| i in   | Posign   | F   | Client:<br>Project:               | Signature  |  |                    | Ir                | ate:<br>put by:       | 10/13/2020<br>Anthony W          | illiams            |          |   | Page 1 of 6               |
|--|--|---|-----------------------------------|--|--|--------------------|-------------------|-----------------------|----------------------------------|--------------------|----------|---|---------------------------|
|  | Design   | P   | Address:                          | 1691 Ma  | in Street Lillir   | ngton, NC          |                   | ob Name:<br>roject #: | Lot 57 Sou<br>J1020-477          |                    |          |   |                           |
| IDR-1 8  | 2 Korte  |   | 17                                | 50" Y  | 9.250"   | 2 DIV              |                   | -                     | evel: Level                      | I                  |          |   |                           |
|  | Z Neitt  | )-3 LVL   | 1.7                               | 50 A   | 9.230  | 2-Piy -            | PA33              |                       |                                  |                    |          |   |                           |
|  | 2  |   |                                   |  |  |                    |                   |                       |                                  |                    |          |   |                           |
|  | <u>_</u>   |   |                                   |  |  |                    |                   |                       |                                  |                    |          |   |                           |
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|  |  |   |                                   |  |  |                    |                   |                       |                                  |                    |          |   |                           |
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|  |  |   |                                   | 1  |  |                    |                   |                       |                                  |                    |          |   |                           |
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|  |  |   |                                   |  |  |                    |                   |                       |                                  |                    |          |   |                           |
| S  |  |   |                                   | •  | alt is the   | 17                 | -                 |                       |                                  |                    |          |   |                           |
|  |  |   |                                   |  | The second s |                    |                   |                       |                                  |                    |          |   |                           |
| 1 SPF E  | nd Grain   |   |                                   |  |  | 2                  | SPF End Gr        | ain                   |                                  |                    |          |   |                           |
| 1  |  |   |                                   | 5'6"   |  |                    |                   | 1                     |                                  |                    |          |   | 1 13 1/2"                 |
|  |  |   |                                   | 6'   |  |                    |                   | 1                     |                                  |                    |          |   |                           |
|  |  |   |                                   |  |  |                    |                   |                       |                                  |                    |          |   |                           |
| ember Inf  | ormation   |   |                                   |  |  |                    | Reaction          | ns UNP                | ATTERNE                          | D lb (Uplif        | t)       |   |                           |
| уре:   | Girder   |   | Applica                           |  | Floor  |                    | Brg               | Live                  | Dea                              | d Snow             | 1        | Wind  | Const                     |
| lies:  | 2  |   | -                                 | Method:  | ASD  |                    | 1                 | 0                     | 140                              |                    |          | 0   | 0                         |
| loisture Cond  | ition: Dry<br>480  |   | Building<br>Load S                | g Code:  | IBC/IRC 2015<br>No   |                    | 2                 | 0                     | 140                              | 2 1290             | )        | 0   | 0                         |
| Deflection TL:   | 480<br>360   |   | Deck:                             | nanng.   | Not Checked  |                    |                   |                       |                                  |                    |          |   |                           |
| nportance:   | Normal   |   | 2001                              |  |  |                    |                   |                       |                                  |                    |          |   |                           |
| emperature:  | Temp <= 100  | )°F   |                                   |  |  |                    |                   |                       |                                  |                    |          |   |                           |
|  |  |   |                                   |  |  |                    | Bearing           |                       |                                  |                    |          |   |                           |
|  |  |   |                                   |  |  |                    | Bearing           | -                     | •                                | React D/L lb       | Total    |   |                           |
