

CORNILLIE CONCRETE.....THE CONCRETE EXPERTS

2900 Cass Rd.
Traverse City, MI 49684
(616) 946-5600 Fax (616) 946-5673

F A X C O V E R S H E E T

DATE: February 4, 1997

TIME: 1:01 PM

TO: David Johnson

PHONE: ()

COMPANY: Procrete

Fax: (847) 253-6954

FROM: Porter Blattenberger

RE: Home Depot - Traverse City, MI

Number of pages including cover sheet: 4

Message

CORNILLIE CONCRETE
2900 CASS ROAD
TRAVERSE CITY, MI 49684
(616)-946-5600

ACI 214 Summary of 14-6779-00 [4000 psi]

ACI 214 SUMMARY

Statistical Strength Summary

Average strength based on	9 tests	:	5722 psi
Overall Standard Deviation		:	199 psi
	Control is Excellent		
Overall coefficient of variation		:	3.47 %
Overall within-test coefficient of variation		:	1.51 %
	Control is Excellent		
Chance of strength falling below	4000 psi	:	- %
Chance of strength falling below	3500 psi	:	- %
Chance of "Average of 3" below	4000 psi	:	- %

Too few tests to determine minimum recommended strength



DAILY CONCRETE REPORT

NTH CONSULTANTS, LTD.

PROJECT: Home Depot
 LOCATION: Traverse City, Michigan
 CLIENT: Home Depot, Inc.
 CONTRACTOR: Concord Cement
 SUPPLIER: Cornille

PROJECT No.: 14-6779-00
 REPORT No.: 14
 DATE: 12/16/96

MIX DESIGN

MATERIALS	SOURCE / DESIGN WEIGHTS	DESIGN
CEMENT	Holman Type I ASTM C260	470 LBS
FINE AGG.	ASTM C33	1619 LBS
COARSE AGG.	ASTM C33 1" max.	1678 LBS
WATER	City	235 LBS
ADMIXTURE 1	Protecto Crete	10 oz/CWT
ADMIXTURE 2		
ADMIXTURE 3		
		28-DAY STRENGTH: 4000 PSI
		SLUMP (IN): 5 MAX. 3 MIN
		AIR: 0-3 %
		C.F.: 5.0 W/C 0.50 LB/LB
		UNIT WGT.: 148.2 PCF
		YIELD: 27.0 CF

FIELD TEST DATA

TIME	10:00	11:30				CUBIC YARDS PLACED:
SLUMP - INCHES, ASTM C 143	5.5	5.0				±600
AIR - %, ASTM C 173 / C 231						
UNIT WGT. - PCF, ASTM C 138	150	144				
YIELD - CF, ASTM C 138	26.7	27.8				CUBIC YARDS REJECTED:
AIR TEMP. - (°F)	50	50				0
MIX TEMP. - (°F), ASTM C 1064	64	60				
SET NO.	14 A-D	15 A-D				

AREA OF PLACEMENT: From column line N to F between column lines 7-4.

LABORATORY TEST DATA: TEST PROCEDURE ASTM C-39 (6x12 CYLINDERS)

CYLINDER NO.	DATE MOLDED	BREAK DATE	AGE (DAYS)	CURING METHOD		TOTAL LOAD (LBS)	STRENGTH (PSI)	TYPE OF BREAK*
				FIELD	LAB			
14A	12/16/96	12/23/96	7			122,800	4343	
14B	12/16/96	01/13/97	28			163,300	5770	
14C	12/16/96	01/13/97	28			165,100	5840	
14D	12/16/96							
15A	12/16/96	12/23/96	7			147,100	5203	
15B	12/16/96	01/13/97	28			168,400	5960	
15C	12/16/96	01/13/97	28			166,000	5870	
15D								

TYPE OF BREAK LEGEND:



* TYPE OF BREAK IS "A" UNLESS OTHERWISE SHOWN.

REMARKS:

FIELD REP.: G. Cornille



DAILY CONCRETE REPORT

NTH CONSULTANTS, LTD.

