Final Documentation
Of
Special Inspections

Hannaford Food & Drug
Riverside Street, Portland, ME

By

allied *engineering, inc.*

January 13, 2005

STATEMENT OF SPECIAL INSPECTIONS

PROJECT: Hannaford Food & Drug.

LOCATION: Riverside Street, Portland, ME

PERMIT APPLICANT: Hannaford Food & Drug

APPLICANT'S ADDRESS: P.O. Box 1000, South Portland, ME 04106

STRUCTURAL ENGINEER OF RECORD: William P. Faucher, P.E. (Name) **allied** *engineering, inc* (Firm)

ARCHITECT OF RECORD: Hannaford Food & Drug (Name) (Firm)

To the best of my information, knowledge, and belief, the Special Inspections required for this project, and described in the Statement of Special Inspections submitted for the project, have been satisfactory completed and all discovered defects have been corrected.

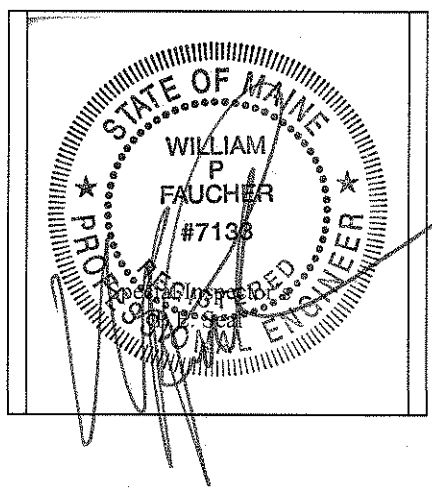
Comments: To the best of my professional knowledge, information and belief, the structural systems for the above referenced project were constructed in general conformance with the plans and specifications and that said plans, in my professional opinion, are in general compliance with applicable laws, codes and ordinances

The Program of Special Inspections does not relieve the Contractor or its subcontractors of their responsibilities and obligations for quality control of the work, for any design work which is included in their scope of services, and for full compliance with the requirements of the Construction Documents. Furthermore, the detection of, or the failure to detect, deficiencies or defects in the work during Special Inspections conducted pursuant to the Program does not relieve the Contractor or its subcontractors of their responsibility to correct all deficiencies or defects, whether detected or undetected, in all parts of the work, and to otherwise comply with all requirements of the Construction Documents.

Respectfully Submitted:
STRUCTURAL ENGINEER OF RECORD

NAME William P. Faucher, PE

SIGNATURE DATE 12-27-04



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LIST OF AGENTS

PROJECT: Hannaford Food & Drug - Riverside Street, Portland, ME

STRUCTURAL ENGINEER OF RECORD: William P. Faucher, P.E. **allied** *engineering, inc*
One Westbrook Common
Westbrook, Maine 04092
(Tel) 207-854-8126 X107; (Fax) 207-854-0603
mailto:wfaucher@allied-eng.com

ARCHITECT OF RECORD: Hannaford Food & Drug

Following is the List of Agents selected for performance of Special Inspections for this project:

	Name	Firm
1. Special Inspector	William P. Faucher, P.E.	**allied** *engineering, inc.*
2. Testing Laboratory (Soils & Concrete)	Roger Domingo	S. W. Cole Engineering, Inc.
3. Testing Laboratory (Steel Connections)	Stephen J. Martelli	Elite Inspection Services

One Westbrook Common, Westbrook, ME 04092
207-854-8126 Voice 207-854-0603 Fax
Web: www.allied-eng.com
E-Mail: info@allied-eng.com

SCHEDULE OF SPECIAL INSPECTION SERVICES
Project: Hannaford Food & Drug - Riverside Street, Portland, ME

MATERIAL/ACTIVITY	ITEM	SERVICE	Y/N	EXTENT (All, Sample, Other, None)	COMMENTS	AGENT No.	DATE COMPLETED	REV. No.
1705.7 PREPARED FILL	5.00							
Site Preparation		Review site preparation prior to prepared fill placement	Yes	S.W. Cole Engineering, Inc.	See Atached Field Summaries	2	Nov/Dec 2004	
During Fill Placement		Review compliance to soils report	Yes	S.W. Cole Engineering, Inc.	See Atached Field Summaries	2	Nov/Dec 2004	
		Material	Yes	S.W. Cole Engineering, Inc.	See Atached Field Summaries	2	Nov/Dec 2004	
		Lift thicknes	Yes	S.W. Cole Engineering, Inc.	See Atached Field Summaries	2	Nov/Dec 2004	
Evaluation of in-Place Density		Review in-place dry density of compliance with soils report	Yes	AEI & S.W. Cole Engineering, Inc.	See Atached Field Summaries	1, 2	Nov/Dec 2004	

All Steel Construction Special Inspections have been completed in accordance with IBC - 2000, Section 1705.6

Inspector _____ Date 12-27-04

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	October 7, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 265 through 268, dated October 6, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

GRAY, ME OFFICE
286 Portland Road, Gray, ME 04039-9586 ▪ Tel (207) 657-2866 ▪ Fax (207) 657-2840 ▪ E-Mail infogray@swcole.com ▪ www.swcole.com

Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
265	10/6/2004	TJB	Sta. 33+98, 17' Left	1/2' BFG	8	2279G	134.4	3.5	96.0	95
266	10/6/2004	TJB	Sta. 22+41, 17' Left	1/2' BFG	8	2279G	138.9	4.0	99.2	95
267	10/6/2004	TJB	Sta. 32+73, 17' Left	1/2' BFG	8	2279G	139.3	4.3	99.5	95
268	10/6/2004	TJB	Sta. 31+76, 17' Left	1/2' BFG	8	2279G	138.2	3.5	98.7	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2279G	8/5/2004	Onsite (Mat'l From Ocean East)	Structural Fill	ASTM D-1557 Modified C	140.0	6.7	

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	October 6, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

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☐Investigation Report	☐Prints	☐Samples
☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 245 through 264, August 16 and September 24, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

1 (207) 657-2866 ▪ Fax (207) 657-2840 ▪ E-Mail infogray@swcole.com ▪ www.swcole.com
Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
245	8/16/2004	DMR	50' Inside Southwest Corner of Building	72.0	10	2279G	140.0	6.6	100.0	95
246	8/16/2004	DMR	16' Inside South Side Centerline	72.0	10	2279G	137.3	5.8	98.1	95
247	8/16/2004	DMR	20' Inside West Side Centerline	72.0	10	2279G	132.8	6.4	94.9	95
248	8/16/2004	DMR	Center of Building	72.0	10	2279G	137.9	7.9	98.5	95
249	8/16/2004	DMR	20' Inside Northeast Corner of Building	72.0	10	2279G	137.5	6.2	98.2	95
250	9/24/2004	TJB	Sta. 36+30, 160' Right	1.5' BFG	8	2279G	135.9	4.2	97.1	95
251	9/24/2004	TJB	Sta. 35+50, 210' Right	1.5' BFG	8	2279G	137.1	3.1	97.9	95
252	9/24/2004	TJB	Sta. 35+50, 100' Right	1.5' BFG	8	2279G	133.3	2.6	95.2	95
253	9/24/2004	TJB	Sta. 36+30, 70' Right	1.5' BFG	8	2279G	136.5	2.5	97.5	95
254	9/24/2004	TJB	Sta. 10+50, 7' Left	1.5' BFG	8	2279G	133.9	2.0	95.6	95
255	9/24/2004	TJB	Sta. 12+00, 7' Right	1.5' BFG	8	2279G	139.7	2.2	99.8	95
256	9/24/2004	TJB	Sta. 13+50, 7' Left	1.5' BFG	8	2279G	136.2	2.2	97.3	95
257	9/24/2004	TJB	Sta. 15+00, 7' Right	1.5' BFG	8	2279G	137.3	2.8	98.1	95
258	9/24/2004	TJB	Sta. 16+50, 7' Left	1.5' BFG	8	2279G	135.1	3.1	96.5	95
259	9/24/2004	TJB	Sta. 18+00, 7' Right	1.5' BFG	8	2279G	137.4	2.7	98.1	95
260	9/24/2004	TJB	Sta. 19+50, 7' Left	1.5' BFG	8	2279G	135.4	2.7	96.7	95
261	9/24/2004	TJB	Sta. 21+00, 7' Right	1.5' BFG	8	2279G	139.1	2.8	99.4	95
262	9/24/2004	TJB	Sta. 22+50, 7' Left	1.5' BFG	8	2279G	135.1	2.7	96.5	95
263	9/24/2004	TJB	Sta. 24+00, 7' Right	1.5' BFG	8	2279G	136.1	3.0	97.2	95
264	9/24/2004	TJB	Sta. 25+50, 7' Left	1.5' BFG	8	2279G	137.1	1.7	97.9	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2279G	8/5/2004	Onsite (Mat'l From Ocean East)	Structural Fill	ASTM D-1557 Modified C	140.0	6.7	

S.W.COLE ENGINEERING, INC.

Report of Field Density

ASTM D2922

Project: **PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

04-0664
September 14, 2004

Hannaford Bros. Co.
Attention: Eric Ottum
145 Pleasant Hill Road
Scarborough, Maine 04074

Subject: Report of Observations
Existing Pavement and Gravel Route 302 Entrance
Proposed Hannaford Supermarket
Forest Avenue and Riverside Street
Portland, Maine

As requested, we made a site visit on September 14, 2004 to the above-mentioned project. The purpose of our visit was to make observations of the existing pavement and gravel thicknesses for the proposed Hannaford entrance drive off Route 302.

OBSERVATIONS

We observed and logged seven explorations (auger probes P-1 through P-4A) made left of centerline between stations 31+90 and 33+50 on Route 302. The explorations were made utilizing a 10-inch diameter core barrel to drill through and remove the existing pavement and a gas-powered 6-inch diameter auger to penetrate and obtain samples of the underlying soil for visual classification. The exploration locations were selected jointly in the field by representatives of S. W. COLE ENGINEERING, INC and R. J. Grondin & Sons. The approximate exploration locations are shown on Sheet 1. Logs of the auger probes are attached as Sheets 2 through 5. A key to the notes and symbols used on the logs is attached as Sheet 6.

In general, we observed the pavement structure of Route 302 consists of two. The observed pavement section encountered at auger probes P-1, P-2, P-2A, P-3 and P-4 is Hot Mix Asphalt (HMA) pavement varying in thickness from as thin as 3½ inches to as thick as 5 1/2 inches. The observed soil beneath the pavement generally consists of sand and gravel fill (base gravel) at auger probes P-1, P-2, P-2A, P-3 and P-4. The gravel base thickness at the exploration locations ranged from 16 inches to 25 inches. Native brown sand with varying amounts of gravel and silt was encountered below the gravel base at auger probes P-1, P-2, P-2A, P-3, and P-4.

04-0664

September 14, 2004

The observed pavement encountered at auger probes P-3A and P-4A is HMA overlying bituminous treated coarse aggregate (BIT). Crushed coarse aggregate (maximum particle size 2 inches) was encountered below the BIT. This pavement section is likely the remnants of an earlier roadway.

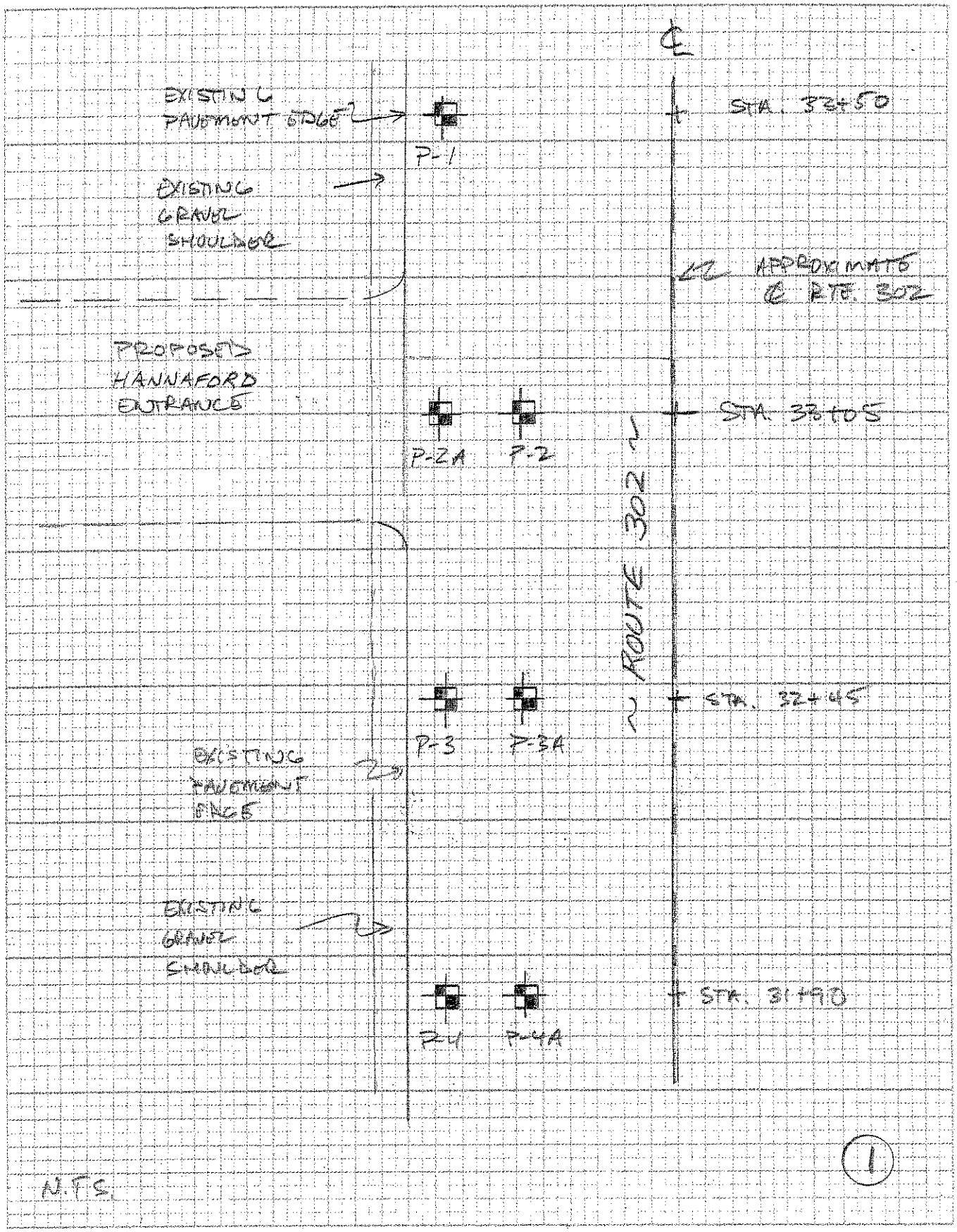
We trust that the information presented herein will be useful in planning. If you have questions regarding this report or if we may be of further assistance, please call.

Sincerely,

S. W. COLE ENGINEERING, INC.

Roger E. Domingo
Construction Services Manager

PROJECT	COMP. BY	JOB NO.
EXISTING PAVEMENT & GRAVEL INVESTIGATION PROPOSED RTE. 302 ENTRANCE HANNAFORD BROS. CO. / PORTLAND, ME.	RSC	04-0664
	CHK. BY	DATE 9/13/04



S.W.COLE ENGINEERING, INC.

AUGER PROBE LOG

PROJECT/CLIENT: Supermarket/Hannaford Bros.
LOCATION: Route 302 & Riverside, Portland Maine
PROJECT NO. 04-0880
AUGER PROBE SIZE O.D. 6"

PROBE NO. P-1
STATION 33+50
OFFSET 18' LT.

DEPTH (Inches)	STRATUM DESCRIPTION
1 7/8	3/4" HMA
3 3/8	3/4" HMA
4 1/2	3/4" HMA
5 1/2	3/4" HMA
	BROWN SAND AND GRAVEL WITH SOME SILT (FILL)
30 1/2	BOTTOM OF EXPLORATION 30 1/2"

PROBE NO.
STATION
OFFSET

DEPTH (Inches)	STRATUM DESCRIPTION

Yes	SOIL TECHNICIAN - VISUALLY
N/A	LABORATORY TESTS

SOIL CLASSIFIED BY: RED

S.W.COLE ENGINEERING, INC.

AUGER PROBE LOG

PROJECT/CLIENT: Supermarket/Hannaford Bros.
LOCATION: Route 302 & Riverside, Portland Maine
PROJECT NO. 04-0880
AUGER PROBE SIZE O.D. 6"

PROBE NO. P-2
STATION 33+05
OFFSET 17' LT.

DEPTH (Inches)	STRATUM DESCRIPTION
1 1/2	3/8" HMA
2 1/4	FINE GRADED AGGREGATE HMA
3 1/2	1" HMA
23 1/2	BROWN SAND AND GRAVEL WITH SOME SILT (GRAVEL BASE)
39 1/2	BROWN SAND WITH SOME GRAVEL TRACE SILT (NATIVE SOIL ?)
	BOTTOM OF EXPLORATION 39 1/2"

PROBE NO. P-2A
STATION 33+05
OFFSET 11' LT.

DEPTH (Inches)	STRATUM DESCRIPTION
1	3/4" HMA
2	FINE GRADED AGGREGATE HMA
4 1/2	2 1/2" HMA
22 1/2	BROWN SAND AND GRAVEL WITH SOME SILT (GRAVEL BASE)
	BOTTOM OF EXPLORATION 22 1/2"

Yes	SOIL TECHNICIAN - VISUALLY
N/A	LABORATORY TESTS

SOIL CLASSIFIED BY: RED

S.W.COLE ENGINEERING, INC.

AUGER PROBE LOG

PROJECT/CLIENT: Supermarket/Hannaford Bros.
LOCATION: Route 302 & Riverside, Portland Maine
PROJECT NO. 04-0880
AUGER PROBE SIZE O.D. 6"

PROBE NO. P-3
STATION 32+45
OFFSET 18' LT.

DEPTH (Inches)	STRATUM DESCRIPTION
1 1/2	3/8" HMA
2 1/4	FINE GRADED AGGREGATE HMA
3 1/4	FINE GRADED AGGREGATE HMA
4 1/4	1" HMA
20 1/4	SAND AND CRUSHED GRAVEL TRACE SILT (GRAVEL BASE)
32 1/4	BROWN FINE SAND WITH SOME SILT (NATIVE SOIL?) BOTTOM OF EXPLORATION 34 1/4"

PROBE NO. P-3A
STATION 32+45
OFFSET 11' LT.

DEPTH (Inches)	STRATUM DESCRIPTION
1	3/4" HMA
1 3/4	FINE GRADED AGGREGATE HMA
3	FINE GRADED AGGREGATE HMA
4	FINE GRADED AGGREGATE HMA
6	2" BIT
12	2" CRUSHED STONE (FILL) (UNABLE TO ADVANCE AUGER THROUGH CRUSHED STONE)
	BOTTOM OF EXPLORATION 12"

Yes	SOIL TECHNICIAN - VISUALLY
N/A	LABORATORY TESTS

SOIL CLASSIFIED BY: RED

S.W.COLE ENGINEERING, INC.

AUGER PROBE LOG

PROJECT/CLIENT: Supermarket/Hannaford Bros. PROJECT NO. 04-0880
LOCATION: Route 302 & Riverside, Portland Maine AUGER PROBE SIZE O.D. 6"

PROBE NO. P-4
STATION 31+90
OFFSET 18' LT.

DEPTH (Inches)	STRATUM DESCRIPTION
1	3/8" HMA
2 1/4	FINE GRADED AGGREGATE HMA
3 1/2	1" HMA
24	SAND AND CRUSHED GRAVEL TRACE SILT (GRAVEL BASE)
36	BROWN FINE SAND WITH SOME GRAVEL AND SILT (NATIVE SOIL) BOTTOM OF EXPLORATION 36"

PROBE NO. P-4A
STATION 31+90
OFFSET 11' LT.

DEPTH (Inches)	STRATUM DESCRIPTION
1	3/4" HMA
2	3/8" HMA
5	2" BIT
6 1/2	2" CRUSHED STONE (FILL) (UNABLE TO ADVANCE AUGER THROUGH CRUSHED STONE)
	BOTTOM OF EPLORATION 6 1/2"

Yes	SOIL TECHNICIAN - VISUALLY
N/A	LABORATORY TESTS

SOIL CLASSIFIED BY: RED

KEY TO THE NOTES & SYMBOLS
Test Boring and Test Pit Explorations

All stratification lines represent the approximate boundary between soil types and the transition may be gradual.

Key to Symbols Used:

HMA	-	hot mixed asphalt
BIT	-	bituminous treated aggregate
w	-	water content, percent (dry weight basis)
q_u	-	unconfined compressive strength, kips/sq. ft. - based on laboratory unconfined compressive test
S_v	-	field vane shear strength, kips/sq. ft.
L_v	-	lab vane shear strength, kips/sq. ft.
q_p	-	unconfined compressive strength, kips/sq. ft. based on pocket penetrometer test
O	-	organic content, percent (dry weight basis)
W_L	-	liquid limit - Atterberg test
W_P	-	plastic limit - Atterberg test
WOH	-	advance by weight of hammer
WOM	-	advance by weight of man
WOR	-	advance by weight of rods
HYD	-	advance by force of hydraulic piston on drill
RQD	-	Rock Quality Designator - an index of the quality of a rock mass. RQD is computed from recovered core samples.
γ_T	-	total soil weight
γ_B	-	buoyant soil weight
HSA	-	Hollow Stem Auger
HW	-	4" Casing
NW	-	3" Casing
SS	-	split-spoon sampler

Description of Proportions:

0 to 5% TRACE
5 to 12% SOME
12 to 35% "Y"
35+% AND

REFUSAL: **Test Boring Explorations** - Refusal depth indicates that depth at which, in the drill foreman's opinion, sufficient resistance to the advance of the casing, auger, probe rod or sampler was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

REFUSAL: **Test Pit Explorations** - Refusal depth indicates that depth at which sufficient resistance to the advance of the backhoe bucket was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

Although refusal may indicate the encountering of the bedrock surface, it may indicate the striking of large cobbles, boulders, very dense or cemented soil, or other buried natural or man-made objects or it may indicate the encountering of a harder zone after penetrating a considerable depth through a weathered or disintegrated zone of the bedrock.

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

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Scarborough, ME 04074

Date: August 13, 2004

Project No: 04-0664

Subject: Riverside Hannaford Super.
Portland, Maine

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☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 211 through 244, August 9-13, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

Soil Field Density

GRAY, ME OFFICE
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Report of Field Density
ASTM D2922

Project: **PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
211	8/9/2004	IIS	44' South of Northeast Building Corner	65	8	2279G	137.1	2.8	97.9	95
212	8/9/2004	IIS	Northeast Building Corner	65	10	2279G	133.7	3.7	95.5	95
213	8/9/2004	IIS	28' West of Northeast Building Corner	67	10	2188G	112.6	3.0	98.0	95
214	8/9/2004	IIS	12' East of Northwest Building Corner	68.5	10	2279G	133.3	3.7	95.2	95
215	8/9/2004	IIS	35' South of Northwest Building Corner	68.5	10	2188G	110.2	2.3	95.9	95
216	8/9/2004	IIS	30' Northwest of Southeast Building Corner	69	10	2188G	110.6	2.7	96.3	95
217	8/9/2004	IIS	50' East of Southwest Building Corner	70	8	2279G	137.9	4.9	98.5	95
218	8/9/2004	IIS	27' Northeast of Southwest Building Corner	70	10	2188G	111.8	2.5	97.3	95
219	8/9/2004	IIS	62' North of Southwest Building Corner	70	8	2188G	111.8	2.0	97.3	95
220	8/9/2004	IIS	72' North of Southwest Building Corner	70	8	2279G	136.2	3.4	97.3	95
221	8/10/2004	IIS	17' South of Northwest Building Corner	70	4	2279G	134.9	4.4	96.4	95
222	8/10/2004	IIS	22' East of Northwest Building Corner	70	6	2279G	133.3	3.0	95.2	95
223	8/10/2004	IIS	Northeast Building Corner	70	8	2279G	136.8	3.5	97.7	95
224	8/10/2004	IIS	45' Southwest of Northeast Buildign Corner	70	8	2279G	133.8	3.1	95.6	95
225	8/10/2004	IIS	75' Southwest of Northeast Building Corner	70	8	2279G	135.7	4.8	96.9	95
226	8/10/2004	IIS	75' West of Southeast Building Corner	70	10	2279G	134.1	4.4	95.8	95
227	8/10/2004	IIS	63' North of Southeast Building Corner	70	10	2279G	134.0	4.4	95.7	95
228	8/10/2004	IIS	49' Off Southwest Building Corner	70	10	2188G	111.2	3.0	96.8	95
229	8/10/2004	IIS	70' Northwest of Southeast Building Corner	70	8	2279G	136.2	4.4	97.3	95
230	8/10/2004	IIS	80' Southeast of Northwest Building Corner	70	8	2279G	136.3	3.3	97.4	95
231	8/11/2004	IIS	20' Off Southeast Building Corner	71	10	2279G	139.2	4.8	99.4	95
232	8/11/2004	IIS	60' Northwest of Southeast Building Corner	71	10	2279G	137.2	4.9	98.0	95
233	8/11/2004	IIS	82' Southeast of Northwest Building Corner	71	8	2279G	134.4	7.5	96.0	95
234	8/11/2004	IIS	22' South of Northeast Building Corner	71	10	2279G	134.8	5.4	96.3	95
235	8/11/2004	IIS	Sta. 34+0, Centerline	69	6	2149G	109.3	4.6	94.0	92

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

236	8/12/2004	IIS	42' Southeast of Northwest Building Corner	72	8	2279G	137.4	5.2	98.1	95
237	8/12/2004	IIS	63' Southeast of Northwest Building Corner	72	8	2279G	136.5	4.1	97.5	95
238	8/12/2004	IIS	60' Southwest of Northeast Building Corner	72	6	2279G	137.0	3.2	97.9	95
239	8/12/2004	IIS	100' Southwest of Northeast Building Corner	72	8	2279G	135.8	5.1	97.0	95
240	8/12/2004	IIS	22' Northwest of Southeast Building Corner	72	6	2279G	133.3	5.4	95.2	95
241	8/12/2004	IIS	55' East of Southwest Building Corner	72	4	2279G	138.1	2.4	98.6	95
242	8/12/2004	IIS	Sta. 34+0, Centerline	71	12	2188G	112.9	4.6	98.3	92
243	8/12/2004	IIS	5' Off Southwest Building Corner	72	10	2279G	137.4	4.3	98.1	95
244	8/13/2004	IIS	30' Northwest of Southeast Building Corner	73.5	10	2279G	133.4	6.1	95.3	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2149G	7/15/2004	Parkins Pit	Sand	ASTM D-1557 Modified A	116.3	10.9	
2188G	7/21/2004	Parsons	Sand	ASTM D-1557 Modified A	114.9	11.3	
2279G	8/5/2004	Onsite (Mat'l From Ocean East)	Structural Fill	ASTM D-1557 Modified C	140.0	6.7	

Elevation Notes:

Comments: Sand/Gravel Tested. Gravel Around Perimeter of Bldg., Sand In The Middle.

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	August 11, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 181 through 210, dated August 2, 3, and 4, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: Roger E. Domingo

GRAY, ME OFFICE
286 Portland Road, Gray, ME 04039-9586 ▪ Tel (207) 657-2866 ▪ Fax (207) 657-2840 ▪ E-Mail infogray@swcole.com ▪ www.swcole.com
Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
181	8/2/2004	IIS	82' Southeast of Northwest Bldg. Cr.	66	8	2120G	134.1	5.0	95.5	95
182	8/2/2004	IIS	44' South of Northwest Bldg. Cr.	66	8	2120G	134.6	5.9	95.9	95
183	8/2/2004	IIS	100' South of Northwest Bldg. Cr.	65.6	8	2120G	134.1	5.7	95.5	95
184	8/2/2004	IIS	37' West of Northeast Bldg. Cr.	65.5	8	2234G	112.7	3.8	99.5	95
185	8/2/2004	IIS	68' South of Northeast Bldg. Cr.	65.5	8	2234G	109.7	4.5	96.8	95
186	8/2/2004	IIS	50' South of Northeast Bldg. Cr.	65.5	8	2234G	109.8	4.7	96.9	95
187	8/2/2004	IIS	80' Northwest of Southeast Bldg. Cr.	66	10	2234G	108.3	5.1	95.6	95
188	8/2/2004	IIS	62' North of Southeast Bldg. Cr.	66	8	2234G	109.4	4.0	96.6	95
189	8/2/2004	IIS	30' North of Southeast Bldg. Cr.	66	8	2234G	108.8	4.7	96.0	95
190	8/3/2004	IIS	66' East of Southwest Bldg. Cr.	66	8	2234G	111.0	3.3	98.0	95
191	8/3/2004	IIS	32' Northwest of Southeast Bldg. Cr.	66	8	2234G	110.5	4.8	97.5	95
192	8/3/2004	IIS	86' Northeast of Southwest Bldg. Cr.	66	8	2234G	111.0	3.8	98.0	95
193	8/3/2004	IIS	40' South of Northwest Bldg. Cr.	66	8	2234G	108.7	3.6	95.9	95
194	8/3/2004	IIS	21' West of Northeast Bldg. Cr.	66	10	2234G	109.5	3.9	96.6	95
195	8/3/2004	IIS	45' West of Northeast Bldg. Cr.	66	10	2234G	112.8	3.4	99.6	95
196	8/3/2004	IIS	Southwest Bldg. Cr.	66	4	2120G	136.1	4.2	96.9	95
197	8/3/2004	IIS	40' Southeast of Northwest Bldg. Cr.	66.5	6	2234G	109.9	3.7	97.0	95
198	8/3/2004	IIS	175' Southwest of Northeast Bldg. Cr.	66.5	8	2188G	115.2	4.2	100.3	95
199	8/3/2004	IIS	150' North of Southeast Bldg. Cr.	66.5	8	2188G	109.8	4.5	95.6	95
200	8/3/2004	IIS	80' North of Southeast Bldg. Cr.	66.5	8	2234G	109.3	3.9	96.5	95
201	8/3/2004	IIS	60' North of Southeast Bldg. Cr.	66.5	8	2234G	108.3	4.6	95.6	95
202	8/4/2004	IIS	10' Off Southeast Bldg. Cr.	66.5	10	2120G	134.2	4.5	95.6	95
203	8/4/2004	IIS	39' North of Southeast Bldg. Cr.	66.5	6	2120G	135.0	5.6	96.2	95
204	8/4/2004	IIS	62' Northwest of Southeast Bldg. Cr.	66.5	8	2120G	134.9	4.3	96.1	95
205	8/4/2004	IIS	161' Northwest of Southeast Bldg. Cr.	66.5	8	2120G	134.4	4.3	95.7	95
206	8/4/2004	IIS	75' West of Northest Bldg. Cr.	66.5	4	2120G	135.7	5.0	96.7	95
207	8/4/2004	IIS	Northwest Bldg. Cr.	66.5	10	2234G	108.7	5.1	95.9	95
208	8/4/2004	IIS	100' Northwest of Southeast Bldg. Cr.	67.0	8	2120G	136.2	4.3	97.0	95
209	8/4/2004	IIS	90' Northeast of Southwest Bldg. Cr.	67.0	8	2120G	138.5	4.7	98.6	95

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

210	8/4/2004	IIS	20' East of Southwest Bldg. Cr.	67.0	8	2120G	134.4	4.1	95.7	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2120G	7/8/2004	Onsite	Stone Dust	ASTM D-1557 Modified B	140.4	7.5	
2188G	7/21/2004	Parsons	Sand	ASTM D-1557 Modified A	114.9	11.3	
2234G	7/30/2004		Sand	ASTM D-1557 Modified A	113.3	12.4	

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:
Hannaford Brothers
Attention: Eric Ottum
145 Pleasant Hill Road
Scarborough, ME 04074

Date: August 5, 2004

Project No: 04-0664

Subject: Riverside Hannaford Super.
Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Field Density Test Results 187- 201

These are transmitted as checked below:

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☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

GRAY, ME OFFICE
286 Portland Road, Gray, ME 04039-9586 ▪ Tel (207) 657-2866 ▪ Fax (207) 657-2840 ▪ E-Mail infogray@swcole.com ▪ www.swcole.com
Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
187	8/2/2004	IIS	80' NW OF SE BUILDING CR	66	10	2234G	108.3	5.1	95.6	95
188	8/2/2004	IIS	62' NORTH OF SE BUILDING CR	66	8	2234G	109.4	4.0	96.6	95
189	8/2/2004	IIS	30' NORTH OF SE BUILDING CR	66	8	2234G	108.8	4.7	96.0	95
190	8/3/2004	IIS	66' EAST OF SW BUILDING CR	66	8	2234G	111.0	3.3	98.0	95
191	8/3/2004	IIS	32' NW OF SE BUILDING CR	66	8	2234G	110.5	4.8	97.5	95
192	8/3/2004	IIS	86' NE OF SW BUILDING CR	66	8	2234G	111.0	3.8	98.0	95
193	8/3/2004	IIS	40' SOUTH OF NW BUILDING CR	66	8	2234G	108.7	3.6	95.9	95
194	8/3/2004	IIS	21' WEST OF NE BUILDING CR	66	10	2234G	109.5	3.9	96.6	95
195	8/3/2004	IIS	45' WEST OF NE BUILDING CR	66	10	2234G	112.8	3.4	99.6	95
196	8/3/2004	IIS	SW BUILDING CR	67	4	2120G	136.1	4.2	96.9	95
197	8/3/2004	IIS	40' SE OF NW BUILDING CR	67	6	2234G	109.9	3.7	97.0	95
198	8/3/2004	IIS	175' SW OF NE BUILDING CR	67	8	2188G	115.2	4.2	100.3	95
199	8/3/2004	IIS	150' NORTH OF SE BUILDING CR	67	8	2188G	109.8	4.5	95.6	95
200	8/3/2004	IIS	80' NORTH OF SE BUILDING CR	67	8	2234G	109.3	3.9	96.5	95
201	8/3/2004	IIS	60' NORTH OF SE BUILDING CR	67	8	2234G	108.3	4.6	95.6	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2120G	7/8/2004	Onsite	Stone Dust	ASTM D-1557 Modified B	140.4	7.5	
2188G	7/21/2004	Parsons	Sand	ASTM D-1557 Modified A	114.9	11.3	
2234G	7/30/2004		Sand	ASTM D-1557 Modified A	113.3	12.4	

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	August 9, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 156 through 201, dated July 29 through August 3, 2004.

