

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

MINUTES OF THE CAMPUS PLANNING COMMITTEE

Meeting No. 27 April 7, 1959

A meeting of the Campus Planning Committee was held at 8:30 a.m. in Room 120 of the Administration Building. Members present were Mr. E. J. Urbanovsky, Colonel C. P. West, and Chairman M. L. Pennington. Mr. J. Evetts Haley, Mr. V. E. Thompson, and Mr. Nolan E. Barrick entered the meeting later.

357. Approval of Minutes

On motion by Mr. Urbanovsky, seconded by Colonel West, the Minutes of Meeting No. 26 were approved.

358. President's Approval of Minutes

The Chairman reported that on April 6, 1959, the President approved the Minutes of Meetings Nos. 25 and 26.

359. Agricultural Plant Sciences

- A. Mr. Urbanovsky reported that the study of functional needs has been prepared.
- B. The inspecting team did secure information on proposed Plant Sciences facilities during the inspection trip. A report is to be prepared on the findings of the Committee.
- C. Mr. Urbanovsky reported that a report from Dean Thomas, showing the proposed use of space vacated by Agronomy and Horticulture and Park Management, has been received.
- D. Mr. Barrick reported that his staff has completed the study showing the space used by Agronomy and Horticulture and Park Management during the fall semester of 1958.
- E. Mr. Urbanovsky and Mr. Barrick are to put all the reports together, study them, and present a recommendation to the CPC at 1:30 p.m. on April 8, 1959.
- F. The site recommendation is to be included in Item E above.
- G. If the project is recommended at the CPC meeting on April 8, 1959, it was agreed that the Associated Architects and Engineers of Lubbock will be recommended for the project.

(Mr. Haley stated that the recommendation, as planned, will be acceptable to him if, after thorough and complete study, the CPC is convinced of the need and justifications.)

360. Air Conditioning Survey

- A. The report from the consultants, Zumwalt and Vinther, was due to be received by mid-March, 1959.
- B. Mr. Mason had reported that the consultants have the written report prepared and wanted to meet with the CPC today to present and explain the report. The Chairman advised Mr. Mason that, with a full Agenda and the lack of notice, it would be impossible to hear Zumwalt and Vinther today. It was agreed that the report will be presented orally at a later date

360. Air Conditioning Survey (continued)

The written report is to be mailed from Dallas today and it was agreed that no action would be taken until the members have had an opportunity to study the report in order to make a recommendation to the President and the Board for future procedure, using the report as a guide.

361. Architects

- A. Mr. Barrick presented a compilation of the various items for the architectural punch list. The members are to study the list and make their recommendations to Mr. Barrick for preparation of the final list to date.
- B. As a part of the punch list, the architects will be notified in writing of the budgeted amounts for their projects.

362. Boiler and Housing

- A. The Chairman reported that he has received two letters from E. L. Howell of the Howell Engineering Company (Murray Boiler Works) under the date of March 30, 1959, stating that no word had been received and asking for assistance. Attached to the letter was a carbon copy of a letter dated the same date to the Board of Governors of Texas Tech complaining about the bid on the boiler.

The Chairman does not feel that a reply is necessary as he has given Mr. Howell all of the information and can do nothing more.

- B. After careful study, the CPC recommends acceptance of the preliminary and final plans and specifications at the Board Meeting on April 11, 1959, subject to a further study of the ventilation problem and material samples.
- C. If the Board of Directors accepts the final plans and specifications, it is recommended that the Board authorize advertisements for bids and the Building Committee to award a contract between Board meetings in order to conserve time.

363. Chemical Engineering and Nuclear Reactor Building

- A. The project layout from Convair-Fort Worth was discussed at length and the basic schematics are ready to roll, subject to possible reduction in space. The architects are working on the schematics.
- B. Mr. Barrick reported that Dean Bradford sent him a list of the functions and recommendation on the Chemical Engineering part of the project. Dean Bradford developed the information from consultation with Drs. Dennis, Oberg, and Renard. After coordination and compilation of the information by Dean Bradford, he reduced the scope and sent it to Mr. Barrick. Mr. Barrick and his staff analyzed the information, reworked the plans, further reduced the size and resubmitted the report to Dean Bradford, who stated that the revisions meet with his approval. As much flexibility as possible is provided in the proposed plans. Construction costs, with the view of reductions, were discussed and it was pointed out that the Chemical Engineering equipment such as fume hoods will increase the cost over that of ordinary laboratories.

(In all probability, two, and perhaps three, of the ROTC Buildings will be on the proposed site.)

- C. The question of a time schedule was discussed. It was pointed out that information on the reactor must be received from the AEC before final plans and specifications can be made. The AEC cannot supply the reactor in the present fiscal year which ends June 30, 1959, but Dean Bradford is of the opinion that the award will be made by mid-July. However, the AEC has designated \$65,000 for auxiliary reactor equipment and it looks as if the reactor will receive favorable approval.

363. Chemical Engineering and Nuclear Reactor Building (continued) Pres. said on 4/20/59 that he agreed

363. Chemical Engineering and Nuclear Reactor Building (continued)

It was agreed that the plans can be prepared only through the preliminary stage as the final plans and specifications will have to be held until the reactor is awarded.

It is recommended that the architects be instructed to present full preliminary plans and specifications, which will include elevations and studies of the economies and needs, to the CPC not later than May 15, 1959, in order that they may be studied and a recommendation made for the Board Meeting on June 1, 1959. On notification of the award of the reactor, the architects will be authorized to start final plans and specifications.

If the notice of award is received by mid-July, 1959, it looks as if the building could be completed by the spring of 1961.

364. Classroom and Office Building

- A. The Chairman reported that Mr. Mason had sent him a memo stating that the study of the sanitary sewer needs and routing of sewer lines for new buildings in the Engineering area has been taken as far as possible until the sites for the other buildings have been determined. The study will proceed as soon as the sites are selected and Mr. Mason feels that the design of the services will be completed by the latter part of May as scheduled.
- B. The CPC requests that the President intercede with the Dean of Business Administration in an attempt to secure the needed equipment for the Business Administration part of the project. There seems to be no need to rush the contractor and other construction people if the equipment is not to be on hand and ready for use when the building is completed. Also, there is a clause in the contract specifying heavy liquidated damages if the building is not completed on schedule and the clause is taken into consideration at the time of bidding by the contractor.

At the February meeting with the Deans and Department Heads of the School of Business Administration, Mr. Thompson requested that he be furnished with the equipment lists two weeks before the Board Meeting on April 11, 1959. He has heard only from Dr. Rushing.

The general equipment for the building cannot be determined until the display room is finally set.

Bids are being taken on the office furniture for the project.

- C. The Chairman was instructed to follow-up with the President to see if the decision on the conversion of the large classroom to a display room is final as time is becoming short to make the change.
- D. Progress Report -- The roof slab has been raised and is being welded in place. Most of the tile is on the third floor slab, which is about ready to lift. The building is behind schedule.

365. Computer - Architecture

- A. The Board has approved a site west of the West Engineering and north of the new Classroom and Office Building.
- B. Mr. Barrick reported that the staff members in the Department of Architecture have studied very carefully the first two proposed layouts which included the scope and general arrangements. The revisions are considered good and have been recommended by the staff.

365. Computer - Architecture (continued)

- C. Various items in the schematics were discussed by the CPC. Provisions are included for 250 drafting tables, whereas the Department now has 220. The need has been cut along a fine line as the Department has been increasing about 3% per year, but it is anticipated that the pending tuition increase before the Legislature will affect the out-of-State enrollment. There are 355 majors in the Department this year. All of the rooms are designed for teaching except one which is reserved for the Office of the Supervising Architect. There are eighteen full-time and three part-time teachers in the Department.

Miss Kirkwood is pulling together the information on the space utilization and justifications. Her report is scheduled to be completed today.

The jury room is a peculiarity of the Department as 90% of the grading is done by a jury of three faculty members. The grading is done competitively and the large drawings are posted for easy vision. The grading is now done in the corridor and there is neither ample lighting nor space. Students observe the open grading and three to six hours are required to grade a set of drawings. There are twenty-four gradings each long semester. Although the room is labeled as a jury room on the schematics, it will be used for other purposes, such as seminars and exhibits, also.

Approximately 30,000 gross square feet of floor space is provided for Architecture in the proposed facilities. The Department now has between 24,000 and 25,000 net square feet. The proposed facilities would provide less net space for the Department but it could be more efficiently used. It is estimated that the cost per square foot will be approximately \$13.00.

Dean Bradford has requested 15,000 square feet for the Computer Center and it is anticipated that the construction costs will be a bit higher than for the Architectural portion.

Mr. Kirby is making two additional studies of the proposed site. One is to include the Computer Center as the basement of the project and the other is to add to the north wing of the East Engineering Building.

- D. The question of the Departmental Library was discussed. The present library is used approximately two-thirds by Architecture and one-third by other Engineering Departments.

Mr. Barrick feels that the library is absolutely essential to the Architecture Department. He has sent questionnaires to other Departments of Architecture over the country and expects answers rather soon. The proposed library is more modest than the present one. He would like to continue it under the library control. He feels there is a need for ready reference as the students are required to go back and forth from the library to the drawing boards. He does not want the students to have the references in the drawing labs. He added that it is a long, continuing tradition to have a library in the Department of Architecture.

It is the recommendation of the CPC that the question of the Departmental Library for Architecture be referred to the President for a policy decision as the decision is felt to be outside the scope of the CPC.

- E. The project architects are doing all that they can pending the final site selection.
- F. The final needs for Computer space is under study by Dean Bradford and the needs for Architecture by Mr. Barrick. The studies are to be concluded as soon as the site is specifically set.

365. Computer - Architecture (continued)

G. It is the recommendation of the CPC that authorization be received to present fully developed preliminary plans, including the specific site, at the meeting of the Board to be held June 1, 1959. The information would be presented to the CPC by May 15, 1959, in order to provide time for study before presentation to the Board.

(Mr. Haley agreed to the above and emphasized that the idea of putting the Computer underground be considered fully for economy of space, air conditioning, etc. He would like for the question to be discussed with the Building Committee at the meeting Friday afternoon.)

The meeting recessed at 12:00 noon and reconvened at 1:00 p.m.

366. Equipment

Mr. Thompson reported that he had met with Dr. Dudek and Dean Bradford on the equipment list for the Textile Engineering Building. The CPC recommends the purchase of the equipment as requested with the exception of the black-out curtains and the drawing boards.

The revised lists of equipment for the new portion are attached to and made a part of the Minutes and the equipment is to be purchased from the budgeted item for equipment. (Item No. 19, of the original priority list, Attachment No. 3, page 8.) (Attachment No. 268, page 107)

The revised lists of equipment for the old portion are attached to and made a part of the Minutes and the equipment is to be purchased from the local building funds (Item 356A, page 245). (Attachment No. 269, page 108)

367. Extension

In all probability, a recommendation will be made that Extension be housed in the present library but it will be necessary to wait for further progress before making a definite recommendation.

368. Funds Available

Mr. Thompson reported that no change has been made since his report in February. (Item No. 276, page 184)

369. Home Economics

The reports presented to the CPC at Meeting No. 26 have been studied by the members. However, as no funds are available, it is recommended that action be deferred on the projects until the construction program has developed further.

370. Library

A. The Chairman reported that he called Mr. Haley on April 1, 1959, as instructed at Meeting No. 26, to discuss the necessity of additional information from the five architectural firms recommended for consideration. Mr. Haley agreed that the information is necessary and thought that it would be well for the Chairman to simply write and ask for the information without implying any commitment or obligation.

Three of the five firms on which the latest information was not available were requested to forward the information and it has been received from Pitts, Mebane and Phelps, and Hedrick and Stanley. Page, Sutherland and Page have not sent the information to date.

370. Library (continued)

- B. The recommendation for architects was discussed at length along with the question of a fee, as the prevailing rate paid by the College is 5% while it is 6% in other areas of the State.

Mr. Haley asked if the College could be cut off from down-state architects if the 5% rate is observed. He said that he thought it could cause much discussion in the Board if it is necessary to fall back on local architects at 5%. The College may have reached the point where it should go afield for architects.

Mr. Haley said that he has heard of George L. Dahl, knows of Hedrick and Stanley, and thinks that Pitts, Mebane and Phelps would do fine. He stated that an additional 1% fee could be an investment well spent.

It was agreed that a list of architects, by priority, would be recommended to the Board. If the Board approves, the number one choice would be told that the College is interested in having him design the library but that the College's prevailing scale is 5%. Talking points are that the College has employed and paid a consultant and the Supervising Architect will aid in the development of the project. If the firm is not interested in the project for a 5% fee, the next firm on the priority list would be approached along the same line. It was agreed that the notification is not to be tendered as an offer but to explore on the basis of interest and 5%.

After much discussion, the tentative recommendation for architects by priority was rearranged and the following is the recommendation of the CPC:

1. Pitts, Mebane and Phelps
2. Pierce and Pierce
3. Hedrick and Stanley
4. Page, Sutherland and Page
5. George L. Dahl

(Mr. Haley asked the Chairman to tell the Building Committee that he would go with the CPC on the initial recommendation but would probably argue with the Committee later on Mr. Hedrick. He stated that he thought the Chairman should make the contact with the prospective architect.)

- C. It was agreed that there would be no change in the recommendation as recorded in previous Minutes for the central library, the site, and arrangements as set out in Mr. Low's report.
- D. The Chairman reported that the President had notified him that there are no plans to eliminate the West Texas Audio-Visual Services and that space should be continued for the Services in the existing library.
- E. The question was asked if the trip to Stillwater, Oklahoma, to inspect the library of Oklahoma State University has been abandoned. No one had heard anything but assumed that all persons interested in the library are in accord with the recommendations. Mr. Haley stated that, if the trip is made, he would like to go along, especially with the project architect, if possible.
- F. The Chairman reported that Mr. Butterfield is out of town and, therefore, no reports are available on the prospects for donations.

371. Mechanical Engineering Shops

- A. Mr. Barrick reported that no additional work has been done by the architects on different systems of construction as they have pretty well covered the problem in their studies.

371. Mechanical Engineering Shops (continued)

- B. Mr. Barrick reported that the architects are trying to rework the schematics based on reorientating the proposed structure to the present East Engineering facilities. It is anticipated that the results will produce the most practical solution and economical construction.
 - C. It is recommended that the site be L-shaped and attached to the north end of the East Engineering Building with two stories in front, if possible, in order to conform to the construction across the street.
- (Mr. Haley asked the Chairman to tell the Building Committee that he concurs with the idea of one L-shaped building with two stories in front.)
- D. It is recommended that the Board of Directors authorize the presentation of full preliminary plans which will include elevations at the June 1, 1959, meeting, with the plans to be presented to the CPC by May 15, 1959, for study.

372. Operating Procedures

- A. The Board of Directors had requested the CPC to study means to finance the remodeling and renovation of existing buildings, such as Science, Journalism, Speech, etc. The CPC asked Mr. Thompson and the Chairman to study the various sources and to report.
- The building program must be developed further before the various needs are known and before a final recommendation can be made. However, since there are no State funds, it looks as if the only possible source of financing would be the unappropriated balance and/or local funds in the Building Funds.
- B. It was agreed that the Operating Procedures will be brought up to date in one list and checked against the Punch List for Architects and Other Items.
 - C. The Chairman reported that Dean Thomas had forwarded one copy of the proposed agreement with the Tech Rodeo Association and the blue-prints on the Rodeo area. Colonel West and Mr. Thompson were requested to study the prints and the agreement and to make a report to the CPC on April 21, 1959.
 - D. It is recommended that the lack of reimbursement for Flint Street be called to the attention of the Board at the next meeting.
 - E. It is recommended that the Board be requested to ask the City to permit a left turn from College Avenue at Broadway to enter the campus and to make a left turn from Broadway at College Avenue to leave the campus.

373. Other Business

- A. Mr. Thompson reported that information is still being accumulated on the need for married student housing.
- B. It was agreed that it would be well to ask the President for his wishes on the request from Mr. Philbrick for additional tennis courts and to mention that there are no courts for women. Some probably should be provided in connection with the New Women's Gym.
- C. It was agreed that the light needed behind the fence at the south end of Weeks Hall be similar to those in front of the Union. The standard will be partially hidden by shrubbery and the light can shine through the trees. Payment is recommended from dormitory funds.

It was agreed that the selection of a standard is not to set a precedent for other light standards on the campus.

373. Other Business (continued)

- D. The Chairman reported that Miss Clewell had told him that it probably will be after the next meeting of the Board of Directors before she can complete the space utilization report for C. E. and E. E. as requested.

374. Physical Plant Facilities

- A. Mr. Barrick reported that the project architects have been presented with the material accumulated by the CPC.

- B. The Board, in the past, requested that the CPC make a careful study of the existing Physical Plant Building site in connection with the need for additional stadium parking.

Several studies have been made and it is recommended that the new Physical Plant facilities be erected on the proposed site. The recommendation is made after a careful analysis of the parking needs and other proposed sites for the Physical Plant facilities. It is believed that the use of the present site for the new facilities will provide the most beneficial, over-all results for the College.

- C. Mr. Barrick reported that the architects have developed what is thought to be the most economical type of construction although the question is still under study.

- D. Mr. Urbanovsky, Mr. Barrick and Colonel West reported on their study of the facilities and presented rough schematics. The various parts of the proposed layout were discussed in detail. It was pointed out that the Printing Press is not included in the proposal at this time due to a lack of space. It will be located in the near vicinity. It looks as if a masonry structure, brick faced on the outside, will be the most economical material. With the suggested plan, it will be possible to operate from the existing buildings during construction although it will be very inconvenient.

The following is the recommendation of the CPC:

1. Present site.
2. Estimated cost \$400,000.
3. That bulk storage be provided elsewhere as out on the farm. The proposed storage is included in the \$400,000.
4. Full preliminaries be presented to the Board of Directors for approval on June 1, 1959, with the plans to be presented to the CPC by May 15, 1959, for study.

(Mr. Haley asked the Chairman to notify the Building Committee that he concurs in the site recommendation and recommends that the total monetary outlay be held to \$386,000 on an over-all basis.)

- E. The Chairman reported that Mr. Taylor, Mr. Steger, Mr. Price, Mr. Thompson, and he had a meeting on the proposed location of the Purchasing Office. It is the recommendation of the group by priority:

1. That space be provided in the Physical Plant Facilities to be used as a Purchasing Office when it becomes necessary to provide more space in the Administration Building.
2. That the Purchasing Office remain in its present location.
3. That it be moved to the Physical Plant Facilities as soon as space is available.

374. Other Business (continued)

After much discussion, it was agreed that the Purchasing Office be left where it is, with the idea that it could be moved to the Physical Plant area at a later date if desirable, with additional facilities to be constructed at that time.

375. Printing Press

It was agreed that the Printing Press should be erected in the general area of the Physical Plant Building and be a part of the Physical Plant structure.

It is recommended that the Board authorize the preparation of full preliminary plans and specifications for presentation at the meeting on June 1, 1959, with the plans to be presented to the CPC by May 15, 1959, for study.

376. Psychology

The Chairman reported that he had received an informational copy of Dr. Kaplan's request dated April 2, 1959, to Dr. Jones, making a strong plea for adequate facilities for Psychology.

After discussion, the CPC agreed that no progress can be made on Psychology facilities until the relocation of the Farm Facilities has progressed much further and that there seems to be nothing else which can be done pending the decision.

377. Relocation of Farm Facilities

It was agreed to include an item in the Agenda for the Building Committee meeting stating that the preparation of the report by the Committee from the Agricultural Staff is to be delayed until the new Head of the Department of Animal Husbandry arrives in the next month or so. (Item 362, page 249)

378. ROTC

A. It is contemplated that it will be necessary for the ROTC to be temporarily housed in various places on the campus during the completion of the building program and until the present library is available for other use. (Item 358B, page 246)

When it is known what ROTC facilities will be lost due to the location of permanent structures, Colonel West and Mr. Thompson are to invite representatives of the two ROTC services to the campus in order to explain the needs for the sites and to show them the temporary housing which must be used during construction.

B. Colonel West and Mr. Thompson are to complete the survey of interim needs for the ROTC Units as soon as the site is selected for the Computer - Architecture Building. (Item 358B, page 246)

379. Science Addition

In view of the mass of information on the project, the fact that there is insufficient time to digest the information and that it may be necessary to meet with the Science Department Heads, the CPC recommends that no proposal be made until the meeting of the Board on June 1, 1959. It will be necessary to utilize the time in an attempt to clarify the needs. Reports from Miss Clewell, Dr. Wade, and Dr. Thomas are attached to and made a part of the Minutes. (Attachments Nos. 109-112, pages 270-273)

380. Southwest Collection

It is planned to have the Collection moved to the present library building when the new library is completed. (Item No. 358B, page 246)

381. Stadium

Bids on the stadium enlargement are to be opened at 2:00 p.m. on April 10, 1959, in the Aggie Auditorium.

It was agreed that the bid opening and award are not part of the CPC procedure but the members should act in their usual individual capacities.

382. Student Union

A. The Chairman reported that it is feasible to issue revenue bonds to construct a \$1,000,000 addition to the Union by pledging the proceeds from the Union and the Bookstore. (Item 364A, page 249)

B. It is recommended that the architects be instructed to go ahead with preliminary work and that the HHFA route continue to be checked for financing to see if funds are available as such financing will yield the lowest possible interest rate. (Item 364A, page 249)

383. Textile Engineering

The contractor is making excellent progress with the construction.

384. Water Mains

The following statement appeared in House Bill No. 133 of the Fifty-Fifth Legislature, Regular Session, as part of the appropriation for Texas Tech:

"It is the intent of the Fifty-Fifth Legislature that the following projects be accomplished by this college, subject to the approval of the governing board, out of funds accruing from the Ad Valorem tax revenues as authorized by Article VII, Section 17, of the Constitution of the State of Texas:

For the Years Ending	
August 31, August 31,	
1958 1959	

"Installation of water
mains and lines----- \$ 17,980

"Air conditioning the
Computer Laboratory----- \$ 10,000"

A meeting was held on the morning of April 6, 1959, between Mr. E. J. Urbanovsky, Mr. V. E. Thompson, and M. L. Pennington to make a recommendation to the CPC on the water mains.

The Constitutional Building Amendment Funds are approximately \$3,000,000 short of the estimated amount needed now for new buildings and equipment and it seems wise to save all possible funds for those purposes, and no money has been appropriated by the Legislature to install the lines. However, during the past year and a half, when funds could be spared, some installations have been made and others perhaps can be from time to time.

After careful consideration, it is recommended that no Constitutional Building Amendment Funds be appropriated for water mains until the building program is more adequately financed and that efforts be continued to eke out funds for the water mains whenever possible.

385. Women's Gym

Various studies are being pulled together on the function, space, site location, etc.

It is recommended that the Board authorize the preparation of full preliminary plans and specifications to be presented to the Board at the meeting on June 1, 1959, with the information to be handed to the CPC by May 15, 1959, for study. It is proposed that the site be adjacent to the President's home.

The meeting adjourned at 4:55 p.m., with the next meeting scheduled for 1:30 p.m. on April 8, 1959, in Room 120, Administration Building, to consider the Agricultural Plant Sciences Facilities.

M. L. Pennington
Chairman

Campus Planning Committee
 April 7, 1959
 Attachment No. 107
 Item No. 366

C -- O -- P -- Y

EQUIPMENT REQUESTED FOR THE DEPARTMENT OF INDUSTRIAL ENGINEERING
 PLANT LAYOUT AND TOOL DESIGN LABORATORY
 IN THE NEW PORTION OF THE TEXTILE ENGINEERING BUILDING

When additions and alterations have been made to the Textile Engineering Building, this equipment will be moved into the room in the addition which is to be used for courses in Industrial Plant Design and Tool Design. This new area will permit section sizes of these courses to be increased by nine students. A total of one hundred (locker facilities requested, one drawer per student) students will be accommodated in these courses. Existing equipment now in the Department can handle eighteen students per section, these eighteen tables and drafting machines will be moved to the new facilities. This equipment is needed because at present the equipment we have does not accommodate all the students we have enrolled in these subjects.

Plant Design and Tool Design - nine student capacity increase
 (27' x 58', 27 student capacity).

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
1	9	Drafting tables, $37\frac{1}{2}$ " x 60" x 38" high. Tables to be four-post type with adjustable tops without drawers; material to be hardwood, natural or light oak with varnish finish. Tops to be of select pine, free from defects or discoloration (same as furnished on P.O. TTC 444-6-22). Similar to Hamilton 250A.	\$ 960.00
2	8	Drafting machines, 24" standard type for mechanical drafting; full circle protractor graduated in degrees with vernier to read to five minutes. Automatic indexing stop at 15 degrees increments. Similar to Bruning 2699.	1,000.00
3	8	Scales, 12" long, duraluminum, graduations 1", $\frac{1}{2}$ ", $\frac{1}{4}$ ", $\frac{1}{8}$ " to the foot. To fit Item 2. Similar to Bruning 27115, Style B.	35.00
4	8	Scales, same as above except 18" long. Scales to fit machines described above, to fit Item 2. (Same as P.O. TTC 444-6-17). Similar to Bruning 2711T, Style B.	50.00
5	9	Draftsman stools, metal, non-adjustable, 28" high. Frames to be tubular welded metal, and foot rest of same type. Seats 14" in diameter. Seats to be of Masonite insert. Metal parts finished in grey enamel (similar to Eugene Dietzgen Company No. 4505IM).	100.00

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<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
6	20	Five-drawer sectional metal filing cabinets, drawers 2" deep and large enough to take 30" x 42" drawings. Each drawer to be fitted with hasp and staple to permit each student to lock his drawer with padlock. Similar to Hamilton 1848, with hasp and staple.	\$3,000.00
7	5	Flat caps for above files.	105.00
8	5	Flush type bases for above files.	90.00
9	2	All metal, two-door cupboard, approximately 78" high x 36" wide x 24" deep; with four (4) adjustable shelves. Doors fitted with locks. Similar to Hon Model 7821.	300.00
10	4	Metal bookcases, 48" high x $3\frac{1}{2}$ " wide x 18" deep; with three (3) adjustable shelves and sliding glass doors. Similar to Hon Bookcase 48F.	320.00
Items 6-10 inclusive to be metallic grey color.			
11	1	Projection booth - see specifications and drawings.	250.00
12	1	Permanent wall projection screen, 70" x 70" similar to Radiant <u>W. E. D. Wall Master</u> .	50.00
Total			<u>\$6,260.00</u>

Campus Planning Committee
April 7, 1959
Attachment No. 108
Item No. 366

C -- O -- P -- Y

EQUIPMENT REQUESTED FOR DEPARTMENT OF INDUSTRIAL ENGINEERING AND
ENGINEERING DRAWING IN THE REMODELED PORTION OF THE TEXTILE ENGINEERING BUILDING

Since the space for both Industrial Engineering and Engineering Drawing will be approximately doubled at the time the Department moves to the remodeled Textile Engineering Building, it is necessary that the Department obtain funds for additional equipment for the additional area in order to (1) provide for larger classes in courses, and (2) provide more adequate, up-to-date instruction. This additional area and equipment will permit the Department to handle approximately 30% more students in all courses, as well as provide much needed specialized areas for certain courses.

In the past, the Department has experienced a large backlog of students requiring Industrial Engineering and drawing courses, as indicated by the number of upper classmen registered for these courses last semester. In the freshman courses of Engineering Drawing 131, 24.7% of the students were upper classmen and in Engineering Drawing 132, 88.6% of the students were upper classmen. In the junior courses of Industrial Engineering 332 and Industrial Engineering 336, approximately 30% of the students were seniors. The space allocated and the equipment requested would begin to alleviate this backlog and would provide adequate facilities for approximately five years in the future, an enrollment of about 1,100 students in drawing and approximately 280 to 300 students registered in Industrial Engineering.

Of the space allocated, all the rooms are laboratories equipped for the teaching of specialized technical courses of Industrial Engineering and Drawing, except classrooms 102 and 115 which could be scheduled for use in other courses of study. The specialized laboratories, if time permits, might be scheduled for use by other engineering departments for the teaching of technical courses of a similar nature to those taught by this department. The Industrial Engineering areas will be utilized approximately 60% of the time for scheduled classes for research. Engineering Drawing areas will be utilized 100% of the time for scheduled classes (during full enrollment periods). The closed circuit TV areas will be utilized along with the drawing courses as well as for a few Industrial Engineering courses.

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These funds are requested since the Department does not have sufficient equipment at present to completely equip the new quarters, nor the funds with which to purchase the additional equipment. One special equipment account is available (approximately \$20,000), but this fund is being reserved in entirety for the purchase of closed circuit TV electronic equipment. The Department is already committed (as approved by the Board of Directors) to the use of the closed circuit TV instruction equipment when the new quarters are available. The present ME & T account is being used to purchase other equipment for which the Department has an immediate need.

The Department has requested at this time only that equipment which is essential to provide for larger classes, more adequate instruction, and to alleviate backlogs. No non-essential equipment is being requested. In all rooms, except conventional classrooms, it will be unnecessary for the College to provide any other standard classroom furnishings.

The following is the list of departmental equipment needs:

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
INDUSTRIAL ENGINEERING AREA			
<u>Room 101 - Industrial Engineering Lab - new area</u> <u>(23' x 27', 18 student capacity)</u>			
1	9	Laboratory benches, 6' long x 2½' wide x 40" high. (See attached drawing).	\$ 450.00
2	18	Posture chairs, 15" square seat, adjustable in height from 22" to 28". Back adjustable up and down, forward or back. All welded tubular steel. (Two to be used with each lab table.) Similar to Royal Model 625-T posture chair.	360.00
3	1	Permanent wall projection screen, 70" x 70". Similar to Radiant <u>W. E. D. Wall Master.</u>	45.00
4	1	All metal, two-door cupboard, approximately 78" high by 36" wide by 24" deep; with four (4) adjustable shelves. Doors fitted with locks. Similar to Hon Model 7821.	100.00
<u>Room 102 - Classroom</u> <u>(24' x 27', 30-35 student capacity)</u>			
6	1	Permanent wall projection screen, 70" x 70". Similar to Radiant <u>W. E. D. Wall Master.</u>	45.00

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<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
<u>Room 103 - Conference and Calculating Room - new area (13' x 27', varied capacity)</u>			
8	2	Blond oak tables, 5' long x $2\frac{1}{2}$ ' to 3' wide x 30" high, to be used for four calculators. Three-drawer, similar to Jasper Model ST-2160.	\$ 80.00
9	4	Oak, straight back chairs, to be used with above tables. Similar to West Texas School Supply Company Teacher's chair No. 103.	40.00

This equipment is necessary since we have added three calculators to our instructional equipment. These calculators are used by the students registered in Industrial Engineering 331 - Motion and Time Study; Industrial Engineering 337 - Production Planning and Control; Industrial Engineering 436 - Engineering Economy; and Industrial Engineering 437 - Industrial Statistics and Quality Control where mathematical and statistical problems must be worked. At present the Department has no calculating room.

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
<u>Room 111 - Storage Area and Tool Crib - new area (10' x 15')</u>			
10	6	Oak, straight back chairs (conference chairs). Similar to West Texas Supply Company Arm Chair No. 101. These chairs will be used with an existing conference table which will be placed in this room. The room will be used for (in addition to a calculating room) staff, student, and student organization conferences. Six presently existing straight back chairs will be used in staff offices.	\$ 100.00
11	2	All metal, two-door cupboards, approximately 78" high x 36" wide x 24" deep, with four (4) adjustable shelves, doors fitted with locks. Similar to Hon Model 7821.	200.00
12	2	Small tool storage wall cabinets, overall size when open 96" x 48" high x 4" deep. Tool mounting area of heavy Masonite pegboard. Similar to Brodhead-Garrett TC-5.	150.00
13	2	Metal bin racks, bins to be of about three assorted sizes. Rack to be 87" high x 36" wide x 12" deep. Similar to Brodhead-Garrett No. 705 or 708.	100.00

This equipment is required to store hand tools and machining equipment which will be used in Room 113 and to store other Industrial Engineering Department equipment and apparatus. At present the Department does not have adequate facilities for the storage of hand tools, etc., on inventory and the inventory is being increased to give proper instruction (as suggested by

the recent E.C.P.D. inspection team). This will be done with funds from the present ME & T account.

