly Specification         P1 - 1-side 7/16" OSB         Fastened w/ 8d nails at 6°0.c. panel edges & 12°0.c. panel field - edges Blocked Active         ADEQUATE  |
| Shearwall Properties:         Wall Heißht, H       10.1       ft.       Max Wall Opening ht, Hc       0.0       ft.         Mall Length, L       7.0       ft.       Max Wall Assembly       P1         Definition of the main o |
| Shearwall Properties:         Wall Height, H       10.1       rf.       Max Wall opening Ht, H       0.1       rf.         7.0       rf.       Qualifying Wall length, I       0.1       rf.         1800       ls0       ls0       2.351       ls0         1800       ls0       ls0       2.351       ls0         1800       ls0       ls0       2.351       ls0         91       ls0       ls0       ls0       2.351       ls0         91       ls0       ls0       ls0       2.351       ls0         91       ls0       ls0       ls0       ls0       ls0       ls0         91       ls0       ls0       ls0       ls0       ls0       ls0       ls0         91       ls0       ls0       ls0       ls0       ls0       ls0       ls0       ls0      <  |
| Shearwall Properties:         Wall height, H       10.1       rf.       Max wall opening ht, ft       0.0       rf.         Wall length, L       7.0       rf.       Qualifying Wall length, ft       7.0       rf.         Shearwall Assemely       1       7.0       rf.       Shearwall Assemely       P1    Construction:          Difference       1000       100       rf.       7.0       rf.         Shearwall Capacity       1000       100       rf.       2351       1cs         Shearwall Capacity       1000       100       rf.       2351       1cs    Shearwall Capacity    Shearwall Capacity    Shearwall Capacity    Control of the state of the stat  |



86TH AVE SE

M&K PROJECT #: 244-22008

Engineer: JCL Date: 07-Sep-22

| SHEARWALL 1ST - SIDE EXT GREAT ROOM F.P.  |              |
|---|--------------|
| SHEARWALL PROPERTIES:   |              |
| Wall Height, H       10.1       FT.       Max wall opening ht, H <sub>o</sub> 0.0       FT.         Wall Length, L       9.3       FT.       Qualifying Wall Length, L       9.3       FT.       Shearwall Assembly       FT.   | 23           |
| CAPACITY EVALUATION:  |              |
| TOTAL SHEAR LOAD ON WALL ALLOWABLE SHEARWALL CAPACITY   |              |
| SHEARWALL ASSEMBLY SPECIFICATION  |              |
| P3 - 1-SIDE 7/16" DSB<br>Fastened W/ BD nails at 3"0.c. panel edges & 12"0.c. panel field - edges blocked<br><u>ADEQUATE</u>  |              |
|   |              |
| Resistive DL       249       plf       Overturning Moment       30.8       K-FT       Hold Down Design Load       23         DL at ends of wall       500       lbs       Resistive Moment       9.3       K-FT       Holdown Capacity       49   | 305 LBS      |
| HOLD-DOWN SPECIFICATION   |              |
| SIMPSON STHD14RJ HOLDOWN  |              |
|   |              |
|   |              |
|   |              |
| SHEARWALL IUS: 1st - Side Int Garage  |              |
| SHEARWALL IUS: 1st - Side Int Garage Shearwall Properties:  |              |
| SHEARWALL       I US:       1 st - Side Int Garage         Shearwall Properties:       Wall height, H       10.1       ft.         Wall height, H       10.1       ft.       Max wall opening ht, Hc       8.0       ft.         Wall length, L       30.0       ft.       Qualifying Wall length, L       27.0       ft.       Shearwall Assembly       Ft.  | 1            |
| SHEARWALL       IUD: 1st - Side Int Garage         Shearwall Properties:       Wall height, H       10.1       FT.         Wall height, H       10.1       FT.       Max wall opening ht, Hc       8.0       FT.         Wall length, L       30.0       FT.       Qualifying Wall length, L       27.0       FT.       Shearwall Assembly       F         Capacity Evaluation:       Evaluation:       Evaluation:       Evaluation:       Evaluation:       Evaluation:   | 21           |
| SHEARWALL       I US:       1 st - Side Int Garage         Bearwall Properties:       Max wall opening ht, Hc       B.0       FT.         Wall Height, H       10.1       FT.       Max wall opening ht, Hc       B.0       FT.         Wall Length, L       30.0       FT.       Qualifying Wall Length, L       27.0       FT.       Shearwall Assembly       F         Capacity Evaluation:       Total Shear Load on Wall       Allowable Shearwall Capacity       4500       LBS       9067       LBS  | <u>1</u>     |
| SHEARWALL       IUS:       1st - Side Int Garage         Shearwall Properties:       Wall Height, H       10.1       FT.         Wall Length, L       30.0       FT.       Qualifying Wall Length, L       27.0       FT.         Capacity Evaluation:       Total Shear Load on Wall       Allowable Shearwall Capacity       4500       LBS       9067       LBS  | 21           |
| SHEARWALL       IUS:       1st - Side Int Garage         Shearwall Properties:       Max wall opening ht, H       B.O       FT.         Wall Height, H       10.1       FT.       Max wall opening ht, Hc       B.O       FT.         Wall Length, L       30.0       FT.       Qualifying Wall Length, L       27.0       FT.       Shearwall Assembly       F         Capacity Evaluation:       Total Shear Load on Wall       Allowable Shearwall Dapacity       4500       LBS       9067       LBS         Shearwall Assembly Specification         P1 - 1-Side 7/16 <sup>8</sup> OSB         Fastened W/ 8D Nails at 6 <sup>6</sup> 0.0. Panel Edges & 12 <sup>8</sup> 0.0. Panel Field - Edges Blocked Abequate   | 21           |
| SHEARWALL       IUS: 1st - Side Int Garage         Shearwall Properties:       Wall Height, H       10.1       FT.       Max wall opening ht, Hc       8.0       FT.         Wall Length, L       30.0       FT.       Qualifying Wall Length, L       27.0       FT.       Shearwall Assembly       F         Capacity Evaluation:       Interval Shear Load on Wall       Allowable Shearwall Capacity       9067       LBS         Shearwall Assembly Less       9067       LBS       9067       LBS         P1 - 1-side 7/16"       05B         Fastened W/ 8D Nails at 6"0.0. Panel edges & 12"0.0. Panel field - edges Blocked ADEQUATE   | 21           |
| SHEARWALL       IUS: 1st - Side INT GARAGE         SHEARWALL PROPERTIES:         Wall HEIGHT, H       10.1         90.0       FT.         Wall LENGTH, L       30.0         90.0       FT.         QUALIFYING WALL LENGTH, L       27.0         FT.       SHEARWALL CAPACITY         4500       LBS         SHEARWALL CAPACITY         9067       LBS<                                      | 0L85         |
| SHEARWALL       TUS: 1st - Side INT GARAGE         SHEARWALL PROPERTIES:         WALL HEIGHT, H       10.1         30.0       FT.         QUALIFYING WALL LENGTH, L       27.0         FT.       SHEARWALL ASSEMBLY         FT.       SHEARWALL CAPACITY         WALL LENGTH, L       30.0         TOTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY         4500       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16"       DSB         FASTENED W/ BD NAILS AT 6"0.0. PANEL EDGES & 12"0.0. PANEL FIELD - EDGES BLOCKED         ADEQUATE         OVERTURNING EVALUATION:         RESISTIVE DL       294         PLF       OVERTURNING MOMENT         45.5       K-FT         HOLD DOWN DESIGN LOAD       HOLDOWN CAPACITY         I       101.0         K-FT       HOLD DOWN DESIGN LOAD  | 0Les<br>0Les |
| SHEARWALL       IDS: 1st - Side INT GARAGE         BHEARWALL PROPERTIES:         WALL HEIGHT, H       10.1         30.0       F. QUALIFYING WALL LENGTH, L         27.0       F. SHEARWALL ASSEMBLY         CAPACITY EVALUATION:         TOTAL SHEAR LOAD ON WALL         4500       LBS         9067       LBS         SHEARWALL CAPACITY         4500       LBS         SHEARWALL CAPACITY         4500       LBS         9067       LBS         SHEARWALL CAPACITY         4500       LBS         SHEARWALL CAPACITY         9067       LBS         SHEARWALL CAPACITY         9067       LBS         SHEARWALL CAPACITY         9067       LBS         SHEARWALL CAPACITY         P1 - 1-SIDE 7/16 <sup>III</sup> DSB         FASTENED W/ BD NAILS AT | 0 L85        |



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M&K Project #: 244-22008

| SHEARWALL | DESIGN | SUMMARY |  |
|-----------|--------|---------|--|
|           |        |         |  |

| SHEARWALL  | 106: 1st - Side Ext Guest WIC   |
|--|---|
| SHEARWALL PROPE  | RTIES:  |
| Wall height, H<br>Wall Length, L   | 10.1     FT.     Max wall opening ht, H <sub>c</sub> 0.0     FT.       7.5     FT.     Qualifying Wall Length, L     7.5     FT.     Shearwall Assembly     P1  |
| CAPACITY EVALUAT   |   |
|  | TOTAL SHEAR LOAD ON WALL     Allowable Shearwall Capacity       400     LBS   |
|  | SHEARWALL ASSEMBLY SPECIFICATION  |
|  | P1 - 1-SIDE 7/16 <sup>6</sup> DSB<br>Fastened W/ 8d nails at 6 <sup>6</sup> 0.c. panel edges & 12 <sup>6</sup> 0.c. panel field - edges blocked<br><u>ADEQUATE</u>  |
| OVERTURNING EVAL<br>RESISTIVE DL<br>DL AT ENDS OF WALL   | UATION:         265       PLF       Overturning Moment       4.0       K-FT       Hold Down Design Load       0       LBS         1000       LBS       Resistive Moment       9.0       K-FT       Holdown Capacity       0       LBS   |
|  |   |
|  |   |
|  |   |
|  |   |
|  |   |
|  |   |
| SHEARWALL  | 107: 1st - Side Int B.P. / Pan  |
| SHEARWALL<br>SHEARWALL PROPE   | 107: 1st - Side Int B.P. / Pan  |
| SHEARWALL<br>Shearwall Prope<br>Wall height, H<br>Wall length, L   | 107:       1st - Side Int B.P. / Pan         RTIES:       10.1         10.1       FT.         10.5       FT.         QUALIFYING WALL LENGTH, L       20.5   |
| SHEARWALL<br>Shearwall Prope<br>Wall height, H<br>Wall Length, L<br>Capacity Evaluat   | 107:       1st - Side Int B.P. / Pan         RTIES:       10.1       FT.         10.1       FT.       Max wall opening ht, Hc       0.0       FT.         20.5       FT.       Qualifying Wall length, L       20.5       FT.       Shearwall Assembly       P1         DN:       DN:       DN:       DN       DN       DN       DN   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>GAPACITY EVALUAT   | 107:     1 ST - SIDE INT B.P. / PAN       RTIES:     IO.1 FT. MAX WALL OPENING HT, HC     O.0 FT.       20.5 FT.     QUALIFYING WALL LENGTH, L     20.5 FT.       SHEARWALL ASSEMBLY     P1   ON:  TOTAL SHEAR LOAD ON WALL ALLOWABLE SHEARWALL CAPACITY SBOD LBS < 6884 LBS  |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT   | 107:       1 ST - SIDE INT B.P. / PAN         RTIES:         10.1       FT.         20.5       FT.         20.5       FT.         QUALIFYING WALL LENGTH, L       20.5         SHEARWALL ASSEMBLY         ON:         TOTAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         5800       LBS         SHEARWALL ASSEMBLY SPECIFICATION   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>GAPACITY EVALUAT   | 107:       1 ST - SIDE INT B.P. / PAN         RTIES:         10.1       FT.         20.5       FT.         QUALIFYING WALL LENGTH, L       0.0         20.5       FT.         QUALIFYING WALL LENGTH, L       20.5         P1         DN:         TOTAL SHEAR LOAD ON WALL         SBOD         LBS         SHEARWALL CAPACITY         5800         LBS         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16"         DSB         FASTENED W/ 8D NAILS AT 6"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE  |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT   | 107:       1 ST - SIDE INT B.P. / PAN         RTIES:         10.1       FT.         20.5       FT.         QUALIFYING WALL LENGTH, L       0.0         20.5       FT.         QUALIFYING WALL LENGTH, L       20.5         ON:       ALLOWABLE SHEARWALL CAPACITY         5800       LBS         SHEARWALL ASSEMBLY       P1         ON:         DITAL SHEAR LOAD ON WALL         5800       LBS         ALLOWABLE SHEARWALL CAPACITY         5800       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16" OSB         FASTENED W/ 8D NAILS AT 6"D.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>GAPACITY EVALUAT<br>COVERTURNING EVAL<br>RESISTIVE DL<br>DL AT ENDS OF WALL  | 107:       1st - Side Int B.P. / Pan         RTIES:          10.1         ft.         MAX WALL OPENING HT, HC         20.5         ft.         GUALIFYING WALL LENGTH, L         20.5         ft.         SHEARWALL ASSEMBLY         P1          DN:          TOTAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         5800         LBS           GB84         LBS<br>SHEARWALL ASSEMBLY         P1          DN:          DTAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         5800         LBS           G884         LBS<br>SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16" OSB         FASTENED W/ BD NAILS AT 6"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - EDGES BLODKED <u>ADEQUATE          DATION:          Overturning Moment         S8.6         x-FT         HOLD DOWN DESIGN LOAD         HOLDOWN CAPACITY         4935         LBS    </u> |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>GAPACITY EVALUAT<br>CAPACITY EVALUAT<br>CAPACITY EVALUAT<br>CAPACITY EVALUAT<br>CAPACITY EVALUAT<br>CAPACITY EVALUAT | 107:       1st - Side INT B.P. / PAN         STEEE:         10.1       FT.         20.5       FT.         QUALIFYING WALL LENGTH, L       0.0         20.5       FT.         SHEARWALL ASSEMBLY       P1         ON:         DTAL SHEAR LOAD ON WALL         SHEARWALL CAPACITY         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16" OSB         FASTENED W/ BD NAILS AT 6"0.C. PANEL EDGES & 12"D.C. PANEL FIELD - EDGES BLOCKED         DEGUATE         DVERTURNING MOMENT 58.6 K-FT         Hold DOWN DESIGN LOAD         1400 LODWN SPECIFICATION   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>GAPACITY EVALUAT   | 107: 1ST - SIDE INT B.P. / PAN         RTIES:         10.1       rr.       MAX WALL OPENING HT, HO       0.0       pr.         20.5       pr.       QUALIFYING WALL LENGTH, L       20.5       pr.         SHEARWALL ASSEMBLY       P1         ON:         TOTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY         5800       LBS       6884       LBS         SHEARWALL ASSEMBLY       P1         DIA         DIA         ALLOWABLE SHEARWALL CAPACITY         5800       LBS       6884       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16" OSB         ASTENCE W/ BD NAILS AT 6"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - EDGES BLOCKED         DEQUATE         DIA         MOLD DOWN DESIGN LOAD       1400       LBS         ACTON:         DIA         DIA         DIA         DIA         DIA         DIA         DIA                              |



