

STATE OF ALABAMA
BALDWIN COUNTY
I certify that this instrument was filed on
AUG 26 1981 11 PM

DECLARATION OF CONDOMINIUM

OF

ISLAND WINDS EAST, a Condominium

and that no tax was collected. Recorded in *Misc*
Book 39
Page 1660
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MH \$1.00
Index \$ By *[Signature]*

THIS DECLARATION, made this 8th day of July, 1981, by BRETT REAL ESTATE, ROBINSON DEVELOPMENT COMPANY, INC., a corporation organized under the laws of the State of Alabama, hereinafter called the DEVELOPER, for itself, its successors, grantees and assigns.

WHEREIN, the DEVELOPER makes the following declaration.

WHEREAS, BRETT REAL ESTATE, ROBINSON DEVELOPMENT COMPANY, INC., a corporation, is the fee simple owner of that certain parcel of real property situated in the Town of Gulf Shores, County of Baldwin, State of Alabama, and intends to improve the same in the manner hereinafter described, which said parcel of land is more particularly described as follows, to-wit:

Parcel 1: Lots One (1), Two (2), Three (3), Four (4), Seventeen (17), Eighteen (18), Nineteen (19), and Twenty (20), all in Block Five (5), of Unit One (1), Gulf Shores, Alabama, according to a map thereof recorded in Map Book 1, page 148, of the records in the office of the Judge of Probate of Baldwin County, Alabama;

Parcel 2: That area of land bounded on the North by the South line of Lots One (1), Two (2), Three (3), and Four (4), in Block Five (5), as shown on a map of Unit One (1), Gulf Shores, Alabama, recorded in Map Book 1, page 148, of said records; on the East by the extension of the East line of Lot Four (4) to the Gulf of Mexico; on the South by the Gulf of Mexico; on the West by the extension of the West line of Lot One (1) to the Gulf of Mexico. This area hereby conveyed is restricted against the erection of any buildings whatsoever;

Parcel 3: That certain alley lying and being located between Lots One (1), Two (2), Three (3) and Four (4), and Lots Seventeen (17), Eighteen (18), Nineteen (19), and Twenty (20), of Block Five (5), of Unit One (1), Gulf Shores, Alabama, according to a map thereof recorded in Map Book 1, page 148, of said records.

NOW, THEREFORE, BRETT REAL ESTATE, ROBINSON DEVELOPMENT COMPANY, INC., a corporation, the DEVELOPER, hereby makes the following declaration as to the division to which

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said real property and improvements thereon may be put, hereby specifying that said DECLARATION shall constitute covenants to run with the land and shall be binding upon BRETT REAL ESTATE, ROBINSON DEVELOPMENT COMPANY, INC., its successors and assigns, and all subsequent owners of all or any part of said real property and improvements, together with their grantees, successors, heirs, executors, administrators, devisees or assigns.

1. Purpose. The purpose of this Declaration is to submit the lands hereinafter described and the improvements to be constructed thereon to the condominium form of ownership and use in the manner provided by the CONDOMINIUM OWNERSHIP ACT, Act No. 1059, 1973 Regular Session, Alabama Legislature (Title 47) Sec. 313(1), et seq., Code of Alabama, Recompiled, as amended).

2. Name. The name by which this condominium is identified is ISLAND WINDS EAST, a Condominium.

3. The Land. The lands owned by the DEVELOPER which are herewith submitted to the condominium form of ownership are the following described lands, lying and being in the Town of Gulf Shores, County of Baldwin, State of Alabama, to-wit:

Parcel 1: Lots One (1), Two (2), Three (3), Four (4), Seventeen (17), Eighteen (18), Nineteen (19), and Twenty (20), all in Block Five (5), of Unit One (1), Gulf Shores, Alabama, according to a map thereof recorded in Map Book 1, page 148, of the records in the office of the Judge of Probate of Baldwin County, Alabama;

Parcel 2: That area of land bounded on the North by the South line of Lots One (1), Two (2), Three (3), and Four (4), in Block Five (5), as shown on a map of Unit One (1), Gulf Shores, Alabama, recorded in Map Book 1, page 148; of said records; on the East by the extension of the East line of Lot Four (4) to the Gulf of Mexico; on the South by the Gulf of Mexico; on the West by the extension of the West line of Lot One (1) to the Gulf of Mexico. This area hereby conveyed is restricted against the erection of any buildings whatsoever;

Parcel 3: That certain alley lying and being located between Lots One (1), Two (2), Three (3) and Four (4), and Lots Seventeen (17), Eighteen (18), Nineteen (19), and Twenty (20), of Block Five (5), of Unit One (1), Gulf Shores, Alabama, according to a map thereof recorded in Map Book 1, page 148, of said records.

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SUBJECT to, however, the following:

A private easement and right-of-way for the owners of property within the tract of land described in page 2 of this Declaration, include the owners of townhouse and apartment units in said condominium, their families, tenants, agents, servants, employees, invitees, and guests, which said private easement and right-of-way is located as appears upon that certain drawing of said property appearing as page 1 of Exhibit A hereto attached and by reference made a part hereof.

4. Definitions. The terms used herein and in the By-laws shall have the meanings stated in the Condominium Ownership Act of Alabama, and as follows:

(a) "Unit" means a townhouse, apartment, or garage and includes the private elements thereof, together with the undivided interests in the common elements which are assigned thereto.

(b) "Unit Owner" means the owner of a townhouse or apartment, whether singly or jointly, partnership, corporation, or other legal entity, or the successors, heirs, administrators, executors or assigns, or the heirs or assigns of the survivor, as the case may be.

(c) "Association" means the ISLAND WINDS EAST ASSOCIATION, INC., and its successors, and is the association of Unit Owners referred to in said Act.

(d) "Common Elements" means common areas and facilities, including but not limited to all parts of the condominium property not included within the unit boundaries as described in paragraph 5.4 hereinafter, and shall include the utility spaces and the tangible personal property required for the maintenance and the operation of the condominium as well as the items stated in the Condominium Ownership Act of Alabama.

(e) "Common Expenses" means and includes the actual and estimated expenses of operating the property, and any reasonable reserve for such purposes as may be found and determined necessary or useful by the Board of Directors, and all sums designated as common expenses by or pursuant to the condominium documents.

(f) "Utility Services" shall include but not be limited to electrical power, water, garbage and sewage disposal.

(g) "Substantial Destruction, Deterioration or Obsolescence" shall mean such destruction or deterioration or obsolescence that the condominium has lost its character as a residential development, and restoration thereof would be the practical equivalent of a newly constructed development.

(h) "Development" comprehends the land, and all buildings, improvements and property which are

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a part of the condominium.

(i) "Common Interest" means the proportionate undivided interest in the fee simple absolute in the common elements appurtenant to each unit as expressed in this Declaration.

(j) "Common Surplus" means the excess of all receipts of the Association, including but not limited to assessments, rents, profits and revenues on account of the common elements, over the amount of common expenses.

(k) "Operation of the Property" means and includes the administration of the project, the operation, maintenance, repair or replacement of, and the making of any additions or improvements in the common elements.

(l) "Person" means a natural person, a corporation, a partnership, the Association herein referred to, a trustee, or other legal entity.

(m) "Unit Designation" means the number, letter or combination thereof or other official designations as shown on the plans annexed to this Declaration.

(n) "Declaration" means this declaration and all amendments thereto hereafter made.

(o) "Surfacing Materials" means the materials, including but not limited to mats, carpeting, sheetrock, decking, boards, panels and the like which are laid upon or attached to foundation slabs, and/or to the studs and structural components of walls, and/or to the under surfaces of ceiling rafters, and/or to the upper surfaces of floor rafters.

5. Development Plan.

.1. The improvements will be constructed as shown upon the drawings thereof, pages 1 through 66, inclusive, of Exhibit A, hereto attached and by reference made a part hereof, which plans were prepared by John M. Senkarik, A.I.A., including a set of floor plans of the building showing the lay-out, location, the designating letters and numbers of each unit, and bearing the verified statement of a Registered Architect that such drawings are in sufficient detail to identify the common elements and the private elements comprising the units as built and which said drawings are supplemented and complemented by the narrative and the graphic descriptions herein contained.

.2. Changes. In order to meet possible unforeseen or varying demands for the number and type of unit, or in order to meet particular requirements of prospective purchasers, lending institutions or title insurance companies, or for any other reason, the DEVELOPER reserves the right to change the size, dimensions, number and location of buildings, units and other improvements, and the size, dimensions, lay-out location and undivided percentage of ownership in the common elements of any unit for which a purchase agreement has not been executed by the

DEVELOPER or with respect to which the purchaser is in default, provided such changes do not change the common elements or the undivided percentage interest of ownership in the common elements of any unit already sold or under an executed purchase and sale agreement as to which the purchaser is not in default. The DEVELOPER further reserves the right to substitute for any of the materials, equipment and other articles herein mentioned, materials, equipment and articles of equal or better quality.

.3. Amendment of Plans. This Declaration may be amended by the filing of such additional plans as may be required to accurately describe the improvements of the condominium and in order to show completion of improvements. Such completion may be shown by the filing of a verified statement of a registered architect or licensed professional engineer certifying that the completed improvements have been constructed as herein represented and upon the plans herewith filed, or, if not so constructed, then designating the changes made and certifying that the plans being filed simultaneously with such certificate fully and accurately depict the lay-out, location, numbers, size and dimensions of the units. Such plans, or certificate, or both, when signed and acknowledged by such a registered architect or licensed professional engineer, and by the DEVELOPER, shall constitute an amendment to this Declaration without approval of the Association, unit owners, lessees or mortgagees of units in the condominium, whether or not elsewhere required for an amendment.

.4. Easements. Easements are reserved throughout the condominium property as may be required for utility services in order to adequately serve the condominium; provided, however, such easements to a unit shall be only in accordance with the plans and specifications for the buildings or as the buildings are constructed, unless approved in writing by the unit owner. Each unit owner shall have an easement in common with the owners of all other units to use all pipes, wires, ducts, cables, conduits, public utility lines and other common elements located in any of the other units and serving his unit. Each unit shall be subject to an easement in favor of the owners of all other units to use the pipes, ducts, cables, wires, conduits, public utility lines and other common elements serving such other units and located in such unit. The Association shall have a right of access to each unit to inspect the same, to remove violations therefrom, and to maintain, repair or replace the common elements contained therein or elsewhere in any building.

.5. Access. Each unit has a right of access to a public street or highway, that is to say, to West Gulf Beach Highway 182, upon and over common elements, providing such access all as shown upon the site plan (Exhibit A, page 1, hereto attached). The immediate common elements by which each unit has access to such public street or highway are (i) the concrete walkways running along the face of the buildings and the grounds, and (ii) the parking areas, driveways and streets all as shown upon the site plan (Exhibit A, page 1, hereto attached).

6. Descriptions.

.1. The Buildings. The Condominium will include

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access areas, parking areas, lawn areas, a swimming pool, all facilities located substantially as shown in the plans and drawing, Exhibit A. The lay-out, location and dimensions of each unit are found in Exhibit A.

.2. Private Elements. The description and location of the private elements and the appurtenances thereto are determined with the aid of the plans therefor, attached hereto, and as follows:

(a) Units Numbered. Each unit is assigned a number which is indicated on the plans attached hereto.

(b) Changes. The DEVELOPER reserves the right to change the interior design and arrangement of all units so long as the DEVELOPER owns the unit so altered.

(c) Type A. Units of this type are on all eight floor levels, have one (1) balcony with a view of the Gulf of Mexico, have three (3) bedrooms, two (2) baths, and have 1,234 square feet of space exclusive of balconies and including an entrance hall, living room, closets and kitchen. The kitchen is equipped with dishwasher, garbage disposal, drop-in range, range hood and refrigerator; the unit is equipped with water heater, heater and air conditioner, washer and dryer, all as set forth in the specifications attached hereto as Exhibit A.

(d) Type B. Units of this type are on all eight floor levels. Some Interior B units are located directly on the Gulf of Mexico; non-interior B units all have balconies with a view of the Gulf of Mexico, have two (2) bedrooms and two (2) baths, have one (1) balcony and have 821 square feet of space exclusive of balconies and including an entrance hall, living room, closets and kitchen. The kitchen is equipped with dishwasher, garbage disposal, drop-in range, range hood and refrigerator; the unit is equipped with water heater, heater and air conditioner, washer and dryer, all as set forth in the specifications attached hereto as part of Exhibit A.

(e) Type C. Units of this type are located on all eight floor levels, are all located on the Gulf of Mexico, have one (1) balcony, one (1) bedroom, and one (1) bath, and have 516 square feet of space exclusive of balconies and including an entrance hall, living room, closets and kitchen. The kitchen is equipped with dishwasher, garbage disposal, drop-in range, range hood and refrigerator; the unit is equipped with water heater, heater and air conditioner, washer and dryer, all as set forth in the specifications attached hereto as part of Exhibit A.

(f) Type D. Units of this type are on all eight floor levels, are all located on the Gulf of Mexico,

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have one (1) balcony, have two (2) bedrooms, and two (2) baths, and have 692 square feet of space exclusive of balconies and including an entrance hall, living room, closets and kitchen. The kitchen is equipped with dishwasher, garbage disposal, drop-in range, range hood and refrigerator; the unit is equipped with water heater, heater and air conditioner, washer and dryer, all as set forth in the specifications attached hereto as part of Exhibit A.

(g) Garage Units. Twenty-six (26) of these units available for purchase, as described in Exhibit A and Exhibit B, separately.

(h) All Units. All units shall be constructed as per the plans attached hereto as Exhibit A, and the specifications therein.

(i) Substitutions. DEVELOPER reserves the right to substitute substantially equivalent materials and/or equipment in any type unit.

.3. Common Elements. The common elements of the condominiums include all parts of the condominium property not located within the perimeter boundaries of the townhouse or apartment units, as hereinafter described, being the facilities located substantially as shown upon the plans hereto attached, and include but are not limited to the following:

(a) The land described in paragraph 3.

(b) All central and appurtenant installations for services such as power, light, telephone, storm drains, sewer, and water; TV cables, heat and air conditioning, including all pipes, ducts, wires, cables, and conduits used in connection therewith, whether located in common areas or in units, and all utility and mechanical equipment, buildings and spaces, which are not used or reserved for the exclusive use of certain units.

(c) Automobile parking spaces, whether or not assigned to the exclusive use of any unit.

(d) All outdoor and exterior lights, excepting such as are placed on the balcony assigned to the exclusive use of a unit.

(e) Balconies and decking.

(f) All attics, foundations, columns, girders, beams, and supports of buildings, and such component parts of walls, roofs, floors, and ceilings as are not located within the units.

(g) Lawn areas, landscaping, trees, curbs, and walkways.

(h) Recreation areas and facilities, including but not limited to the swimming pool and sun deck.

(i) Exterior steps, ramps, handrails, stairs and stairwells.

(j) All tanks, pumps, pump houses, wells, motors, fans, compressors and control equipment, fire fighting equipment, and garbage equipment, elevator and equipment, which are not reserved for the use of certain units.

(k) All retaining walls, seawalls, bulkheads and jetties, and all areas for refuse collection or disposal.

(l) All other parts of the development existing for the common use or necessary to the existence, maintenance and safety of the development.

(m) All other items listed as such in the Condominium Ownership Act of Alabama, Act No. 1059, 1973 Regular Session, Alabama Legislature (Title 47, Sec. 313(1), et seq.; Code of Alabama Recompiled, as amended), and located on the property.

.4. Limited Common Elements. There are no limited common elements.

.5. Unit Boundaries. Each unit consists of that part of the building containing the unit which lies within the boundaries of the unit, exclusive of interior load-bearing walls and pillars and any pipes, wires, conduits, ducts, vents and other servicing utility lines which are utilized for or serve more than one (1) condominium unit. The vertical boundaries of each unit shall be the plane of the inside surfaces of the studs which are the component parts of exterior walls and of interior walls separating a unit from another unit, and are as shown on the drawings (Exhibit A attached hereto). Where the unit is bounded by an exterior wall, the walls shall be considered to include any door, window or other closure therein in the closed position, and the boundary shall be the plane of the inside surfaces of the studs which are the component parts of such walls to the effect that the private elements of the boundary walls shall include the surfacing materials. The upper horizontal boundary of each unit shall be the plane of the under-surfaces of the ceiling slabs. The lower horizontal boundary of floors of the units shall be the upper surface of the floor slab.

.6. Surfaces. An owner shall not be deemed to own the studs and structural components of the perimeter walls and/or of load-bearing walls, nor the windows and doors bounding the unit, nor balconies, nor balcony railings enclosing a balcony area assigned to the exclusive use of the unit. An owner, however, shall be deemed to own and shall have the exclusive right and duty to repair, maintain, replace, paint, repaint, tile, wax, paper or otherwise finish and decorate the surfacing materials on the interior of exterior walls and on the interior walls separating a unit from other units, and the surfacing materials of the floors of his unit, and all appurtenant installations, including all pipes, ducts, wires, cables and conduits used in connection therewith for services such as power, light, telephone, sewer, water, heat and air conditioning, and TV, whether located in the boundaries of the unit

or in common areas, which are the exclusive use of the unit; and all ceilings and partition walls. An owner shall have the exclusive right and duty to wash and keep clean the interior and exterior surfaces of windows and doors bounding his unit.

.7. Balconies. A valid exclusive easement is hereby declared and established for the benefit of each unit and its owner consisting of the exclusive right to use and occupy the balcony or balconies serving the unit.

7. Determination of Percentages of Ownership in Common Elements, Common Expenses, Common Surplus and Voting. A schedule setting forth the percentage of undivided interest of each unit in the common areas is attached hereto, marked Exhibit B, and by reference made a part hereof, to determine the percentage of ownership in the common elements, percentage of common expenses, and percentage of common surplus, and voting in all matters requiring action by the owners. The common expenses shall be charged to the unit owners according to the percentages of the undivided interests of the respective units in the common elements. The common surplus shall be a trust fund for the unit owners and shall be either distributed among the unit owners according to the respective percentages of the undivided interests of the respective units in the common elements or applied against the following year's assessment, unless otherwise determined by the Board of Directors of the Association which shall not in any event use such surplus or any part thereof in any way other than to furnish services, insurance, goods or other items of value to the unit owners.

8. Encroachments. If any portion of the common elements now encroaches upon any unit, or if any unit now encroaches upon any other unit or upon any portion of the common elements, as a result of the construction of any building, or if any such encroachment shall occur hereafter as a result of settling or shifting of any building, a valid easement for the encroachment and for the maintenance of the same so long as such building stands shall exist. In the event any building, any unit, any adjoining unit, or any adjoining common element shall be partially or totally destroyed as a result of fire or other casualty, or as a result of condemnation or eminent domain proceedings, and then rebuilt, encroachments of parts of the common elements upon any unit or of any unit upon any other unit or upon any portion of the common elements, due to such rebuilding, shall be permitted, and valid easements for such encroachments and the maintenance thereof shall exist so long as such building shall stand.

9.1. Units Subject to Act, Declaration, By-laws and Rules and Regulations. All present and future owners, tenants and occupants of units shall be subject to, and shall comply with the provisions of the Act, this Declaration, the By-laws, and the Rules and Regulations, as they may be amended from time to time. The acceptance of a deed or conveyance or the entering into of a lease or the entering into occupancy of any unit shall constitute an agreement that the provisions of the Act, this Declaration, the By-laws and the Rules and Regulations, as they may be amended from time to time, are accepted and ratified by such owner, tenant, and occupant, and all of such provisions shall be deemed and taken to be covenants running with the land and shall bind any person having at any time any interest or estate in such unit,

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as though such provisions were recited and stipulated at length in each and every deed or conveyance or lease thereof. In the event of a conflict in any of the provisions of any such documents, the documents shall govern or control in the following order of preference: (1) the Act, (2) the Declaration, (3) the Articles of Incorporation of the Association, (4) the By-laws of the Association, and (5) the Rules and Regulations of the Association.

.2. Exclusive Ownership. Each owner shall be entitled to exclusive ownership and possession of his unit. Each owner shall be entitled to an undivided interest in the common elements in the percentages expressed in this Declaration, which percentages of undivided interest of each owner shall have a permanent character and shall not be altered without the consent of all owners and lien holders of record of units affected by such alteration expressed in an amended Declaration, duly recorded. The percentage of the undivided interest in the common elements shall not be separated from the unit to which it appertains and shall be deemed to be conveyed or encumbered or released from liens with the unit even though such interest is not expressly mentioned or described in the conveyance or other instrument. Each owner may use the common elements in accordance with the purposes for which the same are intended, without hindering or encroaching upon the lawful rights of the other owners.

.3. Enforcement. Failure of any owner to comply strictly with the provisions of this Declaration, the By-laws, and the Rules and Regulations shall be grounds for an action to recover sums due, or damages, or injunctive relief, or any or all of them. Such actions may be maintained by the Association on its own behalf or on behalf of the unit owners aggrieved. In any case of flagrant or repeated violation by a unit owner, he may be required by the Association to give sufficient surety or sureties for his future compliance with the provisions of this Declaration, the By-laws, and the Rules and Regulations. Nothing herein contained shall prevent, in a proper case, an independent action by an aggrieved unit owner for such relief.

10. Maintenance. The responsibility for the maintenance of the condominium property shall be as follows:

.1. Units.

(a) By the Association. The responsibility of the Association shall be as follows:

(i) To maintain, repair and replace all portions of a unit, except interior surfaces and surfacing materials, contributing to the support of the building, which portions shall include but not be limited to the outside walls of the building and all fixtures thereon, and boundary walls of units, floors, loadbearing columns and loadbearing walls.

(ii) To maintain, repair and replace all conduits, ducts, plumbing, wiring and other facilities for the furnishing of utility services which are contained in the

portions of a unit maintained by the Association, and all such facilities contained within a unit which service part or parts of the condominium other than the unit within which contained.

(iii) To maintain and replace all balconies and balcony railings.

(iv) To repair all incidental damage caused to a unit in the performance of any of the foregoing work.

(b) By the Unit Owner. The responsibility of the unit owner shall be as follows:

(i) To maintain, repair and replace all portions of his unit except the portions to be maintained, repaired and replaced by the Association. Such shall be done without disturbing the rights of other unit owners.

(ii) Not to paint or otherwise decorate or change the appearance of any portion of the exterior of the building and/or the exterior of the balconies assigned to the exclusive use of the unit owner, and/or the exterior of the balcony railings surrounding the balcony area assigned to the exclusive use of the unit owner.

(iii) To maintain the surfacing materials within the unit.

(iv) To maintain, repair and replace all heating, air conditioning, utility and mechanical equipment, and all sewer and water lines including all pipes, ducts, wires, cables and conduits used in connection therewith, which are for the exclusive use of his unit, whether or not located within the boundaries of his unit.

(v) To maintain, repair and replace the interior appurtenances of his unit, including but not limited to the floor coverings, wall coverings, window shades and screens, draperies, furniture, furnishings, light fixtures, and all appliances located therein.

(vi) To promptly report in writing to the Association any defect or need for repairs, the responsibility for the remedying of which is that of the Association.

(vii) To be responsible for the cost of all incidental damage caused to the common elements in the performance of the foregoing work.

(c) Alteration and Improvement. Neither a unit

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owner nor the Association shall make any alterations in the portions of a unit or building which are to be maintained by the Association, or remove any portion thereof, or make any additions thereto, or do any work which would jeopardize the safety or soundness of the building, or impair any easement, without first obtaining approval in writing of the owners of all other units in the building concerned and the approval of the Board of Directors of the Association.

.2. Common Elements.

(a) By the Association. The maintenance and operation of the common elements shall be the responsibility and the expense of the Association.

(b) Additions, Alterations, and Improvements. After the completion of the improvements included in the common elements which are contemplated by this Declaration, there shall be no further additions to common elements (except by incremental development as elsewhere herein provided) without prior approval in writing of seventy-five percent (75%) of the votes of the unit owners, and the approval in writing of all mortgagees who are the holders of mortgages comprising first liens on the units so approving, provided, however, that any alteration or improvements of common elements which constitute or are contained in the boundaries of units bearing the approval in writing of unit owners entitled to cast fifty-one percent (51%) of the votes in the Association, and the approval in writing of all mortgagees who are the holders of mortgages comprising first liens on the units of such approving unit owners, and which does not prejudice the rights of any owners not consenting, may be done if the owners who do not approve are relieved from the initial cost thereof. There shall be no change in the share and rights and obligations of a unit owner in the common elements which are altered or further improved, whether or not the unit owner contributes to the initial cost thereof. Any such alteration or addition shall be done in accordance with complete plans and specifications therefor first approved in writing by the Board; and promptly upon completion of such additional building or structural alteration or addition to any structure, the Association shall duly record or file of record in the office of the Judge of Probate of Baldwin County, Alabama, such amendment, together with a complete set of plans of the condominium, as so altered, certified "as built" by a licensed or registered engineer or architect.

11. Assessments. The making and collection of assessments against unit owners for common expenses and other charges shall be pursuant to the By-laws and subject to the following provisions:

.1. Share of Common Expenses and Other Charges. Each unit owner shall be liable for a proportionate share of the common

expenses and other charges, and shall share in the common surplus, such share being the same as his percentage of ownership in the common elements.

.2. Interest, Application of Payments. Assessments, and installments thereon, paid on or before ten (10) days after the date when due shall not bear interest, but to all sums not paid on or before ten (10) days after the date when due shall be added a \$15.00 penalty and interest at ten percent (10%) per annum for thirty (30) days after date due, until paid.

.3. Liens for Assessments. The Association is hereby granted a lien upon each unit and its appurtenant undivided interest in common elements, which lien shall secure and does secure the moneys due for all assessments now or hereafter levied or subject to being levied against the owner of each unit, which lien shall also secure interest, if any, which may be due on the amount of any delinquent assessment owing to the Association, and which lien shall also secure all costs and expenses, including a reasonable attorney's fee, which may be incurred by the Association in enforcing this lien upon said unit and its appurtenant undivided interest in the common elements. The said lien for non-payment of assessments shall have priority over all other liens and encumbrances, recorded or unrecorded, except only (1) tax lien on the unit in favor of the state, the county, any municipality, and any special district, and (2) all sums unpaid on a first mortgage of record. In any suit for the foreclosure of said lien, the Association shall be entitled to rental from the owner of any unit from the date on which the payment of any assessment or installment thereof becomes delinquent and shall be entitled to the appointment of a receiver for said unit without notice to the owner of such unit. The rental required to be paid shall be equal to the rental charged on comparable types of dwelling units in Gulf Shores, Alabama. The lien granted to the Association shall further secure such advances for taxes and other payments which may be required to be advanced or paid by the Association in order to preserve and protect its lien, and the Association shall further be entitled to interest at the rate of ten percent (10%) per annum on any such advances made for such purposes. All persons, firms, or corporations who shall acquire, by whatever means, any interest in the ownership of any unit, or who may be given or acquire a mortgage, lien or other encumbrance thereon, are hereby placed on notice of the lien granted to the Association.

.4. Rental Pending Foreclosure. In any foreclosure of a lien for assessments, the owner of the unit subject to the lien shall be required to pay a reasonable rental for the unit.

.5. No Exemption from Assessments. No owner of a unit may exempt himself from liability for contribution toward the common expenses and other charges by waiver of the use or enjoyment of any of the common elements or by the abandonment of his unit, or by any other means; except that any holder of a mortgage which comes into possession of the unit pursuant to the remedies provided in the mortgage, foreclosure of the mortgage, or deed in lieu of foreclosure, shall take the property free of any claims for unpaid assessments against the mortgaged unit which accrue prior to the time such holder comes into possession (except for claims for a pro rata share of such assessments resulting from a pro rata allocation of such assessment to all units, including the

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mortgaged unit); and shall not be liable for contribution toward common expenses and other charges until the subject unit shall have been leased or sold.

.6. Statement of Unpaid Assessments. The Association shall promptly provide any unit owner and/or the holder of a mortgage comprising a first lien on any unit or the grantee in any voluntary conveyance of a unit so requesting the same in writing with a written statement of all unpaid assessments due from the unit owner.

12. Association. The operation and administration of the condominium shall be by the Association of the unit owners, pursuant to the provisions of the Condominium Ownership Act of Alabama, which said Association shall be incorporated by Articles of Incorporation recorded in the office of the Judge of Probate of Baldwin County, Alabama. The Association shall be an entity which shall have the capability of bringing suit and being sued with respect to the exercise or non-exercise of its powers. It shall have authority and the power to maintain a class action and to settle a cause of action on behalf of unit owners of the condominium with reference to the common elements, the roof and structural components of a building or other improvement, and mechanical, electrical and plumbing elements serving an improvement or a building as distinguished from mechanical elements serving only a unit, and with reference to any and all other matters in which all the unit owners of the condominium have a common interest. The Association shall be further organized and shall fulfill its functions pursuant to the following provisions:

.1. Name. The name of the Association shall be ISLAND WINDS EAST ASSOCIATION, INC.

.2. Powers. The powers and duties of the Association shall include those set forth in the Condominium Ownership Act, and those set forth in this Declaration and the By-laws of the Association, attached to and made a part hereof, and those set forth in its Articles of Incorporation, and shall have the power to purchase a unit of the condominium. The powers of the Association shall include but not be limited to the maintenance, management and operation of the condominium property.

.3. Members:

(a) Qualification. The members of the Association shall consist of all of the record owners of units.

(b) Change of Membership. Change of membership in the Association shall be established by the recording in the public records of Baldwin County, Alabama, of a deed or other instrument establishing a record title to a unit in the condominium, and the delivery to the Association of a certified copy of such instrument, the owner designated by such instrument thereby becoming a member of the Association. The membership of the prior owner shall be thereby terminated.

(c) Voting Rights. Each unit shall be entitled to one (1) vote, which vote shall be the percentage assigned to the unit as stated in Exhibit B hereto attached. The vote for a unit shall be cast by the owner thereof or the owner of a possessory interest therein, or in the case of a corporate owner, by the officer or employee thereof designated as the voting representative of such unit, as hereinafter provided. Owners of more than one (1) unit shall be entitled to a vote for each unit owned. However, should the Association be a unit owner, it shall not have the voting right for that unit. Garage units have no vote.

(d) Designation of Voting Representative. In the event a unit is owned by one (1) person, his right to vote shall be established by the record title to his unit. If a unit is owned by more than one (1) person, the person entitled to cast the vote for the unit shall be designated by a certificate signed by all of the record owners of the unit and filed with the Secretary of the Association. If a unit is owned by a corporation, the officer or employee thereof entitled to cast the vote for the unit shall be designated by a certificate of appointment signed by the President or Vice President and attested by the Secretary or Assistant Secretary of the corporation and filed with the Secretary of the Association. If such a certificate is not on file with the Secretary of the Association for a unit owned by more than one (1) person or by a corporation, the membership or vote of the unit concerned shall not be considered in determining the requirement for a quorum nor for any purpose requiring the approval of the person entitled to cast the vote for the unit. Such certificate shall be valid until revoked or until superseded by a subsequent certificate or until a change in the ownership of the unit concerned is effected. A certificate designating the person entitled to cast the vote of a unit may be revoked by any owner thereof.

(e) Approval or Disapproval by Unit Owners. Whenever the approval or disapproval of a unit owner is required upon any matter, whether or not the subject of an Association meeting, such approval or disapproval shall be expressed by the same person who would cast the vote of such owner if in an Association meeting, unless the joinder of all record owners is specifically required by this Declaration.

(f) Restraint upon Assignment of Shares in Assets. The share of a member in the funds and assets of the Association cannot be assigned, hypothecated or transferred in any manner except as an appurtenance to his unit.

.4. Board of Directors. The affairs of the Association shall be conducted by a Board of Directors which shall consist of such number not less than three (3) nor more than five (5) as shall, from time to time, be determined and fixed by vote of a majority of the voting rights present in any annual meeting of the

members.

.5. Indemnification. Every Director and every officer of the Association shall be indemnified by the Association against all expenses and liabilities, or any settlement thereof, including counsel fees, reasonably incurred by or imposed upon him in connection with any proceeding to which he may be a party, or in which he may become involved, by reason of his being or having been a Director or officer of the Association, whether or not he is a Director or officer of the Association at the time such expenses are incurred, except in such cases wherein the Director or officer is adjudged guilty of willful misfeasance or malfeasance in the performance of his duties; provided that in the event of a settlement, the indemnification herein shall apply only when the Board of Directors approves such settlement and reimbursement as being for the best interests of the Association. The foregoing rights of indemnification shall be in addition to and not exclusive of all other rights to which such Director or officer may be entitled.

.6. Limitation of Liability. Notwithstanding the liability of the Association to maintain and repair parts of the condominium property, the Association shall not be liable for injury or damage caused by a latent condition of the property to be maintained and repaired by the Association, nor for injury or damage caused by the elements, or other owners or persons.

.7. By-laws. By-laws of the Association shall be in the form attached as Exhibit C hereto.

13. Insurance. Insurance (other than title insurance) which shall be carried upon the condominium property and the property of the unit owners shall be governed by the following provisions:

.1. Authority to Purchase. All insurance policies upon the condominium property shall be purchased by the Association in the name of the Association as trustee for each of the unit owners in the percentages of ownership set forth in the Declaration, and their mortgagees as their interests may appear, and provision shall be made for the issuance of certificates of mortgage endorsements to the mortgagees of unit owners. Such policies shall be deposited with the Association. A unit owner may, at his own expense, additionally insure his own unit for his own benefit, provided such additional insurance upon his unit be placed with the Association's insurance agent; and provided, further, that any diminution in insurance proceeds to the Association resulting from the existence of such other insurance shall be chargeable to the owner who acquired such other insurance, who shall be liable to the Association to the extent of any such diminution and/or loss of proceeds. A unit owner may obtain at his own expense insurance coverage upon his own personal property, and such other coverage, including personal liability, as he may desire.

.2. Coverage.

(a) Casualty. All buildings and improvements upon the land and all personal property comprising the condominium property shall be insured with a single insurance agent in an amount sufficient to avoid application of a co-insurance clause, but not

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more than the maximum insurable replacement value, without deduction for depreciation, as determined annually by the Board of Directors of the Association. If reasonably available, the policy or policies shall contain a stipulated amount clause, or determinable cash adjustment clause, or similar clause to permit a cash settlement covering specified value in the event of destruction and a decision not to rebuild.

(i) Loss or damage by fire and other hazards covered by a standard extended coverage endorsements; and

(ii) Such other risks as from time to time shall be customarily covered with respect to buildings similar in construction, location and use as the buildings on the land, including but not limited to water damage, vandalism, and malicious mischief, and flood insurance.

(b) Public Liability in such amounts and with such coverage as shall be required by the Board of Directors of the Association.

(c) Workmen's Compensation policy, if needed to meet the requirements of the law.

(d) Other Insurance. The Board may purchase and maintain in force debris removal insurance, fidelity bonds, and other insurance and/or bonds as it may deem necessary. The Board is authorized to provide coverage for payment of maintenance charges on behalf of an owner whose unit is rendered uninhabitable by a peril insured against, and to absolve such an owner of the obligation to pay maintenance charges to the extent that the same are offset by proceeds from such coverage.

(e) Revision. Insurance coverages will be analyzed by the Board, or its representative, at least every five (5) years from the date hereof, and the insurance program revised accordingly.

.3. Provisions. Every such policy of insurance shall in substance and effect:

(a) Provide that the liability of the insurer thereunder shall not be affected by, and that the insurer shall not claim any right of set-off, counterclaim, apportionment, proration, or contribution by reason of any other insurance obtained by or for any apparent owner.

(b) Contain no provision relieving the insurer from liability for a loss occurring while the hazard to such building is increased, whether or not within the knowledge or control of the Association, or because of any breach of warranty or condition or any other act or neglect by the Association or any unit

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owner or any other persons under either of them.

(c) Provide that such policy may not be cancelled (whether or not requested by the Association) except by the insurer giving at least thirty (30) days' prior written notice thereof to the Association, the fee owner, and every other person in interest who shall have requested such notice of the insurer.

(d) Contain a waiver by the insurer of any right of subrogation to any right of the Association, or either against the owner or lessee of any unit; and

(e) Contain a standard mortgage clause which shall:

(i) Provide that any reference to a mortgagee in such policy shall mean and include all holders of mortgages of any unit, whether or not named therein; and

(ii) Provide that such insurance as to the interest of any mortgagee shall not be invalidated by any act or neglect of the Association or unit owners or any persons under any of them; and

(iii) Waive any provision invalidating such mortgagee clause by reason of the failure of the mortgagee to notify the insurer of any hazardous use or vacancy, any requirement that the mortgagee pay any premium thereon, and any contribution clause.

.4. Premiums. Premiums upon insurance policies purchased by the Association shall be paid by the Association as a common expense.

.5. Insurance Trustee; Shares of Proceeds. All insurance policies purchased by the Association shall be for the benefit of the Association and the unit owners and their mortgagees as their interests may appear, and shall provide that all proceeds covering casualty losses shall be paid to the Association, as Trustee for each of the unit owners in the percentages established by the Declaration, which said Association, for the purpose of these provisions, is herein referred to as the Insurance Trustee. the duty of the Insurance Trustee shall be to receive such proceeds as are paid and hold the same in trust for the purposes elsewhere stated herein and for the benefit of the unit owners and their mortgagees, as follows:

(a) Common Areas and Facilities. Proceeds on account of damage to common areas and facilities -- an undivided share for each unit owner, such share being the same as his undivided share in the common areas and facilities appurtenant to his unit.

(b) Units. Proceeds on account of units shall be held for the owners of damaged units in proportion to the cost of repairing the damage suffered by each

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unit owner, which cost shall be determined by the Association.

(c) Mortgages. In the event a mortgagee endorsement has been issued as to a unit, the share of the unit owner shall be held in trust for the mortgagee and the unit owner as their interests may appear.

.6. Distribution of Proceeds. If the damage for which the proceeds are paid is to be repaired or reconstructed, the proceeds shall be used to defray the cost thereof as elsewhere provided. Any proceeds remaining after defraying such costs shall be distributed to the beneficial owners, remittances to unit owners and their mortgagees being payable jointly to them. This is a covenant for the benefit of any mortgagee of a unit and may be enforced by him.

.7. Association as Agent. The Association is hereby irrevocably appointed agent for each unit owner to adjust all claims arising under insurance policies purchased by the Association, and to execute and deliver releases upon the payment of claims.

14. Reconstruction or Repair after Casualty. In the event of the damage or destruction of all or part of the property, then, unless it be determined by a vote of one hundred percent (100%) of the owners and one hundred percent (100%) of all record owners of liens on the units not to repair or reconstruct such damaged or destroyed property, the following provisions shall apply:

.1. Reconstruction or Repair. If any part of the condominium property shall be damaged by casualty, it shall be reconstructed or repaired.

(a) Common Areas and Facilities. If the damaged improvement is a common area or facility, the damaged property shall be reconstructed, replaced or repaired.

(b) Building.

(i) Partial Destruction. If the damaged improvement is part of a building, the damaged property shall be reconstructed or repaired.

(ii) Total Destruction. If a building is so damaged that the same is untenable, the building shall be reconstructed.

(c) Plans and Specifications. Any such reconstruction or repair must be substantially in accordance with the plans and specifications for the original building, or as the building was last constructed, or according to plans approved by the Board of Directors of the Association, which approval shall not be unreasonably withheld.

