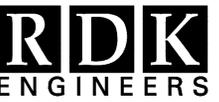




# Economic Development & Industrial Corporation

Hon. Martin J. Walsh, Mayor of Boston

Brian P. Golden, Acting Director



Andover, MA - Boston, MA - Amherst, MA  
Durham, NC - Charlotte, NC



## Board Members

Paul Foster  
Vice-Chairman  
Consuelo G. Thornell  
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Brian P. Golden  
Clerk  
Timothy P. Burke  
Member  
Michael P. Monahan  
Member

## OWNER

BRA/Engineering & Facilities Management  
Division  
Capital Construction Department  
22 Drydock Avenue, Suite 201  
Boston, Massachusetts 02210

Project  
Team

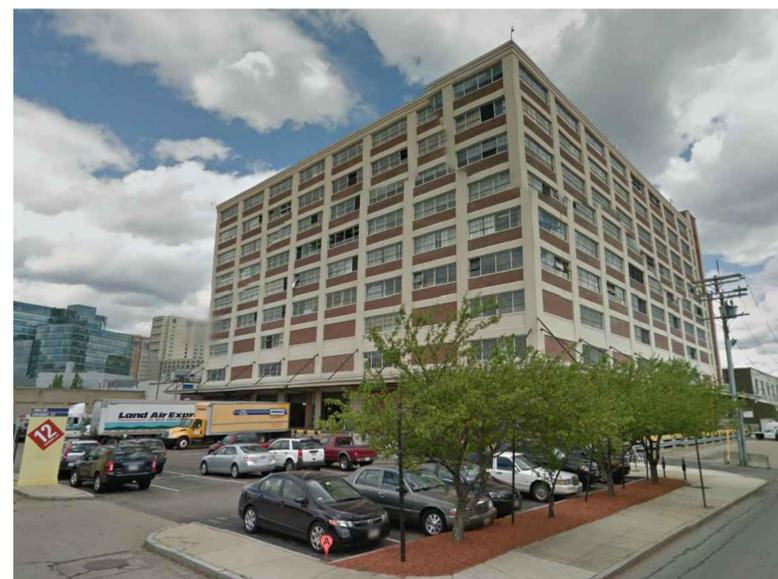
MEP/FP/T  
ENGINEER  
RDK Engineers  
70 Fargo St.  
Boston MA  
02210  
617.345.9885

ARCHITECT  
Rizvi Architects  
334 Boylston St.  
Boston MA  
02116  
617.267.9090

# Code Compliant Stairway Improvements EDIC Project No. 1272C

12 Channel St.

Boston MA. 02210



## DRAWING LIST

### ARCHITECTURAL

A-101 ARCHITECTURAL PLANS AND SCHEDULES  
A-102 ARCHITECTURAL DETAILS

**BID DRAWINGS**  
02-04-14

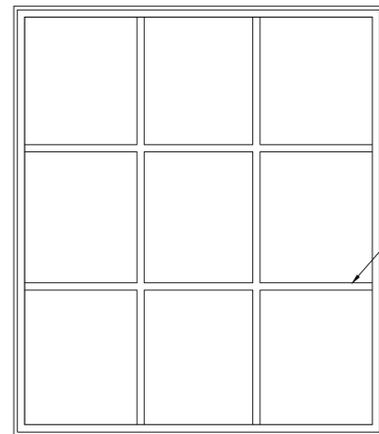
**DOOR SCHEDULE**

NO.	LOCATION	SIZE			DOOR			FRAME			LABEL	REMARKS
		WIDTH	HEIGHT	THK	TYPE	MAT'L	FIN	TYPE	MAT'L	FIN		
001	BASEMENT - TENANT SPACE TO STAIR B VEST.	3'-0"	7'-0"	1 1/2"	B	MTL.	PTD	1	MTL.	PTD	90 MIN	NEW RATED DOOR AND FRAME WITH PANIC DEVICE HARDWARE
101	FIRST FLOOR - TENANT SPACE TO STAIR B VEST.	3'-0"	7'-0"	1 1/2"	A	MTL.	PTD	1	MTL.	PTD	90 MIN	NEW RATED DOOR AND FRAME WITH PANIC DEVICE HARDWARE
201	SECOND FLOOR - TENANT SPACE TO STAIR B VEST.	3'-0"	7'-0"	1 1/2"	B	MTL.	PTD	1	MTL.	PTD	90 MIN	NEW RATED DOOR AND FRAME WITH PANIC DEVICE HARDWARE
202	SECOND FLOOR RESTROOM	3'-0"	7'-0"	1 1/2"	B	MTL.	PTD	1	MTL.	PTD	90 MIN	NEW RATED DOOR AND FRAME WITH PANIC DEVICE HARDWARE TYPE B DOOR HAS NO VISION PANEL
301	THIRD FLOOR - TENANT SPACE TO STAIR B VEST.	3'-0"	7'-0"	1 1/2"	B	MTL.	PTD	1	MTL.	PTD	90 MIN	NEW RATED DOOR AND FRAME WITH PANIC DEVICE HARDWARE
401	FOURTH FLOOR - TENANT SPACE TO STAIR B VEST.	3'-0"	7'-0"	1 1/2"	B	MTL.	PTD	1	MTL.	PTD	90 MIN	NEW RATED DOOR AND FRAME WITH PANIC DEVICE HARDWARE
501	FIFTH FLOOR - TENANT SPACE TO STAIR B VEST.	3'-0"	7'-0"	1 1/2"	A	MTL.	PTD	1	MTL.	PTD	90 MIN	NEW RATED DOOR AND FRAME WITH PANIC DEVICE HARDWARE
601	SIXTH FLOOR - TENANT SPACE TO STAIR B VEST.	3'-0"	7'-0"	1 1/2"	A	MTL.	PTD	1	MTL.	PTD	90 MIN	NEW RATED DOOR AND FRAME WITH PANIC DEVICE HARDWARE
701	SEVENTH FLOOR - TENANT SPACE TO STAIR B VEST.	3'-0"	7'-0"	1 1/2"	A	MTL.	PTD	1	MTL.	PTD	90 MIN	NEW RATED DOOR AND FRAME WITH PANIC DEVICE HARDWARE
801	EIGHTH FLOOR - TENANT SPACE TO STAIR B VEST.	3'-0"	7'-0"	1 1/2"	A	MTL.	PTD	1	MTL.	PTD	90 MIN	EXISTING DOOR TO REMAIN. ADD 12" X 12" VISION PANEL IN EXISTING DOOR
901	NINTH - TENANT SPACE TO STAIR B VEST.	3'-0"	7'-0"	1 1/2"	B	MTL.	PTD	1	MTL.	PTD	90 MIN	NEW RATED DOOR AND FRAME WITH PANIC DEVICE HARDWARE. PROVIDE PEEP HOLE.

NOTES:  
 VERIFY EXISTING DIMENSIONS IN FIELD. MATCH NEW DOORS TO EXISTING.  
 TYPE A DOORS HAVE A 6"x16" VISION PANEL AT 5 FEET AFF. TYPE B DOOR DOES NOT HAVE A VISION PANEL.  
 COORDINATE HARDWARE WITH OWNER REQUIREMENTS AND EXISTING CARD READER DEVICES. HARDWARE TO  
 PROVIDE ACCESS FROM ELEVATOR LOBBY SIDE. PLEASE PROVIDE SHOP DRAWINGS FOR APPROVAL.

**SCHEDULE OF SCOPE OF WORK FOR PAINT AND WINDOW GLAZING**

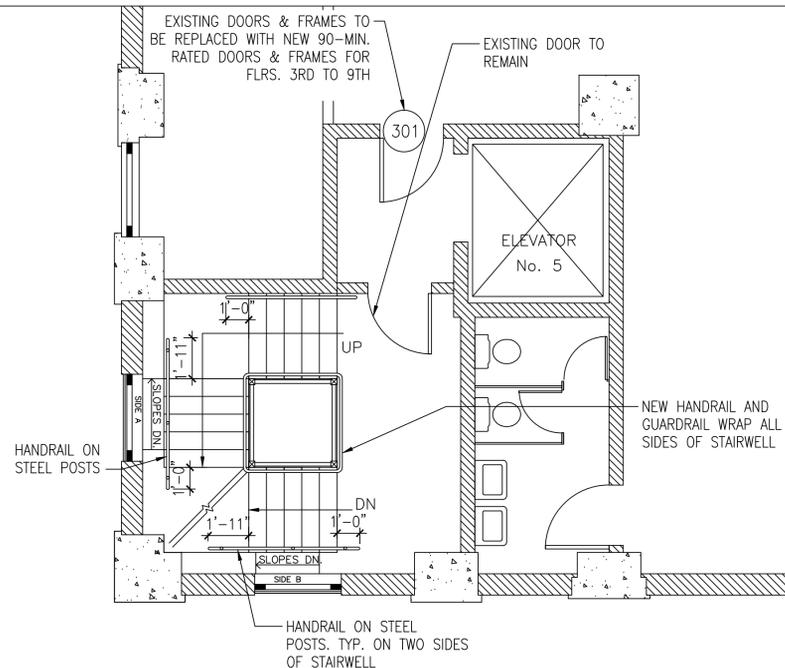
LEVEL	PAINT	SIDE 'B' WINDOWS	SIDE 'A' WINDOWS	COMMENTS
PENT HOUSE	ALL AREAS INCLUDING UNDERSIDE OF STAIR	N/A	N/A	
LEVEL 9	ALL AREAS INCLUDING UNDERSIDE OF STAIR	REPLACE 30% OF GLAZING COMPOUND	REPLACE ALL OF GLAZING COMPOUND	
LEVEL 8	ALL AREAS INCLUDING UNDERSIDE OF STAIR	REPLACE 30% OF GLAZING COMPOUND	REPLACE ALL OF GLAZING COMPOUND	
LEVEL 7	ALL AREAS INCLUDING UNDERSIDE OF STAIR	REPLACE 30% OF GLAZING COMPOUND	REPLACE ALL OF GLAZING COMPOUND	
LEVEL 6	ALL AREAS INCLUDING UNDERSIDE OF STAIR	REPLACE 30% OF GLAZING COMPOUND	REPLACE ALL OF GLAZING COMPOUND	
LEVEL 5	ALL AREAS INCLUDING UNDERSIDE OF STAIR	REPLACE 30% OF GLAZING COMPOUND	REPLACE ALL OF GLAZING COMPOUND	
LEVEL 4	ALL AREAS INCLUDING UNDERSIDE OF STAIR	REPLACE 30% OF GLAZING COMPOUND	REPLACE ALL OF GLAZING COMPOUND	
LEVEL 3	ALL AREAS INCLUDING UNDERSIDE OF STAIR	REPLACE 50% OF GLAZING COMPOUND	REPLACE ALL OF GLAZING COMPOUND	
LEVEL 2	ALL AREAS INCLUDING UNDERSIDE OF STAIR	REPLACE ALL OF GLAZING COMPOUND	REPLACE ALL OF GLAZING COMPOUND	REPLACE 4 PANES OF GLASS
LEVEL 1	ALL AREAS INCLUDING UNDERSIDE OF STAIR	N/A	N/A	
BASEMENT	ALL AREAS INCLUDING UNDERSIDE OF STAIR	N/A	N/A	



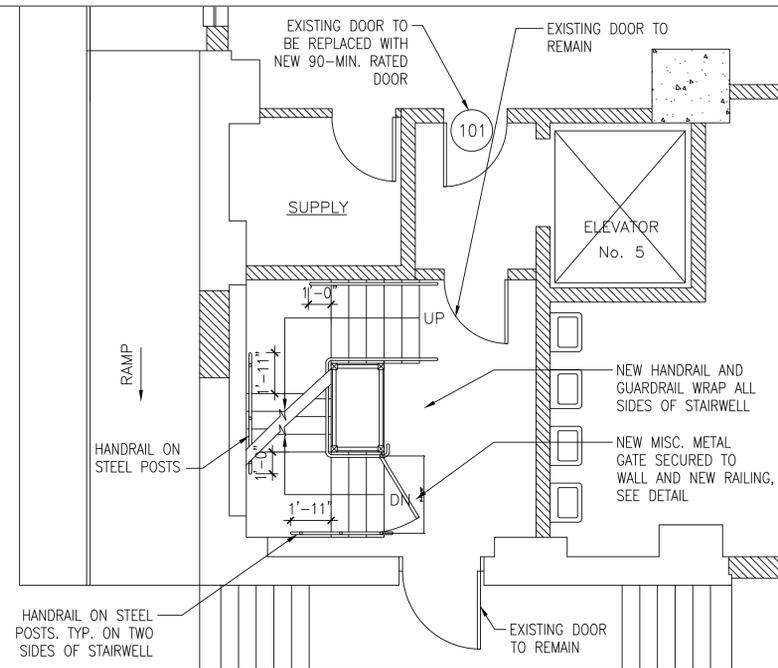
REGLAZE WINDOW PANES AS OUTLINED IN THE SCHEDULE

CLEAN AND CAULK ALL PERIMETER WINDOW FRAME AT MASONRY. TYP. ALL WINDOWS IN THE PROJECT

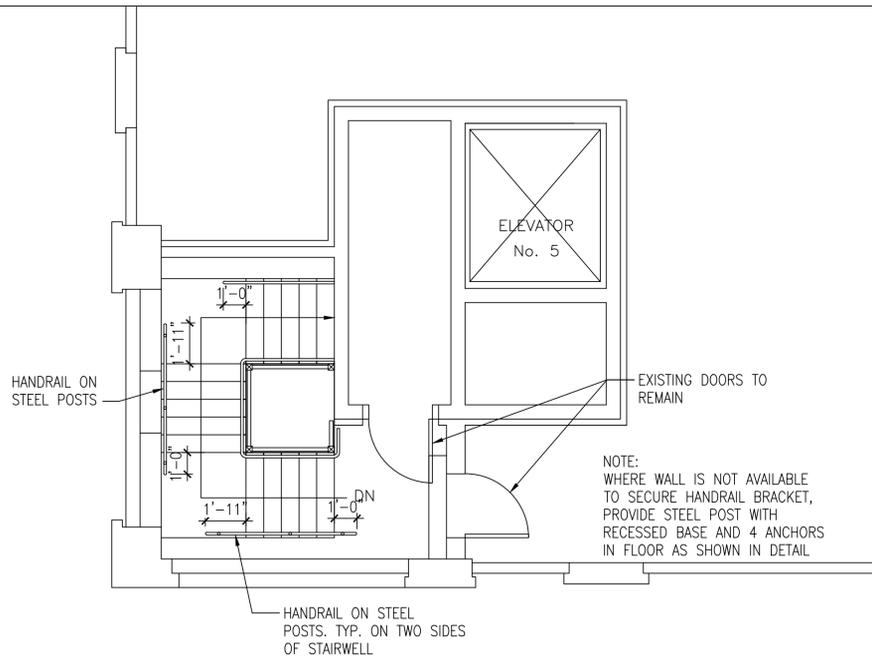
NOTE:  
 CONTRACTOR TO TEST EXISTING GLAZING COMPOUND AND CAULKING FOR ASBESTOS BEFORE REMOVAL.



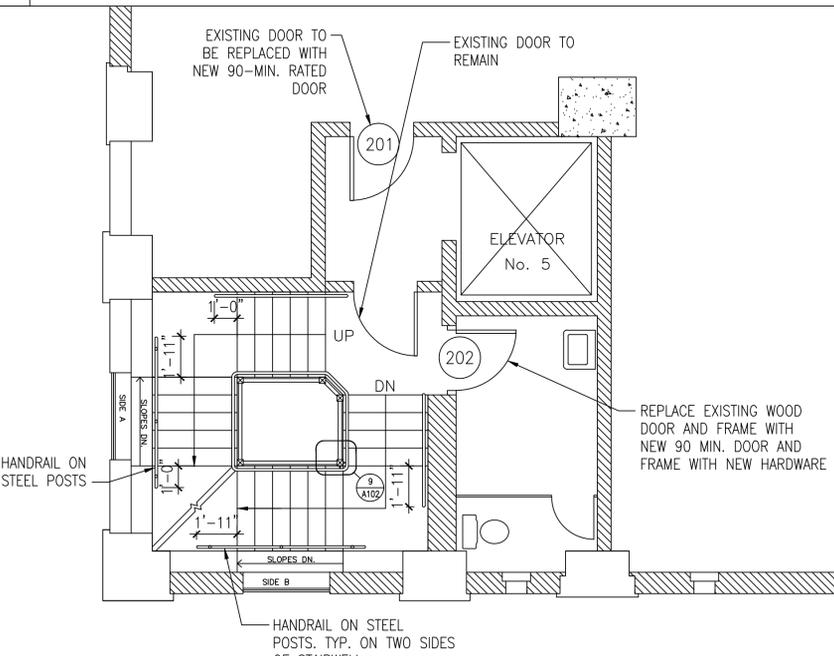
4 THIRD THRU NINTH FLOOR STAIR PLAN  
 SCALE: 1/4" = 1' - 0"



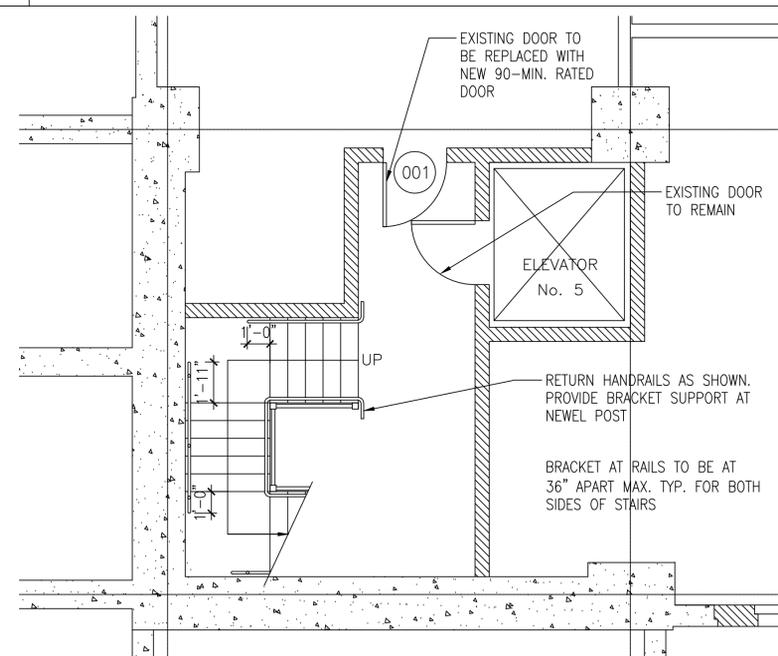
2 FIRST FLOOR STAIR PLAN  
 SCALE: 1/4" = 1' - 0"



5 ROOF LEVEL STAIR PLAN  
 SCALE: 1/4" = 1' - 0"



3 SECOND FLOOR STAIR PLAN  
 SCALE: 1/4" = 1' - 0"



1 BASEMENT FLOOR STAIR PLAN  
 SCALE: 1/4" = 1' - 0"

**REVISIONS**

▲ DATE DESCRIPTION

DATE	DESCRIPTION

**SEAL**



*Deacon S. Marvel*

**PROJECT**

NUMBER: 20130379 EDIC: 1272C

DATE: 2/4/14

EDIC Code Compliant Stairway Improvement

12 Channel St.  
 Boston MA. 02210

**DRAWING**

DRAWN BY: KP

CHECKED BY: DM

SCALE: AS NOTED

**PLANS AND SCHEDULES**





# ECONOMIC DEVELOPMENT & INDUSTRIAL CORPORATION

**MARTIN J. WALSH, MAYOR OF BOSTON**  
Brian P. Golden, Acting Director

*Contract Documents for:*

## **Code-Compliant Stairway Improvements at 12 Channel Street, Phase 1**

Stair "B", 12 Channel Street, Boston Marine Industrial Park, Boston, MA  
BRA Project No. 1272C  
Chapter 149 M.G.L.

*Awarding Authority:*

EDIC Engineering  
& Facilities Management Division  
Capital Construction Department  
22 Drydock Avenue, Suite 201  
Boston, MA 02210

*Architect:*

Rizvi Architects, Inc.  
334 Boylston Street  
Boston, MA 02116

*Engineer:*

Richard D. Kimball Company, Inc.  
70 Fargo Street, Suite 800  
Boston, MA, 02210



### **EDIC Board Members**

Paul D. Foster, Vice-Chairman

Consuelo Gonzales-Thornell, Treasurer

Timothy J. Burke, Member

Michael P. Monahan, Member

Brian Golden, Clerk

**February, 2014**

**Economic Development & Industrial Corporation  
Capital Construction Department  
22 Drydock Avenue, Suite 201  
Boston, MA 02210**

**ADDENDUM No. ONE (1)**

DATED: February 21, 2014

TO: All Registered General Bidders  
Contract Documents

FOR: Code-Compliant Stairway Improvements at 12 Channel Street, Phase 1  
Project No. 1272C

This addendum modifies, revises, amends and supplements designated parts of the Code-Compliant Stairway Improvements at 12 Channel Street, Phase 1, Project and are hereby made a part thereof by reference and shall be as binding as though inserted in its entirety in the locations designated hereunder.

Wherever portions of any Addendum are in conflict with a previous Addendum, the Addendum bearing the latest date shall govern. It shall be the responsibility of each general bidder to notify all non-filed subcontractors and the suppliers he proposes to use for the various parts of the work, of any changes or modifications contained in this Addendum. No claim for additional compensation due to the lack of knowledge of the contents of this Addendum will be considered. Bidders are hereby notified they must acknowledge all Addenda on the Form for General Bid.



Nathaniel Gorham, AIA  
Project Engineer

SECTION 009101

ADDENDUM NO. 1

This Addendum forms part of and modifies the Bidding and Contract Documents. Acknowledge receipt of this Addendum on Bid Forms, as applicable.

Where any original item called for in the Project Manual or indicated on the Drawings is supplemented hereby, the supplemental requirements shall be considered as added thereto. Where any original item is amended, voided, or superseded hereby, the other provisions of such items not specifically amended, voided, or superseded shall remain in effect.

BIDDING AND CONTRACTING REQUIREMENTS

SPECIFICATIONS

A. Section 011000 – General Requirement

1. Section 1.2 – Project Requirements:

Add: Section I: The hours of operation for the 12 Channel Street building are Monday through Saturday 6am to 6pm. For work on Saturday, the contractor must formally request permission from the EDIC. No work will be permitted on Sunday.

Modify: Section C - Hazardous Materials Testing: The Contractor shall cover in his bid price the cost of testing the glazing and caulking for the presence of hazardous material. The contractor shall include in his bid price the cost of removing and disposing of this material in an uncontaminated state. The contractor shall carry an additional item at a value of \$12,000 in his bid to cover the cost of removing glazing and caulking should it be found to be hazardous. The contractor shall remove said hazardous material in compliance with all city, state, federal and environmental regulations.

B. Section 030100 – Concrete Repairs and Patchwork

1. Section 1.2 – Description of Work

Add: B: Patch all openings in concrete stair including bolt holes where existing railing is removed and miscellaneous conduit openings in the floor slabs

C. Section 101500 – Photoluminescent Safety Products

1. Section 1.3 – Submittals

Section C - Samples – Delete Item #1. Rubber Stair Treads are not required

2. Part 2 – Products

Section 2.1 PhotoLuminescent Guidance Products.

Delete: Part A – Step Edge

Add: Part E: Provide 1" wide photoluminescent safety tape for all handrails. Tape shall be applied to top edge of handrails. Tape must comply with UL 1994 or ASTM E 2072. Provide sufficient tape for all handrails plus an additional 20% as Attic Stock.

Add: Part F: Provide 1" wide photoluminescent abrasive safety tape for all step treads. Tape shall be applied set back 1" from edge of step. Tape must comply with UL 1994 or ASTM E 2072. Provide sufficient tape for all handrails plus an additional 20% as Attic Stock.

## DRAWINGS

### A. Drawing A-101 – Plans and Schedules

1. Clarification: Schedule of Scope of Work for Paint and Window Glazing: Scope of Work for General Painting shall be reduced to 5,000 square feet for floor, wall and ceiling surface areas. The Paint scope shall still include painting of the following elements:
  - a. All new doors, frames and exposed conduits
  - b. Metal windows – all interior window frames and mullions
2. Clarification: Schedule of Scope of Work for Paint and Window Glazing: Replacement of Glazing Compound is as per schedule – some windows need all glazing compound replaced and some windows need approximately 30% of glazing compound replace. All glazing compound, new and existing to remain, must be painted.
3. Clarification: Elevation 6 – Typical Window Elevation in Stair: Clean and Caulk entire window perimeter of ALL windows.
4. Modification: Door Schedule: Door 202 shall be 2'-8" x 6'-8".
5. Modification: Door Schedule: Door 801 shall same door and frame as Door 701.

END OF ADDENDUM

Economic Development & Industrial Corporation

CONTRACT DOCUMENTS FOR THE:

Code Compliant Stairway Improvements at 12 Channel Street, Phase 1  
Stair "B", 12 Channel St, Boston Marine Industrial Park

AWARDING AUTHORITY:

Economic Development & Industrial Corporation  
Engineering and Facilities Management Division  
Capital Construction Department  
22 Drydock Avenue, Suite 201  
Boston, MA 02210

ARCHITECT:

Rizvi Architects, Inc.  
334 Boylston Street  
Boston, MA 02116

ENGINEER:

Richard D. Kimball Company, Inc.  
70 Fargo Street, Suite 800  
Boston, MA, 02210

EDIC Project No. 1272C  
Chapter 149 M.G.L.  
Date: February, 2014

Martin J. Walsh, Mayor of Boston  
Brian P. Golden, Acting Director

Economic Development & Industrial Corporation

**TABLE OF CONTENTS**

Code Compliant Stairway Improvements at 12 Channel Street, Phase 1

EDIC Project No. 1272C

**PART A - BIDDING DOCUMENTS, CONTRACT FORMS AND GENERAL CONDITIONS**

**BIDDING REQUIREMENTS AND DOCUMENTS**

**PAGE NUMBER**

Checklist for Bidders	CFB-1 THRU CFB-2
Advertisement	ADV-1 THRU ADV-3
Notice to all Bidders	NTB-1 THRU NTB-12
Form for General Bid	FGB-1 THRU FGB-9
Statement of Tax Compliance	STC-1
Statement of Bidders Qualifications	SBQ-1 THRU SBQ-6

**CONTRACT FORMS**

Contract	C-1 THRU C-4
Certificate of Authority	CA-1
Performance Bond	PB-1 THRU PB-2
Payment Bond	PAYB-1 THRU PAYB-2
Minimum Wage Rate	MWR-1 THRU Page 12
Boston Resident Jobs Policy & Contract Supplement	11 Pages
Apprentice Training	AT-1 THRU AT-3
Standard Forms Index	SFI-1 THRU SFI-2
Standard Forms	18 Pages

Economic Development & Industrial Corporation

Payment Forms	PF-1 THRU PF-2
<b><u>GENERAL CONDITIONS</u></b>	
General Conditions Index	GCI-1 THRU GCI-4
General Conditions	GC-1 THRU GC-78
Index for Special Conditions	SCI-1 THRU SCI-2
Special Conditions	SC-1 THRU SC-24

**PART B - SPECIFICATIONS**

**SECTION 1A**

Schedule of Values	SV-1
--------------------	------

**DIVISION 01 - GENERAL REQUIREMENTS**

Section 011000 General Requirements	16
Section 012200 Unit Prices	2
Section 016200 Substitution Request Form	3

**DIVISION 02 - EXISTING CONDITIONS**

Section 024100 Selective Demolition	7
-------------------------------------	---

**DIVISION 03 - CONCRETE**

Section 030100 Concrete Repairs And Patchwork	5
---	---

**DIVISION 05 - METALS**

Section 055150 Metal Railings	6
-------------------------------	---

**DIVISION 06 - WOOD, PLASTICS AND COMPOSITES**

Section 061000 Rough Carpentry	4
--------------------------------	---

**DIVISION 07 - THERMAL AND MOISTURE PROTECTION**

Section 078410 Penetration Firestopping	6
Section 078440 Fire-Resistive Joint Systems	6
Section 079200 Joint Sealants	7

**DIVISION 08 - OPENINGS**

Economic Development & Industrial Corporation

Section 081110 Hollow Metal Doors and Frames	9
Section 085123 Steel Window Repair	2
Section 087100 Door Hardware	10

**DIVISION 09 - FINISHES**

Section 099000 Painting and Coating	13
-------------------------------------	----

**DIVISION 10 - SPECIALTIES**

Section 101500 Photoluminescent Safety Prods	3
--	---

END OF  
TABLE OF CONTENTS

Economic Development & Industrial Corporation

**PART A**

**BIDDING DOCUMENTS  
CONTRACT FORMS  
GENERAL CONDITIONS**

Economic Development & Industrial Corporation

CHECKLIST FOR BIDDERS

Code Compliant Stairway Improvements at 12 Channel Street, Phase 1  
Stair "B", **12 Channel Street, Boston Marine Industrial Park**

[This Checklist is provided for Bidders' convenience only. Bidders are urged to read the Contract Documents carefully and use this form as an aid in the preparation of their bids.]

CHECK  
ITEMS

1. \_\_\_\_\_ The Bid is submitted on the Bid Form provided by the Authority.
2. \_\_\_\_\_ The name of the Bidder has been provided on the Bid Form.
3. \_\_\_\_\_ All Addenda have been acknowledged on the Bid Form.
4. \_\_\_\_\_ The Proposed Contract Sum has been set forth in both words and figures.
5. \_\_\_\_\_ The Bid Proposal, if any, has been completed; all multiplication and addition has been rechecked for accuracy.
6. \_\_\_\_\_ The Bid Form is signed by an authorized representative of the Bidder.
7. \_\_\_\_\_ Company information has been provided (following signature section on Bid Form).
8. \_\_\_\_\_ A Bid Deposit in the amount of a minimum of 5% of the Proposed Contract Price has been provided in the form a certified check, cashier's check or treasurer's check made payable to the Economic Development & Industrial Corporation, or in the form of a bid bond, signed and sealed by both the Bidder and Surety, with the Surety's current Power of Attorney attached.
9. \_\_\_\_\_ The information requested in the Statement of Bidder Qualifications has been provided, the Statement signed, and notarized by the General Bidder.

Economic Development & Industrial Corporation

10. \_\_\_\_\_ The information requested in the Statement of Tax Compliance has been provided, and signed, by the General Bidder.
11. \_\_\_\_\_ The Apprentice Sponsor Verification has been provided in accordance with the requirements noted in the Notice to all Bidders.
12. \_\_\_\_\_ The bid will be submitted to the Authority at the address indicated in the Notice to all Bidders section, sealed opaque envelopes (inner and outer) bearing on the outside the words 'BID DOCUMENTS', the name and address of the Bidder, the date and time of opening, and the title of the project for which the bid is submitted. If to be forwarded by mail, the sealed bid marked as described above together will be enclosed in another envelope with the notation "BID ENCLOSED" on the face and addressed as indicated in the Invitation for Bids.
13. \_\_\_\_\_ DCAMM Certificate of Eligibility and Update Statement are included with the bid submission.
14. \_\_\_\_\_ The **Schedule of Values** has been included with the Contractor's quantities, unit prices and scheduled values per the contract requirements.

BIDDERS ARE REMINDED THAT IT IS THEIR RESPONSIBILITY TO DELIVER THEIR BIDS TO THE AUTHORITY NOT LATER THAN THE TIME SET FOR OPENING OF BIDS. LATE BIDS WILL NOT BE ACCEPTED.

**ADVERTISEMENT**

**NOTICE TO CONTRACTORS**

**INVITATION TO BID** for the construction project entitled, Code Compliant Stairway Improvements at 12 Channel Street, Phase 1, 12 Channel Street, Boston Marine Industrial Park (EDIC Project No. 1272C).

The Economic Development & Industrial Corporation (EDIC), acting by its Acting Director, hereinafter referred to as the Awarding Authority, hereby invites sealed competitive bids for the above-entitled project. Bids shall be on a form supplied by the EDIC, shall be clearly identified as a bid, shall contain the required bid deposit and certifications and shall be signed by the bidder. All bids for this project are subject to all applicable provisions of law, including without limitation, sections 39F and 39K through 39P of Chapter 30 and Chapter 149 Sections 29 and 44A-44J, inclusive of the Massachusetts General Laws, as amended, and shall be in accordance with the terms and provisions of the contract documents entitled **Code Compliant Stairway Improvements at 12 Channel Street, Phase 1.**

**SCOPE OF WORK:** The work includes the demolition of an existing out-of-date handrail/guardrail system, installation of a handrail and guardrail system spanning 9 floors, new fire-rated door and frame replacements, interior painting, window and concrete repairs and misc. signage at Stair "B" of the 12 Channel Street Building in the Boston Marine Industrial Park. Estimate for the work is \$250,000.00. For further information, please contact Mr. Nat Gorham, EDIC Project Manager, at (617) 918-6252 or the architect, Deacon Marvel, AIA, of Rizvi Architects, at (617) 267-9090.

**TIME AND PLACE FOR FILING BIDS:** General bids shall be filed with the Awarding Authority at 22 Drydock Avenue, Suite 201, before 12:00 PM on February 27, 2014, at which time and place respective bids will be opened forthwith and read aloud. General bids will be valid only when accompanied by (1) a **Certificate of Eligibility** issued by the DCAMM, showing that the contractor has been approved to bid on projects the size and nature of that advertised and (2) an **Update Statement** summarizing the contractor's record for the period between the latest DCAMM certification and the date the contractor submits his bid.

**No Filed Sub-bids required.**

Economic Development & Industrial Corporation

All bidders are hereby notified that bid deposits must accompany the filed proposal, must be a **minimum of five percent (5%)** of his or her bid and shall be in the form of a bid bond, certified check, cashier's check or treasurer's check made payable to the Economic Development & Industrial Corporation. All bids which are not accompanied by the proper bid deposit or certification or which are on a form not completely filled in or which are incomplete, conditional or obscure, or which contain any additions or deductions not called for, shall be invalid.

A pre-bid conference will be held at the lobby of the 12 Channel Street building in the Boston Marine Industrial Park @ 10:00 A.M. on **Thursday, February 20, 2014**. Attendance at the pre-bid conference is not mandatory; however, all bidders will be held responsible for what transpires whether they were present or not.

**CONTRACT DOCUMENTS** Plans and Specifications for this project will be available on the BRA/EDIC website on or about **February 4, 2014**, after 12:00 P.M., to all interested parties at <http://www.bostonredevelopmentauthority.org/opportunities-properties/rfps-rfqs-bids/1272c-stairway-12channelst-phase1> **FOR DOWNLOAD AT NO CHARGE**. To download the documents, Contractors must complete the form at the bottom of the page and submit their contact information. Upon submission, Contractors will also be included on future project mailings and addenda. **For hard copy formats**, interested parties must contract directly with a printing company. For your convenience, a digital copy of the contract documents are on file at BFS Business Printing, 76 South Street, Boston, MA 02111; to purchase directly, please send your request with the job name (*Code Compliant Stairway Improvements at 12 Channel Street, Phase 1*) by email at [South@bfsprinters.com](mailto:South@bfsprinters.com).

The attention of all bidders is specifically directed to the contract provisions regarding bonds, insurance, permits, time of performance, liquidated damages and minimum wage rates. The attention of all bidders is also directed to 'An Ordinance Regulating Employers on Public Construction Contracts' and associated Sponsor Verification Form.

The attention of all bidders is specifically directed to the Boston Resident Jobs Policy of the contract. The contractor during the performance of the work shall be required to maintain a ratio of not less than Fifty percent (50%) Boston Residents, Twenty-five percent (25%) Minority and Ten percent (10%) Women in each trade of the project. Additionally the contractor is notified of the requirements to pay not less than the prevailing

Economic Development & Industrial Corporation

minimum wage stated in the Contract Documents and also the Labor Harmony Clause stated in the Notice to All Bidders.

Attention is directed to the Notice to all Bidders, the Form for General Bid, and the prohibition of abnormally high or low prices for any item of work. Bids may be held by EDIC for a period not to exceed thirty (30) business days from the date of the opening of bids for the purpose of reviewing the bids and investigating the qualifications of the bidders, prior to awarding the contract. The EDIC reserves the right to waive any and all informalities in the bidding or to reject any and all bids if it is in the public interest to do so.

**Brian P. Golden, Acting Director**

Economic Development & Industrial Corporation

**NOTICE TO ALL BIDDERS**

1. **INVITATION**

- 1.1. The Acting Director of the Economic Development & Industrial Corporation, 1 City Hall Plaza, Boston, MA invites proposals for performing the work described in the contract documents attached hereto. Proposals for doing the work shall be submitted to the Economic Development & Industrial Corporation, 22 Drydock Avenue, Suite 201, Boston, MA 02210.

2. **SUBMITTAL OF BIDS**

- 2.1. Proposals shall be submitted on the accompanying forms. Each proposal shall be filled out, signed, enclosed in an envelope, sealed, and plainly marked with a descriptive title of the project, and shall be filed with the Official at the place and time designated in the advertisement accompanying these documents.

Each bidder declares that his proposed contract price includes all sums for expenses related to administrative duties, overhead, profit, bonds and permits. Also, the price for any item bid and/or contracted for, unless otherwise noted or specified, shall include full compensation for all materials, equipment, tools, labor and incidental work necessary to complete the item to the satisfaction of the Engineer and Official. The prices shall, without exception, include all royalties and costs arising from patents, trademarks and copyrights in any way involved in the work.

- 2.1.1 General Bids will be valid only when accompanied by (1) a Certificate of Eligibility issued by DCAMM showing that the Contractor has been approved to bid on projects of the size and nature of that advertised (Demolition), and (2) an Update Statement summarizing the Contractor's record for the period between the latest DCAMM certification and the date the Contractor submits his or her bid.
- 2.2. A **bid deposit** in the form of a bid bond, a certified check, or a treasurer's or cashier's check issued by a responsible bank or trust company, shall be presented, payable to the Economic Development & Industrial Corporation. A bid bond shall be (a) in a form satisfactory to the Awarding Authority, (b) with a surety company qualified to do

Economic Development & Industrial Corporation

business in the Commonwealth and satisfactory to the Awarding Authority and (c) conditioned upon the faithful performance by the principal of the agreements contained in the general bid. The bid deposit shall be in the amount of a **minimum five percent (5%) of the Total Contract Bid Sum** as specified in the advertisement and shall accompany the copy of the bid proposal filed with the Official. This bid deposit shall become and be the property of the Economic Development & Industrial Corporation as liquidated damages if, after a proposal is accepted the bidder shall fail to enter into the required contract within five (5) weekdays next, excluding Saturdays, Sundays and legal holidays, after notice of such acceptance is mailed or delivered to him.

- 2.3. All bid deposits except those of the three (3) lowest qualified, responsible and eligible general bidders shall be returned upon the execution and delivery of the general contract or, if no award is made, upon the expiration of thirty (30) days, Saturdays, Sundays and legal holidays excluded, after the opening of bids or, if federal government approval is required, within thirty (30) days, Saturdays, Sundays and legal holidays excluded, after such approval. Except, if any bidder fails to perform his agreement to execute a contract and furnish a performance bond and also a labor and materials or payment bond as stated in this bid, his bid deposit shall become and be the property of the Economic Development & Industrial Corporation, as liquidated damages, except for any amount of the bid deposit that exceeds the difference between his bid price and the bid price of the next lowest responsible and eligible bidder and in the case of death, disability, bona fide clerical or mechanical error of a substantial nature, or other documented unforeseen circumstances affecting the general bidder, his bid deposit shall be returned to him.

3. **INVESTIGATION AND STUDY OF SITE AND CONTRACT DOCUMENTS**

- 3.1. Before submitting his proposal, each bidder shall visit the site, examine its conditions, thoroughly acquaint him/herself with all obstacles and advantages for performing the work, study the contract documents and compare the same with the site conditions found.
- 3.2. The attention of all bidders is called to, and all bids submitted shall be subject to, all applicable provisions of

Economic Development & Industrial Corporation

law, including without limitations, Section 39F and 39K through 39P, inclusive, of Chapter 30 and Sections 29 and 44A through 44L of Chapter 149 of the General Laws of the Commonwealth of Massachusetts, as amended and Federal Laws where Federal Monies are involved.

4. **QUESTIONS**

- 4.1. All questions as to the interpretation of the contract documents shall be submitted in writing to the Official, and written answers to such questions will be sent by the Official to every individual or firm on record as having taken a set of contract documents. No questions will be answered unless received at least seven (7) days prior to the expiration of the time set for filing bids.

5. **CONTRACT DOCUMENTS**

- 5.1. The Awarding Authority will, upon deposit of the amount per set designated in the Advertisement, furnish one (1) complete set of Contract Documents to each General Bidder requesting same. Deposits will be refunded upon return of complete sets of Contract Documents in good Condition within 30 days of the bid opening.

6. **GENERAL BIDDERS AS FOREIGN CORPORATIONS**

- 6.1. Pursuant to G.L. c. 30, s. 39, the Economic Development & Industrial Corporation will not enter into a contract with a foreign corporation until such foreign corporation has filed with the Awarding Authority a certificate from the Secretary of State for the Commonwealth stating that such foreign corporation has complied with G.L. c. 181, s. 3 and 5, and the date of such compliance; nor shall a subcontractor, of which is a foreign corporation, be approved by the Awarding Authority as one furnishing labor and materials for a part of the work, until such foreign corporation has filed with the Awarding Authority a certificate of the said Secretary of State stating that such corporation has complied with G.L. c. 181, s. 3 and 5, and the date of such compliance.

7. **BID FORMS TO BE FURNISHED**

- 7.1. The Awarding Authority will furnish to every eligible person applying therefore a Form for General Bid.

Economic Development & Industrial Corporation

8. GENERAL BIDS

- 8.1. General bids shall be submitted on the Form for General Bid furnished by the Awarding Authority, a sample of which is bound into the Contract Documents and which shall not be removed. The General Bid shall be completely filled in, signed, enclosed in an envelope, sealed and plainly marked with the description of the work to be done. The bid, accompanied by a bid deposit in the form of a bid bond, or cash, or a certified check, or a treasurer's or cashier's check issued by a responsible bank or trust company, payable to the Economic Development & Industrial Corporation, in the amount specified in the Advertisements, shall be filed with the Awarding Authority at the place designated in the Advertisement for the opening of general bids.
- 8.2. General bids shall be for the complete work as specified; the general contractor shall be selected on the basis of such general bids.

9. BID DEPOSITS OR BOND

- 9.1. Every general bid shall be accompanied by a bid **deposit** in the form of a bid bond or cash or a certified, treasurer's or cashier's check issued by a responsible bank or trust company, payable to the Economic Development & Industrial Corporation. A bid bond shall be (a) in a form satisfactory to the Awarding Authority, (b) with a surety company qualified to do business in the Commonwealth and satisfactory to the Awarding Authority and (c) conditioned upon the faithful performance by the principal of the agreements contained in the general bid. The bid deposit shall be in the amount designated in the advertisement which shall be an amount equal to **a minimum of five percent (5%)** of the value of the proposed work as submitted by the General Contractor for the project.
- 9.2. All bid deposits except those of the three (3) lowest qualified, responsible and eligible general bidders shall be returned within five days or, if no award is made, upon the expiration of thirty (30) days, Saturdays, Sundays and legal holidays excluded, after the opening of bids or, if federal government approval is required, within thirty (30) days, Saturdays, Sundays and legal holidays excluded, after such

Economic Development & Industrial Corporation

approval; except that, if any bidder fails to perform his agreement to execute a contract and furnish a Performance Bond and also a Labor and Materials or Payment Bond as stated in this bid, his bid deposit shall become and be the property of the Economic Development & Industrial Corporation, as liquidated damages, provided that the amount of the bid shall not, in any event, exceed the difference between his bid price and the bid price of the next lowest responsible and eligible bidder and in the case of death, disability, bona fide clerical or mechanical error of a substantial nature, or other documented unforeseen circumstances affecting the general bidder, his bid deposit shall be returned to him.

- 9.3. In addition to the provisions for the return of bid deposit in the first sentence of Section 9.2, upon the receipt of a bid bond in an amount not less than the amount of the required bid deposit, the Awarding Authority shall return any bid deposit of a general bidder forthwith after public opening of general bids. The bid bond shall be in an amount and in the form provided in Section 9.1.

10. **REJECTION OF GENERAL BIDS**

- 10.1. Required by Law.

- 10.1.1. Every general bid and which is not accompanied by the proper bid deposit, or which otherwise does not conform with sections Forty-four A to Forty-four J inclusive of Chapter 149 of the General Laws, as amended, or which is on a form not completely filled in, or which is incomplete, conditional or obscure, or which contains any addition not called for, shall be invalid and the Awarding Authority shall reject every such general bid; provided however, that no such general bid shall be rejected because of failure to submit prices for, or information relating to, any item or items for which no specific space is provided in the bid form furnished by the Awarding Authority; but this sentence shall not be applicable to any failure to furnish prices or information required by this section to be furnished in the Form for General Bid or to any failure to furnish prices or information required by Section Forty-four F to be furnished in the Form for General Bid.

Economic Development & Industrial Corporation

10.1.2. The general bid price shall be the price set forth in paragraph C of the Form for General Bid.

11. **FURTHER RIGHT TO REJECT GENERAL BIDS**

11.1. The Awarding Authority further reserves the right to reject any or all General Bids if it is in the public's interest to do so.

12. **AWARD TO NEXT LOWEST RESPONSIBLE AND ELIGIBLE GENERAL BIDDER**

12.1. If the bidder selected as the general contractor fails to perform his agreement to execute a contract in accordance with the terms of his general bid and furnish a Performance Bond and also a Labor and Materials or Payment Bond as stated in his general bid, an award shall be made to the next lowest responsible and eligible general bidder.

12.2. The thirty (30) day time limit shall not be applicable to a second or subsequent award made after the expiration of the time with the consent of said next lowest responsible and eligible general bidder, and made because the original award made within the time limit was invalid, or because the general bidder failed to execute the general contract or provide a performance bond and labor and materials or payment bond.

12.3. Except as otherwise provided in Section 44E of Chapter 149, of the General Laws, as amended, the words "lowest responsible and eligible bidder" shall mean the bidder whose bid is the lowest of those bidders possessing the skill, ability, and integrity necessary to the faithful performance of the work.

13. **PRE-CONTRACT SUBMITTALS**

13.1. Before any contract is awarded, the bidder may be required to furnish without expense to the Official a complete statement of the origin, composition and manufacturer of any or all materials proposed to be used in the construction of the work, together with all samples, which may be subjected to the tests required by the Official to determine their quality and fitness for the work.

14. **WORKING DAYS DEFINED**

Economic Development & Industrial Corporation

- 14.1. For the purposes of and during the period of this contract or any extension thereof, a working day shall be considered as any day, Monday through Friday, except when such a day falls on a legal holiday of the Commonwealth of Massachusetts or whenever the Official shall, for a good reason, determine in writing that such day is not to be considered a working day.

Further, if requested by the contractor in writing and then approved by the Official, the contractor may work on a Saturday, Sunday or legal holiday and such days will be considered as working days at no additional expense to the Authority.

15. **EQUALITY**

- 15.1. Except where otherwise specifically provided to the contrary, the words "or equal" are hereby inserted immediately following the naming or describing of each article, assembly, system or any component part thereof, in the contract documents, addenda or other documents incorporated in and made a part of the contract.
- 15.2. In a case of substitution, under the "or equal" provisions of this contract, the bidder selected as the Contractor shall submit to the Official a written notice containing the name and describing the full particulars of any item(s) of work other than those specifics named or described therefore in the contract or in the documents incorporated in and made a part of the contract. Upon conclusion of the investigation, the Official shall in writing, promptly advise the Contractor that the item(s) in question is, or is not, considered the equal of the item(s) named or described in aforesaid, and that said item(s) may or may not be furnished on the work accordingly.
- 15.3. Forthwith upon receipt of such written notice, the Official shall conduct or cause to be conducted a reasonable investigation to determine whether the item(s) in question shall be considered equal to the item(s) named or described in the contract or in the documents incorporated in and made a part of the contract. Upon conclusion of the investigation, the Official shall in writing, promptly advise the Contractor that the item(s) in question is, or is

Economic Development & Industrial Corporation

not, considered the equal of the item(s) named or described in aforesaid, and that said item(s) may or may not be furnished on the work accordingly.

- 15.4. Although it is understood that an item equal to that named or described in the contract documents or other documents incorporated in and made a part of the contract may be furnished on the work, in no case can that item be furnished on the work unless the Official shall consider, in writing, the item as the equal of the item so named or described, in the contract documents, as provided by law.

16. **BONDS**

- 16.1. A Performance Bond and also a Labor and Materials or Payment Bond, each of a surety company qualified to do surety business in the Commonwealth of Massachusetts, satisfactory to the awarding authority, and each in the sum of one hundred percent (100%) of the contract price will be required of the successful general bidder.

17. **CONFLICT OF INTEREST**

- 17.1. A bidder filing a proposal thereby certifies that the proposal is made in good faith, without fraud, collusion or connection of any kind with any other bidder for the same work, and that the bidder is competing solely in its own behalf without connection with, or obligation to, any undisclosed person or firm. If any officer, agent, or employee of the Economic Development & Industrial Corporation and/or City of Boston has a financial interest in the bidder, he/she should consult with the Law Department, Room 615, City Hall, to learn what must be done to comply with the provisions of the Conflict of Interest Law, (G.L.C. 268A) and the City Charter (St. 1901, c. 486, s 8).

18. **EQUAL OPPORTUNITY**

- 18.1. The attention of all bidders is specifically directed to the requirements on supplemental equal employment opportunity, anti-discrimination and affirmative action programs set forth in the provisions of this contract. No bidder shall be eligible for award on this project unless he is able to

Economic Development & Industrial Corporation

demonstrate to the satisfaction of the Awarding Authority his ability to comply with these requirements.

19. **WORKFORCE REQUIREMENTS**

During the performance of this contract, the general contractor shall agree and shall require that his subcontractors agree to the following workforce requirements (labor):

1. **MINORITY WORKFORCE**: The contractor and its subcontractors shall maintain a not less than 25 percent ratio of minority man-hours to total employee man-hours in each trade worked on the contract.
2. **FEMALE WORKFORCE**: The contractor and its subcontractors shall maintain a not less than 10 percent ratio of female employee man-hours to total employee man-hours in each trade worked on the contract.
3. **BOSTON RESIDENTS**: The contractor and its subcontractors shall maintain a not less than 50 percent ratio of Boston resident employee man-hours to total employee man-hours in each trade worked on the contract.
4. The workforce requirements of Paragraph (1), (2), and (3) above shall apply to each trade that appears on the list of "Classification and Minimum Wage Rates" as determined by the Commissioner of Labor and Industries under the provisions of Chapter 149, Section 26 through 27G, of the General Laws of Massachusetts, as amended. If you have any questions pertaining to the applicability of these requirements, please call the EDIC Contract Compliance Division, Assistant Director for Contract Compliance, Ms. Patricia A. Doherty, at (617) 918-6213.

20. **LABOR HARMONY**

- 20.1. The general contractor shall certify that itself and all subcontractors are able to and will work harmoniously with all elements of labor employed or to be employed on the work, or adjacent to the site where work will be performed under this Contract, and shall perform such work in a manner so as to promote the orderly and efficient performance of the work under this and separate Contracts. The undersigned

Economic Development & Industrial Corporation

General Bidder shall include corresponding provisions of working in harmony with all elements of labor employed at or adjacent to the site in all its subcontracts and agreements.

- 20.2. The Project's construction will take place in densely confined project site, and will involve work in, on, and around existing EDIC tenant developments and business use, which cannot be taken completely out of service for any extended period during construction. In addition the contractor must work around existing tenant operations in the building. Delay or disruption of the project would significantly burden EDIC and add to the cost of the Project borne by EDIC; prevent the use and occupancy of the building and lengthen the inconvenience of EDIC's tenants and business in areas contiguous to the construction. Because of the foregoing, the Economic Development & Industrial Corporation is placing this Labor Harmony Clause in effect to ensure that the successful Contractor will furnish labor that will work in harmony with all other elements of labor employed on the Project.
- 20.3. As part of the materials submitted in support of the Contract, the Contractor shall furnish, within **fourteen (14)** days after notification of award, a plan setting forth the measures it will take to promote labor harmony on the Project. The Plan shall also include a sworn statement describing any labor disputes the Contractor has been involved in during the past five years including, in each case, the nature of the labor dispute; the name of the labor organization(s), if any, participating in the dispute; the name, location and owner of the project at which the dispute occurred; the dates and duration of the dispute and how the dispute was resolved; and whether the labor dispute disrupted work at the project and, if so, the degree and duration of such disruption. The plan submitted should also identify the likelihood of any such labor dispute(s) occurring on the Project and the preventive steps that the Contractor will take to ensure that such occurrences do not take place. Acceptance of the plan does not constitute approval by the Economic Development & Industrial Corporation or relieve the Contractor of its ongoing obligation to provide labor that results in harmony with all other elements of labor on the Project.

Economic Development & Industrial Corporation

- 20.4. Each Contractor shall furnish, and shall require all of its subcontractors (including sub-bidders) of any tier to furnish, labor that works in harmony with all other elements of labor employed, or to be employed, on the Project. Without limiting the generality of the foregoing, "Labor Harmony" shall include the provision of labor that will not cause, cause to be threatened, engage in, or give rise to, either directly or indirectly, any disruption, slowdowns, or stoppages to the Work of the Project, or any violence or harm to any persons or property on the Project.
- 20.5. The requirement to provide labor harmony as contained above is a material element of the Contract. Failure by the Contractor, or any of its subcontractors of any tier, to comply with this requirement shall be deemed a material breach of the Contract and subject the Contractor to all rights and remedies the Economic Development & Industrial Corporation may have at law or under the Contract Documents, including, without limitation, the Economic Development & Industrial Corporation's right to stop the Work and/or terminate the Contract; in which event the Contractor shall be paid and/or charged (including drawing down on the Performance Bond) as if terminated under the Default Termination provisions of **Article 13 of the General Conditions** of the Contract Documents. The Contractor shall be liable for all damages occasioned by a breach of this Labor Harmony Clause including but not limited to extra costs due to delays caused by a breach of this Labor Harmony Clause and the resultant extra costs for construction acceleration to maintain the original construction schedules of the Project.

Each Contractor shall include this Labor Harmony Clause in all subcontracts, regardless of tier, which it lets involving this Project.

For the purposes of this Labor Harmony Clause, the term "Contractor" and "Contract" will be deemed to include "subcontractor(s)" and "subcontract(s)," respectively.

21. **APPRENTICE TRAINING**

With his/her bid, each bidder shall submit to the Authority the following:

Economic Development & Industrial Corporation

A) 'Sponsor Verification letter from the Commonwealth of Massachusetts Department of Labor and Workforce Development - Division of Apprentice Training (on the Sponsor Verification form included at the Contract Forms portion of the Contract Documents), evidencing that at the time of bidding, the bidder is currently an *Approved Sponsor of Apprentices*, for the Division of Apprentice Training; or

B) A 'Sponsor Verification' letter from the Commonwealth of Massachusetts Department of Labor and Workforce Development - Division of Apprentice Training, evidencing that at the time of bidding an organization is currently an *Approved Sponsor of Apprentices*, for the Division of Apprentice Training **and** a letter from the Sponsor Organization indicating that the bidder is currently a member in good standing of that organization.

Failure to comply with the above shall be cause for rejection of the bid.

22. MASSACHUSETTS SALES TAX

22.1. The Economic Development & Industrial Corporation is exempt from the provisions of the Massachusetts Sales Tax. The Certification of Exemption No. is **E-042-519-577**.

**END OF  
NOTICE TO ALL BIDDERS**

Economic Development & Industrial Corporation

\_\_\_\_\_  
Contractor

**FORM FOR GENERAL BID**

TO THE AWARDING AUTHORITY, acting in the name and behalf of the Economic Development & Industrial Corporation:

A. The undersigned proposes to furnish all labor, materials, equipment and services for the construction improvements for the **Code Compliant Stairway Improvements at 12 Channel Street, Phase 1, EDIC Project No. 1272C**, Boston Marine Industrial Park, in accordance with the accompanying contract documents, Plans and Specifications prepared by Rizvi Architects, for the Contract Price specified below, subject to additions and deletions according to the terms of the Contract Documents.

B. This bid includes Addenda numbered: \_\_\_\_\_

C. The Proposed Total Contract Bid Price is: \_\_\_\_\_

\_\_\_\_\_  
Dollars (\$) \_\_\_\_\_

D. Fill out all prices and amounts in ink. Proposed Total Contract Bid Price shall be entered in writing and in figures. The Unit Prices and Item Amounts in the Schedule of Bid Prices shall be entered in figures/words. In case of discrepancy between Unit Price and Item Amount, the Unit Price shall govern. In case of discrepancy between total of items and total of bid amount stated, the total of the individual items shall govern. Use the Form for General Bid accompanying this document when submitting a bid proposal and submit the Form for General Bid in its entirety along with the required bid deposit.

E. The undersigned agrees that, if he is selected as general contractor, he will within five (5) days, Saturdays, Sundays, and legal holidays excluded, after presentation thereof by the Awarding Authority, execute in quadruplicate a contract in accordance with the terms of this General Bid and furnish a performance bond and also a labor and materials or payment bond, each of a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the Awarding Authority and each in the sum of One Hundred Percent (100%) of the total

Economic Development & Industrial Corporation

contract bid price, the premiums for which are to be paid by the general contractor and are included in the contract price.

- F. The undersigned general bidder hereby certifies that itself and all subcontractors are able to and will work harmoniously with all elements of labor employed or to be employed on the work, or adjacent to the site where work will be performed under this Contract, and shall perform such work in a manner so as to promote the orderly and efficient performance of the work under this and separate Contracts. The undersigned General Bidder shall include corresponding provisions of working in harmony with all elements of labor employed at or adjacent to the site in all its subcontracts and agreements.

Each Contractor shall furnish, and shall require all of its subcontractors of any tier to furnish, labor that works in harmony with all other elements of labor employed, or to be employed, on the Project. Without limiting the generality of the foregoing, "Labor Harmony" shall include the provision of labor that will not cause, cause to be threatened, engage in, or give rise to, either directly or indirectly, any disruption, slowdowns, or stoppages to the Work of the Project, or any violence or harm to any persons or property on the Project.

Each Contractor shall include this Labor Harmony Clause in all subcontracts, regardless of tier, which it lets involving this Project. For the purposes of this Labor Harmony Clause, the term "Contractor" and "Contract" will be deemed to include "subcontractor(s)" and "subcontract(s)," respectively.

- G. The undersigned bidder further agrees that, if s/he fails to perform his/her agreement to execute a contract and furnish a performance bond and also a labor and materials or payment bond as stated in this bid, the bid deposit accompanying the copy of this bid filed with the Awarding Authority shall become and be the property of the Economic Development & Industrial Corporation as liquidated damages.
- H. The undersigned represents that this proposal is made in good faith without fraud, collusion or connection of any kind with other bidders for the same work, that the undersigned is competing solely in his own behalf without connection with, or obligation to, any undisclosed person or corporation that no other person or corporation has any interest in the profits of the contract, that the undersigned has read the contract

Economic Development & Industrial Corporation

documents attached hereto and is fully informed in regard to all provisions thereof including without limitation the drawings, the time for performance and, the provisions for liquidated damages, if any, and that the undersigned has visited the premises described in said contract documents and made his own examination of the place where the work is to be done and of all conditions pertaining to the work and has made his own estimates and from such examination and estimates makes this bid.

I. The names and addresses of all persons interested in this proposal, as principals other than the undersigned, are as follows:

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J. The bidder is a (an) \_\_\_\_\_

Individual - Partnership - Corporation - Joint Venture - Trust

1. If bidder is a Partnership, state names and residential addresses of all partners:

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2. If bidder is a Corporation, state the following:

Corporation is incorporated in the State of:

President is: \_\_\_\_\_

Treasurer is: \_\_\_\_\_

Place of business is: \_\_\_\_\_

(Street, City, State and Zip Code)

3. If the bidder is a Foreign Corporation, also state the following:

(a) The Power of Attorney required by \_\_\_\_\_

Economic Development & Industrial Corporation

General Laws, c.181, s., was filed on: \_\_\_\_\_

- (b) The Certificate and copy of its Charter, Articles or Certificate of Incorporation required by General Laws, c. 181, s.5, were filed on: \_\_\_\_\_

4. If the bidder is a Joint Venture, state the names and business addresses of each person, firm or company that is party to the venture:

A copy of the joint venture agreement is on file at \_\_\_\_\_ and will be delivered to the Awarding Authority on request.

5. If the bidder is a Trust, state the names and residential addresses of all Trustees:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

The Trust documents are on file at:

\_\_\_\_\_  
A copy of the same will be delivered to the Awarding Authority on request.

Economic Development & Industrial Corporation

K. Bank Reference:

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L. If the business is conducted under any title other than the real name of the owner, state the time when, and place where, the certificate required by General Laws, c. 110, s. 5, was filed:

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M. The Federal Social Security Identification Number of the bidder (the number used on Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941) is: \_\_\_\_\_

N. CONTRACTOR INSURANCE REQUIREMENTS

It is the desire of Economic Development & Industrial Corporation for the Contractor to possess insurance in the types and limits specified in the Contract Documents. Contractors not possessing the required insurance and/or limits shall attach additional sheets fully describing their coverage. The Contractor shall provide sample "Certificates of Insurance" as part of this bid package and effective "Certificates of Insurance" upon notification of contract award. Said certificates shall name the Economic Development & Industrial Corporation, Rizvi Architects and RDK Engineers, Inc., as additional insured parties.

Description of Contractor's Proposed Liability Insurance:

1. Name of Current Insurance Firm:

Address: \_\_\_\_\_

Contact: \_\_\_\_\_

Phone No.: \_\_\_\_\_

2. Description of Coverage and Limits Provided By Policy:

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3. Policy Period: \_\_\_\_\_

Economic Development & Industrial Corporation

0. The undersigned offers the following information as evidence of his qualifications to perform work as bid upon according to all requirements of the plans and specifications:

1. Have been in business under present business name \_\_\_ years.
2. Ever failed to complete any work awarded \_\_\_\_\_ (if so, attach descriptive account).

DATE:	_____	BUSINESS ADDRESS:	_____
BIDDER:	_____	BUSINESS TELEPHONE:	_____
	(Company name)	FAX NUMBER:	_____
BY:	_____	EMERGENCY TELEPHONE:	_____
	(Authorized signature)		

HAVE ANSWERING SERVICE?       YES       NO

NOTE:

For the purposes of executing the bid please note the following:

1. This proposal must bear the written signature of the bidder, and must be accompanied by a bid deposit.
2. If the bidder is an individual doing business under a name other than his own name, the proposal must so state, giving the address of the individual.
3. If the bidder is a partnership, the proposal must so state, setting forth the names and addresses of all partners, and must be signed by a partner designated as such.
4. If the bidder is a corporation, the proposal must bear the seal of the corporation and must be signed by a duly authorized officer or agent of such corporation.
5. If the price of any item appears to the Acting Director to be abnormally high or low, or the bidder neglects to bid on each and every item, it may be cause for the rejection of the proposal.

**END OF  
FORM FOR GENERAL BID**

Economic Development & Industrial Corporation

**STATEMENT OF TAX COMPLIANCE**

Pursuant to Massachusetts General Laws Chapter 62C, Section 49A, I certify under the penalties of perjury that I, to my best knowledge and belief, have filed all state tax returns and paid all state taxes required under law.

\_\_\_\_\_  
Bidder's Name

\_\_\_\_\_  
Social Security Number or Federal  
Identification Number

By:

\_\_\_\_\_  
Corporate Officer's Name

\_\_\_\_\_  
Corporate Officer's Title

\_\_\_\_\_  
Date

Approval of a contract or other agreement will not be granted unless the applicant signs this certification clause.

Your social security number will be furnished to the Massachusetts Department of Revenue to determine whether you have met tax filing or tax payment obligations. Providers who fail to correct their non-filing or delinquency will not have a contract or other agreement issued, renewed, or extended.

**END OF  
STATEMENT OF TAX COMPLIANCE**

Economic Development & Industrial Corporation

STATEMENT OF BIDDER'S QUALIFICATIONS

Submitted for: EDIC Project No. 1272C

Cont. Title: Code Compliant Stairway Improvements at 12 Channel Street, Phase 1

Project Area: 12 Channel Street, Boston Marine Industrial Park

1. Name of Bidder: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ FAX: \_\_\_\_\_

FID No.: \_\_\_\_\_

2. How many years has your organization been in business as a general contractor under your present business name? \_\_\_\_\_ ; as a subcontractor? \_\_\_\_\_.

3. Indicate the class or classes of work and the number of years your organization has experience in:

Street Construction	_____	Utilities	_____
Highway Construction	_____	Heavy Utilities	_____
Bridge Construction	_____	Pumping Station	_____
Park Construction	_____	Waterfront/Marine	_____
Landscaping	_____	Doors/Windows	_____
Demolition	_____	General Construction	_____

4. Is your organization pre-qualified by any other agencies? \_\_\_\_\_  
If so, please indicate below:

Agency	Class of Work	Expiration Date
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Economic Development & Industrial Corporation

Have you ever been on the DCAMM List of Debarred Contractors?  
\_\_\_\_\_. If so, when and why.

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5. List the principal officers of the organization and their construction experience:

Name	Present Position	Years of Construction Experience	Magnitude (in Dollars) and Class (See Item 3)	Capacity During Said Experience
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6. Indicate the Project Manager (office) and the Superintendent (field) you intend to assign to this Project and their experience especially relative to this Project:

Project Manager (Office): Name \_\_\_\_\_ Yrs. Exp.: \_\_\_\_

Experience: \_\_\_\_\_

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Superintendent (Field): Name \_\_\_\_\_ Yrs. Exp.: \_\_\_\_

Experience: \_\_\_\_\_

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Economic Development & Industrial Corporation

7. List your major equipment available for this contract.

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8. Have you ever done work under another name(s)? If so, please indicate prior name(s) and address(es):

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9. Has any officer or partner of your Organization ever been an officer or partner of some other organization that failed to complete a contract? If so, state name of individual, other organization, reason therefor and bonding company:

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10. Has any officer or partner of your organization ever failed to complete a contract handled in their own name? If so, state name of individual, name of owner, reason therefor and bonding company:

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11. List below all the projects (limited to 8) similar in type and magnitude to this Project completed within the last 5 years along with Owner's contact or representative:

Contract Amount	Class of Work	When Completed	Location	Name and Telephone Number of Owner or Representative
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Economic Development & Industrial Corporation

12. List below all the contracts you have on hand:

Contract Amount	Contract Amount Remaining	Class of Work	Percent Complete	Completion Date	Location	Name and Telephone Number of Owner or Rep
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13. Have you ever failed to complete any work awarded to you?  
\_\_\_\_\_ If so, where and why?:

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14. Did you complete your last three contracts per the original contract duration? \_\_\_\_\_ If not, why?

