

UNIVERSITY OF NORTH DAKOTA UNIVERSITY VILLAGE DEVELOPMENT
FINDING COMMUNITY IN A DIVERSELY POPULATED AREA



DEPARTMENT OF ARCHITECTURE AND LANDSCAPE ARCHITECTURE

NORTH DAKOTA STATE UNIVERSITY

CAPSTONE PROJECT

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UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY THROUGH A DIVERSELY POPULATE AREA

BY:

DAVID JERKE

DEPARTMENT OF ARCHITECTURE AND LANDSCAPE
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UND UNIVERSITY VILLAGE DEVELOPMENT

A DESIGN THESIS SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE AND
LANDSCAPE ARCHITECTURE OF NORTH DAKOTA STATE UNIVERSITY

BY:
DAVID JERKE

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
BACHELOR OF LANDSCAPE ARCHITECTURE



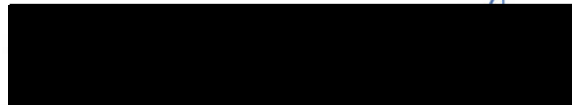
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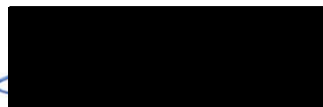
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THESIS COMMITTEE CHAIR



PROGRAM DIRECTOR



PROGRAM CHAIR

MAY, 2004
FARGO, NORTH DAKOTA



UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

ABSTRACT

CAMPUS PLANNING HAS BECOME AN INCREASINGLY IMPORTANT TOPIC OVER THE PAST TWENTY YEARS IN THE FIELD OF CITY PLANNING. WITH MANY STATE'S UNIVERSITIES GROWING AT AN ALARMING RATE UNIVERSITY OFFICIALS ARE BEGINNING TO WONDER WERE TO LOOK FOR EXPANSION. THIS THESIS PROJECT FOCUSES MAINLY ON HOW TO INTEGRATE A NEW STYLE OF PUBLIC UNIVERSITY THAT BEGINS TO FUND ITSELF THROUGH THE EVENTS THAT ARE LOCATED ON CAMPUS. WITH THIS NEW TYPE OF DEVELOPMENT THERE ARE CONCERNS ABOUT LOSING THE IDEA OF FOCUSING THE ATTENTION ON THE STUDENT AND TURNING TOWARDS JUST TRYING TO TURN A PROFIT.

THIS IS THE CASE ON THE UNIVERSITY OF NORTH DAKOTA CAMPUS. THIS CAMPUS HAS RECENTLY EXPANDED ITS BOUNDARIES TO INCLUDE A LUXURIOUS NEW HOCKEY ARENA THAT DRAWS IN FANS FROM AROUND THE MIDWEST. WITH SUCH A FAN DRAW THE UNIVERSITY IS LOOKING INTO WAYS TO INCORPORATE THESE NEW VISITORS INTO THEIR CAMPUS WITHOUT DISTURBING THE EDUCATIONAL ELEMENT OF THE COLLEGE.

ONE WAY TO ACHIEVE THIS GOAL IS TO PROMOTE A MIXED-USE DEVELOPMENT THAT INCORPORATES ALL THE USERS INTO THE SAME SITE AT DIFFERENT TIMES. THIS TYPE OF HIGH-DENSITY DEVELOPMENT WILL ALLOW THE UNIVERSITY TO EXPAND ITS STUDENT BASE ONTO THE SITE AND ALLOW FOR VISITORS TO ENJOY THE COLLEGE ATMOSPHERE. THIS THESIS IS FOCUSED MAINLY ON HOW TO INTEGRATE THESE TWO GROUPS(VISITORS AND STUDENTS) AND THE UNIVERSITIES EXISTING ALUMNI WHO ALSO HAVE AN INTEREST IN THE SITE.

THE MAIN IDEA BEHIND THIS DESIGN IS A FORM OF DEVELOPMENT CALLED NEW URBANISM. THIS TYPE OF DEVELOPMENT PROMOTES MIXED-USE DEVELOPMENT AT A PEDESTRIAN SCALE. THIS PROJECT WILL ALSO FOCUS ON THE IDEAS OF CAMPUS PLANNING AND TRANSIT ORIENTATED DESIGN OR TOD.

THIS THESIS PROJECT WILL ATTEMPT TO CREATE A NEW TYPE OF CAMPUS DESIGN WHICH WILL FURTHER MOVE THE UNIVERSITY INTO THE COMMUNITY.

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UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

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UND UNIVERSITY VILLAGE DEVELOPMENT

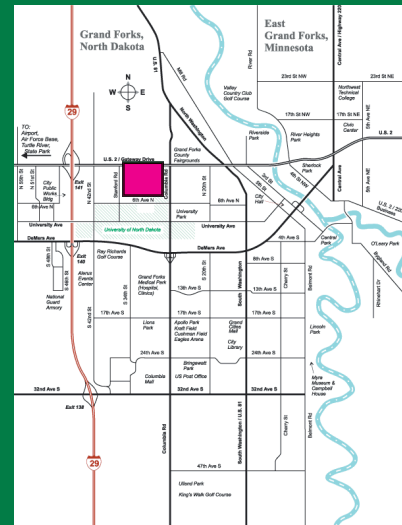
FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

PROJECT ORIENTATION

THE CITY OF GRAND FORKS HAS LONG BEEN A CITY SPLIT INTO TWO. EAST GRAND FORKS LIES ON THE MINNESOTA SIDE OF THE MINNESOTA AND NORTH DAKOTA BORDER WITH THE ACTUAL CITY OF GRAND FORKS BEING IN NORTH DAKOTA. THESE TWO CITIES RECENTLY CHANGED THEIR NAME TO THE GRAND CITIES TO GIVE THE CITIES A FEELING OF NEW LIFE. AFTER THE FLOOD OF 1997 THE CITIES NEEDED A NEW IDENTITY TO ATTRACT NEW CITIZENS. THE NORTHERN HALF OF THESE CITIES HAS DESPERATELY NEEDED SOME FORM OF DEVELOPMENT SINCE THE FLOOD, MY SITE IS LOCATED IN A PRIME AREA TO HELP WITH THIS DILEMMA. THE SITE IS A QUARTER SECTION OF LAND ON THE NORTHERN PART OF THE UNIVERSITY OF NORTH DAKOTA(UND) CAMPUS. THIS SITE IS BORDERED BY TWO MAJOR STREETS. THE FIRST ONE IS HIGHWAY 2 WHICH RUNS EAST AND WEST AND CREATES THE NORTH BOUNDARY OF THE SITE. ALONG THE EAST SIDE OF THE SITE NORTH COLUMBIA ROAD CREATES THE BOUNDARY AND IS THE MAIN THOROUGHFARE ALONG ALL OF THE EAST SIDE OF THE UND CAMPUS. 6TH AVENUE CREATES THE SOUTHERN BOUNDARY OF THE SITE. THIS ROAD ISN'T AS BUSY AS THE FIRST TWO, BUT STILL GETS USED FREQUENTLY TO ACCESS THE SITE'S PARKING AREAS. THE FINAL BOUNDARY TO THE WEST HAS NO DEFINITE LINE. THE SITE STOPS AT THE QUARTER SECTION. THE SITES WESTERN BOUNDARY RUNS THROUGH THE ENGLISH COOLIE AND COMES OUT JUST WEST OF THE NEW WELLNESS CENTER.



