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**Transmittal**

FEB 11 2011

**TO:** Portland Inspections Division  
Portland City Hall, Room 315  
389 Congress Street  
Portland, Maine 04101  
(207) 874-8693

**ATTN:** **Jeanie Bourke**

**DATE:** 2/10/2011

**PROJECT:** Maine Medical Center - Pavilions "A" & "C" P6 Renovations/Additions  
Special Inspections Report


**PROJECT No:** 2370

Dept. of Building Inspections  
City of Portland Maine

<input checked="" type="checkbox"/> Attached	<input type="checkbox"/> Under separate cover via:
<input checked="" type="checkbox"/> For Approval	<input type="checkbox"/> Reviewed
<input checked="" type="checkbox"/> For Your Use	<input type="checkbox"/> For Signature
<input type="checkbox"/> For Review & Comment	<input type="checkbox"/> Returned for Corrections
	<input type="checkbox"/> Other:
<input checked="" type="checkbox"/> Prints	<input type="checkbox"/> Specifications
<input type="checkbox"/> Mylars	<input type="checkbox"/> Calculations
<input type="checkbox"/> Sepias	<input type="checkbox"/> Letter
	<input type="checkbox"/> Bond Reproducibles
	<input type="checkbox"/> Shop Drawings
	<input checked="" type="checkbox"/> Other: CD Copy

Copies	Date	Description
1	2/10/2011	Hard Copy Special Inspections Report
1	2/10/2011	Electronic Copy Special Inspections Report

**Comments:**

**Signed:**   
Ethan A. Rhile, P.E.



**Special Inspections Report  
Maine Medical Center  
Pavilions "A" & "C" P6 Renovations**

Portland, Maine  
February 10, 2011

Prepared for:

Maine Medical Center  
22 Bramhall Street  
Portland, Maine 04101

In conjunction with:

The City of Portland  
389 Congress Street  
City Hall Room 315  
Portland, Maine 04101

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Dept. of Building Inspections  
City of Portland Maine

Maine Medical Center  
Pavilions "A" & "C" P6 Renovations  
February 10, 2011

Special Inspections Report  
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Appendix A (Electronic Version Only)  
Material Certifications



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Dept. of Building Inspections  
City of Portland Maine



**Project: Maine Medical Center P6 Renovations**  
**Date Prepared: 11/30/2009**

## Structural Statement of Special Inspections (Continued)

### 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: *Maine Medical Center P6 Renovations*  
Location: *Portland, Maine*  
Owner: *Maine Medical Center*  
Owner's Address: *22 Bramhall Street, Portland, Maine 04102*

Architect of Record: *Charlie Rizza* *Morris Switzer Environments for Health*  
(name) (firm)

Structural Registered Design  
Professional in Responsible Charge: *Ethan A. Rhile* *Becker Structural Engineers, Inc*  
(name) (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

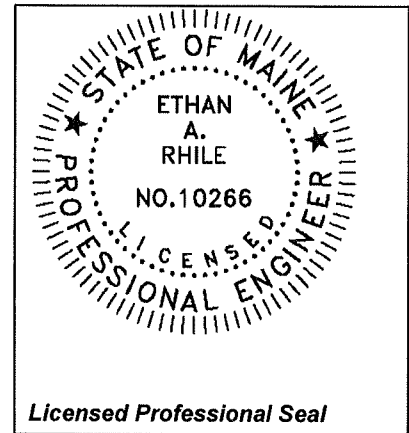
Ethan A. Rhile  
(Type or print name)

Becker Structural Engineers  
(Firm Name)



Signature

2/10/2011  
Date



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Dept. of Building Inspections  
City of Portland Maine

Project: Maine Medical Center P6 Renovations  
Date Prepared: 11/30/2009

**Structural Statement of Special Inspections (Continued)**  
**Special Inspector's/Agent's Final Report**

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Project:  
Special Inspector or Agent: Michael Drew Quality Assurance Laboratories Inc.  
Designation: (name) (firm)

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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.

