STUDENT ACTIVITIES CENTER FOR
BALL STATE UNIVERSITY
MUNCIE, INDIANA

THESIS PROJECT

BOOK I: PRELIMINARY STUDY

COLLEGE OF ARCHITECTURE AND PLANNING
BALL STATE UNIVERSITY
RONALD J. LAKE
May 12, 1971
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H - SITE ANALYSIS
Baylor State University, located in Waco, Texas, is a public research university with a diverse student body. The university is known for its strong programs in science, engineering, business, and the arts. Its initiatives are aimed at enhancing the educational experience for students and strengthening the academic programs. Baylor has a vibrant campus life, with a strong emphasis on community service and leadership development. Its location in Waco provides easy access to cultural, recreational, and professional opportunities in the surrounding area.
Concurrently investigate the existing student center facility.

1. Interview administrators, employees, and attendees to determine their satisfaction with the operation of the center for the student facility.

2. Determine what changes or improvements are essential to improve student satisfaction. Include determination of facilities or services that are in need of improvement and frequency or at all.

3. Conduct research to determine the effect of changes on attendance to improve satisfaction.

Concurrently investigate other social centers located in neighboring universities and any published material on student centers.

Conduct further investigation to study other facilities similar to what such a facility will truly represent.

Identify specific programs needed and propose a student center to be incorporated.

Select appropriate site according to environmental conditions of unique

Continue analysis of existing plan in addition to the various spectrum of the environment. Search for least impact solutions.

Prepare schematic representation of the new center or the relationship of the new center to the core campus environment in addition to the new center's relationship to core campus environment.

Implement with various physical improvements of the environment, considering user needs and design, materials, availability, etc.

And ensure physical design as early as possible before eventual civil construction.
STUDENT CENTER EXTENSION PLANNING COMMITTEE

BALL STATE UNIVERSITY
STATUS REPORT
OF
STUDENT CENTER BUILDING EXTENSION COMMITTEE

As the enrollment continued to expand at Ball State, it became apparent that by necessity the physical facilities should expand in proportion. The Student Center was no exception. However, the kind of business conducted in the Student Center has not necessarily increased in direct proportion to the increased enrollment. Therefore, no such rule of thumb can be applied for the automatic expansion of all areas.

The first phase of the L. A. Pittenger Student Center was constructed in 1951 when the enrollment was approximately 2843. Subsequent phases were constructed in 1958 for an enrollment of 5754 in 1959 for a student enrollment of 6243. Projected enrollment figures reveal that by 1980 enrollment will approach approximately 25,000 students which has helped prompt the need to plan for the future activities of the University.

A room on the main floor of the Administration Building served as a student gathering place equipped with bulletin boards and mailboxes prior to construction of the L. A. Pittenger Student Center. Needless to say, such facilities became outdated and were too small as the enrollment increased. Therefore, it was conceived that a building was needed to house extracurricular activities and other University based activities.
Since State funds are not available for such construction, it was necessary to include profit making areas to make the Building self-liquidating. However, most activities in the Building were and remain basically student oriented. With this original objective in mind there appears to be still further need for expanded facilities.

On November 18, 1967, the President appointed a committee to plan an extension to the Student Center Building with a budget of $1,250,000. The Committee was as follows:

- Elizabeth Crawford
- Robert Kershaw
- Kenneth LaRue
- Robert Linsen
- James Marine
- Dale Miller
- Robert Newton
- Robert Showalter
- Merle Strom
- James Langdon, President, SC Governing Board
- M. C. Beyerl, resource person
- Oliver C. Bumb
- Maurice Mann, coordinating members

Robert Linsen was elected chairman and Dale Miller was elected secretary. During the intervening years personnel changes have been made in the Committee. Edward Keil replaced Kenneth LaRue, Ray Peterson was added as a faculty representative, James Langdon has been replaced by the current President of the SC Governing Board and three additional student representatives were added.

All of the various areas housed in the Student Center were asked to submit space needs to 1980. Based upon that information the Committee arrived at the following priority of needs subject to budget restrictions:

1. Dining Service - centralized kitchen, customer self-service system for cafeteria and snack bar, expanded seating capacity for cafeteria and snack bar.
2. Student Programs - increased office space for students and staff - more general activities space.

3. Enlarged Ball Room

A centralized kitchen would help to reduce operating cost as well as provide convenience of operation and reduce square footage. It is the trend to provide customer self-service which helps to speed up the operation. Naturally, additional seating will be required if the prevailing trend continues.

Related to the increased enrollment is the demand for expanded student program activities. More student organizations are coming into focus which will require additional staff and office and meeting space.

Many large conferences, banquets, dances, and other activities have and will grow to proportions requiring expanded Ball Room space.

It soon became apparent that professional service would be required. Fulfillment of this request by the Board of Trustees was accomplished through the appointment of Walter Scholer and Associates, Architects; and Fred Schmid Associates, Food Facilities Consultants.

With the help of these two firms, planning proceeded on the development of alternate solutions for realizing the established priorities. Each solution seemed to exceed the budget, but still did not provide the most desirable space relationship for possible future expansion of programs. In response, the Architect and Food Facility Consultant developed four alternate master plans incorporating all of the projected programs submitted from each area. Cost figures were also included.

After careful review by the Committee, interested students and staff, an alternate master plan was devised by the Committee. No affirmative action was taken on any of the plans, but it was agreed
that further study should be made on locating some student activities
in a different building more near the center of campus.

The Committee directed James Marine to work with student represen-
tatives in developing a list of suggested facilities to be included in
a proposed student activity building (see appendix).

The lack of Committee action to proceed with definite planning in
any one direction has been precipitated by changing conditions in the
past two years. Those conditions are:

1. The sociological changes that have developed in the student
body have in turn had an impact on the environment, particularly
within the Tally Ho, that seemingly has caused a reduction in
use of that facility.

2. The reduction in revenue, particularly in the food service
areas, is incongruous with the increased enrollment.

3. The impact that the Lafollette Commons will have on the Tally
Ho is yet unknown.

4. The real need and desirability for additional student activity
facilities located more nearly in the center of campus has not
fully been determined.

5. The extended use of the facilities for other than student
oriented activities.

This report has attempted to outline the history of the Committee's
activities and give supportive rationale for its action. In conclusion
the Committee feels the Student Center has served the University well
and will continue to do so provided expansion and updating keeps pace
with the demand and growth of the University. However, with such
vacillating conditions the Committee has found it most difficult to
arrive at any quick conclusions.
June 5, 1970

President John J. Pruis
Ball State University
Muncie, Indiana

Dear President Pruis:

The Student Center Extension Planning Committee, appointed by former
President John R. Emens in the fall of 1967, has been meeting since that
time considering recommendations it might make toward remodeling, ex-
panding or creating a new student center facility.

