

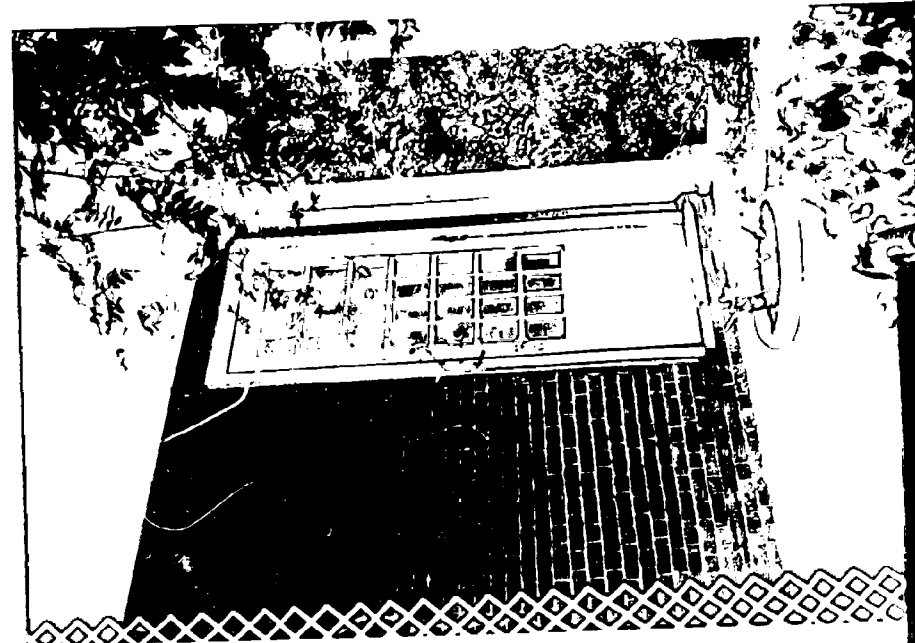
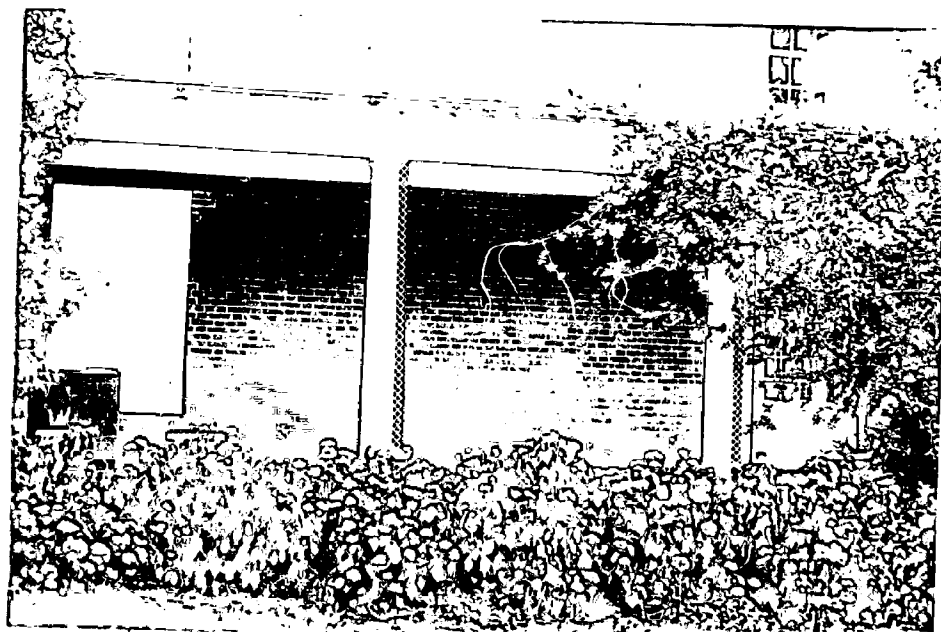
28/13 Norwood

No. #

NORWOOD

17201 Norwood Road
Sandy Spring, Maryland

P H O T O G R A P H S



(Upper left) North elevation of east wing (1867)

(Upper right) North elevation of original house (18th century)

(Middle left) West porch at west end of original house showing (left) existing window to be altered as door, matching (right) existing door, formerly a window; see next photo.

(Middle right) Door at west end, near SW corner, formerly a window.

(Lower left) South porch detail; this porch and its counterpart on the north was added in the 1930s, replacing longer porches added 1867.

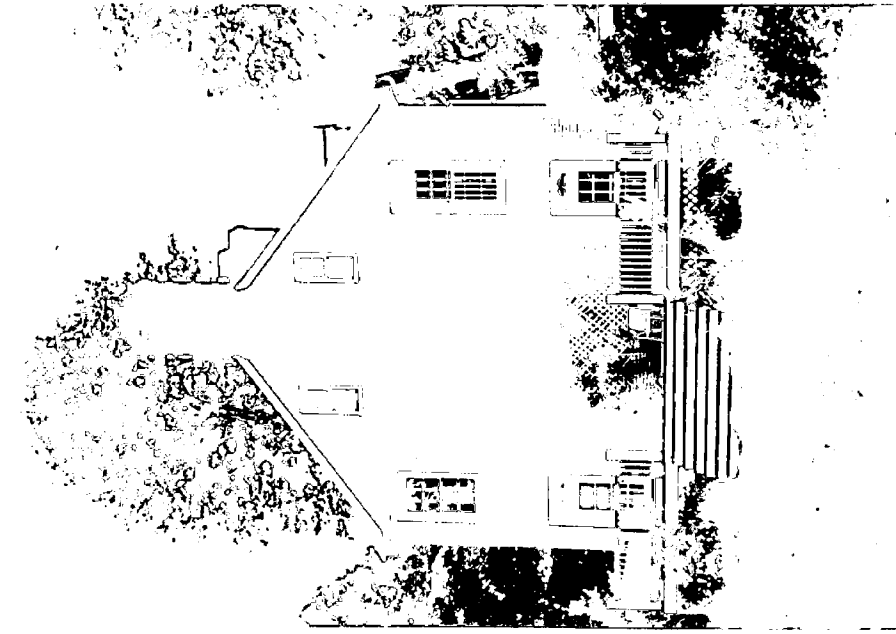
NORWOOD
17201 Norwood Road
Sandy Spring, Maryland 20860

(Middle left) South elevation of original house (18th century).

(Middle right) South elevation of east wing (1867). The 1st story window without shutters originally was a door.

(Lower left) West end (original house).

(Lower right) East end (east wing). The two 1st story doors originally were windows as was the 2nd story door.



Description of Properties Surrounding NORWOOD

The land west and south of NORWOOD, across Norwood Road, is farmland and no structures are close enough to the road to describe; they are barely discernible.

Friends House, a retirement community sponsored by the Religious Society of Friends (Quakers), owns the property north and east of NORWOOD. To the north is the main building of Friends House, a contemporary rambling one-story brick structure with a dramatically high roof over the main section. Directly east of NORWOOD house and its front lawn is an open field with a small new pine plantation at its northern edge. North of the pine plantation -- east of the northerly portion of the NORWOOD property -- is a small development of frame, one-story house associated with Friends House.

(Upper right) Friends House, a contemporary structure for this retirement community.

(Middle left) View from Norwood Road looking north immediately east of property. The vacant land with new pine plantation in distance belongs to Friends House.

(Middle right) View looking east from easterly property line of Norwood showing Friends House cottages north of the pine plantation described in the adjacent photograph.

(Lower left) View looking southeast from Norwood Road near Norwood's lane showing vacant land opposite the south front with a contemporary development further east along Norwood Road.



NORWOOD

17201 Norwood Road
Sandy Spring, Maryland 20860

Views of property from the public
road; and views of surrounding
property.



(Middle left) Norwood from the east, from
Norwood Road.

(Middle right) Norwood from the south, from
Norwood Road.

(Lower left) View looking west across Norwood
Road from Norwood's lane.

(Lower right) View from Norwood Road, opposite
Norwood's lane, looking south across the inter-
section of Norwood Road (left) and Dr. Bird
Road (right). At the extreme left is the SW
corner of the Norwood property.



III ①

HISTORIC PRESERVATION COMMISSION

Staff Review Form

Applicant: Cynthia & Tom Schneider

Applicant's Address: _____

Type of Review:

HAWP X Substantial Alteration _____
Maintenance _____ Demolition _____
Subdivision _____ Other _____

Site No. (Atlas): Norwood 28/13 Master Plan

Site Address: 17201 Norwood Rd.
(if different from applicant) _____

Advertised: Yes _____ X _____ NO _____

Proposed: (describe action to be taken)
Exterior restoration, including replacement of deteriorated wood, shutters,
some door and window work, chimney work.

Staff recommendations and comments:

Part of the work is ordinary maintenance, i.e., painting however some materials
to be replaced (gutters, wood etc.) Recommend approval. Work has been
carefully thought out.

Date: 9-9-88 Staff: AGVH/cm

Signature: _____

HPC Action: _____

Date: _____



Historic Preservation Commission

51 Monroe Street
100 Maryland Avenue, Rockville, Maryland 20850
Suite 1001 279-1327 8097

APPLICATION FOR HISTORIC AREA WORK PERMIT

28

TAX ACCOUNT # 1925984

NAME OF PROPERTY OWNER Cynthia + Tom Schneider TELEPHONE NO. 202 686 5248
(Contract/Purchaser) (Include Area Code)

ADDRESS 3030 Tennyson St., NW Washington DC 20015
CITY STATE ZIP

CONTRACTOR _____ TELEPHONE NO. _____

CONTRACTOR REGISTRATION NUMBER _____

PLANS PREPARED BY James T. Wollon, Jr., Architect TELEPHONE NO. (301) 879-6748
(Include Area Code)

REGISTRATION NUMBER 2529

LOCATION OF BUILDING/PREMISE

House Number 17201 Street Norwood Road

Town/City Sandy Spring, Maryland Election District _____

Nearest Cross Street Dr. Bird Road

Lot _____ Block _____ Subdivision _____

Liber 8333 Folio 021/022 Parcel _____
(there are 2 numbers on my deed)

1A. TYPE OF PERMIT ACTION: (circle one)

Construct	Extend/Add	Alter/Renovate	<u>Repair</u>	Circle One: A/C	Slab	Room Addition			
Wreck/Raze	Move	Install	Revision	Porch	Deck	Fireplace	Shed	Solar	Woodburning Stove
				Fence/Wall (complete Section 4)	<u>Other</u>				

1B. CONSTRUCTION COSTS ESTIMATE \$ 178,342.00

1C. IF THIS IS A REVISION OF A PREVIOUSLY APPROVED ACTIVE PERMIT SEE PERMIT # _____

1D. INDICATE NAME OF ELECTRIC UTILITY COMPANY PERCO

1E. IS THIS PROPERTY A HISTORICAL SITE? Yes

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS

2A. TYPE OF SEWAGE DISPOSAL

01 () WSSC	02 () Septic
03 () Other _____	

2B. TYPE OF WATER SUPPLY

01 () WSSC	02 () Well
03 () Other _____	

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

4A. HEIGHT _____ feet _____ inches

4B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:

- On party line/Property line _____
- Entirely on land of owner _____
- On public right of way/easement _____ (Revocable Letter Required).

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

Cynthia P. Schneider Sept. 7, 1988
 Signature of owner or authorized agent (agent must have signature notarized on back) Date

APPROVED Christa J. Miller For Chairperson, Historic Preservation Commission

DISAPPROVED _____ Signature _____ Date 9/19/88

APPLICATION/PERMIT NO: _____ FILING FEE: \$ _____
 DATE FILED: _____ PERMIT FEE: \$ _____
 DATE ISSUED: _____ BALANCE \$ _____
 OWNERSHIP CODE: _____ RECEIPT NO: _____ FEE WAIVED: _____

SEE REVERSE SIDE FOR INSTRUCTIONS
 * that applicants obtain HPC approval before installing window screens

THE FOLLOWING ITEMS MUST BE COMPLETED AND THE REQUIRED DOCUMENTS MUST ACCOMPANY THIS APPLICATION

DESCRIPTION OF PROPOSED WORK: (including composition, color and texture of materials to be used:)

This project is a general restoration of the existing fabric. The original (westerly) section was built in the 18th century. The east wing was added about 1867 and all the windows of the original section were changed at that time to their existing design. The small entry porches date from the early 20th century. The proposed work includes limited repointing of brickwork, replacement of porch steps with railings, limited replacement of deteriorated wood including a few shutters, restoration and addition of screen and storm doors, changing one window into a door, restoring another door which is now a window, total painting of woodwork and metal roofing, new gutters and downspouts and a new lightning protection system.

(If more space is needed, attach additional sheets on plain or lined paper to this application)

ATTACH TO THIS APPLICATION (2) COPIES OF: SUCH SITE PLANS (lot dimensions, building location with dimensions, drives, walks, fences, patios, etc. proposed or existing) and/or ARCHITECTURAL DRAWINGS (floor plans, elevations, etc.), PHOTOGRAPHS OF THE AREA AFFECTED, as are necessary to fully describe the proposed work.

MAIL OR DELIVER THE APPLICATION AND ALL REQUIRED DOCUMENTS TO THE:
HISTORIC PRESERVATION COMMISSION
100 MARYLAND AVENUE
ROCKVILLE, MARYLAND 20850

S P E C I F I C A T I O N S

NORWOOD

Volume 1

Exterior & Chimney Restoration

S P E C I F I C A T I O N S

Volume 1

Exterior and Chimney Restoration

N O R W O O D

17201 Norwood Road
Sandy Spring, Maryland 20860

the residence of

Mr. and Mrs. Thomas J. Schneider

1 September 1988

James Thomas Wollon, Jr., A.I.A.
Architect
600 Craigs Corner Road
Havre de Grace, Maryland 21078
Telephone: (301) 879-6748

Wallace S. Lippincott
Mechanical & Electrical Engineer
108 East 25th Street
Baltimore, Maryland 21218
Telephone: (301) 889-0699

Skarda and Associates, Inc.
Structural Engineers
4806 York Road
Baltimore, Maryland 21212
Telephone: (301) 435-9330

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AIA Document A701

Instructions to Bidders

1987 EDITION

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| 3. BIDDING DOCUMENTS | 8. FORM OF AGREEMENT BETWEEN OWNER
AND CONTRACTOR |
| 4. BIDDING PROCEDURES | |
| 5. CONSIDERATION OF BIDS | |

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Supplementary Instructions to Bidders

1. CONTRACT DOCUMENTS

- a. The Specifications, Working Drawings and Addenda (which may be issued by the Architect) will be incorporated into the Contract for Construction.
- b. The 1987 edition of the General Conditions of the Contract for Construction (AIA Document A201) will be incorporated into the Contract for Construction.

