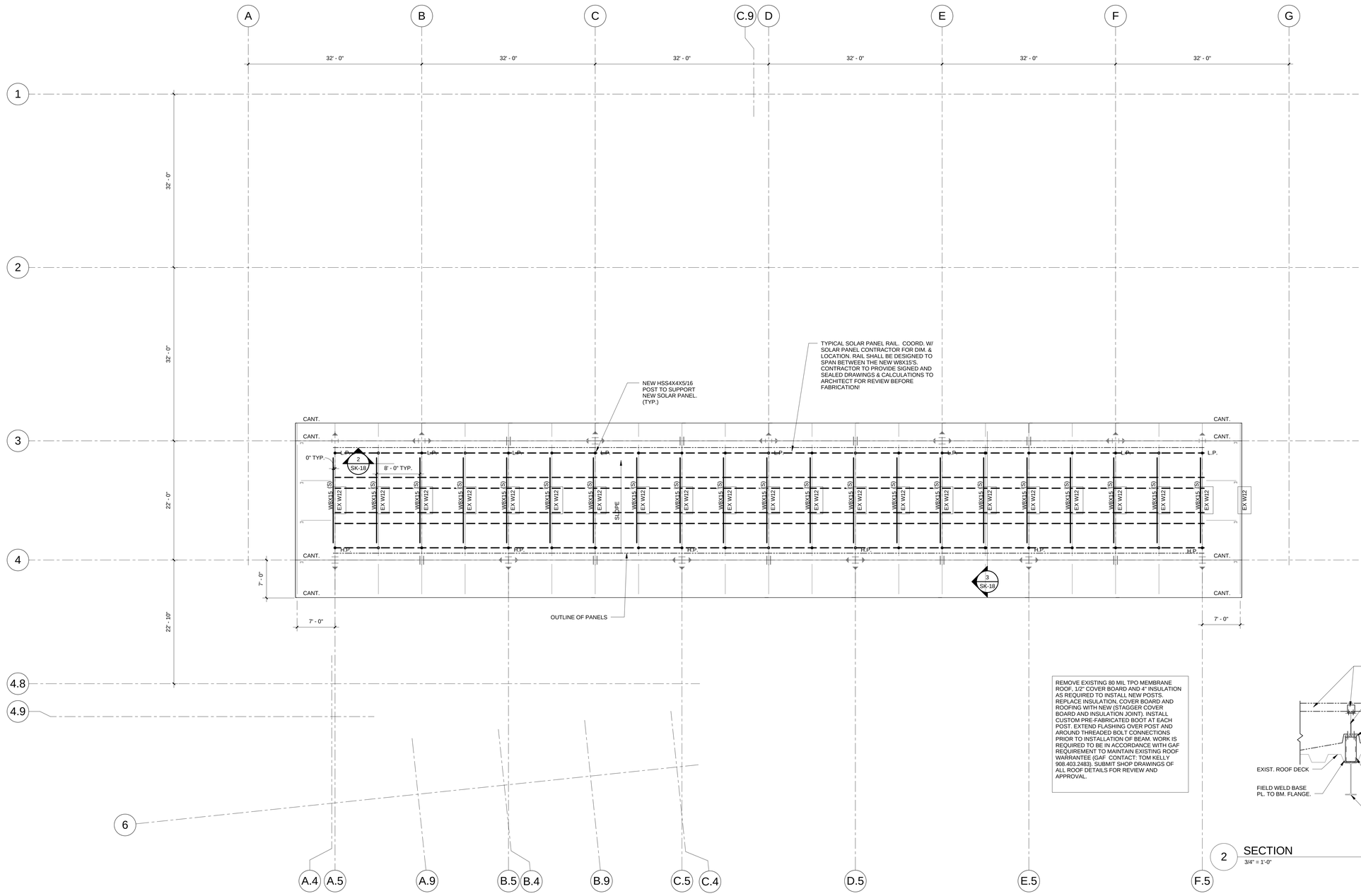



1 HIGH ROOF FRAMING PLAN WITH SOLAR PANELS
1/8" = 1'-0"

REMOVE EXISTING 80 MIL TPO MEMBRANE ROOF, 1/2" COVER BOARD AND 4" INSULATION AS REQUIRED TO INSTALL NEW POSTS. REPLACE INSULATION, COVER BOARD AND ROOFING WITH NEW (STAGGER COVER BOARD AND INSULATION JOINT). INSTALL CUSTOM PRE-FABRICATED BOOT AT EACH POST. EXTEND FLASHING OVER POST AND AROUND THREADED BOLT CONNECTIONS PRIOR TO INSTALLATION OF BEAM. WORK IS REQUIRED TO BE IN ACCORDANCE WITH GAF REQUIREMENT TO MAINTAIN EXISTING ROOF WARRANTEE (GAF CONTACT: TOM KELLY 908.403.2483). SUBMIT SHOP DRAWINGS OF ALL ROOF DETAILS FOR REVIEW AND APPROVAL.