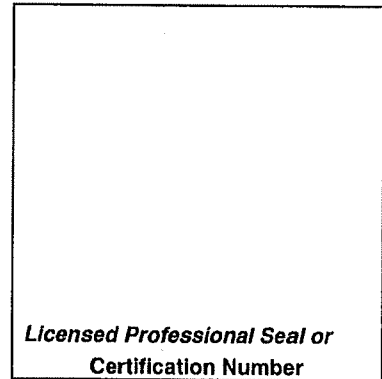
Respectfully submitted,  
Special Inspector or Agent:

Gary E. Parechian  
(Type or print name)

---

  
Signature

2/9/2011  
Date



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Project: Maine Medical Center P6 Renovations  
Date Prepared: 11/30/2009

## Structural Statement of Special Inspections (Continued)

### Special Inspector's/Agent's Final Report

Project:

Special Inspector or  
Agent:

Roger E. Domingo  
*(name)*

S.W. COLE ENGINEERING, INC.

*(firm)*

Designation:

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)



2/9/2011

Signature

Date

Field and laboratory testing was  
performed by Van Terrell, Jr. an  
ICC Spray - Applied  
Fireproofing Special Inspector

**Licensed Professional Seal or  
Certification Number**

## Structural Schedule of Special Inspections

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### 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
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#### 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.
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#### 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

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**Project: Maine Medical Center P6 Renovations**  
**Date Prepared: 11/30/2009**

## Structural Statement of Special Inspections (Continued)

### List of Agents

Project: *Maine Medical Center P6 Renovations*

Location: *Portland, Maine*

Owner: *Maine Medical Center*

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. <b>STRUCTURAL Special Inspections Coordinator (SSIC)</b>	<i>Becker Structural Engineers</i>	<i>75 York Street Portland, Maine 04101 (207) 879-1838 info@beckerstructural.com</i>
2. Special Inspector (SI 1)	<i>Becker Structural Engineers</i>	<i>75 York Street Portland, Maine 04101 (207) 879-1838 info@beckerstructural.com</i>
3. Special Inspector (SI 2)	<i>Quality Assurance Labs</i>	<i>80 Pleasant Street South Portland, Maine 04106 (207) 799-8911</i>
4. Testing Agency (TA 1)		
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.

Project: Maine Medical Center P6 Renovations

Date Prepared: 11/30/2009

### Structural Schedule of Special Inspections

#### 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.	N					
b. During placement and compaction of fill material, verify material being used and maximum lift thickness comply with the approved soils report.	N					
c. Test in-place dry density of compacted fill complies with the approved soils report.	N					
2. Pile foundations:						
a. Observe and record procedures for static load testing of piles.	N					
b. Observe and record procedures for dynamic load testing of piles.	N					
c. Record installation of each pile and results of load test. Include cutoff and tip elevations of each pile relative to permanent reference.	N					
d. Test welded splices of steel piles	N					
3. Pier foundations: Verify installation of pier foundations for buildings assigned to Seismic Design Category C, D, E or F.	N					
a. Verify pier diameter and length	N					
b. Verify pier embedment (socket) into bedrock	N					
c. Verify suitability of end bearing strata	N					

**Structural Schedule of Special Inspections**  
**CONCRETE CONSTRUCTION**

VERIFICATION AND INSPECTION  IBC Section 1704.4	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGEN T	AGENT QUALIFICATION	TASK COMPLETED
1. Inspection of reinforcing steel, including prestressing tendons, and placement	N					
2. Inspection of reinforcing steel welding in accordance with Table 1704.3, Item 5B	N					
3. Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased	N					
4. Verifying use of required design mix	N					
5. At time fresh concrete is sampled to fabricate specimens for strength test, perform slump and air content test and temperature	N					
6. Inspection of concrete and shotcrete placement for proper application techniques	N					
7. Inspection for maintenance of specified curing temperature and techniques	N					
8. Inspection of Prestressed Concrete						
a. Application of prestressing force.	N					
b. Grouting of bonded prestressing tendons in seismic force resisting system	N					
9. Erection of precast concrete members	N					
10. Verification of in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms beams and structural slabs	N					

**Structural Schedule of Special Inspections**  
**MASONRY CONSTRUCTION – LEVEL 1 (NON-ESSENTIAL FACILITY)**

VERIFICATION AND INSPECTION IBC Section 1704.5	V/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.	N					
b. Construction of mortar joints.	N					
c. Location of reinforcement and connectors.	N					
d. Prestressing technique.	N					
e. Grade and size of prestressing tendons and anchorages.	N					
2. The inspection program shall verify:						
a. Size and location of structural elements.	N					
b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.	N					
c. Specified size, grade and type of reinforcement.	N					
d. Welding of reinforcing bars.	N					
e. Protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F).	N					
f. Application and measurement of prestressing force.	N					
3. Prior to grouting, the following shall be verified to ensure compliance:						
a. Grout space is clean.	N					
b. Placement of reinforcement and connectors and prestressing tendons and anchorages.	N					
c. Proportions of site-prepared grout and prestressing grout for bonded tendons.	N					
d. Construction of mortar joints.	N					
4. Grout placement shall be verified to ensure compliance with code and construction document provisions.	N					
a. Grouting of prestressing bonded tendons.	N					
5. Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.	N					
6. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.	N					