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15. Have you ever been refused a bond whether by Bid or Performance? \_\_\_\_\_ If so, why?

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16. Indicate the bonding company(ies) and reference(s) you do business with for this type of work:

Company	Contact	Telephone
_____	_____	_____
_____	_____	_____
_____	_____	_____

Economic Development & Industrial Corporation

17. What is your overall bonding capacity? \_\_\_\_\_  
Based on work on hand what is your present bonding capability?

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18. Indicate the bank(s) and associated loan officers your organization does business with:

Bank	Contact	Telephone
_____	_____	_____
_____	_____	_____
_____	_____	_____

19. Credit Available: \_\_\_\_\_

20. In what other lines of business are you financially interested?

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21. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the EDIC? \_\_\_\_\_

22. The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the EDIC in verification of the recitals comprising this Statement of Bidder's Qualifications.

Dated at \_\_\_\_\_ (AM/PM) this \_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
(Name of Bidder)

State of \_\_\_\_\_

By \_\_\_\_\_

County of \_\_\_\_\_

Title \_\_\_\_\_

Economic Development & Industrial Corporation

\_\_\_\_\_ being duly sworn, deposes and says  
that he is \_\_\_\_\_ (Title) of \_\_\_\_\_  
\_\_\_\_\_ (Name of Organization) and that the answers to the foregoing  
questions and all statements therein contained are true and  
correct.

Subscribed and sworn to  
before me on this \_\_\_\_\_ day  
of \_\_\_\_\_, 20\_\_\_\_.

NOTARY PUBLIC: \_\_\_\_\_

MY COMMISSION EXPIRES: \_\_\_\_\_

(Affix Notary Seal Here)

**END OF  
STATEMENT OF BIDDER'S QUALIFICATIONS**

Economic Development & Industrial Corporation

CONTRACT

EDIC Project No. 1272C

Code Compliant Stairway Improvements at 12 Channel Street, Phase 1

**ARTICLE I**

The Economic Development & Industrial Corporation (herein referred to as the Authority) and the Contractor agree as hereinafter set forth, \_\_\_\_\_ being intended wherever the word Contractor is used, and the Acting Director of the Economic Development & Industrial Corporation or such other person as shall at any time be designated by the Acting Director to have charge of the work in the place of the Acting Director being intended wherever the Authority is used.

**ARTICLE II - Indemnification**

The contractor has made his proposal from his own examinations and estimates, and shall not hold the Economic Development & Industrial Corporation its agents or its employees, responsible for, or bound by, any schedule, estimate, sounding, boring or any plan thereof; shall, if any error in plan, drawing, specification or direction relating to anything to be done under the contract that comes to his knowledge, report it at once to the Authority; shall not, except as the Authority shall authorize in writing, assign, or let any part of the contract or of anything to be done thereunder; shall subject to the provisions of the contract, take all responsibility of and bear all losses resulting to him in carrying it on; and shall assume the defense of, and hold the Economic Development & Industrial Corporation, its agents and employees harmless from, all suits and claims against them, or any of them, arising from the use of any invention, patent or patent right, material, labor or implement by, or from any act, omission, or neglect of, the Contractor, his agents or employees in carrying on the contract. The Contractor shall include, as part of his Comprehensive General Liability Insurance, required under Article 10 of the Contract General Conditions a Save Harmless Agreement for the Authority containing the provisions of this Article.

Economic Development & Industrial Corporation

The Economic Development & Industrial Corporation and \_\_\_\_\_ agree as follows:

**ARTICLE III - THE CONTRACT DOCUMENTS**

The contract documents, as defined by Article 1 of the General Conditions, are hereby incorporated by reference and made a part of the contract agreement.

**ARTICLE IV - GENERAL DESCRIPTION OF THE WORK**

The contractor shall furnish all labor, materials, equipment and services necessary to perform the work required by the contract documents entitled Code Compliant Stairway Improvements at 12 Channel Street, Phase 1, dated February, 2014, prepared by Rizvi Architects, acting as, and in these contract documents, the Architect. Rizvi Architects shall also perform construction management for the Authority.

**ARTICLE V - COMMENCEMENT AND COMPLETION OF THE WORK AND LIQUIDATED DAMAGES**

It is agreed that time is of the essence of this contract. The contractor shall commence the work forthwith upon the execution of the contract by the Economic Development & Industrial Corporation, acting by the Acting Director of the EDIC after the Authority's General Counsel approval as to form and the approval of the EDIC Board of Directors, and shall bring the stipulated portions of the work to **Substantial Completion no later than 80 working days (16 weeks)** and **Final Completion no later than 90 working days (18 weeks)**. Liquidated damages in the amount of Five Hundred Dollars (\$500.00) per calendar day, will be applicable for each and every calendar day delay in completing the work after the date of Substantial Completion, in accordance with the provisions of Article 7 of the General Conditions.

**ARTICLE VI - COMPENSATION TO BE PAID BY THE EDIC**

The Economic Development & Industrial Corporation, shall pay and the Contractor shall accept as full compensation for everything furnished, done by or resulting to the contractor in carrying out this contract, subject to additions and deductions in the contract documents. The Authority shall pay the Contractor for the satisfactory completion of the work required by the Contract an

Economic Development & Industrial Corporation

amount of: \_\_\_\_\_ **Dollars and Cents (\$0.00).**

Periodically the Contractor shall submit requests for payment for work completed in accordance with the Contract Documents and the Authority shall promptly pay the portion of the contract price requested subject to an inspection and certification by the Authority's representative that the work has been satisfactorily completed.

**ARTICLE VII - AVAILABILITY OF APPROPRIATION**

This contract is subject to an appropriation being available therefore.

IN WITNESS WHEREOF, the contract is executed by the Economic Development & Industrial Corporation and by the contractor as of this \_\_\_\_ day of \_\_\_\_\_, 2014.

Economic Development  
& Industrial Corporation

Contractor:

\_\_\_\_\_  
Brian P. Golden  
Acting Director

\_\_\_\_\_  
Firm or Corporation  
\_\_\_\_\_  
\_\_\_\_\_

Approved as to Form:

\_\_\_\_\_  
EDIC General Counsel  
Kevin Morrison

By: \_\_\_\_\_

\_\_\_\_\_  
Title

(If Corporation, Affix  
Corporate Seal Below)

**END OF  
CONTRACT**

Economic Development & Industrial Corporation

CERTIFICATE OF AUTHORITY

MEETING OF BOARD OF DIRECTORS

\_\_\_\_\_, 2014

At a meeting of the Directors of \_\_\_\_\_ duly called and held at \_\_\_\_\_ on the \_\_\_\_\_ day of \_\_\_\_\_, 2014, at which a quorum was present and acting, it was Voted, that \_\_\_\_\_ the \_\_\_\_\_ of the corporation is hereby authorized and empowered to make, enter into, sign, seal, and deliver, in behalf of this corporation a contract for: **Code Compliant Stairway Improvements at 12 Channel Street, Phase 1, EDIC Project No. 1272C** with the EDIC, and a performance bond and payment or materials bond (in the full amount of the contract) in connection with such contract.

I do hereby certify that the above is a true and correct copy of the record, that said vote has not been amended or repealed and is in full force and effect as of this date, and that \_\_\_\_\_ is the duly elected \_\_\_\_\_ of this corporation.

Attest:

\_\_\_\_\_  
Clerk or Secretary of the Corporation

(If Corporation, Affix Corporate Seal)

**END OF  
CERTIFICATE OF AUTHORITY**

Economic Development & Industrial Corporation

**PERFORMANCE BOND**

Bond No. : \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENT:

That we, Contractor, as Principal, and \_\_\_\_\_, as Surety, are held and firmly bound unto the Economic Development & Industrial Corporation/Boston, Boston, Massachusetts, as Obligee, in the sum of \_\_\_\_\_ (\$ \_\_\_\_\_), well and truly to be paid, and for the payment of which we and each of us hereby bind ourselves, our heirs, executors, administrators, successors, and assignees, jointly and severally, firmly by these presents.

This OBLIGATION is UPON the CONDITION that if the person or persons designated in the contract annexed hereto as the Contractor, shall faithfully furnish and perform everything required to be furnished and performed by them under the provisions of said contract, then this obligation shall be void, otherwise it shall remain in full force and effect.

FOR VALUE RECEIVED, said surety company hereby stipulates and agrees that no changes, extension of time, alteration or addition to the terms of said contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and does hereby waive notice of any such change, extension of time, alteration or addition to the terms of said contract or the work or to the specifications.

IN WITNESS WHEREOF, the parties hereto have signed, sealed, and delivered this instrument at Boston, MA, this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
BY: \_\_\_\_\_  
Principal

\_\_\_\_\_  
Title

\_\_\_\_\_  
Surety Company

BY: \_\_\_\_\_  
Attorney - in - Fact

**END OF  
PERFORMANCE BOND**

Economic Development & Industrial Corporation

PAYMENT BOND

Bond No.: \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS:

That we, \_\_\_\_\_, as Principal, and, \_\_\_\_\_, as Surety, are held and firmly bound unto the Economic Development & Industrial Corporation, Boston, Massachusetts, as Obligee, in the sum of \_\_\_\_\_, (\$\_\_\_\_\_ ) well and truly to be paid, and for the payment of which we and each of us hereby bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THIS OBLIGATION IS UPON THE CONDITION that if the person or persons designated in the CONTRACT annexed hereto as the contractor and all subcontractors under said CONTRACT shall faithfully perform everything required of them to be performed under ALL ARTICLES of said CONTRACT and if said Contractor and all subcontractors on the work under said CONTRACT, shall pay for all labor performed or furnished and materials used so employed in the work under said CONTRACT, including lumber so employed which is not incorporated in such work and is not wholly or necessarily consumed or made so worthless as to lose its identity, but only to the extent of its purchase price less its fair salvage value, and including also any material specially fabricated at the order of the contractor or subcontractor for use as a component part of the work under said CONTRACT so as to be unsuitable for use elsewhere, even though such material has not been delivered and incorporated into such work, but only to the extent of its purchase price less its work, but only to the extent of its purchase price less its fair salvage value and only to the extent that such specially fabricated material is in conformity with the CONTRACT DOCUMENTS or any changes therein duly made; and shall pay the transportation charges for materials used or employed therein duly made; and shall pay the transportation charges for materials used or employed therein which are consigned to the contractor or to a subcontractor who has a direct contractual relationship with the contractor, and shall pay all sums due for the rental or hire of vehicles, steam shovels, rollers propelled by steam or other power, concrete mixers, tools and other appliances and equipment employed in such work; and shall pay the transportation charges directly related to such rental or hire and shall pay all sums due trustees or other persons authorized to collect such payments from the contractor or subcontractor, based upon the labor performed or furnished as aforesaid for a maximum of one hundred and twenty

Economic Development & Industrial Corporation

(120) consecutive calendar days, for health and welfare plans and other fringe benefits which are payable in cash and provided for in collective bargaining agreements between organized labor and the contractor or subcontractors, and if the contractor shall pay, or cause to be paid, all rental and transportation charges for the hire or use, in the carrying out of the work under the said CONTRACT, of dump trucks, whether such charges are incurred by the contractor, subcontractors or suppliers or transporters of material to be incorporated in such work, this obligation shall be null and void; otherwise it shall remain in full force and effect.

FOR VALUE RECEIVED, said surety company hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said CONTRACT or to the work to be performed thereunder or the CONTRACT DOCUMENTS accompanying the same shall in any ways affect its obligation on this bond, and does hereby waive notice of any such change, extension of time, alteration or addition to the terms of said CONTRACT or to the work required in the CONTRACT DOCUMENTS.

IN WITNESS WHEREOF, the parties hereto have signed, sealed and delivered this instrument at Boston, Massachusetts this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

CONTRACTOR \_\_\_\_\_

BY: \_\_\_\_\_

(Principal)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
Surety Company

BY: \_\_\_\_\_

**END OF  
PAYMENT BOND**

Economic Development & Industrial Corporation

**MINIMUM WAGE RATES**

(Including Health and Welfare Fund and Pension Fund  
Contributions)

**GENERAL:**

Refer to Article 4.4.2 of the GENERAL CONDITIONS for  
specific requirements regarding labor for this project.

These rates shall be valid in advertising for bids up to ninety  
days from the date of issue, after which new rates must be  
requested for the Public Works job classification attached hereto.

Economic Development & Industrial Corporation

**INSERT WAGE RATES HERE**



DEVAL L. PATRICK  
Governor

THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DEPARTMENT OF LABOR STANDARDS

**Prevailing Wage Rates**

As determined by the Director under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H

JOANNE F. GOLDSTEIN  
Secretary  
HEATHER E. ROWE  
Director

**Awarding Authority:** Boston Economic Development & Industrial Corp  
**Contract Number:** 1272C **City/Town:** BOSTON  
**Description of Work:** Phase 1 Replacement of the non-compliant handrail and guardrail system at 12 Channel St. Other work includes misc. signage, door and window repair, painting.  
**Job Location:** 12 Channel Street

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**Information about Prevailing Wage Schedules for Awarding Authorities and Contractors**

- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the “Wage Request Number” on all pages of this schedule.
- Awarding authorities must request an updated wage schedule from the Department of Labor Standards (“DLS”) if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. Once a contractor has been selected by the awarding authority, the wage schedule shall be made a part of the contract for that project. The wage schedule must be posted in a conspicuous place at the work site during the life of the project in accordance with M.G.L. c. 149, § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project regardless of whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.
- All apprentices working on the project are required to be registered with the Massachusetts Division of Apprentice Training (DAT). Apprentices must keep his/her apprentice identification card on his/her person during all work hours on the project. If an apprentice rate is listed on the prevailing wage schedule for the trade in which an apprentice is registered with the DAT, the apprentice may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **If an apprentice rate is not listed on the prevailing wage schedule for the trade in which an apprentice is registered with the DAT, the apprentice must be paid the journeyworker’s rate for the trade.**
- The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule. Awarding authorities are required to request these updates no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor. Contractors are required to obtain the wage schedules from awarding authorities, and to pay no less than these rates to covered workers. The annual update requirement is not applicable to 27F “rental of equipment” contracts.
- Every contractor or subcontractor which performs construction work on the project is required to submit weekly payroll reports directly to the awarding authority and keep them on file for three years. Each weekly payroll report must contain: the employee’s name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. A sample of a payroll reporting form may be obtained at <http://www.mass.gov/dols/pw>.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may report the violation to the Fair Labor Division of the office of the Attorney General at (617) 727-3465.
- Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Construction</b>						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2013	\$32.05	\$9.41	\$8.80	\$0.00	\$50.26
	06/01/2014	\$32.40	\$9.41	\$8.80	\$0.00	\$50.61
	08/01/2014	\$32.40	\$9.91	\$8.80	\$0.00	\$51.11
	12/01/2014	\$32.40	\$9.91	\$9.33	\$0.00	\$51.64
	06/01/2015	\$32.75	\$9.91	\$9.33	\$0.00	\$51.99
	08/01/2015	\$32.75	\$10.41	\$9.33	\$0.00	\$52.49
	12/01/2015	\$32.75	\$10.41	\$10.08	\$0.00	\$53.24
	06/01/2016	\$33.25	\$10.41	\$10.08	\$0.00	\$53.74
	08/01/2016	\$33.25	\$10.91	\$10.08	\$0.00	\$54.24
	12/01/2016	\$33.25	\$10.91	\$10.89	\$0.00	\$55.05
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2013	\$32.12	\$9.41	\$8.80	\$0.00	\$50.33
	06/01/2014	\$32.47	\$9.41	\$8.80	\$0.00	\$50.68
	08/01/2014	\$32.47	\$9.91	\$8.80	\$0.00	\$51.18
	12/01/2014	\$32.47	\$9.91	\$9.33	\$0.00	\$51.71
	06/01/2015	\$32.82	\$9.91	\$9.33	\$0.00	\$52.06
	08/01/2015	\$32.82	\$10.41	\$9.33	\$0.00	\$52.56
	12/01/2015	\$32.82	\$10.41	\$10.08	\$0.00	\$53.31
	06/01/2016	\$33.32	\$10.41	\$10.08	\$0.00	\$53.81
	08/01/2016	\$33.32	\$10.91	\$10.08	\$0.00	\$54.31
	12/01/2016	\$33.32	\$10.91	\$10.89	\$0.00	\$55.12
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2013	\$32.24	\$9.41	\$8.80	\$0.00	\$50.45
	06/01/2014	\$32.59	\$9.41	\$8.80	\$0.00	\$50.80
	08/01/2014	\$32.59	\$9.91	\$8.80	\$0.00	\$51.30
	12/01/2014	\$32.59	\$9.91	\$9.33	\$0.00	\$51.83
	06/01/2015	\$32.94	\$9.91	\$9.33	\$0.00	\$52.18
	08/01/2015	\$32.94	\$10.41	\$9.33	\$0.00	\$52.68
	12/01/2015	\$32.94	\$10.41	\$10.08	\$0.00	\$53.43
	06/01/2016	\$33.44	\$10.41	\$10.08	\$0.00	\$53.93
	08/01/2016	\$33.44	\$10.91	\$10.08	\$0.00	\$54.43
	12/01/2016	\$33.44	\$10.91	\$10.89	\$0.00	\$55.24
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2013	\$84.21	\$9.80	\$18.17	\$0.00	\$112.18
	08/01/2014	\$87.36	\$9.80	\$18.17	\$0.00	\$115.33
	08/01/2015	\$90.51	\$9.80	\$18.17	\$0.00	\$118.48
AIR TRACK OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2013	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	06/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	12/01/2014	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	06/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	12/01/2015	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	06/01/2016	\$37.85	\$7.30	\$12.70	\$0.00	\$57.85
	12/01/2016	\$38.85	\$7.30	\$12.70	\$0.00	\$58.85

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. <i>HEAT &amp; FROST INSULATORS LOCAL 6 (BOSTON)</i>	12/01/2013	\$30.68	\$10.40	\$5.95	\$0.00	\$47.03
	06/01/2014	\$31.58	\$10.40	\$5.95	\$0.00	\$47.93
	12/01/2014	\$32.48	\$10.40	\$5.95	\$0.00	\$48.83
	06/01/2015	\$33.43	\$10.40	\$5.95	\$0.00	\$49.78
	12/01/2015	\$34.38	\$10.40	\$5.95	\$0.00	\$50.73
ASPHALT RAKER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.49	\$10.00	\$14.18	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.49	\$10.00	\$14.18	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 1</i>	12/01/2013	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	06/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	12/01/2014	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	06/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	12/01/2015	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	06/01/2016	\$37.85	\$7.30	\$12.70	\$0.00	\$57.85
	12/01/2016	\$38.85	\$7.30	\$12.70	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2010	\$37.70	\$6.97	\$11.18	\$0.00	\$55.85

**Classification**

**Effective Date    Base Wage    Health    Pension    Supplemental Unemployment    Total Rate**

**Apprentice - BOILERMAKER - Local 29**

**Effective Date - 01/01/2010**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$24.51	\$6.97	\$11.18	\$0.00	\$42.66
2	65	\$24.51	\$6.97	\$11.18	\$0.00	\$42.66
3	70	\$26.39	\$6.97	\$11.18	\$0.00	\$44.54
4	75	\$28.28	\$6.97	\$11.18	\$0.00	\$46.43
5	80	\$30.16	\$6.97	\$11.18	\$0.00	\$48.31
6	85	\$32.05	\$6.97	\$11.18	\$0.00	\$50.20
7	90	\$33.93	\$6.97	\$11.18	\$0.00	\$52.08
8	95	\$35.82	\$6.97	\$11.18	\$0.00	\$53.97

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	08/01/2013	\$48.06	\$10.18	\$18.15	\$0.00	\$76.39
BRICKLAYERS LOCAL 3 (BOSTON)	02/01/2014	\$48.06	\$10.18	\$18.15	\$0.00	\$76.39
	08/01/2014	\$48.96	\$10.18	\$18.22	\$0.00	\$77.36
	02/01/2015	\$49.52	\$10.18	\$18.22	\$0.00	\$77.92
	08/01/2015	\$50.42	\$10.18	\$18.29	\$0.00	\$78.89
	02/01/2016	\$50.99	\$10.18	\$18.29	\$0.00	\$79.46
	08/01/2016	\$51.89	\$10.18	\$18.37	\$0.00	\$80.44
	02/01/2017	\$52.46	\$10.18	\$18.37	\$0.00	\$81.01

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - BRICK/PLASTER/CEMENT MASON - Local 3 Boston**

**Effective Date - 08/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.03	\$10.18	\$18.15	\$0.00	\$52.36
2	60	\$28.84	\$10.18	\$18.15	\$0.00	\$57.17
3	70	\$33.64	\$10.18	\$18.15	\$0.00	\$61.97
4	80	\$38.45	\$10.18	\$18.15	\$0.00	\$66.78
5	90	\$43.25	\$10.18	\$18.15	\$0.00	\$71.58

**Effective Date - 02/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.03	\$10.18	\$18.15	\$0.00	\$52.36
2	60	\$28.84	\$10.18	\$18.15	\$0.00	\$57.17
3	70	\$33.64	\$10.18	\$18.15	\$0.00	\$61.97
4	80	\$38.45	\$10.18	\$18.15	\$0.00	\$66.78
5	90	\$43.25	\$10.18	\$18.15	\$0.00	\$71.58

**Notes:**

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**Apprentice to Journeyworker Ratio:1:5**

<b>BULLDOZER/GRADER/SCRAPER</b> <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

<b>CAISSON &amp; UNDERPINNING BOTTOM MAN</b> <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2013	\$34.45	\$7.30	\$12.90	\$0.00	\$54.65
	06/01/2014	\$35.20	\$7.30	\$12.90	\$0.00	\$55.40
	12/01/2014	\$35.95	\$7.30	\$12.90	\$0.00	\$56.15
	06/01/2015	\$36.70	\$7.30	\$12.90	\$0.00	\$56.90
	12/01/2015	\$37.45	\$7.30	\$12.90	\$0.00	\$57.65
	06/01/2016	\$38.20	\$7.30	\$12.90	\$0.00	\$58.40
	12/01/2016	\$39.20	\$7.30	\$12.90	\$0.00	\$59.40

For apprentice rates see "Apprentice- LABORER"

<b>CAISSON &amp; UNDERPINNING LABORER</b> <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2013	\$33.30	\$7.30	\$12.90	\$0.00	\$53.50
	06/01/2014	\$34.05	\$7.30	\$12.90	\$0.00	\$54.25
	12/01/2014	\$34.80	\$7.30	\$12.90	\$0.00	\$55.00
	06/01/2015	\$35.55	\$7.30	\$12.90	\$0.00	\$55.75
	12/01/2015	\$36.30	\$7.30	\$12.90	\$0.00	\$56.50
	06/01/2016	\$37.05	\$7.30	\$12.90	\$0.00	\$57.25
	12/01/2016	\$38.05	\$7.30	\$12.90	\$0.00	\$58.25

For apprentice rates see "Apprentice- LABORER"

<b>Classification</b>	<b>Effective Date</b>	<b>Base Wage</b>	<b>Health</b>	<b>Pension</b>	<b>Supplemental Unemployment</b>	<b>Total Rate</b>
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2013	\$33.30	\$7.30	\$12.90	\$0.00	\$53.50
	06/01/2014	\$34.05	\$7.30	\$12.90	\$0.00	\$54.25
	12/01/2014	\$34.80	\$7.30	\$12.90	\$0.00	\$55.00
	06/01/2015	\$35.55	\$7.30	\$12.90	\$0.00	\$55.75
	12/01/2015	\$36.30	\$7.30	\$12.90	\$0.00	\$56.50
	06/01/2016	\$37.05	\$7.30	\$12.90	\$0.00	\$57.25
	12/01/2016	\$38.05	\$7.30	\$12.90	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
CARPENTER <i>CARPENTERS -ZONE 1 (Metro Boston)</i>	09/01/2013	\$40.35	\$9.80	\$15.61	\$0.00	\$65.76
	03/01/2014	\$41.18	\$9.80	\$15.61	\$0.00	\$66.59
	09/01/2014	\$42.20	\$9.80	\$15.61	\$0.00	\$67.61
	03/01/2015	\$43.22	\$9.80	\$15.61	\$0.00	\$68.63

**Apprentice - CARPENTER - Zone 1 Metro Boston**

**Effective Date - 09/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.18	\$9.80	\$1.57	\$0.00	\$31.55
2	60	\$24.21	\$9.80	\$1.57	\$0.00	\$35.58
3	70	\$28.25	\$9.80	\$10.90	\$0.00	\$48.95
4	75	\$30.26	\$9.80	\$10.90	\$0.00	\$50.96
5	80	\$32.28	\$9.80	\$12.47	\$0.00	\$54.55
6	80	\$32.28	\$9.80	\$12.47	\$0.00	\$54.55
7	90	\$36.32	\$9.80	\$14.04	\$0.00	\$60.16
8	90	\$36.32	\$9.80	\$14.04	\$0.00	\$60.16

**Effective Date - 03/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.59	\$9.80	\$1.57	\$0.00	\$31.96
2	60	\$24.71	\$9.80	\$1.57	\$0.00	\$36.08
3	70	\$28.83	\$9.80	\$10.90	\$0.00	\$49.53
4	75	\$30.89	\$9.80	\$10.90	\$0.00	\$51.59
5	80	\$32.94	\$9.80	\$12.47	\$0.00	\$55.21
6	80	\$32.94	\$9.80	\$12.47	\$0.00	\$55.21
7	90	\$37.06	\$9.80	\$14.04	\$0.00	\$60.90
8	90	\$37.06	\$9.80	\$14.04	\$0.00	\$60.90

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

CEMENT MASONRY/PLASTERING BRICKLAYERS LOCAL 3 (BOSTON)	01/01/2014	\$43.60	\$10.90	\$18.71	\$1.30	\$74.51
	07/01/2014	\$43.77	\$10.90	\$18.71	\$1.30	\$74.68
	01/01/2015	\$44.69	\$10.90	\$18.71	\$1.30	\$75.60
	07/01/2015	\$45.29	\$10.90	\$18.71	\$1.30	\$76.20
	01/01/2016	\$46.21	\$10.90	\$18.71	\$1.30	\$77.12

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - CEMENT MASONRY/PLASTERING - Eastern Mass (Boston)**

**Effective Date - 01/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.80	\$10.90	\$12.21	\$1.30	\$46.21
2	60	\$26.16	\$10.90	\$13.71	\$1.30	\$52.07
3	65	\$28.34	\$10.90	\$14.71	\$1.30	\$55.25
4	70	\$30.52	\$10.90	\$15.71	\$1.30	\$58.43
5	75	\$32.70	\$10.90	\$16.71	\$1.30	\$61.61
6	80	\$34.88	\$10.90	\$17.71	\$1.30	\$64.79
7	90	\$39.24	\$10.90	\$18.71	\$1.30	\$70.15

**Effective Date - 07/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.89	\$10.90	\$12.21	\$1.30	\$46.30
2	60	\$26.26	\$10.90	\$13.71	\$1.30	\$52.17
3	65	\$28.45	\$10.90	\$14.71	\$1.30	\$55.36
4	70	\$30.64	\$10.90	\$15.71	\$1.30	\$58.55
5	75	\$32.83	\$10.90	\$16.71	\$1.30	\$61.74
6	80	\$35.02	\$10.90	\$17.71	\$1.30	\$64.93
7	90	\$39.39	\$10.90	\$18.71	\$1.30	\$70.30

**Notes:**

Steps 3,4 are 500 hrs. All other steps are 1,000 hrs.

**Apprentice to Journeyworker Ratio:1:3**

CHAIN SAW OPERATOR LABORERS - ZONE 1	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES OPERATING ENGINEERS LOCAL 4	12/01/2013	\$41.49	\$10.00	\$14.18	\$0.00	\$65.67
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

COMPRESSOR OPERATOR OPERATING ENGINEERS LOCAL 4	12/01/2013	\$28.11	\$10.00	\$14.18	\$0.00	\$52.29
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

DELEADER (BRIDGE) PAINTERS LOCAL 35 - ZONE 1	01/01/2014	\$45.91	\$7.85	\$16.10	\$0.00	\$69.86
	07/01/2014	\$46.76	\$7.85	\$16.10	\$0.00	\$70.71
	01/01/2015	\$47.66	\$7.85	\$16.10	\$0.00	\$71.61
	07/01/2015	\$48.56	\$7.85	\$16.10	\$0.00	\$72.51
	01/01/2016	\$49.51	\$7.85	\$16.10	\$0.00	\$73.46
	07/01/2016	\$50.46	\$7.85	\$16.10	\$0.00	\$74.41
	01/01/2017	\$51.41	\$7.85	\$16.10	\$0.00	\$75.36

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - PAINTER Local 35 - BRIDGES/TANKS**

**Effective Date - 01/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.96	\$7.85	\$0.00	\$0.00	\$30.81
2	55	\$25.25	\$7.85	\$3.66	\$0.00	\$36.76
3	60	\$27.55	\$7.85	\$3.99	\$0.00	\$39.39
4	65	\$29.84	\$7.85	\$4.32	\$0.00	\$42.01
5	70	\$32.14	\$7.85	\$14.11	\$0.00	\$54.10
6	75	\$34.43	\$7.85	\$14.44	\$0.00	\$56.72
7	80	\$36.73	\$7.85	\$14.77	\$0.00	\$59.35
8	90	\$41.32	\$7.85	\$15.44	\$0.00	\$64.61

**Effective Date - 07/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.38	\$7.85	\$0.00	\$0.00	\$31.23
2	55	\$25.72	\$7.85	\$3.66	\$0.00	\$37.23
3	60	\$28.06	\$7.85	\$3.99	\$0.00	\$39.90
4	65	\$30.39	\$7.85	\$4.32	\$0.00	\$42.56
5	70	\$32.73	\$7.85	\$14.11	\$0.00	\$54.69
6	75	\$35.07	\$7.85	\$14.44	\$0.00	\$57.36
7	80	\$37.41	\$7.85	\$14.77	\$0.00	\$60.03
8	90	\$42.08	\$7.85	\$15.44	\$0.00	\$65.37

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

DEMO: ADZEMAN LABORERS - ZONE 1	12/01/2013	\$33.50	\$7.30	\$12.70	\$0.00	\$53.50
	06/01/2014	\$34.25	\$7.30	\$12.70	\$0.00	\$54.25
	12/01/2014	\$35.00	\$7.30	\$12.70	\$0.00	\$55.00
	06/01/2015	\$35.75	\$7.30	\$12.70	\$0.00	\$55.75
	12/01/2015	\$36.50	\$7.30	\$12.70	\$0.00	\$56.50

For apprentice rates see "Apprentice- LABORER"

DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS - ZONE 1	12/01/2013	\$34.50	\$7.30	\$12.70	\$0.00	\$54.50
	06/01/2014	\$35.25	\$7.30	\$12.70	\$0.00	\$55.25
	12/01/2014	\$36.00	\$7.30	\$12.70	\$0.00	\$56.00
	06/01/2015	\$36.75	\$7.30	\$12.70	\$0.00	\$56.75
	12/01/2015	\$37.50	\$7.30	\$12.70	\$0.00	\$57.50

For apprentice rates see "Apprentice- LABORER"

DEMO: BURNERS LABORERS - ZONE 1	12/01/2013	\$34.25	\$7.30	\$12.70	\$0.00	\$54.25
	06/01/2014	\$35.00	\$7.30	\$12.70	\$0.00	\$55.00
	12/01/2014	\$35.75	\$7.30	\$12.70	\$0.00	\$55.75
	06/01/2015	\$36.50	\$7.30	\$12.70	\$0.00	\$56.50
	12/01/2015	\$37.25	\$7.30	\$12.70	\$0.00	\$57.25

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DEMO: CONCRETE CUTTER/SAWYER <i>LABORERS - ZONE 1</i>	12/01/2013	\$34.50	\$7.30	\$12.70	\$0.00	\$54.50
	06/01/2014	\$35.25	\$7.30	\$12.70	\$0.00	\$55.25
	12/01/2014	\$36.00	\$7.30	\$12.70	\$0.00	\$56.00
	06/01/2015	\$36.75	\$7.30	\$12.70	\$0.00	\$56.75
	12/01/2015	\$37.50	\$7.30	\$12.70	\$0.00	\$57.50
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2013	\$34.25	\$7.30	\$12.70	\$0.00	\$54.25
	06/01/2014	\$35.00	\$7.30	\$12.70	\$0.00	\$55.00
	12/01/2014	\$35.75	\$7.30	\$12.70	\$0.00	\$55.75
	06/01/2015	\$36.50	\$7.30	\$12.70	\$0.00	\$56.50
	12/01/2015	\$37.25	\$7.30	\$12.70	\$0.00	\$57.25
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.50	\$7.30	\$12.70	\$0.00	\$53.50
	06/01/2014	\$34.25	\$7.30	\$12.70	\$0.00	\$54.25
	12/01/2014	\$35.00	\$7.30	\$12.70	\$0.00	\$55.00
	06/01/2015	\$35.75	\$7.30	\$12.70	\$0.00	\$55.75
	12/01/2015	\$36.50	\$7.30	\$12.70	\$0.00	\$56.50
For apprentice rates see "Apprentice- LABORER"						
DIRECTIONAL DRILL MACHINE OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2013	\$56.14	\$9.80	\$18.17	\$0.00	\$84.11
	08/01/2014	\$58.24	\$9.80	\$18.17	\$0.00	\$86.21
	08/01/2015	\$60.34	\$9.80	\$18.17	\$0.00	\$88.31
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2013	\$40.10	\$9.80	\$18.17	\$0.00	\$68.07
	08/01/2014	\$41.60	\$9.80	\$18.17	\$0.00	\$69.57
	08/01/2015	\$43.10	\$9.80	\$18.17	\$0.00	\$71.07
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2013	\$60.15	\$9.80	\$18.17	\$0.00	\$88.12
	08/01/2014	\$62.40	\$9.80	\$18.17	\$0.00	\$90.37
	08/01/2015	\$64.65	\$9.80	\$18.17	\$0.00	\$92.62
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2013	\$84.21	\$9.80	\$18.17	\$0.00	\$112.18
	08/01/2014	\$87.36	\$9.80	\$18.17	\$0.00	\$115.33
	08/01/2015	\$90.51	\$9.80	\$18.17	\$0.00	\$118.48
DRAWBRIDGE OPERATOR (Construction) <i>ELECTRICIANS LOCAL 103</i>	09/01/2013	\$43.96	\$13.00	\$14.42	\$0.00	\$71.38
	03/01/2014	\$44.45	\$13.00	\$14.68	\$0.00	\$72.13
	09/01/2014	\$45.12	\$13.00	\$14.70	\$0.00	\$72.82
	03/01/2015	\$45.84	\$13.00	\$14.72	\$0.00	\$73.56
	09/01/2015	\$46.80	\$13.00	\$14.75	\$0.00	\$74.55
	03/01/2016	\$47.75	\$13.00	\$14.78	\$0.00	\$75.53
For apprentice rates see "Apprentice- ELECTRICIAN"						
ELECTRICIAN <i>ELECTRICIANS LOCAL 103</i>	09/01/2013	\$43.96	\$13.00	\$14.42	\$0.00	\$71.38
	03/01/2014	\$44.45	\$13.00	\$14.68	\$0.00	\$72.13
	09/01/2014	\$45.12	\$13.00	\$14.70	\$0.00	\$72.82
	03/01/2015	\$45.84	\$13.00	\$14.72	\$0.00	\$73.56
	09/01/2015	\$46.80	\$13.00	\$14.75	\$0.00	\$74.55
	03/01/2016	\$47.75	\$13.00	\$14.78	\$0.00	\$75.53

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - ELECTRICIAN - Local 103**

**Effective Date - 09/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.58	\$13.00	\$0.53	\$0.00	\$31.11
2	40	\$17.58	\$13.00	\$0.53	\$0.00	\$31.11
3	45	\$19.78	\$13.00	\$10.78	\$0.00	\$43.56
4	45	\$19.78	\$13.00	\$10.78	\$0.00	\$43.56
5	50	\$21.98	\$13.00	\$11.11	\$0.00	\$46.09
6	55	\$24.18	\$13.00	\$11.45	\$0.00	\$48.63
7	60	\$26.38	\$13.00	\$11.77	\$0.00	\$51.15
8	65	\$28.57	\$13.00	\$12.11	\$0.00	\$53.68
9	70	\$30.77	\$13.00	\$12.43	\$0.00	\$56.20
10	75	\$32.97	\$13.00	\$12.77	\$0.00	\$58.74

**Effective Date - 03/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.78	\$13.00	\$0.53	\$0.00	\$31.31
2	40	\$17.78	\$13.00	\$0.53	\$0.00	\$31.31
3	45	\$20.00	\$13.00	\$11.04	\$0.00	\$44.04
4	45	\$20.00	\$13.00	\$11.04	\$0.00	\$44.04
5	50	\$22.23	\$13.00	\$11.37	\$0.00	\$46.60
6	55	\$24.45	\$13.00	\$11.70	\$0.00	\$49.15
7	60	\$26.67	\$13.00	\$12.03	\$0.00	\$51.70
8	65	\$28.89	\$13.00	\$12.37	\$0.00	\$54.26
9	70	\$31.12	\$13.00	\$12.69	\$0.00	\$56.81
10	75	\$33.34	\$13.00	\$13.03	\$0.00	\$59.37

**Notes :**  
 App Prior 1/1/03; 30/35/40/45/50/55/65/70/75/80

**Apprentice to Journeyworker Ratio:2:3\*\*\***

ELEVATOR CONSTRUCTOR ELEVATOR CONSTRUCTORS LOCAL 4	01/01/2012	\$52.45	\$8.78	\$6.96	\$0.00	\$68.19
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**Apprentice - ELEVATOR CONSTRUCTOR - Local 4**

**Effective Date - 01/01/2012**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.23	\$8.78	\$0.00	\$0.00	\$35.01
2	55	\$28.85	\$8.78	\$6.96	\$0.00	\$44.59
3	65	\$34.09	\$8.78	\$6.96	\$0.00	\$49.83
4	70	\$36.72	\$8.78	\$6.96	\$0.00	\$52.46
5	80	\$41.96	\$8.78	\$6.96	\$0.00	\$57.70

**Notes:**

Steps 1-2 are 6 mos.; Steps 3-5 are 1 year

**Apprentice to Journeyworker Ratio:1:1**

ELEVATOR CONSTRUCTOR HELPER <i>ELEVATOR CONSTRUCTORS LOCAL 4</i>	01/01/2012	\$38.59	\$8.78	\$6.96	\$0.00	\$54.33
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For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"

FENCE & GUARD RAIL ERECTOR <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2013	\$38.73	\$10.00	\$13.55	\$0.00	\$62.28
	05/01/2014	\$39.50	\$10.00	\$13.55	\$0.00	\$63.05

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2013	\$40.15	\$10.00	\$13.55	\$0.00	\$63.70
	05/01/2014	\$40.92	\$10.00	\$13.55	\$0.00	\$64.47

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2013	\$21.10	\$10.00	\$13.55	\$0.00	\$44.65
	05/01/2014	\$21.55	\$10.00	\$13.55	\$0.00	\$45.10

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 103</i>	09/01/2013	\$43.96	\$13.00	\$14.42	\$0.00	\$71.38
	03/01/2014	\$44.45	\$13.00	\$14.68	\$0.00	\$72.13
	09/01/2014	\$45.12	\$13.00	\$14.70	\$0.00	\$72.82
	03/01/2015	\$45.84	\$13.00	\$14.72	\$0.00	\$73.56
	09/01/2015	\$46.80	\$13.00	\$14.75	\$0.00	\$74.55
	03/01/2016	\$47.75	\$13.00	\$14.78	\$0.00	\$75.53

For apprentice rates see "Apprentice- ELECTRICIAN"

FIRE ALARM REPAIR / MAINTENANCE <i>LOCAL 103</i>	09/01/2013	\$32.97	\$13.00	\$12.77	\$0.00	\$58.74
	03/01/2014	\$33.44	\$13.00	\$13.03	\$0.00	\$59.47
	09/01/2014	\$33.84	\$13.00	\$13.05	\$0.00	\$59.89
	03/01/2015	\$34.38	\$13.00	\$13.06	\$0.00	\$60.44
	09/01/2015	\$35.10	\$13.00	\$13.08	\$0.00	\$61.18
	03/01/2016	\$35.81	\$13.00	\$13.10	\$0.00	\$61.91

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN (ASST. ENGINEER) OPERATING ENGINEERS LOCAL 4	12/01/2013	\$33.76	\$10.00	\$14.18	\$0.00	\$57.94
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER LABORERS - ZONE 1	12/01/2013	\$20.50	\$7.30	\$12.70	\$0.00	\$40.50
	06/01/2014	\$20.50	\$7.30	\$12.70	\$0.00	\$40.50
	12/01/2014	\$20.50	\$7.30	\$12.70	\$0.00	\$40.50
	06/01/2015	\$20.50	\$7.30	\$12.70	\$0.00	\$40.50
	12/01/2015	\$20.50	\$7.30	\$12.70	\$0.00	\$40.50
	06/01/2016	\$20.50	\$7.30	\$12.70	\$0.00	\$40.50
	12/01/2016	\$20.50	\$7.30	\$12.70	\$0.00	\$40.50
For apprentice rates see "Apprentice- LABORER"						
FLOORCOVERER FLOORCOVERERS LOCAL 2168 ZONE 1	09/01/2013	\$38.61	\$9.80	\$16.71	\$0.00	\$65.12
	03/01/2014	\$38.61	\$9.80	\$16.71	\$0.00	\$65.12

**Apprentice - FLOORCOVERER - Local 2168 Zone 1**

**Effective Date - 09/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.31	\$9.80	\$1.79	\$0.00	\$30.90
2	55	\$21.24	\$9.80	\$1.79	\$0.00	\$32.83
3	60	\$23.17	\$9.80	\$11.34	\$0.00	\$44.31
4	65	\$25.10	\$9.80	\$11.34	\$0.00	\$46.24
5	70	\$27.03	\$9.80	\$13.13	\$0.00	\$49.96
6	75	\$28.96	\$9.80	\$13.13	\$0.00	\$51.89
7	80	\$30.89	\$9.80	\$14.92	\$0.00	\$55.61
8	85	\$32.82	\$9.80	\$14.92	\$0.00	\$57.54

**Effective Date - 03/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.31	\$9.80	\$1.79	\$0.00	\$30.90
2	55	\$21.24	\$9.80	\$1.79	\$0.00	\$32.83
3	60	\$23.17	\$9.80	\$11.34	\$0.00	\$44.31
4	65	\$25.10	\$9.80	\$11.34	\$0.00	\$46.24
5	70	\$27.03	\$9.80	\$13.13	\$0.00	\$49.96
6	75	\$28.96	\$9.80	\$13.13	\$0.00	\$51.89
7	80	\$30.89	\$9.80	\$14.92	\$0.00	\$55.61
8	85	\$32.82	\$9.80	\$14.92	\$0.00	\$57.54

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

FORK LIFT/CHERRY PICKER OPERATING ENGINEERS LOCAL 4	12/01/2013	\$40.49	\$10.00	\$14.18	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GENERATOR/LIGHTING PLANT/HEATERS OPERATING ENGINEERS LOCAL 4	12/01/2013	\$28.11	\$10.00	\$14.18	\$0.00	\$52.29

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) <i>GLAZIERS LOCAL 35 (ZONE 1)</i>	01/01/2014	\$41.20	\$7.85	\$16.10	\$0.00	\$65.15
	07/01/2014	\$42.05	\$7.85	\$16.10	\$0.00	\$66.00
	01/01/2015	\$42.95	\$7.85	\$16.10	\$0.00	\$66.90
	07/01/2015	\$43.85	\$7.85	\$16.10	\$0.00	\$67.80
	01/01/2016	\$44.80	\$7.85	\$16.10	\$0.00	\$68.75
	07/01/2016	\$45.75	\$7.85	\$16.10	\$0.00	\$69.70
	01/01/2017	\$46.70	\$7.85	\$16.10	\$0.00	\$70.65

**Apprentice - GLAZIER - Local 35 Zone 1**

**Effective Date - 01/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.60	\$7.85	\$0.00	\$0.00	\$28.45
2	55	\$22.66	\$7.85	\$3.66	\$0.00	\$34.17
3	60	\$24.72	\$7.85	\$3.99	\$0.00	\$36.56
4	65	\$26.78	\$7.85	\$4.32	\$0.00	\$38.95
5	70	\$28.84	\$7.85	\$14.11	\$0.00	\$50.80
6	75	\$30.90	\$7.85	\$14.44	\$0.00	\$53.19
7	80	\$32.96	\$7.85	\$14.77	\$0.00	\$55.58
8	90	\$37.08	\$7.85	\$15.44	\$0.00	\$60.37

**Effective Date - 07/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.03	\$7.85	\$0.00	\$0.00	\$28.88
2	55	\$23.13	\$7.85	\$3.66	\$0.00	\$34.64
3	60	\$25.23	\$7.85	\$3.99	\$0.00	\$37.07
4	65	\$27.33	\$7.85	\$4.32	\$0.00	\$39.50
5	70	\$29.44	\$7.85	\$14.11	\$0.00	\$51.40
6	75	\$31.54	\$7.85	\$14.44	\$0.00	\$53.83
7	80	\$33.64	\$7.85	\$14.77	\$0.00	\$56.26
8	90	\$37.85	\$7.85	\$15.44	\$0.00	\$61.14

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

HOISTING ENGINEER/CRANES/GRADALLS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.49	\$10.00	\$14.18	\$0.00	\$64.67
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**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - OPERATING ENGINEERS - Local 4**

**Effective Date - 12/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$22.27	\$10.00	\$0.00	\$0.00	\$32.27
2	60	\$24.29	\$10.00	\$14.18	\$0.00	\$48.47
3	65	\$26.32	\$10.00	\$14.18	\$0.00	\$50.50
4	70	\$28.34	\$10.00	\$14.18	\$0.00	\$52.52
5	75	\$30.37	\$10.00	\$14.18	\$0.00	\$54.55
6	80	\$32.39	\$10.00	\$14.18	\$0.00	\$56.57
7	85	\$34.42	\$10.00	\$14.18	\$0.00	\$58.60
8	90	\$36.44	\$10.00	\$14.18	\$0.00	\$60.62

**Notes:**

**Apprentice to Journeyworker Ratio:1:6**

HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 17 - A	12/09/2013	\$42.35	\$9.82	\$19.33	\$2.14	\$73.64
	02/01/2014	\$42.76	\$9.82	\$19.74	\$2.17	\$74.49
	08/01/2014	\$43.61	\$9.82	\$19.74	\$2.17	\$75.34
	02/01/2015	\$44.51	\$9.82	\$19.74	\$2.17	\$76.24
	08/01/2015	\$45.51	\$9.82	\$19.74	\$2.17	\$77.24
	02/01/2016	\$46.51	\$9.82	\$19.74	\$2.17	\$78.24
	08/01/2016	\$47.66	\$9.82	\$19.74	\$2.17	\$79.39
	02/01/2017	\$48.76	\$9.82	\$19.74	\$2.17	\$80.49
	08/01/2017	\$49.86	\$9.82	\$19.74	\$2.17	\$81.59
	02/01/2018	\$51.01	\$9.82	\$19.74	\$2.17	\$82.74

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS) ELECTRICIANS LOCAL 103	09/01/2013	\$43.96	\$13.00	\$14.42	\$0.00	\$71.38
	03/01/2014	\$44.45	\$13.00	\$14.68	\$0.00	\$72.13
	09/01/2014	\$45.12	\$13.00	\$14.70	\$0.00	\$72.82
	03/01/2015	\$45.84	\$13.00	\$14.72	\$0.00	\$73.56
	09/01/2015	\$46.80	\$13.00	\$14.75	\$0.00	\$74.55
	03/01/2016	\$47.75	\$13.00	\$14.78	\$0.00	\$75.53

For apprentice rates see "Apprentice- ELECTRICIAN"

HVAC (TESTING AND BALANCING - AIR) SHEETMETAL WORKERS LOCAL 17 - A	12/09/2013	\$42.35	\$9.82	\$19.33	\$2.14	\$73.64
	02/01/2014	\$42.76	\$9.82	\$19.74	\$2.17	\$74.49
	08/01/2014	\$43.61	\$9.82	\$19.74	\$2.17	\$75.34
	02/01/2015	\$44.51	\$9.82	\$19.74	\$2.17	\$76.24
	08/01/2015	\$45.51	\$9.82	\$19.74	\$2.17	\$77.24
	02/01/2016	\$46.51	\$9.82	\$19.74	\$2.17	\$78.24
	08/01/2016	\$47.66	\$9.82	\$19.74	\$2.17	\$79.39
	02/01/2017	\$48.76	\$9.82	\$19.74	\$2.17	\$80.49
	08/01/2017	\$49.86	\$9.82	\$19.74	\$2.17	\$81.59
	02/01/2018	\$51.01	\$9.82	\$19.74	\$2.17	\$82.74

For apprentice rates see "Apprentice- SHEET METAL WORKER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC (TESTING AND BALANCING -WATER) <i>PIPEFITTERS LOCAL 537</i>	03/01/2013	\$49.34	\$8.75	\$14.39	\$0.00	\$72.48
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HVAC MECHANIC <i>PIPEFITTERS LOCAL 537</i>	03/01/2013	\$49.34	\$8.75	\$14.39	\$0.00	\$72.48
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS <i>LABORERS - ZONE 1</i>	12/01/2013	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	06/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	12/01/2014	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	06/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	12/01/2015	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	06/01/2016	\$37.85	\$7.30	\$12.70	\$0.00	\$57.85
	12/01/2016	\$38.85	\$7.30	\$12.70	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
INSULATOR (PIPES & TANKS) <i>HEAT &amp; FROST INSULATORS LOCAL 6 (BOSTON)</i>	09/01/2013	\$42.11	\$10.95	\$12.10	\$0.00	\$65.16
	09/01/2014	\$44.11	\$10.95	\$12.10	\$0.00	\$67.16

**Apprentice - ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Boston**

**Effective Date - 09/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.06	\$10.95	\$9.00	\$0.00	\$41.01
2	60	\$25.27	\$10.95	\$9.62	\$0.00	\$45.84
3	70	\$29.48	\$10.95	\$10.24	\$0.00	\$50.67
4	80	\$33.69	\$10.95	\$10.86	\$0.00	\$55.50

**Effective Date - 09/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.06	\$10.95	\$9.00	\$0.00	\$42.01
2	60	\$26.47	\$10.95	\$9.62	\$0.00	\$47.04
3	70	\$30.88	\$10.95	\$10.24	\$0.00	\$52.07
4	80	\$35.29	\$10.95	\$10.86	\$0.00	\$57.10

**Notes:**

Steps are 1 year

**Apprentice to Journeyworker Ratio:1:4**

IRONWORKER/WELDER <i>IRONWORKERS LOCAL 7 (BOSTON AREA)</i>	09/16/2013	\$40.85	\$7.70	\$18.60	\$0.00	\$67.15
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**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - IRONWORKER - Local 7 Boston**

**Effective Date - 09/16/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$24.51	\$7.70	\$18.60	\$0.00	\$50.81
2	70	\$28.60	\$7.70	\$18.60	\$0.00	\$54.90
3	75	\$30.64	\$7.70	\$18.60	\$0.00	\$56.94
4	80	\$32.68	\$7.70	\$18.60	\$0.00	\$58.98
5	85	\$34.72	\$7.70	\$18.60	\$0.00	\$61.02
6	90	\$36.77	\$7.70	\$18.60	\$0.00	\$63.07

**Notes:**

\*\* Structural 1:6; Ornamental 1:4

**Apprentice to Journeyworker Ratio:\*\***

JACKHAMMER & PAVING BREAKER OPERATOR LABORERS - ZONE 1	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

LABORER LABORERS - ZONE 1	12/01/2013	\$33.35	\$7.30	\$12.70	\$0.00	\$53.35
	06/01/2014	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	12/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	06/01/2015	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	12/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	06/01/2016	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	12/01/2016	\$38.10	\$7.30	\$12.70	\$0.00	\$58.10

**Classification**

**Effective Date    Base Wage    Health    Pension    Supplemental Unemployment    Total Rate**

**Apprentice - LABORER - Zone 1**

**Effective Date - 12/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$20.01	\$7.30	\$12.70	\$0.00	\$40.01
2	70	\$23.35	\$7.30	\$12.70	\$0.00	\$43.35
3	80	\$26.68	\$7.30	\$12.70	\$0.00	\$46.68
4	90	\$30.02	\$7.30	\$12.70	\$0.00	\$50.02

**Effective Date - 06/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$20.46	\$7.30	\$12.70	\$0.00	\$40.46
2	70	\$23.87	\$7.30	\$12.70	\$0.00	\$43.87
3	80	\$27.28	\$7.30	\$12.70	\$0.00	\$47.28
4	90	\$30.69	\$7.30	\$12.70	\$0.00	\$50.69

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

LABORER: CARPENTER TENDER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.35	\$7.30	\$12.70	\$0.00	\$53.35
	06/01/2014	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	12/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	06/01/2015	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	12/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	06/01/2016	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	12/01/2016	\$38.10	\$7.30	\$12.70	\$0.00	\$58.10

For apprentice rates see "Apprentice- LABORER"

LABORER: CEMENT FINISHER TENDER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.35	\$7.30	\$12.70	\$0.00	\$53.35
	06/01/2014	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	12/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	06/01/2015	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	12/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	06/01/2016	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	12/01/2016	\$38.10	\$7.30	\$12.70	\$0.00	\$58.10

For apprentice rates see "Apprentice- LABORER"

LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.50	\$7.30	\$12.70	\$0.00	\$53.50
	06/01/2014	\$34.25	\$7.30	\$12.70	\$0.00	\$54.25
	12/01/2014	\$35.00	\$7.30	\$12.70	\$0.00	\$55.00
	06/01/2015	\$35.75	\$7.30	\$12.70	\$0.00	\$55.75
	12/01/2015	\$36.50	\$7.30	\$12.70	\$0.00	\$56.50

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: MASON TENDER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.35	\$7.30	\$12.70	\$0.00	\$53.35
	06/01/2014	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	12/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	06/01/2015	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	12/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	06/01/2016	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	12/01/2016	\$38.10	\$7.30	\$12.70	\$0.00	\$58.10
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.35	\$7.30	\$12.70	\$0.00	\$53.35
	06/01/2014	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	12/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	06/01/2015	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	12/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	06/01/2016	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	12/01/2016	\$38.10	\$7.30	\$12.70	\$0.00	\$58.10
This classification applies to the wholesale removal of standing trees including all associated trimming of branches and limbs, and applies to the removal of branches at locations not on or around utility lines. For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE &amp; TILE</i>	08/01/2013	\$36.66	\$10.18	\$16.83	\$0.00	\$63.67
	02/01/2014	\$36.66	\$10.18	\$16.83	\$0.00	\$63.67
	08/01/2014	\$37.37	\$10.18	\$16.90	\$0.00	\$64.45
	02/01/2015	\$37.82	\$10.18	\$16.90	\$0.00	\$64.90
	08/01/2015	\$38.53	\$10.18	\$16.97	\$0.00	\$65.68
	02/01/2016	\$38.98	\$10.18	\$16.97	\$0.00	\$66.13
	08/01/2016	\$39.68	\$10.18	\$17.05	\$0.00	\$66.91
	02/01/2017	\$40.14	\$10.18	\$17.05	\$0.00	\$67.37

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - MARBLE & TILE FINISHER - Local 3 Marble & Tile**

**Effective Date - 08/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.33	\$10.18	\$16.83	\$0.00	\$45.34
2	60	\$22.00	\$10.18	\$16.83	\$0.00	\$49.01
3	70	\$25.66	\$10.18	\$16.83	\$0.00	\$52.67
4	80	\$29.33	\$10.18	\$16.83	\$0.00	\$56.34
5	90	\$32.99	\$10.18	\$16.83	\$0.00	\$60.00

**Effective Date - 02/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.33	\$10.18	\$16.83	\$0.00	\$45.34
2	60	\$22.00	\$10.18	\$16.83	\$0.00	\$49.01
3	70	\$25.66	\$10.18	\$16.83	\$0.00	\$52.67
4	80	\$29.33	\$10.18	\$16.83	\$0.00	\$56.34
5	90	\$32.99	\$10.18	\$16.83	\$0.00	\$60.00

**Notes:**

**Apprentice to Journeyworker Ratio:1:3**

MARBLE MASONS, TILELAYERS & TERRAZZO MECH BRICKLAYERS LOCAL 3 - MARBLE & TILE	08/01/2013	\$48.10	\$10.18	\$18.15	\$0.00	\$76.43
	02/01/2014	\$48.10	\$10.18	\$18.15	\$0.00	\$76.43
	08/01/2014	\$49.00	\$10.18	\$18.22	\$0.00	\$77.40
	02/01/2015	\$49.56	\$10.18	\$18.22	\$0.00	\$77.96
	08/01/2015	\$50.46	\$10.18	\$18.29	\$0.00	\$78.93
	02/01/2016	\$51.03	\$10.18	\$18.29	\$0.00	\$79.50
	08/01/2016	\$51.93	\$10.18	\$18.37	\$0.00	\$80.48
	02/01/2017	\$52.50	\$10.18	\$18.37	\$0.00	\$81.05

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble & Tile**

**Effective Date - 08/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.05	\$10.18	\$18.15	\$0.00	\$52.38
2	60	\$28.86	\$10.18	\$18.15	\$0.00	\$57.19
3	70	\$33.67	\$10.18	\$18.15	\$0.00	\$62.00
4	80	\$38.48	\$10.18	\$18.15	\$0.00	\$66.81
5	90	\$43.29	\$10.18	\$18.15	\$0.00	\$71.62

**Effective Date - 02/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.05	\$10.18	\$18.15	\$0.00	\$52.38
2	60	\$28.86	\$10.18	\$18.15	\$0.00	\$57.19
3	70	\$33.67	\$10.18	\$18.15	\$0.00	\$62.00
4	80	\$38.48	\$10.18	\$18.15	\$0.00	\$66.81
5	90	\$43.29	\$10.18	\$18.15	\$0.00	\$71.62

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

MECH. SWEEPER OPERATOR (ON CONST. SITES) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
MECHANICS MAINTENANCE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
MILLWRIGHT (Zone 1) <i>MILLWRIGHTS LOCAL 1121 - Zone 1</i>	10/01/2013	\$35.20	\$9.80	\$16.01	\$0.00	\$61.01
	04/01/2014	\$35.98	\$9.80	\$16.01	\$0.00	\$61.79
	10/01/2014	\$36.93	\$9.80	\$16.01	\$0.00	\$62.74
	04/01/2015	\$37.89	\$9.80	\$16.01	\$0.00	\$63.70

**Classification**

**Effective Date    Base Wage    Health    Pension    Supplemental Unemployment    Total Rate**

**Apprentice - MILLWRIGHT - Local 1121 Zone 1**

**Effective Date - 10/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$19.36	\$9.80	\$4.40	\$0.00	\$33.56
2	65	\$22.88	\$9.80	\$13.21	\$0.00	\$45.89
3	75	\$26.40	\$9.80	\$14.01	\$0.00	\$50.21
4	85	\$29.92	\$9.80	\$14.81	\$0.00	\$54.53

**Effective Date - 04/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$19.79	\$9.80	\$4.40	\$0.00	\$33.99
2	65	\$23.39	\$9.80	\$13.21	\$0.00	\$46.40
3	75	\$26.99	\$9.80	\$14.01	\$0.00	\$50.80
4	85	\$30.58	\$9.80	\$14.81	\$0.00	\$55.19

**Notes:**

Steps are 2,000 hours

**Apprentice to Journeyworker Ratio:1:5**

MORTAR MIXER LABORERS - ZONE 1	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

OILER (OTHER THAN TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2013	\$20.96	\$10.00	\$14.18	\$0.00	\$45.14
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OILER (TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2013	\$24.43	\$10.00	\$14.18	\$0.00	\$48.61
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OTHER POWER DRIVEN EQUIPMENT - CLASS II OPERATING ENGINEERS LOCAL 4	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

PAINTER (BRIDGES/TANKS) PAINTERS LOCAL 35 - ZONE 1	01/01/2014	\$45.91	\$7.85	\$16.10	\$0.00	\$69.86
	07/01/2014	\$46.76	\$7.85	\$16.10	\$0.00	\$70.71
	01/01/2015	\$47.66	\$7.85	\$16.10	\$0.00	\$71.61
	07/01/2015	\$48.56	\$7.85	\$16.10	\$0.00	\$72.51
	01/01/2016	\$49.51	\$7.85	\$16.10	\$0.00	\$73.46
	07/01/2016	\$50.46	\$7.85	\$16.10	\$0.00	\$74.41
	01/01/2017	\$51.41	\$7.85	\$16.10	\$0.00	\$75.36

**Apprentice - PAINTER Local 35 - BRIDGES/TANKS**

**Effective Date - 01/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.96	\$7.85	\$0.00	\$0.00	\$30.81
2	55	\$25.25	\$7.85	\$3.66	\$0.00	\$36.76
3	60	\$27.55	\$7.85	\$3.99	\$0.00	\$39.39
4	65	\$29.84	\$7.85	\$4.32	\$0.00	\$42.01
5	70	\$32.14	\$7.85	\$14.11	\$0.00	\$54.10
6	75	\$34.43	\$7.85	\$14.44	\$0.00	\$56.72
7	80	\$36.73	\$7.85	\$14.77	\$0.00	\$59.35
8	90	\$41.32	\$7.85	\$15.44	\$0.00	\$64.61

**Effective Date - 07/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.38	\$7.85	\$0.00	\$0.00	\$31.23
2	55	\$25.72	\$7.85	\$3.66	\$0.00	\$37.23
3	60	\$28.06	\$7.85	\$3.99	\$0.00	\$39.90
4	65	\$30.39	\$7.85	\$4.32	\$0.00	\$42.56
5	70	\$32.73	\$7.85	\$14.11	\$0.00	\$54.69
6	75	\$35.07	\$7.85	\$14.44	\$0.00	\$57.36
7	80	\$37.41	\$7.85	\$14.77	\$0.00	\$60.03
8	90	\$42.08	\$7.85	\$15.44	\$0.00	\$65.37

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

PAINTER (SPRAY OR SANDBLAST, NEW) *	01/01/2014	\$42.60	\$7.85	\$16.10	\$0.00	\$66.55
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 1	07/01/2014	\$43.45	\$7.85	\$16.10	\$0.00	\$67.40
	01/01/2015	\$44.35	\$7.85	\$16.10	\$0.00	\$68.30
	07/01/2015	\$45.25	\$7.85	\$16.10	\$0.00	\$69.20
	01/01/2016	\$46.20	\$7.85	\$16.10	\$0.00	\$70.15
	07/01/2016	\$47.15	\$7.85	\$16.10	\$0.00	\$71.10
	01/01/2017	\$48.10	\$7.85	\$16.10	\$0.00	\$72.05

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - PAINTER Local 35 Zone 1 - Spray/Sandblast - New**

**Effective Date - 01/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.30	\$7.85	\$0.00	\$0.00	\$29.15
2	55	\$23.43	\$7.85	\$3.66	\$0.00	\$34.94
3	60	\$25.56	\$7.85	\$3.99	\$0.00	\$37.40
4	65	\$27.69	\$7.85	\$4.32	\$0.00	\$39.86
5	70	\$29.82	\$7.85	\$14.11	\$0.00	\$51.78
6	75	\$31.95	\$7.85	\$14.44	\$0.00	\$54.24
7	80	\$34.08	\$7.85	\$14.77	\$0.00	\$56.70
8	90	\$38.34	\$7.85	\$15.44	\$0.00	\$61.63

**Effective Date - 07/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.73	\$7.85	\$0.00	\$0.00	\$29.58
2	55	\$23.90	\$7.85	\$3.66	\$0.00	\$35.41
3	60	\$26.07	\$7.85	\$3.99	\$0.00	\$37.91
4	65	\$28.24	\$7.85	\$4.32	\$0.00	\$40.41
5	70	\$30.42	\$7.85	\$14.11	\$0.00	\$52.38
6	75	\$32.59	\$7.85	\$14.44	\$0.00	\$54.88
7	80	\$34.76	\$7.85	\$14.77	\$0.00	\$57.38
8	90	\$39.11	\$7.85	\$15.44	\$0.00	\$62.40

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

PAINTER (SPRAY OR SANDBLAST, REPAINT)	01/01/2014	\$40.66	\$7.85	\$16.10	\$0.00	\$64.61
PAINTERS LOCAL 35 - ZONE 1	07/01/2014	\$41.51	\$7.85	\$16.10	\$0.00	\$65.46
	01/01/2015	\$42.41	\$7.85	\$16.10	\$0.00	\$66.36
	07/01/2015	\$43.31	\$7.85	\$16.10	\$0.00	\$67.26
	01/01/2016	\$44.26	\$7.85	\$16.10	\$0.00	\$68.21
	07/01/2016	\$45.21	\$7.85	\$16.10	\$0.00	\$69.16
	01/01/2017	\$46.16	\$7.85	\$16.10	\$0.00	\$70.11

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - PAINTER Local 35 Zone 1 - Spray/Sandblast - Repaint**

**Effective Date - 01/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.33	\$7.85	\$0.00	\$0.00	\$28.18
2	55	\$22.36	\$7.85	\$3.66	\$0.00	\$33.87
3	60	\$24.40	\$7.85	\$3.99	\$0.00	\$36.24
4	65	\$26.43	\$7.85	\$4.32	\$0.00	\$38.60
5	70	\$28.46	\$7.85	\$14.11	\$0.00	\$50.42
6	75	\$30.50	\$7.85	\$14.44	\$0.00	\$52.79
7	80	\$32.53	\$7.85	\$14.77	\$0.00	\$55.15
8	90	\$36.59	\$7.85	\$15.44	\$0.00	\$59.88

