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File 1975-0001

Date 1/19/00 Project Name: Intermountain Bible College

Present	Scanned	
		A few items are denoted with an asterisk (*), which means they are to be scanned for permanent record on the ISYS retrieval system. In some instances, not all entries designated to be scanned are present in the file. There are also documents specific to certain files, not found on the standard list. For this reason, a checklist has been included. **Remaining items, (not selected for scanning), will be marked present on the checklist. This index can serve as a quick guide for the contents of each file.** **Files denoted with (**) are to be located using the ISYS Query System. Planning Clearance will need to be typed in full, as well as other entries such as Ordinances, Resolutions, Board of Appeals, and etc.**
X	X	***Summary Sheet – Table of Contents**
		Application form
X	X	Receipts for fees paid for anything
		***Submittal checklist**
X	X	***General project report**
		Reduced copy of final plans or drawings
		Reduction of assessor's map
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		Public notice cards
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		Legal description
		Appraisal of raw land
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X	X	***Final reports for drainage and soils (geotechnical reports)**
		Other bound or nonbound reports
		Traffic studies
		Individual review comments from agencies
		***Consolidated review comments list**
		***Petitioner's response to comments**
		***Staff Reports**
		***Planning Commission staff report and exhibits**
		***City Council staff report and exhibits**
		***Summary sheet of final conditions**
		***Letters and correspondence dated after the date of final approval (pertaining to change in conditions or expiration date)**

DOCUMENTS SPECIFIC TO THIS DEVELOPMENT FILE:

		Follow-Up Form			
X		Review Sheets			
X	X	Ordinance No. 1555 - **			
X	X	Letter from John Quest to City Council – 4/14/75			
X		Landscape Plan			
X	X	Water Use and Sewage Flow Study			
X	X	Drainage Study			
X	X	Letter from Patrick Dwyer to Planning Commission – 2/12/75			
X	X	Geological Report			
X		Option to Purchase			
X		Statement of Need of New Campus			
X		Letter from John Quest to City Council – 5/14/75			
X		Extension of Option Agreement			
X	X	Letter from Rodger Young to John Quest			
X		Letter from Earl Heald to Planning Commission – 12/26/74			

ENGINEERING CONSULTANTS

NELSON, HALEY, PATTERSON and QUIRK, INC.

760 HORIZON DRIVE GRAND JUNCTION, COLORADO 81501 303: 243-7569

March 12, 1975

City Planning Commission
City Council
Grand Junction City Hall
Grand Junction, Colorado 81501

Ladies and Gentlemen:

This letter is a formal request for approval of an outline development plan for the property described in the following legal description:

A tract of land located in a part of the Northwest Quarter (NW1/4) of the Northeast Quarter (NE1/4) of Section 12, Township 1 South, Range 1 West, Ute Meridian, Mesa County, Colorado, being more particularly described as follows:

Beginning at the Northwest Corner (NWCor.) of the Northwest Quarter (NW1/4) of the Northeast Quarter (NE1/4) of said Section 12; Thence South 89°56'00" East along the North line of the Northwest Quarter (NW1/4) of the Northeast Quarter (NE1/4) of said Section 12 a distance of 20.00 feet; Thence South 90.00 feet; Thence East 30.00 feet; Thence North 90.00 feet to said North line of the Northwest Quarter (NW1/4) of the Northeast Quarter (NE1/4) of said Section 12; Thence South 89°56'00" East along said North line of the Northwest Quarter (NW1/4) of the Northeast Quarter (NE1/4) of said Section 12 a distance of 941.5 feet; Thence South 00°01'00" East 1,008.00 feet to the North bank of the Grand Valley Canal; Thence along said North bank of the Grand Valley Canal by the following six (6) courses and distances:

North 65°57'30" West 448.0 feet
North 84°14'00" West 121.1 feet
South 49°28'00" West 198.3 feet
South 83°56'00" West 204.8 feet
South 40°16'00" West 143.0 feet
South 54°33'00" West 21.20 feet

Thence North 00°06'00" East 1,086.40 feet to the Point of Beginning containing 20.88 acres more or less.

An outline explaining the project are herewith submitted in the form of written text and four exhibits.

This request is on the behalf of Erskine E. Scates, President, Intermountain Bible College, option holders of the above described property.

Very truly yours,

NELSON, HALEY, PATTERSON and QUIRK, INC.

Patrick C. Dwyer, R.A.
Project Director

PCD:dsl

ENGINEERING
CONSULTANTS

NELSON, HALEY, PATTERSON and QUIRK, INC.

760 HORIZON DRIVE GRAND JUNCTION, COLORADO 81501 303: 243-7569

April 14, 1975

City Council
City Planning Commission
City/County Planning Department
Grand Junction, Colorado 81501

Ladies & Gentlemen:

Submitted herewith please find the Preliminary Plans for Intermountain Bible College. The property is located Southeast of the intersection of 27-1/2 and Patterson Roads and is zoned PD8.

Many of the specific preliminary requirements were addressed in the Outline Development Plan submittal materials. Please refer to that plan for items that are not evident with this Submittal.

Particular attention has been given to reviewer and Commission comments that were forthcoming during the presentation of the Outline Development Plan. Some of those are as follows:

Soil Conservation Service: Structural engineering will be designed with consideration for the specific soils.

Fire Department: There will be on-site fire protection.

Sanitation Department. Pick-up areas will be provided. These areas will be determined by the Sanitation Engineer and the site planner.

City Engineer: Submitted herein is a drainage study and plan.

Public Service Company: A meeting with Karl Fitzpatrick, Austin Clark, Rodger Young, and Don Warner resulted in an enlarged area for the Western Slope Gas Company's regulator station. An additional five feet, adjoining their present property, on the south and twenty feet, adjoining their property, on the west will be dedicated to them for their use.

Commission: The canal will be fenced at such time as it is determined that it is a hazard for children of married students residing on campus. The vehicular entry from Patterson Road has been redesigned to align with the intersecting point of Spring Valley Drive.

Public: Drainage courses on the property which serve adjacent properties will not be altered so as to interfer with their present drainage capabilities. Structure heighth will be as follows:

Married Housing	-	3 Story	28 ft.
		Garden Level	24 ft.
Housing	-	3 Story	31 ft.
		Garden Level	27 ft.
Gymnasium	-		35 ft.
Education Bldg.	-	2 Story	26 ft.
Maintenance	-	1 Story	24 ft.

As architect for this project, I would welcome additional comments and recommendations from all interested individuals. In this approach, the plan will then become a viable plan, incorporating the specific interests of all who have participated.

Thank you for your considerations.

Sincerely,

NELSON, HALEY, PATTERSON and QUIRK, INC.

John Quest

John Quest, Project Architect

JQ/jt

INTERMOUNTAIN BIBLE COLLEGE

1420 North 12th Street / Grand Junction, Colorado 81501 / 303 242-4902

STATEMENT OF FINANCIAL PLANNING
RELATIVE TO THE RE-LOCATION OF
Intermountain Bible College

Intermountain Bible College depends upon tuition receipts and the gifts of individuals to support its program. It receives no state funds and no funds from denominational boards. It has operated in the Grand Junction community since 1946 with no record of litigation, liens or suits for any account or obligation. To our knowledge, the college has never failed to pay its accounts due.

Over the years the college has acquired property estimated to be worth over one half million dollars. There exists mortgage liabilities of approximately $125,000.00.

The 1974 income of the college was approximately $130,000.00 for budget purposes and $86,116.00 in building fund receipts. Our monthly mailing goes to approximately 9,000 homes in the western part of the United States. We have a rolodex list of 1,100 regular supporters.

It is our intention to pay for the land before proceeding with the building program on Patterson Road. At some point within the next three years we expect to negotiate the sale of all our properties located in the block bounded by Kennedy and Elm and North 12th. At that time, we will plan to consumate the first phase in our building program. Annuity receipts and some estate receipts promised enter into our planning.

We have maintained various accounts in United Banks on North Avenue, First National and United States Bank. We have borrowed money numerous times from the United States Bank and occasionally from First National. A considerable number of Grand Junction firms have granted us credit from time to time.

We anticipate that the first phase of our building program will at present prices cost about $750,000.00.

Respectfully submitted,

Erskine E. Scates

Erskine E. Scates, President.

DEVELOPMENT SCHEDULE

PHASE 1 - 1977-1979 (Shaded areas indicated on Exhibit D)

Building to House:
- 30 Men
- 45 Women
- Classrooms
- Library
- Chapel
- Administration

Married Housing: 20 Couples

Maintenance Facility:
- Garage
- Central Heating Plant
- Shop

Required improvements to Patterson Road.

All roadways and required parking.

Grassed area for non-structured recreation.

Pedestrian and bicycle path with access to North 20th Street.

Related landscaping with each structure.

PHASE 2 - 1981-1982

Building to House:
- Classrooms
- Library
- Chapel
- Administration

Areas indicated above which were provided for in Phase 1 to be converted to:
- Men's & Women's Housing
- Student Center
- General Housekeeping

Tennis Courts.

Related landscaping with new structure and expanded landscaping of open areas.

Expanded parking as required.

PHASE 3 - 1983-1985

Gymnasium

Improvements to Recreation Space: Backstop for ball field, goal posts, yard markers.

Expanded landscaping of open area.