86TH AVE SE

M&K PROJECT #: 244-22008

| SHEARWALL | DESIGN | SUMMARY |
|-----------|--------|---------|
|           |        |         |

| SHEARWALL  | 108: 1st - Side Ext Garage   |
|--|--|
| SHEARWALL PROPE  | RTIES:   |
| WALL HEIGHT, H<br>Wall Length, L   | 11.0     FT.     Max wall opening ht, H <sub>c</sub> 9.0     FT.       34.5     FT.     Qualifying Wall Length, L     7.5     FT.     Shearwall Assembly     P1  |
| CAPACITY EVALUAT   | <u>on:</u>   |
|  | Total Shear Load on Wall   Allowable Shearwall Capacity     1700   LBS   |
| 1  | SHEARWALL ASSEMBLY SPECIFICATION   |
|  | P1 - 1-SIDE 7/16" DSB<br>Fastened w/ 8d nails at 6"d.c. panel edges & 12"d.c. panel field - edges blocked<br><u>ADEQUATE</u>   |
| <b>Overturning Eval</b><br>Resistive DL<br>DL at ends of wall  | UATION:         150       PLF       Overturning Moment       18.7       K-FT       Hold Down Design Load       0       LBS         400       LBS       Resistive Moment       61.8       K-FT       Holdown Capacity       0       LBS   |
|  | Hold-down Specification  |
|  | NO HOLDOWN REQUIRED  |
|  |  |
|  |  |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H   | 109:     1 ST - SIDE EXT GREAT ROOM / FOYER       RTIES:       10.1     FT.       2.0     FT.  |
| SHEARWALL<br>Shearwall Prope<br>Wall height, H<br>Wall Length, L   | 109:       1st - Side Ext Great Room / Foyer         RTIES:       10.1         10.1       FT.         2.9       FT.         Qualifying Wall Length, L       2.9         FT.       Shearwall Assembly   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT   | 109:       1 ST - SIDE EXT GREAT ROOM / FOYER         RTIES:         10.1       FT.         10.1       FT.         2.9       FT.         QUALIFYING WALL LENGTH, L       2.9         SHEARWALL ASSEMBLY         ON:         TOTAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         950       LBS  |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT   | 109:       1st - Side Ext Great Room / Foyer         RTIES:       10.1       FT.         10.1       FT.       Max wall opening ht, Hc       0.0       FT.         2.9       FT.       Qualifying Wall length, L       2.9       FT.       Shearwall Assembly       P3         ON:       Total Shear Load on Wall       Allowable Shearwall Capacity       950       LBS       1505       LBS         BHEARWALL ASSEMBLY Specification       Control       Control       Control       Control       Control  |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L   | 109:       1st - Side Ext Great Room / Foyer         RTIES:       III.1       FT.         10.1       FT.       Max wall opening ht, Hc       III.0.0         2.9       FT.       QUALIFYING WALL LENGTH, L       III.0.0         ON:       III.1       Total Shear Load on Wall       Allowable Shearwall Capacity         950       LBS       IIII.0.0         BALEARWALL ASSEMBLY       P3         ON:         ON:         Total Shear Load on Wall         950       LBS         Allowable Shearwall Capacity         950       LBS         Shearwall Capacity         950       LBS         Shearwall Capacity         950       LBS         Shearwall Capacity         950       LBS         Shearwall Capacity         P3 - 1-SiDE 7/16" OSB         Fastened W/ 8D NAILS AT 3"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE       |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT   | 109:       1 ST - SIDE EXT GREAT ROOM / FOYER         RTIES:         10.1       FT.         2.9       FT.       QUALIFYING WALL LENGTH, L       0.0       FT.         2.9       FT.       QUALIFYING WALL LENGTH, L       2.9       FT.       SHEARWALL ASSEMBLY       P3         ON:         TOTAL SHEAR LOAD ON WALL       Allowable Shearwall Capacity         950       LBS       1505       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P3 - 1-SIDE 7/16" OSB         FASTENED W/ BD NAILS AT 3"0.C. PANEL EDGES & 12"0.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE  |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>GAPACITY EVALUAT   | 109:       1 ST - SIDE EXT GREAT ROOM / FOYER         RTIES:         10.1       FT.         2.9       FT.       QUALIFYING WALL LENGTH, L       0.0       FT.         2.9       FT.       QUALIFYING WALL LENGTH, L       2.9       FT.       SHEARWALL ASSEMBLY       P3         DN:         TOTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY         950       LBS        1505       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P3 - 1-SIDE 7/16" OSB         FASTENED W/ BD NAILS AT 3"0.0. PANEL EDGES & 12"0.0. PANEL FIELD - EDGES BLOCKED         ADEQUATE         LUATION:         110       PLF       OVERTURNING MOMENT       9.6       K-FT       HOLD DOWN DESIGN LOAD       3070       LBS         LUATION:         110       PLF       OVERTURNING MOMENT       9.6       K-FT       HOLD DOWN DESIGN LOAD       3070       LBS |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT   | 109:       1 ST - SIDE EXT GREAT ROOM / FOYER         RTIES:         10.1       FT.         2.9       FT.         QUALIFYING WALL LENGTH, L       2.9         SHEARWALL ASSEMBLY         ON:         TOTAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         950       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P3 - 1-SIDE 7/16" OSB         FASTENED W/ BD NAILS AT 3"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE         JATION:         110         PLF         OVERTURNING MOMENT         9.6         HOLD DOWN DESIGN LOAD         3070         LBS         HOLD-DOWN SPECIFICATION  |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT<br>OVERTURNING EVAL<br>RESISTIVE DL<br>DL AT ENDS OF WALL | 109: 1st - Side Ext Great Room / Foyer         RTIES:         10.1       FT.         2.9       FT.         QUALIFYING WALL LENGTH, L       2.9         2.9       FT.         Shearwall Assembly       P3         ON:       1505         LBS       1505         Shearwall Assembly Specification         P3 - 1-side 7/16"       D58         FASTENED W/ BD NAILS AT 3"0.0. PANEL EDGES & 12"0.0. PANEL FIELD - EDGES BLOCKED         ADEQUATE         UATION:         110       PLF         DVERTURNING MOMENT       9.6         K-FT       Hold Down Design LDAD         ADEQUATE   |



86TH AVE SE

M&K Project #: 244-22008

| SHEARWALL | DESIGN | SUMMARY |  |
|-----------|--------|---------|--|

| SHEARWALL   | 110: 1st - Front Int Dining   |
|---|---|
| SHEARWALL PROPER  | RTIES:  |
| Wall height, H<br>Wall Length, L                                  | 10.1     FT.     Max wall opening ht, H <sub>d</sub> 8.0     FT.       19.0     FT.     Qualifying Wall Length, L     16.4     FT.     Shearwall Assembly     P1  |
| CAPACITY EVALUATI   | DN:   |
|   | TOTAL SHEAR LOAD ON WALL     Allowable Shearwall Capacity       3000     LBS  |
|   | SHEARWALL ASSEMBLY SPECIFICATION  |
|   | P1 - 1-SIDE 7/16" OSB<br>Fastened w/ 8d nails at 6"0.c. panel edges & 12"0.c. panel field - edges blocked<br><u>ADEQUATE</u>  |
| DVERTURNING EVAL<br>RESISTIVE DL<br>DL AT ENDS OF WALL            | UATION:         700       PLF       Overturning Moment       30.3       K-FT       Hold Down Design Load       0       LBS         4000       LBS       Resistive Moment       121.4       K-FT       Holdown Capacity       0       LBS              |
|   | HOLD-DOWN SPECIFICATION   |
| Ĩ   |   |
|   | NO HOLDOWN REQUIRED   |
|   |   |
| SHEARWALL<br>Shearwall Proper<br>Wall height, H<br>Wall length, L | 111:       1st - Rear Ext Guest Bath         RTIES:       10.1         10.1       FT.       Max wall opening ht, Hc       0.0       FT.         11.0       FT.       Qualifying Wall Length, L       11.0       FT.       Shearwall Assembly       P3 |
| CAPACITY EVALUATI   |   |
|   | Total Shear load on Wall   Allowable Shearwall Capacity     1800   LBS  |
|   | SHEARWALL ASSEMBLY SPECIFICATION  |
|   | P3 - 1-side 7/16" OSB<br>Fastened w/ 8d nails at 3"d.c. panel edges & 12"d.c. panel field - edges blocked<br><u>ADEQUATE</u>  |
|   |   |
| OVERTURNING EVAL  | UATION:   |
| RESISTIVE DL<br>DL AT ENDS OF WALL                                | 134     PLF     Overturning Moment     18.2     K-FT     Hold Down Design Load     1031     LBS       300     LBS     Resistive Moment     6.8     K-FT     Holdown Capacity     4935     LBS   |
|   | Hold-down Specification   |
|   | SIMPSON STHD14RJ HOLDOWN  |
| l   |   |