2 SECTION
3/4" = 1'-0"

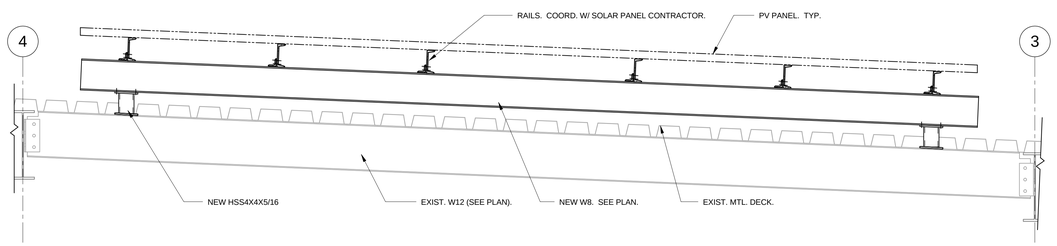
**ROOF FRAMING NOTES**:

1. TYPICAL EXISTING ROOF CONSTRUCTION SHALL BE 3"-20 GA. TYPE "N" DEEP RIB GALVANIZED METAL ROOF DECK.
2. STRUCTURAL STEEL SHALL BE AS FOLLOWS:
   - A. WIDE FLANGE ROLLED SHAPES: ASTM A992, GRADE 50 (Fy = 50 KSI).
   - B. PLATES, ANGLES, BARS, CHANNELS, AND S SHAPES: ASTM A36 (Fy = 36 KSI). (U.N.O.)
   - C. RECTANGULAR HSS: ASTM A500, GRADE B (Fy = 46 KSI).
   - D. ROUND HSS: ASTM A500, GRADE B (Fy = 42 KSI).
   - E. PIPE: ASTM A53, TYPE E OF S, GRADE B (Fy = 35 KSI).
3. BEAMS AND JOISTS SHOWN ON PLAN ARE EQUALLY SPACED BETWEWEN COLUMN CENTERLINES UNLESS OTHERWISE NOTED ON PLAN.
4. (S) INDICATES SLOPING BEAM. SEE PLAN AND SECTIONS FOR HIGH POINT AND LOW POINT ELEVATIONS.
5. COORDINATE LOCATION AND SIZE OF PV PANELS & THIER SUPPORT SYSTEM W/ MANUFACTURER'S DRAWINGS.
6. ALL NEW STEEL EXPOSED TO WEATHER SHALL BE H.D. GALVANIZED.

**TO PV PANEL VENDORS**

1. DESIGN ALL ROOF-MOUNTED, RIGID PV SOLAR PANELS AND THIER SECUREMENT FOR MINIMUM: 95 MPH WIND SPEED, SURFACE ROUGHNESS EXPOSURE C, AND IMPORTANCE FACTOR OF 1.0 (IF ACCEPTABLE BY LOCAL CODES). USE THE TOPOGRAPHICAL FACTOR (KZT) AS DETERMINED USING ASCE 7, EXCEPT FOR LOCATIONS WITH RELATIVELY FLAT TERRAIN (<10° GROUND SLOPE), WHERE KZT CAN BE ASSUMED TO BE 1.0. USE A MINIMUM SAFETY FACTOR (SF) OF 2.0 FOR WIND LOADS ON PANEL ANCHORS. A MINIMUM SAFETY FACTOR OF 1.6 MAY BE USED FOR OTHER WIND LOADS.
2. DESIGN WIND PRESSURE RESISTANCE FOR ANCHORED ROOF-MOUNTED PV PANELS USING ONE OF THE FOLLOWING OPTIONS:
   - A. PRESCRIPTIVE CALCULATIONS METHODS PROVIDED IN SEAOC PV2.
   - B. BOUNDARY LAYER WIND TUNNEL (BLWT) DATA PER ASCE 49.

   HAVE THE DESIGN FOR EACH SPECIFIC INSTALLATION REVIEWED AND ACCEPTED BY A THIRD PARTY THAT IS QUALIFIED IN THE INTERPRETATION AND APPLICATION OF BLWT DATA. COMPUTATIONAL FLUID DYNAMICS (CFD) MODELING SHOULD NOT BE USED AS THE PRIMARY SUBSTANTIATION FOR THE DESIGN OF WIND RESISTANCE. IT SHOULD ONLY BE USED TO INTERPOLATE (NOT EXTRAPOLATE) BLWT TEST DATA. THE DESIGN SHOULD CONSIDER, AMONG OTHER THINGS, WHETHER THE ARRAYS ARE CLOSED (WIND DEFLECTORS) OR OPEN.




3 SECTION
3/4" = 1'-0"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PV PANEL INSTALLATION


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SIGNATURE DATE

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 2 | REVISIONS PER FM GLOBAL COMMENTS | 01/20/16 |
| 1 | ISSUE FOR BID | 12/08/15 |

DRAWING TITLE

**HIGH ROOF FRAMING PLAN FOR SOLAR PANELS AND SECTION**

DATE
12/8/15
SCALE
As indicated
DRAWN
CL
CHECKED
JC
DRAWING NUMBER

# SK-18

NK PROJECT NUMBER: **2066.000**