BECKER
STRUCTURAL ENGINEERS

Structural Special Inspections Report

Oak Street Lofts

Portland, Maine
December 21, 2011

Report Prepared by:

Structural Engineer of Record
Becker Structural Engineers, Inc.
75 York Street
Portland, ME 04101
207. 879.1838

Special Inspections – Exhibit A

Statement of Special Inspections
List of Agents
Final Report of Special Inspections
Special Inspector/Agent Report

Structural Statement of Special Inspections – Exhibit A

Project: *Oak Street Efficiencies*

Location: *Oak Street, Portland, Maine*

Owner: *Avesta Oak Street LP, 307 Cumberland Avenue, Portland, ME*

This *Statement of Special Inspections* encompass the following discipline: **Structural**

This *Statement of Special Inspections* is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Structural Special Inspection Coordinator (SSIC) and the identity of other approved agencies to be retained for conducting these inspections and tests.

The Structural Special Inspection Coordinator shall keep records of all Structural inspections and shall furnish inspection reports to the Building Code Official (BCO) and the Structural Registered Design Professional in Responsible Charge (SRDP). Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Structural Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Building Official and the Structural Registered Design Professional in Responsible Charge at an interval determined by the SSIC and the BCO.

A *Final Report of Special Inspections* documenting completion of all required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted to the BCO prior to issuance of a Certificate of Use and Occupancy.

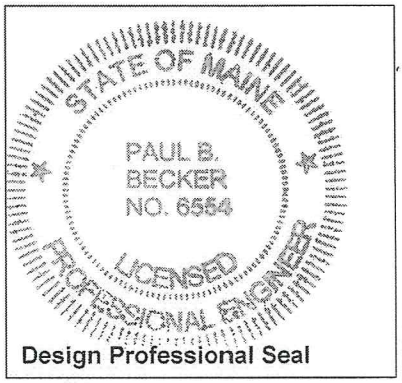
Job site safety and means and methods of construction are solely the responsibility of the Contractor.

Interim Report Frequency: ☐ *Upon request of Building Official* _____ or ☐ per attached schedule.

Prepared by:

Paul B. Becker, P.E.
(type or print name of the Structural Registered Design Professional in Responsible Charge)

Signature 8/18/11 Date



Design Professional Seal

Owner's Authorization:

Signature Date

Building Code Official's Acceptance:

Signature Date

Structural Statement of Special Inspections (Continued) – Exhibit A

List of Agents

Project: *Oak Street Efficiencies*

Location: *Portland, Maine*

Owner: *Avesta Oak Street LP, Portland, Maine*

This *Statement of Special Inspections* encompass the following discipline: **Structural**

(Note: *Statement of Special Inspections* for other disciplines may be included under a separate cover)

This Statement of Special Inspections / Quality Assurance Plan includes the following building systems:

- ☒ Soils and Foundations
- ☒ Cast-in-Place Concrete
- ☐ Precast Concrete System
- ☒ Masonry Systems
- ☒ Structural Steel
- ☒ Wood Construction
- ☐ Special Cases

Special Inspection Agencies	Firm	Address, Telephone, e-mail
1. STRUCTURAL Special Inspections Coordinator (SSIC)	*Nathan Merrill, P.E.* *Becker Structural Engineers*	*75 York Street* *Portland, Maine 04101* *(207) 879-1838*
2. Special Inspector (SI-1)	*Nathan Merrill, P.E.* *Becker Structural Engineers*	*75 York Street* *Portland, Maine 04101* *(207) 879-1838*
3. Special Inspector (SI-2)	*Owens McCullough* *Sebago Technics*	*One Chabot Street* *Westbrook, Maine 04098* *(207)856-0277*
4. Testing Agency (TA-1)	*Roger Domingo* *SW Cole Engineering*	*286 Portland Road* *Gray, Maine 04039* *(207)657-2866*
5. Testing Agency (TA-2)		
6. Other (O1)		

Note: The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Structural Statement of Special Inspections (Continued) – Exhibit A

Final Report of Special Inspections (SSIC/SI 1)

[To be completed by the Structural Special Inspections Coordinator (SSIC/SI 1). Note that all Agent's Final Reports must be received prior to issuance.]

Project: *Oak Street Efficiencies*

Location: *Portland, Maine*

Owner: *Avesta Oak Street, LP*

Owner's Address: *307 Cumberland Avenue*
Portland, ME 04101

Architect of Record: *Ben Walter* (name) — *CWS Architects.* (firm)

Structural Registered Design Professional in Responsible Charge: *Paul B. Becker, P.E.* (name) — *Becker Structural Engineers, Inc.* (firm)

To the best of my information, knowledge and belief, the Special Inspections required for this project, and itemized in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved.

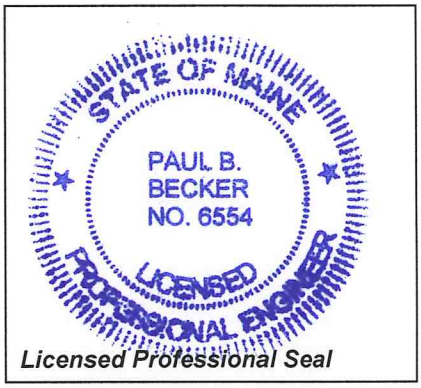
Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted,
Structural Special Inspection Coordinator

PAUL B. BECKER
(Type or print name)

BECKER STRUCTURAL ENGRS., INC.
(Firm Name)

Signature — 12.22.11 Date



Licensed Professional Seal

Structural Statement of Special Inspections (Continued) – Exhibit A

Special Inspector's/Agent's Final Report

Project:	*Oak Street Efficiencies*	
Special Inspector or Agent:	*Owens McCullough*	*Sebago Technics*
	(name)	*(firm)*
Designation:	SI-2	

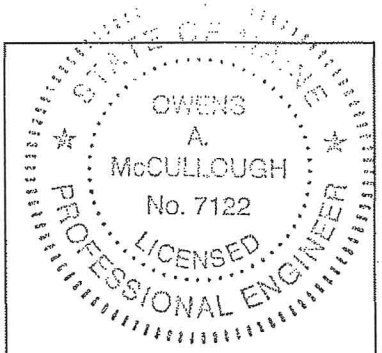
To the best of my information, knowledge and belief, the Special Inspections or testing required for this project, and designated for this Inspector/Agent in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved.

Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted,
Special Inspector or Agent:

Owens A. McCullough
(Type or print name)

12-13-11
Signature Date



Licensed Professional Seal or
Certification Number

Structural Statement of Special Inspections (Continued) – Exhibit A

Special Inspector's/Agent's Final Report

Project: *Oak Street Efficiencies*

Special Inspector or Agent: *Roger Domingo* (name) — *SW Cole Engineering* (firm)

Designation: TA-1

To the best of my information, knowledge and belief, the Special Inspections or testing required for this project, and designated for this Inspector/Agent in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved.

Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted,
Special Inspector or Agent:

Roger E. Domingo

(Type or print name)

12/12/2011

Signature — Date

Licensed Professional Seal or
Certification Number

Special Inspections – Exhibit B

Qualifications of Inspectors and Test Agency
List of Minimum Qualifications
Schedule of Structural Inspections

Structural Schedule of Special Inspections – Exhibit B

Qualifications of Inspectors and Testing Technicians

The qualifications of all personnel performing Special Inspection and testing activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided to the Special Inspector for their records. *NOTE VERIFICATION THAT QUALIFIED INDIVIDUALS ARE AVAILABLE TO PERFORM STIPULATED TESTING AND/OR INSPECTION SHOULD BE PROVIDED PRIOR TO SUBMITTING STATEMENT. AGENT QUALIFICATIONS IN SCHEDULE ARE SUGGESTIONS ONLY; FINAL QUALIFICATIONS ARE SUBJECT TO THE DISCRETION OF THE REGISTERED DESIGN PROFESSIONAL PREPARING THE SCHEDULE.*

Key for Minimum Qualifications of Inspection Agents:

When the Registered Design Professional in Responsible Charge or Special Inspector of Record deems it appropriate that the individual performing a stipulated test or inspection have a specific certification, license or experience as indicated below, such requirement shall be listed below and shall be clearly identified within the schedule under the Agent Qualification Designation.

PE/SE	Structural Engineer – a licensed SE or PE specializing in the design of building structures
PE/GE	Geotechnical Engineer – a licensed PE specializing in soil mechanics and foundations
EIT	Engineer-In-Training – a graduate engineer who has passed the Fundamentals of Engineering examination

Experienced Testing Technician

ETT	Experienced Testing Technician – An Experienced Testing Technician with a minimum 5 years experience with the stipulated test or inspection

American Concrete Institute (ACI) Certification

ACI-CFTT	Concrete Field Testing Technician – Grade 1
ACI-CCI	Concrete Construction Inspector
ACI-LTT	Laboratory Testing Technician – Grade 1&2
ACI-STT	Strength Testing Technician

American Welding Society (AWS) Certification

AWS-CWI	Certified Welding Inspector
AWS/AISC-SSI	Certified Structural Steel Inspector

American Society of Non-Destructive Testing (ASNT) Certification

ASNT	Non-Destructive Testing Technician – Level II or III.

International Code Council (ICC) Certification

ICC-SMSI	Structural Masonry Special Inspector
ICC-SWSI	Structural Steel and Welding Special Inspector
ICC-SFSI	Spray-Applied Fireproofing Special Inspector
ICC-PCSI	Prestressed Concrete Special Inspector
ICC-RCSI	Reinforced Concrete Special Inspector

National Institute for Certification in Engineering Technologies (NICET)

NICET-CT	Concrete Technician – Levels I, II, III & IV
NICET-ST	Soils Technician - Levels I, II, III & IV
NICET-GET	Geotechnical Engineering Technician - Levels I, II, III & IV

Other

_____ _____

01000.5 Disclaimers and Qualifications

The program of Structural/Special Tests and 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 the 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 work during testing and inspection 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 work, and to otherwise comply with all requirements of the Construction Documents. No warrantee is expressed or implied by the issuance of this document. Additional disclaimers and/or qualifications may be included in the Owner-Special Inspection agreement.

Project: Oak Street Efficiencies, Portland, Maine
Date Prepared: August 18, 2010

Structural Schedule of Special Inspections – Exhibit B

SOILS & FOUNDATION CONSTRUCTION

VERIFICATION AND INSPECTION IBC Section 1704.7, 1704.8, 1704.9	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
1. Verify existing soil conditions, fill placement and load bearing requirements						
a. Prior to placement of prepared fill, determine that the site has been prepared in accordance with the approved soils report.	Y	P	IBC 1704.7.1	SI-2	PE/GE	4/17 THRU 6/20
b. During placement and compaction of fill material, verify material being used and maximum lift thickness comply with the approved soils report.	Y	P	IBC 1704.7.2	SI-2	PE/GE	4/17 THRU 6/20
c. Test in-place dry density of compacted fill complies with the approved soils report.	Y	P	IBC 1704.7.2	TA-1	PE/GE, EIT or ETT	5/3 THRU 6/14
2. Pile foundations:						
a. Observe and record procedures for static load testing of piles.	N	C	IBC 1704.8	-	PE/GE, EIT or ETT	
b. Observe and record procedures for dynamic load testing of piles.	N	C		-	PE/GE, EIT or ETT	
c. Record installation of each pile and results of load test. Include cutoff and tip elevations of each pile relative to permanent reference.	N	C		-	PE/GE, EIT or ETT	
d. Test welded splices of steel piles	N	C	AWS D1.1	-	AWS-CWI	
3. Pier foundations: Verify installation of pier foundations for buildings assigned to Seismic Design Category C, D, E or F.	N	C	IBC 1704.9	-	PE/GE, EIT or ETT	
a. Verify pier diameter and length	N	C		-	PE/GE, EIT or ETT	
b. Verify pier embedment (socket) into bedrock	N	P		-	PE/GE, EIT or ETT	
c. Verify suitability of end bearing strata	N	P		-	PE/GE, EIT or ETT	

Field Report

Sebago Technics
Engineering Expertise You Can Build On

Project No.: 07156 Date: 4-17-11

Project Name: Oak Street Apartments

Location: Oak Street, Portland, Maine

Meeting With: Contractor (Paul), Ben Walter (CWS)
Tom Burrill (WR), David Massaro(WR)
Rodney Collard, (WR)
Nathan Merrill (BSE)

STI Present: Owens McCullough

Weather Conditions: Sunny, 45 degrees

Equipment Onsite: Large tracked excavator for foundation excavation with smooth bucket.

Activities/Construction Observed:

1. Contractor uncovered a small area of old brick and stone foundation along the easterly building line extending into the proposed foundation area. In addition, an area of ledge was uncovered approximately 7" below footing elevation at the northeasterly corner of the foundation line. Photos are attached.

2. A meeting was held onsite at 4 p.m. to review the foundation conditions and discuss a course of action.

3. After conferring with Ken Recker (STI) geotechnical engineer, the following actions are recommended.

   A. Remove the section of existing foundation wall to an elevation two feet below proposed footing elevation and remove loose brick, stone and old foundation debris. Apply crushed stone (¾") at 6" maximum lifts and consolidate with vibratory compaction methods (plate compactor) to fill void space within the old foundation.

   B. Place ¾" crushed stone over the exposed ledge to footing elevation and consolidate with vibratory compactor methods (6" – 8" maximum lifts). Contractor must exercise caution to provide a transition zone where crushed stone thickness varies. Transitions should not be more than 4:1 slopes between varying stone depths.

   C. A section of hard pan clay was encountered between the old foundation wall and ledge area. Contractor should excavate (smooth edge bucket) to 1-foot below footing elevation per the geotechnical recommendations and apply layer of geotextile fabric on subgrade along with two, 6" lifts of ¾" crushed stone over the fabric. Stone shall be consolidated with vibratory compaction methods.

cc: Paul Becker, P.E., BSE
Greg Payne, Avesta
Ben Walter, CWS
Tom Burrill, WR

Prepared By: Owens A. McCullough, P.E., LEED A.P.

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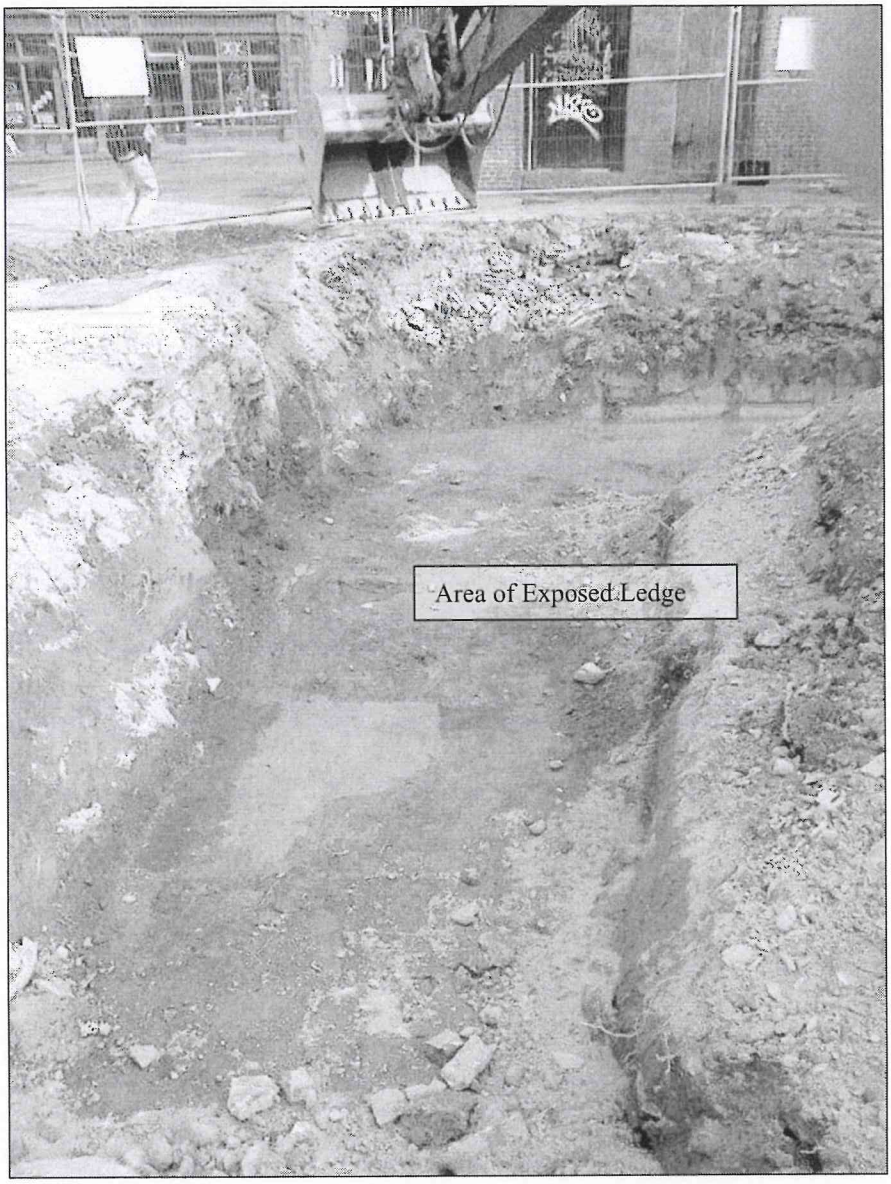

Field Report

Sebago Technics
Engineering Expertise You Can Build On

Project No.: 07156 Date: 4-19-11

Project Name: Oak Street Apartments

Location: Oak Street Portland, Maine

Meeting With: Paul Thebarge - Eastern Excavation
David Massaro(WR)

STI Present: Owens McCullough

Weather Conditions: Overcast, low 40's

Equipment Onsite: Large tracked excavator for foundation excavation with smooth bucket and plate compactor.

Activities/Construction Observed:

1. Contractor was progressing with foundation stone bedding. A ¾" crushed stone was being placed in 6" lifts and consolidated with a plate compactor. Geotextile was placed on the subgrade prior to stone placement.

2. Partial footing forms were placed.

3. Contractor encountered weathered bedrock along back (north) foundation wall. Ledge was fractured and able to be removed with the excavator to footing subgrade elevation.

4. The excavation along the back wall created near vertical conditions adjacent the abutting building foundation (see attached photos). The abutting foundation was observed to be brick and concrete depending on the location. Observations suggest the brick foundation most likely is in direct contact with the ledge. It was unknown if the adjacent building included a basement or slab-on-grade. After discussing the field observations with Nathan Merrill at Becker Structural Engineers, it was agreed there could be serious stability concerns of the excavation adjacent to the existing building. The primary concern is lateral loading on the brick foundation creating an unstable condition. Per a follow-up e-mail from Becker Structural Engineers, project drawings call attention to the potential requirement of temporary shoring of excavations adjacent to property lines. Wright-Ryan was advised to take necessary precautions to address potential instabilities created by excavations adjacent to existing structures.

5. The limit of excavation along the proposed easterly foundation wall exposed an old brick foundation wall at the limit of excavation. Dave from WR stated the abutting lot owner has (on occasion) relocated the barrier fencing to allow for vehicle movement and parking adjacent the excavation. We are extremely concerned the surcharge from the parked and moving vehicles may compromise the integrity of the existing brick foundation wall causing failure of the wall and excavation slope. Therefore, we recommend no vehicles or equipment be allowed adjacent the excavation until such time the foundation is backfilled and stabilized.

cc: Nathan Merrill, P.E.,
Greg Payne, Avesta
Ben Walter, CWS
Tom Burrill & Dave Massaro, WR

Prepared By: Owens A. McCullough, P.E., LEED A.P.

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Field Report

Sebago Technics
Engineering Expertise You Can Build On

Project No.:	07156	Date:	4-25-11
Project Name:	Oak Street Apartments		
Location:	Oak Street, Portland, Maine		
Meeting With:	Rodney Collard (WR), Contractor		
STI Present:	Owens McCullough		

Weather Conditions: Sunny, 50's

Equipment Onsite: Large tracked excavator for foundation excavation with smooth bucket.

Activities/Construction Observed:

1. The concrete contractor is tying steel reinforcing, reviewing plans and grades in preparation for another footing pour this afternoon. They anticipate starting to pouring walls on Thursday.

2. The excavation along the existing building has since been covered with poly with some crush stone at the toe of slope. Sebago Technics remains concerned that the brick foundation along the existing building may be unstable due to unbalanced lateral load conditions. The provisions put in place by the contractor should be confirmed by a qualified entity retained by the contractor.

cc: Paul Becker, P.E., BSE
Greg Payne, Avesta
Ben Walter, CWS
Tom Burrill, WR

Prepared By: Steven A. Groves, CPSWQ

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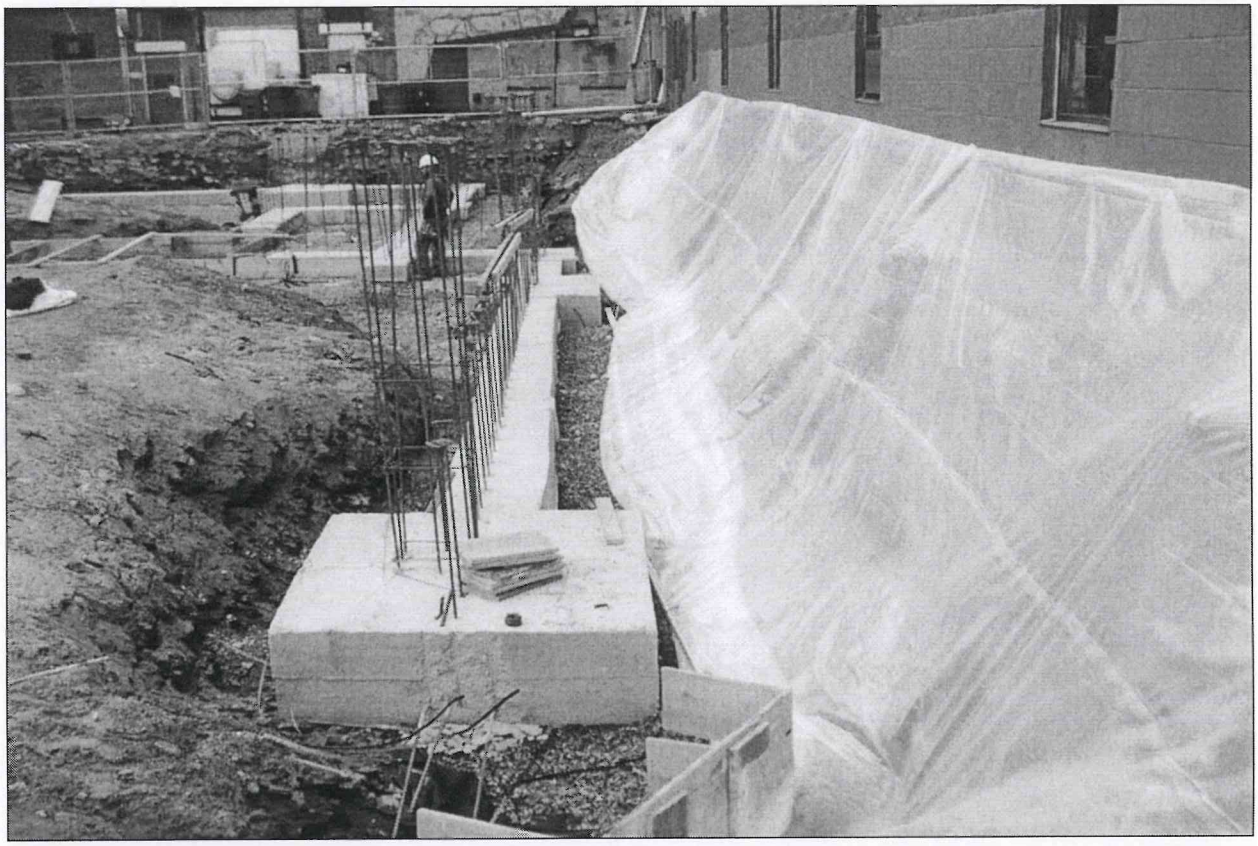

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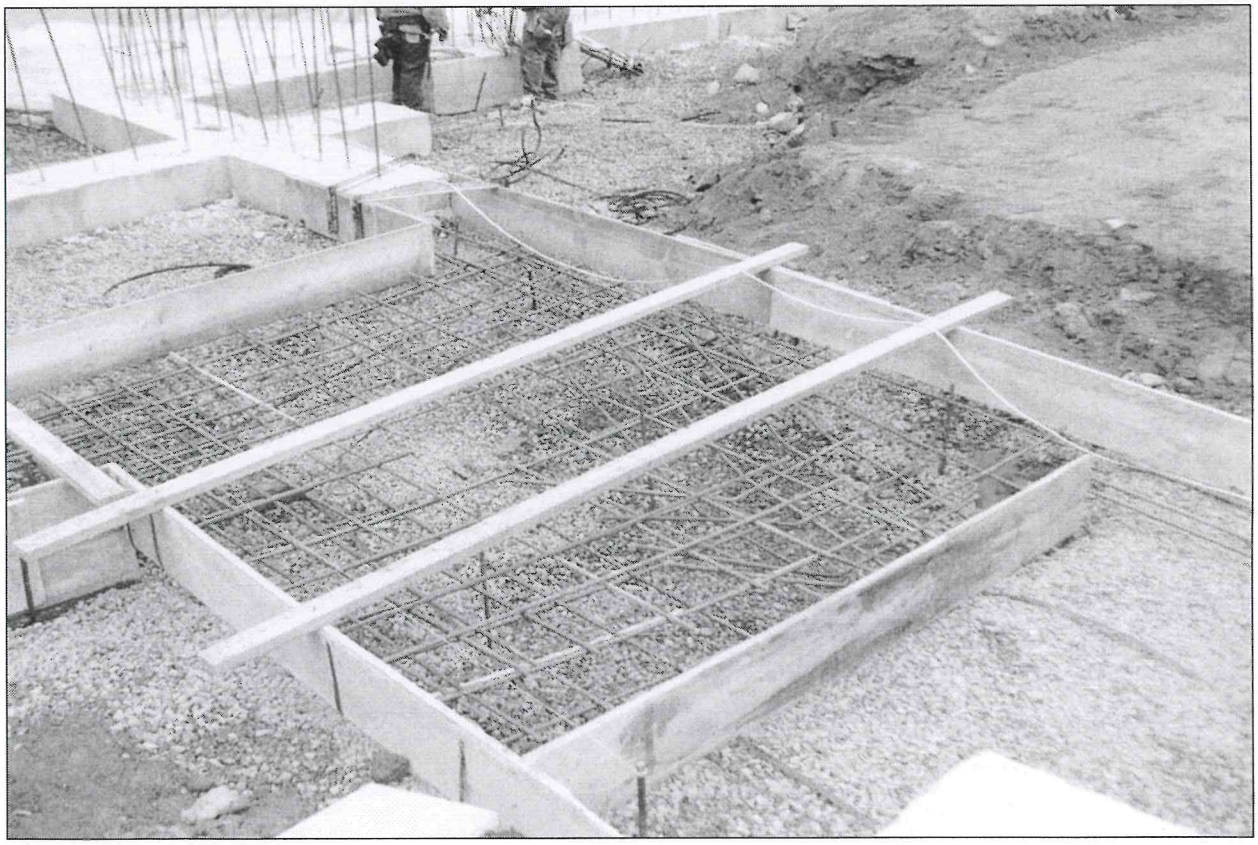

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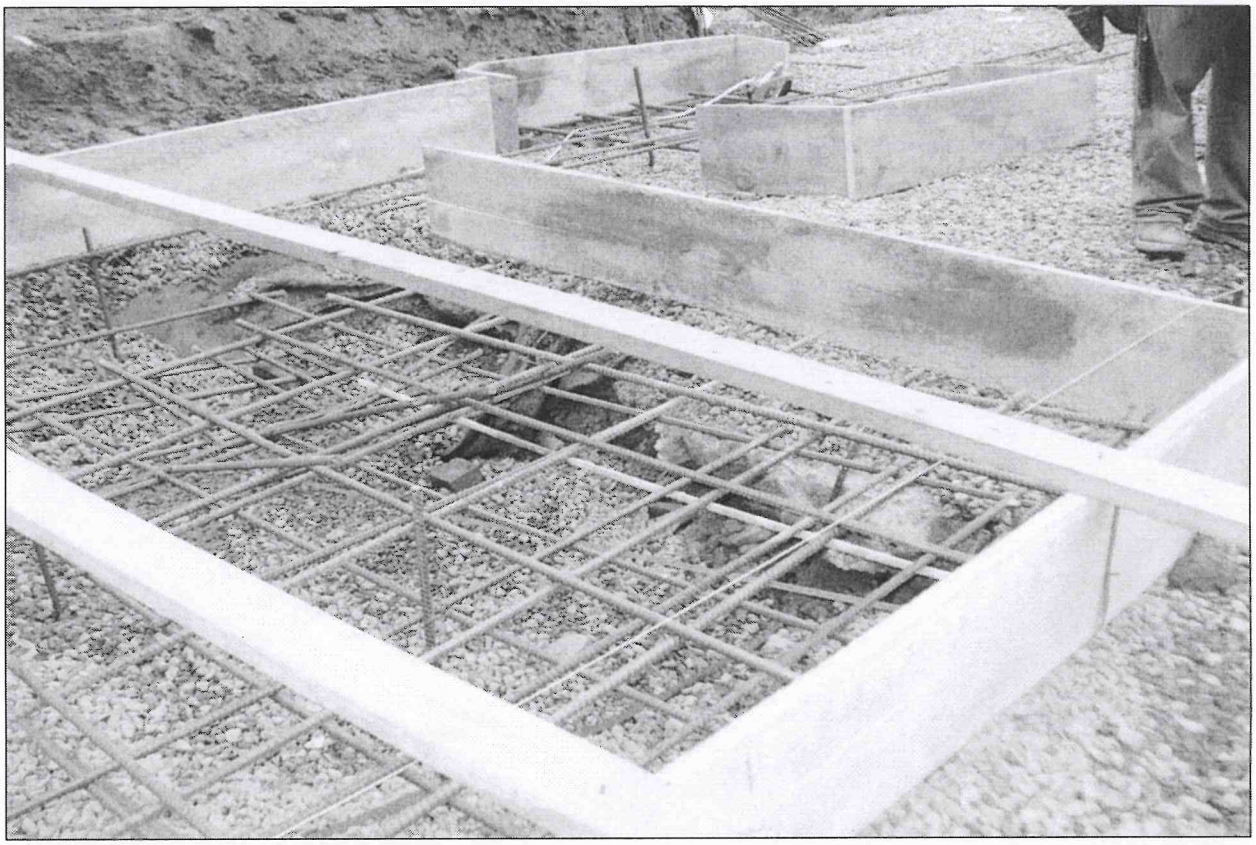

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Field Report

Sebago Technics
Engineering Expertise You Can Build On

Project No.:	07156	Date:	5-06-11
Project Name:	Oak Street Apartments		
Location:	Oak Street, Portland, Maine		
Meeting With:	David Massaro(WR)		
STI Present:	Steven Groves		

Weather Conditions: Sunny, 60 degrees

Equipment Onsite: Large tracked excavator for foundation excavation with smooth bucket.

