

Structural Statement of Special Inspections

Supplemental Narrative

Structural Statement of Special Inspections

Project:	Alumni Hall Renovation		
Location:	Portland, Maine		
Owner:	University of New England		
	nt of Special inspections encompass the follow	ving discipline: Structura	Company to the second of the s
inspection an identity of other	nt of Special Inspections is submitted as a co d Structural Testing requirements of the Buil cable to this project as well as the name of the er approved agencies to be retained for condu	ding Code. It includes a Structural Special Inspe- cting these inspections a	s schedule of Special Inspection clion Coordinator (SSIC) and the nd lests.
Inspection re Responsible C for correction, Building Offici program does	al Special Inspection Coordinator shall keep ports to the Building Code Official (BCO) Charge (SRDP). Discovered discrepancies shalf such discrepancies are not corrected, it at and the Structural Registered Design Profinot relieve the Contractor of his or her respon	and the Structural Reg all be brought to the immo the discrepancies shall be essional in Responsible of sibilities,	elstered Design Professional in ediate attention of the Contractor brought to the attention of the Charge. The Special Inspection
interim report Responsible C	s shall be submitted to the Building Officia Tharge at an interval determined by the SSIC a	I and the Structural Received the BCO.	gistered Design Professional in
correction of a	nt of Special Inspections documenting com any discrepancies noted in the inspections Jse and Occupancy.	pletion of all required S shall be submitted to the	pecial inspections, testing and ne BCO prior to issuance of a
Job site eafety	and means and methods of construction are	solely the responsibility of	The Contractor.
Interim Report			or [] per attached schedule.
Prepared by:			
Dànlel S. Buṃ	ė, P.E.		TE OF MANAGEMENT
type or print n Professional in	ame of the Structural Registered Design Responsible Charge)	•	DANIELS.
1			No. 10910 /8
/an/	1. h	5/1/15	IN CONSTRUCTION
Signature		Date	Design Professional Seal
Owner's Author	rization:	Building Code Official's	Acceptance:
Am It	5/4/15		
ignelure REG HOGA	Date Date	Signalure	Date
COLIATE D	iRECTOIL PLANNING		
70-1711G P	Color (Publishing		

Date Prepared: 5/1/15

Structural Statement of Special Inspections (Continued)

List of Agents		
Project: Alumni Hall Renovation		
Location: Portland, Maine		
Owner: University of New England This Statement of Special Inspections encor	pass the following discipline: Structural	
	other disciplines may be included under a lity Assurance Plan includes the following bui	
 Soils and Foundations Cast-in-Place Concrete Precast Concrete Syster Structural Masonry Syste Structural Steel Wood Construction (n/a steel) 	n ems	cial Cases
Special Inspection Agencies	Firm	Address, Telephone, e-mail
1. STRUCTURAL Special	Bocker Structural Engineers	75 V- J- C4

Special Inspection Agencies	Firm	Address, Telephone, e-mail
STRUCTURAL Special Inspections Coordinator (SSIC)	Becker Structural Engineers	75 York St. Portland, ME 04101 207-879-1838 info@beckerstructural.com
2. Special Inspector (SI 1)	Becker Structural Engineers	75 York St Portland, ME 04101 207-879-1838 info@beckerstructural.com
3. Special Inspector (SI 2)	Summit Geoengineering Services	145 Lisbon St. Lewiston, ME 04240 207-576-3313 bpeterlein@summitgeoeng.com
4. Testing Agency (TA 1)	SW Cole Engineering, Inc	286 Portland Rd Gray, ME 04039 207-657-2866 inforgray@swcole.com
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 <u>not</u> 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)

Final Rep [To be compl must be rece	leted by th	Special Inspections Structural Special Institution to issuance.]	ons (SSIC/SI 1) spections Coordinator (SSIC/S	St 1). Note that all Agent's Final Reports
Project:	Alumni I	Hall Renovation		
Location:	Portland	l, Maine		
Owner:	Universi	ity of New England		
Owner's Add	ress:	11 Hills Beach Rd		
		Biddeford ME 04005		
Architect of R	ecord:	Lita Semrau		Port City Architecture
Cimpleral Re	-i-torod [(name)		(firm)
Structural Reg Professional i			Daniel C Durne D F	n - L - O I F I
11010001011=	mreopo.,	isible Offerge.	Daniel S. Burne, P.E. (name)	Becker Structural Engineers (firm)
героп.			on form a basis for and are to	be considered an integral part of this final
	ecial Inspe	ection Coordinator		
(Type or print	name)			
(Firm Name)				
Signature			Date	Licensed Professional Seal

Project: Alumni Hall Renovation - University of New England
Date Prepared: 5/1/15

Structural Statement of Special Inspections (Continued)