These are transmitted as checked below:

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Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: Roger E. Domingo

GRAY, ME OFFICE
286 Portland Road, Gray, ME 04039-9586 ▪ Tel (207) 657-2866 ▪ Fax (207) 657-2840 ▪ E-Mail infogray@swcole.com ▪ www.swcole.com
Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Field Density

ASTM D2922

Project: **PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

								- - - - In Place - - - -		
Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
156	7/29/2004	IIS	100' SOUTH OF NW BUILDING CR	64.9	6	2120G	137.7	5.9	98.1	95
157	7/29/2004	IIS	115' SW OF NE BUILDING CR	64.9	6	2120G	136.2	5.7	97.0	95
158	7/29/2004	IIS	200' SW OF NE BUILDING CR	64.9	4	2120G	133.4	5.4	95.0	95
159	7/29/2004	IIS	190' NE OF SW BUILDING CR	64.9	4	2120G	135.7	6.2	96.7	95
160	7/29/2004	IIS	20' OFF SW BUILDING CR	63.0	4	2120G	138.2	5.8	98.4	95
161	7/29/2004	IIS	30' OFF SW BUILDING CR	63.0	4	2120G	133.6	6.0	95.2	95
162	7/29/2004	IIS	80' NW OFF SE BUILDING CR	63.0	4	2120G	133.5	5.7	95.1	95
163	7/29/2004	IIS	118' SOUTH OF NW BUILDING CR	63.0	6	2120G	134.1	6.2	95.5	95
164	7/29/2004	IIS	20' NORTH OF SE BUILDING CR	63.0	6	2120G	134.6	7.0	95.9	95
165	7/29/2004	IIS	45' WEST OF SE BUILDING CR	63.0	4	2120G	135.5	7.3	96.5	95
166	7/29/2004	IIS	100' NW OF SE BUILDING CR	630	6	2120G	134.0	5.5	95.4	95
167	7/29/2004	IIS	83' SW OF NE BLDG. CR.	63.0	12	2120G	135.4	6.6	96.4	95
168	7/29/2004	IIS	45' SOUTH OF SE BLDG. CR.	63.0	8	2120G	137.0	5.8	97.6	95
169	7/30/2004	IIS	23' NORTH OF SE BLDG. CR.	64.9	8	2120G	138.7	4.9	98.8	95
170	7/30/2004	IIS	78' SW OF NE BLDG. CR.	64.9	8	2149G	115.6	3.4	99.4	95
171	7/30/2004	IIS	45' SOUTH OF NW BLDG. CR.	64.9	8	2188G	113.4	3.3	98.7	95
172	7/30/2004	IIS	35' SOUTH OF NW BLDG. CR.	64.9	8	2188G	114.4	4.5	99.6	95
173	7/30/2004	IIS	50' NORTH OF SE BLDG. CR.	63	8	2188G	114.0	3.7	99.2	95
174	7/30/2004	IIS	80' NORTH OF SE BLDG. CR.	63	8	2188G	110.0	3.8	95.7	95
175	7/30/2004	IIS	205' NE OF SW BLDG. CR.	64.5	8	2188G	114.3	3.7	99.5	95
176	7/30/2004	IIS	205' NW OF SE BLDG. CR.	64.5	8	2188G	108.5	5.5	94.4	95
177	7/30/2004	IIS	40' SOUTH OF NW BLDG. CR.	64.5	8	2188G	112.3	4.2	97.7	95
178	7/31/2004	IIS	75' NW OF SE BLDG. CR.	65.0	8	2120G	137.6	4.7	98.0	95
179	7/31/2004	IIS	20' NE OF SW BLDG. CR.	65.0	8	2120G	133.4	5.4	95.0	95
180	7/31/2004	IIS	45' EAST OF SW BLDG. CR.	65.0	8	2120G	136.5	5.2	97.2	95
181	8/2/2004	IIS	82' SE OF NW BUILDING CR	66	8	2120G	134.1	5.0	95.5	95
182	8/2/2004	IIS	44' SOUTH OF NW BUILDING CR	66	8	2120G	134.6	5.9	95.9	95
183	8/2/2004	IIS	100' SOUTH OF NW BUILDING CR	65.6	8	2120G	134.1	5.7	95.5	95
184	8/2/2004	IIS	37' WEST OF NE BUILDING CR	65.5	8	2234G	112.7	3.8	99.5	95
185	8/2/2004	IIS	68' SOUTH OF NE BUILDING CR	65.5	8	2234G	109.7	4.5	96.8	95

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

186	8/2/2004	IIS	50' SOUTH OF NE BUILDING CR	65.5	8	2234G	109.8	4.7	96.9	95
187	8/2/2004	IIS	80' NW OF SE BUILDING CR	66	10	2234G	108.3	5.1	95.6	95
188	8/2/2004	IIS	62' NORTH OF SE BUILDING CR	66	8	2234G	109.4	4.0	96.6	95
189	8/2/2004	IIS	30' NORTH OF SE BUILDING CR	66	8	2234G	108.8	4.7	96.0	95
190	8/3/2004	IIS	66' EAST OF SW BUILDING CR	66	8	2234G	111.0	3.3	98.0	95
191	8/3/2004	IIS	32' NW OF SE BUILDING CR	66	8	2234G	110.5	4.8	97.5	95
192	8/3/2004	IIS	86' NE OF SW BUILDING CR	66	8	2234G	111.0	3.8	98.0	95
193	8/3/2004	IIS	40' SOUTH OF NW BUILDING CR	66	8	2234G	108.7	3.6	95.9	95
194	8/3/2004	IIS	21' WEST OF NE BUILDING CR	66	10	2234G	109.5	3.9	96.6	95
195	8/3/2004	IIS	45' WEST OF NE BUILDING CR	66	10	2234G	112.8	3.4	99.6	95
196	8/3/2004	IIS	SW BUILDING CR	67	4	2120G	136.1	4.2	96.9	95
197	8/3/2004	IIS	40' SE OF NW BUILDING CR	67	6	2234G	109.9	3.7	97.0	95
198	8/3/2004	IIS	175' SW OF NE BUILDING CR	67	8	2188G	115.2	4.2	100.3	95
199	8/3/2004	IIS	150' NORTH OF SE BUILDING CR	67	8	2188G	109.8	4.5	95.6	95
200	8/3/2004	IIS	80' NORTH OF SE BUILDING CR	67	8	2234G	109.3	3.9	96.5	95
201	8/3/2004	IIS	60' NORTH OF SE BUILDING CR	67	8	2234G	108.3	4.6	95.6	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2120G	7/8/2004	Onsite	Stone Dust	ASTM D-1557 Modified B	140.4	7.5	
2149G	7/15/2004	Parkins Pit	Sand	ASTM D-1557 Modified A	116.3	10.9	
2188G	7/21/2004	Parsons	Sand	ASTM D-1557 Modified A	114.9	11.3	
2234G	7/30/2004		Sand	ASTM D-1557 Modified A	113.3	12.4	

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	August 9, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☒Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☐Field Test Report(s)	☐Specifications	☐Other

Description: Report of Moisture Density and Gradation, 2279G, dated August 9, 2004.

These are transmitted as checked below:

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Remarks:

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BY: _____
Roger E. Domingo

GRAY, ME OFFICE
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Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

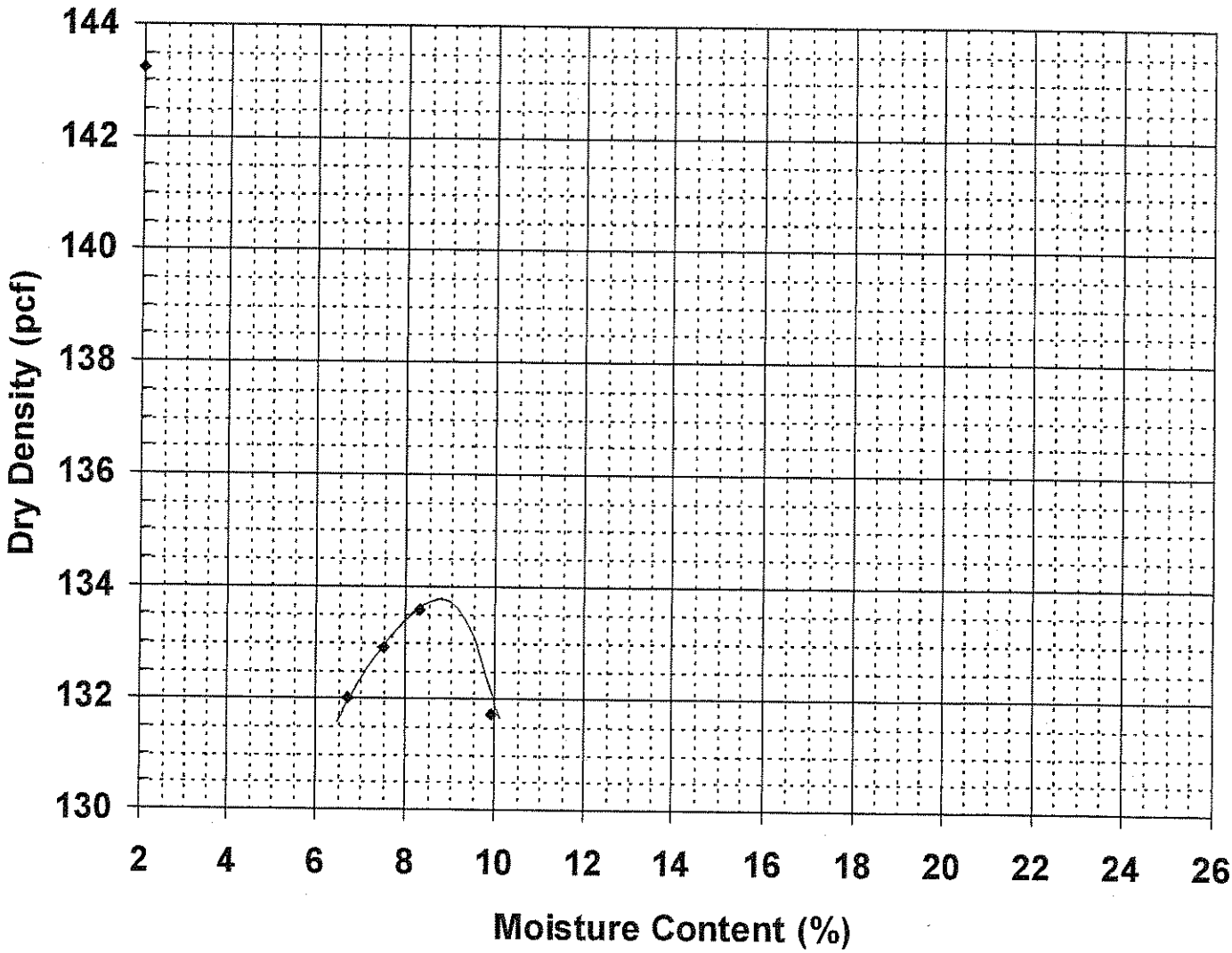
Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure C

Project Name	PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING
Client	HANNAFORD BROS. CO.
Material Type	STRUCTURAL FILL
Material Source	ONSITE (MAT'L FROM OCEAN EAST)

Project Number	04-0664
Lab ID	2279G
Date Received	8/5/2004
Date Completed	8/9/2004
Tested By	JON NADEAU

Moisture-Density Relationship Curve



Maximum Dry Density (pcf)	133.7
Optimum Moisture Content (%)	8.7
Percent Oversized	30.0%

Corrected Dry Density (pcf)	**140**
Corrected Moisture Content (%)	**6.7**

Comments

Roger E. Domingo

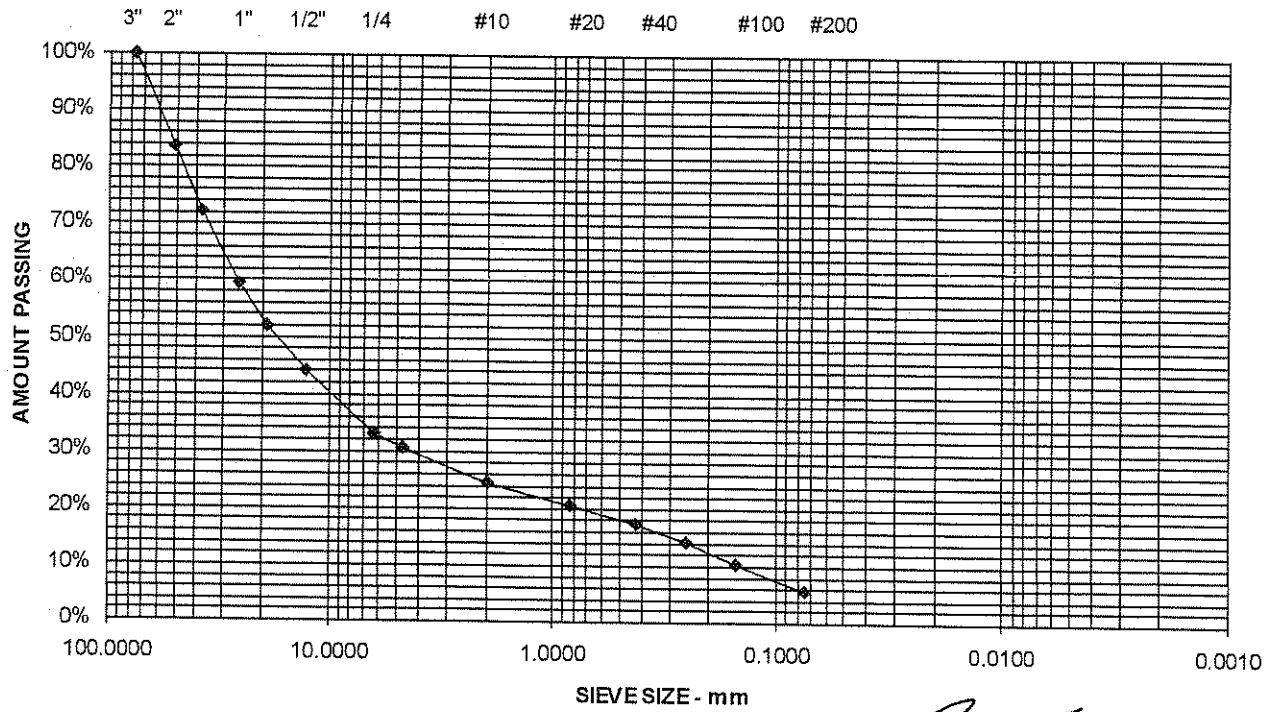
286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE ENGINEERING, INC.

Report of Gradation

Project Name	PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING	Project Number	04-0664
Client	HANNAFORD BROS. CO.	Lab ID	2279G
Material Type	STRUCTURAL FILL	Date Received	8/5/2004
Material Source	ONSITE (MAT'L FROM OCEAN EAST)	Date Completed	8/9/2004
		Tested By	JON NADEAU

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	STRUCTURAL FILL SPECIFICATIONS (%)
150 mm	6"	100	100
125 mm	5"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	84	
38.1 mm	1-1/2"	72	
25.0 mm	1"	59	
19.0 mm	3/4"	52	
12.5 mm	1/2"	44	
6.3 mm	1/4"	33	
4.75 mm	No. 4	31	30 - 90
2.00 mm	No. 10	25	
850 um	No. 20	20	
425 um	No. 40	17	10 - 50
250 um	No. 60	14	
150 um	No. 100	10	
75 um	No. 200	5.7	0.0 - 8.0



Comments

Roger E. Domingo

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:
Hannaford Brothers
Attention: Eric Ottum
145 Pleasant Hill Road
Scarborough, ME 04074

Date: August 3, 2004

Project No: 04-0664

Subject: Riverside Hannaford Super.
Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☒Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☐Field Test Report(s)	☐Specifications	☐Other

Description: Report of Moisture Density 2234G

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

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S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

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Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

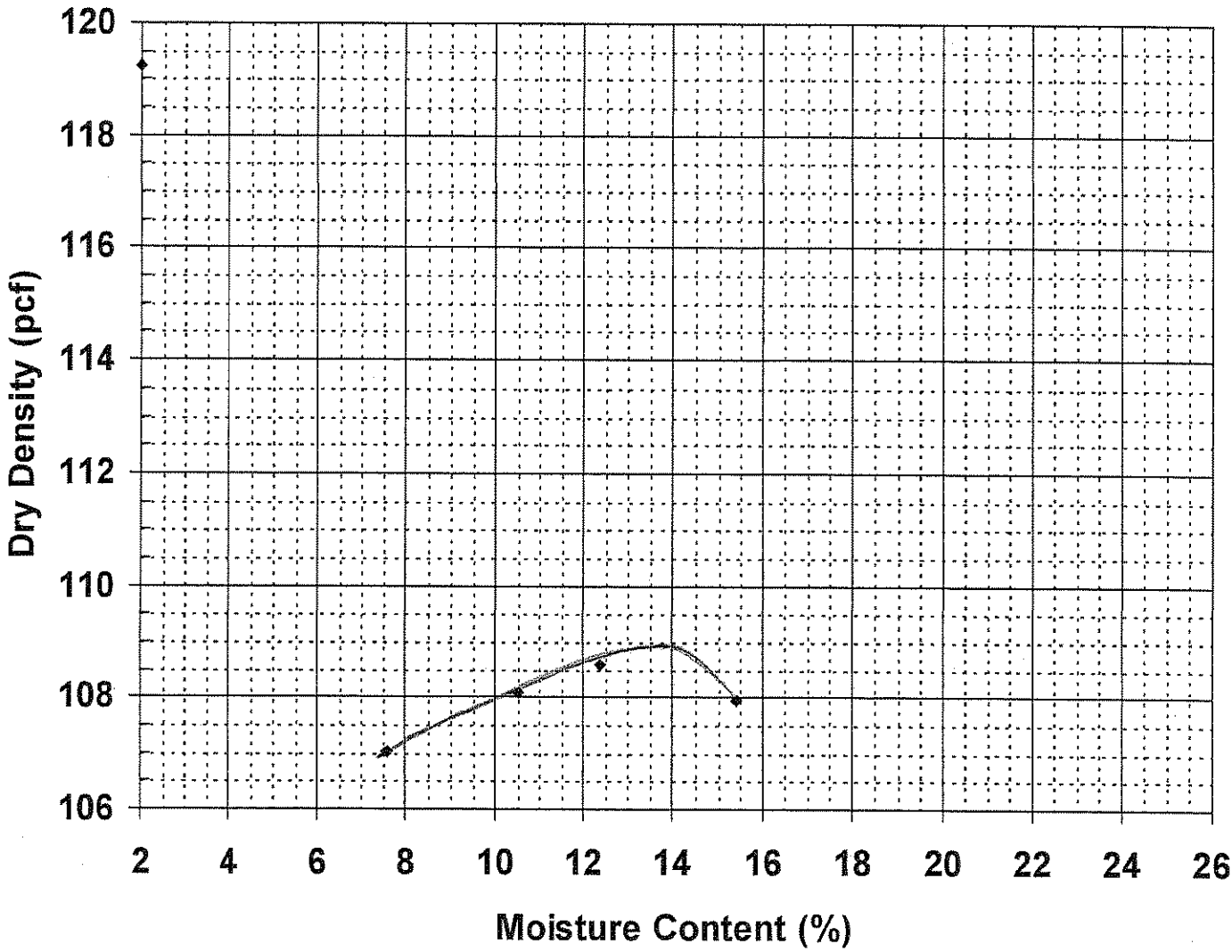
S.W.COLE ENGINEERING, INC.

Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure A

Project Name	PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING	Project Number	04-0664
Client	HANNAFORD BROS. CO.	Lab ID	2234G
Material Type	SAND	Date Received	7/30/2004
Material Source		Date Completed	7/30/2004
		Tested By	NATE MERRILL

Moisture-Density Relationship Curve



Maximum Dry Density (pcf)	108.9
Optimum Moisture Content (%)	13.9
Percent Oversized	12.5%

Corrected Dry Density (pcf)	**113.3**
Corrected Moisture Content (%)	**12.4**

Comments

Roger E. Domingo

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	July 28, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 92 through 101

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

GRAY, ME OFFICE
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Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - RIVERSIDE SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
92	7/22/2004	IIS	5' Off Southwest Building Corner	57.5	8	2120G	136.4	5.0	97.2	95
93	7/22/2004	IIS	50' East of Southwest Building Corner	57.5	8	2120G	134.1	5.8	95.5	95
94	7/22/2004	IIS	30' North of Southeast Building Corner	57.5	8	2120G	137.1	5.6	97.6	95
95	7/22/2004	IIS	100' Northeast of Southwest Building Corner	57.5	8	2120G	134.8	4.9	96.0	95
96	7/22/2004	IIS	75' North of Southwest Building Corner	58	8	2120G	136.5	5.2	97.2	95
97	7/22/2004	IIS	120' Northeast of Southwest Building Corner	58	8	2120G	134.4	5.3	95.7	95
98	7/22/2004	IIS	110' Southwest of Northeast Building Corner	58	8	2120G	133.5	5.0	95.1	95
99	7/22/2004	IIS	100' Southwest of Northeast Building Corner	58	8	2120G	134.8	6.2	96.0	95
100	7/22/2004	IIS	50' Southwest of Northeast Building Corner	58	8	2120G	137.7	4.4	98.1	95
101	7/22/2004	IIS	100' Southwest of Northeast Building Corner	58	8	2120G	136.1	5.7	96.9	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2120G	7/8/2004	Onsite	Stone Dust	ASTM D-1557 Modified B	140.4	7.5	

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:
Hannaford Brothers
Attention: Eric Ottum
145 Pleasant Hill Road
Scarborough, ME 04074

Date: July 29, 2004

Project No: 04-0664

Subject: Riverside Hannaford Super.
Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Field Density Test Results 144 through 155

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

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S. W. COLE ENGINEERING, INC.

BY: Roger E. Domingo

GRAY, ME OFFICE
286 Portland Road, Gray, ME 04039-9586 ▪ Tel (207) 657-2866 ▪ Fax (207) 657-2840 ▪ E-Mail infogray@swcole.com ▪ www.swcole.com
Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING Project Number: 04-0664

Client: HANNAFORD BROS. CO.

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
144	7/28/2004	IIS	100' SOUTH OF NW BUILDING CR	64.5	6	2188G	112.1	5.2	97.6	95
145	7/28/2004	IIS	100' SE OF NW BUILDING CR	64.5	8	2188G	113.7	4.8	99.0	95
146	7/28/2004	IIS	60' SE OF NW BUILDING CR	64.5	2	2188G	112.8	6.2	98.2	95
147	7/28/2004	IIS	180' NORTH OF SE BUILDING CR	61.5	10	2188G	111.4	4.0	97.0	95
148	7/28/2004	IIS	165' NORTH OF SE BUILDING CR	61.5	10	2188G	110.5	3.9	96.2	95
149	7/28/2004	IIS	200' NORTH OF SE BUILDING CR	61.5	6	2188G	111.2	5.4	96.8	95
150	7/28/2004	IIS	190' NORTH OF SE BUILDING CR	62.0	8	2188G	113.5	3.6	98.8	95
151	7/28/2004	IIS	105' NORTH OF SE BUILDING CR	62.0	6	2188G	114.8	4.2	99.9	95
152	7/28/2004	IIS	10' NORTH OF SE BUILDING CR	61.29	8	2149G	114.5	4.3	98.5	95
153	7/28/2004	IIS	35' WEST OF SE BUILDING CR	61.29	8	2149G	112.7	5.2	96.9	95
154	7/28/2004	IIS	185' NW OF SE BUILDING CR	62.90	8	2149G	112.1	4.4	96.4	95
155	7/28/2004	IIS	85' EAST OF SW BUILDING CR	62.90	8	2188G	110.2	3.9	95.9	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2149G	7/15/2004	Parkins Pit	Sand	ASTM D-1557 Modified A	116.3	10.9	
2188G	7/21/2004	Parsons	Sand	ASTM D-1557 Modified A	114.9	11.3	

Elevation Notes:

Comments:

Reviewed By

Haley & Aldrich, Inc.
500 SouthBorough Dr.
Suite 10
South Portland, ME 04106-6935

Tel: 207.772.5439
Fax: 207.871.5999
HaleyAldrich.com

HALEY & ALDRICH

MEMORANDUM

4 August 2004
File No. 29761-001

TO: Hannaford Bros. Co.
Eric Ottum

FROM: Haley & Aldrich, Inc.
James W. Weaver, P.E.

SUBJECT: Site Visit - 3 August 2004
Food Store - Riverside Street Site
Portland, Maine

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Eric – I made a site visit on Tuesday 3 August to observe earthwork operations in the building, parking area and access road alignment. At the time of the visit (2:45 to 3:30 PM) the contractor was excavating fill material in the parking area and naturally deposited marine silt and clay in the access road area adjacent to the north side of the building, placing and compacting granular fill in the building area, and placing and compacting granular fill material to construct the embankment for the access road at the eastern end of the site.

The excavation in the parking lot area encountered granular fill materials (dark brown medium to fine sand trace to little silt), similar to the materials encountered in the design-phase explorations. The material was being hauled to the eastern end of the site and was being used to construct the embankment for the access road. The exposed subgrade was moist and somewhat rutted due to the action of the trailer dumps used to transport the material. A bulldozer was present to grade the surface and eliminate the ruts. The conditions appeared suitable for placement of the parking lot subbase and base course materials.

A backhoe was excavating along the access road along the northern edge of the building. Stiff gray marine silty clay was being exposed. It appeared that the subgrade was at about El. 71. The clay was being hauled to the eastern end of the site where it was being placed and spread adjacent to the access road embankment slopes.

Granular fill (naturally deposited medium to fine sand, little coarse sand, trace fine gravel and silt, and stone dust) was being placed and compacted within the building limits. The material was being placed in approximately 6-inch thick lifts with each lift being compacted with self-propelled steel wheel vibratory compactors. The surface was dry, firm and stable. It is estimated that the grade was at about El. 68.

According to the contractor, the access road along the northern edge of the site has been cut/filled to design subgrade level. The contractor was placing and compacting fill material (from parking lot area) to construct the access road embankment at the eastern end of the site. The material was being placed in lifts on the order of 15 to 18 inches thick. The material was being compacted under the action of the rubber tire trailer dumps and a self-propelled pad-footed steel wheel vibratory compactor (SD-122DX). The soil was moist and the compacted surface appeared to be firm and stable. The contractor was also spreading clay soil (excavated from north of the building area) on the completed embankment slopes with a bulldozer.

The earthwork operations and conditions appeared to be suitable and appropriate.

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HALEY & ALDRICH

MEMORANDUM

20 July 2004
File No. 29761-001

TO: Hannaford Bros. Co.
Eric Ottum

FROM: Haley & Aldrich, Inc.
James W. Weaver, P.E.

SUBJECT: Site Visit - 20 July 2004
Food Store - Riverside Site
Portland, Maine

Eric – I made a site visit this date to observe earthwork operations at the subject site. At the time of the site visit (1000 to 1040 hours) the contractor was 1) placing and compacting granular fill within the building area, 2) excavating to design subgrade level (El. 70) along the northern building line, 3) excavating soils along the northern edge of the site along the access road alignment and 4) placing the excavated soils in the bottom of the pit area at the eastern end of the site within the access road embankment.

The granular fill (stone dust) within the building limit was being placed in approximately 6 to 8-inch thick lifts with each lift compacted with a self-propelled steel wheel compactor. A technician was on site conducting field unit weight tests. The grade within the area was at about El. 55. The exposed subgrade was moist, dense and stable.

The excavation along the northern edge of the building had been made to about El. 70 and exposed stiff, gray silty clay. There was one small area at the eastern end of the north wall that still has to be excavated to remove clay fill material.

The excavation along the access road was being made through naturally deposited marine silt and clay soils. The clay soil was brown in color and was stiff in consistency.

The marine soils being excavated along the access road alignment was hauled to the east end of the site and was being used to construct the embankment for the access road. The soil was being placed in 10 to 12-inch thick lifts with each lift compacted using the rubber tire trailer dumps and a self-propelled steel wheel compactor. The resulting subrade was moist, stiff/dense and stable.

The earthwork conditions observed during the site visit were as anticipated in the design studies and are considered suitable for the project.

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HALEY & ALDRICH

MEMORANDUM

14 July 2004
File No. 29761-001

TO: Hannaford Bros. Co.
Eric Ottum

FROM: Haley & Aldrich, Inc.
James W. Weaver, P.E.

SUBJECT: Site Visit - 14 July 2004
HBC Riverside Site
Portland, Maine

OFFICES

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Massachusetts

Cleveland
Ohio

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New Jersey

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New York

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California

Santa Barbara
California

Tucson
Arizona

Washington
District of Columbia

Eric – I made a site visit this date as discussed with Russ Bartlett of RJ Grondin to observe excavation limits and subgrade conditions within the limits of the building at the subject site. At the time of the visit (0940 to 1020 hours) the contractor was placing, spreading and compacting fill material (mixture of stone dust and sand) in the southern half of the building, and excavating fill material within the northeastern corner of the building.

The fill material above about El. 45 within the northern half of the building area has been excavated, except for a limited area in the northeastern building corner (active excavation area at time of site visit). The excavated material consists primarily of silty clay with various amounts of wood, construction debris and concrete.

A concentration of construction debris (wood, cinder blocks, concrete, etc.) was encountered adjacent to the eastern building wall (40 ft. by 60 ft. area located about 100 ft. south of the northeast building corner) and the material was removed to about El. 44 (one ft. below planned subgrade level). At the time of the site visit the overexcavated area was covered with standing water about 6 in. deep; clay fill material appeared to be present in the excavated bottom.

Naturally deposited marine clay soils were exposed near ground surface level along the northern building limits (except at northeastern corner) and the excavation had been made to approximately El. 70 (5 ft. below design finish floor grade). The El. 70 excavation extended southerly from the northern building limit approximately 50 ft. then there was a cut slope (cut at about 1-1/2 Horizontal to 1 Vertical) about 20 ft. high to a 20-ft. wide shelf at about El. 50. Marine clay was exposed on the cut slope and on the shelf area. To the south of the shelf was another cut slope about 5 ft. high with gravelly coarse to fine sand exposed in the slope. A flat area approximately 20 to 30 ft. wide was present at about El. 45; exposed soils

consisted of gravelly sand, silty clay and clay fill. The balance of the building area (southern half) was being filled with compacted granular fill (stone dust and sand).

The exposed cut slopes, benches and subgrades consisted of naturally deposited Marine Clay and Glacial Stream Deposits, and clay fill. The conditions within the excavated areas are as anticipated and are considered suitable for placement of compacted granular fill in accordance with the contract plans and specifications.

A representative of RJ Grondin indicated that the remaining clay fill material in the northeastern building corner and along the northern edge of the building should be completely removed by the end of day. The soils exposed in the bottom of the excavation (El. 45) will initially be covered by approximately 2 ft. of coarse to fine sand; the sand will then be covered using the stone dust/sand fill material. The backfilling operations will continue until the grade within the building limit is raised to El. 70.