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
<u>Room 113 - Machine Room (23' x 27', varied capacity)</u>			
14	1	DeWalt Model GW-1, 10" radial saw with bench and the following attachments: Boring bit set #8042; Router bits #3808, 3809, 3810; Dado Heads #6001, 6028; Spacers #2432, 2433, 2534, 2535, 2437; Planer #6380, 6383; Saw Blades #1420, 991, 1264, 1714, 993, 994; Shaping accessories #119826, 3472, 101, 102, 104, 106, 107, 108, 109, 111, 112, 115, 6460, 3104, 3105, 6479, 6472; Power Brake #117851; 10" Automatic safety guard #117919; Splitter and kickback device #117917; Work light #8040.	\$ 750.00
15	1	18" x 6" Surfacer with 5 HP, 3600 RPM, 3 phase motor, enclosed and fan cooled. Jointer bar with self-reversing screw. Grinder for operation on jointer bar. Extra set of three (3) high-speed steel knives; Shaving hood; knife setting gage; flexible chip breaker. Similar to Yates American (Brodhead-Garrett #31W301, 31W803, 31W804; 31W805; 31W806; 31W807, and 31W808.)	1,400.00
16	4	Woodworking benches; 48" long x 38" wide x 33" high. Complete with two (2) vises. Similar to Brodhead-Garrett Streamliner #ES-2.	360.00
17	8	Posture chairs, 15" square seat, adjustable in height from 22" to 28". Back adjustable up and down, forward or back. All welded tubular steel. (Two for each work bench.)	160.00
18	2	Small parts storage bins, plastic drawers 10-3/4" long x 2-3/4" high x 2-7/8" wide. Rack to be approximately 28 $\frac{1}{2}$ " high x 13-5/16" wide x 11-1/8" deep, with 32 bins. Similar to General Industrial Company R.S. 32.	75.00
19	1	Small parts storage bin, plastic drawers 5-7/8" length x 2-3/4" wide x 1-7/16" deep. Rack to have 32 drawers. Similar to General Industrial Company J-32.	15.00

This equipment is necessary since this machine room is being expanded (approximately $2\frac{1}{2}$ times). The additional equipment will permit the Department to give better instruction as well as permit the servicing of more students than is possible at present. This machine room is used in conjunction with Industrial Engineering 331 - Motion and Time Study; Industrial Engineering 334 - Production Tooling; Industrial Engineering 432 - Plant Layout and Design; and Industrial Engineering 421 - Materials Handling, and will also be used in conjunction with graduate and staff research. This room must have this equipment in order to accommodate the students enrolled in these courses. Only one work bench is presently on inventory and no small parts storage is available.

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<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
<u>Room 114 - Motion and Time Lab - 10 student capacity increase (27' x 29', 24 student capacity)</u>			
20	5	Laboratory benches, 6' long x 2 $\frac{1}{2}$ ' wide x 40" high. (See attached drawing.)	\$ 250.00
21	10	Posture chairs, 15" square seat, adjustable in height from 22" to 28" with back adjustable up and down, forward or back. All welded tubular steel. Similar to Royal Model 625-T posture chair.	200.00
22	1	27-drawer steel cabinet, drawers to be 9" wide x 3 $\frac{1}{2}$ " high x 12" deep. Similar to West Texas School Supply File #2712.	50.00

This equipment is necessary since this laboratory is being expanded and these additional items will permit the Department to accommodate larger sections in the courses meeting in this room.

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
<u>Room 115 - Classroom (25' x 27', 30-35 student capacity)</u>			
Conventional classroom equipment.			
<u>Room 230 - Seminar and Reading Room - new area (20' x 26', 20 student capacity)</u>			
23	5	Folding table, 72" long x 36" wide x 29" high, with plastic top. (To be used for Seminar courses.) Similar to West Texas School Supply Company Mitchell Model R-11.	\$ 240.00
24	20	All steel folding chairs with padded seat. (To be used with above seminar tables.) Similar to Samson folding chair.	160.00
25	1	Easel, metal preferred; to hold either flip charts, chalkboards, or placards. Similar to West Texas School Supply Company Style K-13.	25.00
26	2	Metal Bookcases, 48" high x 34 $\frac{1}{2}$ " wide x 18" deep, with 3 adjustable shelves and sliding glass doors. Similar to Hon Bookcase 48F. (Metallic grey color.)	160.00

This equipment is necessary since this room is a new area. It will be used to teach such courses as Engineering Seminar, Industrial Engineering 411, as well as graduate courses, as soon as the program is approved. This room will not require regular classroom chairs. This equipment in preference to more expensive oak tables and chairs will also permit considerable versatility for this room.

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<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
ENGINEERING DRAWING AREA			
		Room 218 - Engineering Drawing Lab - 6 student capacity increase (25' x 52', 32 student capacity)	
28	32	Drafting tables, (see requisition 466-7-6).	\$1,300.00
30	32	Drafting stools, metal non-adjustable, 28" high. Frames of tubular welded steel. Seats 14" in diameter. (Similar to Dietzgen Company #4505IM).	355.00

This equipment is necessary in order to permit the Department to include more students in all sections of drawing. (Section size will be increased from 26 to 32.) The laboratory areas are being increased which makes this increase in class size possible.

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
Room 203 - TV Control Room			
31	2	Folding tables, 48" long x 29" high, with plastic top. Similar to West Texas School Supply Company Mitchell Model R-19.	\$ 70.00
32	4	Folding chairs. (Same as Item 24.)	32.00
33	2	All metal two-door cupboards. (Same as Item 4.)	200.00
Room 204 - Storage			
34	2	All metal two-door cupboards. (Same as Item 33.)	200.00
35	4	Metal storage shelves, 6 shelves, 3' long x 6' high x 12" deep. Similar to West Texas Supply Company #7512.	90.00
36	1	Workbench. (Same as Item 16 above.)	90.00
Rooms 205 & 207 - Originating Rooms			
37	2	Folding tables. (Same as Item 31.)	70.00
38	4	Folding chairs. (Same as Item 32.)	32.00
39	2	Easels. (Same as Item 25.)	50.00
40	1	Portable screen, 70" x 70" on tripod stand. Similar to Radiant Educator Tripod EDL screen.	50.00
41	1	Viewgraph, F3.5 anastigmat, 4" diameter, 14" focal length lens; full 10" x 10" projection area; 500 watt, 115 v, A.C. with carrying case. Similar to Besler Master Vu-Graph #6600 and Case #6670.	300.00

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<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
42	1	Opaque projector, 5" diameter, 18" focus lens, 1000 watt lamp, 115 v, A.C., with carrying case. Similar to Besler Vu-Lyte II with Feed-O-Matic.	\$ 300.00
43	1	Tape recorder with two recording heads to record both directions and at 2 speeds, 3-3/4 and 7-1/2 inches per second. Similar to Webcor Royal Model #P2911.	180.00

This equipment is required since the Department will begin a closed circuit television instructional program as approved by the Board of Directors and all of these rooms are new area. The Department was given a special grant of \$20,000 for the purchase of television electronic equipment and a special effort has been made to reserve all of this money for such equipment.

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
OFFICE AREA			
44	2	Oak, double pedestal desks, 60" x 34" x 30" high. Similar to West Texas School Supply Company W-500.	\$ 180.00
45	2	Oak, swivel arm chairs to match above desks. Similar to West Texas School Supply Company #100.	50.00
46	2	Four-drawer letter size, grey, metal filing cabinets equipped with lock. Similar to West Texas School Supply Company #204.	120.00
47	2	Oak, straight back, arm chairs. Similar to West Texas Supply Company #103.	25.00
48	2	Metal bookcases. (Same as Item 26.)	160.00
49	1	27-drawer, steel cabinet; drawers 10" wide x 4 $\frac{1}{2}$ " high x 24" deep. Similar to West Texas School Supply Company #2414.	100.00

This equipment is required since the Department will have three new office spaces to equip. One of these can be equipped with existing office equipment.

Total \$9,469.00

**GENERAL CLASSROOM EQUIPMENT FOR
TEXTILE ENGINEERING BUILDING**

NEW PORTION

5 Classrooms:

200 arm tablet chairs	\$12.50 each	\$2,500.00
5 lecture tables	40.00 each	200.00
5 straight chairs	12.50 each	62.50
5 lecturns	8.00 each	<u>40.00</u>
Subtotal		\$2,802.50

3 Offices:

3 double pedestal desks	\$100.00 each	\$ 300.00
3 arm swivel chairs	40.00 each	120.00
6 straight chairs	12.50 each	75.00
3 bookcases	75.00	<u>225.00</u>
Subtotal		\$ 720.00
Total New Portion		\$3,522.50

REMODELED PORTION

5 Classrooms:

Same as the five classrooms above	<u>\$2,802.50</u>
Total Remodeled Portion	<u>\$2,802.50</u>
TOTAL	<u>\$6,325.00</u>

Campus Planning Committee
 April 7, 1959
 Attachment No. 109
 Item No. 379

C -- O -- P -- Y

TEXAS TECHNOLOGICAL COLLEGE
 Lubbock, Texas

Dean of Admissions
 and Registrar

April 6, 1959

Mr. M. L. Pennington
 Vice President and Comptroller
 Campus

Dear Mr. Pennington:

Additional and more detailed information on classrooms for the three departments housed in the Science Building reveals the general information which is shown on the following tables.

First: I have determined the usage in cycles for each department in the classroom as related to the available time and capacity and then have tried to derive the number of additional enrollments for each department based on an adjusted and more related use of the present facilities in the fall 1958.

For this report the term "Usable" means the maximum time reduced by 20%. Thus, 80% is considered 100% for both capacity and cycles.

- A. The usable capacity considered is 80% of the maximum stations in a given classroom since few classes will use rooms to full capacity of stations. This 80% allows for adds, drops, withdrawals, scheduling difficulties, etc. and all other varying factors affecting class size and stations used.
- B. The survey of classroom usage shows that each room is used 11.2 cycles per week or approximately 80% of the maximum available time. Thus, 80% of the maximum cycles in a room of 14 is 11 cycles. The following table is a summary of the rooms assigned to each of the departments and the additional stations or enrollments that may be used by each department. This has been presented on five different bases, explanations of which are found at the close of the report.

SCIENCE BUILDING

<u>Available</u>	<u>Biology</u>	<u>Geology</u>	<u>Physics</u>
Total classrooms	2	4	3
Total square feet per cycle	1574	2793	2063
Total stations per cycle	146	205	165
Square feet per station per cycle	10.7	13.6	12.5
Maximum number of cycles	14	14	14
Total maximum stations	2044	2870	2310

Usable

Number of stations (80% of maximum)	117	164	132
Usable cycles (80% of maximum of 14)	22	44	33
Number of cycles used	15	33	31
Total usable stations available	1287	1804	1472
Total stations used	811	945	1142
Per cent total usable stations occupied	63%	52%	73%
Square feet used per student	19.4	29.5	12.9
Available cycles (for new classes)	7	11	5

Mr. M. L. Pennington
 Page 2
 April 6, 1959

<u>Additional Spaces or Enrollments</u>	<u>Biology</u>	<u>Geology</u>	<u>Physics</u>	<u>Total Building</u>
A. Fill rooms to capacity for all usable cycles (usable capacity x usable cycles)				
Total number usable stations	1287	1804	1573	
Number of stations used	<u>811</u>	<u>945</u>	<u>1142</u>	
New stations to be added	476	859	431	1766
B. Fill rooms to usable capacity for time room in use (usable capacity x cycles used)				
Total number usable stations	891	1380	1531	
Number of stations used	<u>811</u>	<u>945</u>	<u>1142</u>	
New stations to be added	80	435	389	904
C. Fill room to capacity for unused or available cycles (usable capacity x cycles available)				
Total number usable stations	805	1369	1337	
Number of stations used	<u>589</u>	<u>945</u>	<u>1142</u>	
New stations to be added	216	424	195	835
D. Fill rooms to same per cent of capacity now used for new cycles available (usable capacity x cycles available x per cent capacity used)				
Total number usable stations	831	1136	1277	
Number of stations used	<u>589</u>	<u>945</u>	<u>1142</u>	
New stations to be added	242	191	135	568
E. Fill rooms for $\frac{1}{4}$ cycles to per cent of usable capacity now used (usable capacity x $\frac{1}{4}$ x per cent capacity used)				
Total number usable stations	746	1200	1447	
Number of stations used	<u>589</u>	<u>945</u>	<u>1142</u>	
New stations to be added	157	255	305	717

Explanation of methods of arriving for new stations in classrooms:

It is an academic and departmental responsibility to determine the size of the class and the number of classes for a semester, but I have attempted to show how many more students and how many more classes may be added to the present classrooms. I have outlined five different approaches with explanations as I see it that are affecting the number of new stations usable.

Mr. M. L. Pennington

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April 6, 1959

Explanation of methods of arriving for new stations in classrooms (continued):

- A. Number A is ideal, but seldom attained because no room will be occupied to its full usable capacity on all of the usable cycles. That is, a room will seldom be used to 80% of the stations for 80% of the time.
- B. This means that the classes which are now using the room would be larger and use all of the space but no more classes would be added to the room. This is not very realistic since different level classes vary in size and will seldom fill a room to capacity.
- C. This means that of the new classes added (cycles available) all new classes would be filled to the room capacity. This also is quite unlikely as classes do not fill to capacity.
- D. This is more realistic because additional stations available is based on the current use of the room taking into consideration the current size of the classes, all of which are used as bases. This assumes that added classes would average the same size as those now using the room.
- E. These additional students could be added conveniently by adding more classes to the full capacity of 14 cycles per room for the week. The new classes would be based on the per cent of capacity of stations as now used. This would mean enlarging the schedule by adding more classes.

This report on the use of the Science Building for the three departments does not take into consideration other rooms or lab rooms which are used for classes. For example: The Department of Biology uses one room in the Administration Building six cycles for 100% capacity of stations for a total of 596 students. Biology also uses labs for four additional cycles for a total of 93 students.

Physics uses two labs for three cycles with a total of 48 students, one of which is used 100% of capacity.

Geology uses three labs three cycles for a total of 56 students. A little further information on these departments is reflected in the average class size and the capacity range of the classrooms.

The Average Class Size:

L E C T U R E S

	<u>Biology</u>	<u>Geology</u>	<u>Physics</u>
Freshman	80 (15)	37.6 (13)	33.2 (11)
Sophomore	27.7 (6)	22.6 (5)	41 (13)
Junior	23.5 (7)	24.6 (6)	28.8 (5)
Senior & Graduate	12 (1)	21 (10)	8.5 (2)

The classrooms for Geology average in capacity in a range from 28 to 56. To summarize, a total of 21 classes for the Department of Geology are in rooms that would hold 56 classes if scheduled to 100% of the time or 44 classes based on the 80% usable time.

Biology classrooms range in size from 56 to 124. A total of 29 classes are in rooms that would hold 34 classes if scheduled 100%.

Physics classrooms range from 45 to 64. A total of 31 lecture classes are in rooms that would hold 42 classes.

Mr. M. L. Pennington
Page 4
April 6, 1959

You will note that the Biology class average for Freshmen is large; and with 15 classes, they would have to use a large capacity room in the Administration Building.

I have all of this information in detailed form for each room used by each of the three departments if you need any further facts.

In all of this study, other classes using the Science Building rooms have not been included. In other words, the departments could use these rooms to the availability as outlined in the above report, if other classes were moved from the Science Building classrooms.

Yours very truly,

/s/ Evelyn Clewell

Evelyn Clewell
Assistant Registrar -
Statistics and Reports

EC:sbh

Campus Planning Committee
April 7, 1959
Attachment No. 110
Item No. 309

O -- O -- P -- Y

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

Dean of Admissions
and Registrar

April 6, 1959

Mr. M. L. Pennington
Vice President and Comptroller
Campus

Dear Mr. Pennington:

A more detailed study of laboratories for Biology, Geology and Physics shows the number of additional lab periods that could be scheduled and the number of additional stations that could be used or added. This is shown on the attached table.

For this report, the same usable capacity, 80% of the maximum stations is used as 100%, but all available lab periods are used as 100%. The number of additional lab periods and additional stations that can be added is based on the present use of the length of the lab periods and the number per lab room where laboratories are meeting. For example: If a lab is used for three hour lab periods, then the number of additional labs are figured on the same basis.

Yours very truly,

/s/ Evelyn Clewell

Evelyn Clewell
Assistant Registrar -
Statistics and Reports

EC:sbh
enc.

C -- O -- P -- Y

TEXAS TECHNOLOGICAL COLLEGE
Office of the Registrar

SUMMARY OF LABORATORY USAGE AND ADDITIONAL STATIONS AVAILABLE

<u>Usable</u>	B I O L O G Y			G E O L O G Y			P H Y S I C S			<u>Total Dept.</u>
	<u>Advanced</u>	<u>Elementary</u>	<u>Total</u>	<u>Advanced</u>	<u>Elementary</u>	<u>Total</u>	<u>Advanced</u>	<u>Elementary</u>	<u>Total</u>	
<u>3 Hr.</u>	<u>3 Hr.</u>	<u>Dept.</u>	<u>3 Hr.</u>	<u>3 Hr.</u>	<u>2 Hr.</u>	<u>3 Hr.</u>	<u>3 Hr.</u>	<u>2 Hr.</u>		
Number of Lab Rooms	3	10	13	3	2	2	1	2	3	6
Total Capacity	72	197	269	68	64	80	30	48	72	150
80% Usable Capacity	57	158	215	54	51	64	24	38	57	119
Number of Lab Periods Available	33	120	153	33	22	44	11	22	66	99
Number of Lab Periods Used	3	66	69	16	8	18	3	10	25	38
Per Cent Lab Periods Used of Total Available	9%	55%	45%	48%	36%	40%	41%	27%	45%	38%
Usable Capacity Available	627	2357	2984	594	561	1408	264	418	1254	1936
Stations Used	53	1433	1486	179	143	466	30	202	547	779
Per Cent Stations Used	8%	60%	50%	30%	25%	31%	30%	11%	48%	43%
<u>Additional</u>										
Number of Lab Periods Available on 80% of Maximum Capacity	30	54	84	17	14	26	8	12	43	63
Number of Stations Available on Present Per Cent of Capacity Used	570	1075	1645	308	357	832	192	228	817	1237
	46	645	691	93	90	257	440	106	286	413

Campus Planning Committee
April 7, 1959
Attachment No. 111
Item No. 379

C -- O -- P -- Y

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

Department of Geology

April 2, 1959

Mr. M. L. Pennington
Vice President and Comptroller
Campus

Dear Mr. Pennington:

I have carefully studied Attachment No. 97, Item No. 349, of the report of the Campus Planning Committee dated March 19, 1959, and submit the following comments:

1. The instrument referred to can be a dangerous, vicious thing in the hands of well-meaning, poorly informed individuals and can do more harm than good. Although the facts may be as stated, many qualifying conditions should be included in the report.
2. In part (1) use of lecture rooms is discussed. The 14 cycles referred to must include 4 o'clock classes and two $1\frac{1}{2}$ hour TT cycles. The former are most undesirable for several reasons, most important of which is the low learning-level of the student at the end of the day. Both 4 o'clock and $1\frac{1}{2}$ hour lectures will not contribute to the high academic standards which are so desirable.
3. In part (2) use of laboratory space is discussed. Greater use of such space in the mornings is possible, but only if all disciplines on the campus cooperate to produce a schedule which makes equal use of morning and afternoon hours for lectures.
4. Comments regarding usage of specific laboratories follow:

Science 164. This room is designed specifically for mineralogy and no other course taught in this department can make use of the laboratory. Inasmuch as each section of this course meets two three-hour periods per week, scheduling of any laboratory on Friday afternoon or Saturday morning is improbable. Also, with three-hour laboratory periods it is impossible to use one hour of each morning and each afternoon. These odd hours should be reserved for laboratory preparation. The MWF morning sequence is presently impossible due to conflicts with required courses during this period. 18 hours per week rather than 44 represents the maximum time usage for this room and it was so scheduled during the current semester.

Science 166. This room is designed specifically for optical mineralogy and petrography and this class has a schedule exactly the same as mineralogy. Again, 18 hours per week represents the maximum usage rather than 44 hours.

Science 2. This laboratory is designed for paleontology and is used, in most semesters, 15 hours per week. If enrollment increases additional paleontology laboratories could be scheduled, but the space and equipment is not suited to the needs of other classes. These are also three-hour laboratories and, therefore, 24 hours rather than 44 represents maximum usage.

Science 12. This laboratory is equipped with drawing tables and is not suitable for many purposes other than those for which it is now being used. The scheduled usage is normally for 18 hours, and 24 hours represents the maximum usage for the room.

Science 32, 33, 34. These rooms are used for introductory laboratory sections and as lecture rooms. The usage could be 44 hours per week if students could arrange schedules so that MWF classes would not conflict. At present these laboratories are being used to about the limit of capacity.

5. Several things are implied by or omitted from this report which have considerable bearing on this problem. I believe that they are worthy of consideration.

a. Any laboratory period requires some period of time in which materials are brought to the laboratory and properly arranged for student use. This time cannot be regarded as wasted time unless the laboratory period itself is so regarded.

b. Advanced laboratories should be open to students for additional work if they so desire. Any other arrangement can only lead to a lowering of academic standards.

c. Many advanced laboratories contain equipment or specimens which may be damaged or stolen. To require that this material be removed after each laboratory period would represent a far larger expenditure of money than allowing the room to remain "idle" a few hours each week.

d. Considerable attention was given to the square feet used by each student per hour. No consideration was made of the fact that we are currently using many square feet of laboratory space for storage of materials and that this use is 168 hours per week rather than 44.

e. We are credited with seven laboratories rather than eight. The eighth one is used only one semester each year and is, I assume, deleted for the same reason as the one mentioned for the Physics Department. Of these seven laboratories, only three are suitable for multiple use. I believe that they should be regarded as having a maximum usage time of 32 hours per week rather 44 inasmuch as morning laboratories on MWF are impractical at the present time and the rooms are used for classrooms during part of these periods.

My evaluation of this report is that it is misleading if taken at face value. The one practice of assuming that the use of a laboratory for a three-hour period during the afternoon represents but 75% efficiency is grossly misleading inasmuch as the other hour cannot be used for a scheduled laboratory and is usually utilized to prepare materials for the other three hours. The use of such laboratories as the mineralogy laboratory is rated at only 46% when in reality it is being used 100% of the time which scheduling permits.

6. A few additional classrooms and standard laboratories in addition to what we now possess will not solve our main space problems. Specialized graduate and research laboratories, additional office space, storage rooms, shop, etc., are what we really need. I have been submitting plans and ideas for five years concerning additional space, but the planning board apparently has ignored them. I believe that before preliminary plans and ideas are submitted by the planning board, that the departments concerned should work with the board. Statistical studies are all right for the solutions to some problems, but not to those concerning space problems for departments in the schools of higher education, particularly those offering graduate studies.

Respectfully submitted,

/s/ F. Alton Wade

F. Alton Wade, Head

FAW:ab

cc: Dean R. C. Goodwin

Campus Planning Committee
April 7, 1959
Attachment No. 112
Item No. 379

C -- O -- P -- Y

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

Department of Physics

March 31, 1959

Mr. M. L. Pennington
Vice President and Comptroller
Campus

Dear Mr. Pennington:

I wish to make the following comments about the report concerning usage of space prepared by Miss Clewell.

The Physics Department has three classrooms, Sc 44, 48 and 106. Sc 44 and 48 seat 56 people and are excellent rooms for physics courses which require demonstrations since they are equipped with power, air, water, etc., and have large demonstration tables. Sc 106 holds 45 but has none of the above mentioned facilities. Since these facilities are needed for all elementary physics 031, 141-142, 235-236, this room is unsatisfactory for these courses although we do use it for such.

As indicated by the information in your report concerning the design of facilities for the expansion of Biology, Geology, and Physics: Sc 44 had classes in the fall of 1958 for 42 out of the possible 44 hours per week, Sc 48 had 33 out of the possible 44 and Sc 106 had 28 out of 44, the latter having only 1 hour open in the morning. In addition, physics classes met 9 hours of lecture in space other than Sc 44, 48 or 106.

The only way in which a room could have 14 cycles per week is to have 1-1/2 hour sessions on Tuesday and Thursday afternoon. For elementary physics students a one hour meeting three times a week is preferable to two 1-1/2 hour meetings, I believe, since more frequent class meetings are desirable.

With regard to the laboratories, we have 7 labs, 2 of which are for advanced labs only and the remaining 5 are elementary labs. These are Sc 103, 107, 111, 112 and 113.

Sc 111 and 107 are used for physics 141-142 labs which are 3 hours in length. These had 1 afternoon lab open and 10 morning lab periods.

Sc 103, 112 and 113 have 29 2-hour labs open of which all are in the morning except 6 labs.

According to these figures we could add 11 three-hour labs and 29 two hour labs all except 7 of which would be in the morning.

It seems obvious to me that better use should be made of our existing laboratory space in the morning periods whenever possible. However, students in laboratories must take class work also and there is always a certain amount of inefficiency of meshing these two phases. It is worth noting that we do offer physics courses extensively in the afternoon yet our morning laboratories are not filled. This indicates that the scheduling difficulties arise in departments other than our own.

Mr. M. L. Pennington

Page 2

March 31, 1959

In addition, since there are only 4 3-day sequences in the afternoon while there are 8 in the morning, it follows that the possibilities for filling a laboratory in the morning are not as good as for filling an afternoon laboratory.

It should be noted that a considerable part of our space requests involve neither elementary laboratory space nor lecture space.

Sincerely,

/s/ Henry C. Thomas, Head
Department of Physics

HCT:rt

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

MINUTES OF THE CAMPUS PLANNING COMMITTEE

Meeting No. 28

April 8, 1959

[Handwritten Signature]

A meeting of the Campus Planning Committee was held at 8:30 a.m. in Room 120 of the Administration Building. Members present were Mr. E. J. Urbanovsky, Mr. Nolan E. Barrick, Colonel C. P. West, and Chairman M. L. Pennington. In addition, Mr. V. E. Thompson was present.

386. Agricultural Plant Sciences

Mr. Urbanovsky and Mr. Barrick reported that they had met on the morning of April 8, 1959, with Dean Thomas and Dr. Young in an attempt to make a recommendation to the CPC in keeping with Item No. 359E.

The accumulation of information recently acquired from the Agricultural Committee was discussed. The discussion centered around the functions, needs and justifications of space. The requests total 29,300 net square feet of floor space, which would exclude the toilets and corridors. The gross square footage would require approximately 33,000 square feet.

After much discussion, the CPC is of the opinion that insufficient time is available to make a thorough analyzation and intelligent recommendation in time for the meeting of the Building Committee on Friday afternoon, April 10, 1959. The members feel that the building is needed but want to secure additional information, organize and analyze it and make a specific presentation and recommendation to the Board at the meeting on June 1, 1959.

During the meeting, the Chairman conveyed the information to Dean Thomas and he agreed with the recommendation of the CPC. It was agreed that there would be a meeting at 1:30 p.m. on Tuesday, April 14, 1959, with Dean Thomas, Dr. Young and the members of the CPC to discuss the means of securing the needed information.

387. Other Items

Use of sewage effluent by Texas Tech's School of Agriculture - In a letter dated April 3, 1959, Dean Thomas requested consideration of the CPC for the use of sewage effluent as irrigation water on the College Farms as set out in a letter dated February 11, 1959, to him from Mr. H. P. Clifton, City Manager. Both letters are attached to and made a part of the Minutes. (Attachment No. 113, page 275)

The CPC discussed the various ramifications of both letters and is of the opinion that the question and problem should come under the scope of campus planning and that complete information should be obtained before any steps of approval are taken. From an irrigation standpoint, the effluent could be very valuable to the College.

The CPC recommends that before any action is taken on its part that clarification be obtained from the President and the Board as to whether or not they want the CPC to investigate the problem in view of making a recommendation and if they wish for the CPC to be the intermediary with Mr. Clifton in the development of the study.

The meeting adjourned at 4:05 p.m. The next regularly scheduled meeting of the CPC is scheduled for 8:30 a.m. on Tuesday, April 14, 1959.

COPY

275

Campus Planning Committee
April 8, 1959
Attachment No. 113
Item No. 387

TEXAS TECHNOLOGICAL COLLEGE
School of Agriculture
Lubbock, Texas

Office of the Dean

April 3, 1959

Mr. M. L. Pennington
Vice President and Comptroller
Campus

Dear Mr. Pennington:

I am enclosing a copy of a letter from H. P. Clifton, Lubbock City Manager, concerning a proposal for the use of sewage effluent by the Tech School of Agriculture. As you may recall, this possibility was discussed briefly at an earlier meeting of the CPC.

The proposal presented by Mr. Clifton has been studied by each of our Department Heads. We in Agriculture are wholeheartedly in favor of the use of sewage water. As a matter of fact, this offers the only solution in sight to our serious water shortage problem. With the unavoidable campus encroachment onto good irrigated land, we are facing a problem in adequate production of feeds and forages for our livestock operation.

The principal considerations as we have studied the proposal seem to be:

- (1) Will the high chlorine content of the water have any injurious effect on soil structure or potential productivity?
- (2) Will the estimated cost of 3.3¢ per thousand gallons (the cost of amortization of the installation) allow sufficient leeway for economical operations?
- (3) Will there be any objection to the odor or use of the water from the public?

Our conclusions in regard to the first item are that we do not anticipate any serious detrimental effects on the soil. We will have an opportunity to rotate sewage water with well water if a problem starts to develop. Also, as Mr. Clifton has stated, the College would not be obligated to take all of the water and probably could, or should, re-reserve the right to refuse the water if serious objections arose. There is a very good possibility that we can perform a valuable service to the country by some well-planned studies on the use of the effluent, a water conservation measure that many cities must face in the future. We have Mr. Frank Gray's highly successful operation on which to draw additional information.

The question of economics has been raised. If we had adequate well water this question might have validity. However, with no adequate alternative source of water, there is no question in my mind concerning the economic value. Some research information indicates that the net value of irrigation over dryland crop production would be close to the break-even point with the 3.3¢ per thousand gallon cost (\$10.75 per acre-foot.) Other studies show a much higher value of the water.

Pennington, M. L.

2

April 3, 1959

The third question - that of objectionable odor or use for other reasons - should not prevent us from entering into an agreement with the City. Effective treatment can prevent objectionable odors. This would mean higher chlorine content, of course, than is provided in the water used by Mr. Frank Gray. We in Agriculture feel that these objections, too, could be overcome. Proper location of the storage reservoir and use of the water well within the farm boundaries could reduce objections, even if the water has a slight odor. Fortunately, we would still have leeway in the use because of our irrigation wells. This problem also presents a challenge to us in providing research information to other municipalities.

We would very much like to get this item before the Board of Directors as soon as possible as it may have an influence on the overall planning of our new farm and livestock facilities and operations.

If you need additional information, please let us know.

Sincerely yours,

/s/ Gerald W. Thomas

Gerald W. Thomas
Dean of Agriculture

GWT:cld
Enclosure
cc: Department Heads

CITY OF LUBBOCK

Texas

February 11, 1959

Dr. Gerald Thomas, Dean
Dept. of Agriculture
Texas Technological College
Lubbock, Texas

Dear Doctor Thomas:

Our City Commission has tentatively approved the location of a Sewage Treatment Plant in the Northwest area of the City. The location of this plant as proposed would be on an eighty acre tract of land which the City owns north of Clovis Highway and west of Indiana Avenue. With a plant at this location, it appears possible that the City might be able to furnish the College Farm sewage effluent for a very reasonable price. This price would include energy cost to pump the effluent over to college property plus a cost for amortizing the pipeline necessary to reach your property and a portion of the operating cost of the pumps. Amortization is based on a 20 year period. It appears now that this cost would be approximately 3.3¢ per thousand gallons.

This treatment plant would ultimately serve 11 sections of land that would provide an average flow of $7\frac{1}{2}$ million gallons per day with peak flows of approximately 14 million gallons per day. We would estimate the flow at this plant January 1961 would be approximately 100,000 gallons per day and would increase by at least this amount each year. The College would not be obligated to take all of this water but only its needs.

