



AUDIT OF FABRICATION PRACTICES (STEEL)

Instructions: Form must be completed by the Special Inspection Agency.

FORM D

Fabricator's Name: _____ Fabricator's number: _____ Date: _____

Plant Address: _____

Fabricator's Representative Name: _____ Title: _____

Fabricator's Representative E-Mail Address: _____

Phone Number: _____

INSPECTION AGENCY

AGENCY'S NUMBER: _____ TIME IN: _____ TIME OUT: _____

Inspector Name: _____ Phone Number: _____

E-Mail Address: _____

COMMENTS PERTAINING TO THIS AUDIT

INSPECTOR RECOMMENDATIONS

NEW CERTIFICATION AS CERTIFIED FABRICATOR OF _____

RENEWAL OF CERTIFICATION

APPROVED UPON CORRECTION OF FINDINGS

DISAPPROVAL

SPECIAL INSPECTOR SIGNATURE: _____ DATE: _____


COMPLETE, SIGN, SEAL & DATE THIS FORM AND MAIL OR EMAIL TO THE CITY OF HOUSTON:

Mr. Maher Khansa, P.E.
City of Houston-Building Code Enforcement-CACD, 1002 Washington Ave., Houston, Texas 77002
Email: maher.khansa@houstontx.gov

◆ Symbol intended for office use only

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Fabricator's Name: _____ Fabricator's number: _____ Date: _____

A	GENERAL REQUIREMENTS	COMPLIANCE	COMMENTS
A-1	Is the Quality Control Manual fully documented and up to date?	YES NO	
A-2	Is the Quality Control Manual reviewed at least annually? Provide last review date: _____	YES NO	
A-3	Are there any revisions to the Quality Control Manual? Provide latest revision date: _____	YES NO	
A-4	Are there any key personnel changes since last inspection?	YES NO	
A-5	Are the annual inspections performed as required? Provide last inspection date: _____	YES NO	
B	ENGINEERING	COMPLIANCE	COMMENTS
B-1	The fabricator can demonstrate that there is either an in-house or an outside licensed engineer to perform necessary designs and/or to consult on technical questions.	YES NO	
B-2	The fabricator can demonstrate that there is an in-house or outside special process consultant for each special process performed (such as: welding, bolting, etc.).	YES NO	
B-3	The contract documents are reviewed to assure that all materials and processes are specified or indicated on the drawings or specifications.	YES NO	
B-4	The fabricator reviews the contract documents and structural/architectural drawings for correctness.	YES NO	
B-5	The fabricator has a process to review corrections and complex design problems encountered in the fabrication process.	YES NO	
B-6	The fabricator has personnel with adequate knowledge to provide answers to technical questions.	YES NO	
B-7	The fabricator has personnel with adequate knowledge of applicable material specifications.	YES NO	
B-8	The fabricator has personnel with knowledge of mill roll practices. 	YES NO	
C	DRAFTING	COMPLIANCE	COMMENTS
C-1	Shop drawings are properly prepared.	YES NO	
C-2	The fabricator has personnel capable of supervising, evaluating, and coordinating shop drawing preparation and all shop drawings are reviewed for correctness.	YES NO	
C-3	The fabricator has an in-house capability of providing special details for the shop/plant to solve fabrication problems.	YES NO	
C-4	The shop drawings indicate materials to be utilized in the final structure.	YES NO	
D	DRAWING CONTROL	COMPLIANCE	COMMENTS
D-1	The fabricator can verify control of design drawings as follows: <input type="checkbox"/> receipt <input type="checkbox"/> on file <input type="checkbox"/> revisions	YES NO	
D-2	The fabricator can verify control of specifications and addendums.	YES NO	
D-3	The fabricator can demonstrate control of shop drawings: <input type="checkbox"/> receipt <input type="checkbox"/> on file	YES NO	
D-4	The Quality Control Manual traces each phase from drawing preparation, to shop drawing, receipt, submittals for approval, approval, resubmittals and date sent to shop/plant for fabrication.	YES NO	

