

IV.A Foundations/Structures - Non-bridge Applications

C-R-S:	PID:	Reviewer:	Date:
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If you do not have such a foundation or structure on the project, you do not have to fill out this checklist.

Soil and Bedrock Strength Data	
Y N X 1	<p>Has the shear strength of the foundation soils been determined?</p> <p>Check method used:</p> <p><input type="checkbox"/> laboratory shear tests</p> <p><input type="checkbox"/> estimation from SPT or field tests</p>
Y N X 2	<p>Have sufficient soil shear strength, consolidation, and other parameters been determined so that the required allowable loads for the foundation/structure can be designed?</p>
Y N X 3	<p>Has the shear strength of the foundation bedrock been determined?</p> <p>Check method used:</p> <p><input type="checkbox"/> laboratory shear tests</p> <p><input type="checkbox"/> other List Other items:</p>

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Spread Footings			
Y	N	4	Are there spread footings on the project? If no, go to Question 11
Y	N	X	5 Has the recommended bottom of footing elevation and reason for this recommendation been provided?
Y	N	X	a Has the recommended bottom of footing elevation taken scour from streams or other water flow into account?
		6	Were representative sections analyzed for the entire length of the structure for the following:
Y	N	X	a bearing capacity?
Y	N	X	b sliding?
Y	N	X	c overturning?
Y	N	X	d settlement?
Y	N	X	7 Has the need for a shear key been evaluated?
Y	N	X	a If needed, have the details been included in the plans?
Y	N	X	8 If special conditions exist (e.g. geometry, sloping rock, varying soil conditions), was the bottom of footing "stepped" to accommodate them?
Y	N	X	9 Has the recommended allowable soil or rock bearing pressure been provided?
Y	N	X	10 If weak soil is present at the proposed foundation level, has the removal / treatment of this soil been developed and included in the plans?
Y	N	X	a Have the procedure and quantities related to this removal / treatment been included in the plans?

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Pile Structures			
Y	N	11	Are there piles on the project? If no, go to Question 17
Y	N	12	Has an appropriate pile type been selected? Check the type selected: <input type="checkbox"/> H-pile (driven) <input type="checkbox"/> H-pile (drilled) <input type="checkbox"/> Cast In-place Concrete <input type="checkbox"/> other List Other items:
Y	N	X	13 Have the estimated pile length or tip elevation and section (diameter) been specified? Check method used: <input type="checkbox"/> SPILE, DRIVEN, or equivalent software <input type="checkbox"/> hand calculations
			14 If required for design, have sufficient soil parameters been provided and calculations performed to evaluate the:
Y	N	X	a Lateral load capacity and maximum deflection of the piles?
Y	N	X	b Vertical load capacity and maximum settlement of the piles?
Y	N	X	c Negative skin friction on piles driven through new embankment or soft foundation layers?
Y	N	X	d Potential for and impact of lateral squeeze from soft foundation soils?
Y	N	X	15 If piles are to be driven to bedrock, have "pile points" been recommended to assure secure contact with the rock surface, as per BDM 202.2.3.2.a?
Y	N	X	16 If subsurface obstacles exist, has preboring been recommended to avoid these obstructions?

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Drilled Shafts			
Y	N	17	Are there drilled shafts on the project? If no, go to the next checklist.
Y	N	X	18 Have the drilled shaft diameter and embedment length been specified?
Y	N	X	19 Have the recommended drilled shaft diameter and embedment been developed based on side friction and end bearing for vertical loading situations?
		20	For shafts undergoing lateral loading, have the following been determined:
Y	N	X	a. maximum lateral shear
Y	N	X	b. maximum bending moment
Y	N	X	c. maximum deflection
Y	N	X	d. reinforcement design
Y	N	X	21 Generally, bedrock sockets are 6" smaller in diameter than the soil embedment section of the drilled shaft. Has this factor been accounted for in the drilled shaft design?
Y	N	X	22 If a bedrock socket is required below soil embedment, have separate quantities been estimated based on shaft diameters and materials to be excavated?
Y	N	X	23 Has the site been assessed for groundwater influence?
Y	N	X	a If yes, if artesian flow is a potential concern, does the design address control of groundwater flow during construction?
Y	N	X	24 If special construction features (e.g., slurry, casing, load tests) are required, have all the proper items been included in the plans?

Notes:

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