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 City of Portland Maine

**Structural Schedule of Special Inspections**  
**MASONRY CONSTRUCTION – LEVEL 2 (ESSENTIAL FACILITY)**

VERIFICATION AND INSPECTION  IBC Section 1704.5	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
1. From the beginning of masonry construction, the following shall be verified to ensure compliance:						
a. Proportions of site-mixed mortar, grout and prestressing grout for bonded tendons.	N					
b. Placement of masonry units and construction of mortar joints.	N					
c. Placement of reinforcement, connectors and prestressing tendons and anchorages.	N					
d. Grout space prior to grouting.	N					
e. Placement of grout.	N					
f. Placement of prestressing grout.	N					
2. The inspection program shall verify:						
a. Size and location of structural elements.	N					
b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.	N					
c. Specified size, grade and type of reinforcement.	N					
d. Welding of reinforcement.	N					
e. Protection of masonry during cold weather and (temperature below 40°F) or hot weather (temperature above 90°F).	N					
f. Application and measurement of prestressing force.	N					
3. Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.	N					
4. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.	N					

**Project: Maine Medical Center P6 Renovations**

**Date Prepared: 11/30/2009**

**Structural Schedule of Special Inspections - STEEL CONSTRUCTION**

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
<b>IBC Section 1704.3</b>						
<b>1. Material verification of high-strength bolts, nuts and washers:</b>						
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	Y	S	Applicable ASTM material specifications; AISC 335, Section A3.4; AISC LRFD, Section A3.3	SI1	PE/SE or EIT	X
b. Manufacturer's certificate of compliance required.	Y	S		SI1	PE/SE or EIT	X
<b>2. Inspection of high-strength bolting</b>						
a. Bearing-type connections.	Y	P	AISC LRFD Section M2.5 IBC Sect 1704.3.3	SI2	AWS/AISC-SSI	X
b. Slip-critical connections.	N					
<b>3. Material verification of structural steel (IBC Sect 1708.4):</b>						
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	Y	S	ASTM A 6 or ASTM A 568 IBC Sect 1708.4	SI1	PE/SE or EIT	X
b. Manufacturers' certified mill test reports.	Y	S	ASTM A 6 or ASTM A 568 IBC Sect 1708.4	SI1	PE/SE or EIT	X
<b>4. Material verification of weld filler materials:</b>						
a. Identification markings to conform to AWS specification in the approved construction documents.	Y	S	AISC, ASD, Section A3.6; AISC LRFD, Section A3.5	SI1	PE/SE or EIT	X
b. Manufacturer's certificate of compliance required.	Y	S		SI1	PE/SE or EIT	X
5. Submit current AWS D1.1 welder certificate for all field welders who will be welding on this project.	Y	S	AWS D1.1	SI1	PE/SE or EIT	X
<b>6. Inspection of welding (IBC 1704.3.1):</b>						
<b>a. Structural steel:</b>						
1) Complete and partial penetration groove welds.	Y	C	AWS D1.1	SI2	AWS-CWI	X
2) Multipass fillet welds.	Y	C		SI2	AWS-CWI	X
3) Single-pass fillet welds > 5/16"	Y	C		SI2	AWS-CWI	X
4) Single-pass fillet welds < 5/16"	Y	P		SI2	AWS-CWI	X
5) Floor and deck welds.	Y	P	AWS D1.3	SI2	AWS-CWI	X
<b>b. Reinforcing steel (IBC Sect 1903.5.2):</b>						
1) Verification of weldability of reinforcing steel other than ASTM A706.	N					
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					
3) Shear reinforcement.	N					
4) Other reinforcing steel.	N					
<b>7. Inspection of steel frame joint details for compliance (IBC Sect 1704.3.2) with approved construction documents:</b>						
a. Details such as bracing and stiffening.	Y	P		SI1	PE/SE or EIT	X
b. Member locations.	Y	P		SI1	PE/SE or EIT	X
c. Application of joint details at each connection.	Y	P		SI1	PE/SE or EIT	X