**Effective Date - 07/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.76	\$7.85	\$0.00	\$0.00	\$28.61
2	55	\$22.83	\$7.85	\$3.66	\$0.00	\$34.34
3	60	\$24.91	\$7.85	\$3.99	\$0.00	\$36.75
4	65	\$26.98	\$7.85	\$4.32	\$0.00	\$39.15
5	70	\$29.06	\$7.85	\$14.11	\$0.00	\$51.02
6	75	\$31.13	\$7.85	\$14.44	\$0.00	\$53.42
7	80	\$33.21	\$7.85	\$14.77	\$0.00	\$55.83
8	90	\$37.36	\$7.85	\$15.44	\$0.00	\$60.65

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

PAINTER (TRAFFIC MARKINGS)	12/01/2013	\$33.35	\$7.30	\$12.70	\$0.00	\$53.35
LABORERS - ZONE 1	06/01/2014	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	12/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	06/01/2015	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	12/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	06/01/2016	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	12/01/2016	\$38.10	\$7.30	\$12.70	\$0.00	\$58.10

For Apprentice rates see "Apprentice- LABORER"

PAINTER / TAPER (BRUSH, NEW) *	01/01/2014	\$41.20	\$7.85	\$16.10	\$0.00	\$65.15
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 1	07/01/2014	\$42.05	\$7.85	\$16.10	\$0.00	\$66.00
	01/01/2015	\$42.95	\$7.85	\$16.10	\$0.00	\$66.90
	07/01/2015	\$43.85	\$7.85	\$16.10	\$0.00	\$67.80
	01/01/2016	\$44.80	\$7.85	\$16.10	\$0.00	\$68.75
	07/01/2016	\$45.75	\$7.85	\$16.10	\$0.00	\$69.70
	01/01/2017	\$46.70	\$7.85	\$16.10	\$0.00	\$70.65

**Apprentice - PAINTER - Local 35 Zone 1 - BRUSH NEW**

**Effective Date - 01/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.60	\$7.85	\$0.00	\$0.00	\$28.45
2	55	\$22.66	\$7.85	\$3.66	\$0.00	\$34.17
3	60	\$24.72	\$7.85	\$3.99	\$0.00	\$36.56
4	65	\$26.78	\$7.85	\$4.32	\$0.00	\$38.95
5	70	\$28.84	\$7.85	\$14.11	\$0.00	\$50.80
6	75	\$30.90	\$7.85	\$14.44	\$0.00	\$53.19
7	80	\$32.96	\$7.85	\$14.77	\$0.00	\$55.58
8	90	\$37.08	\$7.85	\$15.44	\$0.00	\$60.37

**Effective Date - 07/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.03	\$7.85	\$0.00	\$0.00	\$28.88
2	55	\$23.13	\$7.85	\$3.66	\$0.00	\$34.64
3	60	\$25.23	\$7.85	\$3.99	\$0.00	\$37.07
4	65	\$27.33	\$7.85	\$4.32	\$0.00	\$39.50
5	70	\$29.44	\$7.85	\$14.11	\$0.00	\$51.40
6	75	\$31.54	\$7.85	\$14.44	\$0.00	\$53.83
7	80	\$33.64	\$7.85	\$14.77	\$0.00	\$56.26
8	90	\$37.85	\$7.85	\$15.44	\$0.00	\$61.14

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

PAINTER / TAPER (BRUSH, REPAINT)	01/01/2014	\$39.26	\$7.85	\$16.10	\$0.00	\$63.21
PAINTERS LOCAL 35 - ZONE 1	07/01/2014	\$40.11	\$7.85	\$16.10	\$0.00	\$64.06
	01/01/2015	\$41.01	\$7.85	\$16.10	\$0.00	\$64.96
	07/01/2015	\$41.91	\$7.85	\$16.10	\$0.00	\$65.86
	01/01/2016	\$42.86	\$7.85	\$16.10	\$0.00	\$66.81
	07/01/2016	\$43.81	\$7.85	\$16.10	\$0.00	\$67.76
	01/01/2017	\$44.76	\$7.85	\$16.10	\$0.00	\$68.71

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - PAINTER Local 35 Zone 1 - BRUSH REPAINT**

**Effective Date - 01/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.63	\$7.85	\$0.00	\$0.00	\$27.48
2	55	\$21.59	\$7.85	\$3.66	\$0.00	\$33.10
3	60	\$23.56	\$7.85	\$3.99	\$0.00	\$35.40
4	65	\$25.52	\$7.85	\$4.32	\$0.00	\$37.69
5	70	\$27.48	\$7.85	\$14.11	\$0.00	\$49.44
6	75	\$29.45	\$7.85	\$14.44	\$0.00	\$51.74
7	80	\$31.41	\$7.85	\$14.77	\$0.00	\$54.03
8	90	\$35.33	\$7.85	\$15.44	\$0.00	\$58.62

**Effective Date - 07/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.06	\$7.85	\$0.00	\$0.00	\$27.91
2	55	\$22.06	\$7.85	\$3.66	\$0.00	\$33.57
3	60	\$24.07	\$7.85	\$3.99	\$0.00	\$35.91
4	65	\$26.07	\$7.85	\$4.32	\$0.00	\$38.24
5	70	\$28.08	\$7.85	\$14.11	\$0.00	\$50.04
6	75	\$30.08	\$7.85	\$14.44	\$0.00	\$52.37
7	80	\$32.09	\$7.85	\$14.77	\$0.00	\$54.71
8	90	\$36.10	\$7.85	\$15.44	\$0.00	\$59.39

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

PANEL & PICKUP TRUCKS DRIVER TEAMSTERS JOINT COUNCIL NO. 10 ZONE A	12/01/2013	\$31.88	\$9.41	\$8.80	\$0.00	\$50.09
	06/01/2014	\$32.23	\$9.41	\$8.80	\$0.00	\$50.44
	08/01/2014	\$32.23	\$9.91	\$8.80	\$0.00	\$50.94
	12/01/2014	\$32.23	\$9.91	\$9.33	\$0.00	\$51.47
	06/01/2015	\$32.58	\$9.91	\$9.33	\$0.00	\$51.82
	08/01/2015	\$32.58	\$10.41	\$9.33	\$0.00	\$52.32
	12/01/2015	\$32.58	\$10.41	\$10.08	\$0.00	\$53.07
	06/01/2016	\$33.08	\$10.41	\$10.08	\$0.00	\$53.57
	08/01/2016	\$33.08	\$10.91	\$10.08	\$0.00	\$54.07
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) PILE DRIVER LOCAL 56 (ZONE 1)	12/01/2016	\$33.08	\$10.91	\$10.89	\$0.00	\$54.88
	08/01/2013	\$40.10	\$9.80	\$18.17	\$0.00	\$68.07
	08/01/2014	\$41.60	\$9.80	\$18.17	\$0.00	\$69.57
PILE DRIVER PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2015	\$43.10	\$9.80	\$18.17	\$0.00	\$71.07
	08/01/2013	\$40.10	\$9.80	\$18.17	\$0.00	\$68.07
	08/01/2014	\$41.60	\$9.80	\$18.17	\$0.00	\$69.57
	08/01/2015	\$43.10	\$9.80	\$18.17	\$0.00	\$71.07

**Apprentice - PILE DRIVER - Local 56 Zone 1**

**Effective Date - 08/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.05	\$9.80	\$18.17	\$0.00	\$48.02
2	60	\$24.06	\$9.80	\$18.17	\$0.00	\$52.03
3	70	\$28.07	\$9.80	\$18.17	\$0.00	\$56.04
4	75	\$30.08	\$9.80	\$18.17	\$0.00	\$58.05
5	80	\$32.08	\$9.80	\$18.17	\$0.00	\$60.05
6	80	\$32.08	\$9.80	\$18.17	\$0.00	\$60.05
7	90	\$36.09	\$9.80	\$18.17	\$0.00	\$64.06
8	90	\$36.09	\$9.80	\$18.17	\$0.00	\$64.06

**Effective Date - 08/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.80	\$9.80	\$18.17	\$0.00	\$48.77
2	60	\$24.96	\$9.80	\$18.17	\$0.00	\$52.93
3	70	\$29.12	\$9.80	\$18.17	\$0.00	\$57.09
4	75	\$31.20	\$9.80	\$18.17	\$0.00	\$59.17
5	80	\$33.28	\$9.80	\$18.17	\$0.00	\$61.25
6	80	\$33.28	\$9.80	\$18.17	\$0.00	\$61.25
7	90	\$37.44	\$9.80	\$18.17	\$0.00	\$65.41
8	90	\$37.44	\$9.80	\$18.17	\$0.00	\$65.41

Notes:

**Apprentice to Journeyworker Ratio:1:3**

PIPEFITTER & STEAMFITTER PIPEFITTERS LOCAL 537	03/01/2013	\$49.34	\$8.75	\$14.39	\$0.00	\$72.48
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**Apprentice - PIPEFITTER - Local 537**

**Effective Date - 03/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$19.74	\$8.75	\$6.50	\$0.00	\$34.99
2	45	\$22.20	\$8.75	\$14.39	\$0.00	\$45.34
3	60	\$29.60	\$8.75	\$14.39	\$0.00	\$52.74
4	70	\$34.54	\$8.75	\$14.39	\$0.00	\$57.68
5	80	\$39.47	\$8.75	\$14.39	\$0.00	\$62.61

Notes:  
 \*\* 1:3; 3:15; 1:10 thereafter / Steps are 1 yr.  
 Refrig/AC Mechanic \*\*1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8:17;9:20;10:23(Max)

**Apprentice to Journeyworker Ratio:\*\***

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PIPELAYER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

PLUMBERS & GASFITTERS <i>PLUMBERS &amp; GASFITTERS LOCAL 12</i>	09/01/2013	\$49.06	\$9.82	\$14.04	\$0.00	\$72.92
	03/01/2014	\$50.06	\$9.82	\$14.04	\$0.00	\$73.92
	09/01/2014	\$51.06	\$9.82	\$14.04	\$0.00	\$74.92
	03/01/2015	\$52.06	\$9.82	\$14.04	\$0.00	\$75.92
	09/01/2015	\$53.06	\$9.82	\$14.04	\$0.00	\$76.92
	03/01/2016	\$54.21	\$9.82	\$14.04	\$0.00	\$78.07
	09/01/2016	\$55.26	\$9.82	\$14.04	\$0.00	\$79.12
	03/01/2017	\$56.26	\$9.82	\$14.04	\$0.00	\$80.12

**Apprentice - PLUMBER/GASFITTER - Local 12**

**Effective Date - 09/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$17.17	\$9.82	\$5.26	\$0.00	\$32.25
2	40	\$19.62	\$9.82	\$5.92	\$0.00	\$35.36
3	55	\$26.98	\$9.82	\$7.95	\$0.00	\$44.75
4	65	\$31.89	\$9.82	\$9.30	\$0.00	\$51.01
5	75	\$36.80	\$9.82	\$10.65	\$0.00	\$57.27

**Effective Date - 03/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$17.52	\$9.82	\$5.26	\$0.00	\$32.60
2	40	\$20.02	\$9.82	\$5.92	\$0.00	\$35.76
3	55	\$27.53	\$9.82	\$7.95	\$0.00	\$45.30
4	65	\$32.54	\$9.82	\$9.30	\$0.00	\$51.66
5	75	\$37.55	\$9.82	\$10.65	\$0.00	\$58.02

**Notes:**

\*\* 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr  
Step4 with lic\$54.16 Step5 with lic\$60.40

**Apprentice to Journeyworker Ratio:\*\***

PNEUMATIC CONTROLS (TEMP.) <i>PIPEFITTERS LOCAL 537</i>	03/01/2013	\$49.34	\$8.75	\$14.39	\$0.00	\$72.48
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For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PNEUMATIC DRILL/TOOL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
POWDERMAN & BLASTER <i>LABORERS - ZONE 1</i>	12/01/2013	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	06/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	12/01/2014	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	06/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	12/01/2015	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	06/01/2016	\$38.10	\$7.30	\$12.70	\$0.00	\$58.10
	12/01/2016	\$39.10	\$7.30	\$12.70	\$0.00	\$59.10
For apprentice rates see "Apprentice- LABORER"						
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.49	\$10.00	\$14.18	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.49	\$10.00	\$14.18	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$28.11	\$10.00	\$14.18	\$0.00	\$52.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY-MIX CONCRETE DRIVER <i>TEAMSTERS LOCAL 25a</i>	05/01/2011	\$29.99	\$7.75	\$5.91	\$0.00	\$43.65
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
RESIDENTIAL WOOD FRAME (All Other Work) <i>CARPENTERS -ZONE 1 (Residential Wood)</i>	04/01/2011	\$37.25	\$8.67	\$15.51	\$0.00	\$61.43
RESIDENTIAL WOOD FRAME CARPENTER ** ** The Residential Wood Frame Carpenter classification applies only to the construction of new, wood frame residences that do not exceed four stories including the basement. <i>CARPENTERS -ZONE 1 (Residential Wood)</i>	05/01/2011	\$27.49	\$6.34	\$6.23	\$0.00	\$40.06
As of 9/1/09 Carpentry work on wood-frame residential WEATHERIZATION projects shall be paid the RESIDENTIAL WOOD FRAME CARPENTER rate.						

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - CARPENTER (Residential Wood Frame) - Zone 1**

**Effective Date - 05/01/2011**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$16.49	\$6.34	\$0.00	\$0.00	\$22.83
2	60	\$16.49	\$6.34	\$6.23	\$0.00	\$29.06
3	65	\$17.87	\$6.34	\$6.23	\$0.00	\$30.44
4	70	\$19.24	\$6.34	\$6.23	\$0.00	\$31.81
5	75	\$20.62	\$6.34	\$6.23	\$0.00	\$33.19
6	80	\$21.99	\$6.34	\$6.23	\$0.00	\$34.56
7	85	\$23.37	\$6.34	\$6.23	\$0.00	\$35.94
8	90	\$24.74	\$6.34	\$6.23	\$0.00	\$37.31

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg) <i>ROOFERS LOCAL 33</i>	08/01/2013	\$38.31	\$10.50	\$10.70	\$0.00	\$59.51
	02/01/2014	\$39.21	\$10.50	\$10.70	\$0.00	\$60.41
	08/01/2014	\$40.11	\$10.50	\$10.70	\$0.00	\$61.31
	02/01/2015	\$41.01	\$10.50	\$10.70	\$0.00	\$62.21
	08/01/2015	\$41.91	\$10.50	\$10.70	\$0.00	\$63.11
	02/01/2016	\$42.81	\$10.50	\$10.70	\$0.00	\$64.01

**Classification**

**Effective Date    Base Wage    Health    Pension    Supplemental Unemployment    Total Rate**

**Apprentice - ROOFER - Local 33**

**Effective Date - 08/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.16	\$10.50	\$3.38	\$0.00	\$33.04
2	60	\$22.99	\$10.50	\$10.70	\$0.00	\$44.19
3	65	\$24.90	\$10.50	\$10.70	\$0.00	\$46.10
4	75	\$28.73	\$10.50	\$10.70	\$0.00	\$49.93
5	85	\$32.56	\$10.50	\$10.70	\$0.00	\$53.76

**Effective Date - 02/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.61	\$10.50	\$3.38	\$0.00	\$33.49
2	60	\$23.53	\$10.50	\$10.70	\$0.00	\$44.73
3	65	\$25.49	\$10.50	\$10.70	\$0.00	\$46.69
4	75	\$29.41	\$10.50	\$10.70	\$0.00	\$50.61
5	85	\$33.33	\$10.50	\$10.70	\$0.00	\$54.53

**Notes: \*\* 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1**  
 Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.

**Apprentice to Journeyworker Ratio:\*\***

ROOFER SLATE / TILE / PRECAST CONCRETE	08/01/2013	\$38.56	\$10.50	\$10.70	\$0.00	\$59.76
ROOFERS LOCAL 33	02/01/2014	\$39.46	\$10.50	\$10.70	\$0.00	\$60.66
	08/01/2014	\$40.36	\$10.50	\$10.70	\$0.00	\$61.56
	02/01/2015	\$41.26	\$10.50	\$10.70	\$0.00	\$62.46
	08/01/2015	\$42.16	\$10.50	\$10.70	\$0.00	\$63.36
	02/01/2016	\$43.06	\$10.50	\$10.70	\$0.00	\$64.26
For apprentice rates see "Apprentice- ROOFER"						
SHEETMETAL WORKER	12/09/2013	\$42.35	\$9.82	\$19.33	\$2.14	\$73.64
SHEETMETAL WORKERS LOCAL 17 - A	02/01/2014	\$42.76	\$9.82	\$19.74	\$2.17	\$74.49
	08/01/2014	\$43.61	\$9.82	\$19.74	\$2.17	\$75.34
	02/01/2015	\$44.51	\$9.82	\$19.74	\$2.17	\$76.24
	08/01/2015	\$45.51	\$9.82	\$19.74	\$2.17	\$77.24
	02/01/2016	\$46.51	\$9.82	\$19.74	\$2.17	\$78.24
	08/01/2016	\$47.66	\$9.82	\$19.74	\$2.17	\$79.39
	02/01/2017	\$48.76	\$9.82	\$19.74	\$2.17	\$80.49
	08/01/2017	\$49.86	\$9.82	\$19.74	\$2.17	\$81.59
	02/01/2018	\$51.01	\$9.82	\$19.74	\$2.17	\$82.74

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - SHEET METAL WORKER - Local 17-A**

**Effective Date - 12/09/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$16.94	\$9.82	\$4.28	\$0.00	\$31.04
2	40	\$16.94	\$9.82	\$4.28	\$0.00	\$31.04
3	45	\$19.06	\$9.82	\$8.70	\$1.13	\$38.71
4	45	\$19.06	\$9.82	\$8.70	\$1.13	\$38.71
5	50	\$21.18	\$9.82	\$9.49	\$1.21	\$41.70
6	50	\$21.18	\$9.82	\$9.74	\$1.22	\$41.96
7	60	\$25.41	\$9.82	\$11.05	\$1.39	\$47.67
8	65	\$27.53	\$9.82	\$11.84	\$1.48	\$50.67
9	75	\$31.76	\$9.82	\$13.41	\$1.65	\$56.64
10	85	\$36.00	\$9.82	\$14.48	\$1.81	\$62.11

**Effective Date - 02/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.10	\$9.82	\$4.28	\$0.00	\$31.20
2	40	\$17.10	\$9.82	\$4.28	\$0.00	\$31.20
3	45	\$19.24	\$9.82	\$8.70	\$1.13	\$38.89
4	45	\$19.24	\$9.82	\$8.70	\$1.13	\$38.89
5	50	\$21.38	\$9.82	\$9.49	\$1.22	\$41.91
6	50	\$21.38	\$9.82	\$9.74	\$1.23	\$42.17
7	60	\$25.66	\$9.82	\$11.05	\$1.40	\$47.93
8	65	\$27.79	\$9.82	\$11.84	\$1.48	\$50.93
9	75	\$32.07	\$9.82	\$13.41	\$1.66	\$56.96
10	85	\$36.35	\$9.82	\$14.48	\$1.82	\$62.47

**Notes:**  
Steps are 6 mos.

**Apprentice to Journeyworker Ratio:1:4**

SIGN ERECTOR PAINTERS LOCAL 35 - ZONE 1	06/01/2013	\$25.81	\$7.07	\$7.05	\$0.00	\$39.93
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**Classification**

**Effective Date    Base Wage    Health    Pension    Supplemental Unemployment    Total Rate**

**Apprentice - SIGN ERECTOR - Local 35 Zone 1**

**Effective Date - 06/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$12.91	\$7.07	\$0.00	\$0.00	\$19.98
2	55	\$14.20	\$7.07	\$2.45	\$0.00	\$23.72
3	60	\$15.49	\$7.07	\$2.45	\$0.00	\$25.01
4	65	\$16.78	\$7.07	\$2.45	\$0.00	\$26.30
5	70	\$18.07	\$7.07	\$7.05	\$0.00	\$32.19
6	75	\$19.36	\$7.07	\$7.05	\$0.00	\$33.48
7	80	\$20.65	\$7.07	\$7.05	\$0.00	\$34.77
8	85	\$21.94	\$7.07	\$7.05	\$0.00	\$36.06
9	90	\$23.23	\$7.07	\$7.05	\$0.00	\$37.35

**Notes:**  
Steps are 4 mos.

**Apprentice to Journeyworker Ratio:1:1**

<b>SPECIALIZED EARTH MOVING EQUIP &lt; 35 TONS</b>		12/01/2013	\$32.34	\$9.41	\$8.80	\$0.00	\$50.55
<i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>		06/01/2014	\$32.69	\$9.41	\$8.80	\$0.00	\$50.90
		08/01/2014	\$32.69	\$9.91	\$8.80	\$0.00	\$51.40
		12/01/2014	\$32.69	\$9.91	\$9.33	\$0.00	\$51.93
		06/01/2015	\$33.04	\$9.91	\$9.33	\$0.00	\$52.28
		08/01/2015	\$33.04	\$10.41	\$9.33	\$0.00	\$52.78
		12/01/2015	\$33.04	\$10.41	\$10.08	\$0.00	\$53.53
		06/01/2016	\$33.54	\$10.41	\$10.08	\$0.00	\$54.03
		08/01/2016	\$33.54	\$10.91	\$10.08	\$0.00	\$54.53
		12/01/2016	\$33.54	\$10.91	\$10.89	\$0.00	\$55.34
<b>SPECIALIZED EARTH MOVING EQUIP &gt; 35 TONS</b>		12/01/2013	\$32.63	\$9.41	\$8.80	\$0.00	\$50.84
<i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>		06/01/2014	\$32.98	\$9.41	\$8.80	\$0.00	\$51.19
		08/01/2014	\$32.98	\$9.91	\$8.80	\$0.00	\$51.69
		12/01/2014	\$32.98	\$9.91	\$9.33	\$0.00	\$52.22
		06/01/2015	\$33.33	\$9.91	\$9.33	\$0.00	\$52.57
		08/01/2015	\$33.33	\$10.41	\$9.33	\$0.00	\$53.07
		12/01/2015	\$33.33	\$10.41	\$10.08	\$0.00	\$53.82
		06/01/2016	\$33.83	\$10.41	\$10.08	\$0.00	\$54.32
		08/01/2016	\$33.83	\$10.91	\$10.08	\$0.00	\$54.82
		12/01/2016	\$33.83	\$10.91	\$10.89	\$0.00	\$55.63

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1</i>	01/01/2014	\$53.33	\$8.42	\$12.85	\$0.00	\$74.60
	03/01/2014	\$54.58	\$8.42	\$12.85	\$0.00	\$75.85
	10/01/2014	\$55.73	\$8.42	\$12.85	\$0.00	\$77.00
	01/01/2015	\$55.73	\$8.42	\$13.00	\$0.00	\$77.15
	03/01/2015	\$56.73	\$8.42	\$13.00	\$0.00	\$78.15
	10/01/2015	\$57.88	\$8.42	\$13.00	\$0.00	\$79.30
	01/01/2016	\$57.88	\$8.67	\$13.15	\$0.00	\$79.70
	03/01/2016	\$58.88	\$8.67	\$13.15	\$0.00	\$80.70
	10/01/2016	\$60.03	\$8.67	\$13.15	\$0.00	\$81.85
	03/01/2017	\$61.03	\$8.67	\$13.15	\$0.00	\$82.85

**Apprentice - SPRINKLER FITTER - Local 550 (Section A) Zone 1**

**Effective Date - 01/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$18.67	\$8.42	\$8.25	\$0.00	\$35.34
2	40	\$21.33	\$8.42	\$8.25	\$0.00	\$38.00
3	45	\$24.00	\$8.42	\$8.25	\$0.00	\$40.67
4	50	\$26.67	\$8.42	\$8.25	\$0.00	\$43.34
5	55	\$29.33	\$8.42	\$8.25	\$0.00	\$46.00
6	60	\$32.00	\$8.42	\$8.25	\$0.00	\$48.67
7	65	\$34.66	\$8.42	\$8.25	\$0.00	\$51.33
8	70	\$37.33	\$8.42	\$8.25	\$0.00	\$54.00
9	75	\$40.00	\$8.42	\$8.25	\$0.00	\$56.67
10	80	\$42.66	\$8.42	\$8.25	\$0.00	\$59.33

**Effective Date - 03/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$19.10	\$8.42	\$8.25	\$0.00	\$35.77
2	40	\$21.83	\$8.42	\$8.25	\$0.00	\$38.50
3	45	\$24.56	\$8.42	\$8.25	\$0.00	\$41.23
4	50	\$27.29	\$8.42	\$8.25	\$0.00	\$43.96
5	55	\$30.02	\$8.42	\$8.25	\$0.00	\$46.69
6	60	\$32.75	\$8.42	\$8.25	\$0.00	\$49.42
7	65	\$35.48	\$8.42	\$8.25	\$0.00	\$52.15
8	70	\$38.21	\$8.42	\$8.25	\$0.00	\$54.88
9	75	\$40.94	\$8.42	\$8.25	\$0.00	\$57.61
10	80	\$43.66	\$8.42	\$8.25	\$0.00	\$60.33

**Notes:** Apprentice entered prior 9/30/10:  
40/45/50/55/60/65/70/75/80/85  
Steps are 850 hours

**Apprentice to Journeyworker Ratio:1:3**

STEAM BOILER OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN OPERATING ENGINEERS LOCAL 4	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TELECOMMUNICATION TECHNICIAN ELECTRICIANS LOCAL 103	09/01/2013	\$32.97	\$13.00	\$12.77	\$0.00	\$58.74
	03/01/2014	\$33.44	\$13.00	\$13.03	\$0.00	\$59.47
	09/01/2014	\$33.84	\$13.00	\$13.05	\$0.00	\$59.89
	03/01/2015	\$34.38	\$13.00	\$13.06	\$0.00	\$60.44
	09/01/2015	\$35.10	\$13.00	\$13.08	\$0.00	\$61.18
	03/01/2016	\$35.81	\$13.00	\$13.10	\$0.00	\$61.91

**Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103**

**Effective Date - 09/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.19	\$13.00	\$0.40	\$0.00	\$26.59
2	40	\$13.19	\$13.00	\$0.40	\$0.00	\$26.59
3	45	\$14.84	\$13.00	\$10.04	\$0.00	\$37.88
4	45	\$14.84	\$13.00	\$10.04	\$0.00	\$37.88
5	50	\$16.49	\$13.00	\$10.29	\$0.00	\$39.78
6	55	\$18.13	\$13.00	\$10.53	\$0.00	\$41.66
7	60	\$19.78	\$13.00	\$10.78	\$0.00	\$43.56
8	65	\$21.43	\$13.00	\$11.03	\$0.00	\$45.46
9	70	\$23.08	\$13.00	\$11.28	\$0.00	\$47.36
10	75	\$24.73	\$13.00	\$11.53	\$0.00	\$49.26

**Effective Date - 03/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.38	\$13.00	\$0.40	\$0.00	\$26.78
2	40	\$13.38	\$13.00	\$0.40	\$0.00	\$26.78
3	45	\$15.05	\$13.00	\$10.29	\$0.00	\$38.34
4	45	\$15.05	\$13.00	\$10.29	\$0.00	\$38.34
5	50	\$16.72	\$13.00	\$10.54	\$0.00	\$40.26
6	55	\$18.39	\$13.00	\$10.79	\$0.00	\$42.18
7	60	\$20.06	\$13.00	\$11.04	\$0.00	\$44.10
8	65	\$21.74	\$13.00	\$11.29	\$0.00	\$46.03
9	70	\$23.41	\$13.00	\$11.54	\$0.00	\$47.95
10	75	\$25.08	\$13.00	\$11.79	\$0.00	\$49.87

**Notes:**

**Apprentice to Journeyworker Ratio:1:1**

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TERRAZZO FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE &amp; TILE</i>	08/01/2013	\$47.00	\$10.18	\$18.15	\$0.00	\$75.33
	02/01/2014	\$47.00	\$10.18	\$18.15	\$0.00	\$75.33
	08/01/2014	\$47.90	\$10.18	\$18.22	\$0.00	\$76.30
	02/01/2015	\$48.46	\$10.18	\$18.22	\$0.00	\$76.86
	08/01/2015	\$49.36	\$10.18	\$18.29	\$0.00	\$77.83
	02/01/2016	\$49.93	\$10.18	\$18.29	\$0.00	\$78.40
	08/01/2016	\$50.83	\$10.18	\$18.37	\$0.00	\$79.38
	02/01/2017	\$51.40	\$10.18	\$18.37	\$0.00	\$79.95

**Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile**

**Effective Date - 08/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.50	\$10.18	\$18.15	\$0.00	\$51.83
2	60	\$28.20	\$10.18	\$18.15	\$0.00	\$56.53
3	70	\$32.90	\$10.18	\$18.15	\$0.00	\$61.23
4	80	\$37.60	\$10.18	\$18.15	\$0.00	\$65.93
5	90	\$42.30	\$10.18	\$18.15	\$0.00	\$70.63

**Effective Date - 02/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.50	\$10.18	\$18.15	\$0.00	\$51.83
2	60	\$28.20	\$10.18	\$18.15	\$0.00	\$56.53
3	70	\$32.90	\$10.18	\$18.15	\$0.00	\$61.23
4	80	\$37.60	\$10.18	\$18.15	\$0.00	\$65.93
5	90	\$42.30	\$10.18	\$18.15	\$0.00	\$70.63

**Notes:**

**Apprentice to Journeyworker Ratio:1:3**

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2013	\$34.70	\$7.30	\$12.90	\$0.00	\$54.90
	06/01/2014	\$35.45	\$7.30	\$12.90	\$0.00	\$55.65
	12/01/2014	\$36.20	\$7.30	\$12.90	\$0.00	\$56.40
	06/01/2015	\$36.95	\$7.30	\$12.90	\$0.00	\$57.15
	12/01/2015	\$37.70	\$7.30	\$12.90	\$0.00	\$57.90
	06/01/2016	\$38.45	\$7.30	\$12.90	\$0.00	\$58.65
	12/01/2016	\$39.45	\$7.30	\$12.90	\$0.00	\$59.65

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2013	\$33.42	\$7.30	\$12.90	\$0.00	\$53.62
	06/01/2014	\$34.17	\$7.30	\$12.90	\$0.00	\$54.37
	12/01/2014	\$34.92	\$7.30	\$12.90	\$0.00	\$55.12
	06/01/2015	\$35.67	\$7.30	\$12.90	\$0.00	\$55.87
	12/01/2015	\$36.42	\$7.30	\$12.90	\$0.00	\$56.62
	06/01/2016	\$37.17	\$7.30	\$12.90	\$0.00	\$57.37
	12/01/2016	\$38.17	\$7.30	\$12.90	\$0.00	\$58.37

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2013	\$33.30	\$7.30	\$12.90	\$0.00	\$53.50
	06/01/2014	\$34.05	\$7.30	\$12.90	\$0.00	\$54.25
	12/01/2014	\$34.80	\$7.30	\$12.90	\$0.00	\$55.00
	06/01/2015	\$35.55	\$7.30	\$12.90	\$0.00	\$55.75
	12/01/2015	\$36.30	\$7.30	\$12.90	\$0.00	\$56.50
	06/01/2016	\$37.05	\$7.30	\$12.90	\$0.00	\$57.25
	12/01/2016	\$38.05	\$7.30	\$12.90	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2013	\$32.92	\$9.41	\$8.80	\$0.00	\$51.13
	06/01/2014	\$33.27	\$9.41	\$8.80	\$0.00	\$51.48
	08/01/2014	\$33.27	\$9.91	\$8.80	\$0.00	\$51.98
	12/01/2014	\$33.27	\$9.91	\$9.33	\$0.00	\$52.51
	06/01/2015	\$33.62	\$9.91	\$9.33	\$0.00	\$52.86
	08/01/2015	\$33.62	\$10.41	\$9.33	\$0.00	\$53.36
	12/01/2015	\$33.62	\$10.41	\$10.08	\$0.00	\$54.11
	06/01/2016	\$34.12	\$10.41	\$10.08	\$0.00	\$54.61
	08/01/2016	\$34.12	\$10.91	\$10.08	\$0.00	\$55.11
	12/01/2016	\$34.12	\$10.91	\$10.89	\$0.00	\$55.92
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2013	\$45.58	\$7.30	\$13.30	\$0.00	\$66.18
	06/01/2014	\$46.33	\$7.30	\$13.30	\$0.00	\$66.93
	12/01/2014	\$47.08	\$7.30	\$13.30	\$0.00	\$67.68
	06/01/2015	\$47.83	\$7.30	\$13.30	\$0.00	\$68.43
	12/01/2015	\$48.58	\$7.30	\$13.30	\$0.00	\$69.18
	06/01/2016	\$49.33	\$7.30	\$13.30	\$0.00	\$69.93
	12/01/2016	\$50.33	\$7.30	\$13.30	\$0.00	\$70.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2013	\$47.58	\$7.30	\$13.30	\$0.00	\$68.18
	06/01/2014	\$48.33	\$7.30	\$13.30	\$0.00	\$68.93
	12/01/2014	\$49.08	\$7.30	\$13.30	\$0.00	\$69.68
	06/01/2015	\$49.83	\$7.30	\$13.30	\$0.00	\$70.43
	12/01/2015	\$50.58	\$7.30	\$13.30	\$0.00	\$71.18
	06/01/2016	\$51.33	\$7.30	\$13.30	\$0.00	\$71.93
	12/01/2016	\$52.33	\$7.30	\$13.30	\$0.00	\$72.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2013	\$37.65	\$7.30	\$13.30	\$0.00	\$58.25
	06/01/2014	\$38.40	\$7.30	\$13.30	\$0.00	\$59.00
	12/01/2014	\$39.15	\$7.30	\$13.30	\$0.00	\$59.75
	06/01/2015	\$39.90	\$7.30	\$13.30	\$0.00	\$60.50
	12/01/2015	\$40.65	\$7.30	\$13.30	\$0.00	\$61.25
	06/01/2016	\$41.40	\$7.30	\$13.30	\$0.00	\$62.00
	12/01/2016	\$42.40	\$7.30	\$13.30	\$0.00	\$63.00
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2013	\$39.65	\$7.30	\$13.30	\$0.00	\$60.25
	06/01/2014	\$40.40	\$7.30	\$13.30	\$0.00	\$61.00
	12/01/2014	\$41.15	\$7.30	\$13.30	\$0.00	\$61.75
	06/01/2015	\$41.90	\$7.30	\$13.30	\$0.00	\$62.50
	12/01/2015	\$42.65	\$7.30	\$13.30	\$0.00	\$63.25
	06/01/2016	\$43.40	\$7.30	\$13.30	\$0.00	\$64.00
	12/01/2016	\$44.40	\$7.30	\$13.30	\$0.00	\$65.00
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2013	\$32.34	\$9.41	\$8.80	\$0.00	\$50.55
	06/01/2014	\$32.69	\$9.41	\$8.80	\$0.00	\$50.90
	08/01/2014	\$32.69	\$9.91	\$8.80	\$0.00	\$51.40
	12/01/2014	\$32.69	\$9.91	\$9.33	\$0.00	\$51.93
	06/01/2015	\$33.04	\$9.91	\$9.33	\$0.00	\$52.28
	08/01/2015	\$33.04	\$10.41	\$9.33	\$0.00	\$52.78
	12/01/2015	\$33.04	\$10.41	\$10.08	\$0.00	\$53.53
	06/01/2016	\$33.54	\$10.41	\$10.08	\$0.00	\$54.03
	08/01/2016	\$33.54	\$10.91	\$10.08	\$0.00	\$54.53
	12/01/2016	\$33.54	\$10.91	\$10.89	\$0.00	\$55.34
WAGON DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.49	\$10.00	\$14.18	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER <i>PLUMBERS &amp; GASFITTERS LOCAL 12</i>	09/01/2013	\$49.06	\$9.82	\$14.04	\$0.00	\$72.92
	03/01/2014	\$50.06	\$9.82	\$14.04	\$0.00	\$73.92
	09/01/2014	\$51.06	\$9.82	\$14.04	\$0.00	\$74.92
	03/01/2015	\$52.06	\$9.82	\$14.04	\$0.00	\$75.92
	09/01/2015	\$53.06	\$9.82	\$14.04	\$0.00	\$76.92
	03/01/2016	\$54.21	\$9.82	\$14.04	\$0.00	\$78.07
	09/01/2016	\$55.26	\$9.82	\$14.04	\$0.00	\$79.12
	03/01/2017	\$56.26	\$9.82	\$14.04	\$0.00	\$80.12
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						
<b>Outside Electrical - East</b>						
CABLE TECHNICIAN (Power Zone) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$25.66	\$8.70	\$4.48	\$0.00	\$38.84
For apprentice rates see "Apprentice- LINEMAN"						
CABLEMAN (Underground Ducts & Cables) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$36.55	\$8.70	\$6.58	\$0.00	\$51.83
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN CDL <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$29.94	\$8.70	\$6.05	\$0.00	\$44.69
For apprentice rates see "Apprentice- LINEMAN"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$23.52	\$8.70	\$5.24	\$0.00	\$37.46
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class A CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$36.35	\$8.70	\$9.43	\$0.00	\$54.48
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class B CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$32.08	\$8.70	\$6.59	\$0.00	\$47.37
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$23.52	\$8.70	\$3.72	\$0.00	\$35.94
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN -Inexperienced (<2000 Hrs.) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$19.25	\$8.70	\$2.85	\$0.00	\$30.80
For apprentice rates see "Apprentice- LINEMAN"						
JOURNEYMAN LINEMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$42.77	\$8.70	\$11.78	\$0.00	\$63.25

**Apprentice - LINEMAN (Outside Electrical) - East Local 104**

**Effective Date - 09/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$25.66	\$8.70	\$4.24	\$0.00	\$38.60
2	65	\$27.80	\$8.70	\$4.71	\$0.00	\$41.21
3	70	\$29.94	\$8.70	\$5.43	\$0.00	\$44.07
4	75	\$32.08	\$8.70	\$6.16	\$0.00	\$46.94
5	80	\$34.22	\$8.70	\$6.88	\$0.00	\$49.80
6	85	\$36.35	\$8.70	\$7.62	\$0.00	\$52.67
7	90	\$38.49	\$8.70	\$8.83	\$0.00	\$56.02

**Notes:**

**Apprentice to Journeyworker Ratio:1:2**

TELEDATA CABLE SPLICER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	07/16/2012	\$26.33	\$4.18	\$2.79	\$0.00	\$33.30
TELEDATA LINEMAN/EQUIPMENT OPERATOR <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	07/16/2012	\$24.78	\$4.18	\$2.74	\$0.00	\$31.70
TELEDATA WIREMAN/INSTALLER/TECHNICIAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	07/16/2012	\$24.78	\$4.18	\$2.74	\$0.00	\$31.70
TREE TRIMMER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	01/29/2012	\$17.18	\$3.37	\$0.00	\$0.00	\$20.55
This classification applies only to the trimming of branches on and around utility lines.						
TREE TRIMMER GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	01/29/2012	\$15.15	\$3.37	\$0.00	\$0.00	\$18.52
This classification applies only to the trimming of branches on and around utility lines.						

Additional Apprentices Information:

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentice ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours) unless otherwise specified.

- \* Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof.
- \*\* Multiple ratios are listed in the comment field.
- \*\*\* APP to JM; 1:1, 2:2, 2:3, 3:4, 4:4, 4:5, 4:6, 5:7, 6:7, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.
- \*\*\*\* APP to JM; 1:1, 1:2, 2:3, 2:4, 3:5, 4:6, 4:7, 5:8, 6:9, 6:10, 7:11, 8:12, 8:13, 9:14, 10:15, 10:16, etc.



**Boston Redevelopment Authority (BRA)**  
**Economic Development & Industrial Corporation of Boston (EDIC)**  
Economic Development Division  
Contract Compliance Unit  
22 Drydock Avenue, Boston, MA. 02210  
(617) 918-6213 Fax (617) 918-6220

## **BOSTON RESIDENT JOBS POLICY**

# **COMPLIANCE CONTRACT SUPPLEMENT FOR BID AWARD CONSTRUCTION CONTRACTS**

**February, 2014**

**Martin J. Walsh, Mayor of Boston**  
**Brian P. Golden, Acting Director**

**Paul D. Foster, Vice-Chairman**  
**Consuelo Gonzalez-Thornell, Treasurer**  
**Timothy P. Burke, Member**  
**Michael P. Monahan, Member**  
**Brian P. Golden, Executive Director / Secretary**

## TABLE OF CONTENTS

	<u>Page</u>
<b><u>INTRODUCTION</u></b>	1
<b><u>ARTICLE 1: DEFINITIONS</u></b>	
A. Awarding Authority	2
B. Boston Residents Jobs Policy	2
C. BRJP Ordinance	2
D. Contract	2
E. Contractor	2
F. Controlled	2
G. Employment Plan	2
H. Minority Person	3
I. Minority and/or Women Business Enterprise ("M/WBE")	3
J. Minority and Women Business Enterprise Office	3
K. M/WBE Directory	3
L. M/WBE Executive Order and Ordinance	3
M. Owned	3
N. Residence	3
<b><u>ARTICLE II: EQUAL EMPLOYMENT OPPORTUNITY PROGRAM FOR MINORITIES, WOMEN AND BOSTON RESIDENTS</u></b>	
A. Anti-discrimination Affirmative Action	3
B. City Ordinance Establishing the Boston Residents Jobs Policy	4
C. Collective Bargaining Agreements	4
D. Subcontracts	4
E. Training	5
F. Pre-bid Conference	5
G. Pre-Award Requirements	5
H. Contractor's Compliance Responsibility	5
I. Non-Compliance	9
J. Sanctions/Debarment	10
K. Sanctions for Subcontractors	10
<b><u>APPENDICES</u></b>	
I. M/WBE Utilization Forms	17
II. Weekly Utilization Form for Workforce Reporting	18
III. Employment Plan	19
IV. M/WBE Certification Application	20
V. M/WBE Periodic Payment Certification Form	21
VI. M/WBE Waiver Request Regulations & Application	22

## **INTRODUCTION**

The City of Boston Minority and Women Business Enterprise Office, the Boston Employment Commission and the Boston Residents Job Policy Unit exist to ensure that a fair share of employment and business benefits on City-assisted construction projects go to Boston residents, minorities and women.

Current policy developments related to construction employment and business opportunities include:

As a condition of receiving public funds and other forms of public assistance developers and contractors must agree to hire Boston residents, minorities and women, to utilize minority and women contractors and/or suppliers of goods, services and materials and to comply with federal laws concerning wage and work conditions where applicable. This Supplement outlines all pertinent policies and procedures with developers and contractors must comply.

The Boston Residents Jobs Policy Unit are available for technical assistance, and copies of Ordinances and Executive Orders referenced above will be made available upon request by calling or writing:

**MS. PATRICIA DOHERTY  
BOSTON REDEVELOPMENT AUTHORITY  
CONTRACT COMPLIANCE DEPARTMENT  
MARINE INDUSTRIAL PARK  
22 DRYDOCK AVE.  
BOSTON, MA 02210  
TEL. 918-6213**

**MINORITY AND WOMEN BUSINESS ENTERPRISE PARTICIPATION AND BOSTON RESIDENT JOBS POLICY**

**COMPLIANCE CONTRACT SUPPLEMENT FOR BID AWARD CONSTRUCTION CONTRACTS**

**CONTRACT REQUIREMENTS**

**ARTICLE I: DEFINITIONS**

For the purpose of this Supplement, the following shall be defined as follows:

- A. **AWARDING AUTHORITY:** The department or quasi-independent agency of the City of Boston awarding the construction contract.
- B. **BOSTON RESIDENT JOBS POLICY:** As defined in the City of Boston Ordinances, Chapter 8, Section 9, as amended, the Boston Resident Jobs Policy ("BRJP") requires that for each construction project funded in whole or in part by City funds, at least fifty percent (50%) of the total employee man-hours in each trade shall be bona fide Boston residents, at least twenty-five percent (25%) of the total employee man-hours in each trade shall be minorities and at least ten percent (10%) of the total employee man-hours in each trade shall be women.
- C. **BRJP ORDINANCE:** City Council Ordinance Establishing the Boston Resident Jobs Policy, City of Boston Ordinances of 1983, effective October 14, 1983.
- D. **CONTRACT:** A legally enforceable agreement for the provision of supplies, labor, materials, services, construction, franchises, concessions, or leases granted by or on behalf of the City.
- E. **CONTRACTOR:** The General contractor for the contract for which funding is awarded. Also referred to herein as the general contractor.
- F. **CONTROLLED:** A business whose management policies and daily business operations are dominantly controlled by one or more Minority Persons or Women, as defined in the City of Boston Minority and Women Business Enterprise Office Certification Application.
- G. **EMPLOYMENT PLAN:** Identifies the individual trades that will make up the work force that a contractor will use on the project. It is designed to define how a contractor intends to comply with the work force requirements (i.e. 50% Boston residents, 25% minority and 10% women). (See Appendix III for sample Employment Plan).
- H. **MINORITY PERSON:** Refers to the definition contained in the City of Boston Minority

and Women Business Enterprise Ordinance.

- I. **MINORITY and/or WOMEN BUSINESS ENTERPRISE ("M/WBE"):** A business that fulfills the certification criteria contained in the City of Boston Minority and Women Business Enterprise Office Certification Regulations and is certified by that office as an M/WBE. To include SOMWBA.
- J. **MINORITY AND WOMEN BUSINESS ENTERPRISE OFFICE:** The City of Boston Minority and Women Business Enterprise Office ("M/WBE Office") is responsible for ensuring compliance with the 1987 Minority and Women Business Development Executive Order and the 1987 Ordinance, as amended in 1994 & 1995 as they pertain to the publicly advertised award of construction contracts and the certification of Minority and Women Business Enterprises.
- K. **M/WBE DIRECTORY:** A compilation of M/WBEs that have been certified by the M/WBE Office, published annually and updated on a quarterly basis.
- L. **M/WBE EXECUTIVE ORDER AND ORDINANCE:** The Executive Order and Ordinance of 1987, as amended in 1994 and 1995 pertaining to Minority and Women Business Enterprises. Effective December 31, 1987, provisions pertaining to construction contracting are stated in the Introduction to this Supplement.
- M. **OWNED:** Refers to the definition contained in the City of Boston Minority and Women Business Enterprise Office Certification Application.
- N. **RESIDENCE:** The actual principal residence of an individual where he or she normally eats, sleeps, and maintains his or her normal personal and household effects. Such residence may be established by any documentation acceptable to the BRA Compliance Office including driver's licenses or utility bills.

**ARTICLE II: EQUAL EMPLOYMENT OPPORTUNITY PROGRAM FOR MINORITIES, WOMEN AND BOSTON RESIDENTS (CONSTRUCTION WORK FORCE REQUIREMENTS)**

- A. **ANTI-DISCRIMINATION AFFIRMATIVE ACTION:** During the performance of this contract, the general contractor shall agree and shall encourage his/her subcontractors to agree to the following:
  - 1. In connection with the performance of work under this contract, the contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin or sex. This commitment shall refer to, but not be limited to, the following: employment upgrading, demotion or transfer, recruitment, advertising, recruitment layoff, termination, rates of pay or other forms of compensation, conditions or privileges of employment, and selection for apprenticeship or other training categories.

2. In connection with the performance of work under this contract, the contractor shall undertake good faith affirmative action measures designed to eliminate any discriminatory employment barrier based on race, color, religious creed, national origin and sex, and to ameliorate and remedy the effects of such discrimination in the past. Such affirmative action shall include positive measures to ensure equal opportunity in the areas of hiring, upgrading, demotion or transfer, recruitment, layoff or termination, rate of compensation and in-service or apprenticeship and other training programs.

**B. CITY ORDINANCE ESTABLISHING THE BOSTON RESIDENT JOBS POLICY, OCTOBER 14, 1983:**

1. **BOSTON RESIDENTS:** The contractor shall, and its subcontractors are encouraged to, maintain a not less than 50% ratio of Boston resident employee work hours to total employee work hours throughout the life of the project for each trade worked on this contract.
2. **MINORITY WORK FORCE:** The contractor shall, and its subcontractors are encouraged to, maintain a not less than 25% ratio of minority employee work hours to total employee work hours for each trade worked on this contract.
3. **FEMALE WORK FORCE:** The contractor shall, and its subcontractors are encouraged to, maintain a not less than 10% ratio of female employee work hours to total employee work hours worked for each trade worked on this contract.
4. **APPLICABLE TRADES:** The workforce requirements of paragraphs (1), (2) and (3) above shall apply to each trade that appears on the list of "Classification and Minimum Wage Rates" as determined by the Commissioner of Labor and Industries under the provisions of Chapter 149, Sections 26 through 27G, of the Massachusetts General Laws as amended from time to time.

**C. COLLECTIVE BARGAINING AGREEMENTS:** Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the contractor has a collective bargaining agreement to comply with these provisions, shall excuse the contractor's obligations under the City Ordinance or this Article.

**D. SUBCONTRACTS:** The general contractor shall be held responsible for the project's overall compliance in all cases. With the exception of contracts awarded pursuant to Massachusetts General Laws Chapter 149, Sections 44A-J and General Laws Chapter 30, sections 39A-40, the general contractor shall also ensure that any subcontracts entered into for construction under the prime contract shall contain specific reference to this Article and all related requirements, so that they shall be binding contractual obligations for all tiers of work. General contractors on projects awarded pursuant to Massachusetts General Laws Chapter 149, sections 44A-J and General Laws Chapter

30, sections 39A-40, shall also encourage the inclusion in all subcontracts entered into for construction pursuant to the prime contract specific reference to this Article and all related requirements, so that they shall be binding contractual obligations for all tiers of work.

- E. **TRAINING:** The contractor shall, and its subcontractors are encouraged to, fill not less than 50% of all training categories with Boston residents, provided that whenever possible a greater percentage of Boston residents shall be utilized in all training and apprenticeship categories.
  
- F. **PRE-BID CONFERENCE:** The Awarding Authority in conjunction with the BRA Compliance Unit may conduct at least one pre-bid conference to explain the work force requirements of the City Ordinance.
  
- G. **PRE-AWARD REQUIREMENTS:** The general contractor shall, prior to commencing work on the project, submit a completed Employment Plan to BRA, Contract Compliance Department, Marine Industrial Park, 22 Drydock Avenue, Boston, MA 02210-2395.
  - 1. The Employment Plan identifies the general contractor's intent to comply with the hiring requirements of this Article and the City Ordinance. This plan must describe efforts that the contractor will make to ensure that its work force on the project conforms to these requirements. The adequacy of the Employment Plan and the contractor's continued compliance with its provisions will be an important factor in the determination of the contractor's good faith efforts to comply with the Ordinance.

H. **CONTRACTOR'S COMPLIANCE RESPONSIBILITY**

- 1. **PRE-CONSTRUCTION CONFERENCE:** Prior to the commencement of work for the contract, the Awarding Authority in conjunction with the BRA Unit shall conduct at least one pre-construction conference to explain the work force requirements. The general contractor shall ensure that all subcontractors to be used on the project also attend the pre-construction conference. The general contractor and subcontractor shall sign a copy of the pre-construction conference minutes to indicate that all participants working on the project understand their contractual obligations.

**SUBCONTRACTORS:** In the event that subcontractors are not yet identified at the time of the pre-construction conference, the general contractor shall, after having requested permission from the Awarding Authority in writing and having received a response in writing, be responsible for providing written notification to the BRA Unit within ten (10) working days of award of any subcontract for construction work under the Prime Contract. The notification shall list the project name, the name, address and telephone number of the subcontractor, dollar

amount of the subcontract, and estimated starting and completion dates of the labor to be supplied under the subcontract.

With the exception of contracts awarded pursuant to Massachusetts General Laws Chapter 149 sections 44A-J, and General Laws Chapter 30, sections 39A-40, the general contractor shall, upon entering into an agreement with the subcontractor, ensure that the subcontractor submits an Employment Plan (See Appendix III) to the BRA Unit prior to the start of work. General contractors on projects awarded pursuant to Massachusetts General Laws Chapter 149, sections 44A-J, and General Laws Chapter 30, sections 39A-40 shall also upon entering into an agreement with the subcontractor, encourage the subcontractor to submit an Employment Plan (See Appendix III) to the BRJP Unit prior to the start of work.

2. **DEBARRED SUBCONTRACTORS:** Contractors shall not enter into any subcontract with any person or firm debarred from contracts pursuant to Article II paragraph J(3) and Article III, paragraph E(3).
3. **RECRUITMENT AND DOCUMENTING GOOD FAITH REPORT:** In the hiring of minorities, women and Boston Residents as journeymen, apprentices, advanced trainees and helpers, the contractors and subcontractors may rely on traditional referral methods utilized by the construction industry, and shall also take specific affirmative action to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications shall be based upon its efforts to achieve maximum results from its actions. The contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:
  - a. Establish and maintain a current list of Boston resident, minority and women recruitment sources and community organizations including, but not limited to, the BRA Contractor Referral List. When the Contractor or its unions have employment opportunities available, a record of the request for Boston residents, minorities and women shall be maintained and a record of the organizations' responses to the request for referrals shall also be maintained.
  - b. Maintain a current file of the names, addresses and telephone numbers of each Boston resident, minority and female referral from a union, a recruitment source, a community organization, or an off-the-street applicant. A record of what action was taken with respect to each individual shall be maintained. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union, or if referred but not employed by the contractor, this shall be documented in the file with the reason, along with whatever additional actions the contractor may have taken.

- c. Provide immediate written notification to the BRA Unit when the union or unions with which the contractor has a collective bargaining agreement has not referred to the contractor a Boston resident, minority person or woman sent by the contractor or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations.
  - d. Disseminate the contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation assisting the contractor in meeting its EEO obligations by 1) including it in any policy manual and collective bargaining agreement, 2) publicizing it in the company newspaper, annual report, etc., 3) specifically reviewing the policy with all management personnel and with all minority and female employees at least once a year and 4) posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
  - e. Disseminate the contractor's EEO policy by advertising it in the news media, specifically including Boston residents, minority and female employees; provide written notification to discuss the contractor's EEO policy with other contractors and subcontractors with whom the contractor does or anticipates doing business.
  - f. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with Boston resident, minority and female students and to Boston residents, minority and female recruitment and training organizations serving the City of Boston's employment needs.
  - g. Ensure and maintain a working environment free of harassment, intimidation and coercion at all sites and in all facilities at which the contractor's employees are assigned to work, with specific attention to Boston resident, minority or female employees working at such sites or in such facilities. Ensure that all foremen, superintendents, and other on site supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment.
4. **START OF CONSTRUCTION:** The construction start date (beginning of work on the site) shall be established at the pre-construction conference. In the event that a firm date cannot be established at the pre-construction conference, both the Awarding Authority (Project Manager) and the general contractor shall notify the BRA Compliance Monitor, in advance, of the date that work is to start on a project. Further, the general contractor shall advise the Compliance Monitor of dates that subcontractors are starting work on a project.

5. **WEEKLY UTILIZATION REPORTS:** The contractor shall prepare and submit to the BRJP Unit Weekly Utilization Reports (See Appendix II) no later than the Tuesday following each week work is performed. With the exception of the contracts awarded pursuant to Massachusetts General Laws, Chapter 149, sections 44A-J, and General Laws Chapter 30, sections 39A-40, the general contractor shall also ensure that subcontractor's prepare and submit to the BRJP Unit Weekly Utilization Reports no later than the Tuesday following each week work is performed. General Contractors on projects awarded pursuant to Massachusetts General Laws Chapter 149, sections 44A-J, and General Laws Chapter 30, sections 39A-40, shall also encourage subcontractor to prepare and submit to the BRA Unit Weekly Utilization Reports no later than the Tuesday following each week work is performed.

In the event that work is suspended for any reason, the contractor or subcontractor shall notify the BRJP Unit of the date work was suspended and the date that work commencement is anticipated.

These reports shall document the name and address of each worker, social security number, the sex, work classification, ethnicity, hours worked on the project and rate of pay. If this contract is funded with Federal funds (consult Awarding Authority), then the payroll deductions section and reverse side of the Weekly Utilization Report should also be completed. The Awarding Authority may require copies of this report sent to it as well.

6. **DESIGNATION OF RESPONSIBILITY:** The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Awarding Authority or the BRA Unit and to keep all required records.
7. **ACCESS TO INFORMATION:** The general contractor shall provide all information and reports required at the request of the Awarding Authority and shall permit access to its facilities and any books, records, accounts and other sources of information which the BRA Unit determines relates to the employment of personnel.

With the exception of contracts awarded pursuant to Massachusetts General Laws Chapter 149, sections 44A-J, and General Laws Chapter 30, sections 39A-40, the general contractor shall also ensure that all subcontractors provide all information and reports required at the request of either the Awarding Authority, and shall permit access to its facilities and any books, records, accounts, and other sources of information which the BRA Unit determines relates to the employment of personnel. General Contractors on projects awarded pursuant to Massachusetts General Laws Chapter 30, sections 39-A-40, shall also

encourage all subcontractors to provide all information and reports required at the request of the Awarding Authority, and shall permit access to its facilities and any books, records, accounts and other sources of information which the BRA Unit determines relates to the employment of personnel.

This paragraph shall apply only to information pertinent to compliance with this Article. Where information is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so demonstrate to the BRA Unit and shall set forth what efforts it has made to obtain this information. Written referral orders and records of each contractor's and subcontractor's attempts to recruit Boston resident, minority and female employees shall be maintained and made available to the BRA Unit within seven (7) days of the request by said Division.

8. **ON-SITE INSPECTIONS:** The BRA Unit shall have the right of access to the construction site in order that on-site inspections may be conducted.
9. **DOCUMENTED COMPLIANCE EFFORT:** The contractor and its subcontractors shall be deemed to be in compliance with Section B, Paragraphs 1-4, of this Article, if they have demonstrated to the satisfaction of the BRA Unit and the Awarding Authority that said contractor/subcontractor has taken all reasonable steps to comply with the provisions of this Article. Such reasonable steps shall include documentation of all outreach efforts. (See Section H, Paragraph 3).

**I. NON-COMPLIANCE:**

1. **INVESTIGATION:** Whenever the BRA Unit or the Awarding Authority believes the contractor or subcontractors may not be operating in compliance with the terms of this Article (See Section H, Paragraph 9, for documented effort), the BRA Unit shall notify the contractor and subcontractors and conduct an investigation to determine the contractor's good faith efforts to comply with the requirement of this Article. The BRA Unit shall present its findings to the Awarding Authority within seven days after completion of the investigation.

**HEARINGS:** The Awarding Authority and BRA Unit will hold the general contractor responsible for apparent non-compliance of this Article in a manner as provided.

**J. SANCTIONS/DEBARMENT:** In the event that the contractor fails or refuses to comply with this Article, the Awarding Authority may impose one or more of the following sanctions upon the project, as it deems appropriate, to attain full and effective enforcement:

1. The suspension of any payment or part thereof due or to become due under the contract until such time as the contractor is able to demonstrate its compliance with the terms of this supplement.

2. The termination of the contract, in whole or in part, unless the contractor is able to demonstrate within a time period specified by the BRA Unit its compliance with the terms of the contract, or demonstrate to the satisfaction of the BRA Unit that it is incapable of complying.
3. The denial to the general contractor of the right to participate in any future contracts awarded by the Awarding Authority for a period of up to three (3) years from the date the Awarding Authority finds non-compliance.

**K. SANCTIONS FOR SUBCONTRACTORS:** With the exception of contracts awarded pursuant to Massachusetts General Laws Chapter 149, sections 44A-J, and General Laws Chapter 30, sections 39A-40, the general contractor shall impose such sanctions and penalties upon its subcontractors for violation of this Article, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to this Article by the Awarding Authority.

APPROVED AS TO FORM:

---

BRA General Counsel

# **APPENDIX I**

## **WEEKLY UTILIZATION FORM FOR WORKFORCE REPORTING**



# APPENDIX II

## EMPLOYMENT PLAN

EMPLOYMENT PLAN

**QUARTERLY WORK FORCE PROJECTION TABLE**

PROJECT \_\_\_\_\_

CONTRACTOR \_\_\_\_\_ ADDRESS \_\_\_\_\_

CONTACT \_\_\_\_\_ PHONE NUMBER \_\_\_\_\_

QUARTER BEGIN DATE \_\_\_\_\_ QUARTER END DATE \_\_\_\_\_

WEEK ENDING			
TRADE			
TOTAL EMPLOYEES			
RESIDENT EMPLOYEES			
MINORITY EMPLOYEES			
FEMALE EMPLOYEES			
TRADE			
TOTAL EMPLOYEES			
RESIDENT EMPLOYEES			
MINORITY EMPLOYEES			
FEMALE EMPLOYEES			
TRADE			
TOTAL EMPLOYEES			
RESIDENT EMPLOYEES			
MINORITY EMPLOYEES			
FEMALE EMPLOYEES			

COMPANY OFFICIAL'S SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

# EMPLOYMENT PLAN

Project: \_\_\_\_\_ Contractor: \_\_\_\_\_ GEN: \_\_\_\_\_ SUB:  
Funding Source: \_\_\_\_\_ Address: \_\_\_\_\_

Date of Pre-construction: \_\_\_\_\_ Date Submitted: \_\_\_\_\_

## PROJECTED WORKFORCE:

\*R-RESIDENTS  
\*M-MINORITIES  
\*F-FEMALES

<u>TRADE</u>	<u>UNION/ NON UNION WAGE</u>	<u>HOURLY**</u>	<u>NAME AND ADDRESS</u>	<u>*R</u>	<u>*M</u>	<u>*F</u>
_____						
_____						
_____						
_____						
_____						
_____						
_____						
_____						
_____						
_____						

\*The required employment percentages apply to work hours by trade, not number of workers. This form however is intended to show your overall commitment.

**TOTAL:**

**Signature:** \_\_\_\_\_  
Company Official

CITY OF BOSTON



---

NINETEEN HUNDRED AND NINETY EIGHT

---

**AN ORDINANCE REGULATING EMPLOYERS ON PUBLIC CONSTRUCTION  
CONTRACTS**

*Be it ordained by the City Council of Boston, as follows:*

Section 1.

City of Boston Code Ordinance Chapter 8-9.1 is hereby amended by adding to Section 8-9.1 the following language after the second full paragraph:

*Approved Apprenticeship Training Program* shall be defined as it is in G. L. c.23 section, s 11H and 11I and is approved by the Division of Apprentice Training of the Department of Labor and Industries.

Section 2.

City of Boston Code Ordinance Chapter 8-9.2 is hereby amended by adding to Section 8-9.2 the following paragraph:

c. It is the policy of the City of Boston that all bidders and all subcontractors under the bid for public construction projects subject to the provisions of G. L. c. 149 s44a(2), shall as a condition for bidding, comply with the following conditions:

- 1.) The bidder and all subcontractors under the bid shall comply with the Boston Employment Plan as it currently exists (CBC Ord. s8-9 et seq. And 12 -10 et seq) and as it may, from time to time, be amended.
- 2.) The bidder and all subcontractors under the bid shall comply with the obligations established under G. L. c. 149 to pay the appropriate lawful prevailing wage rates to their employees.
- 3.) The bidder and all subcontractors under the bid shall comply with the obligations established under G. L. c. 149, s26 concerning the provisions of hospitalization and medical benefits to the extent the requirements of G. L. c. 149, s26 are applicable to public construction contracts in the City of Boston.
- 4.) The bidder and all subcontractors under the bid shall comply with the obligations established under G. L. c. 149, s148B and properly classify employees as employees and treat them accordingly for purposes of workers

compensation insurance coverage, unemployment taxes, social security taxes, and income tax withholding.

- 5.) The bidder and all subcontractors under the bidder shall adhere to the requirements of this Ordinance and G. L. c. 149 for public construction contracts, and shall be sanctioned accordingly for failure to do so. The City of Boston may sanction any bidder or subcontractor under a bidder who fails to maintain throughout the entire duration of a construction project, compliance with this policy or state law with one or more of the following sanctions:
- a.) Cessation of work at no cost to the City of Boston until compliance is obtained.
  - b.) Removal from the project altogether.
  - c.) Withholding of payments until compliance is obtained.
  - d.) Liquidated damages based on the value of the contract.
- 6.) It is the policy of the City of Boston to report to the proper enforcement agency of the Commonwealth any contractor or subcontractor who the City of Boston deems in violation of any Massachusetts General Law which is applicable to City-owned construction projects.

Section 3.

Chapter 8-9.3b(1) is hereby amended by striking the words "and race." And inserting in its place ", race and apprenticeship participation."

Section 4.

Chapter 8-9.5 is hereby amended by deleting the period at the end of the first sentence and inserting the following:

; or, all bidders and all subcontractors under the bidder shall maintain/and participate in an approved apprentice training program as defined by G. L. c.23, s11H and 11I for each apprenticeable trade or occupation represented in his or her workforce that is approved by the Division of Apprentice Training of the Department of Labor and Industries and must abide by the apprentice to journeymen ratio for each trade prescribed therein in the performance of the contract.

In City Council May 20, 1998. Passed  
Approved by the Mayor June 3, 1998.

