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PLANNING & MANAGEMENT CONSULTANTS  
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(919) 726-0505

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NORTH CAROLINA

REPORT OF EXISTING CONDITIONS  
AND RECOMMENDATIONS FOR  
STRUCTURAL RENOVATIONS

MAY 10, 1989



EARLE W. WEBB, JR. MEMORIAL, INC.  
MOREHEAD CITY  
NORTH CAROLINA

March 7, 1989

R.P.T. Corporation  
704 Arendell Street, P.O. Box 3605  
Morehead City, North Carolina  
28557

Att: Mr. William A. Townes, P.E.

Dear Mr. Townes,

In attempting to repair a separation of a section of baseboard and floor in one of our first floor rooms, we found a problem that we feel warrants the advice of an engineer.

I would appreciate your company making a survey of the situation and submitting a report of the findings and your recommendations.

Sincerely,



Frances H. Stakes  
Ass't. Sec. & Treas.

## STRUCTURE

1922  
A two (2) story building 106 ft. x 40 ft. (Circa 1940), locally known as the Webb Memorial Library, at the Northeast corner of 9th and Evans Streets in Morehead City, NC. The building consists of brick exterior walls with wood floor system for both levels, and a wood frame roof covered with shingles.

The floor system for the first floor consists of full size joists (2 in. x 10 in. - 16 in. O.C.), 1 in. diagonal sub floor and standard tongue and groove flooring. The joists bear on the exterior walls and an additional brick wall approximately half the distance between the exterior walls, as shown in Fig.A. Extra support is provided by brick piers, as shown on same drawing.

## EXISTING CONDITIONS

### First Floor: (Fig, B)

The brick walls at this level appear solid and in sound condition. The ground under the floor is damp and supplies a small seepage of water into the basement area -- a condition conducive to termite life. Therefore, considerable termite damage exists at the ends of the floor joists which are supported by the exterior walls (see insert, Fig.A). This termite damage appears to be limited to an area of approximately twelve (12) inches at the supporting end of the joists which bear upon the exterior walls. No termite damage was evident in the joists where they bear upon interior walls or piers. Floor sag (settlement) was evident in Meeting Rooms #1 and #2, Fiction Room, Main Office, Reference Library, and Files Room, as indicated on Fig.B. Termite infestation was indicated in these same areas by a termite survey made in the 1970's, (copy attached as EXhibit #1).

### Second Floor: (Fig. C)

In the area of Meeting Rooms #3 and #4, the floor has dropped below the molding, indicating the loss of joist support at the exterior walls. The removal of an area of wall paneling in Meeting Room #1 (first floor), revealed water damage to the 2 x 4 furring strips, the 2 x 4 bearing plate on the supporting exterior wall ledges, and to some second floor joists. (See Photos, Exhibit #2 and #3).

The damaging water has come from both the leakage from earlier heating radiators, and through exterior wall cracks.

There is also a definite sag in the floor of Meeting Room #4, over the northwest office on the first floor. The determination of cause will require the removal and repair of an area in the ceiling over the office on the first floor.

#### Exterior Brick Work:

It is apparent that time, weather, settlement, and vibration have caused numerous cracks in the exterior brick walls. The deterioration is most evident along the South and East walls. Considerable damage has been done in the vicinity of the steel window lintels above the first floor windows. Damage is most prevalent over the North window in Meeting Room #1 (East wall). As a result of the above, the steel lintels over the windows have deteriorated, causing mortar to disintegrate and fall out.

#### Attic and Roof:

Due to the absence of evident damage, this investigation does not include the second floor ceiling or roof structure.

#### RECOMMENDATIONS - First Floor

The installation of piers and 4 x 6 support beam under the damaged area of Meeting Room #1 (Fig.B), was performed as authorized by Mrs. Frances H. Stakes, Assistant Secretary and Treasurer of the Earl W. Webb, Jr. Memorial, Inc. This method of renovation, structurally sound and appropriate for the conditions, is recommended for the total of the East and West perimeter (See Fig.D).

In view of the above, annual termite treatment is considered mandatory.

#### Second Floor

On this floor the ends of the joists supported by the exterior (East-West) walls rest upon a 2 x 4 plate which is supported by a ledge of the wall (See Fig.E). Damages here are in the ends of the joists in the 2 x 4 support plate.

The recommended renovation is to replace the damaged 2 x 4 plate and to reinforce the damaged joists by attaching (scabbing) them with approximately five (5) feet of new, treated joists,

Sufficient paneling and ceiling were removed from Meeting Room #1 (first floor) to enable inspection and temporary shoring. Similar inspection and recommended rework is proposed for each damaged area.

#### Exterior Brick Work

As a barrier to future water damage, and for structural strengthening and appearance enhancement, the exterior walls should be renovated. A specialized waterproofing company should be contacted. This company should be asked to quote on a price which will include tuckpointing, joint grouting, cleaning and repainting steel lintels, and applying a water repellent to exterior walls.