PHASE 4 - 1986-1988

Additional Housing for Total of: 60 Men
90 Women
40 Couples

Expanded pedestrian and bicycle paths with access to North 22nd Street.

Additional parking as required.

Expanded landscaping of open areas and landscaping related to new structures.

PHASE 5 - 1989-1990

Building to House: Additional Classrooms
Chapel to House 300 Persons

Required parking.

Related landscaping.

PHASE 6 - 1991-1992

Amphitheatre.

Related landscaping.

Additional general landscaping in open areas.

RELATIONSHIP TO THE COMMUNITY

The IBC property is located Southeast of the intersection of 27-1/2 and Patterson Roads. The property has a 991.5 foot frontage on Patterson Road and is located directly south of Spring Valley, Filing Two. The property has a depth of approximately 1,030 feet and is bounded on the South by the Grand Valley Canal and contains 20 acres.

The Area Map, Exhibit B, outlines this property and its relationship to other land uses, roadways, natural features, and individuals ownership parcels within a one mile area.

The Vicinity Map, Exhibit A, illustrates the proposed IBC as it will relate to the northern part of our community. The map indicates schools, medical facilities, parks, shopping areas, and zoning.

COMMUNITY SERVICES

Service will be requested from the Public Service Company and Mountain Bell.

A 12" City water line is existing in Patterson Road right-of-way and a 12"and 15" City sewer line exists approximately 400 square feet north of Patterson Road. Quantities of water use and sewage generated will be calculated at the time of preliminary submittal.

Fire and police protection will be provided by the City of Grand Junction.

Irrigation water will be used for property maintenance. Water rights belonging to other property owners passing through this property or its' right-of-way will be maintained and protected for their use.

PUBLIC IMPROVEMENTS

This property will be developed with a 6" vertical curb, a 5' detached sidewalk, necessary irrigation structures and piping, and additional paving within the Patterson Road right-of-way. This will be done in cooperation/participation with the City of Grand Junction. This request and the details of this joint effort will be determined by the Engineering Department and City Council.

Adequate fire protection and fire lanes will be installed within the property.

ADJACENT PROPERTY OWNERS

2945-121-00-002	Leo A. and G. E. Hupert, 2771 Patterson Avenue, City
019	Leo A. and G. E. Hupert, 2771 Patterson Avenue, City
020	Western Slope Gas Station
2945-122-00-003	A. L. Brodak, 2741 F Road, City
007	Trevinia C. Houston, Box 597, City
008	Charles L. and A. M. Forney, 1631 Wellington, City

TAXING DISTRICTS

School District 51
Grand Junction Fire District
Central Grand Valley Pest Control District
Mesa County
City of Grand Junction (after completion of annexation)

The character of Intermountain Bible College was related, in part, in the previous section in the "Statement of Need". However, this statement is concerned more with the academic character of the college than the physical plant. Therefore, some of the important considerations in the development of this plan are indicated herein.

Provide a physical plant to house a Bible College with a maximum enrollment of 300 students. See sketches and schedules in this section.

Provide for organized expansion and phased development over a 15 year period.

Maintain as reasonably possible a residential scale in the physical plant.

Shield parking from Patterson Road as much as possible with buildings and/or landscaping.

Maintain buffers between structures and adjoining properties.

Orient housing to take advantage of views across open space and across town.

Chapel to hold dominate place in regard to passers-by and in relationship to main approaches onto the development.

Cluster concept to be utilized to facilitate conservation of energy and the utilization of central heating and cooling system, and to create intimate open spaces for students and staff.

Maintain areas which are geographically steeply sloping or areas of drainage as open space or areas of limited use by specialized improvements.

Provide for pedestrian and bicycle access at the south end of the site.

Further items of consideration for the development are as follows:

Parking noted as "future parking" on Exhibit C are areas reserved for parking should it become necessary in the future, but are not required according to the schedule enclosed for a student enrollment of 300.

The future parking noted in the southwest corner of the site would be necessary only if the vehicular access noted on Exhibit B should become a reality.

A shuttle will be provided to carry students between Intermountain Bible College and Mesa College to attend required classes.

Vehicle access to the site has three possible locations as noted on Exhibit B. All possible locations represent expensive construction techniques and other traffic problems. Access to the site from 17th Street was first choice because of easier flow of traffic, alternative routes available, and higher density zonings which occur along these routes, thus reducing traffic impact to single family residential areas. Motor vehicle access from the south to the north end of the property becomes a major and expensive undertaking.

INTERMOUNTAIN BIBLE COLLEGE

Total Development Outline

1. Education Building

    1.1. Administration

        1.1.1. Reception
        1.1.2. Offices
        1.1.3. Workroom
        1.1.4. Faculty Offices

    1.2. Classrooms

        1.2.1. 4 large
        1.2.2. 2 small
        1.2.3. Adequate storage with each room
        1.2.4. Radio studio
        1.2.5. Multi-purpose room

    1.3. Library

2. Chapel

    2.1. Seating for 300
    2.2. Music room
    2.3. Practice rooms (6)
    2.4. Stage

3. Housing (Mens)

    3.1. 60 units

4. Housing (Womens)

    4.1. 90 units

5. Married

    5.1. 30 one-bedroom efficiencies
    5.2. 10 two-bedroom

6. Student Center

    6.1. Recreation
    6.2. Lounge
    6.3. Snack bar

7. Gymnasium

    7.1. Locker rooms

8. Cafeteria

    8.1. 150 people

9. Maintenance Buidling

    9.1. Storage
    9.2. 6 vehicles
    9.3. Mechanical

10. Large Openspace

    10.1. Baseball
    10.2. Football

11. Childrens Recreation

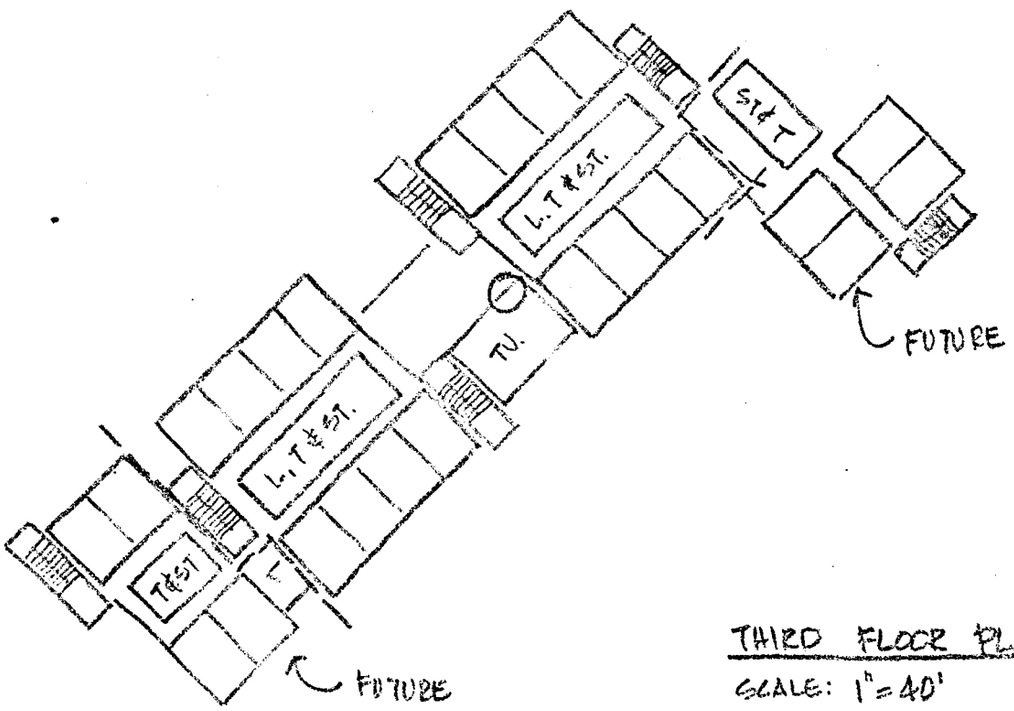
    11.1. Protected and isolated for married students children.

ENROLLMENT AND PARKING

Enrollment On Campus Students	1975	1980	1995
Men	18	30	60
Women	32	45	90
Married	28	40	80
TOTAL	78	115	230
Commuter Students	57	75	70
Staff	15	20	35

