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Whitehead Road Elementary School

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Clarke County

Athens,

Georgia

Roy Otis Ashley and Alan David Hollister

A Senior Terminal Problem

Presented for the Degree of

Bachelor of Landscape Architecture

Department of Landscape Architecture
University of Georgia
Athens, Georgia
May 29, 1964

H.B. Owens Resource Center School of Environmental Design

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Introduction

The Board of Education of the Clarke County School District, Clarke County, Georgia, has developed a policy for the extension and design of the public school system. This school district has promoted some generally accepted standards for modern trends in education, such as the use of expandable interior space, and exterior space requirements. These standards are based on the consideration that the school is the focal point of the community.

The amount of space necessary for the proper functioning of school activities is equally necessary to the development of the community. The need and development of open spaces should become an important design aspect of the school location and therefore, provide adequate supervision and leadership necessary in the education of the younger generation. on for years to determine now learning actually

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boation and therefore, provide adequate supervision and
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Outdoor Education

Outdoor education is a common sense method of learning.

It is natural; it is plain, direct, and simple. The recreation for all subject matter, in all areas of study and at all levels are:

That which can best be learned inside the classroom should be learned there.

That which can best be learned in the out-of-doors through direct experience, dealing with native materials and life situations should there be learned.

This realistic approach to education will apply squarely upon the well-established and irrefutable principle of learning at Whitehead Road Elementary School.

Scientific research and psychological testing have been going on for years to determine how learning actually takes place. Through these tests it was learned that through direct experience, the learning process is faster, what is learned is retained longer, and there is greater appreciation and understanding for those things that are learned first hand.

Thus it becomes clear that what is called for in the curricula of the public schools can most effectively be learned in the out-of-doors. Learning in the open is a mutual process, therefore we have proposed outdoor recreation

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and assembly areas for the site. In the classroom subjects tend to become artificially separated from one another as do pupils from the teachers. Regaining touch with the real world leads to their becoming reunited. People and things are seen in their true relationships; facts and ideas that are most important emerge in perspective.

More than a decade ago experiments were conducted to see whether some learnings could be achieved more quickly and effectively in a feverable outdoor area rather than in the classrooms. Tests used in these experiments did prove that the outdoor setting was more effective for certian resear to the point whoma the Board of Edvertion Seterained learnings.

Today outdoor learning is accepted as an integral part of the total school program. Very few people doubt the vital role of the curricula of their schools. It is said that every school youth should have as a regular part of his experience while he is in school an opportunity to explore and adventure thus solving for himself some of the questions imposed upon him. We have justified this in our solution through modern recreational planning.

Educators think that it is good for the boys and girls to experience at first hand something so direct, plain, an d simple. American schools are now seeking to fit outdoor education into their existing patterns. They are committed to a principle and a way of life.

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Historical Sketch

During the 1950's Clarke County experienced a rapid growth of school population which necessitated a careful study by the Board of Education of the needs that would have to be met in order to provide adequate facilities for all students. One of these needs was for an elementary school in the fast-growing Northern section of the county. A tract of land was purchased and planning for the school was initiated.

In the summer 1959 preliminary considerations had progressed to the point where the Board of Education determined that an architect should be employed to prepare the plans for an Elementary School on Whitehead Road. The construction of the school was to begin when the funds were made available. Heery and Heery, architects of Athens, and Atlanta, Georgia were retained to prepare the plans for the school. In 1960, the State Board of Education approved an application for funds for a twenty-room school to be located directly off of Whitehead Road.

The area where Whitehead Road School is located grew so rapidly that it was necessary to provide the children with temporary facilities while the construction of the new school was getting underway.

In May 1961, plans were announced which provided for the organization of the Whitehead Road School to be housed as a unit in the Childs Street School. At this time it where the transfer of the same of the same

puring an loss a Clarke County experienced a replication which because the bed a centeral county of school population which because the beads that would tudy by the loss of amostion of the beads that would ave to be set it order to provide edequate for an electrical for the school in the case for an electric school in the case formula for the county.

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In May 1961, plans were companed which provided for
the organization of the United adaptace. At this time it

was necessary to rezone some 350 children and transport them
to and from the Childs Street School. On May 23, 1961 a
group of parents met at Alps Road School for the purpose
of organizing the Whitehead Road School P.T.A. which would
be ready to function in the fall when the Whitehead Road
group at Childs Street reported for its first year of activity.

Construction of the building was begun in 1962. The buildings were first occupied at the beginning of the 1963-64 academic year.

The school population is made up of a well balanced cross section of the county population. The highest percentage of students are natives of Clarke County. The second largest group of children belong primarily to families sent in to establish the Westinghouse Plant. There are also students attending the school whose parents have moved into the area to work at the University, the Navy Supply Corps School, and industrial plants and businesses that have located in the Athens area.

According to Miss Allea Betts, Principal of the White-head Road School some 100 students who were rezoned for Whitehead Road School, in the spring of 1963 and the regular attending students were very pleased and excited about their new school. She reports that as the year has progressed a sense of pride in the new school has deepened and the general feeling seems to be a good school spirit and an effort to make Whitehead Road School the best school possible.

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Problem Statement

Members of the Board of Education of the Clarke County
School District, in sesson on April 8, 1964, voted to secure professional assistance in the preparation of a landscape development plan for the grounds of Whitehead Road
Elementary School. Prof. Sam Wood, Superintendant of
Clarke County Schools, has employed this firm of landscape
architects to render this service.

The site is located in Northwest Athens, approximately one-third of a mile west of the Jefferson Road, one block from the Whitehead Road. A single row of residential housing exists between Whitehead Road and the school property. Directly west of the school is an open area of approximately 2.5 acres surrounded by a dense pine forest. North of the school is an existing road which will eventually be paved and connected to the existing school entrance.

Betts, Principal of the Whitehead Road Elementary School, and a careful study of the site, it was decided to include the following special features in the landscape plan, in addition to the usuals items such as drives, walks, parking areas, etc: (a)school garden plots, consisting of planting beds for the students to study the fundamentals of plant growth, basic horticulture, and for simple scientific experiments; (b)an outdoor recreation area divided in two

Inoblem Statement

stances wire Deard of Education of the Clarke County Mandet, in sesson on April 8, 1964, voted to sewheel a to adijakeded out it compales Isolowe sed present plan for the grounds of Whitehead Road To Justine July Sand to Superintendent to equonomal to mail aids be colone and elected when a was ty render this service. Wille is located in Northwest Adjusts, approximately Me of a wile wood of the Jefferson Rigid, one bleek Intimediate to wor elegate A .beef beetered all word loodes out bus been beenedled meaded ataba w To pays made un et fooden eds to seem yffeeth determined the surrounded by a dense pine forest. -Junya fity doing boy collaire or at looms of h whe Looden shifting out of bejondings has bound World conformes with Frot. Wood and Wiss Alles cleatest of the initebood Road Electricity School, obulant of bobloob one it works and to passe below all the absorbers in the lendscape plant in antifued thous and are distribe, walker perfiling Saltmain to gathefeach , about mebras founded a) sou dualit to electerate the rimdamental of plant -ma birtious ton simple not bus southested one with all boulded area solder recobere said) #

parts, one for children in the first, second, and third grades, and one for the students enrolled in the forth, fifth, and sixth grades; (c)an outdoor assembly area to meet requirements for various outdoor group activities and meetings.

The proposed plan will include:

- 1. Location of existing and proposed buildings.
- 2. Vehicular and pedestrain circulation.
- Parking facilities for faculty, visitors, and service trucks.
- 4. Outdoor assembly area.
- 5. Cubdoor recreation areas.
- 6. Open lawns, tree shaded areas, shrub groupings and ground covers.
- 7. Garden plots for each grade.
- 8. Design of interior court west of Cafetorium.

We propose to prepare the following drawings and other documents.

- 1. Site analysis sheet.
- 2. Master plan.
- 3. Grading and staking plan.
- 4. Construction details.
- 5. Planting plan.
- 6. Planting details.
- 7. Scaled model.

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Analysis of the Problem Typewritten, bound, comprehensive report including a historical sketch, analysisof the problem, justification of the solution, plant list, specification for selected portions of the development, cost estimate, and photographs of the above listed drawings, and of the buildings

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and site. The school serves a community of suprose

Dirollegat The school consists of grader 1-6, with an envoluent of 517 public. The present faculty consists of

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The indoor classroom areas requirement per mupil is islaty square feet and the outdoor space requirement per buil is seventy live aquara feet.

at present there is no planting around the buildings.

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Analysis of the Problem

Location Whitehead Elementary School is located in North-East Georgia, three miles West of Athens. The main traffic artery serving the school is Whitehead Road. The school is centrally located within the community.

Community The school serves a community of approximately 2,500 people. Of these, 300 families have children enrolled in the school. Community participation in school-work activities is good.

Enrollment The school consists of grades 1-6, with an enrollment of 517 pupils. The present faculty consists of 17 members.

Schoolground There is space for future expansion of classroom wings. The site consists of fifteen acres, approximately ten acres of which are open except for a few scattered pine and oak trees. Present recreation facilities are poor and the playground is undeveloped. There is an attractive view over a forest of evergreens toward the Southwest.