.2. Responsibility. If the damage is only to those parts of a unit for which the responsibility of maintenance and repair is that of a unit owner, then the unit owner shall be

responsible for the reconstruction and repair after casualty. In all other instances, the responsibility for reconstruction and repair after casualty shall be that of the Association.

.3. Estimates of Costs. Immediately after a casualty causing damage to property for which the Association has the responsibility of maintenance and repair, the Association shall obtain reliable and detailed estimates of the cost to rebuild or repair so as to place the damaged property in condition as good as that before the casualty.

.4. Assessments. If the proceeds of insurance are not sufficient to defray the estimated costs of reconstruction and repair by the Association, assessments shall be made against the unit owners who own the damaged property, and against all unit owners in the case of damage to common areas and facilities, in sufficient amounts to provide funds to pay the estimated costs. If at any time during reconstruction and repair, or upon completion of reconstruction and repair, the funds for the payment of the costs thereof are insufficient, assessments shall be made against the unit owners who own the damaged property, and against all unit owners in the case of damage to common areas and facilities, in sufficient amounts to provide funds for the payment of such costs. Such assessments against unit owners for reconstruction and/or repair of damages to units shall be in proportion to the cost of reconstruction and repair of their respective units. Such assessments for reconstruction and/or repair of damage to common areas and facilities shall be in proportion to the owner's share in the common areas and facilities.

.5. Construction Funds. The funds for payment of costs of reconstruction and repair after casualty for which the Association is responsible which shall consist of proceeds of insurance held by the Insurance Trustee and funds collected by the Association from assessment against unit owners, shall be disbursed in payment of such costs in the following manner:

(a) Association. The proceeds of insurance collected on account of a casualty, and the sums deposited with the Association from collections of assessments against the unit owners on account of such casualty, shall constitute a construction fund which shall be disbursed in payment of the costs of reconstruction and repair in the following manner:

(i) Unit Owner. The portion of insurance proceeds representing damage for which responsibility of reconstruction and repair lies with the unit owner shall be paid by the Insurance Trustee to the unit owner, or if there is a mortgagee endorsement, then to the unit owner and the mortgagee jointly.

(ii) Association - Lesser Damage. If the amount of the estimated costs of reconstruction and repair which is the responsibility of the Association is less than the total of the annual assessments for recurring expense to be made during the year in which the casualty occurs, then the construction fund shall be disbursed in

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payment of such costs upon the order of the Association; provided, however, that upon request to the Insurance Trustee by a mortgagee which is a beneficiary of an insurance policy the proceeds of which are included in the construction fund, such fund shall be disbursed in the manner hereafter provided for the reconstruction and repair of major damage.

(iii) Association - Major Damage. If the amount of estimated costs of reconstruction and repair which is the responsibility of the Association is more than the total of the annual assessments for recurring expense to be made during the year in which the casualty occurs, then the construction fund shall be disbursed in payment of such costs in the manner required by the Board of Directors of the Association and upon approval of an architect qualified to practice in Alabama and employed by the Association to supervise the work.

(iv) Surplus. It shall be presumed that the first moneys disbursed in payment of costs of reconstruction and repair shall be from insurance proceeds; and if there is a balance in the construction fund after payment of all costs of the reconstruction and repair for which the fund is established, such balance shall be distributed to the beneficial owners of the fund in the manner elsewhere herein provided.

15. Use Restrictions. The use of the property of the condominium shall be in accordance with the following provisions:

.1. Single Family Residences. The condominium property shall be used only for single family residences, and for the furnishing of services and facilities herein provided for the enjoyment of such residences. Each of the units shall be occupied only by a single family and its guests as a residence and for no other purpose.

.2. Nuisances. No nuisances shall be allowed upon the condominium property nor any use or practice which is the source of annoyance to residents or which interferes with the peaceful possession and proper use of the property by its residents. All parts of the property shall be kept in a clean and sanitary condition and no rubbish, refuse or garbage allowed to accumulate nor any fire hazard allowed to exist.

.3. Lawful Use. No immoral, improper, offensive or unlawful use shall be made of the condominium property nor any part thereof; and all valid laws, zoning ordinances, and regulations of all governmental bodies having jurisdiction thereof shall be observed. The responsibility of meeting the requirements of governmental bodies which require maintenance, modification or repair of the condominium property shall be the same as the responsibility for the maintenance and repair of the property concerned. No commercial use, except as set forth in paragraph .4.

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.4. Leasing. After approval by the Association as elsewhere required, entire units may be rented provided the occupancy is only by the lessee and his family and guests. No individual rooms may be rented and no transient tenants may be accommodated.

.5. Rules and Regulations. Reasonable Rules and Regulations concerning the use of the condominium property may be made by the DEVELOPER and amended from time to time by the Board of Directors of the Association; provided, however, that all such amendments thereto shall be approved by not less than a majority of the votes of the Association before such shall become effective. Members not present at meetings considering such Rules and Regulations or amendments thereto may express their approval or disapproval in writing. Copies of such Rules and Regulations or amendments thereto shall be furnished by the Association to all unit owners and residents of the condominium upon request.

.6. Proviso. Provided, however, that until the DEVELOPER of the condominium has completed and sold all of the units of the condominium or until February 1, 1986, or until DEVELOPER elects to terminate its control of the condominium, whichever shall first occur; and provided, further, that until the DEVELOPER of the condominium has completed and sold eighty percent (80%) of the aggregate of all the units of the condominium or until four (4) years after the date of the filing of the certificate by the DEVELOPER, or until the DEVELOPER elects to terminate its control over the condominium, whichever shall first occur; neither the unit owners nor the occupants shall interfere with the completion of the contemplated improvements and the sale of the units. DEVELOPER may make such use of the unsold units and of the common areas and facilities as may facilitate such completion and sale, including but not limited to the showing of the property and the display of signs.

16. Maintenance of Community Interests. In order to maintain a community of congenial residents, preserve the financial stability of the condominium regime, and protect the value of the units, the transfer of condominium parcels by any owner other than the DEVELOPER shall be subject to the following provisions so long as the condominium shall exist:

.1. Transfers Subject to Approval.

(a) Sale. No unit owner may dispose of a condominium unit or any interest therein by any sale without approval of the Association, except to another unit owner.

(b) Lease. No unit owner may dispose of a condominium unit or any interest therein by lease without approval of the Association, except to another unit owner.

(c) Gift. If any unit owner shall acquire his title by gift, the continuance of his ownership of his condominium unit shall be subject to the approval of the Association.

(d) Devise or Inheritance. If any unit owner

shall acquire his title by devise or inheritance, the continuance of his ownership of his condominium unit shall be subject to the approval of the Association.

(c) Other Transfers. If any unit owner shall acquire his title by any manner not heretofore considered in the foregoing subsections, the continuance of his ownership of his condominium unit shall be subject to the approval of the Association.

.2. Approval by Association. The approval of the Association which is required for the transfer of condominium units shall be obtained in the following manner:

(a) Notice to Association.

(i) Sale. A unit owner intending to make a bona fide sale of his unit or any interest therein shall give to the Association at least thirty (30) days' written notice of such intention, together with the name and address of the intended purchaser and such other information concerning the intended purchaser as the Association may reasonably require.

(ii) Lease. A unit owner intending to make a bona fide lease of his unit or any interest therein shall give to the Association notice of such intention, together with the name and address of the intended lessee, such other information concerning the intended lessee as the Association may reasonably require, and an executed copy of the proposed lease.

(iii) Gift, Devise or Inheritance; Other Transfers. A unit owner who has obtained his title by gift, devise or inheritance, or by any other manner not heretofore considered, shall give to the Association notice of the acquiring of his title, together with such information concerning the unit owner as the Association may reasonably require, and a certified copy of the instrument evidencing the owner's title.

(iv) Failure to Give Notice. If the notice to the Association herein required is not given, then at any time after receiving knowledge of a transaction or event transferring ownership or possession of a unit, the Association, at its election and without notice, may approve or disapprove the transaction or ownership. If the Association disapproves the transaction or ownership, the Association shall proceed as if it had received the required notice on the date of such disapproval.

(b) Certificate of Approval.

(i) Sale. If the proposed transaction is a

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sale, then within thirty (30) days after receipt of such notice and information the Association must either approve or disapprove the proposed transaction. If approved, the approval shall be stated in a certificate executed by the President or Secretary in recordable form and shall be delivered to the purchaser and shall be recorded in the public records of Baldwin County, Alabama.

(ii) Lease. If the proposed transaction is a lease, then within thirty (30) days after receipt of such notice and information, the Association must either approve or disapprove the proposed transaction. If approved, the approval shall be stated in a certificate executed by the President or Secretary in recordable form and shall be delivered to the lessee.

(iii) Gift, Devise or Inheritance; Other Transfers. If the unit owner giving notice has acquired his title by gift, devise or inheritance, or in any other manner, then within thirty (30) days after receipt of such notice and information, the Association must either approve or disapprove the continuance of the unit owner's ownership of his unit. If approved, the approval shall be stated in a certificate executed by the President or Secretary in recordable form and shall be delivered to the unit owner and shall be recorded in the public records of Baldwin County, Alabama.

(c) Approval of Corporate Owner or Purchaser. Inasmuch as the condominium may be used only for residential purposes, and a corporation cannot occupy a unit for such use, if the unit owner or purchaser of a unit is a corporation, the approval of ownership by the corporation may be conditioned by requiring that all persons to use or occupy the unit be also first approved by the Association.

.3. Disapproval by Association. If the Association shall disapprove a transfer of a unit, the matter shall be disposed of in the following manner:

(a) Sale. If the proposed transaction is a sale, then within sixty (60) days after notifying the unit owner of such disapproval, the Association shall deliver or mail by certified mail to the unit owner an offer to purchase either by the Association, or by a purchaser approved by the Association, and to whom the unit owner must sell the unit upon the following terms:

(i) At the option of the purchaser to be stated in his offer, the price to be paid shall be that stated in the disapproved contract to sell, or, if less, then the fair market value, determined by arbitration in accordance with the then existing rules of the American

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Arbitration Association, who shall base their determination upon an average of their appraisals of the unit; and a judgment of specific performance of the sale upon any award rendered by the arbitrators may be entered in a court of competent jurisdiction. The expense of the arbitration shall be paid by the purchaser.

(ii) The purchase price shall be paid in cash.

(iii) The sale shall be closed within thirty (30) days after the delivery or mailing of said offer to purchase, or within ten (10) days after the determination of the sale price if such is by arbitration, whichever is the later.

(iv) If the Association shall fail to purchase or to provide a purchaser as herein required, then notwithstanding the disapproval, such transfer of ownership shall be deemed to have been approved, and the Association shall furnish a certificate of approval as elsewhere provided.

(b) Lease. If the proposed transaction is a lease, the unit owner shall be advised of the disapproval in writing, and the lease shall not be made.

(c) Gift, Devise or Inheritance; Other Transfers. If the unit owner giving notice has acquired his title by gift, devise or inheritance, or in any other manner, then within thirty (30) days after receipt from the unit owner of the notice and information required to be furnished, the Association shall deliver or mail by certified mail to the unit owner an offer to purchase either by the Association or by a purchaser approved by the Association, and to whom the unit owner must sell the unit upon the following terms:

(i) The sale price shall be the fair market value determined by agreement within thirty (30) days from the delivery or mailing of such offer, and, in the absence of such agreement, by arbitration in accordance with the then existing rules of the American Arbitration Association, except that the arbitrators shall be two (2) appraisers appointed by the American Arbitration Association who shall base their determination upon an average of their appraisals of the unit; and a judgment of specific performance of the sale upon the award rendered by the arbitrators may be entered in any court of competent jurisdiction. The expense of the arbitration shall be paid by the purchaser.

(ii) The purchase price shall be paid in cash.

(iii) The sale shall be closed within ten (10) days following the determination of the sale price.

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(iv) If the Association shall fail to purchase or to provide a purchaser as herein required, then notwithstanding the disapproval, such transfer of ownership shall be deemed to have been approved, and the Association shall furnish a certificate of approval as elsewhere provided.

.4. Unit Mortgage. No unit owner may mortgage his unit nor any interest therein without the approval of the Association except to a bank, life insurance company, a savings and loan association, or the DEVELOPER. The approval of any other mortgage may be upon conditions determined by the Association or may be arbitrarily withheld.

.5. Blanket Mortgage. Notwithstanding any other provisions of this Declaration or the By-laws, the entire condominium property or some or all of the units included therein may be subjected to a single or blanket mortgage constituting a first lien thereon created by a recordable instrument executed by all of the owners of the property or units covered thereby. The instrument creating any such mortgage shall provide a method whereby any unit owner may obtain a release of his unit from the lien of such a mortgage, and a satisfaction and discharge in recordable form, upon payment to the holder of the mortgage of a sum equal to the proportionate share attributable to his unit of the then outstanding balance of unpaid principal and accrued interest and any other charges then due and unpaid, which proportionate share attributable to each unit shall be the proportion in which all unit owners whose units are then subject to the lien of such mortgage own among themselves the common elements and the private elements as provided in the Declaration, or such other reasonable proportion as shall be specifically provided in the mortgage instrument; and such mortgage may contain provisions for converting the same to individual mortgages on the individual units included therein.

.6. Exceptions. The foregoing provisions of this section entitled "Maintenance of Community Interests" shall not apply to a transfer to or purchase by any holder of the mortgage which comes into possession and title of the unit as a result of owning a mortgage upon the unit concerned, and this shall be so whether the title is acquired pursuant to the remedies provided in the mortgage, or foreclosure of the mortgage, or deed from the mortgagor in lieu of foreclosure; nor shall such provisions apply to a transfer, sale or lease by such holder of the mortgage which so acquires its title. Neither shall such provisions require the approval of a purchaser who acquires the title to a unit at a duly advertised public sale with open bidding as may be provided by law, such as but not limited to execution sale, foreclosure sale, judicial sale or tax sale.

.7. Unauthorized Transactions. Any sale, mortgage or lease which is not authorized pursuant to the terms of this Declaration shall be void unless subsequently approved by the Association.

.8. Notice of Lien or Suit.

(a) Notice of Lien. A unit owner shall give

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notice to the Association of every lien upon his unit other than for permitted mortgages, taxes and special assessments, within five (5) days after the owner's receipt of notice thereof.

(b) Notice of Suit. A unit owner shall give notice to the Association of every suit or other proceeding which may affect the title to his unit, such notice to be given within five (5) days after the unit owner receives knowledge thereof.

(c) Failure to Comply with this subsection concerning liens will not affect the validity of any judicial sale.

17. Compliance and Default. Each unit owner shall be governed by and shall comply with the terms of the condominium documents and regulations as they may be amended from time to time. A default shall entitle the Association or other unit owners to the following relief in addition to the remedies provided by the Condominium Ownership Act:

.1. Negligence. A unit owner shall be liable for the expense of any maintenance, repair or replacement rendered necessary by his act, negligence or carelessness or by that of any member of his family or his or their guests, employees, agents, or lessees, but only to the extent that such expense is not met by the proceeds of insurance carried by the Association. Such liability shall include any increase in fire insurance rates occasioned by use, misuse, occupancy, or abandonment of a unit or its appurtenances.

.2. Costs and Attorneys' Fees. In any proceeding arising because of an alleged default by a unit owner, the prevailing party shall be entitled to recover the costs of the proceeding and such reasonable attorney fees as may be awarded by the court.

.3. No Waiver of Rights. The failure of the Association or any unit owner to enforce any covenant, restriction, or other provision of the Condominium Ownership Act, this Declaration, the By-laws, or the Rules and Regulations shall not constitute a waiver of the rights to do so thereafter.

18. Covenant Against Partition. There shall be no judicial or other partition of the project or any part thereof, nor shall DEVELOPER or any person acquiring any interest in the project or any part thereof seek any such partition unless the project has been removed from the provisions of the Condominium Ownership Act, as in said Act provided.

19. Amendment. This Declaration of Condominium and the By-laws of ISLAND WINDS EAST ASSOCIATION, INC., may be amended in the following manner:

.1. Notice. Notice of the subject matter of the proposed amendment shall be included in the notice of any meeting at which a proposed amendment is considered.

.2. Resolution. A resolution adopting a proposed

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amendment may be proposed by either the Board of Directors of the Association or by members having not less than ten percent (10%) of the total percentage values of those votes entitled to be cast at a meeting, and after being so proposed and thereafter approved by one (1) of such bodies, it must then be approved by the other to become effective. Directors and members not present at the meeting considering the amendment may express their approval or disapproval in writing, provided such approval or disapproval is delivered to the Secretary at or prior to the meeting. Such approvals must be by not less than a majority of the Directors and by not less than a majority of the votes of the Association; provided, however, that any such amendment shall have been approved in writing by all mortgagees who are the holders of mortgages which are liens on the units of the approving owners; and provided, further, that every amendment that alters the percentage of undivided interest of an owner in the common areas and facilities or that alters or impairs any common area and facility or any easement or hereditament shall require the unanimous approval of all such owners and all such mortgagees.

.3. Recording. A copy of each amendment shall be certified by the President and Secretary of the Association as having been duly adopted and shall be effective when recorded in the office of the Judge of Probate of Baldwin County, Alabama.

.4. Agreement. In the alternative, an amendment may be made by an agreement signed and acknowledged by all of the record owners, including first mortgagees, of units in the condominium in the manner required for the execution of a deed, and such amendment shall be effective when recorded in the office of the Judge of Probate of Baldwin County, Alabama.

.5. Proviso. Provided, however, that no amendment shall discriminate against any unit owner nor against any unit or class or group of units, nor change any condominium unit nor increase the owner's liability for common expenses unless the record owner thereof and all record owners of liens thereon shall join in the execution of the amendment.

.6. Provisions Pertaining to the Developer.

(a) Notwithstanding any other provisions herein contained, for so long as the DEVELOPER continues to own any of the units, the DEVELOPER reserves the unrestricted right to sell, assign or lease any unit which it continues to own after the recording or filing of this Declaration, and to post signs on the condominium property.

(b) Provided, however, that until the DEVELOPER of the condominium has completed and sold all of the units of the condominium or until February 1, 1986, or until DEVELOPER elects to terminate its control of the condominium, whichever shall first occur; and provided, further, that until the DEVELOPER of the condominium has completed and sold eighty percent (80%) of the aggregate of all units of the condominium, or until the DEVELOPER elects to terminate its control over the condominium, whichever shall first occur, the following additional provisions shall be

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deemed to be in full force and effect:

(i) The DEVELOPER reserves the right to amend the By-laws of the Association.

(ii) The Directors of the Association shall be designated by the DEVELOPER and such Directors as may be so designated need not be unit owners.

(c) None of the provisions in this subparagraph contained shall be construed so as to relieve the DEVELOPER from any obligations of a unit owner to pay assessments as to each unit owned by it, in accordance with the condominium documents.

20. Proportionate Changes in Common Expenses, Common Surplus, and Voting Rights. In the event of any one (1) or more of the units are not rebuilt by reason of the loss of lands as a result of destruction, condemnation or otherwise, and therefore the number of units is reduced, or in the event the number of units is reduced because (a) the Association has become the owner of a unit by foreclosure of its lien as heretofore provided, or (b) an entity has acquired title to a unit as the result of owning a mortgage upon the unit concerned, whether by deed from the mortgagor or through foreclosure proceedings, then the proportionate share of the common expenses and of the common surplus and the voting rights of each unit shall be increased by adding to each remaining unit their proportionate percentages of ownership out of the percentages of ownership of the units so reduced.

21. Termination. The condominium may be terminated in the manner provided by the Condominium Ownership Act; provided, however, that, in the event of termination, each unit shall be subject to the payment of a share of the common expenses as heretofore defined, subject to increase as provided in paragraph 20 hereof.

22. Eminent Domain.

.1. Partial Taking Without Direct Effect on Units. If part of the condominium shall be taken or condemned by any authority having the power of eminent domain in such manner that no unit is taken, compensation and damages for and on account of the taking of the common elements, exclusive of compensation for consequential damages to affected units shall be payable to the Association as Trustee for all unit owners and mortgagees of record according to the loss or damages to their respective interests in such common elements. The Association, acting through its Board of Directors, shall have the right to act on behalf of the unit owners with respect to the negotiation and litigation of the issues with respect to the taking and compensation affecting the common elements, without limitation on the right of the unit owners to represent their own interests. Such proceeds shall be paid to the Association and shall be used promptly to the extent necessary for restoring or replacing improvements so taken on the remaining property in as substantial compliance with the original plans and elevations of the improvements as possible and so as to restore the general value of the condominium. In the event such restoration or

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reconstruction is impossible or impractical, or in the event there is an award in excess of the amount necessary to so substantially restore or reconstruct the common elements, the amount of such award or the excess, as the case may be, shall be distributed by the Association to the unit owners in proportion to their share of undivided interest in the common elements. Nothing herein shall be deemed to prevent unit owners whose units are affected by the taking or condemnation from joining in the condemnation proceedings and petitioning on their own behalf for damages relating to loss of value of the affected units, or personal improvements therein, exclusive of damages related to the taking of common elements. In the event the condemnation award does not allocate damages to specific units, but includes an award for reduction in value of the units without such allocation, the award shall be distributed to the affected unit owners and mortgagees of record in proportion to each unit owner's undivided interest in the common elements.

.2. Partial or Total Taking Directly Affecting Units.

If part or all of the condominium shall be taken or condemned by any authority having the power of eminent domain in such manner that any unit or part thereof is taken, the Association shall have the right to act on behalf of the unit owners with respect to common areas as in subsection .1. of this paragraph 22, and the proceeds shall be used or distributed as outlined therein. The Association, acting through its Board of Directors, shall have the right to act on behalf of the unit owners affected with respect to the negotiation and litigation of the issues with respect to the taking and compensation affecting the taken area, without limitation on the right of the unit owners to represent their own interests. The awards so made shall be used by the Association first to restore the units and improvements on the remaining common elements in the same manner as provided for restoration or reconstruction under paragraph 14 of this Declaration, to the extent possible attempting to rebuild buildings containing new units of the same number, size and basic plan as the units taken, and with any excess award distributed as provided in subsection .1. of this paragraph 22. In the event that the Board of Directors determines that such a taking so removed land and buildings containing units that they cannot effectively be restored or replaced substantially in compliance with the building plans, and unless seventy-five percent (75%) of the unit owners and holders of record of mortgages on at least seventy-five percent (75%) of the units vote to accept an alternative plan, the award shall be distributed as provided in subsection .1. of this paragraph 22.

.3. Notice to Mortgagees. The Board of Directors, immediately upon having knowledge of the institution or threat of institution of any proceedings or other action with respect to the taking of condominium units, the common elements, or any portion of any condominium unit or common element in condemnation, eminent domain or other proceeding or actions involving any unit of government or other entity having the power of eminent domain, shall notify mortgagees holding liens of record on any of the units. Any such mortgagee may, at its option, and if permitted by law, participate in any such proceedings or actions or, in the event, may at its option, participate in negotiations in connection therewith, but shall have no obligation so to do.

23. Table and Headings. This table of contents and headings used in this Declaration have been inserted for convenience and do not constitute matter to be construed in interpretation.

24. Severability. The invalidity in whole or in part of any covenant or restriction, or any section, subsection, sentence, clause, phrase or word, or other provision of this Declaration of Condominium and the By-laws of the Association shall not affect the validity of the remaining portions thereof.

IN WITNESS WHEREOF, the said BRETT REAL ESTATE, ROBINSON DEVELOPMENT COMPANY, INC., a corporation, has caused THESE PRESENTS to be executed by its officers, all thereunto duly authorized, this the day and year first above written.

BRETT REAL ESTATE, ROBINSON
DEVELOPMENT COMPANY, INC.,
a corporation

By: William J. Robinson Jr.
President

Attest:

Lillis M. Brett
Secretary

STATE OF ALABAMA
COUNTY OF BALDWIN

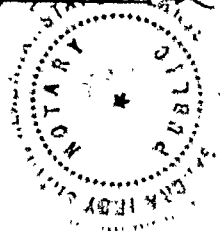
I, the undersigned, a Notary Public in and for said County in said State, hereby certify that William J. Robinson, Jr. as President, and Lillis M. Brett, as Secretary, of BRETT REAL ESTATE, ROBINSON DEVELOPMENT COMPANY, INC., and who are known to me, acknowledged before me on this day that, being informed of the contents of the above and foregoing, as such officers and with full authority, they executed the same voluntarily for and as the act of said corporation on the day the same bears date.

Given under my hand and official seal this 8th day of July, 1981.

Dandrahly Smith
Notary Public

THIS INSTRUMENT PREPARED BY:

MICHAEL J. SALMON, ATTORNEY
P. O. Box 162
Gulf Shores, Alabama 36542



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Exhibit A
Island WINDS EAST

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**SPECIFICATIONS FOR
THE CONSTRUCTION OF
AN 87 UNIT CONDOMINIUM
FOR
BRETT & ROBINSON
BALDWIN COUNTY
GULF SHORES, ALABAMA**

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**JOHN M. SENKARIK, A.I.A.
ARCHITECT
PLANNING & DESIGN
HIGHWAY 59 SOUTH
GULF SHORES, ALABAMA**

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SUPPLEMENT NO.1

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PROPOSAL FORM

PROPOSAL OF _____
(Name of Bidder)

PROPOSAL
for

THE CONSTRUCTION OF
AN 87 UNIT CONDOMINIUM

IN

GULF SHORES, BALDWIN COUNTY, ALABAMA

ARCHITECT

John M. Senkarik

Gentlemen:

The undersigned, having examined the Drawings, Specifications and Related Documents, the site of the proposed Work, being familiar with all of the conditions relating to the construction of the proposed project, including the availability of materials and labor, hereby proposes to furnish all labor, equipment and materials required in connection with or incidental to the construction of an 87 unit Condominium for Gulf Shores, Baldwin County, Alabama and in strict conformance with Plans and Specifications as prepared by John M. Senkarik, A.I.A., Architect for the base amount of: _____

DOLLARS (\$ _____).

SUBCONTRACTORS: This Bid proposal is predicated on acceptance of the following principal subcontractors by Architect and Owner:

MECHANICAL WORK: _____
(Contractor's Name)

(Address)

ELECTRICAL WORK: _____
(Contractor's Name)

(Address)

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PILING WORK: _____
(Contractor's Name)

(Address)

CARPENTRY WORK: _____
(Contractor's Name)

(Address)

UNIT PRICES: The following Unit Prices shall be submitted by the bidder for the purposes of establishing the sums to be added to or deducted from the contract amount on account of an increase or decrease in quantity of the following items:

<u>ITEM</u>	<u>UNIT</u>	<u>PRICE</u>
Concrete Piling	Lineal Feet	\$ _____

Unit price shall cover the cost of materials in place including all labor, material, equipment, incidentals and services, overhead and profit required to render the same complete.

BID GUARANTEE: The under-signed furnishes herewith bid guarantee in the amount of 5% of the total of base bid proposal lump sum amount and attaches same to the proposal. This bid guarantee warrants that the undersigned will not withdraw his proposal for the period of 30 days after the scheduled closing time for the receipt of proposals, and that if this proposal is accepted, the undersigned will enter into a formal contract (prepared by the Owner) and that the required performance bond and payment bond will be given. In the event of the withdrawal of this proposal within the period stipulated above, or the failure of the undersigned to enter into a contract and give the required bonds within ten (10) days after the undersigned has received notice of the acceptance of this proposal, the undersigned shall be liable to the Owner for the full amount of the bid guarantee as liquidated damages to the Owner on account of the default of the undersigned. It is understood that the right is reserved by the Owner to reject any and all bids.

ADDENDA: The undersigned hereby acknowledge receipt of the following Addenda to the Drawings and Specifications, all of the provisions and requirements of which Addenda have been taken into consideration in the preparation of the foregoing Proposal.

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ADDENDUM NO. _____ DATED: _____

ADDENDUM NO. _____ DATED: _____

ADDENDUM NO. _____ DATED: _____

ADDENDUM NO. _____ DATED: _____

State of Alabama Contractor's License

(Name of Holder)

(Certificate No.)

In witness whereof, the Bidder has hereunto set this signature
and affixed his seal this _____ day of _____ A.D.,

(Seal)

BY: _____

Title: _____

SUPPLEMENTARY GENERAL CONDITIONS

1. A.I.A. DOCUMENTS-The General Conditions, August 1976 Edition, of the American Institute of Architects, are hereby made a part of this specification, and shall apply to all trades. Copies may be seen on file in the Architect's office. Where the Special Conditions of the following specifications differ from the A.I.A. General Conditions, these typewritten specifications shall govern.
2. LOCATION OF SITE-The building site is adjacent to West 2nd St. on the South side of West Gulf Shores Boulevard, Gulf Shores, Alabama 36542.
3. INSPECTION OF THE SITE-The Contractor shall visit the site and shall thoroughly familiarize himself with the buildings, the conditions affecting same, entrances, utilities, etc.
4. TEMPORARY STRUCTURES-The Contractor shall maintain at the site the following accessories to the work: A temporary office wherein drawings and specifications, samples, etc., shall be kept in good condition and readily accessible. Suitable sheds for the proper storage of material. Toilets for the use of the workman. At the completion of the entire work, all such structures shall be removed by the Contractor and the premises immediately around building left absolutely clear of all debris and raked clean.
5. ORDERS-No orders for any change or additions to this work shall be considered by the Contractor unless they come to him in written form from the Architect.
6. MEASUREMENTS-The Contractor shall verify all measurements for all portions of the work, checking all figures on the drawings before placing orders for work or materials involved. Figures on drawings shall take precedence over measurements by scale or rule and large scale drawings over small scale drawings. Should the Contractor find that any detail cannot be accurately followed as it is figured or shown, he shall refer the matter to the Architect before he proceeds. Apply to the Architect for all missing important dimensions and for interpretations of obscure parts of the documents, accepting the Architect's decision as final. THE ARCHITECT SHALL BE PROMPTLY ADVISED OF ANY DISCREPANCY AND ANY ADJUSTMENT MADE CONTRARY TO OR WITHOUT HIS DECISION WILL BE AT THE RISK OF THE PARTY MAKING SUCH ADJUSTMENT.
7. ADVERTISING SIGNS-The Contractor shall provide a job sign of approximately 4'X 8' listing the following: Project name, Architect name, Contractor name, Developer name.
8. PERMITS-The Contractor for this work shall obtain and pay for all permits required in this work.
9. CUTTING AND PATCHING-The General Contractor shall do all cutting and patching necessary for all other trades.

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10. INTENT OF CONTRACT DOCUMENTS-The Contractor shall provide complete new and renovation work in accordance with the meaning and intent of the specifications and drawings, whether or not all of the items involved under any one trade are mentioned in one or several headings. Any material reasonably required for the complete execution of any portion of the work, shall be furnished by the Contractor. Written request may be made by bidders for interpretation of doubts as to meaning, conflict, discrepancy or omission in contract documents. Such interpretations will be made by addendum and furnished each bidder of record. The specifications and drawings are complementary to one another, and what is called for or shown by one shall be as binding as if called for or shown by both.
11. CLEANING SITE DURING CONSTRUCTION-The General Contractor shall clean the site during construction to the satisfaction of the Architect.
12. SELECTION OF SUPERINTENDENT ON THIS PROJECT-A superintendent approved by the Architect shall be employed full time on this project and shall have full authority to act for the Contractor. He shall remain on the job during the regular working hours each day. The superintendent shall remain on this job until the building is completed unless the Architect otherwise notifies the Contractor.
13. HURRICANE PROTECTION-Should hurricane warning be issued, the Contractor shall take every practicable precaution to minimize danger to persons, to the work, and to adjacent property. These precautions shall include closing all openings, removing all loose materials, tools, scaffolding and other temporary work.
14. BOND AND INSURANCE REQUIREMENTS-The Contractor shall provide and maintain all bonds and insurance required by Owner and/or lending agencies.
15. COPIES OF PLANS AND SPECIFICATIONS FURNISHED-The Owner will provide to the Contractor up to fifteen (15) sets of the drawings and specifications upon the signing of the contract. Contractor may purchase additional copies by paying the cost of reproduction.
16. STATE SALES TAX-The Contractor will be required to pay State Sales Tax on any material incorporated in this project.
17. ARCHITECT'S REPRESENTATIVE-The Architect's representative on this job has full authority to issue instructions and to make minor changes. Any instructions given or minor changes made by him will be confirmed in writing by the Architect.
18. PAYMENTS-Payment requests in five (5) copies shall be submitted to the Architect by the Contractor at the end of each month. The Architect will review and approve or disapprove pay requests within ten (10) days and submit to the Owner. Payment will be made for 90% of the work approved and/or stored at the site.

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19. TEMPORARY SERVICES-The Contractor shall furnish and pay for temporary water, electrical or other services for this work.
20. SHOP DRAWINGS-Shop drawings shall be submitted to the Architect for approval on all shop-fabricated and pre-manufactured items. Six (6) copies shall be submitted to the Architect and fabrication shall not begin until the Architect has approved them.
21. SUBSTITUTIONS-Items listed by manufacturer in this specification are listed for purposes of quality control. Submit to the Architect for his review and approval six (6) copies of the manufacturer's shop drawings and/or catalog information prior to any substitutions. Substitutions made without the approval of the Architect will be removed from the job.
22. OR APPROVED EQUAL-Where referred to in the specifications the Architect shall be the authority in determining if other products are equal to the products specified.

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SECTION 2A- EARTHWORK

SCOPE: Perform all excavating, backfilling and grading, as shown on the drawings and as specified herein.

CONDITIONS AT THE SITE:

Visit the site, examine and note all conditions as to character and extent of work involved.

PERMITS - ORDINANCES:

Procure and pay for all necessary permits or certificates required by local authorities having jurisdiction over the work. Comply with all applicable federal, state and local ordinances.

TESTS, INSPECTIONS AND SUPERVISION:

- A. General contractor shall lay out all lines and levels. Make every effort to preserve stakes.
- B. General contractor should give the work his personal supervision. In his absence he shall leave a responsible representative in charge who shall have the authority to receive and execute orders from the architect or his representative.

LAYOUT:

- A. Layout of all work under this section shall be made by a licensed surveyor acceptable to the architect.
- B. Maintain all benchmarks, control monuments and stakes whether newly established by surveyor or previously existing. Protect from damage and dislocation. If necessary to disturb existing benchmarks, re-establish in a safe place.
- C. If any discrepancies are found by the surveyor between the drawings and actual conditions at the site, architect reserves the right to make such minor adjustments and work specified as necessary to accomplish the intent of the contract documents without increased cost to owner.

EXISTING UTILITIES ADJACENT PROPERTY:

Restore any damage to adjacent properties, streets and the like caused by operations of this section to original conditions without additional cost to owner.

PUMPING AND DRAINAGE:

- A. Keep all excavations, pits, trenches, footings, etc. entirely free from water.
- B. Protect excavations from rain or water from any source during construction. Use suitable pumping equipment or other means as required by conditions. Continue pumping as necessary until completion of project or until released by architect.

EXCAVATION:

- A. Excavate to depths noted on drawings as required for proper completion of all footings and other sub-grade level work and cut to sufficient size to provide ample room for construction of forms, shoring, and bulk-heading, as required.
- B. Backfill any excess excavation under footings with concrete at contractor's expense.
- C. Shore and brace excavations where necessary to prevent cave-ins and in accordance with all safety laws and codes.

TRENCHING:

Underground piping, electrical conduits, etc. shall be done by the trade installing the pipes, conduits, etc. Backfilling of trenches shall conform to the requirements for compacted fill.

FILLING AND BACKFILLING FOR STRUCTURES AND TRENCHES:

All fill and backfill shall be free from roots with scrap material and other vegetable matter and refuse and shall have a minimum of 5% of clay added thereto when used under structures. Fill and backfill shall be placed in layers not more than 6" thick except as specified otherwise herein and each layer shall be compacted thoroughly and evenly. Backfilling pipe trenches which are approved shall be compacted in 6" layers to a depth of 1 foot over the top of the pipe. The remainder of the trench shall be backfilled in well compacted one foot layers.

COMPACTION:

If the density of the existing material is less than 95% it shall be compacted to a depth of 12" to the minimum 95% density. Fill, backfill under the concrete slabs and the upper 12" under paved areas shall be compacted to not less than 95% of the maximum density. Optimum density shall be as determined by the "American Association of State Highway Officials" standard method of test for the compaction and density of soil.

FINISH GRADING:

Perform all finish grading required as indicated on the drawings. At completion of work entire site shall be left in a clean and finished condition conforming to plans and specifications.

END SECTION 2A

SECTION 28 - PRECAST CONCRETE PILES

SCOPE:

Provide all labor, materials, equipment and services of every nature necessary to complete all precast concrete pile work, including pile tests, shown on the drawings and herein specified, subject to the terms and conditions of the Contract.

REQUIREMENTS:

A. General: Prestressed concrete piles shall be pretensioned, and shall be as indicated and specified herein. Bids shall be based upon the number, size, capacity and lengths as shown on the drawings.

B. Soil Information: A soils report has been prepared for this project and is included elsewhere within these specifications. The soils reports on indicated subsurface conditions are not intended as representations or warranties of the continuity of such conditions. It is expressly understood that the Owner will not be responsible for interpretations or conclusions drawn therefrom by the contractor. The soils report is made available for the convenience of the contractor. Additional test borings and other exploratory operations may be made by the contractor at no additional cost to the Owner, provided such operations are acceptable to the Architect.

C. Side Conditions: Clearing, grading, earthwork, excavations, dewatering, fill and compaction are covered in other sections of these specifications.

D. Soils Engineer: Reference to Soils Engineer in this section will imply Larry M. Jacobs & Associates, Inc. of Pensacola, Florida.

E. Pile length from point to cut-off shall be determined as follows: From the data obtained as a result of driving and loading the test piles, specified hereinafter, the Soils Engineer will determine and will list for the contractor the "calculated" pile point elevations and the driving resistances for all piles. This list shall be used as the basis for ordering the piles. Payment will be on the basis of length of piling from cut-off elevation to final point elevation, established by the requirements specified elsewhere in this section. Should the total number of piles or the number of each length vary from that indicated as the basis for bidding, an adjustment in the contract price and the time for completion will be made. If excavation into firm bearing material is made adjacent to piling and below the grade indicated, and if piling is driven before backfilling in the over-excavation, no payment will be made for the length of piling equal to the depth of the over-excavation. No additional payment will be made for cutting off piles, for any portion of a pile remaining above cut-off elevation, for broken, damaged, or rejected piles, for test piles unless used as a permanent pile, for piles which fail to develop the driving resistance specified by the Soils Engineer, or for resetting of rig and retapping of sufficient number of piles, as directed by the Soils Engineer to insure permanent seating of piles.

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F. Concrete Materials and Methods: Shall conform to "Section 3A - Cast in Place Concrete", as modified herein. Concrete piles shall conform to ACI and Prestressed Concrete Institute "Standard Prestressed Concrete Piles". Prior to the start of the work, the contractor shall, at his own expense, prepare and submit for approval a mix design, prepare cylinders, and present certified test reports from a laboratory approved by the Architect. The Architect may waive this requirement in the case of an established precasting yard with certified records of mixes and tests which are the same as the mix proposed. The mix shall produce concrete having an ultimate compressive strength of 5,000 psi at 28 days. Aggregates shall conform to ASTM C33. The largest maximum size aggregate that will satisfy placing conditions shall be used to minimize shrinkage. Type III cement will be permitted provided the tricalcium aluminate content is limited to 8 percent, except as otherwise provided herein. Maximum chloride content of concrete shall be 0.5 lbs. per cu. yd.