A status report on the work of the committee is attached and, in an effort
to bring the committee's work to a conclusion, an effort was made to attain
consensus at our last meeting.

Here are the results of balloting at our June 1 meeting by the twelve
committee members present (10 faculty and staff and 2 students):

1. Apply the $1,250,000 on the present building realizing
the future need for a new student center activity
facility. 8 ballots

2. Apply the $1,250,000 toward construction of a new
student center activities facility located nearer
the center of campus. 4 ballots

We are submitting this majority and minority report because the Student
Center situation has changed drastically since the committee received its
initial charge of 1967, and you will note that both the final two
alternatives mention the possibility of new facilities. This concept was
not included in our initial committee charge, and it seems that we are now
moving outside the realm of our committee function.

It seems appropriate that this committee, then, offer to dissolve itself
as an administrative decision needs to be made as to future action in this
changing area. The individual committee members and the committee as a whole are at your future disposal as you may need us. Dale Miller, committee secretary, and Maurice Mann, director of campus planning, both have complete sets of committee minutes and background materials that may be of value for future individual or committee action.

Respectfully submitted,

[Signature]

Robert E. Linson
Chairman
Student Center Extension Planning Committee

Attachment: Background Report

c: All Committee Members
July 31, 1970

Dr. Robert E. Linson, Chairman
Student Center Extension Planning Committee

Dear Bob:

Some time has elapsed since your letter of June 5 relative to the "majority and minority" report from your committee relative to the planning of additional Student Center facilities. In part, time has elapsed because I have discussed the matter briefly on a couple of occasions with the Administrative Heads. All of us recognize that there are some severe problems facing us as we plan to accommodate the need for additional spaces for student activities and organizations and similar functions presently taking place in the existing Student Center.

While these problems are difficult, it is my hope that your committee could continue to wrestle with the various dimensions of this situation and come up with a recommendation. We have, of course, authorization to spend $1,250,000 for expansion of our present facility. We have also included a request for $3,500,000 for "Student Center extension" in our Capital Outlay Budget request to the forthcoming General Assembly. In all likelihood, this latter amount could be considered to be a new facility on another location though there is some question about the $1,250,000 in this regard.

It is my hope that the committee might address itself to the following questions:

What kinds of spaces might be included in an addition to the present building for $1,250,000 which would permit the development of spaces which could continue to be housed in the present structure at the south end of the campus?

What kinds of facilities could be provided in a structure to cost $3,500,000 and which would be located in the northern part of the campus which would serve the needs of the students who are housed and who have many classes in that area?
Dr. Robert E. Linson  
Page Two  
July 31, 1970

Should both dollar amounts be combined to provide expansion of the existing building?

Should an effort be made to combine these two dollar amounts for a new structure farther north on the campus?

If replacements for committee members no longer here are necessary or if you would like additional members appointed to the committee, I would be happy to discuss this with you.

Hoping that it will be possible for you and your fellow committee members to continue to work on this problem, I am

Sincerely yours,

John J. Pruis  
(President)

JJP:sla
SUGGESTED FACILITIES TO BE INCLUDED IN PROPOSED STUDENT ACTIVITY BUILDING

-Night Lounge (including adequate vending area)

-Union and Study Lounges

-Central Lounge (oriented to spontaneous activities)

-Club Lounge for Teas, Receptions, and other Formal Occasions (similar to Arts Bldg., West Lounge)

-Office and Work Space (including space for student services printing, etc.)

-Student Association
-Interfraternity Council
-Daily News (Editorial Office)
-Off-Campus Association
-Panhellenic Council
-Student Volunteer Services

-Floor Rooms (connected to Student Offices for Meetings)

-Which could be divided by relatively temporary partitions for student organization offices

-Type room for meetings and conferences

-Multi-purpose large activity-meeting rooms (200 seating capacity)

-Small smaller meeting rooms (20-75)

-Cultural Enrichment Center (including offices and facilities for Religious Programs, International Student Programs, and Special Programs).

-Kitchenette - one adjacent to large meeting room and one adjacent to
-Formal Lounge or one between the two rooms

-Kitchen - probably connected to Cultural Enrichment Center - where students
could prepare full meals

-Gallery - very flexible, adaptable area

-Reading Room (containing various periodicals, materials on student issues, hometown
-newspapers, other school papers, underground press, etc.)

-Cache area in main traffic pattern for student organization sales, drives, elections, etc.

-Information Center

-Dent Programs Office

-Students' lounge (extending hours passing in consultation with Information Center. Probably
-not as complete as present S. C. Recreation)
SUGGESTED FACILITIES TO BE INCLUDED IN PROPOSED STUDENT ACTIVITY BUILDING

<table>
<thead>
<tr>
<th>Facility</th>
<th>Estimated Sq. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-night lounge (including adequate vending area)</td>
<td>3,000</td>
</tr>
<tr>
<td>Television and study lounges and reading room</td>
<td>2,400</td>
</tr>
<tr>
<td>Informal lounge (oriented to spontaneous activities)</td>
<td>2,500</td>
</tr>
<tr>
<td>Formal lounge for teas, receptions, and other formal occasions</td>
<td>2,000</td>
</tr>
<tr>
<td>(similar to Arts Bldg., west lounge)</td>
<td></td>
</tr>
<tr>
<td>Students offices and work space (including space for student services, printing, etc.)</td>
<td>5,000</td>
</tr>
<tr>
<td>Student Assoc.</td>
<td></td>
</tr>
<tr>
<td>Interfraternity Council</td>
<td></td>
</tr>
<tr>
<td>Off-Campus Assoc.</td>
<td></td>
</tr>
<tr>
<td>Panhellenic Council</td>
<td></td>
</tr>
<tr>
<td>Daily News (Editorial Offices)</td>
<td></td>
</tr>
<tr>
<td>Student Volunteer Services</td>
<td></td>
</tr>
<tr>
<td>Seminar room(s) connected to Student Offices for meetings</td>
<td>640</td>
</tr>
<tr>
<td>Space which could be divided by relatively temporary partitions</td>
<td>2,000</td>
</tr>
<tr>
<td>for student organization offices</td>
<td></td>
</tr>
<tr>
<td>U.N. - type room for meetings and conferences</td>
<td>2,000</td>
</tr>
<tr>
<td>(2) multi-purpose large activity-meeting rooms (200 seating capacity)</td>
<td>3,000</td>
</tr>
<tr>
<td>Several smaller meeting rooms (20-75) (2)30 (1)50 (1)75</td>
<td>2,800</td>
</tr>
<tr>
<td>Cultural Enrichment Center (including offices and facilities for Religious Programs, International Student Programs, and Special Programs)</td>
<td>6,500</td>
</tr>
<tr>
<td>(2) Kitchenettes - one adjacent to large meeting room and one adjacent to formal lounge or one between the two rooms</td>
<td>100</td>
</tr>
<tr>
<td>(1) Kitchen - probably connected to Cultural Enrichment Center - where students could prepare full meals</td>
<td>100</td>
</tr>
<tr>
<td>Art Gallery - very flexible, adaptable area</td>
<td>1,500</td>
</tr>
<tr>
<td>Reading room (containing various periodicals, materials on student issues, hometown newspapers, other school papers, underground press, etc.)</td>
<td>1,500</td>
</tr>
</tbody>
</table>
Large area in main traffic pattern for student organization sales, drives, elections, etc. 5,500