This office has discussed this project with Mr. Pat Lauro of the Western Waterproofing Company of Charlotte, NC. From this conversation, we estimate that a contract could be let for \$30,000- \$35,000 for this work. (See Photos, Exhibits #4, #5, & #6).

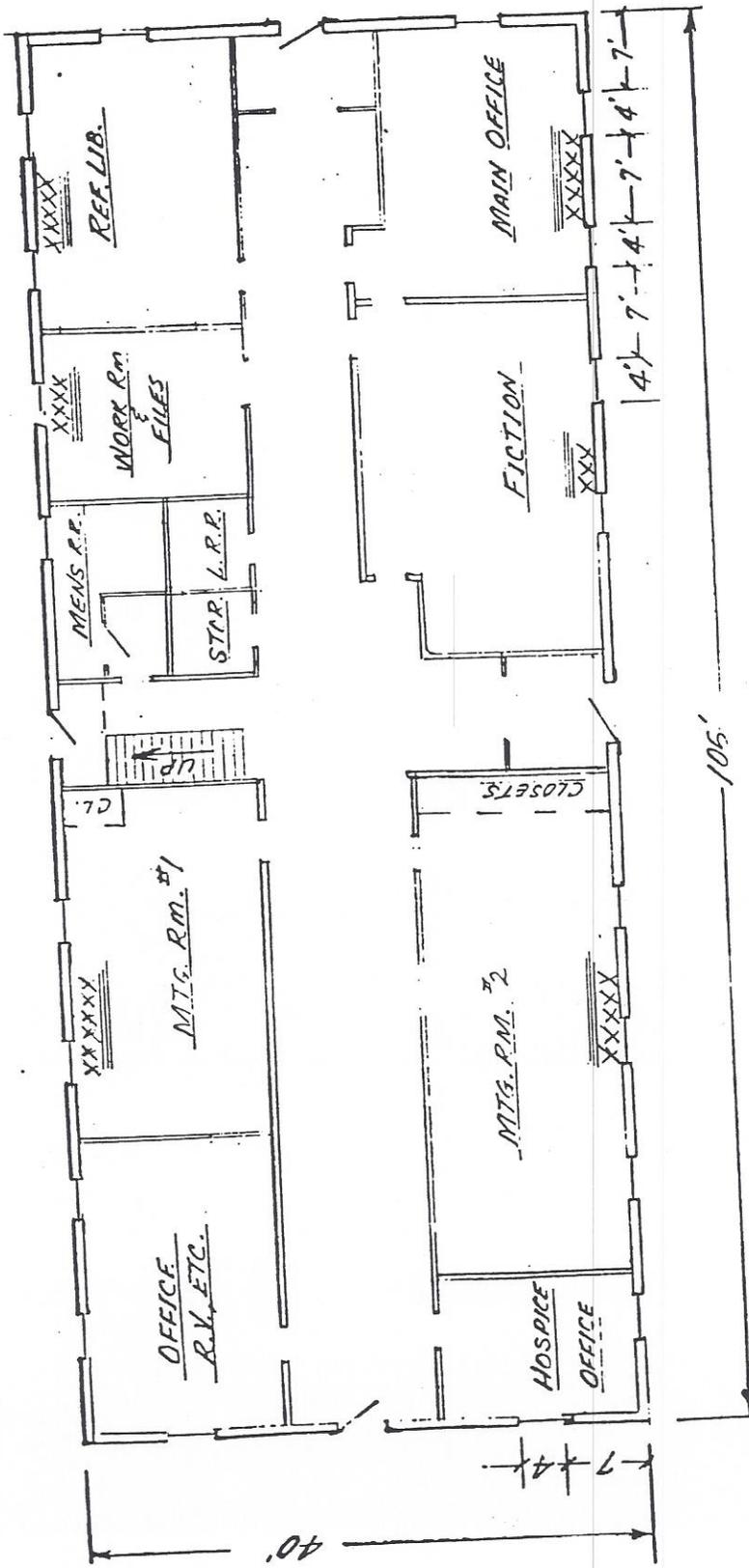
#### Procedure and Cost

The extent of the repairs to the second floor cannot be determined until paneling and ceiling is removed in Meeting Room #2. After this, a determination will be made as to the damage to the second floor joists and floor system. These repairs should be done before the paneling and ceiling is replaced. It is our opinion that the cost of this work would be in the neighborhood of \$10,000. We recommend that a reliable contractor be retained to do this work upon a cost plus a fixed fee (\$1,500 <sup>+</sup>) basis. (See Exhibit SA).

The Western Waterproofing Company, Inc., of Charlotte, NC, should be contacted concerning the exterior brick walls. A set of sketches (Fig. A through E) and photos of exterior walls should be sent to their Charlotte office so that they can give a definite price for the restoration and waterproofing of these walls. (See Exhibit W).

The Earl W. Webb, Jr. Memorial, Inc., may want to consider a local construction management firm to coordinate and inspect the work as it progresses.