|  |  |   |                                   |  |  |                    | 1 - SPF<br>End    | 3.000"                | 29%                              | 1402 / 1290        | 2692     | L   | D+S                       |
| alysis Res   | sults  |   | •                                 |  |  |                    | Grain             |                       |                                  |                    |          |   |                           |
| Analysis   | Actual   | Location A  | Allowed                           | Capacit  | y Comb.  | Case               | 2 - SPF           | 3.000"                | 29%                              | 1402 / 1290        | 2692     | L   | D+S                       |
| <i>I</i> oment   | 3548 ft-lb   | 3' 1  | 4423 ft-lb                        | 0.246 (2   | 5%) D+S  | L                  | End<br>Grain      |                       |                                  |                    |          |   |                           |
| Jnbraced   | 3548 ft-lb   | 3' 1  | 0944 ft-lb                        | 0.324 (3   | 2%) D+S  | L                  |                   |                       |                                  |                    |          |   |                           |
| Shear  | 1832 lb  | 11 1/2" 7   |                                   |  | 3%) D+S  | L                  |                   |                       |                                  |                    |          |   |                           |
|  | 0.027 (L/2497)   |   | •                                 | 0) 0.190 (1  |  | L                  |                   |                       |                                  |                    |          |   |                           |
| L Defl inch  | 0.056 (L/1197)   | 3' 0  | ).188 (L/36                       | 0) 0.300 (3)   | 0%) D+S  | L                  | ļ                 |                       |                                  |                    |          |   |                           |
| esign Not  |  |   |                                   |  |  |                    | l                 |                       |                                  |                    |          |   |                           |
| to exceed 6  | lies using 2 rows o<br>".  | f 10d Box nails                                     | s (.128x3")                       | at 12" o.c. N  | Aaximum end di   | stance not         |                   |                       |                                  |                    |          |   |                           |
|  | t page of calculatio   |   |                                   |  | d loads.   |                    |                   |                       |                                  |                    |          |   |                           |
|  | designed to be sup<br>oust be supported e  |   |                                   | ge only.   |  |                    |                   |                       |                                  |                    |          |   |                           |
| 5 Top braced   | -  |   |                                   |  |  |                    |                   |                       |                                  |                    |          |   |                           |
|  | ed at bearings.<br>derness ratio base  | d on single ply                                     | / width                           |  |  |                    |                   |                       |                                  |                    |          |   |                           |
|  | Load Type  |   |                                   | Trib Width   | Side   | Dead 0.9           | Live              | 1 Snov                | v 1.15 W                         | /ind 1.6 Con       | st. 1.25 | Commen  | ts                        |
|  | Uniform  |   |                                   |  | Тор  | 430 PLF            | 0 PL              |                       | 0 PLF                            | 0 PLF              | 0 PLF    | B2 TRUSS  |                           |
| 2  | Uniform  |   |                                   |  | Тор  | 30 PLF             | 0 PL              |                       | 0 PLF                            | 0 PLF              |          | WALL  |                           |
|  | Self Weight  |   |                                   |  |  | 7 PLF              |                   |                       |                                  |                    |          |   |                           |
|  |  |   |                                   |  |  |                    |                   |                       |                                  |                    |          |   |                           |
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|  |  |   |                                   |  |  |                    |                   |                       |                                  |                    |          |   |                           |
| otes   |  | chemical  |                                   |  |  | it roofs provide p | roper drainage to | prevent               | Manufacturer                     | Info               | C<br>10  | omtech, Inc.<br>001 S. Reilly Road<br>ayetteville, NC | d, Suite #639             |
| uctural adequacy o   | Designs is responsible only<br>f this component based of                           | on the 1. LVL bear                                  | S Installat<br>ms must not be of  | cut or drilled                                       | pondin   | 9                  |                   | 3                     |                                  | uilding, 2nd Floor | U        | ayetteville, NC<br>SA<br>3314                         |                           |