Information Center 50

Student Programs Office 2,250

Bookstore (extended hours perhaps in association with information center.) Probably not as complete as present Student Center Bookstore. 10,000

51,440 a.s.f.

85,390 g.s.f.

Suggested facilities size and estimated cost-85,390 sq. ft. x $55/sq.ft. = $4,696,450

Present Student Center size 169,697 sq.ft.
<table>
<thead>
<tr>
<th>ROOM NO.</th>
<th>Lectures: Meetings, Films, etc.</th>
<th>PARTIES: Teas, Punch Hrs, Receptions</th>
<th>DANCES</th>
<th>DINING: Lunch - Dinner</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Off Campus</td>
<td>On Campus</td>
<td></td>
<td>On Campus</td>
</tr>
<tr>
<td></td>
<td>Times *No. Used Attndg</td>
<td>Times *No. Used Attndg</td>
<td>Times *No. Used Attndg</td>
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</tr>
<tr>
<td>B-1</td>
<td>10 234</td>
<td>361 12,292</td>
<td></td>
<td>3 225</td>
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<tr>
<td>B-2</td>
<td>6 201</td>
<td>360 12,235</td>
<td></td>
<td>3 90</td>
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<tr>
<td>B-3</td>
<td>8 101</td>
<td>313 6,163</td>
<td></td>
<td>3 95</td>
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<tr>
<td>B-4</td>
<td>9 116</td>
<td>343 6,548</td>
<td></td>
<td></td>
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<tr>
<td>B-5</td>
<td>27 141</td>
<td>369 4,478</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-6</td>
<td>7 72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-7</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>B-8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-9</td>
<td>2 80</td>
<td>46 2,968</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arcade</td>
<td>82 -</td>
<td>1038 -</td>
<td></td>
<td>30 510 106 2,900</td>
</tr>
<tr>
<td>Riley</td>
<td></td>
<td></td>
<td></td>
<td>5 200</td>
</tr>
<tr>
<td>Oak</td>
<td></td>
<td></td>
<td></td>
<td>14 4,850</td>
</tr>
<tr>
<td>Cafeteria</td>
<td>1 400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korina</td>
<td>2 40</td>
<td>314 4,814</td>
<td></td>
<td>56 678 29 390</td>
</tr>
<tr>
<td>Pine Sh.</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 103</td>
<td>5 95 5 133</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pine Sh.</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 103</td>
<td>3 74 4 105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pine Sh.</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 134</td>
<td>1 150 3 285</td>
<td></td>
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FISCAL YEAR...July 1, 1969 thru June 30, 1970
<table>
<thead>
<tr>
<th>ROOM NO.</th>
<th>MEETINGS: Lectures</th>
<th>STUDENT CENTER</th>
<th>PARTIES: Teas, Punch Hrs</th>
<th>DANCES</th>
<th>DINING: Breakfast</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Off Campus Times</td>
<td>On Campus Times</td>
<td>Off Campus Times</td>
<td>On Campus Times</td>
<td>Off Campus Times</td>
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<tr>
<td></td>
<td><em>No. Used</em></td>
<td><em>Attndg</em></td>
<td><em>No. Used</em></td>
<td><em>Attndg</em></td>
<td><em>No. Used</em></td>
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<td>-----------</td>
<td>---------</td>
<td>-----------</td>
</tr>
<tr>
<td>Bertha Orr</td>
<td>9</td>
<td>176</td>
<td>10</td>
<td>172</td>
<td></td>
</tr>
<tr>
<td>Ballroom</td>
<td>11</td>
<td>2,575</td>
<td>280</td>
<td>64,807</td>
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<tr>
<td>Ballroom Lounge</td>
<td>1</td>
<td>35</td>
<td>1</td>
<td>6</td>
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<tr>
<td>Alumni Lounge</td>
<td>2</td>
<td>750</td>
<td>16</td>
<td>2,550</td>
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<tr>
<td>Card. Hall 201</td>
<td>1</td>
<td>1,000</td>
<td>8</td>
<td>595</td>
<td></td>
</tr>
<tr>
<td>Card. Hall 202</td>
<td>2</td>
<td>3,200</td>
<td>8</td>
<td>1,310</td>
<td></td>
</tr>
<tr>
<td>Card. Hall 203</td>
<td>3</td>
<td>1,130</td>
<td>14</td>
<td>1,435</td>
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</tr>
<tr>
<td>Terrace Lounge</td>
<td>2</td>
<td>44</td>
<td>11</td>
<td>538</td>
<td></td>
</tr>
<tr>
<td>Forum</td>
<td>23</td>
<td>3,660</td>
<td>262</td>
<td>42,476</td>
<td>5</td>
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<tr>
<td>Forum Dining Rm</td>
<td>1</td>
<td>15</td>
<td>3</td>
<td>47</td>
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<tr>
<td>Terrace Dining Rm</td>
<td>30</td>
<td>379</td>
<td>91</td>
<td>967</td>
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<tr>
<td>Alumni Conf.</td>
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<td>379</td>
<td>91</td>
<td>967</td>
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<tr>
<td>301</td>
<td>31</td>
<td>954</td>
<td>248</td>
<td>12,248</td>
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<td>18</td>
<td>395</td>
<td>228</td>
<td>8,433</td>
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<td>304</td>
<td>89</td>
<td>721</td>
<td>308</td>
<td>3,840</td>
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<tr>
<td>305</td>
<td>42</td>
<td>1,220</td>
<td>268</td>
<td>8,043</td>
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<tr>
<td>306</td>
<td>34</td>
<td>1,026</td>
<td>224</td>
<td>8,447</td>
<td></td>
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</tbody>
</table>