Special Inspector's/Agent's Final Report

Project: Special Inspector or Agent:	Alumni Hall Renovation							
Designation:	(name)	(firm)	1 Geoengineering Services					
To the best of my inform designated for this Ins	SI 2 nation, knowledge and belief, the Special Inspections or testing required for this project, and pector/Agent in the Statement of Special Inspections submitted for permit, have been reported and resolved.							
report.	prior to this final report form a bas	sis for and are to be cons	idered an integral part of this final					
Respectfully submitted, Special Inspector or Ager	nt:							
(Type or print name)								
Signature		Date	Licensed Professional Seal or Certification Number					

Project:	Alumni Hall Renovation	
Special Inspector or	Timen Ital Renovation	
Agent:		SW Cole Engineering
Designation:	(name) TA1	(firm)
ucsignated for this in	mation, knowledge and belie spector/Agent in the State overed discrepancies have be	of, the Special Inspections or testing required for this project, and ment of Special Inspections submitted for permit, have been reported and resolved.
terim reports submitte port.	d prior to this final report forn	า a basis for and are to be considered an integral part of this fina
espectfully submitted,		n a basis for and are to be considered an integral part of this fina
espectfully submitted,		SEAL NOT REQUIRED FOR
espectfully submitted, pecial Inspector or Age		
espectfully submitted, pecial Inspector or Age		SEAL NOT REQUIRED FOR
espectfully submitted, pecial Inspector or Age		SEAL NOT REQUIRED FOR
espectfully submitted, pecial Inspector or Age ype or print name)		SEAL NOT REQUIRED FOR TESTING AGENCY
espectfully submitted, pecial Inspector or Age		SEAL NOT REQUIRED FOR

Date Prepared: 5/1/15

Structural Schedule of Special Inspections

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 PE/GE Structural Engineer – a licensed SE or PE specializing in the design of building structures 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

Structural Schedule of Special Inspections soils & Foundation Construction

VERIFICATION AND INSPECTION IBC Section 1704.7, 1704.8, 1704.9	REQD Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
1. Required Verification and Inspection of Soils:		THE RESERVE OF THE SECOND				
Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	Y	P	IBC 1704.7	SI2	PE/GE, EIT or ETT	
 b. Verify excavations are extended to proper depth and have reached proper material. 	Y	P	IBC 1704.7	SI2	PE/GE, EIT or ETT	
c. Perform classification and testing of compacted fill materials.	Y	P	IBC 1704.7	TAI	PE/GE, EIT or ETT	
d. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	Y	С	IBC 1704.7	TA1	PE/GE, EIT or ETT	
Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	Y	P	IBC 1704.7	SI2	PE/GE, EIT or ETT	
Required Verification and Inspection of Driven Deep Foundation Elements:				u -		
 a. Verify element materials, sizes and lengths comply with the requirements. 	N	С	IBC 1704.8		PE/GE, EIT or ETT	
 Determine capacities of test elements and conduct additional load tests, as required. 	N	С	IBC 1704.8		PE/GE, EIT or ETT	
 Observe driving operations and maintain complete and accurate records for each element. 	N	С	IBC 1704.8		PE/GE, EIT or ETT	
d. Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element.	N	С	IBC 1704.8		PE/GE, EIT or ETT	
Required Verification and Inspection of Cast-in-Place Deep Foundation Elements:						15-10
 Observe drilling operations and maintain complete and accurate records for each element. 	N	С	IBC 1704.9		PE/GE, EIT or ETT	
b. Verify placement locations and plumbness, confirm elelment diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable) and adequate end bearing strata capacity. Record concrete or grout volumes.	N	С	IBC 1704.9		PE/GE, EIT or ETT	

See Concrete, Masonry, and/or Steel Schedules for additional material inspections for deep foundation elements as applicable.

Date Prepared: 5/1/15

Structural Schedule of Special Inspections CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	REQD Y/N	EXTENT: CONTINUOUS, PERIODIC,	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
IBC Section 1704.4		SUBMITTAL, OR NONE				
Inspection of reinforcing steel, including prestressing tendons, and placement	Y	P	ACI 318; 3.5, 7.1-7.7	SII	PE/SE or EIT	
Inspection of reinforcing steel welding in accordance with Table 1704.3, Item 5B	N	_	Not applicable. Welding of Reinf Not Allowed	-	-	
Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased or where strength design is used.	N	С	IBC 1911.5	SII	PE/SE or EIT	
Inspection of anchors installed in hardened concrete.	Y	P	IBC 1212.1	SII	PE/SE or EIT	
5. Verifying use of required design mix	Y	P	ACI 318: Ch 4, 5.2-5.4	TA1	ACI-CFTT or ACI-STT	
At time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests and determine the temperature of the concrete.	Y	С	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	TAI	ACI-CFTT or ACI-STT	
7. Inspection of concrete and shotcrete placement for proper application techniques	Y	С	ACI 318: 5.9, 5.10	TA1	ACI-CFTT or ACI-STT	
Inspection for maintenance of specified curing temperature and techniques	Y	P	ACI 318: 5.11- 5.13	SII	PE/SE or EIT	
9. Inspection of Prestressed Concrete						
a. Application of prestressing force.	N	С	ACI 318; 18.20		PE/SE or EIT	
b. Grouting of bonded prestressing tendons in seismic force resisting system	И	С	ACI 318: 18.18,4		ACI-CFTT or ACI-STT	
10. Erection of precast concrete members.	N	P	ACI 318: Ch 16		PE/SE or EIT	
11. Verification of in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beans and structural slabs.	N	P	ACI 318: 6.2		ACI-CFTT or ACI-STT	
2. Inspect formwork for shape, location and dimensions of the concrete member being formed.	Y	P	Limitations apply. See below		PE/SE or EIT	