SO. 9<sup>th</sup> ST.

XXXXX - DAMAGED IDEA

FIG. B

WEBB MEMORIAL

BLDG.

FIRST FLOOR

NO SCALE

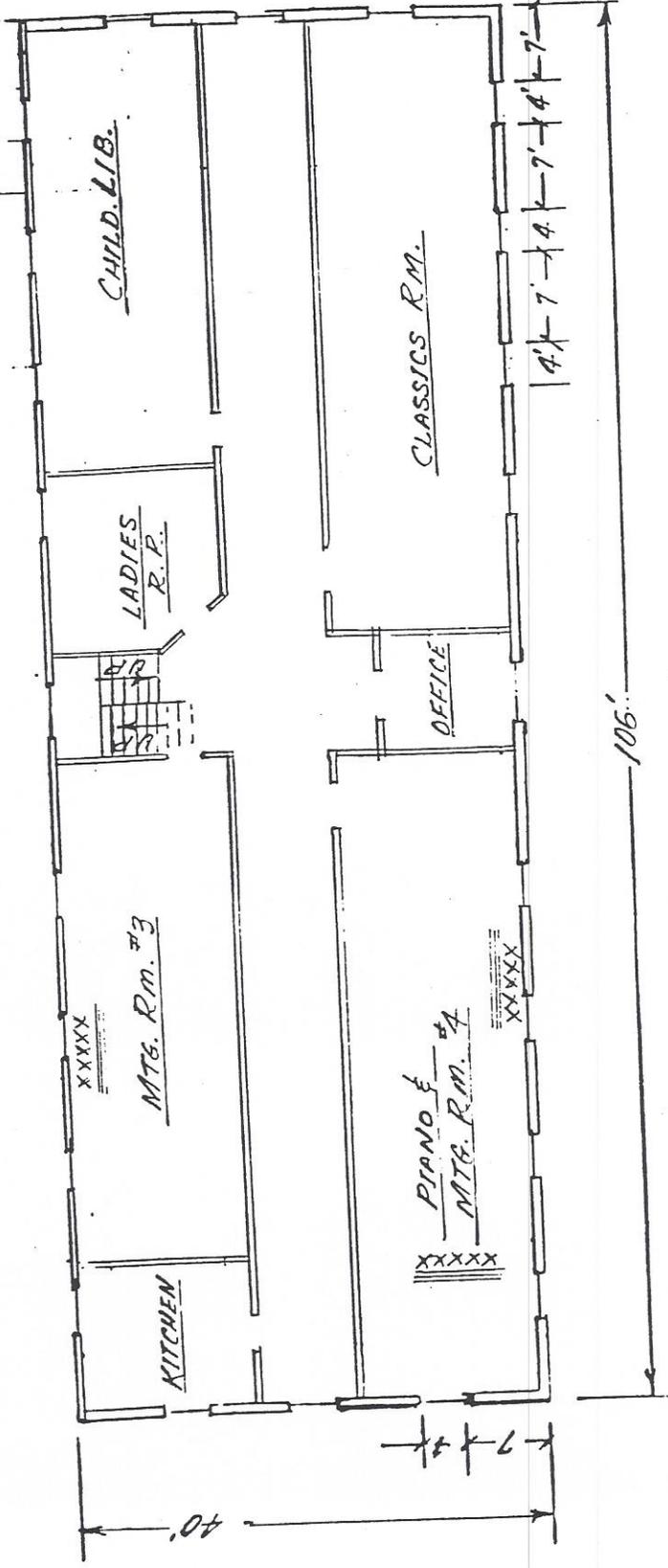
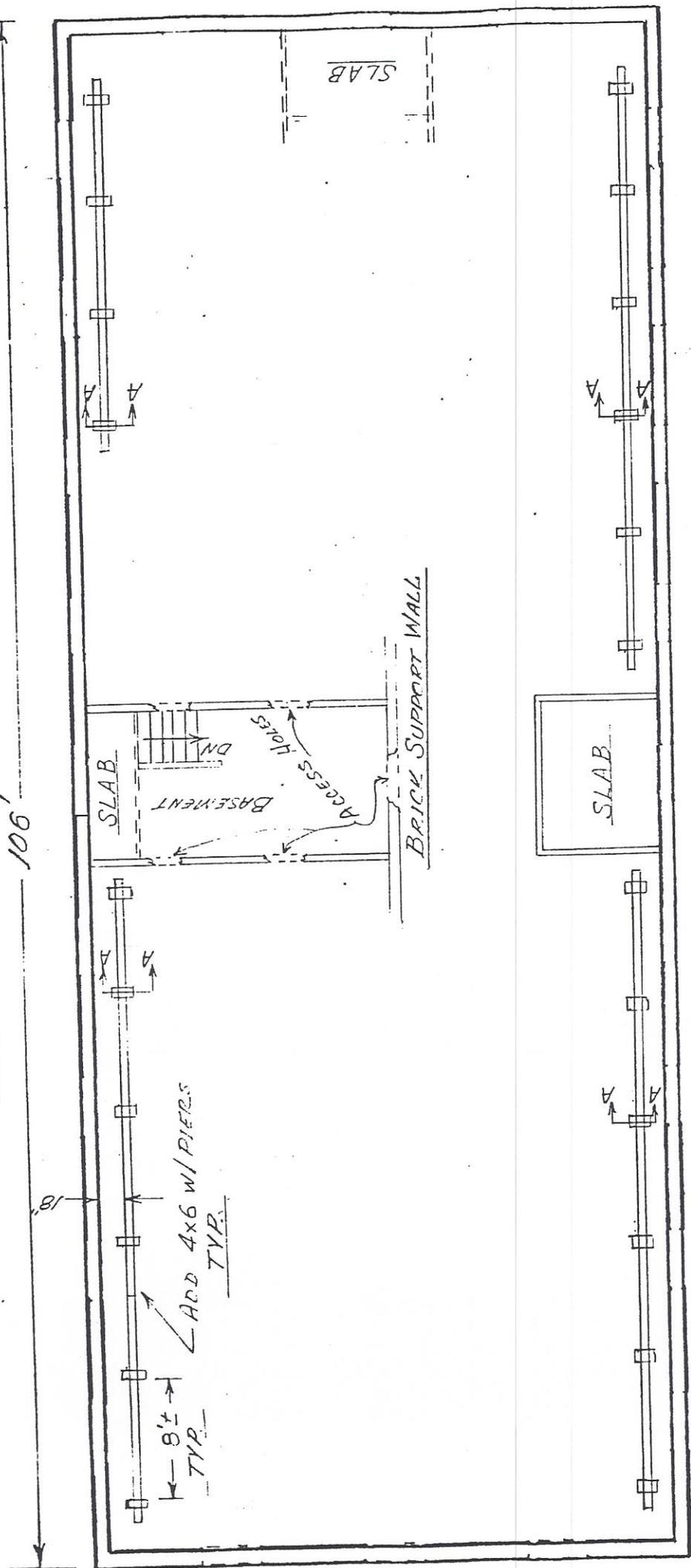
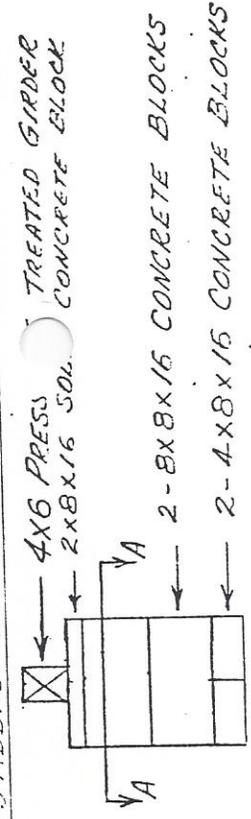