2. APPLICATIONS FOR PAYMENT

The Contractor's periodic Applications for Payment shall be submitted to the Architect in triplicate utilizing AIA Documents G702 and G703, a copy of which follows this page.

3. RETAINAGE

10% of each Application for Payment shall be retained until Substantial Completion at which time the retainage shall be reduced to 5%.

APPLICATION AND CERTIFICATE FOR PAYMENT

AIA DOCUMENT G702

(Instructions on reverse side)

TO (OWNER):

PROJECT:

APPLICATION NO:

Distribution to:

- Owner, Architect, Contractor checkboxes

FROM (CONTRACTOR):

VIA (ARCHITECT):

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.

Table with columns: CHANGE ORDER SUMMARY, ADDITIONS, DEDUCTIONS. Includes sub-table for Change Orders approved in previous months by Owner.

- 1. ORIGINAL CONTRACT SUM
2. Net change by Change Orders
3. CONTRACT SUM TO DATE
4. TOTAL COMPLETED & STORED TO DATE
5. RETAINAGE
6. TOTAL EARNED LESS RETAINAGE
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT
8. CURRENT PAYMENT DUE
9. BALANCE TO FINISH, PLUS RETAINAGE

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...

CONTRACTOR:

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

By: Date:

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...

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.

CONTINUATION SHEET

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 TO:

ARCHITECT'S PROJECT NO:

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		E THIS PERIOD	F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G		H BALANCE TO FINISH (C - G)	I RETAINAGE
			D FROM PREVIOUS APPLICATION (D + E)	E THIS PERIOD			G TOTAL COMPLETED AND STORED TO DATE (D + E + F)	G % (G ÷ C)		

INSTRUCTION SHEET

AIA DOCUMENTS G702a/G703a

A. GENERAL INFORMATION:

AIA Document G702, *Application and Certificate for Payment*, is to be used in conjunction with AIA Document G703, *Continuation Sheet*. These documents are designed to be used on a project where a Contractor has a direct Agreement with the Owner. Procedures for their use are covered in AIA Document A201, *General Conditions of the Contract for Construction*, 1976 Edition.

B. COMPLETING THE G702 FORM:

After the Contractor has completed AIA Document G703, *Continuation Sheet*, summary information should be transferred to AIA Document G702, *Application and Certificate for Payment*.

The Contractor should sign the form, have it notarized and submit it, together with G703, to the Architect.

The Architect should review it and, if it is acceptable, complete the Architect's Certificate for Payment on this form. The completed form should be forwarded to the Owner.

C. COMPLETING THE G703 FORM:

Heading: Complete the information here consistent with similar information on AIA Document G702, *Application and Certificate for Payment*.

Columns A, B & C: These columns should be completed by identifying the various portions of the project and their scheduled value consistent with the schedule of values submitted to the Architect at the commencement of the project or as subsequently adjusted. The breakdown may be by sections of the Work or by Subcontractors and should remain consistent throughout the Project. Multiple pages should be used when required.

Column C should be subtotaled at the bottom when more than one page is used and totaled on the last page. Initially, this total should equal the original Contract Sum. The total of column C may be adjusted by Change Orders during the project.

Column D: Enter in this column the amount of completed Work covered by the previous application. This is the sum of columns D and E from the previous application. Values from column F (Materials Presently Stored) from prior payments should not be entered in this column.

Column E: Enter here the value of Work completed until the time of this application, including the value of materials incorporated in the project which were listed on the previous Application and Certificate for Payment under Materials Presently Stored (column F).

Column F: Enter here the value of Materials Presently Stored for which payment is sought. The total of the column *must* be recalculated at the end of each pay period. This value covers both materials newly stored for which payment is sought and materials previously stored which are not yet incorporated into the Project. Mere payment by the Owner for stored materials does not result in a deduction from this column. Only as materials are incorporated into the Project is their value deducted from this column and incorporated into column E (Work Completed-This Period).

Column G: Enter here the total of columns D, E and F. Calculate the percentage completed by dividing column G by column C.

Column H: Enter here the difference between column C (Scheduled Value) and column G (Total Completed and Stored to Date).

Column I: This column is normally used only for contracts where variable retainage is permitted on a line-item basis. It need not be completed on projects where a constant retainage is withheld from the overall contract amount.

Change Orders: Although Change Orders could be incorporated by changing the schedule of values each time a Change Order is added to the Project, this is not normally done. Usually, Change Orders are listed separately, either on their own G703 form or at the end of the basic schedule. The amount of the original contract adjusted by Change Orders is to be entered in the appropriate location on the G702 form.

D. MAKING PAYMENT

The Owner should make payment directly to the Contractor based on the amount certified by the Architect on AIA Document G702, *Application and Certificate for Payment*. The completed form contains the name and address of the Contractor. Payment should not be made to any other party unless specifically indicated on this form.



AIA Document A201

General Conditions of the Contract for Construction

*THIS DOCUMENT HAS IMPORTANT LEGAL CONSEQUENCES; CONSULTATION
WITH AN ATTORNEY IS ENCOURAGED WITH RESPECT TO ITS MODIFICATION*

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GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

ARTICLE 1

GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents consist of the Agreement between Owner and Contractor (hereinafter the Agreement), Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include other documents such as bidding requirements (advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or portions of addenda relating to bidding requirements).

1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Architect and Contractor, (2) between the Owner and a Subcontractor or Sub-subcontractor or (3) between any persons or entities other than the Owner and Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

1.1.3 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by separate contractors.

1.1.5 THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

1.1.6 THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equip-

ment, construction systems, standards and workmanship for the Work, and performance of related services.

1.1.7 THE PROJECT MANUAL

The Project Manual is the volume usually assembled for the Work which may include the bidding requirements, sample forms, Conditions of the Contract and Specifications.

1.2 EXECUTION, CORRELATION AND INTENT

1.2.1 The Contract Documents shall be signed by the Owner and Contractor as provided in the Agreement. If either the Owner or Contractor or both do not sign all the Contract Documents, the Architect shall identify such unsigned Documents upon request.

1.2.2 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

1.2.3 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results.

1.2.4 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

1.2.5 Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

1.3 OWNERSHIP AND USE OF ARCHITECT'S DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS

1.3.1 The Drawings, Specifications and other documents prepared by the Architect are instruments of the Architect's service through which the Work to be executed by the Contractor is described. The Contractor may retain one contract record set. Neither the Contractor nor any Subcontractor, Sub-subcontractor or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications and other documents prepared by the Architect, and unless otherwise indicated the Architect shall be deemed the author of them and will retain all common law, statutory and other reserved rights, in addition to the copyright. All copies of them, except the Contractor's record set, shall be returned or suitably accounted for to the Architect, on request, upon completion of the Work. The Drawings, Specifications and other documents prepared by the Architect, and copies thereof furnished to the Contractor, are for use solely with respect to this Project. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or material or equipment supplier on other projects or for additions to this Project outside the scope of the

Work without the specific written consent of the Owner and Architect. The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are granted a limited license to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Architect appropriate to and for use in the execution of their Work under the Contract Documents. All copies made under this license shall bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents prepared by the Architect. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's copyright or other reserved rights.

1.4 CAPITALIZATION

1.4.1 Terms capitalized in these General Conditions include those which are (1) specifically defined, (2) the titles of numbered articles and identified references to Paragraphs, Subparagraphs and Clauses in the document or (3) the titles of other documents published by the American Institute of Architects.

1.5 INTERPRETATION

1.5.1 In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

ARTICLE 2

OWNER

2.1 DEFINITION

2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Owner" means the Owner or the Owner's authorized representative.

2.1.2 The Owner upon reasonable written request shall furnish to the Contractor in writing information which is necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein at the time of execution of the Agreement and, within five days after any change, information of such change in title, recorded or unrecorded.

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.2.1 The Owner shall, at the request of the Contractor, prior to execution of the Agreement and promptly from time to time thereafter, furnish to the Contractor reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. *[Note: Unless such reasonable evidence were furnished on request prior to the execution of the Agreement, the prospective contractor would not be required to execute the Agreement or to commence the Work.]*

2.2.2 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site.

2.2.3 Except for permits and fees which are the responsibility of the Contractor under the Contract Documents, the Owner shall secure and pay for necessary approvals, easements, assess-

ments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

2.2.4 Information or services under the Owner's control shall be furnished by the Owner with reasonable promptness to avoid delay in orderly progress of the Work.

2.2.5 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, such copies of Drawings and Project Manuals as are reasonably necessary for execution of the Work.

2.2.6 The foregoing are in addition to other duties and responsibilities of the Owner enumerated herein and especially those in respect to Article 6 (Construction by Owner or by Separate Contractors), Article 9 (Payments and Completion) and Article 11 (Insurance and Bonds).

2.3 OWNER'S RIGHT TO STOP THE WORK

2.3.1 If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents as required by Paragraph 12.2 or persistently fails to carry out Work in accordance with the Contract Documents, the Owner, by written order signed personally or by an agent specifically so empowered by the Owner in writing, may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Subparagraph 6.1.3.

2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

2.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may after such seven-day period give the Contractor a second written notice to correct such deficiencies within a second seven-day period. If the Contractor within such second seven-day period after receipt of such second notice fails to commence and continue to correct any deficiencies, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Architect's additional services and expenses made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3

CONTRACTOR

3.1 DEFINITION

3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative.

3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

3.2.1 The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by the Owner pursuant to Subparagraph 2.2.2 and shall at once report to the Architect errors, inconsistencies or omissions discovered. The Contractor shall not be liable to the Owner or Architect for damage resulting from errors, inconsistencies or omissions in the Contract Documents unless the Contractor recognized such error, inconsistency or omission and knowingly failed to report it to the Architect. If the Contractor performs any construction activity knowing it involves a recognized error, inconsistency or omission in the Contract Documents without such notice to the Architect, the Contractor shall assume appropriate responsibility for such performance and shall bear an appropriate amount of the attributable costs for correction.

3.2.2 The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered shall be reported to the Architect at once.

3.2.3 The Contractor shall perform the Work in accordance with the Contract Documents and submittals approved pursuant to Paragraph 3.12.

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless Contract Documents give other specific instructions concerning these matters.

3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons performing portions of the Work under a contract with the Contractor.

3.3.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.

3.3.4 The Contractor shall be responsible for inspection of portions of Work already performed under this Contract to determine that such portions are in proper condition to receive subsequent Work.

3.4 LABOR AND MATERIALS

3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

3.4.2 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

3.5 WARRANTY

3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform with the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

3.6 TAXES

3.6.1 The Contractor shall pay sales, consumer, use and similar taxes for the Work or portions thereof provided by the Contractor which are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

3.7 PERMITS, FEES AND NOTICES

3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit and other permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required when bids are received or negotiations concluded.

3.7.2 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and lawful orders of public authorities bearing on performance of the Work.

3.7.3 It is not the Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations. However, if the Contractor observes that portions of the Contract Documents are at variance therewith, the Contractor shall promptly notify the Architect and Owner in writing, and necessary changes shall be accomplished by appropriate Modification.

3.7.4 If the Contractor performs Work knowing it to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Architect and Owner, the Contractor shall assume full responsibility for such Work and shall bear the attributable costs.

3.8 ALLOWANCES

3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities against which the Contractor makes reasonable objection.

3.8.2 Unless otherwise provided in the Contract Documents:

- .1** materials and equipment under an allowance shall be selected promptly by the Owner to avoid delay in the Work;
- .2** allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;

- .3 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum and not in the allowances;
- .4 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Clause 3.8.2.2 and (2) changes in Contractor's costs under Clause 3.8.2.3.

3.9 SUPERINTENDENT

3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

3.10.2 The Contractor shall prepare and keep current, for the Architect's approval, a schedule of submittals which is coordinated with the Contractor's construction schedule and allows the Architect reasonable time to review submittals.

3.10.3 The Contractor shall conform to the most recent schedules.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

3.11.1 The Contractor shall maintain at the site for the Owner one record copy of the Drawings, Specifications, addenda, Change Orders and other Modifications, in good order and marked currently to record changes and selections made during construction, and in addition approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work.

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

3.12.3 Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for

which submittals are required the way the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review by the Architect is subject to the limitations of Subparagraph 4.2.7.

3.12.5 The Contractor shall review, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals made by the Contractor which are not required by the Contract Documents may be returned without action.

3.12.6 The Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect. Such Work shall be in accordance with approved submittals.

3.12.7 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

3.12.8 The Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and the Architect has given written approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals.

3.12.10 Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents.

3.12.11 When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, the Architect shall be entitled to rely upon the accuracy and completeness of such calculations and certifications.

3.13 USE OF SITE

3.13.1 The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

3.14 CUTTING AND PATCHING

3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.

3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the

Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

3.15 CLEANING UP

3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials.

3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof shall be charged to the Contractor.

3.16 ACCESS TO WORK

3.16.1 The Contractor shall provide the Owner and Architect access to the Work in preparation and progress wherever located.

3.17 ROYALTIES AND PATENTS

3.17.1 The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

3.18 INDEMNIFICATION

3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Paragraph 3.18.

3.18.2 In claims against any person or entity indemnified under this Paragraph 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Paragraph 3.18 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

3.18.3 The obligations of the Contractor under this Paragraph 3.18 shall not extend to the liability of the Architect, the Archi-

tect's consultants, and agents and employees of any of them arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the Architect, the Architect's consultants, and agents and employees of any of them provided such giving or failure to give is the primary cause of the injury or damage.

ARTICLE 4

ADMINISTRATION OF THE CONTRACT

4.1 ARCHITECT

4.1.1 The Architect is the person lawfully licensed to practice architecture or an entity lawfully practicing architecture identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Architect" means the Architect or the Architect's authorized representative.

4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

4.1.3 In case of termination of employment of the Architect, the Owner shall appoint an architect against whom the Contractor makes no reasonable objection and whose status under the Contract Documents shall be that of the former architect.

4.1.4 Disputes arising under Subparagraphs 4.1.2 and 4.1.3 shall be subject to arbitration.

4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT

4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents, and will be the Owner's representative (1) during construction, (2) until final payment is due and (3) with the Owner's concurrence, from time to time during the correction period described in Paragraph 12.2. The Architect will advise and consult with the Owner. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified by written instrument in accordance with other provisions of the Contract.