A technician from SW Cole was present on site at the time of the visit and was conducting field unit weight tests on the compacted granular fill being placed and compacted in the southern half of the building.

Please do not hesitate to contact me if you have any questions about the observations, comments and recommendations contained herein.

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HALEY& ALDRICH

MEMORANDUM

12 July 2004
File No. 29761-001

TO: Hannaford Bros. Co.
Eric Ottum

FROM: Haley & Aldrich, Inc.
James W. Weaver, P.E.

SUBJECT: Site Visit
Proposed Food Store
Riverside Street
Portland, Maine

Eric – I made a site visit today to observe the excavation and earthwork operations underway within the building limits at the Riverside Street site. I met with Russ Brackett, the project superintendent for R. J. Grondin and Sons. At the time of the site visit (0915 hours) the contractor was excavating fill material from the northern portion of the building area. There was one excavator operating from the bottom of the pit and one located near the northwestern corner of the building area.

Approximately 2/3's of the building plan area has been excavated to El. 45 and is being backfilled with a granular fill described by Mr. Brackett as "stone dust" (a gray gravelly medium to coarse sand with little fine sand and trace silt). The stone dust is being placed in approximately 6-inch thick lifts and compacted with a large self-propelled vibratory compactor. The compacted surface is dense and moist. Mr. Brackett indicated that representatives of SW Cole were at the site periodically to conduct field unit weight testing to verify that the material is being compacted in accordance with the project specifications.

The fill being excavated in the northern portion of the building area generally consists of a brown silty clay/clayey sand with varying amounts of roots, tree limbs, concrete debris, etc. The excavated material is being hauled to the eastern portion of the site and is being placed in a waste area beyond the limits of the new access road. The clay soils are moist to wet. The excavator operating in the northwestern building corner is removing fine-grained granular soils and that material is being transported to the general fill area adjacent to the eastern side of the building area.

Naturally deposited soils are being exposed in the excavation operations. At the bottom of the pit the excavation has penetrated through the clay fill material and is exposing naturally deposited granular soils (described as Glacial Stream Deposits in our 28 March 2003

geotechnical report). I advised Brackett that these granular soils should not be removed even if they are encountered above El. 45 (the general site excavation limit). Undisturbed naturally deposited Marine Clay soils are being exposed at the northwestern building corner and along the northern limit of the excavation as exposed today.

I met with Russ Brackett and told him that the Glacial Stream and Marine Clay deposits can be left in place. There will be an earth slope which forms the boundary between the fill materials and the naturally deposited soils. I indicated that all the fill materials above El. 45 should be removed and that the resulting slope should be shaped to meet relevant OSHA requirements as determined by the contractor. It is possible that some undisturbed naturally deposited soils will have to be removed to meet the OSHA safe slope requirements.

Mr. Brackett said that he thought the fill material within the building area will be excavated by the end of day tomorrow (13 July 2004) or Wednesday (14 July). It was agreed that I would return to the site on 14 July to observe the limits of the excavation to confirm that the objectionable fill material had been removed and the site was ready for backfilling in accordance with the contract plans and specifications.

Please do not hesitate to contact me if you have any questions about the observations, comments and recommendations contained herein.

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S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	July 28, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 132 through 143, dated July 27, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

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Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
132	7/27/2004	IIS	20' East of Southwest Building Corner	60.5	8	2120G	133.6	5.6	95.2	95
133	7/27/2004	IIS	35' Est of Southwest Building Corner	60.0	6	2120G	138.7	5.6	98.8	95
134	7/27/2004	IIS	5' Off Southeast Building Corner	59.5	6	2120G	133.7	5.4	95.2	95
135	7/27/2004	IIS	110' Off Southeast Building Corner	60.5	6	2120G	135.0	5.2	96.2	95
136	7/27/2004	IIS	135' Off Southeast Building Corner	60.5	6	2120G	134.0	4.8	95.4	95
137	7/27/2004	IIS	20' South of Northeast Building Corner	60.5	6	2120G	133.6	6.1	95.2	95
138	7/27/2004	IIS	200' North of Southeast Bulding Corner	61.5	6	2120G	133.7	5.6	95.2	95
139	7/27/2004	IIS	150' North of Southeast Building Corner	61.0	10	2120G	133.4	5.0	95.0	95
140	7/27/2004	IIS	160' Northwest of Southeast Building Corner	61.5	10	2120G	136.4	5.6	97.2	95
141	7/27/2004	IIS	25' Off Southwest Building Corner	61.5	8	2120G	135.0	5.3	96.2	95
142	7/27/2004	IIS	Southwest Building Corner	61.5	6	2120G	134.6	5.4	95.9	95
143	7/27/2004	IIS	30' Northeast of Southwest Building Corner	62.5	8	2120G	137.8	5.4	98.1	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2120G	7/8/2004	Onsite	Stone Dust	ASTM D-1557 Modified B	140.4	7.5	

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	July 27, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 120 through 131, dated July 26, 2004.

These are transmitted as checked below:

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☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

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Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
120	7/26/2004	IIS	25' Northwest of Southeast Building Corner	59.5	8	2120G	136.1	5.2	96.9	95
121	7/26/2004	IIS	60' West of Southeast Building Corner	59.5	8	2120G	136.0	6.1	96.9	95
122	7/26/2004	IIS	150' North of Southeast Building Corner	60.0	8	2120G	137.4	5.2	97.9	95
123	7/26/2004	IIS	150' North of Southwest Building Corner	60.0	8	2120G	133.6	5.3	95.2	95
124	7/26/2004	IIS	200' Northwest of Southeast Building Corner	60.0	8	2120G	136.2	5.6	97.0	95
125	7/26/2004	IIS	200' North of Southeast Building Corner	60.0	6	2120G	136.3	6.2	97.1	95
126	7/26/2004	IIS	17' Off Southeast Building Corner	60.5	8	2120G	139.7	5.9	99.5	95
127	7/26/2004	IIS	50' Off Southeast Building Corner	60.5	8	2120G	135.4	5.0	96.4	95
128	7/26/2004	IIS	45' Northeast of Southwest Building Corner	60.5	8	2120G	136.0	6.5	96.9	95
129	7/26/2004	IIS	30' Off Southwest Building Corner	60.5	6	2120G	134.7	4.7	95.9	95
130	7/26/2004	IIS	Southwest Building Corner	60.5	6	2120G	133.7	5.0	95.2	95
131	7/26/2004	IIS	80' North of Southwest Building Corner	60.5	8	2120G	133.9	6.4	95.4	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2120G	7/8/2004	Onsite	Stone Dust	ASTM D-1557 Modified B	140.4	7.5	

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	July 26, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☒Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 114 through 119, dated July 24, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: Roger E. Domingo

GRAY, ME OFFICE
286 Portland Road, Gray, ME 04039-9586 ▪ Tel (207) 657-2866 ▪ Fax (207) 657-2840 ▪ E-Mail infogray@swcole.com ▪ www.swcole.com
Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - RIVERSIDE SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
114	7/24/2004	IIS	10' Off Southeast Building Corner	59.5	8	2120G	136.9	6.5	97.5	95
115	7/24/2004	IIS	45' West of Southeast Building Corner	59.5	8	2120G	136.7	7.6	97.4	95
116	7/24/2004	IIS	20' Northeast of Southwest Building Corner	59.5	8	2120G	135.9	8.4	96.8	95
117	7/24/2004	IIS	80' North of Southwest Building Corner	59.5	8	2120G	135.1	6.5	96.2	95
118	7/24/2004	IIS	200' Northwest of Southeast Building Corner	59.5	8	2120G	134.8	5.3	96.0	95
119	7/24/2004	IIS	75' Northwest of Southeast Building Corner	59.5	8	2120G	133.6	8.4	95.2	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2120G	7/8/2004	Onsite	Stone Dust	ASTM D-1557 Modified B	140.4	7.5	

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	July 20, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

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☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 64 through 69, dated July 19, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

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S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

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S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - RIVERSIDE SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
64	7/19/2004	IIS	25' Off Southeast Building Corner	55.5	8	2120G	134.1	5.5	95.5	95
65	7/19/2004	IIS	50' Northwest of Southeast Building Corner	55.5	8	2120G	135.3	6.6	96.4	95
66	7/19/2004	IIS	30' East of Southwest Buildign Corner	55.5	8	2120G	135.7	5.5	96.7	95
67	7/19/2004	IIS	10' North of Southwest Building Corner	55.5	10	2120G	138.0	6.2	98.3	95
68	7/19/2004	IIS	100' North of Southwest Building Corner	54.5	8	2120G	133.8	5.3	95.3	95
69	7/19/2004	IIS	100' Southeast of Northwest Building Corner	54.5	8	2120G	133.4	5.3	95.0	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2120G	7/8/2004	Onsite	Stone Dust	ASTM D-1557 Modified B	140.4	7.5	

Elevation Notes:

Comments: A few tests were 94% and when the nuke was rotated around, it was passing.

Reviewed By

S.W.COLE ENGINEERING, INC.

• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	July 26, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☒Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 102 through 113, dated July 23, 2004, as well as Report of Moisture Density, 2188G, dated July 22, 2004.

These are transmitted as checked below:

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☒As requested	☐Returned

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BY: _____
Roger E. Domingo

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Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - RIVERSIDE SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
102	7/23/2004	IIS	120' North of Southeast Building Corner	59	8	2120G	133.7	5.2	95.2	95
103	7/23/2004	IIS	80' Northwest of Southeast Building Corner	59	8	2120G	135.0	5.9	96.2	95
104	7/23/2004	IIS	40' West of Southeast Building Corner	59.5	10	2120G	136.2	4.3	97.0	95
105	7/23/2004	IIS	40' Northeast of Southeast Building Corner	59.5	10	2120G	136.9	4.6	97.5	95
106	7/23/2004	IIS	90' North of Southwest Building Corner	59.0	10	2120G	137.8	5.3	98.1	95
107	7/23/2004	IIS	115' Northeast of Southwest Building Corner	59.0	10	2120G	134.7	6.4	95.9	95
108	7/23/2004	IIS	60' Northwest of Southeast Building Corner	59.0	10	2120G	136.9	4.7	97.5	95
109	7/23/2004	IIS	35' West of Southeast Building Corner	59.0	10	2120G	138.8	4.2	98.9	95
110	7/23/2004	IIS	120' Northeast of Southwest Building Corner	59.0	8	2120G	135.1	5.6	96.2	95
111	7/23/2004	IIS	15' Northeast of Southwest Building Corner	59.0	8	2120G	135.0	4.8	96.2	95
112	7/23/2004	IIS	175' North of Southeast Building Corner	59.0	8	2120G	133.4	6.3	95.0	95
113	7/23/2004	IIS	115' North of Southeast Building Corner	59.0	8	2120G	135.7	4.0	96.7	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2120G	7/8/2004	Onsite	Stone Dust	ASTM D-1557 Modified B	140.4	7.5	

Elevation Notes:

Comments:

Reviewed By

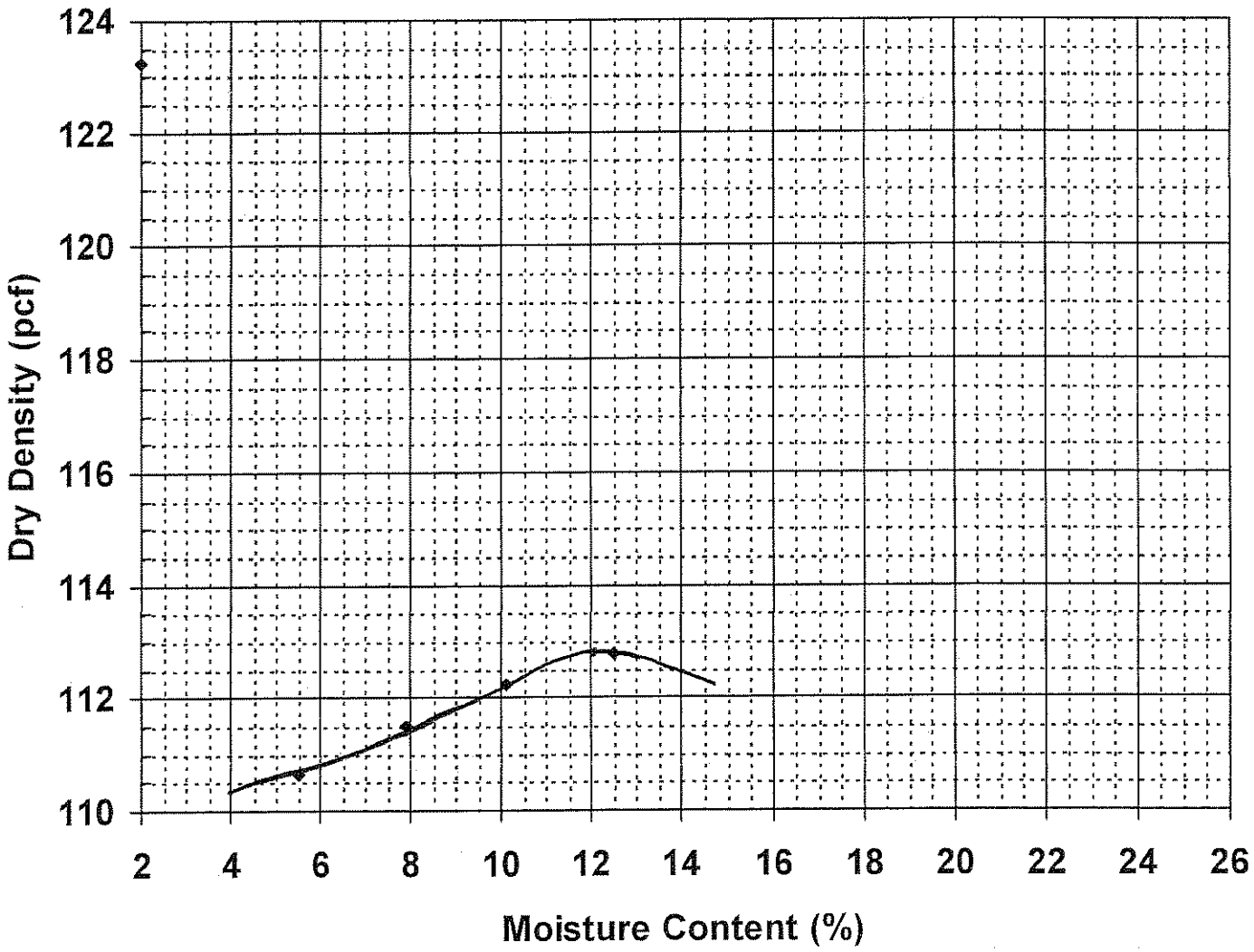
S.W.COLE ENGINEERING, INC.

Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure A

Project Name	RIVERSIDE HANNAFORD SUPERMARKET	Project Number	04-0664
		Lab ID	2188G
Client	HANNAFORD BROS. CO.	Date Received	7/21/2004
Material Type	SAND	Date Completed	7/22/2004
Material Sourc	PARSONS	Tested By	IAN SMITH

Moisture-Density Relationship Curve



Maximum Dry Density (pcf)	112.8
Optimum Moisture Content (%)	12
Percent Oversized	6.6%

Corrected Dry Density (pcf)	**114.9**
Corrected Moisture Content (%)	**11.3**

Comments

Roger E. Domingo

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	July 23, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 92 through 101, dated July 22, 2004.

These are transmitted as checked below:

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☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

GRAY, ME OFFICE
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Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - 1-295 INTERCHANGE - MATERIALS TESTING PO #200300242295** Project Number: **02-0789.3**

Client: **CIANBRO CORP.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
524	7/22/2004	KBG	Sta. 1+833, 12.5 Left, Commercial Street	11.1	12	2039G	117.9	6.0	93.3	90
525	7/22/2004	KBG	Sta. 1+840, 34 Left, Commercial Street	11.3	12	1481G	112.6	6.2	91.5	90
526	7/22/2004	KBG	Sta. 1+775, 7 Left, Bridge 3 MSE	8.2	12	2186G	127.6	2.9	96.1	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
1481G	3/29/2004	VALLEY ST. CUT	Common Borrow	ASTM D-1557 Modified A	123.0	7.7	
2039G	6/24/2004	VETERANS CIRCLE BRIDGE ABUTMENTS	Common Borrow	ASTM D-1557 Modified A	126.3	9.2	
2186G	7/21/2004	Shaw Brothers Blend	Gravel Borrow	ASTM D-698 Standard C	132.8	7.5	

Elevation Notes:

Comments: Bridge 3 MSE gravel borrow in reinforced zone.

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	July 22, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

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☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 82 through 91, dated July 21, 2004.

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BY: _____
Roger E. Domingo

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S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - RIVERSIDE SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
82	7/21/2004	IIS	10' Off Southwest Building Corner	56.5	4	2149G	110.9	7.5	95.4	95
83	7/21/2004	IIS	10' Off Southwest Building Corner	56.5	4	2149G	116.6	9.1	100.3	95
84	7/21/2004	IIS	25' Off Southeast Building Corner	56.5	8	2149G	111.1	4.7	95.5	95
85	7/21/2004	IIS	35' Off Southeast Building Corner	56.5	8	2149G	111.2	5.1	95.6	95
86	7/21/2004	IIS	35' Off Southeast Building Corner	56.5	8	2149G	111.5	5.3	95.9	95
87	7/21/2004	IIS	5' Off Southeast Building Corner	56.5	8	2149G	110.8	5.5	95.3	95
88	7/21/2004	IIS	13' Off Southeast Building Corner	56.5	8	2149G	111.3	6.3	95.7	95
89	7/21/2004	IIS	150' Off Southwest Building Corner	56.5	4	2149G	112.9	6.2	97.1	95
90	7/21/2004	IIS	100' Southeast of Northwest Building Corner	56.5	2	2149G	111.3	11.5	95.7	95
91	7/21/2004	IIS	150' Southeast of Northwest Building Corner	56.5	2	2149G	112.9	9.5	97.1	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2149G	7/15/2004	Parkins Pit	Sand	ASTM D-1557 Modified A	116.3	10.9	

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	July 21, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☒Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☐Field Test Report(s)	☐Specifications	☐Other

Description: Report of Moisture Density, 2149G, dated July 16, 2004, as well as Report of Field Density, tests 70 through 81, dated July 20, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: Roger E. Domingo

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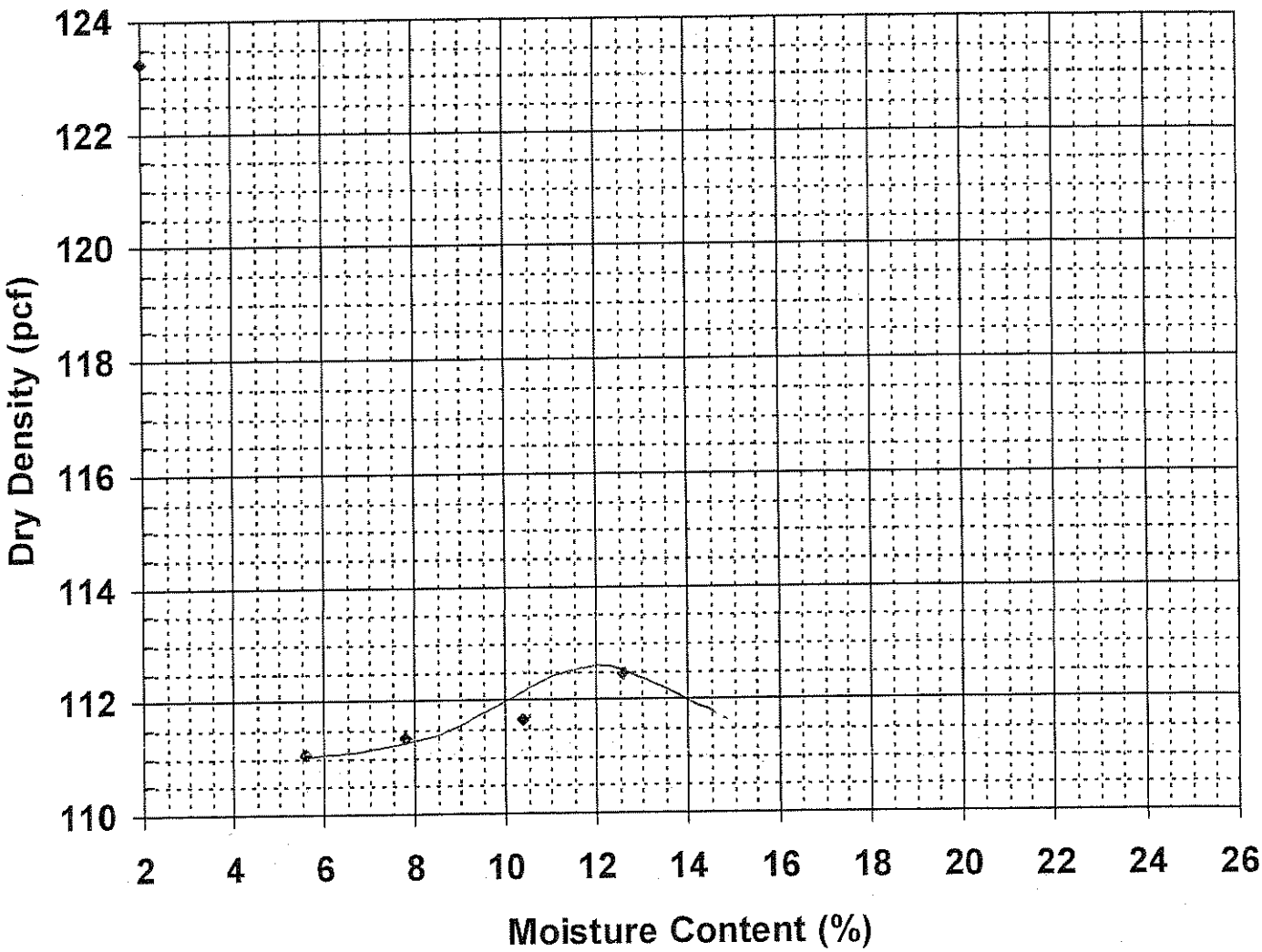
S.W.COLE ENGINEERING, INC.

Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure A

Project Name	RIVERSIDE HANNAFORD SUPERMARKET	Project Number	04-0664
		Lab ID	2149G
Client	HANNAFORD BROS. CO.	Date Received	7/15/2004
Material Type	SAND	Date Completed	7/16/2004
Material Sourc	PARKINS PIT	Tested By	IAN SMITH

Moisture-Density Relationship Curve



Maximum Dry Density (pcf)	112.6
Optimum Moisture Content (%)	12
Percent Oversized	11.2%

Corrected Dry Density (pcf)	**116.3**
Corrected Moisture Content (%)	**10.9**

Comments

Roger E. Domingo

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - RIVERSIDE SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
70	7/20/2004	IIS	20' Off Southwest Building Corner	55.5	6	2120G	133.4	7.0	95.0	95
71	7/20/2004	IIS	70' Off Southwest Building Corner	55.5	6	2120G	136.9	7.4	97.5	95
72	7/20/2004	IIS	35' Off Southeast Building Corner	55.5	6	2120G	135.7	6.9	96.7	95
73	7/20/2004	IIS	100' Off Southwest Building Corner	55.5	6	2120G	134.6	6.2	95.9	95
74	7/20/2004	IIS	100' Off Northwest Building Corner	55.5	6	2120G	133.5	6.6	95.1	95
75	7/20/2004	IIS	100' Off Northeast Building Corner	55.5	6	2120G	133.5	7.2	95.1	95
76	7/20/2004	IIS	120' Off Northwest Building Corner	55.5	8	2120G	136.0	6.5	96.9	95
77	7/20/2004	IIS	75' Off Northeast Building Corner	55.5	8	2120G	136.4	6.6	97.2	95
78	7/20/2004	IIS	75' Off Northwest Building Corner	55.5	8	2120G	137.3	6.7	97.8	95
79	7/20/2004	IIS	30' Off Southeast Building Corner	55.5	8	2120G	139.1	4.7	99.1	95
80	7/20/2004	IIS	60' Off Southeast Building Corner	55.5	8	2120G	137.0	6.4	97.6	95
81	7/20/2004	IIS	20' Off Southwest Building Corner	55.5	8	2120G	134.1	6.5	95.5	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2120G	7/8/2004	Onsite	Stone Dust	ASTM D-1557 Modified B	140.4	7.5	

Elevation Notes:

Comments: Tests 76, 78, 81 failed but were rolled then passed.

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	July 19, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 43 through 63, dated July 15 through 19, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

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Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - RIVERSIDE SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
43	7/15/2004	IIS	120' Northwest of Southeast Building Corner	48.5	6	2149G	109.2	3.9	93.9	95
44	7/15/2004	IIS	110' Northeast of Southwest Building Corner	48.5	6	2149G	110.9	3.8	95.4	95
45	7/15/2004	IIS	100' Southwest of Northeast Building Corner	48.5	10	2149G	114.9	4.2	98.8	95
46	7/15/2004	IIS	100' Northest of Southwest Building Corner	48.5	8	2149G	118.9	9.2	102.2	95
47	7/16/2004	IIS	115' Northwest of Southeast Building Corner	49.8	10	2120G	135.4	5.5	96.4	95
48	7/16/2004	IIS	120' Northeast of Southwest Building Corner	50	8	2120G	134.3	4.8	95.7	95
49	7/16/2004	IIS	100' Off Northeast Building Corner	50	4	2120G	134.3	4.1	95.7	95
50	7/16/2004	IIS	150' Off Southeast Building Corner	50	10	2120G	139.5	5.1	99.4	95
51	7/16/2004	IIS	RETEST #43	47.5	6	2149G	113.5	5.7	97.6	95
52	7/16/2004	IIS	150' Off Southwest Building Corner	47.5	10	2120G	133.5	4.8	95.1	95
53	7/17/2004	IIS	50' Off Northeast Building Corner	50	8	2120G	137.9	4.8	98.2	95
54	7/17/2004	IIS	100' Northwest of Southeast Building Corner	50	10	2120G	134.2	5.5	95.6	95
55	7/17/2004	IIS	110' South of Northwest Building Corner	50	10	2120G	134.4	5.6	95.7	95
56	7/17/2004	IIS	100' Northeast of Southwest Building Corner	52	10	2120G	136.5	4.5	97.2	95
57	7/17/2004	IIS	70' North of Southeast Building Corner	55	8	2120G	135.9	5.5	96.8	95
58	7/19/2004	IIS	Southeast Building Corner	52.75	8	2120G	137.6	5.2	98.0	95
59	7/19/2004	IIS	140' Off Northwest Building Corner	53.5	10	2120G	139.0	5.9	99.0	95
60	7/19/2004	IIS	110' Off Northwest Building Corner	53.5	10	2120G	134.5	4.8	95.8	95
61	7/19/2004	IIS	100' Off Northeast Building Corner	53.5	10	2120G	135.5	5.7	96.5	95
62	7/19/2004	IIS	85' Off Northeast Building Corner	53.5	10	2120G	137.2	5.5	97.7	95
63	7/19/2004	IIS	100' Northwest of Southeast Building Corner	53.5	10	2120G	138.9	5.2	98.9	95

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - RIVERSIDE SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2120G	7/8/2004	Onsite	Stone Dust	ASTM D-1557 Modified B	140.4	7.5	
2149G	7/15/2004	Parkins Pit	Sand	ASTM D-1557 Modified A	116.3	10.9	

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	July 14, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 31 through 42, dated July 13 and 14, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

GRAY, ME OFFICE
286 Portland Road, Gray, ME 04039-9586 ▪ Tel (207) 657-2866 ▪ Fax (207) 657-2840 ▪ E-Mail infogray@swcole.com ▪ www.swcole.com
Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - RIVERSIDE SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
31	7/13/2004	IIS	Southwest Building Corner	53.22	10	2120G	136.5	4.6	97.2	95
32	7/13/2004	IIS	10" From Southwest Building Corner	53.28	10	2120G	137.4	4.7	97.9	95
33	7/13/2004	IIS	25" Northwest of Southeast Building Corner	52.27	10	2120G	133.7	5.6	95.2	95
34	7/13/2004	IIS	100" Northeast of Southwest Building Corner	51.84	10	2120G	134.4	5.0	95.7	95
35	7/13/2004	IIS	100" North of Southwest	50.98	12	2120G	134.2	4.7	95.6	95
36	7/13/2004	IIS	110" Northwest of Southeast Building Corner	51.0	8	2120G	136.1	5.0	96.9	95
37	7/14/2004	IIS	20' North of Southeast Building Corner	51	8	2120G	140.0	6.6	99.7	95
38	7/14/2004	IIS	90' East of Southwest Building Corner	51	10	2120G	138.6	5.3	98.7	95
39	7/14/2004	IIS	20' East of Southwest Building Corner	51	8	2120G	135.5	4.9	96.5	95
40	7/14/2004	IIS	110' Northeast of Southwest Building Corner	50	10	2120G	134.9	5.2	96.1	95
41	7/14/2004	IIS	100' Northwest of Southeast Building Corner	50	8	2120G	133.6	4.9	95.2	95
42	7/14/2004	IIS	90' Off Southeast Building Corner	50	8	2120G	140.2	5.6	99.9	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2120G	7/8/2004	Onsite	Stone Dust	ASTM D-1557 Modified B	140.4	7.5	

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	July 13, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Field Density, tests 25 through 30, dated July 13, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

GRAY, ME OFFICE
286 Portland Road, Gray, ME 04039-9586 ▪ Tel (207) 657-2866 ▪ Fax (207) 657-2840 ▪ E-Mail infogray@swcole.com ▪ www.swcole.com

Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - RIVERSIDE SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
25	7/13/2004	IIS	10" Off Southwest Building Corner	50	8	2120G	134.3	5.2	95.7	95
26	7/13/2004	IIS	30" Off Southwest Building Corner	50	8	2120G	137.0	4.7	97.6	95
27	7/13/2004	IIS	50" Northwest of Southeast Building Corner	50	10	2120G	135.6	4.5	96.6	95
28	7/13/2004	IIS	20" North of Southeast Building Corner	50	12	2120G	136.3	4.4	97.1	95
29	7/13/2004	IIS	100" Northwest of Southeast Building Corner	48	8	2120G	138.8	4.4	98.9	95
30	7/13/2004	IIS	75" North of Southeast Building Corner	52	10	2120G	135.0	5.2	96.2	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2120G	7/8/2004	Onsite	Stone Dust	ASTM D-1557 Modified B	140.4	7.5	

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To: Hannaford Brothers
Attention: Eric Ottum
145 Pleasant Hill Road
Scarborough, ME 04074

Date: July 12, 2004

Project No: 04-0664

Subject: Riverside Hannaford Super.

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☒Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☒Field Test Report(s)	☐Specifications	☐Other

Description: Report of Gradation, 2122G, dated July 9, 2004, as well as Report of Field Densities, tests 1 through 24, dated July 1, 7, 8, 9 and 12, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

GRAY, ME OFFICE
286 Portland Road, Gray, ME 04039-9586 ▪ Tel (207) 657-2866 ▪ Fax (207) 657-2840 ▪ E-Mail infogray@swcole.com ▪ www.swcole.com

Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

Project Name: RIVERSIDE HANNAFORD SUPERMARKET

Client: HANNAFORD BROS. CO.