School The school building consists of an eval shaped multi-purpose cafetorium and auditorium combined, with two classroom wings extending to the West of it.

The indoor classroom space requirement per pupil is thirty square feet and the outdoor space requirement per pupil is seventy five square feet.

At present there is no planting around the buildings.

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thirty square feet and the outdoor space requirement per
pupil is seventy five square feet.

At present there is no planting around the buildings.

There are a few large existing oak trees to the North of the wing which houses grades one to three.

Parking facilities are located at the front entrance and consists of an asphalt paved lot. Service is to the rear of the multi-purpose building.

A small interior court yard, thirty feet by thirty feet, is included to the West of the multi-purpose building, and a larger exterior court exists between the classroom wings.

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and interdor court yard, thirty feet by thirty land the sale of the court extets between the classroom

Explanation of Solution

The landscape plan for the grounds has been designed to accommodate the needs of the students and teachers, and to fit the various features-including parking areas, play-fields, school gardens and outdoor assembly areas. The following is a brief explanation of various proposals:

Playground In view of the development around the school it is necessary that the area blend with the residential district and offer a suggestion that the school be a part of the community itself. This has been accomplished by use of native plant materials surrounding the playground. The area itself will be divided into two age groups, one for grades 1-3, and one for grades 1-6. The playground for grades 3-6 is located farther away from the school and includes two softball fields, a horse shoe stand with plastic horse shoes, shuffleboard, a mound and two multi-purpose recreation areas. The primary grades have a playground located closer to the school and it includes suitable recreation facilities for this age group.

A major portion of the playground is left as open green space and includes some large trees for shade. The area is also surrounded by a more dense grouping of trees, forming a natural environment.

Outdoor Assembly Area It is the present trend in education to focus attention upon groups of students outside moistures to moisansigna

benniseb need and abmoorn out tol main encount ban , eredosed bas stackete out to obeen out and as metons fortures - including parting areas, playend . sagna vidasesa Tobbino ban aneman fecte a la a bet oxplanetion of various bronosals: and honore towas and to welv at boots -lear one dithe broid sere end done weecesse in foodes sit made nelicenten a relie bus deletell -moons need and side . Tipedi thinwands and to the eds guthunoques sleivetem tuelo evitan lo em pl ogs ows cont babivib ad lity liest too em . .. one for grades 1-5, and one for grades 1-6, The out for grades 3-6 is leasted farther sway from the ed includes two softball fields, a horse shee the plastic horse shows, shuffleboard, a mound and Wenter recreation areas. The primary grades and it has loomed to the school and it inwitable recreation facilities for this age group, wier portion of the playground is left as open "Hee and included some large trees for shade." the surrounded by a more dense grouping of tuess,

*be at base duesent end at it is the present troub ebteaus outside outside of students outside

the claserooms. This offers an opportunity for children to learn in natures setting. This area is well justified because the school is in need of an outdoor multi-use area to be used for various group meetings for educational and recreational purposes. Included into the scheme is an assembly area of modern design which allows ample space for all students to meet together at one time. The area chosen for this assembly is adajacent to the playground and between two large oak trees, which will offer shade and some of nature's enhancement.

Parking (automobiles and bicycles) The existing parking lot for automobiles is a dull blacktopped surface. Our proposal is to take out a sportion of the parking spaces and add large trees to provide shade and enhance the area. To make up for those spaces, which have been removed by the trees parallel parking along the service road is specified.

The unorganized arrangement of bicycle parking has developed as a major problem and also distracts from the beauty of the grounds. It is our proposal to provide in the same area as is used now for parking of bicycles a pad consisting of slots for each bicycle. Space for expansion is included for the parking of these vehicles in the area adjacent to the North entrance, which is currently used for bicycle parking.

Planting The plants chosen for use upon the site are native, and in turn will blend with the modern architecture

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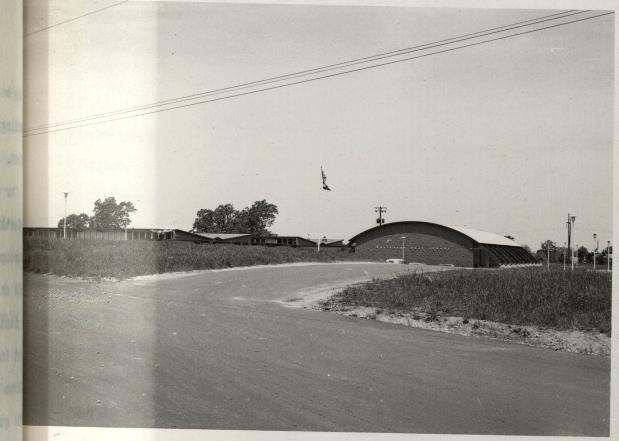
of the buildings as well as enhance the surrounding area, providing a sense of unity and continuity throughout the project.

Our proposal is to create a setting of different areas of plantings which will provide divisions between different age groups of children and at the same time, contribute desirable character and attractiveness to the school grounds. The plants chopsen for the courts are those which will assist in bringing the building in to the scale of school children of the primary grades, as well as provide an asst thetic quality which will be enjoyed from the classrooms and main corridor.

Courts The einterior court is designed not for use by children, but as a place which will enhance the general scheme and add character to the hallway. The faculty and students will be inticed to admire and enjoy its quality.

The idea in the design of the court is to keep it simple, yet provide unity throughout a grassed surface with stones emerging from the ground. A tree is featured in this area. This provides a restrained and dignified effect.

The exterior court is not meant to be used during class periods, but as an area to add to the building attractiveness.