Activities/Construction Observed:

1. Contractor and setting / moving concrete form and waterproofing exterior walls.

2. The contractor has started backfilling the footing along the existing building. Wright-Ryan has only installed a couple of lifts of soil. I spoke with David Massaro (WR) about this. He said that they have been waiting four days for S.W. Cole, for the Procter test results, to verify compaction /soil gradation before proceeding with the next lift. See attached picture of backfill to date.

3. Dave also said that the footing elevation is close to the proposed grade, and that most of the existing building foundation is below the proposed.

cc: Paul Becker, P.E., BSE
Greg Payne, Avesta
Ben Walter, CWS
Tom Burrill, WR

Prepared By: Steven A. Groves, CPSWQ

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Field Report

Sebago Technics
Engineering Expertise You Can Build On

Project No.: 07156 Date: 5-17-11
Project Name: Oak Street Apartments
Location: Oak Street, Portland, Maine
Meeting With: David Massaro(WR)
STI Present: Steven Groves

Weather Conditions: Overcast, 50 degrees.

Equipment Onsite: Large tracked excavator for foundation excavation with smooth bucket.

Activities/Construction Observed:

1. Contractor is excavating existing material for the ground floor slab.
2. The contractor has almost finished backfilling the footing along the existing building. Dave Massaro said all compaction test were positive.
3. I spoke to Dave about intensive surface compaction (ISC). The contractor will remove the existing fill to approximately 1' below the slab grade. The existing fill below this level will be compacted by ISC. See Subsurface and Foundation Report, Page 3, Paragraphs 3 & 4, for compacting procedure.
4. Dave will notify Sebago Technics when they will start intensive surface compaction so that we can observe this procedure.

cc: Paul Becker, P.E., BSE
Greg Payne, Avesta
Ben Walter, CWS
Tom Burrill, WR

Prepared By: Steven A. Groves, CPSWQ

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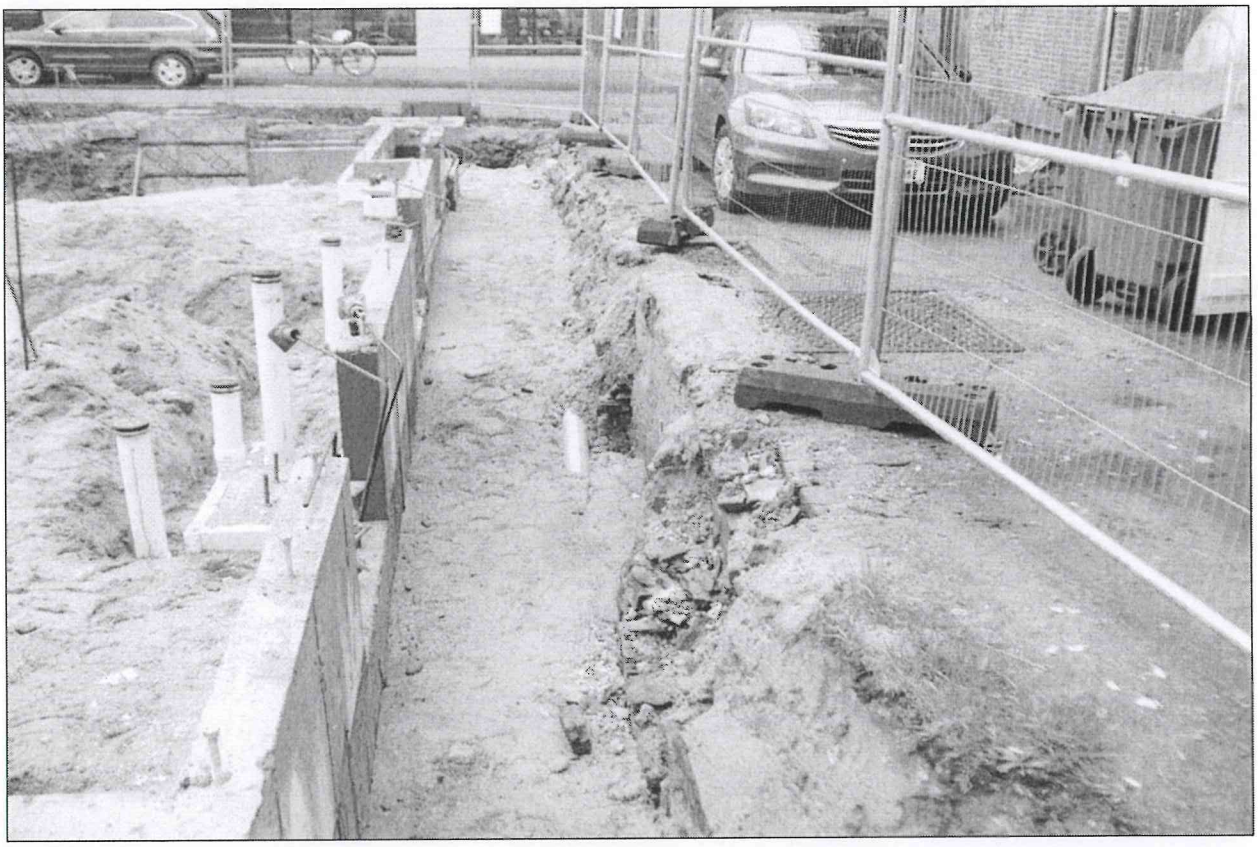

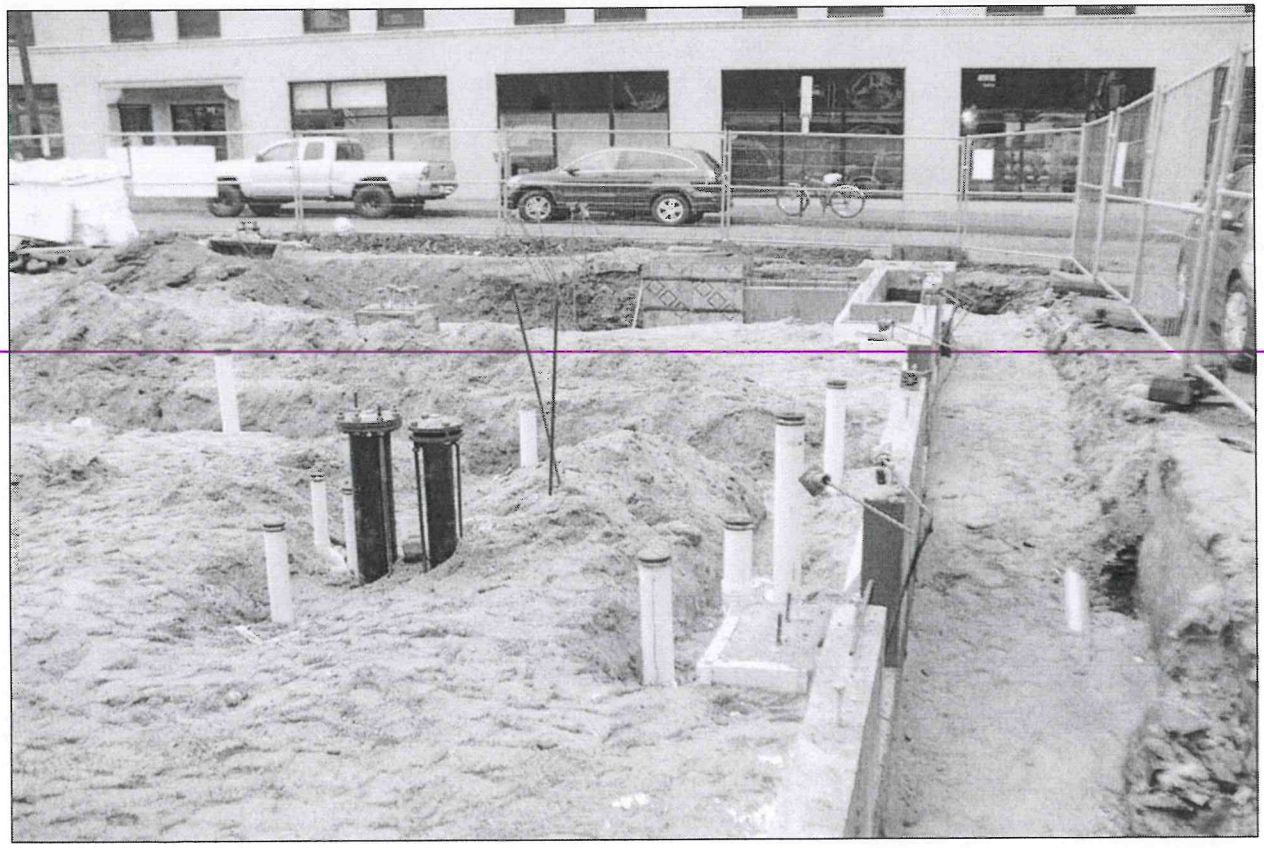

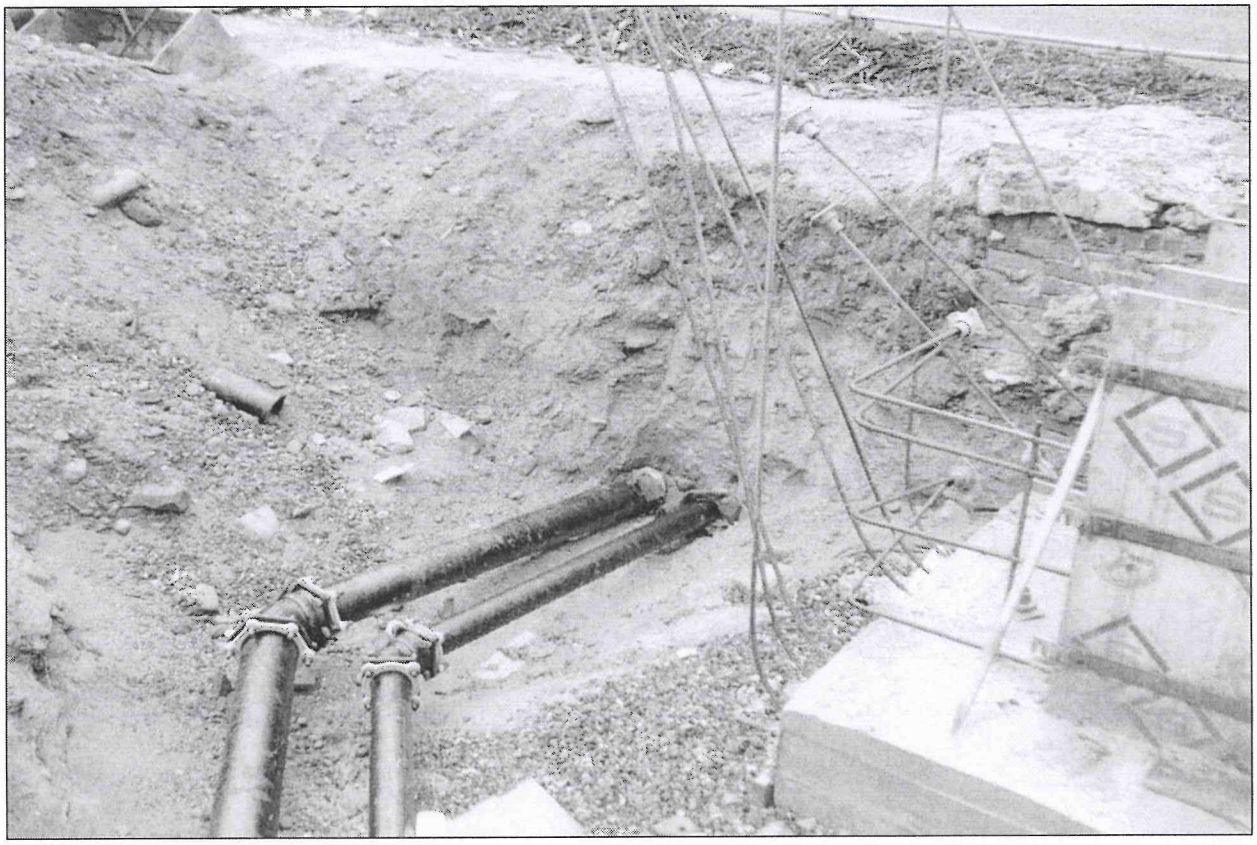

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Field Report

Sebago Technics
Engineering Expertise You Can Build On

Project No.: 07156 Date: 5-27-11
Project Name: Oak Street Apartments
Location: Oak Street, Portland, Maine
Meeting With: David Massaro(WR)
STI Present: Steven Groves

Weather Conditions: Sunny, 70 degrees.

Equipment Onsite: Large tracked excavator for foundation excavation.

Activities/Construction Observed:

1. Contractor is placing form for concrete footing and tying rebar.
2. Setting scaffolding for masonry block walls.
3. I spoke to Dave about compaction. WR has finished installing the flowable fill in the area specified under the footing.
4. All soil compaction tests under the footing have pass the field tests conducted by SW Cole.

cc: Paul Becker, P.E., BSE
Greg Payne, Avesta
Ben Walter, CWS
Tom Burrill, WR

Prepared By: Steven A. Groves, CPSWQ

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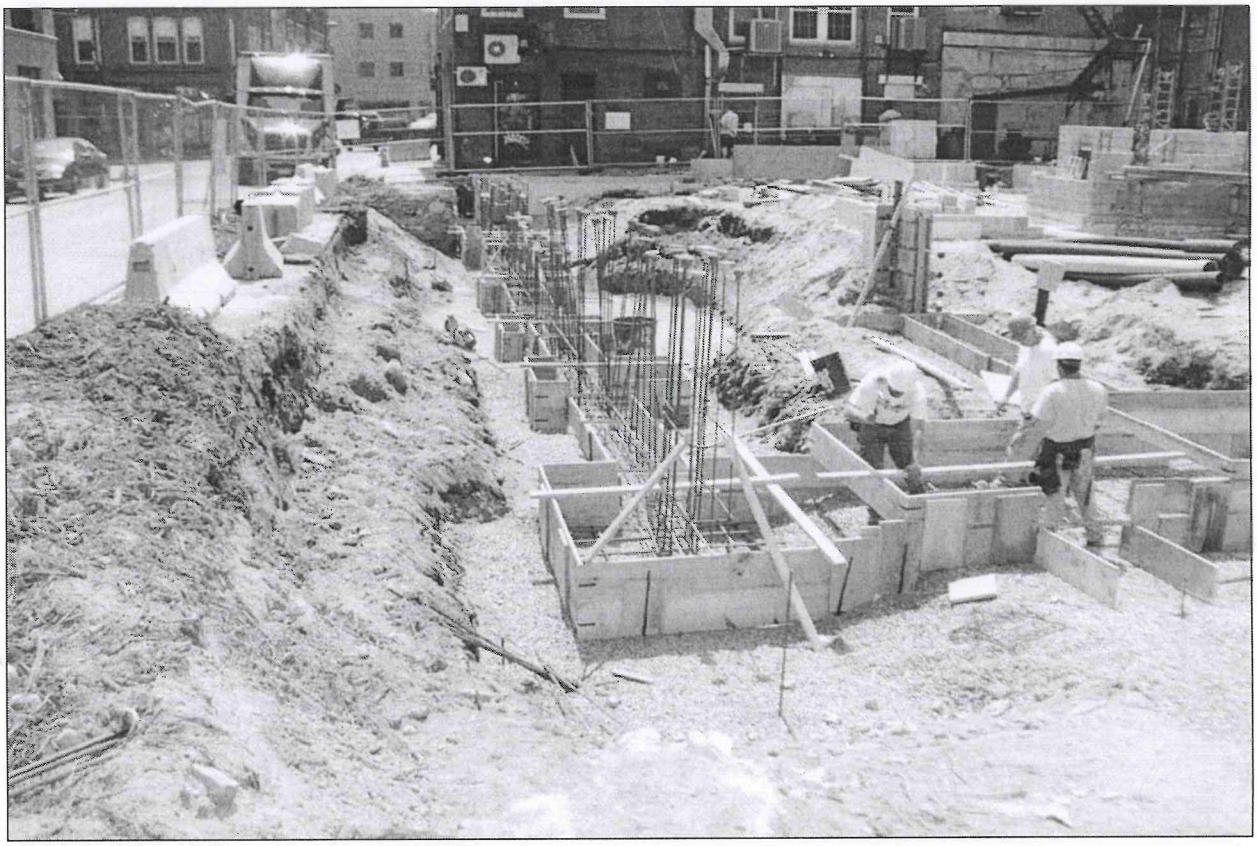

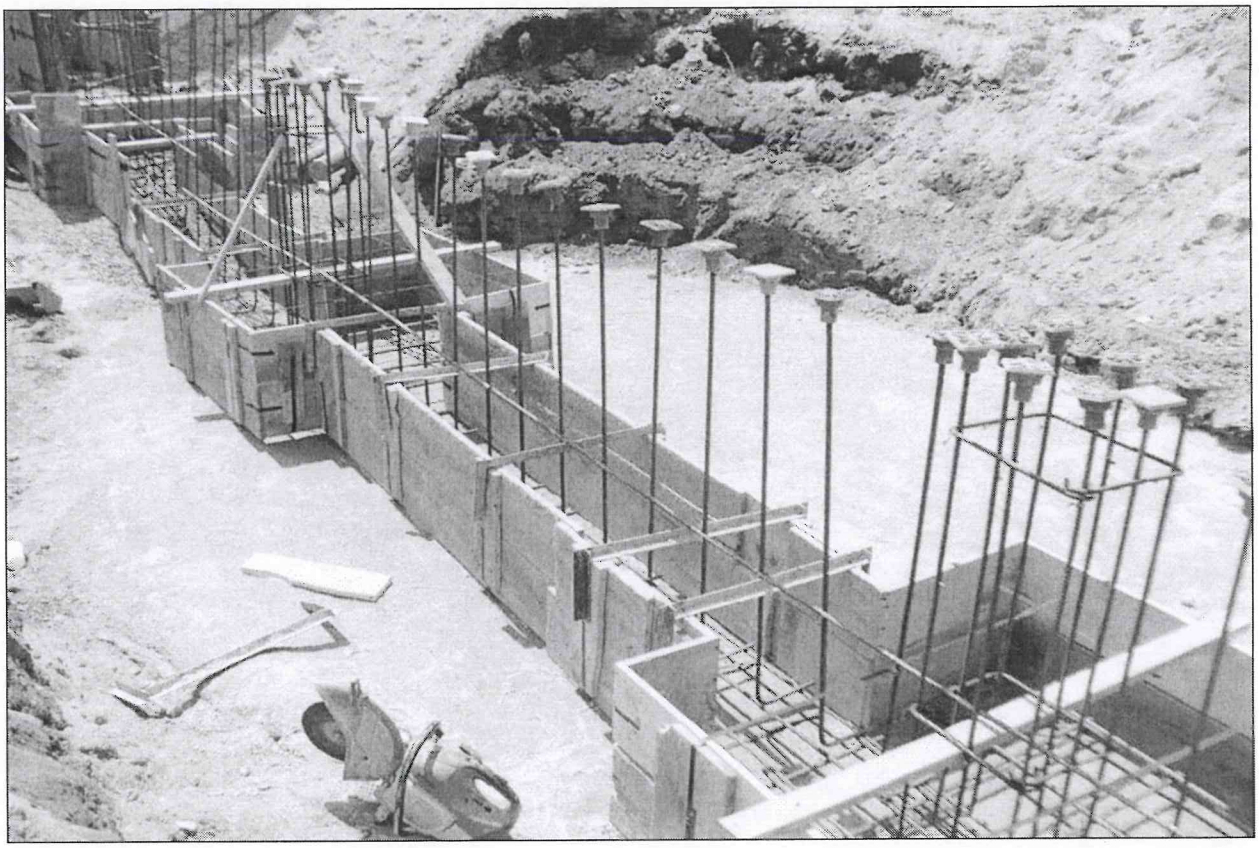

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Field Report

Sebago Technics
Engineering Expertise You Can Build On

Project No.: 07156 Date: 6-10-11
Project Name: Oak Street Apartments
Location: Oak Street, Portland, Maine
Meeting With: David Massaro(WR)
STI Present: Steven Groves

Weather Conditions: Sunny, 70 degrees.

Equipment Onsite: Small Volvo tracked excavator for foundation excavation and backfill.