Future Parking Requirements Based on Current Usage

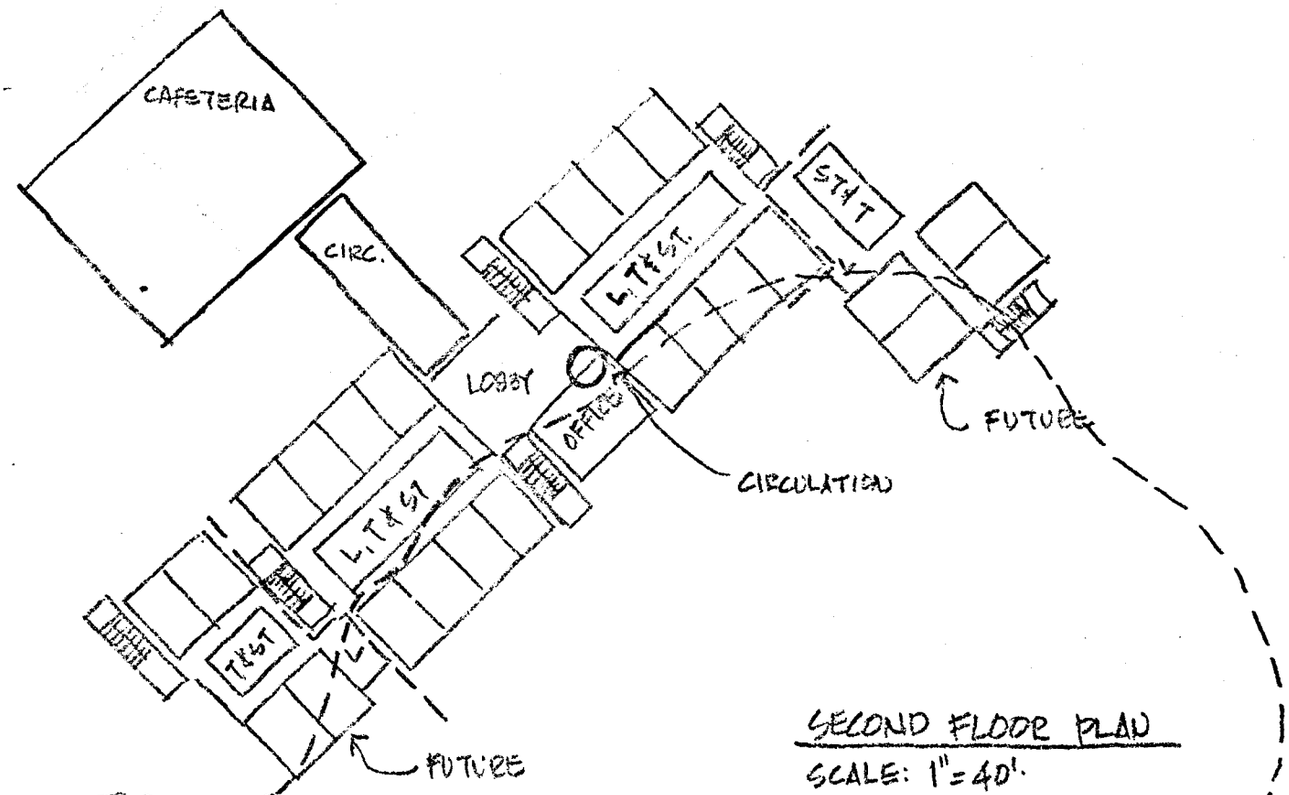
Parking			
Parking Units for On Campus Students	26 (33% of on campus students)	38	76
Parking Units for Staff	15 (100% of staff)	20	35
Average Maximum Parking Demand per day	50 (37% of enrollment)	63	111
Visitor Spaces	-	25	25
TOTAL	50	88	136
Code Requirements (1 space for 4 students and staff)	34	48	75



THIRD FLOOR PLAN

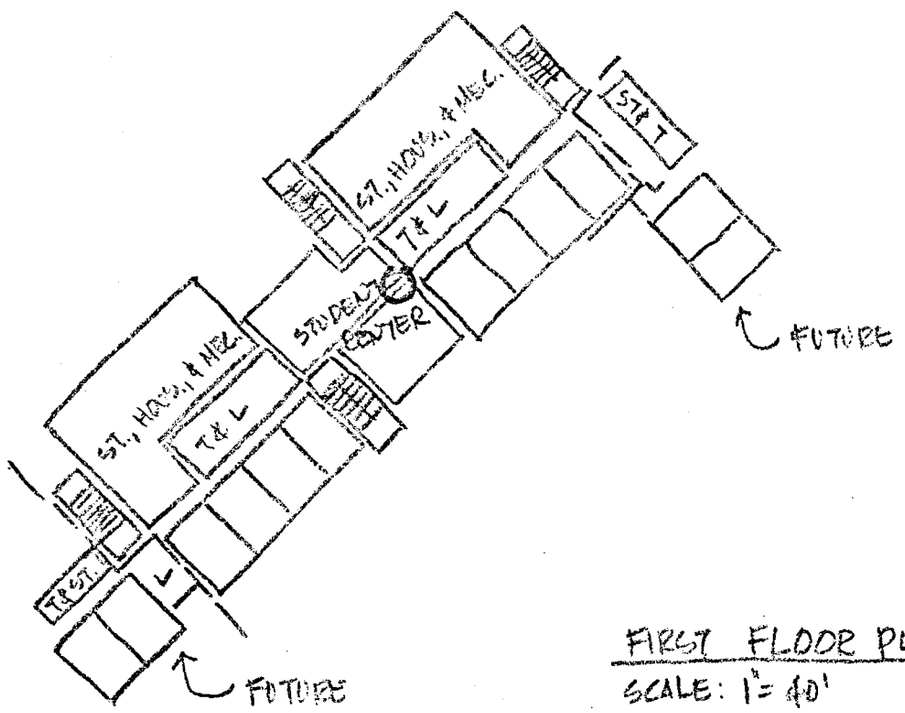
SCALE: 1" = 40'

HOUSING



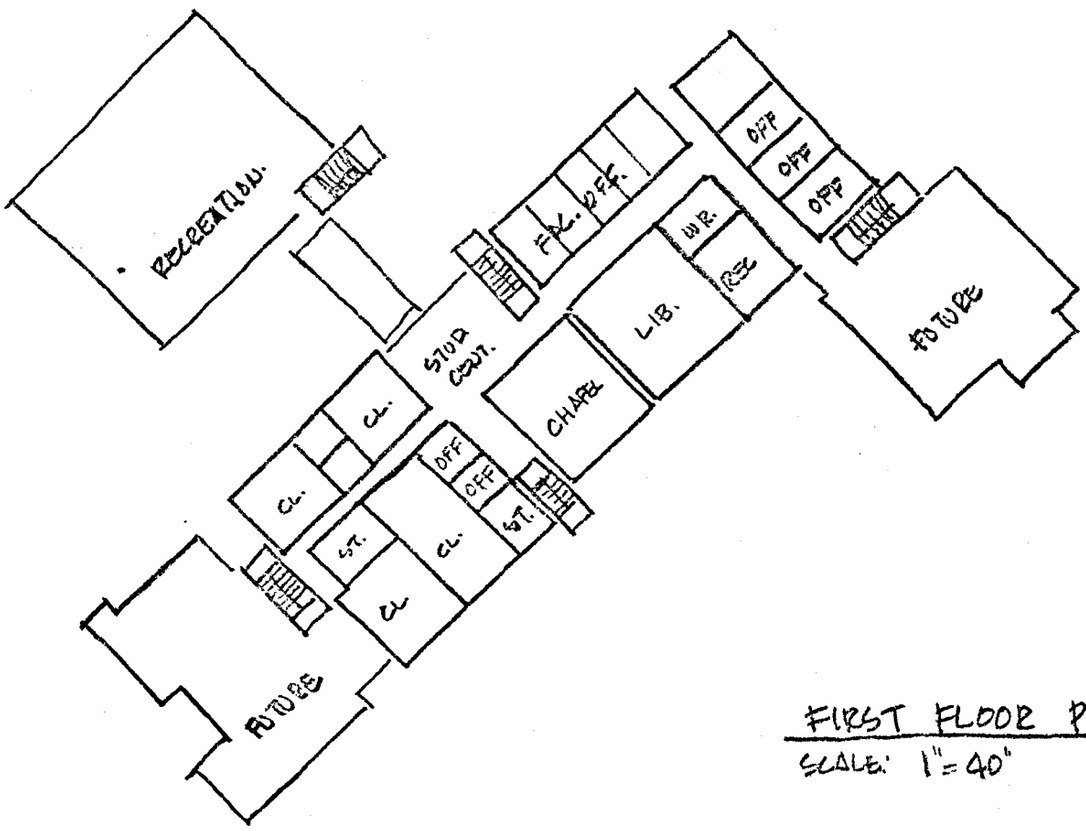
SECOND FLOOR PLAN
SCALE: 1" = 40'.