| sponsibility of the consumer the component of the sponent of the second sponent of the sponent o | loadings shown. It is<br>ustomer and/or the contract<br>ant suitability of the int | the 2. Refer<br>tor to regarding<br>ended fastening | to manufactur<br>g installation   | er's product in<br>requirements,<br>strength values, | multi-ply  |                    |                   | 1                     | Norwalk, CT 06<br>(800) 622-5850 | 851                |          | 3314<br>10-864-TRUS                                   |                           |
| plication, and to verif  | y the dimensions and loads   | approval  |                                   |  | anu coue   |                    |                   | Ň                     | www.metsawo                      | od.com/us          |          |   |                           |
| imber  |  | <ol><li>Design a</li></ol>                          | ssumes top eda                    | e is laterally restra                                | ained  |                    |                   |                       | 00-20. EOK-                      |                    |          |   |                           |
| Dry service condition  | ons, unless noted otherwise<br>ed with fire retardant or cor                       | . 5. Provide  | lateral support<br>splacement and | at bearing points                                    | s to avoid   |                    |                   |                       |                                  |                    |          | CON   | птесн                     |

|  |  | Client:                  | Signature Homes  |  | Date:                      | 10/13/2020                               | Page 2 of 6   |
|--|--|--------------------------|--|--|----------------------------|--|---|
|  |  | Project:                 |  |  | Input by:                  | Anthony Williams                         |   |
| isDesi   | gn   | Address:                 | 1691 Main Stre   | et Lillington, NC  | ; Job Nam                  | e: Lot 57 South Creek                    |   |
|  | -  |                          |  | 0  | Project #                  | : J1020-4771                             |   |
| HDR-1 & 2  | Kerto-S LVI  | 17                       | ′50" X 9.25  | 0" 2-Plv   | - PASSED                   | Level: Level                             |   |
|  |  |                          | 00 X J.20  |  |                            |  |   |
|  |  |                          |  |  |                            |  |   |
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|  |  |                          |  |  |                            | 1/2"                                     | IVIVI I   |
|  |  |                          |  |  |                            | $\frac{1}{\Sigma}$                       | ∧   ∧     9 1/  |
| • •  | • •  | •                        | •  | •  | • • -                      | <u>+ − </u> ¥                            |   |
|  |  |                          |  |  |                            |  |   |
| 1 SPF End Grair  | 1  |                          |  | 2  | 2 SPF End Grain            |  |   |
|  |  |                          | 5'6"   |  | 1                          |  | 3 1/2"  |
| /  |  |                          | 6'   |  |                            | *  |   |
|  |  |                          | -  |  |                            |  |   |
| ļ  |  |                          |  |  |                            |  |   |
| Multi-Ply Analysis   | 5  |                          |  |  |                            |  |   |
| Fasten all plies usir  | ng 2 rows of 10d I   | Box nails                | (.128x3") at 12"   | o.c Maximum  | n end distance r           | ot to exceed 6"                          |   |
| Capacity   | 0.0 %  |                          | (,,,,,,  |  |                            |  |   |
| Load   | 0.0 PLF  |                          |  |  |                            |  |   |
| Yield Limit per Foot   | 163.7 PLF  | :                        |  |  |                            |  |   |
| Yield Limit per Fastener<br>Yield Mode                                     | 81.9 lb.<br>IV   |                          |  |  |                            |  |   |
| Edge Distance  | 1 1/2"   |                          |  |  |                            |  |   |
| Min. End Distance  | 3"   |                          |  |  |                            |  |   |
| Load Combination   |  |                          |  |  |                            |  |   |
| Duration Factor  | 1.00   |                          |  |  |                            |  |   |
|  |  |                          |  |  |                            |  |   |
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|  |  |                          |  |  |                            |  |   |
|  |  |                          |  |  |                            | Manufacturer Info                        | Comtech, Inc.   |
| Notes<br>Calculated Structured Designs is re                               | chemi<br>esponsible only of the Handlin                    |                          | ion  | <ol> <li>For flat roofs provide  <br/>ponding</li> </ol> | proper drainage to prevent | Maturacturer mo                          | <ul> <li>1001 S. Reilly Road, Suite #639</li> <li>Fayetteville, NC</li> </ul> |
| structural adequacy of this comp<br>design criteria and loadings           | shown. It is the 2 Refer                                   | eams must not be         |  |  |                            | 301 Merritt 7 Building, 2nd Floor        | 28314   |
| responsibility of the customer and<br>ensure the component suitabili       | d/or the contractor to regard<br>ty of the intended fasten | ling installation        | requirements, multi-ply<br>strength values, and code     |  |                            | Norwalk, CT 06851<br>(800) 622-5850      | 910-864-TRUS  |