Limitations of item 12: Special inspection includes periodic review of formwork shape, general location, and formwork dimensions that can be readily measured with conventional tape measure. Verification of building layout, building location, foundation extents, column grids, and foundation elevations is excluded.

Structural Schedule of Special Inspections MASONRY CONSTRUCTION – LEVEL 1

VERIFICATION AND INSPECTION IBC Section 1704.5	REQU Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.	Y	P	ACI530.1, 1.5	SII	PE/SE or EIT	
2. Verification of f^*_m and f^*_{AAC} prior to construction except where specifically exempted by this code.	Y	P	ACI531.1, 1.4B	TAI	ACI-CFTT or ACI-STT	
Verification of slump flow and VSI as delivered to the site for self-consolidating grout.	Υ	c	ACI530.1, 1.5B.1.b.3	,TA1	ACI-CFTT or ACI-STT	
4. As masonry construction begins, the following shall be verified to ensure compliance:						
a. Proportions of site-prepared mortar.	Y	P	ACI530.1, 2.6A	TA1	ACI-CFTT or ACI-STT	
b. Construction of mortar joints.	Y	P	ACI530.1, 3.3B	TA1	ACI-CFTT or ACI-STT	
c. Location of reinforcement and connectors.	Y	P	ACI530.1, 3.4, 3.6A	TAI	PE/SE or EIT	
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	
5. During construction the inspection program shall verify:						
a. Size and location of structural elements.	Y	P	ACI530.1, 3.3F	SII	PE/SE or EIT	
b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.	Y	Р	ACI530, 1.2.2(e), 2.1.4, 3.1.6	SII	PE/SE or EIT	
 c. Specified size, grade and type of reinforcement, anchor bolts, prestressing tendons and anchorages. 	Y	P	ACI530, 1,12, ACI530.1, 2.4, 3.4	TAI	PE/SE or EIT	
d. Welding of reinforcing bars,	N	<u>.</u>	Not applicable. Welding of Reinf Not Allowed	-	•	
 Preparation, construction and 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	TAI	PE/SE or EIT	
f. Application and measurement of prestressing force.	N	С	ACI530.1, 3.6B		PE/SE or EIT	
6. Prior to grouting, the following shall be verified to ensure compliance:						
a. Grout space is clean.	Υ	Р	ACI530.1, 3.2D	TAI	PE/SE or EIT	
b. Placement of reinforcement and connectors and prestressing tendons and anchorages.	Y	P	ACI530, 1.12, ACI530.1, 3.4	TA1	PE/SE or EIT	
 c. Proportions of site-prepared grout and prestressing grout for bonded tendons. 	Y	P	ACI530.1, 2.6B	TA1	ACI-CFTT or ACI-STT	
d. Construction of mortar joints.	Y	P	ACI530.1, 3.3B	TA1	ACI-CFTT or ACI-STT	
7. Grout placement shall be verified to ensure compliance.	Y	С	ACI530.1, 3.5	TA1	ACI-CFTT or ACI-STT	
a. Grouting of prestressing bonded tendons.	N	С	ACI530.1, 3.6C		ACI-CFTT or ACI-STT	
 Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed. 	Y	С	IBC 2105.2.2, 2105.3; ACI530.1, 1.4	TA1	ACI-CFTT or ACI-STT	

