



APPROVED

By: RJR Date: 4-25-13



City of Fort Collins
Engineering Department



EARTH ENGINEERING
CONSULTANTS, INC.

MINIMUM PAVEMENT SECTION RECOMMENDATIONS (FLY ASH STABILIZED SUBGRADE)

Client:	Bellissimo, Inc.	Project:	Bucking Horse Development - Phase I	Project No.	1124098	Date:	4/23/2013		
Roadways									
		Kerry Hill Drive and Blackbird Drive		Scarecrow Road					
Roadway Classification		Minor Collectors							
18-kip Equivalent Daily Load Axles (EDLA)		35		25					
20-Year 18-kip Equivalent Single Axle Loads (ESAL)		255,500		182500					
Reliability (%)		75		75					
Standard Deviation		0.44		0.44					
Subgrade Resilient Modulus: Based on Subgrade R-Value of 13		3929		3929					
PSI Loss (Initial Serviceability Index - Final Serviceability Index), psi		2.2		2.2					
AASHTO Design Structural Number - S_N		3.08		2.93					
Composite Pavement Section (Alternative A)		Minimum Pavement Thicknesses - Inches							
		Thickness, Inches	Calculated SN	Thickness, Inches	Calculated SN	Thickness, Inches	Calculated SN	Thickness, Inches	Calculated SN
Hot Bituminous Pavement (Grade S) - Structural Number S_N 0.44		4.0	1.76	4.0	1.76				
Aggregate Base Course (CDOT Class 5 or 6) - Structural No. S_N 0.11		6.0	0.66	6.0	0.66				
⁽¹⁾ Stabilized Subgrade - Fly Ash Treated Subgrade 13% Class C 0.10		12.0	1.2	12.0	1.2				
Calculated Pavement Structural Number - S_N			3.62		3.62				

Note: 1) Calculated SN in **GREEN-TEXT** indicates the overall structural number assuming FULL-STRENGTH fly-ash credit, (i.e., assuming the field compressive strength samples achieve in excess of 150 psi, then **0.10 strength coefficient** is being applied. Please note the HMA and ABC included herein with fly ash are the LCUASS required minimum thicknesses.



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