PROJECT: Home Depot
 LOCATION: Traverse City, Michigan
 CLIENT: Home Depot, Inc.
 CONTRACTOR: Concord Cement
 SUPPLIER: Cormilic

PROJECT No.: 14-6779-00
 REPORT No.: 17
 DATE: 12/19/96

MIX DESIGN

MATERIALS	SOURCE / DESIGN WEIGHTS	DESIGN
CEMENT	Holnam Type 1 ASTM C260	470 LBS
FINE AGG.	ASTM C33	1619 LBS
COARSE AGG.	ASTM C33 1" max.	1678 LBS
WATER	City	235 LBS
ADDMIXTURE 1	Protecte Crete	10 OZ/CWT
ADDMIXTURE 2		
ADDMIXTURE 3		
		28-DAY STRENGTH: 4000 PSI
		SLUMP (IN) 5 MAX 3 MIN
		AIR: 0.3 %
		C.F. w/c LB/LB
		UNIT WGT. 148.2 PCF
		YIELD 27.0 CF

FIELD TEST DATA

TIME	8:00	9:00	10:00	11:00	12:00	CUBIC YARDS PLACED:
SLUMP - INCHES, ASTM C 143	5.0	5.5	5.0	6.0	5.5	±300
AIR - %, ASTM C 173 / C 231						
UNIT WGT. - PCF, ASTM C 138		140	136	142		CUBIC YARDS REJECTED:
YIELD - CF, ASTM C 138		28.6	29.4	28.2		
AIR TEMP. - (°F)		50	50	50		0
MIX TEMP. - (°F), ASTM C 1064		66	64	68		
SET No.		21A-D	22 A-D	23 A-D		

AREA OF PLACEMENT: Floor slab along column line A-F between column lines 7-4.

LABORATORY TEST DATA: TEST PROCEDURE ASTM C-39 (6X12 CYLINDERS)

CYLINDER NO.	DATE MOLDED	BREAK DATE	AGE (DAYS)	CURING METHOD		TOTAL LOAD (LBS)	STRENGTH (PSI)	TYPE OF BREAK*
				FIELD	LAB			
21A	12/19/96	12/26/96	7			135,800	4800	
21B	12/19/96	01/16/97	28			163,300	5775	
21C	12/19/96	01/16/97	28			159,600	5645	
22A	12/19/96	12/26/96	7			128,600	4550	
22B	12/19/96	01/16/97	28			164,900	5835	
22C	12/19/96	01/16/97	28			167,000	5910	
23A	12/19/96	12/26/96	7			134,000	4750	
23B	12/19/96	01/16/97	28			165,700	5860	
23C	12/19/96	01/16/97	28			166,400	5890	

TYPE OF BREAK LEGEND:



* TYPE OF BREAK IS "A" UNLESS OTHERWISE SHOWN.

REMARKS:

FIELD REP.: G. COCHRAN



DAILY CONCRETE REPORT

NTH CONSULTANTS, LTD.

PROJECT: Home Depot
 LOCATION: Traverse City, Michigan
 CLIENT: Home Depot, Inc.
 CONTRACTOR: Concord Cement
 SUPPLIER: Cornille

PROJECT NO.: 14-6779-00
 REPORT NO.: 16A
 DATE: 12/18/96

MIX DESIGN

MATERIALS	SOURCE / DESIGN WEIGHTS	DESIGN
CEMENT	Holnam Type I ASTM C260	470 LBS
FINE AGG.	ASTM C33	1619 LBS
COARSE AGG.	ASTM C33 1" max.	1678 LBS
WATER	City	235 LBS
ADMIXTURE 1	Protecto Crete	10 OZ/CWT
ADMIXTURE 2		
ADMIXTURE 3		
		28-DAY STRENGTH: 4000 PSI
		SLUMP (IN) 5 MAX. 3 MIN
		AIR: 0-3 %
		C.F. 5.0 w/c 0.50 LB/LB
		UNIT WGT. 148.2 PCF
		YIELD 27.0 CF

FIELD TEST DATA

TIME	12:00	1:00	2:00			CUBIC YARDS PLACED:
SLUMP - INCHES, ASTM C 143	10.0	6.0	5.0			4600
AIR - %, ASTM C 173 / C 231						
UNIT WGT. - PCF, ASTM C 138	142					
YIELD - CF, ASTM C 138	28.2					
AIR TEMP. - (°F)	50					
MIX TEMP. - (°F), ASTM C 1064	64					
SET No.	20 A-D					CUBIC YARDS REJECTED: 0

AREA OF PLACEMENT: Between column lines N-F along column lines 1-4 (floor slab).