| application, and to verify the dimen-                                      | sions and loads. approv<br>3. Dama                         | vals<br>ged Beams must r | not be used  |  |                            | www.metsawood.com/us<br>ICC-ES: ESR-3633 |   |
| 1. Dry service conditions, unless r     2. LVL not to be treated with fire | 5. Provid  | le lateral support       | ge is laterally restrained<br>at bearing points to avoid |  |                            |  | соттесн   |
| - EVENING SCHOOLED WITH THE  | lateral  | displacement and         | i rotation   | This design is valid                                     | d until 2/26/2023          |  |   |

| isD   | Design   | Project:  | ure Homes<br>Main Street Lil              | lington, NC                   | ln<br>Jo                  | put by:<br>ob Name: | 10/13/2020<br>Anthony Willia<br>Lot 57 South (<br>J1020-4771                         |                           |  | Page 3 of 6         |
|---|--|---|---|-------------------------------|---------------------------|---------------------|--|---------------------------|--|---------------------|
| IDR-3   | Kerto-S LV   | L 1.750" X  | 9.250" 2                                  | 2-Ply - F                     |                           |                     | //////////////////////////////////////   |                           |  |                     |
|   | 22   |   |   |                               |                           |                     |  |                           |  |                     |
| •   | •  | • •   |   | •                             | •                         | •                   |  |                           |  | 9 1/                |
| 1 SPF En  | nd Grain   |   |   | 2                             | SPF End Gr                | ain                 |  |                           |  |                     |
| 1<br>   |  | 5'6"  |   |                               |                           | 1                   |  |                           |  | 1 13 1/2"           |
|   |  |   |   |                               |                           |                     |  |                           |  |                     |
| ember Info  |  |   |   |                               |                           |                     | TTERNED  |                           |  |                     |
| ype:<br>Plies:<br>Aoisture Condit<br>Deflection LL:<br>Deflection TL:<br>mportance:                       | Girder<br>2<br>tion: Dry<br>480<br>360<br>Normal   | Application:<br>Design Methoc<br>Building Code:<br>Load Sharing:<br>Deck:   |   |                               | Brg<br>1<br>2             | Live<br>0<br>0      | Dead<br>1543<br>1543   | Snow<br>1431<br>1431      | Wind<br>0<br>0   | Const<br>0<br>0     |
| emperature:   | Temp <= 100°F  |   |   |                               | Bearing                   | -                   |  |                           |  |                     |
|   |  |   |   |                               | Bearing<br>1 - SPF<br>End | Length              |  | eact D/L lb<br>543 / 1431 | Total Ld. Ca<br>2974 L   | se Ld. Comb.<br>D+S |
| nalysis Res   | ults   |   |   |                               | Grain                     | 0.000"              | 000/   | 540 / 4404                | 2974 L   | D - 0               |
| Aoment<br>Jnbraced<br>Shear<br>L Defl inch  | 3920 ft-lb<br>3920 ft-lb<br>2024 lb 5<br>0.030 (L/2251)  | 3' 14423 ft-lb 0.27<br>3' 10944 ft-lb 0.35<br>'1/2" 7943 lb 0.25<br>3' 0.141 (L/480) 0.21   |   | Case<br>L<br>L<br>L           | 2 - SPF<br>End<br>Grain   | 3.000               | 33% 1  | 543 / 1431                | 2974 L   | D+S                 |
|   | 0.062 (L/1083)   | 3' 0.188 (L/360) 0.33   | 0 (33%) D+S                               | L                             |                           |                     |  |                           |  |                     |
| to exceed 6".<br>2 Refer to last<br>3 Girders are d<br>4 Top loads mu<br>5 Top braced a<br>6 Bottom brace | ies using 2 rows of 10d f<br>page of calculations for<br>designed to be supporte<br>ust be supported equally<br>at bearings. |   | cified loads.                             | distance not                  |                           |                     |  |                           |  |                     |
| D   | Load Type  | Location Trib W   |   | Dead 0.9                      | Live                      |                     |  | d 1.6 Const               |  |                     |
| 2   | Uniform<br>Uniform   |   | Тор<br>Тор                                | 477 PLF<br>30 PLF             | 0 PL<br>0 PL              |                     |  |                           | 0 PLF A2 TRU<br>0 PLF WALL   | 200                 |
|   | Self Weight  |   |   | 7 PLF                         |                           |                     |  |                           |  |                     |
| uctural adequacy of   |  | chemicals<br>Handling & Installation<br>1. U/L beams must not be cut or drilled<br>2. Refer to manufacturer's prod<br>regarding installation requirem<br>fastening details, beam strength v | pon<br>uct information<br>ents. multi-ply | flat roofs provide pr<br>ding | oper drainage to          | Me<br>30<br>No      | anufacturer Info<br>etsä Wood<br>1 Merritt 7 Build<br>rwalk, CT 0685<br>30) 622-5850 | ing, 2nd Floor            | Comtech, Inc.<br>1001 S. Reilly<br>Fayetteville, N<br>USA<br>28314<br>910-864-TRUS |                     |
| umber<br>. Dry service condition  |  | approvals<br>3. Damaged Beams must not be used<br>4. Design assumes top edge is laterally<br>5. Provide lateral support at bearing<br>lateral displacement and rotation                     | restrained points to avoid                | s design is valid             | until 2/26/202            | IC                  | vw.metsawood.c<br>C-ES: ESR-363  |                           | CO   | тесн                |