Fig 1:1 Grand Forks Regional (www.grandforksgov.com)



Site Area
Fig. 1.2 Grand Forks Area (ww.und.edu)

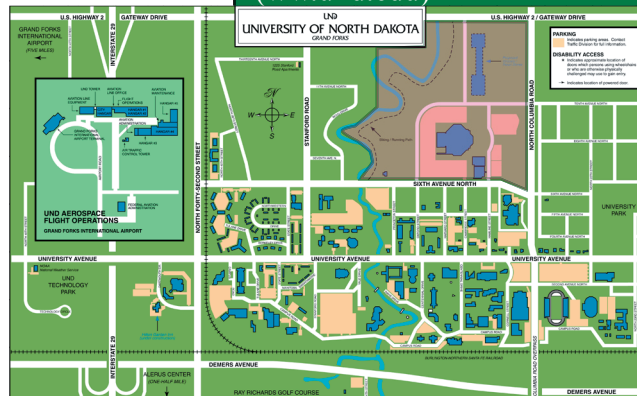


Fig:1.3 Univeristy of North Dakota (www.und.edu)

“It’s the most expensive quarter of land north of the Twin Cities,”

Rick Tonder, Associate Facilities Director University of North Dakota

PROJECT INTRODUCTION

LIVING ON THE UNIVERSITY OF NORTH DAKOTA CAMPUS TODAY IS A VERY EXCITING TIME. THE COLLEGE HAS RECENTLY ADDED A NEW BARNES AND NOBLE BOOK STORE AND A FAMILY MEDICINE CENTER. OF COURSE, THE MOST EXCITING NEW DEVELOPMENT ON CAMPUS HAS BEEN THE RALPH AND BETTY ENGLESTAD ARENAS. THESE ARENAS HAVE BROUGHT NATIONWIDE INTEREST TO THE UNIVERSITY CAMPUS AND ARE HELPING TO FUND MULTIPLE NEW PROJECTS. THE NEW WELLNESS CENTER FOR STUDENTS IS BEING CONSTRUCTED JUST WEST OF THE ARENA. THE STUDENTS ARE ALSO LOOKING FORWARD TO GETTING NEW SOCCER FIELDS FOR THEIR CAMPUS TEAMS. THE GREATEST DEVELOPMENT OUT OF ALL OF THESE HAS BEEN THE BRONSON PROPERTY TO THE NORTH OF THE RALPH ENGELSTAD ARENA. WHAT IS TO HAPPEN TO THIS LAND? HOW SHOULD IT BE DEVELOPED? THESE ARE QUESTIONS MANY ALUMNI AND STUDENTS HAVE WHEN LOOKING NORTH OF THEIR CAMPUS.

THE EFFECT ON THE STUDENT BODY

IN RECENT YEARS THE STUDENT BODY AT UND HAS GROWN BY OVER 600 STUDENTS A YEAR. THIS NEW GROWTH HAS CAUSED THE CAMPUS TO GO THROUGH SOME GROWING PAINS. THESE GROWING PAINS INCLUDE PARKING PROBLEMS, LACK OF STUDENT HOUSING, AND THE RAPID DECREASE IN OPEN SPACE. FOR STUDENTS THIS MEANS A MORE CROWDED AND LESS ENJOYABLE COLLEGE EXPERIENCE. RECENT DEVELOPMENTS ARE SPREADING THE CAMPUS OUT ACROSS MORE AREA EACH YEAR. THIS IS CAUSING STUDENTS TO HAVE TO WALK FURTHER IN NORTH DAKOTA’S BLISTERING WINTERS. THE BONUS SIDE TO THE EXPANSION OF CAMPUS IS THAT MANY STUDENTS GET TO USE NEW FACILITIES AND HOUSING.

PROJECT INTRODUCTION

CAMPUS AS A BUSINESS

UP UNTIL A FEW DECADES AGO CAMPUS LAND WAS USED PRIMARILY FOR THE EDUCATION OF ITS STUDENTS. WITH THE BUDGET CONSTRAINTS ON UNIVERSITIES IN THE REGION CAMPUS OFFICIALS HAVE BEEN FINDING NEW WAYS TO FUND THEIR INSTITUTIONS. ONE WAY IS TO COMMERCIALIZE PART OF THEIR CAMPUS. A GOOD EXAMPLE OF THIS IS DINKY TOWN ON THE UNIVERSITY OF MINNESOTA CAMPUS. THESE DEVELOPMENTS HELP TO FUND THE UNIVERSITY BY CHARGING A LEASE ON THEIR PROPERTIES USED BY THE COMMERCIAL SECTOR. THE UNIVERSITY OF NORTH DAKOTA IS UNIQUE BECAUSE ITS DEVELOPMENT IS NOT BASED SOLELY ON THE BUSINESS OF STUDENTS, BUT ALSO ON BUSINESS FROM THE RALPH ENGELSTAD ARENA FUNCTIONS. THIS CAUSES THE SITE TO BE A DAWN TO DARK COMMERCIAL DISTRICT. THIS CAN ENTICE MANY COMMERCIAL DEVELOPERS AND BUSINESS OWNERS WITH THE PROSPECT OF A LARGE CONSUMER BASE.

CAMPUS AS A PERMANENT HOME

THE UNIVERSITY IS ALSO DESIGNATING SOME OF THE BRONSON PROPERTY FOR STUDENT AND ALUMNI HOUSING. THE ALUMNI HOUSING WILL BE SOLD TO FORMER STUDENTS AND TEACHERS IN HOPES THAT THE HOMES WILL BE LEFT TO THE UNIVERSITY WHEN THE RESIDENTS LEAVE. IN THIS WAY THE CAMPUS CAN MAKE INCOME BY LEASING THE HOMES TO THE NEXT RESIDENT AND KEEPING THE REVENUE. IN THE FUTURE THE UNIVERSITY HOPES TO ADD APARTMENTS IN THE MIXED-USE COMMUNITY THAT CAN BE LEASED TO STUDENTS AND THE RESIDENTS OF GRAND FORKS.



PROJECT DESCRIPTION

SITE SELECTION

THE SITE SELECTED FOR THIS PROJECT IS THE BRONSON PROPERTY IN NORTH-WESTERN GRAND FORKS ON THE UNIVERSITY OF NORTH DAKOTA CAMPUS. THE PROPERTY IS ROUGHLY A QUARTER SECTION WITH ABOUT 160 ACRES OF USABLE LAND. THIS SITE IS RELATIVELY SMALL CONSIDERING ALL THE AMENITIES THAT ARE TO BE PROVIDED. THE SITE ALREADY HAS SOME LARGE EXISTING STRUCTURES AND PARTS OF THE LAND ARE UNUSABLE BECAUSE OF FLOODPLAIN ISSUES. THIS SITE HAS A SMALL COOLIE THAT RUNS SOUTH TO NORTH AND SPLITS THE SITE INTO TWO ALMOST EQUAL PIECES. A COOLIE IS A SMALL CREEK THAT COLLECTS RUN-OFF FROM A SITE AND TRANSPORTS IT TO THE MAIN RIVER. IN THE CASE OF THE ENGLISH COOLIE IT COLLECTS WATER AND TRANSPORTS IT TO THE RED RIVER OF THE NORTH. THIS SITE IS INFILL DEVELOPMENT DUE TO THE FACT THAT IT IS SURROUNDED BY CAMPUS ON TWO SIDES AND STREETS ON THE OTHER TWO SIDES. THIS MEANS THAT THE DEVELOPMENT CANNOT EXPAND PAST THE SITE BOUNDARIES BECAUSE THERE IS NO MORE AVAILABLE LAND AND THE UNIVERSITY DOESN'T OWN ANY OF THE ADJACENT LOTS.