Present plans for the construction of this treatment plant would require that it be of the latest design which would provide effluent of suitable quality for irrigation without objectionable odors. The effluent would be chlorinated as it left the plant to stabilize any organic material that might be remaining after the treatment process. It would not be suitable for drinking water but would be of a quality that is found in the average steam. We believe that this effluent could be suitably used for irrigation on the Tech Farm at an advantage to the College and also to the City of Lubbock. If you are interested in utilizing this material, please let us know in the near future.

Very truly yours,

/s/ H. P. Clifton

H. P. Clifton
City Manager

JH:ba

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

AGENDA FOR BUILDING COMMITTEE MEETING

April 10, 1959

Campus Plot Plan Room

OK 46. Agricultural Plant Sciences Facilities

Insufficient time has been available to make a thorough analyzation and intelligent recommendation of the material on hand in time for the Building Committee meeting.

Although it is felt by the CPC that there is a need for the the building, it is recommended that a specific presentation be delayed until the meeting of the Board on June 1, 1959, in order to afford sufficient time to secure additional information and organize and analyze it.

47. Boiler and Housing

- OK A. Consider acceptance of the preliminary and final plans and specifications for the housing, subject to a further study of the ventilation problem and material samples.
- OK B. If the final plans and specifications are acceptable, consider the authorization to advertise for bids and for the Building Committee of the Board to accept the bids and award a contract between Board meetings in order to conserve time.

OK 48. Chemical Engineering and Nuclear Reactor Building

- OK A. Consider approval of schematics.
- OK B. If the schematics are approved, consider the recommendation of the CPC that full preliminary plans and specifications, which will include elevations and studies of the economies and needs, be presented to the Board at the meeting to be held June 1, 1959, the plans to be presented to the CPC by May 15, 1959, in order to provide time for study before presentation to the Board.

Cognizance of Brod's recommendation

	970,000
	300,000
	600,000
1,766,500	
6,000	
<hr/>	
1,763,000	

Approved by Board

49. Computer - Architecture

A. Consider approval of schematics.

16,100 OK
B. If the schematics are approved, consider the recommendation of the CPC that authorization be received to present fully developed preliminary plans, including the specific site, at the meeting of the Board to be held June 1, 1959. The information would be presented to the CPC by May 15, 1959, in order to provide time for study before presentation to the Board.

(Mr. Haley agreed to the above and emphasized that the idea of putting the Computer underground be considered fully for economy of space, air conditioning, etc. He would like for the question to be discussed with the Building Committee at the Friday afternoon meeting.)

OK
50. Equipment

Consider the recommendation of the CPC that the following equipment be purchased for the old and new portions of the Textile Engineering Building:

New Portion

Departmental Equipment	\$6,260.00
General Building Equipment	<u>3,522.50</u>
Total New Portion-	<u>- - - - - \$9,782.50</u>

Old Portion

Departmental Equipment	\$9,469.00
General Building Equipment	<u>2,802.50</u>
Total Old Portion-	<u>- - - - - \$12,271.50</u>
GRAND TOTAL-	<u>- - - - - \$22,054.00</u>

It is recommended that the new equipment be purchased from the Constitutional Building Amendment Funds and charged to the budgeted amount for equipment.

It is recommended that the equipment in the old portion be purchased from the Local Building Funds.

The revised lists of equipment are attached.

OK
51. Home Economics

Consider the recommendation of the CPC that action on the proposed Home Management House and Nursery School facilities be deferred until the construction program has been developed further in order that there may be a clearer determination of funds available.

52. Library

OK A. Discussion of 5% fee.

use \$ 1,800,000

B. Consider the revised list of architects by priority as follows:

- OK
1. Pitts, Mebane and Phelps
Architects and Engineers
1872 Calder Street
Beaumont, Texas
 2. Pierce and Pierce
2200 Welch Street
Houston 19, Texas
 3. Hedrick and Stanley
Architects and Engineers
T & P Building
Fort Worth, Texas
 4. Page, Sutherland and Page
Architects
602 West Avenue
Austin, Texas
 5. George L. Dahl
Architects and Engineers
2101 N. St. Paul Street
Dallas, Texas

f check with Mr. Haleys if 5/01 till June 30
(Mr. Haley asked the Chairman to tell the Building Committee that he would go with the CPC on the initial recommendation but would probably argue with the Committee later on Mr. Hedrick. He stated that the Chairman should make the contact with the prospective architect.)

C. Consider the recommendations of the CPC:

OK 1. There be one central library. ▷

OK 2. Site west of the Student Union. ▷

OK 3. Construction be of the modular type with free standing and open stacks, low ceilings, air conditioning, excellent lights, etc., as outlined by the consultant. ▷

53. Mechanical Engineering Shops

- OK
1,000
- A. Consider the recommendation of the CPC that the project be L-shaped and attached to the north end of the East Engineering Building with two stories in front, if possible, in order to conform to the construction across the esplanade.

(Mr. Haley asked the Chairman to tell the Building Committee that he concurs with the idea of one L-shaped building with two stories in front.)

OK
1,000

B. Consider the recommendation that the Board of Directors authorize the presentation of full preliminary plans, which would include elevations, at the June 1, 1959, meeting, with the plans to be presented to the CPC by May 15, 1959, for study.

54. Operating Procedures

- OK
1,000
- A. The CPC wishes to call to the attention of the Board of Directors the fact that the City has yet to reimburse the College for the extension of Flint Street.
- B. The CPC recommends that the Board request the City to permit a left turn from College Avenue, at Broadway, to enter the campus and to make a left turn from Broadway, at College Avenue, to leave the campus.

55. Physical Plant Facilities

- ND
1,000
- A. Consider the following recommendations of the CPC:

1. Use of the present site.
2. Estimated cost of \$400,000.
3. Bulk storage be provided elsewhere as out on the farm. The proposed storage facilities are included in the \$400,000.
4. Full preliminaries be presented to the Board for approval on June 1, 1959, with the plans to be presented to the CPC by May 15, 1959, for study.

(Mr. Haley asked the Chairman to notify the Building Committee that he concurs in the site recommendation and recommends that the total monetary outlay be held to \$386,000 on an over-all basis.)

\$100
ND
me ps #55

56. Printing Press

Consider the recommendations of the CPC that the Printing Press be constructed as part of the Physical Plant area and that the Board authorize the preparation of the full preliminary plans and specifications for presentation at the meeting on June 1, 1959, with plans to be presented to the CPC by May 15, 1959 for study.

57. Relocation of Farm Facilities

OK

Consider the recommendation of the CPC that the preparation of the report by the Agricultural Committee for the relocation of farm facilities be delayed until the arrival of the new Head of the Animal Husbandry Department.

58. Science Addition

OK

Consider the recommendation of the CPC that the final recommendation to the Board be delayed until June 1, 1959, in order to provide additional time to organize and analyze the mass of existing information.

59. Student Union

- OK
faculty
facilities
10,000 ft²
Hill
\$100,000
Architects
HHFA
debt
furniture
\$100,000
- A. As instructed by the Board of Directors at the last meeting, a study has been made of the feasibility of issuing revenue bonds to construct a \$1,000,000 addition to the Union by pledging the proceeds from the Union and the Bookstore. Various schedules have been prepared and it is feasible to issue the revenue bonds.
 - B. Consider the recommendation of the CPC that the architects be instructed to go ahead with preliminary work and that the HHFA route continue to be checked for financing to see if funds are available as such financing will yield the lowest possible interest rate.

Go ahead for 1,000,000.
no bowling alley & no swimming pool.

60. Women's Gym

OK

Although various studies are being pulled together on the functions, space, site location, etc., for the project, consider the recommendation of the CPC that the Board authorize the preparation of full preliminary plans and specifications to be presented to the Board at the meeting on June 1, 1959, with the information to be presented to the CPC by May 15, 1959, for study. It is proposed that the site be adjacent to the President's home.

Campus Planning Committee
 April 7, 1959
 Attachment No. 107
 Item No. 366

C -- O -- P -- Y

EQUIPMENT REQUESTED FOR THE DEPARTMENT OF INDUSTRIAL ENGINEERING
 PLANT LAYOUT AND TOOL DESIGN LABORATORY
 IN THE NEW PORTION OF THE TEXTILE ENGINEERING BUILDING

When additions and alterations have been made to the Textile Engineering Building, this equipment will be moved into the room in the addition which is to be used for courses in Industrial Plant Design and Tool Design. This new area will permit section sizes of these courses to be increased by nine students. A total of one hundred (locker facilities requested, one drawer per student) students will be accommodated in these courses. Existing equipment now in the Department can handle eighteen students per section, these eighteen tables and drafting machines will be moved to the new facilities. This equipment is needed because at present the equipment we have does not accommodate all the students we have enrolled in these subjects.

Plant Design and Tool Design - nine student capacity increase
 (27' x 58', 27 student capacity).

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
1	9	Drafting tables, $37\frac{1}{2}$ " x 60" x 38" high. Tables to be four-post type with adjustable tops without drawers; material to be hardwood, natural or light oak with varnish finish. Tops to be of select pine, free from defects or discoloration (same as furnished on P.O. TTC 444-6-22). Similar to Hamilton 250A.	\$ 960.00
2	8	Drafting machines, 24" standard type for mechanical drafting; full circle protractor graduated in degrees with vernier to read to five minutes. Automatic indexing stop at 15 degrees increments. Similar to Bruning 2699.	1,000.00
3	8	Scales, 12" long, duraluminum, graduations 1", $\frac{1}{2}$ ", $\frac{1}{4}$ ", $\frac{1}{8}$ " to the foot. To fit Item 2. Similar to Bruning 27115, Style B.	35.00
4	8	Scales, same as above except 18" long. Scales to fit machines described above, to fit Item 2. (Same as P.O. TTC 444-6-17). Similar to Bruning 2711T, Style B.	50.00
5	9	Draftsman stools, metal, non-adjustable, 28" high. Frames to be tubular welded metal, and foot rest of same type. Seats 14" in diameter. Seats to be of Masonite insert. Metal parts finished in grey enamel (similar to Eugene Dietzgen Company No. 4505IM).	100.00

- 2 -

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
6	20	Five-drawer sectional metal filing cabinets, drawers 2" deep and large enough to take 30" x 42" drawings. Each drawer to be fitted with hasp and staple to permit each student to lock his drawer with padlock. Similar to Hamilton 1848, with hasp and staple.	\$3,000.00
7	5	Flat caps for above files.	105.00
8	5	Flush type bases for above files.	90.00
9	2	All metal, two-door cupboard, approximately 78" high x 36" wide x 24" deep; with four (4) adjustable shelves. Doors fitted with locks. Similar to Hon Model 7821.	300.00
10	4	Metal bookcases, 48" high x $3\frac{1}{2}$ " wide x 18" deep; with three (3) adjustable shelves and sliding glass doors. Similar to Hon Bookcase 48F.	320.00
Items 6-10 inclusive to be metallic grey color.			
11	1	Projection booth - see specifications and drawings.	250.00
12	1	Permanent wall projection screen, 70" x 70" similar to Radiant <u>W. E. D. Wall Master</u> .	50.00
Total			<u>\$6,260.00</u>

Campus Planning Committee
April 7, 1959
Attachment No. 108
Item No. 366

C -- O -- P -- Y

EQUIPMENT REQUESTED FOR DEPARTMENT OF INDUSTRIAL ENGINEERING AND
ENGINEERING DRAWING IN THE REMODELED PORTION OF THE TEXTILE ENGINEERING BUILDING

Since the space for both Industrial Engineering and Engineering Drawing will be approximately doubled at the time the Department moves to the remodeled Textile Engineering Building, it is necessary that the Department obtain funds for additional equipment for the additional area in order to (1) provide for larger classes in courses, and (2) provide more adequate, up-to-date instruction. This additional area and equipment will permit the Department to handle approximately 30% more students in all courses, as well as provide much needed specialized areas for certain courses.

In the past, the Department has experienced a large backlog of students requiring Industrial Engineering and drawing courses, as indicated by the number of upper classmen registered for these courses last semester. In the freshman courses of Engineering Drawing 131, 24.7% of the students were upper classmen and in Engineering Drawing 132, 88.6% of the students were upper classmen. In the junior courses of Industrial Engineering 332 and Industrial Engineering 336, approximately 30% of the students were seniors. The space allocated and the equipment requested would begin to alleviate this backlog and would provide adequate facilities for approximately five years in the future, an enrollment of about 1,100 students in drawing and approximately 280 to 300 students registered in Industrial Engineering.

Of the space allocated, all the rooms are laboratories equipped for the teaching of specialized technical courses of Industrial Engineering and Drawing, except classrooms 102 and 115 which could be scheduled for use in other courses of study. The specialized laboratories, if time permits, might be scheduled for use by other engineering departments for the teaching of technical courses of a similar nature to those taught by this department. The Industrial Engineering areas will be utilized approximately 60% of the time for scheduled classes for research. Engineering Drawing areas will be utilized 100% of the time for scheduled classes (during full enrollment periods). The closed circuit TV areas will be utilized along with the drawing courses as well as for a few Industrial Engineering courses.

- 2 -

These funds are requested since the Department does not have sufficient equipment at present to completely equip the new quarters, nor the funds with which to purchase the additional equipment. One special equipment account is available (approximately \$20,000), but this fund is being reserved in entirety for the purchase of closed circuit TV electronic equipment. The Department is already committed (as approved by the Board of Directors) to the use of the closed circuit TV instruction equipment when the new quarters are available. The present ME & T account is being used to purchase other equipment for which the Department has an immediate need.

The Department has requested at this time only that equipment which is essential to provide for larger classes, more adequate instruction, and to alleviate backlogs. No non-essential equipment is being requested. In all rooms, except conventional classrooms, it will be unnecessary for the College to provide any other standard classroom furnishings.

The following is the list of departmental equipment needs:

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
INDUSTRIAL ENGINEERING AREA			
<u>Room 101 - Industrial Engineering Lab - new area (23' x 27', 18 student capacity)</u>			
1	9	Laboratory benches, 6' long x 2 $\frac{1}{2}$ ' wide x 40" high. (See attached drawing).	\$ 450.00
2	18	Posture chairs, 15" square seat, adjustable in height from 22" to 28". Back adjustable up and down, forward or back. All welded tubular steel. (Two to be used with each lab table.) Similar to Royal Model 625-T posture chair.	360.00
3	1	Permanent wall projection screen, 70" x 70". Similar to Radiant W. E. D. Wall Master.	45.00
4	1	All metal, two-door cupboard, approximately 78" high by 36" wide by 24" deep; with four (4) adjustable shelves. Doors fitted with locks. Similar to Hon Model 7821.	100.00
<u>Room 102 - Classroom (24' x 27', 30-35 student capacity)</u>			
6	1	Permanent wall projection screen, 70" x 70". Similar to Radiant W. E. D. Wall Master.	45.00

- 3 -

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
<u>Room 103 - Conference and Calculating Room - new area (13' x 27', varied capacity)</u>			
8	2	Blond oak tables, 5' long x $2\frac{1}{2}$ ' to 3' wide x 30" high, to be used for four calculators. Three-drawer, similar to Jasper Model ST-2160.	\$ 80.00
9	4	Oak, straight back chairs, to be used with above tables. Similar to West Texas School Supply Company Teacher's chair No. 103.	40.00

This equipment is necessary since we have added three calculators to our instructional equipment. These calculators are used by the students registered in Industrial Engineering 331 - Motion and Time Study; Industrial Engineering 337 - Production Planning and Control; Industrial Engineering 436 - Engineering Economy; and Industrial Engineering 437 - Industrial Statistics and Quality Control where mathematical and statistical problems must be worked. At present the Department has no calculating room.

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
<u>Room 111 - Storage Area and Tool Crib - new area (10' x 15')</u>			
10	6	Oak, straight back chairs (conference chairs). Similar to West Texas Supply Company Arm Chair No. 101. These chairs will be used with an existing conference table which will be placed in this room. The room will be used for (in addition to a calculating room) staff, student, and student organization conferences. Six presently existing straight back chairs will be used in staff offices.	\$ 100.00
<u>Room 113 - Storage Area and Tool Crib - new area (10' x 15')</u>			
11	2	All metal, two-door cupboards, approximately 78" high x 36" wide x 24" deep, with four (4) adjustable shelves, doors fitted with locks. Similar to Hon Model 7821.	200.00
12	2	Small tool storage wall cabinets, overall size when open 96" x 48" high x 4" deep. Tool mounting area of heavy Masonite pegboard. Similar to Brodhead-Garrett TC-5.	150.00
13	2	Metal bin racks, bins to be of about three assorted sizes. Rack to be 87" high x 36" wide x 12" deep. Similar to Brodhead-Garrett No. 705 or 708.	100.00

This equipment is required to store hand tools and machining equipment which will be used in Room 113 and to store other Industrial Engineering Department equipment and apparatus. At present the Department does not have adequate facilities for the storage of hand tools, etc., on inventory and the inventory is being increased to give proper instruction (as suggested by

- 4 -

the recent E.C.P.D. inspection team). This will be done with funds from the present ME & T account.

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
<u>Room 113 - Machine Room</u> (23' x 27', varied capacity)			
14	1	DeWalt Model GW-1, 10" radial saw with bench and the following attachments: Boring bit set #8042; Router bits #3808, 3809, 3810; Dado Heads #6001, 6028; Spacers #2432, 2433, 2534, 2535, 2437; Planer #6380, 6383; Saw Blades #1420, 991, 1264, 1714, 993, 994; Shaping accessories #119826, 3472, 101, 102, 104, 106, 107, 108, 109, 111, 112, 115, 6460, 3104, 3105, 6479, 6472; Power Brake #117851; 10" Automatic safety guard #117919; Splitter and kickback device #117917; Work light #8040.	\$ 750.00
15	1	18" x 6" Surfacer with 5 HP, 3600 RPM, 3 phase motor, enclosed and fan cooled. Jointer bar with self-reversing screw. Grinder for operation on jointer bar. Extra set of three (3) high-speed steel knives; Shaving hood; knife setting gage; flexible chip breaker. Similar to Yates American (Brodhead-Garrett #31W301, 31W803, 31W804; 31W805; 31W806; 31W807, and 31W808.)	1,400.00
16	4	Woodworking benches; 48" long x 38" wide x 33" high. Complete with two (2) vises. Similar to Brodhead-Garrett Streamliner #ES-2.	360.00
17	8	Posture chairs, 15" square seat, adjustable in height from 22" to 28". Back adjustable up and down, forward or back. All welded tubular steel. (Two for each work bench.)	160.00
18	2	Small parts storage bins, plastic drawers 10-3/4" long x 2-3/4" high x 2-7/8" wide. Rack to be approximately 28 $\frac{1}{2}$ " high x 13-5/16" wide x 11-1/8" deep, with 32 bins. Similar to General Industrial Company R.S. 32.	75.00
19	1	Small parts storage bin, plastic drawers 5-7/8" length x 2-3/4" wide x 1-7/16" deep. Rack to have 32 drawers. Similar to General Industrial Company J-32.	15.00

This equipment is necessary since this machine room is being expanded (approximately $2\frac{1}{2}$ times). The additional equipment will permit the Department to give better instruction as well as permit the servicing of more students than is possible at present. This machine room is used in conjunction with Industrial Engineering 331 - Motion and Time Study; Industrial Engineering 334 - Production Tooling; Industrial Engineering 432 - Plant Layout and Design; and Industrial Engineering 421 - Materials Handling, and will also be used in conjunction with graduate and staff research. This room must have this equipment in order to accommodate the students enrolled in these courses. Only one work bench is presently on inventory and no small parts storage is available.

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<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
<u>Room 114 - Motion and Time Lab - 10 student capacity increase (27' x 29', 24 student capacity)</u>			
20	5	Laboratory benches, 6' long x 2 $\frac{1}{2}$ ' wide x 40" high. (See attached drawing.)	\$ 250.00
21	10	Posture chairs, 15" square seat, adjustable in height from 22" to 28" with back adjustable up and down, forward or back. All welded tubular steel. Similar to Royal Model 625-T posture chair.	200.00
22	1	27-drawer steel cabinet, drawers to be 9" wide x 3 $\frac{1}{2}$ " high x 12" deep. Similar to West Texas School Supply File #2712.	50.00

This equipment is necessary since this laboratory is being expanded and these additional items will permit the Department to accommodate larger sections in the courses meeting in this room.

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
<u>Room 115 - Classroom (25' x 27', 30-35 student capacity)</u>			
Conventional classroom equipment.			
<u>Room 230 - Seminar and Reading Room - new area (20' x 26', 20 student capacity)</u>			
23	5	Folding table, 72" long x 36" wide x 29" high, with plastic top. (To be used for Seminar courses.) Similar to West Texas School Supply Company Mitchell Model R-11.	\$ 240.00
24	20	All steel folding chairs with padded seat. (To be used with above seminar tables.) Similar to Samson folding chair.	160.00
25	1	Easel, metal preferred; to hold either flip charts, chalkboards, or placards. Similar to West Texas School Supply Company Style K-13.	25.00
26	2	Metal Bookcases, 48" high x 34 $\frac{1}{2}$ " wide x 18" deep, with 3 adjustable shelves and sliding glass doors. Similar to Hon Bookcase 48F. (Metallic grey color.)	160.00

This equipment is necessary since this room is a new area. It will be used to teach such courses as Engineering Seminar, Industrial Engineering 411, as well as graduate courses, as soon as the program is approved. This room will not require regular classroom chairs. This equipment in preference to more expensive oak tables and chairs will also permit considerable versatility for this room.

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<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
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ENGINEERING DRAWING AREA

Room 218 - Engineering Drawing Lab - 6 student capacity increase (25' x 52', 32 student capacity)		
28	32	Drafting tables, (see requisition 466-7-6). \$1,300.00
30	32	Drafting stools, metal non-adjustable, 28" high. Frames of tubular welded steel. Seats 14" in diameter. (Similar to Dietzgen Company #4505IM). 355.00

This equipment is necessary in order to permit the Department to include more students in all sections of drawing. (Section size will be increased from 26 to 32.) The laboratory areas are being increased which makes this increase in class size possible.

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
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Room 203 - TV Control Room

31	2	Folding tables, 48" long x 29" high, with plastic top. Similar to West Texas School Supply Company Mitchell Model R-19.	\$ 70.00
32	4	Folding chairs. (Same as Item 24.)	32.00
33	2	All metal two-door cupboards. (Same as Item 4.)	200.00

Room 204 - Storage

34	2	All metal two-door cupboards. (Same as Item 33.)	200.00
35	4	Metal storage shelves, 6 shelves, 3' long x 6' high x 12" deep. Similar to West Texas Supply Company #7512.	90.00
36	1	Workbench. (Same as Item 16 above.)	90.00

Rooms 205 & 207 - Originating Rooms

37	2	Folding tables. (Same as Item 31.)	70.00
38	4	Folding chairs. (Same as Item 32.)	32.00
39	2	Easels. (Same as Item 25.)	50.00
40	1	Portable screen, 70" x 70" on tripod stand. Similar to Radiant Educator Tripod EDL screen.	50.00
41	1	Viewgraph, F3.5 anastigmat, 4" diameter, 14" focal length lens; full 10" x 10" projection area; 500 watt, 115 v, A.C. with carrying case. Similar to Besler Master Vu-Graph #6600 and Case #6670.	300.00

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<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
42	1	Opaque projector, 5" diameter, 18" focus lens, 1000 watt lamp, 115 v, A.C., with carrying case. Similar to Besler Vu-Lyte II with Feed-O-Matic.	\$ 300.00
43	1	Tape recorder with two recording heads to record both directions and at 2 speeds, 3-3/4 and 7-1/2 inches per second. Similar to Webcor Royal Model #P2911.	180.00

This equipment is required since the Department will begin a closed circuit television instructional program as approved by the Board of Directors and all of these rooms are new area. The Department was given a special grant of \$20,000 for the purchase of television electronic equipment and a special effort has been made to reserve all of this money for such equipment.

<u>Item</u>	<u>Quantity</u>	<u>Description of Equipment</u>	<u>Estimated Cost</u>
OFFICE AREA			
44	2	Oak, double pedestal desks, 60" x 34" x 30" high. Similar to West Texas School Supply Company W-500.	\$ 180.00
45	2	Oak, swivel arm chairs to match above desks. Similar to West Texas School Supply Company #100.	50.00
46	2	Four-drawer letter size, grey, metal filing cabinets equipped with lock. Similar to West Texas School Supply Company #204.	120.00
47	2	Oak, straight back, arm chairs. Similar to West Texas Supply Company #103.	25.00
48	2	Metal bookcases. (Same as Item 26.)	160.00
49	1	27-drawer, steel cabinet; drawers 10" wide x 4 $\frac{1}{2}$ " high x 24" deep. Similar to West Texas School Supply Company #2414.	100.00

This equipment is required since the Department will have three new office spaces to equip. One of these can be equipped with existing office equipment.

Total \$9,469.00

**GENERAL CLASSROOM EQUIPMENT FOR
TEXTILE ENGINEERING BUILDING**

NEW PORTION

5 Classrooms:

200 arm tablet chairs	\$12.50 each	\$2,500.00
5 lecture tables	40.00 each	200.00
5 straight chairs	12.50 each	62.50
5 lecturns	8.00 each	<u>40.00</u>
Subtotal		\$2,802.50

3 Offices:

3 double pedestal desks	\$100.00 each	\$ 300.00
3 arm swivel chairs	40.00 each	120.00
6 straight chairs	12.50 each	75.00
3 bookcases	75.00	<u>225.00</u>
Subtotal		\$ 720.00
Total New Portion		\$3,522.50

REMODELED PORTION

5 Classrooms:

Same as the five classrooms above	\$2,802.50
Total Remodeled Portion	<u>\$2,802.50</u>
TOTAL	<u>\$6,325.00</u>

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

MINUTES OF THE CAMPUS PLANNING COMMITTEE

Meeting No. 29 April 21, 1959

A meeting of the Campus Planning Committee was held at 8:30 a.m. in Room 120 of the Administration Building. Members present were Mr. E. J. Urbanovsky, Mr. Nolan E. Barrick, Colonel C. P. West, and Chairman M. L. Pennington. In addition, Mr. V. E. Thompson was present.

388. Approval of Minutes

On motion by Colonel West, seconded by Mr. Urbanovsky, the Minutes of Meetings No. 27 and No. 28 were approved with the following addition:

Dean Bradford reported by letter dated April 11, 1959, that Item 363B of the Minutes of Meeting No. 27 "did not meet with his approval" and "the possibility of the Atomic Energy Commission making an award by mid-July is out of the question and I have never made such a statement" as set out in Item 363 of the Minutes of Meeting No. 27.

389. President's Approval of Minutes

The Chairman reported that President Jones tentatively approved the Minutes for Meetings No. 27 and No. 28 on April 10, 1959, in order that they could be used for the Board Meeting on April 11, 1959. He made the final approval of the Minutes on April 20, 1959, and asked to have the following remarks included in the Minutes:

On April 20, 1959, he stated that when he visited the Atomic Energy Commission at Germantown on March 4, 1959, he was told officially by Mr. Packer that the earliest possible date for a final decision on the Nuclear Reactor would be after September 1, 1959. The report was made to the President orally and he wants it reflected in the Minutes.

The President stated that the \$65,000 listed in Item 363C, page 258, is in error as the original grant was \$65,563 and another grant in the amount of \$31,347 was received on February 5, 1959, making a total of \$96,910 received from the Atomic Energy Commission.

390. Air Conditioning Survey

It was agreed that the representatives of Zumwalt and Vinther would be invited to discuss their air conditioning survey with the CPC on Tuesday afternoon, April 28, 1959, at 1:30 p.m.

The report was discussed and considered quite good. A recommendation for the implementation will be delayed until after the verbal presentation.

391. Agricultural Plant Sciences Facilities

Mr. Thompson, who kept the Minutes, reported that the meeting held with Dean Thomas and Dr. Young on Friday, April 17, 1959, was good and very constructive. The efficient use of classrooms and laboratories was discussed with the result of improvement in the use of space. The needs of the CPC for the Board of Directors were worked out and procedure agreed on. (Attachment No. 114, page 280)

391. Agricultural Plant Sciences Facilities (continued)

There is to be another meeting of the CPC with Dean Thomas and Dr. Young at 8:30 a.m. on April 28, 1959. It was agreed that a recommendation for the site will be made by Mr. Urbanovsky and Mr. Barrick and that it will be included in the study of the area south of the Administration Building.

392. Area South of Administration Building

It was agreed that Mr. Urbanovsky and Mr. Barrick are to make a study of the area and present their recommendations to the CPC on May 12, 1959. It was understood that they may call on any member of the CPC for their advice and counsel during the preparation of the recommendation.

393. Boiler and Housing

Mr. Barrick reported that a suitable solution has been worked out for ventilation. An exhaust-type fan is to be installed to provide forced ventilation. The project architect thinks that the fan can be provided within the budgeted amount for the project.

All of the plans are on schedule and bids are to be opened on May 7, 1959, at 2:00 p.m.

394. Board of Directors

The CPC agreed to include a report of the actions of the Building Committee and the Board of Directors on April 10 and 11, 1959, in the Minutes for information and reference. The report is attached to and made a part of the Minutes. (Attachment No. 115, page 281)

395. Chemical Engineering and Nuclear Reactor

- A. The CPC took cognizance of Dean Bradford's statement to the Board on April 11, 1959, that "unfortunately, present plans for the new Chemical Engineering Building are so limited in scope that the recommended minimum laboratory space of 12,800 square feet will not be met."
- B. Mr. Barrick reported that he had met with Dean Bradford on April 15, 1959, and he (Mr. Barrick) thinks that an understanding was reached. He further added that they are proceeding on the development of plans with Dean Bradford to come within the budgeted amount.

396. Classroom and Office Building

The Chairman reported that the display room for Business Administration has received final approval from the President. The plans are to be revised accordingly with the exception of air conditioning, which will be inadequate if excessive use of the special display lighting is made.

397. Computer - Architecture

Mr. Barrick reported that he and Mr. Urbanovsky are reworking the plans which are to be presented to the CPC at the next meeting. The studies will include a specific recommendation on site. The project architects will be used as much as feasible in the preparation of studies.

398. Equipment

Mr. Thompson reported that he and Dr. Dudek are in the process of writing the final specifications for the equipment which the Board of Directors approved at the last meeting for the Textile Engineering Building and an order is to be presented to the Purchasing Office within the next week.

399. Library

- A. The Chairman reported that, as authorized by the Board of Directors at the meeting on April 11, 1959, negotiations have been completed with Mr. L. W. Pitts of Pitts, Mebane and Phelps of Beaumont, Texas, to serve as architects for the new library under the terms and fees stipulated.
- B. A tentative trip has been scheduled to Stillwater, Oklahoma, to visit Mr. Edmon Low, the consultant, and the library on May 18, 1959. It is recommended that Mr. Haley, Mr. Barrick and Mr. Janeway attend, in addition to Mr. Pitts. The tentative arrangements are satisfactory with Mr. Haley and Mr. Janeway.
- C. The studies on the library are to be continued with the project architects and Mr. Barrick is to work out a time schedule with Mr. Pitts after the trip to Stillwater.

The meeting recessed at 12:05 noon and
reconvened at 1:20 p.m.

400. Mechanical Engineering Shops

Mr. Barrick reported that it is hoped that the revised studies can be in the hands of the CPC at the next meeting.

401. Operating Procedures

Dr. Joe Dennis, on March 26, 1959, called attention to the advisability of studying the proper kind of door locks for buildings in the event of an emergency such as fire. Colonel West, who is Chairman of the Fire Prevention Committee, volunteered to present the question to his Committee at the next meeting.

402. Other Business

- A. It was agreed to invite the students to present the scale model on the Tech Rodeo grounds at the meeting of the CPC on Friday, April 24, 1959. Mr. Urbanovsky was to ask Dean Thomas to invite the boys at a time convenient to their class schedules.
- B. It was agreed that the proposed operating agreement will be discussed at the same meeting.
- C. Dr. Jones stated that he would like for the CPC to serve as the intermediary with the City for the study of the use of sewage effluent on the College Farms. He stated that he would tell Mr. H. P. Clifton, City Manager, of the assignment.