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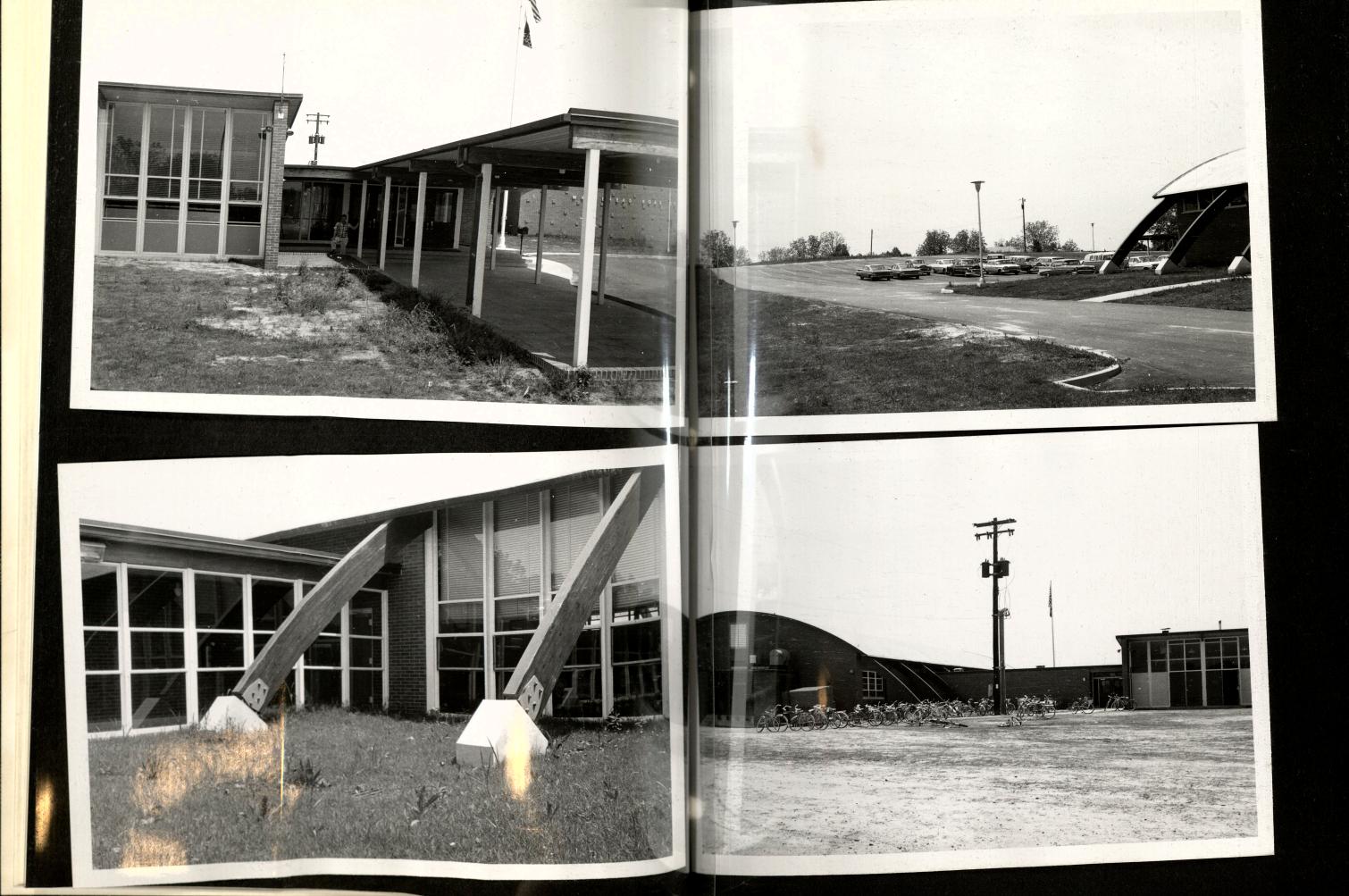
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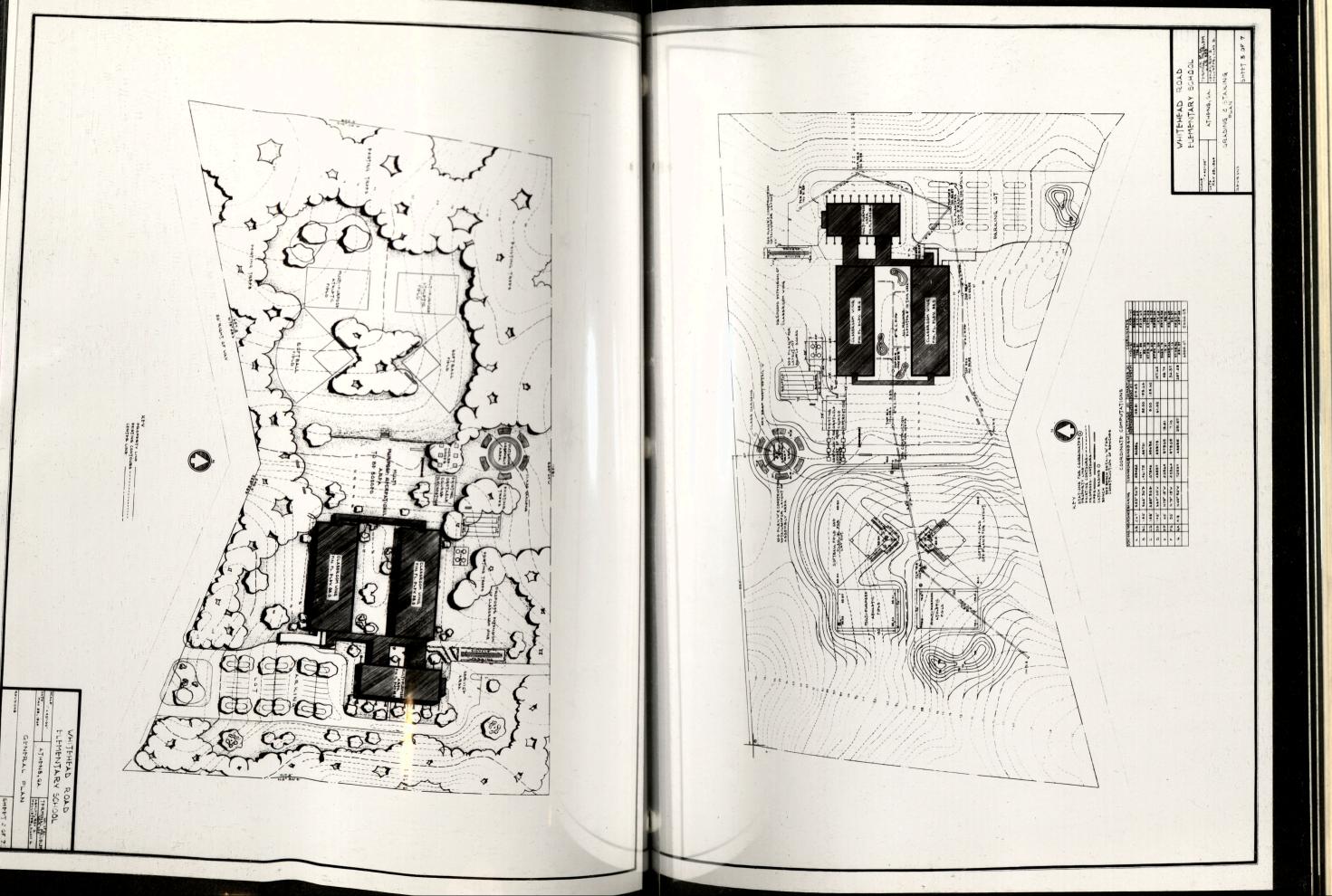
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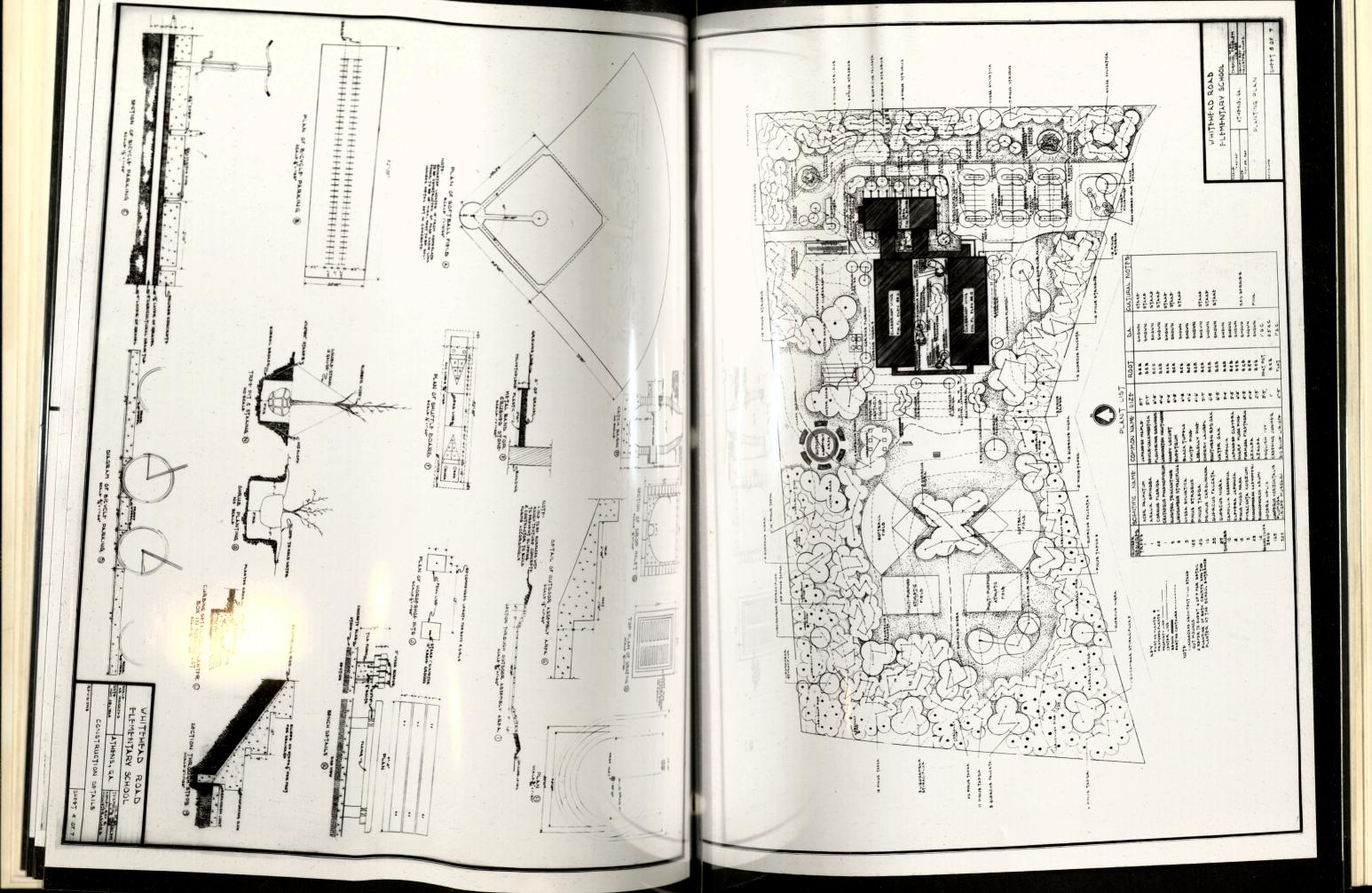
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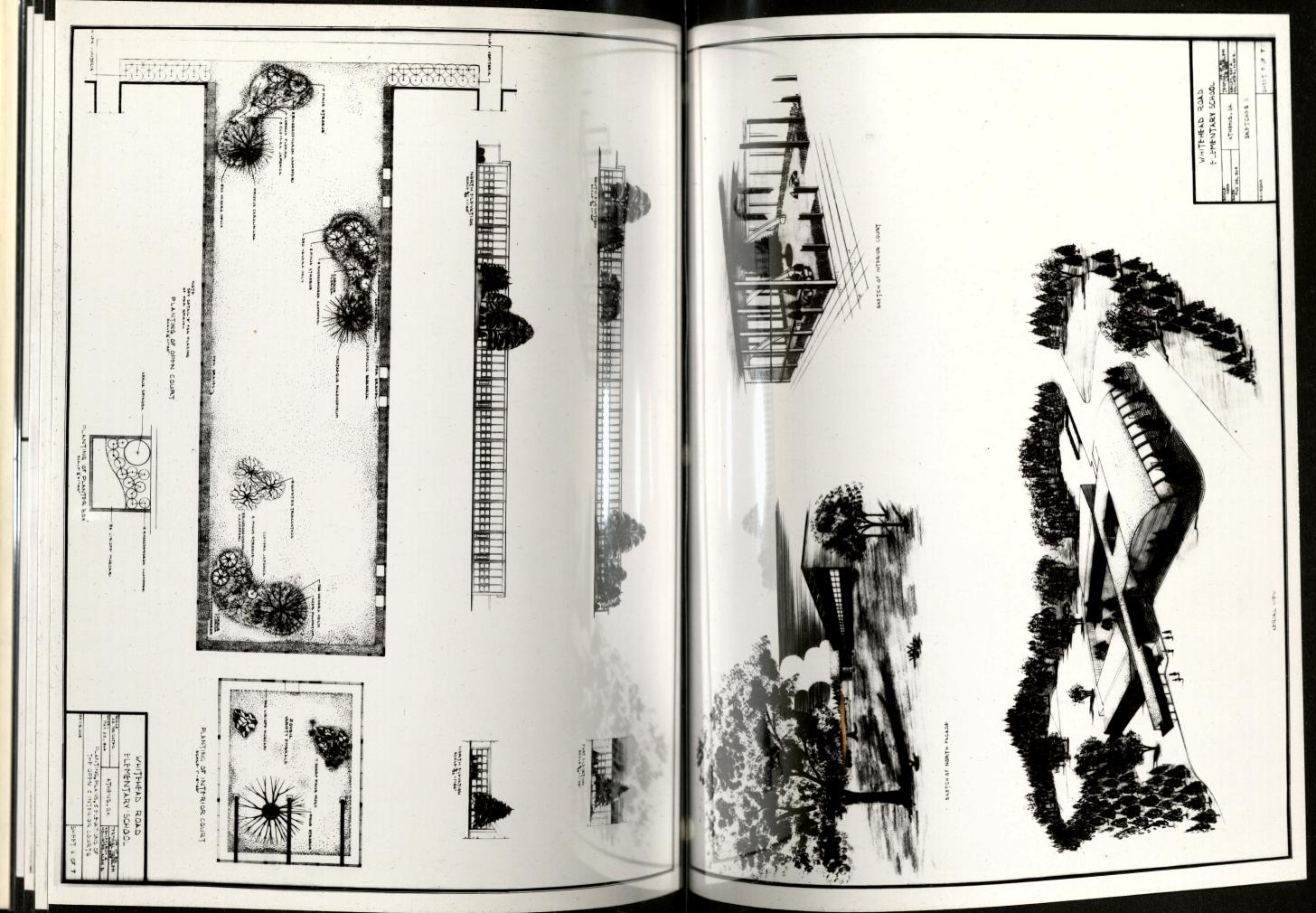
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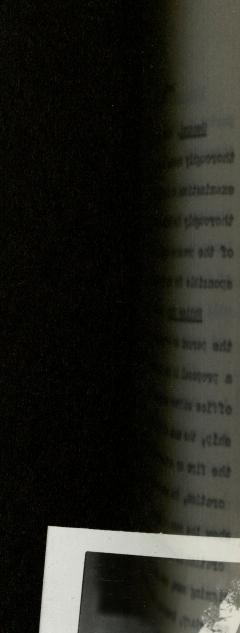