|   |   |                                 | Client:   | Signature Homes                                       |                                   |                      | Date:             | 10/13/2020   | Page 4 of 6  |
|---|---|---------------------------------|---|---|-----------------------------------|----------------------|-------------------|--|--|
| Tis   | Design  |                                 | Project:<br>Address:  | 1691 Main Stree                                       | et Lillington,                    | NC                   |                   | Anthony Williams<br>: Lot 57 South Creek                   |  |
| HDR-3   | <br>Kerto-S   | IVI                             | 1 750   | " X 9.250"  | 2-Plv                             |                      | Project #:        | J1020-4771<br>Level: Level                                 |  |
|   |   |                                 |   | X 0.200   | <b>_</b> y                        | IACO                 |                   |  |  |
|   |   |                                 |   |   |                                   |                      |                   |  |  |
|   |   |                                 |   |   |                                   |                      |                   |  |  |
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|   |   |                                 |   |   |                                   |                      |                   |  |  |
| •   | •   |                                 | •   | •   | •                                 | •                    | •                 | 1/2"   | M  |
|   | •   |                                 | •   | •   | •                                 | •                    | • –               | <u> </u>   | 9 1/4  |
|   | End Grain   |                                 |   |   |                                   | 2 SPF End (          | Grain             | -+   |  |
|   |   |                                 |   | 5'6"  |                                   | 2 SFF Ellu C         |                   |  | 3 1/2"   |
| <del> </del>  |   |                                 |   | 6'  |                                   |                      | $\longrightarrow$ |  |  |
|   |   |                                 |   |   |                                   |                      |                   |  |  |
| Multi-Ply A   | -   | us of 10d                       | Rev poils (   | 100,2"\ + 12"   | o c. Movino                       | una and dist         |                   | t to overand C"  |  |
| Capacity  | ies using 2 rov   | 0.0 %                           | BOX Halls (   | .128x3") at 12"                                       |                                   | um enu uist          | ance no           | t to exceed o  |  |
| Load<br>Yield Limit per F   | oot   | 0.0 PLF<br>163.7 PL             | F   |   |                                   |                      |                   |  |  |
| Yield Limit per F<br>Yield Mode                                     |   | 81.9 lb.<br>IV                  |   |   |                                   |                      |                   |  |  |
| Edge Distance   |   | 1 1/2"                          |   |   |                                   |                      |                   |  |  |
| Min. End Distan   |   | 3"                              |   |   |                                   |                      |                   |  |  |
| Load Combinati<br>Duration Factor                                   | on  | 1.00                            |   |   |                                   |                      |                   |  |  |
|   |   |                                 |   |   |                                   |                      |                   |  |  |
|   |   |                                 |   |   |                                   |                      |                   |  |  |
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|   |   |                                 |   |   |                                   |                      |                   |  |  |
|   |   |                                 |   |   |                                   |                      |                   |  |  |
| Notes<br>Calculated Structured                                      | Designs is responsible only   |                                 | nicals<br>ing & Installatio   |   | 6. For flat roofs prov<br>ponding | vide proper drainage | to prevent        | Manufacturer Info<br>Metsä Wood                            | Comtech, Inc.<br>1001 S. Reilly Road, Suite #639<br>Fayetteville, NC |
| structural adequacy<br>design criteria and<br>responsibility of the | of this component based<br>d loadings shown. It i<br>customer and/or the contra | on the 1. LVL<br>is the 2. Refe | beams must not be co<br>er to manufacture                                   |   |                                   |                      |                   | 301 Merritt 7 Building, 2nd Floor<br>Norwalk, CT 06851     | USA<br>28314<br>910-864-TRUS   |
| ensure the compor   | nent suitability of the in<br>rify the dimensions and loads                     | itended faste<br>s. appi        | roing installation<br>ening details, beam s<br>ovals<br>laged Beams must no | strength values, and code                             |                                   |                      |                   | (800) 622-5850<br>www.metsawood.com/us<br>ICC-ES: ESR-3633 |  |
| 1. Dry service condit   | ions, unless noted otherwise<br>ated with fire retardant or co                  | 4. Des                          | gn assumes top edge   | is laterally restrained<br>at bearing points to avoid | This design is                    | valid until 2/26/20  |                   | 100-LO. LON-3033   | соттесн  |
| 1   |   |                                 |   |   |                                   |                      | -                 |  |  |

