

QUALITY ASSURANCE / QUALITY CONTROL MANUAL

QCM-1

First Edition - Revision 7

FOR

Structural Steel Fabrication

under the requirements of;

The American Institute of Steel Construction

The American Welding Society

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	Manual Number:	Four [4]	Revision:	(See following	g page for revision record)
	Controlled:	Yes			
Issued To:		Cody Diam	ond		
	Company:		ain Lift, Inc.		
Address:		1990 South State Street Springville, Utah 84663			
~~~~	~~~~~~~ Ma	 nual Approv	~~~~~~~ ved – Februa	 ry 12, 2019	~~~~~~~
Vice-Presid	lent: But (remolal	QA/Q0	C Manager:	Cody Viemond

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Original Issue: 03-01-07 Revision Date: 02-12-19 Edition No.: One [1] Revision No.: Seven [7] PART 1 MANUAL REVISION RECORD Page 1 of 1

LIST OF REVISIONS

Part Number	Paragraph	Revision Number	Original Issue Date	Revision Date	Approved By	Remarks
All Parts	All Paragraphs	Zero [0]	03-01-07	- n/a -	СВ	Original Issue / Chad Benson.
All Parts	All Paragraphs	One [1]	03-01-07	07-01-10	CD	Re-Issue / Cody Diamond.
Cover			03-01-07	07-01-11	CD	Cover - Approval Boxes / Signatures.
Index		Two [2]	03-01-07	07-01-11	CD	Update to match cover approvals.
Part 1	All Paragraphs	Two [2]	03-01-07	07-01-11	CD	Updated wording and corrected spelling.
Part 4	All Paragraphs	Two [2]	03-01-07	07-01-11	CD	Add responsibility for implementation.
Part 8	All Paragraphs	Two [2]	03-01-07	07-01-11	CD	IML to assure inspect of non-CCDDS-BD approved sub contractors by approved 3 rd party agency.
Part 11	All Paragraphs	Two [2]	03-01-07	07-01-11	CD	All CCDDS-BD destine materials 100% weld & 100% final inspection prior to shipment.
Part - Gene Policy	eral Management	Three [3]	03-01-07	06-01-13	CD	Added paragraph 2 addressing compliance to codes & standards.
Part 6	Para. 6.2.1	Three [3]	03-01-07	06-01-13	CD	Added requirement for review & stamp of WPSs by a CWI.
Part 12	Para.12.1.1	Three [3]	03-01-07	06-01-13	CD	Add specific responsibility for arranging approved NDE services.
Part 12	Para.12.3	Three [3]	03-01-07	06-01-13	CD	Add para. 12.3 addressing review and use of ASNT Level III reviewed NDE procedures.
Part 10	Para. 10.1.1	Four [4]	03-01-07	06-19-14	CD	Add para. 12.5.3 to address purchased NDE services for CCDDS-DB shall be Clark Co. Approved Agency
Part 12	Para. 12.5.3	Four [4]	03-01-07	06-19-14	CD	Add para. 10.1.1 to address masking and preservation of material traceability identification markings during painting.
All Parts	All Paragraphs	Five [5]	03-01-07	01-10-15	CD	Renumber all sections. Add and update personnel records. Revise Organization Chart.
Part 14	Para. 14.14	Six [6]	03-01-07	03-03-17	CD	Specified how the methods should be used.
Part 20	Resumes	Seven [7]	03-01-07	02-12-19	CD	Update resumes, (remove Darryl and Glade, add Talen and Tyrel).
Part 7	Organizational Chart	Seven [7]	03-01-07	02-12-19	CD	add Falen and Tylen.

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28. Manual Amendments Procedure

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30. List of Appendices:

Appendix I - Facility Plot Plan

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Appendix III - Resumes & Qualifications of Key Personnel

MANUAL ACCEPTANCE:

Bret Crandall

President & General Manager

Date

February 12, 2019

Cody Diamond

QA/QC Manager

Date

February 12, 2019

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(Intermountain Lift, Inc., Quality System Matrix in accordance with CCDDS-BD, TG-1-06a)

CCDDS-BD TG-1 Section	IML Quality Manual Section	Comments:
General Manag	gement	
7.1.1	Manual Part 7 - 'Manual Reviews, Revisions & Audit (page 2)	Issue, Control & Approval - Front Cover. Revisions - Part 7 'Manual Revision Record'. Acceptance - Front Cover & Contents, Page 2 of 2.
7.1.2	Manual Part 2 - Contents, Page 2 of 2.	This Part list the contents of QCM-1
7.1.3	Revisions - Part 7 - Manual Revision Record, (1 page).	Each part of the manual is identified and referenced individually. No continuous page numbering system
7.1.4	Part 4 - 'Introduction', (1 page). Part 5 - 'General Management Policy', (2 pages).	All parts of this manual are designed to be revised individually. No contiguous page numbering is used. Reference the 'Contents' to locate applicable parts.
7.1.5	Part - 'Organization Chart', (1page). Part - 'Management Responsibilities', (12 pages).	Organization chart lists the positions and the Management Responsibilities section addresses position requirements and duties.
7.1.6	Appendix 1	Reference the Index to locate the applicable parts.
7.1.7	Appendix 1	Reference the Index to locate the applicable parts.
7.1.8	Part - 'Organization Chart', (1 page). Part - 'QA Program Management Review', (Team Personnel).	Manuals are issued to all key management and QA/QC personnel.
7.1.9	Quality System Records	This manual provides samples of forms which are suitable for copying and use. 'Completed' sample forms cause excessive clutter in the manual.
7.1.10	Sequence of Operations - See form IML-IRF-01, 'Sh Inspection Report'.	Depending on the fabrication, operation sequences may vary. Basic operation sequences follow the same sequences as the inspections to be done.
7.1.11	Part - 'Manual Reviews, Revisions and Audits', (2 pages).	'Manual Reviews' paragraph specifies revisions to be provided to manual holders within 30 days.
Engineering &	Drafting	
7.2.1	Manual - Part 2, 'Engineering', (3 pages). Manual - Part 3, 'Drawing & Specification Control', (4 pages).	Part 2 - Procedure for handling customer information. Part 3 - RFIs.
7.2.2	Manual - Part 3, 'Drawing & Specification Control', (a pages).	4
7.2.3	Manual - Part 3, 'Drawing & Specification Control', (a pages).	4 Paragraphs 3.5.1 & 3.5.1.1
7.2.4	Manual - Part 3, 'Drawing & Specification Control', (a pages).	Also se PM-1, IML-DS-1, 'Detailing Standard'.
7.2.5	Manual - Part 16, 'Records Retention'.	
Procurement		
7.3.1	Manual - Part 4, 'Purchasing & Material Control'.	
7.3.2	Manual - Part 4, 'Purchasing & Material Control'. Manual - Part 19, 'Reports & Forms'.	Purchase Order FormQCM-1-02
7.3.3	Manual - Part 4, 'Purchasing & Material Control'.	Section 4.21 - 'Customer Supplied materials'.
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Procuremen	t, (continued)	
7.3.4	Manual - Part 4, 'Purchasing & Material Control'. Manual - Part 19, 'Reports & Forms'.	Purchase Order Form QCM-1-02
7.3.5	Manual - Part 4, 'Purchasing & Material Control'.	Section 4.20 - 'Subcontracted Fabrication Requirements'.
Operations	·	
7.4.1	Manual - Part 4, 'Purchasing & Material Control'. Procedure Manual PM-1 - Procedure IML-BT-2.	Section 4.21 - 'Customer Supplied Materials'.
7.4.2	Manual - Part 11, 'Inspection'. Manual - Part 19, 'Reports & Forms'.	'Shop Inspection Report', Form IML-IRF01
7.4.3	Procedure Manual PM-1 - Procedure	IML-SPC-1, IML-ARC-1, IML-C-1
7.4.4	Manual - Part 4, 'Purchasing & Material Control'.	Section 4.15 - 'Storage, Identification & Issuance'.
Quality Cont	rol	
7.5.1	Manual - Part 4, 'Purchasing & Material Control'.	Section 4.5 - 'Material Receiving'.
7.5.2	Manual - Part 6 - 'Structural Welding Operations'. Manual - Part 11 - 'Inspection'.	
7.5.3	Manual - Part 6 - 'Structural Welding Operations'. Procedure Manual - Procedure IML-WCC-1.	
7.5.4	Manual - Part 4, 'Purchasing & Material Control'.	Section 4.9.
Quality Assu	ırance	
7.6.1	Manual - Part - 'Introduction', (1 page).	
7.6.2	Manual - Part - 'Manual Reviews, Revisions & Audits'.	Manual Part 19 - 'Form QCM-1-21, 'Internal Audit Report'
7.6.3	Manual - Part - 'Manual Reviews, Revisions & Audits'.	
7.6.4	Manual - Part - 'Manual Reviews, Revisions & Audits'.	
7.6.5	Manual - Part - 'General Management Policy'.	Page 2 of 2 - 'Employee Education'.
7.6.6	Procedure Manual - Procedure IML-CP-1	Calibration Procedure
7.6.7	Manual - Part 15 - 'Non-Conformance Procedure'.	Manual Part 19 - 'Forms QCM-1-10; 'Non-Conformance Tag', QCM-1-11; 'Non-Conformance Record', QCM-1-12; 'Non-Conformance Report'.
7.6.8	Manual - Part 14 - 'Preventive Maintenance, Calibration of Equipment & Instruments'.	Procedures Manual - PM-1, IML-CP-1, Calibration Procedure'.
7.6.9	Manual - Part 6 - 'Structural Welding Operations'.	Page 1
7.6.10	Manual - Part 6 - 'Structural Welding Operations'.	Page 1
7.6.11	Manual - Part - Appendix III	Resumes & Qualifications of Key Personnel.
7.6.12	Manual - Part 4 - 'Purchasing & Material Control'. Procedure Manual - Procedure IML-WCC-1.	Manual WPS-1, 'Welding Procedures FHM-03, FHM-04, SWP-G-01 & SWP-G-01D.
7.6.13	Manual - Part 17 - ' Certificated of Conformance'.	Manual - Part 19 - 'Reports & Forms', QC-1-18, 'Certificate of Conformance'.
Non-Destruc	ctive Testing	
7.7.1	Manual - Part 12 - 'Non-Destructive Examination'. Procedure Manual - PM-1 - 'NDE Inspections Procedures; VT, PT & MT.	UT & RT are sub-contracted through a CCDDS-BD Approved Inspection Agency.
7.7.2	Manual - Part 11, 'Inspection'	paragraph 11.2.4
		1

Records	
8.1.1	Manual - Part 16, 'Record Retention'.
8.1.2	Manual - Part 16, 'Record Retention'.
8.1.3	Manual - Part 16, 'Record Retention'.
8.1.4	Manual - Part 16, 'Record Retention'.
8.1.5	Manual - Part 16, 'Record Retention'.

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PART 4
INTRODUCTION

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The Intermountain Lift, Inc., Quality Assurance / Quality Control Manual, (QCM-1), is written as the authoritative document to assure conformance to the quality requirements as set forth in the following documents:

Revision No.:

- 1. The American Institute of Steel Construction, (A.I.S.C.);
 - a. Simple / Complex Steel Building Structures.
 - b. Load & Resistant Factor Design Manual, (LRFD).
 - c. Allowable Stress Design Manual, (ASD).
 - d. Seismic Provisions for Structural Steel Buildings.
 - e. Code of Standard Practice for Steel Building and Bridges.
 - f. Specification for Structural Joints Using ASTM A-325 or A-490 Bolts.
- 2. American Welding Society, (AWS);
 - a. ANSI / AWS D1.1, Structural Welding Code Steel.
 - b. ANSI / AWS A2.4, Symbols.
 - c. ANSI A3.0, Terms and Definitions.

NOTE:

For the documents listed in 1 & 2 above, the editions used will be those which are specified by the contract for the project concerned.

These codes and standards shall be the basis for establishing inspection, control and documentation procedures which will be accomplished by Intermountain Lift, Inc., for all shop and field activities, in compliance with these referenced Codes.

It is the intent of this manual to provide the vehicle for building adequate quality into the product at all stages of production, to provide for feedback of information, and for identifying and correcting recurring discrepancies during production operations.

This QA / QC Manual does not include special contractual requirements which are beyond the scope of the applicable codes. Such requirements may supplement this manual, provided they do not negate the rules of the applicable codes.

The Vice-President and General Manager of Intermountain Lift, Inc. is hereby vested with full authority to assure compliance with the applicable codes, standards & specifications, listed above.

The Vice-President and General Management of Intermountain Lift, Inc., fully approves, sponsors and supports the policies and procedures as outlined in this manual.

Approved:

President & General Manager.

Intermountain Lift, Inc.

February 12, 2019

Date

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PART 5 GENERAL MANAGEMENT POLICY

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GENERAL MANAGEMENT POLICY

It is the policy of the General Management of Intermountain Lift, Inc., to insure that all activities of the organization are directed to produce a fabricated product which meets the quality requirements specified in the applicable contract documents.

To this end, all materials and services purchased by Intermountain Lift, Inc., meet the Approved Construction Documents, Applicable Building Codes and Standards, and this Quality Control Manual.

Quality Control, through the Quality Control Manager, reports directly to the Vice-President and General Manager and has the authority to discontinue any operation where the quality of an item is in question.

MANAGEMENT GOALS

The basic Goals of Intermountain Lift, Inc., are to:

- Expand our market as an AISC Approved Fabricator of Structural Steel.
- Provide a Product which . . .
 - . . . meets all applicable project, drawing, specification and code requirements.
 - . . . is produced within the budget of the project bid.
 - . . . is delivered, on time, to the customer.

ASSESSMENT OF ACHIEVEMENT

Evaluation of the achievement of these goals are through. . .

- . . . evidence of projects through new customers.
- . . . increased orders from current customers.
- . . . zero back-charges on completed projects.
- . . . positive feed-back from customers and clients on completed projects.

Note:	Although the Goals of Intermountain Lift, Inc., are objective in nature, the achievement of these goals is somewhat subjective.
	Somewhat Subjective.
	Any growth of Intermountain Lift, Inc., will reflect achievement of our goals. However, it is not the policy of
	Intermountain Lift, Inc., to directly solicit feed-back from our customers.
	However, we do appreciate any input which will improve our service to you, our customer.
	The quality of work, continued contracts and new customers is our evidence of achievement.

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GENERAL MANAGEMENT
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EMPLOYEE EDUCATION

It is the policy of the General Management of Intermountain Lift, Inc., to insure that all employees are familiar with the policies and procedures involved in the function and operation of the Quality Program. For this reason, employees will be instructed on various parts of the Quality Control manual and associated procedures.

This training may be conducted through class type training, through written directives by various department heads, or addressed during extended safety meetings, providing general information as to department responsibilities, requirements, functions and operations of each department and its relationship to the overall quality of the product fabricated.

Documentation of training sessions will be maintained, including subject, date and a sign-up sheet, listing the attendees participating in the training.

Bret Crandall

President & General Manager

February 12, 2019

Date

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QUALITY PROGRAM
MANAGEMENT
REVIEW

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QUALITY PROGRAM MANAGEMENT REVIEW

- The overall Quality Program shall be reviewed, at least annually or more often, as required, in order to assure that the program is functioning properly and is kept current with all applicable requirements.
- The responsibility for performing these reviews falls to the Vice-President and General Manager, who, with the other members of the management team, will evaluate and make recommendations with regard to effective program operation.
- Such reviews will require the participation of each of the following members of the management team, representing their various departments.
 - " Management Team Members:
 - •ACompany President
 - Management Representative
 - Purchasing Manager
 - Project Manager(s)
 - Shop Superintendent
 - Maintenance Supervisor
- Company Vice-President(s)
- Quality Control Manager
- Estimating Manager
- Accounting Manager
- Shipping and Receiving Manager
- Management Review Meetings, for certain parts of the QA/QC Program, may require specific reviews due to changes in personnel, processes, or procedures which require immediate attention.
- The basic agenda for the Management Review Meetings will include, but not be limited to the following items:
 - " Review of the minutes of previous Management Review Meeting(s).
 - Examples: Status of previously identified problems, completion of corrective actions on previously noted deficiencies and identifying trends with regard to the effectiveness of the QA/QC program.
 - " Results of Internal and Third Party audit findings.
 - Examples: Deficiencies noted in the system through corrective action requests.
 - " Customer Feed-back.
 - •\Examples: Results of vendor/supplier surveys, letters of recognition, complaints and

requests for corrective actions.

- " Fabrication Operations.
 - Examples: Back-charges, repeated internal errors with regard to specific operations, (layout,

fitting, welding, bolting, coatings application, etc.).

- " Drawings & Specifications.
 - Examples: Delays in receiving project drawings and specifications, incomplete drawings,
 - detailing errors and back-charges.
- " Purchasing and Shipping & Receiving.
 - Examples: Late deliveries of materials or supplies, incorrect or incomplete documentation

for raw materials from suppliers and shipping delays of completed materials.

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Management Review Meeting Agenda, (continued).

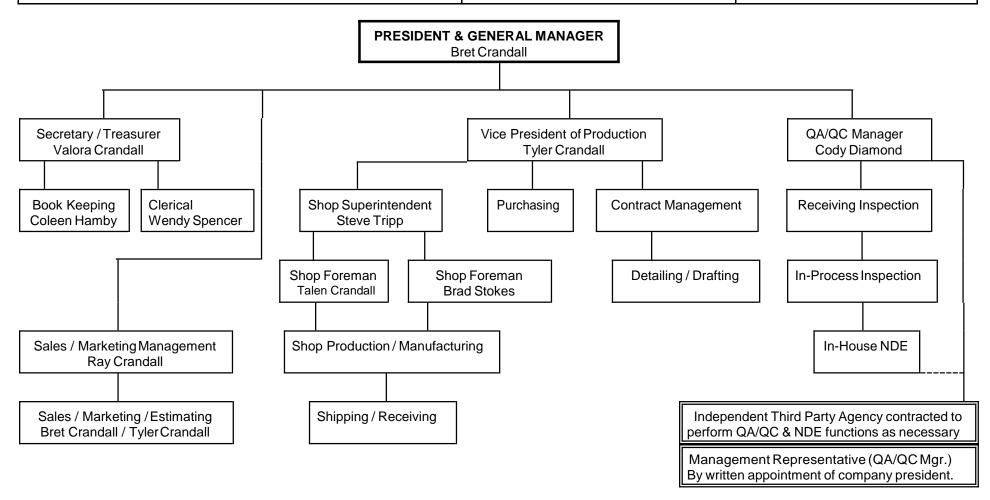
- " Equipment Maintenance.
 - Examples: Preventive maintenance plans, equipment break-downs, equipment failures, acquisitions, replacement or upgrading of production tools and equipment.
- Management Review Meeting Records.
 - " Minutes of each Management Review Meeting will be recorded, either by written or electronic means, for future reference and review.
 - Electronically recorded meeting minutes will be transcribed into a written format and filed for future reference.
 - Copies of the meeting minutes will be distributed to each department head to assure that required actions are undertaken to improve QA/QC program function and effectiveness.

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PART 8
MANAGEMENT
PERSONNEL RESPONSIBILITIES
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POSITION: COMPANY PRESIDENT

MANAGEMENT RESPONSIBILITIES

GENERAL: ! Primary Decisions concerning overall operations, expenditures and organizational leadership.

SPECIFIC: • Provide le

- Provide leadership and direct overall planning with regard to all major operations, shop and field functions, improvements and acquisitions.
- Formulate planning for future growth of operations and facilities.
- Direct lower management personnel and provide input for efficient utilization of facilities and personnel.
- Provide primary representation for company interests with customers, clients and contractors for whom work is being accomplished.
- Establish communications with potential customers and coordinate activities to bring additional contracts into the company.
- Provide experience and knowledge to further company growth, improve working relationships and create an atmosphere for quality, productivity, personnel development and advancement.

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POSITION: VICE-PRESIDENT

MANAGEMENT RESPONSIBILITIES

! In the absence of the President, the Vice-President assumes the responsibilities of the President in GENERAL:

Primary Decisions concerning overall operations, expenditures and organizational leadership.

SPECIFIC: · Provide leadership and direct overall planning with regard to all major operations, shop and field functions, improvements and acquisitions.

• Formulate planning for future growth of operations and facilities.

Direct lower management personnel and provide input for efficient utilization of facilities and personnel.

 Provide primary representation for company interests with customers, clients and contractors for whom work is being accomplished.

 Establish communications with potential customers and coordinate activities to bring additional contracts into the company.

· Provide experience and knowledge to further company growth, improve working relationships and create an atmosphere for quality, productivity, personnel development and advancement.