86TH AVE SE

M&K PROJECT #: 244-22008

Engineer: JCL Date: 07-Sep-22

| SHEARWALL 112: 1st - REAR EXT GUEST WIG   |
|---|
| SHEARWALL PROPERTIES:   |
| Wall Height, H       10.1       ft.       Max wall opening ht, H <sub>o</sub> 0.0       ft.         Wall Length, L       9.8       ft.       Qualifying Wall Length, L       9.8       ft.       Shearwall Assembly       P3  |
| CAPACITY EVALUATION:  |
| Total Shear Load on Wall   Allowable Shearwall Capacity     1600   LBS  |
| SHEARWALL ASSEMBLY SPECIFICATION  |
| P3 - 1-SIDE 7/16" DSB<br>Fastened w/ 8d nails at 3"d.c. panel edges & 12"d.c. panel field - edges blocked<br><u>ADEQUATE</u>  |
|   |
| UVERTURNING EVALUATION:         Resistive DL       134       PLF       Overturning Moment       16.2       K-FT       Hold Down Design Load       1145       LBS         DL AT ENDS OF WALL       200       LBS       RESISTIVE MOMENT       5.0       K-FT       Holdown Capacity       4935       LBS   |
| Hold-down Specification   |
| SIMPSON STHD14RJ HOLDOWN  |
|   |
|   |
| SHEARWALL XXX: - NOT LISED  |
|   |
| SHEARWALL PROPERTIES:   |
| Shearwall Properties:         Wall height, H       D.D       FT.       Max wall opening ht, Hc       D.D       FT.         Wall length, L       D.D       FT.       Qualifying Wall length, L       D.D       FT.       Shearwall Assembly       PD   |
| Shearwall Properties:         Wall height, H       D.0       FT.       Max wall opening ht, Hc       D.0       FT.         Wall length, L       D.0       FT.       Qualifying Wall length, L       D.0       FT.       Shearwall Assembly       P0         Capacity Evaluation:  |
| SHEARWALL PROPERTIES:         WALL HEIGHT, H       D.O       FT.       MAX WALL OPENING HT, HC       D.O       FT.         WALL LENGTH, L       D.O       FT.       QUALIFYING WALL LENGTH, L       D.O       FT.       SHEARWALL ASSEMBLY       PO         CAPACITY EVALUATION:         TOTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY         LBS       #####       #DIV/O!       LBS  |
| SHEARWALL PROPERTIES:         Wall Height, H       D.D       FT.       Max wall opening ht, Hc       D.D       FT.         Wall Length, L       D.D       FT.       Qualifying Wall Length, L       D.D       FT.       Shearwall Assembly       PD         Capacity Evaluation:         Total Shear Load on Wall       Allowable Shearwall Capacity         D       LBS       ####       #DIV/D!       LBS         Shearwall Assembly Specification  |
| Shearwall Properties:         Wall height, H       D.D       FT.       Max wall opening ht, Hc       D.D       FT.         Wall Length, L       D.D       FT.       Qualifying Wall Length, L       D.D       FT.       Shearwall Assembly       PD         Capacity Evaluation:         Total Shear Load on Wall       Allowable Shearwall Capacity         D       LBS       ####       # DIV/D!       LBS         Bhearwall Capacity         Capacity Evaluation:         Diss       ####       # DIV/D!       LBS         Diss         Bhearwall Capacity         Diss       ####       # DIV/D!         Diss       ####       # DIV/D!         Bhearwall Capacity         Diss       ####       # DIV/D!         Bhearwall Capacity         Diss       ####         Diss         Diss       # ###         Diss         Diss         Diss         Diss         Fastened W/ BD Nails at 6 <sup>o</sup> D.c. Panel edges & 12 <sup>o</sup> D.c. Panel field - UNBLOC  |
| SHEARWALL PROPERTIES:         WALL HEIGHT, H       D.D       FT.       MAX WALL OPENING HT, HC       D.D       FT.         WALL LENGTH, L       D.D       FT.       QUALIFYING WALL LENGTH, L       D.D       FT.       SHEARWALL ASSEMBLY       PD         CAPACITY EVALUATION:         TOTAL SHEAR LOAD ON WALL       Allowable Shearwall Capacity         D       LBS       ####       #DIV/D!       LBS         SHEARWALL CASSEMBLY SPECIFICATION         PD - 1-SIDE 7/16" DSB         FASTENED W/ 8D NAILS AT 6"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - UNBLOCKED #DIV/D!  |
| SHEARWALL PROPERTIES:         Wall HEIGHT, H       D.D       FT.       MAX WALL DPENING HT, HC       D.D       FT.         Wall LENGTH, L       D.D       FT.       QUALIFYING WALL LENGTH, L       D.D       FT.       SHEARWALL ASSEMBLY       PD         CAPACITY EVALUATION:         TOTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY         D       LBS       ####       #DIV/D!       LBS         SHEARWALL CAPACITY         DIVID!       LBS         SHEARWALL CAPACITY         DIVID!         Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan= 4###         Main for the steam colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan= 4###         DIVID!       LBS         FO - 1-SIDE 7/16" DSB         FASTENCE W/ BD NAILS AT 6"D.C. PANEL EDES & 12"D.C. PANEL FIELD - UNBLOCKED   |
| SHEARWALL PROPERTIES:         Wall Height, H       0.0       FT.       Max wall opening ht, Ho       0.0       FT.       Shearwall Assembly       PO         CAPACITY Evaluation:         Total Shear Load On Wall       0.0       FT.       Shearwall Capacity         Diss       ####       #DIV/O!       LBS         Diss       ####       #DIV/O!       LBS         Dist Provide the second of the seco |
| SHEARWALL PROPERTIES:         Wall HeißHT, H       D.O.FT.         Wall Lenoth, L       D.O.FT.         SHEARWALL ASSEMBLY       PO         CAPACITY EVALUATION:       Total Shear Load DN Wall       Allowable Shearwall Capacity         Image: Diss       ####       #DIV/D!         Image: Diss       Biss       Biss         Image: Diss       Biss       Biss         Image: Diss       Diss       Biss         Image: Diss       Diss       Biss         Image: Diss       Biss       Biss         Image: Diss       Bis   |

# DESIGN BUILT HOMES

## 86TH AVE SE

MERCER ISLAND, WA

### SHEAR WALL CALCULATIONS - SEISMIC

REVIEWED BY: RJZ

September 7, 2022

<u>Parameters:</u>

SINGLE FAMILY HOME

DESIGN WIND SPEED: 100 MPH

WIND EXPOSURE CATEGORY: B

Seismic Design Category: D

CODE & DESIGN STANDARD: 2018 IBC CH. 1609, ASCE 7-16 CH. 26-30





M&K PROJECT #: 244-22008

ENDINEER: 401

DATE: 25-Aug-22

#### SEISMIC CALCULATION - ASCE 7-16







- 1. PLATE HEIGHT @ CLERESTORY IS 15'-1", U.N.O.
- PLATE HEIGHT @ MAIN FLOOR IS 11'-0", U.N.O. PLATE HEIGHT @ LOWER FLOOR IS 10'-1" U.N.P.
- 2. DIMENSION LINES ARE TO FACE OF STUD U.N.O.
- WINDOW SIZES & ROUGH OPENINGS TO BE VERIFIED BY CONTRACTOR.
   WINDOW HEAD HEIGHT AT MAIN FLOOR IS 8'-O" ABOVE
- SUBFLOOR, U.N.O. IF NOMINAL DOOR AND WINDOW HEIGHTS ARE SIMILAR, COORDINATE WITH DOOR AND WINDOW SPEC'S TO LOCATE FINAL ELEVATION OF THE HEAD HEIGHTS SO THAT ALL DOOR AND WINDOW TRIM ALIGN. 5. WINDOW AND DOOR SIZES ARE DIMENSIONED IN FEET AND
- INCHES (E.G. 2828= 2'-8"W X 2'-8"H) 6. EXTERIOR WALLS TO BE 2X6 STUDS AT 16" O.C., INTERIOR
- WALLS TO BE 2X4 STUDS AT 16" O.C., U.N.O.
- FIREBLOCK ALL PLUMBING PENETRATIONS AND STAIR RUNS PER IRC SEC. R302.11.
   SAFETY GLAZING PER IRC SEC. R308.4.
- 9. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE
- TREATED PER IRC SEC. R317.1. 10. PROVIDE UNDER-STAIR PROTECTION (1/2" GWB) PER IRC SEC
- R302.7.
  11. PROVIDE (1) LAYER OF 1/2" GWB AT THE GARAGE SIDE OF ALL WALLS SEPARATING THE GARAGE FROM THE RESIDENCE, ALL WALLS SUPPORTING A FLOOR CEILING ASSEMBLY BETWEEN THE GARAGE AND RESIDENCE, AND BETWEEN THE GARAGE AND ITS ATTIC. PROVIDE (1) LAYER 5/8" TYPE X GWB TO GARAGE CEILING IF BELOW HABITABLE ROOMS.
- 12. HOUSE/GARAGE DOOR SHALL BE 1-<sup>3</sup>/<sub>8</sub>" THICK WOOD SOLID CORE, OR 1-<sup>3</sup>/<sub>8</sub>" THICK SOLID OR HONEYCOMB CORE STEEL DOOR, OR 20-MINUTE RATED FIRE DOOR W/ SELF CLOSING DEVICE.
- DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS AND CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE MIN. 26 GUAGE GALVANIZED STEEL.
   PER IRC SEC R311.7.5. MAX. RISER HEIGHT SHALL BE 7-3/4". MIN. TREAD DEPTH SHALL BE 10". STAIR NOSINGS: 3/4" MIN.,
- 1-1/4" MAX. RADIUS @ LEADING EDGE OF TREAD: 9/16" MAX. 15. PROV HAND 1.85k (50%) S THAN 34" OR MORE THAN 38"
- ABOV CONT R311. R311. R311.7.7.3.
- 16. PROVIDE GUARDS (MIN. 36" HEIGHT) IN LOCATIONS PER IRC SEC. R312.
  17. FACTORY BUILT FIREDUACES & CHIMMEYS SHALL BE LISTED \$
- 17. FACTORY BUILT FIREPLACES & CHIMNEYS SHALL BE LISTED & LABELED AND SHALL BE INSTALLED & TERMINATED IN ACCORDANCE TO THE CONDITIONS OF THE LISTINGS. FACTORY BUILT FIREPLACES SHALL MEET EMISSION STANDARDS PER CH. 51-51 WAC.
- 18. PROVIDE EXTERIOR AIR SUPPLY TO ANY FACTORY-BUILT FIREPLACE PER IRC SEC R1006.