Attest:



**Rosaria Salerno**  
City Clerk



Economic Development & Industrial Corporation

STANDARD FORMS INDEX

Code Compliant Stairway Improvements at 12 Channel Street, Phase 1

EDIC Project No. 1272C

SHOP DRAWING - SAMPLE - CATALOG CUT SCHEDULE FORM

FORM OF AGREEMENT FOR CHANGE IN CONTRACT  
FORM FOR PROCEED ORDER

FORM FOR GENERAL GUARANTEE  
FORM FOR MANUFACTURER GUARANTEE  
FINAL RELEASE FORM

CERTIFICATION OF LEGAL DUMPING FACILITIES

AFFIDAVIT OF COMPLIANCE WITH WAGE AND LABOR

SUBCONTRACTOR'S AFFIDAVIT OF COMPLIANCE WITH WAGE AND LABOR  
AFFIDAVIT OF PAYMENT TO SUBCONTRACTORS AND SUPPLIERS

SUBCONTRACTORS AND SUPPLIERS AFFIDAVIT OF PAYMENT  
CERTIFICATE OF CONFORMANCE TO AN "OR EQUAL" AGREEMENT

CERTIFICATE OF SUBSTANTIAL COMPLETION  
CONTRACTOR'S FINAL PAYMENT CERTIFICATE  
CONSENT OF SURETY TO FINAL PAYMENT

AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS  
RELEASE AND WAIVER OF LIENS AND CLAIMS

CONTRACT COMPLETION CERTIFICATE

APPLICATION FOR PAYMENT FORM

GENERAL CONDITIONS INDEX  
GENERAL CONDITIONS

SUPPLEMENTAL CONDITIONS INDEX  
SUPPLEMENTAL CONDITIONS

**END OF  
STANDARD FORMS INDEX**



Economic Development & Industrial Corporation

**CHANGE IN CONTRACT**

**CONTRACT FOR:** Amendment No. (1)

**Code Compliant Stairway Improvements at 12 Channel Street, Phase 1**

Date: \_\_\_\_\_

12 Channel Street, BMIP  
Boston, MA

EDIC Project No. 1272C

**THE ARCHITECT:**

Rizvi Architects  
334 Boylston St  
Boston, MA 02116

CONTRACT DATED: February, 2014

**THE OWNER/AUTHORITY:**

Economic Development & Industrial Corporation  
1 City Hall Plaza  
Boston, MA 02201

**THE CONTRACTOR:**

CONTRACTOR  
(Name)  
CONT ADDRESS  
CONT TOWN  
(Address)

The Economic Development & Industrial Corporation, acting by and through its Acting Director, and the Contractor named above, hereby mutually agree that the contract described above be, and the same hereby is, amended as follows:

The Contractor shall include, perform, furnish and install, and/or deduct, substitute, omit or exclude from the Contract as set forth below, under and in accordance with all applicable terms of the Contract Documents, at the prices listed, using therefore, the contractor and/or subcontractor's named.

Economic Development & Industrial Corporation

**CHANGE IN CONTRACT**

**CHANGE ORDER NO. 1**  
**DATE: \_\_\_\_\_**

All documents, written proposals and drawings referred to in this instrument, if any, are incorporated by reference herein.

The aggregate of these \_\_\_\_\_ items is a net **ADDITION** of AMOUNT IN WORDS (\$AMOUNT IN NUMBERS).

The time(s) for completion is extended by this instrument as follows:

Substantial Completion \_\_\_\_\_

Final Completion \_\_\_\_\_

It is hereby mutually agreed upon the execution of this agreement that the sums provided herein are complete, whole, fair and reasonable and that no additional claims, demands or liabilities shall be applicable for any added compensation arising from, growing out of or in any way connected with the work of this Change Order No.1. All other terms and conditions or provisions of the contract shall remain in full force and effect and shall be binding unto the parties of this contract.

**ORIGINAL CONTRACT:**

- |                                    |                        |
|------------------------------------|------------------------|
| a) Price                           | <u>COST IN NUMBERS</u> |
| b) To be substantially complete on | <u>SUBST COMP</u>      |
| c) To be finally complete on       | <u>FINAL COMP</u>      |

Economic Development & Industrial Corporation

**CHANGE IN CONTRACT**

TOTAL VALUE OF THE EXTRA WORK PROPOSED: \$ \_\_\_\_\_

Total added compensation for the revised work shall be in the amount of \$AMOUNT IN NUMBERS (AMOUNT IN WORDS).

The work shall include:

BREAKDOWN OF CHANGE ORDER

Materials	\$ _____
Labor	\$ _____
Equipment	\$ _____
Administration	\$ _____
Subtotal	\$ _____
Overhead and Profit	\$ _____
Total	\$ _____

CONTRACT SUMMARY TO DATE

ORIGINAL CONTRACT \$COST IN NUMBERS

CHANGE ORDER NO. One (1)

Economic Development & Industrial Corporation

**CHANGE IN CONTRACT**

Adjusted contract price upon execution of this agreement will be \$ \_\_\_\_\_ ( \_\_\_\_\_ ). Completion dates, upon execution of this agreement will be:

Substantial \_\_\_\_\_  
Final \_\_\_\_\_

APPROVED AS TO THE AVAILABILITY  
OF THE APPROPRIATION:

RECOMMENDED BY THE ARCHITECT/  
ARCHITECT:

\_\_\_\_\_  
Treasurer

By: \_\_\_\_\_  
(Signature and Title)

APPROVED AS TO FORM:

Rizvi Architects  
334 Boylston St  
Boston, MA 02116

\_\_\_\_\_  
Legal Counsel

THE CONTRACTOR:

APPROVED FOR CONSTRUCTION:

By: \_\_\_\_\_  
(Signature and Title)

\_\_\_\_\_  
Acting Director

CONTRACTOR  
CONT ADDRESS  
CONT TOWN  
(Firm Name and Address)

BASED ON THE FOREGOING  
RECOMMENDATIONS:

Economic Development & Industrial Corporation  
CORPORATE SEAL HERE:

AFFIX

Director

ASSENTED TO:

By: \_\_\_\_\_  
(Attorney-in Fact)

AFFIX CORPORATE SEAL HERE:  
(Affix Power of Attorney)

**END OF  
CHANGE IN CONTRACT**

Economic Development & Industrial Corporation

**PROCEED ORDER FOR CHANGE IN WORK**

Pursuant to Articles II & III of the Contract  
and  
Article \_\_\_ of the General Conditions

DATE \_\_\_\_\_

PROCEED ORDER No. \_\_\_\_\_

CONTRACT FOR:

Code Compliant Stairway Improvements at 12 Channel Street, Phase 1  
12 Channel Street, BMIP

THE ARCHITECT/ENGINEER:

Rizvi Architects  
334 Boylston St  
Boston, MA 02116

**EDIC Project No. 1272C**

CONTRACT DATED: February, 2014

THE OWNER/AUTHORITY:

Economic Development  
& Industrial Corporation

THE CONTRACTOR:

CONTRACTOR  
(Name)

CONT ADDRESS

CONT TOWN  
(Address)

Economic Development & Industrial Corporation

The Economic Development & Industrial Corporation (EDIC), acting by and through its Acting Director under and in accordance with Article No. \_\_\_\_\_ of the GENERAL CONDITIONS orders the following Change in the Work, subject to the price and extension of time limitations stated below:

The Contractor shall immediately proceed in accordance with this order without delay and regardless of any exception to the amount (s) to be added or deducted from the contract or to the extension of time, if any.

This order is valid only if signed by the Acting Director of the Economic Development & Industrial Corporation.

Recommended:

THE ARCHITECT/ENGINEER:

Rizvi Architects  
334 Boylston St  
Boston, MA 02116

By: \_\_

BASED ON THE ARCHITECT'S/ENGINEER'S  
RECOMMENDATION APPROVED BY EDIC

---

Acting Director

**END OF  
PROCEED ORDER FOR CHANGE IN WORK**

**EDIC Project No. 1272C**

**FORM FOR GENERAL GUARANTEE**

It is hereby guaranteed in writing that all portions of work under the Contract for **Code Compliant Stairway Improvements at 12 Channel Street, Phase 1,** was completed in strict accordance with the contract documents and are of quality designated therein and shall remain free of all defects of material and workmanship for a period of one (1) calendar year from the date of Final Completion of the work defined in Article 12 of the Contract to be \_\_\_\_\_.

At no expense to the EDIC, upon receipt of written notice from the Awarding Authority, forthwith repair and make good or cause to be repaired and made good, including damage to any part of said work resulting from (such) defects or their repair or the making good of same, all defects arising in the contract work specified in the contract documents due to defective materials, fabrication, assembly, installation or workmanship, and including within the term "defects" the failure of any equipment or apparatus (including any mechanical or electrical item) to produce and/or maintain specified performance capabilities or capacity.

And for the faithful performance of the covenants of this GUARANTEE, we and each of us bind ourselves, our successors, our heirs, executors, administrators and assigns.

CONTRACTOR (Affix Corporate Seal Here)  
CONT ADDRESS  
CONT TOWN

By: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature/Title)

Subscribed and sworn to  
before me on this \_\_\_\_ day  
of \_\_\_\_\_, 20\_\_.

NOTARY PUBLIC: \_\_\_\_\_  
MY COMMISSION EXPIRES: \_\_\_\_\_

(Affix Notary Seal Here)

**END OF  
FORM FOR GENERAL GUARANTEE**

**FORM FOR MANUFACTURER GUARANTEE**

**EDIC Project No. 1272C**

It is hereby guaranteed in writing that all portions of the work under the Contract for Code Compliant Stairway Improvements at 12 Channel Street, Phase 1, were completed in strict accordance with the Contract Documents and are of the quality designated therein and shall remain free of all defects of material and workmanship for a period of one (1) calendar year from the entire completion of the work defined in Article V of the Contract.

At no expense to the EDIC, upon receipt of written notice from the Awarding Authority, forthwith repair and make good or cause to be repaired and made good, including damage to any part of said work resulting from (such) defects or their repair or the making good of same, all defects arising in the contract work specified in the contract documents due to defective materials, fabrication, assembly, installation, or workmanship, and including within the term "defects" the failure of any equipment or apparatus (including any mechanical or electrical item) to produce and/or maintain specified performance capabilities or capacity.

And for the faithful performance of the covenants of this GUARANTEE, we and each of us bind ourselves, our successors, our heirs, executors, administrators and assigns.

CONTRACTOR  
CONT ADDRESS  
CONT TOWN

BY: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Title)

(Affix Corporate Seal Here)

Subscribed and sworn to  
before me on this \_\_\_\_ day  
of \_\_\_\_\_, 20\_\_.

NOTARY PUBLIC: \_\_\_\_\_

MY COMMISSION EXPIRES: \_\_\_\_\_

(Affix Notary Seal Here)

**END OF  
FORM FOR MANUFACTURER GUARANTEE**

Economic Development & Industrial Corporation

**FINAL RELEASE FORM**

**EDIC Project No. 1272C**

I, \_\_\_\_\_ (Name), duly elected \_\_\_\_\_ (Title) of **CONTRACTOR** do hereby and upon this tender of final payment for the contract named above, release and forever discharge the Economic Development & Industrial Corporation of and from any and all claims, demands and liabilities whatsoever of every name and nature both at law and in equity, arising from, growing out of, or in any way connected with this contract, save only such claims, demands and liabilities as are expressly excepted in this instrument.

By: \_\_\_\_\_

\_\_\_\_\_  
(Title)

(Affix Corporate Seal Here)

Date: \_\_\_\_\_

Subscribed and sworn to  
before me on this \_\_\_ day  
of \_\_\_\_\_, 20\_\_.

NOTARY PUBLIC: \_\_\_\_\_

MY COMMISSION EXPIRES: \_\_\_\_\_

(Affix Notary Seal Here)

**END OF  
FINAL RELEASE FORM**

**CERTIFICATE OF LEGAL DUMPING FACILITIES**

CONTRACT FOR: **EDIC Project No. 1272C**

DATE: \_\_\_\_\_

Code Compliant Stairway Improvements  
at 12 Channel Street, Phase 1  
12 Channel Street, BMIP

ARCHITECT/ENGINEER

Rizvi Architects  
334 Boylston St  
Boston, MA 02116

CONTRACT DATE: February, 2014

I, \_\_\_\_\_, duly elected \_\_\_\_\_ (title), of  
CONTRACTOR do hereby state for the contract named above, that all  
refuse, rubble, debris and any other materials generated from the  
project site and not specified to fulfill the requirements of the  
project shall be legally removed and disposed of in accordance with  
the Contract Documents and all applicable Federal, State and  
Municipal Laws, rules and regulations. Evidence of dumping on the  
form of vouchers and/or receipts shall be maintained and presented  
to the Authority upon request.

The following dump site(s) will be used for the duration of work  
for the above project unless alternate dump sites are to be used,  
subject to the prior approval of the EDIC.

- |          |          |
|----------|----------|
| 1. _____ | 2. _____ |
| _____    | _____    |
| _____    | _____    |
| _____    | _____    |

By: \_\_\_\_\_  
(Signature)

(Affix Corporate Seal Here)

Subscribed and sworn to  
before me on this \_\_\_ day  
of \_\_\_\_\_, 20\_\_.

NOTARY PUBLIC: \_\_\_\_\_

MY COMMISSION EXPIRES: \_\_\_\_\_

(Affix Notary Seal Here)

**END OF  
CERTIFICATE OF LEGAL DUMPING FACILITIES**

**AFFIDAVIT OF**  
**COMPLIANCE WITH WAGE AND LABOR-**  
**STANDARDS PROVISIONS**

FOR EVERY PAY ESTIMATE:

EDIC Project No. 1272C Contractor: CONTRACTOR

EDIC Contract Title Code Compliant Stairway Improvements at 12  
Channel Street, Phase 1

Pay Estimate No. \_\_\_\_\_

Period \_\_\_\_\_ to \_\_\_\_\_

Pursuant to the terms and conditions of the Contract for construction, the undersigned hereby certifies compliance with the Wage and Labor - Standards Provisions of the Contract (as outlined in Section 204 of the Specifications) for the period covered by this Pay Estimate No. \_\_\_\_\_, and, as evidence of said compliance also by the Subcontractor(s), the undersigned submits the attached form(s) of Affidavit on which each applicable subcontractor also attests to such conformance.

BY \_\_\_\_\_

(Type or print name and title underneath all signatures)

**END OF**  
**AFFIDAVIT OF COMPLIANCE**  
**(WAGE AND LABOR STANDARDS)**

**SUBCONTRACTOR'S AFFIDAVIT OF  
COMPLIANCE WITH WAGE AND LABOR-  
STANDARDS PROVISIONS**

FOR EVERY PAY ESTIMATE:

EDIC Project No. 1272C Contractor: CONTRACTOR

EDIC Contract Title: Code Compliant Stairway Improvements at 12  
Channel Street, Phase 1

Pay Estimate No. \_\_\_\_\_

Period \_\_\_\_\_ to \_\_\_\_\_

Pursuant to the terms and conditions of the Contract for construction, the undersigned hereby certifies compliance with the Wage and Labor - Standards Provisions of the subject Contract (as outlined in Section 204 of the Specifications) for the period covered by this Pay Estimate No. \_\_\_\_.

ATTEST: By \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Print or Type Name and Title)

SUBCONTRACTOR: \_\_\_\_\_

ADDRESS \_\_\_\_\_  
\_\_\_\_\_

**END OF  
SUBCONTRACTOR'S AFFIDAVIT OF COMPLIANCE  
(WAGE AND LABOR STANDARDS)**

**AFFIDAVIT OF**  
**PAYMENT TO SUBCONTRACTORS**  
**AND SUPPLIERS**

FOR EVERY PAY ESTIMATE AFTER THE FIRST:

EDIC Project No. 1272C Contractor: CONTRACTOR

EDIC Contract Title: Code Compliant Stairway Improvements at 12  
Channel Street, Phase 1

Pay Estimate No. \_\_\_\_\_

Period \_\_\_\_\_ to \_\_\_\_\_

Pursuant to the terms and conditions of the Contract for construction, the undersigned hereby certifies that, except as listed below, he/she has paid in full or has otherwise satisfied all obligations for all material and equipment furnished, for all work, labor and services performed, to his/her Subcontractors and Suppliers from payment made by the Authority for the previous Pay Estimate No. \_\_\_\_\_. As evidence of such payment the undersigned submits the attached form(s) of Affidavit, on which each applicable Subcontractor and Supplier attest to such payment, by affidavit or receipt, as applicable.

EXCEPTIONS: (If none, write "NONE" here).

\_\_\_\_\_  
\_\_\_\_\_

BY \_\_\_\_\_

(Type or print name and title underneath all signatures)

**END OF**  
**AFFIDAVIT OF PAYMENT TO SUBCONTRACTORS AND SUPPLIERS**

**SUBCONTRACTORS AND SUPPLIERS**  
**AFFIDAVIT OF PAYMENT**

EDIC Project No. 1272C Contractor: CONTRACTOR

EDIC Contract Title: Code Compliant Stairway Improvements at 12 Channel Street, Phase 1

Pay Estimate No. \_\_\_\_\_

Period \_\_\_\_\_ to \_\_\_\_\_

Pursuant to the terms and conditions of the Contract for construction, the undersigned hereby certifies that, except as listed below, he/she has been paid in full or has otherwise been satisfied for all material and equipment furnished and/or for all work, labor and services performed on said above Contract, as of the closing date of the above Pay Estimate.

EXCEPTIONS: (If none, write "NONE" here).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

COMPANY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

Type of Subcontract work or material supplied during period:

\_\_\_\_\_  
\_\_\_\_\_

ATTEST: By \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Print Name and Title)

**END OF**  
**SUBCONTRACTORS AND SUPPLIERS AFFIDAVIT OF PAYMENT**

**CERTIFICATION OF CONFORMANCE**  
**OF MATERIALS OR EQUIPMENT**  
**TO SPECIFICATIONS OR TO AN**  
**"OR EQUAL" AGREEMENT**

TO: Economic Development & Industrial Corporation One City Hall Square Boston, MA 02201	<b><u>EDIC Project No. 1272C</u></b> Contractor: <u>CONTRACTOR</u> EDIC Contract Title: <u>Code Compliant Stairway</u> <u>Improvements at 12 Channel</u> <u>Street, Phase 1</u>
--	--

Type/use of material or equipment to be supplied:

---

COMPANY--MANUFACTURER/SUPPLIER: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
TELEPHONE: \_\_\_\_\_

Pursuant to the terms and conditions of the Contract for construction, the undersigned hereby certifies that, to the best of his/her knowledge and belief, the enclosed manufacturer's/supplier's data (drawings, specifications, other detailed information) specifically requested by the Authority indicates that the \_\_\_\_\_ (material) (equipment) is in full conformance with the Specifications or in conformance to the extent of a prior "or equal" agreement between the Authority and the Contractor.

The data, as required by the Contract, contains the name and brand of the product, its place of origin, the name and address of the producer as well as the detailed information adequate to permit the Authority to verify total conformance or to pass upon its acceptability as an "equal".

The undersigned also certifies that only the (material) (equipment) as described in the attached data and/or presented as a sample herewith will be used in the Contract work for the purpose herein stated, all future deliveries and usage to be identical thereto.

ATTEST: By \_\_\_\_\_  
(Signature)  
\_\_\_\_\_  
(Type or Print Name and Title)

**END OF  
CERTIFICATION OF MATERIALS**



Economic Development & Industrial Corporation

A list of items to be completed or corrected, prepared by the Economic Development & Industrial Corporation and verified and amended by the Architect/Consultant, is appended hereto. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Rizvi Architects  
ARCHITECT/CONSULTANT

BY: \_\_\_\_\_

DATE: \_\_\_\_\_

The Contractor will complete or correct work on the list of items appended hereto by \_\_\_\_\_.

Rizvi Architects  
ARCHITECT/CONSULTANT

BY: \_\_\_\_\_

DATE: \_\_\_\_\_

The Authority accepts the Work or designated portion thereof as substantially complete and will assume full possession thereof on \_\_\_\_\_.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

BY

TITLE

DATE

(Print or type names underneath all signatures)

**END OF  
CERTIFICATE OF SUBSTANTIAL COMPLETION**

**CONTRACTOR'S FINAL PAYMENT CERTIFICATE**

TO: Economic Development & Industrial Corporation  
One City Hall Square  
Boston, MA 02201

EDIC Contract Title: Code Compliant Stairway Improvements at 12  
Channel Street, Phase 1

Contract No: EDIC Project No. 1272C  
Project Area: 12 Channel Street, BMIP  
Mass R-\_\_\_\_\_  
Contract Date: February, 2014  
Pay Estimate No. \_\_\_\_\_

This is to certify that all of the work under this Contract has been satisfactorily completed in accordance with the Specifications and that this is a true and correct final pay estimate.

We further certify that all just and lawful bills for labor, materials, and equipment employed in the performance of this Contract and covered by this Final Estimate have been paid in full.

CONTRACTOR  
Firm

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

(Print or type names underneath all signatures)

**END OF  
CONTRACTOR'S FINAL PAYMENT CERTIFICATE**

Economic Development & Industrial Corporation

**CONSENT OF SURETY TO FINAL PAYMENT**

TO: Economic Development & Industrial Corporation  
One City Hall Square  
Boston, MA 02201

EDIC Contract Title: Code Compliant Stairway Improvements at 12 Channel Street, Phase 1

Contract No.: EDIC Project No. 1272C

Project Area: 12 Channel Street, BMIP

Mass R-\_\_\_\_\_

Bond No: \_\_\_\_\_

Contract Date: \_\_\_\_\_

Contractor: **CONTRACTOR**

In accordance with the provisions of the Contract for construction between the Authority and the Contractor named above, the \_\_\_\_\_

\_\_\_\_\_  
(Name and Address of Surety Company) Surety Company on bond of **CONTRACTOR** hereby approves of final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety Company of any of its obligations to the Economic Development & Industrial Corporation, as set forth in the Surety Company's bond.

IN WITNESS WHEREOF, the Surety Company has hereunto set its hand this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
(Surety Company)

ATTEST:

\_\_\_\_\_  
(Signature of Authorized Surety Company Representative)

\_\_\_\_\_  
(Print Name and Title)

Subscribed and sworn to before me on this \_\_\_ day of \_\_\_\_\_, 20\_\_.

NOTARY PUBLIC: \_\_\_\_\_

MY COMMISSION EXPIRES: \_\_\_\_\_

(Affix Notary Seal Here)

**END OF  
CONSENT OF SURETY TO FINAL PAYMENT**

Economic Development & Industrial Corporation

**AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS**

TO:	EDIC Project No. 1272C
Economic Development & Industrial Corporation	Contractor: CONTRACTOR
One City Hall Square	EDIC Contract Title:
Boston, MA 02201	Code Compliant Stairway Improvements at 12 Channel Street, Phase 1
	Project Area: 12 Channel Street, BMIP
	Mass R-_____
	Contract Date:

COMMONWEALTH OF MASSACHUSETTS

COUNTY OF SUFFOLK

Pursuant to the terms and conditions of the Contract for construction, the undersigned hereby certifies that, except as listed below, he/she has paid in full or has otherwise satisfied all obligations for all material and equipment furnished, for all work, labor and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Authority or its property might in any way be held responsible.

EXCEPTIONS: (If none, write "NONE" here). The Authority requires that the Contractor must furnish bond satisfactory to the Authority and sufficient to cover each exception.

\_\_\_\_\_  
 \_\_\_\_\_  
 CONTRACTOR: CONTRACTOR  
 ADDRESS: CONT ADDRESS, CONT TOWN

ATTEST: By \_\_\_\_\_  
 (Signature)  
 \_\_\_\_\_  
 (Print Name and Title)

Subscribed and sworn to before me on this \_\_\_ day of \_\_\_\_\_, 20\_\_.

NOTARY PUBLIC: \_\_\_\_\_  
 MY COMMISSION EXPIRES: \_\_\_\_\_

(Affix Notary Seal Here)

**END OF  
AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS**

Economic Development & Industrial Corporation

**RELEASE AND WAIVER OF LIENS AND CLAIMS**

TO: Economic Development & Industrial Corporation  
One City Hall Square  
Boston, MA 02201

EDIC Contract Title: Code Compliant Stairway Improvements at 12  
Channel Street, Phase 1

Contract No.: EDIC Project No. 1272C  
Project Area: 12 Channel Street, BMIP  
Mass R-\_\_\_\_\_  
Contract Date: \_\_\_\_\_

In consideration of final payment to the undersigned by the Authority upon which this Release is conditioned, the undersigned:

1. accepts said payment as full, final and complete payment of all compensation payable under the provisions of the Contract referred to above, including all amendments, modifications, and change orders executed thereto;
2. fully releases and discharges without condition beyond receipt of final payment the Authority and its Consultants, and any representative, agent, or servant thereof from any claims, demands, causes of action of every kind and nature arising directly or indirectly out of said Contract; certifies that its subcontractors and all parties who have furnished material, equipment, or labor in connection with any work covered by the aforementioned Contract Documents, have been paid in full; and
3. for themselves and on behalf of their agents, assigns, servants, employees or subcontractors, forever waives and relinquishes any and all liens, stop notices, levies or attachments and any and all rights to claim or file for the same that any of them may now or hereafter have against the Authority or the property thereof.

Economic Development & Industrial Corporation

IN WITNESS WHEREOF, the Contractor has hereunto set its hand this  
\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

CONTRACTOR  
Contractor

\_\_\_\_\_  
Authorized Company Signature

\_\_\_\_\_  
(Print Name and Title)

Subscribed and sworn to  
before me on this \_\_\_\_ day  
of \_\_\_\_\_, 20\_\_.

NOTARY PUBLIC: \_\_\_\_\_

MY COMMISSION EXPIRES: \_\_\_\_\_

(Affix Notary Seal Here)

**END OF  
RELEASE AND WAIVER OF LIENS AND CLAIMS**

Economic Development & Industrial Corporation

CONTRACT COMPLETION CERTIFICATE

CONTRACTOR  
CONT ADDRESS  
CONT TOWN

---

SUBJECT:

Contract No.: EDIC Project No. 1272C  
Contract Title: Code Compliant Stairway Improvements at 12  
Channel Street, Phase 1  
Contract Date: \_\_\_\_\_

Dear Sirs:

All work covered by the subject Contract was tendered for our acceptance.

In order that the Economic Development & Industrial Corporation may proceed with final closeout of the subject Contract, we would appreciate your signing one copy of this Contract Completion Certificate and returning it to me.

Very truly yours,

Economic Development & Industrial Corporation

Mr. Nathaniel Gorham  
Contract Manager

This certifies that all work completed under Contract EDIC Project No. 1272C is in accordance with the Contract Plans and Specifications.

CONTRACTOR  
Contractor

\_\_\_\_\_  
BY TITLE DATE

(Print or type names underneath all signatures)

**END OF  
CONTRACT COMPLETION CERTIFICATE**

**PAYMENT FORMS**

**APPLICATION AND CERTIFICATE FOR PAYMENT**

AIA DOCUMENT G702

(Instructions on reverse side)

PAGE ONE OF \_\_\_\_\_ PAGES

TO (OWNER): PROJECT: \_\_\_\_\_

APPLICATION NO: \_\_\_\_\_  
 Distribution to:  
 OWNER  
 ARCHITECT  
 CONTRACTOR

FROM (CONTRACTOR): VIA (ARCHITECT): \_\_\_\_\_

PERIOD TO: \_\_\_\_\_  
 ARCHITECT'S PROJECT NO: \_\_\_\_\_

CONTRACT FOR: \_\_\_\_\_

CONTRACT DATE: \_\_\_\_\_

**CONTRACTOR'S APPLICATION FOR PAYMENT**

Application is made for Payment, as shown below, in connection with the Contract. Continuation Sheet, AIA Document G703, is attached.

CHANGE ORDER SUMMARY		ADDITIONS	DEDUCTIONS
Change Orders approved in previous months by Owner			
TOTAL			
Approved this Month			
Number	Date Approved		
TOTALS			
Net change by Change Orders			

1. ORIGINAL CONTRACT SUM ..... \$ \_\_\_\_\_
2. Net change by Change Orders ..... \$ \_\_\_\_\_
3. CONTRACT SUM TO DATE (Line 1 ± 2) ..... \$ \_\_\_\_\_
4. TOTAL COMPLETED & STORED TO DATE ..... \$ \_\_\_\_\_  
 (Column G on G703)
5. RETAINAGE:
  - a. \_\_\_\_\_ % of Completed Work \$ \_\_\_\_\_  
 (Column D + E on G703)
  - b. \_\_\_\_\_ % of Stored Material \$ \_\_\_\_\_  
 (Column F on G703)
 Total Retainage (Line 5a + 5b or Total in Column I of G703) ..... \$ \_\_\_\_\_
6. TOTAL EARNED LESS RETAINAGE ..... \$ \_\_\_\_\_  
 (Line 4 less Line 5 Total)
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate) ..... \$ \_\_\_\_\_
8. CURRENT PAYMENT DUE ..... \$ \_\_\_\_\_
9. BALANCE TO FINISH, PLUS RETAINAGE ..... \$ \_\_\_\_\_  
 (Line 3 less Line 6)

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR: \_\_\_\_\_

State of: \_\_\_\_\_ County of: \_\_\_\_\_  
 Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_  
 Notary Public: \_\_\_\_\_  
 My Commission expires: \_\_\_\_\_

**ARCHITECT'S CERTIFICATE FOR PAYMENT**

In accordance with the Contract Documents, based on on-site observations and the data comprising the above application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED ..... \$ \_\_\_\_\_  
 (Attach explanation if amount certified differs from the amount applied for.)  
 ARCHITECT: \_\_\_\_\_

By: \_\_\_\_\_ Date: \_\_\_\_\_  
 This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

AIA Document G702, APPLICATION AND CERTIFICATE FOR PAYMENT, containing Contractor's signed Certification is attached.  
 In tabulations below, amounts are stated to the nearest dollar.  
 Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NUMBER:  
 APPLICATION DATE:  
 PERIOD FROM:  
 TO:  
 ARCHITECT'S PROJECT NO:

A ITEM No.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D Previous Applications	E WORK COMPLETED		F This Application Stored Materials (not in D or E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)	H BALANCE TO FINISH (C-G)	I RETAINAGE
				Work in Place	% (G÷C)				

Economic Development & Industrial Corporation

GENERAL CONDITIONS INDEX

ARTICLE 1 - CONTRACT DOCUMENTS

- 1.1 Definition of Term
- 1.2 Terms By Applicable Law
- 1.3 Information and Instructions for Contract Documents
- 1.4 Copies of Documents Furnished

ARTICLE 2 - THE OWNER

- 2.1 Definition of Term
- 2.2 Owner's Right and Authority; Time for Decisions; Supervision; Delay in the Work; Use and Occupancy Prior to Final Completion
- 2.3 Clerk-of-the-Works

ARTICLE 3 - THE ARCHITECT/ENGINEER

- 3.1 Definition of Term
- 3.2 Interpretations; Time for Decisions, Approvals

ARTICLE 4 - THE CONTRACTOR

- 4.1 Definition of Term
- 4.2 General Responsibility
- 4.3 Supervision and Construction Procedures
- 4.4 Labor
- 4.5 Materials and Equipment; Substitutions; Equals
- 4.6 Laws, Permits, and Licenses
- 4.7 Project Management
- 4.8 Construction Schedule

Economic Development & Industrial Corporation

- 4.9 Project Photographs
- 4.10 Shop Drawings, Samples, and Printed Data
- 4.11 Record Drawings and Specifications on Site
- 4.12 Instructions Relating to Existing Conditions
- 4.13 Removal of Existing Work
- 4.14 Marks and Lines
- 4.15 Materials, Inspection, Disposition, and Suitable Storage
- 4.16 Cutting and Patching; Location of Work
- 4.17 Existing Utilities
- 4.18 Maintenance of Site
- 4.19 Inspection and Testing of the Work
- 4.20 Claims by the Contractor for Loss and Injury

ARTICLE 5 - THE SUBCONTRACTOR

- 5.1 Definition of Term
- 5.2 Use of Subcontractors
- 5.3 Relation Between Subcontractors and the Owner
- 5.4 Relation Between Subcontractors and Contractor

ARTICLE 6 - PROJECT COORDINATION

ARTICLE 7 - CONTRACT TIME AND LIQUIDATED DAMAGES

- 7.1 Definition of Terms
- 7.2 Time as Essential Condition
- 7.3 Progress and Completion

Economic Development & Industrial Corporation

7.4 Liquidated Damages

7.5 Excuse by Failure of Presupposed Conditions

ARTICLE 8 - PAYMENT TO AND BY CONTRACTOR AND SUBCONTRACTORS

8.1. Payments to Contractor

8.2. Payments to Subcontractors

8.3. Periodic Estimated and Certificates of Progress

8.4. Payment for Labor and Materials by Contractor and Subcontractor

ARTICLE 9 - PROTECTION OF PERSON AND PROPERTY

9.1. General

9.2. Accident Prevention

9.3. Insurance Inspection

9.4. Fire Protection and Prevention

9.5. Protection From the Elements

9.6. Watchmen

9.7. Welding and Cutting

9.8. Blasting and Sandblasting

9.9. Overloading

9.10.Noise and Noise Pollution

9.11.Scaffolding, Staging and Hoisting Equipment

ARTICLE 10 - INSURANCE

10.1.Insurance Requirements - General

10.2.Contractors' Liability Insurance

Economic Development & Industrial Corporation

10.3. Property Insurance

ARTICLE 11 - CHANGES IN THE WORK

11.1. Deviations

11.2. Changes by Written Order

11.3. Claims for Extra Work

11.4. Computation of Price Adjustment

11.5. Changes in the Work, Execution of the Instruments

ARTICLE 12 - GUARANTEES

12.1. General Guarantees

12.2. Special Guarantees

ARTICLE 13 - REMEDIES OF THE ECONOMIC DEVELOPMENT & INDUSTRIAL CORP

13.1. Discontinuance of Work of Contractor by Owner

13.2. Indemnification

ARTICLE 14 - RELEASE OF THE ECONOMIC DEVELOPMENT & INDUSTRIAL CORP  
ON THE FINAL PAYMENT

**END OF  
GENERAL CONDITIONS INDEX**

Economic Development & Industrial Corporation

**GENERAL CONDITIONS**

The following Articles, Number 1 through 14 inclusive, are the **General Conditions** of the Contract. Any and all references to **General Conditions** in the Contract Documents shall be considered as references to the contents of Articles 1 through 14, inclusive, and all requirements and conditions set forth herein shall be binding, except to the extent modified and/or amended in and by the **Supplemental Conditions**.

**ARTICLE 1 - CONTRACT DOCUMENTS**

1.1 Definition of Term

The words Contract Documents, wherever used, shall include, but not necessarily be limited to the following:

- 1.1.1 PART A - BIDDING REQUIREMENTS AND DOCUMENTS, CONTRACT FORMS, GENERAL CONDITIONS, AND SUPPLEMENTAL CONDITIONS.
- 1.1.2 PART B - TECHNICAL SPECIFICATIONS
- 1.1.3 All Contract Drawings and Contract schedules as prepared by the Architect/Engineer and his authorized Consultants.
- 1.1.4 All addenda issued by the Awarding Authority prior to the time established for receipt of general bids.
- 1.1.5 All modifications to the Contract Documents issued by the Architect/Engineer, after award of Contract, which bear the written approval of the Official, including supplementary drawings, specifications, and written instructions. A modification is (1) a written amendment to the Contract executed by the Contractor and the Owner and assented to in writing by the Contractor's surety; (2) an order for change in Contract pursuant to Article 2.; or (3) a written interpretation issued by the Architect pursuant to Article 3.2.

1.2 Terms by Applicable Law

- 1.2.1 The Contract Documents shall be deemed to include all applicable provisions of law, including, without limitation, Sections 39F and 39K through 39P, inclusive, of Chapter 30 and Section 29 of Chapter 149 and Chapter

Economic Development & Industrial Corporation

802 of the General Laws, of the Commonwealth of Massachusetts as amended, and Federal Laws where Federal monies are involved.

1.3 Information and Instructions for Contract Documents

1.3.1 In cases of conflict within the parts of the Contract Documents as to the extent or location of materials, the following order of precedence shall govern.

A. Large scale drawings over small scale drawings.

B. Small scale drawings over finish schedules.

C. Finish schedules over Specifications.

1.3.2 In cases of conflict within the parts of the Contract Documents as to the quality and/or quantity of materials to be supplied, the quality specified in the Specifications and the greater quantity shall prevail.

1.3.3 The Contractor shall carefully study all Contract Documents and other instructions from the Architect such special information, detailed drawings, etc., as may be necessary for the proper performance of the work.

1.3.4 The Contract Documents are complementary, and what is required by any shall be as binding as if required by all.

1.3.5 Where drawings show outline or descriptive representations of repetitive features, the Contractor shall construe them in exact accordance with the corresponding features which are common to similar items or materials and which are completely drawn and specified.

1.3.6 Where the statement "Consult Drawing No. \_\_\_\_\_" or "Refer to Drawing No. \_\_\_\_\_" occurs in the Specifications, such reference to a Drawing has been made solely for the convenience of bidders to help them identify the item under consideration and to locate the typical detail of such item in the set of Contract Drawings. It is not the intention of such references,

Economic Development & Industrial Corporation

however, to list each and every Drawing on which a certain item may occur.

- 1.3.7 Reference in the Contract Documents to laws, codes, ordinances, standard specifications and manufacturer's instructions shall mean the latest edition and revisions in effect on the date established for receipt of sub-bids, or general bids in the event of no sub-bids.
- 1.3.8 The terms "as shown", "as indicated", "as detailed", unless otherwise defined in the context, shall mean "as shown (or as indicated, or as detailed) on the Drawings".
- 1.3.9 All headings of articles, paragraphs, and subparagraphs in the Specifications, commencing with Section 1A, shall be deemed to be part of the ensuing text and shall be taken into consideration in the interpretation or construction thereof.
- 1.3.10 The word "provide" shall mean furnish and install, unless otherwise specified.

1.4 Copies of Documents Not Furnished

- 1.4.1 The Authority shall no longer furnish to the Contractor, free of charge, a sufficient number of copies of Contract Documents for his own use and his subcontractors. Contract Documents are digital and the reproduction of hard copy drawings is now the responsibility of the Contractor.
- 1.4.2 In addition, the Authority shall no longer furnish to the Contractor a reproducible transparency and one black line print, each, of details and clarification drawings issued after the award of the Contract. The Contractor shall, at his own expense, provide and distribute such number of prints or reproductions of these transparencies as required for his own and his subcontractors' use.
- 1.4.3 The Authority shall furnish to the Contractor a digital copy of the Contract Drawings for use for the preparation of record "as built" drawing as defined under Article 4.11.

Economic Development & Industrial Corporation

**ARTICLE 2 - THE OWNER**

2.1 Definition of Term

2.1.1 The Economic Development & Industrial Corporation of Boston is the "Owner", and will be represented by the Acting Director of the EDIC, or his authorized representative either in the person of the Authority's Project Manager or other designee, referred to in the Contract Documents, as the "Awarding Authority" or the "Authority" or the "Owner".

2.2 Owner's Right and Authority; Time for Decisions; Supervision; Delay in the Work; Use and Occupancy Prior to Final Completion

2.2.1 The Owner, and his authorized representatives, shall have access to the premises at all times, and shall have the authority to stop, alter, revise and in any way affect the progress of the work or any portion thereof, if it is not being performed in conformity with the requirements of the Contract Documents.

2.2.1.1 The Authority, the Commissioner of Labor & Industries for the Commonwealth of Mass. or any of their authorized representatives, shall have access to any books, documents, papers, and records of the Contractor which are directly pertinent to the Contract for the purpose of making audit, examination excerpts, and transcriptions.

2.2.2 Pursuant to G.L.C. 30 & 39P: Every contract subject to Section Forty-four A (Section 44A) of Chapter One Hundred Forty-nine (Chapter 149) which requires the Awarding Authority, and/or its Architect/Engineer to make a decision on interpretation of the specifications, approval of equipment, material or any other approval, or progress of the work, shall require that the decision be made promptly and, in any event, no later than thirty days (30) after the written submission for decision. But if such decision requires extended investigation and study, the Awarding Authority, and/or the Architect/Engineer shall, within thirty (30) days after the receipt of the submission, give the party making the submission written notice of the reasons why the decision

Economic Development & Industrial Corporation

cannot be made within the thirty (30) day period and the date by which the decision will be made.

- 2.2.2.1 In giving instructions, the Architect/Engineer shall not have the authority to make any change in the work, whether or not involving extra cost, without prior written authorization of the Authority in each instance.
- 2.2.3 Pursuant to G.L.C. 30 & 390: The Awarding Authority may order the Contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as it may determine to be appropriate for the convenience of the Awarding Authority; provided however, that if there is a suspension, delay or interruption for fifteen (15) days or more or due to a failure of the Awarding Authority to act within the time specified in this Contract, the Awarding Authority shall make an adjustment in the Contract price for any increase in the cost of performance of this Contract but shall not include any profit to the Contractor on such increase, and provided further, that the Awarding Authority shall not make any adjustment in the Contract price under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this Contract provides for an equitable adjustment of the Contract price under any other Contract provisions.
- 2.2.4 It is understood and agreed that when any portion of the work is in a reasonable condition, in the opinion of the Authority, to receive any furnishings or equipment or other property of the Owner, not included in this Contract, the Contractor shall provide all reasonable facilities and protection therefor.
- 2.2.5 The Contractor agrees to permit the use and occupancy of the project, or any portion thereof, by the Owner, prior to final completion of the work, in accordance with the following terms:
  - 2.2.5.1 The Owner will, prior to any such partial use or occupancy, give written notice to the Contractor, indicating the areas intended to be

Economic Development & Industrial Corporation

used and occupied and commencement date(s)) of such use.

2.2.5.2            Upon receipt of such notice of intent from the Owner, the Contractor shall promptly secure and submit to the Authority endorsement from the insurance carrier(s)) and written consent from the surety, permitting occupancy and use of the project, or any designated portions thereof, by the Owner, until final acceptance of the project.

2.2.5.3            The Contractor shall maintain all insurance, required under the Contract, for all portions used or occupied by the Owner. Such occupancy shall not affect the various guarantee periods called for by the Contract Documents.

2.2.5.4            The occupancy of the project, or any portion thereof, by the Owner shall not be construed as final acceptance of work, nor relieve the Contractor of his obligation to perform any work required by the Contractor but not completed at the time of occupancy. Before such occupancy, the Authority will give the Contractor a written list of items to be completed prior to Final Completion, in, and with respect to, the areas to be occupied prior to the stipulated date of Final Completion of the work.

2.2.5.5            The Contractor shall be relieved of all maintenance costs on the part(s) of the project so occupied.

2.2.5.6            The Contractor shall not be responsible for wear and tear or damage resulting solely from such occupancy.

2.2.5.7            The Contract price will be adjusted with respect to heat, light, and water furnished in and to the portion(s)) of the project so occupied.

2.2.5.8            After the project, or portions thereof, has been taken over for occupancy by the Owner, it shall be the obligation of the Owner to keep the occupied portions clean.

Economic Development & Industrial Corporation

2.3 Clerk-of-the-Works

- 2.3.1 A Clerk-of-the-Works or Resident Engineer may be engaged by the Owner for this project. In the event that a Clerk-of-the-Works or Resident Engineer is so engaged, he shall work under the Architect/Engineer's direction but he shall not, however, have any authority to order any changes in the work, nor to make any decision relating to the arrangement, design or construction, or to the disposition of materials or workmanship, or to the conduct of work, without the prior written authorization of the Authority.

**ARTICLE 3 - THE ARCHITECT/ENGINEER**

3.1 Definition of Term

- 3.1.1 The firm named as such in the Contract Documents and on the drawings is the Architect/Engineer of the project.
- 3.1.2 References in the Contract Documents to the "Architect" and/or the "Engineer" or to the "architect" and/or the "engineer" shall be construed to be synonymous and interchangeable. The references or titles as noted above, shall mean and refer to the individual and/or the consultant and/or the firm preparing and signing the Contract Drawings and Specifications.
- 3.1.3 In the event of the termination of the employment of the Architect/Engineer, the Owner shall appoint an Architect/Engineer whose status under the Contract Documents shall be that of the former Architect/Engineer. For the information of the contractor(s), the agreement(s) between the Owner and the Architect/Engineer is hereby incorporated herein by reference. A copy of the same will be shown to the Contractor upon his request. Nothing in these Contract Documents shall create any contractual relation between the Architect/Engineer and the Contractor.

3.2 Interpretations; Time for Decisions, Approvals

- 3.2.1 The Architect/Engineer shall interpret the Specifications beginning with Section 1A, and the Drawings, including

Economic Development & Industrial Corporation

detailed developments thereof, provided, however, that in case of any disagreement between the Architect and the Contractor, the Contractor shall have the right of appeal to the Authority whose decision shall be final and binding.

- 3.2.2 Written interpretations necessary for the proper execution or progress of the work by drawings or otherwise will be issued with reasonable promptness by the Architect/Engineers.
- 3.2.3 In giving instructions, the Architect/Engineer shall not have the authority to make any change in the work, whether or not involving extra cost, without prior written authorization of the Authority in each instance.

**ARTICLE 4 - THE CONTRACTOR**

4.1 Definition of Term

- 4.1.1 Unless specifically noted or evidenced to the contrary in the Contract Documents, the word "Contractor" means the general contractor who executes the Contract.
- 4.1.2 The Contractor shall not assign the whole or any part of this Contract or any monies due or to become due hereunder without prior written consent of the Authority. In the event that the Contractor assigns all or any part of any monies due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims of all persons, firms and corporations for services rendered or materials supplied for the performance of the work called for in this Contract.

4.2 General Responsibility

- 4.2.1 The Contractor, all subcontractors, and all parties employed on the work, whether directly employed or as a subcontractor, shall perform their work in a good and workmanlike manner and in accordance with the Contract Documents.

Economic Development & Industrial Corporation

4.2.2 If the Contractor observes that the Contract Drawings and specifications are ambiguous, or are at various with each other, he shall promptly notify the Architect/Engineer and the Authority, in writing, requesting written interpretation. Upon receipt of the written interpretation, he shall perform the work in accordance with the written interpretation. Should the Contractor proceed with which work, without receiving a written interpretation, he shall bear all costs arising from the correction and re-execution of the work performed.

4.3 Supervision & Construction Procedures

4.3.1 The Contractor shall supervise and direct the work. The Contractor shall be solely responsible for all construction means, methods, techniques, sequences, procedures, safety procedures, and for coordinating all portions of the work of the Contract.

4.4 Labor

4.4.1 Unless specifically noted to the contrary, the Contractor shall provide and pay for all labor.

4.4.2 Wage Rates

4.4.2.1 The rate per hour of the wages to be paid to mechanics and apprentices, teamsters, chauffeurs and laborers in the work to be performed under this Contract shall be not less than the rate of wages in the schedule contained in the Contract Documents in SECTION entitled **Minimum Wage Rates**. Minimum rates of wages for work performed under this Contract will be as predetermined by the Commissioner of Labor and Industries of Massachusetts in accordance with the provisions of General Laws, Chapter 149, Sections 26 to 27D inclusive, as amended, as set forth under the Classification of Occupations, General and State. This schedule shall continue to be the minimum rate of wages for said employees during the life of this Contract. The Contractor shall keep posted on the site of the work a legible copy of said schedule of "Minimum Wage Rates and Health and Welfare Fund and Pension Fund Contributions". Apprentices employed

Economic Development & Industrial Corporation

pursuant to this determination of wage rates must be registered and approved by the State Apprenticeship Council. Wherever rates for journeymen or apprentices are not listed, and if any other labor is not included in this list, the Contractor shall insert the rates of all those employed on the work. If the Contractor finds it necessary, during the progress of the work, to secure a minimum wage rate for some additional classification, he shall make a request for such additional classification to the Authority, who, in turn, will obtain the additional classification and corresponding minimum wage rate from the Commonwealth of Massachusetts, Department of Labor and Industries, and advise the Contractor accordingly. Such additional classifications and minimum wage rates shall then be considered a part of the Contract and the Contractor shall have no claim for additional compensation because of the additional classifications and minimum wage rates. When a question arises as to the classification in the schedule of the Department of Labor and Industries in which any employee is to be included, the decision shall be made by the Department of Labor and Industries, through their authorized representative. Payments by employers to health and welfare and pension plans under collective bargaining agreements or understandings between organized labor and employers shall be included for the purposes of establishing minimum wage rates as herein provided. The aforesaid rates of wages in the schedule of wage rates shall include payments by employers to health and welfare and pension plans as provided heretofore, and such payments shall be considered as payments to persons under this section performing work as herein provided. Any employer engaged in the construction of such works who does not make payments to a health and welfare and to a pension plan, where such payments are included in said rates of wages, shall pay the amount of said payment directly to each employee engaged in said construction.

Economic Development & Industrial Corporation

- 4.4.2.2           The Contractor shall pay to any reserve police officers employed by him, if any, the prevailing wage rate paid regular City of Boston police officers. Such police officers shall be covered by Workmen's Compensation Insurance and Employer's Liability Insurance by the Contractor.
- 4.4.2.3           The Contractor shall keep on file at the site the wage rates and classifications of all labor employed on this work in order that they may be available for inspection by the Authority or the Architect/Engineer.
- 4.4.2.4           The Contractor shall certify on a form provided by the Authority that required minimum wages are paid to all employees referred to in Paragraph 4.4.2.1. The Contractor and each Subcontractor shall furnish to the Commission of Labor and Industries within fifteen (15) days after completion of its portion of the work a Statement of Compliance, copy to the Authority, executed by the Contractor or Subcontractor or by any authorized officer or employee of the Contractor or Subcontractor who supervises the payment of wages. The form of the Statement of Compliance is included within these specifications. Schedule of Minimum Wage Rates are listed under Contract Forms in Part A of these specifications.
- 4.4.2.5           Payrolls and basic records relating to the work of this Contract will be maintained during the course at the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work, or in the construction or development of the project. Such records will contain the name and address of each employee, his correct classification, rates of pay (including rates of contributions or costs anticipated of the types described in Section 1 (b) (2) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Authority has found that the wages of any laborer or mechanic includes the amount of any costs reasonably anticipated in

## Economic Development & Industrial Corporation

providing benefits under a plan program, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

### 4.4.2.6

The Contractor will submit weekly a copy of all payrolls to the Economic Development & Industrial Corporation of Boston. The Contract shall be accompanied by a statement signed by the employer or his agent indicating that the payrolls are correct and complete, that the wage rates contained therein are not less than those determined by the Secretary of Labor and that the classifications set forth for each laborer or mechanic conform with the work herein performed. The Contractor shall be responsible for the submission of copies of payrolls of all subcontractors. The Contractor will make the records required under the labor standards clause of the Contract available for inspection by authorized representatives of the Economic Development & Industrial Corporation of Boston and the Department of Labor & Industries, and will permit such representatives to interview employees during working hours on the job.

### 4.4.3 Working Hours

#### 4.4.3.1

No laborer, workman, mechanic, foreman, or inspector working within the Commonwealth, in the employ of the Contractor, subcontractor or other person doing or contracting to do the whole or part of the work contemplated by this Contract, shall be required or permitted to work more than eight (8) hours in any one day, or more than forty-eight (48) hours in any one week, or more than six (6) days in any one week, except in cases of emergency.

#### 4.4.3.2

Unless otherwise required under the Contract Documents, or directed in writing by the Authority,

Economic Development & Industrial Corporation

all work shall be done during regular working hours. However, if the Contractor desires to carry on the work outside of regular working hours or on Saturdays, Sundays, or holidays, he may submit application to, and obtain written permission from the Authority, but shall allow ample time to enable satisfactory arrangements to be made for inspecting work in progress and shall bear all costs with respect thereto.

4.4.3.3 The Contractor shall pay all employees covered in Paragraph 4.4.3.2 that are working more than forty (40) hours in a week or are working on Sundays or holidays a minimum rate of one and one half (1 1/2) times the minimum wage scale established.

4.4.3.4 "Holidays" shall be defined as official holidays of the Commonwealth of Massachusetts and/or the City of Boston.

4.4.3.5 The Contractor shall pay for any additional costs incurred by the Authority due to work performed outside of regular working hours, including, but not limited to, testing and regular inspection of the work.

4.4.3.6 It is anticipated that work will be performed weekdays between the hours of 7:00 a.m. and 3:30 p.m., and that night work and work on Saturdays, Sundays, and legal holidays will not be required to complete the work except as may be specified in the Supplemental Conditions. No work may be accomplished nor may any of the Contractor's personnel be on-site outside of the normal workday and workweek unless specific written approval has been given by the Authority in each instance. Should it be necessary to perform activities on site for extended daytime work, night work, or work on Saturdays, Sundays, and legal holidays, this work shall be scheduled with the Engineer at least one week in advance if reasonably possible and not less than seventy-two hours in advance. Any lighting, safety provisions, and other facilities that the Authority deems necessary for

## Economic Development & Industrial Corporation

performing such work shall be provided by the Contractor. For extended daytime work, night work, work on Saturdays, Sundays or legal holidays, if any be performed, the Contractor will receive no extra payment, but compensation therefore shall be considered as having been included in the prices stipulated for the appropriate times of work as listed in the Bid.

- 4.4.3.7 If it should be necessary in order to complete the work within the time limits stipulated in the Contract or to complete any portion of the work in its various stages in time to avoid delaying the work of other trades, work shall be performed outside normal working hours without additional cost to the EDIC. This work shall be accomplished at the direction and subject to the requirements of the Authority, as noted in the preceding paragraph 4.4.3.6. and the requirements of the Contract.

### 4.4.4 Equal Employment Opportunity

- 4.4.4.1 The Contractor shall assume, and shall require each subcontractor to assume the obligation to take whatever affirmative actions are necessary to ensure that employees, and applicants for employment, under this Contract are treated equally irrespective of race, color, religious creed, national origin, sex, age, or ancestry. The term "treated" shall mean and include, without limitation, the following: Recruited, whether by advertising or other means; compensated, whether in the form of rates of pay or otherwise; selected for training, whether in the form of rates of pay or otherwise; selected for training, whether in the form of rates of pay or otherwise; selected for training, (including apprenticeship); promoted; upgraded; demoted; downgraded; transferred; laid off; and terminated.

- 4.4.4.2 Neither the Contractor, nor any subcontractor, shall discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, sex, age or ancestry.

Economic Development & Industrial Corporation

- 4.4.4.3           The Contractor and all subcontractors shall carry out the requirements specified hereunder pertaining to equal employment with the diligence that they apply to any other part of the Contract.
- 4.4.4.4           The Contractor and each subcontractor shall furnish the information and reports required hereunder.
- 4.4.4.5           If the Contractor does not comply with the provisions specified hereunder, the Owner acting by the Authority, may take whatever action it deems appropriate in the circumstances including, without limitation, cancellation, termination, or suspension of the Contract, in whole or in part. The Contractor shall take such action with respect to any subcontractor which does not comply with the provisions specified hereunder as the Authority may direct.
- 4.4.4.6           "Affirmative Action" shall include, but not be limited to the following:  
                  "The Contractor shall adhere to the provisions of the City of Boston Minority Participation and Resident Preference Section of the Contract Documents and shall maintain a ratio of not less than 10% women, 25% minority and 50% Boston Residents to the total employee manhours utilized in each trade of this Contract".
- 4.4.4.6.1        The Contractor and all subcontractors shall, when advertising for employees, do so in such a manner as will effectively alert potential minority group applicants for employment of job openings, job training opportunities and the like.
- 4.4.4.6.2        The Contractor and all subcontractors shall have significant minority group representation at all skill levels in all categories of their work forces throughout their work under this Contract.
- 4.4.4.6.3        The Contractor and all subcontractors shall recruit employees from minority groups and employ them at all skill levels in all categories of their work

Economic Development & Industrial Corporation

force. The Contractor shall within the overall workforce, seek to employ residents of the City of Boston whenever possible.

- 4.4.4.6.4 When notified from time to time by the Authority, the Contractor, or the contractors, and any subcontractors shall confer with the Authority and/or his authorized representatives for purposes of evaluation and review of compliance with the requirements specified hereunder.
- 4.4.4.6.5 Simultaneously with each filing of the monthly periodic estimate for payment, the Contractor shall complete and file with the Authority, and shall cause each subcontractor to complete and file with the Authority, a compliance report detailing minority and female participation on the project in the form required by the Authority.
- 4.4.4.6.6 Whenever the Contractor or subcontractor has a collective bargaining agreement or other contract or understanding with a labor union or an agency referring workings or providing or supervising apprenticeship or training for such workers, the Compliance Report shall include such information as to such labor union's or agency's practices and policies as the Authority may require, provided that to the extent such information is within the exclusive possession of a labor union or agency, referring workers or providing or supervising apprenticeship or training and such labor union or agency shall refuse to furnish such information to the Contractor, the Contractor shall so certify to the Authority as part of his Compliance Report, and shall set forth what efforts he has made to obtain such information.
- 4.4.4.6.7 The Authority may require that the Contractor or subcontractor submit, as part of his Compliance Report, a statement in writing, signed by an authorized officer or agent on behalf of any labor union or any agency referring workers or providing or supervising apprenticeship or other training, with which the bidder or prospective contractor or subcontractor deals, with supporting information,

## Economic Development & Industrial Corporation

to the effect that the signer's practices and policies do not discriminate on the grounds of race, color, religious creed, national origin, sex, age or ancestry and that the signer either will affirmatively cooperate in the implementation of the policy and provisions specified hereunder or that it consents and agrees that recruitment, employment and the terms and conditions of employment under the Contract shall be in accordance with the purpose and provisions specified hereunder. In the event that the union or agency shall refuse to execute such a statement, the Compliance Report shall so certify and set forth what efforts have been made to secure such a statement and such additional factual material as the Authority may require.

- 4.4.4.6.8 The Contractor and each subcontractor shall post in conspicuous places at his place of business and at the job site and shall send to each labor union or other representative of workers with which he has a collective bargaining agreement or other contract or understanding a notice which shall be provided by the Authority which shall set forth the Contractor's and subcontractor's obligations specified hereunder.

### 4.4.5 Lodging, Boarding, and Trading of Employees

- 4.4.5.1 Every employee in the work to be performed under this Contract shall be allowed to lodge, board and trade where and with whom he elects and the Contractor shall not directly or indirectly require, as a condition of employment in said work, that an employee shall lodge, board or trade at a particular place or with a particular person.

### 4.4.6 Preference in Employment

- 4.4.6.1 The Contractor and each subcontractor shall give preference in the employment of mechanics and apprentices, teamsters, chauffeurs and laborers to residents of the City of Boston and to citizens of the Commonwealth who have been residents of the Commonwealth for at least six (6) months at the

## Economic Development & Industrial Corporation

commencement of their employment and who are veterans as defined in clause Forty-three of Section Seven of Chapter Four of the General Laws and who are qualified to perform the work to which the employment relates; and then to citizens of the Commonwealth generally, and if they cannot be obtained in sufficient numbers, then to citizens of the United States.

4.4.6.2 Specific requirements shall be as set forth in the conditions.

### 4.4.7 Discharge of Employees

4.4.7.1.1 Upon receipt of written request of the Authority, the Contractor shall discharge any person of his employ who appears to the Authority to be disorderly, intoxicated, careless, or incompetent or to be employed in violation of any of the terms of this Contract.

4.4.7.1.2 The committing of nuisances on the land of the Authority, or within tenant lease areas or adjacent property shall be rigorously prohibited and adequate steps taken to prevent it. The use, sale, or distribution of illegal controlled substances by any person in the Contractor's employ on this Contract is also prohibited. Any employee found violating these prohibitions shall be discharged and not employed again on work under this Contract.

### 4.5 Materials and Equipment; Substitutions; Equals

4.5.1 Unless otherwise specifically noted, the Contractor shall provide and pay for all materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the work.

4.5.1.1 Where references are made on the drawing or in the Contract Specifications to standard specifications, codes, requirements, etc., of the U. S. Government, State or Local authorities or

Economic Development & Industrial Corporation

professional and industrial societies and associations, the applicable portions thereof shall govern fully as if they were recited at length herein, and shall include all revisions thereto issued as of the date of the advertisement for bid proposals pertaining hereto. In cases of any conflict the highest quality or greater quantity shall prevail, as determined by the Architect/Engineer for the completion of work.

4.5.2 Except where otherwise specifically provided to the contrary, the words "or equal" are hereby inserted immediately following the naming or describing of each article, assembly, system or component part thereof, in the Contract Documents. The Contractor shall submit, to the Authority, for determination as to its equality, a written notice containing the name and full particulars, pertaining to any item (or items) (other than the specific or specifics named or described therefore in the Contract Documents), one hundred and twenty (120) days in advance of the time of its incorporation in the work, by the Contractor or subcontractor as the case may be. All submissions shall be transmitted through the Contractor to the Architect/Engineer to the Authority.

4.5.2.1 All substitutions submitted on the basis of "or equal" to that which was specified in the Contract Documents shall be clearly identified as a substitute.

4.5.2.2 In any case in which (1) the period of time specified in the Contract Documents for final completion of the work is less than 120 days, or (2) the item or items in questions is to be incorporated in the work prior to the expiration of the first 120 days from the time of the approval of the Contract, the written notice shall be submitted through the Contractor to the Architect to the Authority immediately following the execution of the Contract by the Owner.

4.5.2.3 Upon receipt of such written notice, the Authority will, in consultation with the Architect/Engineer conduct, or cause to be conducted, a reasonable investigation to determine

## Economic Development & Industrial Corporation

whether the item or times in question shall be considered by the Authority equal to the item or items named or described in the Contract Documents. Upon conclusion of the investigation, the Authority will submit written notification to the Contractor and to the Architect advising that the item or times in question is, or is not, determined the equal item or items, may, or may not, be furnished on the work accordingly. The determination of the Authority is final.

4.5.2.4 In no case shall any item be furnished on the work other than the item named or described as aforesaid, unless the Authority shall determine the item to be the equal of the item named or described, as provided by Law.

4.5.2.5 The expense of proving to the Authority the equality of materials offered as substitutions, to the specific or specifics named in the Contract Documents, shall be borne by the Contractor or subcontractor(s) submitting the substitution.

4.5.2.6 The Contractor is responsible for the performance of any approved substitutions, and shall assume all additional costs including those of other trades due to such substitutions.

4.5.3 No materials or supplies shall be purchased under a conditional sales contract or other agreement by which an interest is retained or maintained by the Seller. The Contractor warrants that he has good title to all materials supplied or used by him, free and clear of all interest, claims, or encumbrances.

## 4.6 Laws, Permits, and Licenses

4.6.1 The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations, relating to the work of the project, including, without limitation, the requirements of M.G.L. 30 and Commonwealth of Massachusetts Building Code. The Contractor is responsible for obtaining and paying for all applicable permits.

Economic Development & Industrial Corporation

- 4.6.2 If the Contractor performs any contrary to the applicable laws, ordinances, rules and regulations, he shall bear all loss resulting therefrom. However, it shall not be the responsibility of the Contractor to make certain that the Contract Documents are in accordance with such laws, ordinances, rules and regulations.
- 4.6.3 The Contractor shall pay all applicable federal, consumer, use and other taxes required by law, from which the EDIC is not exempt. Economic Development & Industrial Corporation is exempt from the Massachusetts Sales Tax. The Certificate of Exemption Number is **E-042-519-577**.
- 4.6.4 The Contractor, and each subcontractor, (unless it is indisputably clear from the particular subcontractor's section of the specifications that he is not required to do so) shall each obtain and pay for all permits and licenses of a temporary nature necessary for the performance of their own particular work.
- 4.6.5 All personnel shall be licensed as required by the applicable provisions of the Massachusetts Building Code. The project superintendent shall have a minimum of a B.C. License.

4.7 Project Management

- 4.7.1 The Contractor shall be represented at the project site at all times by a competent administrative project superintendent, satisfactory to the Authority, who shall have general charge of the project operation. The administrative project superintendent shall be furnished with a sufficient number of competent assistants. No change shall be made in the administrative project superintendent or staff without prior written approval of the Authority.
- 4.7.2 Project Management shall be as set forth in the Supplemental Conditions, if so described.
- 4.7.3 The Contractor shall supervise and direct the work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the work under the

Economic Development & Industrial Corporation

Contract. The Contractor's administration, supervision, direction and coordination shall apply to all the work, including work performed by Subcontractors and Sub-subcontractors and shall extend to the procurement and delivery of all material and equipment which is to be incorporated into the work. The Contractor shall maintain at all times a sufficient and efficient field force with extensive knowledge of all the types of work required by and under this Contract.

- 4.7.4 Carefully study all Contract Documents and all specific requirements contained therein, together with all other instructions and orders issued by the Authority. Procure from the Authority and/or Engineer such special information, detailed drawings, and other directions as to the order and manner for the proper performance of the work.
- 4.7.5 Commence the work forthwith, give all notices, take out all permits, pay all charges and fees, pay all electricity, telephone and utility fees and other rates therefore, give continuous personal supervision to the project, keep a competent foreman and sufficient number of competent employees thereon, coordinate the work amongst all trades, carry on the work with all proper speed and in diligence in accordance with the requirement of law.
- 4.7.6 Confer with the Authority and the Engineer at such times, as the progress of work requires, but not less than once weekly during the term of the project. A time and day will be established for weekly construction meetings upon the commencement of work.
- 4.7.7 Conduct the work in such manner as not to interfere with other work being done for the EDIC or the surrounding businesses in the area by Contract, or otherwise, and if deemed necessary by the Authority by written notice or specified herein, this Contract shall conform to the progress of said other work performed for the EDIC or surrounding businesses, and with public service corporations affected by the work, in arranging for storage places, temporary support for structures, repairs, and the location of equipment.

Economic Development & Industrial Corporation

- 4.7.8 Take all proper precautions to protect property from injury or unnecessary interference; provide proper means of access to property where the existing access is cut off by the Contractor and replace or put in good condition every public or private way, conduit, catch basin, tree, fence, or other items injured by the Contractor in carrying on the Contract, unless the same has been permanently done away with by approval of the Authority as being necessary for the proper carrying on of the Contract.
- 4.7.9 Take all proper precautions to protect persons from injury, unnecessary interference or inconvenience; leave an unobstructed way along public and private places for travelers and vehicles; provide and maintain continuous and unobstructed access to fire hydrants and fire alarm call boxes, provide proper walks over or around any obstruction made in a public or private place in carrying on the Contract, and maintain from the beginning of whole of every night, on or near the obstruction, sufficient lights and barricades to protect travelers from injury thereby and when and if the work is suspended, keep all roadways, sidewalks and means of access in proper condition for the safety of persons and the protection of property.

4.8 Construction Schedule

- 4.8.1 The Contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures. All costs and responsibility associated with preparation, maintaining, and updating the construction schedules and related shall be that of the Contractor.
- 4.8.2 The Contractor shall provide to the Architect/Engineer, for approval, a detailed preliminary bar graph project milestone schedule and a detailed construction progress schedule.
- 4.8.3 Within 7 calendar days after the date of the Notice to Proceed, the Contractor shall furnish to the Engineer a preliminary bar graph project milestone schedule for the work showing his general plan for orderly completion of the work and showing in detail his planned mobilization of plant and equipment, sequencing

Economic Development & Industrial Corporation

of early operations, and timing of procurement of materials and equipment. This schedule shall cover the period from receipt of the Notice to Proceed until the detailed schedule is provided, and shall include benchmark dates, so as to allow comparison of target dates with ongoing schedules on an activity basis. The Contractor shall assist the Engineer in reviewing and evaluating said schedule.