Activities/Construction Observed:

1. Contractor is backing the foundation wall along Oak Street and installing 6" underdrain pipe. I asked Dave to maintain 6" of stone cover over the underdrain pipe. I question why they didn't backfill the footing first before installing the underdrain pipe. They seem to be wasting a lot of crushed stone trying to backfill the pipe. See attached photos.
2. The contractor is also excavating and installing underground utilities within the building foundation. I asked Dave to make sure that all trenches are re-compacted to 95%. Additional compaction testing should be completed after utilities have been installed.

cc: Paul Becker, P.E., BSE
Greg Payne, Avesta
Ben Walter, CWS
Tom Burrill, WR

Prepared By: Steven A. Groves, CPSWQ

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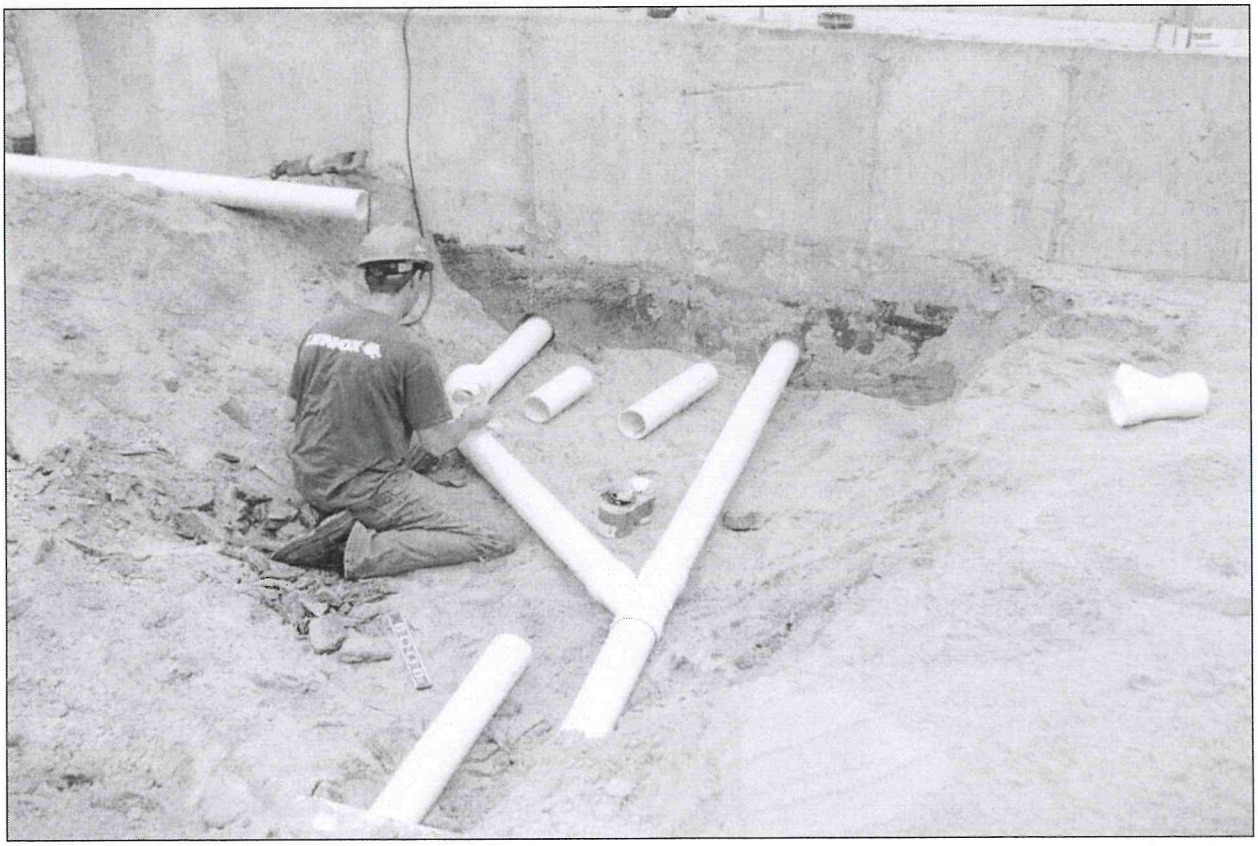

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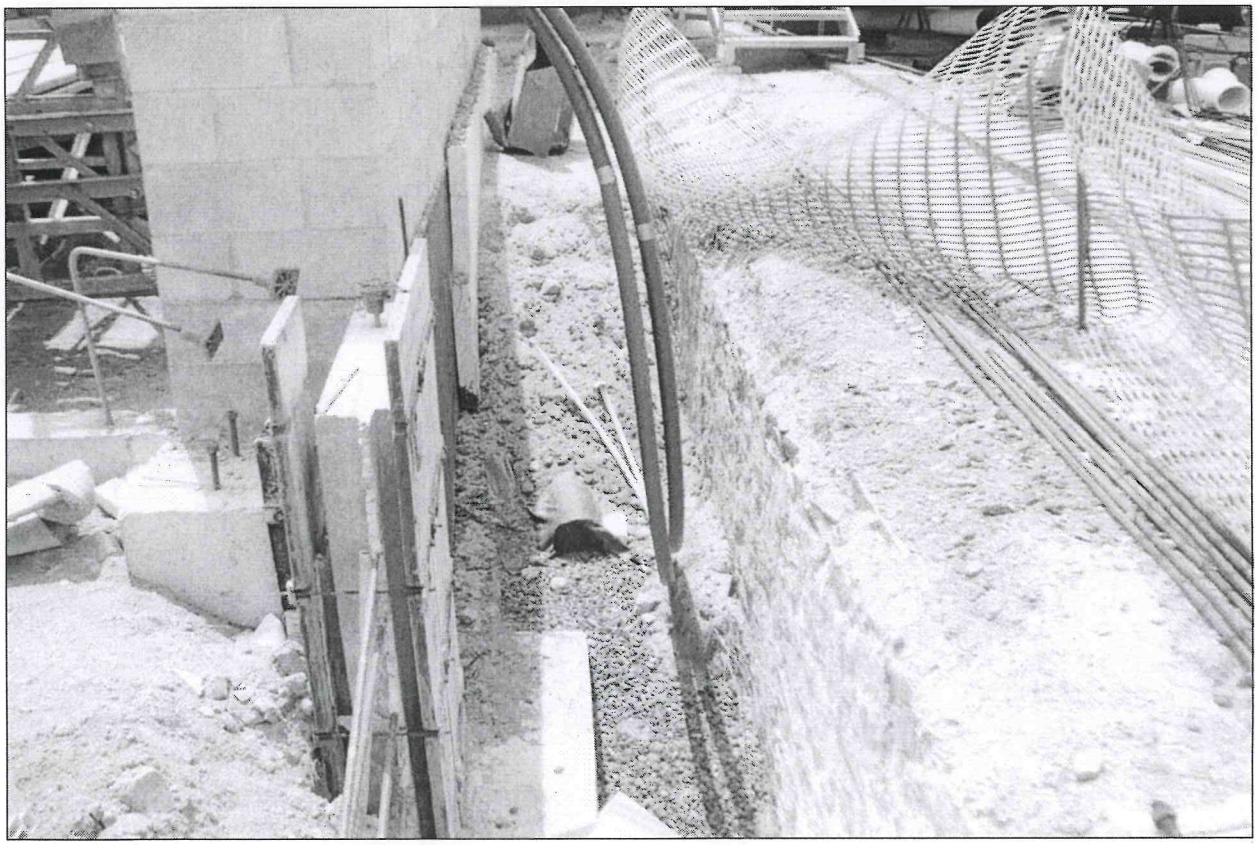


S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Client: AVESTA OAK STREET, LP

Material Type: STRUCTURAL FILL

Material Source: SHAW BROS - H PIT

Project Number: 10-1360

Lab ID: 13841G

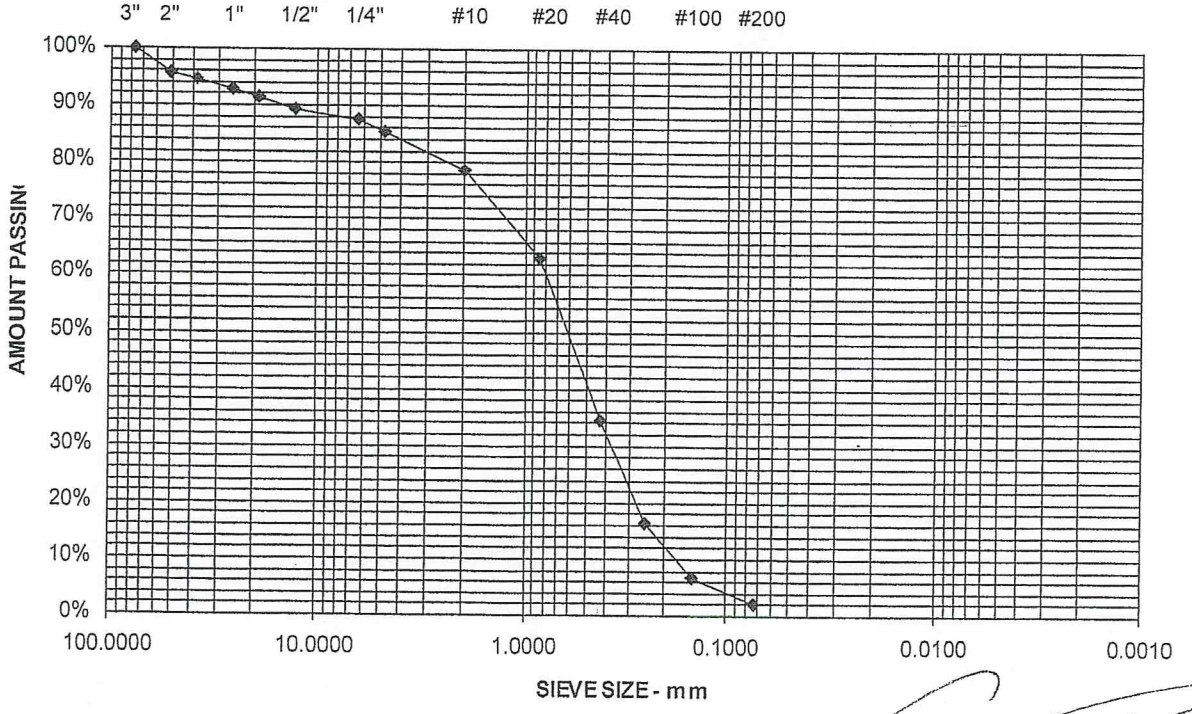
Date Received: 5/4/2011

Date Completed: 5/6/2011

Tested By: JUSTIN BISSON

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"	96	
38.1 mm	1-1/2"	95	
25.0 mm	1"	93	
19.0 mm	3/4"	91	
12.5 mm	1/2"	89	
6.3 mm	1/4"	87	
4.75 mm	No. 4	85	30 - 90
2.00 mm	No. 10	79	
850 um	No. 20	63	
425 um	No. 40	35	10 - 50
250 um	No. 60	17	
150 um	No. 100	7	
75 um	No. 200	2.0	0.0 - 8.0

SAMPLE MEETS SPECIFICATION



Comments

Roger E. Domingo

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

S.W.COLE ENGINEERING, INC.

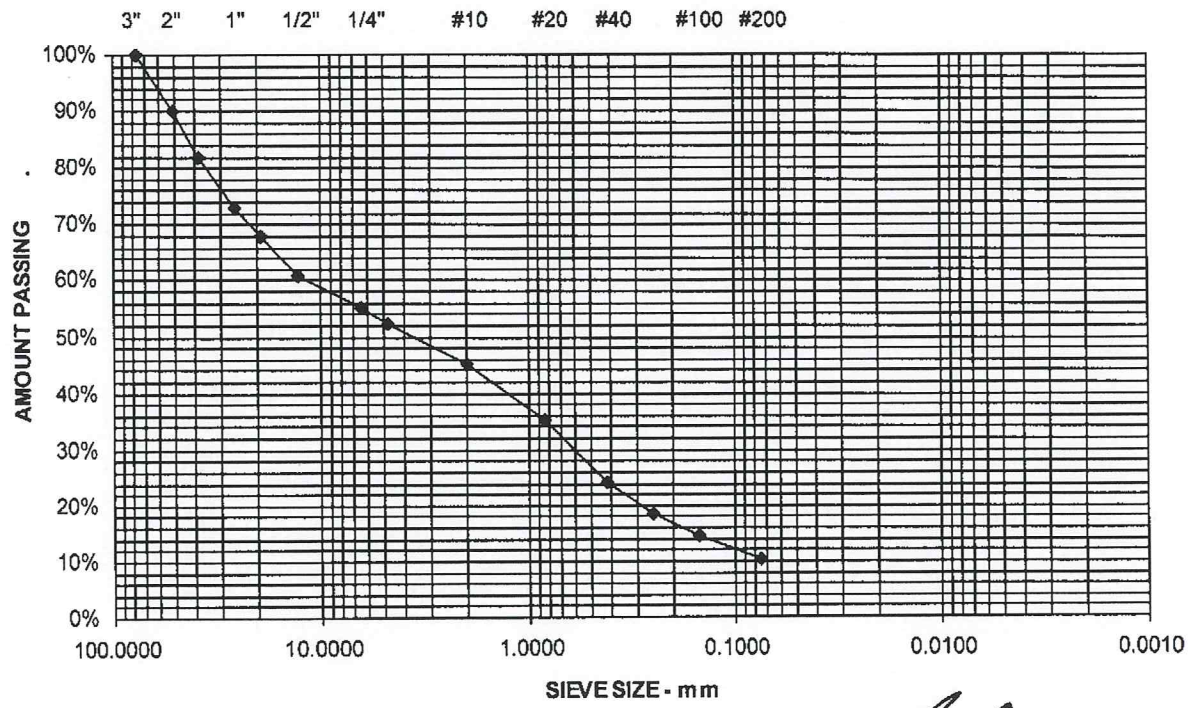
Report of Gradation

ASTM C-117 & C-136

Project Name	PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING	Project Number	10-1360
		Lab ID	14076G
Client	AVESTA OAK STREET, LP	Date Received	6/24/2011
Material Type	AGGREGATE SUBBASE	Date Completed	6/28/2011
Material Source	IN PLACE SAMPLE	Tested By	JUSTIN BISSON

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	MDOT 703.06 TYPE D SPECIFICATIONS (%)	
150 mm	6"	100	100	
125 mm	5"	100		
100 mm	4"	100		
75 mm	3"	100		
50 mm	2"	90		
38.1 mm	1-1/2"	82		
25.0 mm	1"	73		
19.0 mm	3/4"	68		
12.5 mm	1/2"	61		
6.3 mm	1/4"	55	25 - 70	
4.75 mm	No. 4	52		
2.00 mm	No. 10	45		
850 um	No. 20	35		
425 um	No. 40	24	0 - 30	
250 um	No. 60	18		
150 um	No. 100	15		
75 um	No. 200	10.2	0.0 - 7.0	†

† SAMPLE DOES NOT MEET SPECIFICATION



Comments

Roger E. Domingo

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S.W.COLE ENGINEERING, INC.

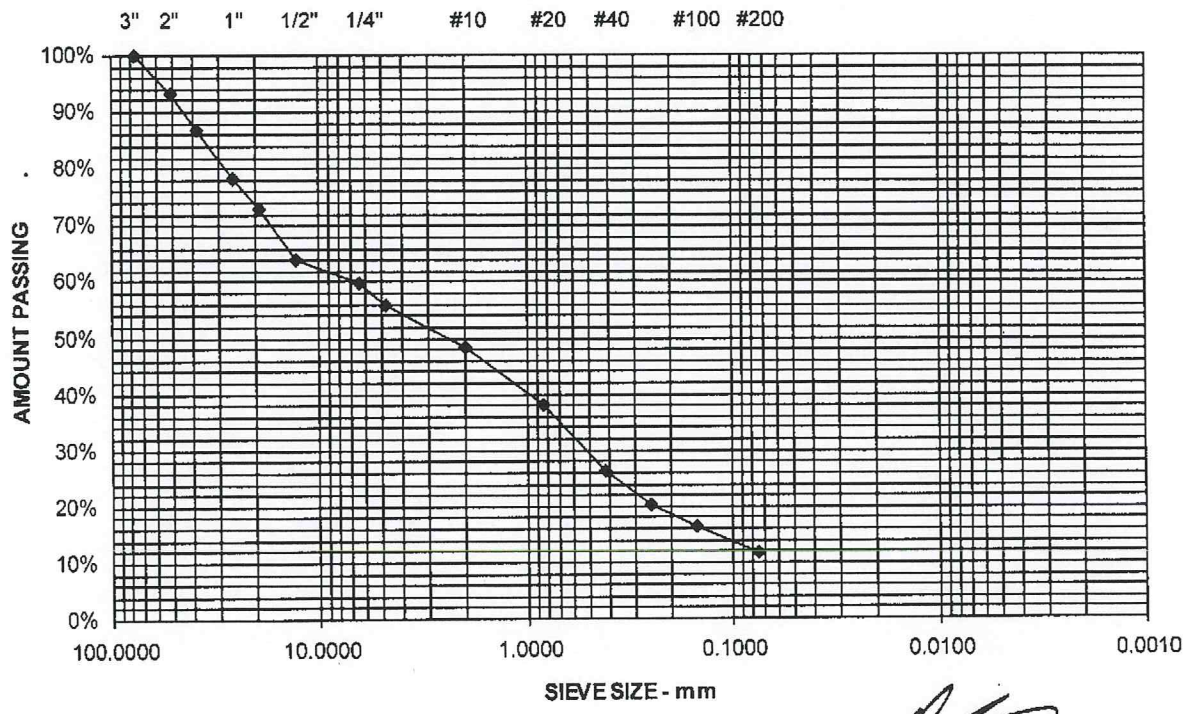
Report of Gradation

ASTM C-117 & C-136

Project Name	PORTLAND ME - OAK STREET HOUSING - MATERIALS TESTING	Project Number	10-1360
		Lab ID	14136G
Client	AVESTA OAK STREET LP	Date Received	7/1/2011
Material Type	AGGREGATE SUBBASE	Date Completed	7/1/2011
Material Source	ON SITE STOCKPILE	Tested By	JUSTIN BISSON

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	MDOT 703.06 TYPE D SPECIFICATIONS (%)	
150 mm	6"	100	100	
125 mm	5"	100		
100 mm	4"	100		
75 mm	3"	100		
50 mm	2"	93		
38.1 mm	1-1/2"	87		
25.0 mm	1"	78		
19.0 mm	3/4"	73		
12.5 mm	1/2"	64		
6.3 mm	1/4"	60	25 - 70	
4.75 mm	No. 4	56		
2.00 mm	No. 10	49		
850 um	No. 20	38		
425 um	No. 40	26	0 - 30	
250 um	No. 60	20		
150 um	No. 100	16		
75 um	No. 200	11.6	0.0 - 7.0	†

† SAMPLE DOES NOT MEET SPECIFICATION



Comments

Roger E. Domingo

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S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

Project Name PORTLAND ME - OAK STREET HOUSING - MATERIALS TESTING

Client AVESTA OAK STREET LP

Material Type AGGREGATE SUBBASE

Material Source ON SITE STOCKPILE

Project Number 10-1360

Lab ID 14137G

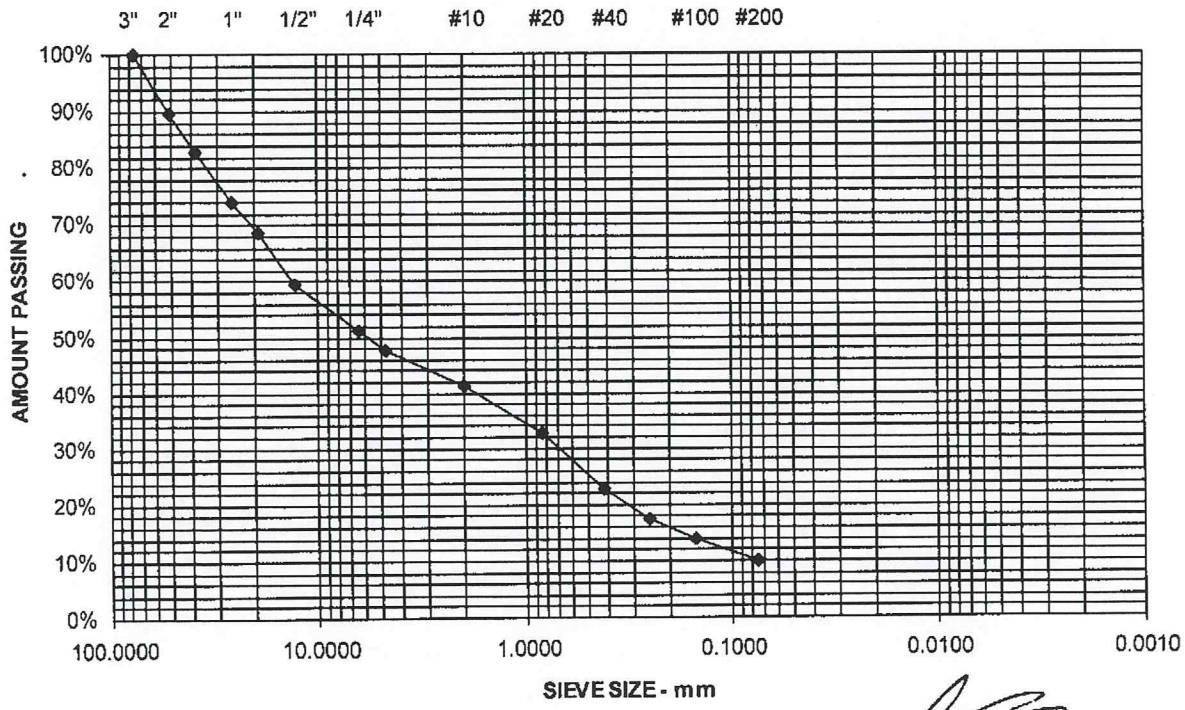
Date Received 7/1/2011

Date Completed 7/1/2011

Tested By JUSTIN BISSON

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	MDOT 703.06 TYPE D SPECIFICATIONS (%)	
150 mm	6"	100	100	
125 mm	5"	100		
100 mm	4"	100		
75 mm	3"	100		
50 mm	2"	90		
38.1 mm	1-1/2"	83		
25.0 mm	1"	74		
19.0 mm	3/4"	69		
12.5 mm	1/2"	60		
6.3 mm	1/4"	51	25 - 70	
4.75 mm	No. 4	48		
2.00 mm	No. 10	41		
850 um	No. 20	33		
425 um	No. 40	23	0 - 30	
250 um	No. 60	18		
150 um	No. 100	14		
75 um	No. 200	9.9	0.0 - 7.0	†

† SAMPLE DOES NOT MEET SPECIFICATION



Comments

Roger E. Domingo

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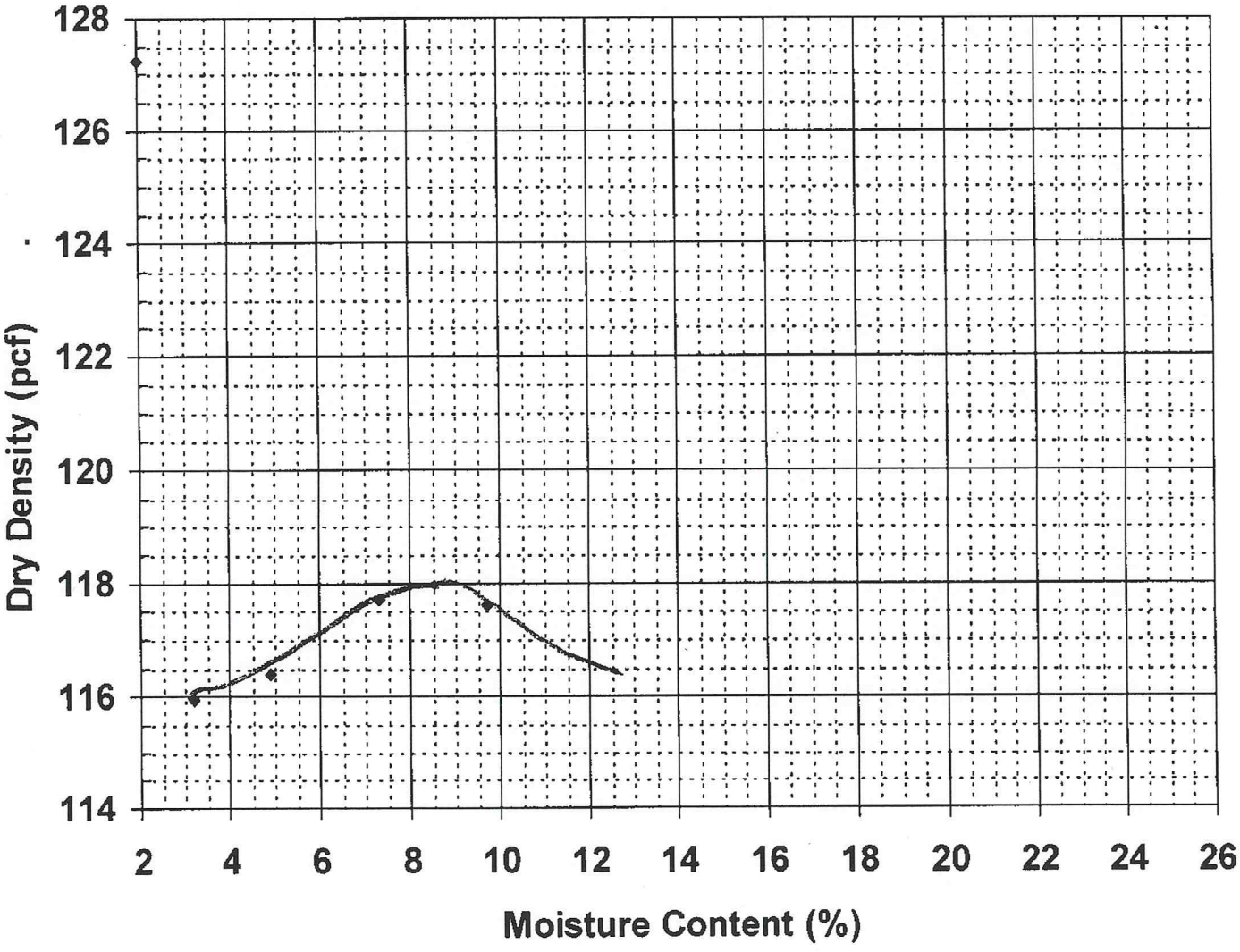
S.W.COLE ENGINEERING, INC.

Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure B

Project Name	PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING	Project Number	10-1360
Client	AVESTA OAK STREET, LP	Lab ID	14006G
Material Type	STRUCTURAL FILL	Date Received	6/10/2011
Material Source	H PIT - SHAW BROS.	Date Completed	6/13/2011
		Tested By	JUSTIN BISSON

Moisture-Density Relationship Curve



Maximum Dry Density (pcf)	118
Optimum Moisture Content (%)	8.5
Percent Oversized	19.9%

Corrected Dry Density (pcf)	**124.2**
Corrected Moisture Content (%)	**7.2**

Comments

Roger E. Domingo

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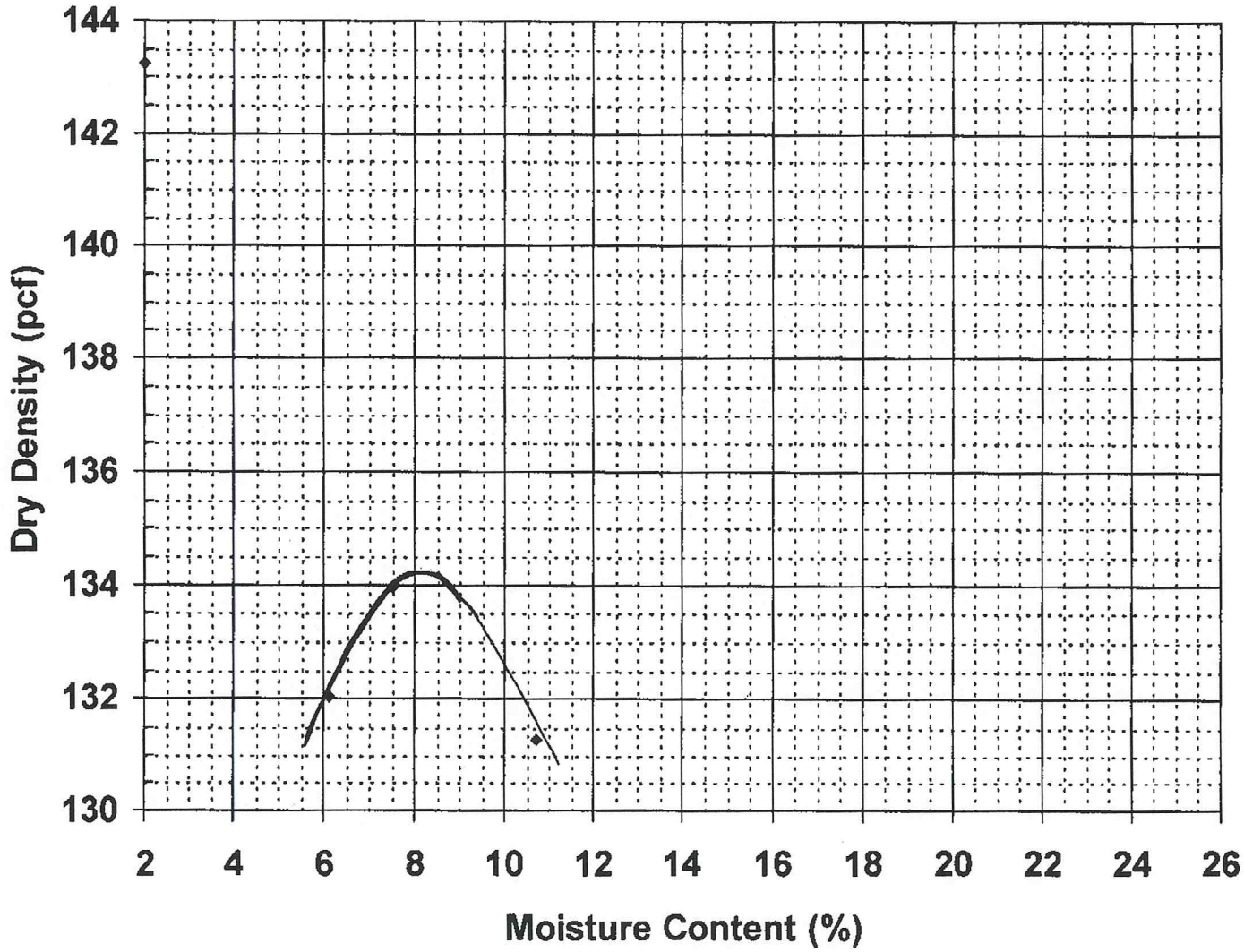
S.W.COLE ENGINEERING, INC.

Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure C

Project Name	PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING	Project Number	10-1360
Client	AVESTA OAK STREET, LP	Lab ID	14076G
Material Type	AGGREGATE SUBBASE	Date Received	6/24/2011
Material Source	IN PLACE SAMPLE	Date Completed	6/29/2011
		Tested By	CRAIG TURCOTTE

Moisture-Density Relationship Curve



Maximum Dry Density (pcf)	134.3
Optimum Moisture Content (%)	8.3
Percent Oversized	30.0%

Corrected Dry Density (pcf)	**140.4**
Corrected Moisture Content (%)	**6.4**

Comments

Roger E. Domingo

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S.W.COLE ENGINEERING, INC.