403. Physical Plant Facilities

Mr. Barrick reported that he and his staff would prepare a layout study on the site west of Men's Dormitories 5 and 6 and across Flint Street. (In past items, the location has been mentioned as "across the freeway." The statement is in error.)

Mr. Barrick is to work with Mr. Urbanovsky on the site and his studies are to include the efficiency of use of proposed site. It is understood that other members of the CPC will be available for assistance.

404. Printing Press

The proposed project is to be included with Physical Plant.

405. Science Addition

In view of the amount of work needed to get the information to the Board of Directors by June 1, 1959, on the other projects, in addition to the amount of material which must be studied to arrive at a recommendation on the Science Addition, it looks as if it will be necessary to sidetrack the project until there is adequate time to complete the studies.

406. Student Union

Mr. Barrick reported that he and his staff are reviewing the studies of Porter Butts, the consultant, on the proposed project. It was agreed that after the studies are reviewed, he will consult with Mr. Longley and the project architects in order to prepare the preliminary plans in time for presentation to the CPC to make a recommendation to the Board of Directors on June 1, 1959.

407. Textile Engineering

The Chairman reported that a check in the amount of \$45,000 was received from the South Plains Cotton Growers, Inc., through Mr. George W. Pfeiffenberger, on April 21, 1959. The amount is to be included as part of the construction funds for the project to finance the Pilot Spinning Plant. The CPC agreed that the Chairman is to write Mr. Pfeiffenberger to express its gratefulness.

408. Women's Gym

Mr. Barrick reported that he and his staff have pulled together the information for rough schematics which have been presented to the architects. The architects now have the information under study. The information was acquired with the aid of Dr. Mary B. Dabney.

The outside facilities are being studied with Dr. Dabney at this time.

The CPC is to meet again in a special meeting on Friday, April 24, 1959, at 8:30 a.m. in Administration Building 120, with Dean Thomas and Dr. Young. The next regular meeting is to be held on Tuesday, April 28, 1959, at 8:30 a.m. and a special meeting is scheduled at 1:30 p.m. on the same day to hear the report of Zumwalt and Vinther on the air conditioning survey.

The meeting adjourned at 2:05 p.m.

M. L. Pennington
Chairman

Campus Planning Committee
April 21, 1959
Attachment No. 114
Item No. 391

MEETING OF THE CAMPUS PLANNING COMMITTEE WITH THE SUBCOMMITTEE
OF THE AGRICULTURE PLANT SCIENCES BUILDING

A meeting of the subcommittee of the Agriculture Plant Science Building met with the Campus Planning Committee on Friday, April 17, 1959. Those present were Mr. E. J. Urbanovsky, Mr. Nolan E. Barrick, Colonel C. P. West, of the CPC and Dean Gerald W. Thomas, Dr. A. W. Young, and Mr. V. E. Thompson.

The purpose of this meeting was to determine the plan of approach and to reorganize the materials previously submitted to the CPC for preliminary studies of the Agriculture Plant Science Building.

This committee agreed on the procedures as follows:

1. All materials originally submitted to the CPC will be completely reworked and condensed into one single, concise justification and recommendation.
2. Justifications for space requirements to be specific, concise and to the point on each functional aspect of the project.
3. That individual space requirements for classrooms, laboratories and storage areas will be studied by Dean Thomas and Dr. Young with the idea of keeping space at a minimum, but still be functional by the departments involved.
4. Dr. Young and Mr. Barrick were requested to study the possibility of reducing the laboratory space originally requested by means of rearrangement of the over-all design of this proposed building. A study is to be made to determine if similar types of laboratories can be used in conjunction with each other.
5. A study will be made to determine the possibilities of cutting the number of general classrooms from five (5) to three (3).
6. A discussion was made regarding the State Seed Testing Unit, a State agency which has been housed in the Agriculture Building for several years and was removed last September, 1958. Dr. Young stated that this Testing Unit would be advantageous to his department, from the concept of equipment and service performed by this agency. If this service is not included in the new building, certain facilities must be purchased, such as germination vault and seed laboratory equipment. It was decided that an alternate plan to include this service, including justifications for its existence, be presented to the CPC for their consideration and recommendation.
7. Dean Thomas will make a complete report on the use of space that will be vacated in the Agriculture and Agriculture Engineering Buildings if and when a new building is constructed for the Plant Sciences.
8. All reports and revisions will be presented to the CPC at 8:30 a.m., Friday, April 24, 1959.

V. E. Thompson
Assistant Comptroller

Campus Planning Committee
April 21, 1959
Attachment No. 115
Item No. 394

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

April 15, 1959

The following are the actions of the Building Committee of the Board of Directors at the meeting on April 10, 1959, and of the Board of Directors in regular session on April 11, 1959:

46. Agricultural Plant Sciences Facilities

The Building Committee accepted the recommendation of the CPC that insufficient time has been available to make a thorough analyzation and intelligent recommendation of the material on hand in time for the meeting. It was agreed that a specific presentation is to be made at the Board Meeting on June 1, 1959.

47. Boiler and Housing

- A. On recommendation of the Building Committee, the Board of Directors accepted the preliminary and final plans and specifications for the housing, subject to further study of the ventilation problem.
- B. On recommendation of the Building Committee, the Board of Directors authorized the advertisement for bids and for the Building Committee of the Board to accept the bids and award the contract between Board Meetings.

48. Chemical Engineering and Nuclear Reactor Building

- A. On recommendation of the Building Committee, the Board of Directors approved the schematics.
- B. On recommendation of the Building Committee, the Board of Directors authorized the preparation of full preliminary plans and specifications to be presented at the Board Meeting on June 1, 1959.

After Dean Bradford's presentation to the Board, the Board requested that cognizance be taken of his recommendation for more space in the Chemical Engineering part of the project.

49. Computer - Architecture

- A. On recommendation of the Building Committee, the Board approved the schematics.
- B. On recommendation of the Building Committee, the Board of Directors authorized the preparation of full preliminary plans to be presented to the Board on June 1, 1959.

50. Equipment

On the recommendation of the Building Committee, the Board of Directors approved the purchase of equipment as per lists presented for the old and new portions of the Textile Engineering Building.

50. Equipment (continued)

New Portion

Departmental Equipment	\$6,260.00
General Building Equipment	<u>3,522.50</u>
Total New Portion-----	\$ 9,782.50

Old Portion

Departmental Equipment	\$9,469.00
General Building Equipment	<u>2,802.50</u>
Total Old Portion-----	<u>\$12,271.50</u>
GRAND TOTAL	<u>\$22,054.00</u>

The equipment for the new portion is to be purchased from the Constitutional Building Amendment Funds and charged to the budgeted amount for equipment.

The equipment for the old portion is to be purchased from the Local Building Funds.

51. Home Economics

The Building Committee accepted the recommendation of the CPC that action on the proposed Home Management House and Nursery School Facilities be deferred until the construction program has been developed further in order that there may be a clearer determination of funds available. ✓

52. Library

A. On recommendation of the Building Committee, the Board of Directors accepted the priority list of architects as recommended by the CPC and set out in the Minutes of Meeting No. 27. (Item No. 370B, page 262)

It was agreed that the Chairman of the CPC would contact the firms in order of priority to see if the fee can be negotiated in keeping with the regular scale paid by the College. ✓

B. On recommendation of the Building Committee, the Board of Directors approved the following:

1. There is to be one central library.
2. The site is to be that west of the Student Union.
3. Construction is to be of the modular type with free standing and open stacks, low ceilings, air conditioning, excellent lights, etc., as outlined by the consultant in his report.

53. Mechanical Engineering Shops

A. On the recommendation of the Building Committee, the Board of Directors approved the concept of an L-shaped project attached to the north end of the East Engineering Building with two stories in front, if possible, in order to conform to the construction across the esplanade. ✓

B. On recommendation of the Building Committee, the Board of Directors authorized the preparation of full preliminary plans to be presented at the June 1, 1959, Board Meeting. ✓

54. Operating Procedures

- A. The Board voted to ask the City for prompt reimbursement for the expenditures in connection with the construction of Flint Street across the campus, with the stipulation that the Secretary notify the City.
- B. The Board voted to request the City to permit a left turn from College Avenue, at Broadway, to enter the campus and to make a left turn from Broadway, at College Avenue, to leave the campus. The Secretary is to notify the City of the request.

55. Physical Plant Facilities

The Building Committee instructed the Campus Planning Committee to make a study of a site across ~~the FLINT~~ and west of Men's Dormitories Nos. 5 and 6. The study is to be complete, including cost. ✓

56. Printing Press

The proposed project would automatically be included in No. 55 as it is to be a part of the general area.

57. Relocation of Farm Facilities

The Building Committee accepted the recommendation of the CPC that the preparation of a report by the Agricultural Committee for the Relocation of Farm Facilities be delayed until the arrival of the new Head of the Animal Husbandry Department. The new Head is Dr. Ralph M. Durham, who is scheduled to arrive on May 1, 1959. ✓

58. Science Addition

The Building Committee accepted the recommendation of the Campus Planning Committee that the report to the Board be delayed until June 1, 1959, in order to provide additional time to organize and analyze the mass of existing information.

59. Student Union

- A. On the recommendation of the Building Committee, the Board accepted the feasibility of issuing Revenue Bonds to construct a \$1,000,000 addition to the Student Union by pledging proceeds from the Union and the Bookstore. The question of the amount to pledge from the Bookstore was discussed at length and was not specifically set. Some sentiment was expressed in favor of setting a fixed annual amount of, for example, \$100,000 with the Bookstore to provide the difference between the amount available from the Union and the \$100,000. The fact that only \$750,000 will be needed from a bond issue to finance the Union Expansion totaling \$1,000,000 was discussed as the Building Fund of the Union will have an estimated \$250,000 by August 31, 1959.
- B. On recommendation of the Building Committee, the Board voted to instruct the architects to go ahead with the preliminary plans for a Union addition costing \$1,000,000 with the stipulation that no bowling alleys or swimming pool be included. It was understood that a preliminary study would be presented to the Board when available. ✓

60. Women's Gym

On the recommendation of the Building Committee, the Board of Directors authorized the preparation of full preliminary plans and specifications to be presented on June 1, 1959. ✓

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

MINUTES OF THE CAMPUS PLANNING COMMITTEE

Meeting No. 30 April 24, 1959

A special meeting of the Campus Planning Committee was held at 8:30 a.m. in Room 120 of the Administration Building. Members present were Mr. Nolan E. Barrick, Colonel C. P. West and Chairman M. L. Pennington. In addition, Mr. V. E. Thompson was present. Mr. E. J. Urbanovsky was unavoidably absent.

Others present were Dean Gerald W. Thomas, Dr. A. W. Young, Dr. Donald Ashdown, Mr. Koy L. Neeley and Mr. John Thomas Yarbrough.

409. Tech Rodeo Association

Mr. Yarbrough displayed the very excellent scale-model of the proposed Texas Tech Rodeo Association arena. The blueprints and the proposed agreement had already been presented to the CPC.

The proposed arena is within the boundaries of the five acres as set by the Board of Directors and has the long axis facing Quaker Avenue as requested. The scale-model was complete with all proposed facilities which appear on the blueprints except the stables. The Association members plan to do as much of the work as possible and hire only a welder.

Holding pens, shelter for rodeo stock during events, chutes, starting pens and the judging stands are at the south end.

The holding and catch pens for calves and dogging steers are proposed at the north end.

The bleachers shown in the scale-model were located on the east side and, solely as a matter of convenience for the spectators, it was suggested that the bleachers be erected on the west side.

Mr. Yarbrough was of the opinion that the first phases of construction would cost about \$3,600 with the addition of donated labor and materials and the Association has about \$3,000 on hand. The plan, as presented, is complete and long-ranged. However, it will take a number of years to complete the plans. Improvements will be made as additional funds, material and labor become available.

The pump has been pulled from the well at the Feeder Pig Farm and the casing is to be removed -- Both to be used in connection with a new well to be drilled at the Rodeo Grounds.

Mr. Yarbrough explained that the area will be landscaped to make it as attractive as possible.

He explained that it may be necessary to cut down the size of the proposed judging stands and all present concurred with the idea.

He agreed that future construction in the long-range plan will be of caliber equal to that shown.

The American Business Club has offered to furnish labor to construct portable bucking chutes in return for use at the Annual ABC Rodeo. The ABC will be responsible for the chutes while in their possession and the Tech Rodeo Association will be responsible the rest of the time. Also, the ABC has offered to construct the stables if they could be used each year to house the contestants' horses during the ABC Annual Rodeo. The Rodeo Association would maintain the stables after construction by the ABC. The use of the stables by the ABC would not include shelter for rodeo stock.

409. Tech Rodeo Association (continued)

Although the plans for the stables are not drawn as yet, it was agreed that they will be of equal quality to the other structures. As long as the standard of construction is on par with the others, it will not be necessary to present the detailed plans and specifications to the CPC for study. The CPC and the others present requested that the walls and other partitions be constructed of concrete blocks and that the roofs would be of "Galbestos" or equal, although sheet metal would be acceptable for the roofs if the other material is too expensive. It was understood that all roofs in the area are to be of the same material.

The Rodeo Association understands that the construction, operation and maintenance are to be at no cost to the College other than the land.

Mr. Yarbrough explained that it may be necessary to add a house or living quarters for students to tend the stock and look after the premises. Any housing provisions are to be presented to the College for approval before construction or any student is permitted to live on the premises.

It was agreed that the request for the use of the land for twenty years would be recommended unless "extraordinary, unforeseen circumstances" arose. It was also agreed that any use of the premises other than that stated is to be presented for approval before such use is allowed. It was further agreed that if need arose for the use of the premises for instructional purposes, a request would be made to the Association.

It was agreed that the proposed contract should contain an abandonment clause which would state that "if the land were abandoned for the original purpose, it would revert to regular college use."

It was agreed by all that the space would be confined to five acres for all purposes, including parking of vehicles. The Rodeo Association will erect a perimeter fence in order to preclude any use of the land other than the five acres.

It was agreed that the items appearing in the Minutes would be included in a revised operating agreement which would be prepared by the Rodeo Association officials. The revised agreement will be presented to the CPC. It was agreed that a revised agreement containing the items in the Minutes would be acceptable when properly prepared.

On motion by Mr. Barrick, seconded by Colonel West, the Campus Planning Committee voted to commend most highly the Texas Tech Rodeo Association for the very splendid scale-model.

At 9:45 a.m. Dr. Ashdown, Mr. Neeley and Mr. Yarbrough left the meeting.

410. Agriculture Plant Sciences

As agreed at the special meeting held on April 17, 1959 (Item No. 391, page 276), a revised report was presented, summarizing and condensing the studies and material on the project. The report entitled "Supporting Data for Request for an Agricultural Plant Science Building" is attached to and made a part of the Minutes. (Attachment No. 116, page 285)

Dr. Young read aloud the first part of the report and Dean Thomas the part on the "Use of Space in the Agriculture Building Vacated by Agronomy, Horticulture and Park Management." The entire report was thoroughly discussed.

410. Agriculture Plant Sciences (continued)

It had been previously agreed that the square footage in the proposed building should be used as a starting point. The original request contained approximately 33,000 square feet. The revised report shows a total square footage of 24,096 square feet which excludes corridors stairs and toilets. It is anticipated that approximately 3,600 square feet will be required for those facilities, making a total of approximately 27,710 square feet. The use of space was very well presented and justified in the report.

In connection with the vacated space in the Agriculture Building, Dean Thomas explained that they had considered the costs of conversions to other uses and that the proposed use is the most economical and practical solution they could find. Very little cost would be required to convert the existing facilities to the proposed uses.

Both Dean Thomas and Dr. Young expressed the need for an Agronomy Greenhouse as it is not only badly needed but is essential for the instructional program. Dean Thomas stated that it may be necessary to provide greenhouse space and defer expenditures elsewhere in the Agriculture Building Program. Dr. Young stated that the program has gone about as far as it can without a Greenhouse.

The State Seed Testing Laboratory was discussed. Dr. Young stated that the Laboratory had been housed at Texas Tech from 1932 until September, 1958 and that the facilities and materials of the Laboratory have been used each year in various phases of the College instructional seed testing work. There is now no place or facilities and both must be provided. The report, as shown, provides a minimum space requirement of 720 square feet. Originally the State Laboratory had 2,500 square feet and the original request included the same amount for the purpose. If the College could provide space for the State Testing Laboratory, considerable operational expense could be saved as the College could use their supplies, equipment and facilities. Also, the presence of the Laboratory on the campus would add to the instructional program.

The CPC voted to recommend to the President that the project be constructed and that it be recommended to the Board of Directors on June 1, 1959. It was agreed that the recommendation will include the studies, with as much information for preliminary plans and specifications as possible, in order to aid the President and the Board by presenting all possible information. Also, it was agreed that a strong effort will be made to present schematics on June 1, 1959.

The meeting adjourned at 11:25 a.m.

The next meeting of the CPC is to be held at 8:30 a.m. on April 28, 1959, in Room 120, Administration Building.

M. L. Pennington
Chairman

Campus Planning Committee
April 24, 1959
Attachment No. 116
Item No. 410

SUPPORTING DATA FOR REQUEST FOR AN
AGRICULTURAL PLANT SCIENCE BUILDING

Introductory Information

In the early years of Texas Technological College the Plant Industry Department included the fields of work dealing with Agricultural Engineering, Agronomy, Entomology, Genetics, Horticulture, Landscape Design, Plant Breeding and Range Management. As enrollment increased in these fields and the institution grew larger the division of this department became expedient.

This division resulted in the establishment of a Department of Agronomy, a Department of Agricultural Engineering and a Department of Horticulture and Park Management. The teaching of the entomology and landscape design were placed in the Horticulture and Park Management Department, while the genetics, plant breeding and range management remained in the Agronomy Department.

During the years since the division of the work into the three departments both the Agronomy and the Horticulture and Park Management Departments have made steady growth. These two areas have shown considerably more increase in the number of major students than the other fields in the School of Agriculture.

The Present Housing Problem

A. The Department of Agronomy, now housed in the Agricultural Building now occupies approximately 1688 square feet of office space, 3494 square feet of laboratory space and 1170 square feet of storage and workroom space. The department taught 56 hours of lecture classes and 60 hours of laboratory work each week during the fall semester, 1958. The office space assigned to the department now occupied by seven full-time teaching employees, one half-time teacher, two research assistants and one secretary. Of the 3494 square feet of laboratory space only 720 square feet is suitable for use for soils laboratory classes. Thus, it has been impossible to offer laboratory work in soil chemistry, soil fertility and soil microbiology. An additional course in soil physics, with a laboratory, is greatly needed to provide needed training for the students taking soils option. In addition, space for proper facilities for teaching of laboratory work in genetics and plant breeding is not available in the present facilities. At the present time the Agronomy Department does not have any assigned greenhouse space. Greenhouse facilities are a "must" to provide opportunity for agronomic instruction in the soils and crops phases which are adapted to greenhouse studies. Plant growth in the greenhouse during the winter months (November through April) is essential to good teaching in genetics, plant breeding, crop production, soil chemistry, soil fertility, soil microbiology and small grain crops. With the present trend toward more instruction at the graduate level the greenhouse facilities for agronomic studies in plant and soil relationships is becoming very pressing.

In summary the Department of Agronomy needs additional laboratory space in which to teach soil chemistry, soil fertility, soil microbiology, soil physics, genetics and plant breeding.

B. The Department of Horticulture and Park Management, now housed partly in the Agricultural Engineering Building and partly in the Agricultural Building, occupies approximately 1525 square feet of office space, 3167 square feet of laboratory space and 311 square feet of storage and preparation room.

The Department taught 37 hours of lecture and 70 hours of laboratory work each week during the fall semester, 1958. The office space assigned to the department is now occupied by seven full-time teaching employees, one half-time teacher and one secretary.

In the present laboratory space assigned to Horticulture and Park Management there is no space available at present for a junior landscape design class of approximately twenty-five students who must do their drawings and construction of models in their residence rooms and then bring their work to the lecture room for criticism and instruction by the instructor. This is not a good teaching condition. In addition, laboratory facilities for teaching the plant material phases of the work in trees and shrubs, ornamentals and floriculture are inadequate. Present storage space and preparation room facilities are inadequate for the quantity of materials required in the courses now taught.

In summary, the Department of Horticulture and Park Management needs additional laboratory space for the landscape design classes and the classes in which relatively large amounts of plant materials are required. More storage and preparation room facilities are needed for storage of plant specimens and preparation of materials for laboratory instruction.

Looking to the Future

If Texas Technological College is to be a school of the first magnitude in the field of Agriculture, it is necessary that our students be given training comparable with that of other first-class colleges and universities. To do teaching at this high level requires adequate laboratory space, adequate good equipment and sufficient storage and preparation facilities so that the necessary materials can be kept available as needed for instructional purposes.

As indicated above in the section dealing with "The Present Housing Problem" neither of the departments involved has sufficient laboratory and storage facilities for the present student enrollment in the classes now offered.

If the anticipated departmental enrollment in these two departments is based on college enrollment estimates for the year 1965, and the estimates are based on the rate of increase experienced during past five to six years by these two departments, we can expect the average number of students enrolled in agronomy classes to increase from the average fall enrollment figures of 506 for the past eight years to 825 in the fall of 1965. Horticulture, under a similar calculation, will show an increase from the fall of 1958 figure of 526 to an anticipated 870 students enrolled in the fall of 1965.

Percentage-wise, this indicates 64 per cent more student load by these two departments by the fall of 1965. On this basis, if the present office, laboratory and storage room space occupied by these two departments were increased by 64 per cent (64% of 11,355 square feet) the departments would occupy 18,612 square feet of space in 1965 but would have just as overcrowded a condition as that which exists at present.

If Texas Technological College is to face the future realistically, increased offerings will be needed to meet the changing trends in agriculture in the fields embraced by these two departments. Agricultural climatology, agricultural chemicals (insecticides, fertilizers, herbicides, fungicides, antibiotics, plant simulants, defoliants, etc.) larger scale farming, more intensive mechanization, more rapid development of recreational, park and urban areas; greater emphases on use of ornamentals for home beautification on farm and city residence areas, vegetable crop production and marketing, and many other phases must be given consideration and leadership must be provided if this institution is to meet the needs of the area served. Some of these advances will replace present instructional phases, while others will have to be added to the present offerings.

As the agricultural industry of the Great Southwest area has gradually changed during the past fifty years from a cattle country to one of the most important crop producing areas of the world, so will it change during coming decades from a somewhat "hit-and-miss" type of agricultural production at present to one of the most highly developed, scientifically controlled crop and livestock producing areas of the world, providing that the necessary leadership and guidance are available. Adequately

trained agronomists, horticulturalists, entomologists, landscape and park specialists, range specialists and others must be the major product of the instruction in these departments if Texas Technological College is to meet the challenge in these fields. First-class, adequate facilities as well as highly trained teaching staff must be provided in order that this institution can give the leadership and guidance which the people of Texas and the Great Southwest can rightfully expect from their investment in this institution.

MINIMUM FACILITIES NEEDED BY AGRONOMY DEPARTMENT

1	24' x 40' Forage Crop Agrostology and Range Management Laboratory	960 sq. ft.
1	12' x 24' Storage and Preparation Room	288 "
1	12' x 24' Study room for plant materials	288 "
1	24' x 30' General Crop Production Laboratory	720 "
1	10' x 24' Study room for plant materials	240 "
1	12' x 24' Storage and preparation room	288 "
1	24' x 40' Grading, judging and identification laboratory	960 "
1	12' x 24' Storage and preparation room	288 "
1	Germination and seed technology laboratory (24' x 30')	720 "
1	24' x 40' General Soil Science laboratory	960 "
1	24' x 30' Soil Fertility, Soil Chemistry and Soil Analysis laboratory	720 "
1	24' x 30' Soil microbiology, pedology, soil physics and soil conservation laboratory	720 "
2	12' x 24' Storage and preparation rooms (Apparatus, chemicals, soil & plant samples)	576 "
1	Reception room and Departmental Secretary's office (12' x 24')	288 "
1	12' x 14' Department Head office	168 "
1	Workroom and general storage area (12' x 24')	288 "
4	Paired offices with storage closet each 18' x 24'	1,728 "
1	General office 12' x 24'	288 "
1	General storage 6' x 24'	<u>144</u> "
Total- - - - -		10,632

In order to provide greenhouse facilities for agronomic instruction, a greenhouse unit of the same size as one of the units now occupied by Horticulture is needed. This unit should be divided into four control areas to provide for different temperatures and moisture conditions.

MINIMUM FACILITIES NEEDED FOR HORTICULTURE
AND PARK MANAGEMENT DEPARTMENT

1 24' x 35' Basic entomology laboratory	840	sq. ft.
1 24' x 35' Advanced entomology laboratory	840	" "
1 24' x 24' Insect collection, preparation and study room	576	" "
1 12' x 18' Entomology work room & small class laboratory	216	" "
1 10' x 24' Entomology storage and preparation room	240	" "
1 24' x 60' General horticulture laboratory	1,440	" "
1 24' x 60' Advanced horticulture laboratory	1,440	" "
1 24' x 40' Plant materials and herbarium storage and work room	960	" "
1 24' x 75' Drafting and design laboratory	1,800	" "
1 20' x 30' Preparation and storage room	600	" "
6 8' x 12' offices	576	" "
2 12' x 20' Combination office, work room and small class laboratory	480	" "
1 12' x 20' General office	240	" "
2 10' x 12' Offices	<u>240</u>	" "
Total- - - - -	10,488	

Classrooms for General Use by Both Departments

2 24' x 50' (for 80 students each)	2,400	" "
1 24' x 24' (for 40 students)	<u>576</u>	" "
	2,976	

GRAND TOTAL SQUARE FOOTAGE- - - - - 24,096

It is anticipated that some additional square footage might be eliminated by suitable arrangements of storage, laboratory or office space. This possible saving in space must remain until the floor plans are worked out.

It does not appear feasible to further reduce the requested askings at this time. When looking ahead and attempting to anticipate future needs, space in addition to that requested above would seem to be logical to care for the needs of the two departments involved.

Use of Space in Agriculture Building Vacated
by Agronomy, Horticulture and Park Management

Laboratories, lecture rooms and office space vacated by the Department of Agronomy and the Department of Horticulture and Park Management in the Agriculture Building will be utilized for the following purposes in order of priority:

1. To relieve present pressure because of inadequate quarters for the Department of Agricultural Economics, Animal Husbandry Department, Dairy Industry Department and Agricultural Education Department.
2. To provide adequate space for the cooperative agricultural research program with the Texas Agricultural Experiment Station which has developed the last two years.

(At present we have 5 staff members on one-half time, 5 graduate students on full-time, 1 full-time secretary, and several temporary employees assigned to this endeavor.)
3. To allow for anticipated expansion in the near future of the departments remaining in the Agricultural Building in undergraduate teaching, graduate instruction and research.
4. To convert remaining space to more effective use by the School of Agriculture and the other Schools of the College.

Following is a list of the rooms involved in the anticipated move together with the recommended new use:

- Room 102 Small office, presently used by Research Secretary, may be made available for other departments.
- Room 116 This room has 3 small offices which may be used for staff or for graduate student's work room.
- Room 121 Entomology laboratory to be used for lecture room. It is anticipated that Animal Husbandry Department will use this at least 50% of the time.
- Room 126 Horticulture laboratory to be converted to general classroom (primarily for agriculture). Minor alterations needed.
- Room 128 Vegetable crops laboratory to be converted to lecture room with minor alterations. Agriculture would need this room about half of the available lecture time.
- Rooms 232 233 This office area to serve as headquarters for the co-operative agricultural research program (for 1-staff member on Agricultural Economics Research, 2-secretaries and a study and work room for graduate students and research assistants):
- Room 302 Two small offices to be used for Agricultural Economics staff members.
- Room 301 To be used as Agricultural Education classroom and work area for vocational agriculture training. Minor alterations needed.

- Room 307 Combination laboratory and storeroom to be used for much needed feeds and animal nutrition laboratory.
- Room 316 Storeroom to be used by Agricultural Economics Department.
- Room 315 Statistical laboratory and lecture room for Agricultural Economics Department.
- Room 317 Crops laboratory to be converted to general classroom with minor alterations (anticipated 50% use by agriculture).

Upper Floor of Agricultural Engineering Building. This space presently occupied by Horticulture and Park Management may be used by other departments and, if Veterinary Science is lost, this space will be needed for poultry, meats and Veterinary Science programs.

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

MINUTES OF THE CAMPUS PLANNING COMMITTEE

Meeting No. 31 April 28, 1959

A meeting of the Campus Planning Committee was held at 8:30 a.m. in Room 120 of the Administration Building. Members present were Mr. E. J. Urbanovsky, Mr. Nolan E. Barrick, Colonel C. P. West and Chairman M. L. Pennington. In addition, Mr. V. E. Thompson was present.

411. Approval of Minutes

- On motion by Colonel West, seconded by Mr. Urbanovsky, the Minutes of Meeting No. 29 were approved.

412. President's Approval of Minutes

The Chairman reported that President Jones approved the Minutes of Meeting No. 29 on April 27, 1959.

413. Air Conditioning Survey

The Chairman reminded the members of the meeting scheduled at 1:30 p.m. today to hear the report from Zumwalt and Vinther. It was agreed that the report of the meeting would be attached to and become a part of the Minutes of this meeting. (Attachment No. 117, page 289)

414. Agricultural Plant Sciences Facilities

Mr. Urbanovsky reported that Dr. Young is preparing a list of preferred spaces on the various floors. Mr. Barrick and his staff are going ahead with sketches as the space can be juggled later.

415. Area South of Administration Building

Mr. Urbanovsky reported that he has started a complete study of the area and will continue until it is available for presentation.

416. Chemical Engineering and Nuclear Reactor

Mr. Barrick reported that he has reworked the tentative plans and turned the schematics to the project architects for their study.

He also reported that studies are underway to shift approximately 1,000 square feet from the Reactor area to the Chemical Engineering facilities.

417. Computer - Architecture

Mr. Barrick presented perspectives and revised plot plans. After thorough discussion, the CPC accepted the studies as a basis for further study and refinement. The project architects are to be brought in on the study. It was agreed that a model on a 1" = 25' scale for study, in addition to the smaller model for the Campus Plot Plan, would be prepared.

418. Library

The Chairman reported that the trip to Stillwater, Oklahoma, on May 18, 1959, has been scheduled with Mr. Low. Those planning to attend are Mr. Haley, Mr. Barrick, Mr. Janeway and Mr. Pitts.

Mr. Janeway has said that he would make reservations for housing with Mr. Low if everyone would let him know their wishes. A check is to be made with Mr. Haley shortly before departure in order to coordinate the trip with him.

418. Library (continued)

Pitts, Mebane and Phelps have been furnished copies of the Campus Plot Plan, air conditioning survey, topograph and utilities layouts and Mr. Low's report. The project architects are making excellent progress in gathering information.

419. Mechanical Engineering Shops

Mr. Barrick presented perspectives and revised layout studies which were discussed at length. Mr. Barrick reported that the basic layout had been studied by Mr. L. J. Powers. The noise and vibration factors have been taken into consideration. Also, the studies have taken into consideration the proposed facilities across the esplanade.

Mr. Barrick reported that studies reveal that insufficient budgeted funds are available for two stories in front and that the need is questionable at this time. Plans and specifications will be drawn so that it could be added at a future time.

The CPC accepted the basic layout, subject to further study and refinement. A model of 1" = 25' is to be prepared for the proposed project for additional study and the project architects are to be brought in.

420. Other Business

- A. Future Utility Needs -- The Chairman read a letter dated April 16, 1959, from Mr. Robert L. Mason, College Engineer, in which Mr. Mason points out some very pertinent items concerning future utility needs. A copy of the letter is attached to and made a part of the Minutes for reference. (Attachment No. 118, page 290)
- B. Furniture for Classroom and Office Building -- Mr. Thompson presented a report of the meeting with Dean Heather and the Heads of the Business Administration Departments. The report was discussed at length, with the recommendation that it be accepted as a working basis. (Attachment No. 119, page 291)

Whether or not the desks should be attached to the wall was discussed along with the problems of floor cleaning and stability. It was agreed that samples of the proposed and other desks would be obtained and that Dr. Camp, Head of the English Department, would be consulted. Mr. Libby, also, is to be consulted.