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D-5	The fabricator can demonstrate control of revisions to shop drawings.	YES	NO	
D-6	The fabricator can demonstrate control of obsolete shop drawings.	YES	NO	
D-7	The drawing control system used is the one described in the Quality Control Manual.	YES	NO	
E	WORK ORDER – JOB CONTROL	COMPLIANCE		COMMENTS
E-1	The fabricator has established a job control number/identification system for all work accepted.	YES	NO	
E-2	All correspondence received is marked with its job identification mark.	YES	NO	
E-3	Job correspondence is filed with the job files for that work.	YES	NO	
E-4	All correspondence received is: <input type="checkbox"/> stamped received <input type="checkbox"/> dated & initialed	YES	NO	
F	MATERIAL PROCUREMENT	COMPLIANCE		COMMENTS
F-1	Materials are procured by a purchase order or some other type of form that provides verification and documentation of the order.	YES	NO	
F-2	All materials are ordered or procured to acceptable standards and/or specifications.	YES	NO	
F-3	The material specifications are indicated/documentated on the purchase order/form used for materials procurement.	YES	NO	
F-4	The procurement document states how the material shall be marked/identified.	YES	NO	
F-5	The fabricator requires suppliers to furnish material certification reports on the procurement document.	YES	NO	
F-6	The procurement documents specify that material test reports shall accompany material/subassembly delivery to the fabricator's facility.	YES	NO	
F-7	The fabricator has documented the review of the quality status of suppliers on a regular basis.	YES	NO	
F-8	The QA/QC manager has visited and/or reviewed subcontractors' fabrication and/or Quality Control System operations on a random basis where applicable.	YES	NO	
G	RECEIVING MATERIAL	COMPLIANCE		COMMENTS
G-1	The fabricator is using a formal method for receiving materials/subassemblies.	YES	NO	
G-2	The fabricator inspects all incoming materials arriving at the facility.	YES	NO	
G-3	The fabricator has a material identification system to assure control of materials of different grades/sizes (as applicable).	YES	NO	
G-4	Acceptance tolerances are available at the receiving inspection station.	YES	NO	
G-5	Receiving inspections are documented.	YES	NO	
G-6	The receiving inspector understand the company system for: <input type="checkbox"/> receiving materials <input type="checkbox"/> receiving subassemblies <input type="checkbox"/> acceptance/rejection of nonconforming materials and/or subassemblies <input type="checkbox"/> means of handling correctable nonconformities observed during the receiving inspection	YES	NO	
G-7	The material identification process utilized provides for material traceability to the final product.	YES	NO	

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G-8	Receiving inspector confirms: <input type="checkbox"/> quantity of materials <input type="checkbox"/> grade of material <input type="checkbox"/> size of material <input type="checkbox"/> length of material <input type="checkbox"/> heat numbers or material match heat numbers on mill certificates <input type="checkbox"/> acceptance tolerances	YES NO	
H	HANDLING & STORAGE EQUIPMENT, FACILITIES AND PROCEDURES	COMPLIANCE	COMMENTS
H-1	The fabricator has adequate facilities, equipment and illustrated drawings or instructions available to indicate the proper way to: <input type="checkbox"/> handle materials in the yard  <input type="checkbox"/> handle materials in the plant <input type="checkbox"/> store materials/subassemblies <input type="checkbox"/> provide correct bracing/blocking for materials/subassemblies  <input type="checkbox"/> prevent material/subassembly deterioration <input type="checkbox"/> provide correct storage for fabricated products <input type="checkbox"/> handle fabricated products	YES NO	
H-2	The fabricator is utilizing an adequate control process for stocked/stored materials.	YES NO	
I	NORMAL AND SPECIAL PROCESSES CONTROL	COMPLIANCE	COMMENTS
I-1	The fabricator is controlling normal and special production/work processes.	YES NO	
I-2	Acceptance standards are readily available or posted near work stations for reviewing by production personnel and inspection personnel.	YES NO	
I-3	Sufficient work instructions are available to production personnel at each work station.	YES NO	
I-4	Fabricator is utilizing established qualification standards for special work processes (such as welding, strand tensioning, laminating and so on).	YES NO	
I-5	Qualifications for personnel performing special work processes are available or posted and maintained up-to- date, readily available to production supervisors and quality control personnel.	YES NO	
I-6	Special process personnel have been assigned identification symbols to identify work performed by them.	YES NO	
I-7	The assigned identification symbols for special process personnel are readily available or have been posted for use by Quality Control inspectors.	YES NO	
I-8	Special process personnel identify work they performed.	YES NO	
I-9	Key inspections by production personnel are documented.	YES NO	
I-10	All inspections are documented.	YES NO	
I-11	The fabricator can demonstrate the system utilized for: <input type="checkbox"/> minor repairs <input type="checkbox"/> major repairs <input type="checkbox"/> documentation of re-inspection of repairs	YES NO	
I-12	The fabricator can demonstrate system for rejection and disposal of non-repairable nonconformities.	YES NO	
I-13	The fabricator can demonstrate that surveillance of stored fabricated products is performed on a routine scheduled basis.	YES NO	
I-14	Fabricated products are stored on a hard compacted well drained surface.	YES NO	