| lis  | Design  | Р  | roject:                               | Signature Ho<br>1691 Main          | mes<br>Street Lilling | nton NC         | I                         | Date:<br>nput by:<br>lob Name | 10/13/202<br>Anthony \<br>: Lot 57 So | Villiams                   |               |                                     | Page 5 of 6              |  |  |
|--|---|--|---------------------------------------|------------------------------------|-----------------------|-----------------|---------------------------|-------------------------------|---------------------------------------|----------------------------|---------------|-------------------------------------|--------------------------|--|--|
|  |   |  |                                       | 1091 Main                          | Olleet Lilling        |                 |                           | Project #:                    | J1020-47                              |                            |               |                                     |                          |  |  |
| GDH  | Kerto-S LVL   | . 1.   | 750" X                                | 14.00                              | 0" 2-F                | Ply - F         | PASSE                     | D                             | Level: Level                          |                            |               |                                     |                          |  |  |
| GDH Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED                |   |  |                                       |                                    |                       |                 |                           |                               |                                       |                            | 1'2"          |                                     |                          |  |  |
| / ·  |   |  |                                       |                                    | 18'3"<br>18'10"       |                 |                           |                               |                                       |                            |               |                                     | 0 1/2                    |  |  |
|  |   |  |                                       |                                    |                       |                 |                           |                               |                                       |                            |               | I                                   |                          |  |  |
| Member In  | formation   |  |                                       |                                    |                       |                 | Reactio                   | ns UN                         | PATTERN                               | ED lb (Uplif               | t)            |                                     |                          |  |  |
| Туре:  | Girder  |  | Applicatio                            | on: F                              | loor                  |                 | Brg                       | Live                          | e Dea                                 | ad Snow                    | 1             | Wind                                | Const                    |  |  |
| Plies:   | 2   |  | Design M                              |                                    | SD                    |                 | 1                         | 377                           |                                       |                            |               | 0                                   | 0                        |  |  |
| Moisture Cond<br>Deflection LL:                                |   |  | Building (<br>Load Sha                |                                    | BC/IRC 2015<br>Io     |                 | 2                         | 377                           | 25                                    | 04 377                     | 7             | 0                                   | 0                        |  |  |
| Deflection TL:   |   |  | Deck:                                 |                                    | lot Checked           |                 |                           |                               |                                       |                            |               |                                     |                          |  |  |
| Importance:  | Normal  |  |                                       |                                    |                       |                 |                           |                               |                                       |                            |               |                                     |                          |  |  |
| Temperature:   | Temp <= 100°F   |  |                                       |                                    |                       |                 | Boarings                  |                               |                                       |                            |               |                                     |                          |  |  |
|  |   |  |                                       |                                    |                       |                 | Bearing                   |                               |                                       |                            |               |                                     |                          |  |  |
|  |   |  |                                       |                                    |                       |                 | Bearing<br>1 - SPF<br>End | Length<br>3.500"              | n Cap.<br>29%                         | React D/L lb<br>2504 / 565 | Total<br>3069 |                                     | Ld. Comb.<br>D+0.75(L+S) |  |  |