421. Physical Plant Facilities

Mr. Barrick reported that the proposed site west of Men's Dormitories 5 and 6 is underway. The same general needs and functions are being used.

The question of cost was discussed. Mr. Barrick reported that Mr. Mason has estimated that an additional amount of \$45,000 to \$50,000 will be required to provide utilities to the new site. Additional streets, parking, and building (the use of the present garage building would be lost) would probably increase the total cost by approximately \$100,000. The estimated cost at the present site is \$386,000 and \$482,000 at the proposed site.

Demolition of the present facilities was not considered as it would be the same for either site.

421. Physical Plant Facilities (continued)

Construction of facilities at the new site would be easier as it would not be necessary to build around existing facilities in order for the building maintenance operation to continue. Also, the new site would allow for future expansion and it would not be necessary to provide dry, bulk storage elsewhere.

The efficiency of operation was discussed in view of additional distances to buildings.

The study is to continue.

422. Women's Gym

Mr. Barrick reported that the studies have been turned to the project architects for their study. They are to present their ideas as soon as possible.

It was pointed out that Dr. Dabney is scheduled to leave on June 1, 1959, and will not return until the fall semester.

The meeting adjourned at 11:10 p.m. to reconvene at 1:30 p.m. to hear the Zumwalt and Vinther presentation.

The next regular meeting of the CPC is scheduled for 8:30 a.m. on Tuesday, May 5, 1959.

M. L. Pennington
Chairman

Campus Planning Committee
April 28, 1959
Attachment No. 117
Item No. 413

PRESENTATION OF AIR CONDITIONING SURVEY
TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

A Special Meeting of the Campus Planning Committee was held at 1:30 p.m. on April 28, 1959, in Administration Building 120. Members present were Mr. E. J. Urbanovsky, Mr. Nolan E. Barrick, Colonel C. P. West and Chairman M. L. Pennington.

In addition, others present were Mr. Robert L. Mason, College Engineer, Mr. O. R. Downing, Superintendent of Heating Plant and Utilities, Mr. L. E. Davis, Superintendent of Construction and Maintenance, and Mr. James Worley, Representative of Zumwalt and Vinther of Dallas, Consulting Engineers.

The following report was prepared by Mr. Robert L. Mason:

Mr. Worley discussed the findings of the air conditioning survey which had been recently conducted of the Texas Technological College Campus.

Copies of the bound report entitled, "Survey and Report on Air Conditioning Requirements and Proposed Water Cooling Plant Systems at Texas Technological College, Lubbock, Texas," with separately bound sheets entitled, "Appendix to Survey and Report on Air Conditioning Requirements ---," had been delivered to the College at an earlier date. The bound report and appendix were gone over in detail by Mr. Worley. His explanations included procedures followed and justification for cooling requirements of each building, which included use of the building, student density, lighting loads and weather data as well as cost figures for equipment to provide this cooling by each of the five schemes, or plans, considered. Each scheme is briefly identified as follows:

Scheme I - Absorption Units

This scheme proposes the use of individual plants for each of the buildings to be air conditioned as illustrated on Appendix Sheet No. 2. Under this scheme, 100 per cent of the required water chilling plant is chargeable to each individual building.

Scheme II - Electric Motor Driven Compressors

This scheme proposes the use of individual refrigeration plants for each of the buildings to be air conditioned as illustrated on Appendix Sheet No. 2. Under this scheme, 100 per cent of the cost of the required water chilling plant is chargeable to each individual building.

Scheme III - Absorption Units - Multiple Station

This scheme proposes the use of multiple small water cooling stations serving the various groups of buildings as illustrated on Appendix Sheet No. 3. Under this scheme, a diversity of 90 per cent has been applied to size each of the stations with each of the individual buildings served by a station charged with its pro rata share of the cost of the station plus the distribution piping.

Scheme IV - Electric Motor Driven Centrifugal Compressors - Large Central Station

This scheme proposes the use of a single large water chilling station to serve the entire campus through chilled water distribution in underground utility tunnels as illustrated on Appendix Sheet No. 4. It further proposes the use of electricity as the prime energy source. Under this scheme, a diversity factor of 75 per cent has been used to size the station equipment, with each of the buildings served charged with its pro rata share of the cost of the station, plus the cost of the underground utility tunnel.

Scheme V - Steam Turbine Driven Centrifugal Compressors -
Large Central Station

This scheme, as does scheme IV, proposes the use of a single large water chilling station to serve the entire campus through chilled water distribution in underground utility tunnels as illustrated on Appendix Sheet No. 4. It proposes the use of steam as the prime energy source and includes the cost of new steam generating equipment to furnish steam for the turbine drives. The steam generating equipment cost is included in the cost data and charged against this scheme. This steam generating equipment would, of course, serve future heating requirements as the campus expands, but no attempt has been made to evaluate this fact into this report. Pro rata charges under this scheme are based on a diversity factor of 75 per cent in the same manner as described under scheme IV.

Conclusions and recommendations as listed in Section V, pages 12-14, of the Report are given below:

"SECTION V - CONCLUSIONS AND RECOMMENDATIONS"

"A comparison of the tabulation on Appendix Sheet No. 1 for Schemes I and II which are illustrated on Appendix Sheet 2 indicates a slight first cost advantage for Scheme II. This is offset by a considerable operating cost advantage for Scheme I with a resulting uniform annual cost advantage for Scheme I. If it is elected to provide individual water cooling plants for each building on the campus, the proposal as described in Scheme I would be the most advantageous to follow. The tabulations on Appendix Sheet 1 further show that the steam required for cooling under Scheme I is less than half that now required for heating. Since these loads peak at different seasons of the year, it is apparent that the present steam plant is more than adequate to serve the equipment requirements outlined under Scheme I.

"The tabulations on Appendix Sheet No. 1 for Scheme III, which is illustrated on Appendix Sheet No. 3, indicate a slightly higher initial cost than Scheme I, but lower operating and uniform annual costs than Scheme I. The uniform annual cost for Scheme III is the lowest for the five schemes studies and is therefore the apparent optimum approach to the air conditioning on the campus. However, a further study of the assembled data shows that where individual building loads are large, i.e. above 200 tons, an individual installation is the more economical, and where a group of small building loads may be served from a central point with relatively short runs of distribution piping, the small central station concept as outlined under Scheme III is the more economical. Therefore it is recommended that as air conditioning loads occur on the campus an analysis be made to determine whether to approach the problem from concept of Scheme I or Scheme III.

"A comparison of the data for Schemes IV and V, which are illustrated on Appendix Sheet No. 4, indicates that Scheme V is the most advantageous. Scheme V further shows the lowest operating cost of any of the five schemes studied, its high initial cost runs its uniform annual cost above that for Schemes I, II, and III. Under Schemes IV and V the actual first cost of the refrigeration machinery is low, but the cost of chilled water distribution which must be added to the cost studies apparently disallows their consideration.

"The underground tunnel distribution system illustrated for Schemes IV and V would allow for serving future buildings with both chilled water and steam. Since these buildings must eventually be served with steam for winter heating, some of the cost of the underground tunnel construction could be deleted for purposes of comparison with the other schemes. The costs for Scheme V further include the cost of steam generating equipment which could be used for future heating requirements as the campus expands. For these reasons, the costs for Schemes IV and V are possibly subject to re-evaluation downward.

"The conclusions herein, based on present costs of installed equipment and present utility costs, are subject to revision as these costs change. Thus it is recommended that conclusions drawn from the data in this report be weighed by any changes in the cost factors applied to the various calculations."

The group discussion which followed the presentation by Mr. Worley centered chiefly about the merits and aspects of Scheme III and Scheme V, with the conclusion that Scheme III appears to be more applicable to Texas Tech due to the lower initial outlay requirements and to the fact that this plan would allow additional units to be installed later as the need and justification arises. The very large initial outlay requirements of Scheme V, due to large units, long runs of distribution piping, new utility tunnels, pumping costs, etc., seem to price Scheme V out of the picture of immediate consideration.

It was pointed out that cost figures of the Report and Appendix do not include the equipment and controls for the distribution of cooling effect within buildings. Costs for equipment, distribution ducts or piping, and the necessary controls for adding cooling to an existing building may amount to between \$350 and \$500 per ton of cooling used in the building. New buildings are being constructed so that a minimum of additional cost will be required to distribute cooling effects to justified spaces within the building once the chilled water is brought to the building.

Mr. Worley stressed the point that his firm desires to make, at any time, a more detailed study, as a part of the existing contract it has with the College, of any particular area or areas of the Campus. He pointed out that they had concluded from their investigations that it seemed best to terminate their present work with the cost figures and conclusions contained in the Report and Appendix, and as particular areas are to receive new buildings they would like to conduct a thorough study of the particular area so as to make recommendations which would allow the College to determine the best long-range, campus-wide policy or scheme to work toward.

Those in attendance agreed to take a few days for the information which had been presented to be absorbed, and that possibly at the next meeting of the CPC they would be in position to request further study by the Consulting Engineers of the general area of New Library, Student Union Expansion, Administration, Bookstore, Infirmary, and Music Buildings, as well as the general area to be occupied by Chemical Engineering - Nuclear Reactor and Computer - Architecture Buildings.

It was agreed that the Consulting Engineers had done a thorough job of handling all aspects of the survey and report. The facts are very well presented in the Report and Appendix.

The meeting adjourned at 3:45 p.m.

Campus Planning Committee
April 28, 1959
Attachment No. 118
Item No. 420A

C -- O -- P -- Y

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

Office of College Engineer

April 16, 1959

Mr. M. L. Pennington
Chairman, Campus Planning Committee
Campus mail

Dear Mr. Pennington:

I feel that the thoughts set forth hereafter should be placed before our College planners at this time in order that those who will be doing the mechanical design for buildings affected may be properly advised, as their particular designs are worked out.

With the Library fairly certain to be located west of the student Union Building, and with the enlargement of the SUB likely to occur at approximately the same time as the Library construction, the time appears to be approaching when an evaluation should be made of the following items:

1. Construction of a lateral utility tunnel westward from the present north-south tunnel which runs just east of the Student Union Building. This tunnel would be the beginning of the south leg of the utility tunnel loop, and would be in position to provide utility service, in addition to forthcoming needs of SUB and Library, to buildings to be located to the west of the new Library, such as Plant Science and, later on, Classroom-Laboratory Buildings, plus any buildings located south and west of the new Library Building.

2. Both the Library and SUB are most likely to be air conditioned. Each building will require sizeable equipment for this purpose and the periods when cooling will be needed in each building will be approximately coincident. Since one plant of proper size to serve both buildings would be less expensive initially and would require less operational cost and attention than separate plants for each building, it appears that consideration should be given to the most desirable overall method of producing the cooling for the two buildings. If one small central plant were found to be the more desirable, would it be possible to share the costs for such a plant from SUB funds and Constitutional Building funds used for the Library?

3. A similar situation, other than source of funds for construction, would seem to be in the offing regarding the Chemical Engineering-Atomic Reactor Building and the Computer-Architecture Building in that Temperature control will be needed in each building on a year round basis. One plant serving both buildings would be more economical than to have a separate plant for each building.

It is my understanding that Zumwalt and Vinther will make such localized studies as the College may consider necessary for guidance toward solutions of matters of the nature mentioned in (2) and (3) above, at no cost to the College. Mr. James Worley of the Dallas Office, and Mr. Jack Roberts of the Lubbock Office have each indicated that they do not consider their obligations in the current contract to be completed, even though the report of their findings during the survey has been submitted.

Yours very truly,
/s/ Robert L. Mason
Robert L. Mason
College Engineer

CC: All members of CPC.
Mr. O. R. Downing.

Campus Planning Committee
April 28, 1959
Attachment No. 119
Item No. 420B

Texas Technological College
Lubbock, Texas

Office of the Vice President and Comptroller

April 23, 1959

A meeting with Dean Heather and all of the Heads of the Departments in the School of Business Administration was held in the Dean's office at 11:00 a.m., Thursday, April 23. The purpose of this meeting was to determine the most practical way to proceed with outlining and submitting an equipment list for the new Classroom-Office Building.

It was my recommendation that the following procedures be followed:

Individual Offices

1. An explanation was made of the possibility of installing individual desks in these offices by means of attaching one end of a single pedestal desk to the south wall. The desks, as planned, are to be 30" by 60" with the pedestal to have two small drawers and one large drawer on the right side; the desk to have formica top with walnut paneling on the pedestal only. This plan was acceptable to the group; in fact, some of the Department Heads seemed very enthusiastic over the idea.
2. Each office will be furnished with one swivel arm chair, probably Bank of England type, in walnut to match the desk, two side chairs and one letter size filing cabinet.
3. It was mentioned that some of the professors had individual typewriters which must be used by them because they did not have secretaries or student help to do their routine typing. It was recommended that in the case where typewriters were used by the individual professor, the Department Head would submit, with his departmental equipment listing, portable typewriter stands for these individual offices.
4. In case a professor had a filing cabinet in his present office, and the cabinet was in an operative condition, this piece of equipment would be moved with him to his new office assignment.

Laboratory Equipment

1. Each Department Head is to submit a list of all laboratory equipment needed to furnish his particular instructional department. It was suggested that their requests be modest, but complete enough to adequately equip each laboratory and be functional for their instructional needs.
2. It was requested that all equipment in the Administration Building laboratories that was in good condition and could be used will be moved to the new location. It was pointed out that in case some of the present equipment was obsolete and worn beyond economical repair, be discarded and the replacements be submitted on the new equipment lists.
3. It was requested that where possible, each department head get together and make all of the equipment as near uniform as possible. This will enable us to secure better prices by means of quantity purchases, such items as tables, chairs and etc.

Dean and Department Head Offices

1. The Dean and each Department Head is to submit a list of equipment for his own particular office, plus the central secretarial office for the Department Heads. It was requested that this equipment should be uniform and, again, modest enough to have a good functional office arrangement.
2. Equipment, except furniture, will be moved to the location; such items as typewriters, dictating equipment and etc.

Fourth Floor Tower

Dean Heather is to submit a list of equipment for this area.

General Classroom

1. Equipment for all general classrooms will be submitted by the Assistant Comptroller's Office.
2. Dean Heather requested that the new lecturns be increased in size to be approximately 8 to 10 inches wider.

It must be understood that all of the above proceedings were recommendatory, and to the CPC only, and the final approval and recommendations to the President and to the Board of Directors will be made by the CPC.

V. E. Thompson
Assistant Comptroller

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

MINUTES OF THE CAMPUS PLANNING COMMITTEE

Meeting No. 32

May 5, 1959

A meeting of the Campus Planning Committee was held at 8:30 a.m. in Room 120 of the Administration Building. Members present were Mr. E. J. Urbanovsky, Mr. Nolan E. Barrick, Colonel C. P. West and Chairman M. L. Pennington. In addition, Mr. V. E. Thompson was present.

423. Approval of Minutes

On motion by Mr. Barrick, seconded by Mr. Urbanovsky, the Minutes of Meetings Nos. 30 and 31 were approved.

424. Agricultural Plant Sciences Facilities

Dr. Young has presented his space study to Mr. Barrick and it contained a great deal of good information. Mr. Barrick's staff is working on the report at present.

425. Architects

In order to secure the best results possible, methods were discussed to make the local project architects aware of the competition that is being faced by them with Pitts, Mebane and Phelps. It was agreed that, perhaps, the best route would be through a newspaper article and the Chairman is to check with Mr. Adrian Vaughn.

426. Air Conditioning Survey

After further study, the CPC is of the opinion that Scheme No. 3, proposed by Zumwalt and Vinther, is the most practical to explore further. It was agreed that the firm would be requested to study the general area of the New Library, Student Union, Administration, Bookstore, Infirmary and Music Building, and the area to be occupied by Chemical Engineering and Nuclear Reactor and Computer - Architecture Buildings as outlined in Mr. Mason's report. (Attachment No. 117, page 289)

427. Area South of the Administration Building

Mr. Urbanovsky reported that the study of the area is still underway.

428. Boiler and Housing

The bids for the Housing are due to be opened at 2 p.m. on May 7, 1959.

429. Chemical Engineering and Nuclear Reactor

Mr. Barrick reported that the project architects stated that they could have rough schematics for study today but preferred to present more fully developed plans next week.

The construction of a scale-model is well along. It was agreed that the usual type of written justification for space in the Chemical Engineering part of the project would be needed.

430. Classroom and Office Building

- A. Mr. Barrick reported that the job is behind schedule and he is very doubtful that it will be ready for occupancy by September, in keeping with the completion date in the contract.
- B. The break in the slab has not been repaired but it will not delay progress. The contractor is scheduled to start lifting the tower slab today or tomorrow.
- C. The CPC voted to record the fact that the large classroom on the first floor, 24' x 56', which is to be converted into a window display room and small classroom for the Department of Marketing, was originally in the other half of the building.
- D. By Item No. 303D, page 203, the CPC recommended that no interview rooms be established in the Office of the Dean. The President approved the action of the CPC on March 9, 1959, (Item No. 318, page 218). The interview rooms have been re-established in the plans. The CPC requests a clarification from the President in order that its records may be clear.
- E. The CPC voted to recommend to the President that the request for mail boxes in the project for the School of Business Administration be disallowed due to the fact that the mail is distributed, at present, in buildings other than the Administration Building, extra expense would be involved in the construction and operational costs, a precedent would be set, and it might not be feasible to provide the mail facilities in other projects. No provision for mail boxes is made for the English Department in the project. It is reported that there are approximately 250 vacant mail boxes at the sub post office.

431. Computer - Architecture

Mr. Barrick reported that he had turned the schematics to the project architects and they are doing a thorough study of the structural and mechanical part at present. Preliminary plans are due on May 15, 1959.

The scale-model is well along toward completion.

432. Equipment

Textile Engineering -- Mr. Thompson reported that the requests for the Textile Engineering equipment are out for bids.

433. Library

Mr. Pitts of Pitts, Mebane and Phelps, is still making excellent progress on the accumulation of information for the library. He has been in contact with Mr. Edmon Low, the consultant, on several occasions by phone, as well as keeping in touch with the College Officials.

434. Mechanical Engineering Shops

Mr. Barrick reported that he has a conference with Mr. Powers and the project architects on Thursday morning of this week, with the view of reducing the amount of equipment for forced ventilation and heating in the building. The architects are preparing studies on the revision of the cost estimates at the present time. The scale-model is under construction.

435. Physical Plant Facilities

The question of the feasibility of the site west of Men's Dormitories 5 and 6 is still under study.

436. Student Union

Mr. Barrick reported that he and his staff have been working with Mr. Longley to pull the Student Union into focus and he thinks that enough information will be ready within one week to turn to the architects for study.

437. Textile Engineering

Progress is continuing in a most satisfactory manner.

438. Women's Gymnasium

Mr. Barrick reported that the studies are continuing on the project.

On motion by Mr. Barrick, seconded by Colonel West, the meeting adjourned at 10:05 a.m.

The next regular meeting of the Campus Planning Committee is scheduled for May 12, 1959, at 8:30 a.m. in Room 120 of the Administration Building.

M. L. Pennington
Chairman

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

MINUTES OF THE CAMPUS PLANNING COMMITTEE

Meeting No. 33

May 12, 1959

A meeting of the Campus Planning Committee was held on May 12, 1959, at 8:45 a.m. in Room 120, Administration Building. Members present were Mr. E. J. Urbanovsky, Mr. Nolan E. Barrick and Chairman M. L. Pennington. Colonel West was representing the College at an out-of-town meeting.

439. Approval of Minutes

On motion by Mr. Urbanovsky, seconded by Mr. Barrick, the Minutes of Meeting No. 32 were approved.

440. Architects

The Chairman reported that Mr. Vaughn has not had time, as yet, to produce the news article on Pitts, Mebane and Phelps but that he will get it out as soon as the Stadium Ground Breaking Ceremony is over.

441. Agricultural Plant Sciences Facilities

Mr. Urbanovsky and Mr. Barrick reported that the studies show more square footage than the budgeted amount will supply. Efforts are continuing to reduce the square footage to come within the budget.

Two sets of schematics were studied in detail. It was agreed that the building must be designed for future expansion. The rearrangement of the proposed facilities is being considered.

The studies are to continue.

442. Air Conditioning Survey

In keeping with Item 426, page 292, the Chairman reported that Mr. Mason will convey the Campus Planning Committee's request for detail studies in the two areas to Zumwalt and Vinther.

443. Area South of the Administration Building

The orientation of the proposed Gymnasium for Women was discussed in detail and the location of other buildings and such problems as streets and parking lots were discussed in general.

The study is to continue.

444. Boiler and Housing

A. Bids were opened on the housing at 2 p.m. on May 7, 1959, and the contract awarded to the low bidder, the James E. Walker Construction Company of Lubbock, in the amount of \$37,270. A copy of the docket item covering the award is attached to and made a part of the Minutes. (Attachment No. 120, page 299)

B. For quite a few past biennia, requests have been made to the Legislature, without success, for funds to brick the walls of the old powerhouse.

444. Boiler and Housing (continued)

Last August the representatives of the Commission on Higher Education, Legislative Budget Board and the Executive Budget Office, were on the campus to review Texas Tech's Legislative submission. They made the statement that the bricking of the walls should be considered new and financed from the Constitutional Building Amendment Funds. Although the College representatives did not agree, it was recommended by the Austin delegation that the request be denied. There is no provision for funds to brick the walls of the existing powerhouse in the Appropriation Bill before the Legislature.

Since the low bid for the new boiler - housing was almost \$20,000 below the budgeted amount, it was agreed that an investigation would be made of the cost to sheathe the walls of the existing powerhouse with the same material that is to be used on the new house.

445. Chemical Engineering and Nuclear Reactor

- A. The scale model is not finished enough and is to be redone.
- B. Mr. Barrick presented the architects' preliminary perspectives on the project and they were discussed at length. It was agreed that the perspectives are very good for the first effort. Modifications were discussed and questions raised concerning the outside appearance, with particular reference to the reactor bay.
- C. Mr. Barrick reported that the representative from Convair-Fort Worth is due Thursday and will go over the schematics. For that reason, the schematics were not studied by the CPC.

446. Classroom and Office Building

Mr. Barrick reported that the floor slabs have been raised in the tower sections and that the contractor is still behind schedule.

447. Computer - Architecture

- A. The scale model is not finished enough and is to be redone.
- B. Mr. Barrick reported that the project architects have said that they would have the preliminary cost estimates, basic structural scheme, suggestions on types of mechanical equipment and other needed information by next Monday.
- C. Mr. Barrick is to call the project architects' attention to Zumwalt and Vinther's study of the air conditioning for the area in order that the project architects may be cognizant of work being done.

448. Library

Mr. Pitts, project architect, is still accumulating information for the project.

449. Mechanical Engineering Shops

- A. The scale model is not finished enough and is to be redone.
- B. Mr. Barrick reported that he met last Friday with Mr. L. J. Powers and Mr. Atkinson, project architect, and they went through the project in as much detail as possible. Mr. Atkinson is of the opinion that an attempt is being made to construct more building than the budget will bear. Mr. Powers has tried very hard to reduce the scope of the mechanical equipment in order to lower the cost to come within the budget. Mr. Atkinson is to make a firm cost estimate on the revised plans and to submit it by next Monday.

450. Other Items

- A. Use of sewage effluent -- The Chairman reported that on May 8, 1959, President Jones told him that he thought it better to let the staff of the School of Agriculture develop the study on the proposed use of sewage effluent on the College Farm and then bring the study in the purview of the CPC for recommendation.
- B. Electrical Supply for Agricultural Engineering Annex -- The Chairman reported that Dr. Jones has approved the installation of electrical facilities at an estimated cost of \$11,000 to provide power to operate the ginning equipment recently *donated* *loaned* to the College.
- C. Provision for Vending Machines in New Buildings -- It was agreed that appropriate facilities are needed for vending machines in each new project and that the item is to be added to the punch list for architects.

451. Physical Plant Facilities

- A. A revised schematic layout on the proposed new site was studied and discussed. It was agreed that future expansion of the facilities at the proposed site would be advantageous as would the operation of the Maintenance Department during construction.
- B. The feasibility and economy of operation were discussed and Mr. Urbanovsky is to prepare a report showing the distances to all buildings which must be served.
- C. It was agreed that the Chairman is to check with the President on the proposed Civic Center in the area as it will affect the use of the proposed site.

452. Relocation of Farm Facilities

It was agreed that information is needed as soon as possible on the use of the Stock Judging Pavilion as it will affect the Speech Department.

453. Student Union

Mr. Barrick reported that several sessions have been held with Mr. Longley but that very little planning has been done due to the amount of time involved with other projects.

454. Textile Engineering

Rapid progress is still being made by the contractor.

455. Women's Gymnasium

- A. Mr. Barrick presented three schematics prepared by the project architects. Various items in the schematics were discussed, along with the need for outside facilities. Doubt was expressed that sufficient locker facilities are being provided. Plans should provide for future expansion of the locker room.

It was agreed that the money should be used to provide as much teaching space as possible. The over-all plan must be flexible and allow for future expansion.

455. Women's Gymnasium (continued)

It was agreed that ample outside play fields must be provided to make the project workable and the fields should be available on a permanent basis. Several different orientations of the project were discussed.

It was agreed that Mr. Urbanovsky and Mr. Barrick are to meet with Dr. Dabney as soon as possible, in order to secure her ideas on the project before she leaves for the summer on June 1, 1959.

The meeting adjourned at 11:35 a.m.

Due to the fact that Mr. Barrick will be in Stillwater, Oklahoma, next Tuesday, May 19, 1959, the next meeting of the Campus Planning Committee will be held Thursday, May 21, 1959, in Room 120 of the Administration Building.

M. L. Pennington
Chairman

Campus Planning Committee
 May 12, 1959
 Attachment No. 120
 Item 444A

TEXAS TECHNOLOGICAL COLLEGE
 Lubbock, Texas

Memorandum

Dr. E. N. Jones

May 8, 1959

DOCKET ITEM

In keeping with the action of the Board of Directors on April 11, 1959 (Item No. 1420), bids on the housing for the new boiler were opened in Room 260 of the Administration Building and publicly read aloud at 2 p.m. on May 7, 1959, in the presence of approximately thirty interested people. A copy of the bid tabulation is attached.

James E. Walker and Company, the low bidder, has done work for the College in the past and is completely reliable.

It was recommended to the Building Committee of the Board of Directors, by telephone on May 7, 1959, that the bid be awarded to James E. Walker and Company for the low bid of \$37,270. The voting was as follows:

Mr. J. Evetts Haley, Chairman "Aye"

Mr. Harold Hinn "Aye"

Mr. James L. Lindsey "Aye"

M. L. Pennington
 Vice President and
 Comptroller

TABULATION SHEET
 ADDITIONS AND ALTERATIONS TO HEATING PLANT
 TEXAS TECHNOLOGICAL COLLEGE

BIDDER	BASE BID	BOND
1. W. B. Abbott	\$41,966	OK
2. H. R. Bundock	43,527	OK
3. Hunter Construction Co.		
4. Claude Martin & Sons		
5. Martyn Bros.	44,617	OK
6. Cecil Pharr	43,500	OK
7. Chas. Ramsey & Co.	47,640	OK
8. Ray - Lee Construction		
9. James E. Walker & Co.	37,270	OK

DEWITT & MAEKER
 ARCHITECTS-ENGINEERS

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

MINUTES OF THE CAMPUS PLANNING COMMITTEE

Meeting No. 34

May 21, 1959

A meeting of the Campus Planning Committee was held on May 21, 1959 at 8:45 a.m. in Room 120, Administration Building. Members present were Mr. E. J. Urbanovsky, Mr. Nolan E. Barrick, Colonel C. P. West and Chairman M. L. Pennington. In addition, Mr. V. E. Thompson was present.

456. Approval of Minutes

On motion by Mr. Urbanovsky, seconded by Mr. Barrick, the Minutes of Meeting No. 33, with the following corrections, were approved:

Item 450B, Page 297

The caption is changed to read: "Agricultural Engineering Annex," and the word, "donated" changed to read "loaned."

457. Agricultural Plant Sciences Facilities

- A. A revised plan has been made and forwarded to Dr. Young for study by his Committee. The revised plan includes the rearrangement of facilities and study of the reduction of square footage. A report on the Committee's action is to be made to the CPC.
- B. As part of the information needed for the project, the CPC requests that the School of Agriculture prepare a statement of its present and projected role and scope, with the request that the information be available by May 27, 1959.

458. Air Conditioning Survey

- A. The Chairman reported that Mr. Mason has conveyed the Campus Planning Committee's request for detailed studies in the two areas to Zumwalt and Vinther.
- B. Mr. Urbanovsky reported that he had received a request to include the Meats Lab in the study of air conditioning in the area with the new Library, Student Union, Administration Building, Bookstore, Infirmary and Music Building. The question was discussed at length with the conclusion that the refrigeration needed for the Meats Lab will not be part of the air conditioning system, if there is one. The last report received on the relocation of Farm Facilities indicated that the Meats Lab should be the center of the relocated area across the freeway.

459. Area South of the Administration Building

Eight separate studies were presented in connection with the location of the Women's Gym. The study is still under consideration.

460. Boiler and Housing

- A. The boiler manufacturer and the contractor have had a conference on the housing to develop coordinated procedures.
- B. The cost to sheathe the walls of the existing powerhouse with the same material as that to be used on the new powerhouse, is in the process of compilation.

461. Chemical Engineering and Nuclear Reactor

- A. The Chairman read aloud a letter dated May 11, 1959, from Dean Bradford to Mr. Barrick and another dated April 29, 1959, from Mr. L. W. Perry from Convair-Fort Worth to Dean Bradford. The letters are attached to and made a part of the Minutes. (Attachments Nos. 121, 122, pages 305, 306)

The interpretation of the CPC is that the letters were written in order to prevent the stoppage of the planning at the end of the preliminary stage, pending the final grant of the reactor. (Item No. 363, page 259; Item No. 389, page 276)

The CPC agreed that it would be necessary to study the contract with Convair-Fort Worth and expressed disappointment that the necessity and expense of securing the reactor construction permit did not seem to be part of the original plans for the project and also that an additional fee is requested to secure the permit. The additional fee will reduce the amount of funds available for the construction of the project and thereby make it more difficult to provide the facilities which are thought to be too small anyway.

Copies of the contract will be sent to the CPC members for study and a recommendation made at the next meeting.

From the standpoint of the project, there would be some advantages in completing the entire plans as soon as possible.

- B. The scale model is still under construction and is due to be completed by May 25, 1959.
- C. The information on the perspectives has been passed to the architects and they are studying it in connection with the information resulting from the meeting with Convair representatives last week.

Mr. Barrick reported that the Convair representative seemed to think that the progress on the plans was very good and he liked the perspectives.

The representative had some suggestions on the reduction of the size and height of the mass for the reactor bay, and the suggestions are being included in the study.

- D. Mr. Barrick reported that the original layout for the Chemical Engineering part failed to provide adequate stairs to fulfill the fire code. The architects pointed out the omission and it is recommended that the 1,000 square feet which were eliminated from the Nuclear Reactor part be included in the Chemical Engineering part. Most of the square footage will be needed for the stairs.

462. Computer - Architecture

- A. The scale model is under construction and is scheduled to be completed on May 25, 1959.
- B. Mr. Barrick reported that the mechanical equipment designed and presented by the project architects seems to be very good. There have been discussions concerning structural types and the architects estimate that the proposed project as it now stands will cost \$642,000 to \$688,000. Steps are to be taken to reduce the scope to come within the budgeted amount.
- C. Full preliminary plans and specifications are to be ready by May 28, 1959.

463. Equipment

- A. Mr. Thompson gave an oral report to the CPC on the equipment requests to date from the Business Administration Departments. As the report is not complete, the CPC voted to include the information available in the Minutes for record purposes. (Attachment No. 123, page 307)

The equipment for the English Department is included in the report.

- B. Mr. Thompson reported that all of the Textile Engineering Building equipment has been ordered except that for the general classrooms and a prompt decision must be made on the type of armchairs to purchase.

Mr. Thompson and the Chairman are to select the chairs.