LABORATORY TEST DATA: TEST PROCEDURE ASTM C-39 (6 x 12 CYLINDERS)

CYLINDER NO.	DATE MOLDED	BREAK DATE	AGE (DAYS)	CURING METHOD		TOTAL LOAD (LBS)	STRENGTH (PSI)	TYPE OF BREAK*
				FIELD	Lab			
20A	12/18/96	12/19/96	1			30,700	1085	
20B	12/18/96	12/20/96	2			49,430	1750	
20C	12/18/96	12/21/96	3			71,900	2540	
20D	12/18/96	12/23/96	7			98,300	3480	
20E	12/18/96	01/01/97	14			137,700	4870	
20F	12/18/96	01/15/97	28			153,400	5420	
20G	12/18/96	02/12/97	56					
20H	12/18/96							

TYPE OF BREAK LEGEND:



* TYPE OF BREAK IN "A" UNLESS OTHERWISE SHOWN.

REMARKS:

FIELD REP.: G. Cozzina



DAILY CONCRETE REPORT

NTH CONSULTANTS, LTD.

PROJECT: Home Depot
 LOCATION: Traverse City, Michigan
 CLIENT: Home Depot, Inc.
 CONTRACTOR: Concord Cement
 SUPPLIER: Cornille

PROJECT NO.: 14-6779-00
 REPORT NO.: 16
 DATE: 12/18/96

MIX DESIGN

MATERIALS	SOURCE/DESIGN WEIGHTS	DESIGN
CEMENT	Holnam Type 1 ASTM C260	470 LBS
FINE AGG.	ASTM C33	1619 LBS
COARSE AGG.	ASTM C33 1" max.	1678 LBS
WATER	City	235 LBS
ADMIXTURE 1	Protecte Crete	10 OZ/CWT
ADMIXTURE 2		
ADMIXTURE 3		
		28-DAY STRENGTH 4000 PSI
		SLUMP (IN) 5 MAX. 3 MIN
		AIR: 0-3 %
		C.F. 5.0 w/c 0.50 LB/LB
		UNIT WGT. 148.2 PCF
		YIELD 27.0 CF

FIELD TEST DATA

TIME	7:00	8:00	9:00	10:00	
SLUMP - INCHES, ASTM C 143	5.5	5.5	5.0	7.0	CUBIC YARDS PLACED: #600
AIR - %, ASTM C 173 / C 231					
UNIT WGT. - PCF, ASTM C 138			146		CUBIC YARDS REJECTED: 0
YIELD - CF, ASTM C 138			27.4		
AIR TEMP. - (°F)			50		
MIX TEMP. - (°F), ASTM C 1064			62		
SET NO.			19 A-D		

AREA OF PLACEMENT: From slab along column line N-F between column line I-4.

LABORATORY TEST DATA: TEST PROCEDURE ASTM C-39 (6 x 12 CYLINDERS)

CYLINDER NO.	DATE MOLDED	BREAK DATE	AGE (DAYS)	CURING METHOD		TOTAL LOAD (LBS)	STRENGTH (PSI)	TYPE OF BREAK*
				FIELD	LAB			
19A	12/18/96	12/25/96	7			112,400	3975	
19B	12/18/96	01/15/97	28			167,400	5920	
19C	12/18/96	01/15/97	28			166,000	5870	
19D	12/18/96							

TYPE OF BREAK LEGEND:



* TYPE OF BREAK IS "A" UNLESS OTHERWISE SHOWN.

REMARKS:

FIELD REP.: G. Cornier



DAILY CONCRETE REPORT

NTH CONSULTANTS, LTD.

PROJECT: Home Depot
 LOCATION: Traverse City, Michigan
 CLIENT: Home Depot, Inc.
 CONTRACTOR: Concord Cement
 SUPPLIER: Comillie

PROJECT No.: 14-6779-00
 REPORT No.: 15
 DATE: 12/17/96

MIX DESIGN

MATERIALS	SOURCE / DESIGN WEIGHTS		DESIGN		
CEMENT	Holman Type I ASTM C260	470 LBS	28-DAY STRENGTH:		4000 PSI
FINE AGG.	ASTM C33	1619 LBS	SLUMP (IN)	5 MAX.	3 MIN
COARSE AGG.	ASTM C33 1" max	1678 LBS	AIR:	0-3 %	
WATER	City	235 LBS	C.F.	5.0 w/c	0.50 LB/LB
ADMIXTURE 1	Protecte Crete	10 OZ/CWT	UNIT WGT.		148.2 PCF
ADMIXTURE 2			YIELD		27.0 CF
ADMIXTURE 3					