| Analysis Re  | sults   |  |                                       |                                    |                       |                 | Grain                     | 0.500"                        | 00%                                   | 0504 / 505                 | 0000          |                                     | D : 0 75/1 : 0)          |  |  |
| Analysis   |   | ocation A  |                                       | Capacity                           | Comb.                 | Case            | End                       | 3.500"                        | 29%                                   | 2504 / 565                 | 3069          | L                                   | D+0.75(L+S)              |  |  |
| Moment   | 12910 ft-lb   |  | 6999 ft-lb                            | 0.478 (48%                         | -                     | L               | Grain                     |                               |                                       |                            |               |                                     |                          |  |  |
| Unbraced   | 13754 ft-lb   | 9'5" 13  | 3758 ft-lb                            | 1.000<br>(100%)                    | D+0.75(L+S)           | ) L             |                           |                               |                                       |                            |               |                                     |                          |  |  |
| Shear  | 2453 lb   | 1'4 3/4" 10  | 0453 lb                               | 0.235 (23%                         | ) D+L                 | L               |                           |                               |                                       |                            |               |                                     |                          |  |  |
| LL Defl inch   | 0.102 (L/2160) 9  | 5 1/16" 0.   | .459 (L/480)                          | 0.220 (22%                         | ) 0.75(L+S)           | L               |                           |                               |                                       |                            |               |                                     |                          |  |  |
| TL Defl inch   | 0.555 (L/398) 9   | 5 1/16" 0.   | .612 (L/360)                          | 0.910 (91%                         | ) D+0.75(L+S)         | ) L             | 1                         |                               |                                       |                            |               |                                     |                          |  |  |
| Design Not   |   |  |                                       |                                    |                       |                 |                           |                               |                                       |                            |               |                                     |                          |  |  |
| 1 Fasten all p<br>to exceed 6                                  | blies using 3 rows of 10  | d Box nails  | (.128x3") a                           | 12" o.c. Ma                        | kimum end dist        | ance not        |                           |                               |                                       |                            |               |                                     |                          |  |  |
| 3 Girders are<br>4 Top loads n<br>5 Top must b<br>6 Bottom bra | t page of calculations f<br>designed to be suppor<br>nust be supported equa<br>e laterally braced at a n<br>ced at bearings.<br>iderness ratio based or | ted on the<br>ally by all pl<br>naximum o                | bottom edge<br>ies.<br>f 7'5 5/8" o.c | e only.                            | oads.                 |                 |                           |                               |                                       |                            |               |                                     |                          |  |  |
| ID   | Load Type   |  |                                       | rib Width                          | Side                  | Dead 0.9        | Live                      | 1 Sno                         | w 1.15                                | Wind 1.6 Con               | st. 1.25      | Comment                             | S                        |  |  |
| 1  | Uniform   |  |                                       |                                    | Тор                   | 55 PLF          | 40 PI                     | _F                            | 40 PLF                                | 0 PLF                      | 0 PLF         | R + F                               |                          |  |  |
| 2  | Uniform   |  |                                       |                                    | Тор                   | 200 PLF         | 0 PI                      | _F                            | 0 PLF                                 | 0 PLF                      | 0 PLF         | WALL                                |                          |  |  |
|  | Self Weight   |  |                                       |                                    |                       | 11 PLF          |                           |                               |                                       |                            |               |                                     |                          |  |  |
|  |   |  |                                       |                                    |                       |                 |                           |                               |                                       |                            |               |                                     |                          |  |  |
| Notes  |   | chemicals  | 1                                     |                                    | 6. For flat           | roofs provide p | proper drainage t         | o prevent                     | Manufacture                           | r Info                     | 10            | omtech, Inc.<br>001 S. Reilly Road, | Suite #639               |  |  |