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POSITION: QUALITY CONTROL MANAGER

MANAGEMENT RESPONSIBILITIES

GENERAL: ! Responsible for Quality Control Program operations & AISC Management Representative.

SPECIFIC:

- Implementing Standards and Specifications to verify compliance, in fabricated items, to meet all applicable project specification requirements.
- Direct Quality Control Program functions as they relate to all aspects of plant operations, from procurement of materials to shipping of completed items.
- Direct all inspection and testing operations for all fabrication operations within the facilities of the company and arrange for all NDE services, when required.
- Supervise inspection personnel and direct inspection functions to assure timely and effective coverage, in order to meet quality requirements and schedules.
- · Maintain records of all testing and inspections relating to the quality requirements of fabricated items.
- Liaison with outside testing laboratories, customer Q.A. representatives and field erection operations on quality matters.
- Issue and control the Quality Control Manual and all related quality control documents.
- Maintain records on Qualification and Certification of welders and welding operators.
- Review contract documents and prepare, or arrange for the preparation of welding and inspection procedures which meet all applicable code, standard and project specification requirements.
- Provide consultation and assistance to all departments in meeting the required codes, standards and specifications of individual contracts.

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POSITION: MANAGEMENT REPRESENTATIVE

MANAGEMENT RESPONSIBILITIES

GENERAL: !Member of the management team appointed by the company president.

• Main contact between company and The American Institute of Steel Construction, (AISC), pertaining to fabricator certification.

SPECIFIC:

- Must have the knowledge and understanding to assure that all work and reporting meet the project requirements.
- Responsible for the Quality Management System, (QMS).
 Must assure that the program has been established, written, implemented, personnel properly trained and that the system is maintained.
- Verify and confirm that the customer requirements, on all projects, are being properly addressed during the project reviews, as outlined in the QC Manual.
- Must have a thorough knowledge of the QMS program, the reporting methods and be involved with the analysis of quality issues.
- Ascertain and review all QMS program documentation to assure that, as problems or deficiencies are disclosed, that solutions are found, implemented and re-training takes place to assure solutions are working.

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POSITION: PURCHASING MANAGER

MANAGEMENT RESPONSIBILITIES

GENERAL: !Order and arrange for delivery of materials and equipment against contract requirements and

operational needs.

SPECIFIC:

• PURCHASING FUNCTION:

- Order and maintain physical inventory of materials.
- Supervise Purchase Order Files.
- Arrange purchase of fabrication materials, equipment maintenance, shop and field supplies and equipment.

• ESTIMATING FUNCTION:

- Coordinate pricing, with Estimating on weights and extensions from Material Take-offs, Advance Bills and Bills of Material.
- Provide training of new Material Take-off Trainees.

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POSITION: ESTIMATING MANAGER

MANAGEMENT RESPONSIBILITIES

GENERAL: ! Coordinate and perform estimating for structural steel fabrication.

- Estimating of specialized medium and heavy classes of work, maintenance, repair and custom built fabrications.
- Estimating duties include such items as major steel buildings, retro-fits and upgrades, commercial and industrial structural steel.
- Applicable specifications and codes:
 - " International Building Code, (IBC).
 - " American National Standards Institute, (ANSI).
 - " American Institute of Steel Construction, (AISC).
 - " American Welding Society, (AWS).

SPECIFIC:

- Estimating of material, labor, freight, handling and erection costs.
- Preparation of print take-offs consisting of materials, weights and cost assessments.
- Shipping and delivery schedules, detail costs and freight pricing is also accomplished.
- Establishment of new customers and clients for future work opportunities.

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POSITION: PROJECT MANAGER

MANAGEMENT RESPONSIBILITIES

GENERAL: ! Coordinate engineering problems with contract design engineers to obtain resolutions.

- Coordinate detailing activities with outside drafting and detailing firms and expedite prints into the fabrication system.
- Maintain drawing records as to revisions, additions, deletions and amendments to contact operations.

SPECIFIC:

- Function as engineering liaison, with the customer's engineer, in the resolution of design and drawing problems arising during fabrication.
- Arrange and coordinate detailing activities through qualified drafting and detailing firms to provide shop detail drawing from engineering and design information.
- Maintain all records concerning drawings, including, but not limited to the following:
 - " Receipt of design drawings from the customer.
 - " Distribution to detailing firm(s).
 - " Submission of details for approval.
 - " Receipt of approved drawings.
 - " Revisions to detail drawings.
 - " Printing and distribution of drawings to production.
 - " Printing and distribution of drawing revisions.
 - " Records relating to the acquisition, distribution, control and traceability of drawings, specifications and other controlled documents.

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POSITION: CHIEF FINANCIAL OFFICER

MANAGEMENT RESPONSIBILITIES

GENERAL: ! A Responsible for the creation of company financial data used in evaluating the profitability of company

operations.

SPECIFIC: • Supervise the input of accounts receivable, accounts payable and job costing data into computer storage

along with the entry of accounting and financial journals.

• Administers all payroll functions, payroll tax reporting and employee benefits program.

• Produce monthly financial statements reconciled to individual accounts.

• Produce monthly job cost analysis, manpower hour analysis and operating expense summaries.

• Maintain property, plant and equipment inventories for preparation of annual property tax reporting.

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PART 8
MANAGEMENT
PERSONNEL RESPONSIBILITIES

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POSITION: SHOP SUPERINTENDENT

MANAGEMENT RESPONSIBILITIES

GENERAL:

! Direct and coordinate all fabrication operations including material receiving, layout, cutting, fitting, welding, blasting and painting to provide items which meet the requirements of all the applicable codes, standards and specifications.

SPECIFIC:

- Provides input on manpower needs, work scheduling, contract status and effects the directives and instructions of the President in order to meet shipping schedules and contract requirements.
- Provides authority and direction in the assignment of personnel, scheduling of work and set priority goals in order to meet delivery commitments.
- Coordinates hiring and training of new personnel for shop operations such as welders, fitters, painters and a general labor force to meet contract schedules and commitments.
- Works closely with the Purchasing and functions as Material Receiving to assure materials are ordered and received for timely completion of contracts.
- Works closely with Quality Control to provide notice of inspections and testing to assure timely completion of contract work with minimal delays due to rework or repair.

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POSITION: QUALITY CONTROL INSPECTOR

MANAGEMENT RESPONSIBILITIES

GENERAL:

- ! Responsible for implementing the provisions of the Quality Control Program, codes, standards and individual contract specifications within the production environment.
- Performing various inspections and tests as required by individual contracts and generating the required documentation.

SPECIFIC:

INSPECTION FUNCTION:

- Enforce codes standards and specifications and verify, through physical examination, the incorporation of the appropriate requirements within each fabrication as represented on the drawings.
- Provide visual examinations and arrange for other Non-destructive testing through the Quality Control Manager.
- Generate records and other necessary documentation, as required by individual contracts, to meet project drawings and specifications.
- Prepare and conduct welder qualification tests.
- Assist outside inspectors and provide all the necessary information which they may request in the performance of their duties.
- Arrange for the correction of any deficiencies noted by himself or any outside inspector, or inspection agency, through notification to the Shop Superintendent.
- Follow-up on all identified deficiencies to verify correction, within the applicable specifications, and document these conditions.
- Provide assistance, as required, to the Quality Control Manager in any and all inspection functions when delegated to do so.

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POSITION: SHIPPING AND RECEIVING MANAGER

MANAGEMENT RESPONSIBILITIES

GENERAL: ! Receive and check in all materials, parts, equipment and supplies against purchase orders.

- Perform inspections of materials, parts, equipment and supplies, as received, to verify quantity and quality as directed by the purchase order and any associated specifications.
- Arrange for transportation of finished fabrications to various job site locations via qualified transport companies.
- Prepare shipping documents for completed fabrications prior to shipments.

SPECIFIC: ! Receive and check in all materials, parts, equipment and supplies against the purchase order.

- Materials will be checked for, but not limited to, the following:
 - " Quantity number of pieces present.
 - " Condition acceptable to appropriate specifications and standards.
 - " Shape configuration of items.
 - " Size pertinent dimensions.
 - " Markings identification and/or traceability.
- Arrange for transportation and shipment of completed fabrications to the various job site locations through qualified trucking companies.
- Schedule pick-ups of completed loads for shipment.
- Prepare and assemble all shipping documentation for each load of completed materials which may include, but not be limited to, the following:
 - " Shipping lists.
 - " Bills of lading.
 - " Release forms.
 - " Specific special contract documentation, (when required).

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POSITION: MAINTENANCE SUPERVISOR

MANAGEMENT RESPONSIBILITIES

GENERAL: ! Direct and supervise maintenance activities for facilities and all fixed and mobile equipment.

- Establish and maintain records for preventive maintenance activities.
- Ordering of facilities and equipment parts and materials.

SPECIFIC:

- Coordinate work assignments and set priorities for repairs and preventive maintenance as work orders are received.
- Direct and assist in performance of facility services, maintenance and repairs such as water, sewer, electrical, heating, cooling, fuels and welding gas systems.
- Direct and perform mechanical and electrical repairs and rebuilds of production, transport and material handling equipment.
- Maintain records of preventive maintenance activities on material handling, production and transport equipment.
- · Order equipment, parts and services which are required for all maintenance activities.

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MANUAL REVIEWS,
REVISIONS and AUDITS
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9. MANUAL REVIEWS

- **9.1** The QA/QC Manual shall be reviewed at least annually, by the QA/QC Manager, to keep the manual current with Code requirements and implement changes as new code revisions have been published.
 - **9.1.1** Reviews of certain parts of the QA/QC Program may require specific reviews due to changes in personnel, processes, or procedures which require immediate attention to assure compliance.
 - **9.1.2** Such reviews and subsequent changes may be documented on form QCM-1-21, 'Interim Audit Report', [see section 29, Exhibit 21], for later inclusion in the Annual Internal Audit.
 - **9.1.3** Changes in company key personnel, plant location, procedures or policies and revisions to this manual shall be distributed to all Controlled manual Holders within thirty [30] days of the changes becoming effective.

9.2 MANUAL REVISIONS

- **9.2.1** Manual revisions shall be identified, throughout the manual, by the revision number at the top of each page.
- **9.2.2** Forms, included in Part 29 of this manual are "EXAMPLES" and are revised and controlled individually.
- 9.2.3 The QA/QC Manager will maintain a list of holders of controlled and non-controlled manuals. Non-controlled manuals need not be kept up to date after issuance, but may be updated and transferred to controlled status as conditions require. Company personnel, involved in Code activities, shall be issued controlled manuals, only.
 Several departments may be issued a joint QA/QC Manual for their use.
- **9.2.4** The assignment of all QA/QC manuals shall be documented on the QA/QC Manual Distribution Log. QCM-1-18, [see section 29, Exhibit #18].
- 9.2.5 All revisions to the Quality Control Manual will be forwarded to holders of Controlled Manual Copies, by use of a Manual Revision Transmittal and Receipt Form. (QCM-1-01), [see Section 29, Exhibit#1].
- **9.2.6** Upon receipt of the revision transmittal, the newly revised pages shall be inserted and the affected, past revision, pages shall be removed and destroyed.
- 9.2.7 The Manual Revision and Transmittal form shall be completed and the lower portion returned to:

Intermountain Lift, Inc. P.O. Box 686 Springville, Utah 84063 ATTN: QA/QC Manager

9.2.8 All subsequent revisions and / or supplements to this QA/QC Manual will be submitted to those concerned, for approval, before becoming a part of this Manual.

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9.3 QA/QC PROGRAM AUDITS

- **9.3.1** The QA/QC Program shall be audited through the various means listed below, on a routine, periodic basis in order to keep the program current with Code requirements and implement changes as new code revisions have been published.
- 9.3.2 An annual internal audit of the QA/QC Program shall be conducted by the QA/QC Manager, or his appointed designee, using form QCM-1-21, 'Interim Audit Report', [see section 29, Exhibit #21].
 - **9.3.2.1** Records of all annual, internal audits shall be maintained on file with Intermountain Lift, Inc, for a period of not less than three [3] calendar years, in accordance with the requirements of Part 26 of this manual.
- 9.3.3 An annual audit of the QA/QC Program will be conducted through a third party agency approved by the Clark County Department of Development Services - Building Division, (CCDDS-BD).
 - **9.3.3.1** It is understood that CCDDS-BD may perform announced or unannounced fabrication facility audits at no cost to the jurisdiction.
- **9.3.4** Additionally, other, periodic audits of the QA/QC Program may be required by clients, customers or other state, county or municipal jurisdictions, through third party agencies or representatives.
 - **9.3.4.1** These audits are, most generally, conducted in connection with specific projects and may require interim changes to normal operations or requirements.
 - **9.3.4.2** Any specific changes to the QA/QC Program required by these audits should be addressed through the application of Part 29, 'Manual Amendments Procedure'.

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CORRECTIVE ACTION
PROCEDURE
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10. CORRECTIVE ACTION PROCEDURES

- 10.1 Purpose
 - **10.1.1** To provide a system for informing appropriate personnel of instances of non-conformance to quality requirements and to initiate corrective actions.
- **10.2** Scope
 - **10.2.1** This system encompasses the activities of all departments in the company.
 - **10.2.2** Its operation is the responsibility of the Quality Assurance Department.
 - **10.2.3** Corrective actions related to suppliers are covered in Part 14 Purchasing & Material Control.
- 10.3 Support Documents
 - **10.3.1** Manual Part 9 Manual Reviews, Revisions and Audits.
 - **10.3.2** Manual Part 14 Purchasing & Material Control.
 - 10.3.3 Manual Part 21 Inspection.

10.4.3.7

10.4.3.8

- **10.3.4** Manual Part 22 Non-Destructive Examination.
- 10.3.5 Manual Part 25 Non-Conformance Procedure.

The part name.

The part number.

- 10.4 Procedure
 - **10.4.1** A <u>Corrective Action Request</u>, (QCM-1-23), [see Section 29, Exhibit #23], shall be prepared to initiate an investigation of the cause of a discrepancy resulting in the recommendation of corrective action so as to avoid the recurrence of the discrepancy.
 - **10.4.2** The generation of a Corrective Action Request, (CAR), shall come about as a result of any findings related to the items described in paragraph 10.3, above.
 - **10.4.3** The Corrective Action Request, (QCM-1-23), [see Section 19, Exhibit #23], shall be filled out as follows:

10.4.3.1	The number of the CAR.
10.4.3.2	The name, address and phone number of the organization responsible for investigating the cause and taking corrective action.
10.4.3.3	The name of the person and organization requesting the action.
10.4.3.4	The date of the request.
10.4.3.5	The date when a reply to the request is due.
10.4.3.6	The name of the program or project.

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- 10.4.3.9 The inspection or failure report number.10.4.3.10 The description of the condition.
- **10.4.3.11** The apparent cause of the condition, if known.
- **10.4.4** Information relative to the CAR is now recorded on the Corrective Action Status Loq, (QCM-1-24), [see Section 29, Exhibit #24], as follows:
 - **10.4.4.1** The CAR number.
 - **10.4.4.2** The inspection or failure report number.
 - **10.4.4.3** The name of the organization responsible for investigative and corrective action.
 - **10.4.4.4** The date the assignment was made to the organization.
 - **10.4.4.5** The date when the response is due.
- **10.4.5** The CAR is forwarded to the assigned organization where an investigation shall be performed to determine the cause of the discrepancy, and action taken to prevent recurrence. This information is recorder on the CAR form as follows:
 - **10.4.5.1** The actual cause of the discrepancy.
 - **10.4.5.2** The action taken to prevent recurrence.
 - **10.4.5.3** The signature and title of the person responsible for the corrective action:
- **10.4.6** The completed CAR is returned to the issuing QA Department and the Corrective Action Status Log is updated to reflect the date of the actual response and any remarks pertinent to the action.

10.5 Reviews

- 10.5.1 At least annually, a documented review of the following documents will be accomplished to identify recurring conditions or trends which may be adverse to the quality of the product or the proper operation of the quality program.
- **10.5.2** Reviews of the following documents will be conducted:
 - **10.5.2.1** Management Review Meeting Minutes.
 - **10.5.2.2** Inspection Reports.
 - **10.5.2.3** Non-conformance Reports.
 - **10.5.2.4** Corrective Action Reports.
- **10.5.3** Any detrimental trends, once identified, will be corrected by the best possible means to prevent recurrence.

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PART 11
QUALITY CONTROL

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11. QUALITY CONTROL

- 11.1 The QA/QC Department, through the QA/QC Manager, reports to the Vice-President.
- 11.2 QA/QC is the final authority with regard to the acceptability of an item and has the authority to place a 'HOLD' on any operation where the quality of any Code item is in question.
- 11.3 Has the authority to disapprove any procurement source where the quality of the materials, products, processes or services is in question.
- 11.4 Shall be responsible for assuring that all products manufactured by Intermountain Lift conforms to the applicable Drawings, Specifications, Codes and Standards.
- 11.5 The overall responsibility for the administration of the requirements set forth in this program shall rest with the QA/QC Manager. The Manager shall be responsible for initiating written directives and I or procedures informing all department heads of their departmental responsibilities to the overall QA/QC Program.
- **11.6** QA/QC will communicate directly with the Customer's Inspector(s) and I or Customer's Quality Assurance Representatives to resolve any questions pertaining to product acceptability.
- 11.7 QA/QC's responsibilities shall, as a minimum, consist of, but not to be limited to, the following duties:
 - **11.7.1** Plan, establish and assist in formulation of production inspection methods.
 - **11.7.2** Compile and file contractual documentation pertaining to all Q.C. operations.
 - **11.7.3** Initiate and supply customers with Intermountain Lift, Inc., Fabrication, Control and Inspection Procedures, Welder's Certifications and all other necessary documentation, as requested.
 - **11.7.4** Perform inspections to assure that applicable Code requirements, Customer and the applicable Intermountain Lift procedures are being followed.
 - **11.7.5** Compile, check and supply customers with Material Test Reports, (MTRs), and Certificates of Compliance, C of C's), as required by individual contract specifications.
 - **11.7.6** Accommodate the customer's inspector(s) and / or customer's representative(s).
 - **11.7.7** Perform the required Non-Destructive Examination, (NDE), in accordance with contract specifications and applicable codes or;
 - **11.7.8** Arrange, coordinate, schedule and over-see Non-Destructive Examinations performed by qualified and certified outside laboratories.
 - **11.7.9** Initiate, document and over-see corrective actions relating to engineering, drawings and fabrication, throughout all levels of operations.
 - **11.7.10** Review and approve shop fabrication procedures and standards prior to issuance.
 - **11.7.11** Administer and evaluate Welder's, Welding Operator's and Fitter / Tacker's qualification examinations.

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11.7.12	Review Weld Rod Withdrawal records for conformance to specifications, (as
	required by the applicable project specifications).

- **11.7.13** Verify and document Welder's, Welding Operator's and Fitter / Tacker's continued qualifications.
- **11.7.14** Schedule and document equipment and instrument calibration.

11.8 QA/QC MANAGER

- **11.8.1** The QA / QC Manager plans and establishes inspection functions in accordance with Intermountain, Lift, Inc., policies.
 - **11.8.1.1** The Manager issues directives governing methods, procedures and operations.
 - **11.8.1.2** The Manager directs in the planning of inspection methods.

11.9 QUALITY CONTROL INSPECTOR

- **11.9.1** The Quality Control Inspector conducts inspection functions to requirements set forth by the Code, Intermountain, Lift, Inc., and / or Customer Inspection Procedures and Specifications, governing product acceptability.
- **11.9.2** QC inspectors will be adequately trained and tested in the use of the tools and equipment used for inspection purposes.

11.10 QUALITY CONTROL STANDARDS

- 11.10.1 In addition to the standards set forth in this manual, the following codes and specifications will be used as a basis for the control of quality.
 - **11.10.1.1** AWS D1.1, Structural Welding Code Steel, latest edition, (Unless other issues are specified by contract documents).
 - **11.10.1.2** AISC Steel Construction Manual, latest edition.
 - **11.10.1.3** AISC Quality Criteria and Inspection Standards.
 - **11.10.1.4** Uniform Building Code, latest edition, (Unless other issues are specified by contract documents).
 - **11.10.1.5** International Building Code, latest edition, (Unless other issues are specified by contract documents).
 - **11.10.1.6** Clark County, Nevada Building Code*, latest edition, (Unless other issues are specified by contract documents).
 - **11.10.1.7** ASTM Annual Standards.
 - **11.10.1.8** Steel Structures Painting Manual, Volumes 1 & 2.

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11.10.1.9 Project specifications issued for the production of a particular project.