THIS SITE IS PERFECT FOR TESTING THE LIMITS OF A NEW URBANISM AND TRANSIT ORIENTATED DEVELOPMENT. NEW URBANISM IS A MIXED-USE TYPE OF DEVELOPMENT THAT CAN BE USED BY THE VISITORS, STUDENTS, AND PERMANENT RESIDENTS OF THE SITE. EACH DIFFERENT USER CAN TAKE ADVANTAGE OF A DIFFERENT TYPE OF USE PROVIDED BY THE SITE. VISITORS CAN USE THE COMMERCIAL DEVELOPMENT PROVIDED BY NEW URBANISM'S GROUND FLOOR COMMERCIAL BUILDINGS. STUDENTS CAN TAKE ADVANTAGE OF NEW URBANISM'S FOCUS ON HIGH DENSITY HOUSING AND LOFT APARTMENTS ABOVE COMMERCIAL AREAS. NEW URBANISM PROVIDES THE SINGLE

PROJECT DESCRIPTION

FAMILY USER WITH ROW HOUSING AND SINGLE FAMILY HOUSING. THIS TYPE OF DEVELOPMENT ALSO PROVIDES COMMUNITY OPEN SPACES THAT CAN BE USED BY THESE SINGLE FAMILIES. THESE OPEN AREAS CAN ALSO BE USED BY SITE VISITORS AND THE STUDENTS. SOME COMMERCIAL AREAS CAN ALSO SERVE MORE THAN ONE FORM OF USER(I.E. STUDENTS AND PERMANENT RESIDENTS).

THE SITE WAS SELECTED FOR MY CAPSTONE PROJECT BECAUSE OF ITS LOCATION AND THE POLITICS THAT THIS SITE MUST DEAL WITH. THIS SITE'S LOCATION PROVIDES ONE OF THE FEW OPPORTUNITIES TO TEST SOME THEORIES OF NEW URBANISM IN A NORTHERN CLIMATE. THE SITE ALSO ALLOWS A SPARSELY POPULATED AREA TO REALIZE THE BENEFITS OF SMART GROWTH LONG BEFORE THE PROBLEMS OF MAJOR URBAN SPRAWL INVADE A COMMUNITY.

THE POLITICS OF THE SITE ARE MIXING USES OF AREAS AND BUILDINGS SO THE UNIVERSITY, VISITORS, STUDENTS, AND PERMANENT RESIDENTS CAN ALL FUNCTION IN THE SAME PROXIMITY. THESE DIFFERENT USERS ALL USE DIFFERENT MODES OF TRANSPORTATION, DINE AT DIFFERENT ESTABLISHMENTS, AND REQUIRE DIFFERENT AMENITIES FROM THE SITE. THE INTEGRATION OF THIS DIVERSE USER WILL BE THE MAIN FOCUS OF MY CAPSTONE PROJECT.

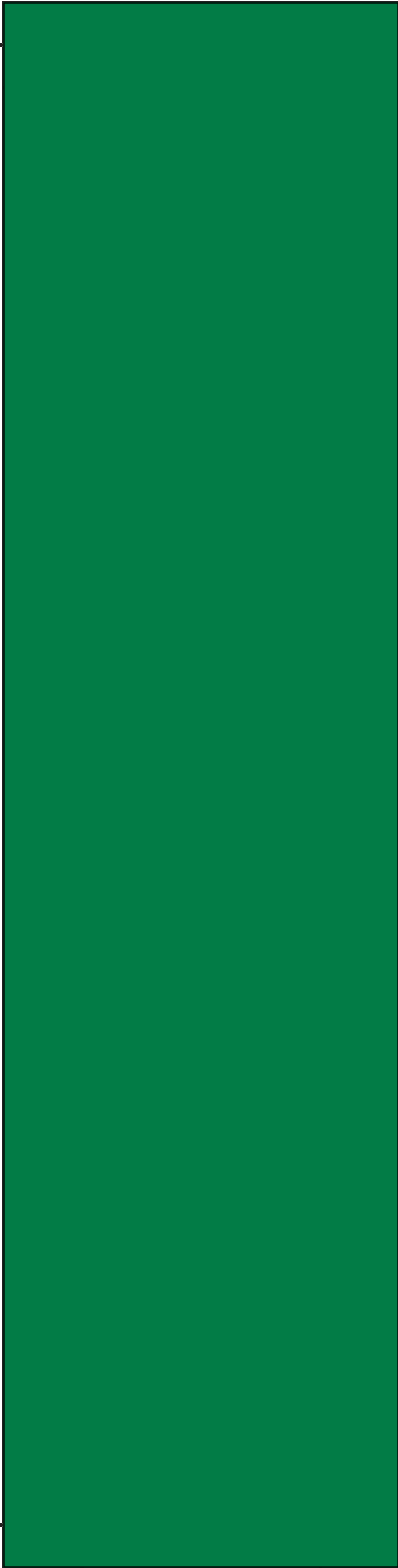




Fig 3:1 Pedestrian Promenade (Jerke 2005)



Fig 3:2 Ralph Engelstad Arena (Jerke 2005)

PROJECT DESCRIPTION

UNIFYING IDEA

THIS DESIGN IS ABOUT RETHINKING HOW WE INTERRUPT OUR PUBLIC UNIVERSITIES AS A WHOLE. UNIVERSITIES IN THE FUTURE NEED TO BECOME A MORE INTEGRAL PART OF THE COMMUNITY THEY INHABIT. BY BECOMING PART OF THE COMMUNITY THEY PROFIT FROM THE LEASING OF UNIVERSITY HELD LAND AND THROUGH ACTIVITIES THAT THE SURROUNDING COMMUNITY CAN ENJOY. PUBLIC UNIVERSITIES NEED TO ALSO REALIZE THAT THE STUDENTS THAT INHABIT THESE CAMPUSES ARE ALSO BECOMING MORE DIVERSE AND REQUIRE DIFFERENT AMENITIES.

THE GOALS OF THIS CAPSTONE PROJECT

THE BRONSON PROPERTY HAS THREE INDIVIDUAL USER GROUPS EACH WITH THEIR OWN NEEDS AND REQUIREMENTS. THE MAIN OBJECT OF THIS DESIGN IS TO INCORPORATE THE UNIVERSITY STUDENTS, THE PERMANENT RESIDENTS, AND THE RALPH ENGELSTAD VISITORS INTO THE DESIGN. THE GROUPS WILL EACH HAVE THEIR OWN SPACES, BUT WILL ALSO SHARE AND EVEN INTERACT IN OTHER SPACES. THE SEAMLESS INTERACTION BETWEEN THESE THREE DIVERSE GROUPS IS ONE OF THE MAIN GOALS OF MY DESIGN.

THE SECOND GOAL OF THIS DESIGN IS TO CREATE A RESIDENTIAL AND COMMERCIAL DEVELOPMENT AT A PEDESTRIAN CAMPUS SCALE. THIS MEANS THAT THE DISTINCTION BETWEEN CAMPUS BUILDINGS AND COMMERCIAL/RESIDENTIAL BUILDINGS NEEDS TO INFORM THE SITE USER OF THE AREAS APPLICATION WITHOUT INTERRUPTING THE ENTIRE FEEL OF THE CAMPUS DESIGN. THE OVERALL GOAL IS TO BRING TEMPORARY USERS BACK TO THE SITE FOR COMMERCIAL PURPOSES, WHILE NOT INTERRUPTING THE LIVES OF THE DAILY CAMPUS USER.