1. Admixtures: When required to retard the setting of the concrete, an admixture conforming to Type B of ASTM Specification C494 shall be used at no additional cost to the Owner. Admixtures containing chlorides shall not be used, and the contractor shall furnish certification that admixtures used are free of chlorides.

2. Prestressing steel shall be seven-wire stress relieved strand conforming to ASTM Specification A416 as modified herein. Except as otherwise provided herein, ultimate breaking strength shall be 250,000 psi. All prestressing steel shall be free of grease, oil, wax, paint, soil, dirt, and loose rust. The use of prestressing strands having kinks, bends, knicks, or other defects will not be permitted. Steel for ties shall conform to ASTM Specification A82.

G. Pile Construction:

1. Piles shall be pretensioned concrete piles manufactured by a method approved by the Architect. Workmanship shall conform to standard commercial practice in modern prestressing plants. Pile pickup points shall be where required to permit handling. Unless special lifting devices are attached for pickup, pickup points shall be plainly marked on all piles after removal of the forms, and all lifting shall be done at these points. The use of special embedded or attached lifting devices, the employment of other pickup points or any other method of pickup shall be subject to approval of the Architect. Piles shall be lifted by a suitable bridge or sling attached to the pickup points. Piling shall not be driven until the concrete attains a compressive strength of not less than 5,000 psi as indicated by breaking test cylinders.

2. Forms shall be of metal and shall be well braced and stiffened against deformation, shall be accurately constructed, shall be watertight, and shall be supported on unyielding casting beds. Forms shall permit movement of the pile without damage during release of the prestressing force. Bottom of the form shall be within 1/4-inch of a true plane in a length of 50 feet.

MSJ.
33-AGE 16C3

3. Concrete Work: Concrete shall not be deposited in the form until the placement of reinforcement and anchorages has been inspected and approved by the manufacturer's engineer. Each pile shall be produced of dense concrete, shall be straight with smooth surfaces, and the reinforcement shall be retained in its proper position during fabrication. Concrete shall be placed promptly after mixing is completed and shall be deposited close to its final position in the form. Vibrator heads shall be smaller than the minimum distance between steel for pretensioning. The plane of the heads of the piles shall be perpendicular to the axis of the pile. The ends of all piles and the corners of square piles shall be chamfered 3/4-inch. Not less than three test cylinders shall be prepared at the time the concrete is deposited for each production line to determine the strength of the casting at different areas. The cylinders shall be cured in the same manner as the piles and shall be placed at the point where the poorest curing conditions are offered. This is at the coolest point in the bed for steam curing. Sides of forms shall not be removed until the concrete has attained a compressive strength of eight-tenths of the specified minimum ultimate compressive strength of the pile.

4. Curing of piles shall conform to "Section 3A - Cast In Place Concrete", except as specified otherwise herein. All concrete shall be moist cured for a minimum of 21 days, except concrete which is steam cured in accordance with the requirements specified hereinafter. Piles shall not be moved, handled, prestressed, or otherwise subjected to stress during the entire curing period. Steam curing of prestressed concrete piles may be used provided the piles are kept continuously moist for a minimum of 72 hours including the steam curing period. The casting bed for any piles cured with steam shall be enclosed completely with a suitable enclosure to minimize moisture and heat losses. After placement of the concrete, the piles shall be moist cured for a minimum of 4 hours unless the ambient air temperature is below 50 degrees F, in which case the steam shall be applied to hold the air surrounding the pile at a temperature between 50 degrees and 70 degrees F. Steam shall not be applied directly upon the concrete surfaces. During application of steam, the air temperature shall be increased at a rate not exceeding 40 degrees F per hour until a maximum temperature of 140 to 160 degrees F is reached. The maximum temperature of 140 to 160 degrees F shall be held until the concrete has reached the required strength. In discontinuing the steam application, the air temperature shall be decreased at a rate not exceeding 40 degrees F per hour until a temperature has been reached 20 degrees F above the temperature of the air to which the concrete will be exposed. The concrete shall not be exposed to temperatures below freezing until at least 6 days after casting. All temperatures within the steam chamber shall be measured by means of recording type thermometers.

5. Prestressing: The tension to which the steel is to be prestressed shall be measured by the elongation of the steel and verified by the jack pressure reading on a calibrated gage. Means shall be provided for measuring the elongation of the steel to at least the nearest 1/8 inch. When the difference between the results of measurement and gage reading is more than 5 percent, the cause of the discrepancy shall be corrected. The tensioning steel shall be given a uniform prestress prior to being brought to design prestress. Pretension in the strands shall be released from the anchorage gradually and simultaneously. The transfer of prestressing force

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shall be done when the concrete has reached a compressive strength of not less than eight-tenths of the specified minimum compressive strength. The same initial prestress shall be induced in each unit when several units of prestressing steel in a pile are stretched simultaneously.

6. Splices: Splicing of piles will not be permitted without approval of the Architect.

7. Test piles shall be of the type, and shall be jettied and driven in the manner, specified for all piling elsewhere in this section. The Soils Engineer will use test pile and load test data to determine the "calculated" pile tip elevation and the necessary driving resistance. Test piles shall be driven at the locations indicated, or directed. Test piles, if located properly and offering adequate driving resistance, may be used in the finished work. Test piles indicated to be used for load tests shall be driven to the calculated tip elevation specified or indicated. A record shall be kept for each test pile, of the number of blows required for each foot of penetration throughout the entire length of the pile, and of the penetration per blow. The record shall include the type and size of the hammer used, the rate of operation, and the type and dimensions of driving helmet and cushion block used. Any unusual occurrence during driving of the pile shall be recorded and brought to the attention of the Soils Engineer.

H. Pile Driving: Piles shall be driven to or below the "calculated" tip elevation to reach a driving resistance in accordance with the schedule which the Soils Engineer will prepare from the test pile driving. The pile hammer used for driving shall be the same type, operated at the same rate and in the same manner, as that used for driving the test piles. If a pile fails to reach the "calculated" tip elevation; or if the pile reaches the "calculated" tip elevation without reaching the required driving resistance, corrective measures shall be applied as recommended by the Soils Engineer and approved by the Architect.

1. Pile Hammers: Piles shall be driven with an air, steam or diesel-powered hammer of a type approved by the Soils Engineer. The hammer furnished shall have a capacity of at least 40,000 ft.-lb. The required driving energy of the hammer shall be obtained by use of a heavy ram and a short stroke with low impact velocity, rather than a light ram and a long stroke with high impact velocity. Diesel powered hammers shall be operated at the rate recommended by the manufacturer throughout the entire driving period. Sufficient pressure shall be maintained at the steam hammer so that: (1) for double-acting hammer, the number of blows per minute during and at the completion of driving of a pile is equal approximately to that at which the hammer is rated; (2) for single-acting hammer, there is a full upward stroke of the ram; and (3) for differential type hammer, there is a slight rise of the hammer base during each upward stroke.

2. Protection of Piles: Care shall be taken to avoid damage to the piles in placing the pile in the leads and during the pile driving operations. Piles shall be laterally supported during driving, but shall not be unduly restrained from rotation in the leads. Where pile or projecting reinforcement orientation is essential, special care shall be taken to maintain the orientation during driving. The top of the pile shall

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be squared to the longitudinal axis of the pile. If the contractor elects to use a pile head with projecting strands or mild steel reinforcing, a special driving head shall be used to prevent damage to the reinforcement and prevent direct impact forces from being transmitted through the reinforcement. The special driving head shall include a softwood cushion block, approved by the Architect, and adequate to prevent the formation of cracks around the reinforcement during driving, in addition to the other requirements specified hereinafter. A driving helmet or cap including a cushion block or cap block of a design approved by the Architect shall be used between the top of the pile and the ram to prevent impact damage to the pile. The driving helmet or cap and cushion block combination shall be capable of protecting the head of the pile, minimize energy absorption and dissipation, and transmit energy uniformly and consistently during the entire driving period. The driving helmet or cap shall fit loosely around the top of the pile so that the pile may rotate slightly without binding within the driving head. During the test pile period the Contractor shall demonstrate to the satisfaction of the Architect that the equipment to be used on the project performs the above functions. The cushion block may be a solid or laminated softwood block with the grain parallel to the end of the pile enclosed in a close-fitting steel housing. The thickness of block shall be suitable for the length of pile to be driven and the character of subsurface material to be encountered. Generally, thicker blocks are required for longer piles and softer subsurface material. The cushion block shall be replaced if it has been damaged, split, highly compressed, charred or burned, or has become spongy or deteriorated in any manner. Under no circumstances will the use of small wood blocks, wood chips, rope, or other material permitting excessive loss of hammer energy be permitted. The contractor shall submit to the Architect, at least two weeks before the start of test pile driving operations, detail drawings of the cushion block, including records of successful use.

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3. Tolerances in Driving: All piles shall be driven with a variation of not more than 0.25 inch per foot of pile length from the vertical. Top of pile shall be within ± 1 inch of the location indicated, except piles covered by poured-in-place concrete caps can be ± 3 inches. Manipulation of piles to force them into position will not be permitted.

4. Jetting or Predrilling of Piles: Jetting or predrilling of piles will be required to within roughly 3 to 4 feet of bearing stratum unless otherwise directed by the Soils Engineer. More exact elevations will be determined by the Soils Engineer from test pile data. Piling designated on the drawings as shear piling to be prejetted and driven in a manner to result in firm surrounding soil around the top of the piling after it is driven. Procedure subject to approval by Engineer.

5. Cutting off piles shall be with pneumatic tools, sawing, or other means approved by the Architect. The use of explosives for cutting will not be permitted.

QUALITY CONTROL:

A. Piling:

1. Manufacture shall be by a firm specializing in prestressed concrete products and services of the types specified herein. The manufacturer must show evidence of successful completion of similar work.

2. All prestressed concrete products shall be designed to support the live and dead loads indicated on the drawings and handling loads.

3. Design shall be accomplished by, or under the direct supervision of a Professional Engineer registered in the State of Florida, who has had a minimum of two years responsible experience in prestressed concrete design. He shall affix his signature and seal to all design calculations and shop drawings certifying that all products had been designed to meet this specification and the load criteria shown on the drawings. He shall submit three copies of complete design calculations to the Architect for record purposes, if requested.

4. Permissible design deviations shall be supported by complete calculations and drawings and shall have the Architect's approval. All connection, bearing and fitting details shown indicate the Architect's intent. The manufacturer may be permitted to modify these details if such modifications will be equally or more efficient, more consistent with the latest recommendation practices of the Prestressed Concrete Institute, and not more costly.

5. Shop Drawings: Before commencing work, the contractor shall submit to the Architect for approval, shop drawings showing details of the plant, equipment, method of pick-up, tensioning and detensioning procedures for manufacturing the precast, prestressed piling.

6. Test cylinders and tests procedures shall conform to the applicable requirements of "Section 3A - Poured in Place Concrete". Three (3) copies of all concrete test cylinder results shall be submitted to the Architect for record purposes.

7. Tests: Testing of complete members is not contemplated within the scope of work; if, however, such testing shall at any time be deemed desirable by the Architect only for determining adequacy of design, the cost of same will be at the expense of the Owner.

B. Soils Engineer: A qualified professional Soils Engineer will be employed by the Owner to supervise the test pile driving. The Soils Engineer will make all the necessary decisions in regards to the type and number of test piling required. From the data obtained from the tests, he will establish driving criteria and piling lengths which will be the basis for the ordering of piling. Records of all operations shall be maintained and three (3) copies shall be submitted to the Architect for record purposes.

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C. Test Piles: Test piles shall be installed, under the direct supervision of the Soils Engineer, where indicated on the drawings. Test piling are to be installed to determine the driving resistance of the pile in order to accurately determine the driving resistance of the pile in order to accurately determine pile lengths required for the remainder of the project. If additional test piles are required, other than those shown, tests will be paid for as an extra. Unless otherwise indicated, all test piling will be located and be considered as a permanent pile.

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SECTION 20 - PAINTING AND MARKING

GENERAL:

A. The Contractor shall furnish all labor, materials, tools, equipment, and perform all work and services necessary for all paving striping and markings as shown on drawings and as specified, in accordance with provisions of the Contract Documents, and completely coordinated with work of all other trades.

B. Although such work is not specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation.

MATERIALS:

A. Paint-

1.) Nonreflective Paint: Fed. Spec. TT-P-115E.

2.) Color of Paint: Yellow or white, subject to approval.

EQUIPMENT:

A. Striping Machine: Self-contained, self-propelled, capable of painting up to 6 in. wide stripes by use of a spray nozzle, with paint kept in constant agitation and under pressure.

PREPARATION OF SURFACE:

Thoroughly clean surfaces to receive striping or marking of foreign substances. Have surfaces completely dry before painting.

PAINTING:

A. Do not paint until a minimum of 21 days has elapsed from time surface is completed. A longer period may be required if directed by Architect.

B. Do not apply over wet surfaces, during wet or damp weather, or when temperature is below 40 degrees F. Mark and stripe in accord with applicable drawings.

C. Use a guide to form markings true to line and width. Keep paints thoroughly stirred and at uniform consistency during application. Do not thin in excess of manufacturer's recommendations. Method of applying paint shall be approved by Architect prior to commencing marking operations. Use rate of application sufficient to produce complete coverage without voids or thin spots. Over-paint unsatisfactory markings as directed by Architect. Protect all markings from traffic until paint has dried sufficiently to prevent tracking. Perform all striping with an approved striping machine.

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D. Application Rate: Rate of application shall be such as to provide wet film thickness of approximately 15 mils.

E. Pavement striping and marking shall be as shown on the plans and in accordance with U.S. Department of Transportation "Manual for Uniform Traffic Control Devices for Streets and Highways" (MUTCD) Edition 1971.

CLEANING:

Place all rags and waste which might constitute a fire hazard in metal containers or destroy at end of each work day. Upon completion of work, remove all containers from site. Remove paint spots or stains upon adjacent surfaces and leave entire job clean and acceptable to Architect.

END OF SECTION 2C

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SECTION 2D- ASPHALTIC CONCRETE PAVING

GENERAL:

A. The Contractor shall furnish all labor, materials, tools and equipment and perform all work and services necessary for or incidental to the construction and completion of asphaltic concrete pavement base and stabilization for roads, parking areas and other incidental structures as shown on drawings and as specified, in accordance with provisions of the Contract Documents, and completely coordinated with work of all other trades.

B. Although such work is not specifically shown or specified, all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation shall be furnished and installed as part of this work.

C. Construct all asphaltic concrete pavement to line, grade and typical section as indicated on the drawings.

REFERENCE SPECIFICATIONS:

A. Asphaltic concrete pavement shall comply with Section 330 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction dated 1977, and the Supplemental Specifications thereto, dated July 1979.

B. Paragraphs and/or references to "Method of Measurement" and "Basis of Payment" of the Standard Specifications do not apply.

C. Wherever the designation "Department" or other state authority occurs in these standard specifications such designation shall be changed to "Architect/Engineer".

D. Other sections or paragraphs of other sections as referenced in Section 330 or referred sections shall become a part of these specifications.

E. All sampling and testing necessary to determine conformance with the requirements of these standard specifications shall be performed by an approved commercial testing laboratory at the Contractor's expense; results of all sampling and testing shall be submitted to the Engineer for approval.

MATERIALS:

A. Sand-clay base materials shall conform to the requirements of Section 912 of the standard specifications.

B. Bituminous materials shall conform to the requirements of Section 916 of the Standard specifications and as further specified in Sections 300, 320, 330, 331, 333 and the supplemental specifications.

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C. Materials for Subgrade Stabilizations shall conform to the requirements of Section 914 of the Standard specifications.

JOB REQUIREMENTS:

A. All asphaltic concrete for this project shall be Type S-1 Asphaltic Concrete as specified in Section 331 or Type III Asphaltic Concrete as specified in Section 333 of the Standard specifications and shall consist of a surface course, 2½ inches or 1½ inches thick (nominal) of hot-mixed hot laid asphaltic concrete on the compacted base course.

B. General construction requirements shall meet all requirements of Section 330 of the Standard specifications.

C. Stabilization for this project shall be as specified in Section 160 of the Standard specifications, for Type B stabilization.

D. All sand-clay base for this project shall be as specified in Section 240 of the Standard specifications.

E. The Contractor shall obtain the sand-clay base material from sources of his own choosing. Material furnished by the Contractor must meet all the requirements of Section 912 of the Standard specifications and the cost of material, hauling and other costs shall be absorbed by the Contractor.

END OF SECTION 2D

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SECTION 3A - CONCRETE

SCOPE:

Provide all labor, materials, equipment and services of every nature necessary to complete all cast-in-place concrete work shown on the drawings and herein specified, subject to the terms and conditions of the Contract.

RESPONSIBILITIES AND COOPERATION:

A. The contractor shall be held responsible for all material meeting all requirements as herein specified, for the adequacy of all formwork, and for all workmanship.

B. The contractor shall cooperate with all other trades, whether or not in his control, in permitting the forming and setting of recesses, chases, sleeves, inserts, bolts, hangers, openings, or any other items that may be necessary.

C. The contractor shall cooperate fully with the Architect or his duly appointed representative. The Architect shall be notified sufficiently in advance of all pours in order that he, or his representative, may inspect and approve the placement of all reinforcing steel, formwork, and the concreting operation.

D. All concrete work shall be in accordance with ACI Code 318-77 except as may be modified on the drawings and in these specifications.

E. All testing to be paid for by the contractor.

MATERIALS:

(All references to ASTM or other specifications indicate the latest edition.)

A. Portland Cement: ASTM C150, Type I or II.

B. Concrete Aggregate: ASTM C33.

1. Fine Aggregate: Natural sand. All sand shall react to ASTM Colorimetric Test for Organic Matter, with a color not darker than the standard referenced color of ASTM C40.

2. Coarse Aggregate: Crushed stone, gravel, or other approved material (slag shall not be used) having clean, hard, durable, uncoated particles. Maximum size of aggregate shall pass through a 3/4" screen, except the maximum size aggregate for concrete in footings, slabs-on-grade, or concrete with no reinforcing, may be 1-1/2", and maximum size for floor fill shall be 3/8". All to be graded from coarse to fine within limits required by ASTM C33. Pea gravel shall be used for wall fill. Dust or other fine particles in excess of 2% will not be permitted.

C. Water: Clean and free from deleterious substances.

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D. Metal Reinforcing:

1. Bars shall be new conforming to ASTM A615, Grade 40. All reinforcing shall be bent cold and shall be free from scale, oil, dirt and structural defects. Fabrication shall be done accurately to the dimensions shown and in accordance with ACI Standard Practices. Store bars at least 6" above the ground.

2. Welded Wire Fabric: ASTM A185.

3. Wire for tying bars shall be 16 gage annealed iron wire.

4. Accessories shall be chairs, bolsters, etc., standard with the fabricator and shall be sufficiently strong to maintain bars in position. Galvanized or plastic tip accessories shall be used where accessory support is in the same plane as face of concrete which will be exposed to the weather.

E. Premoulded Expansion Joints: ASTM D1751 or D1752 sizes to be as shown. Where joints will be exposed, joint sealer conforming to Federal Specification TT-S-230 shall be provided in the top 3/4" of the joint.

F. Concrete Admixture: No admixture of any type will be permitted in the concrete mixes, unless specifically approved by the Architect or otherwise specified.

G. Forms:

1. DFPA, grade-trademarked B-B PLYFORM, CLASS I or II, EXTERIOR, mill-oiled shall be used for all formwork which will be in contact with all poured concrete, except as otherwise specified. Standard board lumber may be used for concrete below grade.

2. Form ties for beams and walls shall be 1" breakback, crimped snap ties.

3. Design and construction of formwork shall be in accordance with ACI 347-68.

H. Sealer and Hardener: Sonneborn "Kure-N-Seal", Grace "One-Kote", W. R. Meadows "CS-309", or approved equal.

I. Inserts:

1. Dovetail Slots: 22 gage galvanized metal, 7/8" wide back and 1/2" wide face x 1/2" deep, with dove-tail crimped-back brick anchors, 1" wide x 16 gage. Furnish fiber or felt fillers.

CONCRETE:

A. Ready-Mixed Concrete: All concrete for this project shall be ready-mixed, either central plant mixed or transit mixed. Equipment, mixing methods, and materials must conform to ASTM C94 and applicable ASTM Standards as indicated under Materials. If directed by the Architect, the

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contractor shall employ an independent testing laboratory to inspect the mixing plant to insure conformance with ASTM C94.

B. Concrete Strengths: All field poured concrete shall develop a minimum compressive strength of 3,000 psi at the end of 28 days, except for walks and wall fill which shall be 2,500 psi concrete.

C. Design Mix:

1. The concrete manufacturer, immediately after the award of this Contract shall submit his standard design mixes for the concrete strengths to be used for this project to the Architect for approval. At the same time, if design mix has not been tested in the previous 30 days, he shall employ an independent testing laboratory to obtain 4 standard test cylinders (ASTM C31) of the concrete strength being manufactured in conformance with the standard design mix. This concrete shall contain the same materials proposed for use on this project. Concrete mixes shall be designed in accordance with ACI Standard Recommended Practices for Selecting Proportions of Concrete (ACI 613-54) based on a slump of 3". The selection of the testing laboratory shall be approved by the Architect.

2. The minimum cement content of all 3000 psi field poured concrete shall be 5 sacks per cubic yard.

D. Field Testing: The contractor shall have an independent testing laboratory conduct tests and submit reports promptly to the Architect on the following field testing of concrete, without additional cost to the Owner.

1. Four standard test cylinders shall be made at the job site for every 50 cubic yards poured, or for each days pour, whichever is less. The procedures of sampling, making, curing, and testing shall be in strict accordance with ASTM C172, C31, C192, and C39, latest editions, respectively, and shall be properly identified as to date, time, pour location and slump. Slump tests shall be made at the same time cylinders are made in conformance with ASTM C143. Samples shall be made by the laboratory only.

2. Two cylinders are to be tested at 7 days and 2 at 28 days, unless otherwise directed. Laboratory shall submit 1 copy of report directly to the Architect, 1 copy to the structural engineer and 2 copies to the contractor.

3. The contractor, at his expense, will be required to have additional tests made, if the Architect deems necessary, of all concrete of which the average of 2 tests from the same days pour is less than specified compressive strength. If these additional tests show that the compressive strength is less than specified, the contractor will be required, at his expense, to remove and replace all such concrete.

E. Adjustment of Design Mixes for Field Conditions:

1. Surface moisture content of aggregate must be determined, in order that water-cement ratio is maintained. Adjust consistency of concrete as

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necessary by varying water content. Addition of water to concrete at job site will be permitted only with the approval of the Architect.

2. Concrete is to be poured with as low a slump as practical. Concrete with excessive slump, in the Architect's opinion, will be sufficient reason for rejection. In no case shall the slump be more than 5", except for wall fill which shall have a slump of approximately 8".

FORMWORK:

A. Forms shall be sufficiently strong to carry the dead weight of the concrete as a liquid without deflection and tight enough to prevent leakage of mortar. Wood forms shall be thoroughly cleated together with corrosion resistant devices. Bevel strips shall be provided in form angles and in corners of boxes for chamfering of corners, where shown or as directed. If any forms show bulge or deflection which in the opinion of the Architect is excessive, the concrete shall be removed and the work shall be rebuilt.

B. Before reinforcing is placed, the inside of wood forms for all exposed concrete shall be coated with plastic coating. Wood forms for concrete which will not be exposed shall be coated with form oil or plastic coating, or shall be thoroughly wetted.

C. Temporary cleanout openings shall be provided at the bottom of forms for columns and walls to facilitate cleaning and inspection immediately prior to concrete placement. Openings shall provide complete access to the surface on which concrete is to be cast.

D. Forms shall not be removed until members have acquired sufficient strength to safely support their own weight, or any weight which will be applied.

REINFORCEMENT:

A. Placing:

1. Metal reinforcement shall be accurately placed in accordance with the plans and shall be adequately supported and secured in position. Use concrete or clay brick for supporting reinforcement in slabs-on-grade and pile caps, when reinforcing is bars. Remove supports as pour progresses. Where welded wire fabric is used, pulled up reinforcing to center of member as concrete pour progresses.

2. Unless otherwise shown, all bars shall lap at least 24 diameters. Lap all welded wire fabric at least one full mesh and tie.

3. All slabs-on-grade shall be at least 4" thick, and shall be reinforced with 6x6-W1.4xW1.4 welded wire fabric unless otherwise indicated.

B. Protection: Unless otherwise indicated, reinforcement shall have the following concrete protection:

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Pile Caps	3" clear, sides and bottom
Columns and Piers	1-1/2" clear, sides
Column and pier Dowels	4" clear bottom; 2" clear, sides
Walls	1-1/2" clear, top, bottom, sides
Grade Beams	1-1/2" clear, top and sides;
	3" clear, bottom
Slabs	3/4" clear, top and bottom

PLACING MISCELLANEOUS MATERIALS:

Special materials, inserts, etc., cast into concrete masses, as indicated, shall be properly placed in the forms prior to placing concrete. Templates shall be used for setting of anchor bolts.

PLACING CONCRETE:

A. Concrete shall be conveyed to the place of final deposit by methods which will prevent separation or loss of the materials. Equipment for chuting concrete shall be of such size and design as to insure a practically continuous flow of concrete at the delivery end.

B. Concrete shall be deposited as near as possible in its final position to avoid segregation due to handling or flowing. No concrete that has partially hardened or has been contaminated by foreign materials shall be deposited in the work, nor shall retempered concrete be used, unless approved by the Architect. Concrete in walls shall be poured with the use of a tremie and shall not be dropped more than 8 feet.

C. When concreting is once started, it shall be carried on as a continuous operation until the placement of the section has been completed. The top surface shall be generally level. When construction joints are necessary, they shall be made as shown or as approved by the Architect.

D. Concrete shall be placed with the aid of mechanical vibrating equipment, placed in the concrete at the point of deposit, and operated at a frequency of not less than 3,500 cycles per minute. Vibration in one place shall be continuous for not less than 20 seconds, nor more than 45 seconds, and shall be sufficiently intense to cause the concrete to flow or settle readily into place and to visibly affect the concrete over a radius of 18" where used in concrete having a 1" slump.

E. Where not practical, in the opinion of the Architect, to use a mechanical vibrator, concrete shall be thoroughly compacted by puddling with suitable tools during the placing.

F. Do not place concrete when the temperature is 40 degrees F., or below or likely to fall to that level within 24 hours unless a method of maintaining a higher temperature in the concrete has been proposed and approved by the Architect.

CURING CONCRETE:

A. After placing and finishing, all concrete which is not covered by forms or chemical sealer-hardener, shall be kept moist for 10 days by methods

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subject to the approval of the Architect, except as otherwise specified. All materials and facilities for covering concrete shall be on hand and ready for use before the concrete is placed. An approved liquid curing sealer may be used provided the sealer is compatible with floor finish which will be installed.

B. Sealer-hardener, as specified in Materials, shall be applied to the tops of slabs in the following areas. Elevator equipment room, trash and storage room, and the pool equipment/storage room.

FINISHING CONCRETE:

A. General: If after the removal of forms, there is any excessive honey-combing or other imperfections, the member shall be repaired by removal and replacement at no extra cost to the Owner.

B. Poured Concrete, Except as Otherwise Specified: All fins and projections shall be removed and small voids filled with a 1:2 mortar of the same color as the member being finished. In addition, all surfaces which will be exposed to view on both exterior and interior of the building shall be rubbed smooth with a carborundum stone to provide the entire surface smooth, uniform in texture and color, and free from all marks.

C. Floors:

1. Finish for Exposed Floors and Floors to Receive Carpet or Soft Tile: All screeds shall be carefully checked with an accurate surveyor's level and shall be thoroughly braced against displacement before concrete is placed. The concrete shall be screeded and then receive a steel trowel finish. Exposed areas to receive a double trowel finish, and areas to receive soft tile or carpet to receive a single trowel finish. The finished surface shall be checked and shall not vary more than 1/8" in 10 feet. Excessive variation shall be reduced by grinding or other approved method. Apply sealer-hardener as specified under Curing Concrete, above.

D. Finish for Sidewalks and Exterior Slabs: The surface of the concrete shall be screeded, troweled and given a light broom finish. Edges and joints shall be rounded with an edger to a radius of 1/4". Scored joints shall be provided at 5 to 6 feet on centers, unless otherwise shown.

EXPANSION AND SCORED JOINTS:

Provide expansion joints in full depth of slabs where indicated and as herein specified. Provide 1/2" expansion joints in walks at intervals not exceeding 30 feet on centers, unless otherwise located. Where joints will be exposed, the top 3/4" of the joint shall be cleaned and filled with joint sealer, applied as directed by the manufacturer.

LOAD TESTS:

In addition to all testing as previously specified, load tests, as directed by the Architect, may be required at the expense of the contractor, if there is evidence of faulty workmanship or violations of these specifications.

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Load tests shall be conducted as indicated in Chapter 20 of ACI Code 318-77.

SHOP DRAWINGS:

Five (5) copies of reinforcing steel shop drawings shall be prepared in accordance with ACI 315, and shall be reviewed, checked, stamped, and signed by the contractor and shall be submitted to the Architect showing concrete dimensions, bar schedule, bending details, and accessories. No fabrication shall be done before the shop drawings have been returned by the Architect. Returned shop drawings shall bear the Architect's stamp of approval and signature which indicates approval as to design only, and does not imply approval of dimensions, quantities, etc., which are the contractor's responsibility. No shop drawings will be permitted on the job without the Architect's and Contractor's stamp of approval and signature.

GROUTING FOR HORIZONTAL JOINTS AND RECESSES IN PRECAST CONCRETE:

Grout for joints and recesses shall be an approved pre-mixed, non-shrink, commercial grouting mortar containing no corrosive irons, aluminums, chemicals, or gypsums. The approved grout shall have no shrinkage below its placement volume, shall have a one-day strength of not less than 3000 psi, and shall have an initial set of not less than 45 minutes. Recent independent laboratory test results shall be furnished showing results under ASTM C827, ASTM 191, ASTM C109. Perform all grouting work in accordance with the recommendations of the ACI, CSI, and the manufacturer's published specifications for mixing and placing. The top of the concrete shall be roughened and cleaned thoroughly before grouting.

GROUTING, POINTING AND CAULKING PRESTRESSED MEMBERS:

A. All grouting, pointing and caulking shall be done in a workmanlike manner.

B. Grout shall be a mixture of 1 part Portland cement to 2-1/2 parts sand. The consistency shall be such that joints can be filled completely but without seepage to other surfaces. Any grout that seeps from joint shall be removed before it hardens.

C. Grout for joints between slabs shall be placed from the top of the slabs, and finished on the underside before hardening by raking joints to 1/2" deep and tooling smooth. Before acoustical plaster is sprayed, the joint shall be filled with hand trowel from the underside with the same type and color of acoustical plaster to be generally used, and shall be struck flush with the underside horizontal surfaces of the adjacent slabs.

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SECTION 3B - PRECAST PRESTRESSED HOLLOW-CORE SLABS

GENERAL:

SCOPE:

Provide and install all precast prestressed hollow-core slabs for floors and roof as shown on the drawings along with end blocking to stop grout in cells, bearing strips and all other items necessary for the installation of those slabs, subject to the terms and conditions of the contract.

SPECIFICATIONS:

The latest edition of the following specifications, standards and codes shall govern:

A. Southern Building Code Congress International, Inc.: Standard Building Code.

B. American Concrete Institute: ACI 318 - Building Code Requirements for Reinforced Concrete; ACI 301 - Specifications for Structural Concrete for Buildings.

C. American Welding Society: AWS D1.1 Structural Welding Code; AWS D1.4 Structural Welding Code - Reinforcing Steel.

D. Prestressed Concrete Institute: MNL - 116 - Manual for Quality Control for Plants and Production of Precast, Prestressed Concrete Products.

DESIGN:

All prestressed concrete design shall be accomplished by a Professional Engineer registered in the State of Florida. He shall affix his signature and seal to all design calculations and shop drawings certifying that all prestressed concrete products have been designed to meet this specification and all load criteria shown on the plans.

SUBMITTALS:

A. Shop Drawings: The prestressed concrete manufacturer shall prepare and submit to the Architect, via the General Contractor, 5 sets of shop drawings for approval and shall not proceed with manufacture prior to receiving General Contractor's and Architect's approval of said shop drawings.

PRODUCTS:

MATERIALS:

Materials shall be as outlined in ACI 318 - Building Code Requirements for Reinforced Concrete.

A. Portland Cement: ASTM C150, Type I or III.

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B. Admixtures:

Air-Entraining Admixtures: ASTM C260.

Water Reducing, Retarding, Accelerating Admixtures: ASTM C494.

C. Aggregates: ASTM C33.

D. Water: Potable or free from foreign materials in amounts harmful to concrete and embedded steel.

E. Reinforcing Steel:

1. Bars: Deformed Billet Steel - ASTM A615.

Deformed Rail Steel - ASTM A616.

Deformed Axle Steel - ASTM A617.

2. Wire: Cold Drawn Steel - ASTM A82.

3. Wire Fabric: Welded Steel - ASTM A185.

Welded Deformed Steel - ASTM A497.

F. Strand: Uncoated, 7-wire, Stress-Relieved Strand - ASTM A416, Grade 250K or 270K.

EXECUTION:

TRANSPORTATION AND ERECTION:

All prestressed concrete members shall be erected into final position in the structure by the prestressed concrete manufacturer, or his on-site technical guidance. Members shall be lifted and supported only at the lifting and/or support points shown on the shop drawings. The members shall be placed into final position on neoprene pads on bearing surfaces prepared true to line and grade under items of the general contract.

FINISHES:

Formed surfaces shall be plant-run finish and unformed surfaces shall have a medium broom finish.

OPENINGS:

Prestressed concrete manufacturer shall provide for all openings required through slabs of 10 inches round or square or larger. Other openings shall be located and field drilled or neatly cut by the trade requiring them after the precast prestressed products have been erected.

GROUTING, POINTING AND CAULKING:

See other sections of this Specification.

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SECTION 3C - PRECAST CONCRETE

SCOPE:

The contractor shall furnish all labor, materials, tools, equipment, and perform all work and services necessary for or incidental to the furnishing and installation, complete, of all architectural precast concrete as shown on drawings and as specified, in accordance with provisions of the contract documents, and completely coordinated with that of all other trades.

Although such work is not specifically shown or specified, all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation shall be furnished and installed as part of this work.

ACCEPTABLE MANUFACTURERS:

A. Manufacturer to have not less than 5 years successful experience in manufacturing architectural precast concrete units similar to units required for this project, and have sufficient production capacity and experienced personnel to produce required units without causing delay in work.

B. Owner to have right to make shop inspections of all manufacturing procedures and of units. Provide access and facilities for such inspections. Discontinue manufacture of rejected units until defects in materials or workmanship have been corrected and approval given to proceed.

SPECIFICATIONS:

The latest edition of the following specifications, standards and codes shall govern:

A. Southern Building Code Congress International, Inc.: Standard Building Code.

B. American Concrete Institute: ACI 318 - Building Code Requirements for Reinforced Concrete; ACI 301 - Specifications for Structural Concrete for Buildings.

C. American Welding Society: AWS D1.1 Structural Welding Code; AWS D1.4 Structural Welding Code - Reinforcing Steel.

D. Prestressed Concrete Institute: MNL - 113 - Manual for Quality Control for Plants and Production of Precast, Prestressed Concrete Products.

DESIGN:

All precast concrete design shall be accomplished by a Professional Engineer registered in the State of Florida. He shall affix his signature and seal to all design calculations and shop drawings certifying that all precast concrete products have been designed to meet this specification and all load criteria shown on the plans. Design panels in compliance with above referenced specifications, standards and codes.

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SUBMITTALS:

A. Shop Drawings: The precast concrete manufacturer shall prepare and submit to the Architect, via the General Contractor, 5 sets of shop drawings for approval and shall not proceed with manufacture prior to receiving General Contractor's and Architect's approval of said shop drawings.

B. Before fabrication, submit for Architect's approval two 48"x48"x4" samples of the precast wall designed and joined in such a way as to illustrate a dummy joint, an actual joint complete with sealant and the specified finish. Additional samples shall be required until samples, as submitted, are approved by Architect. After samples are approved, one full sized panel to include window surround will be fabricated for Architect's approval. If approved, panel may be used in actual wall construction.

C. Sealants are specified in Division 7.

D. Submit silicone waterproofing sealer type and method of application as specified by manufacturer for Architect's approval.

PRODUCT DELIVERY, STORAGE AND HANDLING:

Deliver units to site in such quantities and at such times as will ensure continuity of installation. Store units to ensure against cracking, distortion, staining, or other damage.

JOB CONDITIONS:

Before installing precast work, Contractor and his precast manufacturer and erector shall check all dimensions, and inspect supporting structure for defective conditions or surfaces affecting precast work which may interfere with or prevent a satisfactory installation. Do not proceed with installation until defects and conditions are corrected. Start of installation constitutes acceptance of surfaces and conditions.

TESTING:

A. Contractor shall employ an independent testing laboratory approved by Architect to perform all tests of cylinders and pay all costs of testing.

B. In addition to those copies of test reports required by Contractor for his use, furnish one copy of all test reports to Architect, and one to the structural engineer, promptly and directly.

C. Make sets of four standard 6"x12" cylinders. Cure cylinders in same manner as precast units they represent.

1. Before production of units make, cure, and test one set of cylinders for each type of concrete required. Make cylinders of same mix, same type of cement, aggregates, admixtures and other ingredients as proposed for use in actual production of units. Do not start until test reports have been approved by Architect.

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2. During production of units, make, cure and test one set of cylinders for each 50 cu. yds. of concrete placed.

D. Test cylinders in compliance with ASTM C31 and C39, two at 7 days and 2 at 28 days.

MIX DESIGN:

A. Before production of precast units, submit for Architect's approval, the designs proposed for use. Any changes made in design mixes must be approved by Architect. Mix shall provide a minimum 28-day compressive strength of 5000 psi. Use of calcium chloride, chloride ions or other salts is not permitted.

B. Provide concrete containing air-entraining admixture producing an air content between 5 percent and 8 percent including entrapped air. Test in accordance with ASTM C173 or C231.

TOLERANCES OF UNITS:

Tolerances shall comply with PCI MNL-116.

MATERIALS:

A. Portland Cement: ASTM C150, Type I or II. All cement shall be supplied from a single source.

B. Fine and coarse aggregates for exposed finishes shall be from a single source for the entire job and shall be limestone aggregate.

C. Water: Clean, fresh, free from oil, acid, organic matter or other deleterious substances potable.

D. Air-Entraining Admixtures: ASTM C260.

E. Welded Wire Reinforcing: ASTM A185.

F. Reinforcing Bars: ASTM A615, Grade 60.

G. Flashing Keylets: See Division 7.

H. Metal Anchors, Inserts and Anchorages: Galvanized per ASTM A123. Provide, as part of precast work, all embedded inserts and anchorage items necessary for attachment of units to supporting and adjacent work. Obtain Architect's approval of all sizes, types, and locations and number of all embedded items. Coordinate locations of embedded items with work of other trades to ensure accurate location.