4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the completed Work and to determine in general if the Work is being performed in a manner indicating that the Work, when completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check quality or quantity of the Work. On the basis of on-site observations as an architect, the Architect will keep the Owner informed of progress of the Work, and will endeavor to guard the Owner against defects and deficiencies in the Work.

4.2.3 The Architect will not have control over or charge of and will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility as provided in Paragraph 3.3. The Architect will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Con-

tractor, Subcontractors, or their agents or employees, or of any other persons performing portions of the Work.

4.2.4 Communications Facilitating Contract Administration. Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate through the Architect. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

4.2.5 Based on the Architect's observations and evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

4.2.6 The Architect will have authority to reject Work which does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable for implementation of the intent of the Contract Documents, the Architect will have authority to require additional inspection or testing of the Work in accordance with Subparagraphs 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work.

4.2.7 The Architect will review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken with such reasonable promptness as to cause no delay in the Work or in the activities of the Owner, Contractor or separate contractors, while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Paragraphs 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Paragraph 7.4.

4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion, will receive and forward to the Owner for the Owner's review and records written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment upon compliance with the requirements of the Contract Documents.

4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying

out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

4.2.11 The Architect will interpret and decide matters concerning performance under and requirements of the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made with reasonable promptness and within any time limits agreed upon. If no agreement is made concerning the time within which interpretations required of the Architect shall be furnished in compliance with this Paragraph 4.2, then delay shall not be recognized on account of failure by the Architect to furnish such interpretations until 15 days after written request is made for them.

4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions so rendered in good faith.

4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

4.3 CLAIMS AND DISPUTES

4.3.1 Definition. A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. Claims must be made by written notice. The responsibility to substantiate Claims shall rest with the party making the Claim.

4.3.2 Decision of Architect. Claims, including those alleging an error or omission by the Architect, shall be referred initially to the Architect for action as provided in Paragraph 4.4. A decision by the Architect, as provided in Subparagraph 4.4.4, shall be required as a condition precedent to arbitration or litigation of a Claim between the Contractor and Owner as to all such matters arising prior to the date final payment is due, regardless of (1) whether such matters relate to execution and progress of the Work or (2) the extent to which the Work has been completed. The decision by the Architect in response to a Claim shall not be a condition precedent to arbitration or litigation in the event (1) the position of Architect is vacant, (2) the Architect has not received evidence or has failed to render a decision within agreed time limits, (3) the Architect has failed to take action required under Subparagraph 4.4.4 within 30 days after the Claim is made, (4) 45 days have passed after the Claim has been referred to the Architect or (5) the Claim relates to a mechanic's lien.

4.3.3 Time Limits on Claims. Claims by either party must be made within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims must be made by written notice. An additional Claim made after the initial Claim has been implemented by Change Order will not be considered unless submitted in a timely manner.

4.3.4 Continuing Contract Performance. Pending final resolution of a Claim including arbitration, unless otherwise agreed in writing the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

4.3.5 Waiver of Claims: Final Payment. The making of final payment shall constitute a waiver of Claims by the Owner except those arising from:

- .1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; or
- .3 terms of special warranties required by the Contract Documents.

4.3.6 Claims for Concealed or Unknown Conditions. If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall so notify the Owner and Contractor in writing, stating the reasons. Claims by either party in opposition to such determination must be made within 21 days after the Architect has given notice of the decision. If the Owner and Contractor cannot agree on an adjustment in the Contract Sum or Contract Time, the adjustment shall be referred to the Architect for initial determination, subject to further proceedings pursuant to Paragraph 4.4.

4.3.7 Claims for Additional Cost. If the Contractor wishes to make Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Paragraph 10.3. If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Architect, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Architect, (4) failure of payment by the Owner, (5) termination of the Contract by the Owner, (6) Owner's suspension or (7) other reasonable grounds, Claim shall be filed in accordance with the procedure established herein.

4.3.8 Claims for Additional Time

4.3.8.1 If the Contractor wishes to make Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay only one Claim is necessary.

4.3.8.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data

substantiating that weather conditions were abnormal for the period of time and could not have been reasonably anticipated, and that weather conditions had an adverse effect on the scheduled construction.

4.3.9 Injury or Damage to Person or Property. If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, of any of the other party's employees or agents, or of others for whose acts such party is legally liable, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after first observance. The notice shall provide sufficient detail to enable the other party to investigate the matter. If a Claim for additional cost or time related to this Claim is to be asserted, it shall be filed as provided in Subparagraphs 4.3.7 or 4.3.8.

4.4 RESOLUTION OF CLAIMS AND DISPUTES

4.4.1 The Architect will review Claims and take one or more of the following preliminary actions within ten days of receipt of a Claim: (1) request additional supporting data from the claimant, (2) submit a schedule to the parties indicating when the Architect expects to take action, (3) reject the Claim in whole or in part, stating reasons for rejection, (4) recommend approval of the Claim by the other party or (5) suggest a compromise. The Architect may also, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim.

4.4.2 If a Claim has been resolved, the Architect will prepare or obtain appropriate documentation.

4.4.3 If a Claim has not been resolved, the party making the Claim shall, within ten days after the Architect's preliminary response, take one or more of the following actions: (1) submit additional supporting data requested by the Architect, (2) modify the initial Claim or (3) notify the Architect that the initial Claim stands.

4.4.4 If a Claim has not been resolved after consideration of the foregoing and of further evidence presented by the parties or requested by the Architect, the Architect will notify the parties in writing that the Architect's decision will be made within seven days, which decision shall be final and binding on the parties but subject to arbitration. Upon expiration of such time period, the Architect will render to the parties the Architect's written decision relative to the Claim, including any change in the Contract Sum or Contract Time or both. If there is a surety and there appears to be a possibility of a Contractor's default, the Architect may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

4.5 ARBITRATION

4.5.1 Controversies and Claims Subject to Arbitration. Any controversy or Claim arising out of or related to the Contract, or the breach thereof, shall be settled by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator or arbitrators may be entered in any court having jurisdiction thereof, except controversies or Claims relating to aesthetic effect and except those waived as provided for in Subparagraph 4.3.5. Such controversies or Claims upon which the Architect has given notice and rendered a decision as provided in Subparagraph 4.4.4 shall be subject to arbitration upon written demand of either party. Arbitration may be commenced when 45 days have passed after a Claim has been referred to the Architect as provided in Paragraph 4.3 and no decision has been rendered.

4.5.2 Rules and Notices for Arbitration. Claims between the Owner and Contractor not resolved under Paragraph 4.4 shall, if subject to arbitration under Subparagraph 4.5.1, be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect, unless the parties mutually agree otherwise. Notice of demand for arbitration shall be filed in writing with the other party to the Agreement between the Owner and Contractor and with the American Arbitration Association, and a copy shall be filed with the Architect.

4.5.3 Contract Performance During Arbitration. During arbitration proceedings, the Owner and Contractor shall comply with Subparagraph 4.3.4.

4.5.4 When Arbitration May Be Demanded. Demand for arbitration of any Claim may not be made until the earlier of (1) the date on which the Architect has rendered a final written decision on the Claim, (2) the tenth day after the parties have presented evidence to the Architect or have been given reasonable opportunity to do so, if the Architect has not rendered a final written decision by that date, or (3) any of the five events described in Subparagraph 4.3.2.

4.5.4.1 When a written decision of the Architect states that (1) the decision is final but subject to arbitration and (2) a demand for arbitration of a Claim covered by such decision must be made within 30 days after the date on which the party making the demand receives the final written decision, then failure to demand arbitration within said 30 days' period shall result in the Architect's decision becoming final and binding upon the Owner and Contractor. If the Architect renders a decision after arbitration proceedings have been initiated, such decision may be entered as evidence, but shall not supersede arbitration proceedings unless the decision is acceptable to all parties concerned.

4.5.4.2 A demand for arbitration shall be made within the time limits specified in Subparagraphs 4.5.1 and 4.5.4 and Clause 4.5.4.1 as applicable, and in no event shall it be made after the date when institution of legal or equitable proceedings based on such Claim would be barred by the applicable statute of limitations as determined pursuant to Paragraph 13.7.

4.5.5 Limitation on Consolidation or Joinder. No arbitration arising out of or relating to the Contract Documents shall include, by consolidation or joinder or in any other manner, the Architect, the Architect's employees or consultants, except by written consent containing specific reference to the Agreement and signed by the Architect, Owner, Contractor and any other person or entity sought to be joined. No arbitration shall include, by consolidation or joinder or in any other manner, parties other than the Owner, Contractor, a separate contractor as described in Article 6 and other persons substantially involved in a common question of fact or law whose presence is required if complete relief is to be accorded in arbitration. No person or entity other than the Owner, Contractor or a separate contractor as described in Article 6 shall be included as an original third party or additional third party to an arbitration whose interest or responsibility is insubstantial. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of a dispute not described therein or with a person or entity not named or described therein. The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

4.5.6 Claims and Timely Assertion of Claims. A party who files a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded. When a party fails to include a Claim through oversight, inadvertence or excusable neglect, or when a Claim has matured or been acquired subsequently, the arbitrator or arbitrators may permit amendment.

4.5.7 Judgment on Final Award. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

ARTICLE 5

SUBCONTRACTORS

5.1 DEFINITIONS

5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect will promptly reply to the Contractor in writing stating whether or not the Owner or the Architect, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or Architect to reply promptly shall constitute notice of no reasonable objection.

5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. The Contract Sum shall be increased or decreased by the difference in cost occasioned by such change and an appropriate Change Order shall be issued. However, no increase in the Contract Sum shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

5.2.4 The Contractor shall not change a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such change.

5.3 SUBCONTRACTUAL RELATIONS

5.3.1 By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement which may be at variance with the Contract Documents. Subcontractors shall similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner provided that:

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Paragraph 14.2 and only for those subcontract agreements which the Owner accepts by notifying the Subcontractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

5.4.2 If the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted.

ARTICLE 6

CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided elsewhere in the Contract Documents.

6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules when directed to do so. The Contractor shall make any revisions to the construction schedule and Contract Sum deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights which apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

6.2 MUTUAL RESPONSIBILITY

6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

6.2.3 Costs caused by delays or by improperly timed activities or defective construction shall be borne by the party responsible therefor.

6.2.4 The Contractor shall promptly remedy damage wrongfully caused by the Contractor to completed or partially completed construction or to property of the Owner or separate contractors as provided in Subparagraph 10.2.5.

6.2.5 Claims and other disputes and matters in question between the Contractor and a separate contractor shall be subject to the provisions of Paragraph 4.3 provided the separate contractor has reciprocal obligations.

6.2.6 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Paragraph 3.14.

6.3 OWNER'S RIGHT TO CLEAN UP

6.3.1 If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish as described in Paragraph 3.15, the Owner may clean up and allocate the cost among those responsible as the Architect determines to be just.

ARTICLE 7

CHANGES IN THE WORK

7.1 CHANGES

7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

7.1.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are so changed in a proposed Change Order or Construction Change Directive that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

7.2 CHANGE ORDERS

7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect, stating their agreement upon all of the following:

- .1 a change in the Work;
- .2 the amount of the adjustment in the Contract Sum, if any; and
- .3 the extent of the adjustment in the Contract Time, if any.

7.2.2 Methods used in determining adjustments to the Contract Sum may include those listed in Subparagraph 7.3.3.

7.3 CONSTRUCTION CHANGE DIRECTIVES

7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 unit prices stated in the Contract Documents or subsequently agreed upon;

.3 cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or

.4 as provided in Subparagraph 7.3.6.

7.3.4 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

7.3.5 A Construction Change Directive signed by the Contractor indicates the agreement of the Contractor therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

7.3.6 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the method and the adjustment shall be determined by the Architect on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, a reasonable allowance for overhead and profit. In such case, and also under Clause 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Subparagraph 7.3.6 shall be limited to the following:

- .1 costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' or workmen's compensation insurance;
- .2 costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
- .3 rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
- .5 additional costs of supervision and field office personnel directly attributable to the change.

7.3.7 Pending final determination of cost to the Owner, amounts not in dispute may be included in Applications for Payment. The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

7.3.8 If the Owner and Contractor do not agree with the adjustment in Contract Time or the method for determining it, the adjustment or the method shall be referred to the Architect for determination.

7.3.9 When the Owner and Contractor agree with the determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and shall be recorded by preparation and execution of an appropriate Change Order.

7.4 MINOR CHANGES IN THE WORK

7.4.1 The Architect will have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

ARTICLE 8

TIME

8.1 DEFINITIONS

8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

8.1.2 The date of commencement of the Work is the date established in the Agreement. The date shall not be postponed by the failure to act of the Contractor or of persons or entities for whom the Contractor is responsible.

8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Paragraph 9.8.

8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

8.2 PROGRESS AND COMPLETION

8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor. The date of commencement of the Work shall not be changed by the effective date of such insurance. Unless the date of commencement is established by a notice to proceed given by the Owner, the Contractor shall notify the Owner in writing not less than five days or other agreed period before commencing the Work to permit the timely filing of mortgages, mechanic's liens and other security interests.

8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

8.3 DELAYS AND EXTENSIONS OF TIME

8.3.1 If the Contractor is delayed at any time in progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control, or by delay authorized by the Owner pending arbitration, or by other causes which the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Paragraph 4.3.

8.3.3 This Paragraph 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9

PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

9.2 SCHEDULE OF VALUES

9.2.1 Before the first Application for Payment, the Contractor shall submit to the Architect a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

9.3 APPLICATIONS FOR PAYMENT

9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment for operations completed in accordance with the schedule of values. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and reflecting retainage if provided for elsewhere in the Contract Documents.

9.3.1.1 Such applications may include requests for payment on account of changes in the Work which have been properly authorized by Construction Change Directives but not yet included in Change Orders.

9.3.1.2 Such applications may not include requests for payment of amounts the Contractor does not intend to pay to a Subcontractor or material supplier because of a dispute or other reason.

9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

9.4 CERTIFICATES FOR PAYMENT

9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the

Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Subparagraph 9.5.1.

9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's observations at the site and the data comprising the Application for Payment, that the Work has progressed to the point indicated and that, to the best of the Architect's knowledge, information and belief, quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to minor deviations from the Contract Documents correctable prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

9.5 DECISIONS TO WITHHOLD CERTIFICATION

9.5.1 The Architect may decide not to certify payment and may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Subparagraph 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Subparagraph 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also decide not to certify payment or, because of subsequently discovered evidence or subsequent observations, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss because of:

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or another contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 persistent failure to carry out the Work in accordance with the Contract Documents.