THE THIRD GOAL OF THIS CAPSTONE PROJECT IS TO OPEN THE CAMPUS TO THE SURROUNDING COMMUNITY. THIS GOAL IS AN IMPORTANT FIRST STEP IN THIS DEVELOPMENT PROJECT. THE UNIVERSITY OF NORTH DAKOTA NEEDS TO INVITE NEW VISITORS TO EXPLORE THE CAMPUS AND SURROUNDINGS.

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PROJECT DESCRIPTION

THE FOURTH GOAL OF THIS PROJECT IS TO KEEP ATTENDING STUDENTS FROM FEELING ALIENATED FROM THE SITE ON WHICH THEY INHABIT. THE UNIVERSITY MUST DO THIS IN ORDER TO KEEP THE SITE AN AREA OF INTEREST FOR STUDENTS AND FACULTY SINCE THEY WILL BE THE DAILY USERS.

THE FIFTH GOAL OF THIS PROJECT IS TO PROVIDE ALL THE USERS WITH A PEDESTRIAN FRIENDLY SCALE. THIS WILL HELP THE SITE BECOME FREE OF SOME OF THE PARKING REQUIREMENTS THAT WOULD OVERTAKE AN AREA WITH SO MUCH ACTIVITY.

THE SIXTH GOAL OF THIS PROJECT IS TO CREATE A "UNIVERSITY VILLAGE" FEEL FOR THIS PROJECT. THIS WAS ONE OF THE MAIN GOALS OF THE UNIVERSITY OFFICIALS. THE PROJECT IS TO INCLUDE SMALL SCALE DEVELOPMENT RATHER THAN LARGE DEPARTMENT STORE TYPE CONSTRUCTION.

THE FINAL GOAL OF THIS PROJECT IS TO SHOW THE ADAPTABILITY OF NEW URBANISM AND TRANSIT ORIENTATED DESIGN. THIS PROGRAM WILL BE A CASE STUDY FOR STUDENTS IN THE FUTURE TO LEARN HOW TO IMPLEMENT A FIXED DESIGN TYPE INTO A VERY DIVERSE COMMUNITY.

LANDSCAPE TYPE

THE LANDSCAPE TYPE OF THIS PROJECT IS CAMPUS ZONED. THIS MEANS THAT ALMOST ANY STRUCTURE CAN BE CONSTRUCTED AS LONG AS IT IS APPROVED BY UNIVERSITY OFFICIALS. THE UNIVERSITY HAS EXPRESSED THE GOAL OF HAVING THIS DEVELOPMENT BE A MIXED-USE DEVELOPMENT. THIS TYPE OF DEVELOPMENT HOUSES COMMERCIAL, RESIDENTIAL, AND INSTITUTIONAL ZONES ALL ON THE SAME SITE.



Fig 3:3 University Village Entrance Sign (Jerke 2005)



Fig 3:4 Bike Path Near the English Coolie (Jerke 2005)

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Fig 3:5 Ralph Engelstad
Arena Entrance Sign
(Jerke 2005)



Fig 3:6 Betty Engelstad
Arena Entrance
(Jerke 2005)

PROJECT DESCRIPTION

PROJECT EMPHASIS

THE PROJECT EMPHASIS IS TO CREATE A COMMUNITY FEEL FOR THE DIVERSE USERS, TO KEEP THE DESIGN AT A HUMAN SCALE, AND TO MAXIMIZE USE OF THE DEVELOPMENT AREA. MOSTLY THE DESIGN EMPHASIS WILL FOCUS ON THE INTERACTION OF THE DIFFERENT USER GROUPS.

SOME OF THE WAYS THAT THIS EMPHASIS WILL BE ACCOMPLISHED WILL BE THROUGH DIFFERENT ASPECTS OF THE MASTER PLAN. SOME ISSUES THAT WILL BE FOCUSED ON TO ACHIEVE THE PROJECT EMPHASIS INCLUDE:

MASS TRANSIT

MASS TRANSIT IS AN ESSENTIAL ELEMENT IF A PEDESTRIAN SCALE IS TO BE MAINTAINED. THE MIXTURE OF MASS TRANSIT AND THE AUTOMOBILE WILL BE A BALANCING ACT OF GREAT IMPORTANCE.

GRID SYSTEM AND STREET SCALE

THESE TWO THINGS WILL BE VERY IMPORTANT IN KEEPING THE DESIGN AT A PEDESTRIAN SCALE AND KEEPING THE CAMPUS FEEL ALIVE. THE REST OF THE UNIVERSITY CAMPUS IS IN A GRID LAYOUT AND ALLOWING USERS TO MOVE FREELY WITHOUT THE NEED FOR THE AUTOMOBILE.

BUILDING FACADES AND SETBACKS

THESE TWO AREAS WILL BE EMPHASIZED TO HELP KEEP THE FEEL OF THE CAMPUS DESIGN. THEY WILL ALSO BE IMPORTANT TO DELINEATE DIFFERENT USER AREAS.

PROJECT DESCRIPTION

PERSONAL GOALS

THE GOALS FOR THIS PROJECT ARE MORE HOPES FOR THE FUTURE OF THIS DEVELOPMENT AND MIXED-USE DEVELOPMENT.

-THE FIRST GOAL IS TO GAIN KNOWLEDGE IN THE AREA OF SMART GROWTH. THROUGH THIS PROJECT THE HOPE IS TO INSTALL AN UNDERSTANDING OF HOW SMART GROWTH CAN WORK IN A COLD NORTHERN CLIMATE. SMART GROWTH REQUIRES A LOT OF OUTDOOR ACTIVITY AND MAY BE HARD TO INCORPORATE IN A COLD CLIMATE.

-THE SECOND GOAL IS TO STRETCH THE IDEA OF SMART GROWTH INTO THE COLLEGE CAMPUS DEVELOPMENT FORUM. THROUGH THIS DESIGN THE UNIVERSITY WILL HAVE AN IDEA OF HOW TO EXPAND IN THE FUTURE.

-THE FINAL GOAL FOR THIS PROJECT IS TO COMPLETE A PROGRAM AND THESIS DESIGN THAT IS WORTHY OF STUDY BY FUTURE STUDENTS INTERESTED IN THE FIELD OF MIXED-USE DEVELOPMENT AND PLANNING.

CLIENTS/OWNERS

THE OWNER FOR THIS DEVELOPMENT IS THE UNIVERSITY OF NORTH DAKOTA. THE UNIVERSITY OWNS THE ENTIRE SITE AND HOPES TO DEVELOP THE LAND TO ITS FULLEST EXTENT. THE CLIENT FOR THIS PROJECT IS A COMBINATION OF UND AND THE DEVELOPER WHO IS CONSTRUCTING EACH PIECE OF LEASED LAND. THE LAND WILL BE LEASED IN SECTIONS AND ALTHOUGH THE UNIVERSITY HAS TO APPROVE ALL CONSTRUCTION PROJECTS THE FINAL BUILT PRODUCT IS APPROVED BY THE DEVELOPER. IT IS IN THIS WAY THAT THE DEVELOPMENT MAY HAVE PROBLEMS WITH CONSISTENCY OF DESIGN INTEGRATION. THE UNIVERSITY MUST CONVINCE THE DEVELOPER TO HAVE A BUDGET THAT WILL ALLOW THE DESIGNERS TO FOLLOW THE OVERALL MASTER PLAN CONCEPTS.