I. Waterproofing sealer shall be a clear silicone type sealant, flat finish.

J. Dovetail inserts - See Section 3A.

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DESIGN AND FABRICATION:

A. Design and provide internal reinforcing and embedded connections where not shown on drawings, to withstand:

1. Wind Pressure: In compliance with Standard Building Code.
2. Dead load of panel plus all superimposed loads.
3. Erection forces.
4. Temperature and shrinkage stresses.

B. Provide all connection items, anchors, setting loops, lifting hooks, and similar accessories embedded in precast concrete as a part of Precast Concrete Work. See drawings for details.

C. Provide all connection items, anchors, angles, plates, and other items secured to or embedded in other work and necessary to support and anchor precast units.

D. Employ certified welders to perform all welding. Perform welding in compliance with AWS A1.1 and AWS D1.2.

E. Mark each unit for identification and date of casting.

F. Exterior surfaces of wall panels to be formed in flat steel forms. The unformed surfaces which will be exposed in the finished structure to be steel troweled and then given a light broom finish. The formed surfaces to be treated with a form release agent that will be compatible with coating to be applied. All surfaces which will be exposed will be coated as specified in other sections of the specifications and these surfaces to have at least an Architectural grade B finish. This consists of all air pockets and holes over $\frac{1}{4}$ " to be filled with sand cement paste, and all form offsets or fins over $\frac{1}{8}$ " to be ground smooth.

ERECTION:

A. Employ only skilled and experienced personnel to install precast work. Provide correct equipment capable of properly installing units.

B. Provide metal anchors, inserts, clip angles, anchor plates, shims, bolts, and other devices and fastening accessories as detailed and as necessary for erection of precast units complete in place.

C. Erect units in accordance with approved shop drawings and erection schedules. Install each unit in position assigned on approved erection schedule and drawings. Make joints $\frac{1}{2}$ inch except as shown otherwise on approved shop drawings.

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D. During erection, secure units by welding and bolting as shown. Install clips, plates, straps, bolts and nuts for attachment of cast units. Provide one flat and one lock washer with each bolt and nut. Set units resting on shims where shown or where necessary for level, uniform bearing. Employ only certified and experienced welders to perform welding in compliance with AWS D1.1 and AWS D1.2.

E. After panels have been erected and welded and/or bolted to building frame, apply one coat of a rust-inhibitive paint of type approved by Architect, to all connection items.

CAULKING:

Is specified in Section "Sealants".

PROTECTION:

Protect precast work against damage from cutting or welding operations; provide non-combustible shields as necessary while welding. Protect other work as necessary to prevent damage.

DAMAGED WORK:

Replace any unit which exhibits damage to surfaces, finish, corners or edges which will be exposed to view after setting in place, or which is broken or cracked due to shrinkage, temperature, transportation, handling or erection, except, that in specified instances when approved in writing by Architect, unit may be repaired in place. Perform such work at no additional expense to Owner. Acceptance of repaired units, which have been repaired pursuant to written approval is contingent upon repairs being skillfully done so as to be sound, permanent, flush with adjacent surfaces and of color and texture matching similar adjoining surfaces and showing no apparent line of demarcation between original and repaired work. Remove and replace other work damaged by removal of defective precast members, at no additional cost to Owner, as directed by Architect.

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SECTION 4A- CONCRETE MASONRY UNIT

SCOPE:

Furnish all labor, equipment and material to complete all concrete masonry unit work shown on the drawings and/or herein specified. It is the intent of these plans and specifications to provide a complete job. Accessory pieces normal to the trade and required to provide a complete job whether shown on the drawings or specified shall be provided by the Contractor.

MATERIALS:

Cement, lime and other cementitious materials shall be delivered to the site and stored in unbroken bags, barrels, or other approved containers, plainly marked and labeled with the manufacturer's name and brand. Mortar materials shall be stored in dry, weathertight sheds or enclosures, and shall be stored and handled in a manner which will prevent the inclusion of foreign materials and damage by water or dampness. Masonry units shall be handled with care to avoid chipping and breakage, and shall be stored as directed. Materials shall be stacked or stored on newly constructed floors in such manner that the uniformly distributed loading does not exceed 50psf. Masonry materials shall be properly protected from contact with the earth and exposure to the weather, and shall be kept dry until used. Materials containing frost or ice shall not be used.

A. Concrete Masonry Units shall be either air, water or steam cured. Units shall be stored before use in a minimum of 28 days for air cured units; 10 days for steam or water cured units; and 3 days for units cured with steam at a pressure of 120 to 150 psi and at a temperature of 350 to 365 degrees F. for at least 5 hours. Surfaces of units which are to be left exposed in the finished work, or which are to be painted, shall be relatively smooth with a uniform texture. Surfaces of units to receive plaster or stucco shall be sufficiently rough to provide a suitable bond.

1.) Hollow Loading Bearing Units: ASTM C90, made with light or normal weight aggregates. Grade N-I units shall be provided for exterior and foundation walls.

2.) Concrete Building Brick: ASTM C55, made with light weight or normal weight aggregates. Grade N-I or S-I, except that brick exposed to weather shall be Grade N-I. Concrete brick shall match the concrete masonry units with which they are used as closely as practicable in color and surface characteristics.

3.) Special shapes such as closures, header units, and jamb units, special be provided as necessary to complete the work, and shall conform to the applicable portions of the specifications for the units with which they are used.

B. Cement: Type I, Portland Cement conforming to ASTM C150, or Type IP blended hydraulic cement, conforming to ASTM C595.

C. Lime paste shall be made with pulverized quicklime, or with hydrated lime, which shall be allowed to soak not less than 72 hours before use; except that hydrated lime, processed by the steam method,

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shall be allowed to soak not less than 24 hours, and shall be made by adding the lime to the water. In lieu of hydrated lime paste for use in mortar, the hydrated lime may be added in the dry form.

1.) Hydrated Lime: ASTM C207, Type S.

2.) Pulverized Quicklime: ASTM C5, passing a No. 20 sieve, with 90% passing a No. 50 sieve.

D. Sand: ASTM C144.

E. Water for mixing shall be potable.

F. Horizontal Joint Reinforcement: Durowall or approved equal. Installation shall be in accordance with the manufacturer's printed instructions.

G. Anchors and Ties: Items shall be of approved designs, and shall be of copper clad steel, zinc coated steel, or non-corrosive metal having the equivalent total strength of steel types. Zinc-coated items shall be coated by the hot-dip process after fabrication to provide a minimum of 1.25 oz. of zinc per square foot, or surface when tested in accordance with ASTM A90.

1.) Anchors used with Embedded Slots or Inserts: Dovetail type, of sheet steel, not lighter than 16 gauge and 1 inch wide, and crimped, corrugated or bent at end to provide adequate anchorage. Anchors for wire inserts shall be of 9 gage wire looped and closed. Anchors shall be of the proper length for the use intended. Dovetail slots and inserts are specified in other sections of this specification.

H. Fastenings: Suitable bolts, metal wall plugs, or other approved metal fastenings for securing furring to masonry, and elsewhere as necessary.

MORTAR MIXES: 1 part gray Portland cement
1 part lime paste
6 parts sand

At the Contractor's option, the following mix may be substituted for the above:

1 part approved masonry cement
3 parts sand

Mortar shall be of uniform shade throughout the work.

DELIVERY, STORAGE AND HANDLING: All materials shall be so delivered, stored and handled as to prevent the inclusion of foreign materials and the damage of materials by water or breakage. Packaged materials shall be delivered and stored in original packages until ready for use. Packages of materials showing evidence of water or other damage shall be rejected. All materials shall be of the respectable qualities specified herein.

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LAYING MASONRY UNITS:

A. Lay concrete block dry.

B. Horizontal joints shall be kept level and of uniform thickness with vertical joints. Vertical joints shall be aligned vertically. Lay all concrete block in running bond.

C. All joints shall be struck flush.

D. Lay wall reinforcement at 16" o.c. vertically. Reinforcement shall extend full length of all walls.

E. Build in all flashings, reinforcement, bolts and anchors, door frames, lintels, wall ties, conduit and pipe fittings, etc. that occur in masonry for this and/or other trades, as shown and/or required.

F. Fill with mortar the first cells in all concrete masonry units which are adjacent to the jams of doors, windows and other openings in walls. Mortar fill shall extend the full height of the jamb.

G. Bonding and Anchoring: Masonry walls and partitions shall be securely anchored or bonded at points where they intersect with each other or with the pre-cast wall panel. All anchors shall be completely embedded in mortar.

CUTTING MASONRY UNITS: Where brick or block must be cut to form true sides or joints, such cutting shall be done by a power masonry saw which will be furnished and maintained by the Contractor at the site for the duration of work included in this Section.

CLEANING: All exposed masonry work, interior and exterior, shall be cleaned to remove all soil, mortar, pitch, paint or other materials which detract from the finished appearance of exposed masonry work, and shall be left in first class condition.

END OF SECTION 4A

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SECTION 5-A-- MISCELLANEOUS METALS

SCOPE: Furnish all labor, equipment and material to complete all miscellaneous metal work shown on the drawings and/or herein specified. It is the intent of this Section to provide a complete job including all necessary accessories whether specified herein or shown on the drawings.

MATERIALS:

A. Metals shall be free from defects impairing strength, durability, appearance and the best commercial quality for purposes intended, manufactured with structural properties to withstand safely the strains and stresses to which they will be normally subjected, true to detail, clean, straight with sharply defined profiles, curved work to true radii, and unless otherwise noted, with smooth finished surfaces.

B. Steel: Rolled shapes, angles, plates, anchors, etc., shall conform to ASTM- A-36.

C. Miscellaneous Steel: Shall be milled steel unless otherwise noted or specified.

D. Bolts, Screws, Plugs, Nuts, etc., shall conform to ASTM- A-307. Furnish all bolts, toggle bolts, screws, nuts, etc., for installation, with galvanized finish where not exposed to view or where work is to be painted after installation and of same finish as items attached where work is exposed to view and is not to receive paint after installation. Expansion shields shall be lead.

E. Galvanizing: Coats on structural steel shapes, pipes, bars, and their products shall conform to ASTM A-123. Galvanized iron and steel shall conform to ASTM A-93. Galvanized after fabrication.

F. Bitumastic Paint: Shall be of approved kind and quality. No thinning will be permitted. Apply a heavy coat to contact area of dissimilar metals in contact with one another.

G. Protective Coating: Shall be equal in quality to Galvaloy as manufactured by Metalloy Products Co., applied in accordance with manufacturer's instructions to galvanized items in areas where original galvanizing has been damaged.

END OF SECTION 5A

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SECTION 5B -- METAL RAILINGS

SCOPE: Furnish all labor, equipment and material to complete all metal railings as shown on the drawings and /or herein specified. It is the intent of these specifications to provide a complete job including all necessary accessory pieces whether shown on the drawings or called for in the specifications.

MATERIALS:

A. Aluminum railing shall be ALUM-A-TUBE as manufactured by Aluminum Tube Railings Inc. or approved equal.

B. Finish shall be thermal setting polyester baked enamel bronze color.

INSTALLATION: Installation shall be in accordance with the manufacturer's printed instructions and as detailed on the drawings.

END OF SECTION 5B

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SECTION 6A- ROUGH CARPENTRY

SCOPE: Furnish all labor, equipment and materials to complete all rough carpentry as shown on the drawings and /or herein specified. It is the intent of these specifications to provide a complete job including all accessory pieces whether shown on the drawings or herein specified.

MATERIALS:

A. Fire retardent Treated Lumber: framing, blocking, nailers, grounds, etc., shall be No. 2 S4S Southern Yellow Pine or Fir grademarked and trademarked. Lumber shall be pressure treated with Baxco Pyresote in accordance with Underwriters' Laboratories Inc. label or approved equal. After treatment, framing lumber is to be kiln dried to a maximum moisture content of 18%.

B. Wood Preservative Treatment: All wood in direct contact with concrete shall be pressure treated with Pentachlorophenol in oil in accordance with Uniform Building Code Standard 25-12. All lumber within 12 inches of concrete shall be treated after sawing by soaking in solution of 5% Pentachlorophenol in oil for not less than 15 minutes.

C. Sheathing shall be Thermo-Ply or approved equal.

D. Wood Backing: Provide all wood backing, furring, stripping or blocking indicated or required for proper installation and attachment of work of all other trades. Cut and frame all openings required by other trades.

E. Wood Framing for fence shall be No.2 S4S Southern Yellow Pine treated with wood preservative treatment as specified above.

F. Wood Post for fence shall be 4"x4" cypress treated with wood preservative, installed as detailed on the drawings.

G. Woodsiding for fence specified in Section 6B Finished Carpentry, exterior wood siding.

H. All Exterior wood stud walls shall have all plates (top & bottom) and studs in contact with masonry or concrete set in a full bed of caulking.

NAILS: All nails shall be galvanized. Drill where required to avoid splitting.

END OF SECTION 6A

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SECTION 6B- FINISHED CARPENTRY

SCOPE: Furnish all labor, equipment and materials to complete all finished carpentry as shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all accessory pieces whether shown on the drawings or herein specified or not.

MATERIALS:

- A. Lumber for millwork shall be "B and Better" finish grade Southern Yellow Pine or No. 1 Fir. Trim to be same grade.
- B. Exterior Wood Trim shall be Western Red Cedar. Standard grading and dressing rules "B and Better" grade marked by the West Coast Lumber Inspection Bureau for Fascia Boards and Exterior Trim.
- C. Exterior Wood Siding shall be 3/4" thick Western Red Cedar Lap siding 4 1/2" exposure. Siding shall be Fire Retardant treated as specified in Section 6-A. Standard grading and dressing rules "B and Better" grade marked by the West Coast Lumber Inspection Bureau.

INSTALLATION:

- A. Use only hot dip galvanized or aluminum finish or casing nails. Set nails for putty stopping in surfaced members. Hammer marks not acceptable on any exposed finished surface and may be cause for rejection of work by Architect.
- B. Make all end splices exposed in finished members bevel splices and not square butted. Install members in as long lengths as possible.
- C. Scribe work where required. Miter all corners of trim.
- D. Provide and install other miscellaneous millwork items and related work required to complete work of this Section.
- E. Prepare all wood work installed hereunder by cleaning and sanding as required to receive finishes specified in other Sections of this Specification.

END OF SECTION 6B

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SECTION 6C- CABINET WORK

SCOPE: Furnish all labor, equipment and materials to complete all cabinet work as shown on the drawings and/or specified. It is the intent of these specifications to provide a complete job including all accessory pieces whether shown on the drawings or herein specified or not.

MATERIALS:

A. Finish-All cabinets have each exposed surface covered with textured high-pressure laminates. All cabinet fronts are high pressure .035" thick textured melamine vertical surfacing laminate in accordance with NEMA standards. Cabinet interiors and ends are surfaced in matching high-pressure plastic cabinet liner. Unexposed outside surfaces are covered with a balancing sheet of phenolic, moisture-resistant backing material.

B. General-All parts are factory prefinished. Flush fronts overlap ends. Cabinet body panel joints are assembled with specially designed male and female plated hardware, applied so any panel or part may be replaced by disengaging hardware. All end panels are of flush construction finished in pattern matching fronts. All exposed panel edges have extruded, shockproof, T-molding applied to grooved edge.

C. Doors- $\frac{1}{2}$ " thick core, veneered on both sides with high-pressure plastic laminate with edges sealed with shockproof T-molding.

D. Drawers-Fronts are $\frac{1}{2}$ " thick core, veneered on both sides with textured high-pressure plastic laminates with all edges sealed with shockproof T-molding. Drawer sides, inner fronts and backs are $\frac{1}{2}$ " core veneered with matching high-pressure plastic cabinet liner. All exposed edges are sealed with T-molding. Drawer bottoms are $\frac{1}{8}$ " hardboard core veneered with impervious textured Beige Scrim high-pressure cabinet liner. Drawers glide on plated steel slides with nylon, ball bearing rollers with positive stop. Drawers are easily removable for cleaning and have rubber bumpers to eliminate noise.

E. Cabinet Tops, Bottoms, Ends and Backs- $\frac{1}{2}$ " thick core, veneered both sides with matching high-pressure plastic cabinet liner or phenolic plastic cabinet liner or phenolic balancing sheet. All exposed edges sealed with shockproofed extruded T-edge.

F. Shelves- $\frac{1}{2}$ " thick core, veneered both sides with matching high-pressure plastic cabinet liner. Upper and full height cabinet shelves are adjustable on $\frac{1}{2}$ " centers. Base cabinet shelves are adjustable on $\frac{1}{2}$ " centers.

G. Recessed Toespace-Integral 4" high, 3" deep toespace surfaced with textured black plastic laminate.

FABRICATION AND INSTALLATION

Cabinets shall be as manufactured by Armorclad or approved equal. Installation shall be in accordance with manufacturers printed instructions.

END OF SECTION 6C

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SECTION 7A-MEMBRANE ROOFING

SCOPE: Furnish all labor, equipment and materials to complete all membrane work as shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all accessory pieces whether shown on the drawings or specified herein or not.

MATERIALS: Roofing shall be GAF specification 212 or other approved equal.

RIGID ROOF INSULATION: Shall be equal to Johns/Mansville Fesco factory tapered Dri-Deck System or approved equal. Application shall be in layers of 3/4" thickness with staggered joints.

ROOF EXPANSION JOINT COVERS: Shall be Johns/Mansville Expando Flash or other approved equal.

INSTALLATION:

A. Built-up Roofing shall be applied in strict accordance with the manufacturer's printed instructions.

B. Tapered Roof Insulation shall be in accordance with the manufacturer's printed instructions.

END SECTION 7A

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SECTION 7B- BUILDING INSULATION

SCOPE: Furnish all labor, equipment and materials to complete all building insulation as shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all accessory pieces whether shown on the drawings, herein specified or not.

MATERIALS: Building insulation shall be fiberglass batt insulation Kraft-Faced Insulation as manufactured by Owens Corning Fiberglas or approved equal.

INSTALLATION: shall be in the locations shown on the drawings and in accordance with the manufacturer's printed instructions.

END SECTION 7B

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SECTION 7C--METAL ROOFING AND FLASHING

Scope: Furnish all labor, equipment and materials to complete all metal roofing and flashing as shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all accessory pieces whether shown on the drawings or specified herein or not.

MATERIALS:

- A. Standing seam metal roof shall be Berridge Tee-lanel standing seam system as manufactured by Berridge Manufacturing Co., Houston, Texas or other approved equal. Color to be Medium Bronze, Duranar 200.
- B. Gravel stops, fasciae and gups shall be of the same material and finish as the metal roof.
- C. Flashing Reglets shall be vinyl.
- D. Lead flashing shall be sheet lead weighing not less than 4 lbs. per sq. ft.
- E. Flashing and counter flashing shall be 24 gage hot-dipped galvanized sheet steel.

INSTALLATION:

- A. Metal roof shall be in accordance with the manufacturer's printed instructions.
- P. Metal flashings
 - 1. Metal flashings that are to be built in by other trades shall be shaped according to details and furnished in advance of the need.
 - 2. Lead flashings shall be installed in all plumbing vents through the roof then shall be turned in the tops of vents and shall extend onto the roof at least six inches.

END SECTION 7C

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SECTION 7D--SEALANTS:

SCOPE: Furnish all labor, equipment and materials to complete all caulking and sealant work shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all accessories whether or not shown on the drawings or herein specified.

MATERIALS:

A. Caulking shall be thiokol or other approved equal.

B. Sealant: Sealant for precast joints shall be a polysulfide sealer over styrofoam backing strip. Sealer shall be as manufactured by DAP Inc. or other approved equal.

INSTALLATION:

Sealant and caulking shall be installed in strict conformance with the manufacturer's printed instructions for the specific application.

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END SECTION 7D

SECTION 7E--SHINGLE ROOFING

SCOPE: Furnish all labor, equipment and materials to complete all shingle roofing shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all accessories whether or not shown on the drawings or herein specified.

MATERIALS:

Shingles shall be Sentinel Self-Sealing Fiberglass Asphalt roof shingles as manufactured by G.A.F. Color to be white.

INSTALLATION:

Installation shall be in accordance with the manufacturer's printed instructions.

END SECTION 7E

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SECTION 8A--DOORS AND FRAMES

SCOPE: Furnish all labor and equipment and materials to complete all door and framework shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all necessary accessory pieces whether or not shown on the drawings or herein specified.

MATERIALS:

Hollow Metal Doors shall be flush type, series L-18 as manufactured by Steelcraft or approved equal. Doors shall be galvanized and bonderized and factory primed. Doors shall reinforced at the factory for hardware.

Metal Insulated Doors shall be door system LD-24 and SF9 as manufactured by Steelcraft or approved equal. Doors shall be galvanized steel and factory primed. Doors shall be reinforced at the factory for hardware. Door design shall be flush. Glass shall be $\frac{1}{2}$ " sealed insulated glass.

Hollow Metal Frames as shown on the drawings shall be F-18 as manufactured by Steelcraft, double rabbet design or approved equal. Frame shall be pre-cut and reinforced for hardware. Wall anchors shall be provided to meet the conditions shown on the drawings. There shall be three anchors per jamb.

Hollow Core Wood Doors shall be DHC-II 1- $\frac{3}{8}$ " thick or 1- $\frac{1}{8}$ " thick as called for on the drawings manufactured by Weyerhaeuser or approved equal. Face veneers are to be Lauan, doors shall be flush design, and reinforced at the factory for hardware. Doors with louvres shall be pre-cut at the factory to the required size and reinforced to prevent sagging and warping. Louvres shown on the drawings shall be wood. Adhesives to be Type II water-resistant, the hollow core shall be phenolic impregnated honey-comb.

Upward Acting Sectional Doors shall be Series 700, wood panel doors manufactured by Overhead Door or approved equal. Door hardware shall be galvanized and doors shall be provided with a 5-pin tumbler lock. Doors shall have a wood preservative treatment and be factory primed. Doors shall have electric operator standard with the manufacturer. Frequencies shall be designed so that only one door will operate per control.

Fire-rated Hollow Metal Doors and Frames shall be 1- $\frac{1}{2}$ hour U.L. rated as manufactured by Steelcraft or approved equal. Wall anchors shall be provided to meet the conditions shown on the drawings with a minimum of three anchors per jamb. Doors and frames shall be factory precut and reinforced for hardware.

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Solid Core Wood Doors shall be the blind core DFC-1 as manufactured by Weyerhaeuser Wood Doors or approved equal. Veneer shall be Good Grade Natural Birch. Doors shall be factory primed and sealed. Doors to be factory reinforced for hardware.

INSTALLATION:

Installation shall be in accordance with each of the manufacturer's printed instructions and as detailed on the drawings.

END SECTION 8A

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SECTION 8B- METAL WINDOWS

SCOPE: Furnish all labor, equipment and materials to complete all metal windows as shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all necessary accessory pieces whether or not shown on the drawings or herein specified.

MATERIALS: Aluminum windows shall be InsulWAL series 3000 A-2 high performance single-hung tilt window as manufactured by Acorn Building Components Inc. or other approved equal. The aluminum finish shall be painted with electro-static bronze baked-on enamel paint finish. Windows shall be provided with screens. Glazing shall be standard glazing 1/2" thick, sealed, insulated glass.

INSTALLATION: shall be in accordance with the manufacturer's printed instructions and as detailed on the drawings.

END SECTION 8B

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SECTION 8C--HARDWARE

SCOPE: Furnish all labor, equipment and materials to complete all hardware shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all necessary accessory pieces whether or not shown on the drawings or specified herein.

MATERIALS:

Door Locks and Latch Sets shall be as manufactured by Schlage Lock Company or approved equal. Locks and Latches shall be Series A orbit design.

HINGES shall be as manufactured by Stanley or approved equal. Hinges shall be ball bearing and bronze. Hinges shall be five knuckle design and full mortise.

Fl-Folding Door Hardware shall be model # 2916 as manufactured by Stanley or approved equal. Hardware shall include all the necessary hinges and rollers required to allow the doors to operate properly.

Weather Stripping shall be as manufactured by National Guard Products Inc. or approved equal.

1. Thresholds shall be bronze and the type required to provide a weather-tight seal in the specific application involved. Thresholds shall have a thermal barrier with vinyl insert. Thresholds shall be set in a full bed of caulking.

2. Head and Jamb Seals shall be bronzed aluminum with neoprene inserts.

Cabinet Hardware shall be as manufactured by Grant or other approved equal. Cabinet drawers shall have drawer guides utilizing ball-bearings. Door fronts and drawer fronts shall have pulls. Door front to have magnet catch and two brass hinges designed for their specific door detail.

Door Closer shall be Series 1600 SS as manufactured by Norton or other approved equal.

INSTALLATION:

Installation shall be accordance with each of the manufacturer's printed instructions and as detailed on the drawings.

END SECTION 8C

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SECTION 8D- GLASS AND GLAZING

SCOPE: Furnish all labor, equipment and materials to complete all glass and glazing shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all necessary accessory pieces whether or not shown on the drawings or specified herein.

MATERIALS:

All glass shall be as manufactured by Libby Owens Ford Co. or other approved manufacturer's similar products.

Mirrors shall be 1/2" thick, float-plate glass, electrolytically clad in copper.

INSTALLATION: shall be using stainless-steel clips. All cracked, broken or otherwise damaged mirrors shall be removed and replaced to the satisfaction of the architect.

END SECTION 8D

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SECTION 9A--LATH AND PLASTER

SCOPE: furnish all labor, equipment and materials to complete all lath and plaster shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all necessary accessory pieces whether or not shown on the drawings or specified herein.

MATERIALS:

Shall be manufactured by United States Gypsum or approved equal.

Metal Lath shall be manufactured from galvanized steel and shall be USGJr.-diamond mesh.

Accessories: Accessories, expansion joints and trim shall be vinyl.

Stucco shall be Portland Cement Line Plaster. Finish coat shall be Oriental exterior finish stucco. Texture to match the pre-cast wall panels.

INSTALLATION:

Installation shall be in accordance with the manufacturer's instructions or a specific application and to the thickness shown on the drawings.

END SECTION 9A

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SECTION 9B- GYPSUM DRYWALL

SCOPE: furnish all labor, equipment and materials to complete all gypsum drywall shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all necessary accessory pieces whether or not shown on the drawings or specified herein.

MATERIALS:

GYPSUM DRYWALL: shall be 1/2" thick Sheet-Rock brand panels as manufactured by The United States Gypsum Drywall Co. or other approved equal.

FIRERATED GYPSUM DRYWALL: shall be 5/8" thick Sheetrock brand fire code C panels as manufactured by the United States Gypsum Co. or other approved equal.

JOINT COMPOUND AND TAPE: shall be as manufactured by the United States Gypsum Co. or other approved equal.

ACCESSORIES: corner beads and metal trim shall be galvanized.

INSTALLATION:

Gypsum drywall shall be nailed over wood studs and screw applied over metal studs. Installation shall be in accordance with the manufacturer's printed instructions.

END SECTION 9B

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SECTION 9C--PAINTING

SCOPE: Furnish all labor, equipment and materials to complete all painting shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all necessary accessory pieces whether or not shown on the drawings or specified herein.

MATERIALS:

PAINT shall be as manufactured by Fuller O'Brien Co. or other approved equal. Paint shall have a flame spread Rating of less than 200.

INTERIOR GYPSUM DRYWALL WALLS: (Except kitchens and baths)

- 1 Coat Latex Primer
- 2 Coats Latex Flat Wall Paint

INTERIOR GYPSUM DRYWALL WALLS: (Kitchens)

INTERIOR WOOD DOORS AND TRIM:

- 1 Coat Latex Primer
- 2 Coats Latex Semi-Gloss Enamel

INTERIOR GYPSUM DRYWALLS WALLS: (Baths)

INTERIOR WOOD DOORS AND TRIM: (Baths)

- 1 Coat Alkyd Primer
- 2 Coats Alkyd High-Gloss Enamel

INTERIOR EXPOSED CONCRETE BLOCK:

- 1 Coat Latex Primer
- 2 Coats Latex Flat Wall Paint

EXTERIOR CONCRETE CEILINGS:

- 1 Coat Latex Primer
- 2 Coats Latex Flat Wall Paint

INTERIOR APARTMENT CEILINGS:

- 1 Coat Primer
- Sprayed Acoustic Plaster

EXTERIOR STUCCO & EXTERIOR PRECAST CONCRETE WALL PANELS:

- 1 Coat Primer
- 2 Coats Sonneborn Hydrocide Super Color Coat
- Developing a minimum 20 MILS thickness.

EXTERIOR WOOD DOORS:

- 1 Coat Latex Primer
- 2 Coats Latex Semi-Gloss Enamel

EXTERIOR WOOD SIDING:

- 2 Coats Olympic Stain

APPLICATION: Shall be in strict accordance with the manufacturer's printed instructions.

END SECTION 9C

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SECTION 9D- RESILIENT FLOORING

SCOPE: Furnish all labor, equipment and materials to complete all resilient flooring shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all necessary accessory pieces whether or not they are shown on the drawings or specified herein.

MATERIALS:

SHEET VINYL FLOORING: shall be Premiere Sun Dial Solarium as manufactured by Armstrong Cork Co. or other approved equal. Flooring shall have a flame spread rating of less than 200.

ADHESIVE: shall be of the type recommended by the Sheet Vinyl Flooring for the specific use shown on the drawings.

PRIMER: shall be of the type recommended by the sheet vinyl manufacturer.

APPLICATION:

The concrete floors shall be primed prior to the application of the adhesive. The sheet vinyl flooring shall be installed according to the manufacturer's printed instructions.

END SECTION 9D

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SECTION 9E--CARPET

SCOPE: Furnish all labor, equipment and materials to complete all carpeting shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all necessary accessory pieces whether or not shown on the drawings or specified herein.

MATERIALS:

CARPET shall be 100% nylon, jute back, short shag, flame spread rating of less than 200.

PAD shall be 1/2" thick, reconstituted foam rubber, flame spread rating of less than 200.

ACCESSORIES: Carpet edge strips and other accessories shall be vinyl.

SPLICING TAPE shall be heat-resistant.

TACK STRIPS shall be as recommended by the manufacturer of the carpet.

CARPET ALLOWANCE:

Carpet allowance shall be \$12.00 per square yard for the purchase of the carpet and pad. Installation and accessories are not included in the allowance.

INSTALLATION:

Installation shall be in strict accordance with the manufacturer's written instructions.

END SECTION 9E

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SECTION 10A-ACCESSORIES AND SPECIALTIES

SCOPE: Furnish all labor, equipment and materials to complete all work required by the following specialties and as shown on the drawings. It is the intent of these specifications to provide a complete job including all accessories whether or not shown on the drawings or specified herein.

MATERIALS:

SIGNS: Apartment number and equipment room name signs shall be series EC with 1" letters on a 2" plate as manufactured by Best Signs System or other approved equal. Signs shall be mounted with double-faced vinyl foam tape.

TOILET ACCESSORIES: Each bath shall have the following toilet accessories, Coronado surface-mounted chrome as manufactured by Nu-Tone Hallmark or other approved equal.

- 1 HM-620 Soap Holder
- 1 HM-630 Toothbrush and Tumbler Holder
- 1 HM-670 Paper Holder
- 2-HM-695 Towel Bar 30" Long
- 1 HM-FS-470 Medicine Cabinet
- 1 HM-383 Shower Curtain Rod

CLOSET SPECIALTIES shall be as manufactured by Finishing Touch, 393 East Eleventh Avenue, Hialeah, Florida 33013, or other approved equal. Installation shall include all necessary accessories, wall brackets, and supports to make a complete job.

POSTAL SPECIALTIES: Mailboxes shall be as manufactured by Bommer or other approved equal. Model No. 6210-44, units shall be 4 high, 45 total boxes with 3 postal locks. Finish shall be 383 Dark Bronze Enamel. Locks shall be spring bolt type with 5 pin tumbler cylinders. Provide 3 keys per lock. Doors to have Room Numbers engraved into the face. Directory shall be 6900 Series Top Mounted.

FIRE HOSE CABINETS shall be Model HC 2434 RK 1- $\frac{1}{4}$ " with a 2.5-75 RSSF Hose Unit as manufactured by Larsens's Manufacturing Co. or approved equal. Door shall be Solid Bronze Anodized Aluminum to match Railings and Roofing. Siamese connection shall be No. 166.

INSTALLATION:

Installation shall be in accordance with the manufacturer's printed instructions.

END SECTION 10A

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SECTION 11- EQUIPMENT

SCOPE: Furnish all labor, equipment and materials to complete all work required by the following items and as shown on the drawings. It is the intent of these specifications to provide a complete job including all accessories whether or not they are shown on the drawings or specified herein.

MATERIALS:

KITCHEN EQUIPMENT: Kitchen equipment shall be as manufactured by General Electric or other approved equal. Colors shall be selected from the standard General Electric color selection.

- A. Range- model JMS-07
- B. Hood- model MN-330 non-vented 30"
- C. Dishwasher- Model GSD-551W Potscrubber
- D. Disposer- model GFC510 Disposall
- E. Washer- model WWP1150V
- F. Dryer- Model DDP1200V
- G. Washer & Dryer Mounting Rack- model WDR-4

TRASH COMPACTOR: model 520A container/packer as manufactured by International Dynetic Corp., 4 Taft Street, Norwalk, Connecticut, or other approved equal.

TRASH CHUTE: shall be 24" diameter, 16 gage aluminized steel by Midland Metalcraft Co., Joliet, Illinois, or other approved equal.

- A. Doors- shall be trash type V-H constructed of 20 gage 304 stainless-steel front, 18 gage 430 stainless-steel back and shall bear a 1½ hour U/B label.
- B. Outlet- shall be type D-HS horizontal Steel rolling door. Door is to be of solid-core-steel B label construction with fusible link.
- C. Roof Vent- shall be type G.
- D. Sprinklers- shall be as specified in Division 15 of these specifications.

INSTALLATION:

Installation shall be in accordance with the manufacturer's printed instructions including all necessary accessories.

END SECTION 11

SECTION 12A--WINDOW BLINDS

SCOPE: Furnish all labor, equipment and materials to complete all window blinds as shown on the drawings and/or herein specified. It is the intent of these specifications to provide a complete job including all accessories whether or not they are shown on the drawings or specified herein.

MATERIALS:

Window Blinds shall be Riviera as manufactured by Levolor or other approved equal. Blinds shall be Aluminum. Color to be one color selected from the manufacturer's Standard Colors. Blinds on doors shall have hold down clips. Blinds shall be installed recessed within the window jambs.

INSTALLATION:

Installation shall be in accordance with the manufacturer's printed instructions.

END SECTION 12A

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DIVISION 13
SPECIAL CONSTRUCTION

SWIMMING POOL:

- A. Scope: Furnish all labor, materials, equipment, plant and tools necessary to construct a complete swimming pool in a good and satisfactory operable condition as detailed and indicated on the drawings.
- B. Materials:
1. Pipe: All piping shown on the drawings shall be Schedule 40 rigid PVC pipe as manufactured by Thermoplastics, Inc., or approved equal. Face piping on the filter shall be bolted flange standard weight steel pipe.
 2. Valves: All valves shall be the same size as piping indicated on the drawings and shall be non-rising stem gate valves designed for a 60 psi working pressure except that valves on filter face piping may be butterfly valves as furnished by the filter manufacturer.
 3. Pool Equipment: Furnish and install all pool equipment called for in the schedule. Equipment as scheduled shall be a standard of quality required and any substitutions of this equipment will be only by written prior approval. (See previous conditions). All equipment furnished shall be complete with all necessary accessories such as wedge anchors, escutcheons, handles, motor starters, etc.
 4. Tile: All tile as detailed or called for on the drawings shall be glazed ceramic tile classed to be "Frostproof" by the manufacturer.
 5. Finish: All exposed surfaces of the pool shall be covered with MARBLELITE pool plaster or an approved equal.
 6. Gunite: All gunite shall be a mixture of at least 20% cement to sand, yield a 28 day strength of 3750 psi, and shall be applied with no less than 45 psi and no more than 75 psi pneumatic pressure.
 7. Concrete: At the option of the Contractor the flat floor slab may be poured concrete designed by a recognized testing laboratory to achieve a 28 day strength of 3000 psi in a plastic and workable mix.

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8. Reinforcing: All reinforcing steel shall conform to ASTM A-15 and shall be deformed in accordance with ASTM A-305 and shall be bent, lapped and placed in accordance with ACI standards and recommendations.

C. Installation:

1. Pipe: PVC pipe shall be installed in strict accordance with the manufacturers' recommendations. The Contractor shall install the piping system with a minimum of elbows, bends and tees.
2. Valves: Valves shall be bolted flange installed to the PVC pipe with a companion flange. All valves installed in the deck area shall be installed in a cast iron deck box complete with cover to finish flush with the deck.
3. Pool Equipment: All pool equipment shall be installed in accordance with the recommendations of the equipment manufacturer and such installation shall conform to the recommendation of the:
 - a. National Sanitation Foundation.
 - b. National Swimming Pool Institute.
 - c. Baldwin County Board of Health.
 - d. National Electric Code.
4. Tile: All swimming pool tile governed by this section of the specifications shall be installed in accordance with the specifications on tile and shall be installed true to line and grade as indicated on the drawings.
5. Finish: All exposed surfaces of the pool shall be cleaned and free of all deleterious material and shall receive a coat of "Marblelite" of a minimum of 3/8" thickness.
6. Guniting: The pneumatic concrete shall be applied by personnel experienced in this field in such a manner to avoid cold joints, feathering and stoppage. The guniting concrete shall be applied evenly and smoothly and all rebound shall be taken to waste.
7. General: The installation of all piping, equipment and materials shall be in accordance with the highest standards commensurate in the industry.

- D. Qualifications: The Contractor responsible for the installation of this swimming pool facility shall be

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licensed in the local city and the State of Alabama to perform work in this field and shall have had at least five (5) years experience in such and be capable of showing proof of building at least five (5) pools of this size and consequence.

- E. Warranty: The Contractor shall guarantee the swimming pool for one (1) full year and during this period he shall furnish all labor and materials necessary to repair or replace any faulty workmanship or equipment.

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SECTION 14A--CONVEYING SYSTEMS

SCOPE: Furnish all labor, equipment and materials to complete all work required by the following elevator systems and as shown on the drawings. It is the intent of these specifications to provide a complete job including all accessories whether or not they are shown on the drawings or specified herein.

MATERIALS:

Elevator shall be Model No. SPF 25/35 Standard pre-manufactured, traction, passenger elevator as manufactured by Dover Elevator Co. or other approved equal.

INSTALLATION:

Installation shall be in strict conformance with the manufacturer's printed instructions to meet all local and state codes.

END SECTION 14A

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DIVISION 15 - MECHANICAL

SECTION 1500
GENERAL REQUIREMENTS

SUPPLEMENTARY CONDITIONS, DIVISION 1, AND APPLICABLE RELATED DOCUMENTS SHALL GOVERN THE CONDUCT AND QUALITY OF WORK REQUIRED BY THIS DIVISION OF SPECIFICATIONS.

SCOPE: This Section describes the General Requirements for materials, systems, equipment and installation applicable to all work under Division 15.