*When fabricated structural products are required to be produced under "State of Nevada, Clark County Department of Development Services - Building Department", the applicable codes shall be the "Clark County Building Codes".

11.11 QUALITY CONTROL INSPECTOR TRAINING

- 11.11.1 Shop Inspection personnel, performing Visual Examination, shall be trained and certified in accordance with the requirements of the American Society for Non-Destructive Testing, (ASNT); 'Recommended Practice SNT-TC-1A'.
- 11.11.2 Level II NDE personnel shall be re-certified at least once every three [3] years, (with the exception of an Eye Examination, which shall be maintained annually), in accordance with one of the following criteria:
 - 11.11.2.1 Retesting, in accordance with Quality Testing & Inspection's Written Practice, (QTI-TP-II), for training and certification of personnel performing the function of Level II for Visual-Dimensional Examination.
 - 11.11.2.2 NDE personnel shall be re-evaluated on continued satisfactory performance by the NDE Level III.
 - 11.11.2.2.1 The evaluation includes, but is not limited to, the ability to properly perform the set up and calibration of equipment, to interpret and evaluate the results with respect to the applicable codes, standards and specifications.
 - **11.11.2.2.2** To prepare NDE reports to assure proper documentation;
 - **11.11.2.2.3** Assure individual training is kept current to the company practices and any code or specification changes;
 - **1.11.2.2.4** Demonstration of Practical Testing.
- 11.11.3 It is the responsibility of the Quality Control Manager to evaluate the performance of all inspection personnel, at least annually, to assure compliance to all applicable codes, standards and specifications.
 - **11.11.3.1** Evaluation will be performed in conjunction with annual performance reviews and through monitoring of work and report documentation.

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PART 12 ENGINEERING

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12. **ENGINEERING**

12.1 Engineering is not a direct function of the QA / QC Department; however, it is the responsibility of QA / QC to ensure that the requirements of the referenced codes are followed. Direct departmental communications are necessary in order to resolve any non-conformance which relate to code and / or specification requirements. QA / QC will work closely with, and provide input for, all engineering related requirements, through the Project Manager, or his designee, who, in turn, will provide the necessary information to all departments concerned.

12.2 GENERAL

- **12.2.1** Upon receipt of the Owner's, Customer's or Sub-Contracted Design Organization's specifications, the QA / QC Manager, Project Manager and the Shop Superintendent will review the documents to assure that they are in compliance with applicable code requirements.
- **12.2.2** Based on the customer's documents, the QA / QC Manager will determine which items are subject to the applicable requirements of the code.

12.3 DESIGN PREPARATION, DISTRIBUTION AND CONTROL

- 12.3.1 Design documents may be supplied by the customer or a sub-contracted design organization. It is not within the scope of Intermountain Lift to make design changes without customer approval and only with revised drawings or other written approval documentation for the changes. However, responsibility for compliance to code requirements shall remain with Intermountain Lift.
 - 12.3.1.1 Materials The Owner's, Customer's or Sub-Contracted Design Organization's engineer shall be responsible for the selection and specification of all materials, parts, piping, structural materials and welding consumables, unless otherwise specified within the contract documents.
 - 12.3.1.2 Special material and electrode specifications will be supplied, when material requirements cannot be totally described by referencing appropriate specifications. The customer's engineering department shall be responsible for providing documents on these specialized requirements.
 - 12.3.1.3 Special material and / or electrode specifications, when required, shall stipulate, as a minimum:
 - **12.3.1.3.1** Type and grade of material.
 - **12.3.1.3.2** Special tests and / or examinations to be performed by the vendor or supplier, such as:
 - **12.3.1.3.2.1** Chemical Composition requirements.
 - **12.3.1.3.2.2** Charpy V-Notch requirements.
 - **12.3.1.3.3** Heat treatment to be performed by the vendor or supplier.
 - 12.3.1.3.4 Markings to be applied by the vendor or supplier.

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12.3.1.3.5 Documentation to be supplied by the vendor or supplier.

- **12.3.2** <u>Design Calculations</u> Customer Design Engineering shall be responsible for the preparation of all design calculations.
- **12.3.3** <u>Design Drawings</u> Customer Design Engineering shall be responsible for the preparation of design drawings, (unless contract requirements specify otherwise), which shall include as a minimum:
 - **12.3.3.1** Electrode specifications or references to applicable special requirements for all materials.
 - **12.3.3.2** Geometry and dimensions.
 - **12.3.3.3** Impact test requirements, if applicable.
- **12.3.4** <u>Welding Requirements</u> Customer Welding / Metallurgical Engineering shall be responsible for providing welding requirements which shall include, as a minimum:
 - **12.3.4.1** Weld Symbols in accordance with AWS A2.4 or other specified standards.
 - **12.3.4.2** Reference to applicable welding specifications in accordance with the AWS A5.xx series of specifications or other specified standards.
 - **12.3.4.3** Post weld heat treatment, if applicable.
- 12.3.5 Nondestructive Examination Requirements Customer Engineering shall specify the type and extent of nondestructive examinations required, by symbols in accordance with AWS A2.4, other specified standards or by general drawing notes.
- **12.3.6** Stamping or other identification methods as required for material traceability.
- **12.3.7** Maximum Permissible Tolerances Customer Engineering shall determine and specify the maximum permissible out-of-tolerance allowances, based on applicable codes and standards.

12.3.7.1	ASTM. A-6 (see note Ø)
12.3.7.2	AWS D1.1 (see note Ø)
12.3.7.3	AWS D1.3 (see note Ø)
12.3.7.4	AWS D1.4 (see note Ø)
12.3.7.5	AWS A3.0 (see note Ø)
12.3.7.6	AISC/RCSC (see note Ø)
12.3.7.7	AISC/ ASD (see note Ø)
12.3.7.8	AISC/ LRFD (see note Ø)

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12.3.7.9 Specific contractual requirements.

ØNote: Contract Specified Edition.

12.4 PROCEDURES

12.4.1 Welding Procedure Specifications

[Preparation and Qualification, (see 12.4.1.1), to conform to applicable code requirements].

- **12.4.1.1** By the customer's weld engineering, or Intermountain Lift, per contract requirements.
- **12.4.2** Non-Destructive Examinations By the customer or by Intermountain Lift's NDE Level III Consultant.
- **12.4.3** Post Weld Heat Treat When required, shall be specified by the customer's engineering. (Parameters and conditions shall be fully outlined).

12.5 DESIGN DISTRIBUTION AND CONTROL

- **12.5.1** The customer's engineering department shall forward the following listed documents to Intermountain Lift, as required.
 - 21.5.1.1 <u>Approved Design drawings.</u>
 - **12.5.1.2** Specialized material specifications and / or electrode specifications.
 - **12.5.1.3** Applicable welding specifications or requirements.
 - **12.5.1.4** Applicable Non-Destructive Examination specifications or requirements.
 - **12.5.1.5** Post-weld heat treatment parameters and conditions, when required.
 - **12.5.1.6** Blasting, Painting and Coating requirements and / or specifications.

12.6 NON-CONFORMANCE PROCEDURE

- **12.6.1** The customer's engineering department shall participate in the resolution of any Non-Conformance when they require design modifications to accomplish corrections.
- **12.6.2** The customer's engineer shall assure that any modifications or changes, to any drawings used for fabrication, have been satisfactorily reconciled with any applicable design calculations.

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PART 13
DRAWING and
SPECIFICATION CONTROL
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13. DRAWINGS AND SPECIFICATIONS CONTROL

The control of drawings and specifications is the responsibility of the Chief Project Manager or his appointed designee. QA/QC shall have the responsibility to ensure that all referenced codes and specifications are being adhered to per the requirements. QA/QC will provide input to the Engineering Department to resolve any drawing or specification discrepancies.

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13.2 DRAWINGS

13.2.1 Unless specifically noted as Detail Drawings, Erection Drawing, etc., the term "Drawings" utilized herein includes fabrication, detail and erection drawings, bills of materials, cutting sketches, procedures, and project specifications.

13.3 TRANSMITTALS

- **13.3.1** Regardless of the documentation, (i.e. those items listed in 3.2.1, above), shall be listed, attached, and accompanied by a *Letter of Transmittal*, (form QCM-1-24).
- **13.3.2** Upon contract award, a project number will be established and a <u>Transmittal Log</u>, (form QCM-1-25) will be set up for tracking of all project documentation throughout the system as well as documentation provided to sub-contractors, vendors and suppliers.

13.4 DRAWING PREPARATION

- **13.4.1** The Owner's, Customer's, or sub-contracted design organization's drafting department will provide all the required documents as outlined in paragraph 12.5.
- 13.4.2 Intermountain Lift, if required, will utilize a qualified and approved detailing firm to reduce design and / or erection drawings to more workable conditions, (i.e. detail drawings) for fabrication.
 - **13.4.2.1** The detail drawings will be provided to the Customer's Engineer for review and approval.
- **13.4.3** Whenever revisions to owner / customer documents are received by Intermountain Lift, the Chief Project Manage and Estimating manager will review them for additional requirements and costs prior to providing them to the detailing firm.
 - 13.4.3.1 The Chief Project Manage will then provide the detailing firm with these changes, in a timely manner, to assure correct drawing preparation.
- **13.4.4** As revised documents are received throughout Intermountain Lift organization, obsolete copies shall be handled as follows:
 - The master set of contract drawings, maintained in the Engineering Department, will have all previously revised drawings marked "VOID FOR REFERENCE ONLY", and saved.
 - **13.4.4.2** Shop drawings, as the revised pages are available, shall have the previous revisions removed and destroyed.
- **13.4.5** Intermountain Lift and/or the detailing firm shall utilize these documents and other applicable instructions, procedures and specifications, as appropriate, to prepare the necessary drawings required to purchase materials and fabricate items.

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13.4.5.1	In cases where revisions to the drawing are impractical due to the
	minority of the change required, the Request for Information,
	(QCM-1-16), [see Section 29, Exhibit #16], may be issued.

- 13.4.5.2 Requests for Information, (RFIs), shall be prepared and transmitted to the appropriate individuals for the approvals process before being issued to the shop for fabrication.
- 13.4.5.3 Approved Requests for Information, when issued to the shop, will have the receipt acknowledged through a transmittal letter and shall be annotated on the drawing by RFI Number, to notify the Fabrication and QA / QC departments that a change exists.
- **13.4.6** The detailing firm shall prepare and provide, to the Intermountain Lift Purchasing Department, Bills of Materials which indicates sizes, types and quantities of materials to be ordered.

The documents will indicate the material specifications and any number of examinations that may be required. Impact testing and heat treatment requirements, when specified by the drawings or other instructions, shall also be included. Vendor certification and Customer inspection requirements shall also be indicated.

- **13.4.7** All drawings and advance bills shall show the Intermountain Lift project number.
- **13.4.8** The drawings, when prepared in accordance with Intermountain Lift's <u>Detailing Standards Procedure</u>, (ref: Intermountain Lift Procedures Manual, PM-1), shall show for reference, as a minimum, the following information:
 - **13.4.8.1** Material specifications, (i.e. grade and / or classification), including any special ordering information, as required.
 - **13.4.8.2** All necessary geometry and dimensions, including cuts, copes, cambers and holes.
 - **13.4.8.3** Dimensional Tolerances.
 - **13.4.8.4** Welding Symbols, (shop and field welds), in accordance with AWS A2.4, (latest edition).
 - **13.4.8.5** Post-weld heat treatment, if required.
 - **13.4.8.6** Material evaluations, (i.e. impact testing etc.), if required.
 - **13.4.8.7** Extent and location of Non-Destructive Examinations by general notes or in accordance with AWS A2.4, (latest edition).
 - **13.4.8.8** Out-of-tolerance allowances, if more stringent than the code requirements.
 - 13.4.8.9 Any special instructions provided by the Customer Engineering Department, including fabrication and I or shipping sequences.
 - 13.4.8.10 Any "Special Inspections", special testing or examinations to be performed on materials required by codes, standards or contract specifications.

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13.4.8.11 Piece Mark identification, location, direction and orientation markings for erection purposes.

13.4.9 Completed shop drawings shall reference the approval date of the <u>Structural Design Drawings</u> by the project Structural Engineer of Record.

13.5 DRAWING DISTRIBUTION AND CONTROL

- 13.5.1 Upon receipt of shop drawing from the detailing firm and prior to release to the shop, a complete master set of shop drawings shall be sent to the project Structural Engineer of Record for review and approval.
 - **13.5.1.1** The Structural Engineer of Record for the project shall apply his stamp, and date of review, to the drawings, verifying approval.
- 13.5.2 Prior to the release of drawings to the shop, the Chief Project Manager shall review the drawings against the Project Scope of Work for completeness, accuracy, compliance to the Bill of Materials and inclusion of all Special Notes and Requirements.
 - 13.5.2.1 Upon completion of the drawing review, each drawing to be released to the shop for fabrication shall be stamped with the date of release and the words "APPROVED FOR FABRICATION".
- **13.5.3** Intermountain Lift shall maintain a <u>Drawing Log</u>*, (QCM-1-13), [see Section 29, Exhibit #13], by contract, of all drawings, including revisions and RFIs, which are issued.
- **13.5.4** Drawings, RFIs and the Drawing Log shall be distributed to QA/QC and the Shop Superintendent by the Chief Project Manage or his designee.
 - When a drawing revision is made, the Drawing Log shall be revised and will indicate distribution to the Shop Superintendent and QA/QC.
- **13.5.5** The Chief Project Manage shall be responsible for issuing approved drawings and RFIs to the appropriate departments.
- **13.5.6** The Shop Superintendent is responsible for insuring that revised drawing and RFIs are distributed to the proper work areas and that only the latest revisions of all drawings, (including approved RFIs), are used in the fabrication.
 - 13.5.6.1 The Shop Superintendent shall insure that obsolete drawings are removed from the work areas and destroyed in a timely manner or returned to the Engineering Department, if required.
- 13.5.7 All approved drawings, revisions and RFIs, that have been issued for construction, will be routed through the office of the Chief Project Manage, for review of fabrication requirements.
- **13.5.8** The Chief Project Manage or his designee will distribute the approved drawings and revisions to the appropriate departments.
 - As the drawings have been re-distributed, the Chief Project Manage or his designee will record all the pertinent data on the Master Control List*, (QCM-1-14), [see Section 29, Exhibit #14].

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13.5.9 The Master Control List will show the fabrication completion on a piece-by-piece basis, which will provide a tracking system for planning of shipments.

- 13.5.9.1 The Master Control List may be used by the QA/QC Department to document the status of fabricated items including fit-up inspections and completion of work on an acceptable basis.
- The Master Control List, in conjunction with the Shop Inspection Report, (IML-IRF-01, [see Section 29, Exhibit #24], will provide the required documentation of all fabricated components and final assemblies.
- **13.5.9.3** Both documents will become an integral part of the documentation file for a particular project.
- When the shop drawings have been issued to Fabrication, each item on the drawing will be listed on a <u>Cutting List</u>*, (QCM-1-15), [see Section 29, Exhibit #15], for material preparation assignments. A material allocation will be assigned to each piece to insure proper material usage and status of the material for work scheduling.
- 13.5.11 Contract specifications and correspondence will be received by Engineering.
 Upon review of the documents, the Chief Project Manage will distribute the documents to the appropriate departments.
- The QA/QC Manager will review all project specifications and issue the required written directives or procedures regarding any special contract requirements or instructions.

*SPECIAL NOTE:

The following listed documents may be forms generated by computer programs, purchased for the purpose of allocation and nesting of materials and for listing, updating and controlling drawings and specifications. • Drawing Log, (QCM-1-13), [see Section 29, Exhibit#13], • Master Control List, (QCM-1-14), [see Section 29, Exhibit#14]. • Cutting List, (QCM-1-15), [see Section 29, Exhibit#15].

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14. PURCHASING and MATERIAL CONTROL

14.1 The Purchasing Manager is responsible for Material Control, which begin at the time any contract award is made to Intermountain Lift, Inc., and continues throughout the life of the contract.

14.2 SPECIFICATION AND PRINT REVIEWS

- **14.2.1** Specification and Print Reviews will be performed for the purpose of identifying materials, products and/or services which will be required.
- **14.2.2** These reviews will be performed by Project Management, Estimating, Purchasing and QA/QC during the Inquiry and/or Bid preparation stages, depending upon the complexity of the project, in order to assure correct ordering, pricing and shipment of appropriate materials.
 - **14.2.2.1** The materials, products and/or services which may be required, will be identified and listed for ordering.
 - **14.2.2.1.1** Preliminary, uncontrolled and unnumbered purchase orders or other methods of listing materials for ordering may be used.

14.3 PURCHASE ORDERS

- **14.3.1** After contract award, Purchase Orders will be prepared by the Project Manager, listing the correct quantities, shapes, sizes, material specifications, markings, and all other necessary data which will assure delivery of the contract specified materials.
- 14.3.2 Intermountain Lift, per the requirements of the QA/QC Program and <u>Purchasing and Material Control</u>, does not purchase any ferrous, (steel), raw materials for structurally fabricated components that do not meet the minimum requirements of the following standard specifications for structural steel for use in riveted, bolted or welded construction.
 - **14.3.2.1** ASTM A-36, Standard Specification for Structural Steel Shapes, Plates and Bars of Standard Quality.
 - **14.3.2.2** ASTM A-992, Standard Specification for Structural Steel Shapes.
 - **14.3.2.3** ASTM A-53, Grade 'B', Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc Coated, Welded and Seamless.
 - **14.3.2.4** ASTM A-500, Grade 'B', Standard Specification for Cold-Formed, Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- **14.3.3** The Purchase order shall designate the requirement for MTR's and Certificates of Compliance for the purchased materials.

14.4 RECEIVING REPORTS

14.4.1 After preparation of contract <u>Purchase Orders</u>, (QCM-1-02), [see Section 29, Exhibit #2], one copy shall be identified with the word **"RECEIVER"**, across the pages.

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14.4.2 This copy of the Purchase Order will become the <u>Material Receiving Report</u>, (QCM-1-03), [see Section 29, Exhibit #3], by which the receipt of ordered items will be documented.

14.4.3 The Shop Superintendent, or his designee, will examine all incoming material and check it against the Purchase Order, (Receiving Report), and Packing List. He will examine the condition of the material and check it for compliance as follows:

14.4.3.1 Quantity: Number of pieces physically present.

14.4.3.2 Shape: Configuration of items.

14.4.3.3 Size: Pertinent dimensions;

14.4.3.4 Material

Specifications: In accordance with applicable standards.

14.4.3.5 Material Markings.

14.4.3.6 Material Test Reports, (MTRs), and Certificates of Compliance.

14.4.3.7 Other pertinent data as required by the Purchase Order.

14.5 MATERIAL RECEIVING

- **14.5.1** Most materials are ordered with some form of certification as noted in paragraph 14.4.3.6.
- **14.5.2** When the purchase order requires material certifications, it will be the responsibility of the Shop Superintendent, or his designee, to refuse delivery of these materials until proper documentation is presented.
 - **14.5.2.1** When materials have been delivered without certifications, the Shop Superintendent, or his designee, will have the following options:

OPTION 1.

• Accept, off-load, segregate and place a "Hold" on the received materials until the appropriate documentation is received and the status of the materials can be determined.

OPTION 2.

- DO NOT unload the shipment without all of the proper documents, (MTRs, C of Cs or etc.), specified by the purchase order, present.
- · Give the delivery driver the opportunity to call and request that the missing documents be Faxed, immediately.
- Should the delivery driver not wish to call, or the supplier does not wish to Fax the required information, at that time, Refuse the load.
- Should the supplier provide the required documents, inspect each item against these documents for the information listed in paragraph 14.4.3.
- Items which comply with the purchase order and supporting documents may be off-loaded.
- Any items which do not comply with the purchase order and / or supporting documents may be handled under OPTION
 1., or not be accepted or off-loaded.

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14.6 Following examination of the material, by the Shop Superintendent, or his designee, the status of the materials will be noted on the Receiving Report, (and additional pages as required).

- **14.6.1** The acceptability or any noted discrepancies between the Purchase Order, and the shipping documents, and the MTRs and / or C of Cs, shall be noted.
- **14.6.2** Following examination of the material, by the Shop Superintendent, or his designee, the heat numbers and / or lot numbers, of received items, shall be marked on the materials at the time of unloading.
- 14.7 When proper material certifications have been verified, by the Shop Superintendent, or his designee, for accuracy to the related documents, QA / QC will be notified for review and acceptance.
- 14.8 Should there be any discrepancies such as damage, variations under ordered size or quantities, improper material specifications or improper markings, the material shall be identified on the Material Receiving Report.
 - **14.8.1** All discrepant materials will be identified on the Material Receiving Report and on the material, itself, as deficient by the use of a "HOLD" clearly marked on the item.