HOUSING



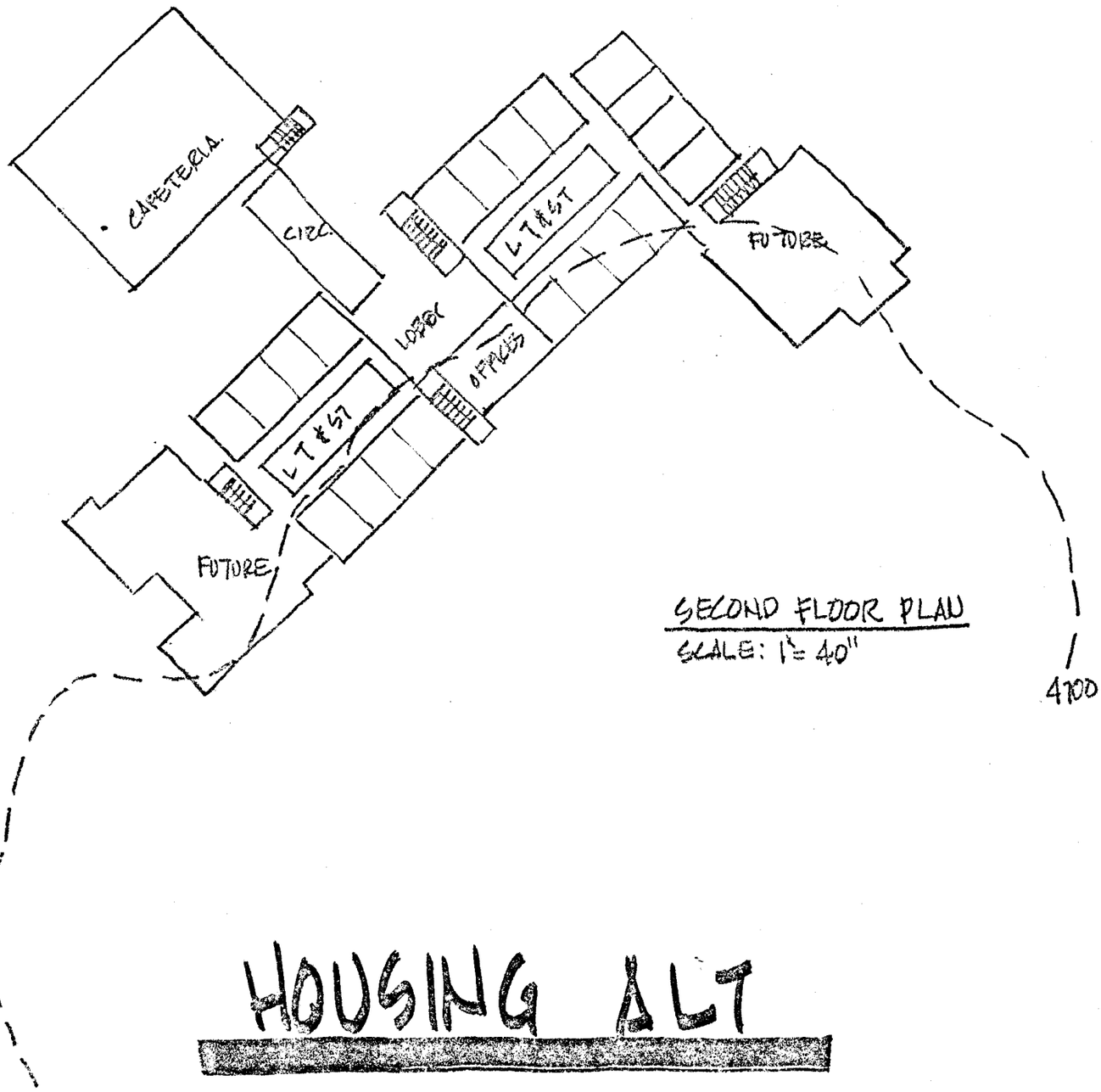
FIRST FLOOR PLAN
SCALE: 1" = 40'

HOUSING



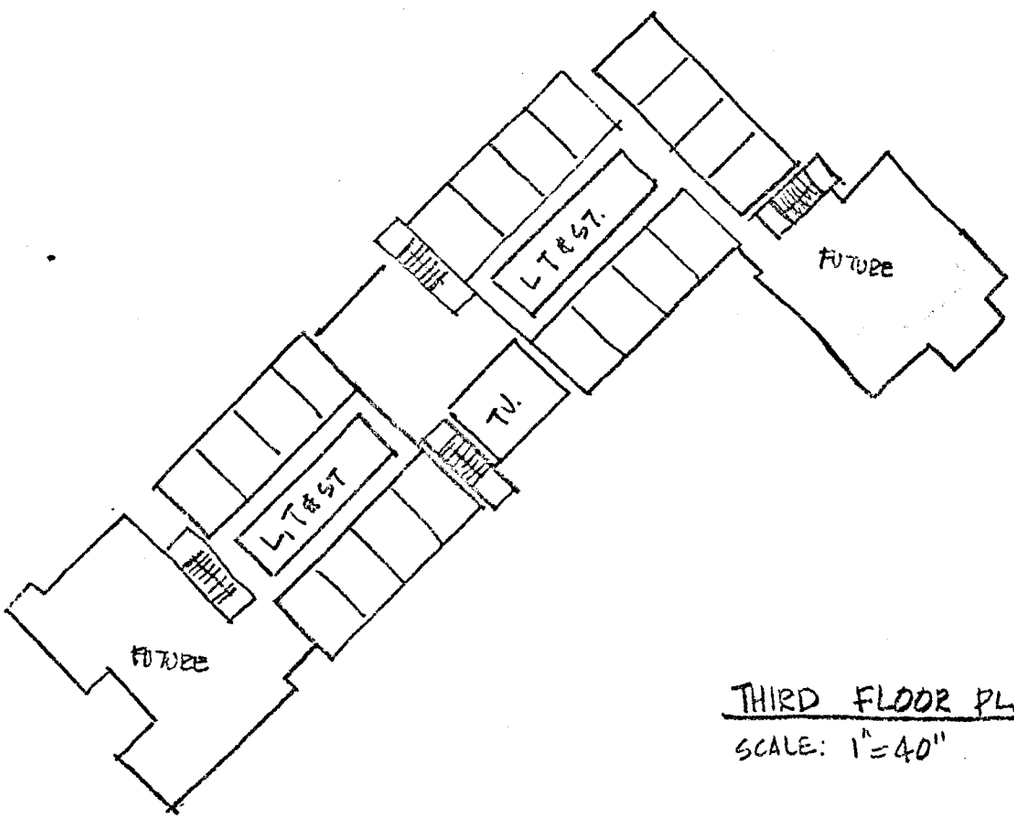
FIRST FLOOR PLAN
SCALE: 1" = 40'

HOUSING ALT.



SECOND FLOOR PLAN
SCALE: 1" = 40'

HOUSING ALT



THIRD FLOOR PLAN
SCALE: 1"=40"

HOUSING ALT

EDUCATION

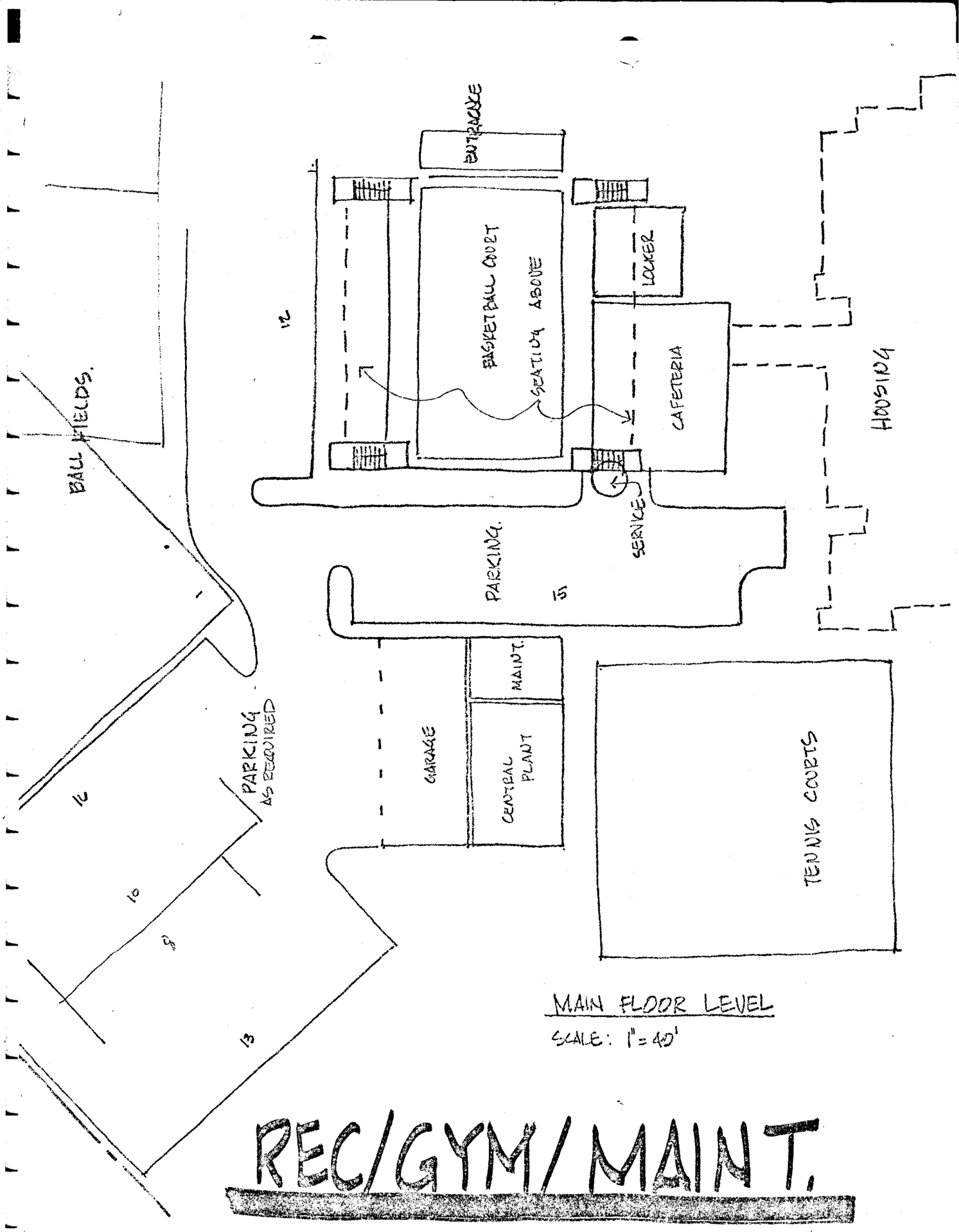
SECOND FLOOR PLAN

SCALE: 1"=40'