464. Library

Mr. Barrick reported that he and Mr. Janeway met Mr. Pitts in Stillwater, and had a very profitable visit with Mr. Low of Oklahoma State University. The trip was beneficial in that it helped to solidify the thinking on the proposed library. Unfortunately, Mr. Haley was unable to make the trip.

465. Mechanical Engineering Shops

Mr. Barrick reported that the revised estimate for the project is \$300,000 excluding the architect's fee and the cost for moving the existing equipment. Mr. Barrick and Mr. Powers are to continue their efforts to bring the project within the budgeted amount.

466. Other Business

- A. Proprietary Keyway -- Mr. Thompson reported that he discussed with Mr. Henson, Business Manager of West Texas State College, the Best and Schlage systems. Mr. Henson is of the opinion that Schlage produces the better lock and has better prices on subsequent orders. He said that they have both systems but are replacing the Best locks with Schlage. Best charged them what seemed to him to be an unreasonable amount for locks after the first order. He reported also that a store in Amarillo has been able to duplicate the Best keys. To his knowledge, the Schlage keys have yet to be duplicated, are a little more expensive to obtain but less expensive to maintain. They now specify Schlage locks on all new buildings without exceptions.

The information from Mr. Henson is to be treated as confidential as he volunteered the information in order to assist Texas Tech.

A. & M. does not have a proprietary keyway but is considering the adoption of one for new construction. They have only Sargent locks which they procure by asking for bids from five or six Sargent dealers and awarding the contract to the low bidder.

There is to be a meeting this afternoon between Mr. Thompson, Colonel West and members of his staff and the Schlage representative to obtain all possible information on the Schlage lock. The group is to make a recommendation to the CPC on the type of proprietary keyway for Texas Tech. It will be necessary to make a recommendation in the near future as the locks must be available to maintain building security on the new projects in the not too distant future.

466. Other Business (continued)

- Unaff'd
balance*
- B. Electrical Service to the Agricultural Engineering Annex -- The Chairman reported that President Jones has authorized the installation of electrical service to the Agricultural Engineering Annex in order to provide power to the cotton ginning equipment.

The President requested a recommendation on procedure.

The CPC agrees with Mr. Mason that it would be advisable to employ an engineering firm to draw plans and specifications and to oversee the installation. It is the recommendation that Zumwalt and Vinther be employed at a fee of 6% and that Mr. Mason develop the contractual procedures.

- unaff'd
balance*
- C. Air Conditioning Registrar's, Placement and Ex-Students Offices The Chairman reported that President Jones wishes to air condition the three offices, subject to Board approval, and asked for recommendation on procedure.

*unaff'd
balance*

It is the recommendation of the CPC that Zumwalt and Vinther be employed to design the installation, prepare the necessary plans and specifications and supervise the work, at a fee of 6% and that Mr. Mason work out the contractual procedures.

It is felt that the 6% fee will be in line due to the fact that both the electrical and air conditioning installations will be remodeling.

- jd.
5/25/59
Const. Bldg. 128*
- D. Water Line to Farm Residences -- Mr. Thompson reported that an invoice from the City in the amount of \$5,207.24 had been received today. Payment is to be made promptly. (Item 201C, page 128)
- 5/25/59
Const. Bldg. 128
5/26/59*

*5/25/59
Const. Bldg.
128*

467. Physical Plant Facilities

*Queen N. B.
Un. 26/59
5/26/59*

The proposed site west of the new Women's Dormitories is still under consideration and Mr. Urbanovsky is in the process of charting the distances from the proposed site to the various buildings. He reported that the Grounds Maintenance people find nothing wrong with the proposed site except the distances.

468. Relocation of Farm Facilities

*Figur. 1.t
Dr. Duran
5/26/59*

The Chairman is to check with the Dean to determine when a recommendation may be expected from the Committee, now that Dr. Durham, the new Head of the Department of Animal Husbandry, is here.

469. Stadium

Mr. Gosdin entered the meeting.

The President had requested Mr. Urbanovsky and his staff to prepare the plans and specifications for resodding the new playing field in connection with the Stadium Addition. The proposed plan and estimated costs were discussed with the CPC as set out in the report which is attached to and made a part of the Minutes. (Attachment No. 124, page 308)

The proposed turf is Tex-turf 10 (T-47) and is the best known turf for stadia. It gets green a bit earlier, stays green a bit longer, does not seed, is easily mowed, is drouth resistant, does not mat, could assist in eliminating injuries. It is a type of Bermuda grass which is economical as it has exceptionally long roots and thereby requires less water. Rice and A. & M. both use the grass on their playing fields.

469. Stadium (continued)

It is recommended that a decision be made on who is to make the plans, prepare the soil, sod the playing field and supervise the project. Also, it is recommended that a decision be made on who will maintain the field after it has been developed. The proposed plans and specifications should be checked with Dr. J. William Davis.

Mr. Gosdin left the meeting.

470. Student Union

Mr. Barrick reported that he and his staff and Mr. Longley have worked out a series of fourteen (14) general areas which seem to serve the needed purpose. Examples of the areas are the Ballroom, new dining facilities, recreational facilities, general meeting rooms, Faculty Club and Ex-Students Offices.

The project architect has been present at one meeting. A meeting is scheduled tomorrow with Mr. Longley to develop the schematic plans into a more definite form.

471. Women's Gym

Mr. Urbanovsky and Mr. Barrick reported that they had a very nice meeting with Dr. Dabney. They went through the building plan with her and she gave them some additional ideas which have been passed to the project architects and are included in the revised schematics.

They reported that Dr. Dabney thinks that the site will meet the needs for outside activities and they are to have another meeting with her before she leaves for the summer. They felt that the requirements are in pretty good shape.

The possibility of adding a basement for archery during inclement weather is under consideration.

Eleven separate studies of the project have been made. The project architects estimate that the proposed building, as it now stands, will cost \$230,000 and the proposed basement \$20,000. The amounts do not include architectural fees nor extension of utilities. The suggestion has been made that the basement be handled as an alternate. The outside facilities are not included in the estimated cost. The project architects report that they hope to have the plans ready by May 23, 1959.

It was agreed that the next meeting of the CPC will be held Monday, May 25, 1959, at 8:30 a.m. to consider the preliminary plans and specifications for the Women's Gym, and the Student Union. The meeting on the Union is to develop, among other things, sufficient information to apply to the HHFA for financing.

Other meetings on individual projects will be held daily during next week, the schedule for which will be developed as the information becomes available.

It was agreed that the meeting on Thursday, May 28, 1959, at 8:30 a.m., will be used to "wrap up" the projects in order to report to the Building Committee.

The meeting adjourned at 12:25 p.m.

*Check with
E.N.J.
F.C.S.*

Campus Planning Committee
May 21, 1959
Attachment No. 121
Item No. 461A

TEXAS TECHNOLOGICAL COLLEGE
Division of Engineering
Lubbock, Texas

Office of the Dean

May 11, 1959

Mr. Nolan E. Barrick, Supervising Architect
Texas Technological College
Lubbock, Texas

Dear Mr. Barrick:

Attached is a letter from Mr. Lou Perry, Assistant Project Engineer of the Nuclear Laboratories of Convair-Fort Worth, outlining the work which has been accomplished under the Texas Tech-Convair contract for the design of a training reactor.

We have been particularly fortunate in obtaining considerable additional data over and above that called for in the contract. In fact, Convair went ahead and has furnished at no extra cost final detail design of the reactor.

One item which Mr. Perry emphasizes in his letter deals with the need for obtaining quick action on the A.E.C. construction approval permit. There are normally three permits which must be obtained from the Reactor Safeguards Committee of the A.E.C.: (1) Site approval, (2) Reactor design approval, and (3) Reactor construction permit. We have already received our site approval and the reactor design approval is now in the asking. The construction permit cannot be requested until the final design of the building housing the reactor is completed.

Under normal operating conditions, we should have now on the campus technically trained personnel that could provide the necessary talent and know-how to coordinate and complete the work on the nuclear reactor and the Reactor Building. Unfortunately, we do not have these people and it is rather important that we work toward obtaining the construction permit as soon as possible.

Where a new type reactor is involved the detailed hazards report necessary for the construction permit would cost approximately \$10,000. Since Convair has already performed the detailed design of the reactor, they are in a position to bring together the building design and the reactor characteristics into a final hazards report at a minimal cost (which they have estimated at \$3500.).

Since it is highly desirable that a construction permit be obtained as soon as possible, and since we do not have the necessary talent on the campus to perform this task, I recommend that this project and report be made a part of the building costs and that Convair be instructed to proceed as soon as possible, since it takes from 30 to 90 days for A.E.C. processing of a report.

Very truly yours,

/s/ John R. Bradford
John R. Bradford
Dean of Engineering

B:J(g)

Campus Planning Committee
May 21, 1959
Attachment No. 122
Item No. 461A

LWP:lc/Gen.FW#6-2177

April 29, 1959.

Texas Technological College
Lubbock, Texas

Attention: Dr. John Bradford

Subject: Training Reactor Design for Texas Tech

Dear Brad:

Although Convair has kept in continual contact with you during our contract to design a training reactor for Texas Tech, I would like to take this opportunity to summarize what has been done, what will be done before the contract terminates, and some suggestions on future action to ensure final AEC approval for the building and reactor.

As you know, our original contract with Tech covered the preliminary design of the training reactor and the consultation with the building architect-engineers to see that the building design would be compatible, both from a safety and operational view, with the inclusion of a nuclear laboratory and a nuclear reactor within the building.

The preliminary design of the reactor was completed during February and subsequent revisions of the reactor drawings to meet your training needs have also been completed. Also, preliminary approval was obtained from the AEC on Tech reactor plans. Since the selection of an architect-engineer by Tech, we have been working with your office and the architect's to integrate the laboratory and the reactor into the building. This, of course, will continue until the building design has been completed and is out for bid.

At the time we finished the preliminary design, Convair indicated that sufficient funds remained in the contract to complete most of the detail design of the reactor. Although the accomplishment of the detail design was beyond the scope of the original contract, Convair felt that it could extend its scope of effort to include this phase of the reactor design at no additional cost to Tech. Accordingly, the contract was changed by mutual consent to include this. The detail design is now nearing completion and the final drawings and specifications will be submitted to Tech within the next two weeks. Accordingly, our portion of the job only remains to consult with the architect-engineer on the building design.

With the building plans moving as rapidly as they are at Tech, I think it necessary to point out the advisability in accomplishing a detail hazard report on the building and the reactor in order that formal AEC approval may be obtained before construction of the building begins. Obtaining construction permits before the reactor building is built is standard practice outlined by the AEC on such matters. If this is desired by Tech, Convair for a small additional sum (about \$3500) can complete the detail hazards report and obtain approval from the AEC before construction of the building would begin. The cost quoted is quite low and is due to our familiarity with the project and comparable other hazards work accomplished for the AEC.

LWP:lc/Gen.FW#6-2177

-2-

The cost of accomplishing this detail hazard report could not have been incorporated in Convair's original contract with Texas Tech since the scope of the work considered at that time was of a preliminary nature. The detail hazard report can only be written after the detail design of the building and reactor have been completed. However, because of the speed by which the preliminary design and the detail design of the reactor, and now the design of the building is progressing, it is now possible to proceed to the next step in the dealings with the AEC and obtain their formal approval for your reactor facility.

Let me point out in closing that Convair has pursued this contract with extreme interest to ensure that Texas Tech obtains the best nuclear training facility possible at a minimum cost. This, I think has been exemplified by accomplishing the detail reactor design under our original preliminary contract at no additional cost to Tech. We are looking forward to working with you on the completion of your reactor facility plans.

Very truly yours,

C O N V A I R
A DIVISION OF GENERAL DYNAMICS CORPORATION
(Fort Worth)

L. W. Perry
Asst. Project Engineer
Special Nuclear Projects

Campus Planning Committee
May 21, 1959
Attachment No. 123
Item No. 463A

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

May 21, 1959

SUMMARY OF A PARTIAL LIST OF EQUIPMENT FOR THE
CLASSROOM-OFFICE BUILDING

(These tabulations have been submitted by the
Department Head of each Department)

Department of Accounting	\$ 7,546.80
Department of Economics and Finance	1,722.20
Visual Aids for the Departments of Economics, Finance and Management	1,860.00
Department of Marketing	29,171.50
Department of Business Education and Secretarial Administration	5,070.25
Office Suite for Department Heads	4,282.00
Subtotal-----	<u>\$49,652.75</u>
General Faculty Offices	16,800.00
General Classroom Equipment	6,500.00
Total-----	<u><u>\$72,952.75</u></u>

The Department of Marketing has requested shelving and cabinets for the display laboratory for which an estimate of costs has not been completed. Also, a complete display window with all the necessary lighting has not been estimated. These items are in process of being designed and the costs will be made just as soon as the plans have developed to make such an estimate.

The Office of the Dean of the School of Business Administration has not submitted its request for equipment. Requests for equipping the Reading Room and the Seminar Room, to be used by the School of Business Administration, have not been submitted and are not included in the above total estimate.

Campus Planning Committee
May 21, 1959
Attachment No. 124
Item 469

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

COST ESTIMATES FOR SEEDBED PREPARATION,
TURFGRASS ESTABLISHMENT AND SPRINKLER SYSTEM
FOR JONES STADIUM

Scope: This will include finish grading, sprinkler system installation, the addition of soil conditioning materials, and the establishment of Tex-turf 10 Bermudagrass on the playing field.

Soil Preparation:

1. **Soil sterilization -**
2400 cu. yds. of topsoil shall be stored separately (8" layer) in a 3 ft. depth. This soil shall be sterilized using Vapam at rate of 1 gallon per 400 square feet of surface (approximately 72,000 sq. ft.). Approximately 180 gallons required. This process is necessary to kill weeds, common Bermuda grass, etc., in surface layer.
2. **Addition of soil conditioners -**
 - a. **Sand** to the 2400 cu. yds. of sterilized soil, 1200 cu. yds. of sharp builders sand shall be added. Mixing will be done by turning repeatedly with maintainer until thoroughly mixed. This mixture to be distributed evenly over 24 inches of topsoil to be in replaced by contractor.
 - b. **Peat -**
A 1 $\frac{1}{2}$ inch layer of Hypnum (cultivated) peat will be evenly distributed over surface and incorporated into the surface 4" to 6" with a rototilling machine. Approximately 300 cu. yds. required.
 - c. **Fertilizer -**
A 10-5-5 fertilizer shall be incorporated into the surface soil at rate of 30 lbs. of fertilizer per 1000 sq. ft., 1 $\frac{1}{2}$ tons required.

Sprinkler System:

An automatic rubber capped rotary pop-up sprinkler system to be installed according to attached plan just prior to finish grading of field.

Planting of Turfgrass:

Tex-turf 10 (available from college nursery) shall be planted into field by the following method:

Live sprigs shall be evenly distributed over the area and immediately rototilled into the prepared seedbed. Area will then be leveled and top dressed with $\frac{1}{2}$ " to 1" of prepared sterilized soil (as described above) to secure a fine finish. The area shall be rolled and watered.

Maintenance Until Established:

The area shall be watered at very frequent intervals and fertilized each three or four weeks throughout the summer. Ammonium nitrate at the rate of 10 lbs. per 1000 shall be used. 900 lbs. - 3 applications.

COST ESTIMATES

Topsoil to be hauled by contractor

Vapam	180 gal.	@ \$ 3.25	\$ 585.00
Sharp sand	1200 cu. yd.	@ 4.00	4,800.00
Peat	300 cu. yd.	@ 15.00	4,500.00
Fertilizer			
	1½ Ton (10-5-5)	@ 80.00	120.00
	1½ Ton Ammonium Nitrate	@ 80.00	120.00
Sprinkler system (materials and labor)			4,000.00

Labor: To include -

mixing sand, peat and fertilizer with soil	
planting Tex-turf '10 Bermudagrass	
Top dressing and rolling	
maintenance until established	1,500.00

Total \$15,625.00

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

MINUTES OF THE CAMPUS PLANNING COMMITTEE

Meeting No. 35 May 25, 1959

A Special Meeting of the Campus Planning Committee was held on May 25, 1959, at 8:30 a.m. in Room 120, Administration Building. Members present were Mr. E. J. Urbanovsky, Mr. Nolan E. Barrick, Colonel C. P. West, and Chairman M. L. Pennington. In addition, Mr. V. E. Thompson was present.

472. Student Union

Mr. Barrick reported that the meeting scheduled with Mr. Longley to develop the schematic plans into a more definite form failed to materialize and the meeting has been rescheduled.

473. Women's Gym

Various layouts and the elevations from the architect were studied and discussed in detail. Mr. Barrick reported that virtually the final session had been held with Dr. Dabney. It is doubtful that the basement can be included in the cost and it is recommended that it be taken as an alternate. Dr. Dabney has requested a partition to divide the classroom in order that both sides can be used for different purposes at the same time. She seemed to be pleased with the plans and Mr. Barrick reported that he, too, is well pleased with the plans. The plans are very orderly and expandable. It is proposed to use the same basic material as that in the Men's Gymnasium. The following actions were taken:

1. Floor Plan -- The CPC accepted the floor plans, subject to refinements which will be handled during the preparation of the final plans and specifications and the final adaptation to the site.
2. Site -- The CPC, by majority vote, voted to recommend the closing of Akron Street in order to provide an adequate site by allowing sufficient space for the Gym and outside play fields. The recommendation was made after much discussion and many studies of layouts.
3. Elevations -- The elevations prepared by the project architect were discussed and it was agreed to return them for additional studies and refinements.
4. Outside Areas -- It was again agreed that it would be necessary to provide outside play areas on a permanent basis. The only fixed outside facilities seem to be the six (6) tennis courts which can be used for other sports also. The other outside sports can be handled on a flexible basis, with the possible exception of archery.

It was agreed that the next meeting would be held at 8:30 a.m. on Tuesday, May 26, 1959, in Room 120 of the Administration Building. Items to be discussed are the site for the Women's Gymnasium, the Nuclear Reactor Building and the Computer - Architecture Building.

The meeting adjourned at 10:45 a.m.

M. L. Pennington
Chairman

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

MINUTES OF THE CAMPUS PLANNING COMMITTEE

Meeting No. 36

May 26, 1959

A Special Meeting of the Campus Planning Committee was held on May 26, 1959, at 8:30 a.m. in Room 120, Administration Building. Members present were Mr. E. J. Urbanovsky, Mr. Nolan E. Barrick, Colonel C. P. West, and Chairman M. L. Pennington.

474. Chemical Engineering and Nuclear Reactor

Revised layouts were studied with the expression that progress has been made in the refinement. Mr. Barrick explained that it was necessary to provide an extra stair for fire safety.

- A. Elevations -- The CPC is of the impression that progress has been made in the development of elevation studies, but the project architects are preparing other studies which are to be submitted.
- B. Floor Plan -- The CPC voted to accept the floor plan with minor refinements which will be developed in the preparation of the final plans and specifications.
- C. Site -- The site has been set.
- D. Budget -- The architects are in the process of revising the cost estimates at this time. Although they originally thought that the proposed project could come within the budgeted amount, they are a bit concerned over the amount at present.

475. Computer - Architecture

The Campus Planning Committee studied the various revisions of the elevation and floor plan drawings.

- A. Elevations -- The CPC felt that the study had been improved but requests that additional work be done prior to acceptance.
- B. Floor Plan -- The CPC accepted the floor plan, subject to the minor refinements which will be developed in the preparation of the final plans and specifications.
- C. Budget -- Mr. Barrick reported that the project architects think that the proposed project can be constructed within the budgeted amount.

476. Women's Gym

Various studies of the orientation of the proposed building, the location and the extent of outside playing areas, including tennis courts, and various studies of the area south of the Administration Building, as affected by the Women's Gym, were studied in detail and at much length.

It was agreed that Mr. Urbanovsky and Mr. Barrick are to make more sketches and studies and to present them to the CPC.

It was agreed that the next meeting of the Campus Planning Committee will be held at 8:30 a.m. on Wednesday, May 27, 1959, in Room 120, Administration Building. A final "wrap-up" for the Board is to be determined Thursday, May 28, 1959.

The meeting adjourned at 12 noon.

M. L. Pennington
Chairman

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

MINUTES OF THE CAMPUS PLANNING COMMITTEE

Meeting No. 37 May 27, 1959

A Special Meeting of the Campus Planning Committee was held on May 27, 1959, at 8:30 a.m. in Room 120, Administration Building. Members present were Mr. E. J. Urbanovsky, Mr. Nolan E. Barrick, Colonel C. P. West, and Chairman M. L. Pennington.

477. Operating Procedures

The entire meeting was devoted to the discussion of the procedures required since it is impossible to have a meeting of the Building Committee prior to the meeting of the Board of Directors on June 1, 1959. It is felt that a different type of presentation must be made to the full Board as there will not be time to consider the projects in as much detail as the Building Committee has in the past.

The progress of the various projects was discussed, and it was agreed that the regularly scheduled meeting of the CPC will be held on Thursday, May 28, 1959, with the usual full agenda. The Chairman is to prepare the agenda and include all the items needing attention. From the meeting on Thursday, May 28, 1959, an agenda will be developed for presentation to the Board of Directors on June 1, 1959. It was agreed that the agenda for the Board is to be "boiled down" to the barest minimum consistent with good procedures.

The next meeting of the CPC will be held Thursday, May 28, 1959, at 8:30 a.m. in Room 120, Administration Building.

The meeting adjourned at 9:50 a.m.

M. L. Pennington
Chairman

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

MINUTES OF THE CAMPUS PLANNING COMMITTEE

Meeting No. 38 May 28, 1959

The regular meeting of the Campus Planning Committee was held on May 28, 1959, at 8:30 a.m. in Room 120 of the Administration Building. Members present were Mr. E. J. Urbanovsky, Mr. Nolan E. Barrick, Colonel C. P. West, and Chairman M. L. Pennington.

478. Approval of Minutes

On motion by Colonel West and seconded by Mr. Urbanovsky, the Minutes of Meetings Numbers 34, 35, 36, and 37 were approved, with the following corrections to Item No. 468, page 303:

"Women's Dormitories" to "Men's" Dormitories

479. President's Approval of Minutes

The Chairman reported that on May 27, 1959, President Jones approved the Minutes of Meetings Numbers 30, 31, 32, 33, and 34, with the exception of Item 430D, page 293, as he wishes to secure more information on the interview rooms before making a decision.

480. Agricultural Plant Sciences Facilities

At the last meeting of the Board of Directors, the Campus Planning Committee was instructed to have a specific recommendation on the proposed project for the meeting on June 1, 1959.

1. The CPC recommends the following:

- A. That the project be approved.
- B. That the Associated Architects and Engineers of Lubbock, be employed to do the architectural and engineering planning.
- C. Site -- Southwest of the greenhouses

2. If the above is acceptable to the Board, the CPC recommends further that:

- A. Preliminary plans and specifications be accepted.
- B. Orientation -- preferably east and west. The Library may affect the orientation.
- C. Floor plans
- D. Estimated Cost -- \$375,000
- E. Budget -- \$375,000 (previously set)
- F. Estimated Number of Square Feet -- Approximately 23,000 reduced from 32,000
- G. General materials and mechanical equipment - Standard brick, aluminum windows, usual inside finishes with the exception that painted concrete blocks will be used.
- H. Air Conditioning -- None, except provisions for future air conditioning in keeping with past instructions of the Board.
- I. Anything peculiar to the project -- None
- J. Authorization for the final plans and specifications to be presented to the Board in the future.

481. Area South of the Administration Building

The area was again discussed, in general, with special emphasis on the location of the Women's Gymnasium and the Agricultural Plant Sciences Facilities.

More time is required to make a recommendation on the complete development of the area at this time.

482. Chemical Engineering and Nuclear Reactor Buildings

At the last meeting, the Board of Directors authorized full preliminary plans and specifications and instructed the CPC to check the required space for the Chemical Engineering part of the project.

The CPC recommends the following:

- A. Site -- North of Petroleum Engineering Building and west of West Engineering Building (already approved)
- B. Orientation -- Face generally south, modified "Z" shaped
- C. Perspectives
- D. Floor plans
- E. Budget -- \$525,000 (previously set)
- F. Estimated Cost -- \$525,000
- G. Square footage -- Approximately 28,000 sq. ft.
- H. General materials and mechanical equipment -- general types used in college construction
- I. Additional space in Chemical Engineering part -- Approximately 1,000 sq.ft. have been transferred from the Nuclear Reactor portion to the Chemical Engineering portion in order to provide adequate stairs to fulfill the fire code, and to provide other additional space.
- J. Air Conditioning -- The Nuclear Reactor portion will need to be air conditioned. The rest of the building will have provisions for the future addition of air conditioning.
- K. Authorization be granted to begin the preparation of final plans and specifications.
- L. On recommendation from Dean Bradford, and after much discussion, the CPC voted to change its recommendation that the planning be stopped at the end of the preliminary stage, pending the award of the Reactor. For the reasons shown in Dean Bradford's letter, it is felt advisable to continue planning through the final plans and specifications. Dean Bradford's letter dated May 29, 1959, is attached to and made a part of the Minutes. (Attachment No. 125, page 319)
- M. The CPC voted to discontinue the preparation of the scale model, due to the fact that there is insufficient time to prepare the model in the necessary detail and the fact that the project has not been fixed long enough to allow for the preparation.

483. Classroom and Office Building

- A. Mail Boxes -- The Chairman reported that the President has accepted the recommendation of the CPC that mail boxes be omitted.
- B. Interview Rooms -- The Chairman reported that the President is seeking more information on the interview rooms prior to making a decision.
- C. Changes in Plans -- The CPC expressed concern over the need to have final decisions made on contemplated changes in the building as the delays are causing the changes to become increasingly expensive.
- D. Completion Date -- The contractor is well behind schedule and it looks as if there is no chance of the project being ready for the opening of the fall semester.

484. Computer - Architecture

At the last meeting, the Board authorized the presentation of full preliminary plans and specifications at the meeting on June 1, 1959.

The CPC recommends the following:

- A. Site -- Attached to and north of the West Engineering Building
- B. Orientation -- Three-sided with an enclosed court
- C. Perspectives
- D. Floor Plan
- E. Budget -- \$625,000 (previously set)
- F. Cost -- \$668,235
(Reduce Architecture Section by one bay,
20' wide, deduct \$39,500; omit Computer
Section south of 3-story portion of
Building, deduct \$55,000)
- G. Estimated Number of Square Feet: -

Architectural Portion	43,000
Computer Center	14,000
Mechanical Space	1,000
Total-----	<u>58,000</u>
- H. General Description and Materials -- Usual materials used in college construction.
- I. Air Conditioning -- Air conditioning is required for the Computer Section. Provisions for future air conditioning will be included for the rest of the project.
- J. Request authorization to begin the preparation of final plans and specifications.
- K. Scale Model -- The CPC voted to discontinue the preparation of the scale model for the same reasons expressed under the Chemical Engineering and Nuclear Reactor Building.

485. Library

- A. It was agreed that the Minutes should include the statement that Pitts, Mebane and Phelps have accepted the Library project, in keeping with the wishes of the Board as expressed at the last meeting. The architects have been very busy accumulating the needed information and the CPC is pleased with the progress.

486. Mechanical Engineering Shops

- A. At the last meeting, the Board authorized the presentation of full preliminary plans and specifications with an "L" shaped concept and provisions for two stories in front in order to conform to the new structure across the street. The budgeted amount precludes the construction of two stories in front and the need to conform has been removed by contemplated changes in the proposed structure across the street.

- B. The CPC recommends the following:

- A. Site -- Attached to the East Engineering Building at the north end and east of the Engineering Building.
- B. Orientation -- "L" shaped
- C. Perspectives
- D. Floor Plans
- E. Budget -- \$275,000 (previously set)
- F. Estimated Cost -- \$300,200 plus \$15,000 for architect's fees

The CPC agreed that the size of the project has been checked from all possible angles, with excellent cooperation from Mr. L. J. Powers. It is impossible to get the needed facilities within the budgeted amount. The only other means of reducing the amount would be to allow the large equipment to remain in the East Engineering Building. One of the major reasons for the construction of the Mechanical Engineering Shops was to remove the large equipment from the East Engineering Building in order to eliminate the damaging vibration and noise.

The CPC recommends that \$40,000 be transferred from the Physical Plant Budget and the cost be set at a figure not to exceed the sum of \$315,000 and that all possible efforts be made to reduce the cost to a lower figure during the preparation of the final plans and specifications.

Any other solution seems to make the proposed project not worthwhile.

- G. Square Footage -- Approximately 22,000 sq. ft.
- H. General materials and mechanical equipment -- It is proposed to use the general materials, but the project will require unusually heavy mechanical services to provide forced ventilation to reduce the noise and prevent dust infiltration.
- I. Authorization to begin final plans and specifications.
- J. Scale Model -- The CPC voted to discontinue the preparation of the scale model for reasons previously stated in the Minutes.

487. Other Business

- A. Tennis Courts -- (Item No. 234, page 158; Item No. 259A, page 170; Item No. 373B, page 263)

The Chairman reported that President Jones approved the construction of two tennis courts as requested by Mr. George Philbrick, in with the request that the Chairman make a recommendation as to the source of funds.

Since the tennis courts will be new construction, there seems to be no source of funds other than the Constitutional Building Amendment Funds, and it is recommended that the funds be used to construct the courts.

Mr. Urbanovsky will prepare the plans and specifications, which will be identical to those on the present two tennis courts. It is planned to make the installation during late summer. It was agreed that the tennis courts would be unserviceable unless a fence were provided. The estimated cost at the present time for two new courts with a cyclone fence is \$10,200.

- B. Sewer Extensions -- Copies of Mr. Mason's letter dated May 22, 1959, have been distributed to the CPC but, due to the lack of time, it was agreed that the study will be considered at the first meeting after the Board meeting. The CPC complimented Mr. Mason on a job well done.
- C. Proprietary Keyway -- After a great deal of discussion, the CPC reversed its original recommendation for Best cylinders and recommended that the proprietary keyway be established by the use of Schlage locks. All were in accord that Schlage's equipment is excellent and it is recommended that bids be taken on the three projects now under construction (the New Classroom and Office Building, Textile Engineering Addition, and the Stadium) for Schlage cylinders and that Schlage locks and cylinders be specified on future construction. Schlage will supply the College with its published catalogue, thereby making it possible to determine the price on future equipment. The Schlage engineers will do the layout on the locks and three to six weeks will be required to run the engineering. However, Schlage will furnish temporary locks while the buildings are under construction, in order to maintain security.
- D. Electrical Service -- The Chairman reported that President Jones has approved the installation of additional electrical services for the Agricultural Engineering Annex in order to operate the model gin. The estimated amount is \$11,000 and it is recommended that the firm of Zumwalt and Vinther be employed to do the engineering work at a fee of 6% and that the cost be borne by the Unappropriated Balance.
- E. Air Conditioning -- The Chairman reported that, subject to approval of the Board of Directors, President Jones has approved the air conditioning of the Registrar's, Placement and Ex-Students Offices at an estimated cost of \$14,000. The CPC recommends that the firm of Zumwalt and Vinther be employed to do the engineering work at a fee of 6% and that the cost of the installation be financed from the Unappropriated Balance.
- F. Agreement With Tech Rodeo Association -- Since the Tech Rodeo Association was to have revised the proposed agreement and re-submitted it to the CPC for approval, the CPC instructed the Chairman to check with Dean Thomas on the status of the agreement.
- G. Agriculture - "Role and Scope" -- Dean Thomas presented the information as requested by Item No. 457B, page 300. The report is attached to and made a part of the Minutes. (Attachment No. 126, page 320)

The CPC voted to commend Dean Thomas and his staff for the very excellent presentation.

488. Physical Plant Facilities

A. At the last meeting, the Board of Directors instructed the CPC to make a study of the proposed site across Flint Street and west of Men's Dormitories 5 and 6, with the estimated cost to be included as part of the study.