- 4.8.4 Within 15 calendar days after receiving the Notice to Proceed, the Contractor shall furnish to the Engineer a detailed construction progress schedule for orderly completion of the work. This schedule shall illustrate Contractor's planned sequences of operations, including those of his Subcontractors, and the dates for commencement and completion of all salient features of the work, to the satisfaction of the Engineer. The schedule shall take into consideration existing climatic and site conditions and other constraints associated with the work. The estimated construction progress schedule shall be in a form satisfactory to the Authority and the Architect/Engineer. The schedule shall show the proposed dates of commencement and completion of each of the various divisions of work required under the Contract Documents and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the progress schedule. The Contractor shall also furnish on forms to be supplied by the Authority (a) a detailed estimate giving a complete breakdown of the Contract price and (b) periodic itemized estimates of work done for the purpose of making partial payments thereon. The costs employed in making up any of these schedules will be used only for determining the basis of partial payments and will not be considered as fixing a basis for quantities, or additions to or deductions from the Contract price. In conjunction with the detailed construction progress schedule, the Contractor shall submit a written chronological statement that presents the order in which the Contractor proposes to perform the salient components of the work. This statement shall indicate in detail the estimated date for commencement of work on each such component and the contemplated completion date for each.

## Economic Development & Industrial Corporation

- 4.8.4.1.1 No physical construction work shall be performed on the work site until the Contractor's construction progress schedule has been submitted in proper form and has been approved by the Engineer. Prior to the Engineer's approval thereof, the Contractor may commence all aspects of the Work other than physical construction work at the site. Permitted work includes, but is not limited to, the placing of material orders, preparation of shop drawings and other submittals, making of field survey layouts, assembly of equipment, and other work in preparation for the commencement of physical construction at the site. Upon written request by the Contractor, and associated written approval from the Authority, specific and limited physical construction work may be permitted. The Authority shall not be liable for any delays or increased costs to the Contractor resulting from the Contractor's failure to provide an approved schedule in a timely manner.
- 4.8.4.1.2 The above detailed construction progress schedule and chronological statement shall be compatible in all respects, and shall be consistent with all Contract requirements. The schedule shall take into account and be coordinated with the various submittals that require preparation and approval under other portions of the Contract Documents prior to performing associated activities. Engineer will provide prompt review of the proposed schedule and chronological statement submitted by the Contractor. They will be reviewed for reasonableness and conformity with the Contract and upon approval by the Engineer will be used to evaluate general job progress and to forecast periodic pay estimate requirements.
- 4.8.4.1.3 The Contractor will be held to have examined the work site, such examination to include check soundings, rodding or pipe probings and whatever other examinations as may be considered necessary by the Contractor, before submitting his schedule for the work and to have satisfied himself as to existing conditions and handicaps under which he

Economic Development & Industrial Corporation

will be obliged to operate or that will, in any way, affect the work schedule.

- 4.8.5 The Contractor shall update and revise the schedule as necessary throughout the duration of the Contract. Updates are required whenever requested by the Engineer. Updates will be requested and required whenever, in the opinion of the Architect/Engineer, the following conditions exist: a) Contractor's operations have been or will be materially affected by changes in the plans, the amount of work, or other circumstances; b) the Contractor's performance materially fails to conform to the approved schedule and chronological statement; or c) the progress of work is significantly behind schedule of the current approved schedule. The Contractor shall, within ten (10) days of such request, submit to the Engineer for approval, a revised schedule and chronological statement of the types specified above, which shall indicate how the Contractor proposes to prosecute the balance of the Work.
- 4.8.6 Approval of schedules or chronological statements by the Architect/Engineer shall not be construed as releasing the Contractor from any of his responsibilities or obligations under the Contract. Such approval shall be a condition precedent to the processing and payment of any monthly pay estimate.
- 4.8.7 The Contractor shall coordinate his work with the Architect/Engineer, the Authority, and other contractors. Regular meetings shall be held. The Contractor and all his employees, working under the Contract, shall comply with all applicable regulations and directives issued by the Authority.
- 4.8.7.1.1 It shall be the responsibility of the Contractor to notify the Engineer on or before the Friday preceding the following week as to his necessary work areas, including a well established definition of the work area limits within which he will be operating within his construction site. The Engineer and the Authority must approve all work limits and designated work areas weekly before construction operations may commence in these areas. The Authority reserves the right,

## Economic Development & Industrial Corporation

which will not be exercised capriciously, to move an uncompleted operation at its discretion to accommodate special conditions that may arise. The movement of the Contractor's operation to satisfy unforeseen special Conditions will be done by the Contractor at no expense to the Authority. In all instances where special unforeseen conditions require the shut down of a construction area, an optional area for the Contractor's work may be provided by the Engineer.

### 4.9 Project Photographs

4.9.1 Before the Contractor commences any work at the site, and on the first work day of each month thereafter until Substantial Completion of the work, the Contractor shall, at his own expense, have exterior and interior, if applicable, photographs taken by a competent commercial photographer from minimum of four (4) different viewpoints, as directed by the Architect/Engineer. The Architect/Engineer shall have the right to increase or decrease the number of photographs required at each period, maintaining an overall average of twenty-four (24) exposures per period.

4.9.2 All photographs shall be 8 x 10 inches in size or submitted in jpeg format on a CD. The prints (or jpeg photos on CD) shall bear the date of the exposure, name of the project, description of the view and the name and address of the photographer. The negatives and one (1) glossy print shall be bound in a photography booklet and delivered to the Authority, all within fifteen (15) days after the exposures are made. The contractor shall also provide photographs in an electronic JPEG format on a compact diskette (CD-ROM). Project photographs shall accompany the monthly requisitions and shall be mandatory for invoice approvals.

### 4.10 Shop Drawings, Samples, and Printed Data

4.10.1 "Shop Drawings" are drawings, diagrams and illustrations, which are prepared by the Contractor or any subcontractor, manufacturer, supplier or distributor and which illustrate some portion of the work.

Economic Development & Industrial Corporation

"Samples" are physical examples furnished by the Contractor to illustrate materials, equipment or workmanship and to establish standards by which the work shall be judged.

"Printed Data" is descriptive literature, catalogues, brochures, performance and test data, and all other information which requires approval and which cannot be submitted in sepia transparency form.

- 4.10.1.1 Within two (2) working days after the date of the Notice to Proceed, the Contractor shall submit the Shop Drawings and Sample Record Form/Schedule, including thereon his proposed initial submittal dates of all submittals, shop drawings, samples, and other printed data, required by and under the Contract Documents, organized sequentially by Specification Section number, and submit same to the Authority and the Architect/Engineer for their written approvals. The Contractor shall continually update the schedule during the course of the work with resubmittal dates, return dates and dispositions.
- 4.10.1.2 Submissions of shop drawings, samples and printed data shall state the Code Compliant Stairway Improvements at 12 Channel Street, Phase 1, specification section(s) and paragraph number(s) which apply to the items submitted. The costs of printing and incidental expenses shall be included in the proposed Contract price on the Form for General Bid. The Contractor shall submit shop drawings, samples, and printed data to the Architect/ Engineer in sufficient time to permit checking, resubmission, re-checking, approval, and subsequent fabrication, and delivery, and with such promptness as to cause no delay in his own work. Failure on the Contractor's part to do so will not justify any delay in the completion of work.
- 4.10.1.3 The Architect/Engineer will submit to the Authority copies of all shop drawings, samples and printed data, upon receipt thereof from the Contractor. Upon completion of review, the Architect/Engineer shall furnish the Authority with copies of all

## Economic Development & Industrial Corporation

reviewed shop drawings, submissions, resubmissions and correspondence relating to shop drawings and their review.

### 4.10.2 Shop Drawings and Printed Data

- 4.10.2.1 For shop drawings, the Contractor shall submit to the Architect/Engineer one legible reproducible (sepia) transparency and five black line prints of each shop drawing, except where a different quantity is otherwise specified; each shop drawing shall have sufficient blank space for the Contractor's and Architect's/Engineer's approval stamps. For printed data, the Contractor shall submit to the Architect/Engineer six (6) copies of required printed data, except where a different quantity is otherwise specified; all such printed data shall be specific, and identification of material or equipment submitted shall be clearly made in ink. As used in the remainder of this Paragraph 4.10.2, the word 'submittal' refers to shop drawings and printed data.
- 4.10.2.2 The Contractor shall check, stamp with his approval, and submit, to the Architect/Engineer, until approved by the Architect/Engineer and with such promptness as to cause no delay in his own work or in that of any other contractor or any subcontractor, all submittals required by the Contract Documents and as required for the proper performance of the work. At the time of submission, the Contractor shall inform the Architect in writing of any deviation in the submittal from the requirements of the Contract Documents, or on resubmitted submittals, to revisions, other than the corrections requested by the Architect/Engineer on previous submissions.
- 4.10.2.3 Only submittals received from the Contractor will be considered for approval by the Architect/Engineer. Prior to the submission of shop drawings and printed data to the Architect/Engineer for approval, the Contractor shall thoroughly examine all details and check all dimensions. The Contractor is fully responsible for the accuracy,

Economic Development & Industrial Corporation

proper fit, and coordination of all parts of the work. By approving and submitting submittals, the Contractor hereby represents that he has determined and verified all field measurements, file construction criteria, materials, catalogue numbers and other similar data, and that he has checked and coordinated each submittal with the requirements of the work and of the Contract Documents. The Contractor shall stamp each sheet of each shop drawing and the cover sheet of all printed data with a rubber stamp stating that he has examined and checked the submittal as above, and shall date and sign each. Any submission which, upon examination by the Architect/Engineer, shows evidence of not having been thoroughly checked will be returned to the Contractor for completion of checking before it will be considered for review.

- 4.10.2.4 The submittals shall be clear, complete and accurate, and shall give all information necessary, or requested in individual sections of the specifications, and also show adjoining work and details of connections thereto.
- 4.10.2.5 Submittals shall be submitted in a proper sequence reflecting the logical sequence and relative priority of the various phases of work to ensure the preparation of a properly coordinated set of submittals.
- 4.10.2.6 The Contractor shall, at his own expense, prepare and submit composite submittals showing the work under all effected trades, upon request of the Architect/Engineer.
- 4.10.2.7 The Architect/Engineer will review and return submittals with reasonable promptness after his receipt of same, but only for conformance with the design concept of the project and with the information given in the Contract Documents. The Architect/Engineer's approval of a separate item shall not indicate approval of an assembly in which the item functions.

Economic Development & Industrial Corporation

- 4.10.2.8 For shop drawings, the Architect/Engineer will make comments, if any are required, directly on the reproducible transparency; for printed data any comments will be made on or attached to the submittal. One copy of the foregoing will be stamped by the Engineer with an action code as to approval status and returned to the Contractor. The Contractor shall make any corrections required by the Architect/ Engineer and resubmit corrected copies to the Architect/Engineer for his approval in the same quantity and manner as for initial submittals. This procedure shall be repeated until all corrections are made to the satisfaction of the Architect/Engineer. Except for "at risk" work as specified at Paragraph 4.10.2.10 below, no portion of the work requiring a submittal shall be commenced until the submittal has been returned by the Architect/Engineer to the Contractor with the stamp "Approved" or "Approved as Corrected". After approval, the Contractor shall provide and distribute such number of prints as required for his own and subcontractors' use.
- 4.10.2.9 The Architect/Engineer's approval of submittals shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents, unless the Contractor has informed the Architect/Engineer in writing of such deviation at the time of submission and the Authority has given approval to the specific deviation, nor shall the Authority's approval relieve the Contractor from responsibility for errors or omissions in the submittals.
- 4.10.2.10 Any work for which shop drawings or other submittals are required to be reviewed and approved by the Architect/Engineer and which is performed prior to or without such submittal, review, and approval shall be considered as being performed at the Contractor's risk. The Contractor shall be solely responsible for all costs incurred to rectify inadequate conditions presented in the work, occurring in other work, or in existing structures, as a direct result of the execution of the unapproved work or execution of the work in an

Economic Development & Industrial Corporation

unapproved manner. Notwithstanding the foregoing, any portion of the work requiring a submittal that the Contractor elects to perform at risk may be halted at any time by the Authority or Architect/Engineer until the submittal has been approved by the Architect/ Engineer in accordance with the Contract Documents. All such portions of the work shall be in accordance with the approved shop drawings and printed data.

4.10.3 Samples

4.10.3.1 The Contractor shall submit for the written approval of the Architect/Engineer all samples required in the individual sections of the specifications. Except as otherwise specified, three (3) specimens of each sample shall be submitted.

4.10.3.2 Samples shall be of sufficient size to permit proper evaluation of material. Where variations in color or other characteristics are to be expected, samples showing the maximum range of variation shall be submitted. Materials exceeding the range of variation of the approved samples will not be approved on the work.

4.10.3.3 All submitted samples shall be accompanied by a transmittal notice and a sample certificate. The transmittal shall identify the name of the project, specification section and paragraph number to which the sample refers, and description of item being submitted. The accompanying sample certificate shall describe each sample submitted for approval, certifying that the material, equipment or accessory submitted complies with contract requirements, and including the name and brand of product, the name and address of manufacturer, the name of the Contractor and the name of the project. The Contractor shall furnish a copy of the transmittal notice and accompanying sample certificate to the Authority. A sample identification tag that designates the material or product, the name of its producer, the name of the Contractor, and the name and number of the project

Economic Development & Industrial Corporation

shall be attached to each sample. Samples which can be conveniently mailed shall be sent directly to the Architect/Engineer by the Contractor; all other samples shall be delivered at the field office of the Clerk of the Works, or Resident Engineer. All charges in connection with delivery and furnishing of samples shall be paid by the Contractor.

4.10.3.4 The Architect/Engineer shall have the option of either retaining or returning all or a portion of the samples submitted for approval. Approved samples that are returned to the Contractor shall be kept on file (and accessible for inspection) by the Architect/Engineer until final acceptance of the project.

4.10.3.5 Such samples as may be required for check tests shall be furnished by the Contractor without extra charge. Check tests will be made on materials delivered for use only as frequently as the Architect/Engineer considers necessary to ensure compliance of materials used with contract requirements. The cost of testing materials, or equipment, or accessories to check for compliance with specification requirements shall be borne by the Contractor.

4.10.3.6 The Architect/Engineer will with reasonable promptness review and give written approval of samples but only for conformance with the design concept of the project and with the information given in the Contract Documents. No material for which samples are required shall be fabricated or delivered to the site for use until representative samples or same have been approved in writing by the Architect/Engineer.

4.11 Record Drawings and Specifications on Site

4.11.1 From the sets of drawings furnished by the Authority at the beginning of the work, the Contractor shall reserve one set for record purposes.

4.11.2 The Contractor and subcontractors shall keep their respective record set available for inspection by the

Economic Development & Industrial Corporation

Authority, the Architect/Engineer or their authorized representatives, at the site at all times, together with one (1) copy of the Specifications addenda, approved shop drawings, and printed data, and shall note thereon, neatly, legibly and accurately, as the work progresses, the exact location of their work as actually installed, any modifications of the Contract Documents and any information requested in their individual sections of the Specifications.

4.11.3 Upon substantial completion of the work, the Contractor shall return the complete set of record drawings to the Architect/Engineer. The Architect/Engineer will review these drawings and return them to the Contractor with any necessary comments. The Contractor shall revise the same, until satisfactory to the Architect/Engineer, as evidenced by his approval endorsed thereon.

4.11.4 Upon receipt of the Architect/Engineer's approval, the Contractor shall at his own expense, make reproducible Mylar transparencies. The Contractor shall transfer the as-built information shown on the record drawings onto said transparencies. The drafting shall be done by experienced draftsperson and shall match the original drawings.

4.11.5 The Contractor shall also at his own expense prepare one complete set of black line prints, and submit the transparencies, and these prints thereof to the Architect/Engineer before the Contractor shall be entitled to final payment.

4.11.6 Availability of record drawings shall be prerequisite to scheduling a final inspection of this Contract and said drawings and original Contract Documents will be used in checking completion of the work. Non-availability of record drawings or inaccuracies therein may be grounds for cancellation and postponement of any scheduled final inspection by the Authority until such time as the discrepancy has been corrected.

4.12 Instructions Relating to Existing Conditions

4.12.1 The Contractor represents that he has read the Contract Documents and is fully informed in regard to all

Economic Development & Industrial Corporation

provisions thereof, including without limitation, the drawings, the time of performance and the provisions for liquidated damages, if any and that he has visited the premises described in the Contract Documents and made his own examination of the place where the work is to be done and of all conditions pertaining to the work and has made his own estimates.

4.12.1.1 The Contractor agrees that he shall not hold the EDIC, its agents or employees responsible for or bound by any schedule, time period, estimate, sounding, boring or any plan thereof, and shall take all responsibility for the prosecution of the work and shall bear all losses resulting to him in such prosecution of the work.

4.12.1.2 The Contractor shall take measurements at the site and shall check all measurements and grades on the Contract drawings or subsequent drawings. The Contractor shall report promptly in writing, any error(s) or inconsistencies in grades, lines, levels, and dimensions as shown on the drawings with actual site conditions to the Architect/Engineer and to the Authority before commencing work. Information given on the Contract drawings and in the Specifications, relative to existing conditions, has been obtained from sources believed to be reliable, but neither the Owner nor the Architect/Engineer shall be liable for any error or discrepancy in the information given.

4.12.2 Pursuant to G.L. Chapter 30, Section 39N:  
"If, during the process of the work, the Contractor or the Awarding Authority discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially or materially from those shown on the plans or indicated in the Contract Documents, either the Contractor or the contracting Authority may request an equitable adjustment in the Contract price of the Contract applying to work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after conditions are discovered. Upon receipt of such a claim from a Contractor, or upon its own

Economic Development & Industrial Corporation

initiative, the contracting authority shall make an investigation of such physical conditions, and, if they differ substantially or materially from those shown on the plans or indicated on the Contract Documents of from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and Contract Documents and are of such a nature as to cause an increase of decrease in the cost of performance of the work or decrease in the cost of work, the contracting authority shall make an equitable adjustment in the Contract price and the Contract shall be modified in writing accordingly".

4.13 Removal of Existing Work

4.13.1 The following requirements shall apply to existing conditions, which are located within the limit of contract lines indicated on the drawings:

4.13.2 On and above existing grades - unless designated in the Contract Documents to be reused; remain; or be altered, all existing items shall become the property of the Contractor and shall be completely removed from the site by the Contractor, at no change to the Contract price.

4.13.3 Below existing grades - unless designated in the Contract Documents to remain; be reused; be altered; or be paid for on a unit price basis, as stipulated in the Form for General Bid, all subsurface materials shall be excavated to the lines specified in the Contract Documents and completely removed from the site by the Contractor, at no change to the Contract price.

4.14 Marks and Lines

4.14.1 The Contractor shall furnish at his expense the services of a Land Surveyor, registered to practice in the Commonwealth of Massachusetts, who shall for the Contractor establish and maintain on-site permanent bench marks, determine from them the various levels of work and place the levels and the base lines for the project, as required for the proper execution of the work.

Economic Development & Industrial Corporation

4.14.2 The Contractor shall employ on a full time basis, a person with sufficient engineering background and experience in the type of work required hereunder who shall, for the Contractor, do other engineering work, which shall include, without limitation, leveling, checking and verifying wall and main partition lines.

4.14.3 The Contractor shall be fully responsible for the accuracy of all lines and levels established by or for him.

4.14.4 The Contractor shall furnish to the Authority a certificate, signed by said Land Surveyor, certifying that the location of the project limits and principal lines, levels and dimensions are accurately established in accordance with the Contract drawings.

4.15 Materials, Inspection, Disposition, and Suitable Storage

4.15.1 Unless otherwise stated in the specifications, or noted on the Drawings, all materials and equipment shall be new and in manufacturer's original containers, clearly marked as to contents. Upon delivery of materials, copies of the delivery receipts shall be given to the Clerk-of-the Works or Resident Engineer.

4.15.2 The Contractor shall allow the Clerk-of-the Works, and/or any other designated representative(s) of the Authority or the Architect/Engineer to examine materials and he shall furnish labor and equipment to assist in such examination. Any material to be used in the work may be tested or inspected at any time by the Architect/Engineer, and may be rejected if it fails to comply with specified tests. All material to be used in the work shall be designated as to proposed source by the Contractor in time to permit testing and inspection before the material is needed to be incorporated in the work. The Contractor shall have no claim because of his failure in time for adequate testing and inspection. Necessary arrangements shall be made to permit the Architect/Engineer to make factory, shop, or other inspection of materials or equipment, ordered for the work, in process of manufacturer or fabrication, or in storage elsewhere than the site of work. Acceptance of a material at any given date shall not abrogate the

Economic Development & Industrial Corporation

right of the Authority to reject the material at a later date, if in the interim between testing and/or inspection the material has changed, deteriorated and/or failed to function as specified in any way.

4.15.3 The Contractor shall store all delivered materials in proper locations which will not interfere with the work. If any stored materials are rejected, notice of rejection will be given to the Contractor by the Architect in writing. Upon receipt of a rejection notice, the Contractor shall, within 24 hours thereafter, proceed to remove all such rejected materials from the site, and completely remove such materials.

4.15.4 Should the Contractor install, or permit the installation of any materials which have not been inspected prior to installation, the Contractor shall be held fully responsible therefore, and, if such installed materials are rejected, after inspection by the Architect, the Contractor shall at his own expense remove all such materials from the site.

4.15.5 The Contractor shall provide sufficient sheds for the protection and orderly keeping of materials, and shall provide sufficient heat and cooling to prevent damage to said materials, it being expressly and explicitly understood and agreed that said sheds shall not necessarily be considered as suitable storage for the purposes defined under Article 9 of the General Conditions.

4.15.6 No determination by the Authority or the Architect/Engineer regarding materials and/or equipment, for the purposes defined under Article 9 Protection of Persons and/or Property of the General Conditions, shall relieve the Contractor of his obligation to bring all work required by the Contract Documents, to entire completion by the dates stipulated, at no change in the Contract price.

4.15.7 In no event shall materials and/or equipment be considered delivered and suitably stored at the site (or at some location approved by the Authority in writing), for the purposes defined under Article 8, of the General Conditions unless in the judgement of the Authority, the

Economic Development & Industrial Corporation

materials and/or equipment are ready for, and actually scheduled for, prompt use; meet the requirements of the Contract Documents; and that the Contractor can and will at his own expense adequately protect the materials and/or equipment until they are incorporated in the work. No payment will be made by the Owner for storage charges, insurance, and/or other costs and expenses.

4.16 Cutting and Patching; Location of Work

4.16.1 The Contractor shall, except as may be specifically noted otherwise under other sections of the specifications, do all cutting and patching of the work for all trades, using therefore whatever materials are needed, whenever necessary or required.

4.16.2 The Contractor shall be responsible for the location and performance of all work, provided nevertheless that any cutting and patching made necessary on account of incorrect information or error on the part of any subcontractor shall be paid for by the subcontractor.

4.17 Existing Utilities

4.17.1 Existing utility lines which are indicated on the drawings, including, without limitation, cables, ducts, conduits and piping shall if damaged (unless, they are to be abandoned, in accordance with the Contract Documents), be immediately repaired, protected, and maintained in use until relocation of same has been completed, or shall, be cut or capped, or prepared for service connections, as the Contract Documents require.

4.17.2 In the event that the Contractor encounters utility lines that are not indicated on the drawings, he shall notify the Clerk-of-the-Works or Resident Engineer immediately, who shall refer the matter to the Architect/Engineer and the Authority for decision. Such utilities shall be immediately repaired, protected, and maintained in use until relocating of the same has been completed or shall be cut and capped, or prepared for service connections, as the Authority may order in writing. An equitable adjustment to the Contract price

Economic Development & Industrial Corporation

will be made provided that any damage to such lines was not caused by fault of the Contractor.

- 4.17.3           The Contractor shall notify the Authority in writing, not less than seventy-two hours (72), Saturdays, Sundays, and legal holidays excluded, in advance of the proposed time for shutting down or interrupting of any utilities, service or facilities which may affect the operation of other buildings, services, or facilities or the Owner or of the Owner's other contractors. In no case shall any shutdown or interruption of any utilities, services, or facilities be made without the prior written approval of the Authority. Unless otherwise authorized in writing by the Authority, the Contractor shall so schedule and coordinate his work that such interruption will occur on weekends, holidays, or before or after the normal working day of the Owner's facilities. All costs and expenses, including outage costs, shall be borne by the Contractor.

4.18 Maintenance of Site

- 4.18.1           At all times prior to acceptance of the project as complete by the Authority, the Contractor shall keep the premises free from accumulation of waste materials, rubbish, or debris.
- 4.18.1.1        After the work of any subcontractor has been properly completed, the Contractor shall be responsible to the Owner for its protection and for repairing, replacing or cleaning any such work which has been damaged by other trades or by any other cause, so that all work is in perfect condition at the time of acceptance of the work.
- 4.18.2           At the end of each workweek, the Contractor shall thoroughly clean the project and site of rubbish and debris of any nature, and remove such from the premises.
- 4.18.2.1        The Contractor shall provide metal barrels, each with tight fitting metal covers, located about the site into which all refuse and garbage shall be deposited.

Economic Development & Industrial Corporation

- 4.18.2.2 Immediately after unpacking the Contractor shall collect and remove from the project and site all packing materials, case lumber, excelsior, wrapping, and other rubbish.
- 4.18.3 The Contractor shall be responsible at all times prior to acceptance of the project as complete, for all broken or scratched glass and plastic, or glass or plastic which has been damaged as a result of the work of the Contractor, or otherwise, except for defective materials or installation, in which case, the responsibility for correction of same shall be that of the installing trade. When so directed by the Authority, prior to final completion of the work, the Contractor shall replace, without additional cost to the Owner, all such glass and/or plastic.
- 4.18.4 Immediately prior to final inspection by the Architect and the Authority, the Contractor shall thoroughly clean the entire project and site. Specific cleaning requirements, prior to final inspection, shall be as set forth in the Special Conditions.

4.19 Inspection and Testing of the Work

- 4.19.1 The Contractor shall make or have made, such tests and inspections on workmanship and materials as may be required by the Building Code, State, or municipal laws, or as called for under the various Sections of the Specifications. In addition, all materials, equipment and workmanship shall be subject to inspection and testing by the Authority, the Architect/Engineer and their authorized representatives for conformance with the requirements of the Contract Documents.
- 4.19.1.1 If the Contract Documents, laws, ordinances, rules regulations or orders of any public authority having jurisdiction require any work to be inspected, tested or approved, the Contractor shall make all arrangements for same. The Contractor shall give the Architect/Engineer and the Authority timely written notice of its readiness and of the date arranged so the Architect and the Authority may observe such inspection, testing or approval. The selection of bureaus, laboratories, and/or

Economic Development & Industrial Corporation

agencies for inspections and testing of materials, processes, and the like, when such testing is required by the various Sections of the Specifications, shall be subject to approval of the Engineer. The Contractor shall bear all expense attached to such tests and inspections, unless otherwise specified under the various Sections of the Specifications and furnish all labor, tools, instruments, water, temporary power and light, construction and equipment necessary for these tests and inspections. The Contractor shall furnish records of all tests and inspections to the Engineer and remove all temporary work, materials, and equipment upon completion of tests and inspections.

- 4.19.1.2 Inspection and testing by the Owner, the Architect or their representatives, or by any other person, shall in no event cancel the Contractor's responsibility for compliance with the full intent and requirements of the Contract Documents.
- 4.19.1.3 The Contractor must anticipate any and all time required for the testing, inspection and approval of materials before incorporation into the work. No additional compensation, or extension of time, will be permitted for losses or delays attributable thereto.
- 4.19.1.4 Should any material or work, after testing or inspection, be found defective, inferior, or not conforming to the Contract Documents, such materials and/or work shall be promptly removed and replaced with conforming material or work by the Contractor at his expense.
- 4.19.1.5 Reasonable costs, for travel, room and board, incurred by the Authority, or his authorized representatives, for the inspection of materials required in the performance of the Contract, which are fabricated outside the limits of the City of Boston will be deducted from sums otherwise due or to become due to the Contractor.

Economic Development & Industrial Corporation

- 4.19.1.6 If after commencement of the work the Authority or the Architect/Engineer determines that any of the work requires special inspection, testing or approval, not otherwise provided for in the Contract Documents, the Architect may, with the written approval of, and shall upon the written order of the Authority, instruct the Contractor, in writing, to order such special inspection, testing or approval. The Contractor shall give the Authority and the Architect timely written notice of the time and place of such inspection and testing. If such inspection and/or testing shows that work does not conform to the requirements of the Contract Documents or of laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction, the Contractor shall pay all costs of such inspection, testing or approval, otherwise the Owner shall bear such costs.
- 4.19.2 Examination of questioned work may be ordered at any time and from time to time by the Authority and/or the Architect, and, if so ordered, the Contractor shall uncover the work. If such work is found to be in accordance with the Contract Documents, the Owner will pay the reasonable costs of examination and replacement. If the work is found to be not in accordance with the Contract Documents, the Contractor shall pay all costs of examination, replacements and all related testing therefore.
- 4.19.3 Before acceptance of the entire project, the Authority and the Engineer will make a complete final inspection of the work done.
- 4.19.4 If the work or any part thereof is not acceptable to the Authority at the time of the final inspection, he shall notify the Contractor in writing of the particular defect(s) or parts of the project to be remedied before final acceptance. If the Contractor has not arranged within a period of five (5) days after the date of transmittal of such notice of non-acceptability, to complete the work speedily with diligence as described by the Authority, the Authority may without further notice and without in any way affecting the Contract, make such

Economic Development & Industrial Corporation

other arrangements as he may consider necessary to insure the satisfactory completion of the project. The cost of so completing the work shall be deducted from any payments due or which may become due the Contractor under the Contract.

4.20 Claims by the Contractor for Loss and Injury

4.20.1 If the Contractor claims any loss or injury resulting to him from any act, omission or neglect of the Owner, its agents or employees, the Contractor shall, within seven (7) days of the occurrence of such act or neglect, deliver to the Authority a detailed written statement of the loss or injury resulting therefrom and no reimbursement shall be made to the Contractor unless the Contractor shall have delivered such written statement.

4.20.2 The Contractor shall have no right to recover damages for any claims of any loss or injury, resulting from work not being performed in conformity with the Contract Documents.

4.20.3 Pursuant to G.L.C. 30 & 390 : The Contractor must submit the amount of a claim under provision (a) of G.L.C. 39 & 390 (Paragraphs 2.2.3. and 3.2.4. of these General Conditions) to the Awarding Authority in writing as soon as practicable after the end of the suspension, delay, interruption or failure to act, and in any event, not later than the date of final payment under this Contract and except for costs due to a suspension order, the Awarding Authority shall not approve any costs in the claim incurred more than twenty (20) days before the Contractor notified the Awarding Authority in writing of the act or failure to act involved in the claim.

**ARTICLE 5 - THE SUBCONTRACTOR**

5.1 Definition of Term

A "Subcontractor" is a person, firm or corporation who is named in the bid proposal of the Contractor and for whom the Awarding Authority has no objection to in terms of ability, qualifications or standing or who is acknowledged pursuant to Paragraph 5.2., by the Awarding Authority in writing as a

Economic Development & Industrial Corporation

person, firm or corporation, performing labor or both performing labor and furnishing materials pursuant to a contract with the Contractor.

5.2 Use of Subcontractors

The Contractor, in the performance of the work hereunder, shall use the subcontractors named in his proposal and shall not use any other subcontractor in the performance of this Contract without prior written acknowledgement of the Authority, which shall be given in writing by the Authority, unless after due investigation, the Authority has a reasonable objection to the subcontractor's standing and ability.

5.3 Relation Between Subcontractors and the Owner

Nothing contained in the Contract Documents shall create a contractual relation between any subcontractor and the Owner.

5.4 Relation Between Subcontractors and Contractor

If a suspension, delay, interruption, or a failure to act by the Awarding Authority increases the cost of performance to any subcontractor, that subcontractor shall have the same rights against the Contractor for payment for an increase in the cost of his performance as provisions (a) and (b) of G.L.C. 30 & 390 (Paragraphs 2.2.3. and 3.2.4. of these General Conditions give the Contractor against the Awarding Authority) but nothing in provisions (a) and (b) shall in any way change, modify or alter any other rights which the Contractor or the subcontractor may have against each other.

**ARTICLE 6 - PROJECT COORDINATION**

6.1 The Contractor shall be responsible for the entire project operations and shall properly coordinate the work of all trades and give all customary and proper assistance to all subcontractors.

6.2 All communications and information, to and from subcontractors, shall be routed through the Contractor's office.

6.3 Complete cooperation between and among the Contractor and his subcontractors is essential to this work. The Contractor

Economic Development & Industrial Corporation

shall fully coordinate his work and the work of his Subcontractors. All work of the subtrades shall be fully coordinated and installed to conform with the requirements and intent of these Contract Documents. If, by virtue of being first on the job, the Contractor or a subcontractor pre-empt a location for work, which later interferes with the location of another required item of work, the Contractor shall cause him to remove his installation without extra charge to the Owner and replace it in a location or position as will ensure its non-interference with other work. The Contractor shall bear all costs associated with the removal and replacement of the work if he has failed and/or neglected to properly coordinate and direct the various trades.

6.4 The Contractor shall coordinate the installation of the temporary or permanent electrical service with the appropriate power company, to assure availability of sufficient power in quantity and number for all project requirements so as not to cause any delay in the work.

6.4.1 Interrupt services and utilities as little as possible and whenever such interruption is necessary it shall be done only after Forty-eight (48) hours advance notice has been given, procedures are indicated, length of time has been stipulated, and the written approval of the Authority has been obtained. The Authority specifically reserves the right to disallow the interruption of services and/or utilities during normal working hours and to require that the work be performed in other than normal working hours.

6.4.2 Generally, perform the work under this Contract at such times as may be necessary to facilitate its orderly progress, with due consideration for the occupancy of the premises, and in a manner that will not interfere with the conduct of and normal business of the area.

6.4.3 The Contractor shall allow the Owner, its agents, and other contractors, and public service corporations, or their agents, to enter upon the work for the purpose of constructing, maintaining, repairing, removing, altering or replacing such pipes, sewers, conduits, manholes, wires, poles or other structures and utilities as are now located or as may be required or permitted at or on the work by the Engineer. The

Economic Development & Industrial Corporation

Contractor shall cooperate with all the aforesaid parties and shall allow reasonable facilities for the prosecution of any work of the Owner or others to be done in connection with this work. Care shall be taken at all times to inconvenience abutters and tenants as little as possible.

- 6.5 The Contractor shall coordinate his operations with those of the Owner's other contractors, consultants, and tenants, if they are on, about or adjacent to, the project site. Cooperation will be required with respect to access to the project site in the arrangement for the storage of materials, and in the detailed execution of the work. The Contractor, including his subcontractors, shall keep informed of the progress, and the detail work of the Owner's other contractors and shall immediately notify the Architect, and the Authority in writing immediately of lack of progress, defective workmanship or defective materials on the part of such other contractors. Failure on the part of the Contractor to keep informed of the work progressing on, about, and adjacent to, the site and/or failure to give such notice of lack of progress or defective workmanship or defective materials by others shall be construed to be an acceptance by him of the status of the work and its being satisfactory for proper coordination with and proper completion of his work.
- 6.6 The Contractor shall keep and maintain a detailed daily log or record of events transpiring during construction operations. The log shall contain all information as is normally entered for construction operations together with the labor, services, equipment and material used for the performance of the project. This log shall be available for inspection by the Authority, Engineer or his representative and shall be duplicated upon request.
- 6.7 The EDIC reserves the right, at any time and at its sole discretion, to contract for and perform other or additional work within the property lines of the project where it is deemed in the best interest of the EDIC that such adjacent work to be done concurrently with work required under the terms of this Contract. Each contractor shall conduct his work so as not to interfere with or hinder the progress or completion of work being done by other contractors.

**ARTICLE 7 - CONTRACT TIME AND LIQUIDATED DAMAGES**

7.1 Definition of Terms

7.1.1 The term "Substantial Completion", shall mean the date certified by the Authority and the Architect, when construction is sufficiently complete, in accordance with the Contract Documents, so the Owner may occupy the project, or designated portion(s) thereof, for the use for which it is intended.

7.1.2 The term "Final Completion", shall mean the date certified by the Authority when all work required by the Contract Documents has been completed.

7.1.3 Use of the project or portions thereof by the Owner, pursuant to the provisions of Article 2 of the General Conditions, prior to completion of work shall not effect the times or Substantial or Final Completion.

7.2 Time as Essential Condition

7.2.1 It is understood and agreed that the dates of commencement of and of Substantial and Final Completion of the work are essential conditions of this Contract. It is further agreed that time is of the essence of each and every portion of the Contract Documents wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract Documents an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this Contract. It is understood and agreed that the times for the completion of the work are reasonable times for the same taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

7.3 Progress and Completion

7.3.1 The Contractor shall commence work promptly upon the execution by the EDIC of this Contract in accordance with Article V of the Contract, and shall prosecute and complete the work regularly, diligently, and uninterruptedly at such rate or progress as will ensure

Economic Development & Industrial Corporation

Substantial and Final Completion on or before the dates stipulated.

- 7.3.2 In the event that the Contractor, with written approval of the Authority, commences work prior to the execution of this Contract by the EDIC in accordance with the provisions of Article V, he shall do so upon the conditions that each and every obligation of the Contractor set forth in the Contract Documents shall be binding on him and that the Contract time may be adjusted accordingly, at the discretion of the Authority.

7.4 Liquidated Damages

- 7.4.1. If the Contractor shall neglect, fail or refuse to complete the work within the times specified, or any proper extensions granted by the Authority, the Contractor agrees, that as a part of the consideration for the execution of this Contract by the Owner, to pay the Owner the amount specified in Article V of the Contract, not as a penalty, but as liquidated damages for such breach of Contract, as herein after set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the Contract for completion of each Milestone identified in Article V of the Contract and for Substantial Completion of the work. Liquidated damages will be assessed independently with respect to each date so identified. The said amount is so fixed and agreed upon because of the impracticality and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, however, said amount shall be agreed upon as the amount which the Owner would sustain. Said amount shall be retained from time to time by the Owner from current periodic estimates in the event of such default.

- 7.4.1.1.1. For any delay to dates established in Article V of the Contract for the Authority to furnish specific instruments or access to the Contractor, affected Milestone Date or Substantial Completion Date shall be extended by the same number of calendar days associated with such delay.

7.5 Excuse by Failure of Presupposed Conditions

Economic Development & Industrial Corporation

7.5.1 The Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to:

- A. To any preference, priority, or allocation order duly issued by the United States Government; or
- B. To unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including, without limitation, acts of God, or of the public enemy, act of the Owner, acts of another contractor or in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unusual weather; or
- C. To any delays of subcontractors or suppliers occasioned by any of the causes specified in (A) and (B) of this paragraph; provided, however, that the Contractor shall, within seven (7) days from the beginning of such delay, unless the Authority shall grant a further period of time, notify the Authority, in writing, of the causes of the delay. The Authority shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of this decision in the matter. The decision of the Authority shall be final and binding.

**Article 8 - Payment to and by Contractor and Subcontractors**

8.1 Payments to Contractor

8.1.1 Within fifteen (15) days after receipt from the Contractor, at the place designated by the Awarding Authority if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the Awarding Authority will make a periodic payment to the Contractor for the work performed during the preceding month and for the materials not incorporated in the work but delivered and suitably stored at the site (or at some location agreed upon in writing) to which the Contractor has title and has authorized the Contractor to transfer title to the

Economic Development & Industrial Corporation

Awarding Authority, less (1) a retention based on its estimate of fair value of its claims against the Contractor and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of this Article 8, and less (3) a retention not exceeding 5% (five percent) of the approved amount of the periodic payment. After the receipt of a periodic estimate requesting final payment and within sixty-five (65) days after (a) the Contractor fully completes the work or substantially completes the work so that the value of the work remaining to be done is, in the estimate of the Awarding Authority, less than one per cent (1%) on the original Contract price, or (b) the Contractor substantially completes the work and the Awarding Authority takes possession for occupancy, whichever occurs first, the Awarding Authority shall pay the Contractor the entire balance due on the Contract less (1) a retention based on its estimate of the fair value of its claims against the Contractor and of the cost of completing the incomplete and unsatisfactory items of work and less (1) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of this Article 8, or based on the record of payments by the Contractor to the subcontractors under this Contract if such record of payment indicates that the Contractor has not paid subcontractors as provided in this Article 8. If the Awarding Authority fails to make payment as herein provided there shall be added to each such payment daily interest at the rate of three percentage points above the rediscount rate charged by the Federal Reserve Bank of Boston commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the Contractor; provided, that no interest shall be due, in any event, on the amount due on a periodic estimate for final payment until fifteen (15) days after receipt of such a periodic estimate from the Contractor, at the place designated by the Awarding Authority if such a place is so designated. The Contractor agrees to pay to each subcontractor a portion of any such interest paid in accordance with the amount due each subcontractor.

Economic Development & Industrial Corporation

8.1.2 No sums retained under this Article 8 shall be deemed to be security under Section 29 of Chapter 149 or Section 39F of Chapter 30 of the General Laws.

8.2 Payments to Subcontractors

8.2.1 Pursuant to General Laws Chapter 30, Section 39F:

- A. Forthwith after the Contractor receives payment on account of a periodic estimate, the Contractor shall pay to each subcontractor the amount paid for the labor performed and the materials furnished by that subcontractor, less any amount specified in any court proceedings barring such payments and also less any amount claimed due from the subcontractor by the Contractor.
- B. Not later than the sixty-fifth (65) day after each subcontractor substantially completes his work in accordance with the plans and specifications, the entire balance due under the subcontract less amounts retained by the Awarding Authority as the estimated cost of completing the incomplete and unsatisfactory items of work, shall be due the subcontractor; and the Awarding Authority shall pay that amount to the Contractor. The Contractor shall forthwith pay to the subcontractor the full amount received from the Awarding Authority less any amount specified in any court proceedings barring payment and also less any amount claimed due from the subcontractor by the Contractor.
- C. Each payment made by the Awarding Authority to the Contractor pursuant to subparagraphs (A) and (B) of this paragraph for the labor performed and the materials furnished by the subcontractor shall be made to the Contractor for the account of that subcontractor; and the Awarding Authority shall take reasonable steps to compel the Contractor to make each such payment to each such subcontractor. If the Awarding Authority has received a demand for direct payment from a subcontractor for any amount which has already been included in a payment to the Contractor for payment

Economic Development & Industrial Corporation

to the subcontractor as provided in subparagraphs (A) and (B), the Awarding Authority shall act upon the demand as provided in this section.

D. If, within seventy (70) days after the subcontractor has substantially completed the subcontract work, the subcontractor has not received from the Contractor the balance due under the subcontract including any amount due for extra labor and materials furnished to the Contractor, less any amount retained by the Awarding Authority as the estimated cost of completing the incomplete and unsatisfactory items of work the subcontractor may demand direct payment of that balance from the Awarding Authority. The demand shall be by a sworn statement delivered to or sent by certified mail to the Awarding Authority, and a copy shall be delivered to or sent by certified mail to the Contractor at the same time. The demand shall contain a detailed breakdown of the balance due under the subcontract and also a statement of the status of completion of the subcontract work. Any demand made after substantial completion of the subcontract work shall be valid even if delivered or mailed prior to the seventieth day after the subcontractor has substantially completed the subcontracted work. Within ten (10) days after the subcontractor has delivered or so mailed the demand to the Awarding Authority and delivered or so mailed a copy to the Contractor, the Contractor may reply to the demand. The reply shall be by a sworn statement delivered to or sent by certified mail to the Awarding Authority and a copy shall be delivered to or sent to the subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract including any amount due for extra labor and materials furnished to the Contractor and of the amount due for extra labor and materials furnished to the Contractor and of the amount due for each claim made by the Contractor against the subcontractor.

E. Within fifteen (15) days after receipt of the demand by the Awarding Authority, but in no

Economic Development & Industrial Corporation

event prior to the seventieth (70) day after substantial completion of the subcontract work, the Awarding Authority shall make direct payment to the subcontractor of the balance due under the subcontract including any amount due for extra labor and materials furnished to the Contractor, less any amount (I) retained by the Awarding Authority as the estimated cost of completing the incomplete or unsatisfactory items of work, (II) specified in any court proceedings barring such payment, or (III) disputed by the Contractor is the sworn reply; provided, that the Awarding Authority shall not deduct from a direct payment any amount as provided in part (III) if the reply is not sworn to, or for which sworn reply does not contain the detailed breakdown required by subparagraph (D). The Awarding Authority shall make further direct payments to the subcontractors forthwith after the removal of the basis for deductions from direct payments made as provided in parts (I) and (II) of this paragraph.

F. The Awarding Authority shall forthwith deposit the amount deducted from a direct payment as provided in part (III) of subparagraph (E) in an interest-bearing joint account in the names of the Contractor and the subcontractor in a bank in Massachusetts selected by the Awarding Authority or agreed upon by the Contractor and the subcontractor, and shall notify the Contractor and the subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided in an agreement between the Contractor and the subcontractor or as determined by decree of a court of competent jurisdiction.

G. If the subcontractor does not receive payment as provided in subparagraph (A) or if the Contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the subcontractor and the subcontractor does not receive payment for same when due less the deductions provided for in subparagraph (A), the subcontractor may demand

## Economic Development & Industrial Corporation

direct payment by following the procedure in subparagraph (D) and the Contractor may file a sworn reply as provided in that same subparagraph. A demand made after the first day of the month following that for which the subcontractor performed or furnished the labor and material for which the subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the Contractor. Thereafter the Awarding Authority shall proceed as provided in subparagraphs (C), (F), (G), and (H).;

- 8.2.2 Any assignment by a subcontractor of the rights under this section to a surety company furnishing a bond under the provisions of Section 29 of Chapter 149 shall be invalid. The assignment and subrogation rights of the surety to amounts included in a demand for direct payment which are in the possession of the Awarding Authority or which are on deposit pursuant to subparagraph (f) of paragraph 8.2.1. shall be subordinate to the rights of subcontractors who are entitled to be paid under this section and who have not been paid in full.
- 8.2.3 A Contractor or subcontractor shall enforce a claim to any portions of the amount of a demand for direct payment deposited as provided in subparagraph (f) of paragraph 8.2.1. by a petition in equity in the superior court against the other and the bank shall not be a necessary party. A subcontractor shall enforce a claim for direct payment or a right to require a deposit as provided in subparagraph (f) of paragraph 8.2.1. by a petition in equity in the superior court against the Awarding Authority and the Contractor shall not be a necessary part.

### 8.3 Periodic Estimates and Certificates of Progress

- 8.3.1 The Contractor's period estimate shall be delivered on the day of each month established by the Authority, by hand or by registered or certified mail, with return receipt requested, to the office of the Architect/Engineer, or in a location as otherwise established by the Authority. The Architect/Engineer shall mark the periodic estimate with the date of

Economic Development & Industrial Corporation

receipt. The date of receipt of a periodic estimate received on a Saturday shall be the first working day thereafter.

- 8.3.2 Such periodic estimate shall be made on a two (2) part form provided by the Authority, shall be arithmetically correct, and shall show (a) the value of labor and materials used in the work, and (b) the value, kind and quantity of each item of materials not incorporated in the work but delivered and suitably stored at the site or elsewhere in accordance with Article 4 of the General Conditions and shall be accompanied by receipted bills for, other acceptable evidence of the ownership of, or satisfactory authority to transfer title to the Owner of, the materials not incorporated in the work. In addition, on a form satisfactory to the Authority, an instrument transferring to the Owner title of the aforesaid materials shall be included. All periodic estimates shall contain a separate item for each filed subtrade and a column listing the amount paid to each filed subcontractor as of the date the periodic estimate is filed.
- 8.3.3 The Architect/Engineer will submit the Contractor's application, as checked and approved by the Architect/Engineer, together with his certificate, to the Authority, not later than five (5) working days from the date of receipt.
- 8.3.4 The Contractor shall also submit, when required by the Authority or the Architect/Engineer's vouchers and such other information showing payments already made by him for labor and materials used in the work.
- 8.3.5 The Architect/Engineer shall issue certificates for payments monthly, based on the Contractor's monthly periodic estimate. All orders and certificates shall be approved by the Authority and shall not be binding on the EDIC until so approved.
- 8.3.6 The Authority and the Architect/Engineer may make changes in any periodic estimate submitted by the Contractor, and the payment due on said periodic estimate shall be computed in accordance with the changes so made, but such changes or any requirement for the periodic estimate by

Economic Development & Industrial Corporation

or on a certain date for the commencement of interest charges on the changes made, shall not be applicable until the periodic estimate is in proper form, as provided herein; provided, that the Awarding Authority must, within seven (7) days after receipt, return to the Contractor for correction, any periodic estimate which is not in the required form or which contains computations not arithmetically correct and, in that event, the date of receipt of such periodic estimate shall be the date of receipt of the corrected periodic estimate in the proper form and with arithmetically correct computations.

- 8.3.7 No certificate given or payment made shall be evidence of the performance of this Contract, either wholly or in part, and no payment, whether made upon the final certificate or otherwise, shall be construed as an acceptance of defective work or materials.
- 8.3.8 The persons making payment for the Awarding Authority shall add the daily interest provided for in Article 8.1.1 to each payment for each day beyond the due date based on the date of receipt mailed on the estimate by the Architect/Engineer.
- 8.3.9 A certificate of the Architect/Engineer to the effect that the Contractor has fully or substantially completed the work shall, subject to the provisions of the General Laws, Chapter 30, Section 39J, be conclusive for the purposes of Article 8.1.
- 8.3.10 In preparing the final construction estimate for payment within the Sixty-five (65) day period required under Section 39G of Chapter 30 of the General Laws, the Authority shall mark for deduction and retention (1) such sum, if any, as the Authority shall determine to be the decrease in the total cost of the work caused by change or taking away of any part thereof; (2) such sums, if any, as the Authority shall determine to be the expense, loss and/or damage to the EDIC caused by a failure of the Contractor to conform to and carry out the full provisions of this Contract; (3) such sums, if any, as the Authority shall determine as to the expense, loss and damage of THE EDIC caused by the termination of this Contract under the Provision of Article 13 of the **General Conditions**; (4) such sums, if any, shall determine to be

Economic Development & Industrial Corporation

just or as otherwise specified as liquidated damages for each day any work done for the EDIC, either by this Contractor or by any other person, firm or corporation is delayed through fault of this Contractor, and (5) such sums, if any, as the Authority shall determine are required for settling or securing the payment of claims, liens or liabilities against the EDIC, its agents or employees, relating to this Contract. No payment shall be and nor shall THE EDIC be liable for any loss of profits for any work deducted or eliminated from the Contract requirements.

8.4 Payment for Labor and Materials by Contractor and Subcontractors

8.4.1 The Contractor hereby agrees that he and all subcontractors on the work under this Contract shall pay for all labor performed or furnished and materials used or employed in the performance of the work under this Contract, including all sums due for the rental or hire of vehicles, equipment, tools, and other appliances employed in such work; and shall pay the transportation charges directly related to such rental or hire; and shall pay all sums due trustees or other persons authorized to collect such payments from the Contractor or subcontractors, based upon the labor performed or furnished as aforesaid for a maximum of one hundred and twenty (120) calendar days, and for health and welfare plans and other fringe benefits which are payable in cash and are provided for in collective bargaining agreements between organized labor and the Contractor and/or subcontractors.

8.4.2 The Contractor and all subcontractors agree that lumber which is not intended to be incorporated into the work specified, but is incorporated at the order of the Awarding Authority shall be paid for at its fair salvage value. Any material specially fabricated at the order of the Contractor or subcontractor for use as a component part of the work so as to be unsuitable for use elsewhere, even though such material has not been delivered or incorporated in such work, shall be paid in full by the Contractor or subcontractor.

**Article 9 - Protection of Persons and Property**

9.1 General

9.1.1 The Contractor shall protect everything on, in, or at the site from injury by water, frost, wind, fire, accident or other cause, and any interference' take charge of, protect, and be liable for any loss of, or injury to the materials for use under this Contract, delivered at or in the vicinity of the site, and whether or not suitably stored at the site (or at some location agreed upon) pursuant to Article 8.1.1., by whosoever furnished. He shall take all proper precautions to protect the Owner's or adjoining property from injury or unnecessary interference; provide proper means of access to the property and replace or put in good condition every public or private way, conduit, catch-basin, fence, tree, or other thing injured by the Contractor in carrying on the work unless permanently done away with, on approval of the Authority, for the proper carrying on of the Contract. He shall take all proper precautions to protect persons from injury, unnecessary interference or inconvenience and be responsible for the results of any failure in doing so; leave an unobstructed way along public and private places for pedestrians and vehicular traffic and leave direct access to hydrants; provide proper walks over and around any obstruction made in public place in carrying on the Contract, maintenance from the beginning of twilight, through the whole of every night, on or near any excavation or obstruction, sufficient lights and barricades to protect travelers from injury thereby; and when the work is suspended keep all roadways and sidewalks in proper condition as provided herein and put and leave the same in good condition at the termination of the work, all to the satisfaction of the Authority.

9.1.1.1 In order to protect the lives and health of his employees under the Contract, the Contractor shall comply with all pertinent provisions of the Contract Work Hours and Safety Standards Act, as amended; and shall maintain an accurate record of all cases of death and occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course

Economic Development & Industrial Corporation

of employment on work under the Contract. Information and records shall be made available to the Authority upon request.

9.1.1.2 The Contractor alone shall be responsible for the safety, efficiency, and adequacy of his plant, appliances, and methods, and for any damage which may result from their failure or their improper construction, maintenance, or operation.

9.1.2 Contractor shall comply fully with the provisions of G.L.C. 111F (Massachusetts Right to Know Act), hereinafter the "Act". Contractor acknowledges that the Authority is subject to the "Act" and agrees to provide the statutory-required Material Safety Data Sheet relative to each hazardous or toxic substances brought onto the Authority's property in connection with the services to be performed by the Contractor. In addition, Contractor agrees to provide, at the Authority's request, statutory-required safety and preventive training to the Authority's designated employees who may be exposed to such substances in the workplace.

9.1.3 Additional requirements for protection of persons and property shall be as set forth in Sections 1A & 1B OF Specifications entitled Special Conditions and/or Temporary Facilities.

9.2 Accident Prevention

9.2.1 The Contractor shall comply with all Federal, State, and municipal recommendations and requirements for safety, and accident prevention, and those of the Associated General Contractors of America, the American Standards Association Standard A10.2., and the Commonwealth of Massachusetts "Rules & Regulations for the Prevention of Accidents in Construction Operations", Industrial Bulletin No. 12 of the Department of Labor and Industry. Ensure that the Field Superintendent conducts regular, frequent inspections of the site for compliance with safety regulations.

9.2.2 The Contractor shall be solely responsible for the means, methods and techniques of providing safe working

Economic Development & Industrial Corporation

conditions and enforcing safety procedures for persons engaged on this project. Neither the Owner nor the Architect/Engineer nor any officer, agent or employee of either of them shall be responsible for providing safe working places, safety measures, means or techniques for the Contractor, subcontractors or their employees or any individual responsible to them for the work.

9.3 Insurance Inspection

9.3.1 The Contractor shall provide for periodic inspections by his insurance underwriters and shall submit written evidence of the same to the Authority. The Contractor shall, at his own expense, promptly carry out their recommendations.

9.4 Fire Protection and Prevention

9.4.1 The Contractor's fire protection program shall conform to Subpart F of the OSHA Standards for Construction and the requirements of the Fire Department having jurisdiction and the Owner. The Contractor shall coordinate his work with the Fire Department and conform without exception to their requirements.

9.4.2 In addition to the requirements of Article 9.7.1, the Contractor shall, until Final Completion of the work, provide and maintain U.L. all-purpose fire extinguishers, and other effective means of fire suppression, ready for instant use, distributed around the project and in about temporary structures. Extinguishers shall be provided and maintained by the Contractor.

9.4.3 Gasoline and other flammable liquids shall be stored in and dispensed from U.L. listed safety containers in conformance with National Board of Fire Underwriter's recommendations and Commonwealth of Massachusetts Department of Public Safety requirements, and in no event, within the confines of the permanent structures.

9.4.4 All tarpaulins used shall have U.L. approval and comply with Federal Specification CCC-C-746. Polyethylene shall not be used. Tarpaulins used during construction shall be made of material that is resistant to fire, water, and weather. Worn, split, torn or otherwise

Economic Development & Industrial Corporation

deteriorated tarpaulins shall be replaced throughout the life of the Contract with new materials.

- 9.4.5 Cloths and cotton waste that might constitute a fire hazard shall be placed in fire-resistant closed metal containers until removed from the work site or destroyed at the end of each day.
- 9.4.6 The Contractor, before using any type of burning or welding equipment shall obtain the permission of the Boston Fire Department and comply with all requirements. In general, these will include maintaining a qualified fire watch in the immediate vicinity of combustibles adjacent to the burning or welding operation and equipping him with a dry chemical-charged fire extinguisher; such fire watch shall be maintained for at least one-half hour following completion of such burning or welding operation. The Boston Fire Department may further require the fire watch to have immediately available a bucket of water and charged 1-1/2 inch fire hose.

9.5 Protection From the Elements

- 9.5.1 Should high wind warnings be issued by the U. S. Weather Advisory Bureau, the Contractor shall take every precaution to minimize danger to persons, to the work, and to adjacent properties. These precautions shall include, but not be limited to, removing all loose materials, tools and/or equipment from exposed locations, and removing or securing scaffolding or other temporary work.
- 9.5.2 The Contractor shall furnish all the necessary structures, labor, materials and equipment, shall take all necessary precautions, and shall assume the entire cost of handling all water resulting from intense storms or floods which may be encountered at any time during the construction of the work. The manner of preventing any damage to the work during construction from such causes is left to the discretion of the Contractor. The cost of all work to prevent such damage or to replace damaged work to the satisfaction of the Engineer is included in the prices stated for the various items in the Schedule of Prices.

Economic Development & Industrial Corporation

9.5.3 The Contractor shall remove all snow and ice which may impede the work, damage the finishes or materials, be detrimental to workmen, or impede trucking, delivery or moving of materials at the job site, or prevent adequate drainage of the site or adjoining areas.

9.6 Watchmen

9.6.1 The Authority shall not be held responsible for any theft, vandalism or damage of materials or equipment at the project site. The Contractor shall provide, at his own expense, a sufficient number of watchmen, at the site at all times when the Contractor's personnel are not present for the protection of all work, materials, equipment and property at the site from beginning of the work until Final Completion of the project. If the Contractor elects in addition to use a dog or dogs for such purpose, each dog shall at all times be accompanied by an adult handler.

9.7 Welding and Cutting

9.7.1 Torch cutting and/or welding operations by the Contractor shall have the approval of the Authority prior to start of such operations. In addition to the requirements of Article 9.4, wherever electric or gas welding or cutting work is done in the vicinity of combustible material, or over areas where persons may be found, interposed shields of fireproof material shall be used to protect against fire damage or injury. Personnel with suitable fire extinguishing equipment shall be stationed near welding and cutting operations to prevent the sparks from edging in floor cracks or passing through floor or wall openings and from lodging in combustible material. Chemical extinguishers shall be available and ready for use in all locations where torch cutting and/or welding operations are in progress. The Contractor shall obtain and pay for all permits necessary for welding and/or cutting operations from the Boston Fire Department - Fire Prevention Unit.

9.8 Blasting/Sandblasting

Economic Development & Industrial Corporation

9.8.1 Blasting shall be performed only after written consent to do so has been received from the Authority, and written notification of proposed procedures, safety measures, and time of operation has been given to the Authority. Irrespective of such consent and notification, the Contractor shall be solely responsible for all operations and resulting effects therefore. The Contractor shall perform blasting operations in accordance with all applicable laws and all rules and regulations of the Commonwealth of Massachusetts Department of Public Safety.

9.9 Overloading

9.9.1 The Contractor shall neither cause nor allow the design live load of any or all parts of the structure to be exceeded at any time during the course of construction.

9.10 Noise & Pollution Control

9.10.1 All work performed under this Contract shall be accomplished in strict accordance with and shall conform to all Federal, State and Municipal Laws, rules and regulations concerning noise and pollution control including without limitation Chapter 111, Sect. 31-C, Atmosphere Pollution and Section 142-D, Metropolitan Air Pollution Control Districts and laws, rules and regulations applicable to the work as adopted by the Massachusetts Department of Environmental Protection (D.E.P.), the Department of Public Health - Division of Environmental Health and the City of Boston - Environmental Department and/or Conservation Commission. The Contractor shall obtain and pay for all permits required for the actual construction of the project and shall observe and comply with all regulations, orders, conditions and reporting procedures as may be required by authorities having jurisdiction.

9.10.1.1 Take all measures as directed by the Authority to avoid committing audio, visual or aromatic nuisances in, or related to, the work area.

9.10.1.2 Perform the work so as not to interfere with normal operations of the site and provide such temporary

Economic Development & Industrial Corporation

dust and sound barricades as may be directed by the Authority.

9.11 Scaffolding, Staging, and Hoisting Equipment

- 9.11.1 If hoisting equipment or machinery is used in the performance of work it shall be done with care in strict accordance with all applicable safety and permitting requirements and with a minimum of inconvenience to occupants and the public at large. Operators of hoisting equipment shall be experienced with and licensed for the use of the type and capacity of equipment employed. Such equipment is to be used only in approved locations with adequate protection provided. Equipment shall be furnished, operated and maintained by the Contractor.
- 9.11.2 All necessary hoisting equipment and machinery will be installed, operated and maintained in safe condition by the General Contractor for the use of all Subcontractors, except such as is required to be furnished by the Subcontractors themselves.
- 9.11.3 All staging equipment required shall be erected or furnished by the General Contractor and maintained in safe condition by him for use of all trades. The Contractor shall submit his proposed method of staging equipment to the Engineer for approval prior to start-up of operations.
- 9.11.4 All hoists, scaffolds, and rigging equipment shall be of approved design; erected, maintained and removed by experienced tradesmen; and comply with the requirements of all applicable federal (including OSHA) state, and local laws, rules and regulations including those applicable requirements of "American Standard Safety Code for Building Construction" published by ANSI. No part of any demolition equipment whatsoever shall reach an elevation of 200 feet above existing ground at this site.

**Article 10 - Insurance**

10.1 Insurance Requirements - General

Economic Development & Industrial Corporation

- 10.1.1 The Contractor shall purchase and maintain, at his own expense, all insurance required by the Contract Documents and all insurance required by the applicable laws of Massachusetts, including but not limited, G.L. Chapter 146 of the General Laws, in connection with all hoisting equipment.
- 10.1.2 The insurance required under this Article 10 shall be written for not less than the Limits specified in the Contract Documents, or required by law, whichever is greater.
- 10.1.3 Any changes in the amounts of insurance coverage, required under this Article 10 will be contained in the Supplemental Conditions of the Contract Documents.
- 10.1.4 Simultaneously with the execution and delivery of the Contract and bonds, by the Contractor, he shall submit to the Authority, certificates and other evidence that the insurance, required under this Article 10 has been purchased. The Economic Development & Industrial Corporation shall be named as the certificate holder.
- 10.1.5 The Contractor shall notify the Owner in writing at least fifteen (15) days in advance of any changes in policy amounts or coverage or any cancellation and expiration date of policies required hereunder.

10.2 Contractor's Liability Insurance

- 10.2.1 The Contractor shall purchase and maintain such insurance as will protect him and the Owner from claims under Workmen's Compensation Acts and from claims for damages because of bodily injury, including death, and all property damage, including without limitation, damage to the buildings and/or facilities at and adjoining the site for construction, which might arise from the performance of this Contract and during operations under this Contract, whether such operations be by himself or by any subcontractor or anyone directly or indirectly employed by either of them, including:

A. Statutory Workmen's Compensation and Employer's Liability

Economic Development & Industrial Corporation

The Contractor shall provide insurance for the payment of compensation and the furnishing of other benefits under Chapter 152 of the General laws (the so-called Workmen's Compensation Act) to all persons to be employed under this Contract and shall continue in force such insurance as aforesaid, shall be deemed a material breach of this Contract and shall operate as an immediate termination thereof. The Contractor shall, without limiting the generality of the foregoing, conform to the provisions of Section 34A of Chapter 149 of the General Laws, which section is incorporated herein by reference and made a part hereof.

If the Contractor requires the use of floating vessels (ie., barges, tugboats, etc.,) to carry out the work then the Contractor's Worker's Compensation Insurance shall include "Jones Act" coverage during the life of this Contract with a limit of not less than Two Million Dollars (\$2,000,000) for any one occurrence. Additionally, such vessels shall carry Protection and Indemnity (P&I) and Pollution Insurance with limits of not less than Two Million Dollars (\$2,000,000) for any one occurrence.

Liability arising from labor of longshoremen on navigable waters shall be covered by insurance for compensation and other benefits under the Longshoremen and Harbor Workers Act.

B. Comprehensive General Liability Insurance

With minimum Bodily Injury Limits of **\$1,000,000** per occurrence, and Property Damage Limits of **\$1,000,000** per occurrence; **\$2,000,000** general aggregate and shall include the following:

- (1) Public Liability (Bodily Injury and Property Damage)
- (2) X.C.U. (Explosion, Collapse, and Underground Utilities)
- (3) Independent Contractor's Protective Liability

Economic Development & Industrial Corporation

- (4) Save Harmless Agreement for Owner and Architect set forth in Article 13.2. of the General Conditions.

C. Umbrella Liability Insurance of at least \$5,000,000 per occurrence.

1. Comprehensive All Risk Motor Vehicle Liability Insurance with minimum Bodily Injury Limits of **\$1,000,000** per occurrence and Property Damage Limit of **\$1,000,000** per accident.
2. All Risk Insurance covering all Contractor's equipment with a provision for Waiver of Subrogation against the Owner.

10.3 Property Insurance

- 10.3.1 The Contractor shall purchase and maintain property insurance upon the entire work at the site to the full insurable value thereof. This insurance shall include the interests of the Owner, the Contractor, subcontractors, the sub-subcontractors in the Work, and shall insure against the perils of Fire, Extended Coverage, Vandalism, and Malicious Mischief. This insurance shall include coverage of owned or rented tools, equipment, temporary facilities, or other items, whether or not the capital value of same has been included in the Contract price.