86TH AVE SE

M&K PROJECT #: 244-22008

ENGINEER: JCL Date: 07-Sep-22

| SHEARWALL  | 201: 2ND - REAR EXT BONUS / MASTER  |
|--|---|
| SHEARWALL PROPER   | ITIES:  |
| WALL HEIGHT, H<br>Wall Length, L   | 9.1     FT.     Max wall opening ht, H <sub>c</sub> 7.5     FT.       32.5     FT.     Qualifying Wall Length, L     21.3     FT.     Shearwall Assembly     P1   |
| CAPACITY EVALUATI  | אב  |
|  | TOTAL SHEAR LOAD ON WALL   ALLOWABLE SHEARWALL CAPACITY     2800   LBS  |
|  | SHEARWALL ASSEMBLY SPECIFICATION  |
|  | P1 - 1-SIDE 7/16 <sup>®</sup> DSB<br>Fastened w/ 8d nails at 6 <sup>®</sup> 0.c. panel edges & 12 <sup>®</sup> 0.c. panel field - edges blocked<br><u>ADEQUATE</u>  |
|  |   |
| RESISTIVE DL   | Dation:       200     plf     Overturning Moment     25.5     K-FT     Hold Down Design Load     0     lbs       200     lbs     Resistive Moment     50.5     K-FT     Holdown Capacity     0     lbs  |
|  | HOLD-DOWN SPECIFICATION   |
|  | No Holdown Required   |
| l  |   |
|  |   |
|  |   |
| SHEARWALL  | <b>202:</b> 2ND - FRONT EXT BED 2 / 3   |
| SHEARWALL<br>SHEARWALL PROPER  | <b>202:</b> 2ND - FRONT EXT BED 2 / 3   |
| SHEARWALL<br>Shearwall Proper<br>Wall height, H<br>Wall length, L  | 202:       2ND - FRONT EXT BED 2 / 3         ATIES:       9.1         9.1       FT.         MAX WALL OPENING HT, HC       5.0         33.2       FT.         QUALIFYING WALL LENGTH, L       17.5         FT.       SHEARWALL ASSEMBLY  |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATION   | 202: 2ND - FRONT EXT BED 2 / 3<br>TIES:<br>9.1 FT. MAX WALL OPENING HT, HC 5.0 FT.<br>33.2 FT. QUALIFYING WALL LENGTH, L 17.5 FT. SHEARWALL ASSEMBLY P1<br>DN:  |
| SHEARWALL<br>Shearwall Proper<br>Wall Height, H<br>Wall Length, L<br>Capacity Evaluation   | 202: 2ND - FRONT EXT BED 2 / 3         STIES:         9.1       FT. MAX WALL OPENING HT, HC         33.2       FT. QUALIFYING WALL LENGTH, L         TOTAL SHEAR LOAD ON WALL         Allowable Shearwall Capacity         2800       LBS         4198       LBS  |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATION   | 202: 2ND - FRONT EXT BED 2 / 3         STIES:         9.1       FT. MAX WALL OPENING HT, HC         33.2       FT. QUALIFYING WALL LENGTH, L         17.5       FT. SHEARWALL ASSEMBLY         P1         PN:         TOTAL SHEAR LOAD ON WALL         2800         LBS         SHEARWALL ASSEMBLY SPECIFICATION  |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATION   | 202: 2ND - FRONT EXT BED 2 / 3         TIES:         9.1       FT. MAX WALL OPENING HT, HC       5.0         33.2       FT. QUALIFYING WALL LENGTH, L       17.5         SN:       TOTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY         2800       LBS       4198         BHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16"       SB         FASTENED W/ 8D NAILS AT 6"0.0. PANEL EDGES & 12"0.0. PANEL FIELD - EDGES BLOCKED         ADEQUATE  |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATION   | 202: 2ND - FRONT EXT BED 2 / 3         9.1       FT. MAX WALL OPENING HT, HC         9.1       FT. QUALIFYING WALL LENGTH, HC         9.1       FT. QUALIFYING WALL LENGTH, HC         9.1       TOTAL SHEAR LOAD ON WALL         17.5       FT. SHEARWALL ASSEMBLY         P1         P1         2800       LBS         LBS       4198         LBS         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16"         P1 - 1-SIDE 7/16"         SB         ADEQUATE  |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATION<br>OVERTURNING EVAL   | 202: 2ND - FRONT EXT BED 2 / 3         STIES:         9.1       FT.   |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATION<br>CAPACITY EVALUATION<br>COVERTURNING EVALUATION<br>RESISTIVE DL<br>DL AT ENDS OF WALL | 202: 2ND - FRONT EXT BED 2 / 3         TITES:         9.1       FT.         9.1       FT.         MAX WALL OPENING HT, HC       5.0         33.2       FT. QUALIFYING WALL LENGTH, L         17.5       FT.         Shearwall Assembly       P1         DNI       Allowable Shearwall Capacity         2B00       LBS         2B00       LBS         2B00       LBS         2B00       LBS         Allowable Shearwall Capacity         2B00       LBS         Allowable Shearwall Capacity         2B00       LBS         Allowable Shearwall Capacity         Allowable Shearwall Capacity         BS       P1 - 1-SIDE 7/16" OSB         Fastened w/ 8D NAILS AT 6"0.C. PANEL EDGES & 12"0.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE         DITION:         200       PLF         201       PLF         202       PLF         203       PLF         203       PLF         203       PLF         203       PLF         203       PLF         204       PLF         205       K-FT  |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATION<br>COMMENTION OF COMMENT<br>DUAT ENDS OF WALL   | 202: 2ND - FRONT EXT BED 2 / 3         MILESI:         9.1       FT.         9.1       FT.         MAX WALL OPENING HT, HC       5.0       FT.         33.2       FT.       QUALIFYING WALL LENGTH, L       17.5       FT.         33.2       FT.       QUALIFYING WALL LENGTH, L       17.5       FT.       SHEARWALL ASSEMBLY       P1         OTTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY         2800       LBS       4198       LBS         SHEARWALL CAPACITY         2800       LBS       4198       LBS         DETAIL SHEAR LOAD ON WALL         P1 - 1-SIDE 7/16" OSB         FASTENED W/ BD NAILS AT 6"0.0, PANEL EDGES & 12"0.0, PANEL FIELD - EDGES BLOCKED         DEQUATE         DYERT URNING MOMENT       25.5       K-FT       HOLD DOWN DESIGN LOAD       0       LBS         LOTTON:         200       PLF       OVERTURNING MOMENT       25.5       K-FT       HOLD DOWN DESIGN LOAD       0       LBS         LOUD PLF       OVERTURNING MOMENT       25.6       K-FT       HOLDOWN CAPACITY       0       LBS  |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATION<br>COVERTURNING EVAL<br>RESISTIVE DL<br>DL AT ENDS OF WALL                              | 202: 2ND - FRONT EXT BED 2 / 3         ITIES:         9.1       FT. MAX WALL OPENING HT, HC       5.0       FT.         33.2       FT. QUALIFYING WALL LENGTH, L       17.5       FT. SHEARWALL ASSEMBLY       P1         INI       ITIEL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY       2000       LBS       4 198       LBS         INI       ITIEL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY       2000       LBS       4 198       LBS         Shearwall Assembly       IS       IS       4 198       LBS       IS         DIAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY       2000       LBS       4 198       LBS         Shearwall Assembly       IS       ALLOWABLE SHEARWALL CAPACITY       IS       IS       IS         JUIN       MALE AS 650.0. PANEL FIELD SHEARWALL CAPACITY       IS       IS       IS       IS         JUIN       MALE AS 650.0. PANEL FIELS IS IN ANDING MOMENT       IS       IS       IS       IS       IS         JUIN       MALE ASSEMBLY       MOMENT       IS       IS       IS       IS       IS       IS       IS         JUIN       MALE ASSEMBLY       MOMENT       IS       IS       IS       IS       IS |



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Engineer: JCL Date: 07-Sep-22

| DATE: | UV-SEP |
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| SHEARWALL 2ND - SIDE EXT STAIRS   |
|---|
| SHEARWALL PROPERTIES:   |
| Wall Height, H     9.1     FT.     Max wall opening ht, H <sub>o</sub> 0.0     FT.       Wall Length, L     7.0     FT.     Qualifying Wall Length, L     7.0     FT.     Shearwall Assembly     P1   |
| CAPACITY EVALUATION:  |
| TOTAL SHEAR LOAD ON WALL   Allowable Shearwall Gapacity     1400   LBS  |
| SHEARWALL ASSEMBLY SPECIFICATION  |
| P1 - 1-SIDE 7/16" DSB<br>Fastened w/ 8d nails at 6"d.c. panel edges & 12"d.c. panel field - edges blocked<br><u>ADEQUATE</u>  |
|   |
| DVERTURNING EVALUATION:         Resistive DL       134       PLF       Overturning Moment       12.7       K-FT       Hold Down Design Load       1429       LBS         DL at ends of wall       400       LBS       Resistive Moment       2.7       K-FT       Hold down Capacity       1705       LBS   |
| HOLD-DOWN SPECIFICATION   |
| SIMPSON CS16 STRAP TIE (14" END LENGTH)   |
|   |
|   |
| SHEARWALL XXX: - NOT USED   |
| SHEARWALL PROPERTIES:   |
| Wall height, H     D.D     FT.     Max wall opening ht, Hc     D.D     FT.       Wall Length, L     D.D     FT.     Qualifying Wall Length, L     D.D     FT.     Shearwall Assembly     PD   |
| GAPACITY EVALUATION:  |
| TOTAL SHEAR LOAD ON WALL ALLOWABLE SHEARWALL GAPACITY   |
|   |
| SHEARWALL ASSEMBLY SPECIFICATION  |
| SHEARWALL ASSEMBLY SPECIFICATION         PD - 1-SIDE 7/16" DSB         FASTENED W/ 8D NAILS AT 6"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - UNBLOCKED         #DIV/01   |
| SHEARWALL ASSEMBLY SPECIFICATION         PO - 1-SIDE 7/16" OSB         FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED         #DIV/O!   |
| SHEARWALL ASSEMBLY SPECIFICATION         PD - 1-SIDE 7/16" DSB         FASTENED W/ 8D NAILS AT 6"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - UNBLOCKED         #DIV/01   |
| SHEARWALL ASSEMBLY SPECIFICATION         PD - 1-SIDE 7/16" DSB         FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED <b>DVERTURNING EVALUATION:</b> RESISTIVE DL       PLF       OVERTURNING MOMENT       #DIV/O!         DL AT ENDS OF WALL       D       LBS       RESISTIVE MOMENT       #DIV/O!       K-FT       HOLD DOWN DESIGN LOAD       D       LBS   |
| SHEARWALL ASSEMBLY SPECIFICATION         PO - 1 - SIDE 7/16" OSB         FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED         #DIV/DI         OVERTURNING EVALUATION:         RESISTIVE DL         OPUT       PLF       OVERTURNING MOMENT       #DIV/01       K-FT       Hold Down Design Load       O       LBS         DL AT ENDS OF WALL       O       LBS       RESISTIVE MOMENT       #DIV/01       K-FT       Hold Down Capacity       O       LBS   |
| SHEARWALL ASSEMBLY SPECIFICATION         PD - 1-SIDE 7/16" OSB         FASTENED W/ BD NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED         #DIV/OI         OVERTURNING EVALUATION:         RESISTIVE DL         OL AT ENDS OF WALL       O         OL BS       RESISTIVE MOMENT         HOLDOWN SPECIFICATION         NO HOLDOWN REQUIRED |