Report of Field Density

ASTM D6938

Project: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING Project Number: 10-1360

Client: AVESTA OAK STREET, LP

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	5/3/2011	VLT	30' E OF INT LINE A + 4 (OUT)	-6' BTOW	12	13841G	118.0	3.3	100.1	95
2	5/3/2011	VLT	30' E OF INT LINE A + 4 (IN)	-6' BTOW	12	13841G	113.0	2.9	95.8	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
13841G	5/4/2011	Shaw Bros - H Pit	Structural Fill	ASTM D-1557 Modified A	117.9	11.7	

Elevation Notes:
BTOW - BELOW TOP OF WALL

Comments:
INT - INTERSECTION

Reviewed By

REC'D MAY 19 2011

S.W.COLE ENGINEERING, INC.

Report of Field Density

ASTM D6938

Project: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Project Number: 10-1360

Client: AVESTA OAK STREET, LP

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
3	5/5/2011	TA	BETWEEN 3.5 & 3/A & B INT	4' ATF	12	13841G	114.7	4.4	97.3	95
4	5/5/2011	TA	BETWEEN 3.5 & 4 EXT	4' ATF	12	13841G	117.0	4.1	99.2	95
5	5/5/2011	TA	BETWEEN 3.5 & 4 EXT WALL	4' ATF	12	13841G	113.2.	4.3	96.0	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
13841G	5/4/2011	Shaw Bros - H Pit	Structural Fill	ASTM D-1557 Modified A	117.9	11.7	

Elevation Notes:
ATF-

Comments:
INT - INTERIOR OF BUILDING
EXT - EXTERIOR OF FOUNDATION WALL

Reviewed By

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D6938

Project: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Project Number: 10-1360

Client: AVESTA OAK STREET, LP

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
6	5/9/2011	TA	WEST CORNER OF BUILDING NEAR PARKING	100.0	12	13841G	113.2	3.8	96.0	95
7	5/9/2011	TA	WEST CORNER OF BUILDING NEAR PARKING	100.0	12	13841G	117.6	2.8	99.7	95
8	5/9/2011	TA	WEST CORNER OF BUILDING NEAR PARKING	102.0	12	13841G	117.6	2.7	99.7	95
9	5/9/2011	TA	WEST CORNER OF BUILDING NEAR PARKING	102.0	12	13841G	113.2	4.0	96.0	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
13841G	5/4/2011	Shaw Bros - H Pit	Structural Fill	ASTM D-1557 Modified A	117.9	11.7	

Elevation Notes:

Comments:

Reviewed By

Thursday, May 12, 2011

REC'D MAY 19 2011

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D6938

Project: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Project Number: 10-1360

Client: AVESTA OAK STREET, LP

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
10	5/10/2011	AM`	10' S ON EAST WALL	104	12	13841G	119.1	2.8	101.0	95
11	5/10/2011	AM`	15' S 10' W ON EW WALL	104	12	13841G	115.1	2.8	97.6	95
12	5/10/2011	AM`	12' S 10'W ON EW WALL	104	12	13841G	114.8	2.2	97.4	95
13	5/10/2011	AM`	ELEVATOR SHAFT	105	12	13841G	122.0	2.6	103.5	95
14	5/10/2011	AM`	STAIRWELL	105	12	13841G	119.3	2.7	101.2	95
15	5/10/2011	AM`	18' S 15' W ON NS WALL	104	12	13841G	115.6	3.5	98.0	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
13841G	5/4/2011	Shaw Bros - H Pit	Structural Fill	ASTM D-1557 Modified A	117.9	11.7	

Elevation Notes:

Comments:

Reviewed By

RECD MAY 19 2011

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D6938

Project: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Project Number: 10-1360

Client: AVESTA OAK STREET, LP

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
16	5/10/2011	AM`	2' N ON A1 WALL	104	12	13841G	113.7	3.9	96.4	95
17	5/10/2011	AM`	15' N ON A1 WALL	104	12	13841G	112.6	2.8	95.5	95
18	5/10/2011	AM`	30' N ON A1 WALL	104	12	13841G	116.0	2.6	98.4	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
13841G	5/4/2011	Shaw Bros - H Pit	Structural Fill	ASTM D-1557 Modified A	117.9	11.7	

Elevation Notes:

Comments:

Reviewed By

Thursday, May 12, 2011

S.W.COLE ENGINEERING, INC.

Report of Field Density

ASTM D6938

Project: **PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING** Project Number: **10-1360**

Client: **AVESTA OAK STREET, LP**

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
19	5/13/2011	TDA	D/.75	105.5	6	13841G	115.4	7.3	97.9	95
20	5/13/2011	TDA	A/2	107	6	13841G	116.5	7.9	98.8	95
21	5/13/2011	TDA	A.5/2.2	107	6	13841G	115.9	7.1	98.3	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
13841G	5/4/2011	Shaw Bros - H Pit	Structural Fill	ASTM D-1557 Modified A	117.9	11.7	

Elevation Notes:

Comments:
INTERIOR/EXTERIOR STRUCTURAL FILL ALONG FOUNDATION WALLS

Reviewed By

S.W.COLE ENGINEERING, INC.

Report of Field Density

ASTM D6938

Project: **PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING** Project Number: **10-1360**

Client: **AVESTA OAK STREET, LP**

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
22	5/17/2011	ARM	10' S	S	12	13841G	115.8	4.2	98.2	95
23	5/17/2011	ARM	25' S	S	12	13841G	112.0	3.9	95.0	95
24	5/17/2011	ARM	30' S	S	12	13841G	118.2	4.2	100.3	95
25	5/17/2011	ARM	50' S	S	12	13841G	114.2	4.1	96.9	95
26	5/17/2011	ARM	10' S	S	12	13841G	112.2	4.8	95.2	95
27	5/17/2011	ARM	10' S	S	12	13841G	114.1	3.6	96.8	95
28	5/17/2011	ARM	10' S	S	12	13841G	112.6	4.0	95.5	95
29	5/17/2011	ARM	10' S	S	12	13841G	115.1	4.1	97.6	95
30	5/17/2011	ARM	10' S	S	12	13841G	116.6	4.6	98.9	95
31	5/17/2011	ARM	10' S	S	12	13841G	112.3	5.0	95.3	95
32	5/17/2011	ARM	10' S	S	12	13841G	112.0	4.2	95.0	95
33	5/17/2011	ARM	10' S	S	12	13841G	113.1	4.6	95.9	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
13841G	5/4/2011	Shaw Bros - H Pit	Structural Fill	ASTM D-1557 Modified A	117.9	11.7	

Elevation Notes:
S - SUBGRADE

Comments:
ALL LOCATIONS ARE FROM EAST WALL IN PARKING AREA

Reviewed By

S.W.COLE ENGINEERING, INC.

Report of Field Density

ASTM D6938

Project: **PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING** Project Number: **10-1360**

Client: **AVESTA OAK STREET, LP**

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
34	6/8/2011	CMT	4 TO 4.5 INSIDE PARKING	104.0	8	14006G	123.1	1.6	99.1	95
35	6/8/2011	CMT	4 TO 4.5 INSIDE PARKING	103.0	8	14006G	124.6	2.1	100.3	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
14006G	6/10/2011	H Pit - Shaw Bros.	Structural Fill	ASTM D-1557 Modified B	124.2	7.2	

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D6938

Project: **PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING** Project Number: **10-1360**

Client: **AVESTA OAK STREET, LP**

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
36	6/9/2011	ARM	100' N 5' E ON EAST WALL	5' BTOF	10	13841G	120.7	2.0	102.4	95
37	6/9/2011	ARM	115' N 7' E ON EAST WALL	4' BTOF	10	13841G	114.4	2.4	97.0	95
38	6/9/2011	ARM	95' N 8' W ON EAST WALL	8' BTOF	12	13841G	116.0	1.7	98.4	95
39	6/9/2011	ARM	80' N 10' W ON EAST WALL	2' BTOF	12	13841G	112.5	2.5	95.4	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
13841G	5/4/2011	Shaw Bros - H Pit	Structural Fill	ASTM D-1557 Modified A	117.9	10.3	

Elevation Notes:
BTOF - BELOW TOP OF FOUNDATION

Comments:

CT

Reviewed By

S.W.COLE ENGINEERING, INC.

Report of Field Density
ASTM D6938

Project: **PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING** Project Number: **10-1360**

Client: **AVESTA OAK STREET, LP**

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
40	6/15/2011	ARM	18' S 3' W ON INTERIOR WALL	104.5	12	13841G	119.4	3.5	97.7	95
41	6/15/2011	ARM	40' N 5' W	104.5	12	13841G	119.5	3.8	97.8	95
42	6/15/2011	ARM	8' N 8' W	104.5	12	13841G	117.5	2.4	96.2	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
13841G	5/4/2011	Shaw Bros - H Pit	Structural Fill	ASTM D-1557 Modified A	122.2	10.3	

Elevation Notes:

Comments:

Reviewed By

S.W.COLE ENGINEERING, INC.

Report of Field Density

ASTM D6938

Project: **PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING** Project Number: **10-1360**

Client: **AVESTA OAK STREET, LP**

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	6/14/2011	JDB	4' S, 4' W OF NE CORNER	104.72	12	14006G	113.2	2.8	91.1	95
44	6/14/2011	JDB	25' S, 2' W OF NE CORNER	104.72	12	14006G	114.3	2.6	92.0	95
45	6/14/2011	JDB	40' S, 15' W OF NE CORNER	104.72	12	14006G	112.4	3.1	90.5	95
46	6/14/2011	JDB	5' N, 10' W OF SE CORNER	104.72	12	14006G	121.6	2.4	97.9	95
47	6/14/2011	JDB	RETEST OF 44	104.72	12	14006G	114.3	2.9	92.0	95
48	6/14/2011	JDB	RETEST OF 45	104.72	12	14006G	113.6	2.9	91.5	95
49	6/14/2011	JDB	RETEST OF 47	104.72	12	14006G	111.9	3.4	90.1	95
50	6/14/2011	JDB	RETEST OF 43	104.72	12	14006G	113.4	3.1	91.3	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
14006G	6/10/2011	H Pit - Shaw Bros.	Structural Fill	ASTM D-1557 Modified B	124.2	7.2	

Elevation Notes:

Comments:
Wright-Ryan to schedule retests

Reviewed By

Structural Schedule of Special Inspections – Exhibit B
CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION IBC Section 1704.4	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
1. Inspection of reinforcing steel, including prestressing tendons, and placement	Y	C	ACI 318: 3.5, 7.1-7.7	TA-1	PE, EIT, ACI-CCI or ICC-RCSI	4/22 THRU 7/19
2. Inspection of reinforcing steel welding in accordance with Table 1704.3, Item 5B	N		Welding of Reinf Not Allowed	-	AWS-CWI	———
3. Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased	Y	C	IBC 1912.5	TA-1	PE, EIT, ACI-CCI or ICC-RCSI	4/22 THRU 7/19
4. Verifying use of required design mix	Y	P	ACI 318: Ch 4, 5.2-5.4	TA-1	ACI-CFTT or ACI-STT	4/22 THRU 7/19
5. At time fresh concrete is sampled to fabricate specimens for strength test, perform slump and air content test and temperature	Y	C	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	TA-1	ACI-CFTT or ACI-STT	4/22 THRU 7/19
6. Inspection of concrete and shotcrete placement for proper application techniques	Y	C	ACI 318: 5.9, 5.10	TA-1	PE, EIT, ACI-CCI or ICC-RCSI	4/22 THRU 7/19
7. Inspection for maintenance of specified curing temperature and techniques	Y	P	ACI 318: 5.11-5.13	TA-1	PE, EIT, ACI-CCI or ICC-RCSI	4/22 THRU 7/19
8. Inspection of Prestressed Concrete						
a. Application of prestressing force.	N	C	ACI 318: 18.20	-	PE/SE or EIT	
b. Grouting of bonded prestressing tendons in seismic force resisting system	N	C	ACI 318: 18.18.4	-	PE/SE or EIT	
9. Erection of precast concrete members	N	P	ACI 318: Ch 16	-	PE/SE or EIT	
10. Verification of in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms beans and structural slabs	N	P	ACI 318: 6.2	-	ACI-STT	

BECKER
STRUCTURAL ENGINEERS

03300

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	4/22/2011
Time:	11:00 AM
Temp:	50 F
Weather:	Sunny

Observation Location: strip/spread footing from E/1.9 along 1 line to A/4

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☐	☐	☒	☐	See notes below
Condition	☒	☐	☐	☐	
Placement	☐	☒	☐	☐	See notes below
Embed/Anchors	☐	☐	☐	☒	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	

Notes:
Vertical dowels not yet installed between A/2.7 and A/4. Vertical dowels at E/1 not complete, additional dowels required. Cover at numerous locations were observed and noted to Dave Massaro of WR. Follow-up visit will be performed prior to placement.

Signed: Nathan R. Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

03300

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	4/22/2011
Time:	1:00 PM
Temp:	50 F
Weather:	Sunny

Observation Location: strip/spread footing from E/1.9 along 1 line to A/4

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☒	☐	☐	☐	
Embed/Anchors	☐	☐	☐	☒	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	

Notes:
Earlier comments were addressed.

Signed: Nathan R. Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

03300

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	4/25/2011
Time:	3:00 PM
Temp:	45 F
Weather:	Overcast - Drizzle

Observation Location: Elevator mat

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☒	☐	☐	☐	
Embed/Anchors	☐	☐	☐	☒	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	

Notes:

Signed: Nathan R. Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

03300

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	4/29/2011
Time:	9:00 AM
Temp:	55 F
Weather:	Sunny

Observation Location: Wall reinforcing from E/1.9 along 1 line to A/4

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☐	☒	☐	☐	See notes below
Embed/Anchors	☐	☒	☐	☐	See notes below
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	

Notes:
Headed anchors for sill plate not present prior to placement. Bent bars for slab dowels not present prior to placement. Pier reinforcing at A.1/1 & A.1/1.9 not placed in the correct location, cage should envelope column anchor rods.

Signed: Nathan R. Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

03300

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	5/2/2011
Time:	2:30 PM
Temp:	55 F
Weather:	Sunny

Observation Location: Footing reinforcing from C.4/2.6 to D/3

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☒	☐	☐	☐	
Embed/Anchors	☒	☐	☐	☐	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	

Notes:

Signed: Nathan R. Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

03300

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	5/3/2011
Time:	12:30 PM
Temp:	60 F
Weather:	Cloudy

Observation Location: Footing reinforcing from A.1/2.6 to B/3

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☒	☐	☒	☐	See Below
Embed/Anchors	☒	☐	☒	☐	See Below
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	

Notes:
Insufficient bottom cover at one corner of footing B3, Bent dowels coming out of 2.6 line footing too close to top of new footing. Advised superintendent, both issues to be addressed prior to placement.

Signed: Dan S. Burne, P.E.

BECKER
STRUCTURAL ENGINEERS

03300

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	5/4/2011
Time:	4:00 PM
Temp:	50 F
Weather:	Rainy

Observation Location: Wall reinforcing from C.4/2.6 to D/3

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☐	☒	☐	☐	See note below
Embed/Anchors	☒	☐	☐	☐	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	

Notes:
Insufficient cover observed along top of wall. G/C noted and will prior to placement. Follow-up visit will be performed.

Signed: Nathan R. Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

03300

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	5/5/2011
Time:	9:00 AM
Temp:	55 F
Weather:	Cloudy

Observation Location: Wall reinforcing from C.4/2.6 to D/3 & B.2/1 to E/1.5

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☐	☒	☒	☐	See note below
Embed/Anchors	☒	☐	☐	☐	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	

Notes:
Follow-up visit to 5-4-11. Additional bars had been added in vicinity of E1. Crews in process of correcting cover at 2.6 line and 1 line between B.2 and C.4. All to be completed prior to placement.

Signed: Dan S. Burne, P.E.

BECKER
STRUCTURAL ENGINEERS

03300

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	5/10/2011
Time:	1:00 PM
Temp:	50 F
Weather:	Cloudy/Drizzle

Observation Location: Footing reinforcing from A/4 to C/6 including wall on line 5.7

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☒	☐	☐	☐	
Embed/Anchors	☒	☐	☐	☐	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	

Notes:

Signed: Nathan R. Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

03300

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	5/13/2011
Time:	9:30 AM
Temp:	60 degrees
Weather:	Sunny

Observation Location: Observed the foundation wall reinforcement between grids A/4 and A5.7, and the reinforcement in the adjacent stairway walls.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☒	☐	☐	☐	
Embed/Anchors	☒	☐	☐	☐	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	

Notes:
The size, spacing and placement of the reinforcement was observed to be in conformance with the structural drawings.

Signed: Chris Williams, E.I.

BECKER
STRUCTURAL ENGINEERS

03300

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	5/31/2011
Time:	11:30 AM
Temp:	75 degrees
Weather:	Sunny

Observation Location: Observed the exterior footing reinforcement between grids E/2 to D/5, and the footing reinforcement between grids D/3 and D/4.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☒	☐	☐	☐	
Embed/Anchors	☒	☐	☐	☐	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	

Notes:

Signed: Nathan R. Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	6/3/2011
Time:	11:30 AM
Temp:	65 degrees
Weather:	Sunny

Observation Location: Observed the grade beam reinf between grid D/5 and E/5.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☒	☐	☐	☐	
Embed/Anchors	☒	☐	☐	☐	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	

Notes:

Signed: Nathan R. Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

03300

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	6/6/2011
Time:	11:30 AM
Temp:	70 degrees
Weather:	Sunny

Observation Location: Observed wall/pier reinforcement from grid E/2 to E/5 and D/3 to D/4.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☐	☒	☐	☐	See notes below
Embed/Anchors	☒	☐	☐	☐	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☐	☒	☐	☐	See notes below
Additional Items	☐	☐	☐	☒	

Notes:
Insufficient cover was noted at many locations. At time of visit, anchor bolts at steel base plate locations was not in place, nor were keyway bondouts for shear lugs. Vertical dowels for CMU and anchor bolts for sill plate were also observed omitted at many locations. G/C was made aware of these comments and locations and G/C intends to incorporate comments prior to placement.

Signed: Nathan R. Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

03300

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	6/21/2011
Time:	10:00 AM
Temp:	75 degrees
Weather:	Sunny

Observation Location: Footings / vertical pier reinf at B4, B5

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☐	☒	☐	☐	See notes below
Embed/Anchors	☒	☐	☐	☐	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☐	☒	☐	☐	See notes below
Additional Items	☐	☐	☐	☒	

Notes:
Bar at both footings observed to be supported off clay brick. Notified foreman and GC that clay brick to be replaced with supports of steel/concrete/stone. Observed one side of B4 to have insufficient bottom cover. All to be corrected prior to placement. Our office also notified that anchor rod groups at E2, E2.5, E3, E3.5, and E4, all were placed 2 1/2" off grid toward the southeast. BSE to determine repair and issue directive.

Signed: Dan S. Burne, P.E.

BECKER
STRUCTURAL ENGINEERS

03300

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	6/28/2011
Time:	2:00 PM
Temp:	75 degrees
Weather:	Sunny

Observation Location: Footings E/5 to C/6

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☒	☐	☐	☐	
Embed/Anchors	☒	☐	☐	☐	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☒	☐	☐	☐	
Additional Items	☐	☐	☐	☒	

Notes:

Signed: Nathan R. Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT
Cast in Place Concrete

Date:	6/30/2011
Time:	2:00 PM
Temp:	75 degrees
Weather:	Sunny

Observation Location: Wall Reinforcing E/5 to C/6

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☒	☐	☐	☐	
Embed/Anchors	☒	☐	☐	☐	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☒	☐	☐	☐	
Additional Items	☐	☐	☐	☒	

Notes:

Signed: Nathan R. Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

OBSERVATION REPORT

Cast in Place Concrete

Date:	7/19/2011
Time:	7:30 AM
Temp:	70 degrees
Weather:	Sunny, Humid

Observation Location: Elevated slab on metal deck

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☒	☐	☐	☐	
Embed/Anchors	☒	☐	☐	☐	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
Bond Beams	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	

Notes:

Signed: Nathan R. Merrill, P.E.

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: AVESTA OAK STREET, LP
General Contractor:
Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 4/22/2011 **Time Cast:** 2:10 **Date Received:** 4/23/2011

Placement Location: LINES E/1.9 - E/1, E/1 - A.1/1. A.1/1 - A.1/2.6,B/2 - B/2.6, PIER FOOTING: D/12

Placement Method: PUMP
Cylinders Made By: TDA
Placement Vol. (yd^3): 27
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (ºF) **Maximum (ºF)**

DELIVERY INFORMATION

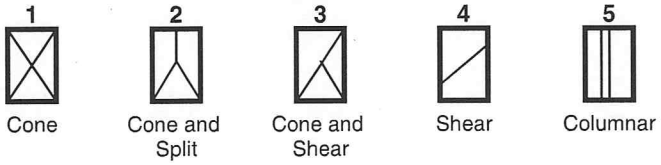
Admixtures: MRWR

TEST RESULTS

Slump (in) (C-143):
Slump WR: 5.5
Air Content (%) (C-231):
Air WR: 6
Air Temp (ºF): 57
Conc. Temp (ºF) (C-1064): 65
Load Number: 1
Mixer Number: 16
Ticket Number: 0024897
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)**
247-1A		4.00	12.57	4/29/2011	Lab	**7**	4	45.6	**3630**
247-1B		4.00	12.57	4/29/2011	Lab	**7**	4	43.9	**3490**
247-1C		4.00	12.57	5/20/2011	Lab	**28**	4	58.6	**4660**
247-1D		4.00	12.57	5/20/2011	Lab	**28**	4	61.3	**4880**
247-1E				Hold	Lab				

Fracture Types



Remarks:

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Project Number: 10-1360

Client: AVESTA OAK STREET, LP

Client Contract Number:

General Contractor:

Concrete Supplier: FREDERICK MEYER III MASONRY

PLACEMENT INFORMATION

Date Cast: 4/25/2011 **Time Cast:** 3:20 **Date Received:**

Placement Location: ALONG B2 TO 2.4 FOOTER
FOOT FOR ELEVATOR PIT PIER AT C4 & 2.6 FOOTER

Placement Method: CHUTE

Placement Vol. (yd³): 8

Cylinders Made By: TA

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (ºF) **Maximum (ºF)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500 MRWR
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4.5

Air Content (%) (C-231): **Air WR:** 5

Air Temp (ºF): 51

Conc. Temp (ºF) (C-1064): 60

Load Number: 1

Mixer Number: 8

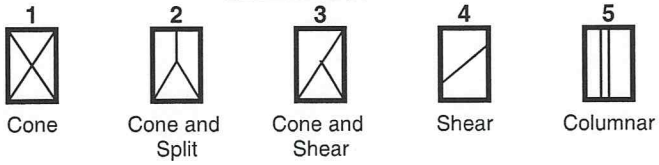
Ticket Number: 0024921

Cubic Yards: 8

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)**
247-2A		4.00	12.57	5/2/2011	Lab	**7**	4	46.0	**3660**
247-2B		4.00	12.57	5/23/2011	Lab	**28**	4	61.7	**4910**
247-2C		4.00	12.57	5/23/2011	Lab	**28**	4	65.9	**5250**
247-2D				Hold	Lab				

Fracture Types



Remarks:

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360

Client: AVESTA OAK STREET, LP
Client Contract Number:

General Contractor:
Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 4/29/2011 **Time Cast:** 2:40 **Date Received:**

Placement Location: STAIR 1 ELEVATOR MECHINE ROOM, ELEVATOR PIT, A LINE 2.6 TO 4

Placement Method: PUMP
Cylinders Made By: CT

Placement Vol. (yd^3): 20
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MIDRANGE

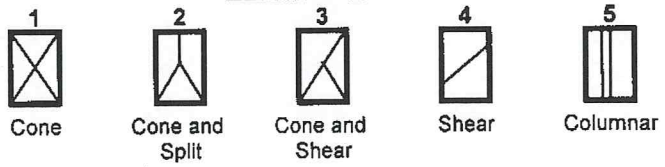
TEST RESULTS

Slump (in) (C-143): 5
Air Content (%) (C-231): **Air WR:** 4.8
Air Temp (°F):
Conc. Temp (°F) (C-1064): 71

Load Number: 1
Mixer Number: 15
Ticket Number: 24936
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)**
247-3A		4.00	12.57	5/6/2011	Lab	**7**	4	44.4	**3530**
247-3B		4.00	12.57	5/27/2011	Lab	**28**	4	61.5	**4900**
247-3C		4.00	12.57	5/27/2011	Lab	**28**	4	56.1	**4470**
247-3D				Hold	Lab				

Fracture Types



Remarks:

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: AVESTA OAK STREET, LP
General Contractor:
Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 5/2/2011 **Time Cast:** 3:50 **Date Received:** 5/3/2011
Placement Location: FOOTINGS: D3 EAST D LINE & SOUTH ON 2.6 LINE TO ELEVATOR

Placement Method: TAILGATE
Cylinders Made By: CT
Placement Vol. (yd³): 10
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures
Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

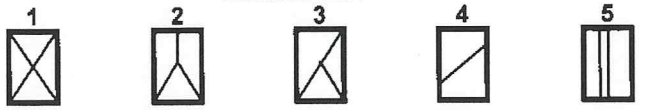
Admixtures: MIDRANGE

TEST RESULTS

Slump (in) (C-143): 5
Air Content (%) (C-231): 5.4
Air Temp (°F): 55
Conc. Temp (°F) (C-1064): 68
Load Number: 1
Mixer Number:
Ticket Number: 23952
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)**
247-4A		4.00	12.57	5/9/2011	Lab	**7**	4	56.0	**4460**
247-4B		4.00	12.57	5/31/2011	Lab	**29**	4	69.1	**5500**
247-4C		4.00	12.57	5/31/2011	Lab	**29**	4	73.0	**5810**
247-4D				Hold	Lab				

Fracture Types



Remarks: DUE TO THE HOLIDAY ON MONDAY TESTING WAS DONE ON TUESDAY

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: AVESTA OAK STREET, LP
General Contractor:
Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 5/3/2011 **Time Cast:** 3:37 **Date Received:** 5/4/2011

Placement Location: PIER FOOTING B-3, FOOTING LINE 3, A + B
FOOTING: A.1, 2.6 TO 3 FOOTING: B, 2.6 TO 3

Placement Method: DIRECT DISCHARGE
Placement Vol. (yd^3): 8
Cylinders Made By: VLT
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MRWR

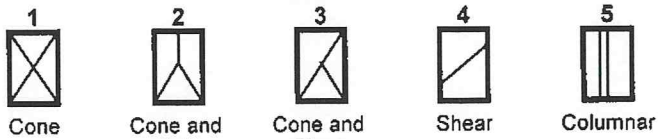
TEST RESULTS

Slump (in) (C-143): **Slump WR:** 3 3/4
Air Content (%) (C-231): **Air WR:** 4.8
Air Temp (°F): 53
Conc. Temp (°F) (C-1064): 65

Load Number: 1
Mixer Number: 13
Ticket Number: 023964
Cubic Yards: 8
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)
247-5A		4.00	12.57	5/10/2011	Lab	**7**	4	46.7	**3720**
247-5B		4.00	12.57	5/31/2011	Lab	**28**	4	65.3	**5200**
247-5C		4.00	12.57	5/31/2011	Lab	**28**	4	69.7	**5550**
247-5D				Hold	Lab				

Fracture Types



Remarks:

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Project Number: 10-1360

Client: Avesta Oak Street LP

Client Contract Number:

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 5/5/2011 **Time Cast:** 10:35 **Date Received:** 5/6/2011

Placement Location: FOUNDATION WALL ALONG 1 LINE A.1-E, ALONG A.1, 1-2 , ALONG E, 1-2, ALONG 2.6, B.2-D, A.1- 2.6-3

Placement Method: PUMP

Placement Vol. (yd³): 20

Cylinders Made By:

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (ºF) **Maximum (ºF)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500 MRWR
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5