FIG. C  
WEBB MEMORIAL  
BLDG.  
SECOND FLOOR  
NO SCALE

XXXX DAMAGED AREA



SO. 9<sup>TH</sup> ST.

FIG. D.

WEBB MEMORIAL  
 BLDG.  
 FIRST FLOOR SUPPORT  
 RECOMMENDED REPAIRS

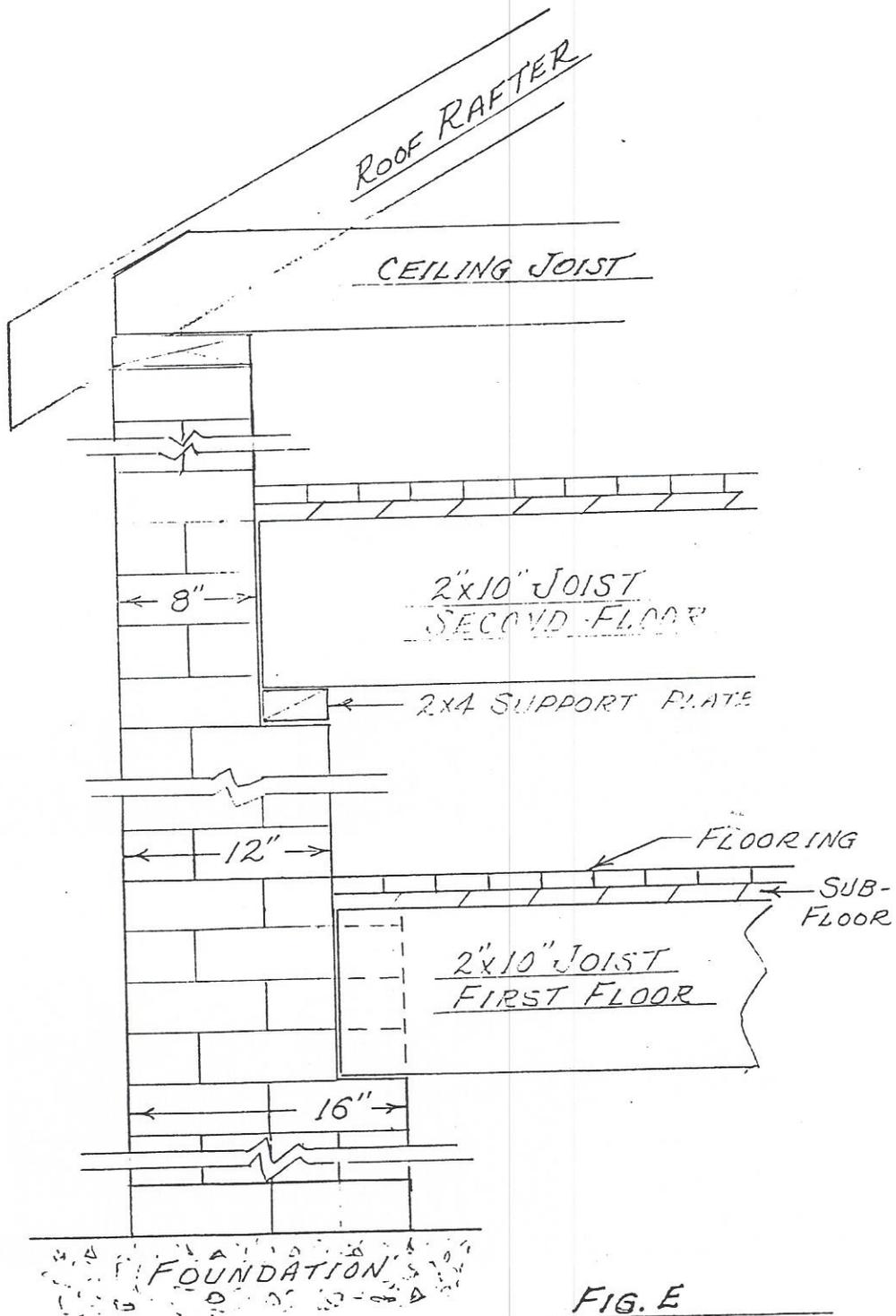
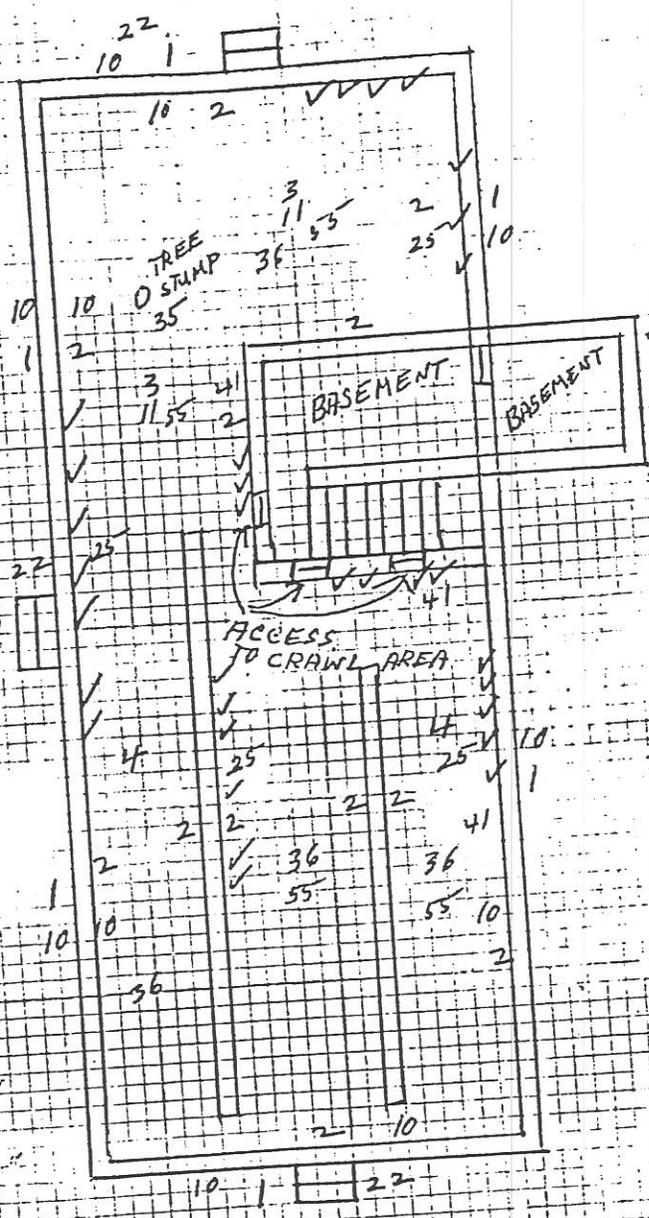


FIG. E  
 E-W WALL CONSTR.  
 WEBB MEMORIAL BLDG.