Structural Schedule of Special Inspections - STEEL CONSTRUCTION

VERIFICATION AND INSPECTION	REQU		COMMENTS	AGENT	AGENT	TASK
IBC Section 1704.3	Y/N	CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	The state of the s		QUALIFICATION	COMPLETED
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 standards, AISC 360, A3.3	TA1	AWS/AISC-SSI	
b. Manufacturer's certificate of compliance required.	Y	S	300, 73.3	SII	PE/SE or EIT	
2. Inspection of high-strength bolting					. 3 52 6, DA	
a. Snug-tight joints.	Y	P		TA1	AWS/AISC-SSI	
 b. Pretensioned and slip-critical joints using turn-of-nut with matchmaking, twist-off bolt or direct tension indicator methods of installation. 	N	P	AISC LRFD Section M2.5		AWS/AISC-SSI	
 Pretensioned and slip-critical joints using turn-of-nut without matchmaking or calibrated wrench methods of installation. 	N	С	IBC Sect 1704.3.3		AWS/AISC-SSI	
3. Material verification of structural steel and cold-formed steel deck:						
For structural steel, identification markings to conform to AISC 360.	Y	P	AISC 360, M5.5	SII	PE/SE or EIT	
 For other steel, identification markings to conform to ASTM standards specified in the approved construction documents. 	Υ	P	Applicable ASTM material standards	SII	PE/SE or EIT	
c. Manufacturer's certified test reports.	Y	S		SII	PE/SE or EIT	
4. Material verification of weld filler materials:						
 a. Identification markings to conform to AWS specification in the approved construction documents. 	Y	P	AISC 360, M5.5	TAI	AWS/AISC-SSI	
b. Manufacturer's certificate of compliance required.	Y	S		SII	PE/SE or EIT	
Submit current AWS D1.1 welder certificate for all field welders who will be welding on this project.	Y	S	AWS D1.1	SII	PE/SE or EIT	
i. Inspection of welding (IBC 1704.3.1): a. Structural steel and cold-formed deck:						
Complete and partial joint penetration groove welds.	N				AWA OWN	
2) Multipass fillet welds.		C			AWS-CWI	
3) Single-pass fillet welds> 5/16"	N	С			AWS-CWI	
4) Plug and slot welds	N	С	AWS D1.1		AWS-CWI	
5) Single-pass fillet welds≤ 5/16"	N	С			AWS-CWI	
6) Floor and deck welds.	Y	P		TAI	AWS-CWI	
	Y	P	AWS D1.3	TA1	AWS-CWI	
b. Reinforcing steel:						
1) Verification of weldability of reinforcing steel other than ASTM A706.	N	4	Not applicable.		-	
Reinforcing steel-resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special structural walls of concrete and shear reinforcement.	N	C	AWS D1.4		AWS-CWI	
3) Shear reinforcement.	N	С	ACI 318: 3.5.2		AWS-CWI	
4) Other reinforcing steel.	N	P			AWS-CWI	
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	and the second s	SII	PE/SE or EIT	
			ļ			
b. Member locations.	Y	P	IBC 1704.3.2	SII	PE/SE or EIT	i

Date Prepared: 5/1/15

Structural Schedule of Special Inspection Services FABRICATION AND IMPLEMENTATION PROCEDURES – STRUCTURAL STEEL

IBC Section 1704.2	REQD Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS		AGENT QUALIFICATION	TASK COMPLETED
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	Pabricator shall submit one of the two qualifications	SII	PE/SE or EIT	
 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	SII	PE/SE or EIT	

Project: Alumni Hall Renovation - University of New England Date Prepared: 5/1/15 SEISMIC RESISTANCE CHECK LIST [IBC 1705.3] Seismic Design Category FOR SEISMIC DESIGN CATEGORY C OR HIGHER: Structural: ☐ The seismic-force-resisting systems ☐ Steel Braced Frames and associated connections/anchorage (Not required for SDC C, R=3) ☐ Steel Moment Frames and associated connections (Not required for SDC C, R=3) ☐ Shear walls: ☐ CMU ☐ Wood ☐ Concrete ☐ Diaphragms: ☐ Floor ☐ Roof Other: WIND RESISTANCE CHECK LIST [IBC 1705.4] Wind Exposure Category NOT APPLICABLE NOT REQUIRED REQUIRED WIND RESISTANCE REQUIREMENTS In wind exposure Category B, where the 3-second-gust basic wind speed is 120 miles per hour \boxtimes (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 \boxtimes (49 m/sec) or greater.

Project: Alum	mi	Hall Renovation	-	University	of New	England
Date Date		# 15 15 m		•		

Date Prepared: 5/1/15

Fabricator's Certificate of Compliance

Each approved fabricator that is exempt from Special Inspection of shop fabrication and implementation procedures p section 1704.2 of the International Building Code must submit a Fabricator's Certificate of Compliance at the completion of fabrication.	er on
Project: Alumni Hall Renovation - UNE	
Fabricator's Name:	
Address:	
Certification or Approval Agency:	
Certification Number:	
Date of Last Audit or Approval:	
Description of structural members and assemblies that have been fabricated:	
I hereby certify that items described above were fabricated in strict accordance with the approved construction documents.	
Signature Date	
Title	

CASE Form 104 • Fabricator's Certificate of Compliance • ©CASE 2004

Attach copies of fabricator's certification or building code evaluation service report and fabricator's quality control manual

End of Structural Statement of Special Inspections