Air Content (%) (C-231): **Air WR:** 5.8

Air Temp (ºF): 48

Conc. Temp (ºF) (C-1064): 62

Load Number: 2

Mixer Number: 13

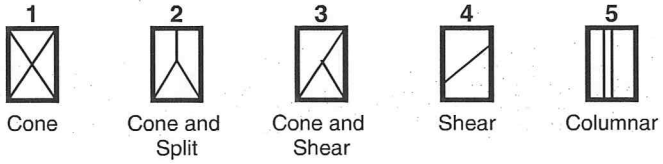
Ticket Number 0024945

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)**
247-6A		4.00	12.57	5/12/2011	Lab	**7**	4	44.6	**3550**
247-6B		4.00	12.57	6/2/2011	Lab	**28**	4	52.9	**4210**
247-6C		4.00	12.57	6/2/2011	Lab	**28**	4	59.3	**4720**
247-6D				Hold	Lab				

Fracture Types



Remarks:

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360

Client: AVESTA OAK STREET, LP
Client Contract Number:

General Contractor:
Concrete Supplier:

PLACEMENT INFORMATION

Date Cast: 5/10/2011 **Time Cast:** 2:00 **Date Received:**

Placement Location: NORTH AND EAST SIDE FOOTINGS

Placement Method: CHUTE
Placement Vol. (yd^3): 14

Cylinders Made By: ARM
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MIDRANGE

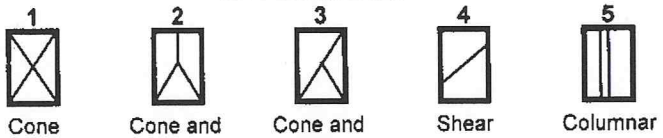
TEST RESULTS

Slump (in) (C-143): 4
Air Content (%) (C-231): 5.1
Air Temp (°F): 52
Conc. Temp (°F) (C-1064): 65

Load Number: 1
Mixer Number: 13
Ticket Number: 0024957
Cubic Yards: 7
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)
247-7A		4.00	12.57	5/17/2011	Lab	**7**	4	53.3	**4240**
247-7B		4.00	12.57	6/7/2011	Lab	**28**	4	63.8	**5080**
247-7C		4.00	12.57	6/7/2011	Lab	**28**	4	61.0	**4860**
247-7D				Hold	Lab				

Fracture Types



Remarks:

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: AVESTA OAK STREET, LP
General Contractor:
Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 5/13/2011 **Time Cast:** 11:10 **Date Received:** 5/16/2011
Placement Location: WALLS@ LINES A/4-A/5.7, A/5.7-C/5.7, A/6-C/6, A.05/5.7-A.05/6, C/5.7-C/6

Placement Method: DIRECT
Cylinders Made By: TDA
Placement Vol. (yd^3): 20
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures
Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

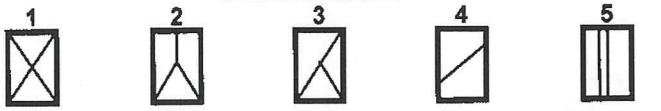
Admixtures: MRWR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5
Air Content (%) (C-231): **Air WR:** 5.8
Air Temp (°F): 63
Conc. Temp (°F) (C-1064): 65
Load Number: 1
Mixer Number: 3
Ticket Number: 24978
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)
247-8A		4.00	12.57	5/20/2011	Lab	**7**	4	43.1	**3430**
247-8B		4.00	12.57	6/10/2011	Lab	**28**	4	58.1	**4620**
247-8C		4.00	12.57	6/10/2011	Lab	**28**	4	66.4	**5280**
247-8D				Hold	Lab				

Fracture Types



Remarks:

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360

Client: AVESTA OAK STREET, LP
Client Contract Number:

General Contractor:
Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 5/24/2011 **Time Cast:** 1:05 **Date Received:** 5/26/2011

Placement Location: IN GROUND ADJACENT TO OAK STREET. USED AS FILL, NO REBAR USED

Placement Method: DIRECT DISCHARGE
Placement Vol. (yd³): 50

Cylinders Made By: MAP
Aggregate Size (in): SAND

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

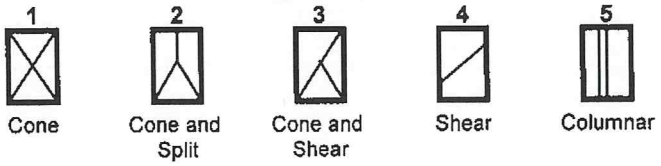
TEST RESULTS

Slump (in) (C-143): **Slump WR:** 8
Air Content (%) (C-231):
Air Temp (°F): 75
Conc. Temp (°F) (C-1064): 67

Load Number: 2
Mixer Number: 15
Ticket Number: 0025005
Cubic Yards: 10
Design (psi):

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)
247-9A		4.00	12.57	5/26/2011	Lab	2	4	0.6	50
247-9B		4.00	12.57	5/26/2011	Lab	2	4	0.5	40
247-9C				Hold	Lab				
247-9D				Hold	Lab				
247-9E				Hold	Lab				
247-9F				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, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: AVESTA OAK STREET, LP
General Contractor:
Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 5/31/2011 **Time Cast:** 7:50 **Date Received:** 6/1/2011
Placement Location: E1 - E5 EAST SIDE FOOTINGS

Placement Method: PUMP (NE)
Cylinders Made By: ARM
Placement Vol. (yd³): 48
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM - MIDRANGE

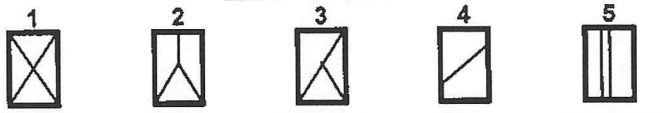
TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5
Air Content (%) (C-231): **Air WR:** 3.8
Air Temp (°F): 75
Conc. Temp (°F) (C-1064): 76

Load Number: 1
Mixer Number: 3
Ticket Number: 0025014
Cubic Yards: 8
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)
247-11A		4.00	12.57	6/7/2011	Lab	**7**	4	51.4	**4090**
247-11B		4.00	12.57	6/28/2011	Lab	**28**	4	67.2	**5350**
247-11C		4.00	12.57	6/28/2011	Lab	**28**	4	68.0	**5410**
247-11D				Hold	Lab				

Fracture Types



Remarks:

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: Avesta Oak Street LP
General Contractor:
Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 6/3/2011 **Time Cast:** 12:45 **Date Received:** 6/6/2011
Placement Location: GB ON 5 LINE
Placement Method: TAILGATE
Placement Vol. (yd³): 5
Cylinders Made By: TEAGUE ADAMS
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures
Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

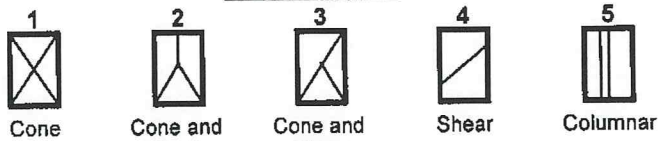
Admixtures: GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5
Air Content (%) (C-231):
Air Temp (°F): 54
Conc. Temp (°F) (C-1064): 72
Load Number: 1
Mixer Number: 3
Ticket Number: 0224195
Cubic Yards: 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)
247-15A		4.00	12.57	6/10/2011	Lab	**7**	4	39.2	**3120**
247-15B		4.00	12.57	7/1/2011	Lab	**28**	4	47.8	**3800**
247-15C		4.00	12.57	7/1/2011	Lab	**28**	4	47.4	**3770**
247-15D				Hold	Lab				

Fracture Types



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

Remarks:

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: Avesta Oak Street LP
General Contractor:
Concrete Supplier: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 6/6/2011 **Time Cast:** 8:15 **Date Received:** 6/7/2011
Placement Location: 25TH COURSE
Placement Method: BUCKET
Placement Vol. (yd³):
Cylinders Made By: SAMUEL CHRISTY
Aggregate Size (in):

INITIAL CURING CONDITIONS

Temperatures
Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

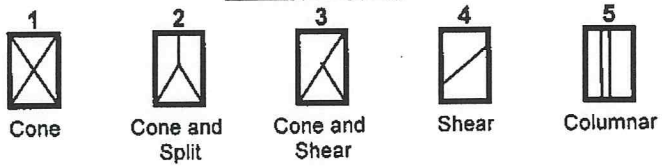
Admixtures:

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6
Air Content (%) (C-231):
Air Temp (°F): 63
Conc. Temp (°F) (C-1064): 67
Load Number:
Mixer Number:
Ticket Number:
Cubic Yards:
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)
247-16A		4.00	12.57	6/13/2011	Lab	7	4	41.4	3300
247-16B		4.00	12.57	7/4/2011	Lab	28	4	53.6	4270
247-16C		4.00	12.57	7/4/2011	Lab	28	4	52.8	4200
247-16D				8/1/2011	Lab	56			

Fracture Types



Remarks: MIX 303 F
GROUT

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: Avesta Oak Street LP
General Contractor:
Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 6/6/2011 **Time Cast:** 2:15 **Date Received:** 6/7/2011
Placement Location: E2-E5, D LINE, OUTSIDE WALL

Placement Method: PUMP (NE)
Placement Vol. (yd³): 33
Cylinders Made By: MATTHEW PALMER
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MID RANGE

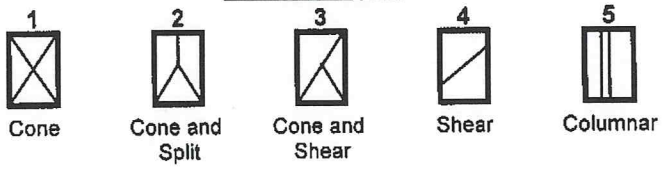
TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 3/4
Air Content (%) (C-231): **Air WR:** 5.9
Air Temp (°F): 77
Conc. Temp (°F) (C-1064): 75

Load Number: 2
Mixer Number: 10
Ticket Number: 0025022
Cubic Yards: 8.5
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)
247-17A		4.00	12.57	6/13/2011	Lab	**7**	4	41.2	**3280**
247-17B		4.00	12.57	7/4/2011	Lab	**28**	4	59.4	**4730**
247-17C		4.00	12.57	7/4/2011	Lab	**28**	4	59.4	**4730**
247-17D				Hold	Lab				

Fracture Types



Remarks:

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: Avesta Oak Street LP
General Contractor:
Concrete Supplier: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 6/17/2011 **Time Cast:** 2:30 **Date Received:**
Placement Location: 12-20
Placement Method: BUCKET
Placement Vol. (yd³):
Cylinders Made By: ANDREW MYERS
Aggregate Size (in): SAND

INITIAL CURING CONDITIONS

Temperatures
Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

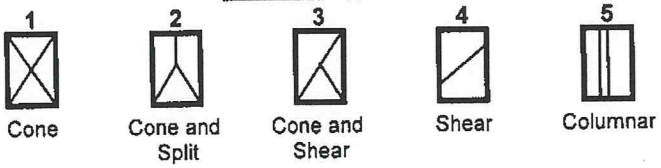
Admixtures:

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4
Air Content (%) (C-231):
Air Temp (°F): 76
Conc. Temp (°F) (C-1064): 76
Load Number:
Mixer Number:
Ticket Number:
Cubic Yards:
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)
247-21A		4.00	12.57	6/24/2011	Lab	7	4	45.5	3620
247-21B		4.00	12.57	7/15/2011	Lab	28	4	60.3	4800
247-21C		4.00	12.57	7/15/2011	Lab	28	4	59.5	4740
247-21D				Hold	Lab				

Fracture Types



Remarks: GROUT

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

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: Avesta Oak Street LP
General Contractor:
Concrete Supplier:

PLACEMENT INFORMATION

Date Cast: 6/21/2011 **Time Cast:** 1:10 **Date Received:** 6/22/2011
Placement Location: 2 FOOTINGS ON BACK SIDE OF BUILDING
Placement Method:
Cylinders Made By: MATTHEW PALMER
Placement Vol. (yd³): 13
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures
Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

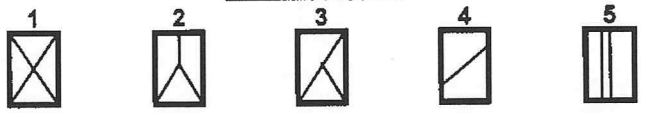
Admixtures: MID RANGE AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 3.5
Air Content (%) (C-231): **Air WR:** 6.0
Air Temp (°F): 80
Conc. Temp (°F) (C-1064): 77
Load Number: 1
Mixer Number: 16
Ticket Number: 0025031
Cubic Yards: 6.5
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)
247-26A		4.00	12.57	6/28/2011	Lab	**7**	4	48.0	**3820**
247-26B		4.00	12.57	7/19/2011	Lab	**28**	4	61.0	**4860**
247-26C		4.00	12.57	7/19/2011	Lab	**28**	4	59.1	**4700**
247-26D				Hold	Lab				

Fracture Types



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

Remarks:

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

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360

Client: Avesta Oak Street LP
Client Contract Number:

General Contractor:
Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 6/22/2011 **Time Cast:** 9:00 **Date Received:**

Placement Location: GALLERY UNDERSLAB

Placement Method: PUMP (NE)
Placement Vol. (yd³):

Cylinders Made By: ANDREW MYERS
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: FIBER
MIDRANGE
BARRIER 1

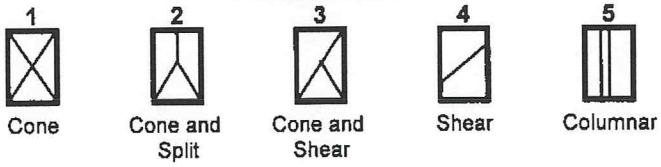
TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6
Air Content (%) (C-231): **Air WR:** 2.8
Air Temp (°F): 68
Conc. Temp (°F) (C-1064): 75

Load Number: 2
Mixer Number: 17
Ticket Number: 0025033
Cubic Yards: 8.5
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)
247-27A		4.00	12.57	6/29/2011	Lab	**7**	4	48.6	**3870**
247-27B		4.00	12.57	7/20/2011	Lab	**28**	4	69.6	**5540**
247-27C		4.00	12.57	7/20/2011	Lab	**28**	4	71.3	**5670**
247-27D				Hold	Lab				

Fracture Types



Remarks:

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360

Client: Avesta Oak Street LP
Client Contract Number:

General Contractor:
Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 6/22/2011 **Time Cast:**
Date Received:

Placement Location: PIERS NEXT TO EXISTING BUILDING

Placement Method:
Placement Vol. (yd^3):

Cylinders Made By:
Aggregate Size (in): 3/4

*** Test Cylinders Not Made By S. W. Cole Personnel**

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143):
Load Number:

Air Content (%) (C-231):
Mixer Number:

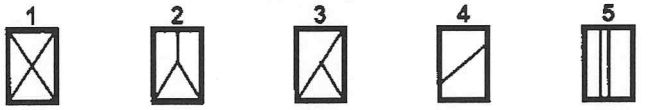
Air Temp (°F):
Ticket Number:

Conc. Temp (°F) (C-1064):
Cubic Yards:

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)
247-30A		4.00	12.57	6/29/2011	Lab	**7**	4	46.4	**3690**
247-30B		4.00	12.57	7/20/2011	Lab	**28**	4	65.6	**5220**
247-30C		4.00	12.57	7/20/2011	Lab	**28**	4	63.2	**5030**
247-30D				Hold	Lab				

Fracture Types



Remarks:

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: Avesta Oak Street LP
General Contractor:
Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 6/28/2011 **Time Cast:** 3:30 **Date Received:** 6/29/2011
Placement Location: E5 - C6 NORTH CORNER
Placement Method: TAILGATE, EXCAVATOR BUCKET
Placement Vol. (yd³):
Cylinders Made By: ANDREW MYERS
Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures
Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

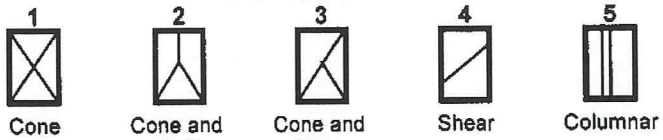
Admixtures: MIDRANGE

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4.5
Air Content (%) (C-231): **Air WR:** 6.0
Air Temp (°F): 80
Conc. Temp (°F) (C-1064): 81
Load Number: 1
Mixer Number: 13
Ticket Number: 025038
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)
247-35A		4.00	12.57	7/5/2011	Lab	**7**	4	52.4	**4170**
247-35B		4.00	12.57	7/26/2011	Lab	**28**	4	64.0	**5090**
247-35C		4.00	12.57	7/26/2011	Lab	**28**	4	63.4	**5050**
247-35D				Hold	Lab				

Fracture Types



Remarks:

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Oak Street Housing - Materials Testing

Project Number: 10-1360

Client Contract Number:

Client: Avesta Oak Street LP

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 6/30/2011 **Time Cast:** 4:50 **Date Received:** 7/1/2011

Placement Location: E5 - C6
NE CORNER - EXTERIOR/INTERIOR WALLS

Placement Method: REAR DISCHARGE

Placement Vol. (yd³): 17

Cylinders Made By: MATTHEW PALMER

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MIDRANGE

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 1/4

Air Content (%) (C-231): **Air WR:** 5.7

Air Temp (°F): 79

Conc. Temp (°F) (C-1064): 77

Load Number: 2

Mixer Number: 17

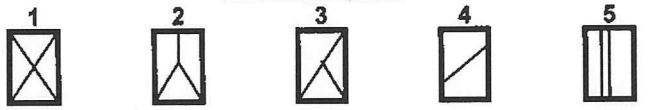
Ticket Number: 0025055

Cubic Yards: 8.5

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)
247-36A		4.00	12.57	7/7/2011	Lab	**7**	4	46.2	**3680**
247-36B		4.00	12.57	7/28/2011	Lab	**28**	4	60.7	**4830**
247-36C		4.00	12.57	7/28/2011	Lab	**28**	4	60.7	**4830**
247-36D				Hold	Lab				

Fracture Types



Remarks:

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Oak Street Housing - Materials Testing

Project Number: 10-1360

Client Contract Number:

Client: Avesta Oak Street LP

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 7/19/2011 **Time Cast:** 9:50 **Date Received:** 7/20/2011

Placement Location: 2ND FLOOR SLAB ALONG OAK STREET

Placement Method: PUMP (NE)

Placement Vol. (yd³): 100

Cylinders Made By: JUSTIN BROWN

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MID RANGE
BARRIER 1

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6 3/4

Air Content (%) (C-231): **Air WR:** 2.4

Air Temp (°F): 85

Conc. Temp (°F) (C-1064): 78

Load Number: 5

Mixer Number: 13

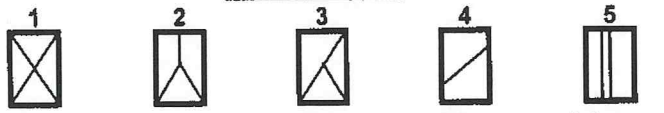
Ticket Number: 0025108

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)
247-37A		4.00	12.57	7/26/2011	Lab	**7**	4	63.0	**5010**
247-37B		4.00	12.57	8/16/2011	Lab	**28**	4	70.6	**5620**
247-37C		4.00	12.57	8/16/2011	Lab	**28**	4	77.2	**6140**
247-37D				Hold	Lab				

Fracture Types



Remarks:

S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Oak Street Housing - Materials Testing

Project Number: 10-1360

Client Contract Number:

Client: Avesta Oak Street LP

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 7/19/2011 **Time Cast:** 12:15 **Date Received:** 7/20/2011

Placement Location: 2ND FLOOR SLAB ALONG OAK STREET

Placement Method: PUMP (NE)

Placement Vol. (yd³): 100

Cylinders Made By: JUSTIN BROWN

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MIDRANGE
BARRIER 1

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5

Air Content (%) (C-231): **Air WR:** 2.4

Air Temp (°F): 92

Conc. Temp (°F) (C-1064): 78

Load Number: 9

Mixer Number: 13

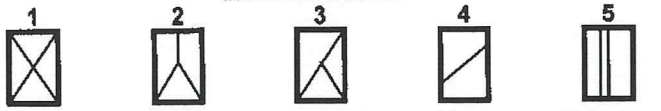
Ticket Number: 0025112

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)
247-38A		4.00	12.57	7/26/2011	Lab	**7**	4	61.4	**4890**
247-38B		4.00	12.57	8/16/2011	Lab	**28**	4	68.9	**5480**
247-38C		4.00	12.57	8/16/2011	Lab	**28**	4	71.7	**5710**
247-38D				Hold	Lab				

Fracture Types



Remarks:

Structural Schedule of Special Inspections – Exhibit B

MASONRY CONSTRUCTION – LEVEL 1 (NON-ESSENTIAL FACILITY)

VERIFICATION AND INSPECTION IBC Section 1704.5	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
1. As masonry construction begins, the following shall be verified to ensure compliance:						
a. Proportions of site-prepared mortar.	Y	P	ACI530.1, 2.6A	TA-1	PE, EIT, ACI-CCI or ICC-SMSI	5/27 THRU 8/3
b. Construction of mortar joints.	Y	P	ACI530.1, 3.3B	TA-1	PE, EIT, ACI-CCI or ICC-SMSI	5/27 THRU 8/3
c. Location of reinforcement and connectors.	Y	P	ACI530.1, 3.4, 3.6A	TA-1	PE, EIT, ACI-CCI or ICC-SMSI	5/27 THRU 8/3
d. Prestressing technique.	N	P	ACI530.1, 3.6B	-	PE/SE or EIT	———
e. Grade and size of prestressing tendons and anchorages.	N	P	ACI530.1, 2.4B, 2.4H	-	PE/SE or EIT	———
2. The inspection program shall verify:						
a. Size and location of structural elements.	Y	P	ACI530.1, 3.3G	SI-1	PE/SE or EIT	5/27 THRU 8/3
b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.	Y	P	ACI530, 1.2.2(e), 2.1.4, 3.1.6	SI-1	PE/SE or EIT	5/27 THRU 8/3
c. Specified size, grade and type of reinforcement.	Y	P	ACI530, 1.12, ACI530.1, 2.4, 3.4	TA-1	PE, EIT, ACI-CCI or ICC-SMSI	5/27 THRU 8/3
d. Welding of reinforcing bars.	N	N/A	AC530, 2.1.10.6.2, 3.2..4 (b)	--	AWS-CWI	———
e. Protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F).	Y	P	IBC 2104.3, 2104.4; ACI530.1, 1.8C, 1.8D	TA-1	PE, EIT, ACI-CCI or ICC-SMSI	5/27 THRU 8/3
f. Application and measurement of prestressing force.	N	N/A	ACI530.1, 3.6B	--	PE/SE or EIT	———
3. Prior to grouting, the following shall be verified to ensure compliance:						
a. Grout space is clean.	Y	P	ACI530.1, 3.2D	TA-1	PE, EIT, ACI-CCI or ICC-SMSI	5/27 THRU 8/3
b. Placement of reinforcement and connectors and prestressing tendons and anchorages.	Y	P	ACI530, 1.12, ACI530.1, 3.4	TA-1	PE, EIT, ACI-CCI or ICC-SMSI	5/27 THRU 8/3
c. Proportions of site-prepared grout and prestressing grout for bonded tendons.	Y	P	ACI530.1, 2.6B	TA-1	PE, EIT, ACI-CCI or ICC-SMSI	5/27 THRU 8/3
d. Construction of mortar joints.	Y	P	ACI530.1, 3.3B	TA-1	PE, EIT, ACI-CCI or ICC-SMSI	5/27 THRU 8/3
4. Grout placement shall be verified to ensure compliance with code and construction document provisions.	Y	P	ACI530.1, 3.5	TA-1	PE, EIT, ACI-CCI or ICC-SMSI	5/27 THRU 8/3
a. Grouting of prestressing bonded tendons.	N	C	ACI530.1, 3.6C	-	PE/SE or EIT	———
5. Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.	Y	P	IBC 2105.2.2, 2105.3; ACI530.1, I.4	TA-1	PE, EIT, ACI-CCI or ICC-SMSI	5/27 THRU 8/3
6. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.	Y	P	ACI530.1, 1.5	SI-1**	PE/SE or EIT	5/27 THRU 8/3

**Becker Structural Engineers will provide as a part of our Basic Service

BECKER
STRUCTURAL ENGINEERS

04230

OBSERVATION REPORT

CMU

Date:	5-27-11
Time:	2:30pm
Temp:	65F
Weather:	Sunny

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

Observation Location: Stair and elevator shafts (first lift)

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☐	☐	☒	☐	
Quantity	☐	☐	☒	☐	
Condition	☒	☐	☐	☐	
Placement	☐	☐	☒	☐	
Embed/Anchors	☐	☐	☒	☐	
Lap Splices	☐	☐	☒	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
CMU Size	☒	☐	☐	☐	
Layout/Fit-up/Plumbness	☒	☐	☐	☐	
Mortar/Grouting Procedure	☐	☐	☒	☐	
Lift Height	☒	☐	☐	☐	
Clean Outs	☐	☐	☐	☒	
Bond Beams	☐	☐	☒	☐	
Additional Items	☐	☐	☐	☒	

Notes:
Follow-up visit to be performed prior to placement on 5/31/11

Signed: Nathan R. Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

04230

OBSERVATION REPORT

CMU

Date:	5-31-11
Time:	11:30am
Temp:	75F
Weather:	Sunny

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

Observation Location: Stair and elevator shafts (first lift)

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	☒	☐	☐	☐	
Quantity	☒	☐	☐	☐	
Condition	☒	☐	☐	☐	
Placement	☒	☐	☐	☐	
Embed/Anchors	☒	☐	☐	☐	
Lap Splices	☒	☐	☐	☐	
Hot Weather	☐	☐	☐	☒	
Cold Weather	☐	☐	☐	☒	
CMU Size	☒	☐	☐	☐	
Layout/Fit-up/Plumbness	☒	☐	☐	☐	
Mortar/Grouting Procedure	☒	☐	☐	☐	
Lift Height	☒	☐	☐	☐	
Clean Outs	☐	☐	☐	☒	
Bond Beams	☒	☐	☐	☐	
Additional Items	☐	☐	☐	☒	

Notes:

Signed: Nathan R. Merrill, P.E.

S.W.COLE ENGINEERING, INC.

Report of Grout Compressive Strength

ASTM C109

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: AVESTA OAK STREET, LP
General Contractor:
Supplier: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 5/31/2011 **Time Cast:** 12:00
Date Received: 6/1/2011
Placement Location: 4' ON STAIRWAY
6' ON ELEVATOR
Placement Method: 5 GAL BUCKET
Placement Vol. (yd³): 3
Cylinders Made By: ARM
Aggregate Size (in): SAND

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143):
Air Temp (°F): 77
Grout Temp (°F) (C-1064): 80
Batch Number:
Mixer Number:
Ticket Number:
Design (psi): 3000

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-10A	10.56	6/7/2011	7	45.4	4300
247-10B	10.56	6/28/2011	28	53.0	5020
247-10C	10.56	6/28/2011	28	59.3	5610
247-10D					

Remarks:

S.W.COLE ENGINEERING, INC.

Report of Grout Compressive Strength

ASTM C109

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: AVESTA OAK STREET, LP
General Contractor:
Supplier: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 6/1/2011 **Time Cast:** 2:25
Date Received: 6/2/2011
Placement Location: 1ST ELEVATION FOR LANDING
Placement Method: BUCKET
Placement Vol. (yd³):
Cylinders Made By: ARM
Aggregate Size (in): SAND

INITIAL CURING CONDITIONS

Temperatures
Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143):
Air Temp (°F): 70
Grout Temp (°F) (C-1064): 79
Batch Number:
Mixer Number:
Ticket Number:
Design (psi): 3000

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-12A	10.56	6/8/2011	7	48.9	4630
247-12B	11.38	6/29/2011	28	58.2	5120
247-12C	10.56	6/29/2011	28	57.1	5410
247-12D					

Remarks:

S.W.COLE ENGINEERING, INC.