Instructions to Bidders

General. Bidders, before making proposals, shall thoroughly examine the plans and specifications and make any examinations on the grounds that will be necessary to thoroughly familiarize themselves with the nature and extent of the proposed construction. The owner will not be responsible for the bidders error or misjudgment.

Making Bids. All proposals must be signed in ink by
the person or persons authorized to sign their names. If
a proposal is made by an individual, his name and post
office address must be shown. If made by a firm or partner—
thip, the name and post office address of each member of
the firm or partnership must be shown. If made by a corp—
oration, the person or persons signing the proposal must
thow the name of the state under the law of which the corp—
oration is chartered and his, or their authority for
signing same, name titles, address of the president,
secretary, treasurer, and the corporate authority for
doing business in this state.

All bids must be submitted in opaque sealed envelopes bearing on the outside the name of the bidder and his address.

Guarantee to accompany bids. No bid will be considered whes accompanied by a bid bond in an amount equal to five percent of the base bid made payable to the owner.

Withdrawals. No bidder may withdraw his bid for a period of thirty days after the date set for the opening thereafter.

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Interpretation. Request for interpretations of the drawings and specifications must be made in writing to the Landscape Architect not later than seven days prior to receipt of the proposal. Any interpretations made to the bidders will be issued in the form of an addenda to specifications, and or, drawings and sent to all bidders. decas accessary.

Rights reserved. The owner reserves the right to reject any or all bids, to waive informalities, and to decide for himself which bid or bids be deemed the lowest and best. - blimblewicky for elearing and grabbing shall be / a

Bid blanks. Bid blanks are to be furnished by the owner at the opening of the bidding.

Progress payment, Payments on account of the contract shall be made with a ten per cent retainage.

It Clearing and Grubbing A. Stomps and roots between slope stakes in suts and the sents three feet or less in depth small be reserved to tepth of eighteen inches below subgrades outside of slope tells and under embanisments more than three feet deep, all res, stupps, brush, etc., shall be not approximately level the the surface, except growth designated for preservation The Lendscape Architects

S. Spoiled methorial shall be burned or reservat to the

respected. No bidder may withdraw his bid for a nather of thirty days after the date set for the opening

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Specifications

Preparation of the Sight

I. Scope abon an all work has been completed, the bon-

Aleberati areas

This part shall consist of clearing and grubbing all lands within the area in which the existing grade is disturbed. Work shall include remeval of those trees, roots, logs, stumps, brush, vegetation, trash, and other objectional matter that the Landscape Architect deems necessary. The task of disposing the matter removed is also included in the contract. The dome wager this liter conclus of chrisping II. Materials of it, and planting it in those areas where it

A. Allmaterials for clearing and grubbing shall be furnished by the contractor as he thinks necessary or as directed by the Landscape Architect.

B. Materials shall be furnished at the expense of the contractor, a topecti shall comsist of a metowal, france,

III. Clearing and Grubbing

A. Stumps and roots between slope stakes in cuts and embankments three feet or less in depth shall be removed to a depth of eighteen inches below subgrade. Outside of slope limits and under embankments more than three feet deep, all trees, stumps, brush, etc., shall be cut approximately level with the surface, except growth designated for preservation by the Landscape Architect.

B. Spoiled material shall be burned or removed to the

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Preparation of the Sight

Habaniddans and emissels to detenne Hada duck elift and within the area in which the existing area and ning we today, work shall include removal of these trees, roote, ese, stumpe, brush, vegetation, trach, and ether opjuntlord metter that the Landscape Architect deems necessary.

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. Stargs and roots between slope stares in outs and of bevomen so find things in east to just equit effections depth of eighteen inches below subgrade. Outside of slope lists and under embanisments mere than three feet deep, all level gledeninges due ed Ilado, obe , devid , equita , con with the surface, except growth designated for preservation of the Landscape Architect.

. Spoiled material shall be burned or removed to the

disposal area.

IV. Acceptance

As soon as all work has been completed, the contractor shall give written notice of completion, the Landscape Architect shall inspect the work. Any defects in the work shall be rectified by the contractor before final

Topsoil A Market A Market

I. Scope

The work done under this item consist of stripping topsoil, storing it, and placing it in those areas where it is needed for the development of grass areas. The areas and depth of application to which topsoil is to be applied vill be designated by the Landscape Architect.

II. Material

The topsoil shall consist of a natural, friable, loany soil which shall be without admixtures of subsoil and reasonably free of clay lumps, stones, stumps, roots, of similar substances two inches or more in diameter. It shall not be excessively acid or alkaline nor contain toxic substances haraful to plant growth. The sources of topsoil will be designated by the Landscape Architect. Topsoil shall be handled only when dry. III. Excavating of account of long and plants and present

The topsoil shall be stripped to depth that is inition breat (1) protestion of authorizing trains and approve . Berge Leagesta

IV. Acceptance

As soon as all work has been completed, the contractor shall give written notice of completion, the Land. one architect shall imspect the work. Any defects in isner evoted topostions ent to belilion of fine work and

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aniquirie to relates the item consist of stripping topsoil, storing lit, and placing it in those siess where it te needed for the development of grene areas. The areas and belique ed of at florget doing of neiteoffique to street vill be designated by the Landscape Architect.

The topooll shall comeist of a matural, intabile, Licedus to securatmes duoditiv and Liene dalow lies ve ol and resecrably free of clay lumps, stones, attures, roots, dI redemals at onom no account out especiation vallets to minimos von entincia do bios vioviseaxe ed tos lista to sources harmful to plant growth. The sources of topsoil will be designated by the Landscape Architect. Topsoil shall be handled only when dry.