9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

9.6 PROGRESS PAYMENTS

9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

9.6.2 The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of such Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in similar manner.

9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

9.6.4 Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor except as may otherwise be required by law.

9.6.5 Payment to material suppliers shall be treated in a manner similar to that provided in Subparagraphs 9.6.2, 9.6.3 and 9.6.4.

9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

9.7 FAILURE OF PAYMENT

9.7.1 If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect or awarded by arbitration, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, which shall be accomplished as provided in Article 7.

9.8 SUBSTANTIAL COMPLETION

9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use.

9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected. The Contractor shall proceed promptly to complete and correct items on the list. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or desig-

nated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not in accordance with the requirements of the Contract Documents, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. The Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion. When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion which shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate.

9.8.3 Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Architect, the Owner shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof as provided in the Contract Documents.

9.9 PARTIAL OCCUPANCY OR USE

9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Subparagraph 11.3.11 and authorized by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Subparagraph 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

9.10 FINAL COMPLETION AND FINAL PAYMENT

9.10.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make

such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's observations and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in said final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Subparagraph 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be cancelled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims. The making of final payment shall constitute a waiver of claims by the Owner as provided in Subparagraph 4.3.5.

9.10.4 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment. Such waivers shall be in addition to the waiver described in Subparagraph 4.3.5.

ARTICLE 10

PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

10.1.2 In the event the Contractor encounters on the site material reasonably believed to be asbestos or polychlorinated biphenyl (PCB) which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner and Architect in writing. The Work in the affected area shall not thereafter be resumed except by written agreement of the Owner and Contractor if in fact the material is asbestos or polychlorinated biphenyl (PCB) and has not been rendered harmless. The Work in the affected area shall be resumed in the absence of asbestos or polychlorinated biphenyl (PCB), or when it has been rendered harmless, by written agreement of the Owner and Contractor, or in accordance with final determination by the Architect on which arbitration has not been demanded, or by arbitration under Article 4.

10.1.3 The Contractor shall not be required pursuant to Article 7 to perform without consent any Work relating to asbestos or polychlorinated biphenyl (PCB).

10.1.4 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material is asbestos or polychlorinated biphenyl (PCB) and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of the Owner, anyone directly or indirectly employed by the Owner or anyone for whose acts the Owner may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Subparagraph 10.1.4.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to:

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

10.2.2 The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Clauses 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Clauses 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Paragraph 3.18.

10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

10.2.7 The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

10.3 EMERGENCIES

10.3.1 In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Paragraph 4.3 and Article 7.

ARTICLE 11

INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 claims under workers' or workmen's compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed;

- .2 claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 claims for damages insured by usual personal injury liability coverage which are sustained (1) by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor, or (2) by another person;
- .5 claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; and
- .7 claims involving contractual liability insurance applicable to the Contractor's obligations under Paragraph 3.18.

11.1.2 The insurance required by Subparagraph 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment.

11.1.3 Certificates of Insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. These Certificates and the insurance policies required by this Paragraph 11.1 shall contain a provision that coverages afforded under the policies will not be cancelled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final Application for Payment as required by Subparagraph 9.10.2. Information concerning reduction of coverage shall be furnished by the Contractor with reasonable promptness in accordance with the Contractor's information and belief.

11.2 OWNER'S LIABILITY INSURANCE

11.2.1 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance. Optionally, the Owner may purchase and maintain other insurance for self-protection against claims which may arise from operations under the Contract. The Contractor shall not be responsible for purchasing and maintaining this optional Owner's liability insurance unless specifically required by the Contract Documents.

11.3 PROPERTY INSURANCE

11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance in the amount of the initial Contract Sum as well as subsequent modifications thereto for the entire Work at the site on a replacement cost basis without voluntary deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Paragraph 9.10 or until no person or entity

other than the Owner has an insurable interest in the property required by this Paragraph 11.3 to be covered, whichever is earlier. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Work.

11.3.1.1 Property insurance shall be on an all-risk policy form and shall insure against the perils of fire and extended coverage and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, false-work, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's services and expenses required as a result of such insured loss. Coverage for other perils shall not be required unless otherwise provided in the Contract Documents.

11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance which will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor, then the Owner shall bear all reasonable costs properly attributable thereto.

11.3.1.3 If the property insurance requires minimum deductibles and such deductibles are identified in the Contract Documents, the Contractor shall pay costs not covered because of such deductibles. If the Owner or insurer increases the required minimum deductibles above the amounts so identified or if the Owner elects to purchase this insurance with voluntary deductible amounts, the Owner shall be responsible for payment of the additional costs not covered because of such increased or voluntary deductibles. If deductibles are not identified in the Contract Documents, the Owner shall pay costs not covered because of deductibles.

11.3.1.4 Unless otherwise provided in the Contract Documents, this property insurance shall cover portions of the Work stored off the site after written approval of the Owner at the value established in the approval, and also portions of the Work in transit.

11.3.2 Boiler and Machinery Insurance. The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

11.3.3 Loss of Use Insurance. The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

11.3.4 If the Contractor requests in writing that insurance for risks other than those described herein or for other special hazards be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, adjoining or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Subparagraph 11.3.7 for damages caused by fire or other perils covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

11.3.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Paragraph 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be cancelled or allowed to expire until at least 30 days' prior written notice has been given to the Contractor.

11.3.7 Waivers of Subrogation. The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other perils to the extent covered by property insurance obtained pursuant to this Paragraph 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

11.3.8 A loss insured under Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Subparagraph 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or in accordance with an arbitration award in which case the procedure shall be as provided in Paragraph 4.5. If after such loss no other special agreement is made, replacement of damaged property shall be covered by appropriate Change Order.

11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection be made, arbitrators shall be chosen as provided in Paragraph 4.5. The Owner as fiduciary shall, in that case, make settlement with insurers in accordance with directions of such arbitrators. If distribution of insurance proceeds by arbitration is required, the arbitrators will direct such distribution.

11.3.11 Partial occupancy or use in accordance with Paragraph 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

11.4 PERFORMANCE BOND AND PAYMENT BOND

11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

ARTICLE 12

UNCOVERING AND CORRECTION OF WORK

12.1 UNCOVERING OF WORK

12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Architect, be uncovered for the Architect's observation and be replaced at the Contractor's expense without change in the Contract Time.

12.1.2 If a portion of the Work has been covered which the Architect has not specifically requested to observe prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such Work is not in accordance with the Contract Documents, the Contractor shall pay such costs unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

12.2 CORRECTION OF WORK

12.2.1 The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear costs of correcting such rejected Work, including additional testing and inspections and compensation for the Architect's services and expenses made necessary thereby.

12.2.2 If, within one year after the date of Substantial Completion of the Work or designated portion thereof, or after the date

for commencement of warranties established under Subparagraph 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. This period of one year shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work. This obligation under this Subparagraph 12.2.2 shall survive acceptance of the Work under the Contract and termination of the Contract. The Owner shall give such notice promptly after discovery of the condition.

12.2.3 The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

12.2.4 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Paragraph 2.4. If the Contractor does not proceed with correction of such nonconforming Work within a reasonable time fixed by written notice from the Architect, the Owner may remove it and store the salvable materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage within ten days after written notice, the Owner may upon ten additional days' written notice sell such materials and equipment at auction or at private sale and shall account for the proceeds thereof, after deducting costs and damages that should have been borne by the Contractor, including compensation for the Architect's services and expenses made necessary thereby. If such proceeds of sale do not cover costs which the Contractor should have borne, the Contract Sum shall be reduced by the deficiency. If payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

12.2.5 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.

12.2.6 Nothing contained in this Paragraph 12.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the time period of one year as described in Subparagraph 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

12.3 ACCEPTANCE OF NONCONFORMING WORK

12.3.1 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13

MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

13.1.1 The Contract shall be governed by the law of the place where the Project is located.

13.2 SUCCESSORS AND ASSIGNS

13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to partners, successors, assigns and legal representatives of such other party in respect to covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

13.3 WRITTEN NOTICE

13.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice.

13.4 RIGHTS AND REMEDIES

13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

13.5 TESTS AND INSPECTIONS

13.5.1 Tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so the Architect may observe such procedures. The Owner shall bear costs of tests, inspections or approvals which do not become requirements until after bids are received or negotiations concluded.

13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Subparagraph 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so the Architect may observe such procedures.

The Owner shall bear such costs except as provided in Subparagraph 13.5.3.

13.5.3 If such procedures for testing, inspection or approval under Subparagraphs 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, the Contractor shall bear all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses.

13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

13.6 INTEREST

13.6.1 Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

13.7 COMMENCEMENT OF STATUTORY LIMITATION PERIOD

13.7.1 As between the Owner and Contractor:

- .1 Before Substantial Completion.** As to acts or failures to act occurring prior to the relevant date of Substantial Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than such date of Substantial Completion;
- .2 Between Substantial Completion and Final Certificate for Payment.** As to acts or failures to act occurring subsequent to the relevant date of Substantial Completion and prior to issuance of the final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of issuance of the final Certificate for Payment; and
- .3 After Final Certificate for Payment.** As to acts or failures to act occurring after the relevant date of issuance of the final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of any act or failure to act by the Contractor pursuant to any warranty provided under Paragraph 3.5, the date of any correction of the Work or failure to correct the Work by the Contractor under Paragraph 12.2, or the date of actual commission of any other act or failure to perform any duty or obligation by the Contractor or Owner, whichever occurs last.

ARTICLE 14

TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor, for any of the following reasons:

- .1** issuance of an order of a court or other public authority having jurisdiction;
- .2** an act of government, such as a declaration of national emergency, making material unavailable;
- .3** because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Subparagraph 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents;
- .4** if repeated suspensions, delays or interruptions by the Owner as described in Paragraph 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less; or
- .5** the Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Subparagraph 2.2.1.

14.1.2 If one of the above reasons exists, the Contractor may, upon seven additional days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead, profit and damages.

14.1.3 If the Work is stopped for a period of 60 days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has persistently failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Subparagraph 14.1.2.

14.2 TERMINATION BY THE OWNER FOR CAUSE

14.2.1 The Owner may terminate the Contract if the Contractor:

- .1** persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2** fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3** persistently disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction; or
- .4** otherwise is guilty of substantial breach of a provision of the Contract Documents.

14.2.2 When any of the above reasons exist, the Owner, upon certification by the Architect that sufficient cause exists to jus-

tify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 accept assignment of subcontracts pursuant to Paragraph 5.4; and
- .3 finish the Work by whatever reasonable method the Owner may deem expedient.

14.2.3 When the Owner terminates the Contract for one of the reasons stated in Subparagraph 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the

Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect, upon application, and this obligation for payment shall survive termination of the Contract.

14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

14.3.2 An adjustment shall be made for increases in the cost of performance of the Contract, including profit on the increased cost of performance, caused by suspension, delay or interruption. No adjustment shall be made to the extent:

- .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of this Contract.

14.3.3 Adjustments made in the cost of performance may have a mutually agreed fixed or percentage fee.

1. Description of Project

a. Significance

The westerly section of Norwood was built in the 18th century. In 1867 the easterly wing was added together with porches across south and north facades. The windows were widened and almost all interior trim was replaced. In the 1930s the existing small porches at the south and north entrances were substituted for the longer porches. Other 20th century changes include the removal of the partition between the two west parlors, the replacement of the stair bannister from the first floor to the landing, wooden ceilings, paneling in the two east rooms of the original house, the interior of the former kitchen in the east wing, the elimination of south and north exterior doors in the wing and the addition of doors in the east end.

b. This Project

The entire house will be preserved and restored, essentially in its present form with some 20th century features returned to earlier forms. These Specifications and Drawings address exterior work. A "second volume" of construction documents is in preparation for interior preservation and improvements.

2. Scope of Work

a. The scope of the project is shown and described in as great a detail as is practicable in the drawings and in these specifications.

b. It is the intention of these drawings and specifications that all labor and materials required for this project whether or not specifically shown or specified shall be furnished and installed so that those portions of the building included in the contract, when turned over to the Owner, will be ready for continuous and satisfactory occupancy, totally completed.

c. Those portions of the structure included in this contract shall be restored and left in as good and maintenance-free condition as possible.

- d. Many tasks cannot be detailed precisely, particularly with respect to exact dimensions. Dimensional variations are very unpredictable due to irregular existing conditions which shall all be field-verified by the Contractor prior to ordering or fabricating any materials.
 - e. Perfectly true, plumb and level surfaces are neither possible nor desired. It is the intent of these documents to achieve maximum stability with maximum retention of original materials. Where surfaces are out of original level or alignment gently but persuasively attempt to restore the original level or alignment after all interfering materials and debris have been removed. Fit all new and replaced components to adjacent surfaces for maximum tightness, neatness and practicable operation.
 - f. Unless otherwise indicated all materials shall be procured, fabricated, installed and finished to match and blend with adjacent and/or similar work in these premises, whether or not the procedures and details are indicated.
 - g. Any portion of the Work described herein or shown on the drawings which is not completely understood by the Contractor shall be clarified by the Architect before proceeding. Many questions cannot be answered, nor specific directions given, about details in a restoration until actual evidence and conditions are studied by the Architect and Contractor on the job. These conditions may not be apparent until work has started. Hence there is a continuing requirement for close communication between Contractor and Architect, and the Contractor shall at all times keep the Architect informed as to evidence of conditions discovered.
 - h. The Contractor is invited to make suggestions and recommendations to the Architect about different methods of accomplishing the work. The Contractor is responsible for calling to the Architect's attention Work not specifically called for which, in his opinion, should be considered at this time.
3. Qualifications of Contractor and Sub-Contractors
- a. Pre-Qualification
 - (1) Bids will only be accepted from Contractors who have been pre-qualified by the project Architect. Contractors have until the bid opening date to be pre-qualified for this project. Interested firms must submit the complete information requested herein to the Architect to be considered.

- (2) Information that is submitted which is incomplete, inadequate or does not meet the minimum conditions specified or is received after the bid opening date will result in the failure of that firm to be pre-qualified.
- (3) The decision of the Architect and Owner with regard to a firm's meeting the specified requirements and qualifications for pre-qualification shall be final.
- (4) The Owner will notify all firms who submit information to the Architect, as soon as possible after its submission, if they have been pre-qualified or not.

b. Qualification of Contractor

- (1) The restorations of historic structures and additions to them are very specialized projects within the building industry and the Contractor, and his Sub-Contractors, must appreciate this and have successful experience in this type of work. The success or failure of a project such as this depends upon character of workmanship.
- (2) Bidders shall submit their qualifications to the Architect as described herein. Personnel names in the qualifications may not be changed without the knowledge and approval of the Owner and Architect. In all cases where previous experiences are required those projects shall be identified. "Comparable" shall be defined as historic preservation projects where original construction dated from the 18th, 19th and/or early 20th centuries and where restoration tasks were similar to those required here. Owners and/or Architect shall be identified together with their addresses and telephone numbers. The judgment of relative success of previous experiences shall be by their Owners, Architects and Authorities having Jurisdiction; and by this project's Owner and Architect. Construction values shall be provided.