FIELD TEST DATA

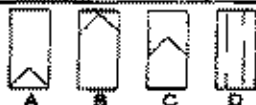
TIME	9:00	9:30	10:00	10:30	11:00	CUBIC YARDS PLACED:
SLUMP - INCHES, ASTM C 143	7.0	6.0	5.0	5.5	5.0	
AIR - %, ASTM C 173 / C 231						
UNIT WGT. - PCF, ASTM C 138	138				152	CUBIC YARDS REJECTED:
YIELD - CF, ASTM C 138	29.0				26.3	
AIR TEMP. - (°F)	45				45	
MIX TEMP. - (°F), ASTM C 1064	60				62	
SET No.	17 A-D				18 A-D	

AREA OF PLACEMENT: From slab between column lines A-F along column lines 7-4.

LABORATORY TEST DATA: TEST PROCEDURE ASTM C-39 (6 X 12 CYLINDERS)

CYLINDER NO.	DATE MOLDED	BREAK DATE	AGE (DAYS)	CURING METHOD		TOTAL LOAD (LBS)	STRENGTH (PSI)	TYPE OF BREAK*
				FIELD	LAB			
17A	12/17/96	12/19/96	2	2	0	35,000	1240	
17B	12/17/96	12/20/96	3	2	1	59,000	2090	
17C	12/17/96	12/24/96	7	2	5	120,000	4240	
17D	12/17/96	12/31/96	14	2	12	140,000	4950	
18A	12/17/96	01/14/97	28	2	26	157,500	5570	
18B	12/17/96	01/14/97	28	2	26	150,000	5300	
18C	12/17/96	02/11/97	56	2	54			
18D	12/17/96			2				

TYPE OF BREAK LEGEND:



* TYPE OF BREAK IS "A" UNLESS OTHERWISE SHOWN.

REMARKS:

FIELD REP.: G. COMBIE



DAILY CONCRETE REPORT

NTH CONSULTANTS, LTD.

PROJECT: Home Depot
 LOCATION: Traverse City, Michigan
 CLIENT: Home Depot, Inc.
 CONTRACTOR: Concord Cement
 SUPPLIER: Cornille

PROJECT No.: 14-6779-00
 REPORT No.: 14A
 DATE: 12/16/96

MIX DESIGN

MATERIALS	SOURCE / DESIGN WEIGHTS	DESIGN
CEMENT	Holman Type I ASTM C260	470 LBS
FINE AGG.	ASTM C33	1619 LBS
COARSE AGG.	ASTM C33 1" max.	1678 LBS
WATER	City	235 LBS
ADMIXTURE 1	Protecta Crete	10 oz/Gal
ADMIXTURE 2		
ADMIXTURE 3		
		28-DAY STRENGTH: 4000 PSI
		SLUMP (in) 5 MAX. 3 MIN
		AIR: 0-3 %
		C.F. 5.0 w/c 0.50 LB/LB
		UNIT WGT. 148.2 PCF
		YIELD 27.0 CF

FIELD TEST DATA

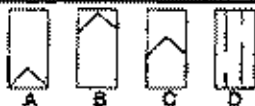
TIME	1:00	10:30	11:00	12:00	12:30	1:30	2:00	CUBIC YARDS PLACED:
SLUMP - INCHES, ASTM C 143	6.0	7.0	6.0	6.0	5.5	6.5	5.5	≈600
AIR - %, ASTM C 173 / C 231								
UNIT WGT. - PCF, ASTM C 138	150							CUBIC YARDS REJECTED: 0
YIELD - CF, ASTM C 138	26.8							
AIR TEMP. - (°F)	50							
MIX TEMP. - (°F), ASTM C 1064	64							
SET NO.	16 A-D							

AREA OF PLACEMENT: From column line N to F between column lines 7-4.

LABORATORY TEST DATA: TEST PROCEDURE ASTM C-39 (6X12 CYLINDERS)

CYLINDER NO.	DATE MOLDED	BREAK DATE	AGE (DAYS)	CURING METHOD		TOTAL LOAD (LBS)	STRENGTH (PSI)	TYPE OF BREAK*
				FIELD	LAB			
16A	12/16/96	12/23/96	7			104,600	3700	
16B	12/16/96	01/13/97	28			158,300	5600	
16C	12/16/96	01/13/97	28			156,700	5545	
16D	12/16/96							

TYPE OF BREAK LEGEND:



* TYPE OF BREAK IS "A" UNLESS OTHERWISE SHOWN.