Report of Mortar Compressive Strength

ASTM C109

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: AVESTA OAK STREET, LP
General Contractor:
Masonry Contractor: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 6/1/2011 **Time Cast:** 2:00 **Date Received:** 6/2/2011
Placement Location: FOUNDATION TO 64"

Batch Method: BUCKET **Product Manufacturer:** QUIKRETE
Specimens Made By: ARM **Aggregate:** SAND

INITIAL CURING CONDITIONS

Min. Temp (°F) **Max. Temp (°F)**

MIX INFORMATION

Mortar Type: S
Admixtures:

TEST RESULTS

Air Temp (°F): 70
Mortar Temp (°F) (C-1064) 74
Ambient RH (%):
Flow Cone (%):

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-13A	4.00	6/8/2011	7	5.4	1350
247-13B	4.00	6/8/2011	7	5.3	1320
247-13C	4.00	6/8/2011	7	6.1	1520
247-13D	4.00	6/29/2011	28	6.6	1650
247-13E	4.00	6/29/2011	28	6.4	1600
247-13F	4.00	6/29/2011	28	6.8	1700

Remarks:

Note: ASTM C270 specifies mortar testing under laboratory conditions only for acceptance of mortar mixes under the property specification. Field sampling and testing of mortar is conducted under ASTM C780 and is used to verify consistency of materials and procedures, not mortar strength.

S.W.COLE ENGINEERING, INC.

Report of Mortar Compressive Strength

ASTM C109

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: Avesta Oak Street LP
General Contractor:
Masonry Contractor: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 6/2/2011 **Time Cast:** 1:00 **Date Received:** 6/3/2011
Placement Location: 8' TO 12' ON ELEVATOR AND STAIRWELL

Batch Method: BUCKET
Product Manufacturer: QUIKRETE
Specimens Made By: ANDREW MYERS
Aggregate: SAND

INITIAL CURING CONDITIONS

Min. Temp (°F) **Max. Temp (°F)**

MIX INFORMATION

Mortar Type:
Admixtures:

TEST RESULTS

Air Temp (°F): 70
Mortar Temp (°F) (C-1064): 73
Ambient RH (%):
Flow Cone (%):

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-14A	4.00	6/9/2011	7	4.5	1120
247-14B	4.00	6/9/2011	7	4.5	1120
247-14C	4.00	6/9/2011	7	4.6	1150
247-14D	4.00	6/30/2011	28	6.3	1580
247-14E	4.00	6/30/2011	28	6.5	1620
247-14F	4.00	6/30/2011	28	5.2	1300

Remarks:

Note: ASTM C270 specifies mortar testing under laboratory conditions only for acceptance of mortar mixes under the property specification. Field sampling and testing of mortar is conducted under ASTM C780 and is used to verify consistency of materials and procedures, not mortar strength.

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S.W.COLE ENGINEERING, INC.

Report of Mortar Compressive Strength

ASTM C109

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Project Number: 10-1360

Client Contract Number:

Client: Avesta Oak Street LP

General Contractor:

Masonry Contractor:

PLACEMENT INFORMATION

Date Cast: 6/13/2011 **Time Cast:**

Date Received: 6/14/2011

Placement Location: 4TH FLOOR BOND BEAM

Batch Method: HAND MIX

Product Manufacturer: QUIKRETE

Specimens Made By: CRAIG TURCOTTE

Aggregate:

INITIAL CURING CONDITIONS

Min. Temp (°F) **Max. Temp (°F)**

MIX INFORMATION

Mortar Type: S

Admixtures:

TEST RESULTS

Air Temp (°F):

Mortar Temp (°F) (C-1064):

Ambient RH (%):

Flow Cone (%):

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-18A	4.00	6/20/2011	7	7.1	1780
247-18B	4.00	6/20/2011	7	5.1	1280
247-18C	4.00	6/20/2011	7	5.5	1380
247-18D	4.00	7/11/2011	28	10.1	2520
247-18E	4.00	7/11/2011	28	10.1	2520
247-18F	4.00	7/11/2011	28	8.6	2150

Remarks:

Note: ASTM C270 specifies mortar testing under laboratory conditions only for acceptance of mortar mixes under the property specification. Field sampling and testing of mortar is conducted under ASTM C780 and is used to verify consistency of materials and procedures, not mortar strength.

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S.W.COLE ENGINEERING, INC.

Report of Grout Specimen Compressive Strength

ASTM C1019

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Project Number: 10-1360

Client Contract Number:

Client: Avesta Oak Street LP

General Contractor:

Supplier: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 6/13/2011 **Time Cast:**

Date Received:

Placement Location: 4TH FLOOR BOND BEAM

Placement Method: HAND MIX

Placement Vol. (yd^3):

Specimen Made By:

Aggregate Size (in): SAND

INITIAL CURING CONDITIONS

Temperatures

Minimum (ºF) **Maximum (ºF)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143):

Air Temp (ºF):

Grout Temp (ºF) (C-1064):

Batch Number:

Mixer Number:

Ticket Number:

Design (psi): **3000**

Specimen Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-19A	10.56	6/20/2011	**7**	54.7	**5180**
247-19B	10.56	7/11/2011	**28**	61.0	**5780**
247-19C	10.56	7/11/2011	**28**	60.5	**5730**
247-19D					

Remarks: GROUT PRISM

S.W.COLE ENGINEERING, INC.

Report of Mortar Compressive Strength

ASTM C109

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Project Number: 10-1360

Client Contract Number:

Client: Avesta Oak Street LP

General Contractor:

Masonry Contractor: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 6/17/2011 **Time Cast:** 2:10 **Date Received:**

Placement Location: 12-22

Batch Method: BUCKET

Product Manufacturer: QUIKRETE

Specimens Made By: ANDREW MYERS

Aggregate: SAND

INITIAL CURING CONDITIONS

Min. Temp (°F) **Max. Temp (°F)**

MIX INFORMATION

Mortar Type:

Admixtures:

TEST RESULTS

Air Temp (°F): 77

Mortar Temp (°F) (C-1064): 76

Ambient RH (%):

Flow Cone (%):

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-20A	4.00	6/24/2011	7	5.5	1380
247-20B	4.00	6/24/2011	7	4.9	1220
247-20C	4.00	6/24/2011	7	4.8	1200
247-20D	4.00	7/15/2011	28	7.7	1920
247-20E	4.00	7/15/2011	28	7.2	1800
247-20F	4.00	7/15/2011	28	6.6	1650

Remarks:

Note: ASTM C270 specifies mortar testing under laboratory conditions only for acceptance of mortar mixes under the property specification. Field sampling and testing of mortar is conducted under ASTM C780 and is used to verify consistency of materials and procedures, not mortar strength.

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S.W.COLE ENGINEERING, INC.

Report of Grout Specimen Compressive Strength

ASTM C1019

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: Avesta Oak Street LP
General Contractor:
Supplier:

PLACEMENT INFORMATION

Date Cast: 6/20/2011 **Time Cast:** 2:40
Date Received: 6/21/2011
Placement Location: NORTH SHEAR WALL NORTH SIDE, 25TH COURSE
Placement Method:
Placement Vol. (yd³):
Specimen Made By: JONATHAN BELL
Aggregate Size (in):

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 7 3/4
Air Temp (°F): 87
Grout Temp (°F) (C-1064): 81
Batch Number:
Mixer Number:
Ticket Number:
Design (psi): 3000

Specimen Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-22A	10.56	6/27/2011	7	40.6	3840
247-22B	10.56	7/18/2011	28	44.0	4170
247-22C	12.25	7/18/2011	28	48.2	3930
247-22D					

Remarks:

S.W.COLE ENGINEERING, INC.

Report of Mortar Compressive Strength

ASTM C109

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Project Number: 10-1360

Client Contract Number:

Client: Avesta Oak Street LP

General Contractor:

Masonry Contractor:

PLACEMENT INFORMATION

Date Cast: 6/20/2011 **Time Cast:** 2:50

Date Received: 6/21/2011

Placement Location: NORTH SHEAR WALL
NORTH SIDE, 25TH COURSE

Batch Method:

Product Manufacturer: QUIKRETE

Specimens Made By: JONATHAN BELL

Aggregate:

INITIAL CURING CONDITIONS

Min. Temp (°F) **Max. Temp (°F)**

MIX INFORMATION

Mortar Type: S

Admixtures:

TEST RESULTS

Air Temp (°F): 87

Mortar Temp (°F) (C-1064): 76

Ambient RH (%):

Flow Cone (%):

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-23A	4.00	6/27/2011	7	3.4	850
247-23B	4.00	6/27/2011	7	2.7	680
247-23C	4.00	6/27/2011	7	3.1	780
247-23D	4.00	7/18/2011	28	4.5	1120
247-23E	4.00	7/18/2011	28	4.2	1050
247-23F	4.00	7/18/2011	28	4.2	1050

Remarks:

Note: ASTM C270 specifies mortar testing under laboratory conditions only for acceptance of mortar mixes under the property specification. Field sampling and testing of mortar is conducted under ASTM C780 and is used to verify consistency of materials and procedures, not mortar strength.

S.W.COLE ENGINEERING, INC.

Report of Grout Compressive Strength

ASTM C109

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: Avesta Oak Street LP
General Contractor:
Supplier:

PLACEMENT INFORMATION

Date Cast: 6/21/2011 **Time Cast:** 2:00 **Date Received:** 6/22/2011
Placement Location: 3RD FLOOR STAIR WALL

Placement Method:
Placement Vol. (yd^3):
Cylinders Made By: MATTHEW PALMER
Aggregate Size (in): SAND

INITIAL CURING CONDITIONS

Temperatures
Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143):
Air Temp (°F):
Grout Temp (°F) (C-1064): 77
Batch Number:
Mixer Number:
Ticket Number:
Design (psi): 2000

Cube Designation	Area($In)^2$	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-24A	12.25	6/28/2011	7	20.5	1670
247-24B	10.56	7/19/2011	28	38.0	3600
247-24C	10.56	7/19/2011	28	37.2	3520
247-24D					

Remarks:

S.W.COLE ENGINEERING, INC.

Report of Mortar Compressive Strength

ASTM C109

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Project Number: 10-1360

Client Contract Number:

Client: Avesta Oak Street LP

General Contractor:

Masonry Contractor:

PLACEMENT INFORMATION

Date Cast: 6/21/2011 **Time Cast:** 2:00

Date Received: 6/22/2011

Placement Location: STAIRWELL - 3RD FLOOR

Batch Method:

Product Manufacturer: QUIKRETE

Specimens Made By: MATTHEW PALMER

Aggregate:

INITIAL CURING CONDITIONS

Min. Temp (°F) **Max. Temp (°F)**

MIX INFORMATION

Mortar Type: S

Admixtures:

TEST RESULTS

Air Temp (°F): 85

Mortar Temp (°F) (C-1064): 77

Ambient RH (%):

Flow Cone (%):

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-25A	4.00	6/28/2011	7	4.5	1120
247-25B	4.00	6/28/2011	7	5.4	1350
247-25C	4.00	6/28/2011	7	4.7	1180
247-25D	4.00	7/19/2011	28	5.8	1450
247-25E	4.00	7/19/2011	28	5.4	1350
247-25F	4.00	7/19/2011	28	5.3	1320

Remarks:

Note: ASTM C270 specifies mortar testing under laboratory conditions only for acceptance of mortar mixes under the property specification. Field sampling and testing of mortar is conducted under ASTM C780 and is used to verify consistency of materials and procedures, not mortar strength.

S.W.COLE ENGINEERING, INC.

Report of Grout Compressive Strength

ASTM C109

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Project Number: 10-1360

Client Contract Number:

Client: Avesta Oak Street LP

General Contractor:

Supplier: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 6/22/2011 **Time Cast:** 1:00 **Date Received:**

Placement Location: 5 COURSES FROM LAST PLACEMENT

Placement Method: BUCKET

Placement Vol. (yd^3):

Cylinders Made By: ANDREW MYERS

Aggregate Size (in): SAND

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143):

Air Temp (°F): 76

Grout Temp (°F) (C-1064): 75

Batch Number:

Mixer Number:

Ticket Number:

Design (psi): 3000

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-28A	10.56	6/29/2011	**7**	44.4	**4200**
247-28B	10.56	7/20/2011	**28**	58.2	**5510**
247-28C	10.56	7/20/2011	**28**	60.6	**5740**
247-28D					

Remarks:

S.W.COLE ENGINEERING, INC.

Report of Mortar Compressive Strength

ASTM C109

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Project Number: 10-1360

Client Contract Number:

Client: Avesta Oak Street LP

General Contractor:

Masonry Contractor: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 6/22/2011 **Time Cast:** 12:45 **Date Received:** 6/23/2011

Placement Location: 40-56

Batch Method: BUCKET **Product Manufacturer:** QUIKRETE

Specimens Made By: ANDREW MYERS **Aggregate:** SAND

INITIAL CURING CONDITIONS

Min. Temp (°F) **Max. Temp (°F)**

MIX INFORMATION

Mortar Type:

Admixtures:

TEST RESULTS

Air Temp (°F): 75

Mortar Temp (°F) (C-1064): 76

Ambient RH (%):

Flow Cone (%):

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-29A	4.00	6/29/2011	7	4.4	1100
247-29B	4.00	6/29/2011	7	4.3	1080
247-29C	4.00	6/29/2011	7	3.9	980
247-29D	4.00	7/20/2011	28	5.5	1380
247-29E	4.00	7/20/2011	28	6.6	1650
247-29F	4.00	7/20/2011	28	6.3	1580

Remarks:

Note: ASTM C270 specifies mortar testing under laboratory conditions only for acceptance of mortar mixes under the property specification. Field sampling and testing of mortar is conducted under ASTM C780 and is used to verify consistency of materials and procedures, not mortar strength.

S.W.COLE ENGINEERING, INC.

Report of Grout Compressive Strength

ASTM C109

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360

Client: Avesta Oak Street LP
Client Contract Number:

General Contractor:
Supplier: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 6/23/2011 **Time Cast:** 1:45 **Date Received:** 6/24/2011

Placement Location: 56-72

Placement Method: BUCKET
Placement Vol. (yd^3):

Cylinders Made By: ANDREW MYERS
Aggregate Size (in): SAND

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143):
Air Temp (°F): 60
Grout Temp (°F) (C-1064): 76

Batch Number:
Mixer Number:
Ticket Number:
Design (psi): 3000

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-31A	10.56	6/30/2011	7	36.8	3480
247-31B	10.56	7/21/2011	28	48.5	4590
247-31C	10.56	7/21/2011	28	49.2	4660
247-31D					

Remarks:

S.W.COLE ENGINEERING, INC.

Report of Mortar Compressive Strength

ASTM C109

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Project Number: 10-1360

Client Contract Number:

Client: Avesta Oak Street LP

General Contractor:

Masonry Contractor: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 6/23/2011 **Time Cast:** 1:36 **Date Received:**

Placement Location: 56-62

Batch Method: BUCKET **Product Manufacturer:** QUIKRETE

Specimens Made By: ANDREW MYERS **Aggregate:** SAND

INITIAL CURING CONDITIONS

Min. Temp (°F) **Max. Temp (°F)**

MIX INFORMATION

Mortar Type:

Admixtures:

TEST RESULTS

Air Temp (°F): 60

Mortar Temp (°F) (C-1064): 76

Ambient RH (%):

Flow Cone (%):

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-32A	4.00	6/30/2011	7	4.9	1220
247-32B	4.00	6/30/2011	7	4.4	1100
247-32C	4.00	6/30/2011	7	4.3	1080
247-32D	4.00	7/21/2011	28	6.7	1680
247-32E	4.00	7/21/2011	28	6.8	1700
247-32F	4.00	7/21/2011	28	5.5	1380

Remarks:

Note: ASTM C270 specifies mortar testing under laboratory conditions only for acceptance of mortar mixes under the property specification. Field sampling and testing of mortar is conducted under ASTM C780 and is used to verify consistency of materials and procedures, not mortar strength.

S.W.COLE ENGINEERING, INC.

Report of Grout Compressive Strength

ASTM C109

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING
Project Number: 10-1360
Client Contract Number:
Client: Avesta Oak Street LP
General Contractor:
Supplier: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 6/28/2011 **Time Cast:** 8:20 **Date Received:** 6/29/2011
Placement Location: HALFWAY UP 4TH FLOOR TO TOP

Placement Method: BUCKET
Placement Vol. (yd³):
Cylinders Made By: ANDREW MYERS
Aggregate Size (in): SAND

INITIAL CURING CONDITIONS

Temperatures
Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143):
Air Temp (°F): 70
Grout Temp (°F) (C-1064): 76

Batch Number:
Mixer Number:
Ticket Number:
Design (psi): 3000

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-33A	10.56	7/5/2011	7	41.5	3930
247-33B	10.56	7/26/2011	28	59.5	5630
247-33C	10.56	7/26/2011	28	56.5	5350
247-33D					

Remarks:

S.W.COLE ENGINEERING, INC.

Report of Mortar Compressive Strength

ASTM C109

Project Name: PORTLAND, ME - OAK STREET BUILDING - MATERIALS TESTING

Project Number: 10-1360

Client Contract Number:

Client: Avesta Oak Street LP

General Contractor:

Masonry Contractor: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 6/28/2011 **Time Cast:** 2:30 **Date Received:** 6/29/2011

Placement Location: FOUNDATION TO TOP OF ELEVATOR

Batch Method: BUCKET **Product Manufacturer:** QUIKRETE

Specimens Made By: ANDREW MYERS **Aggregate:** SAND

INITIAL CURING CONDITIONS

Min. Temp (°F) **Max. Temp (°F)**

MIX INFORMATION

Mortar Type: S

Admixtures:

TEST RESULTS

Air Temp (°F): 80

Mortar Temp (°F) (C-1064): 76

Ambient RH (%):

Flow Cone (%):

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-34A	4.00	7/5/2011	**7**	4.1	**1020**
247-34B	4.00	7/5/2011	**7**	4.8	**1200**
247-34C	4.00	7/5/2011	**7**	3.7	**920**
247-34D	4.00	7/26/2011	**28**	5.0	**1250**
247-34E	4.00	7/26/2011	**28**	4.5	**1120**
247-34F	4.00	7/26/2011	**28**	4.5	**1120**

Remarks:

Note: ASTM C270 specifies mortar testing under laboratory conditions only for acceptance of mortar mixes under the property specification. Field sampling and testing of mortar is conducted under ASTM C780 and is used to verify consistency of materials and procedures, not mortar strength.

S.W.COLE ENGINEERING, INC.

Report of Grout Compressive Strength

ASTM C109

Project Name: Portland ME - Oak Street Housing - Materials Testing **Project Number:** 10-1360

Client Contract Number:

Client: Avesta Oak Street LP

General Contractor:

Supplier: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 8/3/2011 **Time Cast:** 1:30 **Date Received:** 8/4/2011

Placement Location: 6TH COURSE LOCATION SAME AS PREVIOUS

Placement Method: TROWEL

Cylinders Made By: MATTHEW PALMER

Placement Vol. (yd^3):

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143):

Air Temp (°F): 75

Grout Temp (°F) (C-1064): 70

Batch Number:

Mixer Number:

Ticket Number:

Design (psi): 3000

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-39A	10.56	8/10/2011	7	46.0	4360
247-39B	10.97	8/31/2011	28	52.9	4820
247-39C	10.97	8/31/2011	28	63.2	5760
247-39D					

Remarks:

S.W.COLE ENGINEERING, INC.

Report of Mortar Compressive Strength

ASTM C109

Project Name: Portland ME - Oak Street Housing - Materials Testing

Project Number: 10-1360

Client Contract Number:

Client: Avesta Oak Street LP

General Contractor:

Masonry Contractor:

PLACEMENT INFORMATION

Date Cast: 8/3/2011 **Time Cast:** 1:30 **Date Received:**

Placement Location: BELOW 6TH COURSE TO TOP OF FOUNDATION WALL - D5-E5, D5-D4, D4-E4

Batch Method: TROWEL

Product Manufacturer: QUIKRETE

Specimens Made By: MATTHEW PALMER

Aggregate:

INITIAL CURING CONDITIONS

Min. Temp (°F) **Max. Temp (°F)**

MIX INFORMATION

Mortar Type:

Admixtures:

TEST RESULTS

Air Temp (°F): 70

Mortar Temp (°F) (C-1064): 70

Ambient RH (%):

Flow Cone (%):

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
247-40A	4.00	8/10/2011	7	4.7	1180
247-40B	4.00	8/10/2011	7	4.3	1080
247-40C	4.00	8/10/2011	7	3.5	880
247-40D	4.00	8/31/2011	28	5.9	1480
247-40E	4.00	8/31/2011	28	5.5	1380
247-40F	4.00	8/31/2011	28	4.8	1200

Remarks:

Note: ASTM C270 specifies mortar testing under laboratory conditions only for acceptance of mortar mixes under the property specification. Field sampling and testing of mortar is conducted under ASTM C780 and is used to verify consistency of materials and procedures, not mortar strength.

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

Structural Schedule of Special Inspections – Exhibit B - STEEL CONSTRUCTION

VERIFICATION AND INSPECTION IBC Section 1704.3	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
1. Material verification of high-strength bolts, nuts and washers:						
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	Y	P	Applicable ASTM material specifications; AISC 335, Section A3.4; AISC LRFD, Section A3.3	TA-1	AWS/AISC-SSI	7/18
b. Manufacturer's certificate of compliance required.	Y	S		SI-1**	PE/SE or EIT	Basic Services
2. Inspection of high-strength bolting						
a. Bearing-type connections.	Y	P	AISC LRFD Section M2.5 IBC Sect 1704.3.3	TA-1	AWS/AISC-SSI	7/18
b. Slip-critical connections.	Y	C		TA-1	AWS/AISC-SSI	7/18
3. Material verification of structural steel (IBC Sect 1708.4):						
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	Y	P	ASTM A 6 or ASTM A 568 IBC Sect 1708.4	TA-1	AWS/AISC-SSI	7/18
b. Manufacturers' certified mill test reports.	Y	S	ASTM A 6 or ASTM A 568 IBC Sect 1708.4	SI-1**	PE/SE or EIT	Basic Services
4. Material verification of weld filler materials:						
a. Identification markings to conform to AWS specification in the approved construction documents.	Y	P	AISC, ASD, Section A3.6; AISC LRFD, Section A3.5	TA-1	AWS-CWI	7/18
b. Manufacturer's certificate of compliance required.	N	S		SI-1	PE/SE or EIT	—
5. Submit current AWS D1.1 welder certificate for all field welders who will be welding on this project.	Y	S	AWS D1.1	SI-1**	PE/SE or EIT	Basic Service
6. Inspection of welding (IBC 1704.3.1): a. Structural steel:						
1) Complete and partial penetration groove welds. NOTE: For extent marked "C", Agent must be present to observe full welding process	Y	C	AWS D1.1	TA-1	AWS-CWI	7/18
2) Multipass fillet welds.	Y	C		TA-1	AWS-CWI	7/18
3) Single-pass fillet welds> 5/16"	Y	C		TA-1	AWS-CWI	7/18
4) Single-pass fillet welds< 5/16"	Y	P		TA-1	AWS-CWI	7/18
5) Floor and deck welds.	Y	P	AWS D1.3	TA-1	AWS-CWI	7/18
b. Reinforcing steel (IBC Sect 1903.5.2):						
1) Verification of weldability of reinforcing steel other than ASTM A706.	N	C		-		—
2) Reinforcing steel-resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special reinforced concrete shear walls and shear reinforcement.	N	C	AWS D1.4 ACI 318: 3.5.2	-	AWS-CWI	—
3) Shear reinforcement.	N	C		-	AWS-CWI	—
4) Other reinforcing steel.	N	P		-	AWS-CWI	—

Continued on Next page

7. Inspection of steel frame joint details for compliance (IBC Sect 1704.3.2) with approved construction documents:						
a. Details such as bracing and stiffening.	Y	P		SI-1	PE/SE or EIT	7/18/19
b. Member locations.	Y	P		SI-1	PE/SE or EIT	7/18/19
c. Application of joint details at each connection.	Y	P		SI-1	PE/SE or EIT	7/18/19

**Becker Structural Engineers will provide as a part of our Basic Service

Structural Schedule of Special Inspection Services – Exhibit B

FABRICATION AND IMPLEMENTATION PROCEDURES – STRUCTURAL STEEL

VERIFICATION AND INSPECTION IBC Section 1704.2	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
1. Fabrications Procedures: Review of fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices by an approved special inspection agency. At the completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building code official stating that the work was performed in accordance with the approved construction documents. -OR- 2. AISC Certification	Y	S	Fabricator shall submit one of the two qualifications	SI-1	PE/SE or EIT	5/31
3. At completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building code official stating that the work was performed in accordance with the approved construction documents.	N	S	IBC 1704.2.2	SI-1	PE/SE or EIT	

BECKER
STRUCTURAL ENGINEERS

MILL CERTIFICATIONS

PROJECT OAK STREET LOFTS

STRUCTURAL STEEL	☒RECEIVED	DATE: 7-5-11	☐NOT RECEIVED
BOLTS	☒RECEIVED	DATE: 7-5-11	☐NOT RECEIVED
WELD FILLER	☒RECEIVED	DATE: 7-5-11	☐NOT RECEIVED

ITEMS ABOVE MARKED "RECEIVED" HAVE NOT BEEN INCLUDED IN THIS REPORT DUE TO THE LARGE VOLUME. HARD COPIES ARE AVAILABLE UPON REQUEST.

SPECIAL INSPECTOR: NRM DATE: 12-21-11

American Institute of Steel Construction

is proud to recognize

Isaacson Structural Steel, Inc.

Berlin, NH

for successfully meeting the quality certification requirements for

Standard for Steel Building Structures

Sophisticated Paint Coating Endorsement-Enclosed

Roger E. Ferch

Certification valid through September 2011

QUALITY CONTROL INSPECTION SHEET

Isaacson Structural Steel, Inc.
JERICHO ROAD • P.O. BOX 67 • BERLIN, NEW HAMPSHIRE 03570-0067 • TELEPHONE 603/752/2044

The pieces listed below are in compliance with pertinent codes, standards and job specifications as they pertain to: Material Preparation, Dimensional Accuracy, Welding Conformance.

Job Number 12-754

Piece Mark	QTY.	Errors/Remarks	RPR	Piece Mark	QTY.	Errors/Remarks	RPR
26C2-1	1						
34M1-1	32						
Rec1-1	1						

Inspector J. Jones Date 5/27/11

QC Supervisor John F Jones CWI 78051301 QC1 EXP. 5/1/2014 Date 5/31/11

QUALITY CONTROL INSPECTION SHEET

Isaacson Structural Steel, Inc.
JERICHO ROAD • P.O. BOX 67 • BERLIN, NEW HAMPSHIRE 03570-0067 • TELEPHONE 603/752/2044

The pieces listed below are in compliance with pertinent codes, standards and job specifications as they pertain to: Material Preparation, Dimensional Accuracy, Welding Conformance.