Material Type: STONE DUST

Material Source: ON-SITE STOCKPILE

Project Number: 04-0664

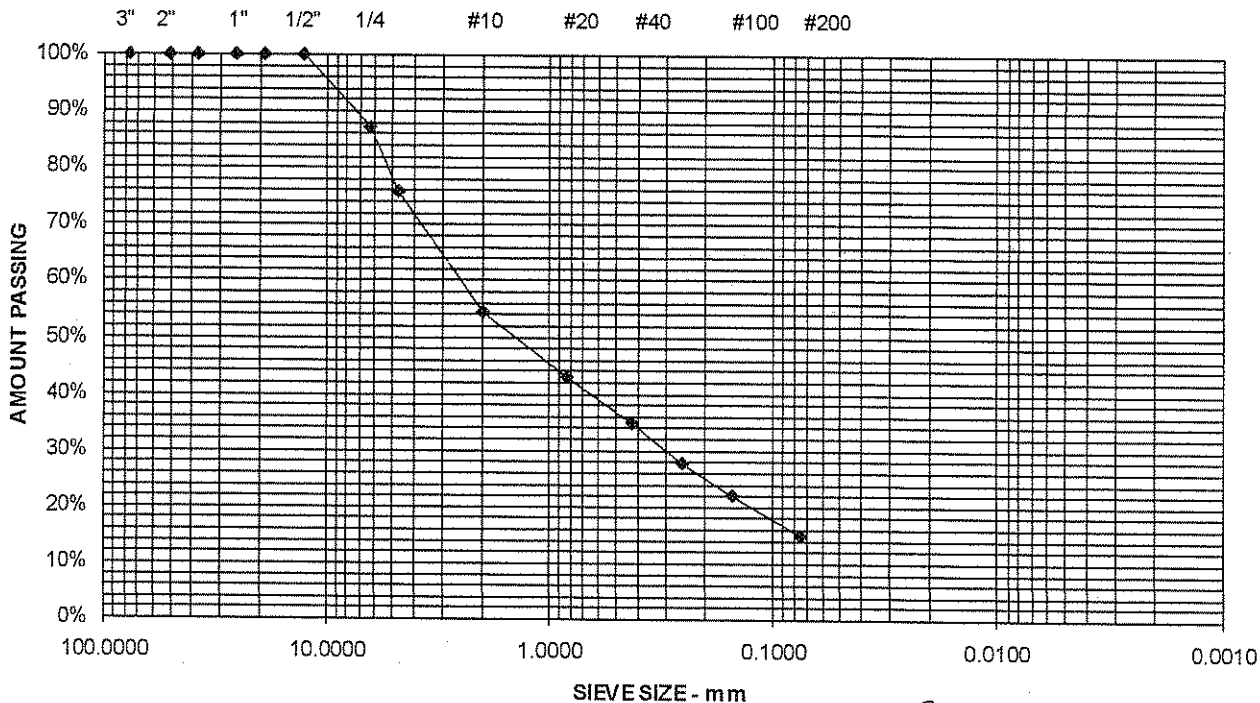
Lab ID: 2122G

Date Received: 7/9/2004

Date Completed: 7/9/2004

Tested By: NATE MERRILL

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	MDOT 703.19 SPECIFICATIONS (%)
150 mm	6"	100	
125 mm	5"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	100	
38.1 mm	1-1/2"	100	
25.0 mm	1"	100	
19.0 mm	3/4"	100	
12.5 mm	1/2"	100	
6.3 mm	1/4"	87	
4.75 mm	No. 4	76	
2.00 mm	No. 10	55	
850 um	No. 20	43	
425 um	No. 40	35	0 - 70
250 um	No. 60	28	
150 um	No. 100	22	
75 um	No. 200	15.0	0.0 - 20.0



Comments

Roger E. Domingo

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - RIVERSIDE SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
1	7/1/2004	DMR	20' Off South Side, 30' Off West Side	47.0	12	2095G	112.0	4.0	99.9	92
2	7/1/2004	DMR	16' Off South Side, 20' Off East Side	47.0	12	2095G	110.8	4.4	98.8	92
3	7/7/2004	IIS	10" In 65" Back/Front Left Corner	48.5	10	2095G	110.6	13.2	98.7	95
4	7/7/2004	IIS	Back Left Corner, 60" and Back	48.5	10	2095G	110.6	9.9	98.7	95
5	7/7/2004	IIS	Along Left Side, 60" From Back	48.5	10	2095G	111.5	13.4	99.5	95
6	7/8/2004	IIS	75' East of Southwest Building Corner	48.5	10	2120G	132.4	6.2	94.3	95
7	7/8/2004	IIS	45" Northeast of Southwest Building Corner	48.5	10	2120G	133.6	5.4	95.2	95
8	7/8/2004	IIS	20" Off Southwest Building Corner	48.5	10	2120G	131.0	6.2	93.3	95
9	7/8/2004	IIS	70" Northeast of Southwest Building Corner	48.5	10	2120G	136.2	5.8	97.0	95
10	7/8/2004	IIS	75" North of Southwest Building Corner	48.5	8	2120G	131.6	7.0	93.7	95
11	7/8/2004	IIS	RETEST #8	48.5	8	2120G	136.7	5.7	97.4	95
12	7/8/2004	IIS	RETEST #10	48.5	10	2120G	136.6	6.1	97.3	95
13	7/9/2004	IIS	75" North of Southwest Building Corner	50.1	10	2120G	134.2	6.7	95.6	95
14	7/9/2004	IIS	45" North of Southeast Corner Building Corner	49.6	10	2120G	133.6	5.5	95.2	95
15	7/9/2004	IIS	90" East of Southwest Building Corner	49.6	10	2120G	136.9	6.0	97.5	95
16	7/9/2004	IIS	50" North of Southwest Building Corner	53.5	10	2120G	137.8	7.7	98.1	95
17	7/9/2004	IIS	100" Off Southwest Building Corner	49.6	10	2120G	137.8	8.2	98.1	95
18	7/9/2004	IIS	15" Off Southwest Building Corner	49.6	10	2120G	137.1	7.2	97.6	95
19	7/12/2004	IIS	5" Off Southwest Building Corner	48.5	8	2120G	133.7	4.7	95.2	95
20	7/12/2004	IIS	40" Northeast of Southwest Building Corner	49.0	12	2120G	137.9	5.1	98.2	95
21	7/12/2004	IIS	Middle of South Building	48.5	10	2120G	134.1	5.1	95.5	95
22	7/12/2004	IIS	85" North of Southeast Building Corner	48.5	10	2120G	134.5	5.0	95.8	95
23	7/12/2004	IIS	100" Northeast of Southwest Building Corner	47.0	10	2120G	135.8	3.7	96.7	95
24	7/12/2004	IIS	10" West of #23	47.0	10	2120G	135.7	4.1	96.7	95

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D2922

Project: **PORTLAND - RIVERSIDE SUPERMARKET - MATERIALS TESTING** Project Number: **04-0664**

Client: **HANNAFORD BROS. CO.**

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
2095G	6/30/2004	excavated on site	Sand	ASTM D-1557 Modified A	112.1	13.7	
2120G	7/8/2004	Onsite	Stone Dust	ASTM D-1557 Modified B	140.4	7.5	

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	July 8, 2004 04-0664 Riverside Hannaford Super.

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☒Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☐Field Test Report(s)	☐Specifications	☐Other

Description: Report of Gradation and Report of Moisture Density, 2120G, dated July 8, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

GRAY, ME OFFICE
286 Portland Road, Gray, ME 04039-9586 ▪ Tel (207) 657-2866 ▪ Fax (207) 657-2840 ▪ E-Mail infogray@swcole.com ▪ www.swcole.com
Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

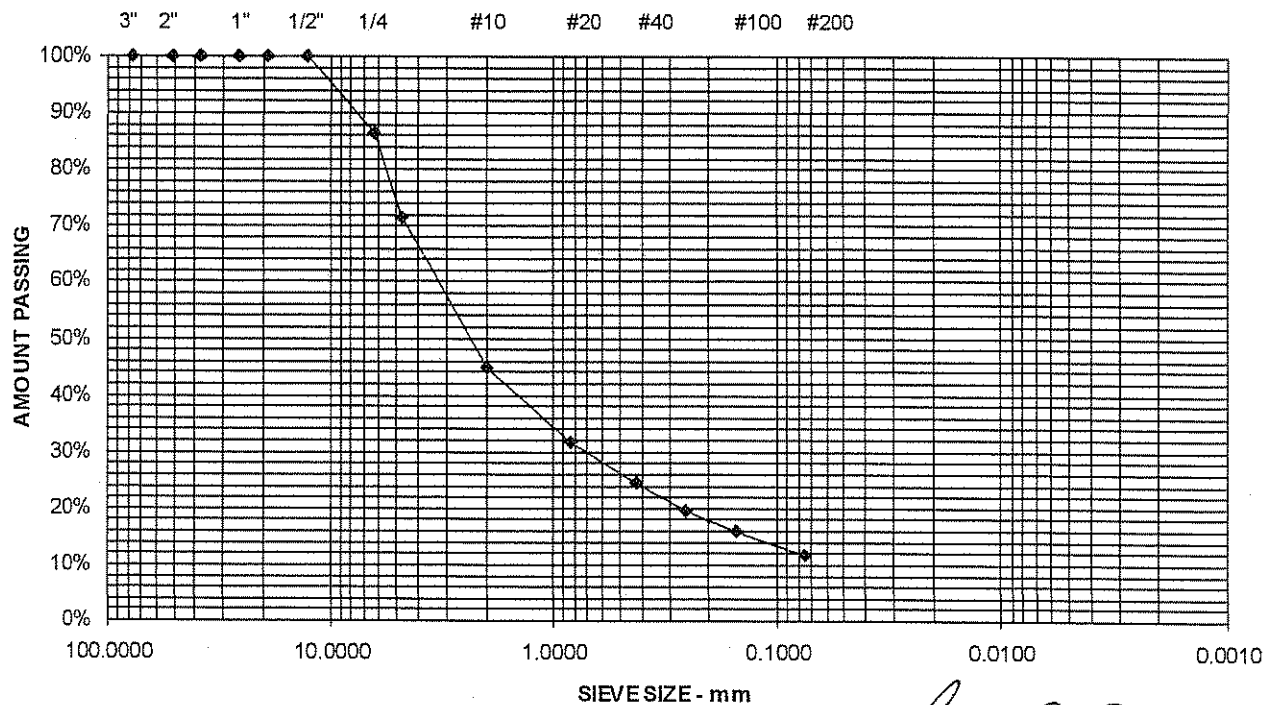
S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

Project Name	RIVERSIDE HANNAFORD SUPERMARKET	Project Number	04-0664
		Lab ID	2120G
Client	HANNAFORD BROS. CO.	Date Received	7/8/2004
Material Type	STONE DUST	Date Completed	7/8/2004
Material Source	ONSITE	Tested By	IAN SMITH

STANDARD DESIGNATION (mm/um)	SIEVE SIZE	AMOUNT PASSING (%)	MDOT 703.19 SPECIFICATIONS (%)
150 mm	6"	100	
125 mm	5"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	100	
38.1 mm	1-1/2"	100	
25.0 mm	1"	100	
19.0 mm	3/4"	100	
12.5 mm	1/2"	100	
6.3 mm	1/4"	87	
4.75 mm	No. 4	71	
2.00 mm	No. 10	45	
850 um	No. 20	32	
425 um	No. 40	24	0 - 70
250 um	No. 60	19	
150 um	No. 100	16	
75 um	No. 200	11.6	0.0 - 20.0



Comments

Roger E. Domingo

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

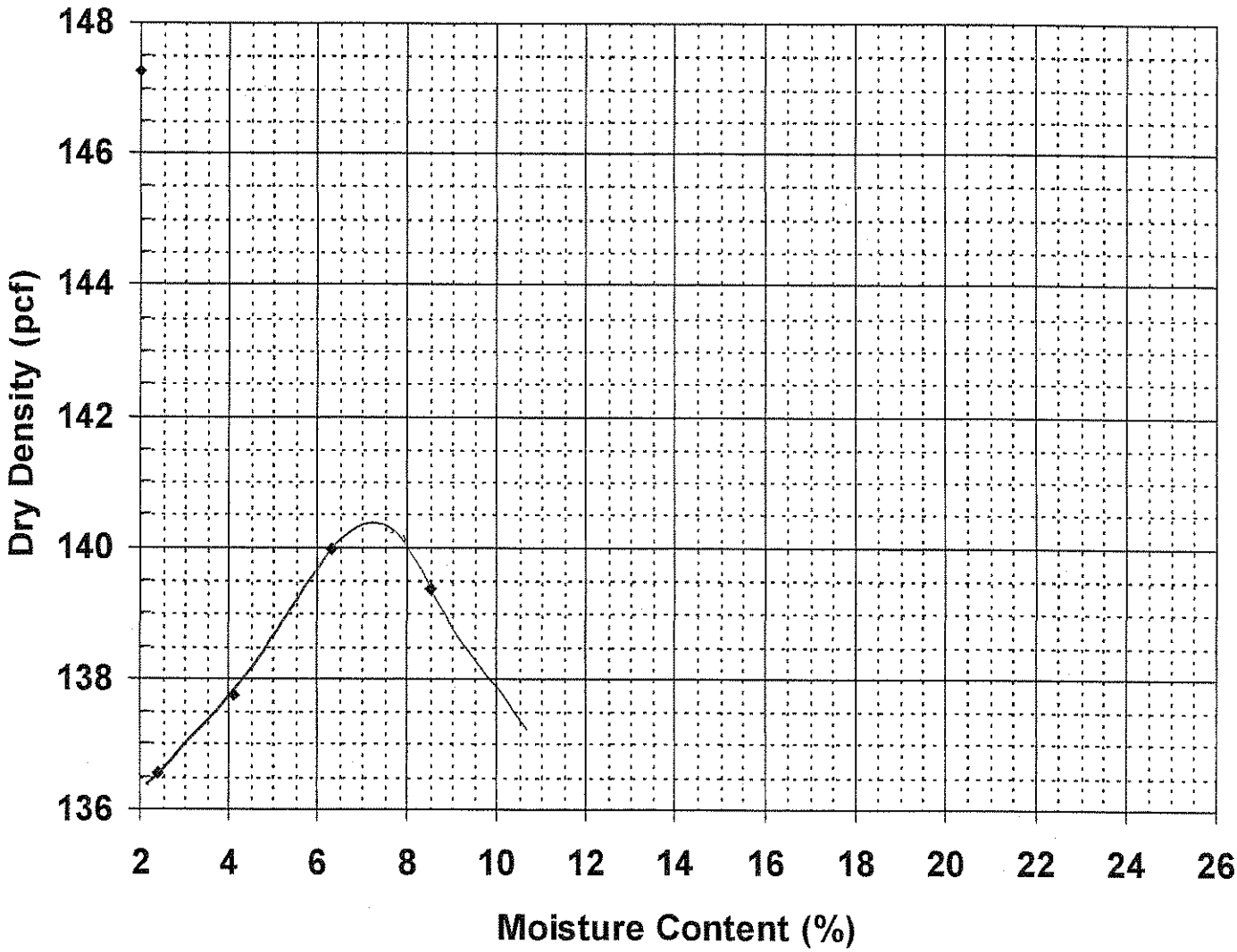
S.W.COLE ENGINEERING, INC.

Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure B

Project Name	RIVERSIDE HANNAFORD SUPERMARKET	Project Number	04-0664
Client	HANNAFORD BROS. CO.	Lab ID	2120G
Material Type	STONE DUST	Date Received	7/8/2004
Material Source	ONSITE	Date Completed	7/8/2004
		Tested By	IAN SMITH

Moisture-Density Relationship Curve



Maximum Dry Density (pcf)	140.4
Optimum Moisture Content (%)	7.5
Percent Oversized	0.0%

Corrected Dry Density (pcf)	**140.4**
Corrected Moisture Content (%)	**7.5**

Comments

Roger E. Domingo

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	July 2, 2004 04-0664 Riverside Hannaford Super.

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☒Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☐Field Test Report(s)	☐Specifications	☐Other

Description: Report of Moisture Density and Report of Gradation, 2095G, dated July 1, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:

S. W. COLE ENGINEERING, INC.

BY: _____
Roger E. Domingo

GRAY, ME OFFICE
286 Portland Road, Gray, ME 04039-9586 ▪ Tel (207) 657-2866 ▪ Fax (207) 657-2840 ▪ E-Mail infogray@swcole.com ▪ www.swcole.com
Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

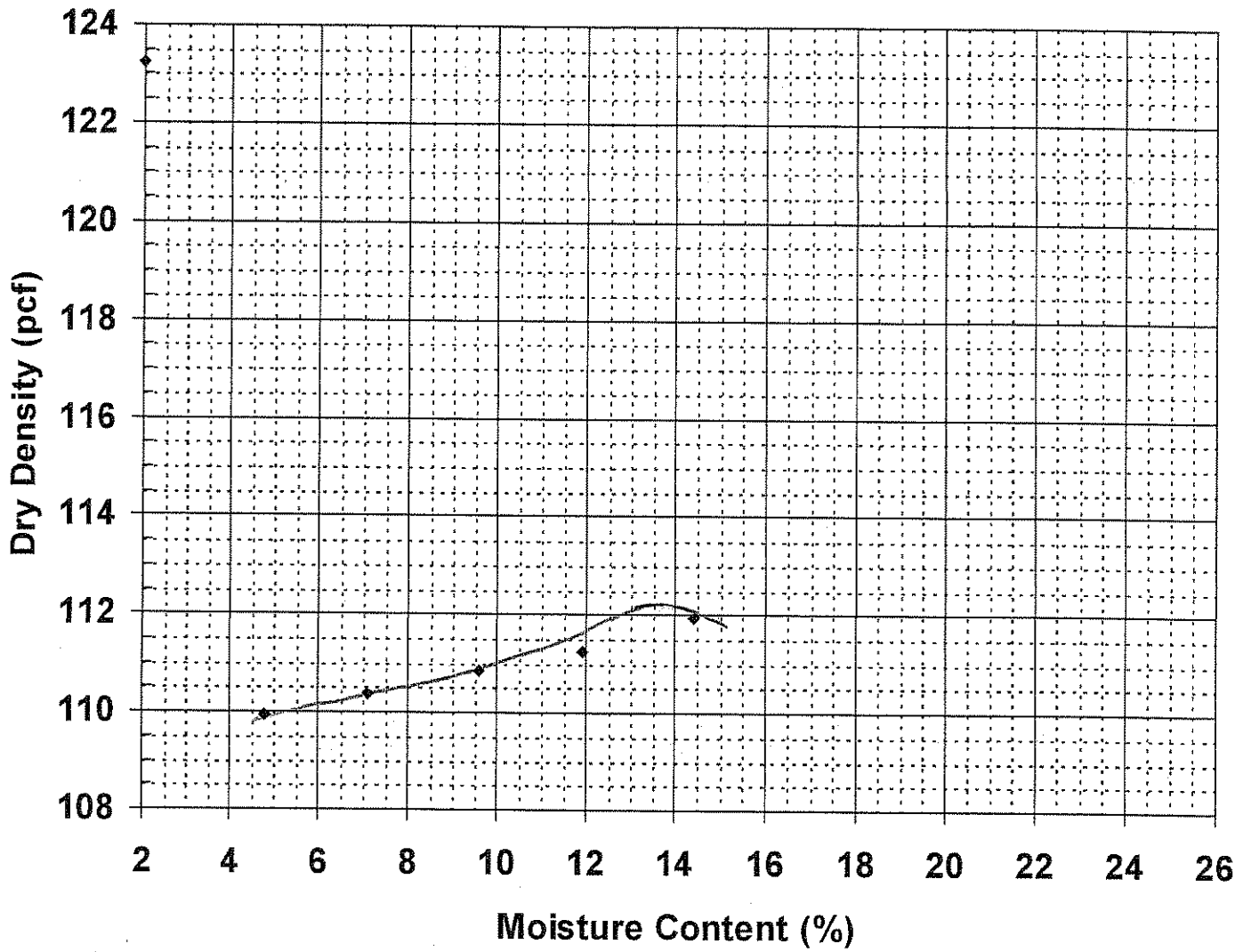
S.W.COLE ENGINEERING, INC.

Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure A

Project Name	RIVERSIDE HANNAFORD SUPERMARKET	Project Number	04-0664
Client	HANNAFORD BROS. CO.	Lab ID	2095G
Material Type	SAND	Date Received	6/30/2004
Material Source	EXCAVATED ON SITE	Date Completed	7/1/2004
		Tested By	IAN SMITH

Moisture-Density Relationship Curve



Maximum Dry Density (pcf)	112.1
Optimum Moisture Content (%)	13.7
Percent Oversized	0.0%

Corrected Dry Density (pcf)	**112.1**
Corrected Moisture Content (%)	**13.7**

Comments

Roger E. Domingo

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

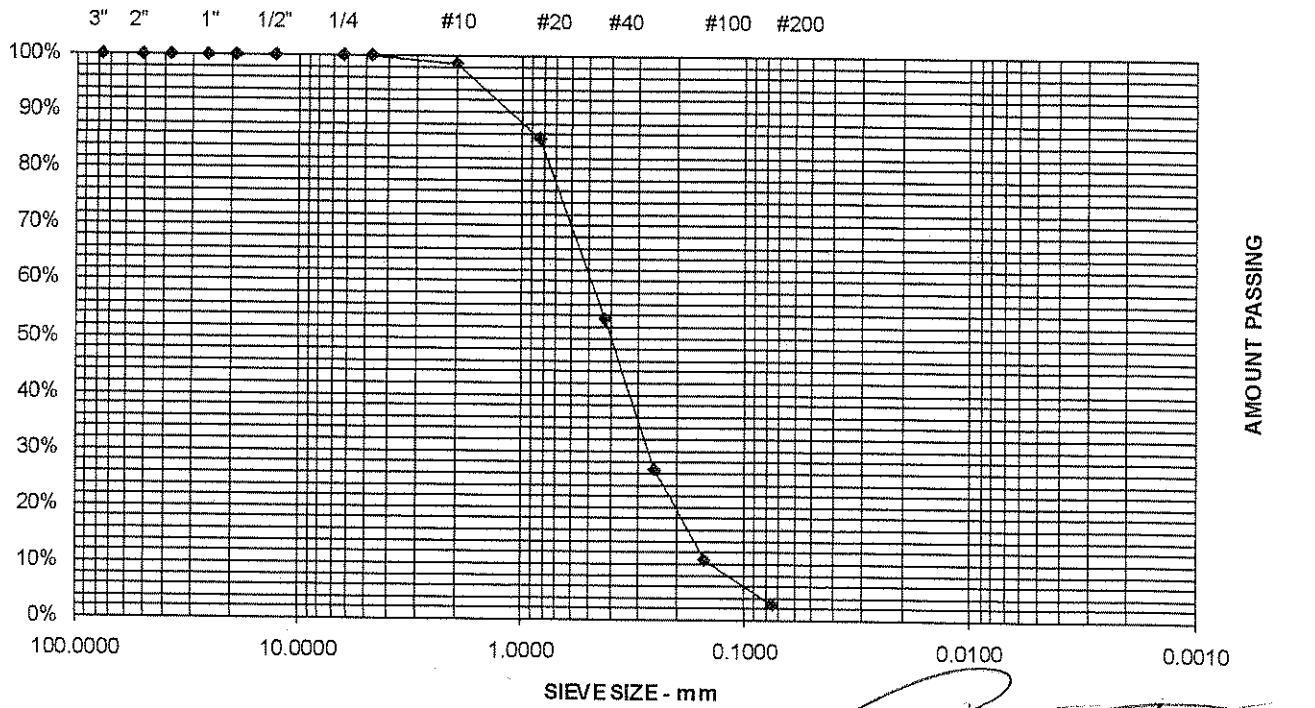
S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

Project Name	RIVERSIDE HANNAFORD SUPERMARKET	Project Number	04-0664
Client	HANNAFORD BROS. CO.	Lab ID	2095G
Material Type	SAND	Date Received	6/30/2004
Material Source	EXCAVATED ON SITE	Date Completed	7/1/2004
		Tested By	IAN SMITH

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	MDOT 703.19 SPECIFICATIONS (%)
150 mm	6"	100	
125 mm	5"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	100	
38.1 mm	1-1/2"	100	
25.0 mm	1"	100	
19.0 mm	3/4"	100	
12.5 mm	1/2"	100	
6.3 mm	1/4"	100	
4.75 mm	No. 4	100	
2.00 mm	No. 10	99	
850 um	No. 20	85	
425 um	No. 40	53	0 - 70
250 um	No. 60	27	
150 um	No. 100	11	
75 um	No. 200	3.0	0.0 - 20.0



Comments

Roger E. Domingo

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

SCHEDULE OF SPECIAL INSPECTION SERVICES
Project: Hannaford Food & Drug - Riverside Street, Portland, ME

MATERIAL/ACTIVITY	ITEM	SERVICE	Y/N	EXTENT (All, Sample, Other, None)	COMMENTS	AGENT No.	DATE COMPLETED	REV. No.
1705.4 CONCRETE CONSTRUCTION	2.00							
Concrete Materials		Review materals (ACI Chapt. 3)	Yes	Shop Drawing Submittal Review	Completed	1	12/6/2004	
		Reviw mix design (ACI Chapt. 4)	Yes	Shop Drawing Submittal Review	Completed	1	12/6/2004	
		Review reinforcing ceritification &	Yes	Shop Drawing Submittal Review	Completed	1	9/21/04 & 12/6/04	
		weldability (ASTM A706) if required						
Placing Reinforcement		Review condition & placement of	Yes	S.W. Cole Engineering, Inc.	Completed Periodically	2	Decmber 2004	
		reinforcing (ACI 318 7.4-7.7)						
Formwork		Reviw formwork	Yes	S.W. Cole Engineering, Inc.	Completed Periodically	2	Decmber 2004	
		(ACI 3186.1)						
		Review form removal & reshoring	Yes	S.W. Cole Engineering, Inc.	Completed Periodically	2	Decmber 2004	
		(ACI 3186.2)						
Concrete Operations		Review concrete strength tests	Yes	AEI & S.W. Cole Engineering, Inc.	See Atached Field Summaries	1, 2	Decmber 2004	
		(ACI) 3185.6)						
		Review mix proportions and	Yes	AEI & S.W. Cole Engineering, Inc.	Completed Periodically	1, 2	Decmber 2004	
		technique (ACI 3185.2,5.3,5.4, 5.8)						
		Review concrete placement	Yes	S.W. Cole Engineering, Inc.	See Atached Field Summaries	2	Decmber 2004	
		(ACI 3185.9 & 5.10)						
		Review curing technique & temperature	Yes	AEI & S.W. Cole Engineering, Inc.	Completed Periodically	1, 2	Decmber 2004	
		(ACI 3185.11, 5.12 & 5.13)						
Press Manufacturing		In-Plant Review	Yes	AEI -Review In-plantQuality Control Procedures	See Atached in-plant quality control procedures	1	Nov-04	
		Part A - Fabrication procedures						
		Part B - Procedures implementation	Yes	AEI -Review In-plantQuality Control Procedures	See Atached in-pland quality control procedures	1	Nov-04	
		Review conformance to Part A						
Erection of Precast Concrete		Review erection of precast units	Yes	AEI	Completed	1	Decmber 2004	
		Review key reinforcement	Yes	AEI	Completed	1	Decmber 2004	
		Review key grouting	Yes	AEI	Completed	1	Decmber 2004	
		Review connections	Yes	AEI & Elite Inspection Services	Completed	3	Decmber 2004	

All Steel Construction Special Inspections have been completed in accordance with IBC- 2000 Section 1705.4

Inspector _____ Date 12-17-04

PM Construction Co., Inc.
19 Industrial Park Road
PO Box 728
Saco, Maine 04072
(207) 282-7697
(207) 283-4549 Fax

[illegible] TRANSMITTAL

DATE: 12/17/04 JOB #: 04-1-133

RE: Hannaford—Portland, ME

Submittal #Concrete Resubmittal

TO: Attn. Paula Pendleton Phone: (207) 885-2856 Fax: (207) 885-2192
Hannaford Bros. Co.
145 Pleasant Hill Rd.
Scarborough, ME 04074

WE ARE SENDING YOU: ☒ Attached ☐ Under separate cover via _____ the following:

☒ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☒ Specifications

☐ Copy of letter ☐ Change order ☐

[illegible]			[illegible]
5	12/16/04		Redi-mix #3
1	12/6/04		Original concrete submittal

THESE ARE TRANSMITTED as checked below:

☒ For approval ☐ Approved as submitted ☐ Resubmit ___ copies for approval

☐ For your use ☐ Approved as noted ☐ Submit ___ copies for distribution

☐ As requested ☐ Returned for corrections ☐ Return ___ corrected prints

☐ For review and comment ☐ _____ ☐ Return prints after use

☐ **FOR BIDS DUE** _____

REMARKS:

Copy to: File

Signed: _____

If enclosures are not as noted, please notify us immediately.

PROJECT MIX DESIGN
TRAILER CARD

Hannaford Store
PM Construction

Mix No.	Strength (psi)	Agg. Size	Description	Optional Admixtures
1	3000	1-inch		2% Pozzutec 20
2	4000	1-inch		2% Pozzutec 20
3	3500	1-inch	No air	1% Pozzutec 20

Supplied by: Dragon Concrete

Dispatch:
800-773-2951

Area Rep: Phil Nunley
Tech. Services: Mark West
207-774-6355

Hannaford Store
PM Construction

Mix No.	Strength (psi)	Agg. Size	Description	Optional Admixtures
1	3000	1-inch		2% Pozzutec 20
2	4000	1-inch		2% Pozzutec 20
3	3500	1-inch	No air	1% Pozzutec 20

Supplied by: Dragon Concrete

Dispatch:
800-773-2951

Area Rep: Phil Nunley
Tech. Services: Mark West
207-774-6355

Corporate Offices
38 Preble St.* P.O. Box 1521
Portland, Maine 04104
207-774-6355* Fax 207-761-5694

December 16, 2004

PM Construction
PO Box 728
Saco, Maine 04072-0728

RE: Hannaford Store

Dear Sirs,

Enclosed please find 6 copies of the mix design and a trailer card for the above reference project:

Mix #3: 3500 psi, 1-inch. Optional: 1% Pozzutec 20

Also enclosed, please find compressive strength test results for 3000, 3500, and 4000 psi concrete. We apologize that this information was not included with the original submittal.

In order to better assure that the approved design mix is shipped, please be sure to use the above **mix number and description** when ordering concrete for your project. Please be sure that the appropriate personnel on your project have this mix design information.

Please include us on the distribution list for any concrete test reports that are generated from this project.

If you have any questions of I can be of any further assistance, please do not hesitate to contact me at 207-774-6355.