 - **14.8.2** Discrepant materials shall be identified, segregated and stored in a separate area, apart from acceptable stock materials.
- **14.9** All acceptable material shall be marked with the following information:
 - 14.9.1 Contract or Job Number.
 - **14.9.2** Size and/or description of material.
 - **14.9.3** Material specification number, (ASTM or other, as applicable).
 - 14.9.4 Heat or Lot Number.
- **14.10** QA/QC will, upon completion of the document and material review, forward all original receiving documents, (i.e.; Receiving Report, Shipping Tickets, Bills of Lading and etc.), to the Accounting Department.
- **14.11** When the material has been issued for fabrication, each piece will be checked for dimensions and material specification.
- 14.12 When materials have been cut to required sizes and shapes, the pieces will be marked with the "Piece Mark Number" and "Job Number", as a minimum.
 - 14.12.1 Whenever material traceability is required, each piece will be identified with the "Heat Number", "Job Number" and "Piece Mark Number".
 - Usable "drop ends" which will be put into material storage upon completion of the project, if other than ASTM A-36, A-53 Grade 'B' or A-500 Grade 'B' material, will be identified with the "Job Number" or "Purchase Order Number" and also the "Heat Number" and "Material Specification Number".

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14.12.2.1 Permanent identification methods shall be employed for future reference.

- **14.12.3** Should no identification exist, material based on Intermountain Lift Purchased Material Control will be discarded or material type and grade determined.
 - 14.12.3.1 Should a question arise as to the proper identification, or verification of chemical or physical properties, testing in accordance to ASTM A-370 "Mechanical Testing of Steel Products", may be performed.
- **14.13** When contract material traceability is required, a <u>Material Acceptance Record. (MAR)</u>, (QCM-104), [see Section 29, Exhibit #4], will be prepared for each contract.
 - **14.13.1** Materials placed on the Material Acceptance Record, will be those released for fabrication.
 - 14.13.2 Prior to processing material for fabrication, preparation personnel will refer to the Material Acceptance Record to verify that QA / QC has released the material.
 - 14.13.3 Material Preparation personnel shall notify QA / QC if there is a discrepancy between the mill identification of the material and the Material Acceptance Record.
 - **14.13.4** Manufacturer's Test Reports and Certificates of Compliance are checked by QA / QC for compliance as follows:
 - **14.13.4.1** Conformance to Intermountain Lift Purchase Order.
 - **14.13.4.2** Conformance to one or more of the following:
 - **14.13.4.2.1** American Society for Testing and Materials; (ASTM) Standard.
 - 14.13.4.2.2 <u>American Association of State Highway and Transportation Officials</u>; (AASHTO) Standard.
 - **14.13.4.2.3** Special contract requirements.
 - 14.13.5 Upon approval, the materials are added to the Material Acceptance Record, (MAR), and the Material Test Reports, Certificates of Compliance and other pertinent documents are filed and maintained against the applicable contract numbers to which they apply.
- 14.14 When required by the contract specifications, material traceability shall be accomplished through one of the following methods. Materials destined for Clark County and contracts requiring itemized traceability shall use method 2, all others shall use method 1. Method 3 shall be used by request only.

METHOD 1

- All items requiring material traceability shall be assigned identifying numbers and / or letters.
- Q.C. shall mark the material test reports with the applicable identification and record the identification, size, heat number and material grade on the Material Acceptance Record.
- The assigned identification mark will be transferred to each piece of material as it is cut from the full piece.

METHOD 2

• When items require material traceability, the mark numbers, heat numbers and / or MAR identification numbers will be recorded in a "log book" or on an "as-built drawing" which shows, in detail, the mark numbers, identification numbers and / or heat numbers on each element.

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METHOD 3

- All items requiring material traceability will have the heat number stamped or stenciled on each piece of material as it is cut.
 When contract requirements dictate or when it is deemed necessary by the Quality Control Manager, the verification and transfer of material identification will be witnessed and confirmed by Q.C., against the applicable documents.
- 14.15 STORAGE, IDENTIFICATION AND ISSUANCE, (Materials Primarily Purchased for Stock)
 The QA/QC Manager, or his designee, is responsible for implementing and enacting the requirements of of this procedure.
 - All Raw Materials, including Shapes, Plates and Bar stock items shall be purchased on Intermountain Lift Purchase Order Forms requiring Material Test Reports, (MTR's), for verification.
 - 14.15.1.1 Materials other than ASTM A-36, A-53 Grade 'B' or A-500 Grade 'B', shall be identified, in singular or bundle form, by Purchase Order Number, Heat Number and Material Specification Number upon receipt and prior to stock storage.
 - **14.15.1.1.1** These materials shall be stored separately from the ASTM A-36, A-53 Grade 'B' and A-500 Grade 'B' stocks.
 - 14.15.1.2 Should material traceability be required per project specifications, for materials removed from stock, the procedure set forth in Part 4 of this manual, (Purchasing and Material Control), Section 4.14 shall be implemented.
 - 14.15.1.3 All materials in storage that are verified upon receipt; through Material Test Reports, Certificates of Compliance, etc., shall have these records retained for permanent filing with the appropriate Purchase Order.
 - 14.15.2 Small items such as nuts, bolts, washers, "buy-out" items and etc. may, if required, be identified by the use of a tag listing, as a minimum, the information specified in paragraph 14.4.3, and attached to the item or container.
 - **14.15.2.1** Small items will be stored in a secure area where they can be controlled so as not to be used on contracts for which they are not intended.
 - 14.15.3 Issuance of materials will be controlled to the point that traceability of all items is maintained as required by contract and code requirements.
 - **14.15.3.1** Issuance of small items from controlled storage will be monitored by the Shop Superintendent, or his designee.

14.16 HANDLING:

The process of handling material through the various processes of manufacturing, to final shipment, will be done using all possible precautions to avoid loss or damage to the product.

14.17 SPECIAL HANDLING:

Requirements and instructions will be issued through written directives or procedures for special handling of materials or fabricated items by the QA / QC Manager, when required.

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14.18 SHIPPING:

All necessary precautions shall be taken, during handling and loading operations, to minimize damage to the product; the final loading and shipping will be accomplished in such a manner as to assure that the order will reach the customer in an undamaged condition.

14.19 SPECIAL SHIPPING REQUIREMENTS:

Instructions shall be issued through written directives or procedures, by QA / QC, concerning any special requirements for materials and / or fabricated items.

14.20 SUBCONTRACTED FABRICATION REQUIREMENTS

When it is required that Intermountain Lift subcontract the fabrication of any structural steel components or any services, the following items shall be applicable.

- **14.20.1** A Purchase Order shall be prepared by Intermountain Lift specifying the scope of work / services to be provided by the subcontractor.
 - **14.20.1.1** A reference to ALL applicable documents and codes shall be described.
- **14.20.2** A controlled copy of the Project Specifications and Drawings, including all Addendums and Change Orders shall be attached to the purchase order.
- **14.20.3** At least annually, or as necessary, Intermountain Lift QA Department shall perform a 'Vendor Survey' of subcontractors, with results described on the 'Subcontractor / Vendor Survey Report', QCM-1-19, [see section 19, Exhibit #19], to verify the subcontractor's ability to perform the required services.
 - 14.20.3.1 A copy of the completed report shall be given to the Purchasing Department and filed with the Purchase Order.
- **14.20.4** The Intermountain Lift QA Department shall review, with the subcontractor, ALL requirements for providing an acceptable product / service to Intermountain Lift.
- **14.20.5** If the subcontractor possesses the capabilities of complying with the Intermountain Lift QA/QC Manual, Project Specifications and Code Requirements, it shall be duly noted by the QA/QC Department.
 - **14.20.5.1** All required documentation shall be provided to Intermountain Lift QA Department utilizing acceptable forms to verify compliance.
- **14.20.6** If the subcontractor does not possess a documented QA/QC Program, Intermountain Lift will implement the applicable Intermountain Lift Document form to be used by the subcontractor.
 - **14.20.6.1** Intermountain Lift may provide shop inspection and additional third-party inspection / testing services during the fabrication process.
 - 14.20.6.2 The subcontractor will provide access to Intermountain Lift QA personnel, including third-party personnel for the purpose of performing inspection on the subcontracted work.
- **14.20.7** Upon submission of ALL finished components, ALL properly completed documentation, verifying compliance, shall accompany the delivery.

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14.20.8 Intermountain Lift, reserves the right to reject any or all of the subcontracted materials or services if full compliance to the Intermountain Lift Purchase Order, QA/QC Manual and Procedures, Project Specifications and Drawings has not been adhered to.

14.21 CUSTOMER SUPPLIED MATERIALS

- **14.21.1** Customer supplied items such as raw materials, equipment, instruments or subassemblies, for specific projects will be received, handled, stored and protected from damage or loss.
 - **14.21.1.1** Customer supplied items will be stored, marked, identified, tagged and /or segregated as specified by the customer's instructions and directives.
 - 14.21.1.2 The Shipping & Receiving Manager has the responsibility for implementing the customer's instructions and directives with regard to the handling, storage and protection of all customer supplied items.

14.22 UNCONTROLLED MATERIALS

- **14.22.1** The Shipping & Receiving Manager has the responsibility for segregating, marking and identifying any uncontrolled materials stored on Intermountain Lift property.
- **14.22.2** Uncontrolled materials are all materials which do not have traceable certifications, (MTRs), and are not approved for use in any structural fabrication projects.
- **14.22.3** The Shipping & Receiving Manager, or his designee, will collect, segregate and store all materials classified as uncontrolled, in designated areas assigned for this storage.
 - **14.22.3.1** All uncontrolled materials shall be clearly marked to designate it as not to be used for fabrication.
- **14.22.4** Uncontrolled materials, (i.e. angle, flat bar & pipe), may be employed as bracing for assembly or shipping purposes, but must be clearly marked to identify the part as uncontrolled materials.

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15. WELDING CONSUMABLES CONTROL

- All welding consumables shall be ordered into Intermountain Lift facilities as is outlined in section 4., "Purchasing and Material Control", and processed accordingly.
- 15.2 All welding materials will be examined by the Shop Superintendent, or his designee, and checked against the purchase order and packing list. Examination of the condition of the materials for compliance shall be as follows:

15.2.1 Quantity: Number of rolls, boxes and/or containers etc., Physically present.

15.2.2 Type: Such as:

E70XX container, E70T-X rolls, EL-XX, EM-XX bags orboxes.

15.2.3 Size: Such as:

Diameters of covered electrode, Diameters & weights of roll electrodes,

Weights of flux containers.

- **15.2.4** Material specifications.
- 15.2.5 Material Markings & Manufacturer.
- **15.2.6** Any special data required.
- Following examination of materials, the receiver will verify acceptability or rejection on the Material Receiving Report, (and additional pages as required), noting any discrepancies between the received materials and the purchase order and / or packing list.

 If discrepancies such as damage, variations of size, quantity, specifications or markings are noted, the material shall be marked "HOLD" and held in a restricted area until disposition has been determined by Purchasing and QA / QC.
 - 15.3.1 Accepted Materials shall be identified as follows:
 - **15.3.1.1** Job number; if ordered for a specific contract requirement.
 - **15.3.1.2** No marking is required if the material is ordered for general issuance, (Stock Material).
- 15.4 WELD MATERIAL CONTROL (Shop & Field)
 - **15.4.1** Covered electrode, Roll electrodes and Dry fluxes will be stored and issued under Intermountain Lift "Welding Consumables Control Procedure", IML-WCC-1.
- 15.5 DOCUMENTATION WELDING CONSUMABLES
 - **15.5.1** All weld material documentation including, but not limited to the following, will be maintained as a permanent record by QA / QC.
 - **15.5.1.1** A copy of the Purchase Order, Packing Slip or other documentation showing acquisition of consumables.
 - **15.5.1.2** Material Certifications, (identified as Actuals or Typicals, as applicable).
 - **15.5.1.3** Physical Tests.
 - **15.5.1.4** Chemical Analysis.

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16. STRUCTURAL WELDING OPERATIONS

- All welding procedures shall be written and qualified or approved, (AWS Prequalified Procedures), in accordance with the requirements of AWS D.1, Structural Welding Code Steel or other applicable codes as specified by contract requirements.
- **16.2** QA/QC will maintain a master file of all welding procedures and procedure qualifications.
 - **16.2.1** All welding procedures incorporated into the master file shall be reviewed and stamped by a Certified Welding Inspector, (CWI), prior to being issued for welding operations.
- Upon receipt of contract welding requirements, QA / QC will select the welding procedures to be used on the applicable contract. QA / QC will obtain customer approval of the welding procedures to be used, and will provide copies of these approved welding procedures to the Shop Superintendent.
- QA / QC will initiate procedure qualification testing for each procedure, other than those designated as "Prequalified" under the AWS codes, when required.

 The QA / QC Manager, or a qualified designee, will prepare an initial Procedure Qualification Record. (PQR), (QCM-1-05), [see Section 29, Exhibit #5], and arrange to have the tests performed, (including all outside laboratory tests). Upon obtaining the results of testing, the Procedure Qualification Record will be completed by QA / QC.
- **16.5** A Procedure Qualification Record File will be maintained and each test will be given an identifying number.
- 16.6 New Welding Procedure Specifications, (WPS), (QCM-1-06), [see Section 29, Exhibit #6], shall be prepared by QA/QC from the parameters of successfully completed procedure qualifications or from AWS D1.1, pre-qualified procedures.
- 16.7 All Welders, Welding Operators and Fitter / Tackers shall be qualified in accordance with the requirements of AWS D1.1, Structural Welding Code Steel and / or other applicable codes as specified by contract requirements.
- 16.8 Upon receipt of successful results of examinations and tests, the QA / QC Manager shall complete, sign and file the Welder Qualification Record, (QCM-1-07), [see Section 29, Exhibit #7), or review and sign outside laboratory documentation.
- 16.9 The QA / QC Manager will request that the Shop Superintendent conduct Welder's Qualifications where the requirement of codes and / or specifications have not been met or contractual requirements dictate.
- 16.10 QA / QC shall verify that all Welders, Welding Operators and Fitter / Tackers have been satisfactorily engaged in each given welding process, without a six [6] month lapse. Verification of qualification shall be recorded on the Welder Qualification Up-date, (QCM-1-08), [see Section 29, Exhibit #08], and maintained on file.
- **16.11** The QA / QC Manager will issue a current listing of qualified welders, welding operators and fitter / tackers to the Shop Superintendent, updated as necessary to reflect the status of welding personnel.

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STRUCTURAL WELDING
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16.12 SHOP WELDING OPERATIONS

- All shop welding shall be accomplished by qualified and certified Welders, Welding Operators and Fitter / Tackers.
- **16.12.2** Welding may be randomly monitored for compliance to acceptable welding procedure parameters to assure compliance to applicable welding procedures.
- 16.12.3 Q.C. shall be notified upon COMPLETION OF PRODUCTION WELDING* and shall initiate the inspection and testing required in accordance with the referencing code and applicable contract specifications.

16.12.4 *COMPLETION OF PRODUCTION WELDING CONSTITUTES THE FOLLOWING CONDITIONS:

- **16.12.4.1** The joint, assembly, attachment or unit area of weld to be inspected will be fully and completely welded.
- The welder or welding operator will have removed all slag, spatter, smoke and other welding residue from the weld joint and an area of two inches (2") on each side of the weld joint except in the case of Ultrasonically inspected joints, where the area shall be six inches (6") on each side of the weld joint.
- **16.12.4.3** The welder or operator shall have visually inspected his work and made any necessary repairs.
- **16.12.4.4** Tack Welds, left in place, shall be made by qualified Fitter / Tackers and / or Welders, and be visually inspected for defects.
 - **16.12.4.4.1** Cracked or otherwise defective tack welds SHALL be removed.
- **16.12.4.5** The welder or operator will have affixed his identification stamp to the weld when required by contract or procedure.

NOTE:	Unless and until the conditions of paragraph 16.12.4 are fully in compliance, the welding
	IS NOT CONSIDERED COMPLETE and the item is not ready for inspection.

16.13 WELDING OPERATOR IDENTIFICATION

- **16.13.1** Each Welder, Welding operator and Fitter / Tacker shall be issued an identification stamp, assigned to that individual.
- 16.13.2 Identification of completed welds, by the welder performing the work, will be affixed according to the Identification and Traceability of Welds and Welding Operators procedure, IML-WID-1, when contractually required.

ı	WARNING:	ANY WELDER, WELDING OPERATOR OR TACKER AFFIXING THE IDENTIFICATION STAMP TO
ı		ANY FABRICATION WELDED BY ANOTHER WELDER, WELDING OPERATOR OR TACKER SHALL
ı		BE SUBJECT TO DISCIPLINARY ACTION AND POSSIBLE TERMINATION OF EMPLOYMENT.

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16.13.3 Upon termination of a Welder, Welding Operator or Fitter / Tackers, that identification stamp shall not be re-issued for a minimum of six [6] months or during the time any contract, upon which it was used, remains in fabrication.

16.13.4 A record of all issued identification stamps and those personnel to whom they were issued will be maintained by the QA / QC Manager.

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17. HANDRAIL, STAIRS, LADDERS & PLATFORMS

NOTE:

Handrails, stairs, ladders and platforms are considered as 'Personnel Access' under the provisions of the Code of Federal Regulation and The International Building Code, (IBC-2006).

Strength requirements for the fabrication and installation of these personnel access devices is addressed in Labor, Part 29CFR191 0.23, .24 & .27 and IBC-2006, Section 1607.

- 17.1 Welding procedures written and qualified or approved, (AWS. Pre-qualified Procedures), in accordance with the requirements of AWS D1.1, Structural Welding Code Steel except that, unless otherwise noted on contract documents, partial penetration groove welds without backing, achieving the required strength requirements to meet 29CFR1910 and / or IBC-2006, Section 1607 for personnel access devices, shall be employed in the fabrication of these devices.
- 17.2 QA/QC will maintain a master file of all welding procedures and procedure qualifications.
- 17.3 Upon receipt of contract welding requirements, QA/QC will select the welding procedures to be used on the applicable contract. QA/QC will obtain customer approval of the welding procedures to be used, and will provide copies of these approved welding procedures to the Shop Superintendent.
- QA/QC will initiate procedure qualification testing for each procedure, other than those designated as "Prequalified" under the AWS codes, when required. The QA/QC Manager, or a qualified designee, will prepare an initial Procedure Qualification Record. (PQR), (QCM-1-05), [see Section 29, Exhibit #5], and arrange to have the tests performed, (including all outside laboratory tests). Upon obtaining the results of testing, the Procedure Qualification Record will be completed by QA/QC.
- 17.5 A Procedure Qualification Record File will be maintained and each test will be given an identifying number.
- 17.6 New Welding Procedure Specifications, (WPS), (QCM-1-06), [see Section 29, Exhibit #6], shall be prepared by QA/QC from the parameters of successfully completed procedure qualifications or from AWS D1.1, pre-qualified procedures.
- 17.7 All Welders, Welding Operators and Fitter I Tackers shall be qualified in accordance with the requirements of AWS D1.1, Structural Welding Code Steel and / or other applicable codes as specified by contract requirements.
- 17.8 Upon receipt of successful results of examinations and tests, the QA/QC Manager shall complete, sign and file the Welder Qualification Record, (QCM-1-07), [see Section 29, Exhibit #7), or review and sign outside laboratory documentation.
- 17.9 The QA/QC Manager will request that the Shop Superintendent conduct Welder's Qualifications where the requirement of codes and I or specifications have not been met or contractual requirements dictate.
- 17.10 QA/QC shall verify that all Welders, Welding Operators and Fitter / Tackers have been satisfactorily engaged in each given welding process, without a six [6] month lapse. Verification of qualification shall be recorded on the Welder Qualification Up-date, (QCM-1-08), [see Section 29, Exhibit #08], and maintained on file.
- 17.11 The QA/QC Manager will issue a current listing of qualified welders, welding operators and fitter / tackers to the Shop Superintendent, updated as necessary to reflect the status of welding personnel.

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17.12 WELDING OPERATIONS

17.12.1 For all shop welding, regardless of structural or personnel access, the requirements of section 16, paragraphs 16.12 and 16.13 applies.

17.13 CODE OF FEDERAL REGULATIONS, PART 29

- **17.13.1** 29CFR1910.23, .24 and .27 provides specific requirements under which personnel access devices are designed and addresses the following:
 - 17.13.1.1 29CFR 1910.23, 'Guarding floor and wall openings and holes.'
 - **17.13.1.2** 29CFR1910.24 'Fixed industrial stairs.'
 - **17.13.1.3** 29CFR1910.27 'Fixed ladders.'

NOTE: The complete 29CFR1910.23. .24 and .27 are contained in Intermountain Lift Procedures Manual, PM-1.