DO NOT DRILL BASEMENT WALL. IT'S SOLID CONCRETE

FRONT OF HOUSE

Key to symbols on Graph

- XX Termite Damage Noted  
Recommended Replacement
- ✓✓✓ Termite Damage  
Do not Recommended Replacement
- /// Suspected Concealed Termite Activity
- ... Vertical Drilling Locations

Scale Used 1 SQ = 2 SQ FT

EXHIBIT #1

**BRANCH MANAGER APPROVAL**

OK on Rate Card Price \_\_\_\_\_

OK on Renewal Price \_\_\_\_\_

Man Hours Allocated to Complete Job \_\_\_\_\_ Hrs.

Man Hours Actual to Complete Job \_\_\_\_\_ Hrs.

\_\_\_\_\_  
Date



EXHIBIT #2

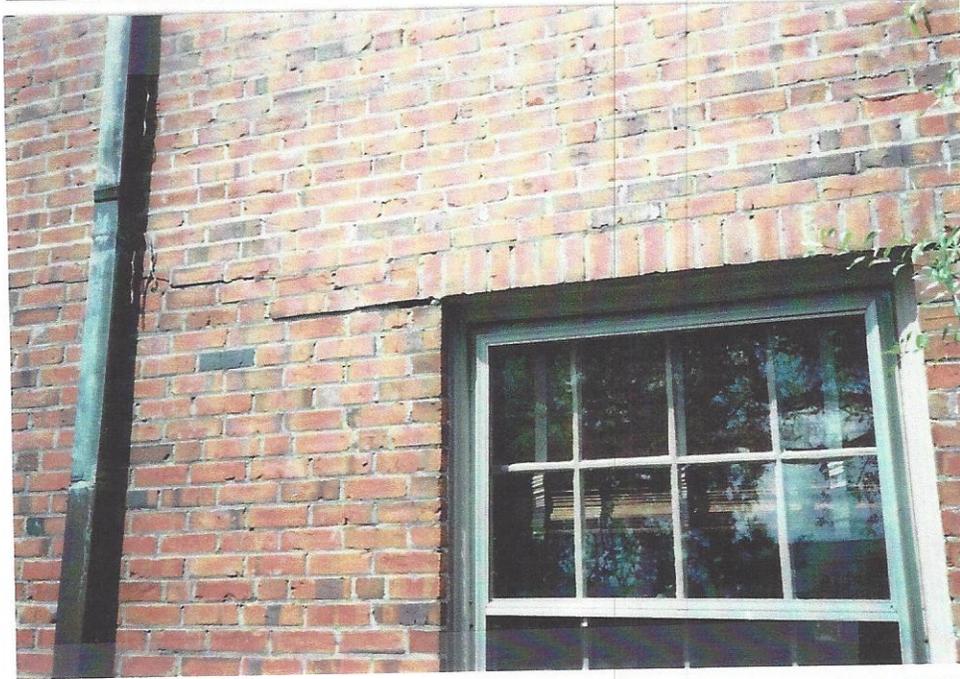


EXHIBIT #3

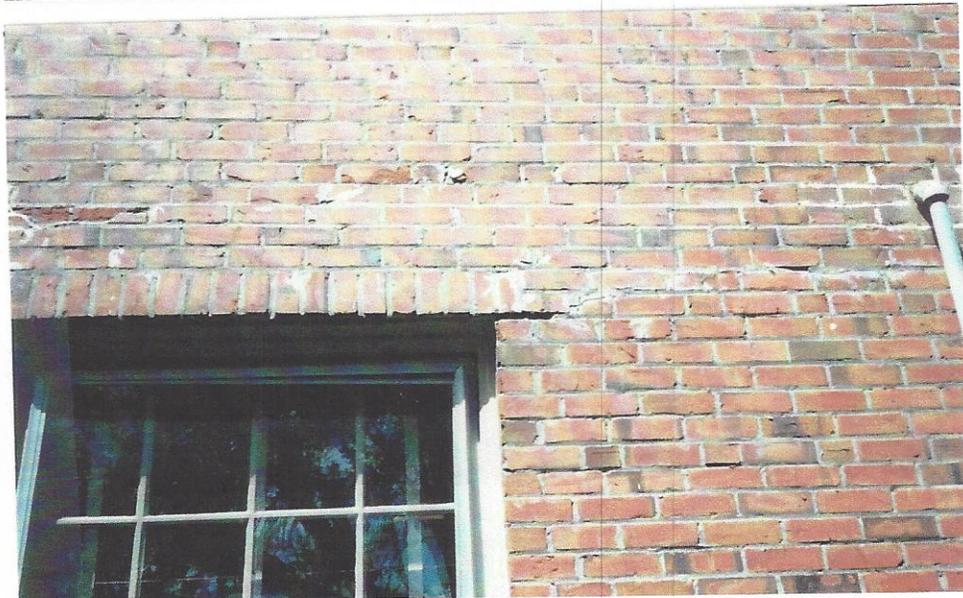
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← EXHIBIT #4



← EXHIBIT #5



← EXHIBIT #6

WEBB MEMORIAL BLDG  
MORRISTOWN CITY, N.C.