Sincerely,

Mark R. West
Technical Services

Enclosure
cc: Phil Nunley

Corporate Offices
38 Preble St.• P.O. Box 1521
Portland, Maine 04104
207-774-6355• Fax 207-761-5694

seeMIX II Mix Report
404140
Strength Compressive: 3,500 psi
12/16/2004

Contractor : P.M. CONSTRUCTION
Project : HANNAFORD STORE
Source of Concrete : DRAGON PRODUCTS COMPANY
Construction Type : MIX #3, INTERIOR SLABS
Placement : CHUTE, PUMP

Weights per Cubic Yard (Saturated, Surface-Dry)	Quantity	Density	Yield, ft³
DRAGON, TYPE II, lb	464	3.150	2.36
LAFARGE, NEWCEM, lb	116	2.820	0.66
Water, lb	280	1.000	4.49
3/4" QUARRY STONE, ASTM C-33, lb	1,092	2.700	6.48
1/2" QUARRY STONE, ASTM C-33, lb	728	2.700	4.32
FINE AGGREGATE, ASTM C-33, lb	1,364	2.650	8.25
MASTER BUILDERS: POZZOLITH 200N, oz (US)	17.4	1.000	0.02
(OPTIONAL) M.B.: POZZUTEC 20, 1%, oz (US)	58.0	1.000	0.06
Total Air, %	2.0 ± 1.0		0.54
		TOTAL	27.18

Water/Cement Ratio, lbs/lb	0.48
Slump, High, in	4.00
Low, in	2.00
Concrete Unit Weight, pcf	148.96
Yield, %	100.7

NEWCEM PERCENTAGE MAY BE ADJUSTED FOR AMBIENT TEMP VARIATIONS

Prepared by :

TECHNICAL SERVICES

SCARBOROUGH HIGH SCHOOL
Mix: WKSCARHS304120M F'c: 3000 psi
12/16/04

MIX DESCRIPTION

WKSCARHS304120M ---------- 3000 psi ---------- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
11/26/ 3	44894	42	68	6.4	4.50	2910	4220	-
12/ 2/ 3	44914	29	63	5.1	3.00	3005	4575	-
12/ 5/ 3	45006	37	56	5.0	3.25	3110	4875	4557
12/ 5/ 3	45110	38	64	6.8	5.25	-	4125	4525
12/23/ 3	45146	41	59	6.7	4.00	2840	4420	4473
1/ 2/ 4	45166	32	65	5.0	4.25	2495	4470	4338
1/ 2/ 4	45170	26	63	6.3	4.00	2650	4408	4433
1/ 5/ 4	45195	35	56	6.0	4.50	3400	5015	4631
1/ 7/ 4	45202	15	63	6.0	4.50	2390	3990	4471
1/13/ 4	45206	37	64	5.4	3.50	2770	4730	4578
1/21/ 4	45226	32	67	6.4	4.50	2440	3815	4178
1/22/ 4	45234	11	66	5.7	4.25	2565	4135	4227
1/22/ 4	45238	12	60	6.4	5.00	2690	4060	4003
1/28/ 4	45271	18	68	6.7	4.75	3120	4615	4270
1/29/ 4	45275	-	60	6.8	5.00	2700	4140	4272
2/ 2/ 4	45308	35	69	6.0	4.00	3155	4280	4345
2/ 6/ 4	45312	25	59	6.5	5.00	2650	4045	4155
2/11/ 4	45337	35	60	6.6	5.00	2590	4283	4203
2/13/ 4	45357	37	62	7.0	5.00	2000	4100	4143
2/17/ 4	45366	30	63	6.2	4.50	2770	4200	4194
2/20/ 4	45396	30	60	6.1	4.50	2530	4120	4140
3/ 8/ 4	45460	-	58	5.0	5.00	3660	5010	4443
3/10/ 4	45492	40	60	6.2	5.00	3590	4840	4657
3/11/ 4	45496	33	60	6.0	5.00	3045	4340	4730
3/12/ 4	45500	30	60	5.7	5.00	2850	4438	4539
3/19/ 4	45557	35	65	7.0	5.00	2100	4133	4303
3/24/ 4	45561	38	71	7.0	5.25	2940	3940	4170
3/24/ 4	45565	39	68	6.9	5.00	2995	3875	3983
3/26/ 4	45700	39	70	7.5	5.50	2115	4153	3989
3/31/ 4	45740	44	60	6.8	5.00	2930	4685	4238
4/ 6/ 4	45768	41	70	7.1	4.50	2550	4750	4529
4/ 9/ 4	45784	55	73	6.7	5.00	2860	4653	4696
4/14/ 4	45812	60	62	9.0	5.50	2860	4653	4685

Concrete Test Report Summary

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
4/16/ 4	45840	51	67	7.2	4.00	3000	4690	4665
4/21/ 4	45904	58	66	7.4	5.00	2850	4073	4472
4/21/ 4	45908	61	68	7.2	4.50	3110	4373	4378
4/23/ 4	45924	51	55	6.6	5.00	2250	4395	4280
4/27/ 4	45932	54	73	3.7	4.75	3005	4760	4509
4/30/ 4	46179	54	69	6.9	6.00	2225	3805	4320
5/27/ 4	46541	56	60	3.6	5.50	2820	4520	4362
6/ 4/ 4	46601	61	68	5.0	3.50	2480	4130	4152
7/12/ 4	46934	71	77	5.0	6.75	3250	4785	4478
7/20/ 4	47122	81	79	6.4	3.25	2960	4245	4387
9/21/ 4	48604	70	72	5.4	5.00	2640	4870	4633
9/21/ 4	48608	70	72	5.4	4.00	3000	5455	4857
9/28/ 4	48712	66	75	5.0	5.00	3210	5590	5305
10/ 5/ 4	48834	56	68	5.4	4.00	2680	4365	5137
10/20/ 4	48983	66	70	5.5	5.25	2130	4045	4667
Count		46	48	48	48	47	48	46
Average		43	65	6.2	4.68	2785	4421	4428
Standard Deviation		17	6	1.0	0.71	372	395	272
Range		11	55	3.6	3.00	2000	3805	3983
		81	79	9.0	6.75	3660	5590	5305
Coefficient of Variation		38.43	8.70	15.99	15.24	13.37	8.94	6.15

WINDHAM HIGH SCHOOL
Mix: WKPDWINDHISC354 F'c: 3500 psi
12/16/04

MIX DESCRIPTION

WKPDWINDHISC354 ---------- 3500 psi ---------- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
10/31/ 2	50	25	65	1.5	7.00	3430	5855	-
11/ 7/ 2	52	30	65	1.4	8.00	3080	4920	-
11/ 7/ 2	53	35	64	1.6	7.00	2970	4865	5213
11/14/ 2	54	50	70	1.5	6.50	3640	5340	5042
11/14/ 2	55	48	70	1.8	7.25	3570	5465	5223
11/25/ 2	57	32	72	1.6	7.00	3220	4810	5205
11/25/ 2	58	35	65	1.5	7.00	3220	4790	5022
11/25/ 2	59	40	65	1.7	7.75	3500	5525	5042
1/29/ 3	66	20	54	2.5	4.50	2790	4460	4925
1/31/ 3	67	11	53	2.5	6.00	2690	4770	4918
3/26/ 3	72	45	75	2.5	4.25	2940	4615	4615
3/27/ 3	73	37	63	1.8	6.25	2790	4105	4497
4/22/ 3	76	40	60	2.5	6.00	3180	4935	4552
4/22/ 3	77	40	60	1.8	5.00	3220	5235	4758
5/ 5/ 3	78	60	59	2.1	6.00	3290	4935	5035
5/ 8/ 3	79	50	56	2.0	6.00	2760	4380	4850
5/ 8/ 3	80	50	56	2.0	7.00	2650	4460	4592
5/13/ 3	81	60	61	2.1	6.50	3320	4810	4550
5/30/ 3	84	69	74	2.1	6.50	3090	4510	4593
5/30/ 3	85	79	71	2.6	7.00	3290	4425	4582
6/ 4/ 3	86	78	74	2.6	2.00	3680	4845	4593
6/ 5/ 3	87	62	69	2.3	4.00	4210	5160	4810
6/10/ 3	88	70	64	2.0	6.25	2970	4135	4713
6/10/ 3	89	64	70	1.8	5.75	3250	4260	4518
6/17/ 3	92	74	71	2.2	6.00	4170	4740	4378
6/17/ 3	93	74	71	2.8	6.00	3610	4755	4585
6/17/ 3	94	75	72	2.8	5.00	3360	4650	4715
6/19/ 3	95	68	66	2.1	6.00	3930	5160	4855
8/27/ 3	112	62	75	2.4	4.50	3040	4000	4603
9/25/ 3	125	65	74	2.6	5.50	2760	4140	4433
9/30/ 3	126	70	72	1.9	3.70	2860	3890	4010
10/ 3/ 3	144	47	63	1.8	5.50	2760	4245	4092
10/ 7/ 3	130	38	60	1.4	7.00	2790	4335	4157

Concrete Test Report Summary

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
1/21/ 4	159	10	60	2.1	3.50	3380	5145	4575
4/ 6/ 4	160	58	28	2.2	2.00	2950	4600	4693
5/11/ 4	162	50	61	2.5	4.00	2600	4480	4742
Count		36	36	36	36	36	36	34
Average		51	65	2.1	5.70	3193	4715	4697
Standard Deviation		19	9	0.4	1.46	409	454	298
Range		10	28	1.4	2.00	2600	3890	4010
		79	75	2.8	8.00	4210	5855	5223
Coefficient of Variation		37.09	13.73	19.80	25.67	12.82	9.63	6.35

GORHAM SCHOOL
Mix: BDGORHAMSCH354 F'c: 3500 psi
12/16/04

MIX DESCRIPTION

BDGORHAMSCH354 ---------- 3500 psi ---------- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
9/ 6/ 2	41	70	57	1.2	7.00	3610	4650	-
9/ 6/ 2	42	72	65	2.0	7.00	3640	4920	-
9/ 6/ 2	43	65	75	1.8	7.00	3930	4070	4547
9/20/ 2	44	60	75	2.0	7.00	3040	4615	4535
9/20/ 2	45	65	73	2.3	7.00	3430	5040	4575
9/20/ 2	46	70	75	2.0	7.00	2970	4245	4633
9/30/ 2	47	55	70	1.4	7.00	2970	4915	4733
9/30/ 2	48	60	70	1.8	6.50	3500	5255	4805
10/ 2/ 2	49	80	80	1.8	7.00	3110	5305	5158
10/10/ 2	50	50	66	1.3	6.00	3360	5310	5290
10/10/ 2	51	50	67	1.3	6.00	3400	5235	5283
10/10/ 2	52	50	67	1.5	6.00	3430	5200	5248
10/10/ 2	53	60	69	1.6	6.00	3500	5585	5340
10/10/ 2	54	60	69	1.4	7.00	3010	4795	5193
10/29/ 2	55	35	66	1.6	7.00	2940	5710	5363
10/29/ 2	56	35	66	1.4	6.50	3430	6295	5600
11/14/ 2	57	45	65	1.8	7.00	3180	5145	5717
11/14/ 2	58	45	65	1.8	6.50	3640	5625	5688
11/14/ 2	59	50	65	1.8	6.50	2120	3625	4798
11/14/ 2	60	55	65	2.0	6.50	3290	5415	4888
11/15/ 2	60	55	65	2.0	6.50	3290	5415	4818
2/28/ 3	60	60	60	3.0	5.00	3220	4980	5270
2/28/ 3	61	60	60	3.0	5.00	3220	4980	5125
2/28/ 3	62	60	63	2.5	6.50	3220	5270	5077
3/24/ 3	63	35	63	1.9	7.75	3800	5535	5262
3/24/ 3	64	37	63	2.2	8.50	4350	6295	5700
4/23/ 3	65	45	54	2.3	6.00	3820	5465	5765
4/23/ 3	66	47	55	3.1	6.00	3780	5215	5658
5/ 8/ 3	69	60	59	2.0	6.75	3610	4810	5163
5/ 8/ 3	70	60	59	2.1	5.00	3960	5325	5117
5/23/ 3	71	55	60	2.3	5.50	4420	5370	5168
5/23/ 3	72	55	57	2.4	6.50	4030	5355	5350
5/23/ 3	73	65	66	2.2	6.00	4070	5180	5302

Concrete Test Report Summary

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
9/ 2/ 3	76	73	72	2.1	6.50	4140	5465	5333
9/ 4/ 3	75	70	67	2.1	5.50	3610	5450	5365
Count		35	35	35	35	35	35	33
Average		56	66	2.0	6.47	3487	5173	5178
Standard Deviation		11	6	0.5	0.74	459	525	352
Range		35	54	1.2	5.00	2120	3625	4535
		80	80	3.1	8.50	4420	6295	5765
Coefficient of Variation		20.15	9.20	23.81	11.50	13.17	10.16	6.80

USM GORHAM
Mix: WKUSMEDUC404110 F'c: 4000 psi
12/16/04

MIX DESCRIPTION

WKUSMEDUC404110 ---------- 4000 psi ---------- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
3/22/ 4	45537	33	53	6.6	4.25	3470	4320	-
3/30/ 4	45720	33	67	5.3	4.50	3465	4895	-
4/ 6/ 4	45772	48	69	5.9	6.50	3010	4480	4565
4/ 9/ 4	45796	57	70	5.3	5.50	3240	4385	4587
4/29/ 4	45956	66	64	5.3	6.50	4005	5215	4693
5/ 3/ 4	46123	62	71	5.8	5.00	3250	4480	4693
5/21/ 4	46521	80	68	8.0	7.25	2640	4245	4647
5/27/ 4	46537	81	-	6.8	6.25	3820	4975	4567
6/ 9/ 4	46645	90	80	4.6	7.50	3060	4588	4603
6/21/ 4	47134	66	74	6.0	7.00	3550	5220	4928
8/10/ 4	47665	68	76	5.5	6.50	2890	4270	4693
8/16/ 4	47771	76	77	5.8	6.75	3840	5230	4907
8/25/ 4	48061	70	72	5.5	7.25	4030	5350	4950
8/26/ 4	48129	80	81	5.8	7.25	3920	4970	5183
9/15/ 4	48466	56	76	5.4	4.00	4220	4905	5075
Count		15	14	15	15	15	15	13
Average		64	71	5.8	6.13	3494	4769	4776
Standard Deviation		17	7	0.8	1.18	473	391	208
Range		33	53	4.6	4.00	2640	4245	4565
		90	81	8.0	7.50	4220	5350	5183
Coefficient of Variation		26.16	10.14	13.76	19.30	13.53	8.20	4.35

USM PARKING GARAGE
Mix: PDUSMPARKING44 F'c: 4000 psi
12/16/04

MIX DESCRIPTION

PDUSMPARKING44 ---------- 4000 psi ---------- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
3/13/ 3	40678	20	62	-	6.50	2780	4848	-
3/21/ 3	40759	37	68	5.4	4.50	4280	5985	-
3/21/ 3	40763	43	63	7.1	7.00	3020	4930	5254
3/21/ 3	40767	55	62	6.6	6.00	3250	5125	5347
3/21/ 3	40771	58	60	6.5	5.50	3170	5325	5127
3/25/ 3	40806	43	63	-	3.00	3690	6065	5505
3/25/ 3	40810	44	62	-	4.00	3400	5585	5658
3/28/ 3	40851	56	66	6.2	3.25	3620	5000	5550
3/28/ 3	40855	60	62	-	4.00	3300	4965	5183
4/ 1/ 3	40900	42	66	-	4.00	3900	5955	5307
4/ 3/ 3	40920	36	62	-	4.00	3950	5850	5590
4/ 3/ 3	40924	36	61	-	6.50	3810	5770	5858
4/ 8/ 3	40904	46	62	-	4.00	3290	5385	5668
4/ 9/ 3	41004	42	69	-	4.00	3630	5410	5522
4/ 9/ 3	41008	40	68	-	5.00	2890	4925	5240
4/14/ 3	41072	65	72	-	4.00	3610	5640	5325
4/14/ 3	41076	57	66	-	2.75	3830	5635	5400
4/16/ 3	41098	47	64	-	3.25	3260	5450	5575
4/17/ 3	41123	41	62	-	3.00	3395	5630	5572
4/21/ 3	41196	61	64	5.6	6.75	3100	4680	5253
4/21/ 3	41200	62	63	5.8	7.25	2783	5025	5112
4/21/ 3	41204	64	69	5.6	7.50	2740	4810	4838
4/22/ 3	41184	50	65	5.0	3.00	3540	5375	5070
4/23/ 3	41232	56	64	5.0	4.00	4330	5585	5257
4/24/ 3	41294	46	64	5.8	7.25	3410	5250	5403
4/29/ 3	41351	84	65	5.5	3.75	3490	4665	5167
4/30/ 3	41374	54	64	5.6	5.50	3960	4725	4880
4/30/ 3	41378	57	66	5.1	6.00	4030	4850	4747
5/ 1/ 3	41391	49	61	6.5	7.00	3900	5335	4970
5/ 1/ 3	41395	48	63	-	7.00	3880	5538	5241
5/ 2/ 3	41425	45	67	6.1	3.50	3680	5523	5465
5/ 6/ 3	41524	53	66	6.0	4.50	3920	5895	5652
5/ 6/ 3	41528	47	65	6.1	5.50	3590	5620	5679

Concrete Test Report Summary

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
5/ 8/ 3	41540	49	64	5.6	6.75	3790	5420	5645
5/ 8/ 3	41544	53	65	5.7	7.00	3060	5395	5478
5/ 9/ 3	41561	51	58	-	7.50	3110	4815	5210
5/13/ 3	41612	50	62	5.9	4.00	3060	5020	5077
5/14/ 3	41654	53	59	-	4.00	4530	6080	5305
5/15/ 3	41662	53	66	6.1	6.50	3560	5195	5432
5/16/ 3	41658	62	64	-	4.50	4040	5450	5575
5/20/ 3	41779	87	72	6.2	6.50	3200	4155	4933
5/21/ 3	41807	60	66	5.2	5.00	4100	5805	5137
5/23/ 3	41839	50	59	5.1	5.00	3790	6165	5375
5/29/ 3	41936	68	67	5.6	6.50	3870	5110	5693
6/ 2/ 3	41956	77	68	5.9	6.50	3510	4965	5413
6/ 4/ 3	42008	63	69	5.0	5.00	3970	5650	5242
6/ 4/ 3	42012	66	69	-	6.00	3820	5460	5358
6/ 5/ 3	42020	56	69	-	4.50	3960	5420	5510
6/ 6/ 3	42024	80	72	5.3	5.25	3685	5003	5294
6/ 9/ 3	42046	62	69	-	6.50	3710	4710	5044
6/10/ 3	42098	75	72	-	7.00	3740	4140	4618
6/11/ 3	42110	68	73	6.0	6.00	3360	4530	4460
6/13/ 3	42138	66	73	6.4	7.00	3910	4775	4482
6/13/ 3	42142	66	71	6.4	6.75	3670	4875	4727
6/17/ 3	42263	75	72	7.0	6.50	3540	4658	4769
6/18/ 3	42267	65	70	-	6.75	4080	5713	5082
6/20/ 3	42274	85	76	7.0	6.50	3895	4885	5085
6/23/ 3	42312	76	76	-	6.00	3770	4865	5154
6/26/ 3	42359	95	81	-	7.10	3510	4120	4623
6/26/ 3	42363	96	81	-	7.00	3460	4153	4379
6/30/ 3	42408	87	79	5.3	6.50	4200	4840	4371
7/ 2/ 3	42412	83	81	5.0	4.50	4060	4813	4602
7/ 7/ 3	42424	84	79	-	6.50	3430	4920	4858
7/11/ 3	42505	59	71	-	6.25	3910	5235	4989
7/16/ 3	42604	66	76	-	6.00	3345	5360	5172
8/21/ 3	43114	88	85	8.5	6.00	3490	4233	4943
9/ 3/ 3	43297	69	74	9.5	7.00	2820	4270	4621
9/19/ 3	43593	59	72	6.6	5.75	3080	4865	4456
9/29/ 3	43698	54	76	7.0	7.50	3230	4855	4663
9/29/ 3	43702	64	76	7.2	7.00	3480	5045	4922
10/ 2/ 3	43722	-	70	6.5	6.00	3550	4508	4803
10/ 2/ 3	43726	-	70	7.5	6.50	3700	5093	4882
10/14/ 3	43975	69	66	8.0	7.00	3120	4303	4634
11/13/ 3	44552	47	74	6.6	6.75	4040	5785	5060
11/13/ 3	44556	49	72	6.8	6.00	3770	5343	5143
11/19/ 3	44735	45	72	6.4	5.25	2950	4910	5346
11/24/ 3	44826	48	69	5.2	5.00	3240	5168	5140
Count		75	77	48	77	77	77	75

Concrete Test Report Summary

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
Average								
		59	68	6.1	5.61	3578	5148	5148
Standard Deviation								
		15	6	1.0	1.34	396	502	361
Range								
		20	58	5.0	2.75	2740	4120	4371
		96	85	9.5	7.50	4530	6165	5858
Coefficient of Variation								
		25.85	8.64	15.51	23.97	11.08	9.74	7.01

04-049

S.W.COLE ENGINEERING, INC.

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Project Name PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number 04-0664 Project Manager

Client HANNAFORD BROS. CO. Date 11/5/2004

HANNAFORD BROS. CO.
ERIC OTTUM
PO BOX 1000
PORTLAND, ME 04104

Phone Number 207-885-2546
Fax Number 207-885-2192

Results Being Reported

CONCRETE CYLINDER COMPRESSION TEST - ASTM C39/AASHTO T22

Copy To:

Remarks:

S. W. COLE ENGINEERING, INC.
BY: Roger E. Domingo

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client Contract Number:

Client: HANNAFORD BROS. CO.

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 10/7/2004 **Time Cast:** 2:05 **Date Received:** 10/9/2004

Placement Location: Front Foundation Walls, Footings on South Wall

Placement Method: Tailgate

Placement Vol. (yd³): 21

Cylinders Made By: DPM

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 2.75

Air Content (%) (C-231): 5.0

Air Temp (°F): 70

Conc. Temp (°F) (C-1064): 68

Load Number: 1

Mixer Number: 156

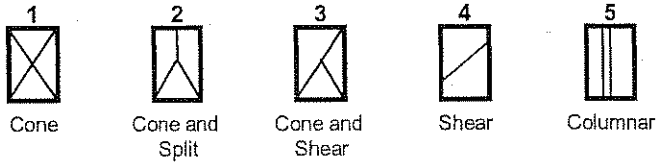
Ticket Number: 4513041

Cubic Yards: 10.5

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
399-5A		6.00	28.27	10/14/2004	Lab	**7**	4	81.0	**2870**
399-5B		6.00	28.27	11/4/2004	Lab	**28**	4	102.0	**3610**
399-5C		6.00	28.27	11/4/2004	Lab	**28**	4	101.0	**3570**
399-5D				Hold	Lab				

Fracture Types



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S.W.COLE ENGINEERING, INC.

Project Name PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number 04-0664 Project Manager

Client HANNAFORD BROS. CO. Date 11/5/2004

HANNAFORD BROS. CO.
ERIC OTTUM
PO BOX 1000
PORTLAND, ME 04104

Phone Number 207-885-2546
Fax Number 207-885-2192

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client Contract Number:

Client: HANNAFORD BROS. CO.

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 10/8/2004 **Time Cast:** 11:15 **Date Received:** 10/9/2004

Placement Location: South Entrance Two Median Pads

Placement Method: Mixer

Placement Vol. (yd³): 30

Cylinders Made By: TJB

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 4.5

Air Content (%) (C-231): 5.4

Air Temp (°F): 60

Conc. Temp (°F) (C-1064): 70

Load Number: 3

Mixer Number: 173

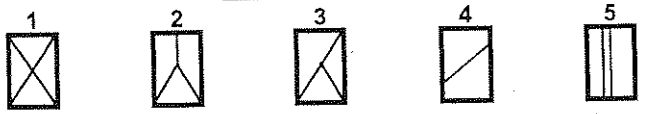
Ticket Number: 4513070

Cubic Yards: 10

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
399-6A		6.00	28.27	10/15/2004	Lab	**7**	4	84.0	**2970**
399-6B		6.00	28.27	11/5/2004	Lab	**28**	4	110.5	**3910**
399-6C		6.00	28.27	11/5/2004	Lab	**28**	4	111.5	**3940**
399-6D				Hold	Lab				

Fracture Types



1 Cone; 2 Cone and Split; 3 Cone and Shear; 4 Shear; 5 Columnar

Remarks:

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S.W.COLE ENGINEERING, INC.

04-049

Project Name PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number 04-0664 Project Manager

Client HANNAFORD BROS. CO. Date 11/3/2004

HANNAFORD BROS. CO.
ERIC OTTUM
PO BOX 1000
PORTLAND, ME 04104

Phone Number 207-885-2546
Fax Number 207-885-2192

Results Being Reported

CONCRETE CYLINDER COMPRESSION TEST - ASTM C39/AASHTO T22

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BY: Roger E. Domingo

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client: HANNAFORD BROS. CO.

Client Contract Number:

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 10/6/2004 **Time Cast:** 4:20 **Date Received:** 10/7/2004

Placement Location: G Line Corner, Southwest Corner, South Wall (Footings) Front Wall, North Side (Foundation Walls)

Placement Method: Tailgate

Placement Vol. (yd^3): 10

Cylinders Made By: DPM

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 2.5

Air Content (%) (C-231): 5.1

Air Temp (°F): 64

Conc. Temp (°F) (C-1064): 62

Load Number: 1

Mixer Number: 180

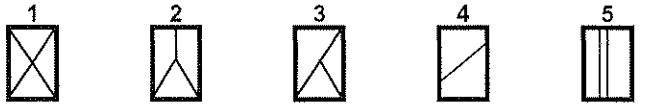
Ticket Number: 3924862

Cubic Yards: 10

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
399-4A		6.00	28.27	10/13/2004	Lab	**7**	4	81.0	**2870**
399-4B		6.00	28.27	11/3/2004	Lab	**28**	4	111.0	**3930**
399-4C		6.00	28.27	11/3/2004	Lab	**28**	4	106.0	**3750**
399-4D				Hold	Lab				

Fracture Types



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S.W.COLE
ENGINEERING, INC.

Project Name PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number 04-0664 Project Manager

Client HANNAFORD BROS. CO. Date 11/1/2004

HANNAFORD BROS. CO.
ERIC OTTUM
PO BOX 1000
PORTLAND, ME 04104

Phone Number 207-885-2546
Fax Number 207-885-2192

Results Being Reported

CONCRETE CYLINDER COMPRESSION TEST - ASTM C39/AASHTO T22

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Remarks:

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BY: Roger E. Domingo

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client Contract Number:

Client: HANNAFORD BROS. CO.

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 10/4/2004 **Time Cast:** 3:15 **Date Received:** 10/5/2004

Placement Location: 1 Line Footing

Placement Method: Chute

Cylinders Made By: KLG

Placement Vol. (yd³): 10

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 3.5

Air Content (%) (C-231): 5.0

Air Temp (°F): 65

Conc. Temp (°F) (C-1064): 78

Load Number: 1

Mixer Number: 151

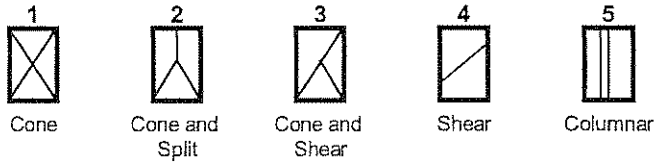
Ticket Number: 4512972

Cubic Yards: 10

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
399-2A		6.00	28.27	10/11/2004	Lab	**7**	4	94.0	**3330**
399-2B		6.00	28.27	11/1/2004	Lab	**28**	4	115.0	**4070**

Fracture Types



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ENGINEERING, INC.

Project Name	PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING		
Project Number	04-0664	Project Manager	
Client	HANNAFORD BROS. CO.	Date	10/29/2004

HANNAFORD BROS. CO.
ERIC OTTUM
PO BOX 1000
PORTLAND, ME 04104

Phone Number 207-885-2546
Fax Number 207-885-2192

Results Being Reported

CONCRETE CYLINDER COMPRESSION TEST - ASTM C39/AASHTO T22

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BY: Roger E. Domingo

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client Contract Number:

Client: HANNAFORD BROS. CO.

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 10/22/2004 **Time Cast:** 3:30 **Date Received:** 10/25/2004

Placement Location: Wall Line; 3-3.4, AB Footing Line; 1-3, A-C; Footing line; 1-3, A-C

Placement Method: Mixer/Vibrator

Cylinders Made By: TJB

Placement Vol. (yd^3): 29

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 5

Air Content (%) (C-231): 5.5

Air Temp (°F): 40

Conc. Temp (°F) (C-1064): 59

Load Number: 2

Mixer Number: 176

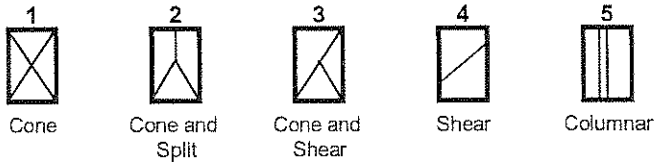
Ticket Number: 4513306

Cubic Yards: 10

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
399-11A		6.00	28.27	10/29/2004	Lab	**7**	4	76.0	**2690**
399-11B				11/19/2004	Lab	**28**			
399-11C				11/19/2004	Lab	**28**			
399-11D				Hold	Lab				

Fracture Types



Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client Contract Number:

Client: HANNAFORD BROS. CO.

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 10/21/2004 **Time Cast:** 3:10

Date Received: 10/25/2004

Placement Location: Wall B Line 3.25 to 5 Line

Placement Method: Tailgate

Placement Vol. (yd³): 11

Cylinders Made By: DMR

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 4.5

Air Content (%) (C-231): 5.4

Air Temp (°F): 60

Conc. Temp (°F) (C-1064): 65

Load Number: 2

Mixer Number: 170

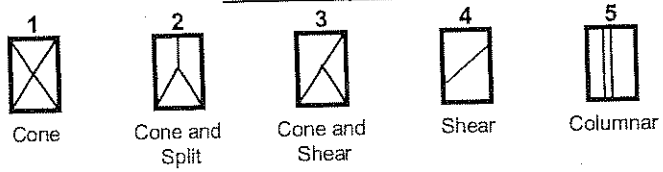
Ticket Number: 4513289

Cubic Yards: 11

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
399-10A		6.00	28.27	10/28/2004	Lab	**7**	4	86.0	**3040**
399-10B				11/18/2004	Lab	**28**			
399-10C				11/18/2004	Lab	**28**			
399-10D				Hold	Lab				

Fracture Types



Remarks:

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S.W.COLE ENGINEERING, INC.

Project Name PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number 04-0664

Project Manager

Client HANNAFORD BROS. CO.

Date 10/27/2004

HANNAFORD BROS. CO.
ERIC OTTUM
PO BOX 1000
PORTLAND, ME 04104

Phone Number 207-885-2546
Fax Number 207-885-2192

Results Being Reported

CONCRETE CYLINDER COMPRESSION TEST - ASTM C39/AASHTO T22

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client Contract Number:

Client: HANNAFORD BROS. CO.

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 10/20/2004 **Time Cast:** 2:35 **Date Received:** 10/22/2004

Placement Location: Wall Line B, 4-5.8; Footing Line A-B, 3-4; Wall Line B, 4-5.8

Placement Method: Mixer/Vibrator

Placement Vol. (yd^3): 21

Cylinders Made By: TJB

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 5

Air Content (%) (C-231): 6.8

Air Temp (°F): 50

Conc. Temp (°F) (C-1064): 64

Load Number: 1

Mixer Number: 180

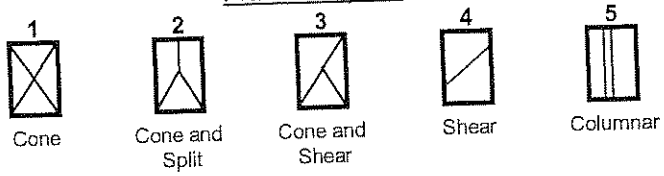
Ticket Number: 4513255

Cubic Yards: 10.5

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
399-9A		6.00	28.27	10/27/2004	Lab	7	4	64.0	2260
399-9B				11/17/2004	Lab	28			
399-9C				11/17/2004	Lab	28			
399-9D				Hold	Lab				

Fracture Types



Remarks:

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S.W.COLE ENGINEERING, INC.

Project Name	PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING		
Project Number	04-0664	Project Manager	
Client	HANNAFORD BROS. CO.	Date	10/26/2004

HANNAFORD BROS. CO.
ERIC OTTUM
PO BOX 1000
PORTLAND, ME 04104

Phone Number 207-885-2546
Fax Number 207-885-2192

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client Contract Number:

Client: HANNAFORD BROS. CO.

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 10/19/2004 **Time Cast:** 3:00 **Date Received:** 10/21/2004

Placement Location: Walls: 52' B Line, Front Piers, Interior Column Footings

Placement Method: Chute

Cylinders Made By: KLG

Placement Vol. (yd³): 24

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 3

Air Content (%) (C-231): 5.0

Air Temp (°F): 46

Conc. Temp (°F) (C-1064): 68

Load Number: 1

Mixer Number: 183

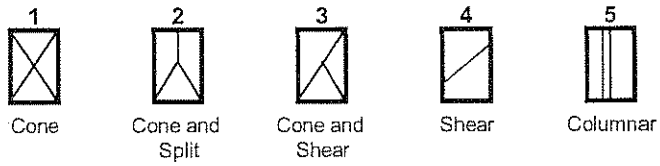
Ticket Number: 4513238

Cubic Yards: 10

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
399-8A		6.00	28.27	10/26/2004	Lab	**7**	4	88.0	**3110**
399-8B				11/16/2004	Lab	**28**			
399-8C				11/16/2004	Lab	**28**			
399-8D				Hold	Lab				

Fracture Types



Remarks:

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE ENGINEERING, INC.

Project Name PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number 04-0664 Project Manager

Client HANNAFORD BROS. CO. Date 10/18/2004

HANNAFORD BROS. CO.
ERIC OTTUM
PO BOX 1000
PORTLAND, ME 04104

Phone Number 207-885-2546
Fax Number 207-885-2192

Results Being Reported

CONCRETE CYLINDER COMPRESSION TEST - ASTM C39/AASHTO T22

Copy To:

Remarks:

S. W. COLE ENGINEERING, INC.

BY: Roger E. Domingo

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client Contract Number:

Client: HANNAFORD BROS. CO.

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 10/11/2004 **Time Cast:** **Date Received:** 10/12/2004

Placement Location: Walls H and G Line and 7 Line Footings B Line

Placement Method: Chute

Placement Vol. (yd³): 38

Cylinders Made By: KLG

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 5

Air Content (%) (C-231): 5.4

Air Temp (°F): 61

Conc. Temp (°F) (C-1064): 72

Load Number: 3

Mixer Number: 180

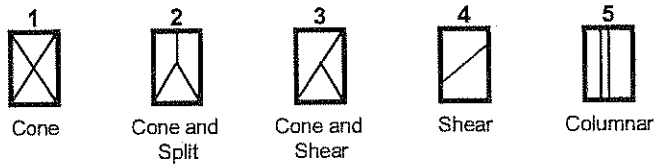
Ticket Number: 4513089

Cubic Yards: 30

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
399-7A		6.00	28.27	10/18/2004	Lab	**7**	1	75.5	**2670**
399-7B				11/8/2004	Lab	**28**			
399-7C				11/8/2004	Lab	**28**			
399-7D				Hold	Lab				

Fracture Types



Remarks:

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE
ENGINEERING, INC.

