

Terracon

CONSULTANTS WESTERN, INC.

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Larry G. O'Dell, P.E.
William J. Attwood, P.E.
Neil R. Sherrod, C.P.G.

September 30, 1997

Mr. Bob Dildine
New Western Horizons
2690 Joyce Street
Golden, CO 80401

Re: **Wildwood Farms**
Larimer County Road 9
Fort Collins, Colorado
Project No. 20971037

Dear Mr. Dildine:

Enclosed are results from quantitative extraction and gradation analysis of extracted aggregate tests performed on asphaltic concrete sampled from the above-referenced project. The tests were performed in general accordance with the test procedures referenced on the attached reports.

Please feel free to contact us if you should have any questions.

Sincerely,
TERRACON CONSULTANTS WESTERN, INC.
Empire Division



Mike L. Walker, CET
Manager of Construction Services

Enclosures

Copies to: (2) Addressee
(1) Mr. Dave Simpson - Connell Resources
(1) Mr. Todd Juergens - City of Fort Collins

MLW/cjh

HO1 MIX ASPHALT LABORATORY TEST SUMMARY

New Western Horizons
Wildwood Farms
Fort Collins, Colorado
PROJECT NO. 20971037
REPORT NO.: 1

Terracon

Date:	28-Sep-97	Time Sampled:	8:45 AM	Temperature(s), degrees F
Lift Designation:	Bottom	Truck No.:	211	Ambient: 58
Mix ID:	3/4" CDOT Grading "C"	Ticket No.:	NR	Hot Mix: 260
Sample Location:	Indigo Circle-S E corner of circle W Lane	Supplier:	Connell Resources	Contractor: Connell Resources

QUANTITATIVE EXTRACTION, CPL 5120 - IGNITION METHOD*

Asphalt/Bitumen Content, %	5.3	Within spec. limits:	NO
Trial Mix Design Optimum Asphalt Content, %	4.9	Specifications, %:	0.3
Trial Mix Design Unit Weight, pcf	147.0		
Date of Trial Mix Design:	Mar-97		

GRADATION ANALYSIS OF EXTRACTED AGGREGATE, ASTM D5444

Sieve Size	Test Sample	Within Spec. Limits**	Job Mix Formula	3/4" CDOT Grading "C"	Master Band Specifications
<i>Percent Passing</i>					
1-1/2"	100		100	100	
1"	100		100	100	
3/4"	100		92-100	90-100	
1/2"	90	NO	79-89	70-89	
3/8"	79		66-82	60-88	
No. 4	59		43-59	44-72	
No. 8	43	NO	30-42	30-62	
No. 16	32		26	---	
No. 30	23		12-24	12-38	
No. 50	15		12	---	
No. 100	10		7	---	
No. 200	6.3		3.0-6.8	3-7	

**Note: "NO" Denotes outside of job mix grading band.

* Colorado Test Method for "Determination of the Asphalt Binder Content of Bituminous Mixtures by the Ignition Method". The test procedure used to develop the data in this report is in general accordance with procedures accepted by multiple governmental agencies, but is not currently an ASTM or AASHTO standard. We are using the procedure in place of standard ASTM or AASHTO procedures in the interest of improved health and safety of our employees and the reduced impact on our environment. Please contact this office if you have any questions.

HOT MIX ASPHALT LABORATORY TEST SUMMARY

New Western Horizons
 Wildwood Farms
 Fort Collins, Colorado
 PROJECT NO. 20971037
 REPORT NO.: 2

Terracon

Date:	28-Sep-97	Time Sampled:	11:20 AM	Temperature(s), degrees F
Lift Designation:	Bottom	Truck No.:	Lucky 7	Ambient: 69
Mix ID:	3/4" CDOT Grading "C"	Ticket No.:	NR	Hot Mix: 268
Sample Location:	County Road #9-STA 17+50 Far W Lane	Supplier:	Connell Resources	
		Contractor:	Connell Resources	

QUANTITATIVE EXTRACTION, CPL 5120 - IGNITION METHOD*

Asphalt/Bitumen Content, %	5.0	Within spec. limits:	YES
Trial Mix Design Optimum Asphalt Content, %	4.9	Specifications, %:	0.3
Trial Mix Design Unit Weight, pcf	147.0		
Date of Trial Mix Design:	Mar-97		

GRADATION ANALYSIS OF EXTRACTED AGGREGATE, ASTM D5444

Sieve Size	Test Sample	Within Spec. Limits**	Job Mix Formula	3/4" CDOT Grading "C"	Master Band Specifications
<i>Percent Passing</i>					
1-1/2"	100		100	100	
1"	100		100	100	
3/4"	100		92-100	90-100	
1/2"	87		79-89	70-89	
3/8"	77		66-82	60-88	
No. 4	56		43-59	44-72	
No. 8	41		30-42	30-62	
No. 16	31		26	---	
No. 30	22		12-24	12-38	
No. 50	14		12	---	
No. 100	9		7	---	
No. 200	5.5		3.0-6.8	3-7	

**Note: "NO" Denotes outside of job mix grading band.

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HOT MIX ASPHALT LABORATORY TEST SUMMARY

New Western Horizons
 Wildwood Farms
 Fort Collins, Colorado
 PROJECT NO. 20971037
 REPORT NO.: 3

Terracon

Date:	28-Sep-97	Time Sampled:	1:15 PM	Temperature(s), degrees F
Lift Designation:	Top	Truck No.:	109	Ambient: 65
Mix ID:	3/4" CDOT Grading "C"	Ticket No.:	NR	Hot Mix: 276
Sample Location:	County Road #9-STA 22+50 Far W Lane	Supplier:	Connell Resources	
		Contractor:	Connell Resources	

QUANTITATIVE EXTRACTION, CPL 5120 - IGNITION METHOD*

Asphalt/Bitumen Content, %	4.8	Within spec. limits:	YES
Trial Mix Design Optimum Asphalt Content, %	4.9	Specifications, %:	0.3
Trial Mix Design Unit Weight, pcf	147.0		
Date of Trial Mix Design:	Mar-97		

GRADATION ANALYSIS OF EXTRACTED AGGREGATE, ASTM D5444

Sieve Size	Test Sample	Within Spec. Limits**	Job Mix Formula	3/4" CDOT Grading "C"	Master Band Specifications
<i>Percent Passing</i>					
1-1/2"	100		100	100	
1"	100		100	100	
3/4"	100		92-100	90-100	
1/2"	86		79-89	70-89	
3/8"	75		66-82	60-88	
No. 4	54		43-59	44-72	
No. 8	40		30-42	30-62	
No. 16	29		26	---	
No. 30	20		12-24	12-38	
No. 50	13		12	---	
No. 100	8		7	---	
No. 200	5.5		3.0-6.8	3-7	

**Note: "NO" Denotes outside of job mix grading band.

* Colorado Test Method for "Determination of the Asphalt Binder Content of Bituminous Mixtures by the Ignition Method". The test procedure used to develop the data in this report is in general accordance with procedures accepted by multiple governmental agencies, but is not currently an ASTM or AASHTO standard. We are using the procedure in place of standard ASTM or AASHTO procedures in the interest of improved health and safety of our employees and the reduced impact on our environment. Please contact this office if you have any questions.