SHOP DRAWINGS:

- A. Prepare shop drawing submittals for all items of equipment and material specified in other sections of this Division, per Supplementary General Conditions and the following requirements:
1. Identify each item by manufacturer, brand and trade name, number, size, rating and whatever other data necessary to properly identify and check materials and equipment. The words "as specified" will not be considered sufficient identification.
 2. Each submitted item shall refer to specification section and paragraph in which the item is specified.
 3. Accessories, controls, finish, etc., not submitted or identified with submitted equipment shall be furnished and installed as specified.
 4. Submittal shall be all-inclusive with all items being submitted at the same time; individual submittals will not be accepted.
 5. Place orders for all equipment in time to prevent any delay in construction schedule or completion of project. If any materials or equipment are not ordered in time, additional charges made by equipment manufacturers to complete their equipment in time to meet construction schedule, together with any special handling charges, shall be borne by the Contractor.

AS-BUILTS: Submit as-built drawings per General Requirements.

GUARANTEES: Submit all guarantees for equipment per General Conditions and General Requirements.

EXAMINATION OF SITE: The Contractor shall thoroughly ex-

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amine site and satisfy himself as to the conditions under which the work is to be performed. The Contractor shall verify, at the site, all measurements affecting his work and shall be responsible for the correctness of same. No extra compensation will be allowed to the Contractor for the expenses due to his neglect to examine or failure to discover conditions which affect his work. No extra compensation will be allowed on account of difference between actual dimensions and those indicated on the drawings.

RULES AND REGULATIONS:

- A. All work and materials shall be in full accordance with Federal, State and local rules and regulations, State Fire Marshal Regulations, The Southern Plumbing Code, Standards of the National Fire Protection Association, Rules of the Florida State Board of Education, Chapter 6A-2, Educational Facilities, Alabama State Department of Insurance and all other applicable laws, codes or regulations. Nothing in these plans or specifications shall be construed to permit work not conforming to these codes.
- B. Furnish, without charge, any additional material and labor when and where required to comply with these rules and regulations, though the work is not mentioned in specifications or shown on drawings. When specifications or drawings call for, or describe, materials or construction of a better quality or larger sizes than required by the above mentioned rules and regulations, the provisions of these specifications and accompanying drawings shall take precedence.

FEES AND PERMITS: Provide, procure and pay for all permits, licenses, certificates, inspections, etc., required to carry and complete the work.

COORDINATION AND APPROVALS:

- A. Before beginning sleeving or any installation work, carefully study all contract drawings and check any piping, ductwork and equipment location for interference with other trades. If conflicts are discovered in drawings or as work progresses, a set of prints marked with RED PENCIL showing recommended installation methods shall be submitted to Architect for approval prior to installation of work in question.
- B. No additional costs to the contract will be considered for work which must be relocated due to conflicts between work of different sections.

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INSPECTION:

- A. Do not allow any work to be covered up or enclosed until inspected, tested and approved by Architect or other authorities having jurisdiction over the work.
- B. Should any work be enclosed or covered up before such inspection and test, the Contractor shall, at his own expense, uncover the work and after it has been inspected, tested and approved, make all repairs as necessary to restore all work disturbed by him to its original and proper condition.

DELIVERY AND STORAGE:

- A. Deliver materials in ample quantities from time to time as necessary for uninterrupted progress of the work. Store so as to cause the least obstruction to the premises and distribute to prevent overloading to any portion of structure.
- B. Provide all temporary storage and shop areas that are required at site for safe and proper storage of materials, tools, and other items used in the performance of this work. Construct only in approved locations and do not interfere with work of any other trades.
- C. Protect materials and equipment furnished under this section, either stored or installed, until final acceptance of the project as a whole.

DEFINITION OF 'PIPING': The term "piping" as used in these specifications or on drawings means all pipe, fittings, nipples, valves, unions, etc., as required for complete and functional systems.

DRAWINGS:

- A. Install work as indicated on drawings; however, changes to accommodate installation of work with other work or to meet Architectural or Structural conditions shall be made without additional cost to the Owner.
- B. For purposes of clarity and legibility, drawings are essentially diagrammatic to the extent that many offsets, bonds, unions, special fittings and exact locations are not indicated. Make use of all data in all contract documents and verify information at the site.

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- C. All dimensions and locations of equipment, doors, partitions, fixtures, grilles, etc., are to be taken from the plans, but shall be verified at the work.

FABRICATION:

- A. All materials and equipment shall be new and the best of their respective grades, free from all defects and of make, brand or quality herein specified or as accepted by the Architect.
- B. All materials and equipment shall be identified by manufacturer's name or nameplate data. Unidentified materials or equipment shall be removed from the site.
- C. Equipment specified by manufacturer's number shall include all accessories, controls, etc., listed in the catalog as standard with the equipment. Optional or additional accessories shall be furnished as specified.
- D. Where no specific make of material or equipment is mentioned, any first class product of a reputable manufacturer may be used, provided it conforms to the requirements of the system and meets with approval of the Architect.
- E. Equipment and materials damaged during transportation, installation and operation shall be considered as "totally damaged" and shall be replaced with new. Any variance from this clause shall be made only with written approval of the Architect.

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INTERRUPTION OF SERVICES: Interruption of any existing services shall be kept to a minimum. Shutdowns shall be made only with approval of and at times designated by the Owner. Contractor shall include overtime work cost in his bid for this work.

TEMPORARY SERVICES: Provide temporary services when any existing services are interrupted in connection with work of this section beyond the period of time acceptable and approved the Owner.

ELECTRICAL WORK: Motors, electrical apparatus and wiring specified in this section shall conform to the National Electrical Manufacturers' Standards and the National Electric Code and bear the Underwriters' label of approval.

CONCRETE WORK: Per Division 3.

SLEEVES, CHASES, CONCRETE INSERTS, ETC.:

- A. Place any sleeves, chases, concrete inserts, anchor bolts, etc., before concrete is poured, and be responsible for correct location and installation of these items.
- B. Sleeves and chases are prohibited in any structural member, except where approved by the Architect in writing.

CUTTING AND PATCHING: Do all sleeving, cutting and patching of rough construction for piping. All cutting, re-pairing and required structural reinforcing for installation of this work shall be done in conformance with Architect's directions and any damage caused by cutting shall be repaired equal to original conditions. No cutting without the Architect's approval.

DAMAGE BY LEAKS, ETC.: Be responsible for all damage to any part of the premises or work of other Contractors caused by leaks or breaks in piping or equipment furnished or installed under this section during construction and guarantee period.

CLEANING AND CLOSING: Inspect all piping and equipment before placing and clean before closing. All piping and ductwork shall be closed at end of each day.

INSTALLATION:

- A. Location: Location of equipment, piping and ductwork indicated on drawings is approximate and shall be changed to meet Architectural and Structural conditions as required.
- B. Equipment: All equipment shall be accurately set and leveled. Supports shall be neatly placed and properly fastened. All equipment shall be fastened in place with bolts. No allowance of any kind will be made for negligence on the part of the Contractor to foresee means of bringing in and installing equipment into position inside structure.
- C. Manufacturer's Direction: Manufacturer's directions shall be followed in all cases where manufacturers of articles used furnishes directions covering points not specified or shown on drawings.
- D. Furring and Pipe Spaces: Spaces provided in the design of the structure shall be utilized and the work shall be kept within furring lines established on drawings.

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E. Installation of Piping:

1. Pipe shall be cut accurately to measurements established by the Contractor at or in the building and shall be worked into place without springing or forcing.
2. Proper provisions shall be made for expansion and contraction of all piping.
3. All pipe lines shall be installed free from traps and air pockets, and true to line and grade.

EXCAVATION: Per Section 2 and as follows:

- A. Trenches: Dig straight and true to line and grade, bottom smoothed of any rock points. Where rock is encountered, excavate 3" below grade of pipe and fill with sand properly packed. Pipe shall be supported for entire length on undisturbed original earth or packed sand. Bottom of trenches shall be shaped or packed for pipe fittings, hubs and couplings, using templates to fit the outside periphery of the lower third of piping.
- B. Shoring: All necessary shoring, sheeting and pumping shall be part of work of this section.
- C. Trees: When it is necessary to excavate adjacent to existing trees, Contractor shall use all possible care to avoid injury to trees and roots. Where a ditching machine is run close to trees having roots smaller than two inches (2") in diameter, wall of trench adjacent to trees shall be hand trimmed making clean cuts through roots. All cuts through roots one-half inch (1/2") and larger diameter shall be painted with "Tree Seal" or equal. Trenches adjacent to trees shall be filled within twenty-four (24) hours after excavation, but where this is not possible, the side of trench adjacent to tree shall be kept shaded with burlap or canvas. Stockpiling of earth or building materials within the drip line of trees is prohibited. Where any roots two inches (2") and larger are encountered, hand tunnel under root and protect it by burlap wrapping.
- D. Backfill: Per Section 2 and as follows:
 1. After piping has been installed, tested and approved, all excavations shall be backfilled, tamped and compacted by compressed air tampers.

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2. Backfill to six inches (6") above crown of pipe shall consist of unwashed sand, with remainder of trench backfilled and mechanically tamped in 6" maximum layers of selected excavated material (free of organic matter, rocks, etc.).
3. In any paved area, backfill shall be made only to subgrade level.
4. Any roads, sidewalks, curbs and the like broken up in the process of construction shall be restored to original condition.

CLEANING, TESTING AND ADJUSTING:

- A. Furnish all labor and test equipment and disconnect from the system any installed equipment that can be damaged by pressure.
- B. Thoroughly clean all equipment, piping, and ducts, free from rust, scale, filings, plaster, etc., before and after covering and painting is done or systems are put in operation.
- C. Equipment and piping shall be cleaned and purged before each test.
- D. The various systems shall be tested in sections as work progresses. However, any system previously tested shall become part of any repeated test.
- E. Leaks shall be repaired by remaking with new material. No makeshift leak stopping methods are acceptable.
- F. Should any piece of equipment or material fail any of tests, immediately remove and replace with new; the system shall again be tested.
- G. All test pressures shall be maintained for the periods stated or as directed without loss in pressure except that due to change in temperature and atmospheric pressure during test.
- H. All tests shall be in accordance with requirements and under supervision of authorities having jurisdiction.

EQUIPMENT BROCHURES, MAINTENANCE INSTRUCTIONS, ETC.: At completion of the project, the Contractor shall furnish two

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bound sets of documents containing complete maintenance instructions, parts list, operating instructions, control wiring diagrams and descriptions for all plumbing and mechanical fixtures and equipment installed in the project. The submission of these brochures shall be a precedent to final payment.

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SECTION 1501
PLUMBING

GENERAL PROVISIONS:

- A. Furnish all labor, material and equipment necessary to complete all plumbing systems as indicated on the drawings and specified herein.
- B. The items of work to be performed shall include, but are not limited to:
 - 1. Sanitary waste and venting system.
 - 2. Domestic hot and cold water systems.
- C. Related work specified elsewhere:
 - 1. Electrical - Division 16.

CODES:

- A. Southern Standard Plumbing Codes.
- B. National Plumbing Codes.
- C. All local Plumbing Codes.

PIPES AND PIPE FITTINGS: Materials shall be new and shall conform to the standard specifications as follows:

- A. Pipe fittings shall conform to the following:
 - 1. Cast Iron Drainage Fittings... ASTM A74-72 and Commercial Standard CS 188-59. Pipe and fittings shall be labeled with the "CI" mark of quality and performance which indicates that they conform to this standard or they shall be approved equal.
 - 2. Cast Iron Drainage Fittings... ASTM A74-72.
 - 3. Malleable Iron Screwed Fittings... ANSI B16.3 (1971).
 - 4. Steel Pipe... ASTM A120-69.
 - 5. Copper Tubing... ASTM Spec. B88.
 - 6. Solder Joint Fittings... American Standard B16.22.
 - 7. Cast Iron Screwed Fittings... ANSI B16.12 (1971).

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8. Bronze Fittings... ANSI B16.15 (1971).
9. PVC Drain Pipe... ASTM D2665-73.
- B. Underground soil, waste and drainage piping within the building and to five feet (5') outside the building shall be service weight cast iron soil piping and fittings.
- C. Above ground soil, waste and vent piping and interior leaders shall be:
1. Service weight cast iron pipe and fittings, for pipe larger than 1-1/2", or NSF approved PVC.
 2. Standard weight galvanized steel pipe with cast drain drainage fitting for pipe serving as lavatory or sink arms, for pipe smaller than two inches (2").
- D. Underground and under concrete slab-on ground water piping shall be:
1. Type "L" copper tubing without joints or fittings under slab. Joints outside of building shall be of the sweat type, using high temperature solder.
- E. Above ground hot and cold water piping shall be:
1. Type "L" copper tubing with wrought copper fittings. Joints shall be of the sweat type, using high temperature solder. Threaded pipe nipples, fittings and adapters shall be hard copper, brass or bronze.
- F. Threads for screwed fittings shall be American National taper pipe thread conforming to Fed. Spec. GGG-P-351a.
- G. Unions:
1. Insulating unions shall be installed between copper water lines and water heaters. The unions shall be equal to Capitol or Epco, sweat copper to threaded brass with iron pipe threads.
 2. For copper and brass piping: All unions two inches (2") and smaller shall be 125 lbs. brass ground-joint type.
- H. Gaskets:
1. For fixture outlets to floor flanges: Gaskets shall be soft asbestos with graphited finish conforming to Fed. Spec. HH-G-116.
- I. Jointing Compounds:

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1. Threaded and flanged jointing compounds shall be made up of pipe cement and oil or graphite and oil.
2. Fixtures setting compound shall conform to Fed. Spec. HH-C-536a.
3. Hot poured jointing compound shall conform to Fed. Spec. SS-C-608.

J. Lead:

1. Caulking lead shall conform to Fed. Spec. QQ-L-156.
2. Sheet lead shall weigh not less than 4 lbs. per sq. ft. and shall conform to Fed. Spec. QQ-L-201a.

K. Packing for hub and spigot joints shall be twisted jute conforming to Fed. Spec. HH-P-117, or hemp conforming to Fed. Spec. HH-P-106c.

L. Cleanouts shall conform to Fed. Spec. WW-P-401.

M. Nipples shall be of the same material as the pipe with which they are installed. Nipples shall conform to Fed. Spec. WW-N-351.

N. Caulking Ferrules shall be red-brass pipe conforming to Fed. Spec. WW-P-351.

O. Soldering nipples and bushings shall be standard red-brass pipe conforming to Fed. Spec. WW-P-351.

P. Solder for copper water pipe shall be composition SB-5, 95% tin, 5% antimony conforming to Fed. Spec. QQ-S-571b. Solder composition for wiped joints shall be 60% soft lead and 40% tin. Flux for copper water pipe joints shall conform to Fed. Spec. O-F-506.

Q. Coal tar enamel shall conform to American Water Works Assoc. Standard C-204.

VALVES:

A. Valves 3/4" and smaller shall be globe valves; larger sizes shall be solid wedge type gate valves. Valves 2" and smaller shall be brass or bronze. All valves shall be 125 lb. type that can be repacked under pressure when wide open. Bronze globe valves shall conform to Fed. Spec. WW-V-51a.

B. Wall hydrants shall be scheduled on Drawings.

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PIPING SPECIALTIES:

- A. Sleeves shall be installed around all piping passing through masonry foundations, walks, slabs, partitions, or other building constructions. Sleeves placed horizontally shall be standard weight pipe one (1) size larger than the pipe passing through the sleeve; those placed vertically shall be 26 gauge galvanized sheet steel flared and railed to the form. Sleeves passing through exterior walls shall be made watertight with caulking compound. Sleeves for copper tubing shall be made of PVC, Polyethylene or Foam Plastic.
- B. Escutcheons shall be installed around all exposed pipe passing through a finished floor, wall or ceiling. Escutcheons shall be of sufficient outside diameter to cover the sleeve opening, and shall fit snugly around the pipe.
- C. Flashing: Pipes extending through the roofs and all roof drains shall be flashed watertight. Flashing shall be sheet lead or sheet copper extending not less than eight inches (8") around the pipe and terminated by being turned down into the top of the pipe as a cap, or by caulking into a hub.
- D. Fixture traps shall be installed on every plumbing fixture except those having integral traps. A combination fixture need have only one (1) trap.
- E. Type of fixture trap shall be water-seal, self-cleaning "P". Full "S" traps or trap standards shall be used for service sinks only. Trap water-seals shall not be less than two inches (2") and not more than four inches (4"). Each trap, except integral traps or those that are readily removable, shall have an accessible brass cleanout of ample size, protected by the water-seal.
- F. The nominal size of each fixture shall be the same as the fixture drain to which it is connected. The size of the fixture drain for fixtures with integral traps shall not be smaller than the fixture outlet. In any case, the minimum size of the trap and fixture drain shall be not less than the following:
- | | |
|------------------------|--------------|
| Floor Drain | 3 inches |
| Water Closets | 3 inches |
| Lavatory | 1-1/4 inches |
| Electric Water Coolers | 1-1/4 inches |
| Sink | 1-1/2 inches |
- G. Cleanouts shall be installed in easily accessible locations, and at each change in direction of the building drain greater than 45°. The distance between cleanouts

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in horizontal soil lines shall not exceed seventy-five feet (75'). Cleanouts shall be of the same nominal size as the piping with which they are installed up to four inches (4") in size for larger piping. Where cleanouts occur in finished walls, provide chrome plated Wade W-8480R cleanout covers.

MECHANICAL SUPPORTING DEVICES:

- A. Hangers shall support the piping from the building structure to maintain the required grade of pitch of the pipe lines, prevent vibration, secure the piping in place, and provide for expansion and contraction. Hangers shall be secured to inserts wherever practical. Hangers for copper pipe shall be copper or copper plated.
- B. Hanger Spacing:
 - 1. Cast iron soil pipe supports shall be spaced not more than five foot (5') intervals.
 - 2. Steel pipe supports shall be spaced not more than twelve foot (12') intervals.
 - 3. Copper tubing supports shall be spaced at not more than six foot (6') intervals. Hangers shall be copper or copper plated.
- C. Vertical piping shall be supported at its base by a hanger placed in the horizontal line near the riser, or by a base fitting set on a pedestal or foundation.
- D. Approved bolts and inserts shall be used for connecting hangers, supports, fixtures, or equipment to masonry; wood plugs shall not be used.

INSULATION:

- A. Hot water supply shall be insulated when located in the following spaces:
 - 1. All interior piping.
- B. Metal bands securing the pipe covering in place shall be placed not more than eighteen inches (18") on center and at all fittings.
- C. Fittings of all insulated piping shall be covered with asbestos cement to the same thickness as the adjacent pipe covering and jacketed with cotton sheeting in this same manner.

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- D. Above ground hot and cold water piping insulation shall be 1/2" thick glass fiber thermal molded pipe covering with universal jacket conforming to Fed. Spec. HH-1-552.

WATER SUPPLY SYSTEMS:

- A. Water supply systems shall be run as indicated on the drawings, including mains, risers, supplies to fixtures, and all indicated equipment. All connections to risers or fixtures shall be from top of mains, and all piping shall be pitched at least one inch (1") in twenty-five feet (25') so that it can be drained completely at low points. Piping shall be pitched up toward risers and fixtures for proper air relief.

- B. Size of fixture supplies shall be indicated on the drawings, but shall be, in no case less than the following:

	<u>Cold Water</u>	<u>Hot Water</u>
Water Closet	1 Inch	---
Lavatory	1/2 Inch	1/2 Inch
Wall Hydrant	3/4 Inch	---
Drinking Fountain	1/2 Inch	---

- C. Stop valves shall be installed in an accessible location.
- D. Unions shall be installed at the connections to each side of equipment.
- E. Wall hydrants shall be installed approximately eighteen inches (18") above the grade, flush or recessed as indicated on drawings and at locations shown on the drawings.
- F. Soldered joints shall have the tube and fitting cleaned bright, fluxed with heat until the 95-5 solder is drawn in by capillarity and the connection is tight.
- G. Air chambers or waterhammer arresters shall be provided for all systems.
- H. A water pressure test shall be applied to all parts of the water supply systems before the piping is concealed or before the fixtures are connected. A hydrostatic pressure of not less than one hundred pounds (100#) per sq. inch shall be applied to the system, and there shall be no leaks at any point in the system at this pressure.

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DOMESTIC HOT WATER:

- A. The Contractor shall furnish and install the water heater as shown and scheduled on plans. This heater shall have a storage capacity and recovery rate as scheduled. The storage tank shall be of the glass lined type. The lining shall be factory fused to the tank shell.
- B. The water heater shall be complete with all A.G.A. required safety devices including ASME Safety Relief Valve, Safety Pilot, Gas Pressure Regulator and Manual cut-off valve and thermostatic controlled gas valve.
- C. Pop drain from safety relief valve will be piped to approved drain.

DRAINAGE AND VENT LINES: The drainage and vent piping shown shall be installed as indicated on the drawings; vents shall extend through the roof. Piping shall be assembled and installed without undue strains or stresses, and provisions shall be made for expansion, contraction, and structural settlement. No structural member shall be weakened or impaired by cutting or notching unless adequate provisions are made with the approval of the Architect for carrying the structural load.

- A. Horizontal drainage piping shall be installed in practical alignment at the grade shown on the drawings, but in no case less than a uniform grade of 1/4 inch per foot for three inches (3") pipe and smaller, not less than 1/8 inch per foot for four inches (4") pipe.
- B. Vents from any fixture or line of fixture, when connected to a vent line serving other fixtures, shall be extended at least six inches (6") above the floor level rim of the highest of such fixtures to prevent use of the vent lines as a waste. No vent terminal shall be directly beneath any door, window, or other ventilating opening of the building or an adjacent building, nor shall any vent terminal be within twelve feet (12') horizontally of such an opening unless it is at least three feet (3') above the top of the opening. Extensions of vent pipes through a roof shall be terminated not less than twelve inches (12") above the roof, unless otherwise indicated on the drawings.
- C. Changes in direction in drainage piping shall be made by the appropriate use of 45° wyes, half-wyes, or long sweep quarter, sixth, eighth or sixteenth bends. Sanitary tees or short quarter bends may be used on vertical stacks or drainage lines where the change in the direction of flow is from the horizontal to the vertical except that long-turn TYS shall be used when two fixtures are installed back to back and have a common drain. Straight tees, elbows, and

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crosses may be used on vent lines. No change in direction of flow greater than 90° shall be made. When different lines of drainage pipes and fittings are to be connected, standard increases and reducers of proper size shall be used. Reduction of the size of drainage piping in the direction of flow is prohibited, except where the Plumbing Code permits the use of a three inch (3") by four inch (4") water closet connection.

- b. Drilling and tapping of house drains, soil, waste, or vent pipes, and the use of saddle hubs and bands are prohibited.
- c. Protection against breakage of piping passing under or through walls shall be provided by means of pipe sleeves (See Paragraph "PIPING SPECIALTIES", "Sleeves"). Pipe passing through or under cinders, cinder concrete, or other corrosive material shall be protected with a heavy coat of coal tar enamel.
- d. Cross connection or any fixtures, devices or construction which will permit backflow connections between a water distribution system and any part of the drainage system shall not be installed.

JOINTS AND CONNECTIONS: All piping shall be made permanently gas and watertight. Any fittings or connection which has an enlargement, chamber, or recess with a ledge or shoulder or reduction of the pipe area offers an obstruction to flow through the pipe shall not be installed.

- a. Caulked joints for cast iron soil pipe shall be firmly packed with oakum or hemp, and filled with molten lead not less than one inch (1") deep. Lead shall be run in one pouring and caulked tight. No paint, varnish, or other coating shall be permitted on the jointing material until after the joint has been tested and approved.
- b. Threaded joints shall be made with a lubricant on the male thread only. All burrs or cutting shall be removed and pipe shall be reamed or filled out to not less than the original diameter.
- c. Floor connections for water closet shall be made by means of an approved brass or iron flange, caulked, soldered or screwed into the drainage pipe. The connection shall be bolted, with an approved gasket or approved setting compound between the fixture base and the connection.
- d. Portland Cement Joints shall not be installed.

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- E. Wiped Joints for lead pipe and fittings or between lead piping and brass or copper piping and brass or copper pipes, ferrules, solder nipples or traps shall be full-wiped joints. Such joints shall have an exposed surface on each side of the joint not less than 3/4 inches wide and at least as thick as the material being jointed. Wall or floor flange wiped joints shall be made by using a lead ring or flange placed behind the joint at the wall or floor. Joints between lead and cast iron, wrought iron, or steel pipe shall be made by means of wiped joints to the caulking ferrule, soldering nipple, or bushing.
- F. Slip joints and unions shall be used only in the waste pipe between a trap seal and a fixture. Unions on the sewer side of the trap shall be ground faced and shall not be concealed or enclosed.
- G. Hot poured joints shall be provided between cast iron soil pipe and vitrified clay or concrete sewer pipe. The joint shall be made by caulking the joint opening with jute or hemp packing and then filling it with an approved hot jointing compound at one pouring.
- H. Excavation and Backfill: Trenches for underground piping shall be excavated to required depths with bell holes provided as necessary to insure uniform bearing. Excavation below the required grade of piping shall be refilled with sand and gravel firmly compacted. Where rock is encountered, it shall be excavated to a grade three inches (3") below the lower most part of the pipe and refilled as necessary to the pipe grade as specified. The trench shall be sheathed, braced, pumped, or bailed as necessary to fully protect workmen and adjacent structures, and to permit proper execution of the work. After the piping has been installed, tested and approved, the trenches shall be backfilled to grade with approved material well tamped (not puddled) compactly in place in layers of not over six inches (6") thick. All underground piping shall be installed below the frost line, not less than two feet (2') below finished grade.
- I. Drainage system tests:
 - 1. A water test shall be applied to all parts of the drainage system, before the pipes are concealed or fixtures set in place. The test may be applied in section.
 - 2. All openings of each system to be tested shall be tightly closed except the highest opening above the roof, and the entire system shall be filled with water up to the overflow point of this highest opening.

3. All parts of the system shall be subject to not less than ten feet (10') of hydrostatic head except the uppermost ten feet (10') of the piping directly below the opening. The water shall remain in the system for not less than 15 minutes after which time no leaks at any joint of lowering of the water level at the overflow shall be visible.

PLUMBING FIXTURES:

- A. Plumbing fixtures shall be of the best quality as fabricated by a manufacturer of established reputation and shall be submitted for the approval of the Architect.
- B. All plumbing fixtures and plumbing brass trim shall be manufactured by the same manufacturer, except as may be noted under specific fixture specifications. Chromard plated supply pipes and traps may be products of other manufacturers, but must be of the best quality as specified and shall be equal to Heritage, Capri, or Constellation.
- C. All fixtures shall have the manufacturer's guaranty, label, or trademark indicating first quality. All acid resisting enameled ware shall bear the manufacturer's symbol signifying acid resisting material.
- D. Furnish and install all plumbing fixtures complete with all equipment, fittings, trimming, etc., as shown or specified and as approved.
- E. All exposed metal parts of fixtures shall have chromium plated finish. All trim and component metal parts shall be "all brass".
- F. All fixtures having hot or cold water shall have the cold water faucet on the left hand side of the fixture.
- G. The Contractor is referred to the Architectural and Mechanical Drawings for the quantities of fixtures to be furnished under this section of the Specifications, which shall be deemed to include all plumbing fixtures shown of the type described hereinafter, complete with all necessary trimmings.
- H. Model numbers are given for the purpose of establishing minimum quality and not intended to limit competition.
- I. Fixtures and fittings shall conform to WW-P-541B and be equal to manufacturer's plate numbers scheduled on drawings.

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GENERAL NOTES: All exposed metal parts on each plumbing fixture shall be of chromard finished brass.

J. Protection during construction:

1. Plumbing fixtures and trim shall be protected against damage or injury due to building materials, acids, tools, equipment, or any cause incidental to construction.
 - a. The finished surface of each fixture shall be covered with paper or similar protection and the fixture encased in a wood box or crate.
 - b. Chromium-plated surfaces shall be covered with vaseline to protect their polish. All fixtures damaged by any cause and any trim with marred or scratched finish, shall be replaced at no cost to the Owner. The fixture protection shall be removed at the completion of construction.
2. All piping openings shall be closed with wood plugs or caps during construction. The plugs or caps shall be installed when the pipe is roughed-in and shall not be removed until final connection is made.

PRESSURE SYSTEM PUMP:

- A. Furnish and install, as shown on plans, a factory assembled duplex set-pressure system, Federal Pump Corporation Type SP-PR-FA.
- B. The unit shall include (2) close-coupled, bronze fitted, end suction centrifugal pumps, each rated as shown in the pump schedule. Pumps shall be of the back pull-out centerline discharge design with bronze shaft sleeve, enclosed bronze balanced impeller, and mechanical shaft seal with copper by-pass line back into the seal chamber. Pumps shall be close-coupled to standard JM-frame dripproof motors as detailed in the pump schedule.
- C. The unit shall include (1) 2-1/2" control valve for each pump with cast iron housing, trim, and 125# flanged ends, factory adjusted to the set system pressure.

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- D. The unit shall include (1) pre-pressurized cushion-stop tank with flexible water storage chamber of the nominal capacity indicated in the pump schedule. The tank shall be rated for a maximum working pressure of 150 PSI, and shall be complete with a pressure relief valve and required check valves.
- E. The unit shall include (1) SP-PR-FA control panel in a NEMA-1 enclosure, including (2) magnetic starters, (2) HOA switches, (1) lead-lag manual transfer switch, (1) fused control circuit transformer, (1) lag pump holding circuit, adjustable from 0-30 minutes, (2) pump-run lights, (1) lag pump cut-in time delay, (1) lag pump control pressure switch, (1) cushion-stop control pressure switch with required time delay and (1) terminal strip. A fusible safety disconnect switch for each motor shall be factory mounted and wired on the unit.
- F. The entire unit shall be factory assembled on a single steel base and shall include galvanized steel suction and discharge headers with a pressure gauge for each header, a mechanical purge valve with temperature sensor, and a bronze gate valve on the suction and discharge of each pump.
- G. The lead pump shall operate continuously and its control valve shall maintain the set system pressure. As the building demand increases beyond the ability of the lead pump to satisfy it, the system pressure will drop, causing the lag pump to start. Both pumps will operate in parallel for a minimum of fifteen minutes or until the demand in the building drops sufficiently to allow the lead pump to satisfy it alone, at which time the lag pump will shut down. The lead and lag pumps can be manually alternated.
- H. If the building demand reaches a set low level, the cushion-stop pressure switch will shut off the lead pump, and the cushion-stop tank storage capacity will satisfy the small demand. When demand increases, the lead pump will be started, again supplying the building demand, and returning the cushion-stop tank to full storage capacity for use on the next low demand cycle.

PUMP SCHEDULE:

- A. Pumps: 180 GPM per pump.
120 Ft. TDH.
- B. Tank: 42 Gallons (Nominal Cap.)
- C. Motors: 10 H.P., 3450 RPM, 208/3/60

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SECTION 1502
HEATING, VENTILATING, AIR CONDITIONING

SCOPE:

- A. Mechanical work includes complete systems of heating, ventilating, air conditioning, exhaust and temperature control.
- B. Division 15 of the specifications generally describe these systems, but the scope of mechanical work includes all such work indicated in all of the contract documents - "Instructions to Bidders", "Proposal Form", "General Conditions", "Supplementary General Conditions", "Architectural, Structural, Mechanical and Electrical Drawings", "Specifications", and "Addenda."
- C. This Division requires the furnishing and installing of complete functioning systems and each element thereof as specified or indicated on drawings or reasonably inferred, including every article, device for accessory (whether or not specifically called for by item) reasonably necessary to facilitate each system's functioning as indicated by the design and the equipment specified. Elements of the work include materials, labor, supervision, supplies, equipment, transportation and utilities.

COORDINATION:

- A. The Contractor shall visit the site before submitting his bid and shall verify all dimensions and locations before purchasing components or commencing work.
- B. He shall maintain a Foreman on the job whenever necessary to coordinate his work with other Contractors and Sub-Contractors. He shall cooperate with all Contractors to avoid interference or delay.
- C. He shall refer to Architectural, Structural and Electrical Drawings to relevant equipment drawings and shop drawings to determine the extent of clear spaces. He shall make all offsets required to clear equipment, beams and other structural members and to facilitate concealing piping and ductwork in the manner contemplated in the design.

MEASUREMENTS AND LAYOUTS: The drawings are intended to cover the layout and design of the work and are not to be scaled for exact measurements. Where specific detail and dimension for me-

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chanical work as not shown on the drawings, the Mechanical Contractor shall take measurements and make layouts as required for the proper installation of the mechanical work in coordination with all other work on the project.

PERMITS AND LICENSES: All permits and licenses that are required by governing authorities for the performances of each Contractor's work shall be procured and paid for by that Contractor.

SHOP DRAWINGS AND MATERIAL LISTS:

- A. Contractor shall submit six (6) copies of material list and of each shop drawing within thirty days after award of the contract. If any shop drawing cannot be obtained within thirty days, he shall notify the Architect immediately upon receiving notice of that fact.
- B. Before submitting shop drawings and material lists, the Contractor shall verify that all equipment submitted is mutually compatible and suitable for the intended use. He shall verify that all equipment will fit the available space and allow ample room for maintenance. If the size of equipment furnished makes necessary any change in location, or configuration, the Contractor shall submit a shop drawing showing the proposed layout.
- C. All shop drawings prepared by manufacturers must be pre-checked by Contractor, must bear Contractor's stamp of approval and date, and must indicate specification paragraph under which submitted and the project name. Any submittals not so identified will be returned to the Contractor without action.
- D. The Architect's checking and subsequent approval of such drawings, schedules, literature or illustrations shall not relieve Contractor from responsibility for deviations from drawings or specifications unless he has, in writing, called the Architect's attention to such deviations at the time of submission, and secured his written approval, nor shall it relieve him from responsibility for errors in dimensions, details, size of members, or omissions of components or fittings, or for coordinating items with actual building conditions and adjacent work.
- E. Any corrections or modifications made by the Architect shall be deemed acceptable to Contractor at no change in price unless written notice is received by the Architect prior to

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the performance of any work incorporating such corrections or modifications.

- F. Shop drawings shall be submitted for temperature controls, all major components of the heating and air conditioning systems, fans, air units, filters, pumps and the like. Sheet metal shop drawings shall be 1/4" scale, on sepi.

CODES, LAWS AND STANDARDS:

- A. Contractor's performance, workmanship and material shall comply with all governing codes, State statutes, City ordinances, and regulations of regulatory bodies having jurisdiction.
- B. Without limiting the generality of the foregoing paragraph, the provisions of the following National Fire Codes shall be deemed applicable as contractual provisions:

70 - National Electrical Code

90A - Air Conditioning and Ventilating

These codes are incorporated herein by reference.

- C. A reference to a USA or ASTM Standard shall indicate that the article shall conform to that standard in all respects (including material, manufacture, handling, dimensions and test procedure).
- D. The Contractor shall comply with rules and regulations of public utilities and municipal departments affected by connections of service.
- E. Laws, codes, ordinances and regulations shall take precedence, excepting only where work called for by the drawings and specifications exceeds code requirements in quality and/or quantity. Contractor shall advise Architect, in writing, of any conflicts with laws, codes, ordinances and regulations.
- F. At final acceptance, the Contractor shall deliver to the Owner all warranties with terms extending beyond the one year guarantee period, each warranty instrument being addressed to the Owner and stating the commencement date and term.

MATERIAL AND MANUFACTURER: All material and equipment shall be of the best quality and design, shall be free from defects

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and imperfections, and shall have markings or a nameplate identifying the manufacturer and providing sufficient reference to establish quality, size and capacity. All material and equipment of the same type shall be made by the same manufacturer whenever that is practicable.

LABOR AND WORKMANSHIP: All labor for the installation of material and equipment furnished under the mechanical contract shall be done by experienced mechanics of the proper trade. All Workmanship shall be first class and in compliance with the specific requirements of drawings and specifications.

CONTRACTOR'S EQUIPMENT: All hoists, scaffolds, staging, runways, tools, machinery and equipment required for the performance of the mechanical work shall be furnished by the Mechanical Contractor.

SAFETY REGULATIONS: All mechanical work shall be performed in compliance with all applicable and governing safety regulations. All safety lights, guards and signs required for the performance of the mechanical work shall be provided by and operated by the Mechanical Contractor.

MOTORS AND MOTOR CONTROL EQUIPMENT:

- A. The Contractor shall furnish all electric motors, switches, relays, pushbuttons and other devices necessary for the proper operation and control of equipment furnished under this section.
- B. A motor starter shall be furnished with each motor. Except where manual starters are specified, magnetic starters shall be furnished. Starters shall be manufactured by Cutler-Hammer, G.E., Westinghouse or Allen-Bradley.
- C. Each magnetic starter shall, unless otherwise indicated, be combination type with a disconnect switch (non-fused if motor is individually protected at panel). Each magnetic starter shall have thermal overload protection on each phase, under-voltage protection, auxiliary contacts as required and H-O-A switch or start-stop pushbutton in cover. Heaters shall be selected at 100% to 115% of full load amps. Provide control transformer where needed.
- D. Where manual motor starters are specified, they shall be equipped with thermal overload devices, selected at 100-115% FLA.

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- E. Unless otherwise specified on the plans, each motor shall be manufactured by Century, G.E., Westinghouse, Louis Allis or Allis Chalmers. One-half horsepower and larger motors shall be three phase, 60 cycle, voltage to suit available system voltage; smaller motors shall be 120 volt, single phase.
- F. Unless otherwise specifically set forth, each motor (including the motor furnished as part of a specified unit of equipment) shall be continuous rated, open, ballbearing, squirrel cage induction, 40°C. ambient motor with Class B insulation, tested and constructed in accordance with current NEMA standards.
- G. The Mechanical Contractor shall furnish to the Electrical Contractor all motor starters, relays or other electrical control devices for installation. The Mechanical Contractor shall be responsible for any wiring, devices, electrical modifications, electrical controls etc. not included in the electrical section of the plans and/or specifications. The Mechanical Contractor shall furnish the Electrical Contractor complete and accurate wiring diagrams which describe the work to be performed on the mechanical equipment.

OPERATING AND SERVICE MANUALS:

- A. At the completion of the project, and at least 14 days in advance of request for final inspection, each Contractor shall provide four volumes of manuals containing the following:
1. Operating instruction for all major items of equipment including start-up and shut-down procedures.
 2. Service and lubrication instruction for each unit of equipment, including spare parts list indicating local source of supply.
 3. Wiring diagrams for all air conditioning equipment.
- B. Each complete set of manuals shall be bound in a three-ring, looseleaf, hardback binder.

START-UP AND ADJUSTMENTS:

- A. All equipment furnished and installed under this contract shall be adjusted to operate as intended by the specifications. All pumps, compressors and other equipment of similar nature shall be aligned with the motor couplings and

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frames drilled and doweled in place as directed. Grout in equipment bases as recommended by manufacturer of equipment. Align sheaves.

- B. All choke and regulating valves shall be adjusted so that the proper circulation of fluid will be established in each branch circuit as directed and required. After adjustment, settings shall be permanently marked.
- C. All bearings shall be aligned true and even so that there is no thumping, knocking, or noise present when the machinery is running at the rated capacity. Bearings that have dirt or foreign material in same shall be removed and replaced with new bearings, without additional cost to the Owner.
- D. Keep all motors and other equipment covered until directed otherwise by the Architect so as to keep same free from dirt, dust and moisture.
- E. Furnish all gauges, thermometers, instruments and miscellaneous equipment required to perform above specified tests and adjustments.
- F. Adjust flows of fluids in all systems.
- G. Balance and adjust the air systems with thermostats set appropriately.
- H. Test all safety devices.
- I. Make all necessary adjustments to control systems.
- J. Record all readings and file three (3) copies with the Architects.
- K. Operate and test the entire plant under load conditions for one week at the beginning of the first heating and cooling seasons, making all adjustments required or directed and giving instruction as described elsewhere.