17.14 INTERNATIONAL BUILDING CODE, (IBC-2006)

- **17.14.1** IBC-2012, Section 1607, 'Live Loads' provides specific requirements under which personnel access devices are designed and addresses the following:
- 17.14.2 IBC-2012, Section 1607, 'Live Loads', paragraphs 1607.7.1, 'Handrails and Guards'.

NOTE: The complete IBC-2012, Section 1607. 'Live Loads', paragraphs 1607.7.1, 'Handrails and Guards' are' contained in Intermountain Lift Procedures Manual, PM-1.

17.15 HANDRAIL STRENGTH I DESIGN REQUIREMENTS

(from 29CFR1910.23 & IBC-2012, Section1607)

- **17.15.2** The requirement for the restraint of personnel is that handrail and guards be capable of:
 - **17.15.2.1** withstanding a load of at least 50 pounds per linear foot, applied in any direction at the top and to transfer this load through the supports to the structure.
 - 17.15.2.2 withstanding a single concentrated load of 200 pounds applied in any direction, at any point along the top, and have attachment devices and supporting structure to transfer this loading to appropriate structural elements of the building.
- **17.15.3** Based on the above requirements, physically tested weld joint procedures are used in the fabrication of all handrail products.
 - When new configurations of handrail weld connections are encountered, workmanship samples will be fabricated and tested to assure that the completed product meets the requirements of 29CFR1910.23 and IBC-2012. Section 1607.

17.16 TESTING AND CERTIFICATION

17.16.1 As a matter of quality and safety, routine sampling and testing of handrail connections is undertaken by Intermountain Lift to assure the highest quality level of the products fabricated.

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- 17.16.2 Periodically, Intermountain Lift produces workmanship samples of the various, standard 'T', 'K' and 'Y' pipe and tube handrail connections which are cut and visually inspected for weld quality and depth of penetration.
- 17.16.3 When drawing configurations are identified, which are "non-standard", Intermountain Lift will produce additional workmanship samples of these connections, cut and visually inspect them to assure that the weld quality and depth of penetration is sufficient to achieve the specified strength requirement of 29CFR 1910.23 and IBC-2012, Section 1607.
- 17.16.4 In the event the client or customer requires Documented Certification as to the quality and strength of handrail connections on a given project, Intermountain Lift may engage an approved testing agency to conduct physical testing of sample connections for actual strength and quality levels.
 - When such certification testing is requested by the client or customer, the additional costs for the preparation, testing and documentation of samples will be included in the fabrication bid.
- When the additional certification is requested, results of the sampling and testing will become part of the project documentation retained by Intermountain Lift as well as being included in the final documentation provided to the client or customer.

17.17 FIELD VERIFICATION OF HANDRAIL QUALITY

- 17.17.1 Should a client or customer request verification of handrail quality I strength, after installation on a given project, Intermountain Lift may engage, at the client I customer's expense, an independent testing agency to perform physical testing to verify that the product supplied meets the strength requirements of 29CFR191 0.23 and IBC-2012, Section 1607.
 - **17.17.1.1** Such testing may involve concentrated load tests by the measured application of force on installed portions of various handrail components.
 - 17.17.1.2 The load testing will be performed using calibrated and certified equipment to establish the minimum specified requirements for restraint as delineated in 29CFR1910.23 and IBC-2012, Section 1607, (i.e. Two-hundred [200] pounds of force in any direction at the top rail).
 - **17.17.1.3** All documentation of findings for such field testing will be provided to the client / customer in a timely manner.

17.17.2 Limits of Responsibility

- **17.17.2.1** Intermountain Lift assumes responsible for the quality of the assembly and welding of the product as shipped to the client / customer.
- 17.17.2.2 Failures regarding the attachment of Intermountain Lift fabricated product to the structure, either bolted or welded, the field welded connections between shop assemblies, or modifications to shop assembled units, performed by others not sub-contracted directly by Intermountain Lift, are the responsibility of the installation contractor.

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17.18 NOTIFICATION

17.18.1 In accordance with the requirements of the AISC Code of Standard Practice, the client / customer must notify the fabricator of any discrepancies involving their product, in a timely manner and provide Intermountain Lift the option of determining the most cost effective method for correction.

17.18.2 In the event that notification to Intermountain Lift, concerning discrepant items or materials, is made after changes or modifications are made in the field, Intermountain Lift shall not be held liable for the correction costs.

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FIELD FABRICATION
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18. FIELD FABRICATION & ERECTION

NOTE: ! Intermountain Lift does not provide services for field fabrication and erection.

- If field fabrication and erection services are required as part of the Intermountain Lift contract the work will be sub-contracted to a qualified erection company.
- 18.1 When fabrication and / or erection is to be conducted at locations outside the controlled plant facility, the requirements of this manual shall be followed, with the following exceptions, and the provisions of this section shall be strictly followed.
- 18.2 All Engineering documentation shall originate from the controlled plant facility in Springville, Utah, and be handled in accordance with Section 12 of this manual.
 - **18.2.1** Interim design changes to fabrication and / or erection drawings, or revisions to Welding Procedure Specifications may be implemented through the use of the Request For Information, (RFI).
 - **18.2.1.1** Approval, by the Engineer, is required prior to implementation of the requested drawing change(s).
 - 18.2.2 Approvals may be handled through Fax, E-mail or by Express Mail communications.
 - **18.2.2.1** Telephone communications may only be used for the purpose of changes to Welding Procedure Specifications where Non-Essential variables are addressed.
 - **18.2.2.2** All other requested changes shall be by written forms of documentation.
 - **18.2.3** Requests For Information, (RFIs), affecting fabrication and / or erection drawings shall be listed, in red ink, on the applicable drawing and the RFI shall be attached.
 - **18.2.3.1** All RFIs should be incorporated into "As-Built" drawings prior to completion of the project.
- 18.3 All Purchasing activities shall be performed through the Purchasing Manager in Springville, Utah, except that the Field Superintendent may procure welding materials, by Purchase Order, in strict compliance to Sections 4 and 5 of this manual.
 - **18.3.1** Receiving inspection shall be conducted by the Site Inspector or a qualified designee, in accordance with paragraph 14.5 of this manual.
 - **18.3.2** Verbal approval, by the QA / QC Manager, of disposition(s), is permitted, but must be followed- up with clear and specific written verification.
 - **18.3.3** All Material Test Reports, Certificates of Compliance and other pertinent documentation, on site-received materials, shall be Faxed, E-mailed or Express Mailed to the QA / QC Manager, as soon as possible, after receipt.
 - **18.3.4** Upon receipt of the documentation for site-received materials, the QA / QC Manager shall review the documentation and notify the Field Superintendent of the acceptability of the materials.
 - **18.3.5** Site Materials Storage and Handling shall comply with the requirements of Sections 14 and 15 of this manual.

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- 18.4 Field site inspection and testing functions shall be accomplished by one or all of the following:
 - **18.4.1** The Site QC Inspector.
 - **18.4.2** A qualified designee specified by the QA / QC Manager.
 - **18.4.3** An approved Quality Assurance Agency*.
 - **18.4.4** Non-Destructive Examinations, at job sites, shall be performed by qualified Non-Destructive Examination personnel, the QC Inspector or by an approved vendor*.
 - 18.4.1.1 An approved vendor* is defined as one whose Written Practices and Procedures have been reviewed and approved, in writing, by the QA / QC Manager as meeting ASNT, SNT-TC-1A guidelines.

*NOTE:

When Clark County, State of Nevada, "Clark County Building Codes" are specified, the following definition apply to "Approved Quality Assurance Agency" and "approved vendor":

".... is one whose written practice and procedures have been reviewed and approved per Clark County Technical Guidelines TG-15 and TG-17", latest edition.

- 18.5 In the event that subcontractors are **not** CCDDS-BD Approved, Intermountain Lift, Inc., shall be responsible to provide assure inspections are accomplished by a CCDDS-BD Approved third party inspection organization.
- **18.6** The Field Superintendent shall maintain copies of Procedure Qualification Records, (PQRs), and Welding Procedure Specifications, (WPSs), applicable to all site welding applications.
 - **18.6.1** The Field Superintendent shall also maintain copies of all Welder Qualification Records for all assigned welders.
 - **18.6.2** The Field Superintendent shall assure that all welders have access to the applicable WPSs for all assigned site welding operations.

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POST-WELD HEAT
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19. **POST-WELD HEAT TREATMENT, (PWHT)**

- 19.1 When Post-Weld Heat Treatment, (PWHT), is required, it shall be accomplished through subcontracting to an approved outside source.
- 19.2 Intermountain Lift QA / QC may inspect the items prior to PWHT to verify proper loading, blocking and thermo-couple attachment procedures.
- 19.3 Intermountain Lift QA / QC shall receive copies of all time and temperature charts for review and documentation.
- **19.4** PWHT shall be performed in accordance with contract specified procedures or per customer engineering directives.
- **19.5** PWHT shall be accomplished prior to any required hydrostatic or pneumatic testing and upon completion of all welding.
- 19.6 When required by the contract specifications, chart recorders and thermocouples shall show evidence of being cleaned, serviced and calibrated by an approved facility or service organization within six [6] months of the intended heat treatment operations.
- **19.7** Intermountain Lift QA / QC must be notified immediately, during PWHT, should any equipment malfunction.
- 19.8 Intermountain Lift QA / QC shall furnish the sub-contractor for the heat treatment with a written Post-Weld Heat Treatment Procedure, (QCM-1-09), [see Section 29, Exhibit #09]. As a minimum, the PWHT Procedure will contain the following information:
 - **19.8.1** Intermountain Lift Contract and / or Job Number.
 - 19.8.2 Piece Mark of Assembly.
 - 19.8.3 Thermocouple Locations.
 - **19.8.4** Heating Rate.
 - **19.8.5** Holding Time and Temperature.
 - 19.8.6 Cooling Rate.

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COATING MATERIALS
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20. COATING MATERIALS & APPLICATION CONTROLS

NOTE: ! Intermountain Lift performs simple coating applications for various shop primers which require minimal controls.

- Surface preparation and coating application methods requiring multiple-coat applications or sophisticated compositions are subcontracted to qualified and approved vendors.
- **20.1** Whether performed by Intermountain Lift or by an approved outside source, surface preparation will be accomplished in accordance with data given on the shop drawings, specifications and with Steel Structures Paining Manual, Volume 2, Section 2.
 - **20.1.1** For the purposes of material traceability, all necessary markings, identifications, heat numbers, etc., will be masked during painting to assure proper traceability.
- 20.2 The coating system will be provided in accordance with data given on the shop drawings or painting specifications prepared by the customer and as issued according to Intermountain Lift procedures, IML-PAINT-1 and IML-SPC-1, as follows:
 - **20.2.1** The proper paint materials, as specified by contract, will be used.
 - **20.2.1.1** Other paint materials may be substituted provided they are accepted by the customer's engineer, in writing.
 - **20.2.2** The correct dry film thickness will be provided within the range specified.
 - **20.2.3** The extent of area to be painted will be as shown or noted on the shop drawings and / or engineering specifications.
 - **20.2.4** Coatings will be prepared and applied in accordance with manufacturer's recommendations when available; otherwise, compliance with Steel Structures Paining Manual, Volumes 1 and 2 shall be required.
 - **20.2.5** Painting will be accomplished when atmospheric conditions are suitable for application of coating materials as specified by in the applicable procedures as noted in paragraph 20.2.
 - **20.2.6** Allowance for recommended drying time will be provided prior to loading.
- **20.3** Inspection of coatings shall be performed by Intermountain Lift personnel and / or the customer's representative prior to shipment.

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21. INSPECTION

21.1 Intermountain Lift Inspector(s) shall perform receiving inspection, in-process inspection and final inspection of all materials and fabrications, as required by the contract, applicable codes, standards, specifications and inspection procedures.

- **21.2** Throughout the fabrication process, Inspector(s) will inspect 100% of all fabricated items, sub-assemblies and assemblies for the applicable conditions listed below.
 - **21.2.1** Material conforms to specifications.
 - 21.2.2 All pertinent dimensions are in compliance with drawings and specifications.
 - **21.2.3** 100% of all welds shall be visually inspected for quality, correct size, proper location and placement, as specified on the applicable drawings and instructions.
 - **21.2.3.1** The quality of the welds complies with the applicable codes, standards, specifications, and procedures required.
 - 21.2.4 In accordance with the requirements of the International Building Code, (IBC), the following pertains to additional requirements for all full penetration groove welds in primary structural members with a material thickness of 5/16" or greater.
 - 21.2.4.1 In addition to the 100% visual examination, these welds will be subjected to a full volumetric examination, (i.e. Ultrasonic or Radiographic), to ensure weld soundness.

NOTE:	The requirements of 21.2.4, above are specifically for all such materials
11012.	destine for Clark County. Nevada and for all other projects where drawing
	and /or specifications require adherence to IBC Chapter 17 requirements.

- **21.2.5** All surfaces and edges are in compliance to the drawings, and applicable procedures, codes, standards and specifications.
- **21.2.6** Non-Destructive examinations are performed, as required by the contract and specifications, or arrangements for, and completion of such testing, to be performed by out-side sources, is accomplished.
- 21.2.7 Assure all welds and adjacent areas are free from slag, spatter, dirt, grease, oil and or other foreign material that may prevent proper visual and I or non-destructive examinations*.

*NOTE: Reference paragraph 16.12.4 of this manual.

- **21.2.8** All items to be painted or receive coating are properly cleaned and prepared as required by the applicable drawings, instructions, codes, standards and specifications.
- **21.2.9** Coatings are applied in conformance to the applicable drawings, instructions, manufacturer's recommendations, codes standards and specifications.
- **21.2.10** All markings and applicable stamping, for identification purposes, are in compliance to the drawings, instructions, procedures, codes, standards and specifications.

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- **21.2.11** Results of inspections shall be recorded on the forms required by the applicable inspection procedures.
- 21.3 The inspection process, which shall include all in-process fabrication after receipt of materials; (i.e. lay-out, cutting, fit-up, welding, cleaning, surface preparation, painting, preparations for shipment and final inspection), shall have documentation results included on Intermountain Lift Master Control List, (QCM-1-14), and in detail on Shop Inspection Report forms, IML-IRF-01.
 - 21.3.1 All activities, including those items listed in 21.2.1 through 21.2.10, shall be documented.
- Any Non-Conformance, identified during in-process inspections, which can be corrected through the normal fabrication processes and does not require the issuance of a Non-Conformance Report, (QCM-1-12), shall be noted, on a daily basis, per piece mark identification and kept open until re-inspection for determination of acceptability.
 - **21.4.1** Upon re-inspection and acceptance, notations shall be made on the daily shop inspection reports.
- 21.5 Any Non-Conformance, identified during in-process inspections, which cannot be corrected through the normal fabrication processes and does require the issuance of a Non-Conformance Report, (QCM-1-12), shall be noted and the requirements of Part 25 of this manual, "Non-Conformance Procedure", shall be placed into effect.
 - **21.5.1** The item in question shall be properly tagged per Part 25 of this manual and a copy of the Non-Conformance Report shall be attached to the daily inspection report.
- **21.6** Prior to all inspections, QA / QC Personnel shall verify that they are in possession of the latest *approved drawings* for the item being evaluated.
 - **21.6.1** In the event that current drawings are not available, the QA / QC Manager shall be notified and a review may be initiated to determine system failure.
 - **21.6.2** Additionally, all fabricated items, sub-assemblies and assemblies, destine for CCDDS-BD projects will receive 100% final inspection prior to a release for shipment to the project.

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22. NON-DESTRUCTIVE EXAMINATION

- 22.1 Non-Destructive Examination, (N.D.E.), shall be performed by in-house or job-site personnel and / or qualified and approved outside testing agencies, as dictated by contract specifications, arrangements, and availability of certified personnel.
 - **22.1.1** The QA/QC Manager is responsible for arranging or providing testing services through an approved outside laboratory.
- 22.2 In-House and job-site NDE personnel shall be trained and certified to the guidelines of The American Society for Non-Destructive Testing, (ASNT); Recommended Practice SNT-TC-1A, to the appropriate levels of competency, in the following disciplines, as applicable.
 - **22.2.1** Visual-Dimensional Inspection;

To the guidelines of SNT-TC-1a for levels II and III*.

22.2.1.1 Visual weld inspection* will also be provided by AWS Certified Welding Inspectors, (AWS-CWI), when contractually required.

22.2.1.1.1 Weld inspection* may be accomplished by personnel, other than

AWS-CWI inspectors, when they are working under the direction

of a certified AWS-CWIinspector.

22.2.2 Magnetic Particle: levels II or III (see note \emptyset).

22.2.3 Liquid Penetrant: levels II or III (see note \emptyset).

22.2.4 Ultrasonic: levels II or III (see note Ø).

22.2.5 Radiography: levels II or III (see note Ø).

ØNOTE:

When Clark County, State of Nevada, "Clark County Building Codes" are specified, the following definition applies to "Approved Quality Assurance Agency" and "approved vendor":

".... is one whose written practice and procedures have been reviewed and approved by CCDDS-BD."

22.3 NDE Procedures

22.3.1 All NDE Procedures employed by Intermountain Lift or any subcontracted agency shall be reviewed and approved by an ASNT Level III.

22.4 Testing Laboratories

- 22.4.1 Purchased testing services shall be through purchase order or direct contract to qualified and certified organizations whose written practice meets the requirements of ASNT SNT-TC-1A, as follows:
 - **22.4.1.1** Visual weld inspection provided by Certified Weld Inspectors, (AWS-CWI), when contractually required.
 - 22.4.1.2 Visual Dimensional Inspection, Magnetic Particle Examination, Liquid Penetrant Examination, Ultrasonic Examination and Radiographic Examination to SNT-TC-1A, Levels II. or III.

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22.5 Purchased N.D.E. Services from qualified outside sources may be arranged as follows:

- **22.5.1** By a review of capabilities, training, certifications and individual personnel certifications by a Intermountain Lift authorized representative.
- **22.5.2** Issuance of a purchase order or contract, by the Purchasing department, stipulating the applicable parameters of the services required.
- 22.5.3 When Clark County, State of Nevada, "Clark County Building Codes" are specified, the subcontracted inspection & testing agency shall be a CCDDS-BD "Approved Quality Assurance Agency" and "approved vendor."

22.6 Completion or Termination of Services.

Services from outside laboratories may be suspended for any of the following reasons:

- **22.6.1** Satisfactory completion of required services.
- 22.6.2 Unsatisfactory Services.
- **22.6.3** Failure to provide properly trained and certified personnel.
- **22.6.4** Failure to follow appropriate procedures.
- **22.6.5** Failure to provide accurate, complete reports in a timely manner.
- **22.6.6** Failure to adhere to proper safety practices.

22.7 TESTING

- **22.7.1** Testing will be conducted as dictated by contract requirements using, one or a combination of, the following:
 - **22.7.1.1** Customer Inspection Procedure.
 - **22.7.1.2** Customer approved, Intermountain Lift Inspection Procedures.
 - **22.7.1.3** Outside Laboratory Procedures, provided they meet the requirements of the customer specifications and approval.

22.8 RECORDS

- 22.8.1 All inspection, testing and NDE reports are to be maintained as permanent records for the contract to which they pertain and may include, but are not limited to, the following:
 - **22.8.1.1** Inspection prints with detailed explanations and weld maps.
 - **22.8.1.2** Visual and Dimensional Inspection Reports.
 - **22.8.1.3** Magnetic Particle Examination Reports.
 - **22.8.1.4** Liquid Penetrant Examination Reports.
 - **22.8.1.5** Ultrasonic Examination Reports.
 - **22.8.1.6** Radiographic Examination Reports and Radiographs.
 - **22.8.1.8** Customer, Vendor and Third-Party Inspection Reports.

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PART 23
CUSTOMER / THIRD PARTY
INSPECTIONS
Page 1 of 1

23. CUSTOMER I THIRD PARTY INSPECTION

- 23.1 The Customer's Inspector(s) shall be provided access to Intermountain Lift, and also the subcontractor's facilities, for the purposes, and to the limits required, to perform inspections, pertaining to the customer's contract(s).
- 23.2 The Customer's Inspector(s) shall have available a controlled copy of Intermountain Lift QA/QC Manual, (QCM-1).
- 23.3 Prior to the start of fabrication, Intermountain Lift will supply the Customer's Inspector(s) with a description of operations, in order to permit the Inspector(s) to determine at what stages Inspection Hold Points and I or Inspection Witness Points may be required.
- 23.4 Intermountain Lift shall provide for the Customer's Inspector(s) to have access to all drawings, specifications, procedures, records, test results, and any other documents related to the applicable contract.