**Structural Schedule of Special Inspection Services**  
**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	SI1	PE/SE or EIT	X
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.	Y	S	IBC 1704.2.2	SI1	PE/SE or EIT	

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Dept. of Building Inspections  
 City of Portland, Maine

Project: Maine Medical Center P6 Renovations

Date Prepared: 11/30/2009

### Structural Schedule of Special Inspection Services

#### FABRICATION AND IMPLEMENTATION PROCEDURES – WOOD TRUSSES

<b>VERIFICATION AND INSPECTION</b>  <b>IBC Section 1704.2</b>	<b>Y/N</b>	<b>EXTENT:</b> <b>CONTINUOUS,</b> <b>PERIODIC,</b> <b>SUBMITTAL,</b> <b>OR NONE</b>	<b>COMMENTS</b>	<b>AGENT</b>	<b>AGENT</b> <b>QUALIFICATION</b>	<b>TASK</b> <b>COMPLETED</b>
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.	N					
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					



**Structural Schedule of Special Inspections**  
**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	N					
b. Verify the nominal size of framing members at adjoining panel edges	N					
b. Verify the nail or staple diameter and length	N					
b. Verify the number of fastener lines	N					
b. Verify the spacing between fasteners in each line and at edge margins	N					
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					

**Structural Schedule of Special Inspections**  
**SEISMIC RESISTANCE - STRUCTURAL**

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETE D
IBC Section 1707						
1. Special inspections for seismic resistance. Special inspection as specified in this section is required for the following:			Seismic Design Category: C			
a. The seismic-force-resisting systems in structures assigned to Seismic Design Category C, D, E or F	Y	P	IBC 1707.1	SII	PE/SE or EIT	X
2. Structural steel: Continuous special inspection for structural welding in accordance with AISC 341.	N	None (not a AISC 341 project)				
3. Structural wood:						
a. Continuous special inspection during field gluing operations of elements of the seismic-force-resisting system.	N					
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	N					
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					
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					

**Quality Assurance Plan – Seismic and Wind**

**QUALITY ASSURANCE FOR SEISMIC RESISTANCE CHECK LIST [IBC 1705]**

Seismic Design Category **C**

**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 **C**

REQUIRED	NOT REQUIRED	NOT APPLICABLE	
			<b>QUALITY ASSURANCE PLAN REQUIREMENTS</b> (A Quality Assurance Plan is required where indicated below)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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:

Building Code Official's Acceptance:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## Disclaimers and Qualifications

01000.2

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. Additional disclaimers and/or qualifications may be included in the Owner-Special Inspection agreement.

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Dept. of Building Inspections  
City of Portland Maine





<b>OBSERVATION REPORT</b>
Structural Steel

**Date:** 6/7/2010  
**Time:** 10:00 am  
**Temp:** N/A  
**Weather:** N/A

**Project:** MMC P6 Connector/Renovations  
**Location:** Portland, Maine  
**Becker Job No:** 2370

**Observation Location:**  
 Reviewed existing column & beam locations for new connector.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Weld Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Anchor Bolts, Nuts, & Washers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Grout/Leveling Plates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Fit Up/Plumbness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pour Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bracing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Notes:**  
 I met with Dave Moore of Hebert. The existing bearing condition at the southeast end of the connector was buried in concrete. Offset beams made the column difficult to find. I worked with Hebert to find the column using a hammer drill. Column condition was located and appeared to be as drawn on the original/design drawings..

**Signed:** Ethan A. Rhile, P.E.

<b>OBSERVATION REPORT</b>
Structural Steel

**Date:** 8/11/2010  
**Time:** 6:30am am  
**Temp:** N/A  
**Weather:** N/A

**Project:** MMC P6 Connector/Renovations  
**Location:** Portland, Maine  
**Becker Job No:** 2370

**Observation Location:**  
 Reviewed existing and installed conditions adjacent to Pavilion "A".

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Weld Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Anchor Bolts, Nuts, & Washers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Grout/Leveling Plates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Fit Up/Plumbness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pour Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bracing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Notes:**  
 I met with Dave Moore of Hebert. We looked at the existing conditions below the floor, including the end condition of the exterior beams and the condition where the new beams framed in. Discussed options for welding the new, interior beam connections with Hebert.