(a) General Contractor

- (1) Successful experience in the comparable restoration of at least three similar historic structures, each of which had a restoration construction contract of at least \$75,000.
- (2) Letters of reference from Owners and/or Architects of at least three prior successful historic preservation projects.

- (3) Name of project supervisor intended for this project together with identities of at least three comparable successful historic preservation projects supervised by this person or in which this person performed an important part.
- (b) Sub-Contractors as follows (may be General Contractor's own personnel)
 - (1) Masonry
 - (2) Finish Carpentry
 - (3) Millwork fabrication and installation
 - (4) Roofing and associated metalwork
 - (5) Finish painting
 - (6) Mechanical
 - (7) Electrical
- (c) Name of Subcontractor (or General Contractor's own personnel in this trade) together with names of supervisor or key personnel.
- (d) Identification of successful experiences in at least three comparable historic preservation projects and where work in these trades was comparable in value to similar work at this project.
- (e) More than one possible subcontractor in any field may be submitted if the General Contractor has not decided which subcontractor will be awarded the work.

4. Examination of Site

- a. Prior to submitting the bid the Contractor shall be responsible for examining the site. The determination of the quality of the soil, underground conditions, water, vegetation, access, utilities and other conditions not otherwise indicated in the Contract Documents, but affecting the execution of the agreement is the responsibility of the Contractor. The Owner makes no representation, other than as indicated in the Contract Documents.
- b. After the award of the Contract, if additional work is found to be necessary as a result of unforeseen

conditions, the Contractor shall inform the Architect prior to proceeding with additional work. The Contractor shall provide a quotation of additional costs. Upon receipt of the Architect's approval the additional work shall proceed, reimbursement being in one of these two ways as approved by the Owner and directed by the Architect:

- (1) lump-sum quotation of cost of additional work
- (2) reimbursement for actual costs of labor and material indicated by documentation submitted by the Contractor.

5. Inspections

The Contractor shall facilitate the access of the Owner, the Architect and their representatives to the Work at all times.

6. Approved Equals

Specified manufacturers shall be considered the standard for the item specified. Equals suggested by the Contractor will be considered by the Architect upon submission of substitute manufacturer's specifications and samples as appropriate.

7. Finish Schedules and Samples

Colors, finishes and patterns of all materials, unless specified herein, will be selected by the Owner and the Architect. The Architect will issue all decisions to the Contractor. The Contractor shall make timely requests as required and will receive decisions within about ten days.

8. Shop Drawings

Where Shop Drawings are required by these Specifications provide same in sufficient quantity for Architect to retain two marked and/or approved copies. No Work or materials covered by the Shop Drawings shall be procured, ordered, fabricated or installed until Shop Drawings have been approved in writing by the Architect. Information included in Shop Drawings shall include, but not be limited to, the following: sizes, dimensions, materials, fabrication, assembly, installation and the manufacturers' published information.

9. Delivery, Storage and Handling of Materials

All materials shall be delivered only when job conditions are acceptable for their proper reception and storage. Materials shall be stored and handled with appropriate protection and care exercised to prevent their damage. Damaged materials shall not be installed if the damage is objectionable

aesthetically, structurally or functionally; damaged materials shall be replaced at no additional expense to the Owner.

10. Installation and Finishing of Materials

Installation and finishing of all materials shall be as recommended and detailed by the manufacturers, whether or not the procedures are detailed in these Specifications.

11. Protection

a. Adjacent Property

The Contractor shall take all reasonable precautions to protect adjacent property from damage due to this construction project. The Contractor shall be responsible for the repair and/or settlement of any such damage at no additional cost to the Owner.

b. This Project

The elements and surfaces of the existing structure are historic. As historic elements they are considered valuable and virtually irreplaceable. Each replacement element will reduce that value.

The Contractor shall take all possible precautions to protect the fabric from damage, theft and vandalism. Cuts and patches are to be made with great care, further described elsewhere in these documents. Floors and staircases, especially, shall be noted as highly vulnerable to damage and these shall be covered with non-damaging protective elements at all times. Banisters and critical door jambs shall be wrapped with padded materials and otherwise protected from damage.

Should any damage occur it shall be repaired to be invisible exactly matching its intended finished condition.

Protection of all fabric and the repair/restoration of damaged materials shall be the Contractor's responsibility, at no additional cost to the Owner.

Unless otherwise indicated the Contractor shall preserve and protect all existing plant materials from injury. The Contractor shall replace any damaged plants with identical plants at no expense to the Owner. If any Work indicated requires removal or pruning of plant materials notify Architect and obtain his approval prior to removing or pruning plants.

12. Site Maintenance

- a. During construction the Contractor shall keep area free of excess trash and he shall maintain the area as neatly as practicable for safety, health and appearance.
- b. At the end of each day's work the Contractor shall deposit all trash in a closed dumpster, trash cans or other secure containers. All building materials, tools and equipment shall be left in an orderly and sightly arrangement.
- c. Upon completion the Contractor shall clean the entire premises and site of all construction debris and trash. All paint spatter, particles of plaster, spackle, etc. shall be removed from floors, stairs and other surfaces. All surfaces included in the Contract shall be left clean including glass.
- d. The premises generally will be publicly accessible exteriorally.

13. Safety and Fire Protection

- a. Job safety is the sole responsibility of the Contractor and he shall conform to the safety requirements of all Authorities having Jurisdiction.
- b. The contractor shall take all reasonable precautions against fire and he shall not allow the unsafe accumulation and/or storage of flammable materials. No fires shall be allowed to endanger the structure. A fire extinguisher for all classes of fires shall be maintained in each story for the duration of this Contract.

14. Guarantees

The Contractor shall provide all guarantees specified herein and/or as provided by the several manufacturers specified.

15. Cost Breakdown

Within thirty (30) days of the award of the contract the contractor shall provide the Architect with a cost breakdown of the project arranged by specification division.

16. Temporary Facilities

- a. The Contractor shall provide sufficiently strong and safe ramps, ladders, scaffolds, hoists and guard rails as required by Authorities having Jurisdiction to accomplish the Work in this Contract. Construction safety is the sole responsibility of the Contractor.

b. Utilities During the Project

The Contractor shall assume all costs associated with heat, sanitary facilities, water, power and signal until the Owner's final acceptance of the Work.

(1) Temporary Heat

None is anticipated.

(2) Sanitary Facilities

The Contractor shall provide and maintain temporary toilet facilities in a location approved by the Owner. Said facilities shall be maintained for the duration of the Contract, cleaned regularly and removed promptly upon completion.

(3) Electricity

The Owner shall provide electrical service as existing on the premises.

(4) Water

The Owner shall provide water service as existing on the premises.

(5) Telephone

A telephone is available on the premises for the Contractor's use for this project. The Contractor shall reimburse the Owner for any long distance calls not related to this Project.

17. Regulations and Permits

- a. All work shall be in conformance with the regulations of all Authorities having Jurisdiction. In case of conflict between the Construction documents and Authorities having Jurisdiction the Contractor shall notify the Architect and shall not proceed with the Work in conflict until the conflict is resolved.
- b. The Contractor shall obtain and pay for any and all reviews, approvals, permits and inspections required by Authorities having Jurisdiction.

18. Sales Tax

Maryland state sales tax shall be paid.

19. Equal Opportunity

The Contractor shall meet all applicable Equal Employment Opportunity regulations for this project.

20. Allowance for miscellaneous additional work

5% of the Estimate Base Bid shall be assumed and included in the Estimate Base Bid as an allowance for small miscellaneous items which may be found necessary, not otherwise noted in the construction documents. The Architect will authorize these items on an individual basis following on-job discussions which will include mutual agreement as to individual costs.

21. Owner's Use of Premises

The premises will not be occupied by the Owner throughout this Contract. However a tenant will occupy part of the house as his residence. The Owner's and the Tenant's access and convenience shall be maintained and preserved at all times.

A. Scope - Demolition

B. Products

All materials and equipment required for demolition shall be considered temporary, the property of or procured by the Contractor, used on this project for this task.

C. Execution

1. Shoring and Bracing

- a. Shore, brace and otherwise support all fabric as required prior to, during and after demolition to prevent unexpected failure, damage and injury.
- b. Note portions of existing structure which are not to be demolished. Take care to allow these portions to remain in place, adequately shored, braced and otherwise supported as required. The reconstruction of existing structure which is to remain, following an accidental failure or collapse, shall be at no additional expense to the Owner.

2. Existing work which is to be reinstalled

- a. Items in this category are indicated in the drawings or herein.
- b. Remove and store such items carefully to avoid damage. All parts shall be marked by the Contractor prior to removal so they can be reinstalled to their original design or as shown in the drawings. Box or bag small components together to ensure context. Cover wood to prevent wetting but allow ventilation.
- c. The Contractor shall take great care to see that no sound original work is so damaged, if it must be removed, that it cannot be reinstalled. If it has deteriorated to such an extent that it cannot be reused, it shall be removed as carefully as possible, saved and an exact replica made and installed.

3. Existing work which is not to be reinstalled

- a. Certain original or existing items may be designated in the drawings, or by the Architect during the execution of this Contract, for preservation but not to be installed in the premises. Remove and store such items as though they were to be reinstalled, as indicated above.

(1) Handmade nails

Save any loose or unused handmade nails encountered and turn them over to the Owner.

(2) Handsplit lath

Remove handsplit lath carefully to avoid breakage and tie it into manageable bundles. Nails may be left in place. Store these materials in a location as directed by the Owner.

(3) Hardware

Save any early hardware encountered and turn over to the Owner.

(4) Tiles, Pottery, Porcelain, Glassware

Save all fragments, no matter how small, noting place found, and turn over to Owner for further study.

(5) Shutters, doors and other building finished elements not installed. Store these in a location as directed by the Owner.

- b. Unless otherwise designated remove all elements resulting from demolition and dispose of off these premises in accordance with the Authorities having Jurisdiction.

A. Scope - Cutting and Patching

B. Products

All materials and equipment required for cutting and patching shall be considered temporary, the property of or procured by the Contractor, used on this project for this task.

C. Execution

1. All cutting and patching for work in these specifications, including but not limited to structural work, mechanical work and electrical work, shall be done by experienced persons in the trade related to the material being cut and patched. As examples, masonry shall be cut and patched by qualified masons; structural wood framing shall be cut and patched by qualified carpenters; finished wood elements shall be cut and patched by qualified finished carpenters; plaster shall be patched by qualified plasterers.
2. If cuts are not indicated in the drawings the Contractor shall call them to the Architect's attention prior to commencing the task, and receive the Architect's approval of the exact scope and procedures of the cut. Wherever possible cuts in finished work shall be **extended** to an existing joint, change of plane or other location to minimize visibility upon completion.
3. All materials removed shall be replaced. All replacement materials shall be procured, fabricated, installed and finished to match and blend with adjacent and/or similar work in these premises, whether or not the procedures and details are indicated. It is the intention of these Specifications that cuts and patches shall not be visible upon completion of the work.

A. Scope - Brick

B. Products

1. Face Brick

A blend of two sources:

- a. Existing units which are sound, not salmons, not cracked, with at least one good face with corners not excessively damaged. Use a maximum number of existing original bricks.
- b. New handmade brick, matching original bricks in size, color, range and texture, with full or tight corners and faces, as manufactured by Alwine or Cushwa.

2. Back-up or concealed brick

Any of the above or bricks meeting ASTM C216.

C. Execution

1. See Section 4-11 Unit Masonry Installation
2. Submit sample to Architect of new brick. Sample shall contain full range of size, color and texture and shall be approved by Architect before proceeding.
3. Cull brick to ensure use of sound units with tight corners exposed, not excessively broken or rounded corners.

A. Scope - Stone

B. Products

1. Paving Stones

Pennsylvania gray in full range, natural cleft faces and
sawn edges, 2" (+-) thick, sizes as indicated in the
drawings.

C. Execution

1. See Section 4-11 Unit Masonry Installation

2. Lay paving stones on 3" bed of sand.

A. Scope - Terra Cotta Flue Liners

B. Products

Standard units of sizes shown in the drawings

C. Execution

1. See Section 4-11 Unit Masonry Installation

2. Install flue liners in all flues.

a. In existing chimneys

(1) Remove face of chimney to expose flue void toward interior of building.

(2) Remove excess soot, mortar, birds nests and all other debris from existing flue.

(3) Rake and repoint all joints within flue; see Repointing, Section 4-12.

b. In all flues receiving liners

(1) Set flue liners into flue voids with sufficient mortar between liners and brick walls of chimney to support flue liners.

(2) Set first flue liner on masonry ledge under all sides three courses deep, not projecting within flue void.

(3) Ensure solid mortar in all bedding joints, cut flush on inside.

(4) Where two flues adjoin each other in the same chimney, with only flue lining separation between them, the joints of the adjacent flue linings shall be staggered at least 8 inches.

(5) Joints in flue liners, generally, shall be close-fitting and left smooth on the inside.

3. Trim liners so projection at top is no greater than indicated in the drawings.

4. See Section 5-3 for dampers.

A. Scope - Mortar

B. Products

1. For use with original brick.

12 parts natural ungraded, bank run sand - ASTM C 144
6 parts hydrated lime - ASTM C 207, Type S
1 part white cement - ASTM C 150, Type I or II
non-staining potable water

C. Execution

1. See Section 4-11 Unit Masonry Installation and 4-12 Repointing and Masonry Repair
2. Select sand to achieve proper color.
3. Formulas given for finished pointing are approximate and shall be considered the starting points to achieve a mortar which matches the approved sample.
4. Joint sizes and profiles shall match sample designated by Architect. New mortar shall match color of adjacent original mortar.
5. Measurement and Mixing; Retempering
 - (1) Measuring shall be by volume and such that the specified proportions of the mortar materials can be controlled and accurately maintained. Measurement by shovel shall not be permitted.
 - (2) Add half the water followed by mixing for approximately five minutes in a mechanical batch mixer.
 - (3) Add the remaining water in small portions until the desired consistency is reached.
 - (4) Mortar shall be used within 30 minutes of final mixing and no additional water shall be added after the initial mix is prepared.