- 23.5 The Customer's Inspector(s) shall have full authority to stop work on any applicable contract fabrications should it be shown that code and I or specification compliance is not being satisfied.
 - **23.5.1** The Customer's Inspector, however, shall show reasonable evidence, in writing, of the code or specification violation before work will be halted.
 - **23.5.2** Corrective actions will be reviewed and accepted by the Customer's Inspector(s) before any work may resume on the fabrication in question.
- 23.6 Intermountain Lift gauges, measuring and test equipment shall be made available to the customer's inspector(s), for the purpose of determining conformance to contract requirements.
- 23.7 Intermountain Lift Inspection Personnel shall be made available to the customer's inspector(s), to aid in the operation of equipment or to perform testing.
- 23.8 Intermountain Lift calibration records for inspection equipment shall be made available to the customer's inspector(s).

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PART 24
PREVENTIVE MAINTENANCE,
CALIBRATION of EQUIPMENT
and INSTRUMENTS
Page 1 of 1

24. PREVENTIVE MAINTENANCE. CALIBRATION OF EQUIPMENT AND INSTRUMENTS

- 24.1 Preventive maintenance of equipment critical to quality and scheduling.
 - **24.1.1** Overhead cranes All overhead cranes shall be inspected and serviced annually by an approved outside service company contracted by Intermountain Lift.
 - **24.1.2** Lift Trucks All lift trucks shall be inspected and serviced periodically, based on operational hours, by an approved outside service company contracted by Intermountain Lift.
 - **24.1.3** Delivery Vehicle Delivery trucks shall be routinely serviced and safety inspected by an approved local facility.
- 24.2 Tape lines used for checking, inspection and/or final acceptance functions, by inspection and supervisory personnel, shall be calibrated at twelve [12] month intervals and a record maintained of each instrument.
- **24.3** Procedures and records for calibration of tape lines is covered in Intermountain Lift calibration document, IML-CP-1.

NOTE: TAPE LINES, IN GENERAL USE BY FABRICATION PERSONNEL, FOR CUTTING, FITTING AND ASSEMBLY OPERATIONS WILL NOT BE CALIBRATED.

- 24.4 All dimensional equipment shall have a Intermountain Lift serial number on each instrument which is to provide traceability of each instrument to the applicable calibration records.
- 24.5 Dimensional equipment calibrations shall be performed utilizing instruments or gauge blocks which have been calibrated and certified, in writing, as being traceable to N.I.S.T. Standards.

24.6 CALIBRATION OF ADDITIONAL EQUIPMENT

- **24.6.1** The calibration of equipment other than that listed above is found under the Intermountain Lift Calibration Procedure, IML-CP-1.
- **24.6.2** Production equipment, (i.e.; jigs, fixtures tooling masters, templates and / or patterns), if used as a media of inspection, shall be calibrated at regularly established intervals.
 - 24.6.2.1 Specific calibrations and intervals of calibration for those items listed in 24.6.2, will be added to the calibration procedure when such items are placed into service for the purpose of inspections.

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PART 25 NON-CONFORMANCE PROCEDURE Page 1 of 2

25. NON-CONFORMANCE PROCEDURE

DEFINITION of a NON-CONFORMANCE

Revision No.:

Any condition which does not comply with the applicable rules of the Code, QA/QC Manual or other specified requirements is termed a Non-Conformance.

Any Non-Conformance MUST be corrected before the Completed Item can be considered to comply with Code Requirements.

25.1 NON-CONFORMANCE REPORT I N.C.R. (QCM-1-12)

[see Section 29, Exhibit #12]

- **25.1.1** All items having deficiencies, which cannot be resolved within normal scope of in-process fabrication, shall be identified and recorded on a Non-Conformance Report.
 - **25.1.1.1** A "HOLD" will be marked on the item in letters of sufficient size as to be easily visible.
- **25.1.2** The non-conforming item shall be held at that stage of fabrication, at which the nonconformance was acknowledged, until the N.C.R. has been reviewed by the QA/QC Manager.
- **25.1.3** If the non-conforming condition can be corrected within the scope of applicable code requirements, an N.C.R. is not required and the QA manager may initiate correction through the Shop Superintendent, with the applicable actions to be taken, to correct the non-conformance.
- **25.1.4** Should the deficiency be of such a nature that additional input by the structural engineer is required, the QA/QC Manager shall forward an N.C.R., with all pertinent information, to the engineer for disposition and a Non-Conformance Tag, (QCM-1-1 0), [see Section 29 Exhibit #10], shall be attached to the item, referencing the N.C.R., by number.
 - 25.1.4.1 If the non-conforming condition, after review of the N.C.R. by the QA/QC Manager, is such that *other work* may be performed without interference to the specific non-conforming condition, a written directive, ("Risk-Fab"), may be issued to the Shop Superintendent, delineating to what extent work may proceed.
- **25.1.5** Upon return of the disposition of the N.C.R., from the structural engineer, it shall be reviewed and signed by the QA/QC Manager.
- **25.1.6** Upon acknowledgment of the engineer's disposition by the QA/QC Manager, the N.C.R. shall be released to the Shop Superintendent for completion.
- **25.2** Disposition of a non-conformance may also be subject to the approval of the customer's representative and all applicable documentation shall be made available for review and approval.
 - 25.2.1 Any "<u>USE-AS-IS</u>" dispositions shall show technical justification on the N.C.R.
- **25.3** Documentation covering Non-Conformance Reports, shall be maintained on the <u>Contract Non-Conformance Record</u>, (QCM-1-11), [see Section 29 Exhibit #11].
- **25.4** The Non-Conformance Report shall be documented on the daily shop inspection reports for the date that the non-conformance was noted.

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PART 25 NON-CONFORMANCE PROCEDURE Page 2 of 2

25.4.1 The NCR Number shall also be noted in the daily inspection report.

25.5 When a non-conformance has been corrected, and noted as acceptable, the daily inspection report shall indicate the acceptance and a copy of the "Closed" NCR will be attached for permanent filing.

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RECORDS RETENTION

Page 1 of 1

26. RECORDS RETENTION

- **26.1** Master files will be maintained for each specific contract, which may include, but not be limited to, the following documentation.
 - **26.1.1** Contract Agreements, Drawings and Specifications.
 - **26.1.2** Purchase Orders and Receiving Reports.
 - **26.1.3** Material Certifications, Material Test reports and Certificates of Compliance for all contract items and materials incorporated into the fabrication(s) provided by Intermountain Lift.
 - 26.1.4 Inspection, Examination and Test reports.
 - **26.1.5** Heat Treatment reports and records, when applicable.
 - **26.1.6** Contract related correspondence.
 - 26.1.7 Welding Procedures.
 - **26.1.8** Transmittals.
- **26.2** The contract files, for each contract, shall be maintained for a period of not less than three [3] years after completion of the contract.
 - **26.2.1** After the three [3] year retention period has elapsed, the customer may be notified of the existence of these stored documents and may arrange for shipment, at the customer's expense.
 - **26.2.2** If, after the three [3] year period, the customer does not arrange for shipment, the records shall be destroyed at Intermountain Lift' discretion.
- 26.3 Location and Security
 - **26.3.1** The QA manager is responsible for collection and storage of project records.
 - **26.3.2** An "Archive" area which is reasonable safe, secure and provides adequate protection from deleterious conditions will be established for records storage.

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PART 27 MATERIAL CONFORMANCE STATEMENT Page 1 of 1

27. MATERIAL CONFORMANCE STATEMENT

- When required by the contract, Intermountain Lift will furnish the customer with a copy of a Material Conformance Statement, (QCM-1-17), [see Section 29, Exhibit #17]. This certificate will certify that the materials and required documents conform to the procuring order and its specifications.
- 27.2 The Material Conformance Statement will contain, but not be limited to, the following information:
 - 27.2.1 Customer Order Number.
 - 27.2.2 Date.
 - 27.2.3 Intermountain Lift Contract Number.
 - 27.2.4 Contract Name.
 - 27.2.5 Location of Job.
 - 27.2.6 Shipping Load Number.
 - 27.2.7 Description of Materials being shipped.
 - **27.2.8** When Clark County, State of Nevada, "Clark County Building Codes" are specified, the "Intermountain Lift Incorporated, Material Conformance Statement" shall include the following statement:
 - "The final product meets the requirements of the approved plans, specifications and Clark County Building Codes".
- **27.3** The <u>Material Conformance Statement MUST</u> be signed by an authorized representative of The Intermountain Lift, Incorporated.
- **27.4** The <u>Material Conformance Statement</u> may also provide for the concurring signature of the customer's representative, when contract documents indicate, dictate or require such verification.
 - **27.4.1** The presence of the customer representative's signature is not necessarily required on the <u>Material Conformance Statement</u> for any given contract, or portion thereof, unless so indicated by other contract specifications or documents.
 - 27.4.2 The signature of the customer's representative applies to concurrence with that portion of the contracted item(s) for which the customer's representative is directly responsible.

 The customer representative's signature is not to be construed as acceptance of the total contract, in cases where responsibility is limited by other contract concerns.

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28. MANUAL AMENDMENT PROCEDURE

- 28.1 THIS MANUAL MAY BE AMENDED THROUGH A LETTER, GENERATED BY THE QUALITY CONTROL MANAGER, FOR THE PURPOSE OF VOIDING CERTAIN REQUIREMENTS, WITHIN THIS MANUAL, WHICH MAY NOT APPLY TO INDIVIDUAL CONTRACT NEEDS.
- 28.2 THE LETTER SHALL NOT DELETE ANY CODE REQUIREMENTS AND IS DIRECTLY REFERENCED TO THE CONTRACT TO WHICH IT APPLIES, BY THE ASSIGNED CONTRACT NUMBER.
- APPROVAL BY THE CUSTOMER IS REQUIRED ON THIS MATTER, AS THE LETTER, UPON APPROVAL BECOMES AN INTEGRAL PORTION OF THE INTERMOUNTAIN LIFT, QUALITY ASSURANCE / QUALITY CONTROL MANUAL FOR THE DURATION OF THE SPECIFIC CONTRACT FOR WHICH IT WAS WRITTEN.

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PART 29 REPORTS & FORMS

Page 1 of 2

29. REPORTS & FORMS

29.1 The following index, (i.e. reports and forms) depicts **SAMPLES ONLY**.

29.2 The reports and forms used for the record keeping and documentation of contract activities within Intermountain Lift are maintained and revised individually, as the need arises.

INDEX OF REPORT & FORMS

FORM NUMBER	FORM TITLE		EXHIBIT NUMBER
QCM-1-01	Revision Transmittal & Receipt Form		1
QCM-1-02	Purchase Order		2
QCM-1-03	Material Receiving Report		3
QCM-1-04	Material Acceptance Record		4
QCM-1-05	Procedure Qualification Record		5
QCM-1-06	Welding Procedure Specification		6
QCM-1-07	Welder Qualification Record		7
QCM-1-08	Welder Qualification Up-date		8
QCM-1-09	Post-Weld Heat Treatment Procedure		9
QCM-1-10	Non-Conformance Tag		10
QCM-1-11	Non-Conformance Record		11
QCM-1-12	Non-Conformance Report		12
QCM-1-13	Drawing Log		13
QCM-1-14	Master Control List		14
QCM-1-15	Cutting list		15
QCM-1-16	Request For Information		16
QCM-1-17	Certificate of Conformance		17
QCM-1-18	QA/QC Manual Distribution Log	18	
QCM-1-19	Subcontractor / Vendor Survey Report		19
QCM-1-20	Internal Audit Report		20
QCM-1-21	-RESERVED-		21

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PART 29 REPORTS & FORMS

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FORM NUMBER	FORM TITLE		
QCM-1-22	Corrective Action Request		NUMBER 22
QCM-1-23	Corrective Action Request Status Log		23
QCM-1-24	Letter of Transmittal		24
QCM-1-25	Transmittal Log	25	
IML-IRF-01	Shop Inspection Report	26	

SPECIAL NOTE:

All of the above listed documents are examples of various forms used. Forms may be generated by computer programs, purchased for the purpose of controlling various aspects of the fabrication processes and the related documents & records required.

Intermountain Lift, Inc. Revision Transmittal and Receipt F 1990 South State St. *** Springville, Utah 84663 Revision Transmittal and Receipt F Phone: 801-489-3652 *** Fax: 801-489			al and Receipt Form		
Spirit grand a spirit					
Document Holder:	Com	Company:			
Telephone: ()	Addr	ess:			
Fax: ()					
DOCUMENT	Г СНА	NGES			
Document Number:		Revision No	umber:	Date:	
Document Description:					
Issued By:			Date Issued:		
A. REMOVE and DESTROY THE FOLLOWING:					
B. INSERT THE FOLLOWING REVISIONS:					
RECEIPT of TRANSI	MITTA	L STATEME	NT		
C. INSTRUCTIONS: Copy this form after completing the required transactions, si The revision(s) listed in item "B" have been inserted into the listed in item "A" have been removed and destroyed.	gnatur	e and date b	locks and return		
Signature of Document Holder:				Date:	
RETURN TO: INTERMOL		N LIFT, INC.			

P.O. BOX 686

Springville, Utah 84663

ATTN: QUALITY CONTROL MANAGER

Intermountain Lift, Inc.	Pur	chase Order		
1990 South State St. *** Springville, Utah 84663	Phone: 801-489-3652 *** I	Phone: 801-489-3652 *** Fax: 801-489-5852		
	PURCHASE ORDER NO.:			
	VENDOR CODE:			

INTERMOUNTAIN LIFT, INC.

1990 South State St. Springville, Utah 84662 Phone: 801-489-3652 FAX: 801-489-5852

PURCHASE ORDER

	ΓΑΛ. O	01-469-360)2				O i \		_	
TO:					SHIPT	ГО:				
P.O. DATE	SHIP	VIA		F.O.B.				TERMS		
BUYER	FREIGHT	REC). DATE	CONFIRMING TO	0			REMARKS		TAX
QTY. REQ.	ITEM NO.			DESCRIPTION				UNIT COST	EXTENDI	ED COST
MATERIAL TEST REPORTS REQUIRED: " Yes "No PROVIDE REQUESTED DOCUMENT CERTIFICATES of COMPLIANCE REQUIRED: " Yes "No AT TIME OF DELIVERY										
!ALL MAT	ERIALS TO ME	ET TOLEF	RANCE I	REQUIREMEN	TS of A	STN	/I A-6.			

Intermountain Lift, Inc.
1990 South State St. *** Springville, Utah 84663

Purchase Order No.:	Vendor Code:	Date:			
QTY. REQ. ITEM NO.	DESCRIPTION	UNIT COST	EXTENDED COST		
MATERIAL TEST REPORTS REQUIRED:	" Yes "No	PROVIDE REQUE	STED DOCUMENT		
CERTIFICATES of COMPLIANCE REQUIREMENTS.			FDELIVERY		
!ALL MATERIALS TO MEET TOLERANCE REQUIREMENTS of ASTM A-6.					

Intermountain Lift, Inc.	Pu	ırchase Order
1990 South State St. *** Springville, Utah 84663	Phone: 801-489-3652 **	* Fax: 801-489-5852
	PURCHASE ORDER NO.:	
	VENDOR CODE:	

INTERMOUNTAIN LIFT, INC.

1990 South State St. Springville, Utah 84662 Phone: 801-489-3652 FAX: 801-489-5852

PURCHASE ORDER

TO:				:	SHIP T	O:				
P.O. DATE	SHIP	VIA		F.O.B.				TERMS		
BUYER	FREIGHT	REG	. DATE	CONFIRMING TO				REMARKS		TAX
QTY. REQ.	ITEM NO.			DESCRIPTION				UNIT COST	EXTEND	ED COST
	AL TEST REPO			"Yes			PF	ROVIDE REQUE		
	CATES of COM							AT TIME O	F DELIVER	<u>′</u>
!ALL MATI	ERIALS TO ME	T TOLER	ANCE R	EQUIREMENT	S of A	STM A-	·6.			

Intermountain Lift, 1990 South State St. *** Spri	Inc. ingville, Utah 84663				Pl	Materia none: 801	al Acceptance Record -489-3652 *** Fax: 801-489-5852
Job Name: Job Loc					Job No.:		
Customer:		Customer's Addre	ess:			Page N	Number:
Quantity, (Items or bundles)	Description, (Plates, Shapes, Bars, Pipe, Tub	oing, etc.)	Specification & Grade, (ASTM Number & Mat'l Grade)	Heat Number	Identifi Num	cation ber	Signature of Inspector, (for Acceptance Inspection)

Intermountain Lift, Inc. 1990 South State St. *** Springville, Utah 84663 Material Acceptance R Phone: 801-489-3652 *** Fax: 801-489-362							
Job Name:		Job No.:			Page Number:		
Quantity, (Items or bundles)	Description, (Plates, Shapes, Bars, Pipe, Tubin	ng, etc.)	Specification & Grade, (ASTM Number & Mat'l Grade)	Heat Number	Identification Number	Signature of Inspector, (for Acceptance Inspection)	

Proce	dure Qualifica Phone: 801-48	ation Record - PQR 89-3652 *** Fax: 801-489-5852
Revision Number:		Date:
"GMAW	"GTAW	"SAW
emi-automatic	" Auto	omatic
al "Vertion	cal	" Overhead
ownward	"Not Applicat	ole
	Code) :
	Code	e:
	Code	9:
	Code	9:
Brand Name:	•	
Brand Name:		
Flow Rate, (cubic fe	eet / hour):	
Arc:	"Single	"Multiple
Electrode Polarity:	" Pos., (+	·) "Neg., (-)
Inter-pass Tempera	ature Range:	
Post-weld Heat Tre	atment Procedu	ure Number:
	I.D. Stamp Nu	ımber:
	•	
ercut	Pip	oing Porosity
	" Acceptable " Unacceptab	ole
Level:	Da	te:
	•	
	Da	te:
	"GMAW demi-automatic al "Vertic downward Brand Name: Brand Name: Flow Rate, (cubic fe Arc: Electrode Polarity: Inter-pass Tempera Post-weld Heat Tre	#GMAW "GTAW #emi-automatic "Automatic "Not Applicated Code Code Code Code Erand Name: #Flow Rate, (cubic feet / hour): #Flow Rate, (cubic feet / hour): ### Arc: "Single Electrode Polarity: "Pos., (+### Inter-pass Temperature Range: ### Post-weld Heat Treatment Proced #### I.D. Stamp Numerous Pipercut ###################################

Pg 1 of_____ QCM-1-05 / Rev. 0 / 3-05

Date:

Welding Witnessed By:

				_	
Int	\sim rm	ALIE	tain	Lift.	Inc
11111		OUL	паш	LIII.	HIIC.

Procedure Qualification Record - PQR Phone: 801-489-3652 *** Fax: 801-489-5852

1990 South State St. *** Springville, Utah 84663

Continued

PQR Number:	Revision Number:	Date:

WELDING PROCEDURE:

Pass No.	Electrode Size, (dia.)	Welding Amperes	Welding Volts	Travel Speed (inches / min.)	Heat Input (kilojoules)	Interpass Temperature (Degrees Fahrenheit)
1	-, (,)	7	rene	((imojouros)	(209.000
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
Mean:						
	% Ampere Limit					
	% Voltage Limit					
<u>+</u> '	% Travel Speed					

Intermountain Lift, Inc. 1990 South State St. *** Springville, Utah 84663	Procedure Qualification Record - PQR Phone: 801-489-3652 *** Fax: 801-489-5852				
or and the second secon	Continued				
PQR Number:	Revision Number:	Date:			
JOINT DETAIL					
As Detailed:					
As Welded:					

QCM-1-05 / Rev. 0 / 3-05

Pg___of___

	1.							
	2.							
*	*DROP = Drop the highest & lowest values of five (5) samples.							

Laboratory Test No:___

ALL WELD METAL TENSIONTESTS:

TEST No.:	ULTIMATE TENSILE STRENGTH, (psi)	YIELD POINT STRENGTH, (psi)	ELONGATION, (% in 2 inches)	REDUCTION of AREA, (% diameter)
1.				
2.				

Procedure Qualification Record - PQR Intermountain Lift, Inc. 1990 South State St. *** Springville, Utah 84663 Phone: 801-489-3652 *** Fax: 801-489-5852 Continued PQR Number: Revision Number: Date: We, the undersigned, certify that the statements within this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of: COMPANY: Intermountain lift, Inc. AUTHORIZED BY: QC Manager Date:_____. Tensile & Bend Tests: Tests Conducted By:______. Date:_____. Representing: .

	<u>Ter</u>	nsile & Bend Tests	66	Charpy Tests			
R	epresentir	ng:		.			
T	ests Cond	ucted By:		·	Date:	.	

Date:_____.