B. The CPC voted to make the following recommendations:

1. Site -- The CPC again discussed in detail the pros and cons of the proposed site. It was agreed that longer distances would have to be traveled to service the buildings on the campus. Additional parking lots and an access road from Flint Avenue would have to be constructed at an estimated cost of \$14,500. Utility extensions would cost an estimated \$44,575.00. The use of the present garage and the use of part of the present Mechanical Engineering Shops for storage would be lost, and it is estimated that \$60,400 would be required to replace the facilities. The present location would provide more accessibility, not only to the maintenance staff but to those who need to do business in the area, and would provide a more efficient operation. The proposed site would provide for future expansion and needed flexibility. The present site would not allow for future expansion. It would be easier to continue operation of the Physical Plant if the new facilities were constructed on the proposed site. It would be possible to provide space for dry bulk storage at the proposed site and it would not be possible at the present site. Although the amount is unknown, it would be possible to save some money on the actual construction of the facilities at the proposed site, as it would be easier for the contractor to work in the area.

After very thorough and careful consideration, it is the recommendation of the CPC that the proposed site be utilized for the construction of the new facilities. Although it will be more expensive at the present time, it is felt that, in the long run, the site will be better.

2. Floor Plan

3. Budget - \$500,000 plus \$75,000 for the Printing Press (previously established)
4. Cost Estimate -- \$386,000 at the present site; \$482,000 at the proposed site
5. Estimated Number of Square Feet -- 60,000 sq. ft. of miscellaneous space for shops, warehouse, offices, garage, and Printing Press
6. General Materials and Mechanical Equipment -- It is planned to use the standard materials and equipment with the exception that cheaper inside materials will be used.
7. Authorization to begin final plans and specifications

489. Relocation of Farm Facilities

The new Head of the Animal Husbandry Department, Dr. Ralph Durham, reported for work at Texas Tech on May 1, 1959, and it is expected that progress now can be made on the relocation of farm facilities.

490. Science Addition

- A. At the last meeting, the Building Committee accepted the recommendation of the CPC that the report be delayed on the project until June, 1959, in order to give time to make a thorough analysis and study of the mass of information on hand.
- B. Due to the large volume of construction planning to be done between the Board Meetings, insufficient time has been available to prepare the report on the project for the meeting on June 1, 1959. It is requested that the CPC be allowed to present the report at the next meeting of the Board of Directors on August 22, 1959.

491. Stadium

The Chairman reported that Dr. Jones told him on May 27, 1959, that he would like for the Maintenance of Grounds Department to draw the plans and specifications for the installation of the new turf on the Stadium, and to see that the soil is properly prepared and sodded. The Grounds Department is to take care of the grass until the maintenance is taken over by the Athletic Department. The Athletic Department is to maintain the field when it becomes necessary to prepare it for the first football game. Expenditures for the preparation are to come from the amount for the Stadium construction. The estimated cost is \$15,625 (Item No. 469, page 303).

492. Student Union

- A. At the last meeting, the Board of Directors voted to instruct the architects to go ahead with the planning for the building.
- B. A good many planning sessions have been held and Mr. Barrick reports that the program is emerging by priority items and it now looks as if more rapid progress may be made on the project.
- C. The Chairman reported that the application to the HHFA for financing will be completed and sent to the Fort Worth Regional Office in the next few days.

493. Textile Engineering

The contractor continues to make excellent progress, the situation is serene and it looks as if the project will be completed on schedule.

- - - - -
The CPC recessed at 12:25 p.m. and re-convened at 1 p.m.

- - - - -

494. Women's Gymnasium

- A. At the last meeting, the Board of Directors authorized the preparation of full preliminary plans and specifications to be presented at the meeting on June 1, 1959.
- B. The CPC recommends the following:
 1. Site -- Southwest of Knapp Hall and the President's Home
 2. Perspectives
 3. Budget -- \$250,000 (previously set)
 4. Estimated Cost -- \$230,000 for the building plus \$20,000 for a basement, excluding architect's fees

494. Women's Gymnasium (continued)

5. Estimated Cost -- \$230,000 for the building, plus \$20,000 for a basement, excluding architect's fees.

It is recommended that the basement be taken as an alternate bid.

6. Square Footage -- Approximately 24,200 sq. ft.
7. General Materials and Mechanical Equipment -- Standard for the College
8. Air Conditioning -- There will have to be some forced ventilation in the Gymnasium, but there will be no air conditioning. Provisions for future air conditioning will be provided, in keeping with past instructions of the Board.
9. Items Peculiar to the Project:
 - a. It is part of the development of the area south of the Administration building.
 - b. Tennis courts, archery range and outside play areas are required.
 - c. In order to locate the project, it is recommended that Akron be closed.
 - d. Authorization to begin the preparation of final plans and specifications.

The meeting adjourned at 2:25 p.m.

M. L. Pennington
Chairman

Campus Planning Committee
May 28, 1959
Attachment No. 125
Item 482L

TEXAS TECHNOLOGICAL COLLEGE
School of Engineering
Lubbock, Texas

May 29, 1959

Office of the Dean

Mr. Nolan E. Barrick
Supervising Architect
Texas Tech
Campus

Dear Mr. Barrick:

The schematics on the Nuclear Reactor-Chemical Engineering Building, which you have submitted to this office, have indicated very excellent progress in the design of the building. In particular, I am well pleased with the general layout which has been proposed for the reactor bay and the laboratories associated with the reactor. In a like manner the chemical engineering portion is looking quite good and I believe that with the added space transferred from the nuclear end of the building to the chemical engineering end will enable the chemical engineering laboratories total space requirements to be met.

Because of the very crowded conditions now existing in the Department of Chemistry and Chemical Engineering I am particularly interested in seeing the work on this building progress at as fast a pace as possible commensurate with good planning. I, therefore, respectfully request that the Campus Planning Committee present to the Board a very strong recommendation to proceed through the working drawings and specifications on the Nuclear Reactor-Chemical Engineering Building for the following reasons:

1. Present working arrangements with the Nuclear Laboratories of Convair-Fort Worth in the design of the reactor and the associated nuclear laboratory facilities have progressed most favorably. While the work is still fresh in the minds of the Convair engineers, I believe that maximum return on our dollar could be obtained by maintaining unbroken liaison between the local architects and the Convair engineering group during the next several months.
2. The Office of Reactor Development of the Atomic Energy Commission is the agency through which we have received to date approximately \$97,000 for the purchase of nuclear equipment and special instrumentation. It is to this same agency that we now have a request for a grant-in-aid to build the Tech training reactor with the hope that the award will be made some time during the fiscal year beginning July, 1959. Informal discussions with the Director of the Office of Reactor Development led me to believe that they operate very much on the basis of "helping those institutions who help themselves". It is, therefore, my belief that we would be in a much more favorable position in our request to the A.E.C. for this grant if we would proceed with the complete design of the building, without delay.
3. At the present time the Reactor Safeguards Committee (another agency of the A.E.C., but one which is not directly associated with the agency awarding the grants to the colleges) has approved our site location and the preliminary design of the reactor. There is still, however, the need to obtain a construction permit from this group which requires the filing of a final hazards report. This report

Mr. Nolan E. Barrick, #2.

5-29-59.

must include the final design of the reactor, as well as the exact design of the building, including a listing of construction materials, etc. Because the two agencies of the A.E.C. operate completely independent it is not necessary that we have the grant award made prior to obtaining a construction permit.

4. Since the actual time of the award is somewhat indefinite this delay could be used to our advantage by progressing with the complete plans and specifications of the building during this waiting period.
5. The physical separation of the Department of Chemistry and the Department of Chemical Engineering should be effected at the earliest possible date for purposes of accreditation. Consequently, the Chemical Engineering portion of the new building becomes very important to this office from the standpoint of presenting strong support for full accreditation of the Chemical Engineering program.
6. The total space involved in the Nuclear Reactor-Chemical Engineering Building is approximately 25,000 square feet. The portion containing the nuclear reactor and directly related facilities comprise approximately 30% of this total area. The reactor bay itself is approximately 10% of this total area. At the present time we have equipment on the campus to effectively utilize the associated nuclear laboratory space and all of the chemical engineering portion of the building. Consequently, 90% of the total area could be effectively used prior to the installation of the reactor.

I sincerely feel that the foregoing advantages far outweigh the relatively small financial risk involved in proceeding with the plans and specifications on the building, and I earnestly recommend that this work proceed without delay, if at all possible.

Very truly yours,

/s/ John R. Bradford

John R. Bradford
Dean of Engineering

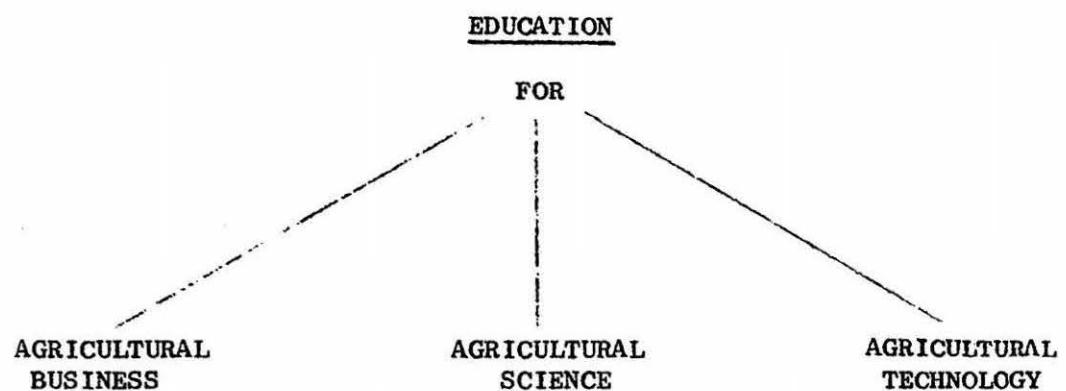
JRB:BJ

Campus Planning Committee
May 28, 1959
Attachment No. 126
Page 320

AGRICULTURE

and

TEXAS TECHNOLOGICAL COLLEGE



Prepared by the Staff of the School of Agriculture

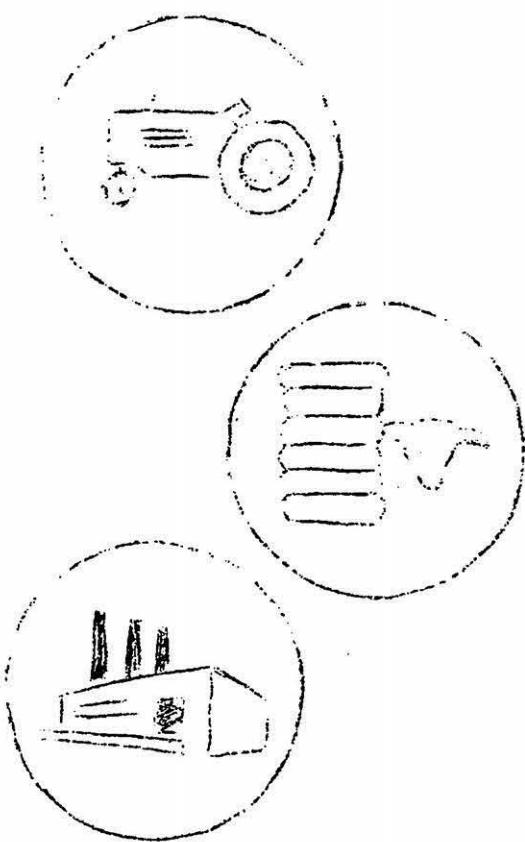
April 25, 1959

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THE NATION'S NO. 1 INDUSTRY - AGRICULTURE

Agriculture is the nation's largest single business, employing approximately 40% of our labor force as:



1. Suppliers of machinery, fertilizers and other production resources.

In Texas alone the annual value of production items purchased by farmers and ranchers has been estimated at \$1.4 billion.

2. Producers on farms and ranches. There are nearly 4 3/4 million farms in the nation.

Texas farms and ranches alone deliver annually to consumers food and fiber products with a retail value of about \$4.5 billion.

3. Processors and distributors of farm and ranch products.

In Texas, the value added to farm and ranch products by processing, storing, and distributing agencies amounts to approximately \$2.5 billion annually.

Of the 65 million people employed in the United States, about 26 million work somewhere in agriculture: nearly 8 million work on farms; 7 million produce for and service farmers; and 11 million process and distribute farm products. In addition, one-half million scientists directly or indirectly serve agriculture.

A generation ago a man who failed in business could always go into farming. Today a man must be successful in business before he can afford to go into farming. Farming today requires an investment of about \$15,000 per worker, as compared to about \$6,500 for industry in general. On many Texas farms and ranches, the investment per worker runs over \$50,000.

At an accelerated rate, especially beginning in the 1930's, agriculture, operationally as well as humanly, has in part "gone to town."

In today's food and fiber economy, two persons are employed off-farm for each one on the farm. Too often, we have divorced or removed these off-farm portions of agriculture from the family of agricultural industries.

A modern concept of agri-business is essential to our understanding of agriculture and can serve as a basis for reorganization of future educational programs in agriculture.

WHERE WE HAVE BEEN - WHERE WE ARE GOING

Population Trends

Texans Employed in Agricultural Industry

	YESTERDAY	1940	TODAY	1958	TOMORROW	1975?
SUPPLIERS	4%		11%		12%	
FARMERS		34%	11%		8%	
PROCESSORS	7%		18%		20%	
DISTRIBUTORS						
OTHER		55%		60%		60%

Increased efficiency - improved technology

Since 1910, U. S. farmers have doubled their total output, tripled their output per man-hour, and are now operating their farms with one-third less manpower.

Since 1935, farm output on the same acreage has gone up 40%. Milk production has gone up 32%; egg production has gone up 50%; and livestock production per breeding unit is up 25%.

Not a single variety of wheat produced in 1900 is still in production today. At present, more than 70% of all crop acreage is planted to varieties not even in existence in 1935. We could not grow these old varieties of crops today with our insect and disease problems and under today's economic conditions.

The great change in efficiency of each farm worker in producing the prime requirements of food and fiber for all people has freed labor and technology for development in other areas of our national economy.

With these other changes, farm and ranch units are becoming larger and more complicated. The scientific farmer - with a keen knowledge of business - is the one who will likely survive the competition of the future.

More scientific, highly specialized fields:

Modern agriculture is becoming more and more highly scientific. Each year more training is required in:

Plant and animal breeding
Animal nutrition
Insect and disease control
Soil and crop science
Automatic equipment operation
Other specialized fields

The demands of agriculture are more intensified for:

New ideas
Better plants and animals
Better equipment - better machinery
New ways of performing farm operations
Better processing and distributing
Improved marketing systems
Better use of soil and water resources

Closer ties with other industries

Today's agriculture is vastly different from the traditional concept. It is becoming more closely tied to the other important industries of our nation. For example, in Texas agriculture is the largest user of petroleum products. Many segments of agriculture are inseparable from other industry.

EDUCATION FOR MODERN AGRICULTURE

Personnel needs of the agricultural industry

Recent surveys indicate that the major fields of agriculture can employ each year 15,000 new college graduates, if 15,000 with college training in agriculture can be made available. At present, our agricultural colleges graduate about 7,500 young men and women each year in agricultural sciences -- 7,500 to fill 15,000 jobs.

With our rapidly expanding world population, the demand for men and women trained in agriculture continues to grow.

In a recent nationwide release, a leading industrialist stated: "America may be desperately short of missile engineers, but the nation's No. 1 industry - agriculture - also is facing a manpower shortage, perhaps the worst in its history. It has farm leaders frankly worried. They fear that the industry is losing the cream of the younger generation to the glamour of the jet age, the nuclear age, the electronic age, the space age. They have coined a new term - the agridynamics age - to emphasize that agriculture has romance, adventure, and glamour, too."

Education increases earning power. A good education is becoming more and more a basic requirement to success.

"College training in agriculture leads to some of today's best careers.."

	Estimated life income for men, by educational level, 1956.
<u>Eight Years of schooling</u>	\$116,000
<u>Four Years of High Schooling</u>	\$165,000
<u>One to Three Years of College</u>	\$190,000
<u>Four or More Years of College</u>	\$263,000

Source: Dr. Lymen V. Ginger, President,
National Education Association.
Based on U. S. Census Bureau
figures.

Future directions of emphasis in agricultural training:

College curricula which place emphasis on the training of farmers only are clearly out of step with the present status of the agricultural industry. The future needs are for education in all aspects of the agricultural industry.

Progress can be made within the traditional departmental set-up, if proper recognition is given:

AGRIBUSINESS -- Understanding and training for positions as:

Suppliers of machinery, fertilizers, and other production resources.

Producers on farms and ranches.

Processors and distributors of farm and ranch products.

AGRICULTURAL SCIENCE -- More fundamental training in mathematics and the basic sciences, followed by well-planned courses in agriculture to properly prepare young people in:

Research

Teaching

Specialist positions in areas such as:

Plant and animal breeding and nutrition
Meat processing and developing
Insect and disease control
Soil and crop science
Horticulture and park management

AGRICULTURAL TECHNOLOGY -- With the demand for improved technology, both on and off the farm, more training is needed in specific fields such as:

Soils and fertilizers
Crop and vegetable production
Livestock and poultry production
Farm machinery and irrigation

Importance of research to the education program in agriculture

An adequate program of higher education in agriculture cannot be obtained without a research environment. Research in agriculture should not be considered only as a service to the area or to certain commodity groups, but rather as:

A means of improving the quality of undergraduate and graduate instruction

A necessary tool to obtain and hold highly trained and enthusiastic staff members

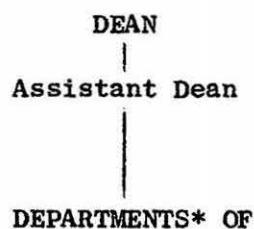
Graduate instruction is inseparably tied to research programs. As a part of the requirements for the Master of Science degree, a research problem must be outlined, pursued, and brought to fruition in the thesis.

Research in agriculture provides an inspiration to many staff members, keeping them current in their instructional programs in today's fast moving agricultural industry and providing them with the enthusiasm and knowledge necessary to good college teaching.

Research in agriculture can usually be performed with about the same (or slightly modified) facilities as those needed for teaching and with a minimum of additional expense.

A LOOK AT AGRICULTURE AT TEXAS TECHNOLOGICAL COLLEGE

Subject Matter Departments



Agricultural Agricultural Agricultural Agronomy Animal Dairy Horticulture
Economics Education Engineering Husbandry Industry and
Park Management

Present Staff for Education and Research

Breakdown by rank:

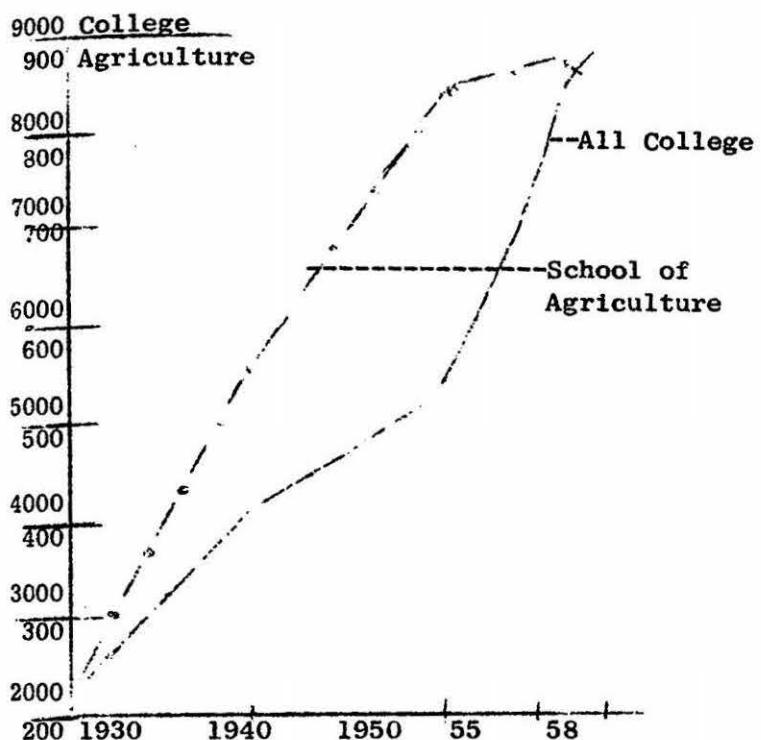
Professors	14
Associate Professors	9
Assistant Professors	3
Instructors	6
Part-time Instructors	1
Teaching Fellows	<u>1</u>
Total	39

Breakdown by degree:

PhD	13
DVM	1
MS	19
BS	<u>6</u>
Total	39

*The college farms and PanTech farms are utilized by the departments for education and research.

ENROLLMENT IN THE SCHOOL OF AGRICULTURE



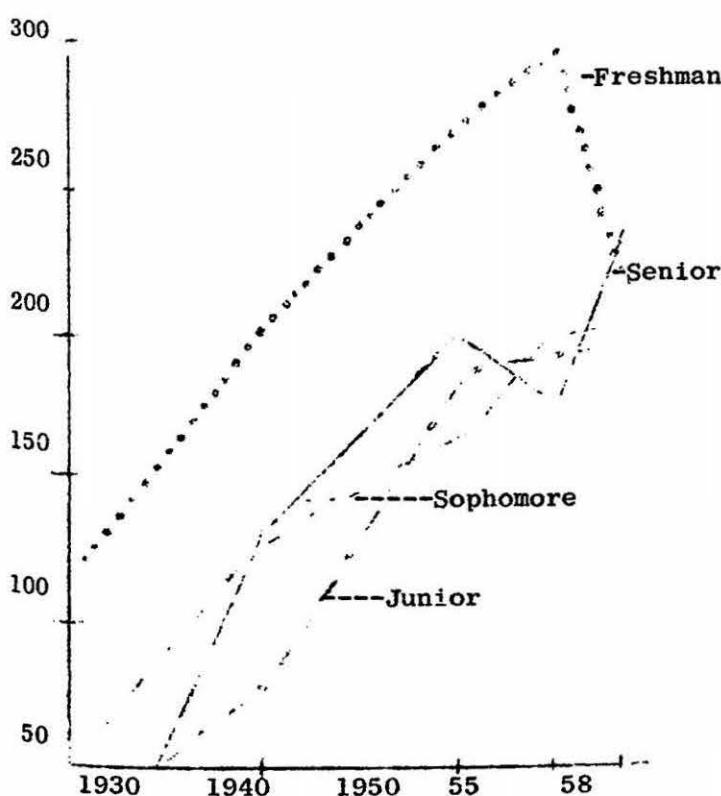
In general, agricultural enrollment at Texas Tech has increased through the years. The leveling in the last four years may be partially due to the opening of several junior colleges (two within a 35-mile radius) which have reduced the freshman enrollment. Since this trend is not reflected in the upper classes, the indications are that Texas Tech is gaining stature as a senior institution in agriculture.

At the present time, Texas Tech ranks 15th among all schools of agriculture in the nation in numbers of undergraduate agricultural students and is significantly larger than most land-grant colleges in the South and Southwest.

Several departments in the School of Agriculture rank among the largest and best in the United States.

Although the School of Agriculture has placed primary emphasis on under-graduate programs, 19 Masters degrees were awarded in 1958.

There is every indication that agricultural enrollment at Tech will continue to increase as the School grows in other branches of education.



Agriculture Enrollment
(by classification)

BASES FOR PLANNING THE FUTURE

As we look at modern agriculture and review the many changes that are taking place, we should plan our educational programs in agriculture with these basic assumptions:

The population explosion will continue. Our economists predict that by 1975 the population in Texas will reach 12.6 million - a 50% increase in about 16 years.

This projected increase in population, plus some rise in per capita consumption of certain farm products and more effective distribution, will likely increase total requirements for agricultural products by as much as 60% by 1975.

We have the technical know-how to partially meet these demands, but better education and more research is vital. We cannot stand still but must constantly battle the inroads made by insects, diseases, and the other numerous problems continually facing the agricultural industry.

The size and complexity of farms and ranches will continue to increase, demanding a keen knowledge of business. We will need more "managers" rather than "operators."

Although fewer and fewer people will be engaged in the actual production aspects of agriculture, the industry will become more important as the population pressure places greater demands for good food and fiber.

More capital will be used in agriculture, with a greater degree of mechanization and higher investments per worker.

Educational institutions will be called upon to furnish more technology and management information and better agricultural scientists and teachers.

The biological, mechanical, and chemical revolution that has taken place in American agriculture - a revolution that has stemmed from education and research - has benefited consumers and the nation as much, or more, than the farmers themselves. It has been estimated that if farmers were using the same practices now that they were using as late as 1940, food and clothing today would cost the average consumer about \$300-400 more per year, or the nation nearly \$13 billion annually.

Texas Technological College is well-suited to accept certain educational and research responsibilities in agriculture. The location of the college in the center of the world's largest inland cotton market, the leading area in the United States in the production of grain sorghums, and one of the largest underground irrigation water areas in the nation provides both an obligation and an advantage to Texas Tech in its service to agriculture. This advantage is further emphasized by the fact that a very extensive ranching industry surrounds the highly productive farming center on the Southern Plains, with livestock the second most valuable agricultural product in the State.

The one dominant feature of the agricultural outlook is change, which makes planning both interesting and difficult.

To meet the future challenge and make the most of our opportunities, the School of Agriculture is planning:

1. A constant improvement in faculty and staff
2. A balanced program of education and research
3. Improved facilities

A new Plant Science Building to adequately house expanding departments

The moving and modernizing of farm and livestock facilities in line with future needs

We have just scratched the surface of agricultural progress. Our accomplishments in the future will be limited only by the minds, energy, and imagination of men.

Acknowledgment

Numerous references were used in the preparation of this report. Citations were not listed because of the tentative nature of the report and the general aim to keep this material within the Texas Tech family.

M.L.P.
FILE
COPY

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

AGENDA FOR BOARD OF DIRECTORS MEETING

June 1, 1959

(There is to be no meeting of the Building Committee)

#478
P311
↓ 61. Agricultural Plant Sciences Facilities

- A. At the last meeting, the Board authorized the Campus Planning Committee to have a specific recommendation ready for this meeting.
- B. The Campus Planning Committee recommends that:
- ↓ 1. The project be approved.
 - ↓ 2. The Associated Architects and Engineers of Lubbock be employed to do the architectural and engineering work.
 - ↓ 3. Site -- Southwest of the greenhouses.
- C. If the Board accepts the above recommendations, it is further recommended that:
- ↓ 1. Orientation -- Preferably east and west but the orientation will be affected by the location of the Library.
 - ↓ 2. Floor Plans
 - 3. Estimated Cost -- \$375,000
 - 4. Budget -- \$375,000 (previously set)
 - 5. Square Footage -- 23,000 sq. ft., the amount has been reduced from 32,000.
 - 6. General Materials and Mechanical Equipment
Standard brick, aluminum windows, usual inside finishes with the exception that as much painted concrete block as feasible will be used.
 - 7. Air Conditioning -- None with the exception that provisions for future installation will be provided in keeping with past instructions from the Board.
 - ↓ 8. Authorization be given to begin preparation of final plans and specifications.

1/2 ↓ 62. Chemical Engineering and Nuclear Reactor Building
1/2

- A. At the last meeting, the Board authorized preparation of full preliminary plans and specifications to be presented at this meeting, with the stipulation that a study be made to be sure that ample space is provided for the Chemical Engineering portion.

62. Chemical Engineering and Nuclear Reactor Building (continued)

B. The Campus Planning Committee recommends that:

1. Site -- North of Petroleum Engineering Building and west of the West Engineering Building (previously set).
↓
2. Orientation -- Face generally south with a modified "Z" shape.
↓
3. Perspectives
↓
4. Floor plan layout
↓
5. Budget -- \$525,000 (previously set)
↓
6. Estimated Cost -- \$525,000
↓
7. Square Footage -- approximately 28,000 sq. ft.
↓
8. Materials and Mechanical Equipment -- General materials and equipment used by the College on other projects.
↓
9. Air Conditioning -- The reactor portion must be air conditioned. Provisions for future installation will be made.
↓
10. Square footage amounting to approximately 1,000 sq. ft., has been moved from the Nuclear Reactor portion of the Chemical Engineering section in order to provide space for a required stair and to provide some additional space for Chemical Engineering.
↓
11. It is recommended that final plans and specifications be prepared as requested by Dean Bradford, although the reactor award will not have been made at the time.

#482-L
P 312 → ↓ 63. Computer - Architecture Building

- 184
1313
*building that could
possibly - no room*
↓ A. At the last meeting, the Board authorized the preparation of full preliminary plans and specifications to be presented at this meeting.

B. The Campus Planning Committee recommends that:

1. Site -- Attached to and north of the West Engineering Building.
↓
2. Orientation -- Three-sided with an enclosed court.
↓
3. Perspectives
↓
4. Floor Plan Layout
↓
5. Budget -- \$625,000 (previously set)
↓
6. Cost -- \$668,235.00*
7. Materials and Mechanical Equipment -- General type used in college buildings.
↓
8. Air Conditioning -- The computer portion must be air conditioned. Plans will be made for future air conditioning in the rest of the building.
↓
9. Authorization be granted to begin preparation of final plans and specifications.

*Reduce Architecture Section by one bay (20' wide) Deduct \$39,500.00

or

Omit Computer Section south of 3-story portion of Building. Deduct 55,000.00

64. Library

Pitts, Mebane and Phelps have accepted the library project on the terms expressed by the Board at the last meeting and are doing an excellent job of accumulating information.

186
3/4
65. Mechanical Engineering Shops

A. At the last meeting, the Board authorized preparation of full preliminary plans and specifications with an L-shaped concept, and provisions for two stories in front in order to conform to the new structure across the street.

The proposed structure across the street has been changed, thereby eliminating the need to conform, and there are insufficient funds budgeted to have two stories in front.

B. The Campus Planning Committee recommends that:

1. Site -- Attached to the north end of East Engineering and east of East Engineering Building.

2. Orientation -- L-shaped.

3. Perspectives

4. Floor Plans Layout

5. Budget --- \$275,000 (previously set)

6. Estimated Cost -- \$300,000 plus \$15,000 for architects fees--\$315,000.

It is recommended that \$40,000 be transferred from the budgeted amount for the Physical Plant Facilities as it does not seem possible to reduce the size and scope of the proposed project further without affecting the original justification for it.

7. Square Footage -- Approximately 22,000 sq. ft.

8. Materials and Mechanical Equipment -- The general materials will be used. Unusually heavy mechanical services will be required to handle the forced ventilation to reduce the noise element to prevent the infiltration of dust to the laboratory equipment.

9. Authorization be granted to begin preparation of final plans and specifications.

66. Other Items

487-A
1315
all funds
A. Additional Tennis Courts -- President Jones has recommended the installation of two additional tennis courts east of the old Men's Gym, at an estimated cost of \$10,200. It is recommended that the cost come from the Constitutional Building Amendment Funds and that Mr. Urbanovsky prepare the plans and specifications and supervise the installation. The estimated cost includes a chain link fence.

66. Other Items (continued)

#487-D ✓ B. Additional Electrical Service for Agricultural Engineering

P. 315

President Jones has recommended the additional service at an estimated cost of \$11,000. It is recommended that the costs come from the Unappropriated Balance and the firm of Zumwalt and Vinther be employed as engineers to handle the project at a fee of 6%, which is not included in the estimated cost.

487-E ✓ C. Air Conditioning Registrar's, Placement, and Ex-Students Offices

P.315

President Jones, with Board approval, would like to air condition the above listed offices and thereby complete the air conditioning for all of the first floor of the Administration Building. The estimated cost is \$14,000 and it is recommended that the cost come from the Unappropriated Balance. Also, it is recommended that Zumwalt and Vinther be employed to handle the project at a fee of 6%. The fee is not included in the estimated cost.

108
3/16

67. Physical Plant Facilities

A. At the last meeting, the Board instructed the Campus Planning Committee to study the proposed site across Flint Street and West of Men's Dormitories 5 and 6, with the study to include the estimated costs.

B. The Campus Planning Committee recommends that:

#488-B-1 (P316)

1. The proposed site be used.

✓ 2. Floor Plan

3. Budget -- \$500,000 plus \$75,000 for the Printing Press.

4. Cost -- It is estimated that the cost at the new proposed site will be \$482,000 and \$386,000 at the present site.

5. Square Footage -- 60,665 sq. ft.*

6. Materials and Mechanical Equipment -- General materials for College Buildings, with the exception that the inside will be of cheaper materials.