III. Excavating

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consistent with the securing of suitable soil and material. where topsoil is to be stripped and it becomes necessary to remove such material before the surfaces to which it is to be applied can be constructed, the topsoil will be stockpiled until the surfaces are ready for application. IV. Placing ook on the lawns and planting can proceed.

The surface to which topsoil is to be applied shall be required grade and be reasonably smooth. All objectionable materials shall be removed from these surfaces. herever the ground is compact, it shall be loosened to a depth of 2 to 3 inches and made sufficiently smooth pro-Tide a uniform depth of topsoil. The topsoil shall be applied to the prepared surface and spread uniformly to a specified depth. All clods and lumps shall be thoroughly broken up, and all remaining objectionable objects shall be removed. Plowing, discing, and harrowing must be done along contours. I fertiliter. Corneratel fertilizer shall

Lawns and Planting

I. Scope It chall be uniform in composition, dry, and This division includes furnishing all materials and equipment necessary for preparation of final subgrades in lawn and planting areas; root protection; lawn construction; Manting of trees, shrubs and vines; protection, maintenance, Swarantee, and replacement of lawn and plants; and related items required to complete work indicated on the drawing and specified except (1) protection of existing trees and shrubs,

consistent with the securing of unitable soil and material.

Where topsoil is to be stripped and it becomes nacedaary
to recove such material before the surfaces to which it.

Is to be applied on be constructed, the topsoil will be
stoompiled until the surfaces are ready for appliestion.

IV. Flacing

The surface to which topsoil is to be applied shall be required grade and be reasonably emooth. All objectionable naterials shall be received from these surfaces.

Wherever the ground is compact, it shall be lessened to a depth of 2 to 3 impires and made surfacebilly smooth provide a miform depth of terminal. The topsoil shall be applied to the prepared surface and spread uniformly to broke up, and clode and lumbs shall be thoroughly to broke up, and all remaining objections of objects shall be choroughly removed. Floring, discing, and harrowing must be done along contents.

Isana and Flenting

This division includes firminal estudiction at the asterior and entitled in propagation of final entitled in the propagation of final entitled in a seal partial and protection; and planting of trees, eleving and vines; and replacement of level and plants; and replacement of level and plants; and replacement of level and plants; and required to complete work indicated on the drawing and specified except for complete work indicated on the drawing and specified except for orderection of extents through and animals.

mining and repair of existing trees and shrubs to remain, and tree removal, (3) restriction regarding materials used for fill, and (4) rough grading to a point 3 inches below finished grade established for lawn areas, to be completed before work on the lawns and planting can proceed.

II. Materials

- A. Topscil stripped and stored. The topscil stripped m stored shall be qualitatively analyzed and necessary doesn't missing shall be added before use.
- B, Topscil to be furnished. If the quantity of stored topscil is insdequate, sufficient additional topscil shall be furnished. It shall possess characteristics of representative, productive topscil of the vicinity, and it shall masses characteristics stated under the division Topscil.
- C. Commercial fertilizer. Commercial fertilizer shall be 10-6-4 and shall conform to the applicable state fert
 Uliver laws. It shall be uniform in composition, dry, and free flowing, and shall be delivered to the site in the original, unopened containers, each bearing the manufacturer's unaranteed analysis. Any fertilizer which becomes caked or otherwise demaged, making it unsuitable for use, will not be accepted.
- D. Lime. Lime shall be ground limestone containing not less than 85% of total carbonate and shall be ground to a

endering and remain of extended through each absolute to remain, and the specification and absolute to remain.

The tree remaind, (3) restinition remaining materials used to the fill, and (4) rough grading to a point 3 laches below the season grades catablished for last areas, to be competed to before repair on the lawns and planting can proceed.

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10-5-4 and shall denicate to the applicable state fort.

11-5-7 and shall be uniform in composition, day, and

11-5-7 length, and shall be uniform to the site in the same of the chart, one partial but delivered to the site in the capacital of the capacital that the chartest are said of the capacital and the capacital.

des paintes ou line abell be ground limestone quatefular not beet than 35% of total ourbonate and shall be ground to a

fineness that 50 % will pass through a 100 mesh sieve and 90% will pass through a 20 mesh sieve.

- gtable or cattle manure, reasonable free of shavings, sawdust er refuse, and shall not contain any harmful material.
- F. Water. Water used in this work will be furnished by the school. Hoses and other irrigation or watering equipment shall be furnished by the contractor.
 - G. Materials for staking, guying, and wrapping.
- 1. Stakes for supporting trees shall be 2% inches square by 3 feet, sound wood, creosoted one-half their length.
- 2. Wires for guys shall be No. 12 pliable, galvan-
- 3. Notched Stakes and deadmen for anchoring guy wires shall be about 3 by 4 inches by 3 feet, and shall be of sound creosoted wood.
- 4. Flags to be fastened to guys shall be of sound wood, about \$ inch by 3 inches by 12 inches, painted white. They shall have a 3/8 inch hole centered 1 inches from each end.
- 5. Hose to encase guy wires shall be of new or used 2 ply garden hose.
- 6. Wrapping material for tree trunks shall be of a standard quality tree wrapping material and in strips of 6 to 10 inches wide.

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1. goding shall be Bermuda Greas, They shall be bestep, vigorous, freehly dug, free of weeds, and shall be seemed proceeded until blanted.

2. Sood shall be Dormude and shall be inco of weeds,

.a. Rome Materials.

1. Plant lists are shown on planting plans.
2. Overlittes necessary to complete the plantings

. Besieve and located on the drawings shall be furnished.

3. Oughly ond size. Plants shall have a habit of creds that the pound.

To the that is normal for the aposies and shall be sound.

It is not the countries. All plants shall equal of the chart first parties. All plants shall equal of the chart surgents apositived in the plant list.

To vill be measured before proming with the branches in the shall see that the transfers in the standard for the shall be described to the the branches in the shall be done at

the time of wlanting. Requirements for the measurements. See time of the or william, quality, balling, and burlaping, of the plants is the wlant list shall follow the recommodetions of the American isocolation of Nurserymen, lnc., in the merican of murserymen, lnc., in the merican of murserymen, lnc., in the

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encompass the fibrous and feeding root system necessary for full recovery of the plant. Balls shall be firmly wrapped with burlap or similar material and bound with twine. When necessary to prevent cracking of the ball during the planting process, the ball may be secured to a platform.

or other authoristor, The Landesens trubited thall in-

2. Bare root plants-all plants we have used will be balled and burlaped as mentioned above. If they do not arrive on the site as such they will be refused by the Landscape Architect.

& B" plants which cannot be planted immediately on delivery will be covered with a moist soil or mulch, or be given other protection from the drying winds or sun.

III. Samples, Tests, and Inspections.

A. Notice of sources. Within ten days following acceptance of the bid, the Landscape Architect shall be notified of the sources of all material required or desired to be tested or inspected.

B. The Landscape Architect will inspect topsoil to be furnished at its source. If the samples are required, the tests will be made by the state or a commercial soil testing laboratory. Delivery of the topsoil may begin after approval of the sample.

C. Plants. The contractor shall be responsible for all certificates of inspection required by Federal, state

oncompans the filerous and feeding roof system necessary for full recovery of the plant. Salls shall be firely wrapped with burksp or similar material and bound with twine. When necessary to provent orecking of the ball during the plant.

- 2. Bore root plants-all plants we have need will be build and burstened as mentioned above. If they do not arrive on the site as even they will be refused by the land-scape Architect.
- to Protection efter delivery. The bolls of the "B to Blants which cannot be planted immediately on delivery will be covered with a moist soil or mulob, or be given other incledion from the drying winds or aux.
- A. Mottoe of sources. Width ten days following acceptance of the bid, the Landscape, Architect shall be notified of the sources of all material required or desired to be tested or inspected.
- B. The Endered Assemblicat will disposed topsell to be furnished at its source. If the samples are required, the tests will be made by the state or a commercial soil testing laboratory. Delivery of the topsell may begin after approval of the sample.
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or other authorities. The Landscape Architect shall inspect the plants upon delivery. Acception or rejection in the light of the specifications shall be left to his judgment.

IV. Construction Methods.

- A. Time of Flanting. The contractor shall be notified by the Landscape Architect to start work of lawns and
 planting, including placing of topsoil to finished grade.
 Favorable weather conditions shall prevail during planting
 operations. Trees, shrubs, and vines are to be planted
 between December 2nd and March 15th; Bermuda grass lawns
 are to be planted between April 2nd and September 1st.
- B. Spraying. Infected existing trees shall be sprayed to prevent the spread of disease and insect pest to the new plantings. Materials and methods shall not injure persons or structures.
- intended that planting shall be done where the depths of soil over underground construction, obstructions or rock is insufficient to accommodate the roots and impair drainage. Such conditions encountered in excavation of planting areas and where stones, boulders, or other obstructions cannot be removed by hand methods in the course of digging the plant pits the usual size; and where trees to be planted are found to be under overhead wires, other locations for the underground construction, overhead wires, or the plants may be ground construction, overhead wires, or the plants may be

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designated by the Landscape Architect.