Job Number 2-754

Piece Mark	QTY.	Errors/Remarks	RPR	Piece Mark	QTY.	Errors/Remarks	RPR
27C1G-1	1						
27C2G-0	1						
30C1G-1	1						
28C2G-0	1						
32BR1-1	2						
32BR2-1	2						
32BR5-1	1						
32BR3-1	2						
32BR4-1	1						
29C2G-0	1						
28C1G-1	1						
*29C1G-1	1						
21C1-1	1						
16C1-1	1						
23C2-1	1						
20C1-1	1						
19C1-1	1						
15C1-1	1						
20C2-1	1						
31M5-1	2						
19C2-1	1						
24C1-1	1						

Michael Bump — Inspector — 5/30/11 — Date

AWS John F Jones CWI 78051301 QC1 EXP. 5/1/2014 — QC Supervisor — 6/1/11 — Date

QUALITY CONTROL INSPECTION SHEET

Isaacson Structural Steel, Inc.
JERICHO ROAD • P.O. BOX 67 • BERLIN, NEW HAMPSHIRE 03570-0067 • TELEPHONE 603/752/2044

The pieces listed below are in compliance with pertinent codes, standards and job specifications as they pertain to: Material Preparation, Dimensional Accuracy, Welding Conformance.

Job Number 2-754

Piece Mark	QTY.	Errors/Remarks	RPR	Piece Mark	QTY.	Errors/Remarks	RPR
15C2-1	1			14B1-1	1		
22C2-1	1			12B4-1	1		
17C1-1	1			6B2-1	1		
18C1-1	1			8B6-1	1		
16C2-1	1			24C2-1	1		
25C1-1	1	small welds (F) form	JH	21C2-1	1		
17C2-1	1			5B5-1	23		
12B5-1	1			13B6-1	1		
11B1-1	1			12B1-1	1		
12B2-1	1	PA22 made with extra 05 SLOT (prog.)		2B2-1	1		
22C1-1	1			1B2-1	1		
11B2-1	1			5B6-1	1		
12B3-1	1			4B6-1	1		
10B3-1	1			11B6-1	1		
10B5-1	1			3B6-1	1		
18C2-1	1			4B3-1	1		
11B5-1	1			2B7-1	1		
10B1-1	1			3B4-1	1		
10B2-1	1			3B5-1	1	holes slots missing in 2 pits (miss)	OK MG
10B7-1	1			5B1-1	1		
11B3-1	1			2B4-1	1		
11B4-1	1			8B5-1	1		
10B4-1	1			8B7-1	1		

Michael Bap — Inspector — 6/1/11 — Date

AWS — John F Jones, CWI 78051301, QC1 EXP. 5/1/2014 — QC Supervisor — 6/2/11 — Date

QUALITY CONTROL INSPECTION SHEET

Isaacson Structural Steel, Inc.
JERICHO ROAD • P.O. BOX 67 • BERLIN, NEW HAMPSHIRE 03570-0067 • TELEPHONE 603/752/2044

The pieces listed below are in compliance with pertinent codes, standards and job specifications as they pertain to: Material Preparation, Dimensional Accuracy, Welding Conformance. 2-7

Job Number 2-754

Piece Mark	QTY.	Errors/Remarks	RPR	Piece Mark	QTY.	Errors/Remarks	RPR
3IB3-1	1						
1IB6-1	1						
3IM4-1	1						
3B3-1	1						
2B1-1	1						
2B3-1	1						
2B5-1	1						
9B7-1	1						
3B1-1	1						
4B5-1	1						
6B7-1	1						
6B3-1	1	Holes missing CPReq error)	OK MG				
5B2-1	1	holes in weld OK Dlp					
4B1-1	1						
3IB1-1	1						
13B2-1	1						
4B4-1	1						
14B2-1	1						
7B2-1	1						
9B5-1	1						
9B6-1	1						

Don Poulin — Inspector — 6-1-11 — Date

John F Jones CWI 78051301 QCI EXP. 5/1/2014 — QC Supervisor — 6/2/11 — Date

3 of 4

QUALITY CONTROL INSPECTION SHEET

Isaacson Structural Steel, Inc.
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The pieces listed below are in compliance with pertinent codes, standards and job specifications as they pertain to: Material Preparation, Dimensional Accuracy, Welding Conformance.

Job Number 2-754

Piece Mark	QTY.	Errors/Remarks	RPR	Piece Mark	QTY.	Errors/Remarks	RPR
31C2-1	1		*	6B1-1	1	LITE TOP HOLE missing (PROG WRONG)	OK DLH
13B3-1	1			8B4-1	1		
13B4-1	1			9B1-1	1		
8B2-1	1			7B1-1	1	wrong R.D to 3 plts and 1 3 (detailing)	ok MB
33m2-1	1			9B4-1	1		
33B4-1	1	AA33 lite wrong RD AMAI	MB	10B6-1	2		
7B3-1	1			13B1-1	1		
33m1-1	1			12B6-1	1		
33m3-1	1						
33m5-1	1						
33m6-1	1						
33m8-1	1						
3B2-1	2						
3B7-1	1						
2B6-1	1						
33m5-1	2						
33m7-1	1						
5B3-1	1						
13B5-1	1						
5B4-1	1						
8B1-1	1						
9B3-1	1						
8B3-1	1						

Michael Bump — Inspector — 6/2/11 — Date

John F Jones
CWI 78051301
QC1 EXP. 5/1/2014 — QC Supervisor — 6/6/11 — Date

QUALITY CONTROL INSPECTION SHEET

5

Isaacson Structural Steel, Inc.
JERICHO ROAD • P.O. BOX 67 • BERLIN, NEW HAMPSHIRE 03570-0067 • TELEPHONE 603/752/2044

The pieces listed below are in compliance with pertinent codes, standards and job specifications as they pertain to: Material Preparation, Dimensional Accuracy, Welding Conformance.

Job Number 2-754/2-7

Piece Mark	QTY.	Errors/Remarks	RPR	Piece Mark	QTY.	Errors/Remarks	RPR
34M2	6			2-754			
34M3	1						
A23C1	1			B25B16-9	1		

Inspector J. Jones 6/6/11 Date

John F Jones
CWI 78051301
QC1 EXP. 5/1/2014
QC Supervisor 6/6/11 Date

WELDER PERFORMANCE QUALIFICATION (WPQ)

AWS D1.1 Structural Welding Code - Steel (Prequalified)

Welder's Name **Paul Berry** ID Number **9462**

Company **American Aerial**

TEST DESCRIPTION

WPS Number **AA - 001** Test Coupon **XXX** Production Weld _____

Material Specification, Type or Grade **A36** to Material Specification, Type or Grade **A36**

test coupon consisted of two pieces of 1"x 3"x 5" plate with both plates beveled 22.5 degrees along the 5" side

TESTING CONDITIONS AND QUALIFICATION LIMITS

Welding Variables	Actual Values	Range Qualified
Welding Process(es)	SMAW	SMAW
Type (Manual, Semi, Auto)	Manual	Manual
Backing	A36 1/4 x 1-1/2"	backing required
Plate XXX Pipe _____	1.0" thickness	1/8" - unlimited
	All fillet sizes qualified on all metal thicknesses	
AWS Electrode Classification	E7018 (F4 electrode qualifies for F1 - F4 electrodes)	
AWS Electrode Specification	A5.1	
Deposit Thickness for each process		
Process 1: SMAW 3 layers minimum Yes XXX No _____	1/8" - unlimited	
Process 2 _____ 3 layers minimum Yes _____ No _____		
Position 3G and 4G	All positions	
Vertical Progression (up or down)		
Current / Polarity	DC Positive	

RESULTS

Visual Examination of Completed Weld **Passed 5/16/11**

Bend Tests **Passed 3G and 4G 5/16/11**

- 3G Bend 1 **Passed, no openings**
- 3G Bend 2 **Passed, no openings**
- 4G Bend 1 **Passed, no openings**
- 4G Bend 2 **Passed, one opening < 1/32"**

Welding and Testing Supervised by: **Warren G. Swan, Jr** Company **New England School of Metalwork**

We certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of the **2010** American Welding Society D1.1 Stuctural Welding Code.

Warren G. Swan, Jr.
Welding Director, NESM
AWS CWI Number: 04050361
Date **5/17/11**

Warren G Swan, Jr.
CWI 04050361
QC1 EXP. 8/1/2013

Manufacturer **American Aerial**

By: _____ Date: _____

WELDER, WELDING OPRATOR, OR TACK WELDER QUALIFICATION TEST RECORD

Name of Welder	Paul Serry	Identification No.	[redacted]
Name	American Aerial		
Welding Procedure Specification No.	1 Rev.	N/A	Date July 5, 2001

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type [Table 4.10, Item (1)]	SMAW	
Electrode (single or multiple) [Table 4.10, Item (5)	1/8 E7018	ALL
Current Polarity	105 A DC+	
Position [Table 4.10, Item (6)]	1G, 2G, 3G	1G, 2G, 3G
Weld Progression [Table 4.10, Item (6)]	UP	UP
Backing (YES or NO) [Table 4.10 Item (7)]	YES	YES
Material/Spec.	Group 1 to Group 1	
Base Metal		
Thickness: (Plate)		
Groove	3/8 inch	1/8 " to 3/4 "
Fillet	N/A	UNLIMITED
Thickness: (Pipe/Tube)		
Groove	N/A	1/8 " to 3/4 "
Fillet	N/A	UNLIMITED
Diameter :(Pipe)PJP		
Groove	N/A	1/8" to 3/4 OVER 24" DIA
Fillet	N/A	OVER 24" DIA
Filler Metal [Table 4.10, Item (3)]		
Spec. No	A5.1	
Class	E7018	
F-No. [Table 4.10, Item (2)]	F 4	F4, F3, F2, F1
Gas/Flux Type [Table 4.10Item (3)]	N/A	
Other	N/A	N/A

VISUAL INSPECTION (4.8.1)

Acceptable YES or NO YES

Guided Bend Test Results (4.30.5)

Type	Result	Type	Result
3G FACE BEND	ACCEPTABLE	3G ROOT BEND	ACCEPTABLE

Fillet Test Results (4.30.2.3 and 4.30.4.1)

Appearance	N/A	Fillet Size	N/A
Fracture Test Root Penetration	N/A	Macroetch	N/A

(Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspected by Brad Wells CWI # 00050221 Test Number N/A

Organization Maine Oxy Date July 5, 2001

RADIOGRAPHIC TEST RESULTS (4.30.3.1)

Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Interpreted by N/A Test Number N/A

Organization N/A Date N/A

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of AWS D1.1, (_____) Structural Welding Code — Steel

Manufacturer or Contractor [signature] Authorized By [signature]

Date 7/5/01

Welder Performance Qualification Record
AWS D1.1 Structural Welding Code - Steel

Welder's Name: Bill Britting ID Number:

Company: American Aerial

TEST DESCRIPTION

WPS Number: AA - 001 Test Coupon: XXX Production Weld:

Material Specification, Type or Grade: A36 >3/4" to Material Specification, Type or Grade: A36 > 3/4"

Test Thickness: 1" Groove

Thickness Qualified Plate: Groove: 1/8" - Unlimited Fillets: Unlimited

Thickness Qualified Pipe:

Groove 1/8 - unlimited on pipe equal to or greater than 24" diameter

Fillets: Unlimited

TESTING CONDITIONS AND QUALIFICATION LIMITS

Welding Variables	Actual Values	Range Qualified
Welding Process(es)	SMAW	SMAW
Type (Manual, Semi, Auto)	Manual	Manual
Backing	A36 1/4" x 1-1/2"	Backing required
Material Group Number	Two	Group One and Group Two
Filler Metal AWS Specifications	A5.1	
Filler Metal Classification	E7018 MR	
Filler Metal F Numbers	F4	F1, F2, F3, F4
Position	3G and 4G	All Positions
Vertical Progression (up or down)	Up	Up Only
Inert Gas Backing		
Transfer Mode (GMAW)		
Current / Polarity	115 - 120 amps DC +	

RESULTS

Visual Examination of Completed Weld: Passed Date: 12/18/07

Bend Test Results: Side Bend: Passed Side Bend: Passed Date: 12/18/07

Test conducted by:

Warren G. Swan, Jr. New England School of Metalwork

We certify that the statements in this record are correct and that the test welds were prepared and welded in conformance with the 2006 AWS D1.1 welding code and the above noted Welding Procedure Specification.

Name: Warren G. Swan, Jr.

Affiliation: New England School of Metalwork

Address: 7 Alfriston Way Auburn, ME 04210

WARREN SWAN
CWI 04090345
EXP. 6-01-08

American Aerial Services

RECORD OF WELDER QUALIFICATION TEST (WPQ)

Refer to AWS D1.3 Structural Welding Code-Sheet Steel

Welder Name: Britting, William G. Jr. Identification #: [redacted] 2997

WPS No.: AA-SM-Spotweld- S18- Flat Revision: 0 Date: 10/29/08

The above welder is qualified for the following ranges:

Variable	Used in Qualification	Qualification
PROCESS	SMAW	SMAW
PROCESS TYPE	Manual	Manual
JOINT		
Joint type	Single Thickness Arc Spot Weld	Single Thickness Arc Spot Weld
Backing Material Type	A36 plate	Pre-qualified per AWS D1.1
BASE METAL (4.7.1.1)		
Material Specification		
Sheet Steel	18 gage sheet steel	18 gage sheet steel
Supporting Steel	A36 plate	Pre-qualified per AWS D1.1
Sheet Thickness (4.7.2.1)		
Arc Spot	18 gage (.0478")	18 gage (.0478")
COATING(S)		
Type	Galvanized	Galvanized or Bare metal
Thickness	Single coat ≤ .004" thick	Single coat ≤ .004" thick
POSITION (4.7.1.5 and 4.7.1.6)		
Arc Spot	Flat	Flat
ELECTRODE (4.7.1.3 and 4.7.1.4)		
Size	1/8"	1/8"
Group Designation	F1 (E6022)	F1

VISUAL EXAMINATION RESULTS (4.6)

Specimen #1: Acceptable Specimen #2: Acceptable

Appearance: Acceptable Cracks: None Undercut: None

Reinforcement: 1/32" Diameter of Arc Spot Nugget: #1: 3/4" #2: 1/2"

Welding Tests Conducted By: American Aerial Services

Mechanical Tests conducted by: Thomas E. Giles, CWI # 88070281, Welding Test Center / EMCC Bangor, ME.

Test date: 10/30/08

The undersigned certifies that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of 4.6 AWS D1.3, Structural Welding Code-Sheet Steel.

Organization: American Aerial Services

Signed: [signature] Date: 10/31/08

Page 2

WELDER, WELDING OPRATOR, OR TACK WELDER QUALIFICATION TEST RECORD

Name of Welder	Jon Curit				
Name	American Aerial			Identification No.	[redacted]
Welding Procedure Specification No	1	Rev.	N/A	Date	Dec. 12, 2007

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type [Table 4.10, Item (1)]	SMAW	
Electrode (single or multiple) [Table 4.10, Item (1)]	1/8 E7018	ALL
Current Polarity	115 A DC+	
Position [Table 4.10, Item (6)]	4G	1G, 4G
Weld Progression [Table 4.10, Item (6)]	N/A	N/A
Backing (YES or NO) [Table 4.10 Item (7)]	YES	YES
Material/Spec	Group 1	to Group 1
Base Metal		
Thickness: (Plate)		
Groove	3/8 "	1/8 to 3/4 "
Fillet	N/A	UNLIMITED
Thickness: (Pipe/Tube)		
Groove	N/A	1/8 " to 3/4 "
Fillet	N/A	UNLIMITED
Diameter: (Pipe)PJP		
Groove	N/A	1/8" tc 3/4 OVER 24" DIA
Fillet	N/A	OVER 24" DIA
Filler Metal [Table 4.10, Item (3)]		
Spec. No.	AS 1	
Class	E7018	
F-No. [Table 4.10, Item (2)]	F 4	F4, F3, F2, F1
Gas/Flux Type [Table 4.10Item (3)]	N/A	
Other	N/A	N/A

VISUAL INSPECTION (4.8.1)

Acceptable YES or NO YES

Guided Bend Test Results (4.30.5)

Type	Result	Type	Result

Fillet Test Results (4.30.2.3 and 4.30.4.1)

Appearance	N/A	Fillet Size	N/A
Fracture Test Root Penetration	N/A	Macroetch	N/A

(Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspected by Brad Wells CWI # 00050221 Test Number N/A

Organization Maine Oxy Date Dec. 12, 2007

RADIOGRAPHIC TEST RESULTS (4.30.3.1)

Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks
	Pass				

Interpreted by [signature] Test Number ERL-07-0347

Organization ERL Date 12/13/07

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of AWS D1.1, (_____) Structural Welding Code — Steel.

Manufacturer or Contractor Authorized By

Date

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or Welding Operator's Name: John Curt
Identification No.: 007-76-1120 Qualification Date: 10/25/08
Welder's Social Security No.: [redacted]-1120

In Accordance with WPS No.: AWS D1.3-98 Revision:
Welding Process(es): SMAW Type: Manual (Automatic, manual, etc.)

Mode of Transfer for GMAW: N/A (Short circuiting, spray, globular)

VARIABLE	ACTUAL VARIABLE USED IN QUAL.	QUALIFICATION RANGE
JOINT		
Joint Type	Arc Spot Weld	Lap
Backing Material Type		
Groove Welded From: one side or both sides		
BASE METAL (4.7.1.1)		
Material Specification		
Sheet Steel	ASTM A606 to A653	ASTM A606 to ASTM A653
Supporting Steel	ASTM A36	ASTM A36
Sheet Thickness (4.7.2.1)		
Groove		
Fillet		
Arc Plug		
Arc Spot	20ga. 5/8"	0.77 to 2T 12 to 1 1/16"
Arc Seam		
COATING(S)		
Type	N/A	
Thickness		
POSITION (4.7.1.5 and 4.7.1.6)		
Groove		
Fillet		
Arc Plug		
Arc Spot	F	F
Arc Seam		
Progression		
GAS (4.7.1.4)		
ELECTRODE (4.7.1.3 and 4.7.1.4)		
Size	1/8"	2.5 to 3.2
Group Designation	F7(E7018)	F7 to F2

VISUAL EXAMINATION RESULTS (4.6)

Specimen 1: Acceptable 2 layer twist test Specimen 2: Acceptable 2 layer twist test
Appearance: Uniform Cracks: None Undercut: None excessive
Reinforcement: 1/32" Diam of Arc Spot Nugget: 11/16"

Test Conducted By: James Reed Per: ANSI/AWS D1.3-98
Laboratory Test No.: Date of Test: 10/25/08

The undersigned certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of 4.6 of ANSI/AWS D1.3 (98), *Structural Welding Code—Sheet Steel*.
(year)

Company: American Aerial Servicing Authorized By:

Form A-3

Desk - 3

American Aerial Services

RECORD OF WELDER QUALIFICATION TEST (WPQ)
Refer to AWS D1.1 Structural Welding Code

Welder Name: Ken H. [redacted] I.D. Number: [redacted]1105
WPS No: AAS-SM-1/1 Revision: 0 Date: 11/09/99

The above welder is qualified for the following ranges:

Variable	Used In Qualification	Qualification
PROCESS	SMAW	SMAW
PROCESS TYPE	Manual	Manual
BACKING	With	With
MATERIAL SPECIFICATION	P 1 to P 1	Prequal./ANSI-AWS D1.1
THICKNESS		
Groove	.375"	.75" Max.
Fillet	NA	All
DIAMETER		
Groove	NA	24" and over
Fillet	NA	All
FILLER METAL		
Specification No.	A5.1	See D1.1 - 3.3
Classification	E7018	See D1.1 - 3.3
DEPOSITED WELD METAL THICKNESS		
Groove	.375"	.75" Max.
POSITION	1G	Flat
Weld Progression	Uphill	Uphill
ELECTRICAL CHARACTERISTICS		
Current	DC	DC
Polarity	Reverse	Reverse

GUIDED BEND RESULTS *(4.8.3)*

Position(s) Tested	V.T. Weld *(4.8.1)*	Bend Type	Defects	Results
Flat 1G	Acceptable	Face Bend	No defects	Acceptable
		Root Bend	Six<1/32" openings	Acceptable

Welding tests conducted by: American Aerial Services
Mechanical tests conducted by: Thomas E. Giles, CWI# 88070281
Welding Test Center / EMTC, Bangor, ME Test date: 8/23/01

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of ANSI/AWS D1.1 Structural Welding Code - Steel.

Organization: American Aerial Services
Signed: [signature] Date: 8/24/01

12 - A

BHATE
Bhate Engineering Corporation
Geotechnical, Materials, Environmental Engineers
5217 Fifth Avenue South
Birmingham v Alabama v 35212-6516
(205) 591-7062
(205) 591-7184 (FAX)

ANSI/AWS D1.3-89 WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or Welding Operator's Name: Kenneth Henderson
Identification Number: ____ Qualification Date: 09-20-89
Welder's Social Security Number: [redacted]1105
In Accordance with WPS Number: AWS D1.3-89 Revision Number: ____
Welding Process(es): SMAW Type: Manual (Automatic, Manual, etc.)

Mode of Transfer for GMAW: N/A (short Circuiting, Spray, Globular)

VARIABLE	ACTUAL VARIABLE USED IN QUALIFICATION	QUALIFICATION RANGE
JOINT:		
Joint Type	Arc spot weld	Lap
Backing Material Type	----	----
Groove Welded From: one side or both sides	----	----
BASE METAL:		
Material Specification		
Sheet Steel	ASTM A606 to A611	ASTM A606 to A611
Supporting Steel	ASTM A36 to A570	ASTM A36 to A570
Sheet Thickness		
Groove	22 GA	0.5t through 2t
Fillet		
Arc Spot	5/8" diameter	1/2" to 11/16"
Arc Beam		
COATING(S):		
Type	N/A	----
Thickness	----	----
POSITION:		
Groove	----	----
Fillet	----	----
Arc Spot	Flat	Flat
Arc Beam	----	----
Progression	----	----
GAS	N/A	----
ELECTRODE		
Size	1/8" to 5/32"	1/8" to 5/32"
Group Designation	F1 E6022	F1 E6022

VISUAL EXAMINATION RESULTS

Specimen 1: Acceptable 2 layer twist test Specimen 2: Acceptable 2 layer twist test
Appearance: Uniform Cracks: None Undercut: None excessive
Reinforcement: 1/32" min Diameter of Arc Spot Nugget: 11/16" diameter
Test Conducted By: Jim R. Wall, CAWI NDT Level II Per: Bhate Engineering Corporation
Laboratory Test Number: 92099C Date of Test: 09-20-89

The undersigned certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of 6.7 of ANSI/AWS D1.3-89 STRUCTURAL WELDING CODE- SHEET STEEL

Company: Bhate Engineering Corporation Authorized By: [signature]

CWI

12-15

Welder Performance Qualification Record
AWS D1.1 Structural Welding Code - Steel

Welder's Name: Zach Johndro ID Number: 4984

Company: American Aerial

TEST DESCRIPTION

WPS Number: AA - 001 Test Coupon: XXX Production Weld:

Material Specification, Type or Grade: A36 >3/4" to Material Specification, Type or Grade: A36 > 3/4"

Test Thickness: 1" Groove

Thickness Qualified Plate: Groove: 1/8" - Unlimited Fillets: Unlimited

Thickness Qualified Pipe

Groove 1/8 - unlimited on structural pipe equal to or greater than 24" diameter

Fillets: Unlimited

TESTING CONDITIONS AND QUALIFICATION LIMITS

Welding Variables	Actual Values	Range Qualified
Welding Process(es)	SMAW	SMAW
Type (Manual, Semi, Auto)	Manual	Manual
Backing	A36 1/4" x 1-1/2"	Backing required
Material Group Number	Two	Group One and Group Two
Filler Metal AWS Specifications	A5.1	
Filler Metal Classification	E7018 MR	
Filler Metal F Numbers	F4	F1, F2, F3, F4
Position	3G and 4G	All Positions
Vertical Progression (up or down)	Up	Up Only
Inert Gas Backing		
Transfer Mode (GMAW)		
Current / Polarity	115 - 120 amps DC+	

RESULTS

Visual Examination of Completed Weld: Passed Date: 2/7/08

Bend Test Results: Side Bend: Passed Side Bend: Passed Date: 2/7/08

Test conducted by:

Warren G. Swan, Jr. New England School of Metalwork

We certify that the statements in this record are correct and that the test welds were prepared and welded in conformance with the 2006 AWS D1.1 welding code and the above noted Welding Procedure Specification.

Name: Warren G. Swan, Jr.

Affiliation: New England School of Metalwork

Address: 7 Albiston Way Auburn, ME 04210

WARREN SWAN
CWI 04052361
QCI EXP. 5/01/10

Warren G Swan

Welder Performance Qualification Record
AWS D1.1 Structural Welding Code - Steel

Welder's Name: Barry Morrison ID Number: 7073

Company: American Aerial

TEST DESCRIPTION

WPS Number: AA - 001 Test Coupon: XXX Production Weld:

Material Specification, Type or Grade: A36 >3/4" to Material Specification, Type or Grade: A36 > 3/4"

Test Thickness: 1" Groove

Thickness Qualified Plate: Groove: 1/8" - Unlimited Fillets: Unlimited

Thickness Qualified Pipe:

Groove 1/8 - unlimited on pipe equal to or greater than 24" diameter

Fillets: Unlimited

TESTING CONDITIONS AND QUALIFICATION LIMITS

Welding Variables	Actual Values	Range Qualified
Welding Process(es)	SMAW	SMAW
Type (Manual, Semi, Auto)	Manual	Manual
Backing	A36 1/4" x 1-1/2"	Backing required
Material Group Number	Two	Group One and Group Two
Filler Metal AWS Specifications	A5.1	
Filler Metal Classification	E7018 MR	
Filler Metal F Numbers	F4	F1, F2, F3, F4
Position	3G and 4G	All Positions
Vertical Progression (up or down)	Up	Up Only
Inert Gas Backing		
Transfer Mode (GMAW)		
Current / Polarity	115 - 120 amps DC+	

RESULTS

Visual Examination of Completed Weld: Passed Date: 1/30/08

Bend Test Results: Side Bend: Passed Side Bend: Passed Date: 1/30/08

Test conducted by:

Warren G. Swan, Jr. New England School of Metalwork

We certify that the statements in this record are correct and that the test welds were prepared and welded in conformance with the 2006 AWS D1.1 welding code and the above noted Welding Procedure Specification.

Name: Warren G. Swan, Jr.

Affiliation: New England School of Metalwork

Address: 7 Alliston Way Auburn, ME 04210

WARREN SWAN
CWI 04091361
EXP 5/31/10

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or Welding Operator's Name Barry Madson
Identification No. 021-26-7023 Qualification Date 10/17/02
Welder's Social Security No. [redacted] 0223

In Accordance with WPS No. AWS D1.3-98 Revision
Welding Process(es) SMAW Type Manual
(Automatic, manual, etc.)