**Article 11 - Changes in the Work**

11.1 Deviations

Chapter 30, Section 391 of the General Laws provides as follows:

"Every Contractor having a Contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public building or public works for the Commonwealth, or of any political subdivision thereof, shall perform all the work required by such Contract in conformity with the Plans and Specifications contained therein. No willful and substantial deviation from said Plans and Specifications shall be made unless authorized in writing by the Awarding Authority or by the Engineer or Architect in charge of the work who is duly authorized by the Awarding Authority to approve such

Economic Development & Industrial Corporation

deviations. In order to avoid delays in the prosecution of the work required by such Contract such deviation from the Plans or Specifications may be authorized by a written order of the Awarding Authority or such Engineer or Architect so authorized to approve such deviation. Within thirty (30) days thereafter, such written order shall be confirmed by a certificate of the Awarding Authority stating: (1) if such deviation involves any substitution or elimination of materials, fixtures or equipment, the reasons why such materials, fixtures or equipment were included in the first instance and the reasons for substitution or elimination, and if the deviation is of any other nature, the reasons for such deviation, giving justification therefore; (2) that the specified deviation does not materially injure the project as a whole; (3) that either the work substituted for the work specified is of the same cost and quality, or that an equitable adjustment has been agreed upon between the contracting agency and the Contractor and the amount in dollars of said adjustment; and (4) that the deviation is in the best interest of the contracting authority".

"Such certificate shall be signed under the penalties of perjury and shall be a permanent part of the file record of the work contracted for".

"Whoever violates any provision of this section willfully and with intent to defraud shall be punished by a fine of not more than Five Thousand Dollars (\$5,000.00) or by imprisonment for not more than six (6) months, or both."

11.2 Changes by Written Order

- 11.2.1 Without invalidating the Contract, the Owner may at any time, by written order of the Authority, change, increase or omit any part of the work, or change the Contract, drawings or Contract Specifications or require the Contractor to furnish extra materials or extra labor relating to the work, and the Contractor shall conform to such orders. No change in the work, whether involving a change in the Contract price or not, shall be allowed unless the order therefore is signed by the Authority. The Authority shall determine the amount to be added to, or deducted from, the Contract sum on account of any such change and shall determine the extension of time, if any, to be allowed. Such amount and extension of time shall,

Economic Development & Industrial Corporation

when possible, be stated in the order but, if necessary, may be determined at a later date, in which case a supplementary order, including the amount and extension of time, shall be issued for the work. The work covered by an order signed by the Authority shall be prosecuted without delay, regardless of any objection of the Contractor according to the directions of the order.

11.3 Claims for Extra Work

11.3.1 If the Contractor takes exception to the amount to be added to or deducted from the Contract or to the extension of time, on account of any order issued by the Authority, he shall, within one week of delivery of said order, file with the Authority full statements in writing of the allowance he claims under such order and no claim for a change in the allowance under such order and no claim for a change in the allowance covered by any order shall be considered unless such statements have been so made and filed. The Authority shall pass on any such claim and his decision in regard thereto shall be final. The work covered by an order to which the Contractor has taken exception shall be prosecuted without delay according to the directions of the order regardless of the Contractor's exception.

11.4 Computation of Price Adjustment

11.4.1 Unless the unit prices are applicable, the Contractor, shall, when requested by the Authority to submit a price for extra work, or for changes in the work required by the Contract Documents, prepare and submit to the Authority and the Architect, an itemized breakdown of the price of doing the added or changed work indicating the following, whether or not the work will be performed by his own forces, a subcontractor, or a combination of both:

- A. For the work performed by his own forces, the Contractor may include only the actual cost of:
  - 1. Labor including foremen (excluding salaried personnel)
  - 2. Materials entering permanently into the work.

Economic Development & Industrial Corporation

3. The reasonable cost at fair market rental rates for equipment employed directly on the work (hand tools and minor equipment excluded)
4. Power and consumable supplies for the operation of power equipment
5. Insurance (including Unemployment, Workmen's Compensation benefits & Liability Insurance)
6. Social Security, Pensions and Health & Welfare Contributions and employment Security Benefits.

To the total of Items 1-6 above, shall be added Ten Percent (10%) for overhead and to that total shall be added Ten Percent (10%) for profit and the actual cost of bond(s).

- 11.4.2 For the work performed by subcontractor, the subcontractor may include only the actual cost of Items 1-6 in Paragraph 11.4.1. and to this total he shall add Ten Percent (10%), for overhead and to that total shall be added Five (5%) Percent for profit and the actual cost of bonds.
- 11.4.3 For the subcontractor work, the Contractor may add an allowance, not exceeding Five Percent (5%) if the total of the subcontractor's price, for the performance of an assuming the added responsibility for such work.
- 11.4.4 All credits shall be at actual costs.
- 11.4.5.1 The Contract limit of work lines shall be as indicated in the Contract Documents and changes in or to the work may be ordered within and/or beyond these lines.
- 11.4.5.2 Performance of the work, which is not required under the Contract Documents, or which is not authorized in writing by the Authority, whether or not such work item is set forth hereunder as a Unit Price Item, shall not be considered cause for any extra payment on account of the Contract. The Contractor will be held fully responsible for such unauthorized work, including the performance of all corrective measures required by the Architect/Engineer of the Authority.

Economic Development & Industrial Corporation

- 11.4.5.3 Prior to commencing the removal of materials, or placement of materials, the Contractor shall notify the Authority in sufficient time to permit proper measurements to be taken on behalf of the Owner. Only quantities, which have been approved in writing by the Authority will be considered in the determination of periodic payments to the Contractor.
- 11.2.5.4 Wherever Unit Price Items are specified hereunder for the removal of materials, spoils or equipment such items shall become the property of the Contractor unless otherwise noted and shall be completely removed from the site and legally disposed of in accordance with the Contract Documents.
- 11.4.5.5 The methods of removal for ledge, rock and boulders, shall be determined and approved in writing by the Architect/Engineer and the Authority, after consultation with the Contractor and the submission of detailed quantities.
- 11.4.5.6 All materials installation methods and definitions of terms, set forth under the Form for General Bid shall be as indicated in the Contract Documents, inclusive.

11.5 Changes in the Work, Execution of Instruments

- 11.5.1 All agreements for change in the work shall be in the form set forth in the section of Contract Documents entitled Standard Forms and must be executed as indicated therein before the Contract shall be deemed to be "altered" pursuant to law and before any payment with respect to any change in the work shall be made to the Contractor. Changes in the work duly ordered by the official in writing pursuant to Article 11.2. shall be prosecuted without delay regardless of any exception by the Contractor to the amount to be added to, or deducted from the Contract price or to the extension of time, if any, as stated in such order.

**Article 12 - Guarantees**

12.1 General Guarantees

- 12.1.1 In consideration of the execution of this Contract by the

Economic Development & Industrial Corporation

Owner and the price here stipulated to be paid obligates himself and agrees to bring all portions of the work under this Contract to completion in accordance with the Contract Documents and within the times specified, free of all defects in material and workmanship for a period of one (1) year from the date of Substantial Completion of the work. The Contractor guarantees on written notice from the Authority to forthwith repair, and make good, or cause to be repaired and made good at his own expense, all defects of material or workmanship in the said work and to pay for or cause to be paid for, any damage to other work resulting therefrom, or from the repair thereof, which may develop during the period one (1) year from the date of the Substantial Completion of the work

- 12.1.1.1 If at any time during the period of one (1) year from the date of final acceptance of the work contemplated in the Contract, as determined by the Engineer, any part of such work, which, in the opinion of the Engineer requires replacing or repairing, or damage to other property of the Authority caused by any defect in the work, the Engineer may notify the Contractor in person or by mail to make the required repairs or replacement and repair such damage. If the Contractor neglects to make such repairs or replacements to the satisfaction of the Engineer within the ten (10) days from the date of giving or mailing such notice, then the Engineer may employ other persons to make the same. The Contractor agrees, upon demand, to pay to the Authority all amounts which it expends for such repairs or replacements.
- 12.1.2 During the guarantee period, the Contractor shall be responsible for all costs incurred in making good, including, and not by way of limitation, factory work, transportation and labor costs, all defects in the materials or workmanship and for all injuries, damages and replacement of work and equipment.
- 12.1.3 If, after installation, any of the materials or equipment furnished by the Contractor fail to meet the requirements of the Contract Documents as to quality or performance, the EDIC shall have the right to operate the equipment until it can be taken out of service for correction

Economic Development & Industrial Corporation

without any undue interference with operation. Temporary equipment, satisfactory to the Authority, and without added expense to the EDIC, shall be provided during the repair period.

12.2 Special Guarantees

- 12.2.1 It is expressly agreed and understood that the general guarantee set forth under Article 12.1 is in addition to and not in substitution of, such guarantees as may be required under any section of the Specifications.
- 12.2.2 All guarantees required in the various sections of the Specifications, which originate with any subcontractor, shall be in the form set forth in the section of the Contract Documents entitled Standard Forms and must be delivered to the Authority before final payment to the Contractor may be made for the account of the particular subcontractor involved.
- 12.2.3 The Contractor and said subcontractor shall be jointly and severally liable to the Owner, under the terms of all guarantees originating with a subcontractor.
- 12.2.4 The failure of the Contractor or subcontractor to deliver a required guarantee shall be deemed to constitute a failure of the subcontractor to fully complete his work in accordance with the Contract Documents.
- 12.2.5 The period of special guarantees for work by a subcontractor shall be one year, (unless a longer period is specified in final payment to the Contractor for the account of the particular subcontractor involved or from the date of Substantial Completion for the project, whichever occurs first.
- 12.2.6 The period of all other special grantees, unless otherwise specified, shall be one year from the date of Substantial Completion of the project.
- 12.2.7 The Contractor shall obtain and provide manufacturers' guarantees for equipment and materials as set forth and specified in the Contract Documents. The failure of the Contractor or subcontractor to obtain and deliver a required manufacturer's guarantee shall be deemed to

Economic Development & Industrial Corporation

constitute a failure of the Contractor or subcontractor to fully complete his work in accordance with the Contract Documents.

**Article 13 - Remedies of the Economic Development & Industrial Corporation**

13.1 Discontinuance of Work of Contractor by Owner

13.1.1 If the Contractor at any times refuses or neglects to supply a sufficiency of properly skilled workmen or if materials of the proper quality, or fails in any respect to prosecute the work with promptness and diligence, or fails in the performance of any of the agreements herein contained, and such refusal, neglect or failure has been certified to by the Authority, the Owner may at once provide such labor or materials and deduct the entire cost thereof from any money then due, or thereafter to become due, to the Contractor under this Contract.

13.1.2 If the Contractor: is (1) adjudged a bankrupt; (2) makes a general assignment for the benefit of his creditors; (3) has a receiver of his property appointed; (4) abandons the work to be performed under this Contract; (5) sublets or assigns any portion of the work without the previous written consent of the Authority; (6) becomes insolvent; (7) fails or neglects to supply sufficient properly skilled workmen or materials of the proper quality, and the Authority so certifies in writing; (8) or fails to prosecute the work with promptness and diligence in the opinion of the Authority, the Owner, acting by the Authority, may, without prejudice to any right or remedy, notify the Contractor to discontinue all work, after giving the Contractor and his Surety seven (7) days written notice.

Thereupon, the Contractor shall discontinue all work, and the Owner, acting by the Authority and at his discretion, by Contract or otherwise, may complete the work and charge the entire expense of so completing the work to the Contractor. The Contractor shall not be entitled to receive any further payment under this Contract until the work is wholly finished, at which time, if the unpaid balance of the amount to be paid

Economic Development & Industrial Corporation

under this Contract exceeds the expense incurred by the Owner in completing the work, such excess shall be paid by the Owner to the Contractor. If such expense exceeds the unpaid balance, the Contractor shall pay the difference to the Owner. To complete the work, the Owner, acting by the Authority, may take possession of and use, or cause to be used, any materials, implements, machinery and tools found on the work site.

- 13.1.3 In the event that any of the provisions of this Contract are violated by the Contractor, or his approved subcontractors, and the Contractor fails to cure such violations and/or defaults of the Contract within seven (7) days of a Notice of Termination; or if the Contractor in the aforementioned seven (7) day period fails to make satisfactory arrangements with the Authority to cure such violations and/or defaults which are approved in writing at the sole discretion of the Authority, then the Contract shall cease and terminate without further notice or obligation of the Authority. In the event of such Notice of Termination, the Authority representing the Owner or Awarding Authority, shall immediately serve notice thereof upon the Surety underwriter of the Contractor and the Surety shall have the right to take over and perform the Contract in accordance with its full terms and conditions; provided however, that if the Surety does not commence performance of the Contract within ten (10) days from receipt of the Notice of Termination, or if the Surety does not make satisfactory arrangements which are approved by the Authority in writing to commence work forthwith thereafter, the Authority, representing the Owner or Awarding Authority, may take over the work and prosecute the same to completion by separate contract or otherwise, at the sole expense of the Contractor. The Contractor and his Surety shall be fully liable to the Authority, representing the Owner or the Awarding Authority, for any and all excess costs occasioned; by the work, including without limitation, any and all claims, demands, damages or liabilities arising from, growing out of or in any way connected by the Contract.

13.2 Indemnification

Economic Development & Industrial Corporation

- 13.2.1 The Contractor shall assume the defense of, and hold the Owner and the Architect/Engineer, their officers, agents, and employees harmless from all suits and claims against them, or any of them, arising from the use of any invention, patent or patent rights, and by or from any act or omission or neglect of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a part indemnified hereunder.
- 13.2.2 In any and all claims against the Economic Development & Industrial Corporation, or the Architect/ Engineer or any of their officers, agents, or employees, by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation of the Contractor shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under Workmen's Compensation Acts, disability benefit acts or other employee benefit acts.
- 13.2.3 If the Contractor delays the progress of any work, let by the Economic Development & Industrial Corporation under a separate contract, apart from this Contract, so as to cause loss for which the EDIC becomes liable, then he shall reimburse the Economic Development & Industrial Corporation for such loss, in such sums as the Authority shall determine to be just.

**ARTICLE 14 - RELEASE OF THE ECONOMIC DEVELOPMENT & INDUSTRIAL CORPORATION**

**ON FINAL PAYMENT**

- 14.1 In consideration of execution of this Contract by the Owner, the Contractor agrees that simultaneously with the acceptance of what the Owner tenders as the Final Payment by it under this Contract, he will execute and deliver to the Owner an instrument under seal releasing and forever discharging the Owner of and from any and all claims, demands and liabilities whatsoever of every name and nature both at law and in equity, arising from, growing out of, or in any way connected with this Contract, save only such claims, demands, and liabilities as are

Economic Development & Industrial Corporation

expressly expected in said instrument. It is agreed that the person who, in fact, executes and delivers said instrument, shall be deemed to be authorized and empowered to execute and deliver the same on behalf of the Contractor.

**END OF  
GENERAL CONDITIONS**

Economic Development & Industrial Corporation

SPECIAL CONDITIONS INDEX

Code Compliant Stairway Improvements at 12 Channel Street, Phase 1

EDIC Project No. 1272C

<u>Article No.</u>	<u>Description</u>	<u>Page</u>
1.0	DESCRIPTION OF WORK	SC-1
2.0	TIME FOR COMPLETION AND SEQUENCE OF WORK	SC-1
3.0	SALES TAX EXEMPTION	SC-1
4.0	GENERAL NOTES TO CONTRACTOR	SC-2
5.0	COMMUNICATIONS	SC-3
6.0	CONTRACT DOCUMENTS AND DRAWINGS	SC-4
7.0	HISTORICAL, ARCHAEOLOGICAL OR ANTIQUE ITEMS	SC-4
8.0	RECORD DRAWINGS	SC-5
9.0	APPLICABLE SPECIFICATION	SC-5
10.0	HOURS OF WORK	SC-5
11.0	EMERGENCY WORK FORCE	SC-6
12.0	CONTRACTOR TO PROPERLY ARRANGE HIS FORCES	SC-6
13.0	TEMPORARY LIGHTING	SC-7
14.0	EMERGENCY TELEPHONE	SC-7
15.0	DELIVERY AND STORAGE OF MATERIALS AND EQUIPMENT	SC-7
16.0	SALVAGE	SC-8
17.0	PROVISIONS FOR TRAFFIC	SC-8
18.0	CITY ORDINANCES	SC-10
19.0	CARE AND PROTECTION OF PROPERTY	SC-10
20.0	OCCUPYING PRIVATE LAND	SC-10
21.0	WATER FOR CONSTRUCTION	SC-11
22.0	OPERATION OF VALVES	SC-11
23.0	SKILLED LABOR AND EMPLOYEES	SC-11
24.0	WORK QUANTITY SUBMISSIONS FOR PARTIAL PAYMENTS	SC-12
25.0	NOISE CONTROL	SC-12
26.0	OCCUPATIONAL SAFETY AND HEALTH REQUIREMENTS	SC-14
27.0	ACCIDENT PREVENTION	SC-15
28.0	RUBBISH REMOVAL	SC-15
29.0	ADVERTISEMENT MATTER	SC-16
30.0	FIRE AND SAFETY	SC-16
31.0	DEBRIS AND SURPLUS MATERIAL	SC-16
32.0	EXCAVATED SOILS	SC-16
33.0	SITE UTILITIES COORDINATION	SC-16
34.0	MUNICIPAL POLICE SERVICE	SC-17
35.0	PROJECT SIGNAGE	SC-17
36.0	SITE FACILITIES	SC-18

Economic Development & Industrial Corporation

37.0	COMPENSATION FOR WORK OF THESE SPECIAL CONDITIONS	SC-18
38.0	COMMENCEMENT AND COMPLETION	SC-19
39.0	SUBSTANTIAL AND FINAL COMPLETION DATES	SC-19
40.0	INSURANCE	SC-19
41.0	TRAFFIC MANAGEMENT CONTROL PLAN	SC-21
42.0	RESTRICTIONS AS TO USE OF GROUNDS	SC-21
43.0	CONSTRUCTION LINES AND GRADES	SC-22
44.0	OMITTED WORK ITEMS	SC-22
45.0	PROJECT PROGRESS MEETINGS	SC-22
46.0	PROJECT CLOSEOUT	SC-22
47.0	WARRANTEE	SC-23
48.0	STAIRWELL CLOSURE / SIGNAGE	SC-23
49.0	PARKING ON SITE	SC-24

**END OF  
SPECIAL CONDITIONS INDEX**

**SPECIAL CONDITIONS**

1.0 DESCRIPTION OF WORK

1.1 The project generally consists of but is not limited to the demolition of an existing wood guardrail, the installation of a new steel handrail and guardrail system, removal and installation of frames, doors and door hardware, window repair, painting of railings, walls and doors, selective concrete repair, exit and door signage, and any other work noted in the plans and specifications.

2.0 TIME FOR COMPLETION AND SEQUENCE OF WORK

2.1 The work, which the Contractor is required to perform under this Contract, shall commence at the time stipulated by the EDIC in the Notice to Proceed. The work as outlined in the Contract shall reach Substantial and Final Completion by the dates outlined on page C-2 of the Contract section contained within this Document. The Contractor shall employ sufficient equipment and workmen in order to complete the construction as directed by the Engineer. If, in the opinion of the EDIC, the progress of the work of the Contractor does not, at any time, clearly demonstrate that the completion of the construction will meet the approval of the Engineer, the EDIC reserves the right to require the Contractor to employ such additional equipment and workmen as required to complete the construction, and to work overtime hours to assure completion dates, at no additional cost to the EDIC.

2.2 The Engineer shall determine when the work shall be interrupted due to unsatisfactory weather conditions. Determination of the period to be included in the Time for Completion shall cease when the Engineer directs that the work stop due to weather and shall commence again on the first working day thereafter that the Engineer may designate for the work to be resumed.

3.0 SALES TAX EXEMPTION

3.1 The Massachusetts Sales Tax is not applicable to work done under contract with the EDIC. The Contractor shall

Economic Development & Industrial Corporation

obtain from the EDIC the Sales Tax Exemption Number for use in the purchase of all materials ordered in the Commonwealth of Massachusetts and which are to be incorporated in the work under this Contract. This saving in cost shall be considered in establishing the bid prices.

4.0 GENERAL NOTES TO CONTRACTOR

- 4.1 Except as otherwise specifically stated in the Contract Documents and Technical Specifications, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, heat, power, transportation, superintendence, temporary construction of every nature, charges, levies, fees or other expenses, and all other services and facilities of every nature whatsoever necessary for the performance of the Contract and to deliver all improvements embraced in this Contract complete in every respect within the specified time.
- 4.2 Unless otherwise specified herein, all materials, workmanship, methods and practices shall conform to the current standards of the appropriate department of the City of Boston.
- 4.3 The Contractor shall warrant the quality of all equipment and materials prior to their use. For certain specific items of the contract work, materials, or equipment to be enumerated by the EDIC, the Contractor shall submit a certificate of conformance to specifications with which verifying support data from manufacturers and suppliers will be provided, said certificate also providing assurance that all future deliveries of the same item(s) will similarly conform.
- 4.4 The Contractor's attention is called to the necessity of obtaining permits, especially those required by the Inspectional Services Department. The Contractor shall pay all required fees to the City of Boston. Reimbursement therefore shall be considered to be included in the Contract unit and lump sum bid prices of the Bid.

Economic Development & Industrial Corporation

- 4.5 The Contractor shall verify dimensions shown on the plans and, if any inconsistencies or discrepancies should be noted on the Drawings and the Specifications, he shall immediately notify the EDIC. The Contractor will be held responsible for any errors resulting from his failure to exercise the aforementioned precaution.
- 4.6 As soon as the Contract is executed, the Contractor shall submit his construction schedule and a schedule for ordering and delivery of materials in anticipation of the Notice to Proceed. When the EDIC gives the Notice to Proceed, the work of construction shall begin at the time stipulated therein and shall be completed within the Time for Completion specified.
- 4.7 The Contractor shall satisfy himself as to the existing conditions of the areas in which he is to perform his work. It is the Contractor's responsibility to make his own investigation and related assumptions and to satisfy himself as to both subsurface conditions and overhead structures and to ensure that these are reflected in the unit and lump sum prices bid. He shall conduct and arrange his work so as not to impede or interfere with the work of other contractors working in the same area and in adjacent areas. The EDIC will decide any disputed questions regarding the performance of the work, access to and cleaning up the site and priority regarding the performance between the various contractors. The Contractor shall advise the EDIC, in writing, of all agreements pertaining to coordinating his work with the work of other contractors in the area.
- 4.8 The Contractor shall exercise particular care that no damage be done to adjacent buildings and that as little damage as possible be done to lawns, walks, fences, trees, shrubs, gardens, drives, walls and other appurtenances. Upon completion of work, adjacent private properties shall be left in as good condition as they were in before the work started.

5.0 COMMUNICATIONS

- 5.1 All notices, demands, requests, instructions, approvals, proposals and claims must be in writing.

Economic Development & Industrial Corporation

- 5.2 Any notice to or demand upon the Contractor shall be sufficiently given if delivered at the office of the Contractor stated on the signature page of the Agreement (or at such other office as the Contractor may from time to time designate in writing to the EDIC), or if deposited in the United States mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office.
- 5.3 All papers required to be delivered to EDIC shall, unless otherwise specified in writing to the Contractor, be delivered to the Engineering and Construction Department, 22 Drydock Avenue, Boston, MA 02210, and any notice to or demand upon the EDIC shall be sufficiently given if so delivered, or if deposited in the United States mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission to said EDIC at such address, or to such other representatives of the EDIC or to such other address as the EDIC may subsequently specify in writing to the Contractor for such purpose.
- 5.4 Any such notice shall be deemed to have been given as of the time of actual delivery or (in the case of mailing) when the same should have been received in due course of post, or in the case of telegrams, at the time of actual receipt, as the case may be.

6.0 CONTRACT DOCUMENTS AND DRAWINGS

- 6.1 The EDIC will not furnish the Contractor, without charge, copies of the Contract Documents. Copies are the responsibility of the Contractor to be purchased at his expense.

7.0 HISTORICAL, ARCHAEOLOGICAL OR ANTIQUE ITEMS

- 7.1 If the Contractor, during his construction and other operations, comes upon, uncovers or otherwise discovers items of historical, archaeological or antique nature, the Contractor shall immediately notify the EDIC so that a proper evaluation may be made of its importance. The EDIC shall arrange for the evaluation in a manner that

Economic Development & Industrial Corporation

shall not unduly interfere with the Contractor's operations.

- 7.2 All such items, if designated by the EDIC to be of historical, archaeological or antique nature, shall not become the property of the Contractor, but shall be placed in the custody of the EDIC for disposition.
- 7.3 The Contractor shall be required to remove with care or to assist in the removal of any such item or items and to transport the same to a place of safe keeping within the City of Boston.

8.0 RECORD DRAWINGS

- 8.1 The Contractor shall cooperate with the Engineer and maintain at the Site a set of drawings on which shall be recorded accurately, as the work progresses, the actual "as built" locations and dimensions of all his work, indicating thereon all variations from the Contract Drawings. This record of "as built" conditions shall include the work of all subcontractors.
- 8.2 Prior to final acceptance of the work, all "as built" data shall be transferred to a complete set of reproducible record drawings in ink on mylar and/or in electronic format of AutoCAD Release 14 (min.), on the originals of the Contract Drawings by the Engineer with the cooperation of the Contractor as required. After review and approval, the record drawings will be completed and delivered to the EDIC by the Engineer. No final payments will be released without approval of the as-built drawings.

9.0 APPLICABLE SPECIFICATIONS

- 9.1 The Technical Specifications contained in these Contract Documents are general specifications relating to various kinds of work, and only those specifications pertinent to the items listed in the Bid Proposal are applicable to the work to be done under this Contract.

10.0 HOURS OF WORK

Economic Development & Industrial Corporation

- 10.1 All work must be performed within the acceptable work hours as per the review and approval through the permit process of the City of Boston Inspectional Services Department and its inspectors. The working hours shall also comply with the ISD's Regulation of Construction Hours. The Contractor shall notify the EDIC's representative on the Site of the days of the week and hours of each day which he proposes to work the job.
- 10.2 For work outside the limits of ISD's permissible construction hours, the Contractor shall only be permitted to work upon obtaining written approval from the Authority. For said work, the Contractor shall also be responsible for the payment and procurement of any permits associated with performance of the work within these hours. Compensation for work on weekends and outside regular hours shall be considered included in the prices already stipulated by the contract under the Form for General Bid. No additional compensation shall be granted.
- 10.3 The 12 Channel Street building's hours of operations are 6:00am to 11:00pm on weekdays and 6:00am to 6:00pm on Saturdays. The contractor shall not be allowed to work on Sundays without prior written approval from the EDIC.

11.0 EMERGENCY WORK FORCE

- 11.1 During days when inclement weather prevents scheduled work from being accomplished, the Contractor shall have available, during the normal working hours, an emergency work force whose purpose will be to maintain the construction Site in a safe, passable condition, and to protect the works from damage.

12.0 SCHEDULING THE WORK AND CONTRACTOR TO PROPERLY ARRANGE HIS FORCES

- 12.1 The contractor shall schedule his work such that there is minimal disruption to the pedestrian traffic in and out of the area.
- 12.2 The Contractor shall so arrange his forces and regulate his operations such that, while complying with the

Economic Development & Industrial Corporation

provisions of any labor laws applicable to this work, he shall leave his work at the end of working periods in a safe and orderly condition.

13.0 TEMPORARY LIGHTING

13.1 In accordance with the Revised Ordinances of 1961 of the City of Boston, Chapter 21, the Contractor shall at his own expense furnish and maintain from the beginning of twilight, through the whole of every night, temporary lights as necessary to protect the public or as required by the EDIC and/or the Transportation Commissioner and the Public Works Commissioner of the City of Boston. At no time shall the contractor use the permanent electrical to the site for his use in order to fully prosecute the work.

14.0 EMERGENCY TELEPHONE

14.1 The Contractor shall provide to the EDIC an emergency telephone number at which he or his authorized representative may be reached at all times.

15.0 DELIVERY AND STORAGE OF MATERIALS AND EQUIPMENT

15.1 Equipment and materials to be used in the work under this Contract shall be delivered sufficiently in advance of their proposed use to prevent delay in the execution of the work, and they shall be delivered as nearly as feasible in the order required for the work.

15.2 The Contractor will have access to storage areas for equipment and (non-combustible) material storage. The equipment and materials can be stored here in the event of early delivery. The contractor must take special care not to impede vehicular access along Drydock Avenue, Tide Street and FID Kennedy Avenue.

15.3 The Contractor shall provide suitable storage facilities for all materials, which are liable to injury by exposure to weather, theft, breakage, etc. All material delivered to the job shall be unloaded and placed in a manner which will not obstruct pedestrian or vehicular traffic. Any material or equipment which is damaged so that, in the opinion of the Engineer, it

Economic Development & Industrial Corporation

is unfit for use shall be satisfactorily repaired or promptly removed and replaced. Location of places for storage of materials and equipment including excavated material shall be approved by the Engineer before any material is so stored.

15.4 The security and safety of all equipment, machinery and materials is the responsibility of the Contractor.

16.0 SALVAGE

16.1 The Contractor shall salvage any property of the Economic Development and Industrial Corporation of Boston that is uncovered in the course of the work and deemed by the EDIC to have value. Contractor shall deliver said property to the Economic Development and Industrial Corporation at his own expense.

16.2 The Contractor shall dispose of all other property not deemed to be of value.

17.0 PROVISIONS FOR TRAFFIC

17.1 The Contractor shall be required to furnish all labor, materials and equipment necessary to maintain and protect vehicular and pedestrian traffic within the project area.

17.2 The Contractor shall not close or obstruct any portion of any street, public or private, without obtaining permits from the proper authorities. If any street or private way shall be rendered unsafe by the Contractor's operations, he shall make such repairs or provide such temporary ways or guards as shall be acceptable to the EDIC.

17.3 Where the construction coincides with the present traveled way, the Contractor shall carry on his work so that uninterrupted traffic flow is maintained through the project during the entire construction period, over traffic line patterns approved by the City of Boston, Transportation Department, Traffic Division and the EDIC.

Economic Development & Industrial Corporation

- 17.4 The Contractor shall conduct the work at all times so that the abutters shall have access to their property. When public or private property is isolated by the temporary closure of a road, the Contractor shall be responsible for providing such safe means of access to a public way as the Engineer deems essential.
- 17.5 Streets wholly or partly closed to traffic shall be protected by suitable barricades, barrier fences, traffic signs and other traffic devices furnished and erected by the Contractor with prior written consent from the Engineer.
- 17.6 The Contractor shall at his own expense provide sufficient temporary lighting such as flares, lanterns, flashers, or other approved illuminated traffic signs and devices to afford adequate protection to the traveling public. See also - TEMPORARY LIGHTING.
- 17.7 The Contractor shall notify the Boston Fire Department when any street is to be closed regardless of the length of time or time of day.
- 17.8 All detours shall be marked with appropriate signs and lights as directed by the Engineer.
- 17.9 The Contractor will be required to maintain such Municipal uniformed police officers on special duty as the EDIC may deem necessary, to avoid as far as reasonably possible, danger to the safety of persons and substantial interference with the free circulation of traffic.
- 17.10 The Contractor shall notify the EDIC and all abutters 48 hours in advance that a portion of the street is to be closed. This is to be done by whatever means deemed suitable by the Engineer.
- 17.11 The decision for routing traffic through or around the work and provisions for the control of same will be made by the EDIC. Roads shall be closed to travel only as directed by the EDIC.
- 17.12 No compensation will be allowed for any of the above work or materials specified, specified herein, it being

Economic Development & Industrial Corporation

agreed and understood that all the costs, shall be included in the lump sum prices bid for the items in the Contract.

18.0 CITY ORDINANCES AND PERMITS

18.1 The Contractor shall comply with all ordinances and rules and regulations of the City affecting the construction of public ways including, without limiting the generality of the foregoing, the Revised Ordinances of 1961 of the City of Boston Chapter 21, as well as any permits issued by the City to the Contractor relating to the work.

18.2 In case any provision imposes requirements consistent with, but in addition to, those provided under any such ordinances, rules and regulations, and permits, such contract provisions shall govern.

19.0 CARE AND PROTECTION OF PROPERTY

19.1 All existing walks, pipes, poles, signs, services to buildings, trees, conduits, fences, stairways, curbing, walls, utilities, water pipes, sewers, drains, hydrants, etc., whether or not shown on the plans, building structures, public and private property, which are to remain in place shall be carefully supported and protected from injury by the Contractor without additional compensation and in case of damage, direct or indirect to public or private property by or on account of any act, omission, neglect or misconduct in the execution of the work on the part of the Contractor, such property shall be restored by the Contractor without additional compensation therefor, to as good condition as that existing before the damage was done.

19.2 Utilities to the tenants of the EDIC shall be protected at all times throughout the course of this project. Any damage to the utilities and any consequences shall be the responsibility of the Contractor.

20.0 OCCUPYING PRIVATE LAND

20.1 The Contractor shall not, except with the consent of the

Economic Development & Industrial Corporation

owner, enter or occupy with men, tools, materials, or equipment, any privately-owned land outside of the Property of the EDIC or the easements as shown on the Plans.

21.0 WATER FOR CONSTRUCTION

21.1 All water used for construction purposes shall be metered as follows:

- (a) All persons desiring to use such water from a hydrant or any other appurtenance shall apply for a "Hydrant Meter Permit" at the Economic Development and Industrial Corporation of Boston, at 22 Drydock Avenue, Suite 201, Boston, MA 02210.
- (b) A deposit is required for each permit which is renewable, if necessary, every 90 days. The permit provides for a meter and all necessary couplings to permit the connection of the meter to a hydrant.
- (c) There is a non-refundable service charge for each permit which along with the cost of water consumed (as determined by use recorded on the meter, at current water rate) will be deducted from the deposit. If the cost of water consumed exceeds the deposit amount, the permittee shall be responsible for the additional cost of such consumption or any damage to the hydrant or any damage to or loss of the meter, wrench, couplings, or any other appurtenance as billed by the EDIC.

22.0 OPERATION OF VALVES

22.1 All valves on the existing water system shall be operated only by or under the direct supervision of employees of the EDIC.

23.0 SKILLED LABOR AND EMPLOYEES

23.1 The Contractor shall furnish to the Engineer such information relating to the employees upon the work as the Engineer may from time to time request. If any person employed on the work by the Contractor is insubordinate or appears to the Engineer to be incompetent, unfaithful,

Economic Development & Industrial Corporation

or disorderly, he shall be discharged immediately on the demand of the Engineer and shall not be again employed on the work without the approval of the Engineer.

24.0 WORK QUANTITY SUBMISSIONS FOR PARTIAL PAYMENTS

24.1 The Contractor shall compare his work quantity reports with those of the Engineer as the work progresses and his cumulative totals on a continuous basis as the Engineer may require. At least once each week the Contractor shall make a formal submission of work quantity reports for comparison and approval by the Engineer.

24.2 Estimates for payment are generally made on a monthly basis, although the period varies. Any quantity reports submitted later than 7 calendar days prior to the date established by the Engineer for submission of a partial payment request will not be included.

24.3 Any violation of any provision of the Specifications which the Engineer deems hazardous to the public or which in his opinion endangers property or the work and which is not remedied at the time for submission of a monthly payment estimate, shall be considered sufficient reason for withholding such submission.

25.0 NOISE CONTROL

25.1 Equipment to be employed on this Site shall not produce a noise level exceeding the following limits in dB(a) at a distance of 50 feet from the equipment under test. (GSA permissible noise levels).

Equipment

Earthmoving		Earthmoving	
front loader	75	scrapers	80
backhoes	75	graders	75
dozers	75	truck	75
tractors	75	paver	80
Materials Handling		Stationary	
concrete mixer	75	pumps	75
concrete pump	75	generators	75

Economic Development & Industrial Corporation

crane	75	compressors	75
derrick	75		
Impact		Other	
jack hammers	75	saws	75
rock drills	80	vibrators	75
pneumatic tools	80		
pile driver	95		

25.2 The Contractor shall comply with all applicable Federal, State and Local Laws, Ordinances and Regulations relative to noise control. (See especially OSHA "Occupational Noise Exposure", 1910.95.)

25.3 In addition to the provisions of the preceding paragraphs, sound levels for noise monitored at the building line of structures affected acoustically by the Contractor's operations and plant:

(a) Sound levels for non-scheduled = intermittent, short term noise for mobile equipment shall not exceed the following:

Daily, including Sundays and Legal Holidays, all hours, a maximum of 85 dB(A).

(b) Sound level limits for repetitively scheduled and relatively long term noise from stationary equipment shall not exceed the following:

Daily, including Sundays and Legal Holidays, all hours, a maximum of 70 dB(A).

25.4 The Contractor shall provide such equipment, sound-deadening devices, and take such noise abatement measures that are necessary to comply with the requirements of this Contract, consisting of, but not limited to the following:

1. Shields or other physical barriers to restrict the transmission of noise.
2. Soundproof housings or enclosures for noise production machinery.

Economic Development & Industrial Corporation

3. Efficient silencers on air intakes of equipment.
  4. Efficient intake and exhaust mufflers on internal combustion engines.
  5. Conducting truck loading, unloading and hauling operations so that noise is kept to a minimum.
  6. Routing of equipment and vehicles over streets that will cause the least disturbance to residents in the vicinity of the work.
  7. Siting of stationary equipment shall be subject to the approval of the Engineer.
- 25.5 The Contractor shall cooperate with the City of Boston Air Pollution Control Commission which may, at its own expense, monitor noise levels throughout the life of this Contract.
- 25.6 Where field sound measurements reveal sound levels exceeding those listed above, the Contractor shall cease operating such equipment and shall either repair it or replace it with equipment complying with these sound levels.

26.0 OCCUPATIONAL SAFETY AND HEALTH REQUIREMENTS

- 26.1 Contract Drawings and Specifications for the construction shall be governed at all times by applicable provisions of the Federal Laws including, but not limited to, the following as most recently amended:  
Williams-Steiger Occupational Safety and Health Act of 1970, Public Law 91-586.

Part 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations.

Part 1518 - Safety and Health Regulations for Construction, Chapter XIII of Title 29, Code of Federal Regulations.

Record Keeping Requirements under the Williams-Steigler Occupational Safety and Health Act of 1970, U.S.

Economic Development & Industrial Corporation

Department of Labor, Occupational Safety and Health Administration.

26.2 The Contractor and all Subcontractors shall immediately report in writing all accidents, injuries, or health hazards to the Authority and Engineer, or their designated representatives. This shall not obviate any mandatory reporting under the provisions of the Occupational Safety and Health Act of 1970. The Contractor shall hold weekly "Tool Box" safety meetings; the subject of which will be recorded in the weekly Job Progress Report.

27.0 ACCIDENT PREVENTION

27.1 Comply with all Federal, State and municipal recommendations and requirements for safety, and accident prevention, and those of the Associated General Contractors of America, and the American Standards Association Standard A10.2. Ensure that the Field Superintendent conducts regular, frequent inspections of the site for compliance with safety regulations.

27.2 Neither the Owner nor the Engineer shall be responsible for providing a safe working place for the Contractor, Subcontractors, or their employees, or any individual responsible to them for the work.

28.0 RUBBISH REMOVAL

28.1 The Contractor shall keep the streets and site free from the accumulation of rubbish and debris at all times. At the end of each work week or sooner if required, the Contractor shall thoroughly clean the streets and premises of rubbish and debris of any nature, and remove such items from the premises.

28.2 The Contractor and each subcontractor shall remove all rubbish, waste, tools, equipment, and appurtenances caused by and used in execution of his work; but this shall in no way be construed to relieve the Contractor of his primary responsibility for maintaining the site free

Economic Development & Industrial Corporation

and clean of debris, leaving all work in a clean condition satisfactory to the Official.

29.0 ADVERTISING MATTER

29.1 Signs or advertisements will not be allowed on premises unless written approval has been obtained from the Owner.

30.0 FIRE AND SAFETY PROCEDURES

30.1 Prior to the use of any type of burning or welding operations on site, the Contractor shall justify to the Engineer the need to conduct such operation. If the Engineer approves the need, the Contractor must then obtain the proper permits from the City of Boston Fire Department and adhere to all procedures before undertaking any operations.

30.2 The Contractor is responsible for securing all safety measures related to the removal of the guardrail and any safety measures required by ISD and/or BFD in relation to the partial opening up of select floors within the stairway during construction.

31.0 DEBRIS AND SURPLUS MATERIAL

31.1 All debris and waste material generated by the construction which is, in the opinion of the Official, unsuitable, shall be removed daily from the jobsite by the Contractor. Debris shall not be permitted to accumulate and the work area shall be kept clean at all times.

31.2 The Contractor and each subcontractor shall remove all tools, equipment, and appurtenances caused by and used in execution of his work, leaving all work in a clean condition daily.

32.0 EXCAVATED SOILS (NOT IN CONTRACT)

33.0 SITE UTILITIES COORDINATION

33.1 The Contractor shall not interrupt any site utilities without prior written approval from the Owner. Any required utility interruption shall be requested in

Economic Development & Industrial Corporation

writing to the Official, minimize interruption duration and restore utilities to existing conditions. Any cost associated with interruption of utilities shall be paid for by the Contractor.

- 33.2 Special care should be given to the protection of existing utilities within the stairway during the construction. Any damage during the work shall be the sole responsibility of the Contractor.

34.0 MUNICIPAL POLICE SERVICES

- 34.1 Make all necessary arrangements with the Boston Municipal Police Department in advance of times when regular off-duty, or reserve police officers will be needed for traffic control or protection, due to the operations performed under this Contact. Pay police officers at the prevailing wage rates in the municipality for such services. All cost for Police Duty will be paid by the Contractor and is included and accounted for in the General Bid Price.

35.0 PROJECT SIGN

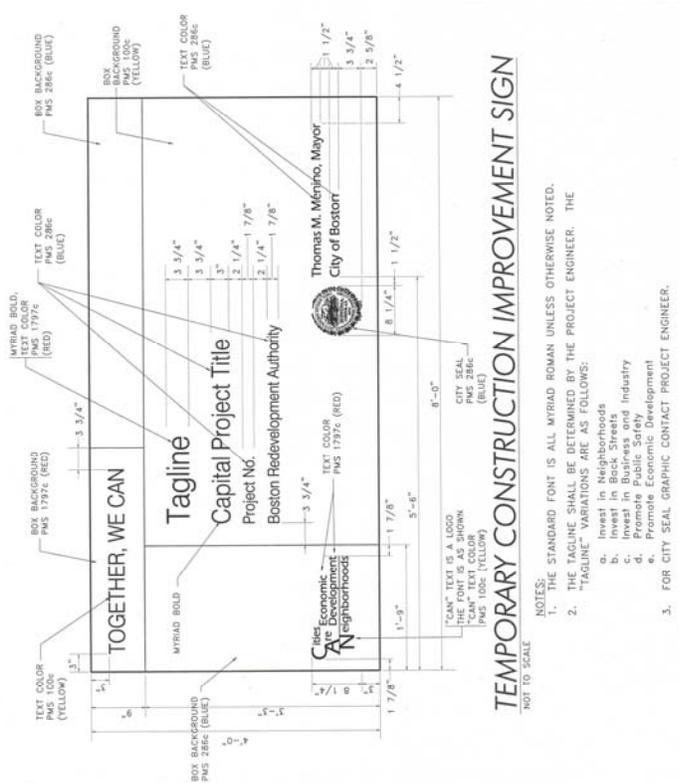
- 35.1 The Contractor shall furnish and install, at locations designated by the Authority, two (2) exterior signs in accordance with the sketches at the end of these Special Conditions and as follows:
1. Size: 4' high x 8' long
  2. Material: heavy -duty, non-porous, light-blocking, single-side vinyl material with a black color on the reverse
  3. Assembly: Reinforced sewn edges with grommets at 12" intervals
  4. Colors: As outlined on the "Temporary Construction Improvement Sign" at the end of these Special Conditions.
- 35.2 The Project Architect/Engineer of the Authority shall determine "Tagline" and "Capital Project Title" to be placed on the "Temporary Construction Improvement Sign"

Economic Development & Industrial Corporation

at the first Project Progress Meeting, if he has not received text prior to that time.

35.3 Cost for project sign shall be included in **Item #3 of the Schedule of Values - General Conditions.**

35.4 The "Temporary Construction Improvement Sign" shall be erected within ten days after the Notice to Proceed or the receipt of actual text, whichever occurs later. The sign shall be maintained in good condition by the Contractor for the duration of the project and removed only at the direction of the Authority.



36.0 SITE FACILITIES

36.1 Restroom facilities located at 12 Channel Street are available for use by the Contractor.

36.2 All utilities including but not limited to electricity, water, telephone, fax, etc. shall be supplied by and are the responsibility of the Contractor.

37.0 COMPENSATION FOR WORK OF THESE SPECIAL CONDITIONS

Economic Development & Industrial Corporation

35.5 All of the work of these Special Conditions is to be provided and paid for by the Contractor and compensation therefore unless specifically provided for in the Technical Specifications shall be included as part of his/her bid.

38.0 COMMENCEMENT AND COMPLETION

38.1 The Contractor shall commence work immediately upon receipt of the Notice to Proceed such that equipment consistent with the first efforts for site security, fencing, construction trailer, construction signs are at the site within ten (10) calendar days after the date of the Notice to Proceed, or as otherwise stipulated by the Authority. Construction equipment commensurate with the work in progress shall remain on the site to provide visible evidence of ensuing and ongoing activity from the date stipulated above until substantial completion of the project.

38.2 The work shall be performed expeditiously and shall be fully and acceptably completed as herein prescribed and within the calendar days stipulated in these of these Supplemental Conditions.

39.0 SUBSTANTIAL AND FINAL COMPLETION DATES

39.1 Substantial Completion shall be reached no later than 80 working days (16 weeks) from the Notice to Proceed.

39.2 Final Completion shall be reached no later than 90 working days (18 weeks) from the Notice to Proceed.

40.0 INSURANCE

40.1 The Contractor's attention is directed to Article 10, of the General Conditions, pertaining to the specific requirements for insurance.

40.2 For insurance purposes, the site of the work and/or the project site includes not only the limited physical work areas involved but also certain other areas and operations set up for utility, sanitary, electrical, water, pollution control, disposal and cleaning purposes; to furnish materials for the work including

Economic Development & Industrial Corporation

storage and stockpile areas and all routes between and among them.

40.3 The insurance limits specified under Article 10 of the General Conditions are changed as follows:

40.3.1 Contractor shall provide a comprehensive general liability policy including products/completed operations with a single limit provision for bodily injury and/or property damage, including theft or damage to stored materials, of a minimum of \$5,000,000 written on an occurrence basis. Include XCU coverage (explosion, collapse, underground). Completed operations coverage shall be provided for the actual contract period and as it may be extended plus one year.

40.3.2 Comprehensive Automobile Liability and Property Damage Insurance.

40.3.3 The Contractor shall provide comprehensive automobile liability insurance with a single limit provision, written on an occurrence basis, covering all owned vehicles, hired vehicles, or non-owned vehicles for all personal and property damages arising out of bodily injuries, death or destruction of property and subject to a limit of a minimum of not less than \$2,000,000 per occurrence for damages arising out of injury to or destruction of property with a MCS 90 endorsement to cover the transportation of hazardous materials.

40.3.4 As part of the Contractor's Liability Insurance, the Contractor shall provide Pollution Liability Insurance for claims involving hazardous materials, including asbestos, lead, PCB's and pollutants, with minimum insurance limits of \$5,000,000 each occurrence and in the aggregate.

40.3.5 The Authority shall be named as an additional insured on all policies of liability insurance.

40.3.6 If by the terms of this insurance a mandatory deductible is required, in the event of a paid

Economic Development & Industrial Corporation

claim, the Contractor shall be responsible for the deductible amount.

41.0 TRAFFIC MANAGEMENT CONTROL PLAN (NOT IN CONTRACT)

- 41.1 Traffic Management Control Plan shall be submitted to the Engineer after the issuance of the Notice to Proceed and prior to the commencement of activities leading up to demolition and associated procedures of this project.
- 41.2 The Contractor shall conduct the work at all times so that the abutters shall have access to their property.
- 41.3 The Contractor shall not isolate public or private property during this project.
- 41.4 The Contractor shall not prohibit the safe means of access to any public or private way.
- 41.5 Traffic Management Control Plan shall include the parking of employee vehicles in the Marine Industrial Park Central Parking Garage.
- 41.6 EDIC shall not be held responsible for any parking violations.
- 41.7 The Traffic Management Control Plan shall outline all site access points, rerouting of pedestrians, applicable signage, control points of Boston Municipal Police details, maximum limits of demolition and associated equipment, placement of contractor furnished Jersey Barriers and any and all procedures that affect vehicular and pedestrian traffic.
- 41.8 All deviations from approved traffic patterns associated with this project shall be submitted to the EDIC in writing forty-eight (48) hours in advance. Permission shall be granted only when written authorization is granted from the EDIC.

42.0 RESTRICTIONS AS TO USE OF GROUNDS

- 42.1 The Contractor's attention is specifically directed to the Traffic Management Control Plan portion of this contract. Under no circumstances are Contractor's

Economic Development & Industrial Corporation

construction vehicles permitted to be parked on any streets, parking lots or other property other than those areas designated under a BRA-approved plan.

43.0 CONSTRUCTION LINES AND GRADES (NOT IN CONTRACT)

43.1 If necessary, the Contractor can be given benchmarks and control points at locations convenient to the work from which he shall establish all lines and grades for layout and control of his work, subject to check and correction by the Engineer. The Contractor shall furnish all stakes and incidental materials for himself and the Engineer, and shall be responsible that the finished product meets the contract lines and grades.

44.0 OMITTED WORK ITEMS

44.1 The Authority reserve the right to delete any item or items from the work and to reduce the contract price by an amount determined in accordance with this Article. The amount of any portion of the work ordered omitted or deleted from the Contract shall be determined in accordance with the applicable provisions of Article 11, General Conditions.

45.0 PROJECT PROGRESS MEETINGS

43.1 Weekly Project Progress Meetings shall be held at the Authority's 22 Drydock Avenue Office, Boston, MA. The contractor's Project Manager shall attend these meetings. A time shall be determined for the meeting that is mutually agreeable to the Authority, the Engineer, and the Contractor.

46.0 PROJECT CLOSEOUT

46.1 Once the project has reached Substantial Completion, the Contractor shall complete all pertinent forms within the Standard Forms section for submission with the Final Payments.

46.2 The Final "working" Application and Certificate for Payment and the "retainage" Application and Certificate for Payment shall be submitted separately, although it can be done simultaneously.

Economic Development & Industrial Corporation

47.0 WARRANTY

47.1 The Contractor shall obtain from the manufacturer of all the materials and equipment when possible and provide to the owner, a manufacturer's warranty in a form acceptable to and for the benefit of the Owner warranting the equipment against defects in design, materials and workmanship for a period of one (1) year following final testing and acceptance. Any defect of the above nature discovered shall be made good without expense to the Owner.

48.0 STAIRWELL CLOSURE / SIGNAGE

48.1 The contractor will also coordinate his work with the EDIC to accommodate the tenants in the 12 Channel Street building. The contractor must allow employees and representatives of adjacent tenants through the site if access is required or as directed by ISD. Please note that the project limit is an emergency egress route and is therefore subject to the requirements of the State Building Code, the NFPA, etc, unless otherwise approved by the Building Inspector(s), BFD, and the City of Boston permit process to ensure compliance with applicable codes.

48.2 The Contractor is responsible for all public safety precautions related to periods of stairwell closure, including the approval, if necessary, of an evacuation and/or fire safety plan by BFD or ISD, notifications to tenants, warning and temporary signage at stairway, public spaces and **within tenant spaces** to appropriately redirect tenants away from the work and toward an available stairwell, and any and all requirements by ISD, BFD or the Authority to properly coordinate tenants to allow for a modified use of the stairwell.

48.3 As part of the work plan submitted for approval to the engineer, the contractor shall submit a plan for Interim Life Safety Measures (ILSM's) which outline the signage and notifications with locations so as to effectively redirect tenants should the stairwell be temporarily shut down during periods of work. This plan should be sufficient in nature to submit to BFD or ISD

Economic Development & Industrial Corporation

as part of the permit approval process and be stamped by the Contractor's engineer should it be required by BFD or ISD during the permitting process.

48.4 Contractor shall notify tenants at least 7 days in advance of any periods of stairway closing and modified access to the means of egress.

49.0 PARKING ON SITE

49.1 The parking of company or personal vehicles at the loading dock or in the alley shall be strictly prohibited. The loading dock and alleyway must be kept open at all times to allow for the loading and unloading of service vehicles to the tenants and businesses at 12 Channel Street. Any and all parking shall be located at the Central Parking Garage.

**END OF  
SPECIAL CONDITION**

**PART B**

**SPECIFICATIONS**

**SECTION 1A**

**Schedule of Values**

**Owner:** Economic Development and Industrial Corporation of Boston  
22 Drydock Avenue  
Boston, Massachusetts 02210

**Project:** Code Compliant Stairway Improvements  
12 Channel Street (in the Marine Industrial Park)  
Boston, Massachusetts 02210  
EDIC Project No. 1272C

**Contractor:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Item No.	Description of Work	Quantity	Unit	Unit Price	Scheduled Value	5% Retainage
1	Bond and Insurance					
2	Mobilization					
3	General Conditions					
4	Shop Drawings					
5	Demolition					
6	Masonry					
7	Windows					
8	* Painting					
9	Inspections and Punch					
10	As Built Drawings and O&M					
11	Metal Railings					
12	Doors					
13	Frames					
14	Hardware					
15	Signage					
16	Penetrations/Firestopping					
17	Glazing					

\*Provide pricing on a square foot basis.

SECTION 011000

GENERAL REQUIREMENTS

1.1	Related Documents	1.11	Submittals
1.2	Project Requirements	1.12	Warranties
1.3	Specification Information	1.13	Cutting and Patching
1.4	Definitions	1.14	Temporary Facilities and Utilities
1.5	Industry Standards	1.15	Products and Substitutions
1.6	Codes and Regulations	1.16	Delivery, Storage and Handling
1.7	Progress Schedule	1.17	Owner-Furnished (OFCl) Products
1.8	Schedule of Values	1.18	Labels
1.9	Payment Requests	1.19	Record Documents
1.10	Procedures and Controls	1.20	Project Close Out
		1.21	Final Cleaning and Repair

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. All of the Contract Documents apply to this Section. This Section applies to all Work performed under the Contract.

1.2 PROJECT REQUIREMENTS

- A. Project Identification: EDIC CODE COMPLIANT STAIRWAY IMPROVEMENTS in Boston, MA
- B. Project Summary for Temporary Utilities and Facilities:
  - 1. Utility Costs: The Owner will allow the use of existing utility systems and pay for cost of utility services consumed, including electricity, water and gas. Do not waste. The Contractor shall provide and pay for temporary heat prior to the complete enclosure of the building and availability of suitable permanent systems.
  - 2. Temporary Offices: A separate field office for the Architect and the Owner's Representative is not required.
  - 3. Toilet Facilities: The Contractor shall provide and maintain temporary toilets outside the building.
- C. Hazardous Material Testing: Perform testing on existing glazing compound for asbestos at each window location. Submit test reports to the Owner and Architect before proceeding with removal and applying new compound.
- D. Permits and Fees: Apply for, obtain, and pay for permits, fees, and utility company backcharges required to perform the work. Submit copies to Architect.
- E. Codes: Comply with applicable codes and regulations of authorities having jurisdiction. Submit copies of inspection reports, notices and similar communications to Architect.

- F. Dimensions: Verify dimensions indicated on drawings with field dimensions before fabrication or ordering of materials. Do not scale drawings.
- G. Existing Conditions: Notify Architect of existing conditions differing from those indicated on the drawings.
- H. Contractor's Conduct on Premises: The Contractor and their employees shall behave in a respectful, courteous and safe manner. Abusive, harassing, and lewd behavior is prohibited. Music playing is prohibited. Alcohol, tobacco and drug use is prohibited.

### 1.3 SPECIFICATION INFORMATION

- A. These specifications are a specialized form of technical writing edited from master specifications and contain deviations from traditional writing formats. Capitalization, underlining and bold print is only used to assist reader in finding information and no other meaning is implied.
- B. Except where specifically indicated otherwise, the subject of all imperative statements is the Contractor.
- C. Sections are generally numbered in conformance with Construction Specifications Institute Masterformat System. Numbering sequence is not consecutive. Refer to the table of contents for names and numbers of sections included in this Project.
- D. Pages are numbered separately for each section. Each section is noted with "End of Section" to indicate the last page of a section.

### 1.4 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

#### 1.5 INDUSTRY STANDARDS

- A. Referenced standards are part of the Contract Documents and have the same force and effect as if bound with these specifications.
- B. Except where specifically indicated otherwise, comply with the current standard in effect as of the date of the Owner/Contractor Agreement. Obtain copies of industry standards directly from publisher.
- C. The titles of industry standard organizations are commonly abbreviated; full titles may be found in Encyclopedia of Associations or consult Architect.

#### 1.6 CODES AND REGULATIONS

- A. Comply with all applicable codes, ordinances, regulations and requirements of authorities having jurisdiction.
- B. Submit copies of all permits, licenses, certifications, inspection reports, releases, notices, judgments, and communications from authorities having jurisdiction to the Architect.

#### 1.7 PROGRESS SCHEDULE

- A. Provide comprehensive bar chart schedule showing all major and critical minor portions of the work, sequence of work and duration of each activity. Update and reissue regularly, but not less than monthly.

#### 1.8 SCHEDULE OF VALUES

- A. Prepare Schedule of Values to coordinate with application for payment breakdown. Submit at least 10 days before first payment application. Update and reissue regularly, but not less than monthly.

#### 1.9 PAYMENT REQUESTS

- A. Provide three copies of each request on completely filled out copies of AIA G702 and continuation sheet G703. Substantiate requests with complete documentation; include change orders to date. Provide partial lien waivers for work in progress and full lien waivers for completed work.
- B. Record Drawing Certification: Certify as a part of each application for payment that the project record documents are current at the time of application is submitted. The Contractor shall

require such drawings to be current as a condition of approving any payment to the trade Contractor and Subcontractor.

C. Before first payment application, provide the following:

1. List of subcontractors, suppliers and fabricators.
2. Schedule of values.
3. Progress schedule.
4. Submittal schedule keyed to project schedule.
5. List of Contractor's key project personnel.
6. Copies of permits and other communications from authorities.
7. Contractor's certificate of insurance.
8. Performance and payment bonds if required.
9. Unit price schedule.

D. Before final payment application, provide and complete the following:

1. Complete closeout requirements.
2. Complete punch list items.
3. Settle all claims.
4. Transmit record documents to Architect.
5. Prove that all taxes, fees and similar obligations have been paid.
6. Remove temporary facilities and surplus materials.
7. Change lock cylinders or cores.
8. Clean the work.
9. Submit consent of surety, if any, for final payment.

#### 1.10 PROCEDURES AND CONTROLS

A. Project Meetings: Arrange for and attend meetings with the Architect and such other persons as the Architect requests to have present. The Contractor shall be represented by a principal, project manager, general superintendent or other authorized main office representative, as well as by the Contractor's field superintendent. An authorized representative of any subcontractor or sub-subcontractor shall attend such meetings if the representative's presence is requested by the Architect. Such representatives shall be empowered to make binding commitments on all matters to be discussed at such meetings, including costs, payments, change orders, time schedules and manpower. Any notices required under the Contract may be served on such representatives. Written reports of meeting minutes shall be prepared by the Contractor and distributed by the Contractor to attendees, the Architect, and Owner within three business days.

1. Pre-Construction Conference: Attendance by Architect, Contractor, major subcontractors. Agenda shall include: Quality of workmanship, coordination, interpretations, job schedule, submittals, approvals, requisition procedures, testing, protection of construction, and construction waste management.
2. Interior Finishes Meeting: Attendance by Architect, Contractor, major subcontractors. Agenda shall include as applicable: Quality of workmanship, environmental conditions for application of finishes, drywall details, millwork details, condition of surfaces to receive finishes, tile work, painting work, samples and test areas and approvals, coordination with mechanical and electrical interfaces and penetrations.
3. Progress Meetings: Hold regularly before preparation of payment requests and additional meetings as requested by the Architect. Attendance by Architect, Contractor, and others

- as determined by Contractor. Agenda shall include work in progress and payment requests.
4. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction, as specified. Preinstallation Conferences may be part of Progress Meeting agenda. Attendance by Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow. Agenda shall include a review of progress of other construction activities and preparations for the particular activity under consideration.
- B. Emergency Addresses: Furnish the Owner and Architect, in writing, the names addresses and telephone numbers of individuals to be contacted in the event of an out-of-hours emergency at the building site. Post a similar list readily visible from the outside of the field office or a location acceptable to the Architect.
  - C. Layout: Layout work and be responsible for all lines, elevations, and measurements of the building, grading, utilities and other work executed under the contract.
  - D. Field Measurements: Verify measurements at the building prior to ordering materials or commencing work. No extra charge or compensation will be allowed because of differences between actual dimensions and measurements indicated on the Drawings. Differences which may be found shall be submitted to the Architect for decision before proceeding with the work.
  - E. Field Measurements for Fixed Equipment: Dimensions for fixed equipment to be supplied under this Contract or separate contracts shall be determined by field measurements taken jointly by the Contractor and the equipment supplier involved. A record of the field measurements shall be kept until time of substantial completion of the project, or until the equipment has been fully installed and accepted by the Owner, whichever is later. Responsibility for fixed equipment fabricated accurately to field measurements for proper fit and operation shall be that of the Contractor. Contractor shall pay all costs involved in correcting any misfitting fixed equipment as fabricated.
  - F. Project Limit Line: The boundaries of the site do not limit the responsibility of the Contractor to perform the work in its entirety. Make utility connections as indicated.
  - G. Matching: Where matching is indicated, the Architect shall be the sole and final judge of what is an acceptable match. Mockups and sample submissions are required.
  - H. Observation: Notify the Architect and authorities having jurisdiction at least thirty-six hours in advance of concealing any work.
  - I. Utilities: Prior to interrupting utilities, services or facilities, notify the utility owner and the Owner and obtain their written approval a minimum 48 hours in advance.
  - J. Furnishings, Fixtures, and Equipment: Cooperate and permit the Owner to install their furnishings and equipment during the progress of the work. Owner's installation of furnishings or equipment does not signify Owner's acceptance of any portion of the work.
  - K. Clean-Up: Frequently clean-up all waste, remove from site regularly, and legally dispose of off-site.

- L. Installer's Acceptance of Conditions: All installers shall inspect substrates and conditions under which work is to be executed and shall report in writing to the Contractor all conditions detrimental to the proper execution and completion of the work. Do not proceed with work until unsatisfactory conditions are corrected. Beginning work means installer accepts previous work and conditions.
- M. Coordination: The Contractor shall be fully responsible for coordinating all trades, coordinating construction sequences and schedules, and coordinating the actual installed location and interface of all work.
1. Prior to beginning mechanical, electrical and fire protection work, the Contractor shall prepare coordination drawings showing the exact alignment, physical location and configuration of the mechanical, electrical and fire protection installations and demonstrating to the Contractor's satisfaction that the installations will clear all obstructions, permit proper clearances for the Work of other trades, and present an orderly appearance where exposed. The Contractor shall be solely liable and responsible for any costs and delays resulting from the Contractor's failure to prepare such coordination drawings or from the negligent preparation of such coordination drawings.
  2. Exact locations and groupings of mechanical, electrical and fire protection fixtures, switches, heads and outlets shall be obtained from the Architect before the Work is roughed in. Work installed without such information from the Architect shall be relocated at the Contractor's expense if the Architect so requests.
- N. Request For Interpretation (RFIs):
1. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
    - a. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
  2. Content of the RFI: Include a detailed, legible description of item needing interpretation.
  3. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow three working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
  4. The following RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.
    - c. Requests for coordination information already indicated in the Contract Documents.
    - d. Requests for adjustments in the Contract Time or the Contract Sum.
    - e. Requests for interpretation of Architect's actions on submittals.
    - f. Incomplete RFIs or RFIs with numerous errors.
- O. Existing Articles of Unusual Value: If during demolition, excavation, or disposal work articles of unusual value or of historical or archaeological significance are encountered, the ownership of such articles is retained by the Owner, and information regarding their discovery shall be immediately furnished to the Architect. If the nature of the article is such that work cannot proceed without danger of damage, work in the area shall be immediately discontinued until the Architect has determined the proper procedure to be followed. Delays in time thereby shall be a

condition for which the time of the Contract may be extended. Costs incurred after discovery in the salvaging of such articles shall be borne by the Owner.

#### 1.11 SUBMITTALS

- A. Required Submittals: Submit shop drawings, product data, initial selection samples, verification samples, calculations, coordination drawings, schedules, and all other submittals as specified in individual specification sections.
- B. Submittal Schedule: Within 30 days after award of contract and before first application for payment, prepare list of submittals in chronological sequence showing all submittals and proposed date first due at Architect's office and proposed date due to be returned to Contractor. Note relevant specification section number.
- C. Contractor's Preparation of Submittals: Modify and customize all submittals to show interface with adjacent work and attachment to building. Identify each submittal with name of project, date, Contractor's name, subcontractor's name, manufacturer's name, submittal name, relevant specification section numbers, and Submittal Schedule reference number. Stamp and sign each submittal to show the Contractor's review and approval of each submittal before delivery to Architect's office; unstamped and unsigned submittals will be returned without action by the Architect. Leave 4" x 6" open space for Architect's "action" stamp.
  - 1. Electronic Submittals: Provide a copy of all submittals in electronic format to the Architect. Architect will return a file of reviewed submittal in electronic format to the Contractor for distribution to subcontractors, suppliers, fabricators, governing authorities and others as necessary for proper performance of the Work. Unless otherwise amenable to the Architect, additional hard copies of submittals will not be reviewed by the Architect (or Consultant) and will not be returned to the Contractor.
  - 2. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
  - 3. Name file with submittal number or other unique identifier, including revision identifier.
  - 4. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect and Construction Manager.
  - 5. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Architect.
- D. Product Data: Provide manufacturer's preprinted literature including, without limitation, manufacturer's standard printed description of product, materials and construction, recommendations for application and use, certification of compliance with standards, instructions for installation, and special coordination requirements. Collect data into one submittal for each unit of work or system; mark each copy to show which choices and options are applicable to project.
  - 1. Installer Copy: Verify that the Installer has a current copy of the relevant product data, including installation instructions, before permitting installation to begin.
- E. Shop Drawings: Provide accurately prepared, large scale and detailed shop drawings prepared specifically for this project. Show adjacent conditions and related work. Show accurate field dimensions and clearly note field conditions. Identify materials and products in the work shown. Note special coordination required.