Project Name	PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING		
Project Number	04-0664	Project Manager	
Client	HANNAFORD BROS. CO.	Date	10/15/2004

HANNAFORD BROS. CO.
ERIC OTTUM
PO BOX 1000
PORTLAND, ME 04104

Phone Number 207-885-2546
Fax Number 207-885-2192

Results Being Reported

CONCRETE CYLINDER COMPRESSION TEST - ASTM C39/AASHTO T22

Copy To:

Remarks:

S. W. COLE ENGINEERING, INC.
BY: Roger E. Domingo

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client Contract Number:

Client: HANNAFORD BROS. CO.

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 10/8/2004 **Time Cast:** 11:15 **Date Received:** 10/9/2004

Placement Location: South Entrance Two Median Pads

Placement Method: Mixer

Placement Vol. (yd³): 30

Cylinders Made By: TJB

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 4.5

Air Content (%) (C-231): 5.4

Air Temp (°F): 60

Conc. Temp (°F) (C-1064): 70

Load Number: 3

Mixer Number: 173

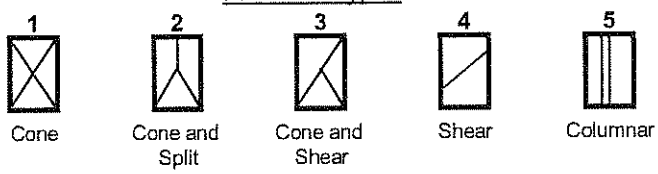
Ticket Number: 4513070

Cubic Yards: 10

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
399-6A		6.00	28.27	10/15/2004	Lab	**7**	4	84.0	**2970**
399-6B				11/5/2004	Lab	**28**			
399-6C				11/5/2004	Lab	**28**			
399-6D				Hold	Lab				

Fracture Types



Remarks:

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S.W.COLE
ENGINEERING, INC.

Project Name PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number 04-0664 Project Manager

Client HANNAFORD BROS. CO. Date 10/14/2004

HANNAFORD BROS. CO.
ERIC OTTUM
PO BOX 1000
PORTLAND, ME 04104

Phone Number 207-885-2546
Fax Number 207-885-2192

Results Being Reported

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BY: Roger E. Domingo

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client Contract Number:

Client: HANNAFORD BROS. CO.

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 10/7/2004 **Time Cast:** 2:05 **Date Received:** 10/9/2004

Placement Location: Front Foundation Walls, Footings on South Wall

Placement Method: Tailgate

Placement Vol. (yd³): 21

Cylinders Made By: DPM

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 2.75

Air Content (%) (C-231): 5.0

Air Temp (°F): 70

Conc. Temp (°F) (C-1064): 68

Load Number: 1

Mixer Number: 156

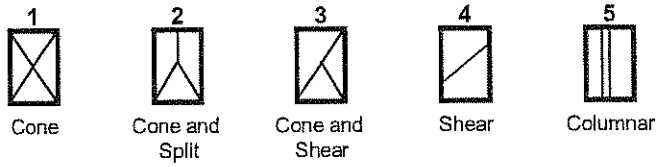
Ticket Number: 4513041

Cubic Yards: 10.5

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
399-5A		6.00	28.27	10/14/2004	Lab	**7**	4	81.0	**2870**
399-5B				11/4/2004	Lab	**28**			
399-5C				11/4/2004	Lab	**28**			
399-5D				Hold	Lab				

Fracture Types



Remarks:

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S.W.COLE
ENGINEERING, INC.

Project Name	PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING		
Project Number	04-0664	Project Manager	
Client	HANNAFORD BROS. CO.	Date	10/13/2004

HANNAFORD BROS. CO.
ERIC OTTUM
PO BOX 1000
PORTLAND, ME 04104

Phone Number 207-885-2546
Fax Number 207-885-2192

Results Being Reported

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client Contract Number:

Client: HANNAFORD BROS. CO.

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 10/6/2004 **Time Cast:** 4:20 **Date Received:** 10/7/2004

Placement Location: G Line Corner, Southwest Corner, South Wall (Footings) Front Wall, North Side (Foundation Walls)

Placement Method: Tailgate

Placement Vol. (yd³): 10

Cylinders Made By: DPM

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 2.5

Air Content (%) (C-231): 5.1

Air Temp (°F): 64

Conc. Temp (°F) (C-1064): 62

Load Number: 1

Mixer Number: 180

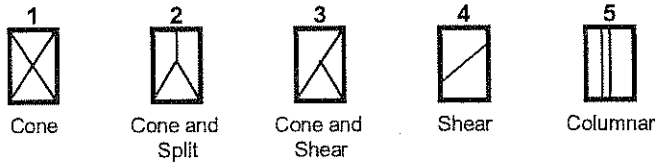
Ticket Number: 3924862

Cubic Yards: 10

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
399-4A		6.00	28.27	10/13/2004	Lab	**7**	4	81.0	**2870**
399-4B				11/3/2004	Lab	**28**			
399-4C				11/3/2004	Lab	**28**			
399-4D				Hold	Lab				

Fracture Types



Remarks:

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S.W.COLE
ENGINEERING, INC.

Project Name PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number 04-0664 Project Manager

Client HANNAFORD BROS. CO. Date 10/12/2004

HANNAFORD BROS. CO.
ERIC OTTUM
PO BOX 1000
PORTLAND, ME 04104

Phone Number 207-885-2546
Fax Number 207-885-2192

Results Being Reported

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BY: Roger E. Domingo

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client Contract Number:

Client: HANNAFORD BROS. CO.

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 10/5/2004 **Time Cast:** 2:15 **Date Received:** 10/6/2004

Placement Location: G Line 8 Yards, Northeast Wall, Finishing Existing Footing

Placement Method: Tailgate

Placement Vol. (yd^3): 10

Cylinders Made By: DPM

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 2.5

Air Content (%) (C-231): 5.0

Air Temp (°F): 68

Conc. Temp (°F) (C-1064): 66

Load Number: 1

Mixer Number: 154

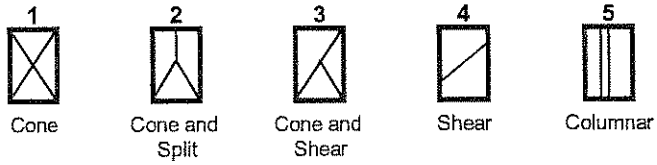
Ticket Number: 4513001

Cubic Yards: 10

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
399-3A		6.00	28.27	10/12/2004	Lab	**7**	4	68.0	**2410**
399-3B				11/2/2004	Lab	**28**			
399-3C				11/2/2004	Lab	**28**			
399-3D				Hold	Lab				

Fracture Types



Remarks:

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE
ENGINEERING, INC.

Project Name PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number 04-0664 Project Manager

Client HANNAFORD BROS. CO. Date 10/12/2004

HANNAFORD BROS. CO.
ERIC OTTUM
PO BOX 1000
PORTLAND, ME 04104

Phone Number 207-885-2546
Fax Number 207-885-2192

Results Being Reported

CONCRETE CYLINDER COMPRESSION TEST - ASTM C39/AASHTO T22

Copy To:

Remarks:

S. W. COLE ENGINEERING, INC.

BY: Roger E. Domingo

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client Contract Number:

Client: HANNAFORD BROS. CO.

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 10/4/2004 **Time Cast:** 3:15 **Date Received:** 10/5/2004

Placement Location: 1 Line Footing

Placement Method: Chute

Placement Vol. (yd³): 10

Cylinders Made By: KLG

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 3.5

Air Content (%) (C-231): 5.0

Air Temp (°F): 65

Conc. Temp (°F) (C-1064): 78

Load Number: 1

Mixer Number: 151

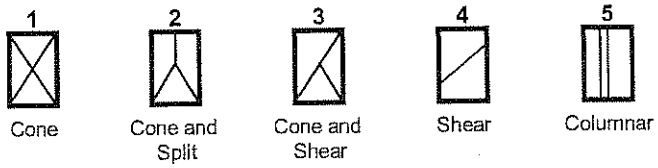
Ticket Number: 4512972

Cubic Yards: 10

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
399-2A		6.00	28.27	10/11/2004	Lab	**7**	4	94.0	**3330**
399-2B				11/1/2004	Lab	**28**			

Fracture Types



Remarks:

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE
ENGINEERING, INC.

Project Name PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number 04-0664 Project Manager

Client HANNAFORD BROS. CO. Date 9/24/2004

HANNAFORD BROS. CO.
ERIC OTTUM
PO BOX 1000
PORTLAND, ME 04104

Phone Number 207-885-2546
Fax Number 207-885-2192

Results Being Reported

CONCRETE CYLINDER COMPRESSION TEST - ASTM C39/AASHTO T22

Copy To:

Remarks:

S. W. COLE ENGINEERING, INC.

BY: Roger E. Domingo

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client Contract Number:

Client: HANNAFORD BROS. CO.

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 8/26/2004 **Time Cast:** **Date Received:** 8/27/2004

Placement Location: Median Between Stations 4+25 - 5+40, 7+40 - 8+70 Riverside Street

Placement Method: Tailgate

Placement Vol. (yd³): 15

Cylinders Made By: CJM

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 4.75

Air Content (%) (C-231): 6.2

Air Temp (°F): 80

Conc. Temp (°F) (C-1064): 75

Load Number: 1

Mixer Number: 158

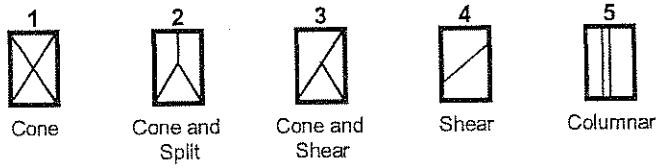
Ticket Number: 4512298

Cubic Yards: 10

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
399-1A		6.00	28.27	9/2/2004	Lab	**7**	4	95.0	**3360**
399-1B		6.00	28.27	9/23/2004	Lab	**28**	4	113.0	**4000**
399-1C		6.00	28.27	9/23/2004	Lab	**28**	4	114.0	**4030**
399-1D				Hold	Lab				

Fracture Types



Remarks: Keeley Construction placing concrete.

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

S.W.COLE
ENGINEERING, INC.

Project Name PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number 04-0664 Project Manager

Client HANNAFORD BROS. CO. Date 9/2/2004

HANNAFORD BROS. CO.
ERIC OTTUM
PO BOX 1000
PORTLAND, ME 04104

Phone Number 207-885-2546
Fax Number 207-885-2192

Results Being Reported

CONCRETE CYLINDER COMPRESSION TEST - ASTM C39/AASHTO T22

Copy To:

Remarks:

S. W. COLE ENGINEERING, INC.

BY: Roger E. Domingo

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - FOREST AVE & RIVERSIDE STREET SUPERMARKET - MATERIALS TESTING

Project Number: 04-0664

Client Contract Number:

Client: HANNAFORD BROS. CO.

General Contractor:

Concrete Supplier: DRAGON PRODUCTS

PLACEMENT INFORMATION

Date Cast: 8/26/2004 **Time Cast:** **Date Received:** 8/27/2004

Placement Location: Median Between Stations 4+25 - 5+40, 7+40 - 8+70 Riverside Street

Placement Method: Tailgate

Placement Vol. (yd^3): 15

Cylinders Made By: CJM

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 4.75

Air Content (%) (C-231): 6.2

Air Temp (°F): 80

Conc. Temp (°F) (C-1064): 75

Load Number: 1

Mixer Number: 158

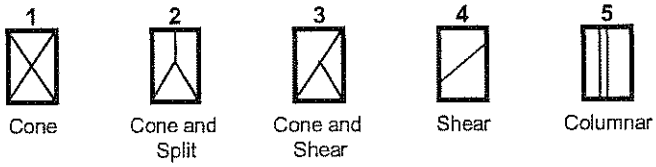
Ticket Number: 4512298

Cubic Yards: 10

Design (psi): **3000**

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
399-1A		6.00	28.27	9/2/2004	Lab	**7**	4	95.0	**3360**
399-1B				9/23/2004	Lab	**28**			
399-1C				9/23/2004	Lab	**28**			
399-1D				Hold	Lab				

Fracture Types



Remarks: Keeley Construction placing concrete.

286 Portland Road, Gray, ME 04039-9586 - Tel. (207) 657-2866 - Fax (207) 657-2840

Oldcastle Precast, Inc.
South Bethlehem Division
123 County Route 101
P.O. Box 218, South Bethlehem, NY 12161
Phone: (518) 767-2269
Fax: (518) 767-9390

LETTER OF TRANSMITTAL

DATE	JOB NO.
11/05/04	4653

ATTENTION Eric Ottum

RE Hannaford Supermarket & Pharmacy

TO Hannaford Bros Co.
145 Pleasant Hill Rd
Scarborough, ME 04074

PHONE # (207) 885-2911

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via DHL Express the following items:

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications

☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
1	1/11/02		Oldcastle South Bethlehem, NY Plant
			QSM - Quality System Manual

RECEIVED
NOV 10 2004

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☑ For your use ☐ Approved as noted ☐ Submit ____ copies for distribution
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☐ For review and comment ☐ _____
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REMARKS _____

COPY TO _____

SIGNED: David Wm

IF ENCLOSURES ARE NOT AS NOTED KINDLY NOTIFY US AT ONCE

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209 West Jackson Boulevard
Chicago, Illinois 60606-6938

Phone: 312-786-0300 • Fax: 312-786-0353

e-mail: info@pci.org • www.pci.org

1/11/02

Mrs. Donna Reuter
Oldcastle Precast, Inc.
South Bethlehem Division
P.O. Box 218
South Bethlehem, NY 12161

Dear Mrs. Reuter:

We have reviewed the Quality Systems Manual (QSM) for Oldcastle Precast, Inc. South Bethlehem Division, South Bethlehem, NY. The submitted QSM is in conformance with the requirements of MNL-116 and is therefore **approved** as a PCI certified quality system manual for the aforementioned facility. Congratulations!

Enclosed you will find one copy of your approved QSM. Note that the cover page has been stamped "APPROVED BY", signed and dated 1/11/02.

Both PCI and Ross Bryan Associates will maintain, at their offices, one approved plant specific quality system manual. Please note that any revision to your QSM must be either sent to PCI or given to the auditors during their standard plant visit. The revisions will then be reviewed and either recommended for approval or noted for changes required.

If you should have any questions, please feel free to contact us at (312) 786-0300.

Best Regards,

Jessica R. Burnett

Jessica R. Burnett
Certification Programs Assistant

Enclosures: Approved (1) QSM
RBA Reviewed Letter

cc w/signature page: Henry Clark – Ross Bryan Associates, via mail

cc w/QSM: PCI Plant File

ROSS BRYAN ASSOCIATES, INC. ENGINEERS
1025 16th Avenue South, Suite 400
Nashville, Tennessee 37212-2319
Telephone 615-329-1300
Telefax 615-327-4446
www.rossbryan.com

December 31, 2001

Mr. Brian Stejskal
Director of Certification Programs
Precast/Prestressed Concrete Institute
209 West Jack Boulevard, Suite 500
Chicago, IL 60606

Dear Brian:

#154

Quality System Manual
MNL-116-99 - Fourth Submittal
Oldcastle Precast, Inc., South Bethlehem Division
South Bethlehem, New York

We have received three copies of the management's responsibility sheet signed by the division manager and plant manager. Based on the receipt of these signed sheets, we recommend that the manual be approved for MNL-116-99.

Should you have any comments or concerns regarding the review of the above plant's QSM, please do not hesitate to call.

Very truly yours,

ROSS BRYAN ASSOCIATES, INC.

Mark Savage

Mark W. Savage

MWS/mgc

MANAGEMENT RESPONSIBILITY

QUALITY POLICY STATEMENT

It is this plant's quality goal to continuously improve products and services, thereby benefiting our customers, employees, and stockholders.

This plan attests to management's determination to operate this plant consistent with a quality system.

Quality is the result of a dedicated effort from all personnel levels. Every employee shall be aware of and committed to the policies and procedures in this manual. This plant will use the PCI Manual for Quality Control, MNL-116-99, as the basis for our quality system, and the PCI Plant Certification Program as our external audit system.

We will conduct daily operations, periodic training sessions and reviews, semi-annual internal audits, and an annual rededication as called for by this Quality System Manual.

Quality will not be compromised, even when it appears to be more expedient to do so.

Division Manager

11/20/01
Date

Plant Manager

11/20/01
Date

OLDCASTLE PRECAST, INC.

South Bethlehem, New York

QUALITY SYSTEM MANUAL

OLDCASTLE PRECAST , INC
SOUTH BETHLEHEM, NY

QUALITY SYSTEM MANUAL

TABLE OF CONTENTS

OLDCASTLE PRECAST INC.
South Bethlehem, New York

QUALITY SYSTEM MANUAL

This Quality System Manual is hereby approved for use.

This Quality System Manual has been reviewed and approved. It meets the general requirements of PCI MNL-116-99, Section 1.2. This approval does not relieve the client of meeting all applicable provisions of MNL-116, which are the minimum requirements of the PCI Plant Certification Program.

Director of Certification Programs — Date

Oldcastle Precast, Inc.
South Bethlehem, NY

Donna Reuter
General Manager

9/10/01
(Date)

Precast/Prestressed Concrete Institute
Chicago, IL

John S. Dick, Director
PCI Certification Programs

January 24, 2002
(Date)

Last Revision Date_____

TABLE OF REVISIONS TO THE QUALITY SYSTEM MANUAL

Revision Number	Date	Page Number	Revision Description

INTRODUCTION

In the race for quality, there is no finish line. Quality is a goal that keeps changing; as we keep improving the quality of our products (as do our competitors), our customers learn to expect more, and then are no longer satisfied with what used to be the norm. It is thus our company policy to strive to exceed (but always at least meet) industry standards, specifications, and customer expectations, in order to:

maintain our reputation and position as industry leader;
minimize the problems, costs, and delays involved with repairs, remakes, and contract disputes over delays;
sustain personal pride of workmanship and product; and,
maximize return on investment for our shareholders.

This Quality System Manual will identify the management functions, address or reference the documented quality system and procedures, and briefly cover all the applicable requirements of the quality system standard established by this Division. And by the time you have worked through the entire document, it will also explain the meaning of many of the strange, awkward or new phrases contained herein.

We all recognize that the primary responsibility for quality rests with production personnel. Accordingly, production personnel must understand the role of quality control and work to insure effective monitoring, timely responses, corrective actions, and continuous improvement. Although production personnel are responsible for the quality of products, it is necessary to have a system of checks and balances. Quality control inspections provide this check and balance system, and consequently are an essential part of the operations of this Division.

This Manual defines our system to help insure consistent production and high quality products. It has the full support and backing of every Oldcastle Precast Officer. *It will only be successful with the full support and cooperation of every Oldcastle Precast employee.*

This Plant Quality System Manual is the responsibility of the Quality Control Department as directed by the Division Manager.

This Quality System Manual is primarily based on the following codes and standards:

Standard Building Code (Uniform Building Code, National Building Code, International Congress of Building Officials, International Building Code)
New York State Building Code (Connecticut, Rhode Island, Pennsylvania, Maryland, etc)
New York State Department of Transportation Specifications and Regulations
Precast/Prestressed Concrete Institute Manual for Quality Control MNL-116-99

MANAGEMENT RESPONSIBILITY

QUALITY POLICY STATEMENT

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Quality will not be compromised, even when it appears to be more expedient to do so.

_____	_____
Division Manager	Plant Manager
_____	_____
Date	Date

MANAGEMENT RESPONSIBILITY

QUALITY SYSTEM AWARENESS

Commitment to quality is meaningless unless every employee knows and understands the program, and is in turn empowered and committed to its success.

Every supervisor shall receive a copy of this Manual, and thereafter read and sign a registration document to acknowledge their awareness and acceptance of those sections of the Quality System Manual for which they have direct involvement.

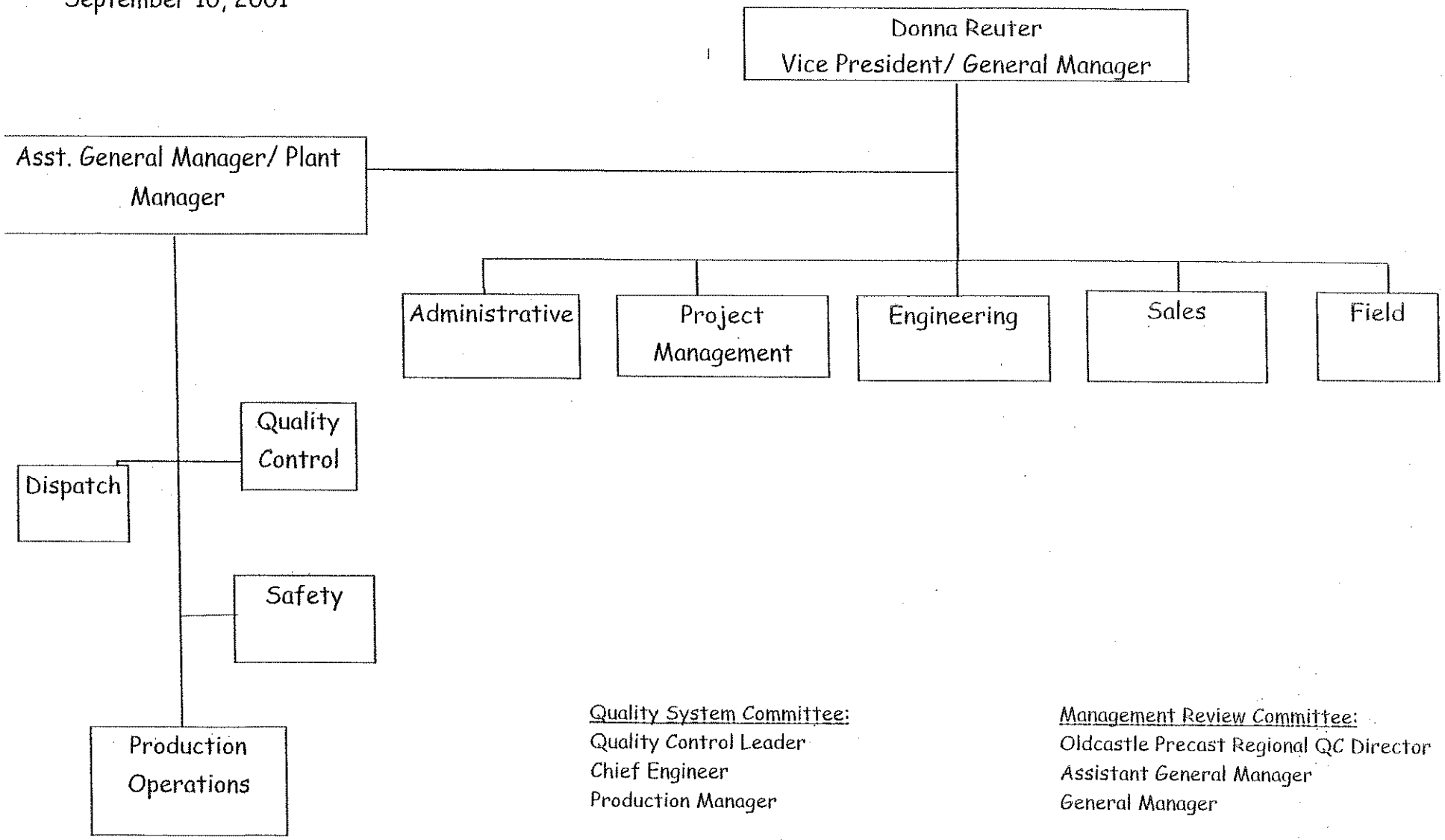
It is the responsibility of each Supervisor to train his/her employees in the Quality System. Each of the above signatories shall review the policy and any changes issued no less than once each year, together with his/her personnel to assure awareness.

The Plant Manager shall keep a record of the name of each person receiving this document, and the dated signature of that person. Revisions of the Plan shall be prepared and distributed by the Plant Manager. Receipt of each revision to the plan shall be similarly kept on record, with names, dates, and original signature of receipt.

This Quality System Manual, in whole or in part, may be provided to our customers when appropriate as documentation of our commitment to quality.

Quality System Committee:
Quality Control Leader
Chief Engineer
Production Manager

Management Review Committee:
Oldcastle Precast Regional QC Director
General Manager
Assistant General Manager



Quality System Committee:
Quality Control Leader
Chief Engineer
Production Manager

Management Review Committee:
Oldcastle Precast Regional QC Director
Assistant General Manager
General Manager

MANAGEMENT RESPONSIBILITY

PERSONNEL RESPONSIBILITY

Assistant General Manager shall:

- Establish the Quality System, initiate revisions, and instill awareness by plant supervisory personnel for the areas in which they have responsibility
- Establish criteria for project QC
- Develop standards for purchasing
- Develop standards for receiving, testing, and acceptance
- Develop standards for production testing
- Develop standards for pre-pour and post-pour inspections
- Obtain procedures from engineering for correcting nonconforming assemblies and products
- Provide and maintain records of continuing training to all Department personnel
- Resolve with General Manager and Department Heads any QSM compliance issues that arise
- Maintain lab equipment in calibration
- Maintain records for receiving and production testing
- Monitor concrete batching and delivery. Obtain and file batch tickets for all concrete produced, and insure its placement is accounted for (specific product, casting lines, waste, etc)

Quality Control Inspector shall:

- Carry out receiving testing and production testing (concrete temp, air %, unit weight, slump, and make cylinders for strength testing)
- Perform aggregate sieve analysis tests
- Maintain monitoring equipment (tapes, levels and instruments)
- Execute pre-pour inspections according to plant standards
- Inspect and verify the accuracy of dimensions and conditions of forms
- Verify the proper fabrication and placement of reinforcement and cast-in items
- Inspect tensioning operations to ensure conformance with specified procedures
- Record and maintain records for pre-pour inspections
- Monitor concrete placement for proper deposition and consolidation
- Execute post-pour inspections according to plant standards
- Record and maintain records for post-pour
- Inform QC Leader of nonconforming product or assemblies
- Monitor loading of product and perform final inspection

MANAGEMENT RESPONSIBILITY

VERIFICATION RESOURCES AND PERSONNEL

Quality Control personnel shall be required to successfully complete the PCI Level I certification within the first year of hire. QC Level I people will be responsible for performing basic inspection duties such as making concrete test cylinders and checking of layout and reinforcement placement. A QC Level II person will be highly competent in Level I duties and able to inspect and evaluate all materials that are used in the product, and able to document and inform engineering of any defective products.

Marc Ruxton PCI Level II.

Purchasing Procedures

Establish quality standard and code reference for each raw material or assembled item.
File copies of purchase orders for materials or assemblies ordered for comparison to items received.

Handling Changes to Shop Drawings during Production

Revised drawings initialed by Chief Engineer
Revised drawings distributed by Production Manager to all involved departments
Revised drawings received and reviewed by QC Leader

Identification of Inspection Status of Product

Green dot means in compliance and ready to ship
Yellow dot means discrepancy (and possibly resolution of) repair needed
(If product rejected, QC pulls Identification tag.)
Identification codes may only be applied and/or changed by QC Department personnel. Any QC Department personnel applying a yellow code will also complete a Non-Conforming Product Report of this action, identifying product color coded, or any codes changed, and the reasons for the action. This report is given to the QC Leader, with copies to the Production Manager and Chief Engineer. QC Leader and Production Manager to confer following receipt of every instance of product rejection.

Inspection and Test Records

Originated, signed and filed by QC Inspector

Welding Procedures and Review

Spot inspection of welded assemblies by QC Inspector, including purchased assemblies
Structural welders certification for AWS procedure being performed kept on file in QC department

Shipping

Spot inspection by QC Inspector

Training

All training shall be documented and recorded.

Self Inspection

Self inspection procedures for the plant are as follows:

Stud welding – visual inspection of penetration and puddling, and 45° bend tests, frequency per PCI Manual. Welding operator will be trained to AWS Standards.

Tensioning jack calibration – using plant load cell, a registered professional engineer in conjunction with the QC Department may perform calibration and generate a report listing data points and range of calibration, jack identification, gage identification, and load cell certification.

Batch plant scales – In addition to subcontractor calibration services per PCI Manual MNL 116 Section 4.9, apply test weights incrementally to establish consistency of scale readout. Calibration of scales shall be performed at intervals not greater than six months, and whenever there is reason to question accuracy.

Water meter - Calibration of water measuring devices shall be performed at intervals not exceeding three months or whenever there is reason to question accuracy.

Admix dispensers, pressure meters (air %), temperature recording devices and pocket thermometers – calibrate to meet PCI MNL 116 requirements or whenever there is reason to question their accuracy.

MANAGEMENT REVIEW,

The Quality System Committee shall consist of the Quality Control Leader, the Production Manager, and the Chief Engineer. It shall be this committees responsibility to establish the Quality System as outlined in this document, to review it at least twice per year for necessary modifications, and to meet following each PCI Plant Audit to review recommended improvements and any necessary quality system adjustments.

No later than two weeks after receipt of PCI Plant Audit Report, review PCI recommendations and response taken by involved departments

Record all actions reviewed, decisions made, and directives issued. The record of the meeting shall be signed and dated by all present, and shall be kept by the Plant Manager.

QUALITY SYSTEM DEFINITION

The Quality System Committee shall include the Quality Control Leader, Chief Engineer, and the Production Manager. The Quality System Committee shall be responsible for setting the Quality System for this plant. Meetings shall be held semi-annually. Minutes of each meeting documenting attendance, items covered, and action taken or to be taken shall be kept and distributed by the Chief Engineer, and kept on file by the Plant Manager.

The Quality System Committee shall be responsible to establish, maintain, and document, in accordance with this Manual and the PCI MNL-116-99, the following aspects of this program:

An inspection system to review methods, purchases, production, and products to verify that materials and products comply with purchase order or contract requirements

The use of interrelated documents for the inspection process such as: contract drawings, shop drawings, inspection procedure sheets, inspection record sheets, and detailed procedures as outline in the QSM

Quality program development by the company's Quality System Committee as well as implementation and administration of the program

The identification and management of nonconforming materials or products as well as identification of corrective action to prevent recurrence

Training of all personnel responsible for inspection to assure that the required skill level is sufficient to perform the functional requirements of the Quality System

DOCUMENT CONTROL

The Quality System Committee shall be responsible for distribution and control of the Quality System Manual. Only the Quality System Committee shall approve revisions. Suggested revisions may be submitted by anyone. Revisions shall be submitted in writing to the Committee at least three days before a scheduled meeting of the Committee.

The Quality Control Leader shall distribute the Quality System Manual and any subsequent revisions thereof. The Quality Control Leader shall maintain the distribution list of each document issued. This shall consist of a page for each individual receiving a manual, noting the manual number, revision page numbers, date of issue, recipients name, and space for the receivers signature by way of acknowledgement of receipt. Every subsequent revision or change to the QSM shall be similarly distributed, with the Quality Control Leader responsible to obtain the personal signature of each recorded recipient to insure complete document control. In so doing, the QCM shall replace any revised pages with new ones as appropriate.

Shop drawings (piece drawings, engineering drawings, erection drawings) for production of products are prepared by the Engineering Department or by selected Consultants. The Chief Engineer shall be responsible to issue and distribute all drawings, and revisions thereof.

The Chief Engineer distributes original and revised drawings to the Production Manager for distribution. Production Supervisor shall be responsible for taking back from circulation the previous drawing upon receipt of each newly revised drawing. Drawings stamped **Preliminary** are for planning and scheduling purposes. Production can not proceed until drawings are stamped **Approved.**

Internal distribution of drawings shall be as follows:

Production – all piece, shape, reinforcing, and specification sheets
Quality Control – all drawings
Dispatch/Erection – installation drawings

PURCHASING

Purchasing personnel shall purchase all materials required for each job in conformance with job specifications. All materials shall have documentation from the manufacturer that represents material delivered to the precast plant. Documents shall include all ASTM test results required for each type of material per PCI MNL 116 and/or job specifications.

No purchase order shall be written to a vendor not on the Approved Vendor List, or a list of approved suppliers of secondary miscellaneous items, without written approval of a member of the Quality System Committee; the full Committee will review all such exceptions at it's next scheduled meeting, and thereafter approve or deny that vendor, for being listed for future purchases. The Committee at each meeting shall review for completeness a different sampling of purchase documents issued since the last meeting

Purchase documents will contain:

A statement that all materials and assemblies will, at a minimum, meet their applicable ASTM standards.

A statement that acceptance of material (or assembly) by the Quality Control Department upon or after delivery or actual usage is based on satisfactory count, inspection, testing, or conformance to standards for material or drawings specified, as well as acceptable performance of material; that acceptance also requires acceptable resolution of any shipping damage, contamination, or shortage.