FISCAL YEAR...July 1, 1969 thru June 30, 1970
<table>
<thead>
<tr>
<th>ROOM NO.</th>
<th>MEETINGS: Lectures/Films, etc.</th>
<th>PARTIES: Teas, Punch Hrs/Receptions</th>
<th>DANCES</th>
<th>DINING: Breakfast/Lunch - Dinner</th>
</tr>
</thead>
<tbody>
<tr>
<td>307</td>
<td>33 770 203 7,196</td>
<td></td>
<td>4 140</td>
<td></td>
</tr>
<tr>
<td>308</td>
<td>16 350 172 6,144</td>
<td></td>
<td>3 90</td>
<td></td>
</tr>
<tr>
<td>309</td>
<td>31 543 138 2,011</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>310</td>
<td>7 53 12 160</td>
<td></td>
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<tr>
<td>311</td>
<td>11 205 115 2,128</td>
<td></td>
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</tr>
<tr>
<td>Faculty</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd Floor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guest Entrance</td>
<td>4 500 9 225</td>
<td>5 220 34 2,685</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H'age.</td>
<td>3 350 297 12,630</td>
<td>5 1,290 3 532</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>521 20,985 6,086 237,178</td>
<td>61 6,740 189 23,632 108 6,316 95 24,570</td>
<td>400 21,573 699 34,139</td>
<td></td>
</tr>
</tbody>
</table>

*Number as it appears on requisition
**Times Used = Sessions Used

FISCAL YEAR...July 1, 1969 thru June 30, 1970
THESIS LOG

Signatures of Faculty or Consultants  

Date:  

Consultation Time  

Notes:

Student center established with bonds (pay off and break even) supported by different businesses. Students given priority in scheduling space approx. 50¢ per student from fees going for student union.颚

Takes care of some student activities. Feels a theater type space is needed for student sponsored films, etc. More dining & meeting space is needed. Larger dining & hotel needed. Suggested to consult with:

Dr. Bumb  
Dr. Jim Marine  
Miss Kitten  
Miss Crawford  
Mr. Foster  

Physical Planning  
Director of Student Affairs  
Bookstore  
Dining Services  
Special Services  
Barber shop
COLLEGE OF ARCHITECTURE AND PLANNING
Ball State University
Muncie, Indiana

THESIS LOG

Signatures of Faculty or Consultants

Date: September 23, 1970
Consultation Time ½ hrs.

Notes:
hotel: 25 rooms presently, could use 100 more
hotel is good income producing area
reasons for use of hotel: interviews, placement, friends, special
weekends, candidates for faculty jobs, orientation
better than 70% occupancy
booked for homecoming 2-3 years in advance
bookstore is main revenue producer in student center
2 sq. ft. per student is standard figure (16,000 at B.S.U.)
presently about half as much as needed
could remedy with scheduling or moving existing facility
bond money is necessary for a new building or public money
quoted approx. $37 per year of fees go to student union at
I.U. and P.U. opposed to 50¢ at B.S.U.
1½ million dollars is presently available for student center expansion
3½ million dollars would be needed for a duplicate facility in
a different location.
not a complete duplication of existing facility
new facility located near center of campus
for reasons of convenience and increased involvement
emphasis of existing facility would shift to primarily conventions
from outside with main cafeteria, a snack bar
he suggests that the main bookstore remain as is with a branch
located in the new centralized facility - revenue is needed for
existing. structure & what would space be used for if moved?
shift student offices, increase meeting space, branch bookstore
contact is a needed aspect for student facilities
a facility for student movies, etc. would be a duplication of
other future plans.
he was in minority to get new facility immediately
the committee agreed unanimously, however, that any new facility
as discussed by the committee should be located in center of
campus (approx. where Dr. Bumbi house is presently located)
suggested consulting with:

Bruce Kosaveach  Pres. of Student Center Gov. Board
THESIS LOG

Signatures of Faculty or Consultants

Date: September 24, 1970

Consultation Time $\frac{1}{2}$ hrs.

Notes:

location of such a facility should be at center of campus - she suggested that original center be located where emens is now need 4 times existing space entire bookstore should be moved, not merely a branch established originally started with 18,000 sq.ft., was chopped to 14,800 to make room for dining, tally, etc.
could use 40,000 sq.ft. 25,000 sq.ft. of floor space an open floor arrangement is much more desirable
ideally, all bookshelves should be 5 ft. high (approx. eye level)
need 3 more private offices & large office space 2 times size of existing special area that is more accessible to customers
would like books on one level - supplies on another level - books on level different than storage and receiving because easier to transport books come in bulk 2 separate entrances 18 registers at peak times - convert to display during other times
can trap at main entrance so don't come right in from cold 10 trucks a day & 4 mail trucks deliveries are always made during working hours could use 3 to 5 docks, 3 times as wide
COLLEGE OF ARCHITECTURE AND PLANNING

Ball State University

Muncie, Indiana

THESIS LOG

Signatures of Faculty or Consultants

Date: September 24, 1970

Consultation Time ½ hrs.

Notes:

Information on committee meetings gave me letters concerning progress and decisions of committee. Agreed with central location for student activities facility. Ball State plans to expand existing facility first. Landed booklet on survey of existing dining facilities. Suggested that I should obtain a complete file of minutes on committee meetings from Mr. Dale Miller who was secretary to the committee.
Notes:

Miss Crawford:
right now only a vending area is needed due to tally (snack bar in
existing student center) and dorm snack bars (Studebaker, LaFollette)
currently 350 chairs in tally
food deliveries are all made during working hours of the day
need dock service entrance, stock storage, kitchen
suggested to see Miss Nicholson since she designed the new snack
bar in LaFollette Hall.

Miss Nicholson:
2 main considerations: a) who is customer  b) what kind of menu
from these one plans the facility
suggests a free-flow complex or "hollow square" similar to
arrangement existing in snack bar in LaFollette Hall
moves faster, freer, personalized service included at rear
need preparation backup area & larger dining area, since service
is considerably quicker
lended plan of snack bar at LaFollette for a reference
registers in front, quick things on sides, personalized service in rear
and misc in middle - basic layout
Mr. Robert Newton
Economics Admin.
committee member
Ball State University

THESIS LOG

Signatures of Faculty or Consultants

Date: September 28, 1970

Consultation Time ½ hrs.