" Tensile & Bend Tests " Charpy Tests

Tests Witnessed By:_____. Date:_____.

Representing:

Charpy Tests:

Tests Witnessed By:______.

Representing:______.

1990 South State St. *** Springville.	, Utah 84663			vveiding P			ICation - VVPS ** Fax: 801-489-5852
WPS Number:		Revision	Number:		Date:		
Supporting PQR(s):							
Material Specifications:							
Welding Process: "SN	MAW	"FCAW		"GMAW		"SA	.W
Process Type: "Ma	anual	" Semi-au	tomatic		Automatio	;	
Position: "FI	at	" Horizont	al	" >	Vertical		" Overhead
Filler Metal Specification:			Filler Me	tal Classificat	ion:		
Flux Type and Classification	:		Applicab	le Code:			
Shielding Gas or Gasses, (%	b):		Flow Ra	te, (cubic feet	per hour):		
Passes: "Single	"Multiple		Arc:		"Single	•	* Multiple
Current: "Direct	"Alternating		Electrod	e Polarity:	"Pos.,	(+) '	'Neg., (-)
Welding Progression:	"Upward, (for	verticalweld	ds)	"Downwa	ard	"No	tApplicable
Root Treatment:	"ArcGouge	& "(Grind	(second s	ide to brig	ht metal p	rior to welding).
JOINT DETAIL				WELD	ING PAR	AMETER	<u>s</u>
			Pass No.:	Electrode Size	Amps*	Volts*	Travel Speed* (inches per Minute)
			*" Proce	edure Qualified	Ranges /	" Recom	mended Ranges
Notes:			7.				
			8.				
2.			9.				
3.			10.				
4.			11.				
5.							
6.			12.				
WPS #:	Rev.: Ap	proved Pv.	1			Date:	
VVF O #.	nev Aρ	proved By:				Date.	QCM-1-05 / Rev. 0 / 3-05

Intermountain Lift, Inc. 1990 South State St. *** Springville, Utah 84663	Welding Procedu Phone: 8	<u>ure Specification - WPS</u> 01-489-3652 *** Fax: 801-489-5852
WPS Number:	Revision Number:	Date:
(AWS D1.1 Pre-qualified Procedure Image)		
(NVO D1.1110 quamica 11000ddio iiilago)		
(ANNO DA A Des envelifie d'Des es dives Netes)		
(AWS D1.1 Pre-qualified Procedure Notes)		

WPS #:

Approved By:

Rev.:

Date:

1990 South State St. ***	Springville,	Utah 84663										ation F * Fax: 801	-489-5852
Welder's Name:								Weld	ler's Ide	ntificatio	on No.:		
QUALIFICATION													
Process Qualified:	"SN	1AW	"FCA	W	"GN	/IAW	•	'SAW	r"GTA	W			
Positions Qualified:	" 1F	" 2F	" 3F	" 4F	"1G	3 "2	:G '	'3G	"4G	"5G	"6G	"6G	₹
Welding Progression	n: "Up	ward	"Dowi	nward	" N/	Α	Proc	edure	Specific	ation No	o.:		
Qualified Material S	pecification	ons:								Backir	ng:	" Ye	s "No
Joint Thickness Tes	ted:				-	Thickn	ess R	ange C	Qualified	:			
Qualification: "W	/elder	"Weld	ingOpe	rator	"Fit	ter/Ta	cker		"Othe	r:			
FILLER MATERIAL													
Filler Metal Specifica	ation No.:				F	Filler M	letal C	Classifi	cation:				
Filler metal Descript	ion:				F	Filler m	netal S	Shieldir	ng:				
VISUAL INSPECTIO	N				•								
Appearance: " Meets Code Requir Fails Code Requir	iirements	ì								s Code	<u>y</u> : s Code Requirements Code Requirements		
GUIDED BEND RES	ULTS												
Type*			Results	6			Ту	pe*			Re	sults	
*(Root Bend, Face Be		Bend).											
FILLET TEST RESU		Bend).		As are stale			" C	a ti a fa u		6	i I Innoti	of o oto m	
FILLET TEST RESU	LTS		N	Macroetch (n:			atisfac				sfactory	
FILLET TEST RESU	LTS		N	Macroetch	1:			atisfad				sfactory	
FILLET TEST RESULT Fillet Size: Fracture Test Root F	LTS Penetration	on Depth:			n:		"S	atisfad	etory	6		sfactory	/
FILLET TEST RESULT Fillet Size: Fracture Test Root F	LTS Penetration	on Depth:		Macroetch marks	n:	File		atisfad	etory				/
FILLET TEST RESULT Fillet Size: Fracture Test Root F	LTS Penetration	on Depth:			n:	Fili	"S	atisfad	etory	6		sfactory	/
FILLET TEST RESULT Fillet Size: Fracture Test Root F RADIOGRAPHIC TE Film I.D. Test Conducted By:_	Penetration ST RESU	on Depth: JLTS ults	Re	marks			"S	atisfac	Re Test No	esults	Unsati	sfactory	rks
FILLET TEST RESULT Fillet Size: Fracture Test Root F RADIOGRAPHIC TE Film I.D.	Penetration ST RESU Res eby certif	on Depth: JLTS ults ies that the	Re	marks ents in th	uis rec	cord ar	"S m I.D.	atisfac	Re Test No	esults	Unsati	sfactory Rema	rks
FILLET TEST RESULT Fillet Size: Fracture Test Root F RADIOGRAPHIC TE Film I.D. Test Conducted By: The undersigned here	Penetration ST RESU Res eby certif	on Depth: JLTS ults ies that the	Re e statem nce with	marks ents in th	nis rec	cord are	m I.D.	atisfac	Re Test No	esults	Unsati	Rema	rks

	tain Lift, Inc. ate St. *** Springvil		Welding Qualification Update Phone: 801-489-3652 *** Fax: 801-489-5852						
Welder's Na	me:	Process:	Positions:	:			Certification Date:		ID Stamp:
	ed, welded and	tested in ac	cordance w	ith the req	n this record are uirements of: Structural Weldir			nat the v	welder's test
This docume welding fore		fication of u	pdates perf s, satisfacto	ormed by ry perform	riginal certification an inspector or nance.	on.			
		ı	JPDATE R	ECORD					
Year	Date	Insp	ector	_	Date		Inspector		
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individual er Furthermore	nployment histo e, Intermountair elded and testo	ory regardin n Lift certifie	g continuou s that this u	ıs, satisfac pdate reco	sed on a review tory performanco ord is true and co nents of: AWS D	e. orrect a	and that the wel	der's te	st was
Ву:						Da	te:		

Intermountain Lift, Inc. Representative

Inter	rmountain Lift, Inc. South State St. *** Springville, Utah 84663	Post-Weld He	eat Treatment Procedure				
1990 8	South State St. Springville, Utan 84003	Pnone:	801-489-3652 *** Fax: 801-489-5852				
Job N	lame:	Job Numbe	r:				
Item [Description:	PcMk Numb	per:				
	CEDURE DESCRIPTION:	the face of the section of within	an analogad formana and in				
	weld heat treatment shall be accomplished by heating dance with the following outlined parameters:	the item or items involved within	n an enclosed furnace and in				
1.	Place the assembly(s) in the furnace in such a man the PWHT operation, and in a location so there is n						
2.	Attach thermo-couples to the thickest portions of the assembly(s) and at various areas of the furnace. {Follow sketches of placement - when provided}.						
3.	The temperature of the furnace shall not exceed 60 furnace.	00° F. at the time the assembly(s) is / are placed within the				
4.	HEATING ABOVE 600° F.: The rate of heating shall not exceed ° F. couples, shall not exceed 250° F	. per hour and variations in temp	erature, between thermo-				
5.	HOLDING TIME/TEMPERATURE: After a temperature of 1100° F. is reached, the assembly(s) shall be held at a temperature of 1175° F. (+/- 75° F. for a period of, at least,hours.						
6.	COOLING: Above 600° F., cooling shall be accomplished within the enclosed furnace, at a rate no greater than° F. per hour. Below 600° F., the assembly(s) may be cooled in <u>STILL</u> air.						
7.	When required by contract specifications, chart reconstructed by an approved laboratory at six [6] mont Records of calibration shall be verified by audit and furnished to IML QA / QC for review.	th intervals.					
8.	In the event that ANY malfunction occurs during he notified.	eat treatment operations, IML QA	. / QC shall be immediately				
	NOTIFICATIONS:						
	1	2					
	Office: ()	Office: ()					
	Home: ()	Home: ()					
9.	At the completion of contracted heat treatment open QA / QC.	rations, Time / Temperature Rec	ords shall be provided to IML				
	APPROVALS:		Doto				
	Intermountain Lift QA / QC Manager:		Date:				
	Intermountain Lift Fabrication Superintendent:		Date:				
	Customer Representative:		Date:				

Intermountain Lift, Inc.
1990 South State St. *** Springville, Utah 84663

Non-Conformance Tag
Phone: 801-489-3652 *** Fax: 801-489-5852

	termountain Lift, IncCONFORMANCE TAG *******
TAG NUMBER:	NCR NUMBER:
CONTRACT No.:	PIECE:
CONDITION:	
LOCATION:	DATE:OCM-1-10 / Rev. 0 / 3-05
	termountain Lift, IncCONFORMANCE TAG *******
TAG NUMBER:	NCR NUMBER:
CONTRACT No.:	PIECE:
CONDITION:	
QC INSPECTOR:	
LOCATION:	DATE:OCM-1-10 / Rev. 0 / 3-05
	termountain Lift, IncCONFORMANCE TAG *******
TAG NUMBER:	NCR NUMBER:
CONTRACT No.:	PIECE:
CONDITION:	
QC INSPECTOR:	
LOCATION:	DATE: QCM-1-10 / Rev. 0 / 3-05

(BLACK LETTERING ON RED STOCK)
(Copy, Cut, Complete & Tape to Item)

Intermountain Lift, Inc.	Non-Conformance Record
1990 South State St. *** Springville, Utah 84663	Phone: 801-489-3652 *** Fax: 801-489-5852

SRI Job Number:	
-----------------	--

TAG No.:	PcMk No.:	Description of Non-Conforming Condition	NCR No.:	Disposition Opened (Date)	Disposition Closed (Date)

Intermountain Lift, Inc. 1990 South State St. *** Springville, Utah 84663	Non-Conformance Report Phone: 801-489-3652 *** Fax: 801-489-5852
Job Name:	Job Number:
Piece Mark Number:	Tag Number:
Piece Description:	NCR Number:
	Date:
CONDITION SHOULD BE:	
CONDITION SHOULD BE.	-
	-
CONDITION IS:	
RECOMMENDED CORRECTIVE ACTION:	
Inspector:	
CORRECTIVE ACTION:	
APPROVALS:	
APPROVALS:	
Project Manager	QC Manager
Fabrication Superintendent	Customer Representative
DISPOSITION AFTER CORRECTIVE ACTION:	

Pg <u>1</u> of ____ QCM-1-12 / Rev. 0 / 3-05

Intermou	ntain Lit	ft, Inc. Springville, Utah 84663					Phone	e: 801-489	-3652 *** I	Drawing	g Log 89-5852
Type of Dra		"Design Drawings	" Fabrication Detail Drawings	"Erection [Drawings	" Specification	" Oth				
Job Numbe				l	L.		ı		Page_	of _	
					Approval	Approval					
Drawing Number		General D	Description of Drawing		Sent (Date)	Received (Date)	Rev 1	Rev 2	Rev 3	Rev 4	Rev 5

1990 South	State St. *** S	t, Inc. Springville, Utah 84663					Phone:	801-489-	3652 *** Fax	Control List c: 801-489-5852
Job Numb	er:								Page	of
PcMk No.:	Quantity	De	scription	Heat Number	Fabrication Weight	Issued to Shop (Date)	Fabrication Complete (Date)	Paint / Con (D	Coating nplete ate)	Shipping Date

Intermountain	Lift, Inc	lle, Utah 84663				Pho	one: 801-489-3	Cutting List 652 *** Fax: 801-489-5852
Job Number:								Pageof
Cut From. (Material I.	 D.)	Quantity Required	Dimensions / Description	Mark No.:	Amount Used	Drop Weight	Unit Cost	Total Cost
								_
								_
								_
								-
								+
								+

Intermountain Lift, Inc. 1990 South State St. *** Springville, Utah 84663		Request for Information - RFI Phone: 801-489-3652 *** Fax: 801-489-5852				
1990 Goulii Gtate Gt. Springvine, Gtan 64003		i none. c	1 ax. 001-409-3032			
Job Number:	Job Name:					
Drawing Number:	Drawing Povision:	Drawing Povision C				
	Drawing Revision: RFI Revision:	Drawing Revision D RFI Issue Date:	vale.			
RFI Number:	Kri Kevision.	KFI ISSUE Date.				
CONDITION IS:						
REQUESTED CHANGE:						
			T_			
Change Requested By:	~~~~~~~	~~~~~~~~~~~~	Date:			
						
Approved By:			Date:			
Position / Title:		Representing:	QCM-1-16 / Rev. 0 / 3-0			

Job

1990 South State St. *** Springville, Utah 84663

Job

TIFICATE of CONFOR

Name:		Number:	
Customer:			
Customer Order Numb	er:	Date:	
Project Description:			
Project Location:			
-			
Applicable Code Requirements:			
Load Number:		Shipment Date:	
Piece Marks / (This Load):		
		nced Item(s) and required documentation have order, specifications, prints and revisions.	e been provided to
Code Section(s) and the	nose standards and specification	rere fabricated to meet the requirements of the as, referenced within the contract documents produced including all change orders to date.	
QA / QC Manager Intermountain Lift, Inc.		Date	
Customer Representati	ive	 Date	

Intermountain Lift, Inc.
1990 South State St. *** Springville, Utah 84663

Manual Number	Controlled	Uncontrolled*	ASSIGNED DOCUMENT HOLDER (Name, Company, Address, Phone & Fax)		Date Assigned	Date Returned
			Name: Company: Address: City: Phone: Fax:	State:		
			Name: Company: Address: City: Phone: Fax:	State:		
			Name: Company: Address: City: Phone: Fax:	State:		
			Name: Company: Address: City: Phone: Fax:	State:		
			Name: Company: Address: City: Phone: Fax:	State:		
			Name: Company: Address: City: Phone: Fax:	State:		
* NOTE:		controlder.	olled QC Ma	nuals are not updated or revised after the date of issue to	the Assigned	Document

Page___of ___

Intermountain Lift, Inc. Sub-Contractor / Vendor Survey Repo 1990 South State St. *** Springville, Utah 84663 Phone: 801-489-3652 *** Fax: 801-489-58										
Company Name:								Date:		
Address:								Phone: Fax:		
Vendor Representative(s) & Positions:	•									
Required Services:	•									
Brief Description of Facilities:										
RATING CHECK LIST:	Excellent	Good	Fair	Poor	Unsatisfactory	Not Applicable	Des	cription, Re	emarks or Comments:	
Facilities & Equipment										
Quality Assurance Program										
Certifications of Equipment										
Certifications of Personnel										
Workmanship										
Instructions to Operators										
Handling & Shipping Practices										
Control of Test Equipment										
Inspection										
Documentation										
Recommendations:										
Surveyed and Rated by:									Date:	

Intermo	ountain Lift, Inc. n State St. *** Springville, Utah 84663	Pr	Internal Audit Report Phone: 801-489-3652 *** Fax: 801-489-5852					
Establish	ment:				Project No.:			
Establish	ment Location:							
Principle	Contact:				Audit Date:			
Purpose	of Audit:		Audit Standard(s):					
Audit Co	ndition: "Announced	"	Unannounced	"Other:		STA	TUS	
Audit Item (U)	Description of Items	Re	emarks & Comments			Acc.	Rej.	
1.0	MANAGEMENT RESPONSIBILITY							
1.1	Quality Policy							
1.2	Direction & Leadership							
1.3	Management Representative							
1.4	Resources							
1.5	Internal Communication							
1.6	Documentation Requirements							
2.0	CONTRACT & SPECIFICATION REVIEWS							
3.0	DETAILING							
4.1	Detailing Procedures							
4.2	Detailing Function Resources							
5.0	DOCUMENT & DATACONTROL							
5.1	Review & Approval							
5.2	Customer Requirements							
5.3	Revision Control							
5.4	Access							
5.5	Obsolescence & Transmittal							
6.0	CONTROL OF QUALITY RECORDS							
7.0	PURCHASING							
7.1	Purchasing Data							
7.2	Selection of Sub-Contractors							
7.3	Verification of Purchased Products							
7.4	Customer Verification of Fabricated Products							
7.5	Control of Customer Supplied Materials							
8.0	MATERIAL IDENTIFICATION							
Notes & 0	Comments:							

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Intermountain Lift, Inc. Internal Audit Report							
Audit Item (U)	Description of Items	Remarks & Comments	Acc.	Rej.			
9.0	FABRICATION PROCESS CONTROL						
9.1	Welding						
9.2	Bolt Installation						
9.3	Material Preparation for Coating						
9.4	Coating Application						
9.5	Equipment Maintenance						
10.0	INSPECTION & TESTING						
10.1	Assignment of QC Inspection & Monitoring						
10.2	Inspection Procedure						
11.0	CALIBRATION OF INSPECTION, MEASURING AND TEST EQUIPMENT						
12.0	CONTROL OFNON-CONFORMANCE						
13.0	CORRECTIVE ACTION						
14.0	HANDLING, STORAGE & DELIVERY						
15.0	TRAINING						
16.0	INTERNAL AUDIT						
Additional pa	r <u>im Audit Report</u> has been revised to r	reflect the requirements of the AISC Quality Management System on the during the audit process and recommendations for corrective actions. Representing:					
	·	s of this audit and understand that the conditions noted as Rejec					
.,	must be corrected within thirty [30] days and a re-audit may be required to verify full compliance.						
Audit Ackı	nowledged By:	Date:	_				

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Intermountain Lift, Inc.
1990 South State St. *** Springville, Utah 84663 – RESERVED --

Phone: 801-489-3652 *** Fax: 801-489-5852

QCM-1-21 - RESERVED -

Intermountain Lift, Inc. 1990 South State St. *** Springville, Utah 84663 Corrective Action Requestry Phone: 801-489-3652 *** Fax: 801-489-8						
·						
Program / Project Name:		Job	No.:	CAR	Number:	
To: (ORGANIZATION NAME, ADDRESS, PHONE NO	.)				Request	t Date:
From: (ISSUING ORGANIZATION)					Respo	onse Pate:
Part Name:	Part No.:		Inspection Report No.:			
Description of Condition:						
Apparent Cause:						
Actual Cause:						
Action Taken To Prevent Recurrence						
ACTION Taken TO Prevent Recurrence	•					

Title:

Signature:

Date:

Intermountain Lift, Inc.
1990 South State St. *** Springville, Utah 84663

CAR Number	Inspection or Failure Report Number	Responsible Organization	Date Assigned	Date Response Due	Date of Actual Response	Remarks		

Intermo	untain Lif	it, Inc. Springville, Utah 84	663		Letter of Transmittal Phone: 801-489-3652 *** Fax: 801-489-5852
				TRANSMIT	
Date:		Copies:	Job No.:		Transmittal No.:
Project Na	ame:	•		Reference:	
TO:					
ATTN:					
711111.					