EDUCATION

FIRST FLOOR PLAN

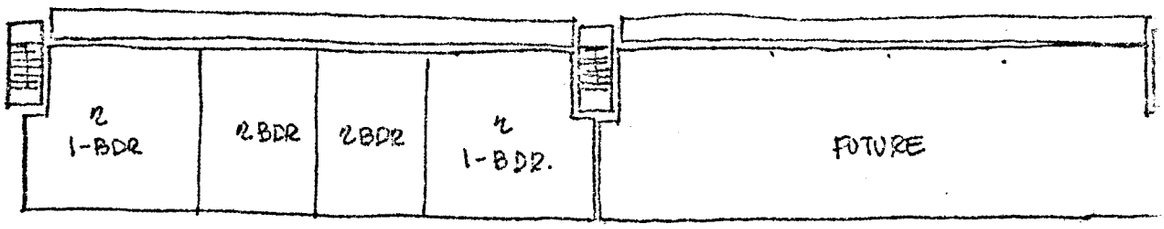
SCALE: 1"=40'



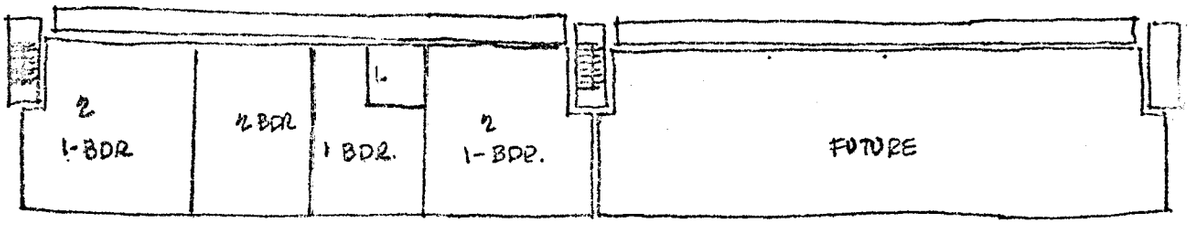
MAIN FLOOR LEVEL

SCALE: 1" = 40'

REC/GYM/MAINT.



SECOND FLOOR PLAN
SCALE: 1'-40'



FIRST FLOOR PLAN

M. HOUSING.

INTERMOUNTAIN BIBLE COLLEGE

Review comments from Mesa Soil Conservation District

This development will be on marginal agricultural land. It is class IV which is shallow over shale. It is predominantly Rp which is rough, broken land Persayo-Chipeta silty clay loam.

Both soils have severe limitations for this planned land use change. These limitations are a result of steep slopes, shallow depth to shale and a high shrink-swell potential. They can be overcome by using appropriate structural design. We favor development on this type land rather than on good agricultural land.

Since there are steep slopes, erosion control measures are needed during development.

There is no flood hazard in this area.

IINTERMOUNTAIN BIBLE COLLEGE

WATER USE AND SEWAGE FLOW

Unit	Water Use GPD	Sewage Flow GPD
Dormitories	11,250	8,438
Married Housing	9,500	7,125
Chapel	600	450
School and Administrative use by off-campus students and staff (cafeteria and gym) (gym flows for all students)	3,625	2,975
Totals	24,975	18,988
. Say	25,000 GPD	19,000 GPD

DORMITORIES

To simplify calculation for the 150 people residing in dormitories, a water consumtive use of 75 GPD and sewage flow at 75% of use.

Water:

150 x 75 = 11,250 GPD.

Sewage:

150 x 75 x 0.75 = 8,438 GPD.

These values pertain to the total use and sewage flow for the on-campus single residents.

MARRIED HOUSING

30 - One bedroom efficiencies.
Assume 2 people per unit at 100 GPD and 75% return of consumed water.

Water:

2 x 30 x 100 = 6,000 gal/day.

Sewage:

2 x 30 x 100 x 0.75 = 4,500 GPD.

Married Housing Con't:

10 - Two bedroom apartments.
Assume 3.5 people per unit at 100 GPD and 75% return of consumed water.

Water:

3.5 x 10 x 100 = 3,500 GPD.

Sewage:

3.5 x 10 x 75 = 2,625 GPD - Say 2,650 GPD.

OFF CAMPUS

Water usage for students residing off-campus and staff.

Water:

130 people at 20 GPD and 75% return of consumed water. (Includes Gymnasium and Cafeteria).

130 x 20 = 2,600 GPD.

Sewage:

130 x 20 x 0.75 = 1,950 GPD.

GYMNASIUM USE FOR REMAINDER OF RESIDENTS

Assume 5 GPD and 100 % return of consumed water.

Water:

205 x 5 - 1,025 GPD.

Sewage:

Waste flow 1,025 GPD.

CHAPEL

Seating for 300 people. Assume 2 GPD and 75% return of consumed water.
Water:
300 x 2 = 600 GPD.

Sewage:
300 x 2 x 0.75 = 450 GPD.

INTERMOUNTAIN BIBLE COLLEGE

DRAINAGE STUDY

The proposed site was evaluated for resulting runoff from two different intensity storms and for both undeveloped and fully developed conditions.

The twenty acre site was divided into several subbasins, shown on the following sketch. It can be seen that several of the subbasins also drain portions of the adjacent properties. The runoff produced from these portions was also calculated in conjunction with the runoff from the entire subbasin.

The Rational Method was used to calculate the amount of runoff. The Rational Formula is as follows:

$$Q = (C_f)\ I\ A$$

Where:

Q = The design peak runoff in CFS

C = Coefficient of runoff for this study:
0.5 for bare steep lands
0.35 for cultivated lands
0.95 for roofs and asphalt
(from Seeley's Design Manual)

C_f = Frequency factor used to account for antecedent precipitation for this study:
1.25 for 100 yr. return period
1.0 for 10 yr. return period

I = Rainfall intensity (in/hr) for this study:
1 hr. 100 yr. storm 1.6 in/hr.
1 hr. 10 yr. storm 1.0 in/hr.
(from Rainfall Frequency Atlas)

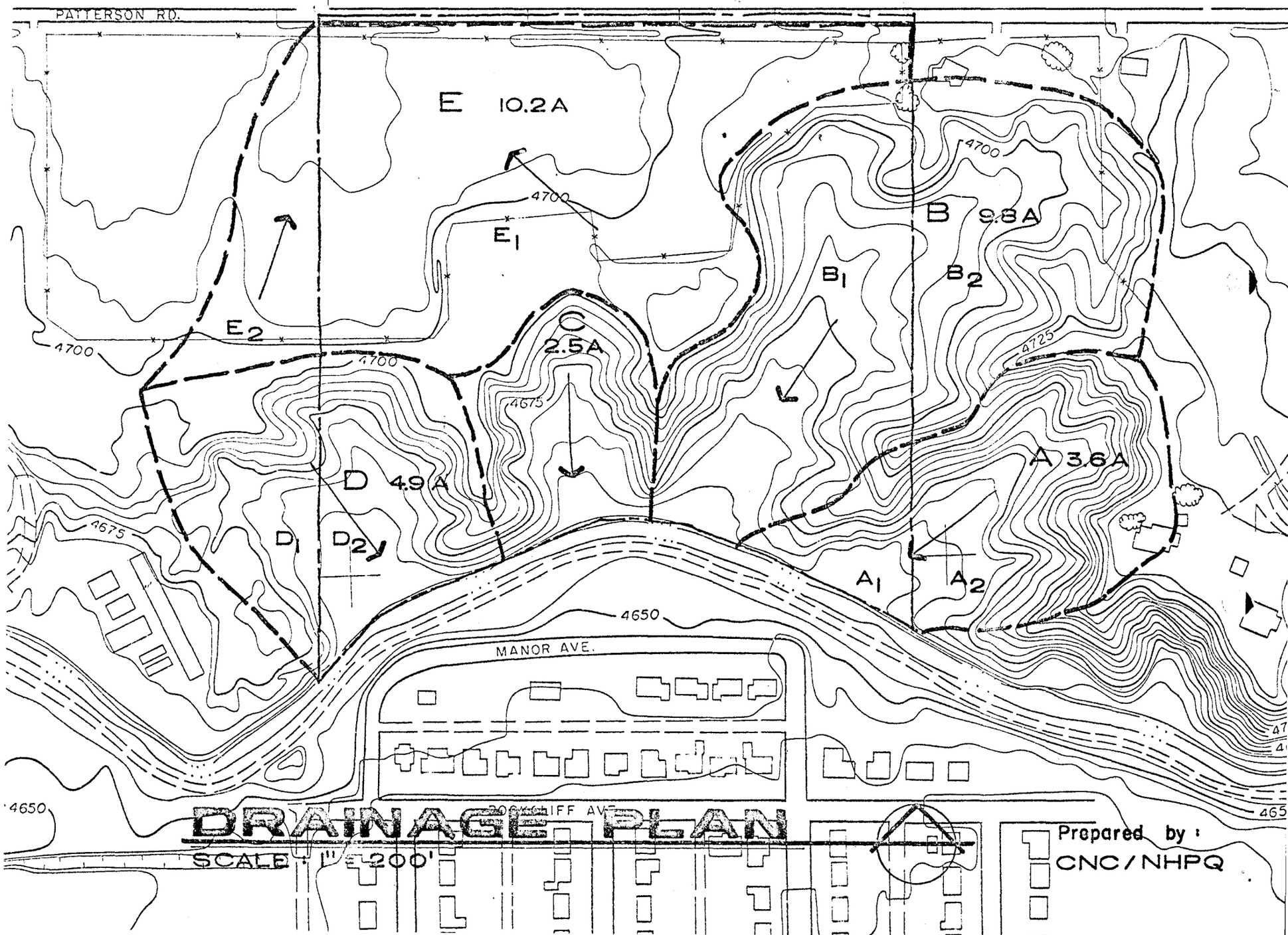
The following table shows the calculated peak runoff for the indicated subbasin. No development is foreseen for subbasins A, B, C, and D. Runoff from subbasin E was calculated for both undeveloped and developed conditions to determine the amount of runoff produced by the construction of the college.