A. Scope - Unit Masonry Installation

B. Products

As specified in other sections of Division 4

C. Execution

1. Lime mortar requires special considerations not necessarily followed when using contemporary mortar.
2. Project Conditions
 - a. No masonry shall proceed when the ambient temperature is below 40°F or when there is a possibility of such conditions within:
 - (1) 3 weeks of work on new masonry using lime mortar.
 - (2) 1 week of work on new masonry using standard mortar mix.
 - (3) Add one week to above in seasons when the temperature averages 40° to 50° F.
 - b. No masonrywork shall proceed in the direct sun or when the wall temperature exceeds 85°F. If it is likely to reach or exceed this temperature within one week of work cover masonry with moist burlap.
 - c. At the end of each day's work, when work is not in progress and in wet weather, cover tops of walls, chimneys, etc. with a watertight cover.
3. In reusing original brick turn all painted and sooty surfaces into the wall so as not to be exposed.
4. Inspection

Install masonrywork only on surfaces and substructures properly prepared and cleaned to receive it; commencement of work constitutes acceptance of conditions.
5. Preparation
 - a. Lay out all work in advance to achieve uniformity in the appearance of units and joints.
 - b. Lay all brick and block to true plumb and level lines; keep head-joints, and webs of block, in vertical alignment.

6. Installation

- a. Exposed masonrywork shall match sound adjacent undisturbed work in every respect including general character, color and texture, joint width and profile.
- b. Exposed masonrywork shall be free of chips, cracks or any other defect which will be visible upon completion of the job; non-exposed items shall not have any defect which will impair their intended function.
- c. Lay all masonry units with mortar around entire embedded surface, including full head joints and cross webs of block (does not apply to paving).
- d. Unit Masonry Paving

Lay pavers with TIGHT joints on sand setting bed.
- e. Joint Profile
 - (1) Tool joints hard.
 - (2) Profile of finished work shall match original sample designated by Architect.
 - (3) Generally mortar shall not be allowed to extend over face of masonry unit.
 - (4) Joints in concealed masonry using contemporary units generally shall be 3/8 inch wide, tooled hard, slightly concave.
- f. Moisten masonrywork

Moisten masonry units prior to installation. Keep masonry laid in lime mortar moist for seven to ten days after installation, gradually diminishing amount of moisture introduced.

7. Cleaning

- a. Cleaning procedure shall commence after mortar is thoroughly set and cured. No mortar or mortar smears shall be left on face of exposed masonry.
 - (1) Dryclean: remove large particles of mortar with wood paddles and scrapers before wetting the wall
 - (2) Presoak: saturate the masonry with clean water and flush off all loose mortar and dirt

- (3) Scrub: Scrub with a solution of one-half cup trisodium phosphate and one-half cup household detergent dissolved in one gallon of clean water. Scrub with stiff fiber brush only
 - (4) Rinse: thoroughly wash off all cleaning solution, dirt, and mortar crumbs, using clean pressurized water.
- b. Acids and Proprietary Cleaning Compounds: use in strict accordance with manufacturer's printed instructions and thoroughly rinse after application.

A. Scope - Repointing and Masonry Repair

B. Products

Refer to other sections of this Division

C. Execution

1. See Section 4-7 Mortar

2. Project Conditions

Lime mortar requires special considerations not necessarily followed when using conventional contemporary mortar.

- a. No masonry shall proceed when the ambient temperature is below 40°F or when there is a possibility of such conditions within

(1) 3 weeks of work on newly constructed walls
chimneys, etc.

(2) 1 week of repointing existing walls, chimneys,
etc.

(3) Add 1 week to above in seasons when the
temperature averages 40°F to 50°F.

- b. No masonrywork shall proceed in the direct sun or when the wall temperature exceeds 85°F. If it is likely to reach or exceed this temperature within one week of work cover masonry with moist burlap.

- c. Moisten joints to be repointed, and replacement masonry units, prior to installation and keep moist for seven to ten days thereafter, gradually diminishing amount of moisture introduced.

- d. At the end of each days' work, when work is not in progress and in wet weather, cover tops of walls, chimneys, etc. with a watertight cover. Cover work in hot weather to prevent accelerated evaporation and hydration.

3. Application

These specifications apply to exterior masonry as well as below grade and interior masonry exposed to view during this construction project.

4. Repointing

- a. Sample Panel

- (1) The Architect will designate an area of approximately six square feet of each type of existing masonry as sample panels to establish the standards for
 - (a) finished pointing; sample panel(s) will be of sound pointing
 - (b) repointing techniques; sample panel(s) will be of pointing requiring repointing; sample will establish standards for removal of existing pointing, limit of damage acceptable, color, texture, profile and width of repointed joint.
 - (2) All new work shall conform to designated sample panels, to Architect's satisfaction. Non-conforming work shall be redone at no additional expense to the Owner. Required restoration work within designated sample panels shall be the last work to be accomplished.
- b. Joints to be Repointed
- (1) Where existing finished pointing has eroded 1/8 inch or more.
 - (2) Where existing pointing is loose, cracked or missing.
 - (3) Elsewhere as indicated specifically in the drawings.
- c. Joints which shall not be repointed
- (1) Joints with sound, undamaged Portland-cement mortar where removal will damage surrounding material.
 - (2) Joints with mortar mechanically bonded to surrounding material.
 - (3) Elsewhere as indicated specifically in the drawings.
- d. Remove joints to be repointed to a depth two and one-half (2½) times joint width (average).
- e. Method of joint removal will be such that surrounding materials are not damaged.
- f. Clean joint of all loose and dusting material.

- g. Moisten cleaned joint and adjacent masonry units.
- h. Install new pointing and bring it to the approved profile.

5. Replacement Masonry Units

- a. Removal of deteriorated units shall be as individually approved by the Architect, generally defined as units which are
 - (1) of a bright orange color (bricks)
 - (2) very soft to touch and in a dusting condition
 - (3) eroded to an average depth of $\frac{1}{4}$ inch
 - (4) damaged and indicated in the drawings for replacement.
- b. Cut out deteriorated unit without damaging sound adjacent masonry.
- c. All replacement masonry units shall be sound, cleaned of all dirt, mortar, vegetation and any other materials which will impare their structural stability and/or bond with adjacent units. No sooty faces shall be exposed.
- d. Replacement masonry units shall match surrounding masonry in size, texture, color range and bond pattern.
- e. Moisten replacement and surrounding masonry units to prevent accelerated absorption of moisture in mortar.

6. Repairing Cracks in Walls

Cracks are defined as continuous and/or contiguous cracks through 9 or more joints and repair shall be undertaken only after specific crack is approved by Architect.

- a. Remove mortar 8 to 12 inches on either side of crack in increments of full masonry units.
- b. Remove fractured masonry units.
- c. Clean exposed joints of all loose materials.
- d. Moisten joints, adjacent masonry units and replacement masonry units.
- e. Install replacement mortar and masonry units to knit wall together.

7. Filling voids in masonry

- a. Where masonry unit(s) is (are) missing due to deterioration, previous removal for alterations/additions or for any other reason fill void with compatible masonry bonded with surrounding work for structural integrity.
- b. Where mortar is missing see paragraph C.4 above.
- c. Where such conditions will be exposed in the completed project filled voids shall be installed with great care so replaced masonry (masonry units and mortar) blends visually with surrounding masonry in every respect including size, color, texture and bond pattern.

8. Cleaning

- a. Cleaning procedure shall commence after mortar is thoroughly set and cured. No mortar or mortar smears shall be left on face of exposed masonry surfaces. Concealed masonry need not be cleaned.
 - (1) Dryclean: remove large particles of mortar with wood paddles and scrapers before wetting the wall.
 - (2) Presoak wall: saturate the masonry with clean water and flush off all loose mortar and dirt.
 - (3) Scrub: Scrub down walls with a solution of one-half cup trisodium phosphate and one-half cup household detergent dissolved in one gallon of clean water. Scrub with stiff fiber brush only.
 - (4) Rinse: thoroughly wash off all cleaning solution, dirt, and mortar crumbs, using clean pressurized water.

A. Scope - Metals Associated with Chimneys

B. Products

1. Fireplace Dampers

Regularly manufactured cast-iron dampers of largest standard size to fit the specific flue; unless otherwise indicated they shall have no visible hardware projecting through face of chimney.

C. Execution

1. Dampers

- a. Install dampers as directed by the manufacturer.
- b. For installation into existing fireplaces remove mantels (as specified in Division 2) and face of chimney breast. Insert dampers at proper elevation, installed level, free of mortar or masonry which interferes with their operation.
- c. Ensure tight assembly and free operation of all parts prior to finishing surrounding masonry enclosure.
- d. Install a damper in each fireplace.
- e. See Section 4-6 for Tera Cotta Flue Liners.

A. Scope - Metal Rail Components

B. Products

1. Wrought Steel Railing

Wrought mild steel as fabricated by an experienced custom fabricator of ornamental iron work:

G. Krug & Son, Inc.
415 West Saratoga Street
Baltimore, Maryland 21201
Telephone (301) 752-3166

Christopher M. Modla
Chesapeake Forge
1843 Montevideo Road
Jessup, Maryland 20794
Telephone (301) 799-4082

2. Anchoring mortar

Rocktite as manufactured by Hartline Products Co., Inc.,
2186 Noble Road, Cleveland, Ohio 44112, telephone (216)
451-6573.

C. Execution

1. General

- a. All railings shall be installed to withstand a force of 300 lbs. in any direction.
- b. All exposed joints shall be welded, ground smooth and flush to blend with adjacent finished metal surfaces.
- c. Rails on stairs shall be parallel to slope of stair.
- c. Exposed bends of rail shall be at 4" radius. Other exposed corners shall be at 1" radius or larger for smooth, safe installation.
- d. Rails, fabrication and installation shall meet all applicable safety standards of the Occupational Safety and Health Administration (OSHA) and of other Authorities having Jurisdiction.
- e. Remove all oil, grease, dirt, rust, mill scale and other foreign matter.
- f. Paint all metal, prime coat after fabrication but before installation. See Division 9, Section 9-3 for more information.

g. Setting newel posts

- (1) Use "Rocktite: anchoring mortar as specified above. Follow manufacturer's published instructions.
 - (2) Drill hole in masonry substrate or allow it as masonry is laid.
 - (3) Blow out all dust and loose particles.
 - (4) Fill hole with water and scrub the sides and bottom with a stiff circular brush such as a bottle brush.
 - (5) Remove excess water with rag or other absorbent material. Leave the hole clean and uniformly damp.
 - (6) In a clean container mix "Rocktite" with water to a thick paste. Mix no more than can be used in ten minutes. Let this mixture stand for about one minute. Stir thoroughly; the mixture should become more fluid. The proper consistency is like heavy batter -- just fluid enough to pour but not watery. Keep the mix thick. Add water very sparingly if required; if the mix is thin add more "Rocktite" promptly to thicken it. Measure accurately:
4½ oz. water per pound of "Rocktite"
or 1½ pints for 5 pounds
 - (7) Pour fluid "Rocktite" around the newel post, tapping the post to settle the "Rocktite". Fill the hole so that it can be beveled slightly.
 - (8) After a few minutes shape the top surface of the anchoring mortar for uniform, smooth finish.
 - (9) Do not touch or move rail system for at least 30 minutes.
2. Ensure the installation of adequate blocking for rail brackets or install them at structural elements. Use long screws to penetrate blocking or studs at least 1½".
 3. Provide shop drawings for Architect's review and approval showing all aspects of railings and gate fabrication and installation including hardware.

A. Scope - Rough Wood (Rough Carpentry)

1. See Drawings for further information.
2. It is the intention of these Documents that all deteriorated wood be replaced with new material fabricated and installed to match original, whether or not specifically called out.

B. Products

1. Structural Wood

- a. Species: Hem-Fir or Southern Yellow Pine, No. 1
- b. Moisture content: 19% maximum in use

2. Blocking, furring and other non-structural rough wood

- a. Species: Hem-Fir or Southern Yellow Pine, No. 2
- b. Moisture content: 19% maximum in use

3. Treated Wood

"Wolmanized", a process of the Koppers Company, labeled to show treater, name and treatment .40 pound per cubic foot of wood.

4. Roof sheathing

Yellow pine, thickness to match existing

5. Nails

Common steel wire nails as manufactured by U.S. Steel or Bethlehem Steel (hot dipped galvanized at exterior and basement locations).

6. Metal Connectors

Teco or Simpson, types as indicated in the drawings

7. Bolts

Galvanized rust-resisting; in lead expansion shields where into masonry.

C. Execution

1. Accommodation

Let all rough carpentry accommodate itself to the environment as installed for at least two weeks prior to covering with finished materials.

2. Installation

a. Wood framing generally shall be in accordance with conditions and details indicated in the drawings.

(1) Apply securely, carefully fitted to existing surfaces and conditions.

(2) Widely ranging variations in dimensions are typical of this project and field measurements shall be made for the accurate fabrication of each piece.

3. Blocking

Provide solid blocking as required (treated when in masonry walls) for all other items in these Specifications.

4. Nails and Connectors

Provide appropriate sizes and quantities as per industry standard, manufacturer's instructions and in accordance with the standards cited herein.

5. Cutting and Installation of New Materials

a. All cuttings and new installations shall be performed by qualified carpenters.

b. Structural members shall not be cut without prior review and approval by Architect, including those elements detailed in the drawings for cuts or other alterations. Notify Architect when all members to be cut are exposed.

c. Each structural member cut shall be compensated for by framing methods approved by Architect, whether or not those procedures are detailed in the drawings.

6. Treated Wood

Unless otherwise noted, treated lumber shall be used in the following locations:

a. Porch and step structural framing

b. Sills

c. Blocking in masonry walls

d. Elsewhere as noted in the drawings.

A. Scope - Finished Wood (Finished Carpentry)

1. It is the intention of these Documents that all deteriorated wood be replaced with new material fabricated and installed to match original, whether or not specifically called out.

B. Products

1. Exterior Wood

- a. Weatherboards

Western red cedar, clear straight grain, 13% average moisture content, rough straight-sawn texture.

- b. Cornicework, barge boards and other trim

Same as a. above, or clear heart Eastern White Pine (Pinus strobus), but without rough texture.

- c. Porch flooring, treads and risers

Clear close edge-grain (vertical grain) fir or southern yellow pine.

- d. Porch railings

Clear edge-grain (vertical grain) western red cedar or fir.

- e. Nails

Hot-dipped galvanized.