D. Fertilizing existing trees to remain. Existing trees shall be fertilized at the beginning of their growing season with 4-12-4 commercial fertilizer applied at the rate of 3 pounds per inch of trunk diameter. Holes for fertilizer shall be spaced from 2 to 3 feet apart within the area beneath the spread of the branches and shall be of sufficient depth to effectively reach the feeding roots. Fertilizer shall be placed in each hole at a uniform rate not to exceed one-half pound per hole, and well watered in. after which the hole shall be filled to the finished grade with peat and sand. E. New planting all be impound or sales out them

- 1. Layout. New plants shall be placed in the location indicated on the planting plan. No planting except ground covers and vines shall be placed closer than two feet to pavement or structures.
- 2. Planting pits. Circular pits with vertical sides shall be excavated for all plants except for plants to be planted in beds. Diameter of the pits for trees and B&B plants and vines shall be at least 2 feet greater than the diameter of the ball or the spread of the roots. Diameter of pits for B. R. shrubs shall be 2 feet greater than the diameter of the spread of the roots. The depth of pits for trees, shrubs, and vines shall be deep enough to accommodate the roots or ball when the plant is set to finished grade,

designated by the Landscrape architect.

D. <u>Percilliving extanting iners to measure</u>. Extating these shall be fertillized at the beginning of their growing season with A-12+4 nonmercial forbillizer applied at the fee of 5 pounds per inch of trunk dismeder. Holes for fee of 5 pounds per inch of trunk dismeder. Holes for the season based the special the special the special of the free that within a station depth to extend the special the freeling roots.

Pertilizer shall be placed in the brombes and shall be of the to exceed the placed in the freeling roots.

Pertilizer shall be placed in the book hole at a uniform rate at the two exceed the book and wall extend in, and to exceed the bole shall be finited at a this finithinal grade with seat and said.

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2. <u>Finging pite</u>. Circular sits with vertical eited of the constant set of the sites of the sites for charts to be decided in bods. Dismoter of the sites for trace and Dag dants and wines shall be at least 2 dept greater than the dissert of the ball or the errend of the roots. Dismoter dissert or the ball or the errend of the Post front in the strate of the spread of the Applied Signification and the dissert of the spread of the moots. The Applied Signification for the tree, chirals, and wines shall be deep anough to accommodate the roots or other than the deep anough to accommodate the roots or other than the first order of the spread of the special of states of grade, and when the piece another to accommodate

allowing three inches of compacted topsoil.

- 3. Soil preparation. Soil used in planting shall be topsoil, which has been discussed earlier in these specifications.
- 4. Excess excavated soil shall be disposed of where and as indicated by the Landscape Architect.
- 5. Setting the Plants. Unless otherwise specified, all plants shall be planted in pits, centered, and set on 3 inches of compacted topsoil to such depth that the finished grade level at the plant after settlement will be the same as that at which the plant was grown. They shall be planted upright and faced to give thebest appearance. No burlap shall be removed or pulled out from under the balls. Platform wires and surplus binding from the tops and sides of balls should be removed. Roots shall be spread in their normal position. All broken or frozen roots shall be cut cleanly. Topsoil shall be placed and compacted carefully to avoid injury to the root system. When the pit is nearly filled, add water as necessary and allow it to soak away. Fill the hole to finished grade, and form a saucer around each plant by placing a ridge of topsoil around the edge of each pit.
- 6. Guying, staking, and wrapping. Trees shall be supported immediately after planting. All trees four inches or more in the trunk shall be guyed and wrapped. Smaller trees shall be staked. Wires shall be encased in rubber

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- events to become the ad Ilana Ilon bedevenes peposi . . judžinová mososbosi vod vo bedselbol se bos
- 7. Satting the Blants. Unless otherwise specified. der has bergives ,adio of bedgain ed linds abais ile and Jade dayeh down at Hosenet beforeness to seems! I no Lily insusition works incle out in lavel chang bedele To all amoun east two la ods do ide in that as emen and of -que joededs evin od boost bas sagings bosnely ed Elede ment due befing no beveer of liade calmed on .commo word and subject one ments erotted . Atled and team stood . Novemen of bluede piled to achie bee sond of to moloco lia . upitieng isomen tiefe at beenge of flow resent seed the seed of cleaning, thought sheet seed. and compassed carefully to avoid injury to the wood system. hat wisepeson as vetow bbs beliff wheen at the out and . share betained of elect the the same star wells to orbit a galaxia ad dania dana bancan messas a mol da - State done to ente ent become Licerco
- of finds comes automore has putters attent . contrat twentiabely after minuting. (all though the contration town I have the the form of I have start and at one washing and position and finds could about and finds obtain

garden hose to prevent direct contact with the bark of the treeand shall be placed around the tree in a single loop. Wires shall be tightened and kept taut.

- 7. Mulching. All plants shall be mulched with a 2 inch layer of well rotted manure within two days after planting. The mulch shall cover the entire pit area of the plant. This had grade. After the subsoil has been pre-
- 8. Hedge planting. Hedge plants shall be planted in trenches, excavated to a depth of at least one foot and a width of one foot wider than the total spread of the roots or the diameter of the balls, when placed in the number of roads specified. Plants shall be evenly spaced along, and equally distant from the center line of the trench.
- 9. Vines. Vines shall be planted in pits at least one cubic foot each of topsoilor prepared soil, thoroughly mixed with one third peat. Vines shall be planted in contact with the wall or other support on which they are to grow. Each vine shall be protected by two stakes. of sopre Lawns Tound is to be searified as necessary and shall
- 1. All areas not required to be developed otherwise shall be sprigged or seeded with grass.
- 2. If construction is completed at a time out of season for sprigging and seeding with Bermuda, all areas to be be grassed shall be seeded with Italian Rye at the rate of five lbs. every 1000 square feet.
 - 3. Preparation of subgrade. The subsoil shall be

gendan house to opeyent direct contact with the bark of the treasm number of ches treasm number of the treasm of the tightened and kept thus.

y. Mulosing. All plants shall be mulohed with a 2 mod layer of the latter madure rotated madure suitating the after the muloh shall cover the muloh shall cover the muloh shall cover the matter of area of

8. Honge planting. Pedent and a plant be planted in tracker, endered in the foot and to a facult of at least one foot and a store and of the foot and to the foot and to the foot and the facult of the foot and the facult of the foot and the speed along.

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9. Vines. Vines shall be planted in pits at least one ouble foot ends of topsellor prepared soil, theroughly one thing one third past. Vines shall be planted in contact with the well or other support on which in the well or other support on which the well or other support on which the vine shall be protected by two stakes.

F. Lavins.

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1. All arous not required to be developed other-

2. If construction is completed at a time out of constant of constant and sending with December. All areas to be by Grassed shall be seeded with Ytalian Bys at the cost of five lbs. every 1000 square feet.

3. Preparetion of substance of the subservers .

graded and uniformly compacted so that it will be parallel to the finished grade. The subgrade material shall be loc-sened and mixed to a depth of 2 to 4 inches and all stones over 2 inches in size, sticks, and rubbish removed. No heavy objects except lawn rollers shall be moved over the finished subgrade.

- 4. Finished grade. After the subsoil has been prepared, topsoil shall be spread and lightly compacted to
 finished grade level. No topsoil shall be spread in a
 frozen or muddy condition.
- 5. Applying lime. Lime shall be applied at the rate of 75 lbs. per 1000 square feet to the lawn areas to be planted.
- 6. Applying fertilizer. Commercial fertilizer shall be applied at the rate of 50 lbs. per 1000 square feet. Fertilizer may be applied with seed.

G. Planting the lawn.

- 1. Sowing of seed. Immediately before any seed is to be sown, the ground is to be scarified as necessary and shall be raked to a uniform texture. Seed shall be sown with a mechanical spreader at the rate of 2½ lbs. per 1000 square feet of area, lightly raked, rolled with a 200 lb. roller and watered with a fine spray. The method of seeding may be varied at the discretion of the contractor on his own responsibility to produce a smooth uniform lawn.
 - 2. Sprigging. Furrows 12 inches apart, preferably

sealed and this of the that it will be parelled -onl of flade farmed an observatur out . when because to ot of comode IIo has account f of S to fitgel a of beats has been ou . hovemen deiddung but , onele at sedent S tove berry noted to except lawn reliers westl be neved over the in elberradue belietall

- 4. Finished stude, After the subsoil has been preof bedeened wishell be spread and lightly compacted to Intelest grade lovel. No topsoil shall be appead in a frozen er muddy condition.
- stor out to believe ad line out! . enti parvicos .? of 15 los. per 1,000 square feet to the lewn areas to be . bedeeld
- flade worlding? Interest Commercial Contilliner shall to applied as the rate of 50 lbs. par 1000 square feet. .bosz natu tolicos and you seedlitte
 - ANYON gett bultaunin .0
- I, Souther of mood, Immediately before any seed in to Links has greeneed as beithfuses of no at houses, out the to mile to a uniform texture, seed about to now with a Deshanded epresder at the rate of 26 lbs. per 1000 square Toffer of area, tightly raised, rolled with a 200 lb. roller ed you pulles to bodien out. The morney of seeding may be -moreov ave ald no responsive end to meldereets end to bely . CHIST artolious diseases a southern of willion
 - ". Indeeding, Australia is thedee apart, profeshir

parallel to contours, shall be opened to a depth necessary to insure covering of sprigs to a depth of 2 inches after compaction. As soon as practical after opening, before soil is dried out, sprigs shall be placed in the furrows continuously with the ends overlapping; approximately one cubic yard of sod should be used for sprigs per 1000 square feet. The sprigs shall be covered immediately, the surface leveled to establish grade, cleaned, suitably compacted, and thoroughly soaked by watering with a fine spray. The method of planting sprigs may be varied at the discretion of the contractor on his own responsibility to establish a smooth, uniformly grassed lawn.