REMARKS:

FIELD REP.: G. COLLIER



2900 East Grand
 Farmington Hills, MI 48024
 (313) 946-1000
 Fax: (313) 946-1000



Mix
 40310


October 3, 1996

Mr. George Ghazel
 Concord Cement Co.
 20789 Orchard Lake Road
 Farmington Hills, MI 48024

Re: Mix Design - Home Depot - Traverse City, MI

Materials for one cubic yard of concrete for exterior flatwork:

- Compressive Strength (28 day)..... 4000 psi
- Slump (inches)..... 4.0 max
- W/C ratio..... .45
- Air content..... 6% (+/- 2%)
- Coarse Aggregate - ASTM C33 1 inch max
- Fine Aggregate - ASTM C33
- Type I Cement - ASTM C260 Type I, Holnam
- Air Entrainment - Euclid Chemical - Airmix 200

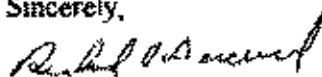
- Cement..... 611 lbs.
- Fine Aggregate..... 1449 lbs. 
- Coarse Aggregate..... 1650 lbs.
- Air Entrainment..... 3.6 ozs. (.6ozs./cwt.)
- Total Water..... 33 gals.

16/107 96oz

This mix is designed in accordance with the requested strength specifications and applicable ACI standards for concrete quality and design requirements. This concrete will meet these requirements when handled, placed, cured and tested in accordance with current A.S.T.M. and A.C.I standards and recommended practices.

In compliance with A.S.T.M. C94, please include Cornillie Concrete on the concrete test report distribution list. This is very important for our quality assurance and statistical analysis.

Sincerely,



Richard A. Deneweth
 President



10000 E. Grand
 Farmington Hills, MI 48024
 (313) 435-1000
 Fax: (313) 435-1001



September 27, 1996

Mr. George Ghazel
 Concord Cement Co.
 20789 Orchard Lake Road
 Farmington Hills, MI 48024

M: 40015

Re: Mix Design - Home Depot - Traverse City, MI

Materials for one cubic yard of concrete for interior floors:

Compressive Strength (28 day)..... 4000 psi
 Slump (inches)..... 4.0 max
 W/C ratio..... .46
 Coarse Aggregate - ASTM C33 1 inch max
 Fine Aggregate - ASTM C33
 Type 1 Cement - ASTM C260 Type 1, Holnam

Cement..... 564 lbs.
 Fine Aggregate..... 1477 lbs.
 Coarse Aggregate..... 1700 lbs.
 Total Water..... 31 gals.

This mix is designed in accordance with the requested strength specifications and applicable ACI standards for concrete quality and design requirements. This concrete will meet these requirements when handled, placed, cured and tested in accordance with current A.S.T.M. and A.C.I standards and recommended practices.

In compliance with A.S.T.M. C94, please include Cornillie Concrete on the concrete test report distribution list. This is very important for our quality assurance and statistical analysis.

Sincerely,

Richard A. Deneweth

Richard A. Deneweth
 President

CORNILLIE CONCRETE
2900 CASS ROAD
TRAVERSE CITY, MI 49684
(616)-946-5600

Concrete Test Report Summary
 Mix: 14-6779-00 F'c: 4000 psi
 02/04/97

MIX DESCRIPTION

14-6779-00 ----- 4000 psi ----- 12/30/93

Sample Date	Slump in	Con Temp deg F	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi	Moving Std: 3 28 day Comp psi	Within C of V 28 day Comp %
12/16/96	6.00	64	3700	5573	-	-	-
12/16/96	5.50	64	4343	5805	-	-	-
12/16/96	5.00	60	5203	5915	5764	-	-
12/17/96	7.00	60	4240	-	-	-	-
12/17/96	5.00	62	-	5435	5718	-	-
12/18/96	7.00	62	3975	5895	5748	-	-
12/18/96	10.00	64	3480	5420	5583	-	-
12/19/96	5.50	66	4800	5710	5675	-	-
12/19/96	5.00	64	4550	5873	5668	-	-
12/19/96	6.00	68	4750	5875	5819	-	-
<hr/>							
Count	10	10	9	9	7	-	-
Average	6.20	63	4338	5722	5711	-	-
Standard Deviation	1.53	3	555	199	77	-	-
Range	5.00	60	3480	5420	5583	-	-
	10.00	68	5203	5915	5819	-	-
Coefficient of Variation	24.70	3.95	12.79	3.47	1.35	-	-