Mode of Transfer for GMAW N/A
(Short circuiting, spray, globular)

VARIABLE	ACTUAL VARIABLE USED IN QUAL.	QUALIFICATION RANGE
JOINT		
Joint Type	Arc Spot Lap	Lap
Backing Material Type		
Groove Welded From: one side or both sides		
BASE METAL (4.7.1.1)		
Material Specification		
Sheet Steel	ASTM A606 to A653	ASTM A606 to ASTM A653
Supporting Steel	ASTM A36	ASTM A36
Sheet Thickness (4.7.2.1)		
Groove		
Fillet		
Arc Plug		
Arc Spot	22 GA to 5/8"	0.57 to 27 GA Min
Arc Seam	1	
COATING(S)		
Type	N/A	
Thickness		
POSITION (4.7.1.5 and 4.7.1.6)		
Groove		
Fillet		
Arc Plug		
Arc Spot	F	F
Arc Seam		
Progression		
GAS (4.7.1.4)		
ELECTRODE (4.7.1.3 and 4.7.1.4)		
Size	1/8	1/8" to 5/32"
Group Designation	E6013	E6013 to E7018

VISUAL EXAMINATION RESULTS (4.6)

Specimen 1 Acceptable Appearance test Specimen 2 Acceptable Appearance test
Appearance Good Form Cracks None Undercut None excessive
Reinforcement N/A Diam of Arc Spot Nugget N/A

Test Conducted By Tracy Reed Per ANSI/AWS D1.3-98
Laboratory Test No. Date of Test 10/25/02

The undersigned certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of 4.6 of ANSI/AWS D1.3 (98), *Structural Welding Code—Sheet Steel*.
(year)

Company Accurate Metal Services Authorized By

Form A-3

Deck - 7

Welder Performance Qualification
AWS D1.1 Structural Code - Steel

Failed Overhead Test Coupon

Welder's Name Anthony Patterson ID Number 4767

Company American Aerial

TEST DESCRIPTION

WPS Number AA - 001 Test Coupon XXX Production Weld

Material Specification, Type or Grade A36 to Material Specification, Type or Grade A36

Test Thickness 1.0" Groove

Thickness Qualified Plate Groove: 1/8" - unlimited Fillets: Unlimited

Thickness Qualified Pipe

Groove 1/8"- unlimited" on structural pipe equal to or greater than 24" in diameter with backing or gouging

Other: Fillets Unlimited

TESTING CONDITIONS AND QUALIFICATION LIMITS

Welding Variables	Actual Values	Range Qualified
Welding Process(es)	SMAW	SMAW
Type (Manual, Semi, Auto)	Manual	Manual
Backing	A36 1/4" x 1.5"	Backing required
Material Group Number	Two	Group One and Two steels
Filler Metal AWS Specifications	A5.1	
Filler Metal Classification	E7018	
Filler Metal F Numbers	F4	F1 - F4
Position	3G and 4G	All positions
Vertical Progression (up or down)	Up	Up only
Inert Gas Shielding or Backing		
Transfer Mode (GMAW)		
Current / Polarity	DC+	DC+

RESULTS

Visual Examination of Completed Welds Passed Date 12/7/10

Vertical Bends -Passed, Overhead Bends Failed

Qualified to weld Flat, Horizontal, and Vertical positions only

Vertical Test Results: Bend #1 Passed, three openings <1/32"

Bend #2 Passed, one opening <1/32"

Overhead Test Results: Bend #1 Failed, lack of penetration and slag entrapment in root pass

Bend #2 Failed, lack of penetration and slag entrapment in root pass

Date 12/7/10

Test conducted by:

Warren G. Swan, Jr, New England School of Metalwork

We certify that the statements in this record are correct and that the test welds were prepared and welded in conformance with the 2010 AWS D1.1 welding code and the above noted Welding Procedure Specification.

Name: Warren G. Swan, Jr.

Affiliation New England School of Metalwork

Address 7 Albiston Way Auburn, ME 04210

Warren G Swan, Jr.
CWI 04050351
QC1 EXP. 5/1/2013

UTS Of Massachusetts Inc.
"The Construction Testing People"

WELDER QUALIFICATION TEST RECORD

Welder or welding operator's name JAMES E READ Identification no. [redacted]-0534
Welding process SMAW Manual XXXX Semiautomatic ____ Machine ____
Position 3G (vertical upwards) & 4G
(Flat, horizontal, overhead or vertical - if vertical, state whether upward or downward)
In accordance with procedure specification no. ____
Material specification ASTM A 36
Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" PLATE
Thickness range this qualifies LIMITED THICKNESS

FILLER METAL

Specification no. AWS A5.1 Classification E7018 F no. F4
Describe filler metal (if not covered by AWS specification) ____
Is backing strip used? YES
Filler metal diameter and trade name MUREX 1/8" DIA. Flux for submerged arc or gas for gas metal arc or flux cored arc welding ____

VISUAL INSPECTION

Appearance ACCEPTABLE Undercut NONE Piping porosity NONE

Guided Bend Test Results

Type	Result	Type	Result
3G RB	ACCEPTABLE	4G RB	ACCEPTABLE
3G FB	ACCEPTABLE	4G FB	ACCEPTABLE

Test conducted by MICHAEL A SCULLY Laboratory test no. 990513
per CWI # 89070121 Test date MAY 13,1999

Fillet Test Results

Appearance ____ Fillet size ____
Fracture test root penetration ____ Macroetch ____
(Describe the location, nature, and size of any crack or tearing of the specimen.)
Test conducted by ____ Laboratory test no. ____
per ____ Test date ____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by ____ Test no. ____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of AWS D1.1 - 98 Structural Welding Code - Steel.

Contractor AMERICAN AERIAL
Authorized by JAMES E READ
Date MAY 13,1999

5 Richardson Lane, Stoneham, Massachusetts 02180 (781) 438-7755 Fax (781) 438-6216

Bhate Engineering Corporation
Geotechnical, Materials, Environmental Engineers
5217 Fifth Avenue South
Birmingham, Alabama 35212-3515
(205) 591-7062
(205) 591-7181 (FAX)

ANSI/AWS D1.3-89 WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or Welding Operator's Name: James Read

Identification Number: [redacted]-0536 Qualification Date: 08-16-99

Welder's Social Security Number: [redacted]-0536

In Accordance with WPS Number: AWS D1.3-89 Revision Number:

Welding Process(es): SMAW Type: Manual
(Automatic, Manual, etc.)

Mode of Transfer for GMAW: N/A
(Short Circuiting, Spray, Globular)

VARIABLE	ACTUAL VARIABLE USED IN QUALIFICATION	QUALIFICATION RANGE
JOINT:		
Joint Type	Arc Spot Weld	Lap
Backing Material Type		
Groove Welded From: one side or both sides		
BASE METAL:		
Material Specification		
Sheet Steel	ASTM A606 to A611	ASTM A606 to A611
Supporting Steel	ASTM A36	ASTM A36
Sheet Thickness		
Groove	22 Ga	0.5t through 2t
Fillet		
Arc Spot	5/8" diameter	¼" to 11/16"
Arc Beam		
COATING(S):		
Type	N/A	
Thickness		
POSITION:		
Groove		
Fillet		
Arc Spot	F	F
Arc Beam		
Progression		
GAS	N/A	
ELECTRODE		
Size	1/8" to 5/32"	1/8" to 5/32"
Group Designation	F1 (E6022)	F1 (E6022)

VISUAL EXAMINATION RESULTS

Specimen 1: Acceptable 2 layer twist test Specimen 2: Acceptable 2 layer twist test

Appearance: Uniform Cracks: None Undercut: None excessive

Reinforcement: 1/32 min Diameter of Arc Spot Nugget: 11/16 diameter

Test Conducted By: Jim R. Wall Per: ANSI/AWS D1.3-89

Laboratory Test Number: 081699WO-2 Date of Test: 08-16-99

The undersigned certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of 6.7 of ANSI/AWS D1.3-89 STRUCTURAL WELDING CODE - SHEET STEEL.

Company: Bhate Engineering Corporation Authorized By: [signature]
J. E. Walker, CWI
CWI

Welding Certification Lead Sheet

Welder	Positions	Joist & Bridging 2F	Clips on Column 3F	Regular Moments & Column Splices 4G	Tube Steel Moments 5G
Berry, Paul R.	1-3G, Limited Stick	OK	OK		
Berry,Scott	1- 4 G, 1-4 F, Unlimited Stick	OK	OK	OK	
Blackburn, Jesse S.	1-4G, Unlimited Stick	OK	OK	OK	
Britting, William	1-4G, Unlimited Stick	OK	OK	OK	
Curit, Jonathan C	1 & 4G, limited Stick	OK	OK	OK < 3/4"	
Furrow, Brian G.	1 & 4G, limited Stick	OK	OK	OK < 3/4"	
Gallagher John	1-4G, Unlimited Stick	OK	OK	OK	
Henderson Glen					
Henderson Ken	1G				
Johndro, Zack	1-4G, Unlimited Stick	OK	OK	OK	
McElman Timothy	1-4G, Limited Stick 1-4G Limited Fluxcore	OK	OK	OK < 3/4"	
Morrison, Barry W.	1-4G, Unlimited Stick	OK	OK	OK	
Perro, Nick	1-4G, Unlimited Stick,1-3G Limited Fluxcore	OK	OK	OK	
Read, James	1-4G, Limited Stick	OK	OK	OK < 3/4"	
Sanders, Steven	1-6G	OK	OK	OK	OK
Waters, Christopher	1-4G, Unlimited Stick	OK	OK	OK	

Welder	Deck Welding Positions	Guage
Berry, Scott	Single, Flat 6022	18
Britting, Bill	Single, Flat, 6022	18
Curit, John	Double, Flat, 7018	20
Furrow, Brian	Double, Flat, 7018	20
Henderson, Glen	Double, Flat, 6022	22
Henderson, Ken	Double, Flat, 6022	22
Morrison, Barry	Double, Flat 7018	20
Perro, Nicholas	Single, Flat, 6022	18
	Single, Pitch, 6022	18,22
	Double, Pitch, 6022	18,22
	Single, Pitch, 7014	18,22
	Double, Pitch, 7014	18,22
James Read	Single, Flat, 6022	22
Waters, Christopher	Single, Flat, 6022	18
		1

Welder Performance Qualification
AWS D1.1 Structural Code - Steel

Failed Overhead Test Coupon

Welder's Name Anthony Patterson ID Number 4767

Company American Aerial

TEST DESCRIPTION

WPS Number AA - 001 Test Coupon XXX Production Weld

Material Specification, Type or Grade A36 to Material Specification, Type or Grade A36

Test Thickness 1.0" Groove

Thickness Qualified Plate Groove: 1/8" - unlimited Fillets: Unlimited

Thickness Qualified Pipe

Groove 1/8"- unlimited" on structural pipe equal to or greater than 24" in diameter with backing or gouging

Other: Fillets Unlimited

TESTING CONDITIONS AND QUALIFICATION LIMITS

Welding Variables	Actual Values	Range Qualified
Welding Process(es)	SMAW	SMAW
Type (Manual, Semi, Auto)	Manual	Manual
Backing	A36 1/4" x 1.5"	Backing required
Material Group Number	Two	Group One and Two steels
Filler Metal AWS Specifications	A5.1	
Filler Metal Classification	E7018	
Filler Metal F Numbers	F4	F1 - F4
Position	3G and 4G	All positions
Vertical Progression (up or down)	Up	Up only
Inert Gas Shielding or Backing		
Transfer Mode (GMAW)		
Current / Polarity	DC+	DC+

RESULTS

Visual Examination of Completed Welds Passed Date 12/7/10

Vertical Bends -Passed, Overhead Bends Failed
Qualified to weld Flat, Horizontal, and Vertical positions only

Vertical Test Results: Bend #1 Passed, three openings <1/32"
Bend #2 Passed, one opening <1/32"

Overhead Test Results: Bend #1 Failed, lack of penetration and slag entrapment in root pass
Bend #2 Failed, lack of penetration and slag entrapment in root pass

Date 12/7/10

Test conducted by:

Warren G. Swan, Jr. New England School of Metalwork

We certify that the statements in this record are correct and that the test welds were prepared and welded in conformance with the 2010 AWS D1.1 welding code and the above noted Welding Procedure Specification.

Name: Warren G. Swan, Jr.

Affiliation New England School of Metalwork

Address 7 Albiston Way Auburn, ME 04210

Warren G Swan, Jr.
CWI 04060361
QC1 EXP. 8/1/2013

Warren G Swan

WELDER PERFORMANCE QUALIFICATION (WPQ)

AWS D1.1 Structural Welding Code - Steel (Prequalified)

Welder's Name William Britting ID Number 2997

Company American Aerial

TEST DESCRIPTION

WPS Number AA - 002 Test Coupon XXX Production Weld

Material Specification, Type or Grade A36 to Material Specification, Type or Grade A36

test coupon consisted of two pieces of 1"x 3"x 5" plate with both plates beveled 22.5 degrees along the 5" side

TESTING CONDITIONS AND QUALIFICATION LIMITS

Welding Variables	Actual Values	Range Qualified
Welding Process(es)	FCAW	FCAW
Type (Manual, Semi, Auto)	Semi	Semi
Backing	A36 1/4 x 1-1/2"	backing required
Plate XXX Pipe	1.0" thickness	1/8" - unlimited
	All fillet sizes qualified on all metal thicknesses	
AWS Electrode Classification	E71T - 8	
AWS Electrode Specification	A5.20	
Deposit Thickness for each process		
Process 1: FCAW 3 layers minimum Yes XXX No	1/8" - unlimited	
Process 2 3 layers minimum Yes No		
Position 1G	Flat only	
Vertical Progression (up or down)		
Current / Polarity	DC Negative	DC Negative

RESULTS

Visual Examination of Completed Weld Passed 12/7/10

Bend Tests Passed 1G 12/7/10

1G Bend 1 Passed, no openings 3G Bend 2 Passed, one opening < 1/32"

Welding and Testing Supervised by: Warren G. Swan, Jr Company New England School of Metalwork

We certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of the American Bureau of Shipping.

Warren G. Swan, Jr.
Welding Director, NESM
AWS CWI Number: 04050361
Date 12/7/10

Warren G Swan, Jr.
CWI 04050361
QC1 EXP. 5/1/2013

Manufacturer American Aerial

By: Date:

BECKER
STRUCTURAL ENGINEERS

05120

OBSERVATION REPORT

Structural Steel

Date:	7-15-11
Time:	1:00 PM
Temp:	80
Weather:	Sunny

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

Observation Location:

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	☐	☐	☒	☐	To be determined by 3rd party inspection
Weld Condition	☐	☐	☒	☐	To be determined by 3rd party inspection
Anchor Bolts, Nuts, & Washers	☒	☐	☐	☐	
Grout/Leveling Plates	☒	☐	☒	☐	See notes below
Fit Up/Plumbness	☒	☐	☐	☐	
Metal Deck Welds	☐	☐	☒	☐	
Pour Stops	☐	☐	☒	☐	
Bracing	☒	☐	☐	☐	
Additional Items	☐	☐	☐	☒	
Additional Items	☐	☐	☐	☒	

Notes:

Space below base plate at A/4 and A/5 exceeds 2" per detail A on S1.4. Remedial action to be provided upon further analysis.

Signed: Nathan Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

05120

OBSERVATION REPORT

Structural Steel

Date:	7-18-11
Time:	11:00 AM
Temp:	70
Weather:	Overcast

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

Observation Location:

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	☐	☐	☒	☐	To be determined by 3rd party inspection
Weld Condition	☐	☐	☒	☐	To be determined by 3rd party inspection
Anchor Bolts, Nuts, & Washers	☒	☐	☐	☐	
Grout/Leveling Plates	☒	☐	☒	☐	See notes below
Fit Up/Plumbness	☒	☐	☐	☐	
Metal Deck Welds	☒	☐	☐	☐	
Pour Stops	☒	☐	☐	☐	
Bracing	☒	☐	☐	☐	
Additional Items	☐	☐	☒	☐	Halfen slotted inserts per detail C/S3.4 not installed
Additional Items	☐	☐	☐	☒	

Notes:

Signed: Nathan Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

05120

OBSERVATION REPORT

Structural Steel

Date:	7-19-11
Time:	7:30 AM
Temp:	70
Weather:	Sunny, Humid

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

Observation Location:

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	☐	☐	☒	☐	To be determined by 3rd party inspection
Weld Condition	☐	☐	☒	☐	To be determined by 3rd party inspection
Anchor Bolts, Nuts, & Washers	☒	☐	☐	☐	
Grout/Leveling Plates	☒	☐	☐	☐	
Fit Up/Plumbness	☒	☐	☐	☐	
Metal Deck Welds	☒	☐	☐	☐	
Pour Stops	☒	☐	☐	☐	
Bracing	☒	☐	☐	☐	
Additional Items	☒	☐	☐	☐	Halfen slotted inserts installed per detail C/S3.4
Additional Items	☐	☐	☐	☒	

Notes:

Signed: Nathan Merrill, P.E.

Quality Assurance Labs Inc.
NON-DESTRUCTIVE TESTING AND INSPECTION SERVICES
80 PLEASANT AVENUE • SOUTH PORTLAND, MAINE 04106 • TEL: (207) 799-8911 • FAX: (207) 799-7251

INSPECTION REPORT

CUSTOMER:	S. W. COLE ENGINEERING	PAGE 1	OF 1
ADDRESS:	GRAY , ME.		
ATTENTION:	ROGER DOMINGO		
COPIES:	FILE		
PROJECT:	OAK STREET LOFTS - PORTLAND , ME.		
OWNER:	SAME		
CONTRACTOR:	WRIGHT-RYAN CONSTRUCTION		

JOB No.:	REPORT No.:	P. O. NUMBER:	DATES INSPECTED:
10-1360	QAL-11-1485		07-18-11

REMARKS

>>>>>> SITE VISIT TO PERFORM VISUAL INSPECTIONS OF STRUCTURAL STEEL FIELD CONNECTIONS PER SITE DOCUMENTS AND AWS D1.1 , D1.3 REQUIREMENTS . GRID LINE LOCATIONS 1 - 6 , A - E SECOND LEVEL FRAMING PLAN :

> COLUMN BASE ANCHOR BOLTED CONNECTIONS BEING ADDRESSED BY G/C AND CONTRACTOR FOR FINAL TORQUE AND SIZE ISSUES .

> COLUMN TO BEAM AND BEAM TO BEAM HIGH STRENGTH BOLTED CONNECTIONS COMPLETE . (Note: location 6-C shows A490's in-progress at brace bay for bolt size replacement for S/C final torque .)

> DECKING ATTACHMENTS FOR PUDDLE WELDS AND SIDE LAP SCREWS COMPLETE . SHEAR STUD PLACEMENT COMPLETE . (Only 2 studs failed as shown at grid line 1-2, C.).

> HSS DIAGONAL BRACE CONNECTIONS COMPLETE . PERIMETER ANGLE BRACE CONNECTIONS IN-PROGRESS FOR POST CONCRETE PLACEMENT .

COMPLETED ITEMS COMPLY WITH SITE DOCUMENTS AND AWS D1.1 , D1.3 REQUIREMENTS FOR VISUAL ACCEPTANCE .

END ITEMS ///

FAA REPAIR STATION NUMBER RX5R187N
METHOD(S),PROCESS(ES),PROCEDURE(S) MERCURY FREE

ADDITIONAL INFORMATION - SEE ATTACHED: ☐ SKETCH(ES) ☐ SUPPLEMENTARY SHEET(S) ☐ NDT REPORTS ☐ VIDEO

	SIGNATURES	CERTIFICATION	LEVEL	DATE M D Y
INSPECTOR	M. Drew CWI # 99050211	ASNT	II	07 | 20 | 11
SUPERVISOR				

(FORM Q703 REV 0)

Structural Schedule of Special Inspection Services – Exhibit B

FABRICATION AND IMPLEMENTATION PROCEDURES – WOOD TRUSSES

VERIFICATION AND INSPECTION IBC Section 1704.2	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
1. Fabrications Procedures: Review of fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices by an approved special inspection agency. At the completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building code official stating that the work was performed in accordance with the approved construction documents. -OR- 2. TPI Inspection Program: Fabricator shall participate in the TPI Quality Assurance Inspection Program, and maintain a copy of the Quality Assurance Procedures Manual, QAP-90. Submit copy of certificate. All trusses shall bear the TPI Registered Mark.	Y	S	Fabricator shall submit one of the two qualifications	SI-1	PE/SE or EIT	YES
3. At completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building code official stating that the work was performed in accordance with the approved construction documents	N	S	IBC 1704.2.2	SI-1	PE/SE or EIT	—

Connecting the Truss Industry

TRUSS PLATE INSTITUTE
218 N. Lee Street, Suite 312
Alexandria, VA 22314
Ph. 703-683-1010
www.tpinst.org

June 15, 2010

Ref: **Aroostook Trusses, Inc.- TPI PLANT #936**

To Whom It May Concern:

Please be advised that **Aroostook Trusses, Inc**. located in **Presque Isle, ME** is an active participant in good standing with the Truss Plate Institute's Quality Assurance Inspection Program. The TPI program is recognized by the International Code Council in accordance with ICC's IAS Report AA-648 Type A (3rd Party) Body (http://www.iasonline.org/PDF/AA/aa648.pdf); it serves as a means for truss manufacturers to comply with IBC Section 1704.2 and 2303.4. Based on random, unannounced inspections and/or audits of in-house QC records conducted by TPI staff, **Aroostook Trusses, Inc**. truss design and manufacturing quality are in accordance with *ANSI/TPI 1-2002* referenced in ICC's *"International Building Code 2003 & 2006"*.

Aroostook Trusses, Inc. is authorized to affix TPI's Quality Assurance Stamp provided that it maintains continued satisfactory conformance with the above requisites of ANSI/TPI 1 & IRC & IBC 2003 & 2006 Standards. The TPI mark is the property of Truss Plate Institute at all times. Its approved usage signifies that the truss manufacturer licensee is complying with the applicable provisions of the model building code. In the event of unsatisfactory performance *(cycle of non-conforming reports)*, TPI quality stamps may be removed from the premises of the TPI licensee and decertification proceedings initiated.

If TPI can be of further assistance in familiarizing you with its voluntary Quality Assurance Inspection Program, or the ongoing status of **Aroostook Trusses, Inc**., or any other of TPI's Quality Assurance Licensees; please do not hesitate to contact us, or visit our website at *http://www.tpinst.org/quality.html* for a complete listing of truss manufacturers that are participating in our quality auditing program.

Sincerely,

TRUSS PLATE INSTITUTE

Michael A. Cassidy, R. A.
Executive Director

"TPI MISSION STATEMENT - Established in 1960 to maintain the truss industry on a sound engineering basis. To accomplish its purpose, the Truss Plate Institute establishes methods of design and construction (ANSI/TPI 1) for wood trusses in accordance with the American National Standards Institute's accredited consensus procedures for coordination and development of American National Standards."

Structural Schedule of Special Inspections – Exhibit B
WOOD CONSTRUCTION

VERIFICATION AND INSPECTION IBC Section 1704.6	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
1. Fabrication of high-load diaphragms						
a. Verify wood structural panel sheathing for grade and thickness	Y	P	IBC 1704.6	SI-1-	PE/SE or EIT	8/30-9/19
b. Verify the nominal size of framing members at adjoining panel edges	Y	P	IBC 1704.6	SI-1	PE/SE or EIT	8/30-9/19
b. Verify the nail or staple diameter and length	Y	P	IBC 1704.6	SI-1	PE/SE or EIT	8/30-9/19
b. Verify the number of fastener lines	Y	P	IBC 1704.6	SI-1	PE/SE or EIT	8/30-9/19
b. Verify the spacing between fasteners in each line and at edge margins	Y	P	IBC 1704.6	SI-1	PE/SE or EIT	8/30-9/19
2. Load Tests for Joist Hangers: Provide evidence of manufacturer's load test in accordance with ASTM D1761 including the vertical load bearing capacity, torsional moment capacity, and deflection characteristics when there is no calculated procedure recognized by the code.	N	S	IBC 1715 [submit ICBO reports]	-	PE/SE or EIT	—

BECKER
STRUCTURAL ENGINEERS

06100

OBSERVATION REPORT

Rough Carpentry

Date:	8-30-11
Time:	1:00 PM
Temp:	75 F
Weather:	Sunny

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

Observation Location: Diaphragm and Shearwall Construction (all levels expect roof)

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Member Sizes	☒	☐	☐	☐	
Material Quality	☒	☐	☐	☐	
Bearing Condition	☒	☐	☐	☐	
Connections	☒	☐	☐	☐	
Nailing Pattern	☒	☐	☐	☐	
Bridging/Bracing	☒	☐	☐	☐	
Other:	☐	☐	☒	☐	See notes below
Other:	☐	☐	☐	☐	

Notes:

Field applied wall sheathing at shearwall on Line 1 & 6 not installed (every level)

Signed: Nathan Merrill, P.E.

BECKER
STRUCTURAL ENGINEERS

06100

OBSERVATION REPORT

Rough Carpentry

Date:	9-19-11
Time:	1:00 PM
Temp:	75 F
Weather:	Sunny

Project:	Oak Street Lofts
Location:	Portland, ME
Becker Job No:	2456

Observation Location: Diaphragm and Shearwall Construction (roof)

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Member Sizes	☒	☐	☐	☐	
Material Quality	☒	☐	☐	☐	
Bearing Condition	☒	☐	☐	☐	
Connections	☒	☐	☐	☐	
Nailing Pattern	☒	☐	☐	☐	
Bridging/Bracing	☒	☐	☐	☐	
Other:	☐	☐	☒	☐	See notes below
Other:	☐	☐	☐	☐	

Notes:

Field applied wall sheathing at shearwall on Line 1 & 6 not installed (every level)

Signed: Nathan Merrill, P.E.

Special Inspections – Exhibit C

Quality Assurance for Seismic Resistance Seismic Checklist
Quality Assurance for Seismic Resistance Wind Checklist
Schedule of Inspections

Structural Schedule of Special Inspections – Exhibit C

SEISMIC RESISTANCE - STRUCTURAL

VERIFICATION AND INSPECTION IBC Section 1707	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
1. Special inspections for seismic resistance. Special inspection as specified in this section is required for the following:			Seismic Design Category: B			
a. The seismic-force-resisting systems in structures assigned to Seismic Design Category C, D, E or F	N	P	IBC 1707.1	SI-1	PE/SE or EIT	—
2. Structural steel: Continuous special inspection for structural welding in accordance with AISC 341. Note: Agent must be present to observe certain welding process.	N	C***	IBC 1707.2	TA-1	AWS-CWI	—
3. Structural wood:						
a. Continuous special inspection during field gluing operations of elements of the seismic-force-resisting system.	N	C	IBC 1707.3	-	PE/SE or EIT	—
b. Periodic special inspections for nailing, bolting, anchoring and other fastening of components within the seismic-force-resisting system, including drag struts, braces and hold-downs	Y	P	IBC 1707.3	SI-1	PE/SE or EIT	8/30 THRU 9/19
4. Cold-formed steel framing: Periodic special inspections during welding operations of elements of the seismic-force-resisting system. Periodic special inspections for screw attachment, bolting, anchoring and other fastening of components within the seismic-force-resisting system, including struts, braces, and hold-downs	N	N		-		—
4. Seismic isolation system. Provide periodic special inspection during the fabrication and installation of isolator units and energy dissipation devices if used as part of the seismic isolation system	N	N	IBC 1707.8	-		—

*** per 1707.2 welding per AISC 341 shall be continuously inspected except:
Single pass fillet welds less than 5/16"
Floor and Roof Deck Welding

Quality Assurance Plan – Seismic and Wind – Exhibit C

QUALITY ASSURANCE FOR SEISMIC RESISTANCE CHECK LIST [IBC 1705]

Seismic Design Category	**B**

☐ **FOR SEISMIC DESIGN CATEGORY C OR HIGHER:**

Structural:

☐ The seismic-force-resisting systems
- ☐ Steel Braced Frames and associated connections/anchorage
- ☐ Steel Moment Frames and associated connections
- ☐ Shear walls: ☐ CMU ☐ Wood ☐ Concrete ☐ Diaphragms: ☐ Floor ☐ Roof
- ☐ Other:

QUALITY ASSURANCE FOR WIND RESISTANCE CHECK LIST [IBC 1706]

Wind Exposure Category	**B**

REQUIRED	NOT REQUIRED	NOT APPLICABLE	QUALITY ASSURANCE PLAN REQUIREMENTS (A Quality Assurance Plan is required where indicated below)
☐	☒	☐	In wind exposure Categories A and B, where the 3-second-gust basic wind speed is 120 miles per hour (mph) (52.8 *m/sec)* or greater.
☐	☐	☒	In wind exposure Categories C and D, where the 3-second-gust basic wind speed is 110 mph (49 *m/sec)* or greater.

Prepared by: BECKER STRUCTURAL ENGINEERS

12/21/11

Signature Date

Building Code Official's Acceptance:

Signature Date