7. Authorization be given to begin preparation of final plans and specifications.

*Square footage includes shops, warehouse, offices, garage, and Press.

\$490
P.317

68. Science Addition

A. At the last meeting, the Board granted permission to the CPC to make a report at this meeting. However, due to the volume of work in connection with the other projects, there has been insufficient time to prepare the report for the Science Addition.

B. It is recommended that permission be granted to make the report at the next meeting of the Board on August 22, 1959.

OK
494
P.317

69. Women's Gymnasium

A. At the last meeting, the Board authorized the preparation of preliminary plans and specifications at this meeting.

B. The Campus Planning Committee recommends that:

- ✓ 1. Site -- Southwest of Knapp Hall and the President's Home.
- ✓ 2. Perspectives
- ✓ 3. Floor Plan Layout
4. Budget -- \$250,000 (previously set)
5. Estimated Cost -- Building \$230,000, basement \$20,000, architect's fees \$12,500, total \$262,500.
- ✓ 6. Basement be taken as an alternate bid.
7. Square footage -- Approximately 24,200 sq. ft.
8. Materials and Mechanical Equipment -- Same as that generally used for college buildings.
9. Air Conditioning -- Only provisions for future installation.
10. The project must be tied-in with the area south of the Administration Building.
11. Tennis Courts, archery range and outside play areas must be provided.
12. Akron will have to be closed.
- ✓ 13. Authorization be given to begin preparation of final plans and specifications.

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

MINUTES OF THE CAMPUS PLANNING COMMITTEE

Meeting No. 39 June 10, 1959

The regular meeting of the Campus Planning Committee was held on June 10, 1959 at 8:30 a.m. in Room 120 of the Administration Building. Members present were Mr. E. J. Urbanovsky, Mr. Nolan E. Barrick, Colonel C. P. West, and Chairman M. L. Pennington.

495. Approval of Minutes

On motion by Colonel West and seconded by Mr. Urbanovsky, the Minutes of Meeting No. 38 were approved, with the following correction to the Minutes of Meeting No. 30:

The State Seed Testing Laboratory originally had less than 1,000 square feet rather than 2,500 square feet as stated in the Minutes and had to move from the Agriculture Building because adequate space was unavailable.

496. Agricultural Plant Sciences Facilities

- A. At the last meeting, the Board of Directors authorized the preparation of final plans and specifications.

The project is to be turned to the architects. The members of the CPC and those who are to use, maintain and operate the facilities will have ample opportunity to study the proposed plans and specifications before the recommendation is made to the Board.

If the final plans and specifications are ready in time for the Board Meeting on August 22, 1959, they will be presented at that time. If they are not ready, the presentation will be postponed for a later meeting.

- B. Mr. Barrick is preparing the contract with the Associated Architects and Engineers of Lubbock, in keeping with the action of the Board of Directors on June 1, 1959.

FPC-6-16159
M.C.P. 6/16/59
J.W. 6/16/59

497. Area South of the Administration Building

The need for the study of the area south of the Administration Building was discussed as it is necessary to have the study to determine the location of the buildings in the area. Mr. Urbanovsky is to continue the study and present to the CPC the results as they are developed.

498. Boiler and Housing

Progress Report -- Construction has started on the housing and parts of the boiler have been delivered. Progress is satisfactory, although last week's rains interferred.

499. Board of Directors

The CPC agreed to include a report of the actions of the Board of Directors on June 1, 1959 in the Minutes for information and reference. The report is attached to and made a part of the Minutes. (Attachment No. 127, page 327)

500. Chemical Engineering and Nuclear Reactor

- A. At the last meeting, the Board of Directors authorized the preparation of final plans and specifications.

The project is to be turned to the architects. The members of the CPC and those who are to use, maintain and operate the facilities will have an opportunity to study the proposed plans and specifications before the recommendation is made to the Board.

If the final plans and specifications are ready in time for the Board Meeting on August 22, 1959, they will be presented at that time. If they are not ready, the presentation will be postponed for a later meeting.

- B. New elevations were presented and studied.

- C. In order to keep the budget in line, the Chairman was instructed to ask the President for the source of funds to pay the approximately \$30,000 to Convair-Fort Worth for the development of the plans and specifications for the Reactor.

- D. It is the feeling of the CPC that the construction permit, as outlined in Dean Bradford's letter of May 11, 1959, should be secured. As the permit is not under the jurisdiction of the CPC, it is recommended that it be secured by the proper person, probably Dean Bradford, and that the estimated \$3,500 not be charged to the budgeted cost of construction.

501. Classroom and Office Building

- A. Mr. Barrick reported that the construction is moving along fairly well; some of the partitions are in and part of the walls are up. However, the construction is still behind schedule.

- B. The CPC urges that decisions on the plan revisions for Business Administration be made, with the least possible delay, in order that construction may not be unduly delayed.

- C. The Chairman reported that Mr. Cummings has been requested to handle the purchase of equipment. The Chairman is to assist Mr. Cummings in securing the needed information from Dean Heather.

502. Computer - Architecture

- A. At the last meeting, the Board of Directors authorized the preparation of final plans and specifications.

The project is to be turned to the architects. The members of the CPC and those who are to use, maintain and operate the facilities will have ample opportunity to study the proposed plans and specifications before the recommendation is made to the Board.

If the final plans and specifications are ready in time for the Board Meeting on August 22, 1959, they will be presented at that time. If they are not ready, the presentation will be postponed for a later meeting.

502. Computer - Architecture (continued)

- B. As reported to the Board at the last meeting, the project, as proposed, will exceed the budgeted amount. In order to come within the budget, it is necessary to reduce the scope of the project.

At this point, Mr. Barrick asked to be, and was, excused from the meeting.

Means to reduce the estimated cost were discussed at length. No solution other than a reduction in scope could be found. As reported to the Board at the last meeting, the reduction of one bay, 20' wide, from the architectural section would provide an estimated \$39,500. The omission of the computer section south of the three-story portion of the building would provide an estimated \$55,000. After very careful and thorough consideration, the CPC voted to recommend the reduction of the computer section for the following reasons:

The accent has been on the need for classroom facilities and a reduction in the architectural portion would reduce the Department to less space than it now has. Not all of the proposed computer section is planned for immediate use and the computer section is in some ways comparable to the new Textile Engineering facilities. There will be income from research contracts and for services provided to others. The Computer Center will be constructed in such a manner that it could be added to if funds become available. If it is felt that all of the proposed computer section should be constructed at this time, it is recommended that efforts be made to secure donations to finance the deleted portion. It will be necessary to know as soon as possible if there are to be donations in order that the preparation of plans may not be unduly delayed.

It was agreed to request Mr. Barrick to work with Dean Bradford on the proposed reduction.

Mr. Barrick was requested to return to the meeting.

503. Library

Mr. Barrick reported that Mr. Pitts would like to come to the College next Monday to present some sketches and to bring the CPC up to date on his progress and to consult with others at the College.

It was agreed that the CPC would meet with him at 2 p.m. on Monday, June 15, 1959.

504. Mechanical Engineering Shops

- A. At the last meeting, the Board of Directors authorized the preparation of final plans and specifications.

The project is to be turned to the architects. The members of the CPC and those who are to use, maintain and operate the facilities will have ample opportunity to study the proposed plans and specifications before the recommendation is made to the Board.

If the final plans and specifications are ready in time for the Board Meeting on August 22, 1959, they will be presented at that time. If they are not ready, the presentation will be postponed for a later meeting.

- B. As the Board of Directors approved the transfer of \$40,000 from the budgeted amount for the Physical Plant Facilities to this project, the budgeted amount is now \$315,000 rather than \$275,000.

505. Other Business

- A. Large Classrooms and Auditoriums -- The Chairman reported that Mr. Haley had requested the CPC to study the need for large classrooms and small auditoriums. He wants to be sure that provisions are made for adequate facilities in view of the continuing large enrollment and the need for class expansion. He is of the opinion that it may be necessary for the College to go to larger classes in some courses. He requests that the problem be discussed at the next meeting of the CPC.

The problem was discussed and it was agreed that Mr. Barrick is to make a survey with the Deans and Department Heads to see what courses are conducive to larger classes and to study the results for incorporation into the projects.

- B. ROTC Rifle Range -- Colonel West was requested to study the ROTC needs for a Rifle Range and to make a recommendation to the CPC in the future.

- C. New Tennis Courts -- At the last meeting of the Board of Directors, authorization was received to construct two new concrete tennis courts east of the Gymnasium.

Mr. Urbanovsky reported that he is at work on the plans and specifications and it was agreed that construction should start during mid-August and the project completed before the opening of school. All plans are to be made with the date in mind.

- D. Electrical Installation for Agricultural Engineering
The Chairman reported that Mr. Mason had informed him that Zumwalt and Vinther are at work on the project in keeping with the approval of the Board on June 1, 1959.

- E. Air Conditioning Registrar's, Ex-Students and Placement Offices -- The Chairman reported that Mr. Mason had informed him that Zumwalt and Vinther are at work on the project in keeping with the approval of the Board on June 1, 1959.

505. Other Business (continued)

- F. Deeds for Nineteenth Street -- The City Manager left one copy of the deeds and other instruments for the conveyance of land to widen Nineteenth Street on the Chairman's desk during the Board Meeting on June 1, 1959.

It was agreed that the instruments are to be checked and a recommendation made in time for the Board Meeting on August 22, 1959 as they cannot be processed prior to that time.

- G. Paving of Flint Street and Dormitory Parking Lots
Mr. Urbanovsky reported that it will be necessary for Mr. J. R. Fanning to seal-coat Flint Street and the parking lots, in keeping with the terms of his contract. It is estimated that the cost will be \$5,000. Mr. Urbanovsky said that he planned to check with the City Officials to be sure that they are in accord.

- H. Boiler Housing (Old) -- It is the recommendation of the CPC that the walls and roof of the north portion of the existing boiler house be sheathed with the same material as that on the new boiler house. Since the Board of Directors has approved the site across Flint Street for the Physical Plant Facilities, the existing boiler house will be exposed to view in addition to being in an unsatisfactory condition. Mr. Barrick is to secure a price from the contractor on the new housing and, if it is found to be in line, a request will be made to the Building Committee for permission to make the installation from Constitutional Building Amendment Funds.

506. Physical Plant Facilities

- A. At the last meeting, the Board of Directors authorized the preparation of final plans and specifications.

The project is to be turned to the architects. The members of the CPC and those who are to use, maintain and operate the facilities will have ample opportunity to study the proposed plans and specifications before the recommendation is made to the Board.

If the final plans and specifications are ready in time for the Board Meeting on August 22, 1959, they will be presented at that time. If they are not ready, the presentation will be postponed for a later meeting.

- B. The CPC urges that a decision be made with the least possible delay on the land proposed to be donated to the City for a Civic Center as it will affect the location of this project and the long-range development of the entire area.

507. Printing Press

The project will be included in the Physical Plant area.

508. Relocation of Farm Facilities

Mr. Urbanovsky reported that the Committee of the School of Agriculture is working on a priority list which is to be submitted to the CPC in the near future.

509. Science Addition

In order to have a report for the Board of Directors on August 22, 1959, it was agreed that the CPC members will study the existing reports and bring their thinking up to date. Pending the return of Miss Clewell, a meeting will be requested with Dean Goodwin and representatives of the Science Department.

510. Student Union

Mr. Barrick reported that he and his staff are shaping up some schematic plans which seem to be feasible. When completed, they will be presented to the CPC. He stated that Mr. Longley has been of a great deal of help in the development.

The CPC commends Mr. Longley for a very good job of programming.

511. Textile Engineering

Mr. Barrick reported that the contractor is still making excellent progress and it looks as if the building will be ready at the beginning of the fall semester.

512. Women's Gymnasium

At the last meeting, the Board of Directors authorized the preparation of final plans and specifications.

The project is to be turned to the architects. The members of the CPC and those who are to use, maintain and operate the facilities will have ample opportunity to study the proposed plans and specifications before the recommendation is made to the Board.

If the final plans and specifications are ready in time for the Board Meeting on August 22, 1959, they will be presented at that time. If they are not ready, the presentation will be postponed for a later meeting.

A special meeting of the CPC is to be held Monday, June 15, 1959 at 2 p.m. in Room 120, Administration Building, in order that Mr. Pitts of Pitts, Mebane and Phelps, may present his findings to date on the new library.

The next regular meeting will be subject to call. The meeting adjourned at 11:45 a.m.

M. L. Pennington
Chairman

Campus Planning Committee
June 10, 1959
Attachment No. 127
Page 321

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas
June 1, 1959

The following are the actions of the Board of Directors at the meeting held on June 1, 1959 in regular session:

61. Agricultural Plant Sciences Facilities

Approved the establishment of the project, the employment of the Associated Architects and Engineers of Lubbock, and the site southwest of the Greenhouses. In addition, the Board approved preliminary plans and specifications as set out in the Agenda and authorized the preparation of the final plans and specifications.

62. Chemical Engineering and Nuclear Reactor Building

Accepted the preliminary plans and specifications as outlined in the Agenda and authorized the preparation of final plans and specifications.

63. Computer - Architecture Building

Approved the preliminary plans and specifications as outlined in the Agenda and authorized the preparation of final plans and specifications. Mr. Wooldridge expressed the opinion that the location of the projects in the Engineering area may over-crowd that end of the campus and allow inadequate room for expansion. The Board stipulated that the project is to be reduced to come within the budget, in keeping with the recommendation in the Agenda.

64. Library

It was reported to the Board that Pitts, Mebane and Phelps of Beaumont, Texas, have accepted the Library project on the terms expressed by the Board at the last meeting.

65. Mechanical Engineering Shops

Approved the preliminary plans and specifications as outlined in the Agenda. Approved the transfer of \$40,000 from the Physical Plant Facilities Budget to the Mechanical Engineering Shops in order that the original requirements for the facilities could be met. In addition, the Board authorized the preparation of final plans and specifications.

66. Other Items

- A. Approved the installation of two additional tennis courts east of the New Men's Gymnasium at an estimated cost of \$10,200. The project is to be financed from Constitutional Building Amendment Funds.
- B. Approved the installation of additional electrical service to the Agricultural Engineering Annex in order to provide power for the model gin, at an estimated cost of \$11,000. The action included the employment of Zumwalt and Vinther to do the engineering work at a fee of 6%, which is not included in the estimated cost. The project is to be financed from the Unappropriated Balance.
- C. Approved the installation of air conditioning in the Registrar's, Placement and Ex-Students Offices, at an estimated cost of \$14,000, and approved the employment of Zumwalt and Vinther at a fee of 6%, which is not included in the estimated cost. The project is to be financed from the Unappropriated Balance.

67. Physical Plant Facilities

Approved the site across Flint Street and west of Men's Dormitories No. 5 and No. 6, the preliminary plans and specifications as outlined in the Agenda and authorized the preparation of final plans and specifications.

68. Science Addition

Approved the request of the Campus Planning Committee to postpone a report on the project until the next meeting of the Board on August 22, 1959.

69. Women's Gym

Approved the preliminary plans and specifications as outlined in the Agenda and authorized the preparation of final plans and specifications. An alternate bid is to be taken for the basement and is to be accepted only if it comes within the budgeted amount.

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

MINUTES OF THE CAMPUS PLANNING COMMITTEE

Meeting No. 40 June 15, 1959

A Special Meeting of the Campus Planning Committee was held on June 15, 1959 at 2 p.m. in Room 120 of the Administration Building. Members present were Mr. E. J. Urbanovsky, Mr. Nolan E. Barrick, Colonel C. P. West and Chairman M. L. Pennington. Others present were Mr. L. W. Pitts of Pitts, Mebane and Phelps, and Mr. Ross Zumwalt of Zumwalt and Vinther.

513. New Library

Mr. Pitts presented and explained his studies and findings to date.

Three basic schemes and the estimated cost for each were presented. Additional information on costs is to be secured from area contractors during his trip. The trip to Oklahoma State University has been very helpful to him in the design and planning.

A great deal of research and thinking has been done in an attempt to design an outstanding building. The proposed structure incorporates the features requested by the CPC and Mr. Janeway, and approved by the Board. Attempts have been made to provide the maximum in reader and volume space, and for future expansion in the proposed design. The climate of Lubbock had been respected in the design. A visit to and studies of the LSU Library have been very helpful. LSU has a new and very good library.

Also, a very great deal of thought and study has gone into the architectural style, which is in keeping with the modified Spanish Renaissance motif. The proposed style is a new variation for Texas Tech of the same type of architecture. He wants to and would like to prepare a written philosophy of the design which is a careful and delicate application of modified Spanish Renaissance.

The three separate schemes, deemed worthy as a refinement of the many schemes studied, were presented. Scheme A would provide two floors underground, one at ground level and two above ground. Scheme B and B-1 would have one floor in the basement, three above ground with the top floor being used for mechanical equipment, and one-story wings. Scheme C would have three floors, all above ground.

Mr. Pitts recommended that Scheme B-1 be considered as the most desirable.

Next, Mr. Pitts presented scale models of the three schemes. The models were discussed at length.

Mr. Pitts explained that the proposed loggia is needed to provide the contrast with the low ceilings, bright lights and stacks. It would have a higher ceiling and provide needed informal reading space in addition to attracting students to the library.

513. New Library (continued)

Revised cost estimates will be presented after the prices are checked with the contractors in the area.

He summed up the presentation by saying that a very great deal of architectural thought and study has gone into the orientation, effect on other buildings, style, function, flexibility, expansion and features of the proposed central building for the College.

President Jones dropped in for approximately thirty minutes at about 5 p.m. and received a brief report on the developments to date and viewed the studies and models.

The meeting adjourned at 6:10 p.m.

M. L. Pennington
Chairman

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

MINUTES OF THE CAMPUS PLANNING COMMITTEE

Meeting No. 41 June 18, 1959

A Called Meeting of the Campus Planning Committee was held at 3 p.m. on June 18, 1959 in Room 120 of the Administration Building. Members present were Mr. E. J. Urbanovsky, Mr. Nolan E. Barrick, Colonel C. P. West and Chairman M. L. Pennington.

514. Approval of Minutes

On motion by Colonel West and seconded by Mr. Barrick, the Minutes of Meetings Nos. 39 and 40 were approved.

515. President's Approval of Minutes

The Chairman reported that on June 18, 1959 President Jones approved the Minutes of Meetings Nos. 35, 36, 37, 38, 39 and 40.

516. Chemical Engineering and Nuclear Reactor Building

A. (No. 500-C, page 322) The Chairman reported that President Jones told him on June 18, 1959 that he would like to use Building Funds other than the Constitutional Building Amendment Funds to pay Convair-Fort Worth the \$30,000 fee for the development of plans and specifications for the reactor. If Convair should not be the successful bidder, it was agreed that no appropriation will be requested until bids are taken and the successful bidder is known.

B. (No. 500-D, page 322) The Chairman reported that President Jones told him on June 18, 1959 that he would like to use Building Funds other than the Constitutional Building Amendment Funds to pay the fee estimated at \$3,500 to Convair-Fort Worth for the expense to secure the construction permit.

Dean Bradford is requested to contact Convair, if he has not already done so.

517. Library

The Chairman reported that President Jones told him on June 18, 1959 that, since the Library is to be the outstanding, largest and one of the most important buildings on the campus, he would like for the Building Committee to pass on the proposed design as soon as possible in order not to delay the architect, or to cause him undue work.

The procedure was discussed and it was agreed that the architects are to have more specific plans by approximately July 15, 1959. These studies are to be sent to the College at that time and the Building Committee, the Librarians, the Campus Planning Committee and others will have a two-week period to look at them. The studies are to be returned to Mr. Pitts on or about August 1, 1959 with any suggestions for change. He would then have a bit over two weeks to further develop the plans for presentation to the Board on August 22, 1959.

517. Library (continued)

There is a possibility that there may be a special meeting of the Board of Directors during the summer. If the special meeting would coincide with the presentation of the studies on the Library, it is recommended that the Building Committee be requested to study the proposal at that time. If there is to be no special meeting of the Board, it is recommended that a meeting of the Building Committee be held as near July 15, 1959 as possible.

518. Other MattersA. Sewer Survey of West Engineering Area - Mr. Mason's letter of May 22, 1959 was discussed in detail. The letter is attached to and made a part of the Minutes. (Attachment No. 128, page 334)

1. The CPC recommends that Mr. Mason's suggestions on the Chemical Engineering and Nuclear Reactor Building be accepted, with the additional stipulation that the sewer line extension be part of the building contract.
2. The CPC recommends that Mr. Mason's suggestions on the Computer - Architecture Building be accepted with the added stipulation that the sewer connection be part of the building contract.
3. The CPC recommends that Mr. Mason's suggestions for the installation of the sewer line to serve the New Classroom - Office Building be accepted with the added stipulation that the line be routed to skirt a proposed future auditorium for the building and that the expense of the installation be paid from the amount budgeted for utilities.
4. The CPC recommends that the street crossing on Engineers Lane be protected with concrete beneath the paving.
5. Mr. Mason's recommendation that a modification of the sewer manhole be made, was accepted.
6. The CPC recommends that the contractor be asked for a credit to cover the originally proposed sewer installation and, in addition, an extra to reroute the line as Mr. Mason has suggested. After receiving the amount for the extra and credit, a decision will be made for acceptance or rejection. If his offer is rejected, the installation will be handled as a separate contract.

Mr. Barrick is to request the amount of the extra and credit from the contractor.

7. Mr. Mason is requested to begin the preparation of the plans and specifications for the installation.

The CPC wishes to commend Mr. Mason for another job very well done.

B. Proprietary Keyway Locks - The CPC discussed at length the report of Mr. Tom Hufford of the Schlage Lock Company. A copy of the report is attached to and made a part of the Minutes. (Attachment No. 129, page 335)

518. Other Matters (continued)

After a very thorough discussion, the CPC voted to accept the report as an operating basis. The system will provide a Grand Master, Building Master, Departmental Masters and Individual keys.

It was agreed that the locks for the Textile Engineering Addition and Classroom - Office Buildings will be ordered as soon as the number of locks is known.

- C. Old Heating Plant Sheathing - The proposal of Mr. James E. Walker for the installation of sheathing on the Old Power House was discussed in detail. The proposal is attached to and made a part of the Minutes. (Attachment No. 130, page 336)

After much discussion, the CPC voted to recommend the acceptance of Mr. Walker's offer to make the installation for the sum of \$23,120 providing the overhead door is included and the existing corrugated sheet metal would remain the property of the College. Mr. Barrick is to check on both items and, if Mr. Walker is in agreement, the Chairman is to request permission of the President and Building Committee to proceed with the installation.

The CPC is of the opinion that it will be cheaper by \$1,356 to make the installation while the contractor is on the ground, rather than to contract separately or have him come back to make the installation. It is not feasible to install the sheathing over the existing corrugated sheet metal.

The Chairman reported that President Jones told him on June 18, 1959 that he is in favor of providing the sheathing on the existing Power House and stated that he would prefer to use Building Funds other than the Constitutional Building Amendment Funds to defray the building costs.

- D. Paving of the Street between the Textile Engineering Addition and Heating Plant No. 1 from Engineers Lane to Akron Street - Mr. Urbanovsky presented the problem of drainage and service to the area without a properly paved street. A new transformer vault has been installed and a very great deal of difficulty is being experienced in keeping it dry. The street has been part of the overall drainage plan all along.

The CPC agreed that the paving should be done and requested Mr. Urbanovsky to check-out all phases of the proposed installation, including costs, and to report to the next meeting of the CPC. In addition, it was agreed that if the need still seems justifiable after Mr. Urbanovsky's report is made, the Chairman is to request the President and Building Committee of the Board to authorize the installation during the summer, in order to secure the installation with the least amount of delay.

- E. Paving Street from the Light on Flint Avenue East to the Academic Area - After thorough discussion, the CPC voted to recommend the paving of the area, subject to a complete study including the estimated cost by Mr. Urbanovsky.

518. Other Matters (continued)

It was agreed that, if Mr. Urbanovsky's study justifies the expenditure of funds, the Chairman is to request permission from the President and the Building Committee of the Board to make the installation during the summer as it will be very difficult to get by another year without a paved street.

- F. Area for the Civic Center (No. 506-B, page 325) - The Chairman reported that President Jones told him on June 18, 1959 that he would check with Dr. W. C. Holden in an attempt to determine the status of the proposed Civic Center as it will vitally affect the location of the Physical Plant Facilities. The CPC feels that the Civic Center should be north and east of the Physical Plant Facilities in order that it will not be in the midst of future expansion of the College.

519. Science Building.

A need to reactivate the studies of the proposed Science Building was discussed and Mr. Barrick stated that his staff will resume the study.

The meeting adjourned at 5:15 p.m. The next meeting is subject to call.

M. L. Pennington
Chairman

C O P Y

Campus Planning Committee
June 18, 1959
Attachment No. 128
Item 518A

TEXAS TECHNOLOGICAL COLLEGE
Lubbock, Texas

May 22, 1959

Office of College Engineer

Mr. M. L. Pennington
Chairman, Campus Planning Committee
Campus Mail

Re: Sewer Survey of
West Engr. Area

Dear Mr. Pennington:

At a January, 1959, meeting of the CPC, I was directed to make a study of sewer needs of the buildings to the west and north of West Engineering. The request followed the receipt of the quotation of \$1299.02, submitted by Mr. Duncan, for rerouting the line for the Classroom-Office Building.

It was felt that sufficient information would become known by late May, 1959, on size and permanent locations of Chemical Engineering-Nuclear Reactor Building and the Computer-Architecture Building to allow plans and specifications to be made of size and routings of the main sewer lines to serve the area in question.

A review of a utility drawing which I have prepared of the area with the buildings drawn in in their approximate final locations postulates the following:

1. Chemical Engineering-Nuclear Reactor Building will be located south of an 8 inch main sewer line and west of a 6 inch main sewer line. The building will be approximately 30 feet from either line, hence the contract for the building should include connections necessary to discharge its sewage into the nearby main, preferably the 8 inch main line to the north.
2. Computer-Architecture Building likewise has main sewer lines passing nearby; a 6 inch main some 85 feet to the north and a 6 inch main on the east which shall require some minor rerouting due to the building location. This building contract should include the work of connecting its sewer lines into the nearby main, preferably the 6 inch main line to the north.
3. Petroleum Engineering, X-12 and X-13 (as well as X-9, X-10 and X-11, until they are eliminated from their present locations) all discharge into the 6 inch main sewer line (which is the one listed in Item 1, above, as passing east of the Chem. Engr.-Nuclear Building, and also the one listed in Item 2, above, as passing north of the new Comp.-Arch. Building). In a discussion with the Plumbing Foreman a few days ago, I was told that the 6 inch line has had no stoppages since the kitchen of the Old Infirmary was deactivated several years ago, and that the line has proven itself to be entirely sound. Its size (6 inches) is ample to accommodate the new Computer-Architecture Building in addition to its present loading, plus any enlargement which may sometime be made of the Petroleum Engineering Building.
4. The 6 inch line out of the new Classroom-Office Building should be extended north some 110 feet to a point near the south side of the parking lot which is south of the Petroleum Engineering Building and west of West Engineering Building,

Mr. M. L. Pennington

May 22, 1959

page 2.

thence west to the corner by the Bookstore Annex, thence northwest, across Engineers Lane, to a sewer manhole in the existing 8 inch main sewer line. The total required run of this extension is approximately 325 feet. One sewer manhole, one clean-out riser, and the tie-on of sewer lines from new cooling tower and the Bookstore Annex would be required. The line should be 6 inch size throughout its length.

This routing is essentially the same as was used by the building contractor as the \$1299.02 estimate was made. I suggest a modification of the sewer manhole which was proposed. I also recommend the elimination of concrete on the street crossing since the line is more than 4 feet below grade, and the street is not a main thoroughfare at the point of the crossing.

I recommend that only the extension of the sewer line for the Classroom-Office Building be made at this time and that it be handled as a separate contract. I estimate the cost for such would be approximately \$1050.00.

Plans and specifications for this work could be prepared in my office in approximately two weeks time after date I am advised to go ahead with the work upon them. The specifications for the Classroom Building (General Conditions, page 11, Article 35) states, "The Owner reserves the right to let other contracts in connection with this work".

I had a discussion in 1957 and again on February 11, 1959, with City Engineer, Mr. John Hickerson, on additional sewage flow into the City's 9th Street main due to forthcoming buildings on the Texas Tech Campus. On each occasion he indicated that the 9th Street main could satisfactorily receive sewage from all Classroom-Laboratory type buildings the College would ever expect to locate on the northern part of the Campus.

I shall try to meet personally, and as soon as possible, with Mr. Urbanovsky and with Mr. Barrick, as directed by the minutes of the CPC meeting #20, for the purpose of going over my utility drawing of the area in question. I also invite the opportunity of making the presentation to the CPC at its earliest convenience. I estimate that unless the Classroom-Office Building has its sewer line completed by approximately July 1, 1959, the College may have complaints from the contractors.

Yours very truly,

/s/ Robert L. Mason

Robert L. Mason
College Engineer

cc: All members of CPC.

C
O
P
Y

Campus Planning Committee
June 18, 1959
Attachment No. 129
Item 518B

Branches in SCHLAGE
Principal Cities LOCK COMPANY Cable Address "SCHLAGE"
Executive Offices and Factory Telephone DElaware 3-1100
Bayshore Boulevard

P. O. Box 3324
San Francisco 19

June 15, 1959

Texas Tech. Univ.
Lubbock, Texas

Subj: Keying Plan for Campus

Attn: Col. West

Dear Col. West:

After conducting a survey on the campus regarding the establishment of a keying system, I have arrived at the following plan of approach which I submit for your consideration.

This is to be considered as a basic plan of approach, there may be exceptions, which we will try to accommodate, but I feel this below would be the way to proceed:

1. Establishment of campus GGMK for all locks on campus.
2. A Grand Master key for each building for all locks in the building.
3. Within each building, Master keys to operate all locks in a Dept., permanently housed in such building.
4. Where there might be several departments in the same building, one department will have jurisdiction over commonly used spaces. I feel this control should lie with the largest or dominant Dept. in the Bldg.
5. I strongly recommend that all general purpose classrooms in each Bldg., be keyed alike. Special purpose classrooms, labs, etc., to be keyed in with Dept. key that normally controls such spaces.
6. Under the MKeys set up for the Maint. and Custodial Dept., there will be one key which will be used for all custodial and maint., spaces throughout the campus. Where Maint., and Custod., have common interest both of them will operate locks to those common spaces.
7. Except for spaces used by Maint., food service areas, and possibly personnel areas, the dorms would not be put on the campus GGMK or use any restricted type keyways.
8. I strongly urge that every effort be made to key alike wherever possible.
9. I plan to work as much as possible with the department heads to establish the keying within their Dept.

I would appreciate it if you would advise all concerned on this plan, so if there is no objection we will proceed on this basis.

Respectfully submitted,

/s/ Tom Hufford

Campus Planning Committee
June 18, 1959
Attachment No. 130
Item 518C

JAMES E. WALKER & CO.

General Contractor

1501 Avenue G
Lubbock, Texas
Porter 3-4655

June 16, 1959

Mr. Nolan E. Barrick, AIA
Supervising Architect
Texas Technological College
Lubbock, Texas

RE: PROPOSAL

Gentlemen:

We wish to submit the following proposal for Alterations to the Heating Plant, Texas Technological College.

The work to be done includes removing the existing corrugated sheet metal on roof and sidewalls; re-working steel structure to receive one over-head door, two hollow metal doors and frames and one steel window; recovering walls & roof with color galbestos V-Beam sheets to match the new building for the sum of TWENTY THREE THOUSAND ONE HUNDRED TWENTY DOLLARS (\$23,120.00).

If three mechanically operated louvers and fans are installed for ventilation add the sum of FOUR THOUSAND EIGHT HUNDRED THIRTY TWO DOLLARS AND EIGHTY FIVE CENTS (\$4,832.85).

If electric fixtures in existing building are replaced with fixtures similar to ones called for in new building the price will be approximately SIXTEEN HUNDRED SIXTY SIX DOLLARS AND FIFTY CENTS (\$1666.50). This price depends on how the alteration is to be made.

Respectfully submitted,

/s/ James E. Walker

James E. Walker
JAMES E. WALKER & CO.

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