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J	EQUIPMENT CONTROL & MAINTENANCE	COMPLIANCE	COMMENTS								
J-1	The fabricator can demonstrate that each piece of equipment in the plant: <ul style="list-style-type: none"> <input type="checkbox"/> is acceptable or not acceptable for use <input type="checkbox"/> is documented on the equipment <input type="checkbox"/> is on a maintenance program <input type="checkbox"/> is listed on a maintenance log <input type="checkbox"/> has been calibrated within an acceptable established time frame where applicable <input type="checkbox"/> is listed, when appropriate, in a calibration log when actively utilized 	YES NO									
K	AUDITS/REVIEWS OF THE QUALITY PROGRAM	COMPLIANCE	COMMENTS								
K-1	Verification was presented to demonstrate that management has reviewed the Quality Control System within the last twelve (12) months.	YES NO									
K-2	Management has taken steps to measure the effectiveness of the quality program.	YES NO									
K-3	The QA/QC manager has shown documentation that each Quality Control Manual was reviewed to assure it is complete and up to date within the last six (6) months.	YES NO									
K-4	The fabricator has established a record retention system and is retaining job records for a minimum of two (2) years after construction completion.	YES NO									
L	QUALITY CONTROL PERSONNEL/INSPECTORS	COMPLIANCE	COMMENTS								
L-1	Quality control inspectors were available in the plant at the time of this inspection excluding QC manager (applicable when appropriate).	YES NO									
L-2	The quality control personnel have immediate access to the specifications, addendums to specifications, or to the engineer for answering key questions.	YES NO									
L-3	The quality control personnel have immediate access to the technical library and other pertinent information.	YES NO									
L-4	The quality control personnel inform line production supervisory personnel when nonconforming work is observed.	YES NO									
L-5	The quality control personnel are conversant with qualifications of special process requirements.	YES NO									
L-6	The quality control personnel have immediate access to approved procedures for special processes.	YES NO									
L-7	The quality control personnel are conversant with qualifications of special process personnel.	YES NO									
L-8	The quality control personnel verify equipment is checked for acceptable performance.	YES NO									
L-9	The quality control personnel verify that production equipment is calibrated.	YES NO									
L-10	The quality control personnel can verify documentation of equipment maintenance and repairs.	YES NO									
L-11	Non-conforming tools and equipment are red tagged to prevent their use in production.	YES NO									
L-12	The quality control personnel are equipped to properly perform assigned tasks. <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> tapeline</td> <td><input type="checkbox"/> chipping hammer</td> </tr> <tr> <td><input type="checkbox"/> calipers</td> <td><input type="checkbox"/> magnifying glass</td> </tr> <tr> <td><input type="checkbox"/> tag system</td> <td><input type="checkbox"/> amp tongs</td> </tr> <tr> <td><input type="checkbox"/> welding gage</td> <td><input type="checkbox"/> paint gauge</td> </tr> </table>	<input type="checkbox"/> tapeline	<input type="checkbox"/> chipping hammer	<input type="checkbox"/> calipers	<input type="checkbox"/> magnifying glass	<input type="checkbox"/> tag system	<input type="checkbox"/> amp tongs	<input type="checkbox"/> welding gage	<input type="checkbox"/> paint gauge	YES NO	
<input type="checkbox"/> tapeline	<input type="checkbox"/> chipping hammer										
<input type="checkbox"/> calipers	<input type="checkbox"/> magnifying glass										
<input type="checkbox"/> tag system	<input type="checkbox"/> amp tongs										
<input type="checkbox"/> welding gage	<input type="checkbox"/> paint gauge										
L-13	The quality control personnel understand their responsibility to management.	YES NO									