PROJECT DESCRIPTION

USER

THE PRIMARY USER FOR THIS SITE IS THE STUDENTS OF THE UNIVERSITY OF NORTH DAKOTA. THE SITE WILL INCLUDE NEW STUDENT HOUSING THAT WILL HOUSE BETWEEN 400 AND 600 STUDENTS. STUDENTS MAY ALSO INHABIT SOME OF THE LOFT APARTMENTS AND POSSIBLY SOME OF THE ROW HOUSING.

THE SECONDARY USERS WILL BE THE SITE VISITORS AND THE PERMANENT RESIDENTS. THE PERMANENT RESIDENTS ARE SECONDARY BECAUSE OF THEIR CHOICE TO LIVE ON THE CAMPUS. STUDENTS ARE PRIMARY BECAUSE THEY ARE EITHER REQUIRED TO LIVE ON CAMPUS OR WANT TO BE CLOSE TO THEIR CLASSES. THE AMOUNT OF PERMANENT RESIDENTS WILL VARY DEPENDING ON THE AMOUNT OF HOUSING INSTALLED. THESE USERS WILL USE THE LOFT APARTMENTS, ROW HOUSES, AND SINGLE FAMILY HOUSES.

THE OTHER SECONDARY USER IS THE VISITORS WHO ARE ATTENDING ATHLETIC EVENTS. THESE USERS WILL BE IMPORTANT BECAUSE OF THE VOLUME AT WHICH THEY WILL INHABIT THE SITE. DURING RALPH ENGELSTAD ARENA EVENTS THE SITE WILL HAVE TO ACCOUNT FOR AS MANY AS 12,000 VISITORS. THESE VISITORS WILL WANT QUICK ACCESS ON AND OFF THE SITE.

ECONOMIC BASE

THE FUNDING FROM THIS PROJECT IS COMING ALMOST SOLELY FROM THE DEVELOPERS OF THE UNIVERSITY LAND. THE UNIVERSITY IS LEASING THE LAND ON A 50 YEAR LEASE. WHEN THE 50 YEAR LEASE IS UP THE LAND AND BUILDINGS WILL GO BACK TO BELONGING TO THE UNIVERSITY. THIS IS A GREAT OPPORTUNITY FOR THE UNIVERSITY BECAUSE 50 YEARS FROM WHEN THE LEASES STARTS THE UNIVERSITY WILL GET BACK ITS LAND ALONG WITH A FREE BUILDING.

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PROJECT DESCRIPTION

PROJECT NEEDS

STUDENT HOUSING

STUDENT HOUSING IS ONE OF THE MAIN NEEDS FOR THIS DEVELOPMENT. THE UNIVERSITY IS LOOKING TO HOUSE ROUGHLY 400 TO 600 STUDENTS IN SOME LARGE SCALE APARTMENT COMPLEXES. STUDENT HOUSING WILL COVER ABOUT 10% OF THE DEVELOPMENT OR 14 ACRES

RESIDENTIAL HOMES

THE UNIVERSITY IS LOOKING AT HAVING ABOUT 100 HOMES ON THE DEVELOPMENT WHEN IT IS COMPLETED. THESE SINGLE FAMILY AND MULTI FAMILY HOMES NEED SMALL PRIVATE YARDS, SOME OFF STREET PARKING, AND GARAGES. RESIDENTIAL HOMES WILL COVER 20% OF THE TOTAL DEVELOPMENT OR 28 ACRES.

LOFT APARTMENTS AND CONDOS

THESE TWO TYPES OF RESIDENTIAL BUILDINGS WILL BE INCORPORATED IN THE COMMERCIAL AND RESIDENTIAL AREAS OF THE DEVELOPMENT. THE UNIVERSITY WANTS TO COMFORTABLY FIT AS MUCH APARTMENT HOUSING AS THEY CAN. UND OFFICIALS DID NOT SPECIFY A SPECIFIC AMOUNT FOR EITHER OF THESE UNITS. THE CONDOS WILL REQUIRE ONLY 5% OF THE TOTAL DEVELOPMENT OR 7 ACRES.

COMMERCIAL BUILDINGS

THE UNIVERSITY OFFICIALS DID NOT SPECIFY HOW MUCH COMMERCIAL SPACE WAS TO BE INCORPORATED INTO THIS DEVELOPMENT. THE UNIVERSITY DOES WANT CERTAIN TYPES OF COMMERCIAL BUSINESSES INCLUDING: SPORTS BARS, FAMILY RESTAURANTS, A GAS STATION, BANK, AND SMALL COMMERCIAL BUSINESSES(I.E. HAIR PARLORS, GIFT SHOPS, BOOK STORE, AND A SMALL SPORTING GOOD STORE. THE COMMERCIAL BUILDINGS ARE TO BE KEPT AT A SMALL SCALE. COMMERCIAL BUILDINGS WILL COVER ABOUT 10% OF THE SITE OR 14 ACRES.



Fig 3:7 On Campus Bus Station
(Jerke 2005)



Fig 3:8 Bike Path on South Side of Site (Jerke 2005)

PROJECT DESCRIPTION

COMMUNITY BUILDINGS

THE UNIVERSITY ASKED THAT THE SITE HAVE SOME COMMUNITY BUILDINGS INCLUDING AN ALUMNI CENTER. THE SITE ALREADY HAS MANY COMMUNITY BUILDINGS INCLUDING THE WELLNESS CENTER AND THE RALPH AND BETTY ENGELSTAD ARENAS. THESE NEW COMMERCIAL AREAS WILL COVER APPROXIMATELY 5% OF THE GROUNDPLAIN OR ABOUT 14 ACRES

OPEN SPACE

THE STUDENTS AND PERMANENT RESIDENTS WILL REQUIRE MANY SMALL AND LARGE SCALE OPEN AREAS FOR ACTIVITY. A DENSE MIXED USE DEVELOPMENT LIKE THIS ONE REQUIRES MANY AREAS WHERE THE PUBLIC CAN ENJOY THE OUTDOORS. THE ENGLISH COOLIE IS A PRIME AREA FOR THESE OPEN SPACES. PUBLIC OPEN SPACE WILL COVER 10% OF THE DEVELOPMENT OR ABOUT 21 ACRES.

PARKING AREAS

THE STUDENTS AND SOME OF THE PERMANENT RESIDENTS WILL REQUIRE PARKING AREAS AND ON STREET PARKING. THE AMOUNT OF PARKING WILL BE DETERMINED BY THE AMOUNT OF HOUSING AND HOW MUCH OFF SITE PARKING WILL BE PROVIDED BY THE UNIVERSITY. UNFORTUNATELY PARKING MIGHT COVER AS MUCH AS 5% OF THE TOTAL DEVELOPMENT OR 21 ACRES.

BIKE AND PEDESTRIAN PATHS

THE UNIVERSITY HAS ASKED FOR PEDESTRIAN AND BIKE PATHS TO BE EASILY ACCESSIBLE FOR ALL THE USERS OF THE SITE. THE UNIVERSITY CAMPUS CURRENTLY HAS MANY WALKING AND BIKING PATHS ON THE CAMPUS AND HOPES TO CONTINUE THAT FEEL IN THE UNIVERSITY VILLAGE DEVELOPMENT. BIKE PATHS WILL COVER 2% OR .8 ACRES.