C. Execution

1. Fabrication

All finished wood shall be fabricated accurately to sizes, shapes and profiles indicated without raised grain, roughness, irregularities, splinters or modern machine tool marks such as circular saws, planers, etc.

2. Accommodation

Let all finished wood accommodate itself to the environment of this location a minimum of two weeks prior to installation.

3. Installation

- a. Details generally are indicated in the drawings or by existing precedents cited in the drawings.

- b. Apply finished wood securely, neatly and closely fitted with accurate cuts.
 - c. Install all finished wood in longest possible pieces, generally without splices unless run is over 16 feet. Avoid splices within 2 feet of the end of a particular run. Ensure solid attachment of all ends.
 - d. Keep end joints at a minimum and make them at 45° cuts through thickness where feasible, oriented to shed water where external.
 - e. Miter all corners except where shown otherwise.
 - f. Make all cuts, mortises, tenons, etc. neat and closely fitted.
 - g. All exposed surfaces and all saw cuts shall be true and smooth, without rough edges, corners or exposed end grain.
 - h. Sand all exposed corners to a radius approximately 1/8 inch.
 - i. Prime (see Division 9) all surfaces of finished wood after cutting and fitting but before installing.
4. Nailing
- a. Pre-drill holes in finished wood if required to prevent splitting wood.
 - b. Countersink and putty all nails not specifically shown as exposed.

- A. Scope - Metal Roofing and Flashing
- B. Products
 - 1. Roofing and edging
 - 2. Underlayment
 - a. 15 lb. asphalt saturated felt
 - b. Rosin-sized building paper
 - 3. Fasteners
- C. Execution
 - 1. It is anticipated that the existing materials will be preserved in place and in use.
 - 2. Prior to finish painting and preparation for the same a qualified metal roofing contractor shall inspect all the existing roofs and flashings thoroughly and carefully and make recommendations for extending their life.
 - 3. When the Architect and Owner have reviewed these recommendations, assuming a decision to preserve the existing materials, the recommended repairs shall be executed.
 - 4. Painting is specified in Division 9.
 - 5. Supplement snow board fastenings with new items where required, fabricated and installed to match the existing.
 - 6. Install snow boards using treated wood as specified in Division 6.

A. Scope - Gutters and Downspouts

B. Products

1. Material - 26 gauge galvanized steel with galvanized steel fastenings.
2. Shape and Size
 - a. gutters - half-round 6 inch
 - b. downspouts - round 4 inch
 - c. drops - round, 4 inch
3. Fastenings

As manufactured by Berger Brothers Company, 805 Pennsylvania Boulevard, Feasterville, Pennsylvania 19047.

- a. Gutters - Existing, supplemented as required with 2 piece shank and circle, adjustable, installed 3'-0" o.c., with spring clips.
- b. Downspouts - No. 18 conductor bands within one foot of the top and bottom, within one foot above the watertable and at the third points between top and watertable.

C. Execution

1. Submit for the Architect's approval samples or catalogue cuts of fastenings proposed for use.
2. Review with Architect the attachment of gutter hangers to existing conditions.
3. Attach downspout bands to wall without damaging wall materials. Drive nails into treated wood blocks 2 inches wide by mortar joint thickness, set flush with pointing.
4. Weld joints in all gutters and downspouts for watertight installation with slip joint between gutter and downspout.
5. Provide neat and uniform offsets over watertable with welded joints, allowing downspouts to retain a uniform distance from the wall.
6. Give gutters minimum slope toward downspouts, not dead level and ensure that downspout entry is at lowest point of gutters.
7. Outer edge of gutter shall clear projected line of roof slope by a minimum of 1/4 inch.
8. Terminate downspouts with shoes approximately 6 inches above grade, 30° above the horizontal or as directed in the field by the Architect.

A. Scope - Caulking

B. Products

Sealant shall be based on liquid polysulfide polymer manufactured by Thiokol Chemical Corporation and bearing Thiokol "Tested and Approved" seal.

C. Execution

1. Remove all old, defective caulking.
2. Provide closed-cell polyethylene foam caulking dam or back-up material to fill joint so caulking depth will not exceed three times its width.
3. Caulking shall be delivered to the job site in sealed containers, each bearing the manufacturer's name and product designation.
4. Prime all joints to be caulked with material supplied by the caulking manufacturer to improve adhesion to substrates.
5. Caulk between all dissimilar materials.
6. Caulk all joints where caulking will stop the penetration of wind and water, unless ventilation slot is shown.
7. Form neat beads, uniform in width and profile, shaped to shed water. Remove any excess material which covers adjacent finishes or finished materials.

A. Scope - Doors

B. Products

1. Historic doors, jambs, heads, trim, etc.

a. Existing materials

2. New wood where required

Clear heart eastern white pine (Pinus strobus), straight close edge or vertical grain, 13% average moisture content.

3. New basement hatch doors (board doors)

Clear heart eastern white pine (Pinus strobus), straight close edge or vertical grain, 13% average moisture content.

4. New Storm/Screen doors

Clear heart eastern white pine (Pinus strobus), straight close edge or vertical grain, 13% average moisture content.

5. Nails

a. Typical - See Section 6-2.

b. In board doors - "Wrought-head" (hot-dipped galvanized) as manufactured by Tremont Nail Company, 21 Elm Street, Wareham, Massachusetts 26003.

6. Hardware - See Section 8-6

7. Weatherstripping - See Section 8-7

C. Execution

1. General

a. See Division 6, Section 6-2, for general requirements for finished wood which shall also apply here.

b. All finished wood shall be fabricated accurately to sizes, shapes and profiles indicated without raised grain, roughness, irregularities, splinters or machine or tool marks.

c. Make all mortises, rebates and other cuts required for hardware and joints closely fitting.

- d. In paneled doors, as shown, provide mortise-and-tenon construction
 - (1) Blind tenons, doweled
 - (2) Tongue-and-groove joint immediately above and below tenons of top and bottom rails, respectively and between tenons of intermediate rails.
- e. Clinched "wrought-head" nails in board doors
 - (1) Prebore holes to prevent splitting wood.
 - (2) Shape wood at hole to allow slight countersinking of head.
 - (3) When the point is driven through the wood about $\frac{1}{4}$ inch bend it parallel to the grain.
 - (4) When nail is fully driven, head slightly countersunk into surface of wood, bend exposed shaft parallel to grain and countersink into wood.
 - (5) Remove splinters and other roughnesses which may occur with this process.
- f. Leave all elements securely installed, plumb, level, weathertight, freely operating, lubricated and clean.

2. Storm/Screen Doors

- a. Each exterior door shall have a wooden storm/screen door with seasonally interchangeable panels of glazing and screening.
- b. Some doors have all or part of such units.
- c. The drawings describe the nature of each unit at each door.
- d. Furnish and/or restore same, complete with hardware as specified in Section 8-6.

A. Scope - Windows and Shutters

B. Products

1. Existing materials where scheduled.
2. New Wood where required - 13% average moisture content

- a. Window frames and sills

Tidewater red cypress (Taxodium distichum) or old Southern yellow pine (Pinus echinata or P. taeda); clear heart with close, straight edge or vertical grain.

- b. Sashes and shutters

Clear heart Eastern white pine (P. strobus) with close, straight vertical or edge grain.

- c. Trim

- (1) Exterior, as specified in Section 6-2.

3. Glazing

- a. Glass

- (1) Existing unbroken glass shall be preserved in use.

- (2) Replacement glass

Old glass with bubbles, waviness and other irregularities. This is not commercially available from regular sources.

- b. Putty

Linseed-oil putty formulated for use in wooden sash.

4. Hardware - See Section 8-6
5. Weatherstripping - See Section 8-7
6. Storm windows and screens - See Section 8-8

C. Execution

1. General

See Division 6, Section 6-2, for general requirements for finished wood which shall also apply here.

- a. All installations shall match original existing work. In cases of uncertainty about the identification of original work the Architect will designate applicable examples.
- b. Patch all holes, splits and other irregularities caused by later hardware and general abuse with non-shrinking wood filler or wood dutchmen, sanded smooth to blend with adjacent undamaged surfaces.
- c. Remove and reset all loose existing units and elements, installing new blocking as may be required. Remove dirt, paint, etc. which may interfere with tight, accurate fit.
- d. All finished wood shall be fabricated accurately to sizes, shapes and profiles indicated without raised grain, roughness, irregularities, splinters or planer chatter marks.
- e. Provide new sash beads and parting strips matching original work where required.
- f. Provide full mortise-and-tenon joints with wood pins as in original examples. Provide full-height tongue-and-groove joints at stiles and rails, all matching existing work. Glue all joints with waterproof glue.
- g. Reconstruct all sashes where required to eliminate loose joints, sagging meeting rails, broken muntins, etc. Replace all deteriorated joints, tenons, sides of mortises, pins, etc., splicing in new wood, saving maximum amount of original; stagger cuts, glue and sand smooth to match original conditions. Where new muntin is required provide same full width or height of sash, egg-crated with others, mortised into stiles and rails, pegged as in original sample.
- h. Prime all surfaces of all wood after cutting and fitting but before assembling and installation.
- i. Sash operation of double-hung windows
 - (1) Provide new sash cords matching existing where required. Reconnect all weights as required.
 - (2) Ensure neatly fitted weight pocket covers, securely installed but easily removable without damage.
- j. Leave all elements securely installed, closely fitted, weathertight, freely operating, lubricated and clean.

2. Glazing

- a. Retain all unbroken glass and putty. Furnish sample panel glass showing range and distribution of imperfections. Obtain Architect's approval of sample glass prior to ordering glazing materials.
- b. Where glass or putty is broken, loose or missing, including damage by work in this Contract, remove all glass and putty from that pane.
- c. Simple cracks in antique glass may be accepted by the Architect, without replacement.
- d. Cut all glass with adequate space around for expansion.
- e. Give all glazing rebates a coat of linseed oil.
- f. Prime all sash prior to glazing.
- g. Secure glass in wood frames with glazer's points.
- h. Tool and compact putty to neat diagonal profile, not extending on glass beyond edge of muntin.
- i. Wash both sides of all glass clean.

- A. Scope - Door, Window and Shutter Hardware
- B. Products

Letter in parenthesis in hardware schedule denotes manufacturer.

1. Reproduction Hardware

- a. (B&B) as manufactured by Ball and Ball, 463 West Lincoln Highway, Exton, Pennsylvania 19341; Telephone (215) 363-7330.
- b. (RES) as manufactured by R. Edward Slaysman, 6507 Beechwood Road, Baltimore, Maryland 21239; Telephone (301) 377-8967.

2. Contemporary Hardware

- a. Mortised Locks for exterior prime doors.

Baldwin Hardware Corporation (B)
Reading, Pennsylvania 19603

or

Russwin Hardware Division (R)
Emhart Industries, Inc.
Berlin, Connecticut 06037

- b. Surface locks

Colonial Lock Co. (C)
172 Main Street
Terryville, Connecticut 06786

- c. Latch sets for storm/screen doors

Solid brass as manufactured by:

Baldwin Hardware Corporation (B)
Reading, Pennsylvania 19603

or

Ives (I)
50 Ives Place
New Haven, Connecticut 06508

d. Hinges

Solid brass as manufactured by:

Stanley Works (S)
New Britain, Connecticut 06050

e. Closers for Storm/Screen doors

Ives (I)
50 Ives Place
New Haven, Connecticut 06508

C. Execution

1. General

- a. Ensure firm setting for all hardware.
- b. Predrill snug holes in wood to prevent splitting.
- c. Cut all rebates, mortises, etc. precisely to fit hardware.
- d. It is the intent of the foregoing that each item of hardware be furnished complete, ready for use, whether or not all components are indicated.
- e. A detailed schedule of hardware shall be furnished for the Architect's review including catalogues of intended items also showing comparable alternates. Furnish these materials in sufficient number for the Architect to mark up and return however many the Contractor wishes plus two for the Architect and Owner each to retain a copy.

2. Reproduction Hardware

- a. Forge hinges for tight, precise fit on pintels.
- b. Install strap hinges with round-headed carriage bolt, head against hinge, washer and nut against wood.
- c. Install cast iron hardware with flat-head wood screws.
- d. Do not attach reproduction hardware with Phillips-head screws.
- e. Before installation of exterior hardware: prime all metal surfaces with a rust-inhibiting paint (Rustoleum) and prime wood.

3. Cylinder locks (deadbolts)

- a. Locks shall be selected to have short tail piece, not requiring exterior rings.
- b. Delete and do not install exterior rings and rims making exterior surface project beyond surface of door; remove shroud from exterior face of lock.
- c. This modification requires drilled hole in door to be very precise and neat so lock is extremely close-fitting.
- d. Key all locks alike as directed by Owner.