NOISE AND VIBRATION: The Contractor shall be responsible for the installation of all equipment in such a manner as to control the transmission noise and vibration from any installed equipment or system. Contractor shall be responsible for the correction of any objectionable noise in any occupied area due to installed equipment systems.

PIPE SUPPORTS, SLEEVES, ESCUTCHEONS, ANCHORS AND INSERTS:

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- A. Horizontal runs of refrigerant piping shall be properly supported and isolated from building structure by use of a double thickness of 3/4" closed cell insulation, 8" long saddles and ring and bolt hanger. On roof of building piping shall be supported on 6x6 treated wood sleepers. Sleepers shall be secured to building structure and pipe secured to sleepers through use of an 8 inch length of double thick 3/4" closed cell insulation with metal protection sleeve, and clamps over assembly and secured to sleepers.
- B. Saddles and protection sleeves shall be min. 18 ga. double weight galvanized metal.
- C. Pipe shall be supported each five feet or fraction thereof.
- D. Vertical Risers - Vertical run of refrigerant lines shall be supported at every other floor level. Support method shall be as detailed. The bare refrigerant line shall be attached to the supporting member with pipe clamps properly sized, similar to Unistrut P11109B. The structural support shall be equal to Unistrut channel. The structural supporting member shall be bolted to 2 inch deflection spring isolator with neoprene rubber base similar to Kinetics Model FDS or Vibration Eliminator Company Model OSK properly sized for load. Submit load calculation and isolator sizing. After attachment to support, the uninsulated portion of vapor lines and related clamp shall be wrapped with several thicknesses of closed cell tape, or other approved tape, to prevent sweating.

TESTS: Piping shall be tested and proven tight at 250 psi test pressure with dry nitrogen in the presence of the Engineer. Test gauges shall be minimum 6" dial and shall be divided in 5 psi increments. Tests shall be held for a minimum of six hours with no loss in pressure.

SHEET METAL WORK:

- A. Work shall include all ducts, housings, air intakes, grilles, louvers, diffusers, registers, dampers and accessories, for air supply, return and exhaust systems as shown on the drawings.
- B. Except as otherwise shown or specified, duct construction, gauges, reinforcing and details shall conform with "Duct Manual and Sheet Metal Construction for Ventilating and Air

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Conditionings System, Section 1, Low Velocity System, Fifth Edition", published by Sheet Metal and Air Conditioning Contractors National Association, Inc. Additional reinforcing shall be installed where necessary to eliminate excessive movement and vibration. Housing connections to walls or floor shall be made airtight with angles and caulking. Transitions in ductwork shall be constructed with angles of change in size at no more than 15° unless otherwise approved. Ductwork and housing shall be airtight under all pressures that occur in the system. Do not crossbreak ductwork. Install turning vanes, splitters, extractors, etc. as noted on plans.

- C. Where necessary, ducts shall be punched or cut for installation of pipes and ceiling hangers except that where possible, a duct shall be offset or changed in size to another duct of equal equivalent round to clear pipes and construction whether shown on plans or not. Sheet metal screws shall be cadmium plated.
- D. Internally insulated supply and return ducts shall be lined with 1" thick, 3 lb. density duct liner complying with NFPA 90A flame spread under 25, and smoke developed under 50. Liner shall have a thermal conductivity of 0.24 at 75° mean temperature and an installed friction co-efficient of 0.02. Lining shall be smoothly and permanently bonded to the inside of duct using SMACNA'S suggest procedures, with adhesive and metal clips. Lining shall be Gustin-Bacon #300 Ultra-lite with black coating, or PPG equivalent.
- E. Supply and return ducts which are not lined shall be insulated with 2" thick 3/4 lb. density fiberglass blanket insulation with foil vapor barrier continuous through walls and ceiling openings and sleeves.
- F. Flexible duct connections shall be made with 15 ounce woven asbestos cloth or other approved non-combustible material approximately 6" in width, conforming to ASTM D 1571. Attachment to metal ducts shall be made with flanged connection to insure a solid connection at the point. No rigid connection of any utility will be allowed.
- G. Exhaust ducts shall be of metal construction and uninsulated.
- H. All low pressure metal supply duct, metal return duct and all exhaust duct shall conform to SMACNA'S standards for 2 inches pressure with seal Class B and constructed as

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detailed in SMACNA Publication 15D Low Pressure Duct Construction Standards, Fifth Edition, 1976. Sheet metal shall be galvanized sheet steel of lock forming quality, ASTM A-525.

- I. Fibre Glass Duct (where allowed as an option for low pressure supply and return duct) shall be constructed of 1 inch board equal to Owens-Corning Type 800FR. Fabrication, construction, installation, erection, reinforcing, supports, etc. shall in all respects conform to recommendations and standards contained in SMACNA'S publication entitled Fibrous Glass Duct Construction Standards, Fifth Edition, 1979 for 2" W.G. of pressure. Closure system used shall be listed and recommended by the manufacturer of the board used. This applies in particular to brands of pressure sensitive tapes.

GRILLES, REGISTERS AND DIFFUSERS:

- A. All registers and diffusers shall be selected for a maximum sound rating as indicated on plans and schedules, but not to exceed NC30. Sound rating shall be tested at power levels 10-13 watts, with 10db room reduction. All ceiling mounted devices shall be furnished in Off-White baked enamel, except where installed in ceiling to be painted, devices shall be primed for field painting. All ceiling units shall be compatible with the type of ceiling construction encountered. All duct work visible through grilles to be painted Black.
- B. Supply diffusers, return grilles and exhaust registers shall be equal to Tuttle & Bailey, Titus, Carnes, Anemostat, Metalaire or Millaire. Grilles specified on plans are used as base for performance requirements.

DAMPERS:

- A. Install fire and smoke dampers with UL fusible links and damper operators where shown on drawings, or required by 90A of NFPA. Dampers shall be UL labeled. Dampers shall be Ruskin LBD, or approved equal, with compressed blades occupying only 1" space for each 12" of damper height. All units shall be Type "B" (with retraced blades outside the air stream) except that Type "A" will be acceptable when there is no space available for the upper closure. Horizontally mounted units shall have stainless steel closure springs. Frame shall be galvanized steel and blades 18 gauge galvanized steel with 3" maximum blade width. Enlarge

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duct as required to accommodate damper. Fire dampers in smoke partitions shall be Ruskin FB90A-SM with motor operator actuated by smoke detectors and/or fire alarm system as indicated. Dampers shall have sleeve completely through wall with appropriate inspection and access door.

- B. Gravity actuated relief dampers shall be of the balanced multiblade type normally closed, noiseless with adjustable stop and felted edges, equal to Airstream FBD-12 or Ruskin CBS-3. Blades shall be made of 20 gauge galvanized steel, set in steel channel frames with brass bearings. Damper shall open on slight pressure and close on slight backdraft and shall be supplied with adjustable counterweight.
- C. Air balancing dampers shall be of type as indicated on plans. All dampers shall have levers with locking quadrants or other approved method of locking dampers. All damper rods shall be marked to show position of damper blade and be accessible for adjustment. Any device located above a non-removable finished ceiling shall have operator extended below finished ceiling and shall have appropriate cover (such as Young #315) installed.
- D. Access shall be provided at all fire and smoke seal dampers. Access shall be for inspection and resetting of such dampers. Access openings shall be as follows:
 - 1. Low pressure system - Rectangular duct with one side larger than 8 inches or round duct 8 inches and larger shall have factory fabricated insulated access door equal to Air Balance Inc. No. FSA 100. Doors shall be of adequate size and located to allow access to all working parts of damper.
 - 2. Medium and high pressure system shall have access doors rated for such system equal to Air Balance Inc. No. FSA 100H. Access doors in main ducts downstream of fire dampers shall have a pressure sensitive release for manual or emergency vacuum release to prevent duct collapse in event of sudden shut-off of fire damper. Unit shall be equal to United Sheet Metal Type ARW access section.
 - 3. Duct sizes smaller than 8 inches may have a removable gasketed plate, a removable section of duct, or a capped tee fitting.

WARRANTY: All work by this Contractor shall be warranted

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for a period of one year without cost to the Owner. Excepted are normal consumable items such as air filters. In the event of failure, repairs shall be performed as expeditiously as possible. Work is to be performed during normal business hours except that work may be required at other times to prevent further damage from occurring. In such a case only that work required to protect equipment and building from further damage shall be required. In addition, all refrigeration compressors shall be warranted by the manufacturer for an additional four years. Copies of the manufacturer's warranty certificates, properly filled out, shall be delivered to the Owner or his representative prior to Final Inspection.

EXHAUST FANS

- A. Exhaust fans shall be furnished, located, and configured as shown on plans and schedule and shall be equipped with accessories as indicated. Disconnect switch for each fan shall be furnished whether specified or not.
- B. Brands and model numbers listed are used as a standard of quality. Equal units by Greenheck, Jenn Air, ILG, Penn, or ACME shall be acceptable.
- C. Control of fans shall be as noted or as indicated in the electrical portion.
- D. Roof top exhaust fans shall be of all aluminum construction (unless noted otherwise) with spun aluminum housing, centrifugal fan, motor, automatic backdraft damper, disconnect switch, and birdguard. Belt drive units shall include adjustable V-belt drive with motor and drive isolated from the air stream.
- E. Fan capacities and motor characteristics shall be as scheduled. Furnish proper magnetic or manual motor starter with accessories for duty, control, etc. as indicated.
- F. Fans are to be mounted on curbs. Where specified, factory fabricated curbs shall be aluminum, with one inch insulation, nailer strip and roof flange.

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AIR CONDITIONING SPECIFICATIONS SPLIT SYSTEMS:

A. CONDENSING UNITS:

1. Furnish and install, where indicated on plans, air cooled condensing units with capacity and power characteristics as per schedule.
2. Unit compressor shall be welded hermetic type with internal spring vibration isolators or semi-hermetic type with external spring vibration isolators. Hot gas muffler shall be provided (can be internal on welded hermetic). Motor shall have both thermal and current sensitive overload devices, internal hi-pressure protection, high and low pressure cutout switches, crankcase heater and method to prevent rapid cycling of compressor.
3. Condenser fan shall be direct driven propeller type with vertical discharge of air. Fan motor shall be factory lubricated, inherently protected, resiliently mounted and provided with device to prevent water from entering bearings.
4. Controls shall be factory wired and located in a readily accessible location inside unit.
5. Unit shall have liquid line and suction line shut-off valves.

- B. EVAPORATOR COIL shall be of same manufacturer as condensing unit and shall have been listed with condensing unit in published ratings.

C. INDOOR UNIT:

1. Furnish and install vertical indoor electric furnace with compatible DX evaporator coil or direct expansion fan coil with integral electric heater.
2. Unit shall be of the same manufacturer as the condensing unit and shall be listed with condensing unit by the manufacturer. Unit shall bear U.L. label.
3. Capacity, voltage, and efficiency will be as scheduled on the drawings.
4. The unit enclosure shall be insulated and constructed of steel, bonderized and finished with baked enamel. Large front access panels shall be provided for easy access to

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all compartments. Filter rack shall have duct flange and be equipped with slide out filter.

5. Fan shall be forward curved with double inlet, mounted on motor shaft, dynamically and statically balanced. The fan shall deliver specified CFM and static pressure. Fan shall have a minimum of three speed. Motor shall be factory lubricated, have internal overload protection and be resiliently mounted.
6. Unit shall be internally insulated and shall have condensate pan under evaporator coil with a primary and auxiliary drain connection.
7. Electric heater shall be furnished by manufacturer of unit and may be factory installed or field installed if so listed by the manufacturer and by U.L. All heaters shall be equipped with both thermal and current overload device.
8. A complete system of low voltage controls including transformer shall be included.

D. REFRIGERANT PIPING shall conform to the American Standards Institute Standard B9.1, Safety Code for Mechanical Refrigeration.

1. Refrigerant piping shall be Type "K" or Type "L" bright annealed dehydrated and sealed. Soft tempered refrigerant tubing with minimum number of joints shall be used in concealed spaces, chases, etc., and where bending is required and where flare joints are used. Hard drawn tubing shall be used where no bending is required. Flare joints may be used on lines 5/8" and smaller. All other joints shall be silver brazed. Lines shall be as recommended by the manufacturer of the equipment and sized for maximum operation efficiency and minimum line loss. All piping shall be installed in a neat and workmanship manner. Lines shall be properly supported. Vapor lines or insulation of such lines shall not come into direct contact with any of the building structure. Proper standoff supports, etc. with saddles shall be employed where needed.
2. Vapor lines shall be insulated with 3/4" closed cell insulation suitable for such duty. All joints shall be sealed with approved sealer. In addition, any insulated lines exposed to the weather shall have two coatings of weatherproofing applied.
3. On field piped systems liquid line filter dryers as recommended by the manufacturer shall be installed.
4. System shall be charged or charge checked as recommended by the manufacturer.

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SECTION 1530
FIRE PROTECTION

GENERAL:

- A. The fire protection system is a wet-type, combination standpipe and sprinkler system hydraulically designed.
- B. Sprinkler systems shall, as a minimum, meet the requirements of NFPA Standard No. 13.
- C. Fire standpipe and hose systems shall, as a minimum, meet the requirements of NFPA Standard No. 14.
- D. Connect to the water supply and extend to the fire protection system. Provide all accessories on the service as detailed and indicated on the drawings. Provide all local alarm and signalling devices.
- E. Unless specifically excepted, the fire protection work shall conform to all other sections of this Division which apply to pipe installation and accessories. References are to pipe hangers, sleeves and tests.
- F. The drawings companying these specifications are not intended to be used as working drawings. Prepare shop drawings based on the above drawings together with other mechanical, electrical and structural data, and have same approved by the Underwriters and the Architect before the installation is started. Required copies of shop drawings, with two (2) sets of shop drawings bearing evidence of the Underwriters' approval together with a copy of the Underwriters' letter of approval and/or comments, shall be furnished to the Architect. If changes in the shop drawings are required by the Architect to conform to Contract requirements, make any changes necessary and submit revised prints to the Architect.

MATERIALS:

- A. Pipe and Fittings:
 - 1. Sprinkler system piping shall be Class 1, Schedule 40, ASTM A-120 black steel pipe. Fittings under 3" in size shall be screwed sprinkler pattern cast iron for 125 pound S.W.P. 3" in size and over joining of pipes and fittings, except for flanged equipment, shall be a bolted type clamp with gasket. Fittings shall be delivered pregrooved.

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2. Fire standpipe system piping shall be Class 1, Schedule 40 ASTM A-120 black steel pipe or Schedule 10 ASTM 120 light wall steel pipe. Fittings under 3" in size shall be malleable iron screwed for 150 pound S.W.P. 3" in size and over, joining of pipes and fittings, shall be a bolted type clamp with gasket. Fittings shall be delivered pregrooved.
3. Clamps shall be cast iron with gasket and two bolts. Working pressure shall be 1000 psi up to 6" in size. Clamps shall be Victaulic Model 75 or Gustin Bacon Model 100.
4. Flanges shall be 250 pound S.W.P. cast iron with threaded inlet.

B. Joints:

1. Threaded joints shall be made up with a mixture of lead and boiled oil applied to the male thread.
2. Flanged joints shall be made up with rubber gaskets and assembled with machine bolts and hexagon heads made of open hearth steel.

C. Valves:

1. Gate Valves 2-1/2" in size and larger shall be O.S.&Y. type with iron body, bronze trim, solid wedge, and flanged ends for 175 pound W.W.P. Valves shall be Underwriters' Laboratories listed with identification mark for such stamped or cast on valve body. Valves shall be:

Crane	No. 467
Stockham	G-634
Nibco/Scott	F-607-0
Kennedy	Fig. 68

2. Gate Valves 2" in size and smaller shall be O.S.&Y. type with bronze body, solid wedge, and threaded ends for 175 pound W.W.P. Valves shall be Underwriters' Laboratories listed with identification mark for such stamped or cast on valve body. Valves shall be.

Crane	No. 459
Stockham	B-133
Nibco/Scott	T-104-0
Kennedy	Fig. 66

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3. Check Valves 2-1/2" in size and larger shall be horizontal swing type with iron body, bronze trim, and flanged ends for 175 pound W.W.P. Valves shall be Underwriters' Laboratories listed with identification mark for such stamped or cast on the valve body. Valves shall be:

Crane	No. 375
Stockham	G-9393
Nibco/Scott	F-908-B
Kennedy	Fig. 126

4. Check Valves 2" in size and smaller shall be horizontal swing type with bronze body, composition disc, and threaded ends for 200 pound W.O.G. Valves shall be:

Crane	No. 34-1/2
Stockham	B-305-B
Nibco/Scott	T-413-W
Kennedy	Fig. 440

NOTE: Check valves designated to be slow closing shall be equipped with a weighted lever.

5. Globe Valves shall have bronze body, rising stem, composition disc, and threaded ends for 200 pound W.O.G. Valves shall be:

Crane	No. 7
Stockham	B-13-T
Nibco/Scott	T-211-W
Kennedy	Fig. 97

6. Angle Valves shall have bronze body, rising stem, composition disc, and threaded ends for 200 pound W.O.G. Valves shall be:

Crane	No. 17
Stockham	B-13-T
Nibco/Scott	T-311-W
Kennedy	Fig. 98

7. Post Indicator Valve shall be iron body bronze mounted gate type, Underwriters' Laboratories approved for 175 P.S.I. working pressure with ends to suit piping on which used, and with mounting plate for post indicator.

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Over each valve provide an indicator post which shall be of cast iron with an adjustable length, flanged on bottom for bolting to gate valve, a non-rising stem, a valve control handle on top which can be locked in place to prevent tampering and an indicating window to show if the valve is open or shut. Post shall extend 36" above grade and be painted enameled fire engine red.

VALVE

<u>Manufacturer</u>	<u>Mech. Joint</u>
Mueller Co.	A-2072-23
Kennedy	71X
American-Darling	55FM-UA
Nibco//Scott	M-609

INDICATOR POST

Mueller	A-20800
Kennedy	Series 54120
American-Darling	IP-71
Nibco/Scott	NIP-1

8. Fire Department Valves shall be exposed. Valve shall be complete with cap and chain and shall have rough brass finish.

Elkhart	U-25
Allen	1700
Seco	750
Potter-Roemer	157U

D. Roof Manifold:

1. Roof manifold at top of fire standpipe riser shall be of the size shown on the roof drawings, with rough brass finish and three 2-1/2" 300 psi working pressure valves each with cap and chain with Underwriters' label.

<u>Manufacturer</u>	<u>"T" Type</u>
Allen	439
Elkhart	158
Seco	210
Potter-Roemer	295

E. Fire Hose Cabinet:

1. Surface mounted fire hose cabinets shall have steel bodies and solid steel door. Door shall have continu-

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ous hinge and open away from stairwell. Paint the interior of the cabinet an enameled white and give the steel doors a prime coat of paint. Install on the outside of each cabinet door a decal reading "FIRE HOSE". Each cabinet shall be provided with 100 feet of 2-1/2" single jocked cotton rubber lined fire hose with 300 lb. test. Manufacturers with standard 50 foot lengths shall provide a brass pin lug coupling. Hoses shall be provided with wax and gum mildew treatment. Manufacturer shall check cabinet size to insure that the hose specified will lap horizontally with nozzle at top. Nozzle shall be brass fog type with rubber bumper and have from full off, to straight, to 90° fog stream. Couplings shall be brass pin lug type and all system threads shall be standard type.

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	<u>Elkhart</u>	<u>Seco</u>	<u>W.D. Allen</u>	<u>Potter-Roemer</u>
Cabinet	323c	20HS	278WS	2107SD
Hose	Industrial Fire Hose	As Described Above	No. 39	No. 34-44
Nozzle	D-200	565	P-48	250
Spanner	451	185	9	185

F. Siamese Connections:

1. Siamese connections shall be straight type with wall escutcheon. Unit shall be complete with two 2-1/2" inlets with caps, chains and cast bronze body. Inlet size shall be as noted on the drawings. All exposed surfaces shall be of polished brass. Siamese shall be labeled with the name of the fire protection system served. The connection to the siamese shall be provided with an automatic ball drip with discharge drain line. Pipe the drain from the drip through the wall and terminate with an escutcheon and turned down elbow each with finish to match the siamese. Connections shall be set 2'-6" from the hose inlet centerline to the adjoining grade. All wall units shall have face plates.

	<u>Elkhart</u>	<u>Seco</u>	<u>Allen</u>	<u>Potter-Roemer</u>
Straight Body	156	251	270	132

G. Flow Switches:

1. Flow switches for wet sprinkler system shall be paddle type water flow alarm switch equipped with a retard device. Switch shall be suitable for 120 volt A.C. operation and shall have double contacts for either open or closed circuit operation for tie-in with building fire fire alarm system.

<u>Manufacturer</u>	<u>Switch</u>
Globe	NFSA
Howe Electric Co.	Type E
Hodgman	WFD
Star Sprinkler Corp.	VRS
Grinnell Corp.	F-620
Grimes	GWF-4

H. Sprinklers:

1. Upright and pendant type wet sprinkler heads shall be spray type. Pendant heds shall be complete with escutcheon at ceiling. Finish of pendant head and escutcheon shall be polished chrome plate.

<u>Manufacturer</u>	<u>Upright Head</u>	<u>Pendant Head</u>
Globe	G	G
Automatic Sprinkler Corp. of America	38B	38B
Viking	C	C
Star Sprinkler Corp.	E	E
Firematic	TU	TU
Grimes	SSU	SSP
Grinnell	C	C
Grimes	ESSU	ESSP

2. Sidewall sprinklers shall be 1/2" spray type for use on wet pipe system and shall have escutcheon. All exposed parts of head and escutcheon shall have a polished chrome plated finish.

<u>Manufacturer</u>	<u>Sidewall Head</u>
Grinnell Corp.	Model D
Globe	Model D
Viking	Model C
Grimes	Model E

3. Unless otherwise noted on drawings, sprinkler heads shall be rated for 165° standard operation.

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4. Provide to the representative of the using agency a reserve supply of sprinkler heads and the tools for removing and replacing the heads. The heads and tools shall be contained in a metal carrying case and shall contain a proportionate number of each type of head installed. Obtain a receipt for the heads from the using agency's representative and deliver same to the Architect.
5. The fire protection system shall include all NFPA specified accessories including signs, test connections and drains.

FIRE PUMP AND CONTROLS:

A. General:

1. Provide a complete Fire Pump System including fire pump, jockey pump, electric fire pump driver, fire pump control panel, jockey pump control panel, and all necessary accessories.
2. The fire pump, jockey pump, both controllers and all accessories shall be purchased as a unit from the same manufacturer.
3. The pump manufacturer shall assume unit responsibility and shall provide the services of a factory trained Engineer to supervise the installation and to conduct final field acceptance test.
4. The pump unit shall be factory painted with enamel red paint in accordance with Section "PAINTING".

B. Fire Pump:

1. The fire pump shall be vertical split case, bronze fitted, single stage, double suction case, centrifugal pump with bronze shaft sleeves, case wearing rings, flexible coupling and packed stuffing boxes with lantern ring, listed by Underwriters' Laboratories, Inc., and/or approved by Associated Factory Mutual. The pumping unit shall meet all requirements of the National Fire Protection Association Pamphlet #20. Pump shall be for horizontal installation.
2. The pump shall have the capacity as indicated on the drawings. The pump shall deliver not less than 150% of rated capacity at a pressure not less than 65% of the rated pressure. The shutoff pressure shall not exceed 120% of rated pressure. The pump shall be given a complete performance test with positive suction pressure

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and with a 15 foot suction lift. Certified performance curves for both conditions shall be prepared and submitted for approval prior to shipment. The pump shall also be hydrostatically tested to twice the shutoff pressure, but in no case less than 250 lbs. per square inch.

3. Pump suction and discharge shall be arranged to conform to piping arrangement shown on the drawings.
4. The pump baseplate shall be structural steel and shall be bolted to the concrete foundation.
5. Fire pump shall be:

Aurora 483 Series
Peerless ABF Series
Patterson MAA Series

6. Fire pump shall be equipped with the following accessories:

3/4" casing relief valve.
Suction and discharge gauges.
Automatic air release valve.
Eccentric suction and concentric discharge increasers to match drawing details and pump openings.
Hose valve test outlets on exterior building wall. All exposed parts to be polished brass. 2-1/2" outlets shall total 2 and each outlet shall be provided with a 2-1/2" valve with cap and chain. Outlets shall be mounted on one plate labeled "FIRE PUMP TEST". The test valve plate and valves shall be by the fire pump manufacturer.

C. Fire Pump Driver:

1. The driver shall be an electric motor of open dripproof type. The motor shall be of such capacity that 115% of the full load ampere rating shall not be exceeded at any condition of pump load. Pump motor shall be of the minimum horsepower shown on the drawings. For electrical characteristics refer to the electrical drawings.
2. With an ambient temperature not exceeding 40°C, the pump motor shall be designed for a temperature rise not exceeding 40°C when carrying full rated load continuously and shall be capable of operating continuously with an overload of 15% without stress or injurious rise in temperature. Locked motor current shall not exceed the values specified in NFPA Pamphlet No. 20.

D. Fire Pump Controller:

1. The motor control equipment shall be completely assembled, wired and tested at the factory and the assembly shall be specifically approved for fire pump purposes. The controller shall be marked "Fire Pump Controller". All equipment shall be enclosed in one or more UL approved NEMA 3R enclosures. The controller shall be of the combined manual and automatic reduced voltage primary resistor type incorporating the following:
 - a. Disconnect switch, externally operable, quick-break type.
 - b. Motor starter capable of being energized automatically through the pressure switch or manually by means of an externally operable handle.
 - c. Pressure switch set to cut in and out at pressure shown on drawings.
 - d. Running period timer set to keep motor in operation when started automatically for a minimum period of 7 minutes.
 - e. Circuit breaker with pilot lamp to indicate circuit breaker closed and power available. Interrupting rating of circuit breaker shall not be less than 35,000 amps RMS symmetrical at 480 volts.
 - f. Ammeter test link and voltmeter test studs.
 - g. Manual selection station - two position station shall be provided on the enclosure marked "automatic" and "non-automatic".
 - h. Starting resistors for reducing in-rush current.
 - i. Controller shall be mounted on wall.
 - j. Provide additional isolated interlock contacts as required by control wiring diagrams shown on electrical drawings.

E. Jockey Pump:

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1. The jockey pump shall be horizontal split case end suction centrifugal. The pump shall be constructed of the following materials:

Casing	Cast Iron, ASTM A48-56
Case Wearing Rings	Bronze, ASTM B14403B
Ball Bearings	Steel
Seal	Mechanical, consisting of a ceramic stationary seat and a face
Shaft Sleeve	316 Stainless Steel
Impeller	Bronze ASTM B144-3B
Shaft	Carbon Steel

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DIVISION 16 - ELECTRICAL

SECTION 1600
GENERAL REQUIREMENTS

SCOPE: Supply and install all electrical work for complete and satisfactorily operating electrical system as shown on the drawings and as specified in Division 16.

SHOP DRAWINGS:

- A. Prepare and submit shop drawings, where required for items specified in other sections of this Division, per Supplementary General Conditions.
- B. Material submittals shall be all-inclusive, with all items requiring submittals being submitted at same time. Individual submittals will not be accepted.
- C. Place orders for all equipment in time to prevent any delay in construction schedule or completion of project. If any materials or equipment are not ordered in time, additional charges made by equipment manufacturers to complete their equipment in time to meet construction schedule, together with any special handling charges, shall be borne by this Contractor.

GUARANTEE:

- A. Per General Conditions.
- B. In addition, furnish written guarantee that all systems are functioning properly and that all materials and workmanship are free from defects.

PERMITS, FEES AND INSPECTION: Per General Conditions.

- A. Rules and Regulations: All work shall conform to latest rules and regulations of NEC, all applicable State and local codes. Should any part of the design fail to comply with such requirements, discrepancy shall be called to the attention of the Architect prior to submission of bid.

DRAWINGS:

- A. The general arrangement and location of wiring and equipment is shown on drawings, and shall be installed in accordance therewith, except for minor changes required by conflicts with the work of other trades.

- B. Drawings indicate, generally, the routes of all branch circuits; all runs to panels indicated as starting from nearest outlet and points in direction of panel, and all such circuits and conduits shall be continued to panel as though the routes were indicated in their entirety.
- C. All branch circuit conduits to contain two wires, except that where more wires are in raceway the number of wires is indicated by "slash marks" on branch circuit symbol.
- D. All wires #12 except as noted next to "slash marks" on drawings, or as noted under "wire" as specified hereinafter.
- E. All dimensions, together with locations of doors, partitions, etc., are to be taken from Architectural drawings verified at site by this Contractor.
- F. Maintain "as-built" records at all times, showing exact location of feeder installed under this contract, and actual numbering of each circuit. Submit drawings per General Requirements.

MEASUREMENTS: Before ordering any material or closing in any work, verify all measurements on the job. Any difference found between dimensions on drawings and actual measurements shall be brought to Architect's attention before proceeding.

COORDINATION WITH OTHER WORK:

- A. Become familiar with conditions at job site and with drawings and specifications and plan the installation of electrical work to conform with conditions shown and specified to provide the best possible assembly of the combined work of all trades.
- B. All "tight" conditions shall be worked out in advance with the General Contractor's Superintendent and the trades involved and if found necessary, supplementary drawings shall be prepared by this Contractor for the Architect's approval before work proceeds in these areas. No additional cost will be considered for work which must be relocated due to conflict with the work of the trades.
- C. Any difference or disputes concerning coordination, interference or extent of work shall be decided by Architect, and his decision shall be considered final.
- D. Electrical system layouts are generally diagrammatic, location of outlets and equipment is approximate. Exact routing of wiring, locations of outlets to be governed by structural conditions and obstructions. Wiring for equipment requiring maintenance and inspection to be readily accessible.

- E. Architect reserves the right to make any reasonable change in location of outlets, prior to roughing-in.

WORKMANSHIP AND SUPERVISION:

- A. All workmanship shall be carried out in a manner satisfactory to and approved by Architect.
- B. This Contractor shall personally, or through an authorized representative, constantly supervise the work and check all materials prior to installation for conformance with approved plans and specifications.

SLEEVES, CUTTING AND REPAIRING:

- A. Provide and place in the forms all conduit, inserts and sleeves in time to prevent any delay in the concrete work.
- B. All cutting and repairing and required structural reinforcing for the installation of this work shall be done by this Contractor in conformance with the Architect's direction, and any damage caused by cutting shall be repaired equal to original condition. No cutting shall be done without Architect's approval.

CLEANING, PAINTING AND CONDUIT:

- A. Panelboards and all other electrical items of equipment not "finish painted" under other sections shall be touched up where finished surface is marred or damaged.
- B. Equipment, lighting fixtures, etc., shall be left in clean condition.

APPARATUS IDENTIFICATION: Panelboards, convertible circuit breakers in panelboards, motor disconnect switches, starters and other apparatus used for the operating of or control of circuits, appliance or equipment shall be properly identified by means of engraved laminated plastic descriptive nameplates mounted on the apparatus using contact cement. Nameplates shall be submitted to Architect for approval. Cardholders in any form are not acceptable.

MATERIALS: Materials and equipment shall be new and listed by Underwriters' Laboratories, Inc., and bear their label wherever standards have been established and their label service is regularly furnished.

TESTS:

- A. Test panels and circuits for ground and shorts with mains disconnected from feeders, branch circuits connected and circuit breakers closed, all fixtures in place and permanently connected and grounding jumper to neutral lifted and with all wall switches closed.
1. Test each individual circuit at the panel, with equipment connected for proper operation.
 2. Ground tests shall meet requirements of National Electrical Code.
 3. On completion of work, a final inspection will be made and equipment shall be operated under normal conditions, all to satisfaction of Architect and Owner.

EQUIPMENT BROCHURES, WIRING DIAGRAMS, ETC.: At completion of the project, the Contractor shall provide two (2) bound sets of documents containing wiring diagrams, operation instructions and complete information for all equipment and fixtures installed in the project. The submission of these brochures shall be a precedent to final payment.

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SECTION 1601
BASIC MATERIALS AND METHODS

MATERIALS:

A. Raceways, Fittings and Outlet Boxes:

1. Rigid steel conduit, zinc coated- Fed. Spec. WW-C-581.
2. Electrical metallic tubing- Fed. Spec. W-C-563.
3. Rigid non-metallic conduit- NEMA TC-6- DIRECT BURIAL.
4. Fittings, flexible metal conduit- Fed. Spec. W-F-406.
5. Flexible metal conduits .. Fed. Spec. WW-C-566.
6. Fittings, zinc coated steel- Rigid steel conduit and electrical metallic- Fed. Spec. W-F-408.
7. Outlet boxes and fittings, zinc coated- Fed. Spec. W-C-586.
8. Outlet boxes and covers, cadmium plated (for out-door duty)- Underwriters' approved.
9. Fittings, cadmium plated or non-ferrous (for out-door duty)- Underwriters' approved.
10. Conductors - Copper with Type THWN or THHN 600 volt insulation.

- B. Panelboards for 120/208 volt service shall be equal to Square D NQOB. Minimum interrupting capacity of branch circuit breakers shall be 10,000 amperes RMS symmetrical. All two and three pole breakers shall be of the single handle common trip type (no tie handles). The cabinets shall be constructed of code thickness sheet steel and galvanized. The trim shall be finished with standard prime and finish coat. Hardware shall be nickel finished with combination latch and cylinder lock. A glass or plastic covered directory cardholder shall be provided on the inside of the door, which shall contain a neatly typed description of the service supplied by each breaker. Lighting panel circuit numbers shall be mechanically secured to panel interiors. No glued on or similar method of securing circuit breaker numbers will be accepted without specific approval of the Architect.

- C. Safety switches shall be NEMA heavy duty Type HD UL listed. All switches shall have switch blades which are fully visible in the OFF position when the door is open. Switches shall have removable arc suppressors where necessary to permit easy access to line side lugs. Lugs shall be UL listed for aluminum and/or copper cables and front removable. All current carry-

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ing parts shall be plated. Switches shall have quick-make and quick-break operating handle and mechanism which shall be an integral part of the box, not the cover. Switches shall have a dual cover interlock to prevent unauthorized opening of the switch door in the ON position or closing of the switch mechanism with the door open. Handle position shall indicate if switch is ON or Off.

- D. Time switch used for control of fans shall be twenty-four hour type with skip-a-day feature and reserve spring for maintaining time schedule during power outage. Time switch enclosure shall be NEMA 1. Operation shall be for 120 volt circuits. Time switch shall be two pole maintained contact and shall be the product of Paragon, Tork or Intermatic.
- E. Motor Starters: Magnetic motor starters for the control of heating, ventilating and air conditioning equipment will be furnished with the equipment. Where these are not an integral part of the equipment, the Electrical Contractor shall receive the starters, provide necessary support, and set them in place. Manual motor starters shall be furnished and installed by the Electrical Contractor.

WIRING METHODS:

A. General:

1. All wiring within the building, unless otherwise specifically indicated, shall consist of insulated copper conductors in rigid conduit. Conduits concealed in or under floor slabs or underground outside the building shall be rigid hot-dipped galvanized steel conduit or may be DB PVC conduit with turn-ups being rigid galvanized steel conduit. Conduit concealed in stud walls, partitions or exposed 7'-0" or more above finished floor may be electrical metallic tubing (EMT). Minimum conduit size shall be 1/2 inch diameter.

B. Conduit:

1. Exposed conduit runs shall be neatly arranged to run parallel to or at right angles to the lines of the building. Conduit above ceiling shall be a minimum of 12 inches above the ceiling suspension members. Support members shall be maximum of 6 feet apart.

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2. Rigid hot-dipped galvanized steel conduit shall be constructed and installed in accordance with Article 346 of the NEC. Electrical metallic tubing shall be galvanized steel and shall be constructed and installed in accordance with Article 348 of the NEC and shall have couplings and connectors of the threadless raintight split compression ring type. All connections shall be made up tight.
3. Rigid galvanized steel conduit runs under the slab or outside the building shall be coated with two coats of bitumastic paint or be galvanized conduit coated with not less than 20 mils PVC coating.
4. Rigid non-metallic conduit shall be constructed and installed in accordance with Article 347 of the NEC and shall be Type DB PVC. All conduit turn-ups shall be rigid hot-dipped galvanized steel conduit.
5. Equipment subject to vibration shall be connected with not less than twelve inches nor more than 3 feet of flexible liquid-tight metal conduit from the end of a conduit run or junction box. Flexible liquid-tight metal conduit shall be constructed and installed in accordance with Article 351 of the NEC. Provide separate green grounding conductor in the conduit.
6. In general, the conduit installation shall follow the layout shown on the drawings. This layout is diagrammatic only, and where changes are necessary due to structural conditions, other apparatus or other causes, such changes shall be made without any additional cost to the Owner. Off-sets in conduits are not indicated and must be furnished as required.
7. Wires shall not be installed until work which might cause damage to wire or conduit has been completed. The Contractor shall exercise every precaution to prevent the admission of water, dirt, concrete, etc., into the conduit system during the execution of the work, and shall effectively cap, during construction, all conduit stubs by means of capped bushings or pennies. Conduits in which water or other foreign matter has been allowed to accumulate shall be thoroughly cleaned out or replaced if necessary.
8. Expansion fittings shall be provided where conduit crosses building expansion joints.

C. Conductors (600 Volts or Less):

1. Conductors shall be copper of not less than ninety-eight percent (98%) conductivity, with NEC Type THHN or THWN, 600 volt insulation. Conductors for fire alarm system shall be Type THHN or THWN and color coded as required. Conductors No. 12 through No. 8 shall be solid and No. 6 and larger shall be stranded. The neutral conductor for all branch circuits shall have an identifying white covering.
2. Color code all wiring including branch circuits, feeders and emergency circuits.
3. Use the following colors in lighting and power wiring. Color coding shall be as follows:

	<u>L1</u>	<u>L2</u>	<u>L3</u>	<u>N</u>	<u>GRD</u>
120/208	BLACK	RED	DK. BLUE	WHITE	GREEN
480/277	BROWN	YELLOW	LT. BLUE	GREY	GREEN

4. In various systems, color code all wiring to enable proper identification of all leads. Color coding of ends only will be acceptable for conductors #6 AWG and larger.

D. Wiring:

1. Install a complete system of wiring as shown on the drawings. All wiring shall be in conduit. Conductors shall be not less than AWG 12 for power and AWG 14 for control. Conductors for auxiliary systems shall be as designated.
2. Grease, oil or lubricant harmful to insulation shall not be used to facilitate the pulling of wires.
3. Joints in circuit work at outlets and junction boxes shall be made with approved solderless-type connectors.
4. At each device outlet a loop or end of wire not less than eight inches (8") long shall be left for connection to devices. Wire in capped outlets shall have ends taped.