This document has important legal consequences; consultation with an attorney is encouraged with respect to its completion or modification.

# STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR ON THE BASIS OF COST-PLUS FEE

Prepared by

ENGINEERS' JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE  
*A practice division of the*  
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

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CONSTRUCTION SPECIFICATIONS INSTITUTE

This document has been approved and endorsed by

The Associated General Contractors of America



This Standard Form of Agreement has been prepared for use with the Standard General Conditions of the Construction Contract, No. 1910-8, 1983 edition. Their provisions are interrelated and a change in one may necessitate a change in the others. The suggested language for instructions of bidders contained in the Guide to the Preparation of Instructions to Bidders, No. 1910-12, 1983 edition, is also carefully interrelated with the language of this Agreement. Comments concerning their usage are contained in the Commentary on Agreements for Engineering Services and Contract Documents, No. 1910-9, 1981 edition. See also Guide to the Preparation of Supplementary Conditions, No. 1910-17, 1983 edition.

STANDARD FORM OF AGREEMENT  
BETWEEN OWNER AND CONTRACTOR  
ON THE BASIS OF COST-PLUS

THIS AGREEMENT is dated as of the \_\_\_\_\_ day of \_\_\_\_\_ in the year 19 \_\_\_\_  
by and between \_\_\_\_\_  
\_\_\_\_\_ (hereinafter called OWNER) and  
\_\_\_\_\_ (hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1. WORK.

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

Article 2. ENGINEER.

The Project has been designed by

who is hereinafter called ENGINEER and who is to act as OWNER's representative, assume all duties and responsibilities and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

Article 3. CONTRACT TIME.

3.1. The Work will be substantially completed on or before \_\_\_\_\_, 19 \_\_\_\_\_, and completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions on or before \_\_\_\_\_, 19 \_\_\_\_\_.

3.1. The Work will be substantially completed within \_\_\_\_\_ days from the date when the Contract Time commences to run as provided in paragraph 2.3 of the General Conditions, and completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions within \_\_\_\_\_ days from the date when the Contract Time commences to run.

3.2. *Liquidated Damages.* OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 3.1 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER \_\_\_\_\_ dollars (\$ \_\_\_\_\_) for each day

(Strike Inapplicable Paragraph)

## Article 8: CHANGES IN THE WORK.

The amount of any increases or decreases in the Contractor's Fee and in any Guaranteed Maximum Contract Price or Fee which results from a Change Order shall be set forth in the applicable Change Order subject to the following:

- 8.1. If the Contractor's Fee is a fixed fee: any increase or decrease in the Contractor's Fee resulting from net additions or decreases in the Cost of the Work shall be determined in accordance with paragraph 11.6.2 of the General Conditions.
- 8.2. If the Contractor's Fee is a percentage fee not subject to any guaranteed maximum limitation: Contractor's Fee will adjust automatically as the Cost of the Work changes.
- 8.3. Wherever there is a Guaranteed Maximum Contract Price or Fee: in the case of net additions in the Work, the amount of any increase in the Guaranteed Maximum shall be determined in accordance with paragraphs 11.3 through 11.6, inclusive, of the General Conditions; and in the case of net deletions in the Work, the amount of any such decrease shall be determined in accordance with paragraph 11.6.2 of the General Conditions and any Guaranteed Maximum shall be reduced by mutual agreement.

## Article 9. PAYMENT PROCEDURES.

Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will indicate the amount of the Contractor's Fee then payable. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

9.1. *Progress Payments.* OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment as recommended by ENGINEER, on or about the \_\_\_\_\_ day of each month during construction as provided below. All such payments will be subject to the limitations of any Guaranteed Maximum Contract Price or Fee and will be measured by the schedule of values established in paragraph 2.9 of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

9.1.1. *For Cost of Work:* Progress payments on account of the Cost of the Work will be made:

9.1.1.1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.7 of the General Conditions:

\_\_\_\_\_ % of Cost of the Work completed. If Work has been 50% completed as determined by ENGINEER, and if the character and progress of the Work have been satisfactory to OWNER and ENGINEER, OWNER on recommendation of ENGINEER, may determine that as long as the character and progress of the Work remain satisfactory to them, there will be no additional retainage on account of Work completed in which case the remaining progress payments prior to Substantial Completion will be in an amount equal to 100% of the Work completed.

\_\_\_\_\_ % of Cost of the Work applicable to materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to OWNER as provided in paragraph 14.2 of the General Conditions).

9.1.1.2. Upon Substantial Completion, in an amount sufficient to increase the total payments to CONTRACTOR to \_\_\_\_\_ % of the Cost of the Work, less such amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.7 of the General Conditions.