H. Clean up. Any soil, menure, peat, or similar material which has been brought into the area, all rocks, excess soil, and debris shall be cleaned up and removed from the site or disposed of as directed by the Landscape Architect, sompo Architect and will be at the contraptors

V. Maintenance.

Maintenance shall begin after each portion of lawn and each plant is planted, and shall continue in accordance with the following requirements:

A. Lawns shall be protected and maintained and replanted as necessary, for at least thirty days after completion of lawn operations. Scattered bare spots, none of which are larger than one square foot, will be accepted up to a maximum so 3 percent of any lawn area. D. Design Estates from the commentation of the comment of the comm

TOTAL THE COMMENCE OF SERVICE AND ADDRESS OF THE SERVICE OF THE SE

medial to contours, chail be obsered to a depth necessary to insure accounts of suring of suring to a depth of 2 inches after oursellon. As soon as precision after opening, before all is dised out, soften abelianced in the furrows continuously with the made averdancing; approximately one and a made of an approximately one and a made of an approximately one and for sorius par 1000 aquare feet, the spring shall be covered instably observed, itself to establish areade, observed, outself; compacted, and theroughly socked by vetering with a fine array. The method of planting applies may be verified at the discretion of the contraster on his own responsibility to establish a smooth, underester on his own responsibility to establish a mooth, underester on his own responsibility to establish a

H. Olego up. Any soil, manure, peat, or similar natural which has been brought into the size, all rooms, some soil, and debric shall be elegated up and removed from the wille or disposed of an directed by the Labisacos.

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enter the spant is planted, and shall continue in accord-

A. Lawra shall be protected and maintained and replaned as necessary, for at least thirty days after complation of lawn operations. Sectioned bare snots, note
of whichiged larger than one square foct, will be apospted up to a sanistem as 3 percent of any lawn area.

B. New planting will be protected and maintaned until
the end of the lawn maintenance period, or if installed
after the lawn maintenance period, until installation of
planting is completed. Maintenance shall include watering,
weeding, cultivating, mulching, tightening and repairing
of guys, removal of dead material, resetting of plants to
proper grades or upright position, and restoration of the

planting saucer. If planting is done after lawn prep-

aration, proper protection to lawn areas shall be pro-

vided, and any damage from planting operations repaired

c. Repairs to lawns or replacements of plants necessary during the maintenance period due to the removal, loss or damage resulting from occupancy, vandalism, or acts of neglect on the part of others, may be made on the order of the Landscape Architect and will be at the contractors expense.

VI. Inspection for Acceptance.

A. Inspection of the work of lawns and planting to determine completion of contract work, exclusive of the possible replacement of plants, will be made by the Land-possible replacement of plants, will be made by the Land-scape Architect at the conclusion of the maintenance period upon written notice of such inspection. This notice should upon written notice of such inspection. This notice should be submitted by the contractor at least ten days prior to be submitted by the contractor at least ten days prior to the anticipated date. The conditions of lawns will be

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c. Receipt to level or replacements of minute comming diving the maintenance period due to the removal, or design momilting from occupancy, vandalism, or acts median of the part of otpone, may be made an the order avodocratico and to ad like box toatidous aquabical of the

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noted and determination made by the Landscape Architect whether maintenance shall continue in any part.

- B. The contractor will be notified in writing by the Landscape Architect of acceptance of all work of the division lawns and planting. Lawn maintenance or other work remaining to be done shall be subject to reinspection before acceptance.
- C. Acceptance in part. The work of lawns and planting will be accepted in part by the Landscape Architect upon written application by the contractor, provided the work offered for acceptance comprises all of the work of this division entirely completed. This would include lawn maintenance, exclusive of the possible replacement of plants, located within a continuous area, which is a substantial portion definately separated from the remainder of the site by roads, walks, fences, and other structural barriers, or readily defined topographical Men shell be furnished and planted on space. VII. Plant Quarantee and Replacement. features.

- A. Guarantee. Plants shall be guaranteed for the duration of one full growing season beginning April 1st and ending November 1st, after planting. They shall be alive in satisfactory growth at the end of the guarantee period.
 - B. Replacement. At the end of the guarantee period,

noted and determination and by the Landsonoe Architect.

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or acceptance in part by the largerous architects the first will be scanded in part by the largerous architects the restriction by the continuous, provided the most entitle acceptance comprises all of the work of the social second the work of the scanded and invited a continuous, acceptance, or the particular acceptance area, which is a continuous area, which is a mostantial continuous distanced at the scanded irem the received at the scanded area, which is a minder of the site of the scanded irem the re-

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depresent. At the end of the guarentee period,

written notice requesting such inspection. This notice should be submitted by the contractor at least ten days before the anticipated date. Any plant subject to this contract that is dead or not satisfactory in growth as determined by the Landscape Architect, shall be removed from the site; these and any plants missing, due to the contractor's negligence, shall be replaced as soon as conditions permit, but only during the normal planting season. In the case that the condition and satisfactory establishment of the rejected plant is questioned, the contractor may elect to allow such plant to remain through another complete growing season. If the rejected plant is found to be dead at this time, or in an unhealthy or badly impaired condition, it shall be replaced.

- c. Materials and operations. All replacements shall be plants of the same kind and size as specified in the plant list. They shall be furnished and planted as specified under new planting; the cost shall be borne by the contractor except for possible replacements resulting from removal, loss or damage due to occupancy of the project in any part, vandalism, or acts of neglect on the part of others.
- D. Costs of plant replacements. A sum sufficient to cover the estimated cost of possible replacements, including materials and labor, will be retained by the Landscape

inspection will be made by the Landscape Architect upon written notice requesting such inspection. This notice should be submitted by the contractor at least ten days before the subject of the auticipated date. Any plant subject to this contract that is dead on not setisfactory in growth me described by the Landscape Architect, shall be renored from the site; there and any plants witseing, due to the contractor's negligence, shall be replaced as soon as contitions permit, but only during the negligence according to remain all satisfactors seathful and case that the replaced plant is questioned, the combine complete growing season. If the rejected plant is questioned, the another complete growing season. If the rejected plant is noted to be dead at this time, or in an unhantery or bedly impaired condition, it shall be replaced.

of Manager of the same kind and size as specified in the plants of the same kind and size as specified in the plants of the possibility of the contract of the possible replacements recentling from removal, loss or damage due to secureary of the project in any part, wands its, or note of maginar on the part of others.

D. Costs of plant replacements, a sun sufficient to cover the estimated cost of possible replacements, included the materials and labor, will be replacements, included the materials and labor, will be replacements, included

Architect and paid the contractor only after all replacements have been made and approved.

A. General conditions. The general and special conditions are a part of the specifications. All provisions contained in them which affected this work are as binding as though incorporated herein.

Work included under this section is general excavation of the site as shown on the drawings, including cuts, the construction of slopes and terraces around the buildings, all required excavation for foundations, back filling against walks, filling in all trenches, the removal of trees and stumps within the area of the building or the cuts, etc.

The contractor shall excavate or fill, as the case may be, to grades as indicated on the drawings. Earth shall be sloped away from buildings in all cases.

At option of the owner and Landscape Architect any topsoil, grass, and or sod, within the area to be excavated by the contractor, shall be removed and stored on the site. The contractor will be required to redistribute the topsoil, grass or sod as here specified.

The owner does not guarantee to the contractor the depth of excavation required or the height for foundation walls. Existing grade lines are shown on the drawings approximately as they exist now. All bidders will be required to verify

at the end of 28 days.

Apanited and puld the compressor only after all replacenumber have been made and approved.

A. <u>Gengral expititions</u>. The general and special conditions are a part of the apecifications. All provisions constant in them which affected this work are as binding or though tecorporated herein.

Now included under this socion is general emergion of the eiter of the chown on the drawing, including outs, the complete of along and terroper around the buildings, all required expandion for foundations, book filling of this in all transcours, the emovial of traces on the shape within the area of the building or the cuts, etc. for to guides as indicated on the drawings. Earth shall be aloned away from buildings in the drawings. Earth shall be aloned away from buildings in all eases.

At eption of the owner and Landscape Architect, and bedevated to poster to be excavabled to be excavabled. Described to the except to be removed and atomed on the alto. To compretely this be required to redistrability the topsed.