| Calculated Structured<br>structural adequacy                   | Designs is responsible only of the<br>of this component based on the  | 1 IVI beam   | & Installation                        |                                    | ponding               |                 |                           |                               | Metsä Wood<br>301 Merritt 7           | Building, 2nd Floor        | Fa<br>U       | ayetteville, NC<br>SA               |                          |  |  |
| design criteria and<br>responsibility of the o                 | l loadings shown. It is the<br>customer and/or the contractor to<br>ent suitability of the intended   | <ol> <li>Refer to<br/>regarding</li> </ol>               | manufacturer's<br>installation        | s product infor<br>requirements, m | ulti-ply              |                 |                           |                               | Norwalk, CT (<br>(800) 622-585        | 06851                      | 20            | 314<br>0-864-TRUS                   | _                        |  |  |
| application, and to ver<br>Lumber<br>1. Dry service conditi    | ify the dimensions and loads.<br>ons, unless noted otherwise<br>ted with fire retardant or corrosive  | approvals<br>3. Damaged<br>4. Design as<br>5. Provide la | Beams must not<br>sumes top edge is   | bearing points to                  | d<br>avoid            | esian is valio  | l until 2/26/20           | 23                            | ICC-ES: ESR                           | ood.com/us                 |               | con                                 | тесн                     |  |  |
| Version 20 20 044  |   |  |                                       |                                    | 1115 UE               | Sign is valle   | . and 2/20/20             |                               |                                       |                            |               |                                     |                          |  |  |

CSD DESIGN

|                                     |   | Client: Signature Hon   | nes  | Date:                  | 10/13/2020   | Page 6 of 6  |
|-------------------------------------|---|---|--|------------------------|--|--|
| 4                                   |   | Project:  |  | Input by:              | Anthony Williams                                       | Fage 0 01 0  |
| Ļ                                   | isDesign  | Address: 1691 Main S  | Street Lillington, NC  | Job Name<br>Project #: | : Lot 57 South Creek<br>J1020-4771                     |  |
| GDH                                 | Kerto-S LVL   | 1.750" X 14.000   | )" 2-Ply - PASS  |                        | evel: Level  |  |
|                                     |   |   |  |                        |  |  |
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|                                     | · · · ·   | · · · ·   | · · · · ·  | •••                    | · · · ·  | <u> </u>   |
| 1 SPF                               | End Grain   |   |  |                        | 2 SPF End  | Grain A ź  |
| <del> </del>                        |   |   | 18'3"  |                        |  | <b>1 1</b> /2"   |
| 1                                   |   |   | 18'10"   |                        |  |  |
| Multi_Dly                           | y Analysis  |   |  |                        |  |  |
|                                     |   | l0d Box nails (.128x3") at  | 12" o.c Maximum end d  | istance no             | t to exceed 6"   |  |
| apacity                             | 0.0 0   | 6   |  |                        |  |  |
| oad<br>ïeld Limit pe                |   | PLF<br>6 PLF  |  |                        |  |  |
| ïeld Limit pe<br>ïeld Mode          | er Fastener 81.9<br>IV  | lb.   |  |                        |  |  |
| dge Distan                          |   |   |  |                        |  |  |
| lin. End Dis                        |   |   |  |                        |  |  |
| oad Combin<br>Ouration Fac          |   |   |  |                        |  |  |
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|                                     |   |   |  |                        |  |  |
|                                     |   |   |  | r                      |  |  |
|                                     |   | chemicals<br>andling & Installation   | <ol> <li>For flat roofs provide proper draina<br/>ponding</li> </ol> | ige to prevent         | Manufacturer Info<br>Metsä Wood                        | Comtech, Inc.<br>1001 S. Reilly Road, Suite #639<br>Fayetteville, NC |
| structural adequ<br>design criteria | acy of this component based on the 1  | . LVL beams must not be cut or drilled<br>. Refer to manufacturer's product inform  | ation  |                        | 301 Merritt 7 Building, 2nd Floor<br>Norwalk, CT 06851 | USA<br>28314<br>910-864-TRUS   |
| ensure the co<br>application, and   | emponent suitability of the intended<br>to verify the dimensions and loads. | regarding installation requirements, mul<br>fastening details, beam strength values, and<br>approvals   | u-piy<br>code  |                        | (800) 622-5850<br>www.metsawood.com/us                 |  |
|                                     | 4 A A A A A A A A A A A A A A A A A A A                                     | <ul> <li>Damaged Beams must not be used</li> <li>Design assumes top edge is laterally restrained</li> <li>Provide lateral support at bearing points to a<br/>lateral displacement and rotation</li> </ul> |  |                        | ICC-ES: ESR-3633                                       | сотесн   |
|                                     | 044 Powered by iStruct™   | เลเราสา นารุทสงอากยาน สาม างเสปีอก  | This design is valid until 2/26                                      | /2023                  |  |  |

CSD DESIGN