Notes:
in Indiana one needs money other than tax money to finance a new building such as this new student activities facility under consideration.
one either already has it or borrows it with interest utilities are supplied by university fee (which consists of heat here at BSU. only) the building must support additional utilities itself changing market of students, don't want and need the same things as students before bookstore is by far the main income producer for existing facility would have to get permission from bond holders to move it and revenue would most likely be replaced with student fees the guest hotel and various recreation facilities help some but don't really hold up much. dining also only 1,250,000 dollars has been appropriated for expansion of new union he does not believe that students at I.U. and P.U. pay as much as $1.37 per year out of fees for their student union he questioned the central location of all facilities included in a student union — but feels a place is needed for students to "bitch and let off steam" which could be in the center of activity
EXPLAINED future plans for campus of B.S.U.
plans will be carried out very much in conjunction with the
proposals of the Perkins and Will plan
the most immediate projects are for the most part located in
the "central" area of the existing campus plan
this includes:
- a new library located directly behind Emens auditorium
- university hall - a facility containing a theater type space with
  some lecture space to supplement emens and little theater
  this will be located behind emens near the north-east corner of emens
- expansion of radio / T.V. facilities - additional structure added on
to the northeast corner of emens
- central parking structure - located between Noyer Hall and Woodworth
  Hall on existing parking lot.
Future academic complex of buildings forming some sort of a
square around an open space which already exists between Emens,
McKinley St., Noyer Hall, and the new Architecture building
that is currently under construction at the corner of McKinley St.
and Neely Ave.
COLLEGE OF ARCHITECTURE AND PLANNING
Ball State University
Muncie, Indiana

THESIS LOG

Signatures of Faculty or Consultants

Date: October 7, 1970
Consultation Time ¼ hrs.

Notes:

Subject - proposed auditorium space intended to supplement Emens
proposed 800 seats
one large space, no adjoining lecture spaces or sub-spaces other
than usual, (rest rooms, lobby, ticket office, etc.)
meant to be a total university facility
for: student gov. film series, recitals, televised productions, lectures,
some conference meetings, an organ will be installed
financed from same funds available for student center type facilities
money could not be used for classroom or administrative office
space

1 million dollars are appropriated

criteria for proposed location are:

• close relationship to music and television facilities (tunnel from
emens so students can go for recital without exposing their
instruments

• located to the east side of the back of emens so as not to
destroy the proposed open area between emens and the new
library facility
he agrees on possibilities of overlapping with student activities center
COLLEGE OF ARCHITECTURE AND PLANNING
Ball State University
Muncie, Indiana

Mr. Shaller
Assoc. Professor
College of Architecture
Ball State University

THESIS Log

Signatures of Faculty or Consultants

Date: December 17, 1970

Consultation Time 3/4 hrs.

Notes:
understands process to this point
agrees with primary objectives
recognizes problem of expressing these objectives and design factors in
physical form
suggested that my approach to structure & space is too rigid and with
a "limited vocabulary."
look at problem in terms of entire earth system
limiting myself to grid system involving line and rectangular plane only.
look around and recognize the range of different forms that exist —
naturally and man-made.
think in terms of human scale - easily manipulated spaces
grid system OK, but introduce other forms
determine what spaces would work well in what kind of form
design a "kit" - easy of construction, expansion, connection to existing
possibly a "warehouse" within facility to store parts for system

• sketches & diagrams on
another sheet →
COLLEGE OF ARCHITECTURE AND PLANNING
Ball State University
Muncie, Indiana

THESIS LOG

Signatures of Faculty or Consultants

Date: December 17, 1970
Consultation Time 3/4 hrs.

Notes:

1. line
2. rigid
3. skin
4. solid
5. amorphic

becomes easy
architects to
only of this
"just talk

changing
growing
unify existing

1 1 1

color

texture

finish

edge

SIMULTANEOUS
April 2, 1970

Dr. Oliver C. Bumb
Vice President for Development
Ball State University
Muncie, Indiana 47306

Dear Dr. Bumb:

We are pleased to submit herewith the "Supplemental Report - Comprehensive Campus Development Plan", in fulfillment of our agreement with Ball State University, dated February 19, 1969, under which we have performed certain professional planning services for the University campus. This Supplemental Report represents a series of studies dealing with specific areas and aspects of campus development based on policies and standards established in the prior planning period and set forth in the "Phase I Report - Comprehensive Campus Development Plan" dated October, 1968. These studies, including background materials and alternative solutions, are herein assembled in "workbook" form so that changes may be made and subsequent actions incorporated by inserting additional pages.

The principal intent of these studies has been to analyze in considerably greater detail than was appropriate to the Phase I Report certain critical problems requiring immediate action in order to properly guide the physical growth of the University during the next several years.

We are indeed pleased to be able to record in this Supplemental Report, a number of extremely important actions which have been taken by the Master Planning Committee of the University, establishing clearly-defined policies in accord with recommendations presented by your planning consultants. These policies form the essential basis for implementing forthcoming campus improvements particularly those involving vehicular and pedestrian circulation, parking and the location of the proposed new library and other urgently needed instructional facilities.

Our participation in formulating the plans and establishment of policies has been a professionally challenging and rewarding experience, and we wish to express our deep appreciation for the guidance, stimulation and assistance we have received from the Master Planning Committee, and the many public officials and private citizens in the Delaware-Muncie community.

Sincerely,

THE PERKINS & WILL PARTNERSHIP

[Signature]
George A. Hutchinson, Partner
SUMMARY OF FINDINGS

- Develop a vehicular free pedestrian zone from the south quadrangle area to the gymnasium.
- Develop an outer loop of arterial roads to carry non-Ball State traffic around the campus.
- Develop a Ball State-oriented inner loop for intra campus traffic and service.
- Provide parking facilities for approximately 17,000 cars by 1980 (25,000 student enrollment)
- Provide parking facilities in central portion of campus for faculty, staff, and visitors.
- Develop a campus shuttle bus service.
- Locate proposed new library facility directly north of Emens Auditorium.
- Develop projected new academic facilities around a major space located north of Emens Auditorium.
- Develop area around Cardinal Creek Pond for passive recreation and court sports.
- Relocate proposed central receiving facility to east portion of campus in the vicinity of Bethel Pike.
- Retain basic recommendations of Phase 1 report for land use north of Bethel Pike but modify distribution and proportions.
- Acquire additional property in three priority zones.
- Undertake a study of campus recreational requirements.
- Adopt as University policy those goals and concepts which reflect the major ideas of the Supplemental Report.
- Create a committee (or committees) specifically responsible for plan implementation and coordination with local governmental agencies.
SUMMARY OF PLAN RECOMMENDATIONS
GOALS AND OBJECTIVES

This planning effort is geared to the achievement of certain goals and objectives. These aims relate not only to Ball State, but to its environment--Muncie, Indiana, The United State of America. Many of these goals are obvious, but they deserve restating because they underlie virtually all the decisions made of the development of the concepts.

The goals and objectives set forth relate generally to the limits of this planning activity. They are broadly grouped in five categories and are listed, although not necessarily in order of priority.

ENVIRONMENTAL DESIRABILITY

It is the intention of Ball State University to create an environment for education and student life that is pleasant, healthful, responsive, and reflects the educational philosophy of this institution.