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| SHEARWALL  | 204: 2ND - SIDE EXT MASTER BEDROOM  |
|--|---|
| SHEARWALL PROPE  | RTIES:  |
| Wall height, H<br>Wall Length, L   | 9.1     FT.     Max wall opening ht, H <sub>c</sub> 2.0     FT.       16.3     FT.     Qualifying Wall Length, L     12.3     FT.     Shearwall Assembly     P1   |
| CAPACITY EVALUATI  |   |
|  | Total Shear Load on Wall     Allowable Shearwall Capacity       600     LBS   |
|  | SHEARWALL ASSEMBLY SPECIFICATION  |
|  | P1 - 1-SIDE 7/16 <sup>®</sup> OSB<br>Fastened w/ 8d nails at 6 <sup>®</sup> 0.c. panel edges & 12 <sup>®</sup> 0.c. panel field - edges blocked<br><u>ADEQUATE</u>  |
| OVERTURNING EVAL   |   |
| RESISTIVE DL<br>DL AT ENDS OF WALL   | 134     plf     Overturning Moment     5.5     K-FT     Hold Down Design Load     O     les       50     lbs     Resistive Moment     8.3     K-FT     Holdown Capacity     O     lbs   |
|  |   |
|  |   |
|  |   |
|  |   |
|  |   |
|  |   |
| SHEARWALL  | 205: 2ND - SIDE EXT/INT BONUS TO BED 3  |
| SHEARWALL<br>Shearwall Prope   | 205: 2ND - SIDE EXT/INT BONUS TO BED 3  |
| SHEARWALL<br>Shearwall Proper<br>Wall height, H<br>Wall length, L  | 205:       2ND - SIDE EXT/INT BONUS TO BED 3         STIES:       9.1         FT.       Max wall opening ht, Hc         8.0       FT.         40.5       FT.         QUALIFYING WALL LENGTH, L       33.0   |
| SHEARWALL<br>Shearwall Prope<br>Wall height, H<br>Wall Length, L<br>Capacity Evaluati  | 205:       2ND - SIDE EXT/INT BONUS TO BED 3         STIES:       9.1         9.1       FT.         40.5       FT.         QUALIFYING WALL LENGTH, L       33.0         FT.       Shearwall Assembly         P1   |
| SHEARWALL<br>Shearwall Proper<br>Wall Height, H<br>Wall Length, L<br>Capacity Evaluati   | 205:     2ND - SIDE EXT/INT BONUS TO BED 3       STIES:       9.1     FT.       40.5     FT.       QUALIFYING WALL LENGTH, L     33.0       FT.     SHEARWALL ASSEMBLY       P1   ON:       TOTAL SHEAR LOAD ON WALL   Allowable Shearwall Capacity       1300     LBS  |
| SHEARWALL<br>Shearwall Prope<br>Wall height, H<br>Wall Length, L<br>Gapacity Evaluati  | 205: 2ND - SIDE EXT/INT BONUS TO BED 3         STIES:         9.1       FT.         40.5       FT.         40.5       FT.         GUALIFYING WALL LENGTH, L       B.D         DN:       Allowable Shearwall Capacity         1300       LBS         SHEARWALL ASSEMBLY       SHEARWALL CAPACITY   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATI  | 205: 2ND - SIDE EXT/INT BONUS TO BED 3         STIES:         9.1       FT.         40.5       FT.         QUALIFYING WALL LENGTH, L       B.0         33.0       FT.         SHEARWALL ASSEMBLY       P1         DN:       ALLOWABLE SHEARWALL CAPACITY         1300       LBS         SHEARWALL CAPACITY         1300       LBS         P1 - 1-SIDE 7/16"         DSE         FASTENED W/ BD NAILS AT 6"0.C. PANEL EDGES & 12"0.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATI  | 205:       2ND - SIDE EXT/INT BONUS TO BED 3         STIES:       9.1       FT.         9.1       FT.       MAX WALL OPENING HT, HC       8.0       FT.         40.5       FT.       QUALIFYING WALL LENGTH, L       33.0       FT.       SHEARWALL ASSEMBLY       P1         ON:         TOTAL SHEAR LOAD ON WALL         1300       LBS       7915       LBS         SHEARWALL CAPACITY         1300       LBS       7915       LBS         DESENSE         DITAL SHEAR LOAD ON WALL         1300       LBS       7915       LBS         DITAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         1915         DITAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         1915         DITAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         DITAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         DITAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         ALLOWABLE SHEARWALL CAPACITY         DIT |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATI  | 205: 2ND - SIDE EXT/INT BONUS TO BED 3         STIES:         9.1       FT.         9.1       FT.         40.5       FT.         QUALIFYING WALL LENGTH, L       33.0         STE       SHEARWALL ASSEMBLY         P1         DN:         TOTAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         1300       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16"         P1 - 1-SIDE 7/16"         DSE         ASTENED W/ BD NAILS AT 6"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - EDGES BLOCKED ADEQUATE  |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATION<br>COVERTURNING EVAL<br>RESISTIVE DL<br>DL AT ENDS OF WALL             | 205: 2ND - SIDE EXT/INT BONUS TO BED 3         STIES:         9.1       FT. MAX WALL OPENING HT, HC         40.5       FT. QUALIFYING WALL LENGTH, L         33.0       FT. SHEARWALL ASSEMBLY         91       TOTAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         1300       LBS         P1 - 1-SIDE 7/16"       DSB         FASTENED W/ BD NAILS AT 6"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE  |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>GAPACITY EVALUATION<br>COVERTURNING EVAL   | 205: 2ND - SIDE EXT/INT BONUS TO BED 3         TIES:         9.1       Tr. MAX WALL OPENING HT, HC         9.1       Tr. MAX WALL OPENING HT, HC         40.5       FT. QUALIFYING WALL LENGTH, L         33.0       FT.         Shearwall Assembly       P1  |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT<br>CAPACITY EVALUAT<br>MARKING EVAL<br>RESISTIVE DL<br>DL AT ENDS OF WALL | 205: 2ND - SIDE EXT/INT BONUS TO BED 3         STIES:         9.1       FT. MAX WALL OPENING HT. HC         9.1       FT. MAX WALL OPENING HT. HC         9.1       FT. QUALIFYING WALL LENGTH, L         9.1       FT. QUALIFYING WALL LENGTH, L         9.1       TOTAL SHEAR LOAD ON WALL         1300       LBS         1300       LBS         9.1       TOTAL SHEAR LOAD ON WALL         1300       LBS         1300       LBS         1300       LBS         9.1       1.1.8         KET       HOLD DOWN DESIGN LOAD         131       DVERTURNING MOMENT         132       LFT         133       DVERTURNING MOMENT         133       KFT         MILDOWN DESIGN LOAD       LBS         HOLD DOWN DESIGN LOAD       LBS         HOLDOWN SPECIFICATION       LBS         HOLDOWN SPECIFICATION       LBS         HOLDOWN REQUIRED       LBS   |



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| SHEARWALL  | <b>206:</b> 2ND - SIDE EXT BED 4   |     |
|--|--|-----|
|  |  |     |
| OREARWALL PROFE  |  |     |
| WALL HEIGHT, H   | 9.1 FT. MAX WALL OPENING HT, H <sub>c</sub> 5.0 FT.  | 1   |
| WALL LENGTH, L   | 20.5 FI. QUALIFFING WALL LENGIH, L 21.5 FI. SHEARWALL ASSEMBLY FI  |     |
| CAPACITY EVALUAT   | <u>'ION:</u>   |     |
|  | TOTAL SHEAR LOAD ON WALL ALLOWABLE SHEARWALL CAPACITY  |     |
|  | 600 LBS <b>&lt;</b> 5157 LBS   |     |
|  | SHEARWALL ASSEMBLY SPECIFICATION   |     |
|  | P1 - 1-SIDE 7/16" OSB  |     |
|  | fastened w/ Bd nails at $6^{"}$ d.c. panel edges & $12^{"}$ d.c. panel field - edges blocked   |     |
|  | ADEQUATE   |     |
|  |  |     |
| OVERTURNING EVA  | LUATION:   |     |
| RESISTIVE DL   | 170 PLF OVERTURNING MOMENT 5.5 K-FT HOLD DOWN DESIGN LOAD O  | LBS |
| L AT ENDS OF WALL  | 400 LBS RESISTIVE MOMENT 31.6 K-FT HOLDOWN CAPACITY O  | LBS |
|  |  |     |
|  | HOLD-DOWN SPECIFICATION  |     |
|  |  |     |
|  | No Holdown Required  |     |
|  |  |     |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H                                       | 207: 2ND - SIDE INT BONUS<br>ERTIES:<br>9.1 FT. Max wall opening ht, Hc 0.0 FT.<br>20.5 FT. Divergent Lange to 10.5 FT.  |     |
| SHEARWALL<br>Shearwall Prope<br>Wall height, H<br>Wall length, L                     | 207:       2ND - SIDE INT BONUS         ERTIES:       9.1         9.1       FT.         Max wall opening ht, Hc       0.0         20.5       FT.         Shearwall Assembly       P1   | ]   |
| SHEARWALL<br>Shearwall Prope<br>Wall height, H<br>Wall Length, L<br>Capacity Evaluat | 207:       2ND - SIDE INT BONUS         ERTIES:       9.1         9.1       FT. MAX WALL OPENING HT, HC         20.5       FT. QUALIFYING WALL LENGTH, L         20.5       FT. QUALIFYING WALL LENGTH, L         10N:   | ]   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT | 207:       2ND - SIDE INT BONUS         ERTIES:       9.1         9.1       FT.         9.1       FT.         9.1       FT.         QUALIFYING WALL LENGTH, L       QU.5         ION:       ALLOWABLE SHEARWALL CAPACITY   | ]   |
| SHEARWALL<br>Shearwall Prope<br>Wall Height, H<br>Wall Length, L<br>Gapacity Evaluat | 207:     2ND - SIDE INT BONUS       ERTIES:     9.1       9.1     FT.       9.1     FT.       QUALIFYING WALL LENGTH, L     20.5       IDTAL SHEAR LOAD ON WALL     ALLOWABLE SHEARWALL DAPACITY       1700     LBS  | ]   |
| SHEARWALL<br>Shearwall Prope<br>Wall height, H<br>Wall length, L<br>Capacity Evaluat | NO HOLDOWN REQUIRED         207: 2ND - SIDE INT BONUS         ERTIES:         9.1       FT.         1700       LBS         5       4917         1700       FT.         5       4917         5       5         5       5         6  | ]   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT | No Holdown Required         207: 2ND - Side INT BONUS         ERTIES:         9.1       FT.       MAX WALL OPENING HT, HC       D.O       FT.         20.5       FT.       QUALIFYING WALL LENGTH, L       D.O       FT.         SHEARWALL ASSEMBLY       P1         ION:         TOTAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         1700       LBS       4917       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16 <sup>®</sup> DSB   | ]   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT | NO HOLDOWN REQUIRED         207: 2ND - SIDE INT BONUS         ERTIES:         9.1       FT.       MAX WALL OPENING HT, HC       D.O       FT.         20.5       FT.       QUALIFYING WALL LENGTH, L       D.O       FT.         SHEARWALL ASSEMBLY       P1         ION:         SHEARWALL COPACITY         1700       LBS        4917       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16 <sup>6</sup> OSB         FASTENED W/ 8D NAILS AT 6 <sup>6</sup> O.C. PANEL EDGES & 12 <sup>6</sup> O.C. PANEL FIELD - EDGES BLOCKED  | ]   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT | No Holdown Required         207: 2ND - Side INT BONUS         ERTIES:         9.1       FT.       Max Wall OPENING HT, HC       D.0       FT.         20.5       FT.       QUALIFYING WALL LENGTH, L       D.0       FT.         20.5       FT.       QUALIFYING WALL LENGTH, L       D.0       FT.         SHEARWALL CAPACITY         10N:         TOTAL SHEAR LOAD ON WALL       Allowable Shearwall Capacity         1700       LBS       4917       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16" OSB         FASTENED W/ BD NAILS AT 6"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE   | ]   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT | NO HOLDOWN REQUIRED         207: 2ND - SIDE INT BONUS         ERTIES:         9.1       FT.       MAX WALL OPENING HT, HC       D.O       FT.         20.5       FT.       QUALIFYING WALL LENGTH, L       D.O       FT.         20.5       FT.       QUALIFYING WALL LENGTH, L       D.O       FT.         SHEARWALL ASSEMBLY       P1         TOTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL DAPADITY         1700       LBS       4917       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16" DSB         FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE   | ]   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT | 207:       2ND - SIDE INT BONUS         9.1       FT.         9.1       FT.         20.5       FT.         QUALIFYING WALL OPENING HT, HC       D.D         PT.       PT.         20.5       FT.         QUALIFYING WALL LENGTH, L       2D.5         PI       PI         10N:       ALLOWABLE SHEARWALL CAPACITY         17DD       LBS         SHEARWALL ASSEMBLY       PI         17DD       LBS         PI - 1-SIDE 7/16"       DSB         FASTENED W/ 8D NAILS AT 6"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE  | ]   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT | NO HOLDOWN REQUIRED         207: 2ND - SIDE INT BONUS         ERTIES:         9.1       FT.         20.5       FT.         9.1       FT.         20.5       FT.         9.1       FT.         20.5       FT.         9.1       PT.         20.5       FT.         9.1       PT.         1700       LBS         Allowable Shearwall Capacity         1700       LBS         Shearwall Capacity         1700       LBS         Allowable Shearwall Capacity         1700       LBS         Allowable Shearwall Capacity         1700       LBS         Shearwall Assembly Specification         P1 - 1-side 7/16" OSB         FASTENED W/ 8D NAILS AT 6"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE  | ]   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT | No Holdown Required         207: 2ND - SIDE INT BONUS         ERTIES:         9.1       FT.         9.1       FT.         20.5       FT.         QUALIFYING WALL LENGTH, L       20.5         20.5       FT.         SHEARWALL ADDO DN WALL       ALLOWABLE SHEARWALL DAPADITY         1700       LBS         SHEARWALL ABSEMBLY P1         ION:         DIFT.         DIFT.         SHEARWALL ABSEMBLY P1         IBS         SHEARWALL ABSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16" OSB         FASTENED W/ BD NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE         LUATION:         134         OVERTURNING MOMENT         15.5         HOLD DOWN DESIGN LOAD         OVERTURNING MOMENT         15.5         HOLD DOWN DESIGN LOAD         OVERTURNING MOMENT         18.2   |     |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT | NO HOLDOWN REQUIRED         20.7: 2ND - SIDE INT BONUS         ERTIES:         9.1       FT.         9.1       FT.         20.5       FT.         QUALIFYING WALL LENGTH, L       20.5         ERTIES:         9.1       FT.         9.1       FT.         20.5       FT.         QUALIFYING WALL LENGTH, L       20.5         TOTAL SHEAR LOAD ON WALL         TOTAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         1700       LBS         SHEARWALL ABSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16" OSB         FASTENED W/ 8D NAILS AT 6"0.0. PANEL EDGES & 12"0.0. PANEL FIELD - EDGES BLOCKED         ADEQUATE         LUATION:         134       PLF         OVERTURNING MOMENT         15.5       K-FT         Hold DOWN DESIGN LDAD         OVERTURNING MOMENT         134       PLF         OVERTURNING MOMENT         15.5       K-FT         Holdown Design LDAD         OVERTURNING MOMENT <td></td> |     |