Since no additional runoff will be produced in subbasins A, B, C, and D, no facilities for runoff control will be necessary in those subbasins. Some detention will be constructed in subbasin E to allow only that amount under undeveloped conditions to discharge from the property at any instant.

Subbasin	Area	Runoff Coefficient	Frequency Coefficient		Rainfall Intensity 1 hr. (in/hr) 1 hr.		Discharge (CFS)	
	A	C	100 yr. (C_f)	10 yr.	100 yr.	10 yr.	100 yr.	10 yr.
A	3.7	0.50	1.25	1.0	1.6	1.0	3.7	1.85
A_1	1.0	0.50	1.25	1.0	1.6	1.0	1.0	0.5
A_2	2.7	0.50	1.25	1.0	1.6	1.0	2.7	1.35
B	9.8	0.50	1.25	1.0	1.6	1.0	9.8	4.9
B_1	5.6	0.50	1.25	1.0	1.6	1.0	5.6	2.8
B_2	4.2	0.50	1.25	1.0	1.6	1.0	4.2	2.1
C	2.5	0.50	1.25	1.0	1.6	1.0	2.5	1.25
D	4.9	0.50	1.25	1.0	1.6	1.0	4.9	2.45
D_1	2.8	0.50	1.25	1.0	1.6	1.0	2.8	1.4
D_2	2.1	0.50	1.25	1.0	1.6	1.0	2.1	1.05
Undeveloped								
E	10.2	0.35	1.25	1.0	1.6	1.0	7.1	3.57
E_1	8.3	0.35	1.25	1.0	1.6	1.0	5.8	2.9
E_2	1.9	0.35	1.25	1.0	1.6	1.0	1.3	0.67
Developed								
E_1	8.3	0.57*	1.25	1.0	1.6	1.0	9.5	4.7
E	10.2						10.7	5.4

* Composite C_c
3 Ac. C = 0.95
5.3 Ac. C = 0.35

$$C_c = \frac{3\ (0.95) + (5.3)\ (0.35)}{8.3} = 0.57$$


PATTERSON RD.
E 10.2A
E1
E2
4700
B 9.8A
B1
B2
4725
C
2.5A
4675
D 4.9A
D1
D2
A 3.6A
A1
A2
4650
MANOR AVE.
CLIFF AVE.
DRAINAGE PLAN
SCALE 1" = 200'
Prepared by :
CNC / NHPQ

GEOLOGIC INVESTIGATION
INTERMOUNTAIN BIBLE COLLEGE

During March, 1975, a field examination was made of a site comprising approximately 20 acres. This is located in the Northeast Quarter of Section 12, Township 1 South, Range 1 West of the Ute Meridian. This location is approximately two miles north-easterly from downtown Grand Junction and proposed to be annexed to the City.

The topography varies from nearly flat in the northern portion to rather steep slopes, exceeding 50 percent, along the bluffs. This is shown in detail on the included topographic map.

The drainage on the east portion of the property drains an off-site area of approximately 5 acres. The two remaining draws drain very limited areas outside the property boundaries. The flat area drains north to F Road at the present time.

The bedrock at this location is Mancos Shale. The persayo-chipeta silty clay loams are the soils which form the overburden. The shale has a dip to the northeast of approximately 3 degrees.

The present use of the flat land is that of irrigated pasture. The steep lands have no apparent use except as a location to use trail and dirt bikes.

Geologic features which are significantly relative to the development of this property include the following items:

1. A high shrink-swell potential of the soils and underlaying bed rock.
2. A potentially high water table in the bottom of the drainage areas.
3. Steep slopes.

The shrink-swell factor in the Mancos Shale and related soils is a well-identified condition in the Grand Junction area. We recommend that a detailed soils and sub-surface investigation be conducted at the specific location of each proposed building. This should provide the necessary information about the soils so appropriate foundation designs can be made. The depth to bedrock in the upper areas is estimated to be 4 to 12 feet.

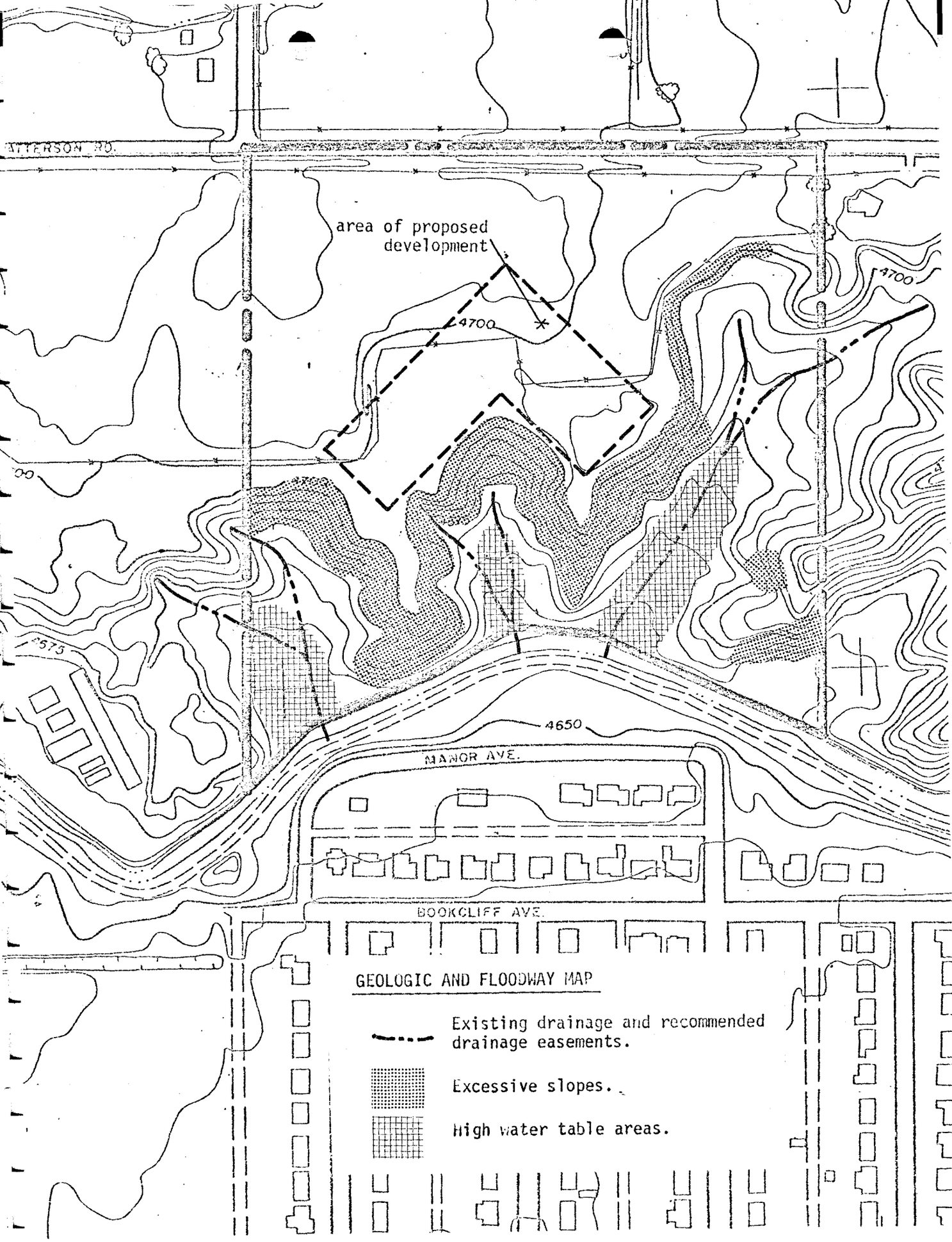
The lower portions of the drainage areas show evidence of a high water table. It is likely to be within two feet of surface during the irrigation season.

The steep slopes are formed of weathered and unweathered shale. They do not show evidence of unstability; however, caution should be taken placing buildings along the edge. The west drainage areas shows evidence of use as a dumping area. This appears to be very minor, but should be investigated further at the same time as the other soil tests are conducted if building is planned in that area.

Drainage from the site will either go into the canal or the borrow pit along the south side of F Road. There does not appear to be any significant problem associated with surface drainage and its design.

Other than the factors previously discussed, the development will not cause any additional adverse effects relating to geology, topography or drainage. No significant change in the water table is expected from the change in land use. No minerals will be lost and only limited pasture land. Being inside the City, all of the normal services are available to the location at normal costs.

Gordon W. Bruchner, P.E. & L.S.



GEOLOGIC AND FLOODWAY MAP

Existing drainage and recommended drainage easements.

Excessive slopes.