The achievement of this goal requires an appropriate balance of open space and physical development. It implies a recognition of man in terms of the scale of development. It further requires that a development be compatible with the surrounding environment and contain a variety of places to serve diverse needs. The results of activities towards this objective should reflect the identity of the institution.

A desirable environment requires the minimization of deleterious effects. To the extent possible, planning should eliminate or neutralize all forms of pollution. This would not only include combating the pollution of air and water and the upsetting of ecological cycles, but also visual blight and noise of urban living.

CONVENIENCE AND EFFICIENCY OF CIRCULATION

It is the intention of Ball State University to provide a campus circulation system which insures vehicular access and service yet provides for pedestrian convenience and pleasure. This system should be appropriately designed to respond to the needs of its users.

To effect the desired results will require a system which minimizes travel times and distances for both pedestrians and vehicles, and places routes and facilities in appropriate locations. With the proposed scale of the Ball State campus, all forms of transportation should be considered to serve its needs. The movement system of Ball State University must be adequately sized to meet its ever-expanding requirements.
SAFETY

It is the goal of Ball State University to create a safe environment for all campus users, both drivers and pedestrians. To achieve this goal the plan should minimize points of potential conflict and maximize the clarity of the system.

ECONOMY

It is the goal of Ball State University to create a development plan responsive to its economic capabilities. This will require maximum flexibility in terms of capital commitment. It will further necessitate that expenditures for non-essential facilities be minimized or reallocated in response to priorities. Inherent in this philosophy is the need for economic efficiency.

COMMUNITY RELATIONSHIP

It is the goal of Ball State University to create an environment that is beneficial to the institution and the community. This will require communications and coordination with the community to assure compatibility of concepts and minimize areas of conflict.
PEDESTRIAN CIRCULATION

SITUATION ANALYSIS

The present pedestrian circulation system at Ball State University is generally related to the existing vehicular system. In many cases, the "sidewalk" parallels the road even though there is no meaningful relationship in use patterns. The result is a system that is often unattractive and in some cases, unsafe.

With the exception of the quadrangle area, most walkways are typically unattractive and are generally not designed for pedestrians in terms of textures, definition, scale and accouterments. There are few examples of appropriate signage, lighting or furniture.

The mixing of pedestrians and vehicles at intersections or other points of crossing creates generally unsafe conditions. Sidewalks abutting streets are also undesirable from the point of view of safety, although not to the same extent as crossings.

The growth of Ball State has also extended the pedestrian travel distances. As projected developments are undertaken, this problem will be compounded. Pedestrians cannot traverse these distances within the between-class intervals.

RECOMMENDED CONCEPT

A vital part of any viable comprehensive circulation system is adequate provision for pedestrians. In addition to being functional, this aspect of the system must be concerned with safety and environmental quality.

The safest system for pedestrians is one which separates their patterns from those of vehicles. As part of the inner loop concept, vehicular traffic skirts main pedestrian flows and minimizes the points of conflict.

Creation of a vehicle-free zone also provides the opportunity to develop a pedestrian-oriented environment. A pedestrian-oriented environment implies a scale, flow, and texture geared to the walker. Signage, planting, furniture, and materials should be chosen based upon usage by man, not cars. Further definition of the environmental design will partially occur in conjunction with the planning and development of new instructional facilities.
OVERALL SYSTEM

The recommended pattern of pedestrian movement is based on the concept of dual foci. One focus is the present quadrangle and the other will be created in the area north of Emens Auditorium. They will be linked by a pedestrian walkway system. Each area would have its own identity, although there would be a similarity of scale.

Another element of the pedestrian circulation system is the development of a supplementary movement system, (bus system) discussed in more detail in the section on parking.

NORTH ACADEMIC ZONE

This exterior circulation concept is strongly related to the user demand patterns. Points of entry, and travel routes are related to the dormitories, the gymnasium-parking facility, and the circulation artery to the existing quadrangle.

The major focal point of the system is the space created by the new academic facilities. This area should be considered as an informal, landscaped area which will serve as a contrasting texture to the enclosing buildings. Some paved plaza areas could occur, but it is important that it not become a vast sea of concrete.

Existing grades should be retained or slightly modified if required. This will maintain the same general relationship to existing buildings and underground utilities.

As in the vehicular system, the closing of Riverside is an important aspect of pedestrian circulation. This street closing permits the unimpeded flow from the quadrangle to the area north of Emens Auditorium.

If closing is delayed or prevented, a number of alternates are possible. The first is merely retaining the crossing at grade, but resignalling to extend the crossing interval. With the elimination of McKinley (which is presumed to be achievable) there will be no vehicular turning movements to confuse the patterns. Adequate buffering would be required to restrict pedestrian crossing points to signalled areas. This solution would be a marked improvement over the present situation, but would not be as desirable as some form of separation. This would, however, require a minimum expenditure of capital funds.

The second recommended alternative would be to create a pedestrian underpass beneath Riverside. If properly handled this solution would retain the visual continuity of the campus yet would have the inherent safety of a grade separation. This scheme additionally retains an on-grade circulation pattern. A detailed analysis of these and other alternatives appears in the appendix.
RECOMMENDED CIRCULATION SYSTEM

8. PEDESTRIAN
VEHICULAR CIRCULATION

SITUATION ANALYSIS

One of the major characteristics of the traffic and circulation problem at Ball State is that through-traffic traverses the campus at critical points. East/west streets such as Riverside, University, and to a lesser degree, Petty-Neely, are carriers of traffic destined either for downtown or the western zones of Muncie. McKinley Drive, which serves as a connector from Bethel southward, also is a carrier of unnecessary through traffic.

Through-traffic, with its generally higher speeds, is intermixed with local traffic, resulting in congestion and safety problems. The most critical point is the intersection of Riverside and McKinley. Through-traffic on Riverside, intra-campus traffic on McKinley, turning traffic from both streets, and the student body attempting to cross, generates an extremely hazardous condition. While there are signals at this location, they are not adequate to cope with the magnitude of the problem. Students cross not only with the light (which often is not of sufficient duration), but they also cross at other spots along Riverside and occasionally against the light. Considering the flow of traffic in this location, it is amazing that many students have not been seriously injured.

Also contributing to campus congestion is the inadequacy and inappropriate distribution of parking. This results in cars flowing into traffic patterns at the wrong locations, intermixing of vehicles and pedestrians, and restrictions of street capacities due to on-street parking.

Congestion at certain critical points on campus is also related to the functions of certain buildings. The Student Union, Emens Auditorium, and athletic facilities, because of their functions and lack of appropriate parking facilities, are such sources of congestion.

