



**REPORT OF SPECIAL INSPECTION**

Project Name: Ocean Gateway Parking Garage

Report #: 07-117-010

Client: Intercontinental Developers

Inspection Type(s)/Coverage: \_\_\_\_\_

Continuous     Periodic/frequency: \_\_\_\_\_

**Inspections made, including locations:**

See pre-concrete report. The welder certification was verified. An inspection was done on the tension bars at PC8 on 1.9-2.1, D & C. Both side of the bar are welded 5" using E-7018. Welds look good and clean. All reinforcing steel installed to date looks good.

**Items requiring 1) Correction, 2) Correction of previously listed items, and 3) Previously listed uncorrected items:**

**Changes to approved plans authorized by engineer or architect of record:**

Elevator Pit - H line at 2.3, (8) #9's vertical with #4 ties at 12" on center. Pier brought up to an elevation of the elevator pit wall.

**Comments:**

To the best of my knowledge, work inspected was in accordance with the building department-approved plans, specifications, and applicable workmanship provisions of the IBC except as noted above.

Signed: \_\_\_\_\_ Phone Number: 603-749-1841

Print full name: Ken Ries Agency: JOHN TURNER CONSULTING INC.

Cc: distro list



## REPORT OF STRUCTURAL STEEL INSPECTION

**CLIENT:** Intercontinental Developers Inc.  
Attn: Mr. Richard Libardoni  
1270 Soldiers Road  
Boston, MA 02135-100

**PROJECT:** Ocean Gateway Garage  
Portland, ME

**DATE:** January 10, 2008

**REPORT #:** 07-117-038

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As requested, a site visit was made on this date for continuing inspection of structural steel as follows:

Vector connections (ref. sect. 3 dwg. S6.01); All connections completed to date were visually inspected. Completed areas are primarily H to F at all levels and F to D from 1 to 1.9 at lower levels. Also, the roof was approximately eighty percent completed. Approximately forty locations were rejected primarily due to omitted welds. Corrective work will begin on 1/10. The following items are also noted and should be reviewed by the Structural Engineer.

1. At numerous locations the shop installed vectors have a gap of 3/8" and occasionally less. The 3/8 plate has been turned on the side and a slot weld used. If the gap is less than 3/8" the plate is ground to the required thickness.
2. To date we have observed eight locations with misaligned plates and one location with an omitted plate. We are advised that repairs will be conducted per an approved procedure.
3. Drawing indicate weld to be centered, 4" maximum in length with no weld in corners. Apparently one welder fully welded the length of plate or started the weld at one corner rather than centering the weld. These will be left "as is" unless otherwise directed.
4. Some shop installed vectors are not square. It was necessary to taper the insert to provide proper fit.

DT to beam welds (ref. sect 5 dwg. S6.01); Approximately ten percent of welds completed to date were visually inspected. Areas inspected are primarily on lines 1.9 and 2.1 levels 3 and above. All welds were found to be acceptable with the following comment:

1. At some locations embedded plates do not align with shop welded plates. New galvanized plates have been installed however plates are welded at ends rather than all around as shown on drawing (it appears that the all around requirement was due to sealing for hot dip galvanizing). If this is unacceptable please notify Contractor.

Recessed areas H to G (ref. sect 6 dwg. S6.01 and precast dwgs.) Welding is approximately fifty percent completed at all levels. Work completed to date is acceptable with the following comment:

1. Non galvanized shims have been used to adjust elevations. We are advised by Cives Steel that locations will be cold galvanized prior to placement of topping.

Testing of column splices began and will continue on 1/10.

Inspector; Neal J White



## REPORT OF STRUCTURAL STEEL INSPECTION

**CLIENT:** Intercontinental Developers Inc.  
Attn: Mr. Richard Libardoni  
1270 Soldiers Road  
Boston, MA 02135-100

**PROJECT:** Ocean Gateway Garage  
Portland, ME

**DATE:** January 10, 2008

**REPORT #:** 07-117-039

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Inspection of structural steel continued on this date as follows:

Column splices; All column splices completed to date were visually inspected. Complete penetration welds were tested by ultrasound (E1.9 could not be tested due to lack of space).