A statement that rejected material, based on any of the mentioned criteria, will be: sent back to the supplier at suppliers cost; or if to be disposed of by the plant, a statement that all costs of disposal are to be paid by supplier; or if material can be used for other work not required to meet these standards a negotiation of price and use will be attempted; also add a statement that cost impacts for delay may be imposed in cases of nonconformance, and a statement of allowed time for replacement of rejected material or assembly

PRODUCT IDENTIFICATION AND TRACEABILITY

Each unit produced shall be uniquely marked and dated on the day of removal from the form. This is a multi-purpose requirement: to identify the product; to confirm production; to link the product to conformance testing by the Quality Control Department; to link the product to raw materials or assemblies used in its production; to link the product to the erection plan. In general, these identifying mark numbers and dates will be painted directly on the outside of the product in a location that is not visible when the product is in its final position, but which can be readily seen in the storage yard. For products on which direct marking is not applicable, the same data shall be applied to a weatherproof tag and temporarily fastened to the product. (Another method possibly used in your plant is form applied piece marks and date stamps, etc.; if so, add appropriate language)

For bulk concrete related raw material, such as cement, aggregates, and admixtures, Purchasing Personnel shall be responsible for keeping documentation of these items. This will require that dates and quantities and weights of materials received be included on each such document.

At the time of receipt, each pack of strand will be accompanied by documents which shall contain date received, manufacturer, supplier, strand size(s) and grade, pack number, heat number. These documents shall be filed by Purchasing Personnel. As with any shipment of strand, the mill certificates will be delivered to the Quality Control Leader.

Strand coils shall be kept in reel stands, and have their original identification tags removed from the coil prior to opening, and then securely attached to the reel stand until all strand has been used or removed from production use. Quality control will record on each days production records the data from the reel stand identification tags.

At the time of receipt, each bundle of rebar will be documented. The document will contain the following information: Date received, supplier, manufacturer, P.O. Number, size, mill certificate, and a Tag Number. The receiver will forward the mill certificates, which accompany each shipment, to the Purchasing Department. The Purchasing Department will maintain a permanent file of these certificates. If mill certificates have not accompanied the shipment the receiver will immediately notify the Purchasing Department. Use of that shipment will not take place until mill certificates are received. The purchasing department will maintain a permanent file for these documents. For stock, we will track by PO number, and Bar Size and will be noted on the pre-pour inspection.

For rebar purchased cut and bent, Purchasing will require the same documentation as described above.

At the time of receipt, each bundle of wire mesh will be documented. The documents will contain the following information: Date received, supplier, manufacturer, P.O. Number, size & description, mill certificate, and a tag number. The receiver will forward the mill certificates which accompany each shipment to the Purchasing Department. The Purchasing Department will maintain a permanent file of these certificates. If mill certificates have not accompanied the shipment the receiver will immediately notify the Purchasing Department. Use of that shipment

will not take place until mill certificates are received. The receiving department will maintain a permanent file for these documents.

PROCESS CONTROL

Process control is an overview of personal responsibilities that are assigned for each phase of the production process.

A. PRODUCTION PLANNING

The General Manager and Assistant General Manager shall decide on overall plant layout of plant facilities. The plant manager shall decide on specific form orientation within established beds. The plant manager and yard foreman will establish storage locations for materials used in the production process.

B. ENVIRONMENT

Plant manager and production personnel will decide on product curing environment based on ambient temperature, concrete temperature and sensitivity of concrete member.

C. PRODUCTION EQUIPMENT / SET-UP AND CALIBRATION

All batching and tensioning equipment will be calibrated by qualified outside firms who are regularly engaged in the testing and calibration of a particular item used in the production process. Precast products will be handled by either forktrucks, hydraulic boom cranes or travel lifts. The appropriate machine for the situation will be the decision of the Production Supervisor.

Management will select and have trained appropriately individuals on the operation of handling equipment. The maintenance department will maintain records on all handling equipment and service on predetermined cycles. Additionally, there will be an annual evaluation of the structural components of the handling equipment by an outside consulting firm regularly engaged in that type of work

Production planning for specific products is as follows:

4'0" wide Hollow Core Plank - Located on the East end of the Production Building #1. Curing is by circulating hot water under the 6 520' forms.

Misc. stair and landing forms – Located at the West end of Production Building #1. Curing is by Kero Heaters. (This area will also be reserved for other small products.)

8'0" Wide Floor Plank and Wall Panels – These are cast on the South Side of Production Building #2. There are 2 520'0" self stressing forms. Curing is by circulating hot water.

On the North side of Production building #2, from East to West there is a 120'-0" x 13'-0" self stressing table. Next there is a 200'x 0" by 12'-6" self stressing table. Curing on both beds is by circulating hot water. Then there is the QC and office area. A small steel fab shop and a small misc. form area for precast products. Curing for these products will be kero heaters.

Outside on the South side of Production Building #2 there are two open bridge pits. On the east end the bridge pit is 230'-0" long and on the West end the bridge pit is 110-0" long. These two beds are primarily for Box Beams. Curing is Live Steam.

(All Products will be naturally cured as weather permits.)

All products in building will be removed from molds with the use of an overhead crane and appropriate spreader bar and rigging. All outdoor products will be removed from molds with the use of travel lifts and appropriate spreader bar and rigging. Stripping methods shall be determined by Production Supervision. Product is then landed on Flatbed trailers and removed to storage area.

D. Welding personnel will be certified for each type of weld produced in accordance to ANSI/AWS D1.1-96 specifications. All welding of inbeds is done by an outside vendor.

INSPECTION AND TESTING

Inspection and testing at time of receiving

1.) All materials received shall have a packing slip identifying material and shall be dated with date received.

2.) Strand, rebar, mesh, deformed anchors and headed studs will also have mill certifications attached.

3.) Cement mill report will be received monthly or depending on usage supplied by supplier.

4.) Certified test reports will be maintained by Quality Control.

Visual Inspections

All materials received from manufacturers will be visually inspected by QC personnel. Prestressed strand will be inspected for contaminants such as excessive rust, nicks and kinks which can cause problems in tensioning of strand. Strand chucks will be inspected after each use and properly cleaned by an assigned production personnel. Strand used in precast components shall conform to ASTM A416 specifications. Steel reinforcing bars shall be labeled for grade, size and weldability per ASTM A615, A616, A617 and A706. Epoxy-coated reinforcing bars will be inspected for proper identification and surface defects such as holes, voids, cracks and damaged areas which could be detrimental to reinforcing performance. Epxoy-coated reinforcing bars comply with ASTM A775. All prefabricated bent reinforcement bars will be inspected for visual defects and dimensional errors. Welded wire fabric will be visually inspected for broken welds as per ASTM A185.

Gray cements are used in all of our concrete products. There is no purchase agreement with the cement supplier relative to cement color consistency. Variations in cement colors are expected. Monthly certification is received from the cement supplier that is representative of that month's production. Our experience is that sampling of individual cement shipments is not necessary. It is not practical to attempt tracking of individual loads of cement with our bulk cement storage facilities. We historically have not had strength concerns with our present cement supplier.

Material Testing

Materials not tested by Oldcastle Precast, Inc. will have a certified Mill Test report conforming to the required ASTM specification. All other materials will be in-house tested or sent to a qualified independent testing laboratory. The following schedule represents in-house test requirements.

Concrete will be tested in accordance with ACI Certification Program for concrete inspection. All concrete tests will be made be PCI certified personnel per job specifications. Absorption tests

will be conducted as required by MNL-116. Aggregates shall comply with ASTM-C-33. Fineness modulus shall not exceed +/-.20 from average value of utilized mix design. Material finer that No. 200 sieve (ASTM C-116) shall be limited to 3% for fine aggregates and 1% for coarse aggregates. If crushed materials are used and the fines passing the No. 200 sieves are from the rock, then these values increase to 5% for fine aggregates and 1.5% or coarse aggregates.

Test Results

All material test results are reviewed by Q C for compliance to required ASTM specifications. Assistant General manager and Plant Manager are notified of all material test results. If materials do not comply with required ASTM specification, then defective materials are labeled and isolated from other materials. Materials are then handled according to purchasing agreements.

IN PROCESS INSPECTION AND TESTING

1. INSPECTION DOCUMENTATION

   Inspection data forms for concrete, stressing, pre-check, and post-check are found in the Appendix. All concrete and stressing data forms are to be accurately completed by Q C personnel. Stud welding documents will be completed by welding operators. Outside Vendor.

2. REVISED DRAWINGS

   Any time an approved print is revised due to field check adjustments or general contractor requests, a copy of the revision is sent to Q C and production personnel prior to set-up operations. Revised prints will be kept on file by Q C department. Original drawings and the distribution of the latest copies shall be under the control of the chief drafter.

INSPECTION, MEASURING AND TEST EQUIPMENT

Calibration of testing equipment will be performed annually or at anytime where results are questionable. All calibrations of stressing jacks and concrete testing machines will be performed by Professional Calibration, Inc. Located in Meshoppen, PA.

All calibration records will be kept in the quality control office and maintained by the quality control leader.

The following is a list of equipment to be tested by Professional Calibration, Inc. at the prescribed annual intervals described above.

FORNEY MATERIALS TESTING MACHINES

Model: F-500 F-01 Model: FT-40-2

. Serial Number: 98041	Serial Number: 74232
. Capacity: 500,000 lbs.	Capacity: 250,000 lbs.
Range of Calibration	
. Gauge #1: 10,000 thru 100,000	Gauge #1: 3,000 thru 30,000
. Gauge #2: 50,000 thru 500,000	Gauge #2: 25,000 thru 200,000

HAMILTON STRESSING SYSTEM (Single Strand)

. Serial Number: 10791	Range of Calibration
. Pre-pull 6,000 PSI	Pre-pull 2,500 and 3,000
. Capacity 60,000 PSI	Final 5,000 thru 32,000

HAMILTON STRESSING SYSTEM

. Serial Number: 11108	Range of Calibration
. Ram: 60"	Pre-pull 2,500 and 3,000
. Pre-Pull 10,000	Final 5,000 thru 32,000
. Capacity: 60,000	

BYNUM STRESSING SYSTEM (Single Strand)

. Serial Number: 92986	Range of Calibration
. Ram: 60"	Pre-pull 2,500 and 3,000
. Pre-Pull 10,000	Final 5,000 thru 32,000
. Capacity: 50,000 lbs.	

All tensioning operations are carefully monitored and observed by qualified personnel and reviewed by the Q C Manager.

All Tensioning calculations are made by the quality control leader using the format.

P = Pounds of Force

L = Length of Bed

A = Area of Strand

E = Modulus of Elasticity of Strand

All elongation measurements must agree within 5% of calculates elongation.

AMERICAN CUBE MOLD (ACM) PRESSURE METER

Air meter calibrations are performed by Quality Control Personnel.

The method of calibration is done by: a Pro Cali-Can. Manufactured by ACM.

Calibrations are done on a basis of varying questionabilities of air percentages from day to day if Any exist or annually.

Thermometers are checked on a periodic basis and compared with other Temp. Measuring device located in the Quality Control office.

OHAUS TRIP SCALE WITH (2610 GRAM CAPACITY)

Calibration of this trip scale is done by placing a known mass on the tray and placing the individual weights of the same weight as the known mass on the platform at the opposite side.

If the trip scale does not level out then the adjustment screw can be moved from left to right to level it. Once this is done then the trip scale is calibrated.

A.N.D. DIGITAL FG 150 K (300 LB CAPACITY)

Calibration of the electrical digital bench scale is performed in accordance with the specified instruction manual. A copy of this procedure is included.

ACCU-WEIGH BALANCE SCALE MODEL

NUMBER 301TDX / A-54 (300 POUND CAPACITY)

Calibration of scales and water meters will be done Biannually or at anytime where results are questionable. Scales will be calibrated through there Full range of use. The water meters will be calibrated using a 50 Gallon target. The scales are checked by Scale Service and Supply Co., Inc. and the water meters are checked by Q.C.

Admix is Calibrated biannually by Q.C.

INSPECTION STATUS

All precast concrete members will be inspected in the following order:

- precheck status;
- post-check status; and
- repair status.

Precheck inspections will be completes prior to concrete placement. Upon member release from form, the member is labeled with an I.D. tab. This tag will show status of the member. In the event repair is needed, the production manager and patching crew will be issued a photocopy of the piece drawing form the post-check showing the exact location and status of repair needed. The Q C department and / or the production manager will inspect the repair for final approval.

CONTROL OF NONCONFORMING PRODUCT

All defective precast concrete products are isolated or marked appropriatly in the storage area per each job. This product is then evaluated for required repair. Repair detail is then sent to Q C personnel. Production is sent a copy of repair detail. Upon repair completion, Q C personnel inspects repair and, if found to be acceptable, the product is placed in shipping status.

FINAL INSPECTION

POST-CHECK

Final inspection of the product is made in a timely manner. This will prevent similar mistakes in products yet to be cast. Post-pour inspection verifies that the product is correctly marked with an identification number, job number and date cast. A visual inspection is performed at this time to check for any defect such as cracks, spalls, honeycomb, bugholes and overall quality of finish. The finish of the unit should match the sample that was approved by the architect prior to job production. Overall dimensions and insert locations are checked for compliance to job specific tolerances. Any structural, cosmetic or dimensional defects are reported to Plant Manager and engineering for production evaluation. All post-pour inspections results are documented per product produced.

CORRECTIVE ACTION

STANDARD REPAIR-MINOR SPALL

Examine the spalled area and clean all loose material. Apple standard repair mix for this product as specified by department manager, or quality control leader. Finish repair true to planes of damaged area and to match project standard. Cure repaired area by covering with polyethyne.

STANDARD REPAIR- CRACKS WHEN EPOXY INJECTION IS REQUIRED

Use Prime Resins two-part dual component system or an equal as provided by department manager. Space ports 4" to 6" apart over crack and apply dual component gel over crack and around ports. Component resin until resin comes out the adjacent port. Continue injecting ports until all ports overflow. When resin has completely hardened grind off all excess material not in plane of surface.

MAJOR CORRECTIVE REPAIRS

Major corrective repairs will be reviewed by the department manager and then engineering department. Corrective action procedure will be written at this time by engineering and this procedure executed through the direction of the department manager.

HANDLING, STORAGE AND LOADING

GENERAL

Each location shall have equipment needed to handle every type of precast element produced at their facility. If special handling of precast is required, engineering and production shall review handling requirements.

HANDLING

Equipment used for handling precast must be capable of handling the elements without damaging them or equipment used. Capacities for all spreader bars and hooks shall be clearly marked. An annual inspection of all handling devices will be required and maintained in the safety director's office. Stripping crews shall have all adequate experience and training in the handling of precast elements. Shop drawings must show all lifting points.

Once the product is stripped form the casting area, it shall be moved by overhead crane to a detailing area or flatbed trailer for movement outside of the building.

Dunnage used for movement of product shall be of sufficient size and capacity to move the precast without damage. The dunnage should be aligned with the lifting points of the product.

STORAGE

The storage of precast units shall consist of vertical wall panel storage

racks. These racks will be used to store wall panels that are rolled to their vertical edge position by means of an overhead crane, yard crane, or travelift. Protection will be used to eliminate staining when securing panels in racks. Wall panels will then be leveled and secured above the panel's center of gravity.

Other precast shapes will be stored in a horizontal plane. These shapes will be handled by overhead crane, yard crane, forklift or travelift. Precast units will be stockpiled on level surfaces with dunnage aligned at the picking points. In some cases, precast units too large to be stockpiled in vertical wall positions will be stored in the above manner.

DELIVERY

Upon final inspection by quality control and the product has been approved for final acceptance, loading of the precast elements may begin.

In all cases of shipping, all strapping or chaining will be at all dunnage or racking points of the precast and the trailer. Care shall be taken to use chain guards, shims and dunnage that will protect the panels form chips, spalls and stainning.

QUALITY RECORDS

All quality control records at Oldcastle Precast Inc. in South Bethlehem N,Y, are prepared to meet the desired requirements described in MNL-116-99 Quality Control Manual.

These records shall be prepared and maintained by the quality control leader.

To provide easily retrievable records, they shall be stored by job number and job name in folders.

Time of record retention meets the minimum 5-year requirements of MNL-116.

These are separate sheets for production pour dates, mix designs, concrete testing, pre-pour and post-pour checks , concrete testing and tensioning data.

See appendix for example sheets described above.

INTERNAL QUALITY REVIEW

A management review of the quality program shall be conducted by the general manager, the plant manager, and the quality control leader to ensure conformance with the QSM. Reviews shall be conducted following each PCI audit plus and annual self-inspection. Minutes of the review will serve as the record of this inspection and shall document any corrections required and specify the individual responsible for seeing that the corrections are made.

TRAINING

Plant managers will conduct monthly meetings with quality control and production personnel for an in-plant training program. Topics of study include proper practices of workmanship in producing a high-quality product. This training program will allow for discussion between management and production personnel to understand the quality system. Production personnel will review and learn proper methods of fabrication. Topics include, but are not limited to, concrete characteristics, concrete consolidation, form work, reinforcing steel placement, types of finishes, finishing techniques, and blueprint reading. Each training session will include a review and/or a brief test for each topic presented. Documentation of each in-plant training session will include copies of materials presented and a sign-in sheet to account for all personnel present.

Plant managers will be responsible for maintaining this documentation. Additional training programs will be available for all personnel based upon specialized needs at certified learning programs or an academically acclaimed institute. The Plant Manager will also keep records of this training.

DEFINITIONS

PCI MNL-116-99, pages xiii through xvii, contain the most commonly used definitions. However, this plant uses the following words as well:

Rabbit: a small motor driven machine for pulling individual strands down a plank bed.
Reel Pack: a prepackaged coil of prestressing strand
Port: a device through which epoxy is injected into a crack
Spreader bar: same a spreader beam
Stud: a headed anchor or deformed anchor made for stud welding to a plate or fixture

APPENDIX

a.) Calibration of Water Meters
b.) QC Material Acceptance/Rejection Stamp
c.) QC Post – Pour Discrepancy Report
d.) QC Elongation Report
e.) Plank Daily Production & QC report
f.) QC Wet Cast Pre- Pour
g.) QC Wet Cast Post Pour
h.) QC Elongation Log
i.) QC Weekly Moisture Test
j.) QC 28 Day Cylinder Breaks
k.) Sieve Analysis
l.) Plot Plan

CALIBRATION OF WATER METERS

DATE:_____

WET CAST _____ PLANK_____

TARGET 50 GALLONS OUR READING

TARGET 50 GALLONS _____

TARGET 50 GALLONS _____

TARGET 50 GALLONS _____

TARGET 50 GALLONS _____

COMMENTS:_____

_____

_____

_____

QC Acceptance/Rejection		
	Initials	Date
Count		
Inspection		
Accept		
Reject		

This acceptance/rejection will be in the form of a self-inking stamp that is put on each receiver as it arrives.

OLDCASTLE PRECAST

PLANK DAILY PRODUCTION & Q.C. REPORT

DATE _____/_____/_____
PAGE _____ OF _____

BED# _____
WIRE SERIES ______________________________

SCHEDULED PRODUCTION

JOB #	ORDER LINE #	DETAIL	MARK #	# OF PCS	PIECE LENGTH

ACTUAL PRODUCTION

# OF PCS	PIECE LENGTH	YARD DETAIL

Q.C.

PRE POUR	G	Y	CAMBER 25% & REMARKS

TOTAL LINIAL FT. ____________
TOTAL SQ. FT. ____________

INITIAL SLIPPAGE
LIVE END ______ DEAD END ______

QUALITY CONTROL

SPANCRETE NORTHEAST, INC.
South Bethlehem, NY 12161

ELONGATION — REPORT

DATE _____

INSP. _____

JOB NO. _____

Coil No. _____ Steel Area _____ Heat # _____

Strand Size _____ Mod. of Elast. _____

Basic Elongation = _____ =

5% Tolerance = +/- _____

Coil No. _____ Steel Area _____ Heat # _____

Strand Size _____ Mod. of Elast. _____

Basic Elongation = _____ =

5% Tolerance = +/- _____

Coil No. _____ Steel Area _____ Heat # _____

Strand Size _____ Mod. of Elast. _____

Basic Elongation = _____ =

5% Tolerance = +/- _____

QUALITY CONTROL

SPANCRETE NORTHEAST
South Bethlehem, NY 12161

POST POUR DISCREPANCY REPORT

Date: _____
Insp.: _____
Job No.: _____
Date Cast: _____
Bed No.: _____

BED LOC.	MARK NO.

DISCREPANCY:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

RECOMMENDATIONS:

Reject _____ Div. Mgr. Approval _____ Date _____

Repair _____ Engr. Required: Y N Q.C. _____

Date _____

REPAIR PROCEDURE: _____

_____

_____

_____

_____

_____

Load Test Required: Y N Engr.: _____ Date: _____

Attached Drawing: Y N

Approved For Shipping By: _____ Date: _____

QUALITY CONTROL

SPANCRETE NORTHEAST
South Bethlehem, NY 12161

WET CAST PRODUCTS
PRE-POUR AND POUR

Date: _____

Insp.: _____

Weather: _____

Job No.: _____

BATCH DATA: _____ PSI @ 28-DAYS

MIX DESIGN

CEMENT	SAND	STONE	WATER	WRDA19	17	AIR	HYCOL	

BED NO.: _____

BED LENGTH: _____

BED COND.: G F P

CURING DATA

STEAM		TEMP.	TOTAL HOURS
Y	N		

ENSIONING DATA: MFR: _____
SIZE: _____

REEL #	THEOR ELONG	ACT ELONG	THEOR GAUGE	ACT GAUGE	+/-5%

TEST DATA

TARE WT. _____ x 4.08

BATCH	PIECE MARK	NO. CYL	AIR	SLUMP	WT.	YIELD	TEMP	TIME
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

PRODUCT:

WEIGHTS

CEM	SAND	STONE	WAT.

ADDMIXTURES

19	17	AIR	HYCOL	

CYLINDER BREAKS

RELEASE		28-Day
TIME	PSI	

UALITY CONTROL
ANCRETE NORTHEAST INC.
RE-POUR INSPECTION REPORT
OST POUR INSPECTION REPORT
ET CAST PRODUCTS

Date:
Insp:
Job No:
Bed No:
Pour No:
Product:
Mark No:
Date Cast:

Remarks:

SPECIAL CONDITIONS:

ark No:							
	GFP	GFP	GFP	GFP	GFP	GFP	
ed Condition:							BLOCKOUTS
esign Length:							Location Square
orm Set-Up Length:							Bleeding Misc
esign Width:							INSERTS
orm Set-Up Width:							Quantity Size
esign Depth:							Location Misc.
orm Set-up Depth:							
einforcing Steel:							WELD PLATES
lates:							Quantity Size
lockouts:							Location Other
nserts:							
ifting Loops:							Projecting Material
emarks:							Quantity Size
							Location Other

Mark No:							FINISH
	GFP	GFP	GFP	GFP	GFP	GFP	___Trowel ___Broom
Bed Condition:							___Float ___Other
Design Length:							Cracking:
Form Set-Up Length:							RELEASE CAMBER
Design Width:							Date Anticipated Actual
Form Set-Up Width:							
Design Depth:							SHIPPING CAMBER
Form Set-up Depth:							Date Anticipated Actual
Reinforcing Steel:							
Plates:							Supports In Storage
Blockouts:							Supports on Truck
nserts:							
Lifting Loops:							
Remarks:							

02/11/97

QUALITY CONTROL

OLDCASTLE PRECAST INC
South Bethlehem NY 12161

Date: _____/2000
Insp: _____
Weather: _____
_____

Job No: _____
_____

TENSIONING DATA: MFR: FLORIDA WIRE
SIZE: 3/8" 270K

Remarks:
M.O.E.

	Loc	Reel #	Theoretical Elong	Actual Elong	Theoretical Gauge	Actual Gauge	+/-5%
Bed 1	1						
	2						
	3						
Bed 2	1						
	2						
	3						
Bed 3	1						
	2						
	3						
Bed 4	1						
	2						
	3						
Bed 5	1						
	2						
	3						
Bed 6	1						
	2						
	3						

Oldcastle Precast, Inc.
Spancrete Northeast

www.oldcastle-precast.com

123 County Route 101
P.O. Box 218
South Bethlehem, NY 12161

Phone: (518) 767-2269
Fax: (518) 767-2037

WEEKLY MOISTURE TEST

Source: _____ Date: _____

Weight of Sample Moist	=	_____
Weight of Sample Dry	=	_____
Weight of Moisture	=	_____
Percent of Moisture	=	_____ %
Absorbtion	=	_____
Total	=	_____ %

28 DAY CYCLINDER BREAKS

JOB #	MARK #	DATE CAST	DATE OF BREAK	CYL. #	P.S.I.

OLDCASTLE PRECAST INC.
123 CR 101
South Bethlehem, NY 12161

DATE: 7/27/00

AGGREGATE SIEVE TEST REPORT

JOB NAME:
JOB No.:
SAMPLE ID: SAND

QC INSPECTOR: _____

Screen Size	RETAINED						PASSING	
	WEIGHTS				PERCENT		WEIGHTS	
	SAMPLE+SCREEN (grams)	SCREEN (grams)	SAMPLE (grams)	CUMULATIVE (grams)	INCREMENTAL%	CUMULATIVE%	CUMULATIVE (grams)	CUMULATIVE%
1	170	170	0	0	0.0%	0.0%	1553	100.0%
0.75	170	170	0	0	0.0%	0.0%	1553	100.0%
0.375	170	170	0	0	0.0%	0.0%	1553	100.0%
4	170	170	0	0	0.0%	0.0%	1553	100.0%
8	386	170	216	216	13.9%	13.9%	1337	86.1%
16	484	170	314	530	20.2%	34.1%	1023	65.9%
30	472	170	302	832	19.4%	53.6%	721	46.4%
50	573	170	403	1235	25.9%	79.5%	318	20.5%
100	420	170	250	1485	16.1%	95.6%	68	4.4%
200	220	170	50	1535	3.2%	98.8%	18	1.2%
PAN	188	170	18	1553	1.2%	100.0%	0	0.0%
			1553		F.M. =		2.77	

NOTE: F.M. does not include 200 sieve and pan
in accordance with ASTM C125

CALLED NORTH

STORAGE BLD A

STORAGE BLD B

ERECTION SHOP

CARPENTER- SHOP

STORAGE BLD C

BATCH PLANT

PLANT OFFICE

DISPATCH

LUNCH RM

MAINT

BOILER RM

ELEC RM

STORAGE BLD

PLANK PRODUCTION

COMPRESSOR & REBOILER ROOM

MISC WET CAST FORM AREA

REBAR SHOP

TOOL RM

PRODUCTION QC OFFICE

WET CAST PRODUCTION

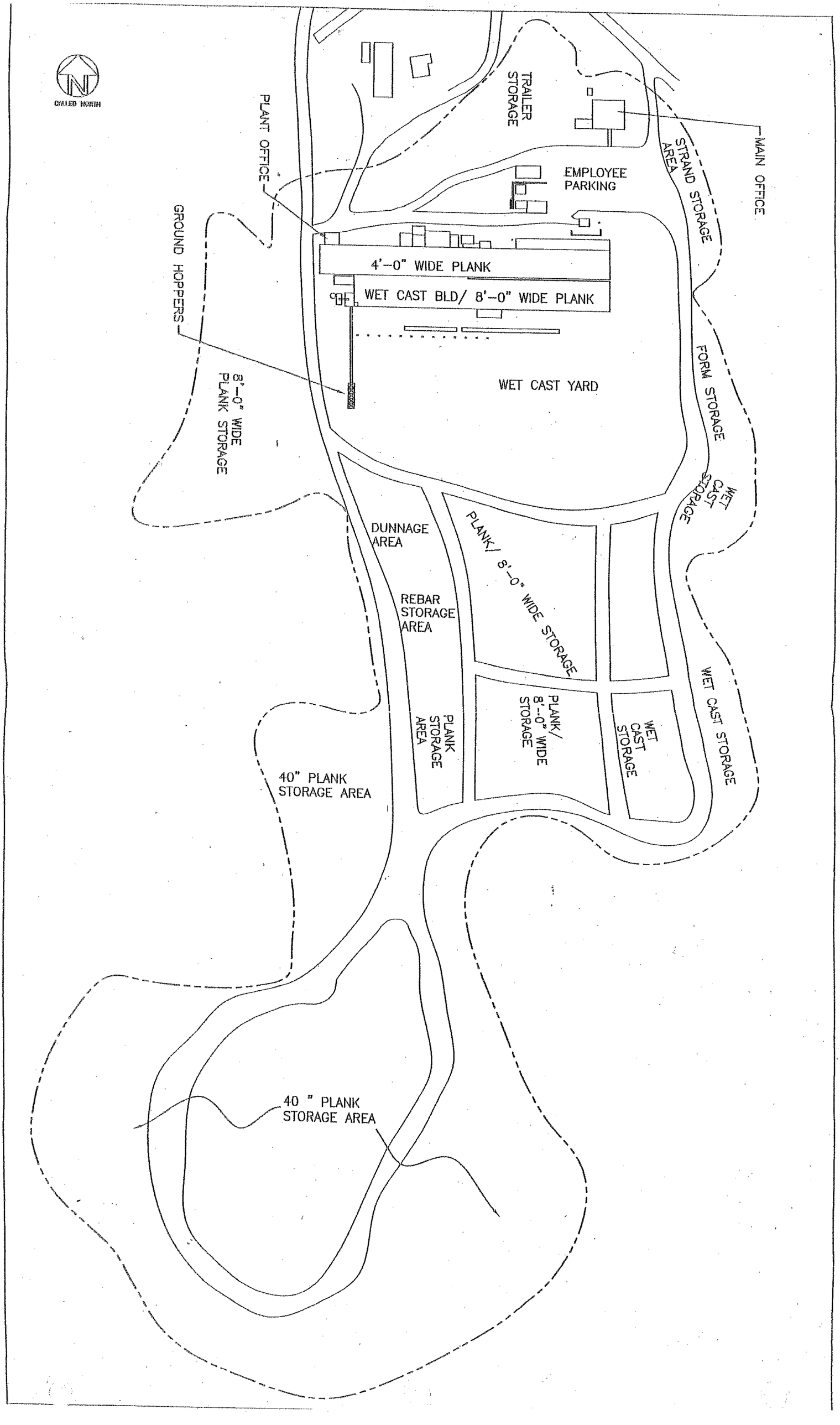
WET CAST PRODUCTION

BATCH PLANT

8'-0" WIDE PLANK PRODUCTION

WET CAST BRIDGE PIT

WET CAST BRIDGE PIT


CALLED NORTH
PLANT OFFICE
TRAILER STORAGE
MAIN OFFICE
STRAND STORAGE AREA
EMPLOYEE PARKING
GROUND HOPPERS
4'-0" WIDE PLANK
WET CAST BLD/ 8'-0" WIDE PLANK
WET CAST YARD
FORM STORAGE
WET CAST STORAGE
8'-0" WIDE PLANK STORAGE
DUNNAGE AREA
PLANK/ 8'-0" WIDE STORAGE
REBAR STORAGE AREA
PLANK STORAGE AREA
PLANK/ 8'-0" WIDE STORAGE
WET CAST STORAGE
WET CAST STORAGE
40" PLANK STORAGE AREA
40 " PLANK STORAGE AREA

SCHEDULE OF SPECIAL INSPECTION SERVICES

Project: Hannaford Food & Drug - Riverside Street, Portland, ME

MATERIAL/ACTIVITY	ITEM	SERVICE	APPLICABLE TO THIS PROJECT					
			Y/N	EXTENT (All, Sample, Other, None)	COMMENTS	AGENT No.	DATE COMPLETED	REV. No.
1705 STEEL CONSTRUCTION	1.00							
1705.2 Steel Fabrication		In-plant review						
		Part A-Fabrication procedures	Yes	AEI - Review In-plantQuality Control Procedures	See Atached in-plant quality control procedures	1	Reviewed November 2004	
		Review material certificates of	Yes	Shop Drawing Submittal Review		1	Sep-04	
		compliance (Bolts, nuts, washers,						
		structural steel, & weld filler mat.)						
		Review connections	Yes	Shop Drawing Submittal Review		1	Sep-04	
1705.3 Steel Erection		Review welder certification	Yes	Shop Drawing Submittal Review		1	Dec-04	
		Review material certificates of	Yes	Shop Drawing Submittal Review		1	Sep-04	
		compliance (bolts, nuts, washers, &						
		weld filler material)						
		Review primary steel connections						
		Moment connections	Yes	Elite Inspection Services	See Atached Field Summaries	3	Dec-04	
		Shear connections	Yes	Elite Inspection Services	See Atached Field Summaries	3	Dec-04	
		Bracing connections	Yes	Elite Inspection Services	See Atached Field Summaries	3	Dec-04	
		Review welded column splices	N/A					
		Review secondary steel connect.						
		Girts	N/A					
		Steel Deck	Yes	AEI & Elite Inspection Services	See Atached Field Summaries	1,3	Dec-04	
		Lintels	Yes	AEI & Elite Inspection Services	See Atached Field Summaries	1,3	Dec-04	
		Review details/Steel Frame	None					

All Steel Construction Special Inspections have been completed in accordance with IBC - 2000, Section 1705.2 and 1705.3

Inspector _____ Date 12-27-04

PME CONSTRUCTION CO.