High water table areas.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
P. O. 2418, Grand Junction, Colorado 81501

March 7, 1975

Nelson, Haley, Patterson, and Quirk, Inc.
760 Horizon Drive
Grand Junction, Colorado 81501

Gentlemen:

This is the soils map and interpretations which you requested for the Intermountain Bible College.

There are four types of soil on the area of proposed development. They are:

Bd - Billings silty clay loam, 2 to 5 percent slope.
Pa - Persayo-Chipeta silty clay loam, 0 to 2 percent slope.
Pb - Persayo-Chipeta silty clay loam, 2 to 5 percent slope.
Rp - Mesa, Chipeta, and Persayo soil materials, rough broken land.

The predominant soil type on the site (Rp) has severe limitations for all phases of construction as a result of the steepness of slopes (12 to 30 percent) and the shallow depth to shale.

The soil types found on the northern third of the property (Pa and Pb) has moderate to severe limitations for all phases of construction as a result of the high shrink-swell potential, shallow depth to rock, and the steepness of slopes.

The soil type found on the southern boundary of the site (Bd) has severe to moderate limitations for all phases of construction as a result of a seasonal high water table and a high shrink-swell potential.

A good erosion control program is needed for the area of proposed development due to the steepness of slopes. On-site inspections, by a qualified soils engineer, should be made to insure that there are no specific problems.

If we can help further, or answer any questions, please call.

Sincerely,

Martin N. Gaines, Jr.
Soil Conservation Technician

SCS-
FILE CODE SOILS-12

Tentative - subject to revision

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Billings silty clay loam, 0 to 2 percent slopes (Bc) (Bd) similar

SOIL SURVEY INTERPRETATIONS

MLRA: Mesa County, Colo. Grand Junction Soil Survey Area

This soil is derived from deep alluvial deposits that came mainly from Mancos shale. Although the dominant texture is silty clay loam, the profile may have seams of loam, clay loam, fine sandy loam, or a very fine sandy texture. Its tilth and workability are fair; but when it is mostly a silty clay loam, it puddles quickly when wet and bakes so hard when dry that good tilth can be maintained only by proper irrigation and special cultural practices. Slopes range up to those having two feet of fall in every 100 feet.

ESTIMATED PHYSICAL AND CHEMICAL PROPERTIES

MAJOR SOIL HORIZONS (INCHES)	CLASSIFICATION			COARSE FRACT. > 3 IN. %	PERCENTAGE LESS THAN 3 INCHES PASSING SIEVE NO. ---				LL	PI	PERMEABILITY (in./hr)	AVAILABLE WATER CAPACITY (in/in)	SOIL REACTION (pH)	SALINITY (EC x 10^3 @25°C)	SHRINK-SWELL POTENTIAL	POTENTIAL FROST ACTION
	USDA TEXTURE	UNIFIED	AASHO		4	10	40	200								
0-60	Silty clay loam	CL	A-7	-	100	90-95	85-90	75-90	-	-	.3-.75	.17-.19	7.9-9.0	1/	Moderate	Mod. to high * 0-60

DEPTH TO BEDROCK OR HARDPAN: >60"

FLOOD HAZARD: Rare

DEPTH TO SEASONAL HIGH WATERTABLE: <20"

HYDROLOGIC GROUP: C

SUITABILITY AND MAJOR FEATURES AFFECTING SOIL AS RESOURCE MATERIAL

TOPSOIL: Poor; high clay content	GRAVEL: 2/
SAND: 2/	ROADFILL: Fair; moderate shrink-swell; A-2 to A-7

DEGREE OF LIMITATION AND MAJOR SOIL FEATURES AFFECTING SELECTED USE

LOCAL ROADS AND STREETS: Severe; poor traffic-supporting capacity; moderate to high water tables common.	SEPTIC TANK FILTER FIELDS: Severe; slow permeability; poor internal drainage; seasonal high water tables.
SHALLOW EXCAVATIONS: Severe; high water tables common	SEWAGE LAGOONS: Moderate; moderate piping hazard; berm material Unified CL
DWELLINGS: Moderate; high shrink-swell potential; subject to water table build up.	CORROSIVITY - UNCOATED STEEL: --
RESERVOIR AREA: Moderate; seepage through gypsum seams; high water table.	CORROSIVITY - CONCRETE: --
RESERVOIR EMBANKMENT: Moderate; moderately erosive; moderate shrink-swell potential	

1/ Property highly variable requiring on-site investigation.
2/ Unsuitable; limited quantity or limited quality of sand or gravel.

USDA-SCS PORTLAND, OREG. 1971

DEGREE OF SOIL LIMITATIONS AND MAJOR FEATURES AFFECTING RECREATION DEVELOPMENT

CAMP AREAS	Severe; moderate to high water tables; high clay content surface soil.
PICNIC AREAS	Moderate; moderate to high water tables; high clay content surface soil.
PLAYGROUNDS	Moderate; moderate to high water tables; high clay content surface soil.
PATHS AND TRAILS	Moderate; moderate to high water tables; high clay content surface soil.

CAPABILITY, SOIL LOSS FACTORS, AND POTENTIAL YIELDS--(High Level Management)

PHASES OF SERIES	CAPABILITY	SOIL LOSS								
		K	T							

WOODLAND SUITABILITY

PHASES OF SERIES	WOODLAND SUITABILITY GROUP	SPECIES AND SITE INDEX	MANAGEMENT HAZARDS OR LIMITATIONS					
			SEEDLING MORTALITY	WINDTHROW HAZARD	PLANT COMPET.	EQUIPMENT LIMITATION	EROSION HAZARD	SPECIES SUITABILITY

RANGE

PHASES OF SERIES	RANGE SITE NAME	IMPORTANT CLIMAX SPECIES	TOTAL ANNUAL YIELD LBS/AC

WILDLIFE SUITABILITY

PHASES OF SERIES	POTENTIAL FOR HABITAT ELEMENTS							POTENTIAL AS HABITAT FOR---		
	GRAIN AND SEED CROPS	GRASSES, LEGUMES	WILD HERBACEOUS PLANTS	HARDWOOD TREES AND SHRUBS	LOW CONIFER PLANTS	WETLAND FOOD AND COVER	SHALLOW WATER DEVELOP.			

OTHER

PHASES OF SERIES	

USDA-SCS-PORTLAND OREG. 1971

SCS-SOI[illegible]
1-71
FILE CODE SOILS-12

Tentative - subject to revision

U. S. DEPARTMENT OF AG[illegible]LTURE -
SOIL CONSERVATI[illegible]ERVICE

Rough broken land: Mesa, Chipeta and Persayo soil materials (Rr) (Rp) similar

SOIL SURVEY INTERPRETATIONS

MLRA Mesa County, Colo. Grand Junction Soil Soil Survey Area

Except for small areas northeast and south of Palisade, all of this miscellaneous land type occurs south of the Colorado River. It occupies very steep escarpments--25 to 140 feet high--along the south bank of the Colorado River and rough, rugged terrain along tributary drainageways or arroyos. Slopes generally range from 12 to 30 percent along the drainageways but are much steeper along the escarpment adjoining the Colorado River.

ESTIMATED PHYSICAL AND CHEMICAL PROPERTIES

MAJOR SOIL HORIZONS (INCHES)	CLASSIFICATION			COARSE FRACT. > 3 IN. %	PERCENTAGE LESS THAN 3 INCHES PASSING SIEVE NO. ---						PERMEABILITY (in./hr)	AVAILABLE WATER CAPACITY (in/in)	SOIL REACTION (pH)	SALINITY (EC x 10^3 @25°C)	SHRINK-SWELL POTENTIAL	POTENTIAL FROST ACTION
	USDA TEXTURE	UNIFIED	AASHO		4	10	40	200	LL	PI						
1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	Low

DEPTH TO BEDROCK OR HARDPAN: Variable

DEPTH TO SEASONAL HIGH WATERTABLE: > 60"

FLOOD HAZARD: Rare

HYDROLOGIC GROUP: D

SUITABILITY AND MAJOR FEATURES AFFECTING SOIL AS RESOURCE MATERIAL

TOPSOIL: Unsuitable	GRAVEL: Unsuitable
SAND: Unsuitable	ROADFILL: Poor: slope

DEGREE OF LIMITATION AND MAJOR SOIL FEATURES AFFECTING SELECTED USE

LOCAL ROADS AND STREETS: Severe; slopes	SEPTIC TANK FILTER FIELDS: 1/
SHALLOW EXCAVATIONS: Severe; slopes; depth to shale	SEWAGE LAGOONS: Severe; slopes over 15%
DWELLINGS: Severe; slopes and depth to shale	CORROSIVITY - UNCOATED STEEL: Low
RESERVOIR AREA: Severe; slopes and depth to shale	CORROSIVITY - CONCRETE: Low
RESERVOIR EMBANKMENT: Severe; limited material	

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1/ Property highly variable, requiring on-site investigation

Persayo-Chipeta silty clay loams, 0 to _ percent slopes (Pa)
2 to 5 percent slopes (Pb)

SCS - SOILS - 2C (Rev.)
8 - 71

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL SURVEY INTERPRETATIONS

FILE CODE SOILS-12

SERIES: Persayo-Chipeta
STATE: Colorado
MLRA: 34
CLASSIF:

Persayo are shallow, well drained soils formed in calcareous loamy sediments weathered from soft, sedimentary rock. In a representative profile they have about 14 inches of silty clay loam that overlies weathered shale and siltstone. Natural vegetation is a thin stand of desert shrubs and grass. Average annual precipitation is about 8 inches. Slopes are 2 to 45 percent.

