4-1 SPREAD FOOTING DATA TABLES

Format for the Foundation Report:

Table 1. Summary of Controlling Loads

Support Location	*L* (ft)	*B* (ft)	Controlling Loads[1]						
			M_X (kip-ft)	M_Y (kip-ft)	V_X (kips)	V_Y (kips)	P_{Total} (kips)	P_{Perm} (kips)	Load Combination
Abutment 1				N/A	N/A				
Bent 2									
Abutment 3				N/A	N/A				

Table 2. Foundation Design Recommendations for Spread Footing

Support Location	Footing Size (ft)		Bottom of Footing Elevation (ft)	Minimum Footing Embedment Depth (ft)	Total Permissible Support Settlement (inches)	Service Limit State	Strength or Construction Limit State $\varphi_b = X$	Extreme Event Limit State $\varphi_b = 1.00$
	L	*B*				Permissible Net Contact Stress[2] (ksf)	Factored Gross Nominal Bearing Resistance[3] (ksf)	Factored Gross Nominal Bearing Resistance[3] (ksf)
Abut 1								N/A
Bent 2								
Abut 3								N/A

1. Controlling load combination is the one resulting in the highest ratio of $q_{g,u}/q_R$ for foundations on soil, or $q_{g,max}/q_R$ for foundation on rock.
2. For Service-I Limit State, controlling load combination is the one resulting in the highest ratio of $q_{n,u}/q_{pn}$ for foundations on soil, or $q_{g,max}/q_R$ for foundations on rock. Permissible Net Contact Stresses were calculated for controlling load combinations.
3. For Strength, Construction, and Extreme Event limit State, controlling load combination is the one resulting in the highest ratio of $q_{g,u}/q_R$ for foundations on soil, or $q_{g,max}/q_R$ for foundations on rock, Factored Gross Nominal Bearing Resistances were calculated for controlling load combinations.

Format for the Contract Plans:

Table 3. Spread Footing Date Table[1]

Support Location	Service[2] Permissible Net Contact Stress (Settlement) (ksf)	Strength/Construction[3] Factored Gross Nominal Bearing Resistance $\varphi_b = X$ (ksf)	Extreme Event[3] Factored Gross Nominal Bearing Resistance $\varphi_b = 1.00$ (ksf)
Abutment 1			N/A
Bent 2			
Abutment 3			N/A

1. Controlling load combination is the one resulting in the highest ratio of $q_{g,u}/q_R$ for foundations on soil, or $q_{g,max}/q_R$ for foundation on rock.
2. Controlling load combination for Service Limit Stateis is the one resulting in the highest ratio of $q_{n,u}/q_{pn}$ for foundations on soil, or $q_{g,max}/q_R$ for foundations on rock.
3. Controlling load combination for Strength, Construction, and Extreme Event is the one resulting in the highest ratio of $q_{g,u}/q_R$ for foundations on soil, or $q_{g,max}/q_R$ for foundations on rock.