

SUMMARY OF DESIGN VARIATIONS BASED ON SOIL CONDITIONS¹

PLAN 1	Class	Max w/cm	Min f'c	Applicable Details	Comments
EXPANSIVE SOIL					
Very Low	VL			SD-1 General Notes, Detail 1/FD1-1, S1-1	
Low	L			SD-1 General Notes, Detail 1/PT1-1, S1-1	Post-Tensioned Slab
Medium	M			SD-1 General Notes, Detail 2/PT1-1, S1-1	Post-Tensioned Slab
High	H			NA	No soil found within this range
HIGH SULFATE					
NA	S0	NA	2500	SD-1 General Notes	No cement type restrictions
Moderate	S1	0.5	4000	SD-1 General Notes	Type II Cement
Severe	S2	0.45	4500	SD-1 General Notes	Type V Cement
Very Severe	S3	0.45	4500	SD-1 General Notes	Type V Cement w/Slag cement
CORROSIVE TO METALS					
NA	C0	NA	2500	SD-1 General Notes	Max CL ⁻ 1.0 % by weight of cement
Moderate	C1	NA	2500	SD-1 General Notes	Max CL ⁻ 0.3 % by weight of cement
Severe	C2	0.4	5000	SD-1 General Notes	Max CL ⁻ 0.15 % by weight of cement
PLAN 2	Class	Max w/cm	Min f'c	Applicable Details	Comments
EXPANSIVE SOIL					
Very Low	VL			SD-1 General Notes, Detail 1/FD1-1, S2-1	Conventional Foundation
Low	L			SD-1 General Notes, Detail 1/PT1-1, S2-1	Post-Tensioned Slab
Medium	M			SD-1 General Notes, Detail 2/PT1-1, S2-1	Post-Tensioned Slab
High	H			NA	No soil found within this range
HIGH SULFATE					
NA	S0	NA	2500	SD-1 General Notes	No cement type restrictions
Moderate	S1	0.5	4000	SD-1 General Notes	Type II Cement
Severe	S2	0.45	4500	SD-1 General Notes	Type V Cement
Very Severe	S3	0.45	4500	SD-1 General Notes	Type V Cement w/Slag cement
CORROSIVE TO METALS					
NA	C0	NA	2500	SD-1 General Notes	Max CL ⁻ 1.0 % by weight of cement
Moderate	C1	NA	2500	SD-1 General Notes	Max CL ⁻ 0.3 % by weight of cement
Severe	C2	0.4	5000	SD-1 General Notes	Max CL ⁻ 0.15 % by weight of cement

¹For additional requirements, refer to ACI 318-14, Table 19.3.2.1

SUMMARY OF DESIGN VARIATIONS BASED ON SOIL CONDITIONS¹

PLAN 1	Class	Max w/cm	Min f'c	Applicable Details	Comments
EXPANSIVE SOIL					
Very Low	VL				
Low	L				
Medium	M				
High	H				
HIGH SULFATE					
NA	S0	NA	2500		
Moderate	S1	0.5	4000		
Severe	S2	0.45	4500		
Very Severe	S3	0.45	4500		
CORROSIVE TO METALS					
NA	C0	NA	2500		
Moderate	C1	NA	2500		
Severe	C2	0.4	5000		
PLAN 2	Class	Max w/cm	Min f'c	Applicable Details	Comments
EXPANSIVE SOIL					
Very Low	VL				
Low	L				
Medium	M				
High	H				
HIGH SULFATE					
NA	S0	NA	2500		
Moderate	S1	0.5	4000		
Severe	S2	0.45	4500		
Very Severe	S3	0.45	4500		
CORROSIVE TO METALS					
NA	C0	NA	2500		
Moderate	C1	NA	2500		
Severe	C2	0.4	5000		

¹For additional requirements, refer to ACI 318-14, Table 19.3.2.1

SUMMARY OF DESIGN VARIATIONS BASED ON SOIL CONDITIONS¹

PLAN 3	Class	Max w/cm	Min f'c	Applicable Details	Comments
EXPANSIVE SOIL					
Very Low	VL				
Low	L				
Medium	M				
High	H				
HIGH SULFATE					
NA	S0	NA	2500		
Moderate	S1	0.5	4000		
Severe	S2	0.45	4500		
Very Severe	S3	0.45	4500		
CORROSIVE TO METALS					
NA	C0	NA	2500		
Moderate	C1	NA	2500		
Severe	C2	0.4	5000		
PLAN 4	Class	Max w/cm	Min f'c	Applicable Details	Comments
EXPANSIVE SOIL					
Very Low	VL				
Low	L				
Medium	M				
High	H				
HIGH SULFATE					
NA	S0	NA	2500		
Moderate	S1	0.5	4000		
Severe	S2	0.45	4500		
Very Severe	S3	0.45	4500		
CORROSIVE TO METALS					
NA	C0	NA	2500		
Moderate	C1	NA	2500		
Severe	C2	0.4	5000		

¹For additional requirements, refer to ACI 318-14, Table 19.3.2.1

SUMMARY OF DESIGN VARIATIONS BASED ON SOIL CONDITIONS¹

PLAN 5	Class	Max w/cm	Min f'c	Applicable Details	Comments
EXPANSIVE SOIL					
Very Low	VL				
Low	L				
Medium	M				
High	H				
HIGH SULFATE					
NA	S0	NA	2500		
Moderate	S1	0.5	4000		
Severe	S2	0.45	4500		
Very Severe	S3	0.45	4500		
CORROSIVE TO METALS					
NA	C0	NA	2500		
Moderate	C1	NA	2500		
Severe	C2	0.4	5000		
PLAN 6	Class	Max w/cm	Min f'c	Applicable Details	Comments
EXPANSIVE SOIL					
Very Low	VL				
Low	L				
Medium	M				
High	H				
HIGH SULFATE					
NA	S0	NA	2500		
Moderate	S1	0.5	4000		
Severe	S2	0.45	4500		
Very Severe	S3	0.45	4500		
CORROSIVE TO METALS					
NA	C0	NA	2500		
Moderate	C1	NA	2500		
Severe	C2	0.4	5000		

¹For additional requirements, refer to ACI 318-14, Table 19.3.2.1