Welds are complete and acceptable from line H through line C with the following exceptions:

1. C1.9 West is visually unacceptable (to be tested after repair).
2. E2.1 West was rejected by ultrasound. Backing should be removed, root gouged and welded. Also grinding is required on E2.1 East.
3. E1 is not finished.

Bolted connections; bolted connections are complete and acceptable from lines H to F at all levels.

Vector connections; Corrective work began on those welds rejected 1/9. Repairs were completed at First and Second levels. Repair work is acceptable.

Additional welder certifications for stainless and carbon steel were provided on this date. These have been reviewed and are acceptable.

Also see report for this date regarding visual inspection and testing of moment connections.

Note: All items noted in this report and 1/9 report have been reviewed with the Erector and Contractor. Any outstanding discrepancies have been marked and will be re-inspected upon correction.

Inspector; Neal J White



## REPORT OF STRUCTURAL STEEL INSPECTION

**CLIENT:** Intercontinental Developers Inc.  
Attn: Mr. Richard Libardoni  
1270 Soldiers Road  
Boston, MA 02135-100

**PROJECT:** Ocean Gateway Garage  
Portland, ME

**DATE:** December 27, 2007

**REPORT #:** 07-117-035

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As requested, site visit was made on this date for inspection and testing of moment connections welds.

Welds at Second level framing were tested as documented on the enclosed test report. Two locations; C3 East bottom flange and D2.1 West bottom flange were rejected due to linear indications. Remaining welds were found to be acceptable.

Discrepancies noted will be corrected and re-tested.

During the course of testing it was noted at several locations backing bars were not properly installed on column splice welds (no welds were tested on this date).

The erector and contractor were advised of our findings.

Inspector; J Bowen & Neal White

# ULTRASONIC TEST REPORT

Date: **December 27, 2007**

Report: **07-117-036**

Client: **John Turner Consulting, Inc.**

Transducer: **70 degree 2.25 Mhz**

Project: **Ocean Gateway Parking Garage**

Ultrasonic Unit: **Panametrics Epoch IV**

Address: **Portland, ME**

Test Method Standard: **AWS D1.1**

Fabricator: **Cives Steel Company**

Acceptance Standard: **AWS D1.1**

Description of Joint: **Tee**

Material: **A992**

Weld Identification	Acceptable	Rejectable	Transducer Angle	From Face	Leg 1-2-3	Decibels				Defect			Distance	
						Indication Level A	Reference Level B	Attenuation Level C	Indication D	Length	Angular Distance (sound path)	Depth from "A" surface	"X"	"Y"
<b>Moment conn.s Second level</b>														
<b>D3 E,W TF, BF</b>	<b>X</b>		<b>70</b>	<b>A</b>	<b>1-2</b>		<b>51</b>							
<b>D1 E,W TF, BF</b>	<b>X</b>													
<b>E3 E,W TF, BF</b>	<b>X</b>													
<b>E1 E,W TF, BF</b>	<b>X</b>													
<b>C2.1 E TF, BF</b>	<b>X</b>													
<b>D2.1 E TF, BF</b>	<b>X</b>													
<b>E2.1 E TF, BF</b>	<b>X</b>													
<b>E2.1 W TF, BF</b>	<b>X</b>													
<b>C1.9 E TF, BF</b>	<b>X</b>													
<b>D1.9 E,W TF, BF</b>	<b>X</b>													
<b>E1.9 E,W TF, BF</b>	<b>X</b>													
<b>D2.1 W TF</b>	<b>X</b>													
<b>C3 E TF</b>														
<b>C3 E BF</b>		<b>X</b>												
<b>D2.1 W BF</b>		<b>X</b>												

Remarks:

Technician: **J Bowan**    Level: **II**



# ULTRASONIC TEST REPORT

Date: **November 19, 2007**

Report: **07-117-028**

Client: **John Turner Consulting, Inc.**

Transducer: **70 degree 2.25 Mhz**

Project: **Ocean Gateway Parking Garage**

Ultrasonic Unit: **KB USN50L**

Address: **Portland, ME**

Test Method Standard: **AWS D1.1**

Fabricator: **Cives Steel Company**

Acceptance Standard: **AWS D1.1**

Description of Joint: **Butt**

Material: **A992**

Weld Identification	Acceptable	Rejectable	Transducer Angle	From Face	Leg 1-2-3	Decibels				Defect			Distance	
						Indication Level A	Reference Level B	Attenuation Level C	Indication D	Length	Angular Distance (sound path)	Depth from "A" surface	"X"	"Y"
<b>Column slices</b>														
<b>H1.9E retest</b>	<b>X</b>		<b>70</b>	<b>A</b>	<b>1-2</b>		<b>46</b>							
<b>F1 E, W</b>	<b>X</b>													
<b>F3 E</b>	<b>X</b>													
<b>G2.1 E</b>	<b>X</b>													
<b>G1.9 E</b>	<b>X</b>													

Remarks:

Technician: **N White**    Level: **II**



## REPORT OF STRUCTURAL STEEL INSPECTION

**CLIENT:** Intercontinental Developers Inc.  
Attn: Mr. Richard Libardoni  
1270 Soldiers Road  
Boston, MA 02135-100

**PROJECT:** Ocean Gateway Garage  
Portland, ME

**DATE:** November 5, 2007      **REPORT #:** 07-117-025

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As scheduled, our initial steel inspection visit was made on this date. At this time all six levels from line H to G were erected and erection was in progress from G to F. Welding at level 3 was nearly completed and random areas were welded at other levels. Inspection indicated the following:

Base plates appeared to be fully grouted with washers in place and nuts snug tightened.

Vector connections completed to date were found to be unacceptable for the following reasons:

1. At most locations a section of #5 rebar has been used in lieu of 3/8" plates. The rebar is unapproved and there is no welding detail. Commonly rebar did not fit tight and the gap was bridged with weld. At some locations two pieces of bar have been used to fill gap.
2. Some of the shop vector plates are installed at an angle while others are nearly square to DT. This makes it difficult to obtain a tight fit. Various width connector plates should be provided. It was also observed that some plates are misaligned.
3. Weld quality is commonly unacceptable.
4. Welder was not certified for stainless steel welding.
5. Incorrect electrode was used to weld stainless to galvanized plates (occurs two locations).

Column splices were completed from G to F. These were visually inspected and complete penetration welds tested by ultrasound. Welds were acceptable with the following exceptions:

1. H1.9 East was rejected by ultrasonic testing due to lack of complete fusion at root. Backing bar should be removed and root repaired.
2. G1.9 East had two stepped sections of backing used. This is unacceptable. Backing should be removed and root welded.
3. G2.1 East had an open root weld used. The root should be gouged to sound metal and welded.
4. G1 column flanges are misaligned by 3/16".
5. Ends of welds should be properly terminated and filled to full profile.

DT to beam welds were completed on level 3 from G to H. All were accessed and visually inspected. Approximately fifty percent are unacceptable for the following reasons:

1. Beam on line 2.1 from G to H was installed backwards. Consequently the webs of DT's do not fall on shop welded plates. Corrective work is unacceptable.
2. As many as four shims have been used to adjust height. Shims are only tacked together and are unacceptable. Shims must be used in a manner which will allow 2" of weld to be obtained on each side.
3. In some cases shims are installed flush with edge of bearing plate so that a weld can be obtained on one side only. Shims should be centered.
4. Various length and thickness galvanized shims should be provided to the site.



Welding of DT to DT connections was to begin on this date. Details were reviewed with the Erector and the following items noted:

1. Elevation of opposing plates varies up to 2". Consequently, it will be necessary to shim one side or bend plate to fit. An approved repair sketch is required.
2. Drawing specifies a 1/8" weld all around. Per discussion with Structural Engineer there should be a 1/4" weld each side with length to be determined.
3. Bars provided are 2" wide rather than 1" as detailed. While this is acceptable it appears that in some cases bars may be too short as there is a large gap between plates.
4. Various length and thickness shims should be provided to the site.

No discrepancies were noted with bolted connections at this time.

Welder certifications for structural steel were provided and are acceptable.

Quality of DT fabrication is inconsistent.

A meeting was held with representatives of the contactor, erector and steel fabricator present.

Additionally, all items noted in this report were inspected with the fabricators representative present. Repair sketches will be required for many of the nonconforming items. It was brought to the attention of all parties that contract specification section 3.8 item C requires the fabricator/erector to provide site quality control.