- A. Scope - Weatherstripping and Thresholds
- B. Products

Products as manufactured by the following are acceptable:

Pemko, Inc.
P. O. Box 3780
Ventura, California 93006

Accurate Metal Weatherstrip Co., Inc.
725 South Fulton Avenue
Mount Vernon, New York 10550

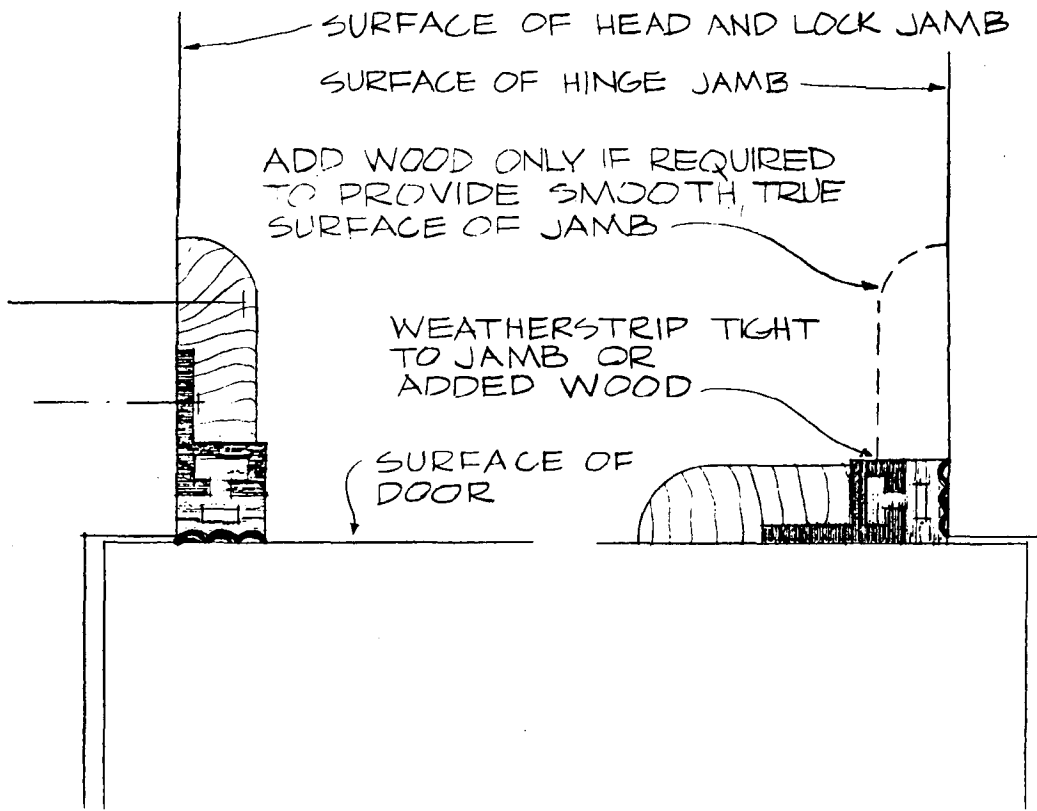
Zero Weather Stripping Company, Inc.
415 Concord Avenue
Bronx, New York 10455

- 1. At each exterior door
 - a. Head and Jamb: Pemko 297AV as illustrated herein
 - b. At Sill: Pemco 61B and 101B
 - c. Drip: Pemco 345B
- 2. Windows: Pemco 4C and 10 (zinc)

C. Execution

- 1. Install at all exterior openings in accordance with manufacturer's instructions.
- 2. Note rope channels in sashes and review weatherstrip locations with Architect and Owner prior to ordering materials and fitting existing materials to new.
- 3. Use screws or nails furnished by manufacturer of weatherstripping, of compatible metals.
- 4. Install all weatherstripping as tightly as possible for maximum efficiency with closely-fitted tolerances.
- 5. Install door jambs and head weatherstripping as detailed herein.
- 6. Trim widths as may be required to fit conditions.
- 7. Prime and finish paint all wood prior to installation of weatherstripping. Paint out all weatherstripping mounted on surface of doors.
- 8. Set thresholds in a bed of caulking.

WEATHERSTRIP TO ABUT DOOR
AND JAMB TIGHTLY, AS SHOWN



INSTALLATION of DOOR WEATHERSTRIP

SCALE: FULL SIZE

A. Scope - Screen/Storm Windows

B. Products

1. Existing wooden sashes with panes matching those of prime windows.
2. New screens for all windows
 - a. Size -- Lower sash, to fit beneath upper sash.
 - b. Material -- Extruded aluminum, baked enamel finish to match surrounding woodwork.
3. To be considered:

Triple track aluminum storm window units with screens for lower sash, baked enamel finish to match surrounding woodwork, as manufactured by Burch Company, 1303 Carroll Street, Baltimore, Maryland 21230.

C. Execution

1. Storm windows and screens shall receive further consideration. The following notes apply to new triple track storm windows and screens as specified at B.3 above.
2. Mount units against existing prime window frame with frames of storm window/screen units tight against casings of openings.
3. Provide any wood strips or blocking which may be necessary for straightness, clearances, etc. Blockings and/or strips shall be continuous, neatly fabricated, installed and finished to match adjacent woodwork. Exposed surfaces and end grains shall be sanded smooth equal to the existing finished woodwork.
4. Align all meeting rails with meeting rails of prime windows.
5. Installation of storm window units shall be after completion of all finish painting. Neatly caulk around new units where appropriate for tight and neat appearance. Leave drainage holes open in bottoms of exterior units.

A. Scope - Painting

1. Extent

a. Exterior

b. All previously-painted wood and metal surfaces.

2. Included in this Scope are exterior stained finishes.

B. Products

1. Paint (generally, unless otherwise noted)

Alkyd or oil-based primer and paint as manufactured by Benjamin Moore, Duron, Fuller-O'Brien, Hanline, Martin Senour, Masury, Pittsburgh, Pratt and Lambert, or Sherwin Williams, formulated for application to the specific surface and meeting the required color selections.

2. Exterior Stain for Wood

a. Wooden porch flooring, stair treads and risers, exterior door sills

Floor and decking stain, linseed-oil base, as manufactured by Cabot, 1 Union Street, Boston, Massachusetts 02108.

b. Pressure-treated wood

Pressure-treated wood stain, alkyd resin-base, as manufactured by Cabot, 1 Union Street, Boston, Massachusetts 02108.

3. Galvanized Steel

a. Primer

Zinc-dust paint formulated for use as a primer, meeting Federal specification TT-P-641, Type 1; or Benjamin Moore "Ironclad" galvanized metal primer, Rustoleum 770 galvanized metal primer.

b. Finish

Oil-based paint compatible with the primer.

4. Iron railings

Tnemec Company, Inc., P.O. Box 1749, Kansas City, Missouri 64141.

5. Terne Metal (tin) roofing and flashing

a. Prime Coat

Red iron oxide linseed oil paint

- (1) Vehicle - at least 50% linseed oil
- (2) Pigment - at least 40% red iron oxide

b. Finished Coats (two)

"Tin-o-lin" as manufactured by Calbar, Inc., 2626
North Martha Street, Philadelphia, Pennsylvania
19125.

C. Execution

1. Coats, generally

Primer and two finished coats

2. Colors

The Contractor shall supply the Architect with complete selections of paint manufacturers' available colors. More than one manufacturer may be selected to obtain the required colors. The Architect will select colors which match appropriate colors for this building. The Architect will issue a detailed color schedule for all painted surfaces, indicating flat, semi-gloss, gloss, etc.

a. Exterior colors, generally

Wood (generally): off-white
Shutters: dark green
Porch floors, steps: gray
Roofing: dark green

3. Painting preparation

- a. Scrape and sand existing painted surfaces to be retained. All loose, blistering, chalking, cracked, crazed, chipped and otherwise defective paint shall be removed to provide sound smooth surface for new paint. Sand all rough edges and feather edges of old finishes for uniform new coverage.
- b. Exercise care to prevent damage to the original surfaces by excessive or careless scraping, excessive exposure to paint removal chemicals or heat, etc. Chemicals and methods of paint removal shall be as approved by the Architect.

- c. Scrape and wire-brush rust from metals to be painted.
 - d. Open-flame tools shall not be permitted. Electric heat tools are permitted after demonstration and experience shows them to be safe, usable without damage to existing materials.
 - e. Wash all surfaces with strong solution of tri-sodium phosphate.
 - f. Painting preparation is an important component of this Contract.
4. Painting, generally
- a. All surfaces to be painted shall be absolutely dry, cured, clean and free of deleterious materials when painted.
 - b. Install finishes only when temperature is above 50°F. and will not fall below 50°F. at least 4 days after installation of finishes.
 - c. Apply all finishes in strict accordance with manufacturers' instructions.
 - d. Prime ALL surfaces of metal and wood after fitting and cutting but before installation.
 - e. Mix paints thoroughly before application.
 - f. Brush finishes on surfaces as recommended by the manufacturers for proper bond. No roller applications will be allowed.
 - g. Brush textures of finish painting shall match existing samples designated by the Architect or samples prepared by the Contractor and approved by the Architect.
 - h. Allow adequate drying time between coats: 48 hours
 - i. Sand lightly between coats for better paint adhesion.
 - j. Paint tops and bottoms of doors, sashes and entire sash meeting rails the required minimum number of coats.
 - k. Finished painted surfaces shall fully hide original surface with uniform coverage, texture, gloss, etc. Make edges sharp and clean.

- l. Exposed mechanical and electrical items shall be painted to match the surface on which they are installed.
 - m. Iron and steel hardware shall be painted to match surface on which they are installed. Brass hardware shall be left unpainted.
 - n. Paint frames of screen/storm window units and metal components of weatherstripping the same color as adjacent wood.
 - o. Paint insides of gutters the full number of coats.
 - p. Paint doors, windows, jambs and sills first in the day to allow maximum drying time with units open while premises is attended by painting contractor.
5. Galvanized steel
- a. Thoroughly wash all galvanized steel with trisodium phosphate (TSP) at the rate of 2½ oz. TSP to 1 gallon of water. Use hot water, from 150°F. to 200°F.
 - b. Thoroughly rinse all surfaces with clear water.
 - c. Sand all surfaces slightly to cut the glaze.
 - d. Prime and paint all surfaces in accordance with paint manufacturer's instructions.
 - e. Apply finish coats as soon as previous coat is dry.
 - f. Ensure compatibility between primer and finish coats.
6. Wrought-iron and mild steel
- a. Preparation
 - (1) See paragraph C.3. above for general requirements.
 - (2) Remove all previous paint, all rust and scale down to sound bare metal. Method of removal shall be as approved by Architect after demonstration and experience shows no damage to original metal surface.
 - b. Shop Painting
 - (1) Primer - One (1) coat Tnemec 90-93 applied in accordance with manufacturers recommendations to a thickness of 2.5 dry mils minimum.

- (2) Intermediate coat - One coat Tnemec S-66, color as specified above, applied in accordance with manufacturers recommendations to a minimum thickness of 4.0 dry mils.
- (3) Visually inspect dried film for runs, sags, overspray and missed areas. Repair defective or damaged areas to Architect's satisfaction.
- (4) Provide sufficient quantity of intermediate coat materials to project for field touch-up prior to placing finished coat.

c. Finished Painting

- (1) Finished coat shall be field applied after erection of metal elements.
- (2) Finished coat - One (1) coat Tnemec S-71 Endura-Shield applied in accordance with manufacturers recommendations to a minimum thickness of 1.5 to 2.5 dry mils.

A. Scope - Electrical Lightning Protection

1. The General Conditions of the Contract and the Supplementary Conditions apply to the work specified in this section. All work under this section shall also be subject to the requirements of Division 16.
2. The work covered by this section of the specifications includes the furnishing of all labor, equipment and materials and performing all operations in connection with the installation of a complete Lightning Protection System as shown on the drawings, as hereinafter specified.
3. The Contractor shall coordinate the installation of the Lightning Protection System with other trades to ensure a proper installation and adequate clearances.
4. The system shall bear a U.L. Master Label.

B. Products

1. Metal

Components shall be compatible with each other and with other metals adjacent to and beneath the components of this system. The metal of this system shall be as recommended by the mfr. for use over painted tin (terne) roofs.

2. Air Terminals

Air terminals shall be $\frac{1}{2}$ " ϕ and shall be mounted to extend a minimum of 15 inches above the object to be protected. Air terminals at chimney shall be side mounted.

3. Conductors

Conductors of 29 strand x 17 gauge smooth twist cable shall interconnect all air terminals and provide a two-way path to ground from each air terminal. Conductors shall maintain a horizontal and/or downward path from the air terminals to ground without forming "U" or "V" pockets.

4. Groundings

Each downlead cable from roof circuits shall terminate in a properly made ground connection. Groundings shall consist of an acceptable electrode $\frac{3}{4}$ " ϕ extended vertically 10 feet into the earth.

5. Interconnection of Metals

Connections between dissimilar metals shall be made with approved bimetallic connectors.

6. Fasteners

Fasteners shall be placed on each run of exposed conductor not more than three (3) feet apart.

7. Connections

Splices in main conductor runs and connections to branches shall be made with pressure type bolted or compression type connectors. Underground connections shall be pressure type bolted or exo-thermic welded connectors.

C. Execution

1. Standard

- a. The materials used shall be manufactured especially for Lightning Protection Systems by an accredited firm listed as a manufacturer of Lightning Protection Systems by Underwriters' Laboratories, Inc. in their latest edition of "Electrical Equipment List". All materials shall be listed by Underwriters' Laboratories, Inc. with U.L. Label "A" for cables and U.L. Label "B" for each air terminal point.
- b. The Contractor shall furnish the Owner with a Lightning Protection System "Master Label" Certificate upon completion.

2. Design

The system shall consist of air terminals, interconnecting conductors, down conductors with their groundings and bonding of extended metal objects designed to appear as part of the building. Exposed roof circuit cables shall be placed so as to require a minimum of displacement for future repair and maintenance of roofing.

3. Submittals

The Contractor shall submit to the Architect a complete shop drawing of the proposed system for approval before fabricating materials or starting the installation work. Submittals shall include catalog data with complete

description of material components. Shop drawings are to include a layout of the roof system with air terminal locations, interconnecting circuits, locations for downleads and locations of metal equipment to be bonded.

4. Guarantee

The entire system shall be guaranteed for a period of one (1) year after final acceptance by the Owner.

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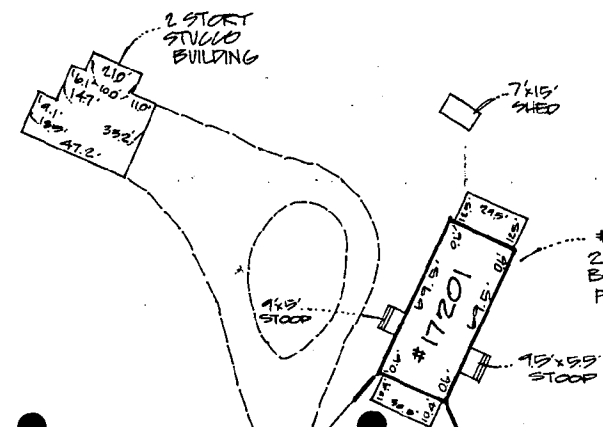
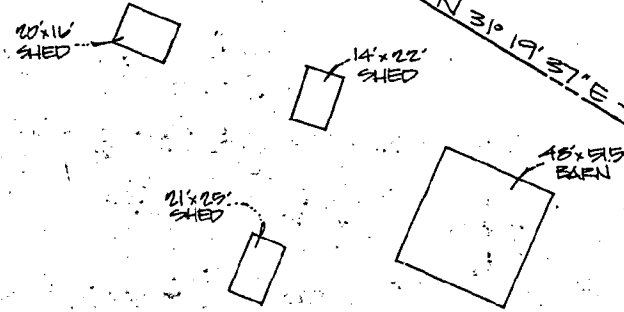
THIS LOCAT
DETERMINI
PROPERTY
OTHERWISE
BRL INFO
RECORDS.

FRIENDS HOUSE, INC.
PLAT 14595
PARCEL 'C'

POINT OF
BEGINNING

N 04° 54' 40" E - 154.50'
N 31° 19' 37" E - 176.69'

520.81'
N 57° 26' 25" W



348'±
GRAVEL DRIVEWAY

348'±