PROJECT DESCRIPTION

EXISTING ELEMENTS

EXISTING ELEMENTS ALREADY COVER ROUGHLY 40-45% OF MY SITE OR 60 ACRES. SOME OF THESE EXISTING ELEMENTS INCLUDE PARKING AREAS, TENNIS COURTS, RIPARIAN AREA, SOCCER FIELDS, AND EXISTING BUILDINGS.

USAGE NEEDS

THE SITE WILL HAVE HEAVY USAGE DURING THE SCHOOL YEAR. THE USAGE DURING THIS TIME WILL BE 24 HOURS A DAY. THE HEAVIEST USAGE OF THE SITE WILL BE DURING RALPH AND BETTY ENGELSTAD ARENA EVENTS AND DURING PEAK CAMPUS HOURS.

BUDGET NEEDS

THE BUDGET NEEDS FOR THIS SPACE CANNOT BE DETERMINED AT THIS TIME DUE TO THE SIZE AND SCOPE OF THIS PROJECT. THE BUDGET FOR THE UNIVERSITY WILL CHANGE DRASTICALLY DEPENDING ON THE TIME LINE IN WHICH THEY HOPE TO BUILD THIS DEVELOPMENT.

PSYCHOLOGICAL IMPACT

THIS CAPSTONE PROJECT WILL REQUIRE A VERY OPEN MIND FROM THE CLIENT AND USER. THIS TYPE OF DESIGN HAS NEVER BEEN TRIED IN THIS AREA AND SOME OF ITS FEATURES ARE FOREIGN TO THE UPPER MIDWEST. THE BENEFITS WILL OUTWEIGH THE INITIAL DOUBTS OF THIS DESIGN BUT THE CLIENT WILL NEED TO STAY THE COURSE AS THIS DESIGN IS TRULY THE ROAD NOT TAKEN.

I shall be telling this with a sigh
Somewhere ages and ages hence:

Two roads diverged in a wood,
and I—

I took the one less traveled by,
And that has made all the difference

Robert Frost
The Road Not Taken

PROJECT DESCRIPTION

RESEARCH

RESULTS FROM UNIFYING IDEA RESEARCH

FROM STUDYING THE UNIFYING IDEA I HAVE DISCOVERED MANY DIFFERENT TYPES OF HUMAN SCALE DESIGN SUCH AS THE GARDEN CITY DESIGN, NEW URBANISM, AND THE GRID SYSTEM.

I HAVE ALSO DISCOVERED THAT A DESIGN THAT INCORPORATES THIS MANY DIFFERENT DESIGN SITUATIONS HAS BEEN ATTEMPTED OTHER PALACES (I.E. UNIVERSITY OF WISCONSIN-MILWAUKEE). THESE TYPES OF DESIGN DEPEND HEAVILY ON USER PARTICIPATION.

RESULTS FROM TYPOLOGY RESEARCH

FROM STUDYING THE CAMPUS AND MIXED-USE DEVELOPMENT TYPOLOGIES I HAVE DISCOVERED THAT THEY HAVE MANY SIMILAR TRAITS. BOTH USE PEDESTRIAN SCALE AND RELY HEAVILY ON MASS TRANSIT. THE ONE THING THAT DIFFERS BETWEEN THE TWO TYPES OF DEVELOPMENT IS THAT USUALLY CAMPUS DEVELOPMENT HAS LARGE SCALE BUILDINGS WHILE THE MIXED-USE(NEW URBANISM) DEVELOPMENT STAYS WITH SMALLER SCALE TIGHTLY COMPACT BUILDING PATTERNS.

HISTORICAL CONTEXT OF THE THESIS

THIS DESIGN FITS INTO THE RECENT MOVEMENT OF NEW URBANISM, TRANSIT ORIENTATED DESIGN, AND THE HUMAN SCALE. THIS TYPE OF DESIGNING HAS BEEN AROUND IN ONE FORM OR ANOTHER FOR DECADES. THE GARDEN CITY MOVEMENT IS ONE EXAMPLE OF A HUMAN SCALE, NEW URBANISM TYPE DEVELOPMENT THAT DATES BACK TO THE 1800S. THIS TYPE OF DESIGN HAS BEEN USED BEFORE, BUT IT VERY SELDOMLY GETS STRETCHED TO THE EXTENT REACHED IN THIS THESIS.

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

ST. CROIX VALLEY

THIS CASE STUDY WAS DONE ORIGINALLY TO GIVE A MASTER PLAN FOR THE RESIDENTS OF COMMUNITIES BETWEEN MINNEAPOLIS AND THE WISCONSIN BORDER. THIS SITE IS PROJECTED TO INCREASE THE AMOUNT OF HOUSEHOLDS BY 50%. EMPLOYMENT IS ALSO GROWING THOUGH NOT AT THE SAME RATE. THE AREA IN THIS STUDY IS PROJECTED TO ENCOUNTER ALL TYPES OF NEW DEVELOPMENT.

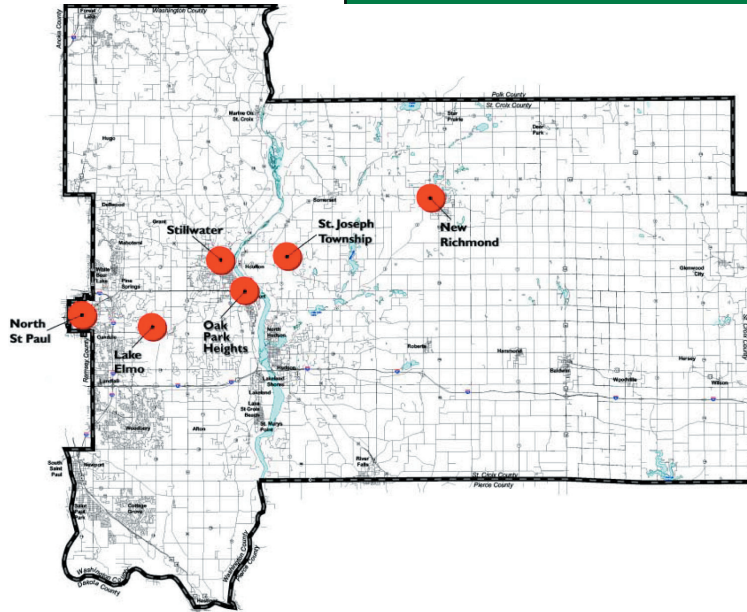


Fig. 4:1 St Croix Valley Case Study (Calthorpe, 2000)

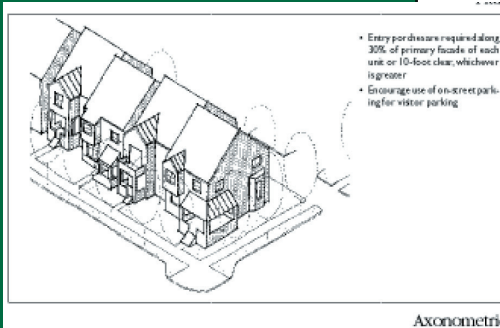
THE ST. CROIX RIVER DEVELOPMENTS TAKE PLACE IN A VARIETY OF DIFFERENT TOWNS AND CITIES. THE DEVELOPMENTS INCLUDED LAKE ELMO, OAK PARK HEIGHTS, SAINT JOSEPH TOWNSHIP, NORTH ST. PAUL, STILLWATER, AND NEW RICHMOND. EACH COMMUNITY FACES A DIFFERENT ASPECT OF URBAN SPRAWL OR URBAN DECAY. THIS CASE STUDY FOCUSED ON DIFFERENT WAYS TO USE SMART GROWTH IN ALL OF THESE SITUATIONS. THESE CITIES LIE ON WHAT IS KNOWN AS THE 36/64 CORRIDOR WHICH IS THE MAIN HIGHWAY THAT LEADS FROM MINNEAPOLIS INTO STILLWATER, WISCONSIN. THIS AREA IS PRONE TO DEVELOPMENT FOR TWO REASONS.

