# HP-35s Calculator Program –

## LIVE LOAD REDUCTION

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| Line | Instruction | Process | User Instruction |
|------|-------------|---------|------------------|
| L001 | LBL L | Establishing the library (N goes for Neige) | |
| L002 | CLVARS | Clear all variables | ⤶ CLEAR 5 |
| L003 | LL REDUCTION | Title: Live Load Reduction | |
| L004 | PSE | Short Pause | Key in using EQN, RCL C, RCL O, etc |
| L005 | LL INI | Initial Live Load based on tributary area | |
| L006 | PSE | | |
| L007 | INPUT V | Input initial Live Load | Nomenclature: |
| L008 | REDUC ROOF LL | Reduced Live Load Process based on tributary area | |
| L009 | PSE | | A = variable for Option of Pm=Is*pg |
| L010 | SOLVING R1 | Solving for Reduction factor R1 | B = variable for Option of |
| L011 | PSE | | Pm=0.7*Ce*Ct*Is*pg |
| L012 | TRIBUTARY AREA | | E = Exposure Factor Ce |
| L013 | PSE | | F = Pf Snow Load of Flat Roofs |
| L014 | INPUT A | Input the area | G = Pg Ground snow load as |
| L015 | 200 | | determined from Fig. 7-1 in psf |
| L016 | x≥y? | Routine selection process | I = I Importance Factor from Tbl 1.5- |
| L017 | GTO L035 | | 2 of ASCE-7 |
| L018 | Clx | | S = Roof slope in degrees |
| L019 | R↓ | | T = Ct Thermal factor from Tbl 7-2 |
| L020 | 600 | | |
| L021 | x≤y? | | |
| L022 | GTO L032 | | |
| L023 | Clx | | |
| L024 | R↓ | | |
| L025 | 0.001 | | |
| L026 | × | | |
| L027 | +/- | | |
| L028 | 1.2 | | |
| L029 | + | | |
| L030 | STO R | Storing as R1 reduction factor | |
| L031 | GTO L037 | | |
| L032 | 0.6 | | |
| L033 | STO R | Storing as R1 reduction factor | |
| L034 | GTO L037 | | |
| L035 | 1 | | |
| L036 | STO R | Storing as R1 reduction factor | |
| L037 | VIEW R | | |
| L038 | SOLVING R2 | | |
| L039 | PSE | | |
| L040 | RISE  IN PER FT | Slope process | |
| L041 | PSE | | |
| L042 | INPUT F | Input inches rise per foot for "F" factor | |
| L043 | ARCH OR DOME | Process for Arched (vaulted) or Domed roofs | |
| L044 | PSE | | |
| L045 | 0 | | |
| L046 | STO D | | |
| L047 | INPUT D | If Arch or Dome give value other than 0 | |
| L048 | x=0? | | |
| L049 | GTO L054 | | |
| L050 | RCL F | | |
| L051 | 1.3333333333 | | |
| L052 | × | | |
| L053 | STO F | | |
| L054 | RCL F | | |
| L055 | 12 | | |
| L056 | x≤y? | | |
| L057 | GTO L070 | | |
| L058 | Clx | | |
| L059 | 4 | | |
| L060 | x>y? | | |

| L061 | GTO L073 | |
|------|----------|--|
| L062 | 0.05 | |
| L063 | +/- | |
| L064 | RCL F | |
| L065 | × | |
| L066 | 1.2 | |
| L067 | + | |
| L068 | STO Q | Saving R2 reduction factor as Q |
| L069 | GTO L076 | |
| L070 | 0.6 | |
| L071 | STO Q | Saving R2 reduction factor as Q |
| L072 | GTO L076 | |
| L073 | 1 | |
| L074 | STO Q | Saving R2 reduction factor as Q |
| L075 | GTO L076 | |
| L076 | VIEW Q | |
| L077 | RCL Q | |
| L078 | RCL R | |
| L079 | RCL V | |
| L080 | × | |
| L081 | × | |
| L082 | STO L | |
| L083 | 12 | |
| L084 | x≥y? | |
| L085 | STO L | |
| L086 | Clx | |
| L087 | 20 | |
| L088 | x≤y? | |
| L089 | STO L | Saving final Live load value after reduction applied |
| L090 | VIEW L | View final Reduced Live Load |
| L091 | CLSTK | |
| L092 | RCL L | |
| L093 | STOP | |
| L094 | RTN | |