A call was placed to the Structural Engineer on this date for clarification of several items.

Inspector; Neal J White

# ULTRASONIC TEST REPORT

Date: **November 5, 2007**

Report: **07-117-026**

Client: **John Turner Consulting, Inc.**

Transducer: **70 degree 2.25 Mhz**

Project: **Ocean Gateway Parking Garage**

Ultrasonic Unit: **KB USN50L**

Address: **Portland, ME**

Test Method Standard: **AWS D1.1**

Fabricator: **Cives Steel Company**

Acceptance Standard: **AWS D1.1**

Description of Joint: **Butt**

Material: **A992**

Weld Identification	Acceptable	Rejectable	Transducer Angle	From Face	Leg 1-2-3	Decibels				Defect			Distance		
						Indication Level A	Reference Level B	Attenuation Level C	Indication D	Length	Angular Distance (sound path)	Depth from "A" surface	"X"	"Y"	
<b>Column splices</b>															
<b>3rd floor</b>															
<b>H2.1 E, W</b>	<b>X</b>		<b>70</b>	<b>A</b>	<b>1-2</b>		<b>44</b>								
<b>H1.9 W</b>	<b>X</b>														
<b>H1.9 E</b>		<b>X</b>													
<b>G2.1 W</b>	<b>X</b>														
<b>G1.9 W</b>	<b>X</b>														

Remarks: **H1.9 was rejected due to defects at root. Backing is to be removed and repairs made.**

Technician: **Neal J White**    Level: **II**



## REPORT OF STRUCTURAL STEEL INSPECTION

**CLIENT:** Intercontinental Developers Inc.  
Attn: Mr. Richard Libardoni  
1270 Soldiers Road  
Boston, MA 02135-100

**PROJECT:** Ocean Gateway Garage  
Portland, ME

**DATE:** October 12, 2007

**REPORT #:** 07-117-024

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As requested, a site visit was made on this date to attend a pre-erection meeting.

Present at the meeting were the Structural Engineer, Contractor, Erector and Fabricator.

Inspector; Neal White



## REPORT OF STRUCTURAL STEEL INSPECTION

**CLIENT:** Intercontinental Developers Inc.  
Attn: Mr. Richard Libardoni  
1270 Soldiers Road  
Boston, MA 02135-1003

**PROJECT:** Ocean Gateway Garage  
Portland, ME

**DATE:** September 25, 2007

**REPORT #:** 07-117-023

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As requested, a visit was made on this date for inspection of structural steel fabrication. At the time of visit approximately three hundred fifty tons of steel were either completed or in the fabrication process. Four double columns, ten single columns and approximately seventy beams had been completed. No material had been sent for galvanizing. The following summarizes our inspection.

Cives Steel has a quality control program indicating one hundred percent visual and dimensional inspections are conducted. We are also advised that all complete penetration welds will be tested by ultrasound and random other welds by magnetic particle. There was one completed double column with a splice (527C1) and we were provided with an ultrasonic test report. Magnetic particle and visual inspection reports were also made available for review.

Material was purchased specifically for this contract and mill test reports were available for review. We verified that Grade 50 miscellaneous material was used where specified. All material was properly identified and appeared in conformance to ASTM dimensional specifications.

Welder certifications and welding procedures had been previously provided and found acceptable. No discrepancies were noted with welding procedures observed during the visit.

Welding of two double columns and assembly of single columns were in progress. All work was visually inspected. This included verification of welder certifications, review of welding procedures, fit up inspection, workmanship inspection and overall conformance to drawings. No discrepancies were noted.

All completed members were visually inspected. Camber dimensions were randomly verified. Special attention was given to field weld preparation to verify that proper field fit up could be obtained. Several column splice preparations required repair and were corrected immediately. No other discrepancies were noted and all work appears acceptable.

At this time it appears that all work is proceeding in an acceptable manner.

Please note: The fabricator is masking approximately 2" of field weld preparations for no galvanizing. Ultrasonic testing will require approximately 6" of "smooth surface" for testing. All parties should be aware that in some instances testing may be adversely affected by the galvanizing.

Inspector; Neal J White