The last aspect of the problem but certainly not the least is the total number of cars on campus. Large numbers of cars in a restricted area require an organized system of movement to assure proper functioning. At present, without any organized system, these cars are thrust into the central portion of the Ball State campus and their sheer numbers cause congestion and safety problems. Air pollution, noise, and visual blight are also increased in direct proportion to the total number of cars in a particular area.
EXISTING CIRCULATION SYSTEM
RECOMMENDED CIRCULATION SYSTEM
DESCRIPTION OF RECOMMENDED CONCEPT

The recommended concept is composed of two basic elements—an outer loop system and an inner loop system. Both are necessary for the ultimate functioning of the total system.

OUTER LOOP

The function of the outer loop system is to carry traffic around the Ball State University area. It should ensure the smooth flow of vehicles headed to other destinations. Additionally, the outer loop should provide a quick and effective means of egress from the campus area to the Muncie traffic system.

The establishment of the outer loop system will require a number of actions. It will require improvement or widening of the following:

1. Tillotson and its connection to Everett.
2. Bethel Pike and its extension to Centennial.
3. One of three possible streets in the southern section of the campus:
   a. Gilbert street from Tillotson to White River Boulevard. This selection would require major improvement and widening of what is presently a local residential street. While it could be well related to an existing bridge its extension eastward may present circulation difficulties.
   b. University Avenue - The improvement of this artery would probably destroy the commercial area immediately east of Ball State University ("The Village") University is not well related to any existing bridge and would require routing along Wheeling Avenue to cross the White River.
   c. Jackson Street - This route, even though it is presently undersized, provides a continuous right of way across town. It is presently served by a bridge, which may require expansion. This route appears to be the most feasible for consideration as part of the Outer loop at this time.
It will additionally require some form of improvement or adjustment of usage to New York Avenue (Between Bethel and Riverside) and Dicks (south of Riverside). These rights-of-way may close the loop or simply funnel traffic from Bethel, Riverside, and Jackson. The exact form that this segment takes is dependent upon the conclusions of the Muncie comprehensive plan.

Improvements to Bethel and to a portion of Tillotson are presently programmed for action. The "loop" concept also relates well to proposals for an arterial system which could form a ring around most of the city. This system may include McGalliard and Tillotson. At this point, there appears to be no major element of incompatibility between the objectives of Ball State University and the City of Muncie.

Development of the outer loop will have to occur in stages. This will allow for changes in use patterns and for improvement to parts of the system. Initially, changes in signage and control can be utilized to force certain traffic off of Riverside and onto Jackson or University. By reducing the amount of traffic on Riverside, total or partial closing can be affected more easily.

INNER LOOP

The basic concepts relating to the development of an inner loop system are:

1. Ease of access to any portion of campus on a controlled route.

2. Separation of vehicle and pedestrian traffic and the creation of vehicle-free zones.

3. Unification of the diverse portions of the campus and the creation of a total sense of identity.

The inner loop development process is more directly under control of the University, since most of it occurs on B.S.U. property. However, even though some initial steps can be taken in the creation of the inner loop, it cannot be fully functioning until a viable outer loop is developed.

The following activities are required to develop an inner loop system:

1. Street closings:

   a. McKinley from Petty to south leg of Gilbert.
b. Riverside, in the vicinity of McKinley.

c. Petty-Neely, within campus boundaries.

d. Portions of University from Talley to Calvert. (assuming it is not designated as south leg of outer loop).

e. Cul-de-sacs or stop signs at miscellaneous locations.

2. The construction of new roads or improvements to certain existing segments will also be required in the completion of the loop. The exact configuration of the loop can be quite flexible. However, the general segments required are as follows:

a. North-south segment along east side of campus from vicinity of gymnasium to Riverside.

b. North-south connection from Riverside along Calvert to Gilbert.

c. East-West segment along Gilbert-University from Calvert to vicinity of physical services building.

d. North-south segment between University and Riverside west of present quadrangle area.

e. North-south leg along west edge of campus from Riverside to Petty.

f. East-west segment of loop from vicinity of La-Follette Halls to east side of gymnasium.

Much of this development can be tied to other activities of the University. Land acquisition programs for parking and new facilities can assist in the creation of this loop. Sections of new roadway and improvements to existing roadways can be accomplished in conjunction with other University building projects.

The ultimate configuration of the Ball State circulation system will be largely dependent upon the conclusions of the Muncie comprehensive plan and the community's response to it. Due to delays, data collection for this planning effort will probably not begin until spring of 1970 (at the earliest).
This means that it will probably be spring of 1973 before the total planning effort is complete. Until the transportation segment of that plan is completed, only preliminary steps can be taken to create the Ball State System. This is primarily due to the relationship of the outer loop to the total Muncie system. However, certain preliminary actions, such as added signals on Riverside or closing McKinley south of Petty, can be initiated now.

Capital requirements for the development of the inner loop are most difficult to project. The exact configuration, the increments and timing of development, all influence the ultimate cost. However, a preliminary estimate can be made based upon present costs and recommended route.

The concept as illustrated would require approximately 5,500 linear feet of new roadway. At the present rate of $50/linear foot this would generate cost of $275,000. (including lighting, curbs and drainage). Improvements to existing rights-of-way should cost $125,000. The estimated total in 1969 dollars would be $400,000. (See Capital Requirements Chart)

The Ball State circulation system should not be viewed as a rigid, inflexible plan. It must be understood that it is a series of principles and development guidelines which can be adjusted in response to a variety of situations. The manner of staging, and to a degree, the exact route should be fixed only at the time implementation occurs.

One critical element deserves special attention. That is the willingness of the city to vacate a portion of Riverside. This is strongly tied to the comprehensive plan recommendations and the prevailing political attitudes in the city. The question that is obviously raised is, what alternative courses of action are available if the city delays or vetoes the closing of Riverside?

An acceptable alternate position would be the creation of two smaller loops, each intersecting Riverside as illustrated in the following exhibit. An alternate pedestrian solution is discussed in the section on Pedestrian Circulation.