1. After Architect's action, follow specified distribution procedure.
- F. Samples: Provide units identical with final materials and products to be installed in the work. Where indicated, prepare samples to match Architect's sample. Label each sample with description, source, generic name or manufacturer's name and model number. Architect will review samples for confirmation of visual design intent, color, pattern, texture and type only; Architect will not test samples for compliance with other Contract requirements which shall remain the exclusive responsibility of the Contractor.
1. Initial Selection Samples Submittal Quantities: For initial selection purposes, submit 1 set of samples showing the complete range of colors and finishes available.
  2. Verification Samples Submittal Quantities: For verification of an initial selection, submit 3 sets of samples; one set will be returned to Contractor to be maintained at project site for quality control comparisons.
- G. Timing of Submittals: Submit submittals in a timely fashion to allow at least 10 business days for each office's review and handling. This means that submittals which have to be reviewed by the Architect and one of their consultants require at least 20 business days for review and handling. Add ten business days for each additional consultant who must review a submission.
- H. Architect's Action on Submittals: Architect will review submittals, stamp with "action stamp", mark action, and return to Contractor. Architect will review submittals only for conformance with the design concept of the project. The Contractor is responsible for confirming compliance with other Contract requirements, including without limitation, performance requirements, field dimensions, fabrication methods, means, methods, techniques, sequences and procedures of construction, coordination with other work. The Architect's review and approval of submittals shall be held to the limitations stated in the Owner/Architect Agreement and the Conditions of the Contract. In no case shall approval or acceptance by the Architect be interpreted as a release of Contractor of their responsibilities to fulfill all of the requirements of the Contract Documents.
1. Required Resubmittal: Unless submittal is noted "reviewed" or "reviewed except as noted, resubmission not required," make corrections or changes to original and resubmit to Architect.
  2. Distribution: When submittal is noted "reviewed" or "reviewed as noted, resubmittal not required," make prints or copies and distribute to Owner, Subcontractors involved, and to all other parties requiring information from the submittal for performance or coordination of related work.
- 1.12 WARRANTIES
- A. Warranties Required: Refer to individual trade sections for specific product warranty requirements.
  - B. Procurement: Where a warranty is required, do not purchase or subcontract for materials or work until it has been determined that parties required to countersign warranties are willing to do so.
  - C. Warranty Forms: Submit written warranty to Owner through Architect for approval prior to execution. Furnish two copies of executed warranty to Owner for their records; furnish two additional conformed copies where required for maintenance manual.

- D. Work Covered: Contractor shall remove and replace other work of project which has been damaged as a result of failure of warranted work or equipment, or which must be removed and replaced to provide access to work under warranty. Unless otherwise specified, warranty shall cover full cost of replacement or repair, and shall not be pro-rated on basis of useful service life.
- E. Warranty Extensions: Work repaired or replaced under warranty shall be warranted until the original warranty expiration date or for ninety days whichever is later in time.
- F. Warranty Effective Starting Date: Guarantee period for all work, material and equipment shall begin on the date of substantial completion, not when subcontractor has completed their work nor when equipment is turned on. In addition to the one year guarantees for the entire work covered by these Contract Documents, refer to the various sections of the specifications for extended guarantee or maintenance requirements for various material and equipment.

#### 1.13 CUTTING AND PATCHING

- A. Limitations: Do not cut and patch any work in a manner that would result in a failure of the work to perform as intended, decreased energy performance, increased maintenance, decreased operational life, or decreased safety.
  - 1. Structural Work: Do not cut structural work or bearing walls without written approval from Architect. Where cutting and patching of structural work is necessary and approved by Architect, perform work in a manner which will not diminish structural capacity nor increase deflection of member. Provide temporary shoring and bracing as necessary. Ensure the safety of people and property at all times.
- B. Cutting and Patching Materials: Use materials identical to materials to be cut and patched. If identical materials are not available or cannot be used, use materials that match existing materials to the greatest extent possible. Provide finished work that will result in equal to or better than existing performance characteristics.
- C. Inspection: Before cutting and patching, examine surfaces and conditions under which work is to be performed and correct unsafe and unsatisfactory conditions prior to proceeding.
- D. Protection: Protect adjacent work from damage. Protect the work from adverse conditions.
- E. Cutting: Cut work using methods least likely to damage adjoining work. Use tools designed for sawing or grinding, not hammering or chopping. Use saws or drills to ensure neat, accurately formed holes to sizes required with minimum disturbance to adjacent work. Temporarily cover openings; maintain weathertightness and safety.
  - 1. Utilities: Locate utilities before cutting. Provide temporary utilities as needed. Cap, valve, or plug and seal ends of abandoned utilities to prevent entrance of moisture or other foreign matter.
- F. Patching: Patch with seams and joints which are durable and not visible. Comply with specified tolerances for similar new work; create true even planes with uniform continuous appearance. Restore finishes of patched areas and, if necessary, extend finish restoration onto adjoining unpatched area to eliminate evidence of patching and refinishing. Repaint entire assemblies, not just patched area. Remove and replace work which has been cut and patched in a visually unsatisfactory manner as determined by the Architect.

- G. Qualifications: Retain experienced and specialized firms, original installers if possible, to perform cutting and patching. Workmen shall be skilled in type of cutting and patching required.

#### 1.14 TEMPORARY FACILITIES AND UTILITIES

- A. Scope of Temporary Work: This article is not intended to limit the scope of temporary work required under the Contract. Provide all temporary facilities and utilities needed.
- B. Permits and Fees: Obtain and pay for all permits, fees and charges related to temporary work.
- C. Codes and Authorities Having Jurisdiction for Temporary Facilities and Utilities: Comply with all requirements of authorities having jurisdiction, codes, utility companies, OSHA, and industry standards including, but not limited to the following:
  - 1. NFPA Code 241, Building Construction and Demolition Operations.
  - 2. ANSI-A10 Series, Safety Requirements for Construction and Demolition.
  - 3. NECA National Joint Guideline NJG-6, Temporary Job Utilities and Services.
  - 4. Electrical Service: NEMA, NECA, and UL.
- D. Field Offices: Provide Contractor's field offices as needed. Keep current copies of all Contract Documents and project paperwork neatly on file at jobsite. Permit Architect's unrestricted use of Contractor's field office facilities including copiers, telephones, plan tables, and other equipment. Furnish, maintain, and pay for light, power, phone, fax, and other field office services.
- E. Shops and Sheds: At Contractor's option, provide shops and sheds for Contractor's use as needed. Locate shops and sheds where acceptable to Owner and authorities having jurisdiction. Prior to completion of construction, temporary storage facilities and surplus stored materials shall be removed from the site.
- F. Temporary Heat: Provide temporary heat as needed to protect the work and create a suitable work environment. Provide temporary heat to protect the exterior construction against injury or damage resulting from cold temperature and dampness, to heat materials, and to maintain the minimum temperatures specified herein and in individual specification sections. Protect building from soot, smoke and fire damage. Do not use heaters which would interfere with curing of mortar and grout or damage any materials.
  - 1. Heaters for temporary heat shall be approved temporary steam generators or forced warm air heaters located outside the building or vented to the outside, or other safety type UL approved heating devices acceptable to the Architect.
  - 2. Oil burning salamander type heaters will not be permitted. Non-vented, open flame heaters will not be permitted inside the building once the building is closed-in.
  - 3. Propane type-heaters will not be permitted within the area of the building or near stockpiles of combustible materials.
  - 4. Permanent building equipment shall not be used without written permission from the Owner. If the equipment is used for temporary heating or cooling, it shall be adequately maintained per manufacturer's instructions and protected with filters, strainers, controls, reliefs, and similar items. Prior to turnover to Owner, the equipment shall be in a clean, like new condition. The guarantee period shall not start until the equipment is turned over to the Owner for their use. Do not invalidate existing warranty by any action or failure to

act. Clean and change air filters frequently to prevent construction dust and debris from contaminating system.

- G. Pumping and Drainage: Protect excavations, trenches, buildings and materials from rain water, ground water, backup or leakage of sewers, drains and other piping, and from water of any other origin. Promptly remove any accumulation of water. Provide and operate all pumps, piping and other equipment necessary for pumping, drainage and protection from water.
- H. Equipment and Tools: Provide all equipment including, but not limited to, hoists, lifts, scaffolding, machines, tools and the like, as needed for execution of the work. Provide safe access to all parts of the work.
- I. Temporary Enclosures: Provide temporary enclosures to maintain proper temperatures and to prevent weather damage. Always maintain legal means of egress.
- J. Snow and Ice: Remove all snow and ice which interferes with work or safety.
- K. Streets, Walks and Grounds: Maintain public and private roads and walks clear of debris caused by construction operations. Repair all damage caused to streets, drives, curbs, sidewalks, fences, poles and similar items where disturbed or damaged by building construction and leave them in as good condition after completion of the work as before operations started.
- L. Protection: Protect nearby property and the public from construction activities. Provide and maintain barricades, warning signs and lights, railings, walkways and similar items. Immediately repair damaged property to its condition before being damaged.
- M. Public Services: Provide temporary public services such as, street lighting, night lighting, sidewalks, covered passages, signs, signals and the like, as requested by authorities having jurisdiction.
- N. Construction Fencing: Provide construction fencing and barriers as applicable to the project and as required by code to protect personnel, the public, and to control access.
- O. Security: Secure site against unauthorized entry at all times. Provide secure, locked temporary enclosures. Protect the work at all times. Provide watchman service, if necessary, to protect the work.
- P. Signs: Erect project identification signs in compliance with details to be provided by Architect. Signs shall be minimum 4' x 8' exterior grade plywood and shall contain the names of the project, Owner, Architect, major Consultants, Contractor, and major financing institution. Except for safety and warning signs, no other signs are permitted. Location as acceptable to the Architect.
- Q. Fire Prevention: Take every precaution to prevent fire. Provide and maintain in good operating condition suitable and adequate fire protection equipment and services, and comply with recommendations regarding fire protection made by the representative of the fire insurance company carrying insurance on the Work or by the local fire chief or fire marshal. The area within the site limits shall be kept orderly and clean, and all combustible rubbish shall be promptly removed from the site.

- R. Egress: Maintain safe and legal means of egress at all times. At all times, provide at least two separate means of egress.
  
- S. Mold Control and Remediation During Construction: The Contractor shall protect construction materials and building systems from moisture damage and from conditions which promote mold growth during and after construction. The Contractor shall be responsible for mold remediation and replacement of materials which cannot be successfully remediated in accordance with the following requirements:
  - 1. Materials which become wet prior to installation shall be cleaned, treated and dried in accordance with EPA Guidelines.
  - 2. Materials which exhibit mold growth prior to installation shall not be installed and shall be removed from the site.
  - 3. Materials which exhibit mold growth after installation shall be remediated in accordance with EPA Guidelines for Remediating Building Materials with Mold Growth Caused by Clean Water. The Contractor shall engage and pay for a qualified industrial hygienist acceptable to the Owner to determine the cause of the mold growth, and to certify in writing that materials have been successfully remediated. In the event that the industrial hygienist recommends methods of remediation in addition to those in the Guidelines, the Contractor shall also be responsible for the additional remediation. Materials which can not be successfully remediated shall be removed and replaced with new materials at no additional expense to the Owner.
  - 4. Prior to the start of construction, the Contractor shall submit the name of the person in the Contractor's organization responsible for ensuring compliance with these requirements for mold control and remediation.

#### 1.15 PRODUCTS AND SUBSTITUTIONS

- A. Specified Products: In all cases in which a manufacturer's name, trade name or other proprietary designation is used in connection with materials or articles to be furnished under this Contract, whether or not the phrase "or equal" is used after such name, the Contractor shall provide the product of the named manufacturers without substitution, unless a written request for a substitution has been submitted by the Contractor and approved in writing by the Architect as follows.
  
- B. Deviations from Detailed Requirements: If the Contractor proposes to use material which, while suitable for the intended use, deviates in any way from the detailed requirements of the Contract Documents, the Contractor shall inform the Architect in writing of the nature of such deviations at the time the materials is submitted for approval, and shall request written approval of the deviation from the requirements of the Contract Documents.
  
- C. Approval of Substitutions: In requesting approval of deviations or substitutions, the Contractor shall provide evidence, including, but not limited to manufacturer's data, leading to a reasonable certainty that the proposed substitution or deviation will provide a quality of result at least equal to that attainable if the detailed requirements of the Contract Documents were strictly follows. If, in the opinion of the Architect, the evidence presented by the Contractor does not provide a sufficient basis for such reasonable certainty, the Architect may reject such substitution or deviation without further investigation.
  
- D. Intent of Contract Documents: The Contract Documents are intended to produce a building of consistent character and quality of design. All components of the building including visible

items of mechanical and electrical equipment have been selected to have a coordinated design in relation to the overall appearance of the building. The Architect shall judge the design and appearance of proposed substitutes on the basis of the suitability in relation to the overall design of the Project, as well as for their intrinsic merits. The Architect will not approve as equal to materials specified proposed substitutes which in the Architect's opinion, would be out of character, obtrusive, or otherwise inconsistent with the character or quality of design of the Project. In order to permit coordinated design of color and finishes the Contractor shall furnish the substituted material in any color, finish texture, or pattern which would have been available from the manufacturer originally specified, at no additional cost to the owner.

- E. Additional Costs or Impact: Any additional cost, or any loss or damage arising from the substitution of any material or any method for those originally specified shall be borne by the contractor, notwithstanding approval or acceptance of such substitution by the Owner or the Architect, unless such substitution was made at the written request or direction of the Owner and the Architect. Any decrease in the cost of the substitution shall be returned to the Owner.
- F. Manufacturers: To the greatest degree possible, provide primary materials and products from one manufacturer for each type or kind. Provide secondary materials as recommended by manufacturers of primary materials.
- G. Substitution Requests: Refer to Section 016200 - SUBSTITUTION REQUEST FORM. Submit 3 copies. Identify product to be replaced by substitute by reference to specification sections and drawing numbers. Provide Contractor's certification and evidence to prove compliance with Contract Document requirements as acceptable to Architect.
- H. Substitution Conditions: Substitution requests will be returned without action unless one of the following conditions is satisfied. The Contractor shall state which of the following conditions applies to the requested substitution:
  - 1. Request is due to an "or equal" clause.
  - 2. Specified material or product cannot be coordinated with other work.
  - 3. Specified material or product is not acceptable to authorities having jurisdiction.
  - 4. Substantial advantage is offered Owner in terms of cost, time, or other valuable consideration.
  - 5. Specified material or product is not available.
- I. Invalid Substitutions: Contractor's submittal and Architect's acceptance of shop drawings, samples, product data or other submittal is not a valid request for, nor an approval of a substitution unless the Contractor presents the information when first submitted as a Request for Substitution.
- J. Compatibility of Materials Used in the Work:
  - 1. Ensure complete compatibility between materials.
  - 2. Compatibility shall include adhesion, erosion, solubility, differential thermal response, and galvanic action.
  - 3. Provide evidence of compatibility.
  - 4. Provide custom testing where evidence is not available.
  - 5. Where materials are not compatible, provide necessary isolation or transition materials and provide details of same.

6. Correct defects resulting from incompatibility including de-construction and re-construction of assemblies – whether materials are part of a submittal and substitution process or not.
7. Proposed substitutions may be rejected where compatibility information is not provided; or where compatibility is not adequately addressed, according to the Architect's judgment; or where incompatible materials would negatively impact the project's success.

1.16 DELIVERY, STORAGE AND HANDLING

- A. Manufacturer's Instructions: Strictly comply with manufacturer's instructions and recommendations and prevent damage, deterioration and loss, including theft. Minimize long-term storage at the site. Maintain environmental conditions, temperature, ventilation, and humidity within range permitted by manufacturers of materials and products used.

1.17 OWNER-FURNISHED CONTRACTOR-INSTALLED (OFICI) PRODUCTS

- A. Not applicable.

1.18 LABELS

- A. Labels, Trademarks, & Tradenames: Locate required labels on inconspicuous surfaces. Do not provide labels, nameplates, or trademarks which are not required. Provide permanent data plate on each item of equipment stating manufacturer, model, serial number, capacity, ratings and all other essential data.

1.19 RECORD DOCUMENTS

- A. General: Keep record documents neatly and accurately. Record information as the work progresses and deliver to Architect at time of final acceptance. Include in record documents all field changes made, all relevant dimensions, and all relevant details of the work. Keep record documents up to date with all field orders and change orders clearly indicated.
- B. Drawings: Keep four separate sets of blackline prints at the site, one set each for mechanical, electrical, plumbing, and architectural/structural disciplines. Neatly and accurately note all deviations from the Contract Documents and the exact actual location of the work as installed. Marked-up and colored prints will be used as a guide to determine the progress of the work installed. Requisitions for payment will not be approved until the record documents are accurate and up-to-date.
  1. Work Outside Building: Record data outside of building to an accuracy of plus or minus 1 inch and determine and record the invert elevation of all drain lines.
  2. At completion of the work, submit one complete set of marked-up prints for review. After acceptance, these marked-up prints shall be used in the preparation of the record drawings.
  3. Architect shall furnish Contractor with AutoCAD files for originals of the Contract Drawings. Make modifications to these files as shown on the marked-up prints. Remove superseded data to show the completed installation.
  4. Deliver the completed AutoCAD record drawings, in the same version as Contract Drawings, properly titled and dated to the Architect. Indicate preparer of record drawings. These record drawings shall become the property of the Owner.

- C. Specifications: Maintain one clean copy of complete specifications [including addenda, modifications, and bulletins with changes, substitutions, and selected options clearly noted. Circle or otherwise clearly indicate which manufacturer and products are actually used.
- D. Operating and Maintenance Manuals: Manuals shall be submitted which contain the following:
  - 1. Description of the system provided.
  - 2. Handling, storage, and installation instructions.
  - 3. Detailed description of the function of each principal component of the systems or equipment.
  - 4. Operating procedures, including prestartup, startup, normal operation, emergency shutdown, normal shutdown and troubleshooting.
  - 5. Maintenance procedures including lubrication requirements, intervals between lubrication, preventative and repair procedures, and complete spare parts list with cross reference to original equipment manufacturer's part numbers.
  - 6. Control and alarm features including schematic of control systems, control loop electric ladder diagrams, controller operating set points, settings for alarms and shutdown systems, pump curves and fan curves.
  - 7. Safety and environmental considerations.
- E. Copies of Operating and Maintenance Manuals: Three copies of the manuals shall be provided within sufficient time to allow for training of Owner's personnel. Submit one copy of the manuals to the Architect for review no later than 90 calendar days prior to substantial completion, or building turn over, whichever comes first. Submit the remaining five copies within 15 days after first review set is returned to contractor. Progress payment may be withheld if this requirement is not met.
- F. Additional Requirements for Operating and Maintenance Manuals: The requirements for manuals applies to each packaged and field-fabricated operating system. The manuals shall be provided in three-ring side binders with durable plastic covers. The manuals shall contain a detailed table of contents and have tab dividers for major sections and special equipment.
- G. Framed Data: Provide charts and lists of all valves, circuits, switches, controls and equipment. Install on walls under glass at locations directed by Architect.

#### 1.20 PROJECT CLOSE OUT

- A. Complete the following prior to Substantial Completion:
  - 1. Provide Contractor's Punch List of incomplete items stating reason for incompleteness and value of incompleteness.
  - 2. Advise Owner of insurance change over requirements.
  - 3. Submit all warranties, maintenance contracts, final certificates and similar documents.
  - 4. Obtain Certificate of Occupancy and similar releases which permit the Owner's full and unrestricted use of the areas claimed "Substantially Complete".
  - 5. Submit record documents.
  - 6. Deliver maintenance stocks of materials where specified.
  - 7. Make final change over of lock cylinders or cores and advise Owner of change of security responsibility.
  - 8. Complete startup of all systems and instruct Owner's personnel in proper operation and routine maintenance of systems and equipment.

9. Complete clean up and restoration of damaged finishes.
  10. Remove all temporary facilities and utilities that are no longer needed.
  11. Request Architect's inspection for Substantial Completion.
- B. Architect will either issue a Certificate of Substantial Completion or notify Contractor of work which must be performed prior to issue of certificate.
- C. Complete the following prior to Final Acceptance and payment:
1. Obtain Certificate of Substantial Completion.
  2. Submit final application for payment, showing final accounting of changes in the work.
  3. Provide final releases and lien waivers not previously submitted.
  4. Submit certified copy of final punch list stating that Contractor has completed or corrected each item.
  5. Submit final meter readings, record of stored fuel and similar information.
  6. Submit Consent of Surety for final payment.
  7. Submit evidence of Contractor's continuing insurance coverage (if required by Contract Documents).

#### 1.21 FINAL CLEANING AND REPAIR

- A. Clean Up: Immediately prior to the Architect's inspection for Substantial Completion, the Contractor shall completely clean the premises and clean and prepare the completed work in order for it to be used for its intended purpose in accordance with the Contract Documents. Such work shall include, but not be limited to the following:
1. Concrete and ceramic surfaces shall be cleaned and washed.
  2. Resilient coverings shall be cleaned, waxed and buffed as applicable.
  3. Woodwork shall be dusted and cleaned.
  4. Sash, fixtures and equipment shall be thoroughly cleaned.
  5. Stains, spots, dust, marks and smears shall be removed from all surfaces.
  6. Hardware and metal surfaces shall be cleaned and polished.
  7. Glass and plastic surfaces shall be thoroughly cleaned by professional window cleaners.
  8. Damaged, broken or scratched glass or plastic shall be replaced by the Contractor at the Contractor's expense.
  9. Vacuum carpeted and soft surfaces with high efficiency particulate arrestor (HEPA) vacuum.
  10. Use low-emitting, environmentally friendly cleaning agents and procedures.
- B. Repairs: Repair and touch-up all damaged and deteriorated products and surfaces.

PART 2 - PRODUCTS [Not Used]

PART 3 - EXECUTION [Not Used]

END OF SECTION

SECTION 012200

UNIT PRICES

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 SUMMARY

- A. This Section covers those items for which indefinite quantities can be expected and, therefore, pre-agreed prices per unit of work are established as means to determine adjustments to the Contract Price after actual quantities are determined.

1.3 QUANTITIES AND COST ADJUSTMENTS

- A. Refer to individual Specification Sections for methods of measurement and payment for unit prices. As soon as the work involved in each unit cost item has been completed, submit documentation to establish the actual quantities provided. Submit to the Architect for review and issuance of Change Order.
- B. Change Order amount for each unit cost item will be based on actual quantities multiplied by the unit price. This unit price includes all costs as described below.

1.4 UNIT PRICES

- A. Should certain additional work be required, or should the quantities of certain classes of work be increased or decreased from those required by the Contract Documents, by authorization of the Owner, the below unit prices shall, at the option of the Owner, be the basis of payment to the Contractor or credit to the Owner, for such increase or decrease in the work.
- B. The Unit Prices shall represent the exact net amount per unit to be paid the Contractor (in the case of additions or increases) or to be refunded the Owner (in the case of decreases). No additional adjustment will be allowed for materials, installation, substrate preparation, overhead, profit, insurance, general conditions, or other direct or indirect expenses of the Contractor or Subcontractors.

PART 2 - PRODUCTS [Not Used]

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

- A. Painting: Bid shall include painting for wall, floor, and ceiling surfaces in stairs. Provide unit price for additional painting.
  - 1. Unit of measure: Square Feet.
  - 2. Unit price proposed by bidder: \$\_\_\_\_\_
  
- B. Glass Replacement: Bid shall include replacing glass units where indicated. Provide unit price to replace existing glass units that are not indicated.
  - 1. Unit of measure: Each.
  - 2. Unit price proposed by bidder: \$\_\_\_\_\_
  
- C. Glazing Compound Replacement: Bid shall include replacement of glazing compounds in quantities and locations where indicated. Provide unit price to replace glazing compounds that are not indicated.
  - 1. Unit of measure: Linear Feet.
  - 2. Unit price proposed by bidder: \$\_\_\_\_\_
  
- D. Concrete Patching: Bid shall include concrete patching and repairs in quantities and locations where indicated. Provide unit price to patch and repair concrete surfaces that are not indicated.
  - 1. Unit of measure: Cubic Feet.
  - 2. Unit price proposed by bidder: \$\_\_\_\_\_

END OF SECTION

SECTION 016200

SUBSTITUTION REQUEST FORM

No substitutions will be considered  
without this completed substitution request form and supporting documentation.

Substitutions made without completion of this form  
will be considered defective work as stated in AIA A201.

Date: \_\_\_\_\_ Number: \_\_\_\_\_

Project: EDIC CODE COMPLIANT STAIRWAY IMPROVEMENTS

To: Rizvi Architects, Inc.

Re: Request for Substitution

The Contractor proposes the following substitution in accordance with the requirements of the Contract Documents:

Scope of Substitution \_\_\_\_\_  
\_\_\_\_\_

Specification Reference \_\_\_\_\_  
\_\_\_\_\_

Drawing Reference \_\_\_\_\_  
\_\_\_\_\_

Reason for Proposed Substitution \_\_\_\_\_  
\_\_\_\_\_

Benefit to Owner \_\_\_\_\_  
\_\_\_\_\_

Impact on Project Cost \_\_\_\_\_  
\_\_\_\_\_

Impact on Project Schedule \_\_\_\_\_  
\_\_\_\_\_

Impact on \_\_\_\_\_

Guarantees and  
Warranties

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Coordination and  
Compatibility Required  
with Adjacent Materials  
and System

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List Deviations  
From Specified  
Requirements

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Attachments: Attach supporting documentation sufficient for Architect to evaluate substitution.  
Substitution Request Forms submitted without adequate documentation will be returned without review.

Attachments

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Response Date: List date by which response by Architect is requested to maintain project schedule and  
allow sufficient time for inclusion of proposed substitution.

Response Date

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Submitted By

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Firm and Address

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Signature below signifies acceptance of responsibility for accuracy and completeness of information  
included in this Substitution Request Form.

Authorized Signature

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ARCHITECT'S RESPONSE

Notations listed below shall have same meaning as on Architect's approval stamp. Clarifications to or changes in project schedule or time shall be processed using standard project forms.

Architect's  
Response

- \_\_\_\_\_ Approved
- \_\_\_\_\_ Approved as Corrected
- \_\_\_\_\_ Revise and Resubmit
- \_\_\_\_\_ Rejected
- \_\_\_\_\_ Returned Without Review

Remarks

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Date

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Signed

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END OF FORM

SECTION 024100

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included:
1. Selective demolition and removal of existing: wood railings, glazing compounds, doors and frames as marked on drawings, and other items as required for new work. Refer to the Drawings for additional requirements.
  2. Removal and legal disposal of demolished materials off site. Except those items specifically designated to be relocated, reused, or turned over to the facility, all existing removed materials, items, trash and debris shall become property of the Contractor and shall be completely removed from the site and legally disposed of at her/his expense. Salvage value belongs to the Contractor. On-site sale of materials is not permitted.
  3. Demolition and removal work shall properly prepare for alteration work and new construction to be provided under the Contract.
  4. Scheduling and sequencing operations without interruption to utilities serving occupied areas. If interruption is required, obtain written permission from the utility company and the Owner. Provide temporary services as necessary to serve occupied and usable facilities when permanent utilities must be interrupted, or schedule interruption when the least amount of inconvenience will result.
- B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
1. Section 011000 - GENERAL REQUIREMENTS for Temporary Facilities And Controls:
    - a. Maintenance of access, cleaning during construction, dust and noise control.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Detach items from existing construction and deliver them to the Owner ready for reuse, at a location designated by the Owner. Protect from weather until accepted by Owner.
- C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated. Protect from weather until reinstallation.

- D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

#### 1.4 MATERIALS OWNERSHIP

- A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques, antiques, and other items of interest or value to Owner that may be encountered during selective demolition remain property of the Owner as applicable. Carefully remove each item or object in a manner to prevent damage and deliver promptly to a location acceptable to the Owner.

#### 1.5 SUBMITTALS

- A. Schedule of Selective Demolition Activities: Indicate the following:
  - 1. Detailed sequence of selective demolition and removal work, with early and late starting and finishing dates for each activity. Ensure Owner's on-site operations are uninterrupted if applicable.
  - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
  - 3. Coordination for shutoff, capping, and continuation of utility services.
  - 4. Use of elevator and stairs.
  - 5. Locations of proposed dust- and noise-control temporary partitions and means of egress, including for other occupants affected by selective demolition operations.
  - 6. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
  - 7. Means of protection for items to remain and items in path of waste removal from building.
- B. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged, and turned over the Owner.
- C. Predemolition Videotapes: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by selective demolition operations. Comply with Division 01. Submit before Work begins.
- D. Landfill Records: Provide trip tickets (receipts) indicating receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

#### 1.6 QUALITY ASSURANCE

- A. Examination of Existing Conditions: The Contractor shall examine the Contract Drawings for demolition and removal requirements and provisions for new work. Verify all existing conditions and dimensions before commencing work. The Contractor shall visit the site and examine the existing conditions as he finds them and shall inform herself/himself of the character, extent and type of demolition and removal work to be performed. Submit any questions regarding the extent and character of the demolition and removal work in the manner and within the time period established for receipt of such questions during the bidding period.
- B. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.

- C. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- D. Standards: Comply with ANSI A10.6 and NFPA 241.
- E. Predemolition Conference: Conduct conference at Project site to comply with requirements in Section 011000 - GENERAL REQUIREMENTS, Project Meetings. Review methods and procedures related to selective demolition including, but not limited to, the following:
  - 1. Inspect and discuss condition of construction to be selectively demolished.
  - 2. Review structural load limitations of existing structure.
  - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
  - 5. Review areas where existing construction is to remain and requires protection.

#### 1.7 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

#### PART 2 - PRODUCTS (Not Used)

#### PART 3 - EXECUTION

##### 3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- E. Engage a professional engineer registered in the state that the project is located to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.
- F. Survey of Existing Conditions: Record existing conditions by use of preconstruction videotapes.

1. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

- G. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

### 3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Arrange to shut off indicated utilities with utility companies and Owner.
2. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing. Where entire wall is to be removed, existing services/systems may be removed with removal of the wall.
4. Prior to commencing cutting work in existing surfaces, take all precautionary measures to assure that mechanical and electrical services to the particular area have been made inactive. Coordinate with Fire Protection, Plumbing, HVAC, and Electrical subcontractors. Only licensed tradesmen of that particular trade shall disconnect and cap existing mechanical and electrical items that are to be removed, abandoned and/or relocated.
5. If, during the process of cutting work, existing utility lines are encountered which are not indicated on the Drawings, regardless of their condition, immediately report such items to the Architect. Do not proceed with work in such areas until instructions are issued by the Architect. Continue work in other areas.

### 3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Comply with requirements for access and protection specified in Section 011000 - GENERAL REQUIREMENTS, Temporary Facilities and Controls.
2. Maintain adequate passage to and from all exits at all times. Before any work is done which significantly alters access or egress patterns, consult with the Architect and obtain approval of code required egress. Under no condition block or interfere with the free flow of people at legally required exits, or in any way alter the required condition of such exits.

- B. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

1. Strengthen or add new supports when required during progress of selective demolition.
2. Remove temporary shoring, bracing and structural supports when no longer required.

3. Post warning signs and place barricades as applicable during placement and removal of temporary shoring.
- C. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around demolition area(s).
1. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction. Provide temporary barricades as required to limit access to demolition areas.
  2. Protect existing site improvements, appurtenances, and landscaping to remain.
- D. Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with demolition operations.

### 3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
  3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
  5. Maintain adequate ventilation when using cutting torches.
  6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
  8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  9. Dispose of demolished items and materials promptly.
- B. Removed and Salvaged Items:
1. Clean salvaged items.
  2. Pack or crate items after cleaning. Identify contents of containers.
  3. Store items in a secure area until delivery to Owner.
  4. Transport items to storage area designated by the Owner.
  5. Protect items from damage during transport and storage.
- C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
  2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  3. Protect items from damage during transport and storage.
  4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.
- E. Items for Re-use and Preservation of Existing Surfaces to Remain:
1. The Contractor shall inspect closely each item specifically designated to be relocated, re-used, or turned over to the Owner prior to its removal, and immediately report damages and defects to the Architect and the Owner. The Contractor shall be responsible for any subsequent damage to the same other than latent defects not readily apparent from close inspection, and shall bear responsibility for its repair or same replacement as directed by the Architect, to the satisfaction of the Owner.
  2. Unless special surface preparation is specified under other Specification Sections, leave existing surfaces that are to remain in a condition suitable to receive new materials and/or finishes.

### 3.5 PROTECTION OF PUBLIC AND PROPERTY

- A. Provide all measures required by federal, state and municipal laws, regulations, and ordinances for the protection of surrounding property, the public, workmen, and Owner's employees during all demolition and removal operations. Measures are to be taken, but not limited to installation of sidewalks, sheds, barricades, fences, warning lights and signs, trash chutes and temporary lighting.
- B. Protect all walks, roads, streets, curbs, pavements, trees and plantings, on and off premises, and bear all costs for correcting such damage as directed by the Architect, and to the satisfaction of the Owner.
- C. Demolition shall be performed in such a manner that will insure the safety of adjacent property. Protect adjacent property from damage and protect persons occupying adjacent property from injuries which might occur from falling debris or other cause and so as not to cause interference with the use of other portions of the building, of adjacent buildings or the free access and safe passage to and from the same.
- D. Every precaution shall be taken to protect against movement or settlement of the building, of adjacent buildings, sidewalks, roads, streets, curbs and pavements. Provide and place at the Contractor's own expense, all necessary bracing and shoring in connection with demolition and removal work.
- E. Remove portions of structures with care by using tools and methods that will not transfer heavy shocks to existing and adjacent building structures, both internal and external of the particular work area.

- F. Provide and maintain in proper condition, suitable fire resistive dust barriers around areas where interior demolition and removal work is in progress. Dust barriers shall prevent the dust migration to adjacent areas. Remove dust barriers upon completion of major demolition and removal in the particular work area.

### 3.6 DISCOVERY OF HAZARDOUS MATERIALS

- A. If hazardous materials, such as chemicals, asbestos-containing materials, or other hazardous materials are discovered during the course of the work, cease work in affected area only and immediately notify the Architect and the Owner of such discovery. Do not proceed with work in such areas until instructions are issued by the Architect. Continue work in other areas.
- B. If unmarked containers are discovered during the course of the work, cease work in the affected area only and immediately notify the Architect and the Owner of such discovery. Do not proceed with work in such areas until instructions are issued by the Architect. Take immediate precautions to prohibit endangering the containers integrity. Continue work in other areas.

### 3.7 CUTTING

- A. Perform all cutting of existing surfaces in a manner which will ensure a minimal difference between the cut area and new materials when patched. Use extreme care when cutting existing surfaces containing concealed utility lines which are indicated to remain and bear full responsibility for repairing or replacement of all such utilities that are accidentally damaged.
- B. Provide a flush saw cut edge where pavement, curb and concrete removals abut new construction work or existing surfaces to remain undisturbed.

### 3.8 DISPOSAL OF DEMOLISHED MATERIALS

- A. General:
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.

### 3.9 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Premises shall be left in a clean condition and ready to accept alteration work and new construction.

END OF SECTION

SECTION 030100

CONCRETE REPAIRS AND PATCHWORK

PART 1 GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Provide all equipment and materials, and do all work necessary to repair and patch existing concrete surfaces, as indicated on the Drawings and as specified herein.

1.3 SUBMITTALS

- A. Samples: Submit duplicate samples of cured concrete patch material on 5/8 in. plywood backing, 12 in. x 12 in.
- B. Product Data: Submit manufacturer's specifications and installation instructions for all products required for concrete repair, including certifications and other data as may be required to show compliance with the Contract Documents.

1.4 QUALITY ASSURANCE

- A. Concrete repair work shall be performed by a firm having at least five years experience in the installation of materials specified herein on projects comparable to this Project using approved equipment. The firm shall have the approval of the concrete repair materials manufacturer.
- B. Repair material manufacturer shall provide evidence indicating that the specified materials have been successfully utilized on work of similar scope to that shown and specified for this Project. The concrete repair examples cited shall have been completed and in use for five years without any evidence of failure.
- C. Mock-ups: Before beginning primary work of this Section, provide mock-ups at locations acceptable to Architect and obtain Architect's acceptance of visual qualities. Protect and maintain acceptable mock-ups throughout the work of this Section to serve as criteria for acceptance of this work.

1.5 WARRANTY

- A. Warrant that work executed under this Section will be free from defects of materials and workmanship for two years from date of Substantial Completion, and that defects will be remedied on written notice at no additional cost to Owner. Warranty shall be signed by the Contractor and concrete repair materials manufacturer. Responsibility shall include removal and replacement of materials as required to repair concrete, at no cost to the Owner.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's unopened containers fully identified with name of manufacturer, brand name, date of manufacture, and other information identifying contents of containers.
- B. Store materials in original tightly sealed containers or unopened packages. Materials shall be stored out of weather, off the ground, in dry area, in compliance with manufacturer's maximum storage temperature range.

#### 1.7 JOB CONDITIONS

- A. Maintain manufacturer's current installation instructions at the job site at all times for material to be used on the Project.
- B. Comply with manufacturer's recommendations concerning environmental controls during application.
- C. Protect surrounding work, vehicles, finish materials, landscaping, and items of similar nature from damage during operations.
- D. Comply with manufacturer's safety recommendations and instructions during application.

#### 1.8 PROTECTION

- A. Protect the building and finish surfaces from damage, resulting from spillage, dripping, and dropping of materials. Repair, restore, or replace work which is soiled or damaged in connection with the performance of the Work.

### PART 2 PRODUCTS

#### 2.1 MANUFACTURER

- A. Acceptable Manufacturers: Patching and repair materials by one of the following, or equal:
  - 1. Cathedral Stone Products.
  - 2. Conproco.
  - 3. Sika Corporation.

#### 2.2 PATCHING MATERIALS

- A. Patching of concrete after removal of spalled, loose and damaged concrete where depth of patch is greater than 1 in., shall be accomplished with SikaTop 122, polymer-modified, two component Portland cement concrete, as manufactured by Sika or other manufacturer listed above. Properties of the cured polymer-modified Portland cement concrete are as follows:
  - 1. Compressive strength (ASTM C 39)
    - a. 4 hour: 300 psi minimum.
    - b. 1 day: 1500 psi minimum.
    - c. 28 day: 7000 psi minimum.
  - 2. Splitting Tensile Strength (ASTM C 496) at 28 days: 500 psi minimum.
  - 3. Flexural Strength (Modulus of Rupture) ASTM C 78 at 28 days: 900 psi minimum.
  - 4. Rapid Freeze/Thaw Durability (ASTM C 666; Procedure A).
    - a. Relative Durability Factor at 300 cycles: 90 min.

5. Aggregate to extend the polymer-modified Portland cement concrete shall be a minus 1/2 in. or 3/8 in. clean, well-graded, saturated surface dry material, having low absorption and high density. Aggregate shall conform to ASTM C 33, and be approved by Architect.

## 2.3 BONDING MATERIALS

- A. Bonding of plastic Portland cement concrete to existing hardened Portland cement concrete shall be accomplished with Sikadur 32, Hi-Mod, multi-purpose, two component, solvent-free, moisture-insensitive structural epoxy resin adhesive, as manufactured by Sika or other manufacturer listed above.
  1. Compressive properties at 28 days in accordance with ASTM D 695:
    - a. Compressive Strength: 8500 psi minimum.
    - b. Modulus of Elasticity: 375,000 psi minimum.
  2. Component A shall be modified epoxy resin of the epichlorohydrin bisphenol A type containing suitable viscosity control agents. Material shall not contain butyl glycidyl ether.
  3. Component B shall be primarily a reaction product of a selected amine blend with an epoxy resin of the epichlorohydrin bisphenol A type containing suitable viscosity control agents, pigments, and accelerators.
  4. Ratio of Component A: Component B shall be 1:1 by volume.
  5. Material shall not contain asbestos.
- B. Bonding of plastic Portland cement concrete to existing hardened Portland cement concrete where steel reinforcing bar is exposed, shall be accomplished with Armetec 110, three component water based epoxy resin/Portland cement bonding agent/anti-corrosion coating, as manufactured by Sika or other manufacturer listed above.
  1. Compressive strength (ASTM C 109 Modified)
    - a. 1 day: 810 psi minimum.
    - b. 7 day: 6200 psi minimum.
    - c. 28 day: 8700 psi minimum.
  2. Component A shall be an epoxy resin/water emulsion containing suitable viscosity control agents. It shall not contain butyl glycidyl ether.
  3. Component B shall be primarily a water solution of a polyamine.
  4. Component C shall be a blend of selected Portland cements and sand.
  5. Material shall not contain asbestos.

## PART 3 EXECUTION

### 3.1 INSPECTION

- A. Inspect surfaces to receive patching mix and encapsulation and verify that:
  1. Surfaces are free of ice, frost, dirt, grease, oil, curing compounds, form release agents, paints, impregnations, loose material, and foreign matter likely to affect bond or performance of system.
  2. Provisions for expansion and control joints are consistent with Specifications and Drawings.
  3. Concrete is structurally sound, and all cracks have been repaired.

### 3.2 PREPARATION AND PATCHING

- A. Mechanically and/or chemically clean and roughen surfaces by waterblasting, sandblasting, chipping, brushing, acid etching, or using approved chemical detergent to obtain clean, sound surface similar in roughness to a medium sandpaper or rougher.
- B. Where steel reinforcing bar is exposed, chip in behind and around exposed bar to provide access to entire surface of bar. Clean rust off rebar by power blasting or other approved means leaving a rough, clean steel surface, and apply Armetec 110 in accordance with manufacturer's printed instructions and as specified below.
  - 1. Mixing: Shake contents of Components A and Components B. Empty all of both components into a clean, dry mixing pail. Mix thoroughly for 30 seconds with a jiffy paddle on a low-speed (400-600rpm) drill. Slowly add the entire components of Component C while continuing to mix for three minutes until uniform with no lumps. Mix only that quantity that can be applied within its pot life.
  - 2. Placement: Apply to approved, prepared surface with a stiff-bristle brush, broom or "hopper type" spray equipment. Exposed steel rebar shall be completely coated.
    - a. Hand applications: Place fresh, plastic concrete/mortar while the bonding bridge adhesive is wet or dry, up to 24 hours.
    - b. Machine applications: Allow the bonding bridge adhesive to dry for 12 hours minimum.
- C. Repairing cracks, spalled areas, and patching holes.
  - 1. Cracks not subject to movement shall be cleaned out to a minimum 1/8 in. in depth, scrub coated, and patched with SikaTop 122, in accordance with manufacturer's printed instructions.
  - 2. Cracks subject to movement shall be routed out and sealed with urethane sealant.
  - 3. Honeycombed, spalled, and deteriorated concrete areas and holes shall be scrub coated and patched with SikaTop 122 in accordance with manufacturer's printed instructions.
- D. Overlay of existing concrete surface shall be scrub coated, and completed with SikaTop 122 "Overlay", in accordance with manufacturer's printed instructions.
- E. Mixing polymer-modified Portland cement mortar: Mechanical mixing shall be done in appropriately sized mortar mixer or with jiffy paddle and low speed drill (400-600 rpm). Manual mixing shall be done in a wheel barrow or mortar box. Pour approximately 4 /5 gallon Component A into the mixing container. Add Component B while continuing to mix. Mix to a uniform consistency for a maximum of three minutes. Add remaining Component A to mix if loose consistency is desired. If manual mixing takes more than three minutes, mix small quantities. Should smaller quantities be needed, be sure components are dosed in the correct ratio and that Component B is uniformly pre-mixed before batching.
- F. Mixing polymer-modified Portland cement concrete: Pour 1 gallon of Component A into the mixing container. Add Component B while continuing to mix. Add correct amount of the pre-approved coarse aggregate, 42 lb/unit maximum, and continue mixing to a uniform consistency. Mixing time shall be three minutes maximum.
  - 1. For overlay applications greater than 1 in. depth, add a 3/8 in. coarse aggregate as recommended by manufacturer, and approved by Architect.

### 3.3 BOND COAT

- A. Mix and apply Sikadur 32, Hi-Mod, in accordance with manufacturer's instructions and recommendations.
- B. Premix each component. Proportion equal parts by volume of Component "A" and Component "B" into a clean, dry mixing pail. Mix thoroughly for 3 minutes with a jiffy paddle on a low speed (400-600 rpm) drill. Mix only that quantity of material that can be used within its pot life (25-35 minutes at 73<sup>o</sup> F.) Do not exceed manufacturer's recommendations.
- C. Manually apply epoxy resin adhesive on the prepared area to receive Portland cement concrete or mortar at approximately 80 sq. ft./gal. Use rollers, brushes, or brooms. Place the Portland cement concrete or mortar before the epoxy resin adhesive becomes tack-free to the touch.
  - 1. For spray application follow manufacturer's printed instructions.

### 3.4 FIELD QUALITY CONTROL

- A. Twenty-four hours after application, patches shall be inspected to ensure that coating has cured to a hard finish, showing no softness or dusting, by rubbing cured membrane to ensure that it is hard.
- B. Inspection for complete coverage should be made to ensure all holes, cracks, and voids have been filled, leaving no pinholes or uncovered areas, all exposed steel rebar has been completely coated, and all joints and cracks have been properly treated.
- C. Tap cured patch to ensure that no hollow sounds occur and that tight, strong bond has been achieved.

### 3.5 CLEAN-UP

- A. Upon completion of the concrete repair work clean stains, remove masking, protections, equipment, material, and debris from the work and storage area, and leave those areas in an undamaged and acceptable condition.

END OF SECTION

SECTION 055150

METAL RAILINGS

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
  - 1. Steel tube railings.
  - 2. Steel tube handrails.
  - 3. Swinging gate and hardware.
- B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
  - 1. Section 061000 - ROUGH CARPENTRY for wood blocking for anchoring railings.
  - 2. Section 099000 - PAINTING AND COATING for field painting work of this section.

1.3 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design railings, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. Structural Performance of Railings: Provide railings capable of withstanding the effects of gravity loads and Code required loads and stresses within limits and under conditions indicated.

1.4 SUBMITTALS

- A. Product Data: For metal railings and the following:
  - 1. Paint products.
  - 2. Grout.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
  - 1. Provide templates for anchors and bolts specified for installation under other Sections.
  - 2. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer, licensed in the jurisdiction where Project is located, responsible for their preparation.

- C. Delegated-Design Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data and drawings signed and sealed by the qualified professional engineer responsible for their preparation.
- D. Welding certificates.
- E. Qualification Data: For professional engineer.
- F. Samples: Provide 12" long sample of metal railing showing finished weld condition for approval by Architect.

#### 1.5 QUALITY ASSURANCE

- A. Engineering Responsibility: Preparation of Shop Drawings, design calculations, and other structural data by a qualified professional engineer.
- B. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in the jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of metal railings that are similar to those indicated for this Project in material, design, and extent.
- C. Installer Qualifications: Fabricator of products.
- D. Welding: Qualify procedures and personnel according to the following:
  - 1. AWS D1.1, "Structural Welding Code--Steel."
  - 2. AWS D1.3, "Structural Welding Code--Sheet Steel."

#### 1.6 COORDINATION

- A. Coordinate installation of anchorages for metal railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

### PART 2 - PRODUCTS

#### 2.1 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces, unless otherwise indicated. For components exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

#### 2.2 FERROUS METALS

- A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
- B. Steel Tubing: ASTM A 500 (cold formed) or ASTM A 513, Type 5 (mandrel drawn).

- C. Rolled-Steel Floor Plate: ASTM A 786/A 786M, rolled from plate complying with ASTM A 36/A 36M or ASTM A 283/A 283M, Grade C or D.
- D. Uncoated, Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M either commercial steel, Type B, or structural steel, Grade 30, unless another grade is required by design loads.

## 2.3 FASTENERS

- A. General: Provide zinc-plated fasteners with coating complying with ASTM B 633, Class Fe/Zn 25 for exterior use, and Class Fe/Zn 5 where built into exterior walls. Select fasteners for type, grade, and class required.

## 2.4 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Shop Primers: Provide primers that comply with Section 099000 - PAINTING AND COATING.
- C. Zinc-Rich Primer: Complying with SSPC-Paint 20 or SSPC-Paint 29 and compatible with topcoat.
- D. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

## 2.5 FABRICATION, GENERAL

- A. Provide complete railing assemblies, including metal framing, hangers, struts, railings, clips, brackets, bearing plates, and other components necessary to support and anchor railings.
  - 1. Join components by welding, unless otherwise indicated.
  - 2. Use connections that maintain structural value of joined pieces.
- B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch, unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- C. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- D. Form exposed work true to line and level with accurate angles and surfaces and straight edges.
- E. Weld connections to comply with the following:
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove welding flux immediately.
  - 4. Weld exposed corners and seams continuously, unless otherwise indicated.
  - 5. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

- F. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) screws or bolts unless otherwise indicated. Locate joints where least conspicuous.
- G. Comply with "Guideline 1: Joint Finishes", by National Ornamental & Miscellaneous Metals Association (NOMMA), as follows:
  - 1. Typical Railing: Type 2 or better, unless otherwise indicated.
  - 2. Service Stair Railing: Type 3 or better, unless otherwise indicated.
- H. Fabricate joints that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

## 2.6 STEEL TUBE RAILINGS

- A. General: Fabricate railings to comply with requirements indicated for design, dimensions, details, finish, and member sizes, including wall thickness of tube, post spacings, and anchorage, but not less than that needed to withstand indicated loads.
- B. Welded Connections: Fabricate railings with welded connections. Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
- C. Form changes in direction of railings as detailed on the Drawings.
- D. Form simple and compound curves by bending members in jigs to produce uniform curvature for each repetitive configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.
- E. Close exposed ends of railing members with prefabricated end fittings.
- F. Provide wall returns at ends of wall-mounted handrails, unless otherwise indicated. Close ends of returns unless clearance between end of rail and wall is 1/4 inch or less.
- G. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, end closures, flanges, miscellaneous fittings, and anchors for interconnecting components and for attaching to other work. Furnish inserts and other anchorage devices for connecting to concrete or masonry work.
  - 1. Connect posts to stair framing by direct welding, unless otherwise indicated.
  - 2. For nongalvanized railings, provide nongalvanized ferrous-metal fittings, brackets, fasteners, and sleeves, except galvanize anchors embedded in exterior masonry and concrete construction.
- H. Fillers: Provide fillers made from steel plate, or other suitably crush-resistant material, where needed to transfer wall bracket loads through wall finishes to structural supports. Size fillers to suit wall finish thicknesses and to produce adequate bearing area to prevent bracket rotation and overstressing of substrate.

## 2.7 SWINGING GATE

- A. Provide swinging steel gate and gate hardware in configuration as indicated on drawings.

1. Hinge: Heavy-duty spring hinge.

## 2.8 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

## 2.9 STEEL AND IRON FINISHES

- A. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with minimum requirements indicated below for SSPC surface preparation specifications and environmental exposure conditions of installed products:

1. Railings (SSPC Zone 1B): SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."

- B. Apply shop primer to uncoated surfaces of metal railing components, except those with galvanized finishes and those to be embedded in concrete or masonry unless otherwise indicated. Comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing metal railings to in-place construction. Include threaded fasteners for concrete and masonry inserts, through-bolts, lag bolts, and other connectors.
- B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal railings. Set units accurately in location, alignment, and elevation, measured from established lines and levels and free of rack.
- C. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.
- D. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.
- E. Field Welding: Comply with the following requirements:
  1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  2. Obtain fusion without undercut or overlap.
  3. Remove welding flux immediately.
  4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

### 3.2 INSTALLING STEEL TUBE RAILINGS

- A. Adjust railing systems before anchoring to ensure matching alignment at abutting joints. Space posts at spacing indicated or, if not indicated, as required by design loads. Plumb posts in each direction. Secure posts and rail ends to building construction as follows:
1. Anchor posts to steel by welding directly to steel supporting members.
  2. Anchor handrail ends to concrete and masonry with steel round flanges welded to rail ends and anchored with postinstalled anchors and bolts.
- B. Attach handrails to wall with wall brackets. Provide bracket with 1-1/2-inch clearance from inside face of handrail and finished wall surface. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads. Secure wall brackets to building construction as follows:
1. Use type of bracket with flange tapped for concealed anchorage to threaded hanger bolt.
  2. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.
  3. For hollow masonry anchorage, use toggle bolts.
  4. For steel-framed gypsum board assemblies, fasten brackets directly to steel framing or concealed steel reinforcements using self-tapping screws of size and type required to support structural loads.

### 3.3 ADJUSTING AND CLEANING

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.

END OF SECTION

SECTION 061000  
ROUGH CARPENTRY

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
  - 1. Wood blocking, cants, and nailers.
  - 2. Plywood backing panels.

1.3 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
  - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used, net amount of preservative retained, and chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.
  - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials, both before and after exposure to elevated temperatures when tested according to ASTM D 5516 and ASTM D 5664.
  - 3. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
  - 4. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.4 QUALITY ASSURANCE

- A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels; place spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

## PART 2 - PRODUCTS

### 2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
  - 1. Factory mark each piece of lumber with grade stamp of grading agency.
  - 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
  - 3. Provide dressed lumber, S4S, unless otherwise indicated.
  - 4. Provide dry lumber with 15 percent maximum moisture content at time of dressing for 2-inch nominal thickness or less, unless otherwise indicated.
  
- B. Plywood Panels:
  - 1. Plywood: Either DOC PS 1 or DOC PS 2, unless otherwise indicated.
  - 2. Thickness: As needed to comply with requirements specified but not less than thickness indicated.
  - 3. Factory mark panels according to indicated standard.

### 2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
  - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.
  - 2. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not require incising, contain colorants, bleed through, or otherwise adversely affect finishes.
  
- B. Kiln-dry material after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood. Do not use material that is warped or does not comply with requirements for untreated material.
  
- C. Mark each treated item with the treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
  
- D. Application: Treat items indicated on Drawings, and the following:
  - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
  - 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete in exterior walls.

### 2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: For all interior use materials, provide materials that are fire-retardant treated and comply with performance requirements in AWPA C20 (lumber) and AWPA C27 (plywood).

Identify fire-retardant-treated wood with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction.

1. Use treatment for which chemical manufacturer publishes physical properties of treated wood after exposure to elevated temperatures, when tested by a qualified independent testing agency according to ASTM D 5664, for lumber and ASTM D 5516, for plywood.
2. Use treatment that does not promote corrosion of metal fasteners.

#### 2.4 MISCELLANEOUS LUMBER

- A. General: Provide lumber for support or attachment of other construction, including the following:
1. Blocking.
  2. Cants.
  3. Nailers.
  4. Furring.
  5. Grounds.
- B. For items of dimension lumber size, provide Construction, Stud, or No. 2 grade lumber with 15 percent moisture content.

#### 2.5 PANEL PRODUCTS

- A. Miscellaneous Concealed Plywood: Exposure 1 sheathing, span rating to suit framing in each location, and thickness as indicated but not less than 1/2 inch.

#### 2.6 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners of Type 304 stainless steel.
- B. Nails, Wire, Brads, and Staples: FS FF-N-105.
- C. Power-Driven Fasteners: CABO NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.
- F. Bolts: Steel bolts complying with ASTM A 307, Grade A with ASTM A 563 hex nuts and, where indicated, flat washers.
- G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.

1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5; except provide Type 304 stainless steel where in contact with pressure-preservative treated wood.

## 2.7 MISCELLANEOUS MATERIALS

- A. Adhesive, Including Gluing Furring and Sleepers to Concrete or Masonry: Formulation complying with ASTM D 3498 that is approved for use indicated by adhesive manufacturer.
  1. Use adhesives that have a VOC content of 70 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Discard units of material with defects that impair quality of carpentry and that are too small to use with minimum number of joints or optimum joint arrangement.
- B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- C. Apply field treatment complying with AWWA M4 to cut surfaces of preservative-treated lumber and plywood.
- D. Securely attach carpentry work as indicated and according to applicable codes and recognized standards.
- E. Countersink fastener heads on exposed carpentry work and fill holes with wood filler.
- F. Use fasteners of appropriate type and length. Pre-drill members when necessary to avoid splitting wood.

### 3.2 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.

END OF SECTION

SECTION 078410

PENETRATION FIRESTOPPING

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
  - 1. Through-penetration firestop systems for penetrations through fire-resistance-rated constructions, including both empty openings and openings containing penetrating items.
- B. Related Work: The following items are not included in this Section and will be performed under the designated Sections:
  - 1. Section 078440 - FIRE-RESISTIVE JOINT SYSTEMS for fire-resistive joint sealers.
  - 2. Section 079200 - JOINT SEALANTS for standard joint sealers.

1.3 COORDINATION

- A. Jobsite conditions of each through-penetration firestop system must meet all details of the UL-Classified System selected. If jobsite conditions do not match any UL-classified systems, contact firestop manufacturer for alternative systems or Engineer Judgment Drawings.
- B. Coordinate work with other trades to assure that penetration-opening sizes are appropriate for penetrant locations.
- C. Verify that the schedule is current at the time of construction, and that each referenced system is suitable for the intended application.

1.4 PERFORMANCE REQUIREMENTS

- A. General: For penetrations through fire-resistance-rated constructions, including both empty openings and openings containing penetrating items, provide through-penetration firestop systems that are produced and installed to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of construction penetrated.
- B. Penetrations in Fire-Resistance-Rated Walls: Provide penetration firestopping with ratings determined per ASTM E 814 or UL 1479, based on testing at a positive pressure differential of 0.01-inch wg (2.49 Pa).

1. Fire-resistance-rated walls include fire walls, fire-barrier walls, smoke-barrier walls and fire partitions.
  2. F-Rating: Not less than the fire-resistance rating of constructions penetrated.
- C. Penetrations in Horizontal Assemblies: Provide penetration firestopping with ratings determined per ASTM E 814 or UL 1479, based on testing at a positive pressure differential of 0.01-inch wg (2.49 Pa).
1. Horizontal assemblies include floors, floor/ceiling assemblies and ceiling membranes of roof/ceiling assemblies.
  2. F-Rating: At least 1 hour, but not less than the fire-resistance rating of constructions penetrated.
  3. T-Rating: At least 1 hour, but not less than the fire-resistance rating of constructions penetrated except for floor penetrations within the cavity of a wall.
- D. Penetrations in Smoke Barriers: Provide penetration firestopping with ratings determined per UL 1479.
1. L-Rating: Not exceeding 5.0 cfm/sq. ft. (0.025 cu. m/s per sq. m) of penetration opening at 0.30-inch wg (74.7 Pa) at both ambient and elevated temperatures.
- E. Exposed Penetration Firestopping:
1. Provide products with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, as determined per ASTM E 84.
  2. For through-penetration firestop systems exposed to view, traffic, moisture, and physical damage, provide products that, after curing, do not deteriorate when exposed to these conditions both during and after construction.
    - a. For piping penetrations for plumbing and wet-pipe sprinkler systems, provide moisture-resistant through-penetration firestop systems demonstrating no evidence of water leakage when tested according to UL 1479.
    - b. For floor penetrations with annular spaces exceeding 4 inches in width and exposed to possible loading and traffic, provide firestop systems capable of supporting floor loads involved, either by installing floor plates or by other means.
- F. For penetrations involving insulated piping, provide through-penetration firestop systems not requiring removal of insulation.

## 1.5 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For each through-penetration firestop system, show each type of construction condition penetrated, relationships to adjoining construction, and type of penetrating item. Include firestop design designation of qualified testing and inspecting agency that evidences compliance with requirements for each condition indicated.
1. Submit documentation, including illustrations, from a qualified testing and inspecting agency that is applicable to each through-penetration firestop system configuration for construction and penetrating items.

- C. Through-Penetration Firestop System Schedule: Indicate locations of each through-penetration firestop system, along with the following information:
  - 1. Types of penetrating items.
  - 2. Types of constructions penetrated, including fire-resistance ratings and, where applicable, thicknesses of construction penetrated.
  - 3. Through-penetration firestop systems for each location identified by firestop design designation of qualified testing and inspecting agency.
- D. Qualification Data: For Installer.

#### 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Either a firm that has been approved by FMG according to FMG 4991, "Approval of Firestop Contractors" or a firm experienced in installing through-penetration firestop systems similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction of a minimum of five projects with a record of successful performance. Qualifications include having the necessary experience, staff, and training to install manufacturer's products per specified requirements.
- B. Source Limitations: Obtain through-penetration firestop systems, for each kind of penetration and construction condition indicated, through one source from a single manufacturer.
- C. Fire-Test-Response Characteristics: Provide through-penetration firestop systems that comply with the following requirements and those specified in Part 1 "Performance Requirements" Article:
  - 1. Firestopping tests are performed by a qualified testing and inspecting agency. A qualified testing and inspecting agency is UL or another agency performing testing and follow-up inspection services for firestop systems acceptable to authorities having jurisdiction.
  - 2. Through-penetration firestop systems are identical to those tested per testing standard referenced in "Part 1 Performance Requirements" Article. Provide rated systems complying with the following requirements:
    - a. Through-penetration firestop system products bear classification marking of qualified testing and inspecting agency.
    - b. Through-penetration firestop systems correspond to those indicated by reference to through-penetration firestop system designations listed in the UL "Fire Resistance Directory."
- D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver through-penetration firestop system products to Project site in original, unopened containers or packages with intact and legible manufacturers' labels identifying product and manufacturer, date of manufacture, lot number, shelf life if applicable, qualified testing and inspecting agency's classification marking applicable to Project, curing time, and mixing instructions for multicomponent materials.

- B. Store and handle materials for through-penetration firestop systems to prevent their deterioration or damage due to moisture, temperature changes, contaminants, or other causes.

#### 1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install through-penetration firestop systems when ambient or substrate temperatures are outside limits permitted by through-penetration firestop system manufacturers or when substrates are wet due to rain, frost, condensation, or other causes.
- B. Ventilate through-penetration firestop systems per manufacturer's written instructions by natural means or, where this is inadequate, forced-air circulation.

#### 1.9 COORDINATION

- A. Coordinate construction of openings and penetrating items to ensure that through-penetration firestop systems are installed according to specified requirements.
- B. Coordinate sizing of sleeves, openings, core-drilled holes, or cut openings to accommodate through-penetration firestop systems.
- C. Do not cover up through-penetration firestop system installations that will become concealed behind other construction until each installation has been examined building inspector, if required by authorities having jurisdiction.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, through-penetration firestop systems that may be incorporated into the Work include, but are not limited to the following:
  - 1. Hilti, Inc.
  - 2. BioFireShield; RectorSeal Corporation.
  - 3. Specified Technologies, Inc. (STI).
  - 4. 3M; Fire Protection Products Division.

#### 2.2 FIRESTOPPING MATERIALS

- A. VOC Content: Penetration firestopping sealants and sealant primers shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
  - 1. Sealants: 250 g/L.
  - 2. Sealant Primers for Nonporous Substrates: 250 g/L.
  - 3. Sealant Primers for Porous Substrates: 775 g/L.
- B. Compatibility: Provide through-penetration firestop systems that are compatible with one another; with the substrates forming openings; and with the items, if any, penetrating through-penetration firestop systems, under conditions of service and application, as demonstrated by through-penetration firestop system manufacturer based on testing and field experience.

- C. **Materials:** Provide through-penetration firestop systems containing primary materials and fill materials which are part of the tested assemblies indicated in the approved Through-Penetration Firestop System Schedule submittal. Fill materials are those referred to in directories of referenced testing and inspecting agencies as "fill," "void," or "cavity" materials.
- D. **Accessories:** Provide components for each through-penetration firestop system that are needed to install fill materials and to comply with Part 1 "Performance Requirements" Article. Use only components specified by through-penetration firestop system manufacturer and approved by qualified testing and inspecting agency for firestop systems indicated

### 2.3 MIXING

- A. For those products requiring mixing before application, comply with through-penetration firestop system manufacturer's written instructions for accurate proportioning of materials, water (if required), type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other items or procedures needed to produce products of uniform quality with optimum performance characteristics for application indicated.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for opening configurations, penetrating items, substrates, and other conditions affecting performance of work. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. **Surface Cleaning:** Clean out openings immediately before installing through-penetration firestop systems to comply with firestop system manufacturer's written instructions and with the following requirements:
  - 1. Remove from surfaces of opening substrates and from penetrating items foreign materials that could interfere with adhesion of through-penetration firestop systems.
  - 2. Clean opening substrates and penetrating items to produce clean, sound surfaces capable of developing optimum bond with through-penetration firestop systems. Remove loose particles remaining from cleaning operation.
  - 3. Remove laitance and form-release agents from concrete.
- B. **Priming:** Prime substrates where recommended in writing by through-penetration firestop system manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.
- C. **Masking Tape:** Use masking tape to prevent through-penetration firestop systems from contacting adjoining surfaces that will remain exposed on completion of Work and that would otherwise be permanently stained or damaged by such contact or by cleaning methods used to remove smears from firestop system materials. Remove tape as soon as possible without disturbing firestop system's seal with substrates.

### 3.3 THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLATION

- A. General: Install through-penetration firestop systems to comply with Part 1 "Performance Requirements" Article and with firestop system manufacturer's written installation instructions and published drawings for products and applications indicated.
- B. Install forming/damming/backing materials and other accessories of types required to support fill materials during their application and in the position needed to produce cross-sectional shapes and depths required to achieve fire ratings indicated.
- C. Install fill materials for firestop systems by proven techniques to produce the following results:
  - 1. Fill voids and cavities formed by openings, forming materials, accessories, and penetrating items as required to achieve fire-resistance ratings indicated.
  - 2. Apply materials so they contact and adhere to substrates formed by openings and penetrating items.
  - 3. For fill materials that will remain exposed after completing Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.