86TH AVE SE

M&K PROJECT #: 244-22008

ENGINEER: JCL DATE: 07-Sep-22

| DATE: U/SEP-22  |
|---|
| SHEARWALL DESIGN SUMMARY  |
| SHEARWALL XXX: - NOT USED   |
| SHEARWALL PROPERTIES:   |
| Wall Height, H       D.O       FT.       Max wall opening ht, H <sub>c</sub> D.O       FT.         Wall Length, L       D.O       FT.       Qualifying Wall Length, L       D.O       FT.       Shearwall Assembly       PO           |
| CAPACITY EVALUATION:  |
| TOTAL SHEAR LOAD ON WALL ALLOWABLE SHEARWALL CAPACITY   |
| SHEARWALL ASSEMBLY SPECIFICATION  |
| PO - 1-SIDE 7/16" OSB<br>Fastened w/ 8d nails at 6"d.c. panel edges & 12"d.c. panel field - UNBLOCKED<br><u>#DIV/0!</u>   |
|   |
| OVERTURNING EVALUATION:   |
| RESISTIVE DL     O     PLF     OVERTURNING MOMENT     #DIV/O!     K-FT     Hold Down Design Load     O     LBS       DL AT ENDS OF WALL     O     LBS     RESISTIVE MOMENT     O.O     K-FT     Hold Down Capacity     O     LBS      |
| Hold-down Specification   |
| No Holdown Required   |
|   |
|   |
| SHEARWALL 101: 1st - FRONT EXT DINING / PDR   |
|   |
| SHEARWALL PROPERTIES:   |
| Wall height, H     10.1     FT.     Max wall opening ht, Hc     0.0     FT.       Wall Length, L     3.9     FT.     Shearwall Assembly     P3  |
|   |
| GAPAGITY EVALUATION:  |
| TOTAL SHEAR LOAD ON WALL ALLOWABLE SHEARWALL GAPACITY   |
|   |
| SHEARWALL ASSEMBLY SPECIFICATION  |
| P3 - 1-side 7/16" OSB<br>fastened w/ 8d nails at 3"o.c. panel edges & 12"o.c. panel field - edges blocked   |
| ADEQUATE  |
|   |
|   |
| RESISTIVE DL     450     PLF     OVERTURNING MOMENT     16.4     K-FT     Hold Down Design Load     3498     LBS       DL AT ENDS OF WALL     700     LBS     RESISTIVE MOMENT     2.8     K-FT     Holdown Capacity     3695     LBS |
|   |
| HOLD-DOWN SPECIFICATION   |
| SIMPSON STHD14RJ HOLDOWN  |
|   |



86TH AVE SE

M&K PROJECT #: 244-22008

ENGINEER: JCL DATE: 07-SEP-22

| SHEARWALL | DESIGN | SUMMARY |  |
|-----------|--------|---------|--|
|           |        |         |  |

| SHEARWALL 1ST - FRONT EXT PDR / OFFICE   |
|--|
| SHEARWALL PROPERTIES:  |
| Wall Height, H 10.1 ft. Max wall opening ht, H <sub>c</sub> 0.0 ft.<br>Wall Length, L 6.0 ft. Qualifying Wall Length, L 6.0 ft. Shearwall Assembly P3  |
| CAPACITY EVALUATION:   |
| Total Shear Load on Wall   Allowable Shearwall Capacity     2575   LBS   |
| SHEARWALL ASSEMBLY SPECIFICATION   |
| P3 - 1-side 7/16" DSB<br>fastened w/ 8d nails at 3"d.c. panel edges & 12"d.c. panel field - edges blocked<br><u>Adequate</u>   |
|  |
| DVERTURNING EVALUATION:         Resistive DL       450       plf       Overturning Moment       26.0       k-ft       Hold Down Design Load       3412       lbs         DL AT ENDS OF WALL       700       LBS       Resistive Moment       5.5       k-ft       Hold Down Capacity       3695       lbs  |
| Hold-down Specification  |
| SIMPSON STHD14RJ HOLDOWN   |
|  |
|  |
|  |
| SHEARWALL 103: 1ST - SIDE EXT STAIRS   |
| SHEARWALL 103: 1st - Side Ext Stairs<br>Shearwall Properties:  |
| SHEARWALL       103: 1st - Side Ext Stairs         SHEARWALL PROPERTIES:         Wall Height, H       10.1       FT.         Wall Length, L       7.0       FT.         Gualifying Wall Length, L       7.0       FT.  |
| SHEARWALL       103: 1st - Side Ext Stairs         SHEARWALL PROPERTIES:         Wall Height, H       10.1         WALL LENGTH, L       10.1         FT.       QUALIFYING WALL LENGTH, L         Capacity Evaluation:  |
| SHEARWALL       103: 1st - Side Ext Stairs         Shearwall Properties:       Wall Height, H       10.1       FT.       MAX WALL OPENING HT, HC       0.0       FT.         Wall Length, L       7.0       FT.       QUALIFYING WALL LENGTH, L       7.0       FT.       Shearwall Assembly       P1         Capacity Evaluation:       Allowable Shearwall Capacity         I       1600       LBS       1679       LBS  |
| SHEARWALL       103: 1st - Side Ext Stairs         SHEARWALL PROPERTIES:       Wall Height, H       10.1       FT.       Max Wall OPENING HT, HC       0.0       FT.         Wall Length, L       7.0       FT.       Qualifying Wall Length, L       7.0       FT.         Capacity Evaluation:       Allowable Shearwall Capacity         Data Shear Load on Wall       Allowable Shearwall Capacity         Backwall Assembly       1600       LBS       1679       LBS   |
| SHEARWALL       103: 1st - Side Ext Stairs         Shearwall Properties:   |
| SHEARWALL       103: 1st - Side Ext Stairs         SHEARWALL PROPERTIES:         Wall Height, H       10.1       rt. Max wall openning ht, Hc       0.0       rt.         Wall Length, L       10.1       rt. Qualifying Wall Length, L       0.0       rt.         Shearwall Capacity       91       100       rt.       Shearwall Assembly       P1         Capacity Evaluation:         Total Shear Load on Wall       Allowable Shearwall Capacity         1600       Lbs       1679       Lbs         Shearwall Assembly Specification         P1 - 1-Side 7/16 <sup>a</sup> OSB         Fastened w/ 8D nails at 6 <sup>a</sup> 0.c. panel edges & 12 <sup>a</sup> 0.c. panel field - edges Blocked ADEQUATE  |
| SHEARWALL       103: 1ST - SIDE EXT STAIRS         SHEARWALL PROPERTIES:         WALL HEIGHT, H       10.1       FT.         MALL LENGTH, L       10.1       FT.         MALL LENGTH, L       0.0       FT.         SHEARWALL CAPACITY       0.0       FT.         MALL LENGTH, L       0.0       FT.         SHEARWALL CAPACITY       0.0       FT.         SHEARWALL CAPACITY       0.0       FT.         SHEARWALL CAPACITY       0.0       FT.         SHEARWALL CAPACITY       1600       LBS         I 1600       LBS       1679         SHEARWALL CAPACITY       1600       LBS         SHEARWALL CAPACITY       SHEARWALL CAPACITY   |
| SHEARWALL       103: 1st - Side Ext Stars         BLEARWALL PROPERTIES:         WALL HEIGHT, H       10.1       rf.         YALL LENGTH, L       10.1       rf.         Total Fr.       QUALIFYING WALL LENGTH, L       0.0       rf.         SHEARWALL CAPACITY       10.1       rf.       Max wall opening H, Ho       0.0       rf.         Yall LENGTH, L       10.1       rf.       QUALIFYING WALL LENGTH, L       7.0       rf.       Shearwall Capacity       P1         CAPACITY EVALUATION:       Total Shear Load on Wall       Allowable Shearwall Capacity       1679       uss         Description       1600       uss        1679       uss         Shearwall Basemally Specification       P1 - 1-side 7/16"       DSB       Statened w/ Bd Nails at 6"o.c. Panel edges & 12"o.c. panel field - edges blocked <u>LacQuate</u> Description       W// Bd Nails at 6"o.c. Panel edges & 12"o.c. panel field - edges blocked <u>LacQuate</u> 1306       uss         Description       294       prf       Overturning Moment       16.2       k-ff       Hold Down Design Load       1306       uss         DL at ends of y wall       1200       uss       Resistive Moment       7.0       k-ff       Holdown Capacity       3695       uss   |
| SHEARWALL       103: 1st - Side Ext Stairs         SHEARWALL PROPERTIES:         Wall Heißht, H       10.1       FT.         MAX WALL OPENING HT, HC       0.0       FT.         TO       FT.       QUALIFYING WALL LENGTH, L       0.0         TO       FT.       QUALIFYING WALL LENGTH, L       0.0       FT.         SHEARWALL ASSEMBLY       P1       1       P1         Comparison of the state of the st   |
| SHEARWALL       103: 1ST - SIDE EXT STAIRS         SHEARWALL PROPERTIES:       Wall HEIGHT, H       10.1 FT. MAX WALL OPENING HT, H0       0.0 FT.         WALL LENGTH, L       7.0 FT. QUALIFYING WALL LENGTH, L       7.0 FT. SHEARWALL ASSEMBLY       P1         DEPARTY EVALUATION:       TOTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL DAPACITY         Image: Control of the state of th |