This alternate has many of the same characteristics as the recommended concept. It does not create the same sense of identity, however, and signals would have to be provided at the Riverside intersections. This alternative could be satisfactory as a long-term solution or could easily be converted to the primary scheme when politically feasible.
## STUDENT - STAFF - FACULTY

### Parking Requirement Estimates
(Based on Current Policies)

<table>
<thead>
<tr>
<th>Rated Year</th>
<th>1970</th>
<th>1975</th>
<th>1980</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Students</td>
<td>15,000</td>
<td>20,000</td>
<td>25,000</td>
</tr>
<tr>
<td>Population</td>
<td>Cars</td>
<td>Population</td>
<td>Cars</td>
</tr>
<tr>
<td>Undergraduates</td>
<td>12,000</td>
<td>15,000</td>
<td>18,700</td>
</tr>
<tr>
<td>Meters @ 25% U</td>
<td>3,000</td>
<td>3,750</td>
<td>4,700</td>
</tr>
<tr>
<td>W/l use 20% T</td>
<td>3,000</td>
<td>4,000</td>
<td>5,000</td>
</tr>
<tr>
<td>Graduates</td>
<td>3,000</td>
<td>5,000</td>
<td>6,300</td>
</tr>
<tr>
<td>Meters &amp; Users @ G</td>
<td>1,800</td>
<td>3,000</td>
<td>3,780</td>
</tr>
<tr>
<td>All Student Cars</td>
<td>7,800</td>
<td>10,750</td>
<td>13,480</td>
</tr>
<tr>
<td>Including Mernity &amp; Cycles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty @ 1:16st</td>
<td>940</td>
<td>1,250</td>
<td>1,560</td>
</tr>
<tr>
<td>Mated Daily Users</td>
<td>700</td>
<td>940</td>
<td>1,170</td>
</tr>
<tr>
<td>If @ 1:11st</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Same 90% on day shift</td>
<td>1,360</td>
<td>1,815</td>
<td>2,270</td>
</tr>
<tr>
<td>Of total drive</td>
<td>800</td>
<td>1,060</td>
<td>1,330</td>
</tr>
<tr>
<td>All Campus Population</td>
<td>17,300</td>
<td>23,065</td>
<td>28,830</td>
</tr>
<tr>
<td>All Cars On Campus</td>
<td>9,300</td>
<td>12,750</td>
<td>15,980</td>
</tr>
<tr>
<td>Parking Available**</td>
<td>4,850</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assumption: 100% of these undergraduates reside on campus.

Includes new 500 car facility south of Christy Woods
The central zone of the campus has a restricted potential in terms of parking development. This is not only due to considerations of economics or displacement, but simply to a lack of available, suitable locations. Placing parking within the campus area would necessitate the relocation of other facilities. This in turn would fragment and spread the pedestrian portions of the campus. In addition, the placement of cars in the heart of the campus would tend to reduce the environmental quality.

A basic assumption of the recommended scheme is that no student parking will occur in the central campus area. Certain exceptions, such as handicapped students and evening students, would be allowed to park on campus. This assumption has two implications:

1. One or more major facilities will be required totaling approximately 13,000 cars. This assumes a dual usage of at least a portion of the facility for stadium events. Total acreage required would be approximately 110 acres.

   The breakdown of users by type indicates approximately 8,000 cars for short-term and long-term storage and 5,000 cars daily parking for commuters. (The commuter facility could well serve a dual use for the stadium.)

   The only location, presently vacant, owned by the University, and sufficient in size for these facilities is north of Bethel. Therefore, it is recommended the facility be located there. However, if land could be acquired south of campus, it would be desirable to locate a portion of the parking there. This would improve geographic distribution, minimize traffic concentrations and work more efficiently with a shuttle system.

2. Some shuttle system, primarily for commuter use, is required to bring students to the central portion of the campus. This may indicate a bus, mini-bus, conveyor, mono-rail, or other mechanical movement system.

Parking for visitors, staff, and faculty is located in or near the central portion of the campus. It is recommended that six prime facilities*, with a total capacity of approximately 3500 cars, be provided. These facilities would be augmented by a number of small, dispersed lots which would serve the daily needs of some faculty and staff. Most of these lots will be existing facilities that are retained.

*Includes existing 600 car facility south of Christy Woods.
Parking capacities for this area are projected from data on current staff/faculty occupancy of buildings. The total allows for 100% of faculty and staff requirements and additional provision for visitors and special uses.

The following maps indicate the volume and distribution data and the recommended parking development scheme.

In addition to vehicles operated by faculty, staff and students, parking is also required for non-university users. This would include visitors, business agents, deliveries service, or people attending meetings or events. Some of this parking would occur at times when it would not conflict with other uses. For example, events at Emens Auditorium during evenings or on weekends would not conflict with the daily requirements of the area. Other potential multi-use situations exist in relation to the football and basketball facilities. As long as the necessary volume of parking is available to the generating facility at the appropriate time and it does not conflict with other uses, then it will not require an increase in total capacity.

NON-CONCURRENT SPECIAL USE PARKING GENERATORS*
(PRIMARY USE IN EVENINGS AND ON WEEKENDS)

<table>
<thead>
<tr>
<th>Facility</th>
<th>Estimated Parking Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Center</td>
<td>250</td>
</tr>
<tr>
<td>Emens Auditorium</td>
<td>950</td>
</tr>
<tr>
<td>Auditorium/Lecture Fac.</td>
<td>200</td>
</tr>
<tr>
<td>Gymnasium</td>
<td>400</td>
</tr>
<tr>
<td>Stadium</td>
<td>1,000</td>
</tr>
<tr>
<td>Evening Students</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Other locations on campus generate special use parking requirements during normal school hours.

Facilities such as the student center, administration building, and library attract substantial numbers of visitors during school hours. These spaces must be added to the total number required. The following chart indicates the estimated visitor requirements for these key facilities.

* Does not include staff or faculty normally in the facility.
CONCURRENT SPECIAL USE PARKING GENERATORS *
(PRIMARY USE DURING WEEKDAYS)

<table>
<thead>
<tr>
<th>Facility</th>
<th>Estimated Parking Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Center</td>
<td>300</td>
</tr>
<tr>
<td>Administration</td>
<td>30</td>
</tr>
<tr>
<td>Library</td>
<td>100</td>
</tr>
<tr>
<td>Central Receiving</td>
<td>10</td>
</tr>
<tr>
<td>Physical Plant</td>
<td>10</td>
</tr>
<tr>
<td>Construction Workers</td>
<td>75</td>
</tr>
<tr>
<td>Art Museum</td>
<td>20</td>
</tr>
<tr>
<td>General Visitor</td>
<td>50</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>595</strong></td>
</tr>
</tbody>
</table>

* Does not include staff or faculty normally in the facility

By adding the estimated requirements for faculty, staff, and students; the total parking requirements can be derived.

<table>
<thead>
<tr>
<th>Estimated Parking Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>------</td>
</tr>
<tr>
<td>Faculty/Staff/Students</td>
</tr>
<tr>
<td>Special Use</td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
</tr>
</tbody>
</table>

Present data indicates that approximately 4,850 spaces are available on campus. This would leave 4,450 cars unprovided for. Some of this deficiency may be accounted for by car pools, differing times for use, or municipal transportation. However, based upon observations by the Ball State University administration and the consultants, significant numbers of cars are parked on nearby streets. This is a clear demonstration of the present inadequacy.