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E. Outlet Boxes:

1. Outlets for concealed installation in walls shall consist of standard galvanized steel outlet boxes and plaster rings. Boxes and covers shall be not less than one-sixteenth inch (1/16") thick and in every instance of such form and dimensions as to be adapted to its specific use and location, kind of equipment to be used and number, size and arrangement of conduits connected thereto. Outlet boxes shall be firmly anchored in place. Junction boxes shall be provided with blank covers painted to match surrounding.
2. Ceiling outlet boxes shall be four inch (4") octagonal or four and eleven-sixteenths inch (4-11/16") square when required due to number of wires and not less than one and one-half inches (1-1/2") deep. Outlet boxes shall be National, Steel City, Raco, or equal.
3. Outlet boxes for use where large number of conductors are involved shall be of sufficient size to provide free space for all conductors enclosed within the box and shall conform to Section 370-6(A) and 370-6(B) of the National Electrical Code.
4. Outlets in exposed conduit shall be installed in galvanized cast iron fittings.

FIRE STOPS - PENETRATION SEALS:

- A. All penetrations through fire rated floor and walls shall be sealed with CHASE-FOAM, CTC PR-855 Fire Resistant Foam Sealant, or approved equal, to prevent the spread of smoke, fire, toxic gas or water through the penetration either before, during or after a fire. The fire rating of the penetration seal shall be at least that of the floor or wall into which it is installed, so that the original fire rating of the floor or wall is maintained as required by Article 300-21 of the National Electrical Code.
- B. The sealant shall remain soft and pliable to allow for the removal and/or addition of cables without the necessity of drilling holes. It shall adhere to itself perfectly to allow any and all repairs to be made with the same material. It shall permit the vibration, expansion and/or contraction of anything going through the penetration without the seal cracking or crumbling.

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- C. The foam sealant shall be capable of being installed by a single tradesman, working from one side of a floor or wall. The chemical components of the foam shall come pre-measured and contained within a single, hand operated, disposable cartridge which is used for mixing and dispensing the foam. The foam shall also come packaged for use with power mixing/dispensing equipment. No special skills or extensive training shall be necessary to operate either the cartridges or the power equipment. Both shall deliver the correct ratio of the two chemical components of the foam without the possibility of error or the necessity of technical supervision.
- D. When damming materials are to be left in place after the seal is complete, then all such materials shall be non-flammable.
- E. When sealant is injected into a penetration, the foam shall expand to surround all the items within the penetration and maintain pressure against the walls of the penetration. The foam shall cure within five minutes and be fire resistant at that time. No heat shall be required to further expand the foam to block the passage of fire and smoke or water.
- F. All wall or floor penetration openings shall be as small as possible.
- G. The foam sealant shall meet all of the fire test and hose stream test requirements of ASTM E119-73 and shall be UL Classified as a Wall Opening Protective Device. The sealant shall be CHASE-FOAM, CTC PR-855 Fire Resistant Foam Sealant from Chase Technology Corporation, Huntington Station, New York 11746, or approved equal.

SECTION 1602
INSTALLATION PROCEDURES

WIRING CONNECTIONS FEEDERS:

- A. Provide feeders and branch circuits as shown on the Drawings.
- B. Balance loads on the electrical system.
- C. Where conditions permit, panel and connections for wire of Size No. 8 and larger shall be made with pressure copper lugs of adequate capacity.
- D. Make connection to all panels, switches, receptacles, fixtures, etc. Install finishing plates and make all systems complete and ready for use. Where fuses are employed, fill all fuse holders with proper size fuses and furnish a complete duplicate set of fuses for spares.

BRANCH CIRCUITS:

- A. Use heavy neoprene jacket covering on insulated conductors installed underground.
- B. In moist locations or where raceways are trapped, use moisture resisting grade of wires (Type THW or THWN).
- C. Splices in conductors shall be made only within junction boxes, wiring troughs and other enclosures as permitted by the National Electrical Code, latest edition. Do not splice conductors in panelboards, safety switches, switchboard, or motor control enclosures. Splices in conductors No. 8 AWG or smaller shall be made with Skotchlok insulated spring connectors, Ideal wire nuts, or Buchanan steel crimping sleeves with nylon insulating caps. Splices in conductors larger than No. 8 AWG shall be made with split bolt connectors taped with No. 88 plastic electrical tape unless splices are indicated to be made with crimping sleeve applied to conductors with hydraulic operated crimping tool.
- D. Minimum wire size for branch circuits shall be No. 12 AWG.

GROUNDING: In general, wiring systems shall be grounded in accordance with Article 250 of the National Electrical Code.

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AIR CONDITIONING CONTROLS: Certain control components with electrical connections such as motor starters, push-button stations, thermostats, etc., will be furnished by the Mechanical Contractor. Control conduit and wiring indicated on the Electrical Drawings will be furnished and installed by the Electrical Contractor. Control wiring and conduit not indicated on the Electrical Drawings will be the responsibility of the Mechanical Contractor.

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SECTION 1603
SERVICE SYSTEM

ELECTRICAL SERVICE:

- A. The local utility company will install transformers and meter.

INSTALLATION OF SERVICE ENTRANCE EQUIPMENT AND METERING FACILITIES:

- A. Install service entrance conductors and main service entrance equipment and ground as required by Article 250 of the N.E. Code.

METERING OF SERVICES:

- A. Retail electrical service to building will be supplied by the local utility company under conventional retail procedure, or by the Contractor who shall install such equipment as particularly required by the utility company. Arrangements are to be made to meter the service with meter supplies and installed by the company.
- B. The local utility company will make final connections between busses and building service conductors.

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SECTION 1604
INSTALLATION OF LIGHT FIXTURES

LIGHT FIXTURES

- A. Furnish, install and connect all lighting fixtures as hereafter described and/or scheduled on the drawings.
- B. Furnish and install a full complement of lamps in each lighting fixture.
- C. All fixtures shall be properly polarized. Connect shell of lampholder sockets to neutral (white) conductors.
- D. All fixtures shall be re-lamped with new, unused, lamps prior to final inspection and acceptance by the Owner.

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SECTION 1605
TELEPHONE SYSTEM

INSTALLATION OF TELEPHONE FACILITIES:

- A. Install empty raceways and telephone outlets as indicated on the plans. The installation of telephone instruments and wires will not be required.
- B. It is the intent of these specifications and the plans to provide for future entry of telephone lines into buildings without the necessity of the telephone company cutting walls or partitions to effect entry to their wires and installation of instruments. Where telephone outlets are indicated on the plans, install at each such location an empty standard type switch box with a standard telephone flush-mounted finishing plate. From outlet extend a run of electrical metallic tubing, size 3/4" to above corridor and terminate tubing with a suitable bushing or fitting to eliminate possibility of wires being cut or damaged when pulled in.
- C. Install, as indicated on the plans, sections of conduit from telephone terminal to outside of walls, to permit entry of wires into building. Cap outside ends of conduits and leave for future use.

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SECTION 1606
FIRE ALARM SYSTEM

GENERAL:

- A. Furnish and install a complete automatic and manual, electrically supervised state of the art non-coded march time cadence fire alarm system. Install the system as specified herein and shown on the contract drawings.
- B. The system shall comply with and be installed in accordance with NFPA 72A, NFPA 101 Life Safety Code, National Electrical Code, OSHA Regulations and ANSI A117.1 Specifications for Making Building and Facilities Accessible to and Usable by the Physically Handicapped.
- C. The equipment shall be the product and service responsibility of one manufacturer. The manufacturer's name or logo shall be permanently affixed to each device submitted as a component of the system. The equipment shall be listed by UL or approved by FM.
- D. The manufacturer shall maintain a full time factory trained service organization for annual or semi-annual Fire Alarm Inspection and Testing Agreements. The service organization shall provide local service within 24 hours for emergency repair. The equipment listed in these specifications is that of Simplex Time Recorder Co. and constitutes the quality of equipment to be furnished. Similar equipment as manufactured by Honeywell, Faraday, or approved equal may be bid as an alternate to the equipment specified herein.

SYSTEM OPERATION:

- A. The actuation of any manual station or automatic detection device shall cause all audible devices to sound in march time cadence, all fire lights to flash in march time cadence, all AHU's to shut down and smoke doors to close. The system shall remain in alarm until the actuating device has been reset and the fire alarm control panel reset. The recall signal shall be activated from the main control panel and shall sound continuously until reset. The fire alarm panel shall be zoned as shown on the plans and each zone in alarm shall be visually identifiable by a lighted red LED on that zone module. A time delay module Simplex #2001-3042 shall be provided to silence the signals after a preset time. The General Alarm signals may be silenced by authorized personnel only at the main control panel or annunciator. The operation of the signal silence switch

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shall cause a trouble light and an audible signal to be activated. The audible signal may be silenced, but the light must remain on until the system is restored to normal.

EQUIPMENT:

- A. Control Panel: The Fire Alarm System Control, Simplex 2001 Life Alarm System, shall be solid state, state of the art equipment designed and engineered specifically for Fire Alarm Evacuation of personnel. Secondary function shall be protection of property. Pluggable modules shall contain the necessary LEDs, switches, fuses and/or meters for operation of the module. The modules shall be combined or assembled in a common enclosure surface or semi-flush mounted, with an outer door and frame assembly complete with lock and transparent door panel for full view of all modules. The control modules are listed below to be selected and used as required.

1. Control Module #2001-1002 shall provide a central point for operating and indicating all functions of the Fire Alarm System. The functions shall include system reset, alarm lock-in, alarm resound, trouble resound, acknowledge switch, earth LED, system trouble LED, signal silenced LED, ammeter and LED test. A system flasher shall provide 150 PPM during alarm or trouble condition. The acknowledge switch, when operated, silences the alarm or trouble signals and lights a trouble LED to indicate this condition. The meter shall indicate the supervising current for the entire system. The module resound feature shall have two step reset switches for proper restoration of McCulloch (Class A) circuits as well as system reset functions. Earth detection shall be designed to detect either positive or negative voltages when earth connections of 50,000 ohms or less are encountered.
2. Initiating Circuit Module, Simplex #2001-1010, interfaces between such devices as smoke detectors, heat detectors and manual stations to the control module. The module shall operate two wire detectors and shall be fully supervised. Provide quantity of modules required for the system.
3. Standby Battery Charger Module, Simplex #2001-3001 shall be a panel mounted automatic current limited combination high rate/trickle rate unit which can return a fully discharged battery to 70% of charge within 12 hours.

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High rate charge shall be 4 amps maximum with trickle rate charge between 10MA and 200MA. The charger shall have a LED high rate indicator and charger failure indicator.

4. The power supply module, Simplex #2001-3021, shall be panel mounted to provide the necessary and proper filtered power for all system modules, smoke detectors, annunciators and power limited signal power. The module shall supervise and indicate the loss of AC power, loss of DC, low DC output, high DC output and open battery fuse. The module shall also provide a trouble and open battery fuse indication. The module shall also provide a trouble indication should the battery leads be improperly reversed.
 5. The Battery Monitor Module, Simplex #2001-1069, shall determine the status of a system connected battery. The module shall indicate low battery, battery disconnect, charger failure, trouble resound, printer output and supervised output for remote battery trouble.
 6. Signal Circuit Module, Simplex #2001-1075, shall provide 2 amperes of signal power either AC or DC. The signal circuit shall be two wire parallel supervised circuit. The circuits shall be supervised for open or shorted line and shall indicate these conditions by LED. The signal circuit shall be protected by a resettable circuit breaker on the module. Provisions shall be incorporated for common or individual programmed alarm outputs. The module shall provide for dual rate march time output of 120 beats per minute for general alarm with LED on module flashing at selected rate. A timer shall stop the signals after a pre-selected duration between 20 seconds to 10 minutes.
- B. Manual Fire Alarm Stations: Provide Simplex #4251-21 single action pull lever to sound alarm type. Stations shall be non-coded with one normally open contact for annunciation and one normally open contact for alarm initiation. The pull lever shall be flush in standby and when operated shall lock in a protruding position until reset with key provided with each station. The stations shall be constructed of high impact red lexan, with smooth high gloss finish.

- C. Audio Visual Alarm Signals shall be Simplex Model 2903 Series light and horn combination with Model 4051 horn. The unit shall be injected molded lexan with shock mounted incandescent light to prevent bulb failure when horn is activated. The unit shall be provided with a wire hanger to allow ease of connecting wires. Where visual signals only are required, the same unit may be used without horn. The unit shall be provided with diode for parallel connections to a supervised signal circuit. The unit shall be 24VDC. The unit, when special weatherproof backbox is provided, shall be suitable for mounting outside.
- D. Audible horns shall be Simplex Model 4051 Series for flush or surface mounting as required. Weatherproof units shall be furnished with weatherproof housing and cast aluminum backbox with mounting lugs and gaskets. Projector horns shall be single or double projector as indicated and shall consist of basic horn unit with Model PR projector for single and Model PR2 projector for double projector units.
- E. Smoke Detectors: Furnish and install as indicated on the plans, Simplex #4259-36 Smoke Detectors. Detectors shall be solid state photoelectronic and shall operate on the light scattering, photo-diode principle. Detectors shall be factory set to detect smoke at a normal 1.5% light obscuration per foot regardless of the rate of combustion, the distance between the detector and the fire source, the combustible material, the temperature or velocity of the smoke and whether the fire is in a confined or open area. The detector shall ignore invisible airborne particles or smoke densities below the factory set alarm point to minimize nuisance alarms. No radioactive material shall be used. Detectors shall be listed by Underwriters' Laboratories and approved by Factory Mutual under the current standards for photoelectric type smoke detectors. The detector shall have a pulsed LED indicator in the standby state and will be a steady red glow in alarm. The detectors shall have an integral fixed temperature heat detector rated at 135 degrees. Provide a calibrated test feature for individual local testing of the detector without the generation of actual smoke in the building. Detector shall have a twist lock mounting to a separate base assembly with screw terminals for external wire connections. The detector base shall have a locking mechanism to prevent unauthorized removal of the detector. Air duct smoke detectors shall be installed in suitable duct housing.

- F. Heat Detectors shall be Simplex #4255-20, low profile with wide base, for 135°F temperature rating. Units shall be rate of rise/fixed temperature type suitable for spacing not more than 50 feet on center for smooth ceilings. Dangling disk shall indicate operation of fixed temperature element. Rate-of-rise element shall be self restoring. Heat detectors for boiler room and mechanical room application shall be Simplex #4255-23 with fixed temperature rating 197°F. Rate-of-rise elements shall not be provided in high temperature (197°) detectors.
- G. Standby battery shall be lead-calcium grid, lead-acid type in transparent plastic container. The battery shall not generate corrosive gases, shall not be damaged by occasional excessive discharges and short circuits or occasional overcharging. Battery shall be sized to provide a minimum of 24 hours standby service for the entire system in which the battery is installed. Provide a suitable cabinet separate from the fire alarm control panel for the battery cells. Electrolyte level shall be visible without opening cabinet door.
- H. Provisions shall be incorporated in the fire alarm system to notify municipal or remote fire department of alarm utilizing leased telephone line.
- I. Provide auxiliary relays to shutdown air handling equipment and close smoke doors where these functions are indicated on the drawing.
- J. Annunciator shall be Simplex Type 4315 dead front, backlighted type for semi-flush mounting. Each zone indication shall be approximately 1-1/2" x 1-1/2" with eight zones per module. Zone indications shall be on separate film negatives. Custom zone designations shall be provided and these shall be approved by the school Principal. There shall be one lamp per zone indication. Each group of eight lamps shall be attached by a quick-connect harness to terminals mounted in the rear of the cabinet. Provide one lamp test switch inside the cabinet for each zone module. Provide remote trouble buzzer and lamp with silence switch, general alarm silence switch, system reset switch, and two step drill switch. All switches shall be key operated.

INSTALLATION:

- A. All wiring shall be in conduit and shall conform to the Basic Material and Methods Section of these Specifications. The installation of the fire alarm system equipment and wiring shall be in accordance with the fire alarm equipment manufacturer's recommendations, except that conductors shall not be smaller than #14 AWG. The wiring shall be color coded or marked for clear identification at each junction box and at the fire alarm control panel.
- B. The final system checkout and testing shall be performed by a representative of the manufacturer, especially trained in fire alarm testing and certification.

CITY CONNECTION:

- A. Furnish and install interface and transmitter equipment compatible with the local fire reporting system. Pay all required connection fees. Coordinate installation with the local fire department.

COMPLETION:

- A. Upon completion of the installation and checkout of the fire alarm system, the Electrical Contractor shall provide to the Architect or Owner a signed, written statement substantially in the form as follows:

The undersigned having been engaged as the Electrical Contractor on _____ confirms that the fire alarm system equipment was installed in accordance with the specifications and directions provided to us by the manufacturer.

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SECTION 1607
TELEVISION ANTENNA DISTRIBUTION SYSTEM

GENERAL:

- A. The work includes furnishing all apparatus, labor, and materials necessary for the installation of a complete television Master Antenna Distribution System. All work shall be accomplished with competent mechanics.

SYSTEMS, FUNCTIONS AND CAPABILITIES:

- A. The system shall provide for reception of all UHF/VHF channels within a 75 mile radius.
- B. The single antenna site shall provide for reception of indicated channels for the entire system.
- C. The system, as installed, shall be capable of passing standard color TV signals without the introduction of noticeable effects on color fidelity and intelligence.
- D. The system and all equipment shall be rated and capable of continuous 24-hour operation.
- E. Basic system components shall be as described on the drawings.

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SECTION 1608
EMERGENCY GENERATOR

GENERAL:

- A. The installation of a standby electric power system shall include an ONAN 150-ODYG-15R Series electric generating set rated for continuous standby service at 150 KW, 187.5 KVA at 0.8 PF, 60 hertz. The system shall be a package of new and current equipment consisting of:
1. A diesel engine driven electric generating set to provide standby power.
 2. An engine start-stop control system mounted on the generating set.
 3. An automatic load transfer control to provide automatic starting and stopping of the engine and switching of the load.
 4. Mounted accessories as specified.
- B. This system shall be built, tested and shipped by the manufacturer of the alternator so there is one source of supply and responsibility. The performance of this generating set series shall be certified by an independent testing laboratory as to the set's full power rating, stability and voltage and frequency regulation.
- C. This standby electric power system, furnished completely by the manufacturer, shall be warranted for a period of five years from the date of installation.

ENGINE:

- A. The engine shall be diesel fueled, four-cycle, water-cooled with mounted radiator, fan and water pump. It shall have six (6) cylinders and a minimum displacement of 844 cubic inches, with a minimum rating of 276 bhp at its operating speed of 1800 RPM. Intake and exhaust valves shall be heat resisting alloy steel. Free rotating, exhaust valves. Exhaust valve seat inserts shall be provided. Full pressure lubrication shall be supplied by a positive displacement lube oil pump. The engine shall have air cleaner, fuel and oil filters with replaceable elements, and a fuel transfer pump. Engine speed shall be governed by a mechanical governor to maintain alternator frequency within 5 percent from no-load to full-load alternator output. The engine shall have a 24 volt battery charging DC alternator with a transistorized voltage regulator. Remote, 2-wire starting shall be by a 24 volt solenoid shift, electric starter.

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ENGINE INSTRUMENTS: The engine instrument panel shall contain an oil pressure gauge, coolant temperature gauge, and battery charge rate ammeter.

ENGINE CONTROLS: The generating set shall contain a complete engine start-stop control which starts engine on closing contact and stops engine on opening contact. A cranking limit shall be provided to open the starting circuit in approximately 45 to 90 seconds if the engine is not started within that time. The engine controls shall also include a 3-position selector switch with the following positions: RUN-STOP-REMOTE. High engine temperature low oil pressure, and overspeed shutdown with signal light and alarm terminals shall also be provided.

BRUSHLESS ALTERNATOR: The alternator shall be a 4-pole revolving field design with temperature compensated solid state voltage regulator and brushless rotating rectifier exciter system. No brushes shall be allowed. The stator shall be directly connected to the engine flywheel housing, and the rotor shall be driven through a semi-flexible driving flange to insure permanent alignment. The insulation system shall be Class "F" as defined by NEMA MCI-1.65. The three phase, broad range alternator shall be 12 lead, reconnectible. Output voltage shall be 120/208, 3 phase, 4 wire.

UNIT PERFORMANCE: Frequency regulation shall not exceed 3 hertz from no load to rated load. Voltage regulation shall be within plus or minus 2 percent of rated voltage, from no load to full rated load. The instantaneous voltage dip shall be less than 18 percent of rated voltage when full, 3 phase, load and rated power factor is applied to the alternator. Recovery to stable operation shall occur within 2 seconds. Stable or steady state operation is defined as operation with terminal voltage remaining constant within plus or minus 1 percent of rated voltage. A rheostat shall provide a minimum of plus or minus 5 percent voltage adjustment from rated value. Temperature rise shall be within NEMA MGI-22.40 definition.

ALTERNATOR INSTRUMENT PANEL: The alternator instrument panel shall be wired, tested and shock mounted on the generating set by the manufacturer of the alternator. It shall contain panel lighting; manual reset circuit breaker; frequency meter; running time meter; voltage adjusting rheostat; AC voltmeter (dual range-indicates all voltages); AC ammeter (dual range-indicates current each phase); meter switch, voltmeter-ammeter phase selector with OFF position. Single phase instrumentation includes voltmeter, two ammeters and no selector switch.

GENERATING SET MOUNTING: The electric generating set shall be equipped with vibration isolators and mounted on a welded steel base which shall provide suitable mounting to any level surface.

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HOUSING: A complete generating set shall be suitable for locating in Equipment Room.

ACCESSORIES: All accessories needed for the proper operation of the generating set shall be furnished. These shall include a muffler, flexible exhaust connection, starting batteries, battery cables, battery rack, fuel tank and lines, and detailed operation and maintenance manuals with parts list.

AUTOMATIC LOAD TRANSFER CONTROL:

A. The complete automatic load transfer control shall be designed, built and tested by Automatic Switch Co., or approved equal. The load transfer control shall be rated for continuous duty and for all classes of load. The ampere rating of the transfer switch shall be sufficient to handle the capacity of the loads being transferred. The control components shall be compatible with the electrical requirements of the standby set and provide the following functions:

1. Upon power line outage automatically start the generating set and when the set comes up to speed and voltage, disconnect the load circuits from the power line and transfer them to the standby set's output.
2. Upon power line return, transfer the load back to the line and stop the standby set.

REMOTE ANNUNCIATOR PANEL: The Contractor shall furnish a remote annunciator panel located as indicated on the drawings. This panel shall comply with Section 700-12 of the NEC and NFPA Bulletin 76C.

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SECTION 1609
LIGHTNING PROTECTION SYSTEM

- A. Furnish and install a complete lightning protection and common grounding system as shown on the drawings and herein specified. System shall be in compliance with provisions of the Lightning Protection Institute's Installation Code LPI-175, the NFPA Code 78, and Master Label provisions of the UL Bulletin 96A. The system shall be installed under the direct supervision of a Certified Master Installer.
- B. System materials shall be the standard product of a manufacturer regularly engaged in the production of lightning protection systems. Materials shall comply in weight, size and composition for the Class Codes. The system shall consist of all necessary cables, air terminals, mounting bases, fittings, couplings, connectors, fasteners, etc. as required to give a complete and coordinated system. All cable and all air terminals used shall bear UL label. Materials shall generally be aluminum on the roof, and copper for downleads and groundings.
- C. All fittings, cable connectors, etc. shall utilize pressure type connectors having bolts and screws to maintain tightness throughout the life of the system. All bolts, screws, and related type hardware shall be stainless steel.
- D. Complete shop drawings shall be submitted to the Architect for approval prior to start of work. If any departures of consequence from the approved shop drawings are deemed necessary by the Contractor, details thereof shall be submitted and approval obtained, before work is resumed and completed.
- E. System conductors shall be concealed wherever practical. Downleads shall be concealed within the building walls or columns with roof cable penetrations made utilizing approved thru-roof connectors with copper pitch boxes.
- F. Bonding of all metallic objects and systems at roof levels and elsewhere on the structure shall be complete. Primary bonds for metal bodies of conductance shall be with appropriate fittings and full size conductors, and shall consist of but not be limited to the following:
 - 1. Roof exhaust fans, HVAC units with related piping and ductwork, plumbing vents and any other roof piping systems, roof ladders, antenna mast for TV, metal stacks, etc.

MISC. 39:AGE 1725

- G. Metal bodies of inductance located within six feet of a conductor or object with primary bond, shall be bonded with secondary cable and fittings. Typical of these are:
1. Roof flashings, parapet coping caps, gravel guards, isolated metal building panels or siding, roof drains, down spouts, roof ventilators, exterior balcony handrails, lower level sizeable miscellaneous metals, etc.
- H. Ground connections to earth shall be made with 3/4" x 10' long copperclad ground rods and shall be driven to a minimum depth of 12' or more as necessary to reach permanent moisture. In addition to artificial grounding, one ground shall be connected with full-size conductor to the water system at the point at which the water source enters the building, ahead of the water meter. Also, provide common ground connection between the lightning protection system and electric and telephone systems, and all underground metal piping systems including gas and sewer piping.
- I. Installation of the system shall be certified as correct in accordance with these specifications. Master installer shall certify, in writing, on Form LPI-175A covering job site witness of grounding connections, and at completion of job on Form LPI-175B covering post-installation inspection that system is complete as specified. Contractor shall furnish Owners with above Certificates of LPI Code Compliance, together with UL Master Label "C" certificates. Job will not be accepted without these certificates.

"Supplement Number One"

Larry M. Jacobs & Associates, Inc.

Engineering Testing

June 30, 1981

File #81-150

REPORT OF
SUBSURFACE INVESTIGATION
FOR THE PROPOSED
BRETT-ROBINSON CONDOMINIUM UNITS
GULF SHORES, ALABAMA

MSC. 39 AGE 1728

FOR: Mr. Tillis Brett (1)
Brett-Robinson
1090 Industrial Parkway
Saraland, Alabama 36571

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MISC. 39 AGE 1729

INTRODUCTION

This report forwards the results of our recent Subsurface Investigation for the proposed Brett-Robinson Condominium Units, Gulf Shores, Alabama. Our investigation consisted of four 90 foot deep Standard Penetration Test borings, laboratory tests on selected soil samples, and a site visit, inspection of the samples, and analysis by our engineering staff.

We recommend that the building be established on 18" prestressed driven piles. We have roughly estimated that the piles will reach bearing at 37-49 feet below existing grade.

SITE AND STRUCTURAL INFORMATION

This site is located east of the Island Winds Condominium project on the Gulf of Mexico, Gulf Shores, Alabama. The site is relatively flat and roughly elevation +5 feet in the building area.

The structure will be 8 storys. Eighteen inch piles will be used as columns for most locations with loadings of 300⁺ kips. Some 16" piles will be used for stair wells and lightly loaded areas. Several shear walls will be present where additional piles will be used for lateral resistance only.

SUBSURFACE CONDITIONS

Figure #1 shows the boring location plan and figure #2 shows the individual logs of boring. The site was underlain by medium dense or loose sand, sand with organics, and sand with small clay seams to a depth of 27-28 feet. At this depth soft clay, loose clayey sand, and some interbedded sand layers were encountered. These soft soils were generally erratic among the borings. Dense sand or silty sand soils were encountered below these erratic soils

MSC. 39 AGE 1730

at depths varying from 35-47 feet. The dense soils loosened to medium dense roughly 6-10+ feet into the stratum to a depth of roughly 65-70 feet where very dense soils were encountered which were present to the bottom of the borings at 90 feet below existing grade.

Water Content, Sieve Analysis, and Wash #200 Sieve Tests were run on selected soil samples to classify the soils and generally evaluate their material properties. The results of these tests are shown on the logs of boring opposite the samples tested and on Figure #3.

Ground water levels were not measured at the time of drilling, but normally run slightly above the Gulf level. This level will vary with the tide and rainfall.

DISCUSSION AND RECOMMENDATIONS

Driving the piles just into the dense sands encountered from 35-47 feet below existing grade will result in varied pile lengths; however, substantial savings in foundation costs should be realized as the other alternative is to establish the piles in the very dense sands present roughly 55-65 feet below existing grade. Establishing the piles in this upper dense layer will result in slightly erratic settlements due to the underlying medium dense soils. However, we understand from previous discussion on the adjacent structure that the building is quite rigid in the north to south direction and not overly sensitive to differential settlement in the east-west direction. The piles should be jettied to 3-4 feet above the expected bearing level and driven to bearing as determined by the Hiley Formula with a minimum dynamic factor of safety of 2. Table #1 below shows the estimated pile lengths at each of the 4 borings for 18" piles at roughly 300 kip loadings.

TABLE #1

<u>Boring #</u>	<u>Estimated Bearing Depth</u>
1	49'
2	40'
3	41'
4	37'

Allowable loadings of 90 tons should be conservative for 16" piles at these depths.

There is a possibility in isolated areas that sufficiently dense sand may not be present to develop the 300+ kip loadings, and the pile may drive through the relatively thin bearing layer. If this does occur, significantly longer piles could be required at some locations while others may just require several feet of additional driving. In the event that a pile does not take up and must be driven into the dense sand at 55-65 feet, a prestressed pile splice could be made which would allow the pile to be driven in a timely manner. Piles which do take up within the originally planned exposed length can be spliced by forming the additional length as necessary.

Some piles will be placed for lateral resistance which will have little or no vertical loadings. The tips of these piles should be placed just into the medium dense to dense sand at roughly 35-47 feet below existing grade. Rough calculations assuming a point of fixity about 12 feet below grade and a cantilever pile at that point will give a reasonable approximation of the average ultimate lateral capacity of the pile. Some allowance for scour should be included in the grade elevation used for calculations as 2-3 feet of soil will be unstable during hurricane conditions, with possibly deeper scour at shear wall locations. Grade beams for any walls should be placed as deep as practical to minimize their exposure to wave action. Piles

MISC. 39 PAGE 1732

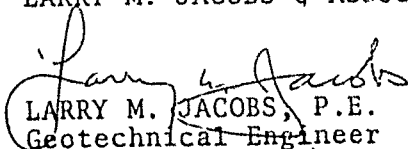
placed for lateral resistance should have minimal jetting as densification of the sands surrounding the piles is necessary to increase lateral resistances.

We recommend that at least 10 test piles be driven at permanent pile locations at the start of driving to get a good evaluation of the pile lengths required and develop the jetting and driving criterion for the piles. The actual loadings for each pile should be known so that the minimum dynamic resistances can be determined for each pile in the event that "soft" areas are present where the piles have not obtained as high a resistance as desired. The length of these piles normally needs to be estimated within roughly 3 feet for cut-off purposes which should not be a problem. Adding length should be expected, is practical, and the design should facilitate splicing, if necessary. We will be happy to determine the driving criteria (blows/foot) required when the equipment to be used on the site is known. The pile hammer should have a minimum energy of roughly 40,000 ft-lb. We will need to be on the site during the test pile driving to evaluate the results and establish pile length requirements.

We hope this report provides sufficient information for design. Please feel free to call us if you have any questions or comments, as we will be happy to discuss the project with you.

Very truly yours,

LARRY M. JACOBS & ASSOCIATES, INC.


LARRY M. JACOBS, P.E.
Geotechnical Engineer
Alabama Reg. #10786

LMJ/kls

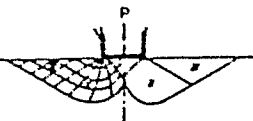
cc: Mr. John Senkarik, AIA (3)

HSC. 33-AGE 1733

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LOG OF BORING

PROJECT: BORING LOG KEY

JOB NO.:

ELEVATION:

BORING NO.:

TYPE BORING:

DATUM:

LOCATION:

DATE:

GR. WATER:

MSJ. 39-AGE 1734

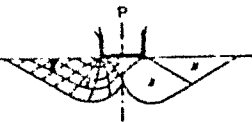
DEPTH IN FEET	LOG	DESCRIPTION	SAMPLE NO.	S.P.T.		W.C. %	ATTERBERG LIMITS		% MINUS #200	SHEAR STRENGTH	Visual U/S
				N _f	N _c		L.L.	P.L.			
		SAND		N _f - Field hammer blows from penetration test borings	N _c - Overburden correction in cohesionless soil only	W.C.-Natural water content	L.L.-Liquid limit test results	P.L.-Plastic limit test results	% Passing the #200 Sieve		Visual Unified Soils classifications - All soils classifications are visual unless test results are shown.
		SILT									
		CLAY									
		PEAT OR ORGANICS									
		WATER TABLE									
☐ Sample taken at this depth ☐ UD-Undisturbed sample ☒ UD-Undisturbed sample ☐ NR-No Return											

REMARKS:

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MISC. 38-10E 1735

LOG OF BORING

PROJECT: BORING LOG KEY

JOB NO.:

ELEVATION:

BORING NO.:

TYPE BORING:

DATUM:

LOCATION:

DATE:

GR. WATER:

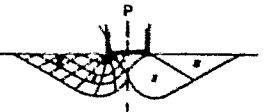
DEPTH IN FEET	LOG	DESCRIPTION	SAMPLE NO.	S.P.T.		W.C. %	ATTERBERG LIMITS			% MINUS #200	SHEAR STRENGTH	Visual U/S
				N _f	N _c		L.L.	P.L.				
		SAND		N _f - Field hammer blows from penetration test borings N _c - Overburden correction in cohesionless soil only		W.C.-Natural water content	L.L.-Liquid limit test results P.L.-Plastic limit test results			% Passing the #200 Sieve		Visual Unified Soils classifications - All soils classifications are visual unless test results are shown.
		SILT										
		CLAY										
		PEAT OR ORGANICS										
		WATER TABLE										
	☐	Sample taken at this depth										
	☐	UD-Undisturbed sample										
	☐	UD-Undisturbed sample										
	☒	NR-No Return										

REMARKS:

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HSC. 39-AGE 1736

LOG OF BORING

Brett-Robinson,
PROJECT: Condominium Units

JOB NO.: 81-150

ELEVATION: N/A

BORING NO.: B-1

TYPE BORING: ASTM D1586

DATUM: Existing Grade

LOCATION: As per sketch

DATE: 5/28/81

GR. WATER: Not measured

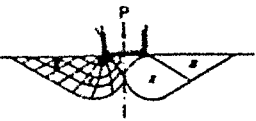
DEPTH IN FEET	LOG	DESCRIPTION	SAMPLE NO.	S.P.T.		W C %	ATTERBERG LIMITS		UNIT WT pcf	% MINUS #200	SHEAR STRENGTH	Visual U/S
				N _i	N _c		L.L.	P.I.				
0			1	12								
5		Medium gray sand	2	16								SP
10		Dark gray med. sand w/organics and small seam of black clay	3	10								SP/SM
15			4	5								
20		Medium gray sand	5	22								SP
25			6	31								
30		Dark gray silty clay	7	3								OH
35		Gray sand	8	16								SP
40		Marine clay	9	4								OH
45		Gray slightly silty sand	10	3								SP/SM
50		Gray slightly silty sand	11	100+								SP/SM
55		Multicolored silty sand	12	15		20.8				13.0		SM
60			13	36								
65			14	56								
70		Dense sand	15	100+								SP
75			16	100+								
80			17	100+								

REMARKS: All soils classifications are visual unless test results are shown.

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HISC. 39-10E 1737

Brett-Robinson,
PROJECT: Condominium Units
BORING NO.: B-1 cont., B-2
LOCATION: As per sketch

LOG OF BORING

JOB NO.: 81-150
TYPE BORING: ASIM D1586
DATE: As noted

ELEVATION: N/A
DATUM: Existing Grade
GR WATER: Not measured

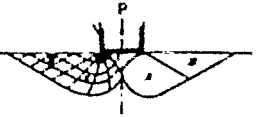
DEPTH IN FEET	LOG	DESCRIPTION	SAMPLE NO.	S.P.T.		W.C %	ATTERBERG LIMITS		UNIT WT pcf	% MINUS #200	SHEAR STRENGTH	Visual U/S
				N ₁	N _c		L.L.	P.I.				
80	...	B-1 cont., drilled 5/28/81										
85	...	Dense sand	18	100+								SP
90	...											
		B-2 drilled 5/29/81										
0	...	White or gray sand w/traces of organics	1	7								SP
5	...		2	10								
10	...		3	24								
15	...		4	13								
20	...		5	12								
25	...		6	14								
30	...	Sandy clay mixture	7	6								OH/SM
35	...	Marine clay	8	6								OH
40	...	Gray silty sand	9	40								SM
45	...		10	25								

REMARKS: All soils classifications are visual unless test results are shown.

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M.S.C. 39-16 1738

LOG OF BORING

PROJECT: Brett-Robinson,
Condominium Units

JOB NO.: 81-150

ELEVATION: N/A

BORING NO.: B-2 cont.

TYPE BORING: ASTM D1586

DATUM: Existing Grade

LOCATION: As per sketch

DATE: 5/29/81

GR. WATER: Not measured

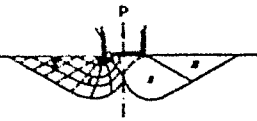
DEPTH IN FEET	LOG	DESCRIPTION	SAMPLE NO.	S.P.T.		W.C. %	ATTERBERG LIMITS		UNIT WT pcf	% MINUS #200	SHEAR STRENGTH	Visual U/S
				N _f	N _c		L.L.	P.I.				
45												
50		Gray silty sand	11	30								
55			12	15		18.3				9.7		SP/SM
60			13	17		21.0				14.1		or SM
65			14	30								
70			15	100+								
75		Dense sand	16	100+								SP
80			17	100+								
85			18	100+								
90			19	100+								

REMARKS: All soils classifications are visual unless test results are shown.

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HIST. 33 JUL 1989

LOG OF BORING

PROJECT: Brett-Robinson,
Condominium Units

JOB NO.: 81-150

ELEVATION: N/A

BORING NO.: B-3

TYPE BORING: ASTM D1586

DATUM: Existing Grade

LOCATION: As per sketch

DATE: 6/2/81

GR. WATER: Not measured

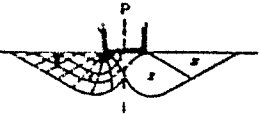
DEPTH IN FEET	LOG	DESCRIPTION	SAMPLE NO.	S.P.T.		WC %	ATTERBERG LIMITS		UNIT WT pcf	% MINUS #200	SHEAR STRENGTH	Visual U/S
				N ₁	N _c		L.L.	P.I.				
0			1	12								
5		Medium gray sand	2	10								SP
10			3	29								
15			4	11								
20			5	9								
25			6	16								
30		Gray silty sandy clay	7	9								OH
35		Gray marine clay	8	5								OH
40			9	37								
45		Silty sand	10	25		22.0				14.4		SM
50			11	33								
55			12	17		19.9				9.7		
60			13	16		19.2				13.5		
65			14	33								
70			15	100+								
75		Dense sand	16	100+								SP
80			17	100+								

REMARKS: All soils classifications are visual unless test results are shown.

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H.S.C. 33-416 17740

LOG OF BORING

 PROJECT Brett-Robinson
Condominium Units

JOB NO. 81-150

ELEVATION N/A

BORING NO. B-3 cont., B-4

TYPE BORING: ASTM D1586

DATUM: Existing Grade

LOCATION: As per sketch

DATE: As noted

GR. WATER: Not measured

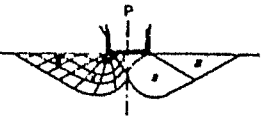
DEPTH IN FEET	LOG	DESCRIPTION	SAMPLE NO.	S.P.T.		WC %	ATTERBERG LIMITS		UNIT WT pcf	% MINUS #200	SHEAR STRENGTH	Visual U/S
				N ₁	N _c		LL	PI				
80		B-3 cont., drilled 6/2/81										
85		Dense sand	18	100+								SP
90			19	100+								
0		B-4 drilled 5/25/81										
5		Medium gray sand	2	14								SP
10			3	4								
15		Dark gray sand	4	6								SP/SM to SP
20			5	17								
25			6	33								
30		Silty clay	7	2								ML/OL
35		Silty clay sand	8	55								SC
40		Sand	9	100+								SP
45			10	18		22.9				13.8		
50		Silty sand	11	36								SM
55												

REMARKS: All soils classifications are visual unless test results are shown.