ONE IS THE AESTHETIC VALUE OF THE LAND ON WHICH IT LIES. THE ST. CROIX RIVER VALLEY IS A SCENIC RURAL LANDSCAPE COVERED WITH RIVERS, LAKES, AND WETLANDS. THE RIVER VALLEY IS A PRIME SPOT FOR DEVELOPMENT BECAUSE OF ITS RURAL HISTORY AND CHARACTER. THIS IDEAL FITS INTO WHAT AMERICANS BELIEVE IS THEIR AMERICAN DREAM. A RURAL HOME WITH NATURAL FEATURES SUCH AS THIS FITS INTO THE FIFTIES TYPE NEIGHBORHOOD THAT MOST AMERICANS DESIRE.

Housing Type	Lot Size	Density Range	Distinguishing Feature
Rural Cluster	minimum 1 acre	maximum 1 du/gross acre	detached, clustered, rural setting
Single-Family Large-Lot	7,000-10,000 sq. ft.	3-4 du/gross acre	detached
Single-Family Standard-Lot	5,000-7,000 sq. ft.	4-6 du/gross acre	detached
Single-Family Small-Lot	4,000-5,000 sq. ft.	6-8 du/gross acre	detached
Green Court	2,800-3,800 sq. ft. (includes pro-rata portion of shared green)	8-11 du/gross acre	detached, clustered, common green space shared by 5-14 units
Duplex	2,000-3,000 sq. ft./unit	8-15 du/gross acre	two attached units
Townhouse	1,500-3,000 sq. ft./unit	10-15 du/gross acre	multiple attached units
Four-Plex	N/A	15-20 du/gross acre	four units per building
Garden Apartments	N/A	15-25 du/net acre	attached with courtyard parking
Tuck-Under Apartments	N/A	20-30 du/net acre	attached with tuck-under parking
Podium Apartments	N/A	30-50 du/net acre	attached over structured parking
Senior Housing	N/A	20-250 du/net acre	attached courtyard or podium
Residential over Commercial	N/A	15-30 du/net acre	attached with ground-floor retail
Ancillary Unit	N/A	doubles density of primary unit	studio or one-bedroom over garage

Fig. 4:2 Smart Growth Residential Housing Types (Calthorpe, 2000)

ST. CROIX VALLEY



Axonometric

Fig. 4:3 Example of New-style Townhomes (Calthorpe, 2000)

THE OTHER PIECE TO THE PUZZLE OF DEVELOPMENT IN THIS AREA IS ITS PROXIMITY TO THE CITY. WITH MANY SUBURBANITES ALREADY LOOKING FOR A PLACE TO CALL HOME AWAY FROM THE TWIN CITIES THE LAND HAS BECOME A VERY VALUED COMMODITY.

THESE TWO FEATURES ARE WHY THE METROPOLITAN COUNCIL AND CALTHORPE AND ASSOCIATES BEGAN THIS CASE STUDY IN JANUARY OF 2000. THE STUDY RUNS THE GAMUT OF DEVELOPMENT STRATEGIES AND GIVES EXAMPLES OF HOW TO IMPLEMENT THESE SMART GROWTH TACTICS IN MULTIPLE AREAS.

RELEVANCE TO MY DESIGN

THIS CASE STUDY IS BEING USED TO HELP FOCUS IN ON THE TYPE OF URBAN DEVELOPMENT I WOULD LIKE TO ACHIEVE. THE TYPES OF DEVELOPMENT ENCOUNTERED IN THIS STUDY WILL BE A MIX-AND-MATCH OF WHAT I INTEND TO USE.



Fig. 4:4 Example of Village Center (Calthorpe, 2000)

THE FIRST TYPE OF DEVELOPMENT IN THIS STUDY THAT WOULD INFLUENCE THE BRONSON PROPERTY IS THE "VILLAGE" DESIGN. THIS TYPE OF DEVELOPMENT WAS DONE PRIMARILY IN THE LAKE ELMO DEVELOPMENT. LAKE ELMO IS A SMALL COMMUNITY OF 6,500. THE COMMUNITY IS PROJECTED TO GROW AT A RAPID RATE AS IT IS ON THE 36/64 CORRIDOR. A DEVELOPMENT SUCH AS THIS CAN HOLD ROUGHLY 3,300 HOUSEHOLDS AND AVERAGES 8 DWELLING UNITS PER ACRE. THE SECOND NUMBER IS WHAT IS IMPORTANT IN THIS THESIS SINCE THAT IS THE DENSITY I WOULD LIKE TO ATTAIN IN THE SINGLE-FAMILY HOUSING PORTION OF MY DESIGN. THE LAKE ELMO DEVELOPMENT IS A MIX OF RESIDENTIAL, COMMERCIAL, AND EMPLOYMENT OPPORTUNITIES WHICH ARE ALL ESTABLISHED IN A WALKABLE COMMUNITY.

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

ST. CROIX VALLEY

THE ONE ASPECT ABOUT THIS DEVELOPMENT THAT DOESN'T FIT INTO THIS THESIS PROPOSAL IS THAT MOST "VILLAGE" DEVELOPMENTS ARE LOW-DENSITY. ALTHOUGH, THIS DESIGN WILL HAVE SOME LOWER DENSITY AREAS OVERALL THE AREA WILL BE HIGHER DENSITY.

THIS BRINGS US TO THE SECOND TYPE OF DEVELOPMENT IN THIS CASE STUDY WHICH IS THE "TOWN" DEVELOPMENT. THIS DEVELOPMENT IS IN OAK PARK HEIGHTS. THIS DESIGN IS SIMILAR TO THE VILLAGE DESIGN. THE ONE MAIN DIFFERENCE IS THE PERCENTAGE OF SINGLE FAMILY UNITS. A VILLAGE IS A LOWER DENISTY DEVELOPMENT AND THEREFORE CONTAINS MORE SMALLER FAMILY UNITS. THE TOWN DEVELOPMENT USES WALKABLE DEVELOPMENT AND TRANSIT-FRIENDLY DEVELOPMENT AROUND A MIXED-USE CORE. THE CORE IS SURROUNDED BY MEDIUM DENSITY HOUSING, OPEN SPACE, AND MIXED USE FACILITIES. THIS TYPE OF DESIGN WOULD FIT THE SPACIAL AND USAGE REQUIREMENTS OF THE UNIVERSITY VILLAGE.

THE FINAL ASPECT THIS CASE STUDY WAS USEFUL FOR IS THAT IT GAVE THE MAIN ELEMENTS OF A SMART GROWTH COMMUNITY. HERE IS THE LIST SPLIT INTO MAIN USES.