TD A NICMI	TTED HER	EW/ITU:			
TRANSIVII	ITEDTIEN				

THESE ITEMS ARE TRANSMITTED FOR THE PURPOSE(S) CHECKED BELOW:

"ForApproval	" Approved as Submitted	"Approved as Noted
"ForYourUse	"AsRequested	"Returned for Correction
"For Review and Comment	"Return	" Executed Copies
"Other:		

cc:	

FROM:	

ntermountain Lift, Inc. 990 South State St. *** Springville, Utah 84663 Transmittal Log Phone: 801-489-3652 *** Fax: 801-489-5852										
SSC Project Nu	ımber:	Project Name:								
Transmittal Number:	Date Sent:	Description of Documents:	Sent To:	Action:	Remarks & Comments:					

Intermo	ountain Lift, Inc. h State St. *** Springville,	Utah 84663										Phone: 80	Shop Inspection 01-489-3652 *** Fax: 80	Report 1-489-5852	
Project N	Name:												Job No.:		
Client:					Site	Location:				G	Governing Authority:				
Address:						Shipping Address:					Applicable Codes & Standards:				
Client P.O. Number:					Site Contact:										
Mark Description Layout Fit-up Weld			Weldii	ding Welded NDE Cleaning Paintir			Painting	Final Inspe	Final Comments Inspection			NCR Number			

INTERMOUNTAIN LIFT, INC. Quality Assurance / Quality Control Manual QCM-1

Original Issue: 03-01-07 Revision Date: 02-12-19 Edition No.: One [1] Revision No.: Seven [7] PART 30 LIST of APPENDICES Page 1 of 1

LIST OF APPENDICES

Appendix I Facilities Plot Plan

Appendix II Equipment List

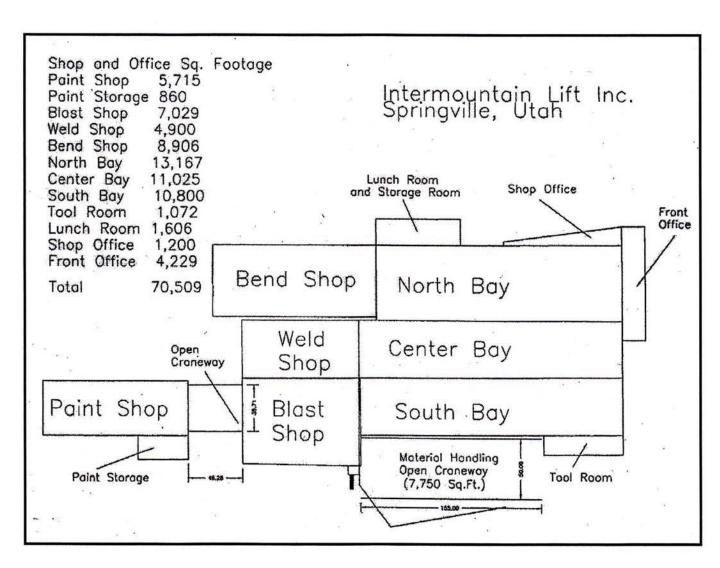
Appendix III Resumes & Qualifications of Key Personnel

INTERMOUNTAIN LIFT, INC. **Quality Assurance / Quality Control Manual** QCM-1

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PART 30 APPENDIX I FACILITIES PLOT PLAN

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FACILITIES PLOT PLAN

INTERMOUNTAIN LIFT, INC. Quality Assurance / Quality Control Manual QCM-1

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Revision No.: Seven [7]

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2 Drawing Tables-exec. Desk 1968 Ford One Ton Truck

Goose Neck Trailer

74 Utility Trailer

Great Dane Drop Trailer Machinery & Other Equipment

Ironworker

Buggo Burning Machine

Pipe Roller Plasma Cutter Burning Machine Overhead Crane

Marvel Saw #8 & Conveyor

90 Ton Beam Punch Burning Machine Mechanical Shear

10 Ton Overhead Crane

Drill Bit Grinder Pneumatic Chisel

Pneumatic Jack Hammer C-Frame Beam Punch

100 Ton Enerpac Pump with Rams

Quincy Compressor Magnetic Drills 3/4 Air Impact 1" Air Impact Chevrolet Blazer

1981 Case 585c Forklift

Parts Punch

Enerpac 5000 Psi Pump Graco 400# Grease Pump

50 Ton Crane

Vernon Pipe Cutting Machine 5 Ton Overhead Bridge Crane

1½ Ton Jib Crane Condor 350 Cold Saw Material Racks

Portable Power Hacksaw

Transit & Stand Air Cleaners Tapping Head 1971 Peterbuilt Truck 1989 Roundo Angle

10 Ton P&H Overhead Crane - 1965 10 Ton P&H Overhead Crane - 1966

200 Ton Bulldozer

Aikeda High Pressure Washer with Attachment

Forklift

Torches

Eye Wash Equipment Trumpf Plate Beveller Hougan Magnetic Drill

50 H.P. Gardner Denver Compressor

1981 International 2-ton Truck

14-16 Miter Saw

Clemco 600 Sand Blast Pot Bulldog 30 Airless Paint Gun

Disc Sander

Portable Pipe Bender 1 Ton 3153 Electric Hoist 600# Sandblast Pot Win Telephone System

Computer Equipment & Calculators

586e Case Fork Lift
Fireproof File Cabinet
Snow Plow Blade
Plate Nibbler
15 Ton P&h Crane
No. 1 Bevel Machine

18 Ton Mobil Grove Crane 1991 Chevrolet Pickup

1993 Isuzu Rodeo

Sun-Air 50 HP Compressor Magnetic Particle Yoke Cad 13 Software 1996 Chevrolet Pickup Thickness Gauge

Quincy 245 Air Compressor

Portable Radios 1997 3/4 Ton Truck Gauge Block Set 1650 Copier 1550 Copier

Portable Bandsaw with Case

5000 Lb. Forklift Breathing Air Pump

Blast Media Recovery System

5 Ton Bridge Crane 2" Banding Tensioner Willis Solberga Drill Digital Camera

Case 1840 Skid Loader 1998 Jeep Wrangler Sport 15 Ton P&h Bridge Crane

1963 Ford Truck

(2) 1995 Polaris 4 Wheelers

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PART 30 APPENDIX II EQUIPMENT LIST Page 2 of 2

Bulldog Pump and Spray Gun AA Plus Spray Paint Gun **GMC Water Truck** 3000 Generator Hydraulic Porta Power Unit 1990 Utility Flatbed Trailer (45') (2) CO, Monitors 1999 Haulmark Trailer 10 Ton P&h Material Handling Crane 12 Ton P&h Material Handling Crane 15 Ton P&h Overhead Bridge Crane Conveyor Equipment for Material Bay Material Handling Crane for Runway Bay Beam Clamp Power Team Hydraulic Pump and Cylinder Topcon Vertical Laser Transit and Stand (2) Chicago Pneumatic 9160 7" Angle Grinders 2001 Chevrolet 3/4 Ton Hd 4-wd Pickup 1994 JLG 60 foot Aerial Work Platform 15 & 6 Ton Yale Overhead Crane Shop Built Hydraulic 6" Through 8" Bender Positector Paint Gauge Williams & White 300 Ton Bulldozer with Hydraulic 10 Ton P & H Bridge Crane Roundo R7-s Angle Roll with Various Dies (2) Pandjirish Pipe Rolls (1 Lot) Track Fabrication Fixtures Bosch Electric Hand Drill 50 Hp Quincy Air Compressor (2) 7" CP-857 Grinders (2) Needle Scalers (3) Victor Torch Sets with Carts Able & Howe 24" Jib Crane with ACCO 2 Ton Hoist (2) Ingersoll-rand SI 600-103 Ton Come-Alongs Topcon RI-vh3d Vertical Laser Transit (3) Chicago Pneumatic 9160 7" Air Grinders Hp Design Jet 430 24" Plotter Husquvarna 55r Chain Saw Unix to Windows 2003 Server Conversion & Operating System P&h 5/5/10 Ton Overhead Bridge Crane 20 Hp Portable Hydraulic Pump Cincinnati Gilbert 4' X 11' Radial Drill

(2) 1/4 Ton C&m Hoists with Power Trolley

Eaton 500 Gallon Fuel Tank with Spill Container 2005 Chevrolet 3/4 Ton Hd 4-WD Pickup Metal Muncher PS4000 Hydraulic Shear 8' X 40' Double Door Storage Container Hyd-Mech V-18 X 18 X 11/4" Blade Vertical Bandsaw Koike Ik-12 Max 3 Dual Head Track Burner with Manifold

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PART 30
APPENDIX III
RESUMES &
QUALIFICATIONS

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KEY PERSONNEL

NAME	POSITION	
Bret Crandall	President & General Manager	
Tyler Crandall	Vice-President of Production	
Steve Tripp	Shop Superintendent	
Talen Crandall	Shop Foreman	
Brad Stokes	Shop Foreman	
Cody Diamond	QA/QC Manager	
Tyrel Makowski	QC Inspector	
Gary Hoopes	QC Inspector	
Brent Miller	Maintenance / Safety Supervisor	

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PART 20
APPENDIX III
RESUMES &
QUALIFICATIONS

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RESUME

Bret Crandall 775 West 1600 North Mapleton, UT 84664 Telephone: (801) 489-7662

PERSONAL

Nick Name: (Butch)

Date of Birth: 8-28-63

Place of Birth: San Pedro, Honduras

Status: Married - Wife: Julie 2- Children

EDUCATION

Springville High School

Graduated in 1981

Springville, UT

Utah Tech. College

Provo, UT

Studied structural drafting, pipe and plate

layout 1982 - 1983.

WORK EXPERIENCE

March 96 - Present

Intermountain Lift Inc.

Springville UT.

Title: Vice President/

General Manager

Duties: Continue to assist the President as Vice President of Operations and to act as General Manager of the company to control the flow of business activities so that sales and profit goals are achieved and to develop operating controls consistent with the policies

issued by the president.

Other Duties: To assist Sales / Marketing

Estimator department as required.

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APPENDIX III
RESUMES &
QUALIFICATIONS

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Feb. 95 - March 96

Intermountain Lift Inc.

Springville UT.

Title: Vice President

Operations

Duties: Manage Estimating, Purchasing, and Clerical personnel. Work with Sales /

Marketing Manager in sales, estimating, scheduling, and procurement of material for each job sold. Work with President on Management decisions for the Corporation.

Jan. 94 - Feb. 95

Intermountain Lift Inc.

Springville UT.

Title: V P of Production

Duties: Oversee Production Supervisor.
Work with Sales / Marketing Manager in sales, estimating, scheduling, and procurement for each job sold. Coordinate jobs between shop

and Estimating Managers.

Mar. 92 - Jan. 94

Infermountain Lift Inc.

Springville UT.

Title: Production Super.

Duties: Supervise Shop Foreman.

Study all drawings for each job. Make sure all material is ordered and received for each job. Make cutlist of material for each job. Work with Shop Foreman on scheduling each job. Make sure all jobs do not exceed budget. Work with QC - Manager on all quality control procedures

for each job.

May 89 - Mar. 92

Intermountain Lift Inc.

Springville UT.

Title: Shop Foreman

Duties: Supervise Shop Employees.

Avg. Employees 24 - 36. Make sure all employees are working by there set times through-out the day. Know all procedures and specifications on all jobs. Organize all jobs in shop. Organize all material into specified areas. Make sure all jobs come in under

estimated hours.

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PART 20 APPENDIX III RESUMES & QUALIFICATIONS

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Jun. 85 - May 89

Intermountain Lift Inc.

Springville UT.

Title: "A" Fitter

Duties: Read Blue prints and translate mathmatical formulas. Certify under certain weld procedures. Operate oxygen and acty. equipment. Operate all saws, shears, drills,

punches, and bending equipment. Operate mobil, and overhead cranes along with

forklifts.

Jun. 81 - Jun. 85

Intermountain Lift Inc.

Springville UT.

Title: Apprentice - Helper Duties: Help A Fitters and Painters. Load and

Un-load all material. Sweep shop, clean equipment, operate grinders, sandblast, cut

and prep material.

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PART 20
APPENDIX III
RESUMES &
QUALIFICATIONS

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486 East 1000 South Springville, UT 84663 (801)615-1465

Tyler Bret Crandall

2014 - Present Intermountain Lift inc.
Vice President of Production

2010 - 2014 Intermountain Lift inc.

Shop Foreman

Responsible for shop crew. Understanding and problem solving prints.

2007 - 2010 Intermountain Lift inc

Assistant Foreman

Responsible for opening and locking up shop. Making sure everyone knows what there duties are for that day. Reading and understanding blue prints.

2003 -2007 Intermountain Lift inc.

Roundo Operator

Bending Pipe, Angle, etc. according to the blue prints.

2002 -2003 Intermountain Lift inc.

Fitter/Welder

Responsible for fitting and welding the product according to the blue print

2001 -2002 Intermountain Lift inc.

Helper

Sawing, Grinding, Drilling etc..

2000-2001 Snelson's Photo Lab

Delivery Driver

Packaging pictures and delivering them to the photographers

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RESUME Steve Tripp 965 W 820 N Provo, Utah 84601 (801) 377-8514

PROFFESIONAL OBJECTIVE

To advance my knowledge in steel fabrication through hands-on experience in all areas of the industry.

EXPERIENCE

Journeyman Welder:

MIG Welding

SMAW-7018:

Flat-Unlimited

Vertical-Unlimited
Overhead-Unlimited

SAW-Solid Core:

Flat-Unlimited

Twin-Arc Dualhead w/ Auto Tracking

Flux Core

Flat & Fillet welds-Unlimited

Innershield:

Horizontal-Unlimited

6G Pipe-Unlimited

Dual Shield:

Flat-Unlimited

Horizontal-Unlimited Vertical Up-Unlimited

EGW Electrogas:

Vertical Up-Unlimited

Twinheads w/ copper damns.

Journeyman Fitter:

Fluent in Blueprints-Shop drawings, erection drawings, engineer & architect drawings. Expert in fabrication of beams, columns, trusses, girders, box columns & trusses, spaceframes, ski-lift towers & bullwheels, Roller Coasters, Thrill Rides and most other types of fabrication.

Journeyman CNC Operator:

Installation, programming, operating, and maintenance of computerized drill lines, punch lines, angle lines, duplicators, copers, profilers, saws, burn tables, shears, roller systems, and transfer systems.

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Craftsman:

Experience in structural steel. Shipping and receiving, most types of mobile forklifts and cranes, installation of overhead cranes. I have a wide range of experience in fabrication, production control, estimating, engineering, working with XYZ coordinates, AutoCAD detailing shop drawings, and management, including hiring and administrating personnel.

WORK EXPERIENCE

1992-2007 Intermountain Lift, Inc.

1990 S. State, Springville, Utah

Fitter/Welder Leadsman Foreman

Production Manager Production Supervisor (over 50 personnel)

1985-1992 Stott Inc.

550 W. 1700 S., Salt Lake City, Utah

Fitter/Welder Leadsman Foreman

Production Manager Shop Superintendent (over 50-80 personnel)

1980-1985 Ashby Metal Products

Pioneer Road, Salt Lake City, Utah

Fitter/Welder Shift Foreman Shop Foreman

1975-1980 K & Z Steel

West Jordan, Utah Fitter/Welder Shop Foreman

1972-1975 Amwest Ornamental Iron

Sandy, Utah Fabricator Estimator Shop Foreman

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Talen Ray Crandall

Shop Foreman/Supervisor

Responsible for shop crew and making sure products are being fit correctly and safely. Understanding blue prints and newly updated programs such as AutoCAD, Solid Works, Excel etc.

Roundo/Dozer operator

Bending pipe, tube etc.

Fitter/Welder- 6GR-Unlimited,5G Limited (6"), 5G- Limited (3 ½") 3G-Unlimited (1") 2G-Unlimited (6"), F, H, V. Responsible for fitting and welding the product according to the blue print.

Automotive Technician

Dealing with customers and problems with their cars.

Glass Technician

Installing windshields, Tinting etc.

Shop helper / janitor

Sawing, grinding, cleaning bathrooms etc.

INTERMOUNTAINLIFT.INC 2011-2019 (2003-2005)

BMW/MINI OF MURRAY 2010-2011

A TOUCH OF AIR GLASS AND TRIM 2004-2008

High school diploma, Springville Red Devils, 2007
2.8GPA
Associates degree, Universal Technical Institute, Arizona, 2009
3.9GPA, Directors honors list

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1553 East Ridgefield Road Spanish Fork UT 84660 (801) 787-5517

Bradley B. Stokes

Experience: January 29, 2003 - Present Intermountain Lift, Inc. Springville, Utah

 2003 - 2003 Shop Laborer: Helping lead fitters and making parts. Sawing, drilling, grinding, etc.

 2003 – 2010 Fitter/Welder: Fabricating and welding steel products according to job drawings. Training laborers and new fitters.

- 2010 2014 Night Shift Foreman: Responsible for opening and locking up shop. Making sure all shop crew members are completing their assigned tasks.
- 2014 Present Shop Foreman: Making sure all shop crew members are completing their assigned tasks on a daily basis. Responsible for opening and locking up shop. Making sure all jobs meet deadlines. Making cut lists, bend drawings, etc.

Education

1994 - 1997 General Education

Springville High School Springville, Utah

Interests

· Hunting, motorcycles, firearms.

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Cody Diamond

Experience:

2007 - Present Intermountain Lift, Inc., Springville, Utah

Quality Control Manager

Checking the quality of fabricated product from start to finish, (receiving of all material and components, dimensional layout, joint fit-up, weld inspection for size and contour, blast profile, paint mil thickness, and shipping of final product).

Level II Visual Examination, Magnetic Particle Inspection, Liquid Penetrant Inspection per ASNT-TC-1A.

1997 - 2007 Intermountain Lift, Inc., Springville, Utah

Fitter/Welder/Painter/Laborer

Fit and weld amusement rides and other structural designs. Read and interpret blue prints. Qualified FCAW 5G unlimited, Qualified GMAW 3G limited. Cut and prep parts to be fit. Prime and paint according to job and manufacturers specs.

1996 - 1997 Pro Fab and Welding, Lindon, Utah

Laborer

Cut and prep parts to be fit. Clean welds and prep for paint.

1996 - 1996 FTL Contracting, Orem, Utah

Crew Lead Man

Prepared ground for asphalt. Worked with crew on a spreader box to lay asphalt. Operated heavy equipment.

Education:

High School - Springville High School

1996 - 1998 UVSC, Orem, Utah - Auto Body Repair

Interests: Hunting, Tractor Pulling, Camping, ATV's, and Trucks

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Tyrel L. Makowski

225 W. 450 N. Santaquin, UT 84655 / (801)636-4596 / tmakowski@intermountainlift.com

Objective:

To further my knowledge in the steel industry.

Education:

High School:

· Independence High School, Elko, NV.

Experience:

2018 - present: Intermountain Lift Inc.

- · Quality Control Inspector:
- · Checking the quality of fabricated products from start to finish, (receiving of all material and components, dimensional layout, joint fit-up, weld inspection for size and contour, blast profile, paint mil thickness, and shipping of final product.)
- · CWI per AWS, Level II Magnetic Particle Inspection per ASNT-TC-1A.

2008 – 2018: Intermountain Lift Inc.

- Fitter/Welder/Laborer
- Fit and weld amusement park rides and other structural designs. Read and interpret blue prints and shop drawings.
 Qualified FCAW 5G unlimited, Qualified GMAW 3G limited. Cut and prep parts to be fit. Fit and weld weldments per drawings.

Interests:

Hiking, fishing, camping, grilling.

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1116 N 600 E Springville, UT 84663 (801) 836-3546

Gary Hoopes

Experience

1988 - 2005 Timpanogos Metals

- 1988 1993 Laborer: Helping lead fitters and making parts. Sawing, drilling, grinding, etc.
- 1993 1998 Fitter/Welder: Fabricated and welded various steel products according job drawings.
- 1998 -2005 Supervisor: Making sure all shop crew members are completing their assigned tasks on a daily basis. Responsible for opening and locking up shop. Making sure all jobs meet deadlines.

2005 - 2010 BMC Fabrication

- 2005 2010 Fitter/Welder: Fabricated and welded various steel products according job drawings.
- 2009 2010 Assistant Supervisor: Read and interpret drawings. Making sure all shop crew members are completing their assigned tasks on a daily basis. Responsible for opening and locking up shop. Making sure all jobs meet deadlines.

2010 - Present Intermountain Lift

- 2010 2013 Fitter/Welder: Fabricated and welded various steel products according job drawings.
- 2013 Present QC Inspector: Inspect fabrication fit up and welds per job drawings and applicable codes and/or standards. Inspect blast profile and paint. Fill out inspection reports as needed. Make shipping documents.

Education

1980 - 1985 General Education

Pleasant Grove High School
Pleasant Grove, Utah

2010

High School Diploma

Pleasant Grove, Utah Tintic High School Eureka, Utah

Interests

· Woodworking, motorcycles, fly fishing.

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Brent W. Miller

Experience

1993 - Present Intermountain Lift, Inc. Springville, Utah

Maintenance/Safety Supervisor

 Responsible for daily maintenance, repairs and rebuilding of all equipment and buildings. Responsible for purchasing shop consumables. Responsible for daily shop safety.

Electrician

1981-1993

 Responsible for installing electrical systems in industrial, commercial and residential buildings. Troubleshoot and repair electrical systems.

Education

1981 - 1985 Electrical apprenticeship

Utah Technical College

Provo, Utah

1977 - 1981 General Education

Springville High School

Springville, Utah