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L-14	The quality control personnel have sufficient authority to perform their assignments.	YES	NO	
M	ADDITIONAL COMMENTS	COMPLIANCE	COMMENTS	
It is evident by this inspection and the review of the Quality Control System and its operation that at this time:				
M-1	All employees are aware of the Quality Control System.	YES	NO	
M-2	Employees are familiar with the Quality Control System as it may pertain to them.	YES	NO	
M-3	Management has taken an active role in the Quality Control System.	YES	NO	
M-4	The following key functions are performed by personnel fully aware of and acquainted with the Quality Control System: <input type="checkbox"/> sales <input type="checkbox"/> purchasing <input type="checkbox"/> other _____ <input type="checkbox"/> engineering <input type="checkbox"/> production _____ <input type="checkbox"/> drafting <input type="checkbox"/> quality control _____	YES	NO	
M-5	The fabricator has completely separated production and QA/QC activities.	YES	NO	
M-6	The fabricator QA/QC program is functioning in each of the key areas without significant omissions, inconsistencies and/or non-compliance with the established program.	YES	NO	
M-7	The fabricator appears to have sufficient procedure/work instructions to assure all products are fabricated to conform to the contract documents and code requirements.	YES	NO	
M-8	The fabricator has an adequately documented Quality Assurance Program.	YES	NO	

Does the fabricator manufacture structural steel?

- No. **STOP** and proceed to sign the form.
 Yes. Complete Section N. Workmanship (Structural Steel Only)

N	WORKMANSHIP (STRUCTURAL STEEL ONLY)
N-1	Auditor: Observe a fabrication project either in progress or just completed and provide the following information: ■ Project Name: _____ ■ Fabrication is: <input type="checkbox"/> In Progress <input type="checkbox"/> Fabrication was completed on: _____
N-2	Auditor: Inspect a sample portion of the fabricated items of the observed project and provide the following information: ■ Material identification markings: _____ Material's Heat Number HT# _____ ■ Material Test Report # (MTR) for this material's HT# _____ ■ Material purchase order reference #: _____ ■ Who inspected and approved the material for use? _____ ■ Who is the engineer on record for the shop drawings used? _____ ■ What welding process (s) was used? _____ ■ Are welder(s) qualified to perform the weld types? <input type="checkbox"/> Yes <input type="checkbox"/> No ■ Are proper Welding Procedure Specifications (WPS) available for the types of welds performed? <input type="checkbox"/> Yes <input type="checkbox"/> No ■ Does the fabricator mark name/number on all finished structural members? <input type="checkbox"/> Yes <input type="checkbox"/> No ■ Check each inspection that was performed during the production process: Were inspections during fabrication performed? <input type="checkbox"/> Yes <input type="checkbox"/> No Name or Initials of inspector: _____ Was a final inspection of the finished item performed? <input type="checkbox"/> Yes <input type="checkbox"/> No Name or initials of inspector: _____

SPECIAL INSPECTOR NAME: _____

(ENGINEER'S SEAL)

SPECIAL INSPECTOR SIGNATURE: _____

DATE: _____