**Signed:** Ethan A. Rhile, P.E.

<b>OBSERVATION REPORT</b>
Structural Steel

**Date:** 9/02/2010  
**Time:** 9:40am  
**Temp:** N/A  
**Weather:** N/A

**Project:** MMC P6 Connector/Renovations  
**Location:** Portland, Maine  
**Becker Job No:** 2370

**Observation Location:**  
 Interior beams installed thorough Pavilion "C".

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Weld Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Anchor Bolts, Nuts, & Washers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Grout/Leveling Plates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Fit Up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pour Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bracing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Notes:**

**Signed:** Ethan A. Rhile, P.E.

RECEIVED

FEB 11 2011

Dept. of Building Inspections  
 City of Portland Maine



<b>OBSERVATION REPORT</b>
Structural Steel

**Date:** 9/15/2010  
**Time:** 10:40am  
**Temp:** N/A  
**Weather:** N/A

**Project:** MMC P6 Connector/Renovations  
**Location:** Portland, Maine  
**Becker Job No:** 2370

**Observation Location:**  
 Installation of connector frame, base plate conditions and new-to-existing.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Weld Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Anchor Bolts, Nuts, & Washers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Grout/Leveling Plates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Fit Up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pour Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bracing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Notes:**

**Signed:** Ethan A. Rhile, P.E.

<b>OBSERVATION REPORT</b>
Structural Steel

**Date:** 9/16/2010  
**Time:** 10:40am  
**Temp:** N/A  
**Weather:** N/A

**Project:** MMC P6 Connector/Renovations  
**Location:** Portland, Maine  
**Becker Job No:** 2370

**Observation Location:**  
 Installation of connector frame (complete erection), base plate conditions and new-to-existing.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Weld Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Anchor Bolts, Nuts, & Washers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Grout/Leveling Plates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Fit Up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pour Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bracing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Notes:**  
 Reviewed base conditions that had been welded in the past day.

**Signed:** Ethan A. Rhile, P.E.

*05120 Structural Steel*

QA Labs Testing/Inspection Report

05120.2



# 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: MAINE MEDICAL CENTER		PAGE 1 OF 1	
ADDRESS: PORTLAND, ME.			
ATTENTION: MARSHALL BARTLETT			
COPIES: FILE			
PROJECT: P6 CONSTRUCTION / STRUCTURAL STEEL INSPECTIONS			
OWNER: MMC			
CONTRACTOR: HEBERT CONSTRUCTION			
JOB No.:	REPORT No.: QAL-10-1682	P. O. NUMBER:	DATES INSPECTED: 09-23-10

### REMARKS

>>>>> SITE VISIT TO PERFORM VISUAL INSPECTIONS OF NEW STRUCTURAL STEEL AT P6 :

- > COLUMN TO BEAM AND BEAM TO BEAM HIGH STRENGTH T/C BOLTED CONNECTIONS COMPLETE .
- > C J P MOMENT CONNECTIONS COMPLETE . note: drawing detail for lower flange moment welds list added 5/16" fillet welds . Part geometry does not allow any fillet welds at these connections.

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

END ITEMS ////



MICHAEL W. DREW  
CWI 99050211  
CCI EXP. 06/03/11

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

INSPECTOR M. Drew CWI # 99050211

SUPERVISOR

CERTIFICATION	LEVEL	DATE		
		M	D	Y
ASNT	II	09	24	10

*05120 Structural Steel*  
SW Cole Fireproofing Test Report

05120.2





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

**REPORT OF SFRM THICKNESS, DENSITY, and ADHESION/COHESION  
COLUMN OR BEAM  
ASTM E605/E736**

Project Name: MMC P6  
 Project Number: 10-1010  
 Client: Maine Medical Center  
 Report Date:

SFRM Supplier: W.R. Grace  
 SFRM Material: Monokote MK-6/HY  
 SFRM Installer: New England Fireproofing  
 Installation Date: Prior to 9/23/10

**THICKNESS**

Test Date	Floor No.	Member No.	Member Type	Minimum (in)	Maximum (in)	Average (in)	Specification (in)
9/23/10	Roof Framing	Line 2.75 & line D.5	Beam	0.750	1.375	1.156	1.125
9/23/10	Roof Framing	Line 2.75 & line M.5	Beam	0.625	0.625	1.323	1.313

**DENSITY**

Test Date	Floor No.	Member No.	Member Type	Member Thickness (in)	Area (in <sup>2</sup> )	Density (pcf)	Specification (pcf)
9/23/10	Roof Framing	Line 2.75 & M.5	Beam	1.651	48.000	17	15