### 3.4 FIELD QUALITY CONTROL

- A. Inspecting Agency: Engage a qualified, independent inspecting agency to inspect through-penetration firestops. Independent inspecting agency shall comply with ASTM E 2174 requirements including those related to qualifications, conducting inspections, and preparing test reports.
- B. Where deficiencies are found, repair or replace through-penetration firestop systems so they comply with requirements.
- C. Proceed with enclosing through-penetration firestop systems with other construction only after inspection reports are issued and firestop installations comply with requirements.

### 3.5 CLEANING AND PROTECTING

- A. Clean off excess fill materials adjacent to openings as Work progresses by methods and with cleaning materials that are approved in writing by through-penetration firestop system manufacturers and that do not damage materials in which openings occur.
- B. Provide final protection and maintain conditions during and after installation that ensure that through-penetration firestop systems are without damage or deterioration at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated through-penetration firestop systems immediately and install new materials to produce systems complying with specified requirements.

END OF SECTION

SECTION 078440

FIRE-RESISTIVE JOINT SYSTEMS

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the Work of this Section, including but not limited to fire-resistive joint systems for the following:
1. Floor-to-floor joints.
  2. Floor-to-wall joints.
  3. Head-of-wall joints.
  4. Wall-to-wall joints.
  5. Perimeter fire-resistive joint systems consisting of floor-to-wall joints between perimeter edge of fire-resistance-rated floor assemblies and exterior curtain walls.
- B. Related Work: The following items are not included in this Section and will be performed under the designated Sections:
1. Section 078410 - PENETRATION FIRESTOPPING for firestopping.
  2. Section 079200 - JOINT SEALANTS for standard joint sealers.

1.3 PERFORMANCE REQUIREMENTS

- A. General: Provide fire-resistive joint systems that are produced and installed to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of assembly in which fire-resistive joint systems are installed.
- B. For fire-resistive systems exposed to view, provide products with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, as determined per ASTM E 84.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For each fire-resistive joint system, show each kind of construction condition in which joints are installed; also show relationships to adjoining construction. Include fire-resistive joint system design designation of testing and inspecting agency acceptable to authorities having jurisdiction that demonstrates compliance with requirements for each condition indicated.

1. Submit documentation, including illustrations, from a qualified testing and inspecting agency that is applicable to each fire-resistive joint system configuration for construction and penetrating items.
- C. Fire-Resistive Joint Systems Schedule: For each fire-resistive joint system. Include location and design designation of qualified testing agency.
  1. Where Project conditions require modification to a qualified testing agency's illustration for a particular fire-resistive joint system condition, submit illustration, with modifications marked, approved by fire-resistive joint system manufacturer's fire-protection engineer as an engineering judgment or equivalent fire-resistance-rated assembly.
- D. Product Certificates: For each type of fire-resistive joint system, signed by product manufacturer.
- E. Qualification Data: For Installer.
- F. Field quality-control test reports.
- G. Research/Evaluation Reports: For each type of fire-resistive joint system.

#### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A firm experienced in installing through-penetration fire stop systems similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction of a minimum of five projects with a record of successful performance. Qualifications include having the necessary experience, staff, and training to install manufacturer's products per specified requirements. Evidence of FMG 4991 approval is acceptable for installer qualifications, but not mandatory.
- B. Installation Responsibility: Assign installation of through-penetration firestop systems and fire-resistive joint systems in Project to a single qualified installer.
- C. Source Limitations: Obtain fire-resistive joint systems, for each kind of joint and construction condition indicated, through one source from a single manufacturer.
- D. Fire-Test-Response Characteristics: Provide fire-resistive joint systems that comply with the following requirements and those specified in Part 1 "Performance Requirements" Article:
  1. Fire-resistance tests are performed by a qualified testing and inspecting agency. A qualified testing and inspecting agency is UL or another agency performing testing and follow-up inspection services for fire-resistive joint systems acceptable to authorities having jurisdiction.
  2. Fire-resistive joint systems are identical to those tested per methods indicated in Part 1 "Performance Requirements" Article and comply with the following:
    - a. Fire-resistive joint system products bear classification marking of qualified testing and inspecting agency.
    - b. Fire-resistive joint systems correspond to those indicated by referencing system designations of the qualified testing and inspecting agency.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver fire-resistive joint system products to Project site in original, unopened containers or packages with qualified testing and inspecting agency's classification marking applicable to Project and with intact and legible manufacturers' labels identifying product and manufacturer, date of manufacture, lot number, shelf life, curing time, and mixing instructions for multicomponent materials.
- B. Store and handle materials for fire-resistive joint systems to prevent their deterioration or damage due to moisture, temperature changes, contaminants, or other causes.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install fire-resistive joint systems when ambient or substrate temperatures are outside limits permitted by fire-resistive joint system manufacturers or when substrates are wet due to rain, frost, condensation, or other causes.
- B. Ventilate fire-resistive joint systems per manufacturer's written instructions by natural means or, if this is inadequate, forced-air circulation.

1.8 COORDINATION

- A. Coordinate construction of joints to ensure that fire-resistive joint systems are installed according to specified requirements.
- B. Coordinate sizing of joints to accommodate fire-resistive joint systems.
- C. Do not cover up through-penetration firestop system installations that will become concealed behind other construction until each installation has been examined building inspector, if required by authorities having jurisdiction.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, fire-resistive joint systems that may be incorporated into the Work include, but are not limited to the following:
  - 1. Hilti, Inc.
  - 2. BioFireShield; RectorSeal Corporation.
  - 3. Specified Technologies, Inc. (STI).
  - 4. 3M; Fire Protection Products Division.

2.2 FIRE-RESISTIVE JOINT SYSTEMS

- A. VOC Content: Fire-resistive joint system sealants shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
  - 1. Architectural Sealants: 250 g/L.
  - 2. Sealant Primers for Nonporous Substrates: 250 g/L.
  - 3. Sealant Primers for Porous Substrates: 775 g/L.

- B. General: Where required, provide fire-resistive joint systems that are produced and installed to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of assemblies in or between which fire-resistive joint systems are installed. Fire-resistive joint systems shall accommodate building movements without impairing their ability to resist the passage of fire and hot gases.
- C. Joints in or between Fire-Resistance-Rated Construction: Provide fire-resistive joint systems with ratings determined per ASTM E 1966 or UL 2079.
- D. Joints at Exterior Curtain-Wall/Floor Intersections: Provide fire-resistive joint systems with rating determined by ASTM E 119 based on testing at a positive pressure differential of 0.01-inch wg (2.49 Pa) or ASTM E 2307.
  - 1. Fire-Resistance Rating: Equal to or exceeding the fire-resistance rating of the floor assembly.
- E. Joints in Smoke Barriers: Provide fire-resistive joint systems with ratings determined per UL 2079.
  - 1. L-Rating: Not exceeding 5.0 cfm/ft (0.00775 cu. m/s x m) of joint at 0.30 inch wg (74.7 Pa) at both ambient and elevated temperatures.
- F. Compatibility: Provide fire-resistive joint systems that are compatible with joint substrates, under conditions of service and application, as demonstrated by fire-resistive joint system manufacturer based on testing and field experience.
- G. Accessories: Provide components of fire-resistive joint systems, including primers and forming materials, that are needed to install fill materials and to comply with Part 1 "Performance Requirements" Article. Use only components specified by fire-resistive joint system manufacturer and approved by the qualified testing and inspecting agency for systems indicated.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for joint configurations, substrates, and other conditions affecting performance of work.
  - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Surface Cleaning: Clean joints immediately before installing fire-resistive joint systems to comply with fire-resistive joint system manufacturer's written instructions and the following requirements:
  - 1. Remove from surfaces of joint substrates foreign materials that could interfere with adhesion of fill materials.
  - 2. Clean joint substrates to produce clean, sound surfaces capable of developing optimum bond with fill materials. Remove loose particles remaining from cleaning operation.

3. Remove laitance and form-release agents from concrete.
- B. Priming: Prime substrates where recommended in writing by fire-resistive joint system manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.
- C. Masking Tape: Use masking tape to prevent fill materials of fire-resistive joint system from contacting adjoining surfaces that will remain exposed on completion of Work and that would otherwise be permanently stained or damaged by such contact or by cleaning methods used to remove smears from fire-resistive joint system materials. Remove tape as soon as possible without disturbing fire-resistive joint system's seal with substrates or damaging adjoining surfaces.

### 3.3 INSTALLATION

- A. General: Install fire-resistive joint systems to comply with Part 1 "Performance Requirements" Article and fire-resistive joint system manufacturer's written installation instructions for products and applications indicated.
- B. Install forming/packing/backing materials and other accessories of types required to support fill materials during their application and in position needed to produce cross-sectional shapes and depths required to achieve fire ratings indicated.
- C. Install fill materials for fire-resistive joint systems by proven techniques to produce the following results:
  1. Fill voids and cavities formed by openings and forming/packing/backing materials as required to achieve fire-resistance ratings indicated.
  2. Apply fill materials so they contact and adhere to substrates formed by joints.
  3. For fill materials that will remain exposed after completing Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.

### 3.4 FIELD QUALITY CONTROL

- A. Inspecting Agency: Engage a qualified independent inspecting agency to inspect fire-resistive joint systems and prepare inspection reports.
- B. Testing Services: Inspecting of completed installations of fire-resistive joint systems shall take place in successive stages as installation of fire-resistive joint systems proceeds. Do not proceed with installation of joint systems for the next area until inspecting agency determines completed work shows compliance with requirements.
  1. Inspecting agency shall state in each report whether inspected fire-resistive joint systems comply with or deviate from requirements.
- C. Remove and replace fire-resistive joint systems where inspections indicate that they do not comply with specified requirements.
- D. Additional inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

- E. Proceed with enclosing fire-resistive joint systems with other construction only after inspection reports are issued and fire-resistive joint systems comply with requirements.

### 3.5 CLEANING AND PROTECTING

- A. Clean off excess fill materials adjacent to joints as Work progresses by methods and with cleaning materials that are approved in writing by fire-resistive joint system manufacturers and that do not damage materials in which openings occur.
- B. Provide final protection and maintain conditions during and after installation that ensure fire-resistive joint systems are without damage or deterioration at time of Substantial Completion. If damage or deterioration occurs despite such protection, cut out and remove damaged or deteriorated fire-resistive joint systems immediately and install new materials to produce fire-resistive joint systems complying with specified requirements.

END OF SECTION

SECTION 079200

JOINT SEALANTS

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
  - 1. Joint sealants and fillers for typical conditions.
  - 2. Joint sealants and fillers at steel windows and masonry, all sides of all windows.
- B. This Section includes joint sealants for the applications specified with the products in this Section and as indicated on Drawings.

1.3 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.
- B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

1.4 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for Verification: For each type and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- wide joints formed between two 6-inch- long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- C. Qualification Data: For Installer.
- D. Preconstruction Field Test Reports: Indicate which sealants and joint preparation methods resulted in optimum adhesion to joint substrates based on preconstruction testing specified in "Quality Assurance" Article.
- E. Compatibility and Adhesion Test Reports: From sealant manufacturer, indicating the following:
  - 1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.

2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.

F. Field Test Report Log: For each elastomeric sealant application.

G. Product Test Reports: Based on comprehensive testing of product formulations performed by a qualified testing agency, indicating that sealants comply with requirements.

#### 1.5 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized Installer who is approved or licensed for installation of elastomeric sealants required for this Project.

B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

C. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.

1. Use manufacturer's standard test method to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
2. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
3. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.
4. Testing will not be required if joint-sealant manufacturers submit joint preparation data that are based on previous testing of current sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.

D. Preconstruction Field-Adhesion Testing: Before installing elastomeric sealants, field test their adhesion to Project joint substrates as follows:

1. Locate test joints where indicated on Project or, if not indicated, as directed by Architect.
2. Conduct field tests for each application indicated below:
  - a. Each type of elastomeric sealant and joint substrate indicated.
  - b. Each type of nonelastomeric sealant and joint substrate indicated.
3. Notify Architect seven days in advance of dates and times when test joints will be erected.
  - a. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193.
    - 1) For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
4. Report whether sealant in joint connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.

5. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

- E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01.

#### 1.6 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
  1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F
  2. When joint substrates are wet.
  3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
  4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

#### 1.7 WARRANTY

- A. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
  1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which elastomeric sealant manufacturer agrees to furnish elastomeric joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
  1. Warranty Period: Five years from date of Substantial Completion.
- C. Special warranties specified in this Article exclude deterioration or failure of elastomeric joint sealants from the following:
  1. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
  2. Disintegration of joint substrates from natural causes exceeding design specifications.
  3. Mechanical damage caused by individuals, tools, or other outside agents.
  4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

## PART 2 - PRODUCTS

### 2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- B. VOC Content of Interior Sealants: Provide interior sealants and sealant primers that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
  - 1. Architectural Sealants: 250 g/L.
  - 2. Sealant Primers for Nonporous Substrates: 250 g/L.
  - 3. Sealant Primers for Porous Substrates: 775 g/L.
- C. Colors of Exposed Joint Sealants: Provide colors as selected by the Architect from manufacturer's full range of standard and custom colors; maximum of five colors, three standard colors and two custom colors.

### 2.2 JOINT SEALANTS

- A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- B. Stain-Test-Response Characteristics: Elastomeric sealants shall be nonstaining to porous substrates. Provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.
- C. Single-Component Neutral-Curing Silicone Sealant:
  - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Dow Corning Corporation; 790.
    - b. GE Silicones; SilPruf LM SCS2700.
    - c. Tremco Inc.; Spectrem 1.
    - d. Pecora Corporation; 864.
    - e. Bondaflex Technologies; Sil 290
  - 2. Extent of Use: Joints in exterior surfaces.
- D. Latex Sealant: Comply with ASTM C 834, Type P, Grade NF.
  - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Bostik Findley; Chem-Calk 600.
    - b. Pecora Corporation; AC-20+.
    - c. Sonneborn, BASF Building Systems; Sonolac.
    - d. Tremco Inc.; Tremflex 834.

e. May National Bondaflex Sil-A 700

2. Extent of Use: Non-moving joints at interior locations.

### 2.3 JOINT-SEALANT BACKING

- A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Elastomeric Tubing Sealant Backings: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056, nonabsorbent to water and gas, and capable of remaining resilient at temperatures down to minus 26 deg F. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and to otherwise contribute to optimum sealant performance.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

### 2.4 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include concrete, masonry and unglazed surfaces of ceramic tile.
  3. Remove laitance and form-release agents from concrete.
  4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following metal, glass, porcelain enamel and glazed surfaces of ceramic tile.
- B. Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
1. Do not leave gaps between ends of sealant backings.
  2. Do not stretch, twist, puncture, or tear sealant backings.
  3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
1. Place sealants so they directly contact and fully wet joint substrates.
  2. Completely fill recesses in each joint configuration.

3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
1. Remove excess sealant from surfaces adjacent to joints.
  2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
  3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

#### 3.4 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

#### 3.5 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION

SECTION 081110

HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
1. Standard hollow-metal steel doors.
  2. Standard hollow-metal steel frames.
  3. Fire-rated doors and frames, 90-minute.
- B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
1. Section 087100 - DOOR HARDWARE for door hardware for steel doors.
  2. Section 099000 - PAINTING AND COATING for field painting steel doors and frames.

1.3 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, core descriptions, label compliance, fire-resistance rating, temperature-rise ratings, and finishes for each type of steel door and frame specified.
- B. Shop Drawings:
1. Elevations of each door design.
  2. Details of doors, including vertical and horizontal edge details and metal thicknesses.
  3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
  4. Locations of reinforcement and preparations for hardware.
  5. Details of each different wall opening condition.
  6. Details of anchorages, joints, field splices, and connections.
  7. Details of accessories.
  8. Details of moldings, removable stops, and glazing.
  9. Details of conduit and preparations for power, signal, and control systems.
  10. Verification of all existing conditions and dimensions.
- C. Schedule: Provide a schedule of hollow metal work prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with door hardware schedule.

- D. Qualification Data: For Installer.
- E. Product Test Reports: Based on evaluation of comprehensive fire tests performed by a qualified testing agency, for each type of standard steel door and frame.

#### 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and approved by manufacturer.
- B. Source Limitations: Obtain standard steel doors and frames through one source from a single manufacturer.
- C. Fire-Rated Door, Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings and temperature-rise limits indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.
  - 1. Smoke- and Draft-Control Assemblies: Provide an assembly with gaskets listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing according to UL 1784 and installed in compliance with NFPA 105.
- D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver doors and frames palletized, wrapped, or crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.
- B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.
- C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch-high wood blocking. Do not store in a manner that traps excess humidity.
  - 1. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

#### 1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

#### 1.7 COORDINATION

- A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Ceco Door Products; an ASSA ABLOY Group Company.
  2. CURRIES Company; an ASSA ABLOY Group Company.
  3. de LaFontaine
  4. Mesker Door Inc.
  5. Pioneer Industries, Inc.
  6. Philipp Manufacturing Company.
  7. Republic Builders Products Company.
  8. Steelcraft; an Ingersoll-Rand company.

### 2.2 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 metallic coating.
- D. Frame Anchors: ASTM A 591/A 591M, Commercial Steel (CS), 40Z coating designation; mill phosphatized.
1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.
- E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
- F. Powder-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow metal frames of type indicated.
- G. Grout: ASTM C 476, except with a maximum slump of 4 inches, as measured according to ASTM C 143/C 143M.
- H. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool with 6- to 12-lb/cu. ft. density; with maximum flame-spread and smoke-development indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.
- I. Isolation Coating: ASTM D 1187, cold-applied asphalt emulsion, VOC compliant, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

## 2.3 STANDARD STEEL DOORS

- A. General: Provide doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces, unless otherwise indicated. Comply with ANSI A250.8.
  - 1. Design: Flush panel.
  - 2. Core Construction:
    - a. Fire Door Core: As required to provide fire-protection and temperature-rise ratings indicated.
  - 3. Top and Bottom Edges: Closed with flush or inverted 0.042-inch-thick end closures or channels of same material as face sheets.
  - 4. Tolerances: Comply with SDI 117, "Manufacturing Tolerances for Standard Steel Doors and Frames."
- B. Interior Doors: Face sheets fabricated from cold-rolled steel sheet. Provide doors complying with requirements indicated below by referencing ANSI A250.8 for level and model and ANSI A250.4 for physical-endurance level:
  - 1. Level 2 and Physical Performance Level B (Heavy Duty), Model 2 (Seamless), 1-3/4 inches thick.
- C. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.
- D. Fabricate concealed stiffeners and hardware reinforcement from either cold- or hot-rolled steel sheet.

## 2.4 STANDARD STEEL FRAMES

- A. General: Comply with ANSI A250.8 and with details indicated for type and profile.
- B. Interior Frames: Fabricated from cold-rolled steel sheet.
  - 1. Fabricate frames with full profile welded joints.
  - 2. Frames for Level 2 Steel Doors: 0.053-inch-thick steel sheet.
- C. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcement plates from same material as frames.

## 2.5 FRAME ANCHORS

- A. Jamb Anchors:
  - 1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
  - 2. Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch thick.
  - 3. Compression Type for Drywall Slip-on Frames: Adjustable compression anchors.

4. Postinstalled Expansion Type for In-Place Concrete or Masonry: Minimum 3/8-inch-diameter bolts with expansion shields or inserts. Provide pipe spacer from frame to wall, with throat reinforcement plate, welded to frame at each anchor location.

B. Floor Anchors: Formed from same material as frames, not less than 0.042 inch (1.0 mm) thick, and as follows:

1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.
2. Separate Topping Concrete Slabs: Adjustable-type anchors with extension clips, allowing not less than 2-inch height adjustment. Terminate bottom of frames at finish floor surface.

## 2.6 STOPS AND MOLDINGS

A. Fixed Frame Moldings: Formed integral with hollow metal frames, a minimum of 5/8 inch high unless otherwise indicated.

## 2.7 ACCESSORIES

A. Mullions and Transom Bars: Join to adjacent members by welding or rigid mechanical anchors.

B. Ceiling Struts: Minimum 1/4-inch-thick by 1-inch-wide steel.

C. Grout Guards: Formed from same material as frames, not less than 0.016 inch thick.

## 2.8 FABRICATION

A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.

B. Tolerances: Fabricate hollow metal work to tolerances indicated in SDI 117.

C. Hollow Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.

1. Full Profile Welded Frames: Weld joints continuously; grind, fill, dress, and make smooth, flush, and not visible.
2. Sidelight and Transom Bar Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as doorframe. Fasten members at crossings and to jambs by butt welding.
3. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
4. Grout Guards: Weld guards to frame at back of hardware mortises in frames to be grouted.
5. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
6. Jamb Anchors: Provide number and spacing of anchors as follows:

- a. Masonry Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
    - 1) Two anchors per jamb up to 60 inches high.
    - 2) Three anchors per jamb from 60 to 90 inches high.
    - 3) Four anchors per jamb from 90 to 120 inches high.
    - 4) Four anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 120 inches high.
  - b. Stud-Wall Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
    - 1) Three anchors per jamb up to 60 inches high.
    - 2) Four anchors per jamb from 60 to 90 inches high.
    - 3) Five anchors per jamb from 90 to 96 inches high.
    - 4) Five anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high.
    - 5) Two anchors per head for frames above 42 inches wide and mounted in metal-stud partitions.
  - c. Compression Type: Not less than two anchors in each jamb.
  - d. Postinstalled Expansion Type: Locate anchors not more than 6 inches from top and bottom of frame. Space anchors not more than 26 inches o.c.
7. Door Silencers: Except on weather-stripped doors, drill stops to receive door silencers as follows. Keep holes clear during construction.
- a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
  - b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.
- D. Fabricate concealed stiffeners, edge channels, and hardware reinforcement from either cold- or hot-rolled steel sheet.
- E. Hardware Preparation: Factory prepare hollow metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Section 087100 - DOOR HARDWARE.
1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
  2. Reinforce doors and frames to receive nontemplated, mortised and surface-mounted door hardware.
  3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
  4. Coordinate locations of conduit and wiring boxes for electrical connections with Division 26 - ELECTRICAL.
- 2.9 STEEL FINISHES
- A. Prime Finish: Apply manufacturer's standard epoxy primer immediately after cleaning and pretreating.

1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.
2. Refer to Section 099000 – PAINTING AND COATING for field-applied coating.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for embedded and built-in anchors to verify actual locations before frame installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.
- B. Prior to installation, adjust and securely brace welded hollow metal frames for squareness, alignment, twist, and plumbness to the following tolerances:
  1. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
  2. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
  3. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
  4. Plumbness: Plus or minus 1/16 inch, measured at jambs on a perpendicular line from head to floor.
- C. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

#### 3.3 INSTALLATION

- A. General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.
- B. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11.
  1. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.

- a. At fire-protection-rated openings, install frames according to NFPA 80.
  - b. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
  - c. Install door silencers in frames before grouting.
  - d. Remove temporary braces necessary for installation only after frames have been properly set and secured.
  - e. Check plumbness, squareness, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
  - f. Field apply isolation coating to backs of frames that are filled with grout.
2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with postinstalled expansion anchors.
- a. Floor anchors may be set with powder-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
3. Metal-Stud Partitions: Solidly pack mineral-fiber insulation behind frames.
4. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout.
5. Concrete Walls: Solidly fill space between frames and concrete with grout. Take precautions, including bracing frames, to ensure that frames are not deformed or damaged by grout forces.
6. In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
7. In-Place Gypsum Board Partitions: Secure frames in place with postinstalled expansion anchors through floor anchors at each jamb. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
8. Ceiling Struts: Extend struts vertically from top of frame at each jamb to overhead structural supports or substrates above frame unless frame is anchored to masonry or to other structural support at each jamb. Bend top of struts to provide flush contact for securing to supporting construction. Provide adjustable wedged or bolted anchorage to frame jamb members.
9. Installation Tolerances: Adjust hollow metal door frames for squareness, alignment, twist, and plumb to the following tolerances:
- a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
  - b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
  - c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
  - d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.
- C. Hollow Metal Doors: Fit hollow metal doors accurately in frames, within clearances specified below. Shim as necessary.
1. Fire-Rated Doors: Install doors with clearances according to NFPA 80.

3.4 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.
- B. Remove grout and other bonding material from hollow metal work immediately after installation.
- C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
- D. Metallic-Coated Surfaces: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

END OF SECTION

SECTION 085123

STEEL WINDOW REPAIR

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS, which are hereby, made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work included: Provide labor, materials and equipment necessary to complete the work of this Section, including, but not limited to the following:
  - 1. Replace existing glazing compound for all windows as per charts shown on drawings.
  - 2. Replace cracked single pane glass lites where indicated.

1.3 SUBMITTALS

- A. Product Data: Include manufacturer's literature for all materials intended for use.
- B. Sample: Submit 10 – inch long sample of glazing compound.
- C. Qualification Data: Provide contractor's qualifications.

1.4 QUALITY ASSURANCE

- A. Pre-bid inspection: Perform inspection of all conditions prior to bidding.
- B. Qualification of Contractor: Provide written documentation and photographic illustration documenting the Contractors previous successful experience in the restoration of steel windows. Provide location, date, type and number of windows and contact information for owner/general contractor/project supervisor/owner's representative as well as photographs adequate, in the judgment of the Architect, to illustrate the repair work.
- C. Mock-ups. Provide mock-up of one entire window for approval by the Architect before proceeding with the work. Repeat mock-up procedures, as required until approval of acceptable samples.
- D. Glazing: Glazing compounds and methods of glazing shall conform with applicable requirements of FGMA Glazing Manual.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Glazing Compounds:
  - 1. For Face Glazing: ASTM C669, elastic glazing compound, manufactured for back bedding and face glazing of metal sash, in color as selected by the Architect from manufacturer's full range.
  - 2. Elastomeric Joint Sealant: Sealant for glass to glass edge joints shall be a silicone sealant conforming with ASTM C920, black in color.
- B. Glass Lites: Provide single pane glass lites to match existing. Provide tempered glass where safety glass is required.

## PART 3 - EXECUTION

### 3.1 REPAIR PROCEDURES

- A. Completely remove existing glazing compounds with chisel/small utility knife. Remove any rust exposed by putty removal. Replace void sections of putty ensuring a flush joint to the interior muntin surface.
- B. Replace cracked glass lites with new glass lites.
- C. Glazing of Metal Windows with Compound:
  - 1. Face Glazing: Glass shall be glazed around all edges and exterior face of glass with glazing compound hereinbefore specified. Provide setting blocks and glazing clips as required. Clean surfaces to be glazed with solvent. Apply and compress glazing compound; smooth out and point with putty knife at 30-degree to 45-degree angle. Finished surfaces shall be uniformly smooth at required angle, mitered at corners.
- D. Allow full seven-day cure of all glazing putty prior to final painting.
- E. Provide final cleaning of interior and exterior glass surfaces. All interior glass shall be cleaned and accepted prior to the installation of interior storm sash. All surface dirt shall be removed from sills, jamb, sash and frame prior to installation of storm sash

END OF SECTION

SECTION 087100

DOOR HARDWARE

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
1. Commercial door hardware.
  2. Cylinders for doors specified in other Sections as listed below.
  3. Panic devices for all doors to stairways.
  4. Comply with Owner requirements, including coordinating with Owner's keying system.
- B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
1. Section 081110 - HOLLOW METAL DOORS AND FRAMES for door silencers provided as part of the frame.

1.3 SUBMITTALS

- A. Product Data: Include installation details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
  2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening.
    - a. Organize door hardware sets in same order as in the Door Hardware Schedule at the end of Part 3.
  3. Content: Include the following information:
    - a. Type, style, function, size, label, hand, and finish of each door hardware item.
    - b. Manufacturer of each item.

- c. Fastenings and other pertinent information.
  - d. Location of each door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
  - e. Explanation of abbreviations, symbols, and codes contained in schedule.
  - f. Mounting locations for door hardware.
  - g. Door and frame sizes and materials.
4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Keying Schedule: Prepared by or under the supervision of supplier, detailing the Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations.
- D. Product Certificates: Signed by manufacturers of electrified door hardware certifying that products furnished comply with requirements.
1. Certify that door hardware approved for use on types and sizes of labeled fire doors complies with listed fire door assemblies.
- E. Qualification Data: For firms and persons specified in "Quality Assurance" Article.
1. Include lists of completed projects with project names and addresses of architects and owners, and other information specified.
- F. Maintenance Data: For each type of door hardware to include in maintenance manuals specified in Division 01.
- G. Warranties: Special warranties specified in this Section.
- 1.4 QUALITY ASSURANCE
- A. Installer Qualifications: An experienced installer who has completed door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- B. Supplier Qualifications: Door hardware supplier with warehousing facilities in Project's vicinity and who is or employs a qualified Architectural Hardware Consultant, available during the course of the Work to consult with Contractor, Designer, and the Owner about door hardware and keying.
- C. Architectural Hardware Consultant Qualifications: A person who is currently certified by the Door and Hardware Institute as an Architectural Hardware Consultant and who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project.
1. Electrified Door Hardware Qualifications: Experienced in providing consulting services for electrified door hardware installations.

- D. Source Limitations: Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.
1. Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated. Manufacturers that are listed to perform electrical modifications, by a testing and inspecting agency acceptable to authorities having jurisdiction, are acceptable.
- E. Regulatory Requirements: Comply with provisions of the following:
1. Where indicated to comply with accessibility requirements, comply with Massachusetts Architectural Access Board and the Americans with Disabilities Act (ADA), "Accessibility Guidelines for Buildings and Facilities (ADAAG)," as follows:
    - a. Handles, Pulls, Latches, Locks, and other Operating Devices: Shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist.
    - b. Door Closers: Comply with the following maximum opening-force requirements indicated:
      - 1) Interior Hinged Doors: 5 lbf applied perpendicular to door.
      - 2) Sliding or Folding Doors: 5 lbf applied parallel to door at latch.
      - 3) Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
    - c. Thresholds: Not more than 1/2 inch high. Bevel raised thresholds with a slope of not more than 1:2.
  2. NFPA 101: Comply with the following for means of egress doors:
    - a. Latches, Locks, and Exit Devices: Not more than 15 lbf to release the latch. Locks shall not require the use of a key, tool, or special knowledge for operation.
    - b. Delayed-Egress Locks: Lock releases within 15 seconds after applying a force not more than 15 lbf for not more than 3 seconds.
    - c. Door Closers: Not more than 30 lbf to set door in motion and not more than 15 lbf (67 N) to open door to minimum required width.
    - d. Thresholds: Not more than 1/2 inch high.
- F. Fire-Rated Door Assemblies: Provide door hardware for assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 252.
1. Test Pressure: Test at atmospheric pressure.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

- C. Deliver keys to manufacturer of key control system.

1.6 COORDINATION

- A. Coordinate layout and installation of recessed pivots and closers with floor construction. Cast anchoring inserts into concrete. Concrete, reinforcement, and formwork requirements are specified in Section 033000 - CAST-IN-PLACE CONCRETE.
- B. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

1.7 WARRANTY

- A. General Warranty: Special warranties specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Special Warranty: Written warranty, executed by manufacturer agreeing to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period. Failures include, but are not limited to, the following:
  - 1. Structural failures including excessive deflection, cracking, or breakage.
  - 2. Faulty operation of operators and door hardware.
  - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
- C. Warranty Period: Three years from date of Substantial Completion, unless otherwise indicated.
- D. Warranty Period for Manual Closers: Ten years from date of Substantial Completion.

1.8 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for the Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. Scheduled and acceptable manufacturers must provide all the functions and features of the specified product or it will not be approved.

Item	Scheduled Manufacturer	Acceptable Manufacturers
Hinges	Ives (IVE)	McKinney, Hager
Continuous Hinges	Markar (MAR)	Stanley, Ives
Locksets & Deadlocks	Schlage (SCH)	Sargent, Best
Keypad Locks	Schlage (SCH)	User Standard

Cylinders & Keying	Schlage (SCH)	User Standard
Exit Devices & Mullions	Von Duprin (VON)	Precision, Sargent
Door Closers & Auto Operators	LCN (LCN)	Norton
Push & Pull Plates & Bars	Ives (IVE)	Rockwood, Burns
Flush Bolts & Coordinators	Ives (IVE)	Rockwood, Burns
Protection Plates	Ives (IVE)	Rockwood, Burns
Stops & Holders	Ives (IVE)	Rockwood, Burns
Overhead Stops	Glynn-Johnson (GLY)	Sargent, Rixson
Silencers	Ives (IVE)	Rockwood, Burns
Thresholds & Weather-strip	National Guard (NGP)	Pemko, Reese

- B. Hand of Door: Drawings show direction of slide, swing, or hand of each door leaf. Furnish each item of hardware for proper installation and operation of door movement as shown.
- C. Where the hardware specified is not adaptable to the finished shape or size of the members requiring hardware, furnish suitable types having the same operation and quality as the type specified, subject to the Architect's approval.

## 2.2 MATERIALS

### A. Fasteners:

1. Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.
2. Furnish screws for installation with each hardware item. Finish exposed (exposed under any condition) screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work as closely as possible including "prepared for paint" surfaces to receive painted finish.
3. Provide concealed fasteners for hardware units that are exposed when door is closed except to the extent that no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work unless their use is the only means of reinforcing the work adequately to fasten the hardware securely.
4. All hardware shall be installed with the fasteners provided by the hardware manufacturer.

### B. Hinges:

1. The following is a guide for hinge type required for this specification:
  - a. 1-3/4" thick doors up to and including 3'-0" wide:
    - 1) Exterior: standard weight, ball bearing, bronze/stainless steel, 4-1/2" high
    - 2) Interior: standard weight, ball bearing, steel, 4-1/2" high
  - b. 1-3/4" thick doors over 3'-0" wide:
    - 1) Exterior: heavy weight, ball bearing, bronze/stainless steel, 5" high
    - 2) Interior: heavy weight, ball bearing, steel, 5" high
2. Provide 3 hinges per door leaf for doors 90 inches or less in height, and one additional hinge for each 30 inches of additional door height.
3. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
  - a. Steel Hinges: Steel pins
  - b. Non-Ferrous Hinges: Stainless steel pins

- c. Out-Swinging Exterior Doors: Non-removable pins
    - d. Interior Doors: Non-rising pins
  - 4. The width of hinges shall be 4-1/2" or as required for clearance.
- C. Continuous Hinges:
  - 1. Provide continuous hinges fabricated from anodized aluminum or stainless steel as scheduled.
  - 2. Provide bearings at each hinge knuckle for quiet, smooth, self-lubricating operation.
  - 3. Hinges shall be capable of supporting door weights up to 600 pounds, and shall be successfully tested for 1,500,000 cycles.
  - 4. Install hinges with fasteners supplied by manufacturer. Hole pattern shall be symmetrically patterned.
- D. Flush Bolts:
  - 1. Automatic and manual flush bolts shall have forged bronze faceplates with extruded brass levers and with wrought brass guides and strikes. Doors up to 7'-6" in height shall have 12" steel or brass rods. Manual flush bolts for doors over 7'-6" in height shall be increased by 6" for each additional 6" of door height. Provide dust-proof strikes where scheduled.
- E. Coordinators:
  - 1. Where pairs of doors are equipped with automatic flush bolts, an astragal, or other hardware that requires synchronized closing of the doors, provide a bar-type coordinating device, surface applied to the underside of the stop at the frame head.
  - 2. Finish of the coordinator to be prime coat to receive the same finish paint as the doorframe.
  - 3. Provide a filler bar of the correct length for the unit to span the entire width of the opening, and appropriate brackets for parallel arm door closers and surface vertical rod exit device strikes. Factory-prep coordinators for vertical rod devices if required.
- F. Mortise Locks:
  - 1. Mortise locks shall be certified as ANSI A156.13, Grade 1 Operational, Grade 1 Security, and shall be manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance. Lock case shall be multi-function and field reversible for handing without opening the case.
  - 2. Locks are to have a standard 2-3/4" backset with a full 3/4" throw 2-piece stainless steel mechanical anti-friction latch bolt. Deadbolt shall be a full 1" throw, constructed of stainless steel.
  - 3. Lever trim shall be solid brass, bronze, or stainless steel, cast or forged in the design specified, with wrought roses and external lever spring cages. Levers shall be thru-bolted to assure proper alignment, and shall have a 2-piece spindle. Lever trim on the secure side of doors serving rooms considered by the authority having jurisdiction to be hazardous shall have a tactile warning. Lever design shall be Schlage 17A or similar.
  - 4. Locks meeting this specification: Schlage L9000 series, Sargent 8200 series, Best 40H series.
- G. Keypad Locks:
  - 1. Locksets shall be mortise type with 3-piece, beveled, stainless steel latch bolts with 3/4" throw and equipped with an anti-friction latch.
  - 2. Chassis shall accommodate ANSI standard mortise lock prep with a 2-3/4" nominal backset for 1-3/4" doors.
  - 3. Locksets shall be provided from the factory with appropriate handing.

4. Levers shall operate independently of each other. Lock shall use patented clutch mechanism to deter vandalism and maximize durability. Disablement of secured levers shall not permit latch bolt retraction from secure side, but shall allow egress. Lever trim on the secure side of doors serving rooms considered by the authority having jurisdiction to be hazardous, or where noted on the door schedule, shall be knurled to provide a tactile warning. Lever style to be Schlage 17.
5. Provide key cylinder for emergency key override, with Everest/Primus core.
6. Electrical operation shall be battery operated, capable of 80,000 operating cycles using four AA alkaline batteries. Lock shall be resistant to radio frequency and electrostatic discharge.
7. Outside escutcheon shall have keypad and iButton reader.
8. Visual red and green LED indicators shall indicate activation, operational systems status, system error conditions and low power conditions.
9. Locks meeting this specification: Schlage/Locknetics CM5596.

H. Exit Devices:

1. Exit devices shall be touchpad type, fabricated of brass, bronze, stainless steel, or aluminum, plated to the standard architectural finishes to match the balance of the door hardware.
2. All exit devices shall incorporate a fluid damper or other device which eliminates noise associated with exit device operation. Touchpad shall extend a minimum of one half of the door width. End-cap will have two-point attachment to door. Touch-pad shall match exit device finish, and shall be stainless steel for US26, US26D, US28, US32, and US32D finishes. Only compression springs will be used in devices, latches, and outside trims or controls.
3. All devices to incorporate a security dead latching feature.
4. Provide roller strikes for all rim and surface mounted vertical rod devices, ASA strikes for mortise devices, and manufacturer's standard strikes for concealed vertical rod devices.
5. Mechanism case shall sit flush on the face of all flush doors, or spacers shall be furnished to fill gaps behind devices. Where glass trim or molding projects off the face of the door, provide glass bead kits.
6. All non-fire-rated exit devices shall have cylinder dogging.
7. Where lever handles are specified as outside trim for exit devices, provide heavy-duty lever trims with forged or cast escutcheon plates. Provide vandal-resistant levers that will travel to a 90-degree down position when more than 35 pounds of torque are applied, and which can easily be re-set. Lever style will match the lever style of the locksets.
8. Exit devices shall be UL listed panic exit hardware. All exit devices for fire rated openings shall be UL labeled fire exit hardware.
9. Provide electrical options as scheduled.
10. Exit devices meeting this specification: Von Duprin 98 series, Precision Apex series, Sargent 80 series with dead latching.

I. Door Closers:

1. Door closers shall have fully hydraulic, full rack and pinion action with a high strength cast iron or cast aluminum cylinder. Cylinder body shall be 1-1/2" in diameter, and double heat-treated pinion shall be 11/16" in diameter.
2. Hydraulic fluid shall be of a type requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F. Fluid shall be fireproof and shall pass the requirements of the UL10C "positive pressure" fire test.
3. Spring power shall be continuously adjustable over the full range of closer sizes, and allow for reduced opening force for the physically handicapped. Hydraulic regulation

- shall be by tamper-proof, non-critical valves. Closers shall have separate adjustment for latch speed, general speed, and back check.
4. All closers shall have solid forged steel main arms (and forged forearms for parallel arm closers).
  5. Closers shall not incorporate a pressure relief valve.
  6. All closers shall have metal covers.
  7. Closer cylinders, arms, and metal covers shall have a powder coating finish which has been certified to exceed 100 hours salt spray testing by an independent testing laboratory used by BHMA for ANSI certification. For metal components that can't be powder coated, a special rust inhibiting finish (SRI) must be used.
  8. Door closers meeting this specification: LCN 4010/4110 series, Norton 7500/PR7560 (standard screws).
- J. Push Plates: 8" wide x 16" high x 0.050" thick. Where door stile does not allow 8" wide plates, 4" wide plates may be used.
- K. Door Pulls & Push Bars: Solid bar stock, diameter and length as scheduled. Push bars shall be of sufficient length to span from center to center of each stile.
- L. Protection Plates: Provide kick plates as scheduled, with 4 beveled edges. Furnish with machine or wood screws, finished to match plates. Plates shall be 8" high x 2" LWOD on single doors, 1" LWOD on pairs of doors.
- M. Door Stops and Holders:
1. It shall be the responsibility of the hardware supplier to provide door stops for all doors in accordance with the following requirements:
    - a. Wall stops shall be used wherever possible.
    - b. Where wall stops cannot be used, provide dome type floor stops of the proper height.
    - c. At any opening where a wall or floor stop cannot be used, a heavy-duty overhead stop must be used.
- N. Thresholds and Weatherstrip: Furnish as scheduled and per architectural details. Match finish of other items as closely as possible. Provide only those units where resilient or flexible seal strip is easily replaceable and readily available.
- O. Silencers: "Push-in" type silencers for each hollow metal or wood frame, 3 for each single frame, 2 for each pair frame. Omit where gasketing is scheduled.

## 2.3 FINISHES

- A. With the exception of all items listed below, the finish of all hardware shall be US26D - satin chrome or US32D - satin stainless steel.
- B. Exceptions are as follows:
1. Door Closers: Aluminum powder coat finish.
  2. Coordinators: Prime painted.
  3. Thresholds: Mill finish aluminum.
  4. Weatherstrip and Sweeps: Clear anodized aluminum.
  5. Silencers: Grey.

## 2.4 KEYING

- A. All locks and cylinders shall be construction master keyed and master keyed per the Owner's instructions, to existing Everest/Primus key system.
- B. All locks and cylinders, except cylinders for keypad locks will be interchangeable core type.
- C. Provide 3 keys per lock, 6 construction master keys, and a total of 6 master keys for each group.
- D. All master keys shall be delivered directly to the Owner by the hardware supplier, who shall obtain a receipt for delivery of same.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Steel Doors and Frames: Comply with DHI A115 series.
  - 1. Surface-Applied Door Hardware: Drill and tap doors and frames according to SDI 107.
- B. Wood Doors: Comply with DHI A115-W series.

### 3.3 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
  - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
- B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work. Do not install surface-mounted items until finishes have been completed on substrates involved.
  - 1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.

2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

- C. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Section 079200 - JOINT SEALANTS.

### 3.4 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 30 degrees.
2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
3. Door Closers: Adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the leading edge of the door.

- B. Six-Month Adjustment: Approximately six months after date of Substantial Completion, Installer shall perform the following:

1. Examine and readjust each item of door hardware as necessary to ensure function of doors, door hardware, and electrified door hardware.
2. Consult with and instruct the Owner's personnel on recommended maintenance procedures.
3. Replace door hardware items that have deteriorated or failed due to faulty design, materials, or installation of door hardware units.

### 3.5 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items as necessary to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

END OF SECTION

SECTION 099000  
PAINTING AND COATING

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
1. Field painting of exposed interior items and surfaces.
  2. Field painting of all steel windows, interior and exterior.
  3. Surface preparation for painting.
- B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
1. Section 055150 - METAL RAILINGS for shop priming ferrous metal.
  2. Section 081110 - HOLLOW METAL DOORS AND FRAMES for factory priming steel doors and frames.

1.3 DEFINITIONS AND EXTENT

- A. General: Standard coating terms defined in ASTM D 16 apply to this Section.
1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
  2. Eggshell refers to low-sheen finish with a gloss range between 20 and 35 when measured at a 60-degree meter.
  3. Semigloss refers to medium-sheen finish with a gloss range between 35 and 70 when measured at a 60-degree meter.
  4. Full gloss refers to high-sheen finish with a gloss range more than 70 when measured at a 60-degree meter.
- B. This Section includes surface preparation and field painting of exposed exterior and interior items and surfaces.
1. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.
- C. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned,

paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.

1. Painting includes field painting of exposed bare and covered pipes and ducts (including color coding), hangers, exposed steel and iron supports, and surfaces of mechanical and electrical equipment that do not have a factory-applied final finish.
- D. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
1. Prefinished items include the following factory-finished components:
    - a. Finished mechanical and electrical equipment.
    - b. Light fixtures.
  2. Concealed surfaces include walls or ceilings in the following generally inaccessible spaces:
    - a. Foundation spaces.
    - b. Furred areas.
    - c. Ceiling plenums.
    - d. Utility tunnels.
    - e. Pipe spaces.
    - f. Duct shafts.
    - g. Elevator shafts.
  3. Finished metal surfaces include the following:
    - a. Anodized aluminum.
    - b. Stainless steel.
    - c. Chromium plate.
    - d. Copper and copper alloys.
    - e. Bronze and brass.
  4. Operating parts include moving parts of operating equipment and the following:
    - a. Valve and damper operators.
    - b. Linkages.
    - c. Sensing devices.
    - d. Motor and fan shafts.
  5. Labels: Do not paint over UL, FMG, or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.
- 1.4 SUBMITTALS
- A. Product Data: For each paint system indicated. Include block fillers and primers.
1. Material List: An inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.

2. Manufacturer's Information: Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material.
- B. Samples for Verification: For each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.
1. Provide stepped Samples, defining each separate coat, including block fillers and primers. Use representative colors when preparing Samples for review. Resubmit until required sheen, color, and texture are achieved.
  2. Provide a list of materials and applications for each coat of each Sample. Label each Sample for location and application.
  3. Submit two eight inch by 12 inch Samples for each type of finish coating for Architect's review of color and texture only.
- C. Qualification Data: For Applicator.

#### 1.5 QUALITY ASSURANCE

- A. Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B. Source Limitations: Obtain block fillers and primers for each coating system from the same manufacturer as the finish coats.
- C. Mockups: Provide a full-coat benchmark finish sample for each type of coating and substrate required. Comply with procedures specified in PDCA P5. Duplicate finish of approved sample Submittals.
1. Architect will select one room or surface to represent surfaces and conditions for application of each type of coating and substrate.
    - a. Wall Surfaces: Provide samples on at least 100 sq. ft.
    - b. Small Areas and Items: Architect will designate items or areas required.
  2. Apply benchmark samples, according to requirements for the completed Work, after permanent lighting and other environmental services have been activated. Provide required sheen, color, and texture on each surface.
    - a. After finishes are accepted, Architect will use the room or surface to evaluate coating systems of a similar nature.
  3. Final approval of colors will be from benchmark samples.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:
1. Product name or title of material.
  2. Product description (generic classification or binder type).
  3. Manufacturer's stock number and date of manufacture.

4. Contents by volume, for pigment and vehicle constituents.
  5. Thinning instructions.
  6. Application instructions.
  7. Color name and number.
  8. VOC content.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain storage containers in a clean condition, free of foreign materials and residue.
1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily.

#### 1.7 PROJECT CONDITIONS

- A. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F.
- B. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F.
- C. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.
1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

#### 1.8 EXTRA MATERIALS

- A. Furnish extra materials that match and are from same production runs as products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Paint: Furnish two unopened gallons of each type of paint and coating work, in color and gloss as used for the Project.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work are listed in the Finish Schedule at the end of this Section.

#### 2.2 PAINT MATERIALS, GENERAL

- A. Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

- B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
  - 1. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed substitutions.
  - 2. Colors: As selected by Architect.
  
- C. VOC Content for Interior Paints and Coatings: Products shall comply with VOC limits of authorities having jurisdiction and, for interior paints and coatings applied at Project site, the following VOC limits, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
  - 1. Flat Paints and Coatings: 50 g/L.
  - 2. Nonflat Paints and Coatings: 150 g/L.
  - 3. Dry-Fog Coatings: 400 g/L.
  - 4. Primers, Sealers, and Undercoaters: 200 g/L.
  - 5. Anticorrosive and Antirust Paints Applied to Ferrous Metals: 250 g/L.
  - 6. Zinc-Rich Industrial Maintenance Primers: 340 g/L.
  - 7. Pretreatment Wash Primers: 420 g/L.
  - 8. Floor Coatings: 100 g/L.
  - 9. Shellacs, Clear: 730 g/L.
  - 10. Shellacs, Pigmented: 550 g/L.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for paint application.
  - 1. Proceed with paint application only after unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
  - 2. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.
  
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
  - 1. Notify Architect about anticipated problems when using the materials specified over substrates primed by others.

#### 3.2 PREPARATION

- A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical

or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- B. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove oil and grease before cleaning.
1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions and technical bulletins for each particular substrate condition and as specified.
1. Provide barrier coats over incompatible primers or remove and reprime.
  2. Cementitious Materials: Prepare concrete, concrete unit masonry, cement plaster, and mineral-fiber-reinforced cement panel surfaces to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
    - a. Use abrasive blast-cleaning methods if recommended by paint manufacturer.
    - b. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish paint to blister and burn, correct this condition before application. Do not paint surfaces if moisture content exceeds that permitted in manufacturer's written instructions.
    - c. Clean concrete floors to be painted with a 5 percent solution of muriatic acid or other etching cleaner. Flush the floor with clean water to remove acid, neutralize with ammonia, rinse, allow to dry, and vacuum before painting.
  3. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
    - a. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
    - b. Prime, stain, or seal wood to be painted immediately on delivery. Prime edges, ends, faces, undersides, and back sides of wood, including cabinets, counters, cases, and paneling.
    - c. If transparent finish is required, backprime with spar varnish.
    - d. Backprime paneling on interior partitions where masonry, plaster, or other wet wall construction occurs on back side.
    - e. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately on delivery.
  4. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC's recommendations.

- a. Exterior Exposed Steel: Clean steel surfaces in accordance with SSPC-SP 6/NACE No. 3 Commercial Blast Cleaning. Abrasive blast cleaned surfaces shall exhibit a uniform, angular profile of 1.5-3.0 mils. Prime cleaned surfaces within 8 hours and prior to surface rusting.
  - b. Interior Exposed Steel, in Humid Environments: Clean steel surfaces in accordance with SSPC-SP 6/NACE No. 3 Commercial Blast Cleaning. Abrasive blast cleaned surfaces shall exhibit a uniform, angular profile of 1.5-3.0 mils. Prime cleaned surfaces within 8 hours and prior to surface rusting.
  - c. Interior Exposed Steel, in Dry Environments: Clean steel surfaces in accordance with SSPC-SP2 or SP3 Hand or Power Tool Cleaning.
5. Galvanized Surfaces: Clean galvanized surfaces in accordance with SSPC-SP16 Brush off Blast Cleaning of Galvanized Steel and NonFerrous Metals, to achieve a minimum 1 mil anchor profile.
- D. Material Preparation: Mix and prepare paint materials according to manufacturer's written instructions.
1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
  2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
  3. Use only thinners approved by paint manufacturer and only within recommended limits.
- E. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

### 3.3 APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
1. Paint colors, surface treatments, and finishes are indicated in the paint schedules.
  2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
  3. Provide finish coats that are compatible with primers used.
  4. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, grilles, convector covers, covers for finned-tube radiation, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.
  5. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
  6. Paint interior surfaces of ducts with a flat, nonspecular black paint where visible through registers or grilles.
  7. Paint backsides of access panels and removable or hinged covers to match exposed surfaces.
  8. Finish exterior doors and doors in wet areas on tops, bottoms, and side edges the same as exterior faces.
  9. Sand lightly between each succeeding enamel or varnish coat.

- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
1. The number of coats and film thickness required are the same regardless of application method. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
  2. Omit primer over metal surfaces that have been shop primed and touchup painted.
  3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure that edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
  4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure, and until application of another coat of paint does not cause undercoat to lift or lose adhesion.
- C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
1. Brushes: Use brushes best suited for type of material applied. Use brush of appropriate size for surface or item being painted.
  2. Rollers: Use rollers of carpet, velvet-back, or high-pile sheep's wool as recommended by manufacturer for material and texture required.
  3. Spray Equipment: Use airless spray equipment with orifice size as recommended by manufacturer for material and texture required.
- D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate to achieve dry film thickness indicated. Provide total dry film thickness of the entire system as recommended by manufacturer.
- E. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to items exposed in equipment rooms and occupied spaces.
- F. Mechanical items to be painted include, but are not limited to, the following:
1. Uninsulated metal piping.
  2. Uninsulated plastic piping.
  3. Pipe hangers and supports.
  4. Tanks that do not have factory-applied final finishes.
  5. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets.
  6. Duct, equipment, and pipe insulation having "all-service jacket" or other paintable jacket material.
  7. Mechanical equipment that is indicated to have a factory-primed finish for field painting.
- G. Electrical items to be painted include, but are not limited to, the following:
1. Switchgear.
  2. Panelboards.
  3. Electrical equipment that is indicated to have a factory-primed finish for field painting.

- H. Block Fillers: Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled.
- I. Prime Coats: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.
- J. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- K. Transparent (Clear) Finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, runs, cloudiness, color irregularity, brush marks, orange peel, nail holes, or other surface imperfections.
  - 1. Provide satin finish for final coats.
- L. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

#### 3.4 FIELD QUALITY CONTROL

- A. The Owner reserves the right to invoke the following test procedure at any time and as often as the Owner deems necessary during the period when paint is being applied:
  - 1. The Owner will engage a qualified independent testing agency to sample paint material being used. Samples of material delivered to Project will be taken, identified, sealed, and certified in the presence of Contractor.
  - 2. Testing agency will perform appropriate tests for the following characteristics as required by the Architect.
  - 3. The Architect may direct Contractor to stop painting if test results show material being used does not comply with specified requirements. Contractor shall remove noncomplying paint from Project site, pay for testing, and repaint surfaces previously coated with the noncomplying paint. If necessary, Contractor may be required to remove noncomplying paint from previously painted surfaces if, on repainting with specified paint, the two coatings are incompatible.

#### 3.5 CLEANING

- A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site.
  - 1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping without scratching or damaging adjacent finished surfaces.

### 3.6 PROTECTION

- A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.
- B. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.
  - 1. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

### 3.7 PAINT SCHEDULE

- A. Schedule: Provide products and number of coats specified. Use of manufacturer's proprietary product names to designate colors, materials, generic class, standard of quality and performance criteria and is not intended to imply that products named are required to be used to the exclusion of equivalent performing products of other manufacturers.
- B. Exterior Paint Schedule:
  - 1. Exterior Prepainted Steel, for Sandblasting and Painted Finish:
    - a. Surface Preparation- SSPC-SP 6 Commercial Blast Cleaning.
    - b. One Coat:
      - 1) Tnemec 90-97 or 90G-1K97 at 3 to 3.5 mils DFT.
      - 2) PPG PMC Amercoat 68 MCZ at 3.0 mils DFT.
      - 3) Dupont Ganicin 80% Zinc load Zinc Rich Primer at 3.0 to 3.5 mils DFT.
    - c. And One Coat:
      - 1) Tnemec 73 Endura-Shield at 3.0 to 4.0 mils DFT.
      - 2) PPG PMC Amerlock 400 at 4.0 DFT.
      - 3) Dupont Imron 2.8 at 4.0 to 5.0 mils DFT.
    - d. And One Coat:
      - 1) Tnemec 1070, 1071, or 1072 Flouronar at 2.5 to 3.5 mils DFT.
      - 2) PPG PMC Corolon Coating at 5.0 mils DFT.
      - 3) Dupont Flouropolymer at 3.0 mils DFT.
- C. Interior Paint Schedule:
  - 1. Interior Gypsum Wallboard and Plaster, Latex Paint Finish:
    - a. One Coat, Primer:
      - 1) Moore Eco Spec WB Interior Latex Primer 372.
      - 2) Duron Genesis Latex Primer.
      - 3) S-W ProMar 200 Zero-VOC Latex Wall Primer.
      - 4) PPG Pure Performance Latex Primer.
      - 5) California Paint Envirotech Zero VOC Primer 646.

- b. And Two Coats, Flat Finish: At ceilings, and elsewhere as indicated.
    - 1) Moore Eco Spec WB Interior Latex Flat 373.
    - 2) Duron Genesis Latex Flat.
    - 3) S-W ProMar 200 Zero-VOC Latex Flat.
    - 4) PPG Pure Performance Latex Eggshell.
    - 5) California Paint Envirotech Zero VOC Flat 633.or
  - c. And Two Coats, Eggshell Finish: At walls, and elsewhere as indicated.
    - 1) Moore Eco Spec WB Interior Latex Eggshell 374.
    - 2) Duron Genesis Latex Eggshell.
    - 3) S-W ProMar 200 Zero-VOC Latex Eggshell.
    - 4) PPG Pure Performance Latex Eggshell.
    - 5) California Paint Envirotech Zero VOC Eggshell 631.or
  - d. And Two Coats, Semi-Gloss Finish: At toilet rooms, other wet areas, and elsewhere as indicated.
    - 1) Moore Eco Spec WB Interior Latex Semi-Gloss 376.
    - 2) Duron Genesis Latex Semi-Gloss.
    - 3) S-W ProMar 200 Zero-VOC Latex Semi-Gloss.
    - 4) PPG Pure Performance Latex Semi-Gloss.
    - 5) California Paint Envirotech Zero VOC Semi-Gloss 663.
2. Interior Concrete Masonry Units, Epoxy/Urethane Coating:
- a. Surface Preparation: Cured, clean and dry, free of surface contaminants.
  - b. One Coat:
    - 1) Tnemec 130 Envirofil at 100 sqft/gal.
    - 2) PPG PMC Nu-Klad 965 at 100 sqft/gal.
    - 3) Dupont 25P at 100 sq/ft/gal.
    - 4) International Acrylic Cementitious Block Filler at 80 sqft/gal.
  - c. And One Coat:
    - 1) Tnemec 280 Tneme-Glaze at 6.0 8.0 mils DFT.
    - 2) PPG PMC Amercoat 351 6.0 to 8.0 mils DFT.
    - 3) Dupont 100% Solids Epoxy at 7.0 to 9.0 mils DFT.
    - 4) International Interseal 670 HS at 8.0 to 10.0 mils DFT.
  - d. And One Coat:
    - 1) Tnemec 1080 or 1081 EnduraShield at 3.0 to 4.0 mils DFT.
    - 2) PPG PMC AmerShield VOC at 3.0 to 4.0 mils DFT.
    - 3) Dupont Imron WB Urethane at 3.0 to 4.0 mils DFT.
    - 4) International Water Borne Urethane at 3.0 to 4.0 mils DFT.

3. Interior Concrete Walls Exposed to View, Urethane Coating:
  - a. Surface Preparation: Cured, clean and dry, free of surface contaminants.
  - b. And One Coat:
    - 1) Tnemec 201 Epoxoprime at 3.0- 4.0 mils DFT.
    - 2) PPG PMC Amerlock Sealer at 3.0 to 4.5 mils DFT.
    - 3) Dupont Hi-Solids Colar primer at 3.0 to 4.0 mils DFT.
    - 4) International Interseal 670 HS at 3.0 to 4.0 mils DFT.
  - c. And One Coat:
    - 1) Tnemec 280 Tneme-glaze at 6.0 to 8.0 mils DFT.
    - 2) PPG PMC Amercoat 351 Epoxy at 6.0 to 8.0 mils DFT.
    - 3) Dupont 100 % Solids Epoxy at 8.0-10.0 mils.
    - 4) International Interseal 670 HS at 3.0 to 4.0 mils DFT.
  - d. And One Coat:
    - 1) Tnemec 1080 or 1081 EnduraShield at 3.0 to 3.5 mils DFT.
    - 2) PPG PMC AmerShield VOC at 2.0 to 3.0 mils DFT.
    - 3) Dupont WB Urethane at 3.5 to 4.0 mils DFT.
    - 4) International Water Borne Urethane at 3.0 to 4.0 mils DFT.
4. Interior Concrete Ceiling, Painted Finish:
  - a. Surface Preparation: Cured clean and dry.
  - b. One Coat:
    - 1) Tnemec 151 Elasto-grip at 2.0 mils DFT.
    - 2) RD Coatings Multiprim at 1.0-2.0 mils DFT.
  - c. And Two Coats:
    - 1) Tnemec 158 Biolastic at 8.0 mils DFT.
    - 2) RD Coatings ElastoFlex at 6.0 to 8.0 mils DFT.
5. Interior Metals (Not specified to receive other coating systems/not shop finished), Epoxy Painted Finish:
  - a. One Coat: Approved primer, in shop under other Sections (where specified). If not shop primed, provide primer recommended by finish coating manufacturer.
  - b. And One Coat:
    - 1) Tnemec 1029 Enduratone at 2.0 mils DFT.
    - 2) PPG PMC Amerlock 400 at 2.0 to 4.0 mils DFT.
    - 3) Dupont 25P at 3.0 to 4.0 mils DFT.
    - 4) International Interseal 670 HS at 3.0 mils DFT.

- c. And One Coat:
  - 1) Tnemec 1029 Enduratone at 2.0 to 3.0 mils DFT.
  - 2) PPG PMC Amerlock 400 at 2.0 to 4.0 mils DFT.
  - 3) Dupont High Solids Acrylic Coating 3.0 mils DFT.
  - 4) International Intercryl 530 at 3.0 to 4.0 mils DFT.
  
- 6. Interior Exposed Steel, Joists, Ductwork, Conduit and Similar Items, Dry-Fall or Dry-Fog Painted System:
  - a. One Coat:
    - 1) Tnemec 115 WB Unibond at 2.5 to 3.0 mils DFT.
    - 2) PPG PMC Amercoat 220 Acrylic at 3.0 mils DFT.
    - 3) International Intercryl 530 at 2.5 to 3.0 mils DFT.
    - 4) RD Coatings Muracryl at 2.0 to 3.0 mils DFT.
  
- 7. Mechanical and Electrical Work: Paint all exposed items throughout the project except factory finished items with factory-applied baked enamel finishes which occur in mechanical rooms or areas, and excepting chrome or nickel plating, stainless steel, and aluminum other than mill finished. Paint all exposed ductwork and inner portion of all ductwork. Same as specified for other interior metals, hereinabove.

END OF SECTION

SECTION 101500

PHOTOLUMINESCENT SAFETY PRODUCTS

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
  - 1. Contrast strips at stair edges.
  - 2. Directional signage at each floor.
- B. Related Work: The following items are not included in this Section and will be performed under the designated Sections:
  - 1. Section 055100 - METAL STAIRS AND RAILINGS for metal railing substrates.
  - 2. Section 096510 - RESILIENT FLOORING AND ACCESSORIES for resilient flooring and stair accessory product substrates.

1.3 SUBMITTALS

- A. Product Data: For each type of unit indicated.
- B. Shop Drawings: Show fabrication and installation details. Include plans, elevations, sections, details, and attachments to other work.
  - 1. Provide message list for each sign, including large-scale details of wording, lettering, artwork, and braille layout.
- C. Samples:
  - 1. Submit two foot wide sample of rubber stair tread and riser with integrated photoluminescent strip.
  - 2. Provide full scale sample of signage for approval.
  - 3. Provide sample of manufacturer recommended adhesive for application on existing concrete.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of unit through one source from a single manufacturer.

- B. Regulatory Requirements: Comply with the Massachusetts Architectural Access Board, Americans with Disabilities Act (ADA) and with code provisions as adopted by authorities having jurisdiction.

#### 1.5 PROJECT CONDITIONS

- A. Field Measurements: Where sizes of signs are determined by dimensions of surfaces on which they are installed, verify dimensions by field measurement before fabrication and indicate measurements on Shop Drawings.

#### 1.6 COORDINATION

- A. For signs supported by or anchored to permanent construction, advise installers of anchorage devices about specific requirements for placement of anchorage devices and similar items to be used for attaching signs.

### PART 2 - PRODUCTS

#### 2.1 PHOTOLUMINESCENT GUIDANCE PRODUCTS

- A. Step Edge: N3011 Contrast Strip by Ecoglo, non-skid aluminum strip with both plastic laminate and non-skid surface.
- B. Signage: Provide photoluminescent signage panel by Ecoglo in size and with custom lettering as indicated on drawings.
- C. Tactile and Braille Copy: Manufacturer's standard process for producing copy complying with ADA Accessibility Guidelines and ICC/ANSI A117.1. Text shall be accompanied by Grade 2 braille. Produce precisely formed characters with square cut edges free from burrs and cut marks.
  - 1. Raised-Copy Thickness: Not less than 1/32 inch
- D. Symbols of Accessibility: Provide 6-inch- high symbol fabricated from opaque nonreflective vinyl film, 0.0035-inch nominal thickness, with pressure-sensitive adhesive backing suitable for both exterior and interior applications.

#### 2.2 ACCESSORIES

- A. Mounting Methods: Use manufacturer recommended adhesives or double-sided vinyl tape fabricated from materials that are not corrosive to sign material and mounting surface.
- B. Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation conditions affecting performance.
  - 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of safety products.
  - 2. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Prepare substrates according to manufacturer's written recommendations to ensure adhesion of safety products.
- B. Comply with manufacturer's written instructions for installation.
- C. Set units accurately in position and attach securely to substrates.

#### 3.3 INSTALLATION

- A. General: Locate signs and accessories where indicated, using mounting methods of types described and in compliance with manufacturer's written instructions.
  - 1. Install signs level, plumb, and at heights indicated, with sign surfaces free from distortion and other defects in appearance.
  - 2. Interior Wall Signs: Install signs on walls adjacent to latch side of door where applicable. Where not indicated or possible, such as double doors, install signs on nearest adjacent walls. Locate to allow approach within 3 inches of sign without encountering protruding objects or standing within swing of door.
- B. Wall-Mounted Panel Signs: Attach panel signs to wall surfaces using methods indicated below:
  - 1. Vinyl-Tape Mounting: Use double-sided foam tape to mount signs to smooth, nonporous surfaces. Do not use this method for vinyl-covered or rough surfaces.

#### 3.4 ADJUSTING AND CLEANING

- A. Remove and replace units that are damaged or not installed in proper alignment with adjacent work.
- B. Protect safety products from marks, marks, indentations, and other damage from construction operations during remainder of construction period. Use protection methods recommended in writing by manufacturer.

END OF SECTION