86TH AVE SE

M&K PROJECT #: 244-22008

Engineer: JCL Date: 07-Sep-22

| SHEARWALL 104: 1st - Side Ext Great Room F.P.  |
|--|
| SHEARWALL PROPERTIES:  |
| Wall Height, H 10.1 ft. Max wall opening ht, H <sub>o</sub> 0.0 ft.<br>Wall Length, L 9.3 ft. Qualifying Wall Length, L 9.3 ft. Shearwall Assembly P3  |
| GAPAGITY EVALUATION:   |
| Total Shear Load on Wall   Allowable Shearwall Capacity     1900   LBS   |
| SHEARWALL ASSEMBLY SPECIFICATION   |
| P3 - 1-SIDE 7/16" DSB<br>Fastened w/ 8d nails at 3"d.c. panel edges & 12"d.c. panel field - edges blocked<br><u>ADEQUATE</u>   |
|  |
| Dverturning evaluation:         Resistive DL       249       plf       Overturning Moment       19.2       K-FT       Hold Down Design Load       1309       lbs         DL at ends of wall       500       lbs       Resistive Moment       7.0       K-FT       Hold Down Capacity       3695       lbs  |
| HOLD-DOWN SPECIFICATION  |
| SIMPSON STHD14RJ HOLDOWN   |
|  |
|  |
|  |
| SHEARWALL 105: 1st - Side INT GARAGE   |
| SHEARWALL 105: 1st - Side Int Garage Shearwall Properties:   |
| SHEARWALL       105:       1 ST - SIDE INT GARAGE         SHEARWALL PROPERTIES:       Wall Height, H       10.1       FT.         Wall Length, H       10.1       FT.       Max wall opening ht, Hc         Wall Length, L       30.0       FT.       Qualifying Wall Length, L       27.0       FT.   |
| SHEARWALL       105:       1 st - Side INT Garage         Shearwall Properties:       Wall height, H       10.1       FT.         Wall Length, H       10.1       FT.       Max wall opening ht, Hc       8.0       FT.         Wall Length, L       30.0       FT.       Qualifying Wall Length, L       27.0       FT.       Shearwall Assembly       P1         Capacity Evaluation:  |
| SHEARWALL       105:       1 ST - SIDE INT GARAGE         SHEARWALL PROPERTIES:       Wall Height, H       10.1       FT.         Wall Length, L       30.0       FT.       QUALIFYING WALL LENGTH, L       8.0       FT.         Capacity Evaluation:       Total Shear Load on Wall       Allowable Shearwall Capacity       91         Garage       6476       LBS  |
| SHEARWALL       105:       1 ST - SIDE INT GARAGE         SHEARWALL PROPERTIES:       Wall Height, H       10.1       FT.         Wall Length, L       30.0       FT.       Qualifying Wall Length, L       9.0       FT.         Capacity Evaluation:       Total Shear Load on Wall       Allowable Shearwall Capacity       91         Bits       6476       LBS  |
| SHEARWALL       105:       1st - Side Int Garage         Build Shearwall Properties:       Wall Height, H       10.1       FT.       Max wall Opening Ht, Hc       8.0       FT.         Wall Length, L       30.0       FT.       Qualifying Wall Length, L       27.0       FT.       Shearwall Assembly       P1         Capacity Evaluation:       Total Shear Load on Wall       Allowable Shearwall Capacity       91         Build Length       10.0       LBS       6476       LBS         Build Length       10.0       LBS       6476       LBS         Build Length       10.0       LBS       10.0       Engunde         Build Length       LBS       10.0       Engunde       Engunde         Build Length       LBS       10.0       Engunde       Engunde         Build Length       LBS   |
| SHEARWALL       105:       1 ST - SIDE INT GARAGE         SHEARWALL PROPERTIES:       WALL HEIGHT, H       10.1       FT.       MAX WALL OPENING HT, HC       B.0       FT.         WALL LENGTH, L       10.0       FT.       QUALIFYING WALL LENGTH, L       27.0       FT.       SHEARWALL ASSEMBLY       P1         CAPACITY EVALUATION:         TOTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY         3000       LBS       6476       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P1 - 1-SIDE 7/16"         P1 - 1-SIDE 7/16"         P1 - 1-SIDE 7/16"         ADEQUATE  |
| SHEARWALL       105: 1ST - SIDE INT GARAGE         Barwall Properties:       Wall Height, H       10.1       FT.       MAX WALL DPENING HT, HD       8.0       FT.         Wall Length, L       30.0       FT.       QUALIFYING WALL LENGTH, L       27.0       FT.       SHEARWALL ASSEMBLY       P1         CAPACITY EVALUATION:       TOTAL SHEAR LOAD ON WALL       Allowable Shearwall Capacity       3000       LBS       6476       LBS         Description       Big Control (BS)       Stearwall Assembly Specification       6476       LBS         Distribution       P1 - 1-Side 7/16" OSB       Fastened w/ 8d Nails at 6"0.0. PANEL Edges & 12"0.0. PANEL Field - Edges Blocked Adequate         Distribution       Correcturning Evaluation:       Resistive DL       294       P1       Overturning Moment       30.3       K-FT       Hold Down Design Load       0       LBS   |
| SHEARWALL       105: 1st - Side Int Garage         SHEARWALL       P15: 1st - Side Int Garage         SHEARWALL       10.1         SHEARWALL       10.1         Mall Height, H       10.1         30.0       FT.         Qualifying Wall Length, L       27.0         SHEARWALL       0.0         SHEARWALL       10.1         Tri       Max wall Opening HT, HC         30.0       FT.         Qualifying Wall Length, L       27.0         SHEARWALL       Carboning         Direction       P1         Shearwall Carboning       P1         Direction       Carboning Evaluation:         P1 - 1-Side 7/16"       SB         P1 - 1-Side 7/16"       SB         Fastened W/ BD Nails At 6"d.c. Panel edges & 12"d.c. Panel Field - edges Blocked <u>AbeQUATE</u> Directioning Evaluation:       P1 - 1 - Side T/16"         Resistive DL       294       P1F         Overturning Moment       30.3       K-FT         Hold Down Design Load       0       L85         DL at ends of wall       1200       L85   |
| SHEARWALL       105: 1st - Side Int Garage         BHEARWALL       P1:         SHEARWALL       P1:         Wall Height, H       10.1       rr.         Max Wall OPENING HT, H0       B.0       rr.         Wall Length, H       30.0       rr.       QUALIFYING WALL LENGTH, L       B.0       rr.         Chearwall Control       27.0       rr.       Shearwall Assembly       P1         Chearwall Control       27.0       rr.       Shearwall Assembly       P1         Chearwall Control       1000       Les       647.6       Les         Shearwall Assembly Security Evaluation:       1000       Les       647.6       Les         Shearwall Assembly Security Evaluation:       N1 - 1-Side 7/16"       S8       Security Evaluation:       N1 - 1-Side 7/16"       S8         Mastened W/ BD Nails at 6"0.0. Panel edges & 12"0.0. Panel Field - edges Blocked Accurity       Accurity Evaluation:       Accurity Evaluation:         Di at Ends of Wall       294       PLF       Overturning Moment       30.3       K-FT       Hold Down Design Load       0       Les         DL at Ends of Wall       294       PLF       Overturning Moment       30.3       K-FT       Hold Down Capacity       0       Les         D |
| SHEARWALL       105: 1st - Side Int Garage         SHEARWALL PROPERTIES:         Wall Height, H       10.1 ft. Max Wall OPENING HT, H0       8.0 ft.         Wall LENGTH, L       30.0 ft. QUALIFYING WALL LENGTH, L       27.0 ft.       SHEARWALL ASSEMBLY       P1         CAPACITY EVALUATION:         TOTAL SHEAR LOAD ON WALL         ALLOWABLE SHEARWALL DAPACITY         JOUR COLSPANSION         MULTION:         ALLOWABLE SHEARWALL DAPACITY         JOUR COLSPANSION         MALL ON WALL         JOUR COLSPANSION         JOUR COLSPANSION         ALLOWABLE SHEARWALL DAPACITY         JOUR COLSPANSION  |



86TH AVE SE

M&K PROJECT #: 244-22008

Engineer: JCL Date: 07-Sep-22

| SHEARWALL 106:   | 1st - Side Ext Guest WIC   |
|--|--|
| SHEARWALL PROPERTIES:  |  |
| WALL HEIGHT, H 10.1 FT.<br>WALL LENGTH, L 7.5 FT.  | MAX WALL OPENING HT, H <sub>0</sub> 0.0 ft.<br>Qualifying Wall Length, L 7.5 ft. Shearwall Assembly P1   |
| CAPACITY EVALUATION:   |  |
| ,  | OTAL SHEAR LOAD ON WALL     ALLOWABLE SHEARWALL CAPACITY       200     LBS       LBS     1799  |
|  | SHEARWALL ASSEMBLY SPECIFICATION   |
| FASTENED   | P1 - 1-SIDE 7/16" OSB<br>w/ 8d nails at 6"d.c. panel edges & 12"d.c. panel field - edges blocked<br><u>ADEQUATE</u>                                    |
|  |  |
| RESISTIVE DL 265 PLF<br>DL AT ENDS OF WALL 1000 LBS  | OVERTURNING MOMENT     2.0     K-FT     Hold Down Design Load     0     LBS       RESISTIVE MOMENT     6.7     K-FT     Holdown Capacity     0     LBS |
|  | Hold-down Specification  |
|  | No Holdown Required  |
|  |  |
|  |  |
| SHEARWALL 107:   | 1st - Side Int B.P. / Pan  |
|  |  |
| WALL HEIGHT, H 10.1 FT.<br>WALL LENGTH, L 20.5 FT.   | Max wall opening ht, Hc D.O ft.<br>Qualifying Wall Length, L 20.5 ft. Shearwall Assembly P1  |
| CAPACITY EVALUATION:   |  |
| r  | TOTAL SHEAR LOAD ON WALL     ALLOWABLE SHEARWALL CAPACITY       3600     LBS       LBS     4917  |
|  | SHEARWALL ASSEMBLY SPECIFICATION   |
| FASTENED   | P1 - 1-SIDE 7/16" OSB<br>w/ 8d nails at 6"d.c. panel edges & 12"d.c. panel field - edges blocked<br><u>ADEQUATE</u>                                    |
|  |  |
| DVERTURNING EVALUATION:         RESISTIVE DL       120         DL AT ENDS OF WALL       1200 | OVERTURNING MOMENT 36.4 K-FT HOLD DOWN DESIGN LOAD 680 LBS<br>RESISTIVE MOMENT 22.4 K-FT HOLDOWN CAPACITY 3695 LBS                                     |
|  | Hold-down Specification  |
|  | SIMPSON STHD14RJ HOLDOWN   |
|  |  |



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M&K Project #: 244-22008

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|  | IUB: 1st - Side Ext Garage   |
|--|--|
| SHEARWALL PROPE  | RTIES:   |
| Wall height, H<br>Wall Length, L   | 11.0     FT.     Max wall opening ht, H <sub>c</sub> 9.0     FT.       34.5     FT.     Qualifying Wall Length, L     7.5     FT.     Shearwall Assembly     P1  |
| CAPACITY EVALUAT   | <u>on:</u>   |
|  | Total Shear Load on Wall     Allowable Shearwall Capacity       1100     LBS   |
|  | SHEARWALL ASSEMBLY SPECIFICATION   |
|  | P1 - 1-SIDE 7/16 <sup>11</sup> DSB<br>Fastened W/ 8d nails at 6 <sup>11</sup> 0.c. panel edges & 12 <sup>11</sup> 0.c. panel field - edges blocked<br><u>ADEQUATE</u>  |
| OVERTURNING EVAL<br>Resistive DL<br>DL at ends of wall   | UATION:<br>150 PLF OVERTURNING MOMENT 12.1 K-FT HOLD DOWN DESIGN LOAD O LBS<br>400 LBS RESISTIVE MOMENT 46.4 K-FT HOLDOWN CAPACITY O LBS   |
|  |  |
|  |  |
|  | NO HOLDOWN REQUIRED  |
|  |  |
|  |  |
| <b>B</b> · · <b>-</b> · <b>-</b> · · · · ·   |  |
| SHEARWALL  | 109: 1st - Side Ext Great Room / Foyer   |
| SHEARWALL  | 109: 1st - Side Ext Great Room / Foyer   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L   | 109:       1st - Side Ext Great Room / Foyer         RTIES:         10.1       FT.         10.1       FT.         2.9       FT.         QUALIFYING WALL LENGTH, L       2.9         FT.       Shearwall Assembly   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>GAPACITY EVALUAT   | 109:       1st - Side Ext Great Room / Foyer         RTIES:         10.1       FT.         2.9       FT.       QUALIFYING WALL LENGTH, L         00:       CN:   |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT   | 109:       1st - Side Ext Great Room / Foyer         RTIES:         10.1       FT.         2.9       FT.       Qualifying Wall Length, L         2.9       FT.       Shearwall Assembly         P3         ON:         Total Shear Load on Wall         Allowable Shearwall Capacity         600       LBS   |
| SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT  | 109:       1st - Side Ext Great Room / Foyer         RTIES:         10.1       FT.         2.9       FT.       Gualifying Wall Length, L         2.9       FT.       Shearwall Assembly         ON:       Allowable Shearwall Capacity         600       LBS       1075         BHEARWALL ASSEMBLY Specification       1075  |
| SHEARWALL<br>SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L   | 109: 1st - Side Ext Great Room / Foyer         RTIES:         10.1       FT.         2.9       FT.         QUALIFYING WALL LENGTH, L       2.9         DN:       ALLOWABLE SHEARWALL CAPACITY         600       LBS         BS       1075         BHEARWALL ASSEMBLY SPECIFICATION         P3 - 1-Side 7/16"         P3 - 1-Side 7/16"         Concols         ADEQUATE  |
| SHEARWALL PROPE<br>Wall HEIGHT, H<br>Wall LENGTH, L<br>CAPACITY EVALUAT  | 109:       1st - Side Ext Great Room / Foyer         RTIES:         10.1       FT.         2.9       FT.         2.9       FT.         Shearwall Assembly       P3         ON:         TOTAL SHEAR LOAD ON WALL         600       LBS         LBS         SHEARWALL CAPACITY         600       LBS         DATE         BHEARWALL ASSEMBLY SPECIFICATION         P3 - 1-SIDE 7/16" OSB         FASTENED W/ 8D NAILS AT 3"0.C. PANEL EDGES & 12"0.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE   |
| SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT<br>COVERTURNING EVAL<br>RESISTIVE DL<br>DL AT ENDS OF WALL | 109: 1st - Side Ext Great Room / Foyer         RTIES:         10.1       rt.         10.1       rt.       Max Wall OPENING HT, HC       0.0       FT.         2.9       rt.       QUALIFYING WALL LENGTH, L       2.9       FT.       Shearwall Assembly       P3         ON:         TOTAL SHEAR LOAD ON WALL       Allowable Shearwall Dapacity         600       LBS       1075       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P3 - 1-SIDE 7/16" OSB         FASTENED W/ BD NAILS AT 3"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED         JATION:         USATION:         OVERTURNING MOMENT         6.1         Hold DOWN DESIGN LOAD         1913         LISS   |
| SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT<br>OVERTURNING EVAL<br>RESISTIVE DL<br>DL AT ENDS OF WALL  | 109: 1st - Side Ext Great Room / Foyer         RTIES:         10.1       FT.         2.9       FT.       Max Wall depening HT, HC       0.0       FT.         2.9       FT.       Qualifying Wall length, L       2.9       FT.       Shearwall Assembly       P3         ON:         Total Shear Load on Wall       Allowable Shearwall Capacity         600       LBS       1075       LBS         Shearwall Assembly Specification         P3 - 1-Side 7/16" OSB         Fastened W/ BD NAILS AT 3"0.0. PANEL EDGES & 12"0.0. PANEL FIELD - EDGES BLOCKED ADD ADD ADD ADD ADD ADD ADD ADD ADD A   |
| SHEARWALL PROPE<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUAT<br>OVERTURNING EVAL<br>RESISTIVE DL<br>DL AT ENDS OF WALL  | 109: 1ST - SIDE EXT GREAT ROOM / FOYER         RTIES:         10.1       FT.         2.9       FT.         QUALIFYING WALL LENGTH, L       2.9         2.9       FT.         QUALIFYING WALL LENGTH, L       2.9         ON:       600         GOD       LBS         SHEARWALL CAPACITY         600       LBS         93 - 1-SIDE 7/16"         DSB         SHEARWALL ASSEMBLY SPECIFICATION         P3 - 1-SIDE 7/16"         DSB         ASTENED W/ BD NAILS AT 3"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE         UATION:         110       PLF         DVERTURNING MOMENT       6.1         0.5       K-FT         HOLD DOWN DESIGN LOAD       1913         LBS       RESISTIVE MOMENT         0.5       K-FT         HOLDOWN CAPACITY       3695         LBS       HOLD-DOWN SPECIFICATION |