The owner does not gramming to the combine but the denth of cocaration models.

Allies notion found the beigns for the description wills.

Allies are shown on the descripts sported to receive to the required to results.

conditions at the site before submitting their proposals, as no claims will be allowed, after the contract is awarded, for discrepancies as they occur in the work, and these are shown on the drawings.

VIII. Construction.

sette A. concrete. and call this was to commerce

- 1. Scope. The general contractor shall furnish all labor and materials for installing all concrete work consisting of steps, terraces, parking areas, walks, and seats as shown on the drawings.
- 2. Coarse aggregate. Gravel, or crushed stone, must be hard, clean, and free from organic matter, acids, or other chemicals, and grading from 1/4 inch to 1-1/4 inches for the different classes of work.
- 3. Fine aggregate. Fine aggregate for concrete shall consist of clean, washed sand, 95% of which shall pass a No. 4 sieve. Not less than 50% shall be retained on a No. 30 sieve, and not more than 5% shall pass a 100 mesh sieve.
- 4. Reinforcing steel. All bars for concrete reinforcement shall be deformed bars, rolled of new billet steel, conforming to the specifications of the American Society for Testing Materials. Mesh shall be electrically welded, rectangular or square fabric.
- 5. Concrete quality. All concrete shall have an ultimate compressive strength of 3000 lbs. per square inch at the end of 28 days.

elsectors when galatindue evoled with and se enclatence -braws of toerdago add terts after the contract to awarden. for disorpromutes as they occur in the with, and these regalization of the discontinuous and the second era will, Construction. The best property of the best of t

A. Conorebo. Sine without the property to the property of the state of

- in deliming finde rossers occurred off proper i -singer Myor eference lie maillaient wet alebrated the wedel ting of aters, terraces, parting areas, walks, out cente as shows on the disvings.
- O. Coarse sauregate, Gravel, or drushod stone, must to berd, close, and free from organic matter, colds, or other ebesienis, and grading from 1/6 inch to 1-1/4 inches inter to seemal devication of not
- Ilan erevence for edagorgas oniv .edaporere dell' consist of steam, weaked sand, 95% of which chall pass a Mo. steve. Not less than 30% shall be retained on a No. 30 stove, and not more than 56 shall page a 100 medh slave.
- -Attendance of and ill the senerate reinloses to the deflor to be derored bears, rolled of new billet steel. confemning to the specifications of the American Seciety for Toot to Materials. Neck shall be electrically welded, rectcondan equate rebrice
- S. Congrete quality. All concrete chall have an Mittacte sommerstye strength of 3000 the. per somere inch at the and of 28 days.

- 6. Cement. All cement shall be Portland cement and shall be dry and of uniform quality having no lumps. It shall be in its original containers.
- 7. Water. All water used must be clean filtered drinking water, containing no alkaline acids, vegetable matter, or other chemicals injurious to concrete.
- 8. Mixing of concrete. Concrete shall be approved ready mixed or shall be mixed on the site in a mechanical batch mixer of a type approved by the Lendscape Architect.
- 9. Exposed congrete. All exposed wells and architectural concrete shall be cast against smooth plywood.
- 10. Finishes. All surfaces that will be walked on shall be brushed to assure sure footing.

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|---|--------------|----------------------------------|--------------------------|-------------------|--------------------------|-----------------------|-------------------------|-----------------|---------------|---------------|---------------------|------------------|---------------|-------------------|-------------------|-------------------|---------------------|-----------------------|---------------------|
| | 39. | notes stake | Stake | Stake | Stake | Stake | Stake | Stake | | | State | State | | | | | | | |
| ı | | D-A-Shown | Shown | Sh over | Shown | Shown | Shown | Shown | Shown | Shown | ten | 556 | 1 666 | | Thoras . | Thom | Shown | Shown | Shown |
| ı | | Reot. BAB | BAB | 888 | B.88 | Ben | 36.9 | BASB | Bits | 840 | 38.8 | 88 | CA CA | m K | DEB | 92.9 | 12.8 | BAB | BAB |
| ı | | 57.5 | 9-7- | 6-81 | e4-61 | 4-61 | 6-8 | 69 | 4-61 | 19-4 | 27 | 5 | -83 | 1 | T | 6"-1 | 2-3+ | 2-31 | 2-3 |
| | Florit Lilot | Common name Japaneso Maple | Devile-Walkingstick 5-7' | Flowering Dogwood | Washington Hawthorned-6* | Honey Locust | Swootgum | Black Tunelo | White Pine | Lobiolly Pine | Cherry Laurel | Southern Red Cak | witor out | Camella | Japanese Cleyere. | Mugo Pine (dwarf) | Formosa Firethorn | Azalen | Kurume Azalea |
| | | Acer palmatum | aralls spinoss. | Cornus Moritas | Grataegus phochopyrum | Gleditsia triscanthos | Liquidamber styraelflua | Nyssa sylvatica | Pinus atrobus | Pinus taeda | Frunus carolinians. | Quercus felcats | Cuerous nigra | Cemellie secondus | Cleyera Japonica | Pimus Mugo nama | Pyremanthe roldzumi | Rhododendron kampfore | Rhododendron kurume |
| | | Mumber troes | H | 25 | - | M | တ | īU | 125 | 120 | 10 | K | ম | | n | 13 | m | 8 | 12 |

the drawer and of the shall be forther as lutter. It is the dry and of unfilled quality having so lutter.

The water, water was a similar anida, vegetable siter, or other absolute injurious to concrete.

S. <u>Wixing of congrete</u>. Concrete shall be approved in the alter in a mechanism.

Include or shall be mixed on the alter in a mechanism.

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thesturel concepts shall be east against anothin plywood.

10. Fintense that the cast against anothin plywood.

10. Fintense. All surfaces that will be walked on that the brushed to assure ours footing.

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|-----------------------|--------------|----------------|--------------------------|---------|
| Whitehead Road Ele | ARLE Demo | Sind Rock | The Land | Coals. |
| Computed By Roy C. | Ashley & Als | An D. Holliste | 16.00 1 | 150,00 |
| Material List | Unit Gost | Quanity | Cost | 7.50 |
| 10-6-4 Fertilizer | 3.00/100 | 2000 lbs | \$60.00 | 24,00 |
| Wilt Proof | 6.50/gal. | 6-8 2 gel. 9 | 10, 13.00 | 80,00 |
| Tree Wrap and sylva | 1.00/roll | 6-84 rolls | 12.014.00 | 60,00 |
| Bales Straw | .50/bale | 30 bales | 5. 15.00 | \$87.50 |
| Wire (No.12) | 10.00/role | 2 rolls | 20.00 | 562,00 |
| Rubber Hose (2Ply | .10/ft. | 200 ft. No. | | |
| Concrete | 14.25/eu.yd | . 5 25 cu. yd | s. 256.00 Tot. 488.00 | 250.06 |
| 27 Queyous rd | 6725 | 6-8* 14.0 | 10.00 | 270,00 |
| <u>So11</u> | Yards Fill | Unit Cost | | 70.0 |
| Top Soil | 400 Yards | 3.00 | \$1200.00 | 10.5 |
| Peat Moss | 30 Bales | 3.00 | 90.00 | 5 |
| Manure (Rotted) | 150 Yards | 2.00 | 300.00 ot.1590.00 | |
| Labor Cost No | Rate | Hours | Cost | 80*5 |
| Foreman 1 | | | \$300.0 | 0 42.4 |
| Connected of Sections | 1,50/Hr. | | 1070.0 | 0 |
| Equipment | horizontellä | | 2.00 | 33/5-1 |
| Dozer 1 | OBB | | 260.0 | 0 |
| Auger 1 | | - 12 | 187.5 | 0 4074 |
| Sprige Berauda | | 39728 | rot.1817.5 | |
| Plant Materials | N. | | total | |
| Quanity Scient | tific Name | Size Root | Price | Cost |
| 1 Acer pal | | 5-7' B&B | 8.00 | 8.00 |
| 1 Aralia | 177, 12 | 5-7' B&B | 9.50 | 9.50 |
| | | | | |

| | | Plant List (Cont'd) | | | *04 |
|----------------|-----------------------------------|-----------------------------|---------------|------------------|--------------|
| Number Cooking | Setontific Tome | Common | 27 | Root | D.A. Outtown |
| 3,400 | Reders helix | English Ivy | \$ | Feat Pots 1.0.c. | 1 10.C. |
| 105 | Juniperus horizontalis plumosa | Creeping Juniper 1'-13" Den | | | 25.10.0 |
| 325 | Lirlope muscari | Elgblue Liriope | *** | Flats | 1.0.0. |
| 200 bu. | Der mida | Permuda | 2-4-2 20ed | å | 2 0°C. |
| | | | | | |

| | | | | Plant Haterial (cont'd) |
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| 00.08 | 10.00 | EMA | 6-81 | musitioners assumble a |
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Items (cont'd) Cost Mibliography 693.25 Overhead Profit Tot. 2373.57 \$2373.57 1. Special Equipment 488.00
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4. Plant Materials

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