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LOG OF BORING

PROJECT: Brett-Robinson
Condominium Units

JOB NO. 81-150

ELEVATION: N/A

BORING NO.: B-4 cont.

TYPE BORING: ASTM D1586

DATUM: Existing Grade

LOCATION: As per sketch

DATE: 5/25/81

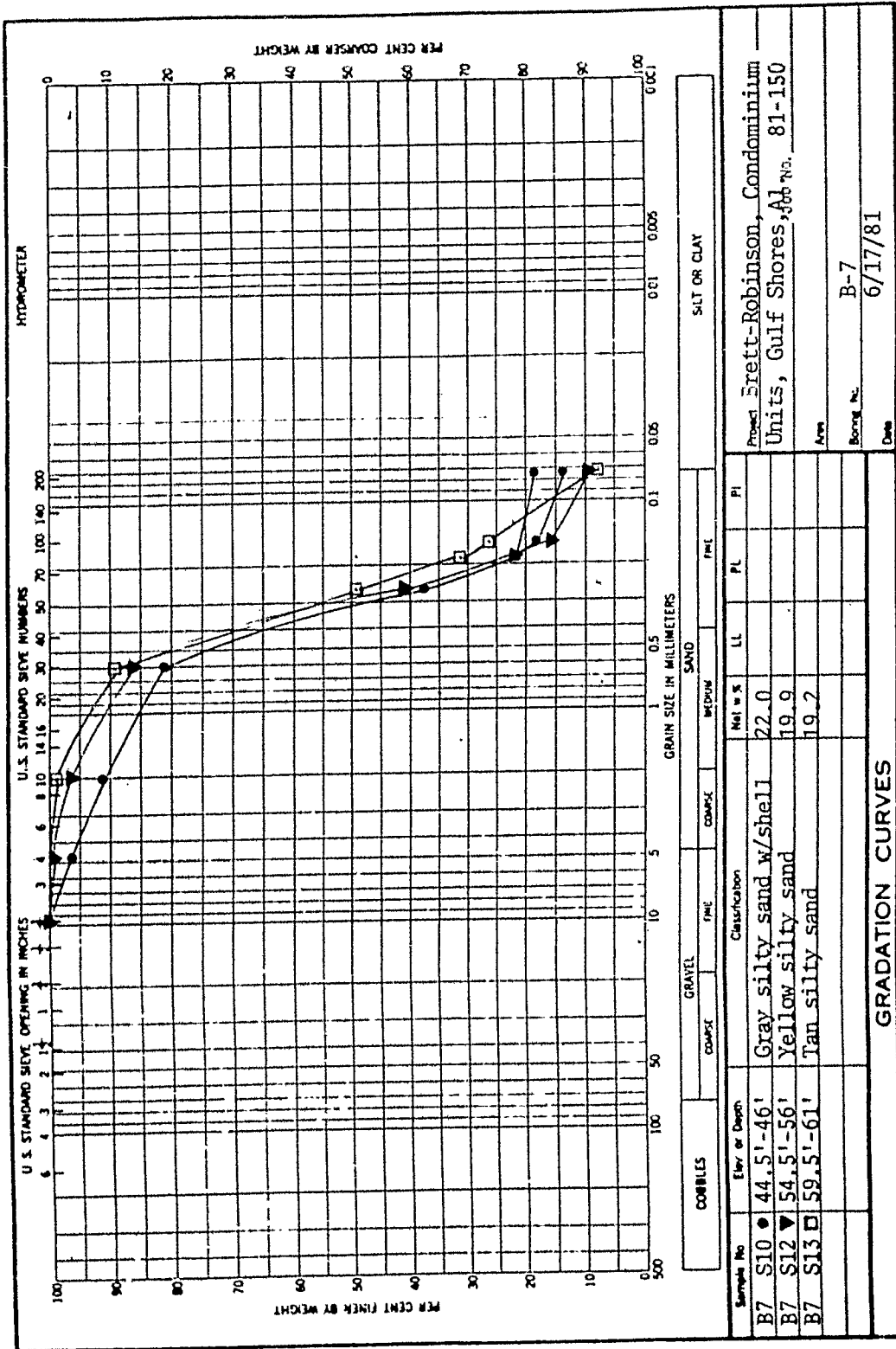
GR. WATER: Not measured

DEPTH IN FEET	LOG	DESCRIPTION	SAMPLE NO.	S.P.T.		W.C. %	ATTERBERG LIMITS		UNIT WT. pcf	% MINUS #200	SHEAR STRENGTH	Visual U/S
				N _i	N _c		L.L.	P.I.				
55			12	33								
60		Dense sand	13	45								SP
65			14	59								
70			15	84								
75			16	100								
80			17	100+								
85			18	100+								
90			19	100+								

MISC. 39/4GE 1791

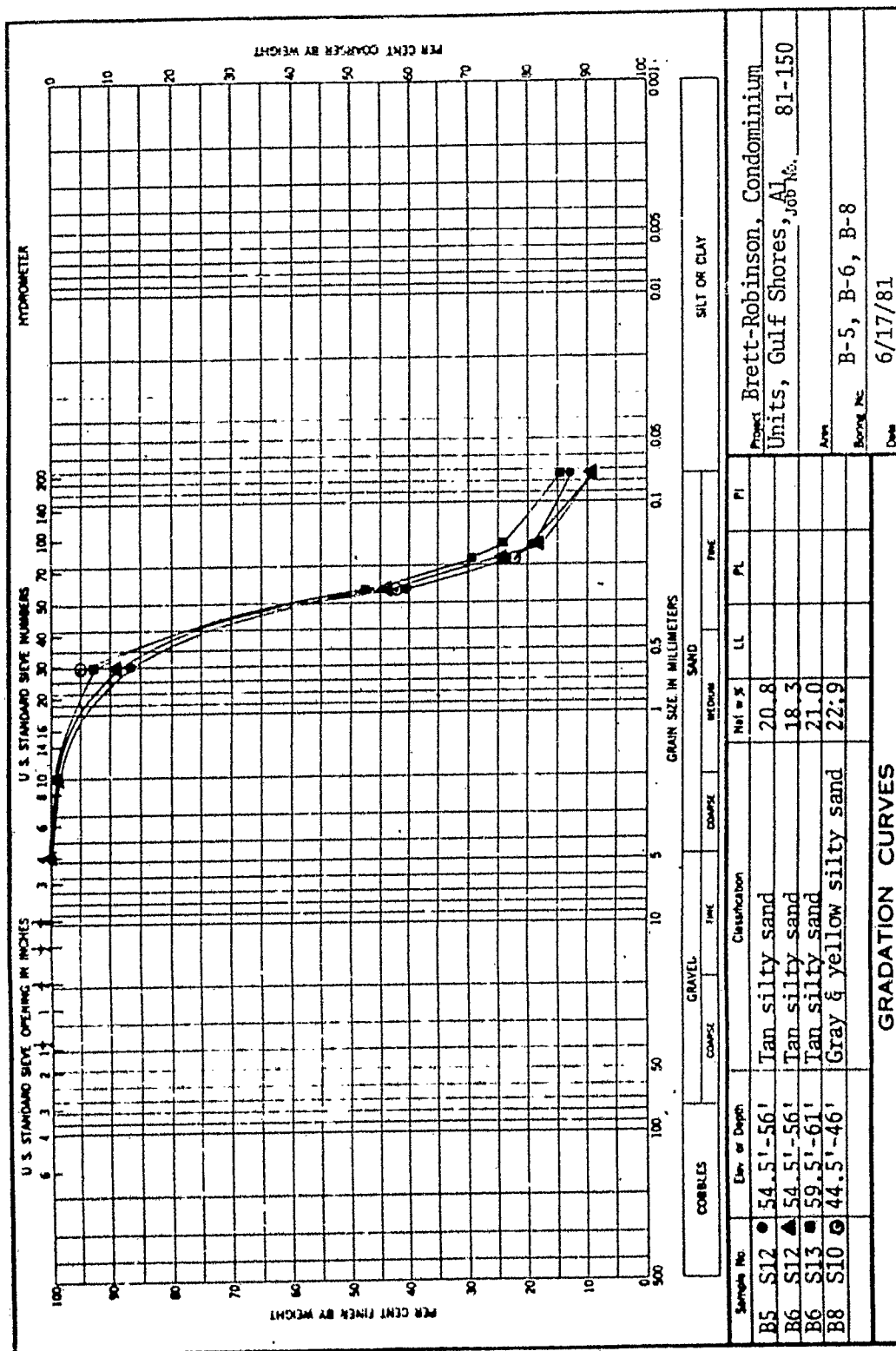
REMARKS: All soils classifications are visual unless test results are shown.

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 328 East Gadsden Street
 Pensacola, Florida 32501
 (904) 434-0846



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 328 East Gadsden Street
 Pensacola, Florida 32501
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FIGURE #3

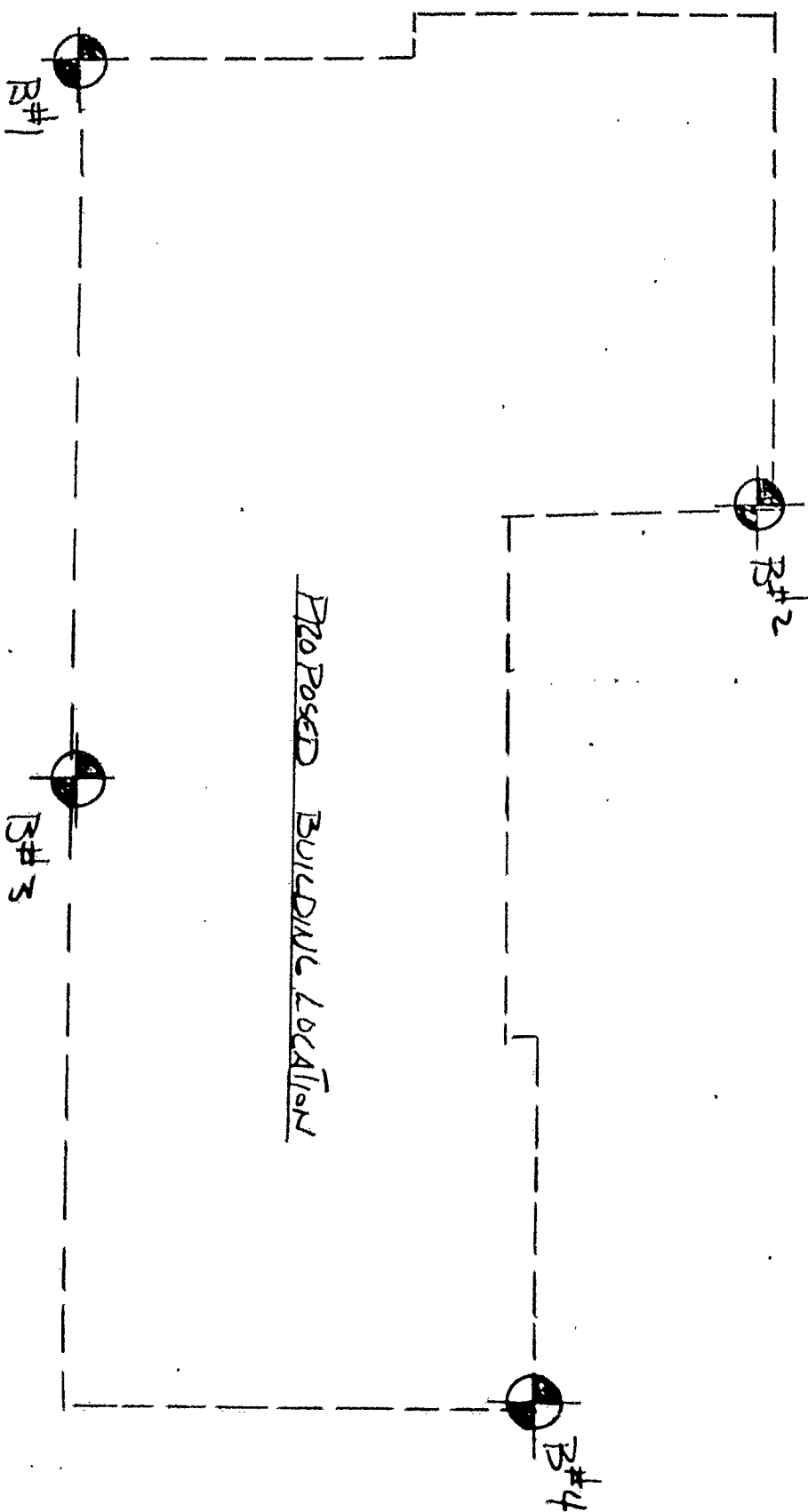


MSC. 39 AGE 1743

BORINGS LOCATION PLAN

SCALE 1"=20'

FIGURE #1



PROPOSED BUILDING LOCATION

NOTE: BORINGS WERE LOCATED BY APPROXIMATE
FIELD METHODS.

EXHIBIT B

SCHEDULE OF UNDIVIDED INTERESTS

OF

ISLAND WINDS EAST, a Condominium

<u>Unit</u>	<u>Percent</u>	<u>Unit</u>	<u>Percent</u>	<u>Unit</u>	<u>Percent</u>
1A1	1.583980488	6B2	1.053847635	1D9	1.144984275
1A11	1.583980488	6B3	1.053847635	2D9	1.144984275
2A1	1.583980488	6B7	1.053847635	3D9	1.144984275
2A11	1.583980488	6B8	1.053847635	4D9	1.144984275
3A1	1.583980488	6B10	1.053847635	5D9	1.144984275
3A11	1.583980488	7B2	1.053847635	6D9	1.144984275
4A1	1.583980488	7B3	1.053847635	7D9	1.144984275
4A11	1.583980488	7B7	1.053847635	8D9	1.144984275
5A1	1.583980488	7B8	1.053847635		
5A11	1.583980488	7B10	1.053847635	Garage	
6A1	1.583980488	8B2	1.053847635	Unit	
6A11	1.583980488	8B3	1.053847635	G1	.296514987
7A1	1.583980488	8B7	1.053847635	G2	.296514987
7A11	1.583980488	8B8	1.053847635	G3	.296514987
8A1	1.583980488	8B10	1.053847635	G4	.296514987
8A11	1.583980488			G5	.296514987
		1C4	.662345161	G6	.296514987
1B2	1.053847635	1C6	.662345161	G7	.296514987
1B3	1.053847635	2C4	.662345161	G8	.296514987
1B7	1.053847635	2C5	.662345161	G9	.296514987
1B8	1.053847635	2C6	.662345161	G10	.296514987
1B10	1.053847635	3C4	.662345161	G11	.480071882
2B2	1.053847635	3C5	.662345161	G12	.296514987
2B3	1.053847635	3C6	.662345161	G13	.296514987
2B7	1.053847635	4C4	.662345161	G14	.296514987
2B8	1.053847635	4C5	.662345161	G15	.296514987
2B10	1.053847635	4C6	.662345161	G16	.296514987
3B2	1.053847635	5C4	.662345161	G17	.296514987
3B3	1.053847635	5C5	.662345161	G18	.296514987
3B7	1.053847635	5C6	.662345161	G19	.404338618
3B8	1.053847635	6C4	.662345161	G20	.404338618
3B10	1.053847635	6C5	.662345161	G21	.296514987
4B2	1.053847635	6C6	.662345161	G22	.296514987
4B3	1.053847635	7C4	.662345161	G23	.296514987
4B7	1.053847635	7C5	.662345161	G24	.296514987
4B8	1.053847635	7C6	.662345161	G25	.296514987
4B10	1.053847635	8C4	.662345161	G26	.296514987
5B2	1.053847635	8C5	.662345161		
5B3	1.053847635	8C6	.662345161		
5B7	1.053847635				
5B8	1.053847635				
5B10	1.053847635				

EXHIBIT C

BY-LAWS

OF

ISLAND WINDS EAST ASSOCIATION, INC.

1. IDENTITY.

These are the By-Laws of ISLAND WINDS EAST ASSOCIATION, INC., an association organized pursuant to the "Condominium Ownership Act," Act No. 1059, 1973 Regular Session, Alabama Legislature (Title 47, Sec. 313(1), et seq., Code of Alabama Recompiled, as amended), for the purpose of administering ISLAND WINDS EAST, a condominium, located in the Town of Gulf Shores, Baldwin County, Alabama.

.1. The office of the Association shall be at Highway 182, P. O. Box 159, Gulf Shores, Alabama 36542.

.2. The fiscal year of the Association shall be such as may from time to time be established by the Association.

2. MEMBERS' MEETINGS.

.1. The first meeting of the unit owners to organize the Association shall be held within thirty (30) days after the Developer has sold and conveyed title to eighty (80%) percent of the units, and in no event later than February 1, 1986, at which time the Board of Directors designated by the Developer shall resign and all of the unit owners, including the Developer if then a unit owner, shall elect a new Board of Directors.

.2. Thereafter the annual meetings of the unit owners shall be held at the office of the Association at 7:30 p.m., local time, on the third Friday in March of each year for the purpose of electing Directors and of transacting any other business authorized to be transacted by the members; provided, however, if that day is a legal holiday, the meeting shall be held at the same hour on the next day following that is not a legal holiday.

.3. Change of Date. The time of holding the annual meeting of members may be changed at any time prior to fifteen (15) days before the regular day for holding such meeting by a resolution duly adopted by the Board of Directors or by the members, provided that notice of such change be mailed to each member of record at such address as appears upon the records of the Association not less than ten (10) days before the holding of such meeting; and further provided that each annual meeting of members shall be held within one (1) month of the date on which it should regularly have been held but for such change.

.4. Special members' meetings shall be held whenever called by the President or Vice President or by a majority of the Board of Directors, and must be called by such officers upon receipt of a written request from members entitled to cast

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twenty-five (25%) percent of the votes in the Association.

.5. Notice of all members' meetings stating the time and place and the objects for which a meeting is called shall be given by the President or Vice President or Secretary unless waived in writing. Such notice shall be in writing to each member at his address as it appears on the books of the Association and shall be mailed not less than ten (10) days nor more than sixty (60) days prior to the date of the meeting. Proof of such mailing shall be given by the affidavit of the person giving the notice. Notice of meeting may be waived before or after meetings.

.6. Voting shall be on a percentage basis and the percentage of the vote to which a member is entitled is the percentage assigned to the unit of which the member is the owner, as stated in the Declaration of Condominium.

.7. A quorum at members' meetings shall consist of persons entitled to cast a majority of the votes of the entire membership. As used in these By-Laws, the term "majority" means fifty-one (51%) percent of the votes in accordance with the percentages assigned in the Declaration of Condominium.

.8. Proxies. Votes may be cast in person or by proxy. Proxies may be made by any person entitled to vote and shall be valid only for the particular meeting designated therein and must be filed with the Secretary before the appointed time of the meeting.

.9. Vote required to transact business. When a quorum is present at any meeting, the holders of a majority of the voting rights present in person or represented by written proxy shall decide any questions brought before the meeting, unless the question is one upon which, by express provision of the statutes, the Declaration of Condominium or the By-Laws, a different number is required, in which case the express provision shall govern and control the decision in question.

.10. Adjourned meetings. Any meeting of the Association may be adjourned from time to time to such date and time as may be determined by majority vote of the members present, whether a quorum be present or not, without notice other than the announcement at the meeting. At any adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted by a quorum at the meeting as originally called.

.11. The order of business at annual members' meetings and, as far as practical, at all other members' meetings, shall be:

- (a) Call to order,
- (b) Calling of the roll and certifying of proxies,
- (c) Proof of notice of meeting or waiver of notice,
- (d) Reading and disposal of any unapproved minutes,
- (e) Reports of officers,
- (f) Reports of committees,
- (g) Election of Directors,
- (h) Unfinished business,
- (i) New business,
- (j) Adjournment.

.12. Cumulative Voting shall not be permitted at any meeting of the owners.

.13. Proviso. Provided, however, that until the Developer of the condominium has completed and sold all of the units of the condominium or until February 1, 1986, or until Developer elects to terminate its control of the condominium, whichever shall first occur, there shall be no meeting of members of the Association unless a meeting is called by the Board of Directors; and provided, further, that until the Developer of the condominium has completed and sold eighty (80%) percent of the aggregate of all of the units of the condominium or until four (4) years after the date of the filing of a certificate by the Developer, or until Developer elects to terminate its control over the condominium, whichever shall first occur, there shall be no meeting of members of the Association unless a meeting is called by the Board of Directors.

3. BOARD OF DIRECTORS.

.1. Membership. The affairs of the Association shall be conducted by the Board of Directors which shall consist of such number not less than three (3) nor more than five (5), as shall, from time to time, be determined and fixed by a vote of a majority of the voting rights present at any annual meeting of the members. Each Director shall be an owner of a unit, except as provided in subparagraph .2.(d) below.

.2. Election of Directors shall be conducted in the following manner:

(a) Directors shall be elected at the annual meeting of the members of the Association.

(b) Except as to vacancies created by removal of Directors by members, vacancies in the Board of Directors occurring between annual meetings of members shall be filled by the remaining Directors.

(c) Any Director may be removed by concurrence of two-thirds (2/3) of the members of the Association at a special meeting of the members called for that purpose. The vacancy thus created shall be filled at the same meeting by the members of the Association in the same manner as was provided for the election of the removed Director.

(d) Provided, however, that until the Developer of the condominium has completed and sold all of the units of the condominium or until February 1, 1986, or until Developer elects to terminate its control of the condominium, whichever shall first occur, there shall be no meeting of members of the Association unless a meeting is called by the Board of Directors; and provided, further, that until the Developer of the condominium has completed and sold eighty (80%) percent of the aggregate of all of the units of the condominium or until two (2) years after the date of the filing of a certificate by the

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Developer, or until Developer elects to terminate its control over the condominium, whichever shall first occur, there shall be no meeting of members of the Association unless a meeting is called by the Board of Directors.

.3. The term of each Director's services shall extend until the next annual meeting of the members and thereafter until his successor is duly elected and qualified or until he is removed in the manner elsewhere provided.

.4. The organization meeting of a newly elected Board of Directors shall be held within ten (10) days of their election at such place and time as shall be fixed by the Directors at the meeting at which they were elected, and no further notice of the organization meeting shall be necessary, provided a quorum shall be present.

.5. Regular meetings of the Board of Directors may be held at such time and place as shall be determined, from time to time, by a majority of the Directors. Notice of regular meetings shall be given to each Director, personally or by mail, telephone or telegraph, at least three (3) days prior to the day named for such meeting.

.6. Special meetings of the Directors may be called by the President, and must be called by the Secretary at the written request of one-third (1/3) of the votes of the Board. Not less than three (3) days' notice of the meeting shall be given personally or by mail, telephone or telegraph, which notice shall state the time, place and purpose of the meeting.

.7. Waiver of notice. Any Director may waive notice of a meeting before or after the meeting, and such waiver shall be deemed equivalent to the giving of notice.

.8. A quorum at Directors' meetings shall consist of the Directors entitled to cast a majority of the votes of the entire Board of Directors. The acts of the Board approved by a majority of votes present at a meeting at which a quorum is present shall constitute the acts of the Board of Directors, except where approval by a greater number of Directors is required by the Declaration of Condominium or by these By-Laws. If at any meeting of the Board of Directors there be less than a quorum present, the majority of those present may adjourn the meeting from time to time until a quorum is present. At any adjourned meeting any business which might have been transacted at the meeting as originally called may be transacted without further notice. The joinder of a Director in the action of a meeting by signing and concurring in the minutes thereof shall constitute the presence of such Director for the purpose of determining a quorum.

.9. The presiding officer of Directors' meetings shall be the President. In the absence of the President, the Directors present shall designate one of their number to preside.

.10. Directors shall serve without compensation, and a Director may not be an employee of the Association.

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4. POWERS AND DUTIES OF THE BOARD OF DIRECTORS.

The Board of Directors, for the benefit of the owners, shall have the following powers and duties:

.1. To exercise all of the powers of the Association with respect to the operation and regulation of the condominium project which are conferred upon the Board by the Condominium Ownership Act or which may be conferred upon the Board by these By-Laws pursuant to such Act, and to exercise all of the powers of the Association which are conferred upon it by law and by its Articles of Incorporation.

.2. To make contracts and incur liabilities in connection with the exercise of any of the powers and duties of the Board.

.3. To provide or cause to be provided all goods and services required by the By-Laws or by law, or which the Board, in its discretion, deems necessary for the proper operation of the condominium project, or which are used in common or jointly by the common elements and condominium units, in each case to the extent such goods and services shall not be otherwise provided.

.4. To collect monthly assessments from the owners, and to render or cause to be rendered statements, when required or useful, of any assessments which remain unpaid by any owner.

.5. To maintain a class action, and to settle a cause of action, on behalf of owners with reference to the common elements, the roof and structural components of a building or other improvement, and mechanical, electrical and plumbing elements serving an improvement or a building as distinguished from mechanical elements serving only a unit; and to bring an action, and to settle the same, on behalf of two (2) or more of the owners, as their respective interests may appear, with respect to any cause of action relating to the common elements or more than one (1) condominium unit; all as the Board deems advisable.

.6. To elect the officers of the Association and otherwise exercise the powers regarding officers of the Association as set forth in these By-Laws.

.7. To determine who shall be authorized to make and sign all instruments on behalf of the Association and the Board.

.8. To employ a management agent or manager, at a compensation established by the Board, to perform such duties and services as the Board shall authorize, including, but not limited to, the duties listed in this Section, and any such duties so conferred upon the managing agent or manager by the Board of Directors may at any moment be revoked, modified or amplified by the majority of the votes in a duly constituted meeting.

.9. To designate and remove personnel necessary for the maintenance, repair and replacement of the common elements.

.10. To procure such property and other insurance of all kinds and such fidelity bonds as the Board deems advisable

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covering officers and employees of the Association handling and responsible for the Association's funds and personal property, and to procure Directors' and officers' liability insurance if the Board deems it advisable; and the premium of such bonds and insurance shall be paid by the Association as common expense.

.11. To determine policies and to adopt administrative rules and regulations governing the details of the operation and use of the condominium project, including the common elements, and to amend such administrative rules and regulations from time to time as the Board deems advisable.

.12. To designate, by resolution passed by a majority of the whole Board, one (1) or more committees to consist of two (2) or more of the Directors. Any such committee, to the extent provided in such resolution, shall have and may exercise all of the authority of the Board of Directors in the management of the business and affairs of the corporation, except where action of the full Board of Directors is required by law, the Articles of Incorporation, the Declaration, or the By-Laws.

.13. To designate, by resolution adopted by a majority of the Directors present at a meeting at which a quorum is present, or by the President thereunto duly authorized by a like resolution of the Board of Directors, other committees not having and exercising the authority of the Board of Directors in the management of the affairs of the corporation. Membership on such committees may but need not be limited to Directors or members of the Association.

.14. All committees so appointed shall keep regular minutes of the transactions of their meetings, and shall cause them to be recorded in books kept for that purpose in the office of the Association, and shall report the same to the Board of Directors at the next meeting of such Board.

5. OFFICERS.

.1. The executive officers of the Association shall be a President, who shall be a Director; a Vice President, who shall be a Director; a Treasurer and a Secretary, all of whom shall be elected annually by the Board of Directors and who may be peremptorily removed by vote of the Directors at any meeting. Any person may hold two (2) or more offices except that the President shall not also be the Secretary. The Board of Directors shall from time to time elect such other officers and designate their powers and duties as the Board shall find to be required to manage the affairs of the Association.

.2. The President shall be the chief executive officer of the Association. He shall have all of the powers and duties which are usually vested in the office of president of an association.

.3. The Vice President shall, in the absence of or disability of the President, exercise the powers and perform the duties of the President. He shall also generally assist the President and exercise such other powers and perform such

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other duties as shall be prescribed by the Directors.

.4. The Secretary shall keep the minutes of all proceedings of the Directors and the members. He shall attend to the giving and serving of all notices to the members and Directors and other notices required by law. He shall have custody of the seal of the Association and affix the same to instruments requiring a seal when duly signed. He shall keep the records of the Association, except those of the Treasurer, and shall perform all other duties incident to the office of the secretary of an association as may be required by the Directors or the President.

.5. The Treasurer shall have custody of all property of the Association, including funds, securities, and evidence of indebtedness. He shall keep the financial records and books of account of the Association in accordance with good accounting practices; shall keep detailed, accurate records in chronological order of the receipts and expenditures affecting the common areas and facilities, specifying and itemizing the maintenance and repair expenses of the common areas and facilities and any other expenses incurred; and he shall perform all other duties incident to the office of Treasurer. The records, books of account, and the vouchers authorizing payments, shall be available for examination by a member of the Association at convenient hours of weekdays.

6. FISCAL MANAGEMENT.

.1. Budget. The Board of Directors shall determine the common expenses of the Association and adopt a budget for each calendar year of such estimated common expenses, including a reasonable allowance for contingencies and reserves, less the unneeded fund balances on hand. Copies of the budget and proposed assessments shall be transmitted to each member on or before December 20th preceding the year for which the budget is made. If the budget is subsequently amended before the assessments are made, a copy of the amended budget shall be furnished each member. Delivery of a copy of the budget to each owner shall not affect the liability of any owner for any existing or future assessments.

.2. Assessments for Recurring Expenses. Assessments for recurring common expenses shall be made for the calendar year annually in advance, on or before December 20th preceding the year for which the assessments are made. The Board may include a Maintenance Fund Reserve for contingencies in such assessments, and such Maintenance Fund reserve may from time to time be increased or reduced at the discretion of the Board. The proportionate interest of each unit owner in said Fund cannot be withdrawn or separately assigned but shall be deemed to be transferred with such unit even though not expressly mentioned or described in the conveyance thereof. In case the condominium regime hereby created shall be terminated and the property removed from the Condominium Ownership Act, any part of the said Fund remaining after full payment of all common expenses of the Association shall be distributed to all unit owners in their respective proportionate shares. Such assessments shall be due in monthly installments on the 1st day of

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each month of the year for which the assessments are made. If such annual assessment is not made as required, an installment in the amount required by the last prior assessment shall be due upon each installment payment date until changed by a new assessment. The total of the assessments for recurring common expenses shall be not more than one hundred twenty (120%) percent of the assessments for this purpose for the prior year unless approved in writing by unit owners entitled to cast a majority of the votes in the Association. In the event such an annual assessment proves to be insufficient, it may be amended at any time after approval in writing by unit owners entitled to cast a majority of the votes in the Association, and the amended assessment for the remaining portion of the calendar year shall be due at the time the next monthly installment is due. The first assessment shall be determined by the Board of Directors of the Association.

.3. Assessments for capital improvements. Upon written notice to all the unit owners and upon approval in writing by unit owners entitled to cast a majority of the votes in the Association, the Board may establish and maintain one (1) or more capital reserve accounts, by the assessment of and payment by all the unit owners in equal monthly installments of their respective proportionate shares of such reasonable annual amount, for such term of years, as the Board may estimate as needed to cover each unit owner's obligations to provide for specified capital improvements, such as, by way of illustration and not limitation, the purchase of additional property, the paving or repaving of streets and areas, the construction or reconstruction of common elements, and the like. Each such capital reserve account shall be earmarked, segregated from other accounts, and designated for the specific capital improvement for which the assessment is made, and the funds of each such capital reserve account shall not be commingled with the general assessment funds of the Association, but shall be deposited in a special account similarly earmarked and designated. The proportionate interest of each unit owner in each such capital reserve account cannot be withdrawn or separately assigned, but shall be deemed to be transferred with such unit even though not expressly mentioned or described in the conveyance thereof. In case the condominium regime hereby created shall be terminated and the property removed from the Condominium Ownership Act, any part of each such capital reserve account remaining after full payment of all common expenses of the Association shall be distributed to all unit owners in their respective proportionate shares.

.4. Assessments for emergencies. Assessments for common expenses for emergencies which cannot be paid from the assessments for recurring expenses shall be made only after notice of the need therefor to the unit owners concerned. After such notice and upon approval in writing of more than one-half (1/2) of such unit owners concerned, the assessment shall become effective, and it shall be due after thirty (30) days' notice thereof in such manner as the Board of Directors of the Association may require.

.5. Acceleration of assessment installments upon default. If a unit owner shall be in default in the payments of an installment upon any assessment, the Board of Directors may

accelerate the remaining installments of such assessment upon notice thereof to the unit owner, and thereupon the unpaid balance of the assessment shall come due upon the date stated in the notice, but not less than ten (10) days after delivery thereof to the unit owner, or not less than twenty (20) days after the mailing of such notice to him by registered or certified mail, whichever shall first occur.

.6. Default.

(a) In the event an owner of a unit does not pay any sums, charges or assessments required to be paid to the Association within thirty (30) days from the due date, the Association may foreclose the lien encumbering the unit created by non-payment of the required moneys in the same fashion as mortgage liens are foreclosed; provided that thirty (30) days prior to foreclosure, notice of such intention shall be mailed, postage prepaid, to the unit owner and to all persons having a mortgage lien or other interest of record in such unit as shown in the Association's record of ownership. The Association shall be entitled to the appointment of a Receiver, if it so requests. The Association shall have the right to bid in the unit at a foreclosure sale and to acquire, hold, mortgage and convey the same. In any such foreclosure action, the lien of the Association shall be subordinate and inferior to tax liens in favor of the state, county, any municipality and any special district, and any first mortgage liens of record encumbering such unit at the time of the commencement of the foreclosure action by the Association. In lieu of foreclosing its lien, the Association may bring suit to recover a money judgment for any sums, charges or assessments required to be paid to the Association without waiving its lien securing same. In any action either to foreclose its lien or to recover a money judgment brought by or on behalf of the Association against a unit owner, the losing defendant shall pay the cost thereof together with a reasonable attorney's fee.

(b) If the Association becomes the owner of a unit by reason of foreclosure, it shall offer said unit for sale and at such time as a sale is consummated it shall deduct from such proceeds all sums of money due it for monthly assessments and charges, all costs incurred in the bringing of the foreclosure suit, including reasonable attorney's fees, and any and all expenses incurred in the resale of the unit, which shall include but not be limited to advertising expenses, real estate brokerage fees, abstract or title insurance costs, and expenses necessary for the repairing and refurbishing of the unit in question. All moneys remaining after deducting the foregoing items of expense shall be returned to the former owner of the unit in question.

.7. The depository of the Association shall be such

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bank or banks as shall be designated from time to time by the Directors and in which moneys of the Association shall be deposited. Withdrawal of moneys from such accounts shall be only by check signed by such persons as are authorized by the Directors.

.8. An audit of the accounts of the Association shall be made annually by a certified public accountant, not a member of the Association, and a copy of the report shall be furnished to each member not later than April 1st of the year following the year for which the report is made.

7. OBLIGATIONS OF THE OWNERS.

.1. Assessments. Every owner of any unit in the condominium shall contribute pro rata toward the expense of administration of the condominium, as provided in the Declaration and in these By-Laws.

.2. Maintenance and Repair.

(a) Every owner must perform promptly all maintenance and repair work within his unit, which if omitted would affect the condominium in its entirety or in a part belonging to other owners, and is expressly responsible for the damages and liabilities that his failure to do so may engender.

(b) All the repairs of internal or appurtenant installations of the unit, such as water, lights, power, air conditioning, heat, sewage, telephones, sanitary installations, doors, windows, lamps, and all other accessories belonging to the unit area, shall be maintained at the owner's expense.

(c) An owner shall reimburse the Association for any expenditures incurred in repairing or replacing any common areas and facilities damaged through his fault.

.3. Use of units. Every owner shall comply strictly with the provisions of the Act, the Declaration, the By-Laws and the Rules. In the event of the failure of any owner so to do, the Association may sue to recover sums due, and/or damages, and/or injunctive relief, and for its costs and expenses therein, including a reasonable attorney's fee.

.4. Right of entry. The manager and any person authorized by the Board of Directors shall have the right to enter each unit in case of any emergency originating in or threatening such unit whether or not the owner or occupant, when so required, shall permit other unit owners or their representative to enter his unit at reasonable times for the purpose of performing authorized installations, alterations, or repairs to the common elements therein for central services, provided that requests for entry are made in advance.

.5. Title. Every unit owner shall promptly cause to be duly recorded in the office of the Judge of Probate of Baldwin County, Alabama, the deed or other conveyance to him of

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his unit or other evidence of his title thereto and file such evidence of his title with the Association, and the Secretary shall maintain such information in the record of ownership of the Association.

.6. Mortgages.

(a) Any mortgagee of a unit may file a copy of its mortgage with the Association, and the Secretary shall maintain such information in the record of ownership of the Association. After the filing of the mortgage, the Association shall be required to notify the mortgagee of any unit owner who is in default in the expenses for the administration of the condominium and the mortgagee at its option may pay the delinquent expenses; and the holder of every such mortgage requesting the same shall be entitled to written notification from the Association of any default by the mortgagor of such unit in the performance of such mortgagor's obligations under the condominium documents which is not cured within thirty (30) days.

(b) Unless all holders of first mortgage liens on units have given their prior written approval, the Association shall not be entitled to:

(i) Change of pro rata interest or obligations of any unit for the purposes of levying assessments and charges, and determining shares of undivided interest in the common elements and proceeds of the project;

(ii) Partition or subdivide any unit or the common elements of the project; nor

(iii) By act of omission seek to abandon the condominium status of the project except as provided by statute in case of substantial destruction, deterioration or obsolescence to the units and condominium project.

8. AGENT TO RECEIVE SERVICE OF PROCESS.

The following person, who is a resident of the State of Alabama, is designated as agent to receive service of process upon the Association:

Name:	Tillis M. Brett
Resident Address:	1090 Industrial Parkway Saraland, Alabama 36571

9. PARLIAMENTARY RULES.

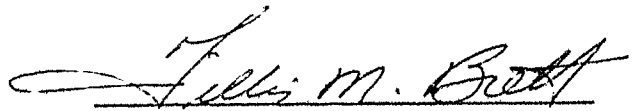
Roberts Rules of Order (latest edition) shall govern the conduct of Association meetings when not in conflict with the Condominium Ownership Act, Declaration of Condominium, or these By-Laws.

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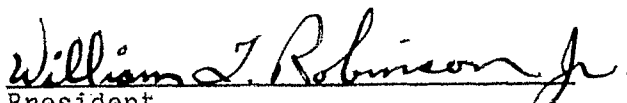
10. AMENDMENTS:

These By-Laws may be amended by following the provisions of paragraph 19 of the Declaration of Condominium.

The foregoing were adopted as the By-Laws of ISLAND WINDS EAST ASSOCIATION, INC., at the first meeting of the Board of Directors on July 8, 1981.


Secretary

Approved:


President

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THIS INSTRUMENT PREPARED BY:

MICHAEL J. SALMON, ATTORNEY
P. O. Box 162
Gulf Shores, Alabama 36542