19 INDUSTRIAL PARK ROAD
PO BOX 728
SACO, ME 04072

TELEPHONE: (207) 282-7697
FACSIMILE: (207) 283-4549

FACSIMILE TRANSMITTAL SHEET

TO: Steve
FROM: George Laplume
COMPANY: Elite Inspections
DATE:
FAX NUMBER: 797-2284
TOTAL NO. OF PAGES INCLUDING COVER:
PHONE NUMBER:
SENDER'S REFERENCE NUMBER:
RE: Hannaford - Portland, ME - Riverside Ave
YOUR REFERENCE NUMBER:

☐ URGENT ☑ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

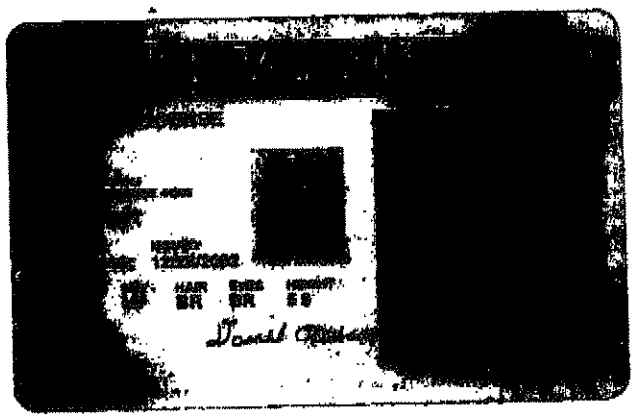
Steel Erector Welding Certs

Harvey Libby Steel Erecting

Harvey Tibbey

Daniel W Nason

#	Test Date	Sup	Code	Process	Gas	Filler Metal	Base Metal	Position	Thickness	Expires
1	06/06/02	G	D1.1	SMAW	N/A	F4	P1	A	U	01/06/05



[redacted]

James R Nason

Cert # 0206095W SSN# 006-62-7915

[redacted]

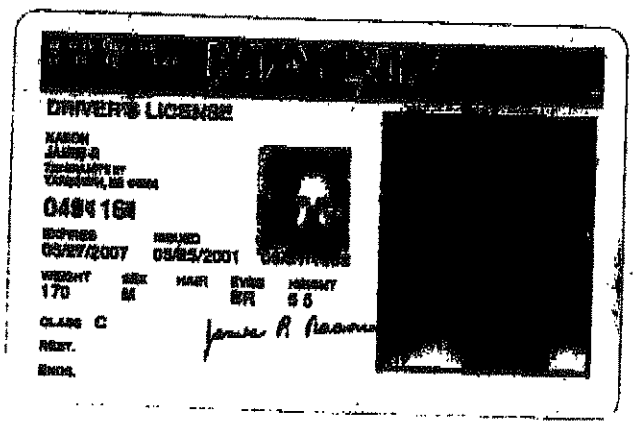
AMERICAN WELDING SOCIETY

VALID ONLY IF ACCOMPANIED BY PHOTO ID

This Card is the property of AWS and shall be returned on demand.

James R Nason

#	Test Date	Sup	Code	Process	Gas	Filler Metal	Base Metal	Position	Thickness	Expires
1	06/06/02	G	D1.1	SMAW	N/A	F4	P1	A	U	01/06/05



James A. McBrady, Inc.
Plant: 29 Parkway Drive - Scarborough, Maine 04074
Mail : PO Box 8239 - Portland, Maine 04104
Phone: (207) 883-4176 Fax : (207) 883-0276

RECEIVED
OCT 29 2004
Bill/File

FAX COVER SHEET

DATE: 10/29/04 NO. OF PAGES (Incl. Cover Sheet): 28

COMPANY: ALLIED ENGINEERING FROM: GUS MCBRADY

ATTN TO: BILL FAUCHER RE: HANNAFORD FOOD & DRUG FLUORIDE

☐ FYI ☑ PER YOUR REQUEST ☐ FOR REVIEW & COMMENT ☐ REPLY ASAP

ATTACHED Q.A. PROGRAM

CALL WITH ANY QUESTIONS OR IF YOU WOULD LIKE TO VISIT OUR SHOP

In case of Transmission Problems or if you need any part of this facsimile resent please contact this office.

Thank You,

GUS

James a. Mc Brady, Inc.

PLANT: PLEASANT HILL ROAD, SCARBOROUGH, MAINE 04074
MAIL: P.O. BOX 8239, PORTLAND, MAINE 04104
(207-883-4176)

A well defined Quality Assurance program is vital to the efficient operation of our company. To assure consistency and increase efficiency, a company wide Quality Control program has been established.

The Quality Control program has been developed by a coordinated effort of company personnel who are responsible for purchasing, detailing, project management and fabrication.

To enable independent viewpoints on policies, in addition to shop supervision and quality control, all shop personnel may report quality control issues independently to plant management.

Quality control is committed to adherence to all contract documents and specifications and to ensuring that policies are observed by all employees.

Gus McBrady

President

STRUCTURAL STEEL FABRICATORS OF NEW ENGLAND

BY AUTHORITY OF THE BOARD OF DIRECTORS

James A. McBrady, Inc.

having been duly elected to membership
is hereby certified as

Member

and entitled to all privileges thereof

Elected prior to 1987

Emile W. J. Bourque, P.E.
Consultant

President

THIS IS TO CERTIFY THAT

James A. McBrady, Inc.

IS AN ACTIVE MEMBER OF

American Institute of Steel Construction

INCORPORATED

ELECTED TO MEMBERSHIP

April 27, 1983

James A. McBrady, Inc.

PLANT: PLEASANT HILL ROAD, SCARBOROUGH, MAINE 04074
MAIL: P.O. BOX 8239, PORTLAND, MAINE 04104
(207-883-4176)

Material Control Procedure

1. Material purchased by James A. McBrady, Inc. ordered according to specifications listed on the bill of material from approved shop drawings. Information is obtained from contract documents.

2. Contracts that require material traceability will use a page and line system for ordering material. The mill order will refer the purchase order.

3. Identification of material shall be maintained during fabrication by marking each piece with piece job and part number. Heat number are maintained if required by contract documents.

4. Useable crops shall have the heat number and job number transferred to them if required by contract documents. Copies of the test reports are maintained in the job/invoice files.

James a. Mc Brady, Inc.

PLANT: PLEASANT HILL ROAD, SCARBOROUGH, MAINE 04074
MAIL: P.O. BOX 8239, PORTLAND, MAINE 04104
(207-883-4176)

Receiving Inspection

Receiving inspection is accomplished by either the quality control inspector or the shop supervisor

Steel

1. Incoming material is checked (if practical) to be in conformance with ASTM A6. If it arrives in bundles, material is checked in process for conformance.
2. Material is marked with contract number material specification.
3. Material is marked with the heat number and page/line if material is to be traceable.

Hardware and Consumables

1. Assure that containers are marked properly.
2. Assure that contents are not damaged.
3. Hardware is marked with contract number.

James a. Mc Brady, Inc.

PLANT: PLEASANT HILL ROAD, SCARBOROUGH, MAINE 04074
MAIL: P.O. BOX 8239, PORTLAND, MAINE 04104
(207-883-4176)

Inprocess Inspection Procedure

Inprocess inspection is accomplished by either the quality control inspector or the shop supervisor.

1. Inspect physical condition of member to be in accordance with ASTM A6.

2. Check layouts for:
   a. holes, copes, length of piece
   b. stiffeners, clips, connection plates fit-up prior to welding or bolting.

3. Monitor welding for weld quality, correct use of electrodes and weld cleaning.

4. Inspect weld joint preparation.

5. Inspect oxygen cut and sheared edges for discontinuities.

6. Inspect for deburring of holes, breaking of sharp edges and

7. Monitor heat input during straightening of material.

8. Inspect for proper location of piece marks and erection marks.

9. Inspect surface prep and paint when paint is required by contract documents

10. Recheck layout prior to shipping

James a.
Mc Brady, Inc.

PLANT: PLEASANT HILL ROAD, SCARBOROUGH, MAINE 04074
MAIL: P.O. BOX 8239, PORTLAND, MAINE 04104
(207-883-4176)

Nonconformance Procedure

1. Material that is found during the inspection processes to not be in conformance with contract documents is noted in fabrication log or on detail drawings and returned to the fab area.

2. Supervisory personnel are notified and take corrective action if necessary.

3. Material discrepancies will be reinspected, and if found acceptable, will be so noted in the fabrication log or on detail drawings and will be sent on for shipping.

James A. McBrady, Inc.

PLANT: PLEASANT HILL ROAD, SCARBOROUGH, MAINE 04074
MAIL: P.O. BOX 8239, PORTLAND, MAINE 04104
(207-883-4176)

Final Inspection

1. All material furnished by James A. McBrady, Inc. is to be given a final visual inspection by quality control prior to shipment for completeness and conformance with approved shop drawings.

2. Shop supervision or quality control keeps a record of each piece fabriciated.

James a. Mc Brady, Inc.

PLANT: PLEASANT HILL ROAD, SCARBOROUGH, MAINE 04074
MAIL: P.O. BOX 8239, PORTLAND, MAINE 04104
(207-883-4176)

High Strength Bolted Connection

Structural joints using ASTM A325 and A490 bolts.

Ref: AISC Section 5, 9th edition

1. Bolted parts shall fit solidly together when assembled in properly aligned holes and shall not be separated by gaskets or any other interposed compressible material.

All joint surfaces, including those adjacent to the bolt heads, nuts, or washers, shall be free from scale, except tight mill scale, and shall be free from burrs, dirt and other foreign material that would prevent solid seating of the parts. Paint is permitted unconditionally in bearing-type connections. Contact surfaces with friction-type joints shall be free of all paint, lacquer or other coatings or as specified in contract documents.

2. Washers

A325 fasteners may be installed without hardened washers when tightening is by the turn-of-nut method. A490 bolts installed by the turn-of -nut method and A325 or A490 bolts tightened by the calibrated wrench method (i.e., by torque control), shall have a hardened washer under the element (nut or bolt head), turned in tightening. Additionally, a hardened washer shall be used with all A490 bolts under the element not turned in tightening if the material against which it bears has a specified minimum yield point less than 40 KSI.

James a. Mc Brady, Inc.

PLANT: PLEASANT HILL ROAD, SCARBOROUGH, MAINE 04074
MAIL: P.O. BOX 8239, PORTLAND, MAINE 04104
(207-883-4176)

Where an outer face of the bolted parts has a slope greater than 1:20 with respect to a plane normal to the bolt axis, a bevelled washer shall be used to compensate for the lack of parallelism.

3.Tightening: Turn-of-nut tightening

When the turn-of-nut method is used to provide the tension there shall first be enough bolts brought to a "snug tight" condition to ensure that the parts of the joint are brought into good contact with each other. Snug tight is defined as the tightness attained by a few impacts of an impact wrench or the full effort of a man using an ordinary spud wrench. Following this initial operation, bolts shall be placed in any remaining holes in the connection and brought to snug tightness. All bolts in the connection shall then be tightened additionally by the applicable amount ot nut rotation specified in Table 5 with tightening progressing systematically from the most rigid part of the joint to its free edges. During this operstion, there shall be no rotation of the part not turned by the wrench.

Reuse

A490 bolts and galvanized A325 bolts shall not be reused. Other A325 bolts may be reused if approved by the engineer responsible. Retightening previously tightened bolts which may have been loosened by tightening of adjacent bolts shall not be considered as a reuse.

Table 5. Nut Rotation from Snug Tight Condition[a,b]

Bolt length (Under side of head to end of bolt)	Disposition of Outer Face of Bolted Parts		
	Both faces normal to bolt axis	One face normal to bolt axis and other sloped not more than 1:20 (beveled washer not used)	Both faces sloped not more than 1:20 from normal to the bolt axis (beveled washer not used)
Up to and including 4 diameters	1/3 turn	1/2 turn	2/3 turn
Over 4 diameters but not exceeding 8 dia.	1/2 turn	2/3 turn	5/6 turn
Over 8 diameters but not exceeding 12 dia.[c]	2/3 turn	5/6 turn	1 turn

[a]Nut rotation is relative to bolt regardless of the element (nut or bolt) being turned. For bolts installed by 1/2 turn and less, the tolerance should be plus or minus 30 degrees; for bolts installed by 2/3 turn and more, the tolerance should be plus or minus 45 degrees.

[b]Applicable only to connections in which all material within the grip of the bolt is steel.

[c]No research has been performed by the Council to establish the turn-of-nut procedure for bolt lengths exceeding 12 diameters. Therefore, the required rotation must be determined by actual test in a suitable tension measuring device which simulates conditions of solidly fitted steel.

James a. Mc Brady, Inc.

PLANT: PLEASANT HILL ROAD, SCARBOROUGH, MAINE 04074
MAIL: P.O. BOX 8239, PORTLAND, MAINE 04104
(207-883-4176)

The following A.I.S.C. checklist is used by company personnel to ensure that policies are followed according to A.I.S.C. standards

INSPECTION-EVALUATION CHECK LIST
CONVENTIONAL STEEL BUILDING STRUCTURES

NO.	ITEM	COMMENTS	YES	NO
	Application Screen			
App1 (E)	Is there a written quality policy statement describing company policy, goals and commitment to quality?		☑	☐
App2 (E)	Is there a description of the organization with positions established to carry out quality functions?		☑	☐
App3 (E)	Are biographical information and qualifications of key managers shown and matched to the positions filled as showing the organization description?		☑	☐
App4 (E)	Is there a list of major equipment and a facility plan?		☑	☐
App5 (E)	Is there a list of recent projects showing experience in the type of work for which certification is sought?		☑	☐
	Procedures			
App7 (E)	Is there a bolt installation procedure?		☑	☐
App8 (E)	Is there an acceptable inspection procedure?		☑	☐
App9 (E)	Is there an acceptable non-conformance procedure?		☑	☐
	Administration			
App11 (E)	Is the information required for program administration shown?		☑	☐

INSPECTION-EVALUATION CHECK LIST Conventional Steel Building Structures

NO.	ITEM	COMMENTS	YES	NO
	GENERAL MANAGEMENT			
	Policy			
A.1.a (E)	Is there a written policy statement adequately describing company policy, goals and commitment to quality?		☑	☐
	Organization			
A.2.a	Are functions effecting quality assigned to positions that are adequately defined by job descriptions and an organization chart?		☑	☐
A.2.b (C)	Are personnel qualified for, and capable of, performance of their duties? (Qualifications include continuing education and/or society activities for professionals.)		☑	☐
	Procedures			
A.3.a (C)	Does management review project quality requirements prior to production, allocate adequate resources, assign or contract for project activities by suitably qualified personnel and select or create necessary quality procedures for the work?		☑	☐
A.3.b (E)	Are quality requirements particular to projects (like coating requirments, weld restrictions, etc.) effectively communicated to plant departments?		☑	☐

INSPECTION-EVALUATION CHECK LIST Conventional Steel Building Structures

NO.	ITEM	COMMENTS	YES	NO
A.3.c	Are fabrication and erection requirements (like adjustment needs, erection aids and sequencing of NDT) and priorities reviewed prior to production?		☑	☐
A.3.d	Are drawing, material and production due dates scheduled (by suitable areas or sequences) and are schedules disseminated to appropriate personnel?		☑	☐
A.3.e	Are drawing, material and production schedules maintained and current throughout the year?		☑	☐
A.3.f	Are requests for information documented?		☑	☐
	Experience			
A.4.a. (E)	Has the fabricator supplied simple buildings or provided training to his men?		☑	☐

Footnote 1 *Qualifications:*

Familiarity with quality and specification requirements and construction practices.

One position in any category may be short of the requirement to allow for personnel changes.

 Plant:_____ Inspector's Init.:_____ Date:____/____/____

INSPECTION-EVALUATION CHECK LIST Conventional Steel Building Structures

NO.	ITEM	COMMENTS	YES	NO
	ENGINEERING & DRAFTING			
	Organization			
B.1.a	Is the Drafting Mgr. familiar with pertinent codes and specs.?		☑	☐
	If there is an in-house drafting room Items B.1.b-B.1.d are to be evaluated.			
B.1.b	Do drafters have the ability to transfer the material requirements noted on the design drawings to advance bills of material for their use by the Purchasing Dept.?		☑	☐
B.1.c	Do drafters have adequate knowledge of the applicable material specifications?		☑	☐
B.1.d	Do drafters have adequate knowledge of mill rolling practices as they affect structural steel?		☑	☐
	If detail drawings are sublet, items B.1.e-B.1.g are to be evaluated.			
B.1.e (C)	Are details sublet to a qualified structural drafting firm that has a drafting manager who is an engineering technician (some trade school or college training and/or experience) and is familiar with codes and specifications?		☑	☐
B.1.f (C)	Does the in-house drafting manager assure that instructions are furnished to the sublet drafters?		☑	☐

INSPECTION-EVALUATION CHECK LIST Conventional Steel Building Structures

NO.	ITEM	COMMENTS	YES	NO
B.1.g	Does the in-house drafting mgr. take action to assure quality compliance by outside detailers?		☑	☐
	If there is an in-house Engineering Department items B.1.h & B.1.i are to be evaluated.			
B.1.h	Is there a person capable of supervising in-house design or evaluating and coordinating outside design?	N/A	☐	☐
B.1.i	Does the company have adequate in-house design engineers or does it consistently use consultants qualified by registration or experience?	OUTSIDE SOURCES	☑	☐
	Procedure			
B.2.a	Does the drafting deparument maintain a current log of design drawings and specification receipts with the latest revisions and dispositions?		☑	☐
B.2.b	Is there a procedure for the control, distribution and revision of job specifications and special provisions to appropriate plant and quality control personnel?		☑	☐
B.2.c	Are there provisions to assure that obsolete drawings are destroyed or isolated from use throughout the plant? (May be assured by other departments.)		☑	☐
B.2.d (C)	Does the drafting department maintain a current log of shop detail drawings with latest approval, revisions and dispositions?		☑	☐

 Plant:_____ Inspector's Init.:_____ Date:____/____/____

INSPECTION-EVALUATION CHECK LIST Conventional Steel Building Structures

NO.	ITEM	COMMENTS	YES	NO
B.2.e	Are drafting practices coordinated with erection requirements?		☑	☐
B.2.f	Are company drafting standards adequate?		☑	☐
B.2.g (C)	Are detail drawings checked by qualified personnel?		☑	☐
B.2.h (E)	Are all detail drawings reviewed or approved by the owner?		☑	☐

 Plant:_____ Inspector's Init.:_____ Date:____/____/_____

INSPECTION-EVALUATION CHECK LIST Conventional Steel Building Structures

NO.	ITEM	COMMENTS	YES	NO
	Facilities and Resources			
B.3.a (C)	Is there an adequate and current library of specifications including: AISC: Manual Steel Const ✓ Vol II Conns. ✓ Det'l'g Steel Const ✓ Quality Criteria & Insp. Stds. ✓ ANSI/AWS ✓ D1.1 ✓ ASTM as req'd ✓ SSPC for paint ✓		☑	☐

Plant:_____ Inspector's Init.:_____ Date:____/____/____

INSPECTION-EVALUATION CHECK LIST Conventional Steel Building Structures

NO.	ITEM	COMMENTS	YES	NO
	PROCUREMENT			
	Organization			
C.1.a	Are buyers familiar with ordering information required to control variables effecting quality of purchased material?		☑	☐
	Procedures			
C.2.a (E)	Is material ordered in accordance with the design drawings and specifications?		☑	☐
C.2.b (C)	Are procedures in effect to assure subcontract fabrication is ordered to contract requirements?		☑	☐
C.2.c (C)	Where a level of certification is required by contract documents, is appropriate fabrication sublet to fabricator holding the required certification?		☑	☐
C.2.d	Are procurement sources adequately evaluated?		☑	☐
C.2.e	Are all other purchased materials (bolts, paint, castings, etc) checked for conformance to purchasing documents upon receipt?		☑	☐
C.2.f	Are controls set up to assure adequate identification of incoming purchased items?		☑	☐
C.2.g (E)	Are records maintained and is a written procedure functioning to assure traceability of grade, and where required, heat numbers and material test reports for special requirements?		☑	☐

NO.	ITEM	COMMENTS	YES	NO
C.2.h (E)	Are manufacturer's test reports or certificates of conformance of bolts, weld wire, paint, etc. kept on file?		☑	☐
C.2.i (E)	Are mill test reports kept on file?		☑	☐
	Facilities and Resources			
C.3.a	Are current copies of ASTM specifications available to purchasing personnel?		☑	☐

INSPECTION-EVALUATION CHECK LIST Conventional Steel Building Structures

NO.	ITEM	COMMENTS	YES	NO
	OPERATIONS			
	Organization			
D.1.a (E)	Is shop supervision conversant with current workmanship provisions of AWS & AISC specifications?		☑	☐
D.1.b (C)	Does the fabricator have a competent welding technician, supervisor or outside expert available on call?		☑	☐
D.1.c (C)	Are welders qualified per ANSI/AASHTO/ AWS?		☑	☐
	Procedures & Practices			
	Material Receipt & Storage			
D.2.a i (C)	Is the grade of material and marking verified prior to fabrication? *(see note 1)*		☑	☐
D.2.a ii (C)	Are welding electrodes, flux, bolts and paint stored properly and identified? (including RCT lot when applicable)		☑	☐
D.2.a. iii (C)	Are flux and rod ovens adequate and operating per AWS latest adoption?		☑	☐
	Fabrication			
D.2.b i (E)	Is fabrication in accordance with contract documents and specifications and are finished products shipped in accordance with approved detail drawings?		☑	☐

NO.	ITEM	COMMENTS	YES	NO
D.2.b ii (E)	Is there a procedure for handling revisions and voided drawings?		☑	☐
D.2.b iii	Is material inspected for conformance to ASTM A6?		☑	☐
D.2.b iv (E)	Is material identity retained during fabrication and restocking?		☑	☐
D.2.b v	Do welders identify welds they make?		☑	☐
D.2.b vi	Do welders know, comply with and check their welds to the workmanship and technique requirements of AISC & AASHTO/AWS?		☑	☐
D.2.b vii	Is workmanship checked throughout the fabrication process to conform to contract documents and specifications? Is checking in accordance with the company inspection procedure?		☑	☐
D.2.b viii	Are approved written weld procedures in close proximity to and used by the welders?		☑	☐
D.2.b ix (C)	Are written bolt tightening procedures used? *(see note 2)*		☑	☐
D.2.b x	Are provisions for agitation, temperature and humidity measurement and methods of paint application adequate and functional?		☑	☐

INSPECTION-EVALUATION CHECK LIST Conventional Steel Building Structures

NO.	ITEM	COMMENTS	YES	NO
D.2.b xi	Are provisions for wet & dry film measurement and control adequate & functioning?		☑	☐
D.2.b xii	Are there provisions for suitable loading blocking and bracing for shipment?		☑	☐
	Non-conformances			
D.2.c i (E)	Is there a functioning, written procedure for disposition of non-conforming material or work in-process rejected by QC personnel?		☑	☐
D.2.c ii	Is an effective system used to indicate conforming or non-conforming work in progress?		☑	☐
D.2.c iii	Does the procedure include provision for action to avoid future non-conforming work?		☑	☐
	Equipment Condition			
D.2.d i (C)	Are welding machines periodically checked to ensure correct amp and volt readings and is a record kept? (except SMAW)		☑	☐
D.2.d ii	Is manual welding equipment that is in use in acceptable operating condition?		☑	☐
	Facilities and Resources			
D.3.a	Does the fabricator have automatic or semi-automatic equipment for making continuous welds?		☑	☐

INSPECTION-EVALUATION CHECK LIST Conventional Steel Building Structures

NO.	ITEM	COMMENTS	YES	NO
D.3.b	Does the fabricator have mechanically-guided burning equipment?		☑	☐
D.3.c	Does the fabricator have mechanical paint agitators and other painting equipment? (May be NA if a qualified subcontractor is used for painting.)		☑	☐
D.3.d	If the fabricator is involved in metalizing and stud welding, is his equipment adequate? (May be NA depending on the type of work)	N/A	☐	☐
D.3.e	Does the fabricator have adequate and accurate hole-making equipment? (Punches and drills)		☑	☐
D.3.f	Does the fabricator have adequate and accurate cutting and finishing equipment? (Shears, saw, milling machine, planer and/or grinder.)		☑	☐
D.3.g	Does the fabricator have material handling equipment including cranes to move material without damage?		☑	☐
D.3.h	Is housekeeping adequate?		☑	☐
D.3.i	Is the air supply adequate?		☑	☐
D.3.j	Is the electrical supply adequate?		☑	☐
D.3.k	Does the operations manager have space and assistance to permit efficient performance?		☑	☐

NO.	ITEM	COMMENTS	YES	NO
	QUALITY CONTROL			
	Organization			
E.1.a	Are there qualified shop inspectors?		☑	☐
E.1.b	Is there a functioning program for training shop inspectors?		☑	☐
E.1.c	Does the QC organization include at least one certified level II magnetic particle inspection technician certified in accordance with ASNT-TC-1A on staff or available from outside sources?		☑	☐
E.1.d	Is there a qualified testing service available and used if required?		☑	☐
	Procedures and Practices			
E.2.a (C)	Is there a written quality assurance system and are quality procedures followed?		☑	☐
E.2.b	Is there separation of responsibility for the Production Supervision function and the Quality Control Supervision function?		☑	☐
E.2.c	Is the in-process and final inspection procedure implemented?		☑	☐
E.2.d (E)	Does Quality Control have authority to stop and responsibility to inform the operating supervisor of non-conforming work?		☑	☐
E.2.e	Is a record kept of all inspections such as by noted detail drawings?		☑	☐

INSPECTION-EVALUATION CHECK LIST Conventional Steel Building Structures

NO.	ITEM	COMMENTS	YES	NO
E.2.f	Is a check made to ensure that approved welding procedures are disseminated and followed in the shop?		☑	☐
E.2.g	Is surface preparation (including grinding and fins) checked prior to painting?		☑	☐
E.2.h	Is the coating checked after application?		☑	☐
E.2.i	Are there adequate procedures for liaison with outside inspectors?		☑	☐
	Facilities and Resources			
E.3.a (C)	Do inspectors have the following equipment available? Tapeline ✓ Welding gages ✓ Tag system		☑	☐
E.3.b	Is the following equipment available? X-ray incl. viewing rm & viewer UT scope MPT equipt. LPT equipt Isotope	NA	☐	☐
E.3.c	Are there reference standards for periodically calibrating: Paint gages Tapeline NDE equipt. Torque wrenches (Skidmore)		☑	☐

04-049

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To: Hannaford Brothers
Attention: Eric Ottum
145 Pleasant Hill Road
Scarborough, ME 04074

Date: December 15, 2004

Project No: 04-0664

Subject: Riverside Hannaford Super.
Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☐Field Test Report(s)	☐Specifications	☒Other

Description: Elite Inspection Services report dated November 23, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:
City of Portland/Mike Nugent
William Faucher/Allied Engineering

S. W. COLE ENGINEERING, INC.

BY: Roger E. Domingo

GRAY, ME OFFICE
286 Portland Road, Gray, ME 04039-9586 ▪ Tel (207) 657-2866 ▪ Fax (207) 657-2840 ▪ E-Mail infogray@swcole.com ▪ www.swcole.com
Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

Elite Inspection Services Inc.

220 Industrial Way, Unit #1
Portland, Me 04103

Telephone: (207) 797-2496
Fax: (207) 797-2284

November 23, 2004

S. W. Cole Engineering, Inc.
286 Portland Rd.
Gray, Me. 04039

Re: Inspection of Structural Steel.
Cust. #04-0664 EISI # 573-04-VT

Att: Roger Domingo

Dear Sir,

This letter shall serve as the report for the Visual Inspection that was performed at the Hannaford Food Store at Riverside in Portland, Maine on November 23, 2004. Below is a listing of the areas inspected, their location and the results.

Welding Certifications

1) Certifications have not been faxed to this Office as of this date. They will be faxed before the next scheduled visit.

Structural Steel

1) From Column Line B.4-B.6,2.2-4.1 on the Roof Level, the Framing for the Condenser is acceptable.
2) From Column Line A-C,1-7 is in progress.

Decking

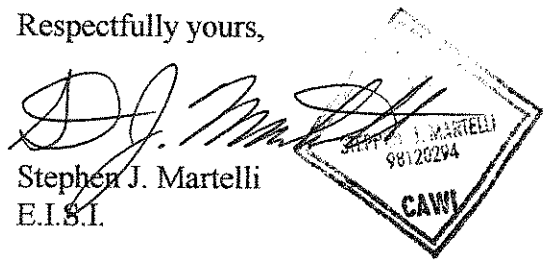
1) From Column Line A-H,1-7 on the Roof Level is 80% complete, all is acceptable.

TC Bolts

1) From Column Line A-H,1-7 at all locations is acceptable.

All acceptable welds to be IAW A.W.S. D1.1 and all applicable drawings. If you have any further questions concerning these results, please feel free to call this office anytime.

Respectfully yours,



Stephen J. Martelli
E.I.S.I.

04-049

S.W.COLE ENGINEERING, INC.

• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

Letter Of Transmittal

To:	Hannaford Brothers Attention: Eric Ottum 145 Pleasant Hill Road Scarborough, ME 04074	**Date:** **Project No:** **Subject:**	December 6, 2004 04-0664 Riverside Hannaford Super. Portland, Maine

We are sending you: ☒Attached ☐Under Separate Cover

☐Investigation Report	☐Prints	☐Samples
☐Laboratory Test Report(s)	☐Copy of Letter(s)	☐Invoice
☐Field Test Report(s)	☐Specifications	☒Other

Description: Elite Inspection Services Inspection Report of Structural Steel dated November 18, 2004.

These are transmitted as checked below:

☒For your information	☒For your use
☒As requested	☐Returned

Remarks:

Copy to:

City of Portland/Mike Nugent

William Faucher/Allied Engineering

S. W. COLE ENGINEERING, INC.

BY: Roger E. Domingo

Gray, ME Office
286 Portland Road, Gray, ME 04039-9586 • Tel (207) 657-2866 • Fax (207) 657-2840 • E-Mail infogray@swcole.com • www.swcole.com

Other offices in Augusta, Bangor, and Caribou, Maine & Somersworth, New Hampshire

Elite Inspection Services Inc.

220 Industrial Way, Unit #1
Portland, Me 04103

Telephone: (207) 797-2496
Fax: (207) 797-2284

November 18, 2004

S. W. Cole Engineering, Inc.
286 Portland Rd.
Gray, Me. 04039

Re: Inspection of Structural Steel.
Cust. #04-0664 EISI # 533-04-VT

Att: Roger Domingo

Dear Sir,

This letter shall serve as the report for the Visual Inspection that was performed at the Hannaford Food Store at Riverside in Portland, Maine on November 8 & 15, 2004. Below is a listing of the areas inspected, their location and the results.

Initial Inspection
November 8, 04

1) Initial visit to review all Structural Steel documents and Welders Certifications.
2) After speaking with Butch Pulcifer, Jobsite Superintendent from PM Construction. It was determined that all Welders Certificates were on file with the main office in Saco. A copy of these will be faxed to the Jobsite before the next visit on November 15, 2004.

November 15, 04

Welding Certifications

1) Certifications have not been faxed to this Office as of this date. They will be faxed before the next scheduled visit.

November 15, 04 (cont'd)

1) From Column Line A-H,1-7: at a majority of locations, approximately 70%, the Anchor Bolts have been puddle welded to the nuts. This issue was discussed with Butch Pulifer, he informed Eric Ottum, Project Manger, Hannaford Bros. Co., about this condition.
2) Mr. Pulsifer conveyed to me that Mr. Ottum was going to inform the Structural Engineer, Allied Engineering, of this condition and ask for his direction. It was determined by the Structural Engineer on or about November 18, 04 that it was acceptable weld the Nuts.

Bar Joist & Bridging

1) From Column Line C-H,1-7 at the Roof Level is acceptable.
2) From Column Line A-C,1-7 is in progress.

Decking

From Column Line A-C,1-7 is in progress

All acceptable welds to be IAW A.W.S. D1.1 and all applicable drawings. If you have any further questions concerning these results, please feel free to call this office anytime.

Respectfully yours,

Stephen J. Martelli
E.I.S.I.

STEPHEN J. MARTELLI
98126204
CAWI