**ADHESION/COHESION**

Test Date	Floor No.	Member No.	Member Type	Failure Type	Force (Lbs)	Bond Strength (Psf)	Specification (Psf)
9/23/10	Roof Framing	Line 2.75 & M.5	Beam	X	20	347	339psf

Reviewed By: RED



Project Name: MMC P-6 Addition

Project No.: 10-1010

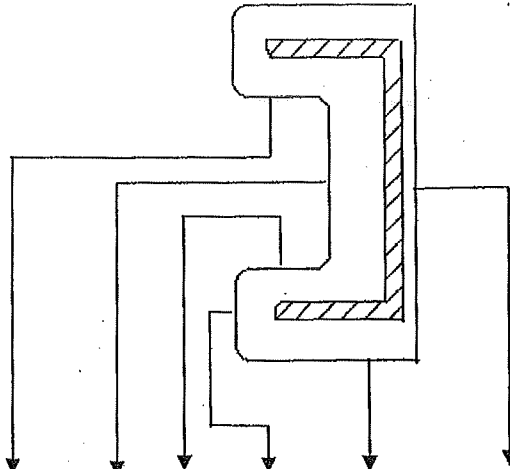
Client: Maine Medical Center

Date: 9-23-10

Comments: Substrate type C-Channel C8 X 11.5 Pavilion A Roof Framing

Sheet: 1 of 1

SWCE Rep.: VLT



Location	Required Thickness	1	2	3	4	5	6			Average Thickne
Line A.5 & line 4.25	1.125	1.56	2.375	1.25	.625	1.125	1.625			1.426
Line A.5 & line 4.25	1.125	1.5	2.375	1.312	.625	1.25	1.625			1.447

\*Required for columns only

Reviewed By: RED

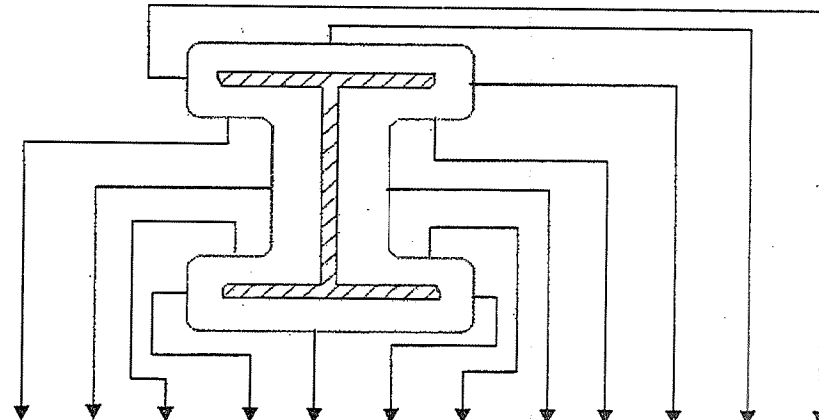


# WORKSHEET

## SFRM THICKNESS ON BEAM OR COLUMN ASTM E605

Project Name: MMC P-6  
 Project Number: 10-1010  
 Client: Maine Medical Center

SFRM Supplier: W.R. Grace  
 SFRM Material: Monokote MK-6/HY  
 SFRM Installer: New England Fireproofing  
 Installation Date: Prior to 9/23/10



Floor No.	Column/Beam No.	Type	Test Date	Spec.	1	2	3	4	5	6	7	8	9	10*	11*	12*	Average
Roof Framing	Line 2.75 & line D.5	Beam W6X15	9/23/10	1.125	0.938	2.375	1.375	0.750	1.000	0.750	2.000	2.875	1.625				1.146
					0.875	1.875	1.375	0.750	1.250	0.750	2.000	2.875	1.625				1.167
Floor No.	Column/Beam No.	Type	Test Date	Spec.	1	2	3	4	5	6	7	8	9	10*	11*	12*	Average
Roof Framing	Line 2.75 & line M.5	Beam W10X12	9/23/10	1.313	1.375	2.000	2.000	0.875	1.313	0.750	1.500	1.625	1.375				1.319
					1.625	2.000	2.000	0.875	1.313	0.625	2.000	1.688	1.313				1.326
Floor No.	Column/Beam No.	Type	Test Date	Spec.	1	2	3	4	5	6	7	8	9	10*	11*	12*	Average
Floor No.	Column/Beam No.	Type	Test Date	Spec.	1	2	3	4	5	6	7	8	9	10*	11*	12*	Average

\* Not Required for Beams





*Appendix A*  
Material Certifications

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