NOTES TO DESIGNER:

1. This strand extension detail is to be used for continuous spans at moment resisting diaphragms only. This detail is not applicable to continuous spans using hinge diaphragms.

2. Designer shall calculate the exact number of extended straight strands needed to develop the required moment capacity at the end of the girder. This calculation shall be based on the tensile strength of the strands, the stresses imposed on the anchor, and concrete bearing against the projected area of the anchor.

The total number of extended strands shall not be less than:

\[ N_{ps} = \frac{12(M_c + V_c x h - M)}{X_c X K} \]

where:

- \( N_{ps} \): The lesser of Elastic or Plastic hinging moment & shear capacity of column
- \( M_c \): The moment due to SIDL (Traffic barrier, sidewalk, etc.)
- \( V_c \): Shear capacity of column
- \( X_c \): Area of each extended strand
- \( X_p \): Ultimate strength of strand
- \( h \): Distance from top of column to c.g. of superstructure, ft
- \( N_c \): Number of columns
- \( A_{ps} \): Area of each extended strand, in²
- \( fps \): Ultimate strength of strands, ksi
- \( d \): Distance from top of slab to c.g. of extended strands, in
- \( M \): Moment due to SIDL (Traffic barrier, sidewalk, etc.)
- \( K \): 0.5 for \( L_1 = L_2 \), 0.67 for \( L_1 = 2L_2 \)

3. Dimensions shall be shown in Imperial units to the nearest 1/16 inch.

NOTE: Dimensions shall be shown in Imperial units to the nearest 1/16 inch.