86TH AVE SE

M&K PROJECT #: 244-22008

| SHEARWALL   | 110: 1st - Front Int Dining  |  |
|---|--|--|
| SHEARWALL PROPER  | ITIES:   |  |
| Wall height, H<br>Wall Length, L  | 10.1     FT.     Max wall opening ht, H <sub>c</sub> 8.0     FT.       19.0     FT.     Qualifying Wall Length, L     16.4     FT.     Shearwall Assembly     P1   |  |
| CAPACITY EVALUATIC  | <u>SN:</u>   |  |
|   | TOTAL SHEAR LOAD ON WALL     ALLOWABLE SHEARWALL CAPACITY       3600     LBS   |  |
| 1   | SHEARWALL ASSEMBLY SPECIFICATION   |  |
|   | P1 - 1-SIDE 7/16" OSB<br>Fastened w/ Bd nails at 6"0.c. panel edges & 12"0.c. panel field - edges blocked<br><u>ADEQUATE</u>   |  |
|   |  |  |
| DVERTURNING EVALL<br>RESISTIVE DL<br>DL AT ENDS OF WALL   | JATION:         700       PLF       Overturning Moment       36.4       K-FT       Hold Down Design Load       0       L         4000       LBS       Resistive Moment       91.1       K-FT       Holdown Capacity       0       L  |  |
|   | Hold-down Specification  |  |
|   | No Holdown Required  |  |
|   |  |  |
| SHEARWALL   | 111: 1st - Rear Ext Guest Bath   |  |
| SHEARWALL   | 111: 1st - Rear Ext Guest Bath   |  |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L   | 111:       1 ST - REAR EXT GUEST BATH         THES:       10.1         10.1       FT.         MAX WALL OPENING HT, HC       0.0         FT.       GUALIFYING WALL LENGTH, L         11.0       FT.         SHEARWALL ASSEMBLY       P3   |  |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L<br>CAPACITY EVALUATION  | 1111:       1 ST - REAR EXT GUEST BATH         STIES:         10.1       FT.         11.0       FT.         FT.       QUALIFYING WALL LENGTH, L         11.0       FT.         SHEARWALL ASSEMBLY       P3   |  |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L   | 1111:       1 ST - REAR EXT GUEST BATH         ITIES:         10.1       FT.         11.0       FT.         11.0       FT.         QUALIFYING WALL LENGTH, L       11.0         IDI       FT.         Shearwall Assembly       P3         IDI       FT.         Shearwall Capacity         IDI       ES         IDI       4952   |  |
| SHEARWALL SHEARWALL PROPER WALL HEIGHT, H WALL LENGTH, L CAPACITY EVALUATIO   | 1111:       1 ST - REAR EXT GUEST BATH         TITES:         10.1       FT.         11.0       FT.         PT.       QUALIFYING WALL LENGTH, L         DN:       TOTAL SHEAR LOAD ON WALL         Allowable Shearwall Capacity         2200       LBS         Shearwall Assembly Specification  |  |
| SHEARWALL<br>SHEARWALL PROPER<br>WALL HEIGHT, H<br>WALL LENGTH, L   | 111:       1 ST - REAR EXT GUEST BATH         STIES:         10.1       FT.         11.0       FT.         DI.       FT.         ST.       SHEARWALL ASSEMBLY         DIL         ALLOWABLE SHEARWALL DAPACITY         2200       LBS         SHEARWALL ASSEMBLY SPECIFICATION         P3 - 1-SIDE 7/16" OSB   |  |
| SHEARWALL SHEARWALL PROPER WALL HEIGHT, H WALL LENGTH, L CAPACITY EVALUATIO   | 111:       1 ST - REAR EXT GUEST BATH         TIES:         10.1       FT.         11.0       FT.         PT.       QUALIFYING WALL LENGTH, L         DT.       Shearwall Assembly         DT.         ALLOWABLE SHEARWALL CAPACITY         2200       LBS         Shearwall Capacity         200         LBS         Shearwall Capacity         2200       LBS         Shearwall Capacity         DT.         DT.         DT.         DT.         ALLOWABLE SHEARWALL CAPACITY         2.200         LBS         DT.         DT. <td col<="" td=""></td>  |  |
| SHEARWALL SHEARWALL PROPER WALL HEIGHT, H WALL LENGTH, L CAPACITY EVALUATION  | 111:       1 ST - REAR EXT GUEST BATH         STIES:         10.1       FT.         11.0       FT.         0.1       FT.         11.0       FT.         0.1       FT.         11.0       FT.         0.0       FT.         11.0       FT.         Shearwall Assembly       P3  |  |
| SHEARWALL SHEARWALL PROPER WALL HEIGHT, H WALL LENGTH, L CAPACITY EVALUATIO COVERTURNING EVALU RESISTIVE DL RESISTIVE DL DL AT ENDS OF WALL | 111: 1ST - REAR EXT GUEST BATH         III: IST - REAR WALL OPENING HT, HC         III: IST - REAR WALL OPENING WALL LENGTH, L         III: IST - REAR LOAD ON WALL         III: IST - REAR LOAD ON WALL         ALLOWABLE SHEARWALL CAPACITY         III: IST - REARWALL ASSEMBLY SPECIFICATION         P3 - 1-SIDE 7/16" ISB         FASTENED W/ BD NAILS AT 3"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - EDGES BLOCKED         ADEQUATE         JATION:         I34       PLF         I34       PLF         I34       PLF         I34       PLF         I34       PLF         ISITIVE MOMENT       IS1         I34       PLF         ISITIVE MOMENT       IS1         IS1       K-FT         HOLDOWN CAPACITY       IS53 |  |
| SHEARWALL SHEARWALL PROPER WALL HEIGHT, H WALL LENGTH, L CAPACITY EVALUATIO COVERTURNING EVALU RESISTIVE DL RESISTIVE DL DL AT ENDS OF WALL | 111:       1st - Rear Ext Guest Bath         III:       1st - Rear Ext Guest Bath         III:       III:         III:       III: </td   |  |
| SHEARWALL SHEARWALL PROPER WALL HEIGHT, H WALL LENGTH, L GAPACITY EVALUATIO OVERTURNING EVALU RESISTIVE DL RESISTIVE DL DL AT ENDS OF WALL  | 111:       1ST - REAR EXT GUEST BATH         III:       IST - REAR EXT GUEST BATH         III:       FT.         SHEARWALL LENGTH, L       III.         III:       FT.         SHEARWALL CAPACITY       P3         III:       III:         III:   |  |



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M&K PROJECT #: 244-22008

Engineer: JCL Date: 07-Sep-22

| SHEARWALL PROPERTIES:   |     |
|---|-----|
| Wall height, H 10.1 ft. Max wall opening ht, H <sub>c</sub> 0.0 ft.<br>Wall Length, L 9.8 ft. Qualifying Wall Length, L 9.8 ft. Shearwall Assembly P3   |     |
| CAPACITY EVALUATION:  |     |
| TOTAL SHEAR LOAD ON WALL ALLOWABLE SHEARWALL CAPACITY   |     |
|   |     |
|   |     |
| P3 - 1-SIDE 7/16 USB<br>FASTENED W/ 8D NAILS AT 3"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED<br><u>ADEQUATE</u>   |     |
|   |     |
| Overturning Evaluation:       Resistive DL       134       plf       Overturning Moment       20.2       K-FT       Hold Down Design Load       1688       LBS         DL at ends of wall       200       LBS       Resistive Moment       3.7       K-FT       Holdown Capacity       3695       LBS   | 3   |
| Hold-Down Specification   |     |
| SIMPSON STHD14RJ HOLDOWN  |     |
|   |     |
|   |     |
| SHEARWALL XXX: - NOT USED   |     |
| SHEARWALL PROPERTIES:   |     |
| Wall height, H       D.D       ft.       Max wall opening ht, Hc       D.D       ft.         Wall Length, L       D.D       ft.       Qualifying Wall Length, L       D.D       ft.       Shearwall Assembly       PD   |     |
| CAPAGITY EVALUATION:  |     |
|   |     |
| TOTAL SHEAR LOAD ON WALL ALLOWABLE SHEARWALL CAPACITY   |     |
| TOTAL SHEAR LOAD ON WALL ALLOWABLE SHEARWALL CAPACITY   |     |
| Total Shear Load on Wall       Allowable Shearwall Capacity         0       LBS       ####       #DIV/0!       LBS         BHEARWALL ASSEMBLY SPECIFICATION         PD - 1-SIDE 7/16" DSB         FASTENED W/ 8D NAILS AT 6"0.C. PANEL EDGES & 12"0.C. PANEL FIELD - UNBLOCKED         #DIV/D!  |     |
| TOTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY         0       LBS       ####       #DIV/0!         SHEARWALL ASSEMBLY SPECIFICATION         PD - 1-SIDE 7/16" OSB         FASTENED W/ BD NAILS AT 6"0.C. PANEL EDGES & 12"0.C. PANEL FIELD - UNBLOCKED         #DIV/O!  |     |
| TOTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY         0       LBS       ####       #DIV/0!         LBS       ####       #DIV/0!       LBS         SHEARWALL ASSEMBLY SPECIFICATION         PD - 1-SIDE 7/16" OSB         FASTENED W/ 8D NAILS AT 6"D.C. PANEL EDGES & 12"D.C. PANEL FIELD - UNBLOCKED         UVERTURNING EVALUATION:   |     |
| TOTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY         0       LBS       ####       #DIV/0!         BELERWALL ASSEMBLY SPECIFICATION         PD - 1-SIDE 7/16" OSB         FASTENED W/ BD NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED         UVERTURNING EVALUATION:         PLF       OVERTURNING MOMENT         PL AT ENDS OF WALL       0       LBS       RESISTIVE MOMENT       #DIV/0!       K-FT       HOLD DOWN DESIGN LOAD       0       LBS  | 3   |
| DTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY         Ibs       ####       #DIV/D!       Ibs         SHEARWALL ASSEMBLY SPECIFICATION         PI - 1-SIDE 7/16" OSB         FASTENED W/ BD NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED         DVERTURNING EVALUATION:         MOVERTURNING EVALUATION:         PIF       OVERTURNING MOMENT         PL AT ENDS OF WALL       PIF       OVERTURNING MOMENT       #DIV/D!       K-FT       HOLD DOWN DESIGN LOAD       O       LBS         HOLD-DOWN SPECIFICATION: | 5   |
| DTAL SHEAR LOAD ON WALL       ALLOWABLE SHEARWALL CAPACITY  | 5 5 |