9.1.2. *For Contractor's Fee:* Progress payments on account of the Contractor's Fee will be made:

9.1.2.1. If the Contractor's Fee is a fixed fee: payments prior to Substantial Completion will be in an amount equal to \_\_\_\_\_ % of such fee earned to the date of the approved Application for Payment (less in each case payments previously made on account of such fee) based on the

**Article 12. ACCOUNTING RECORDS.**

CONTRACTOR shall check all materials, equipment and labor entering into the Work and shall keep such full and detailed accounts as may be necessary for proper financial management under this Agreement, and the accounting methods shall be satisfactory to OWNER. OWNER shall be afforded access to all CONTRACTOR's records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda and similar data relating to the Cost of the Work and Contractor's Fee. CONTRACTOR shall preserve all such documents for a period of three years after the final payment by OWNER.

**Article 13. CONTRACT DOCUMENTS.**

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the Work consist of the following:

- 13.1. This Agreement (pages 1 to \_\_\_\_\_, inclusive).
- 13.2. Exhibits to this Agreement (pages \_\_\_\_\_ to \_\_\_\_\_, inclusive).
- 13.3. Performance and other Bonds, identified as exhibits \_\_\_\_\_ and consisting of \_\_\_\_\_ pages.
- 13.4. Notice of Award.
- 13.5. General Conditions (pages \_\_\_\_\_ to \_\_\_\_\_, inclusive).
- 13.6. Supplementary Conditions (pages \_\_\_\_\_ to \_\_\_\_\_, inclusive).
- 13.7. Specifications bearing the title \_\_\_\_\_ and consisting of \_\_\_\_\_ divisions and \_\_\_\_\_ pages, as listed in table of contents thereof.
- 13.8. Drawings, consisting of a cover sheet and sheets numbered \_\_\_\_\_ through \_\_\_\_\_, inclusive with each sheet bearing the following general title:

[Fill in, and, if a set of Drawings is not attached to each signed counterpart of Agreement, so indicate in which case OWNER and CONTRACTOR should initial or otherwise appropriately identify all Drawings.]

- 13.9. Addenda numbers \_\_\_\_\_ to \_\_\_\_\_, inclusive.
- 13.10. CONTRACTOR's Bid (pages \_\_\_\_\_ to \_\_\_\_\_, inclusive) marked exhibit \_\_\_\_\_.

[Attach Bid Form only in special circumstances.]

- 13.11. Documentation submitted by CONTRACTOR prior to Notice of Award (pages \_\_\_\_\_ to \_\_\_\_\_, inclusive).

13.12. The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying or supplementing the Contract Documents pursuant to paragraphs 3.4 and 3.5 of the General Conditions.

13.13. The documents listed in paragraphs 13.2 et seq. above are attached to this Agreement (except as expressly noted otherwise above).

There are no Contract Documents other than those listed above in this Article 13. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.4 and 3.5 of the General Conditions.

**Article 14. MISCELLANEOUS.**

14.1. Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.

14.2. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation moneys that may become due and moneys that are due may not be

# WESTERN WATERPROOFING COMPANY INC.

CONTRACTORS • A MISSOURI CORPORATION

9609 DIXIE RIVER ROAD • CHARLOTTE, NORTH CAROLINA 28208 • 704 399-2568

Dear Building Manager:

It is our continued desire to give you better service in the new and remedial construction field, therefore we have prepared the following check list for your use. This list follows the standard CSI format.

## DIVISION 3: CONCRETE

- Sandblasting
- Caulking Precast
- Pressure Grouting
- Gunite - Shotcrete
- Epoxy Injection
- Cleaning
- Coatings - Cementitious
  - Acrylic
  - Epoxy
  - Urethane
  - Decorative
- Chemical Grouting

## DIVISION 7: MOISTURE PROTECTION

- Sealants and Caulking
- Membrane - Fluid Applied
- Membrane - Elastomeric
- Dampproofing
- Metallic Waterproofing
- Liquid (Water) Repellents
- Elastomeric Roof & Deck Coating
- Membrane - Cold Applied

## DIVISION 4: MASONRY

- Tuckpointing
- Sandblasting
- Water Repellents
- Steam Cleaning
- Wet Aggregate Cleaning
- Coatings
- Joint Grouting
- High Pressure Water Cleaning
- Stone Repair
- Brick Replacement

## DIVISION 9: FINISHES

- Floor Topping
  - Abrasive
  - Acid Resistant
  - Nonconductive
- Exterior Coatings
- Fluid Applied Resilient Flooring
- Elastomeric Liquid Flooring
- Stucco Repairs

We can furnish quotations on all services listed; please call or write our office.

Very truly yours,

WESTERN WATERPROOFING COMPANY INC.

James R. (Bob)  
Simmons  
Regional Manager

Pat Lauro  
Remedial Constr.  
Manager (North  
Carolina)

Terry Talley  
Remedial Constr.  
Manager (South  
Carolina)

Paul Hass  
New Constr.  
Manager