ESTIMATED SOIL PROPERTIES SIGNIFICANT TO ENGINEERING

MAJOR SOIL HORIZONS (INCHES)	CLASSIFICATION			COARSE FRACT. > 3 IN. %	PERCENTAGE LESS THAN 3 INCHES PASSING SIEVE NO. ---				LL	PI	PERMEABILITY (In./hr)	AVAILABLE WATER CAPACITY (In/In)	SOIL REACTION (pH)	SALINITY (EC x 10^3 @25°C)	SHRINK-SWELL POTENTIAL	POTENTIAL FROST ACTION
	USDA TEXTURE	UNIFIED	AASHO		4	10	40	200								
0-14	Silty clay loam	CL	A-6	0-10	0-15	80-100	80-95	60-85	25-40	15-20	0.6-2.0	0.15 0.19	7.9-8.4	0-8	Mod.	Mod * 0-14
14+	Weathered shale		Partially consolidated shale.													

DEPTH TO BEDROCK OR HARDPAN: --
FLOOD HAZARD: None
DEPTH TO SEASONAL HIGH WATERTABLE 6'
HYDROLOGIC GROUP D

SUITABILITY OF SOIL AS SOURCE OF SELECTED MATERIAL AND FEATURES AFFECTING USE

TOPSOIL: Poor - area reclamation, slope	GRAVEL: Unsuited
SAND: Unsuited	ROADFILL: Poor - thin layer, slope

DEGREE OF SOIL LIMITATION

LOCAL ROADS AND STREETS: Moderate to severe - shrink-swell, depth to rock and slope	SEPTIC TANK ABSORPTION FIELDS: Severe - depth to rock, slope
SHALLOW EXCAVATIONS: Moderate to severe - depth to rock, slope	SEWAGE LAGOONS: Severe - depth to rock, slope
DWELLINGS: a) w/ basements Moderate to severe - shrink-swell, depth to rock, slope b) w/o basements " " " " " "	CORROSIVITY: a) uncoated steel High b) concrete Low
SANITARY LAND FILL: (TRENCH TYPE) Severe - depth to rock, slope	

MAJOR SOIL FEATURES AFFECTING SELECTED USE

POND RESERVOIR AREAS: Slope, depth to rock	IRRIGATION: Slope, rooting depth
EMBANKMENTS, DIKES, and LEVEES: Thin layer, compressible	TERRACES and DIVERSIONS: Complex slope, droughty, erodes easily
DRAINAGE of CROPLAND and PASTURE: Not needed	GRASSED WATERWAYS: Droughty, erodes easily, slope

9-SCS-PORTLAND, OREG. 1971

* Frost action potential is greater due to irr. of desert lands.

CA-33-PD
2-14-58

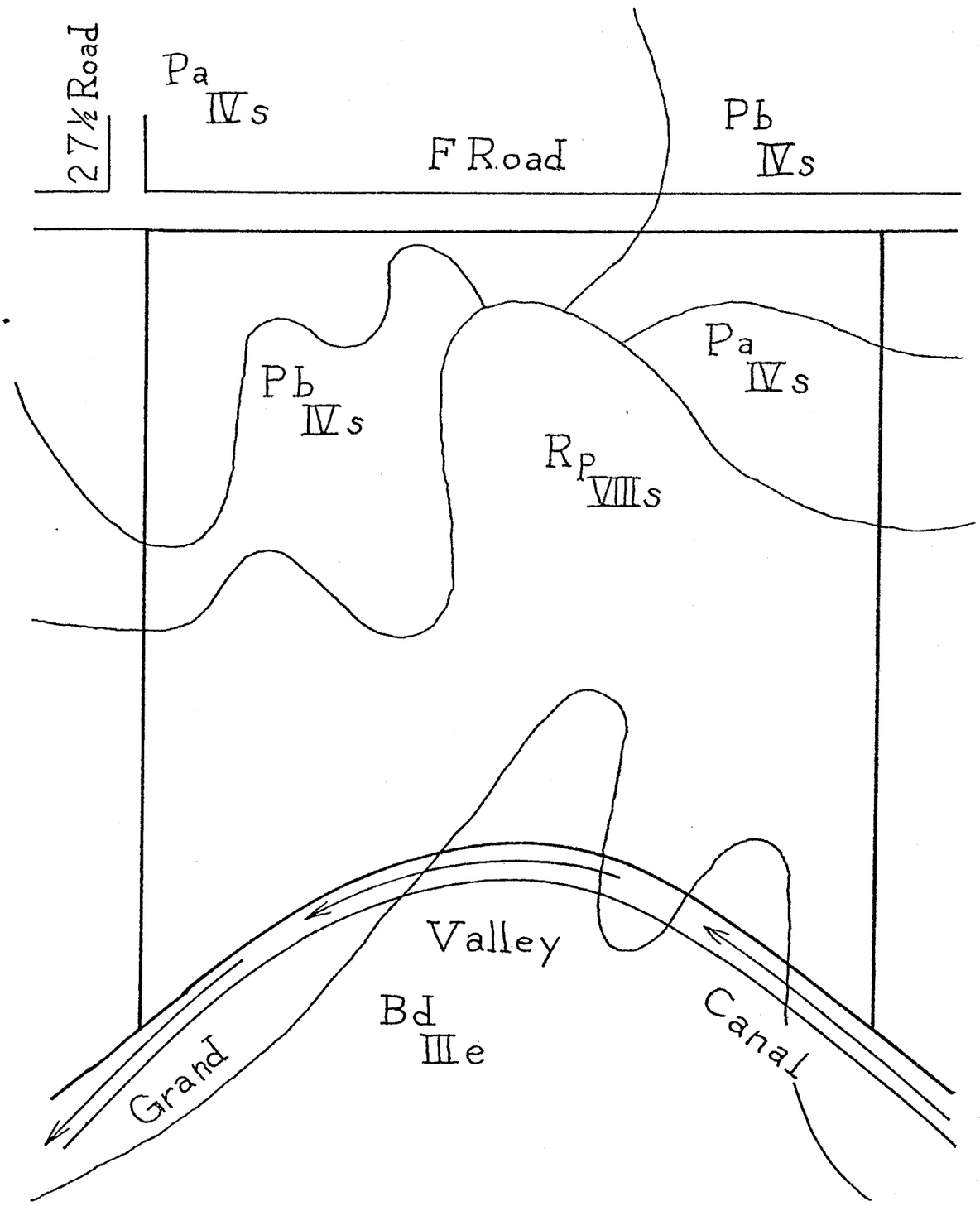
OUR SOIL ★ OUR STRENGTH

SOIL and CAPABILITY MAP

Prepared by UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERV
cooperating with
MESA S.C.D.
S.C. DISTRICT AND AGENCIES COOPERATING IN SOIL SURVEY

OWNER Intermountain Bible College
OPERATOR
Mesa COUNTY, Colorado STATE

FARM NO. DATE 3-75
SCALE 1" = 200' APPROXIMATE ACRES 20
PHOTO NO. AIG-4JJ-242



INTERMOUNTAIN BIBLE COLLEGE

1420 North 12th Street / Grand Junction, Colorado 81501 / 303 242-4902

Intermountain Bible College hereby agrees that in conjuction with the exercise of their option contract with L. A. Brodak and Anna Brodak, they will deed the following described property to the Western Slope Gas Company.

Beginning at the Northwest Corner of the Northwest Quarter of the Northeast Quarter of Section 12, Township 1 South, Range 1 West, Ute Meridian, thence South 89° 56'00" East along the North line of the Northwest Quarter of the Northeast Quarter of said Section 12 a distance of 20 feet, thence South 90 feet, thence East 30 feet, thence South 5 feet, thence West 50.17 feet, thence North 0° 06'00" East 95 feet along the West line of the Northwest Quarter of the Northeast Quarter of said Section 12 to the point of beginning.

Signed for Intermountain Bible College

Erskine E. Scates

Erskine E. Scates, President

Earl Heald

Earl Heald, Dean

CITY OF GRAND JUNCTION
COLORADO
P.O. Box 968
81501

Office of CITY ENGINEER

CITY OF GRAND JUNCTION

Dial 243-2633

March 24, 1975

Mr. John Quest
Nelson, Haley, Patterson & Quirk
760 Horizon Drive
Grand Junction, Colorado 81501

Subjcet: North-south thoroughfare from Patterson Road to Orchard Avenue between Twelfth Street and 29 Road

Dear Mr. Quest:

In answer to your inquiry concerning the above subject, the City at this time does not have any plans for a specific north-south route; however, the above subject area is in need of such a route.

The only corridors that would be possible routes are Fifteenth Street on the west side and 28 1/4 Road extension on the east. The area between these two corridors has the high bluff just north of the Grand Valley Canal which would require extensive excavation and embankment for a road. The area south of the canal is well developed and obtaining right of way through this area would be quite expensive. Any route that would traverse the side of the bluff would require retaining structures to hold the roadway. The bluff is subject to erosion.

As for a recommendation as to possible north-south routes, I would recommend Fifteenth Street and 28 1/4 Road extensions.

Very truly yours,

Rodger O. Young

Rodger O. Young, P.E.
City Engineer

ROY/hm