SUGGESTED COMMERCIAL MIXED USE AREAS

- | | |
|--------------------|------------------------|
| -THEATRES | -RESTAURANTS |
| -FOOD STORES | -HOTELS |
| -GAS STATIONS | -GENERAL OFFICE |
| -GENERAL STORE | -HEALTH CLUBS |
| -INDOOR RECREATION | -MISC. RETAIL TRADE |
| -CONDOS. AND APTS. | -PROFESSIONAL SERVICES |

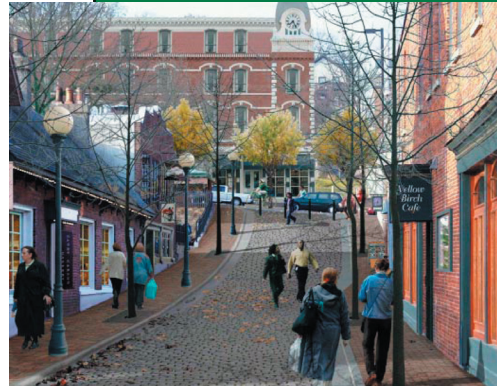


Fig. 4:5 Continous Building Facades
(Calthorpe 2000)



Fig. 4:6 New Urbanist Curb Appeal
(Calthorpe 2000)

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

CASE STUDIES

ST. CROIX VALLEY

CIVIC AREAS

- CHURCHES
- COMMUNITY SERVICE FACILITIES
- CULTURAL FACILITIES

OPEN SPACE

- INDOOR RECREATION FACILITIES (NOT TO EXCEED 20% LOT COVERAGE)
- OUTDOOR RECREATION FACILITIES (FLOODLIGHTING NOT TO EXCEED 0.5 FOOT CANDLES AT THE PROPERTY LINE OF ADJACENT RESIDENTIAL USES.)
- EXHIBIT SPACES

TOWN CENTER RESIDENTIAL AREAS

(THESE AREAS WOULD MOST LIKELY BE THE STUDENT HOUSING)

- ATTACHED AND OR STACKED HOUSING (AT 15 TO 25 DWELLINGS PER NET ACRE, WITH AT LEAST 4 UNITS PER BUILDING)
- ASSISTED LIVING FACILITIES
- GROUND FLOOR RETAIL AND OFFICE SPACE (ONLY WHERE RESIDENCES OCCUR ABOVE)
- HOME OFFICES AND BUSINESSES

SINGLE-FAMILY RESIDENCE

- DIVERSITY OF HOUSING STYLES
- ACCESSORY UNITS.

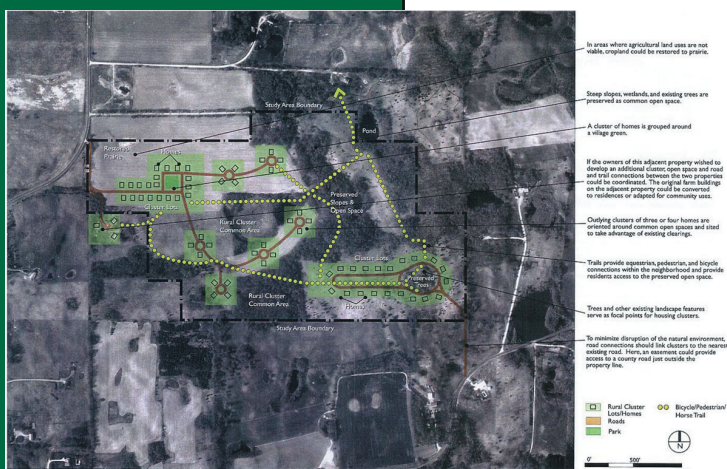


Fig. 4:7 Cluster Development (Calthorpe 2000)

BLACKSBURG, VIRGINIA

BLACKSBURG HAS ROUGHLY A POPULATION OF 48,532 WHICH IS SIMILAR IN SIZE TO GRAND FORKS. THE COMMUNITY IS CENTERED AROUND AN INDUSTRIAL DEVELOPMENT AND TO VIRGINIA TECH COLLEGE. THE TOWN'S POPULATION IS SET TO GROW AT A STEADY PACE IN THE FUTURE SO MORE PROPERTIES AND DEVELOPMENTS ARE MOVING IN DAILY. BLACKSBURG'S SET OUT TO HAVE A PLAN THAT RUNS OVER THE NEXT 25 YEARS.

THE STAGES OF THIS PLAN TRY TO KEEP IN MIND THE GENERAL POLICIES OF BLACKSBURG. THESE POLICIES INCLUDE THE FOLLOWING:

- PRESERVE AND ENHANCE BLACKSBURG'S UNIQUE IDENTITY AND SMALL TOWN CHARACTER
- ENCOURAGE CLUSTER DEVELOPMENT AND PRESERVATION OF OPEN SPACE
- ENCOURAGE NEO-TRADITIONAL TYPE DEVELOPMENT
- ENHANCE THE TOWN'S PEDESTRIAN FRIENDLY ENVIRONMENT
- PROTECT SIGNIFICANT HISTORIC PROPERTIES
- EXPAND THE URBAN FOREST
- PROTECT THE INTEGRITY AND QUALITY OF FORESTED AREAS AS BUFFERS, HABITAT, AND POLLUTANT REMOVAL SYSTEMS
- PROTECT SCENIC VIEWS

RELEVANCE TO MY DESIGN

THE WAYS THAT VICKSBURG INTENDS TO IMPLEMENT THESE POLICIES CAN BE VERY USEFUL IN THE UNIVERSITY VILLAGE OF UND. THE FIRST THING THAT VICKSBURG INTENDS TO DO TO ENCOURAGE CLUSTER DEVELOPMENT IS TO DECREASE THE LOT SIZE IN RESIDENTIAL AREAS AND INCREASE THE AMOUNT OF OPEN COMMUNITY SPACE.



Fig. 4:8 Open Space Transition (Langrehr 2004) (Calthorpe 2000)

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

CASE STUDIES

BLACKSBURG, VIRGINIA

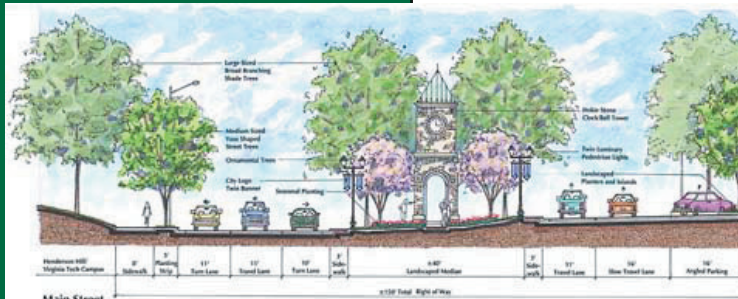


Fig. 4:9 Street Boulevard
(www.blacksburg.gov)

THIS HELPS REDUCE INFRASTRUCTURE COSTS AND REDUCES LOCAL GOVERNMENT MAINTENANCE COSTS. ONE WAY OF ENCOURAGING THIS DEVELOPMENT IS THROUGH A CO-HOUSING DEVELOPMENT. THESE DEVELOPMENTS ARE

TIGHTLY CLUSTERED RESIDENTIAL SECTIONS WITH AN INTERNAL PEDESTRIAN TRAIL. THE DEVELOPMENTS PUSH AUTOMOBILE TRAFFIC TO THE EDGE OF THE DEVELOPMENT.

THIS TYPE OF DEVELOPMENT IS VERY USEFUL ON A TIGHTLY FIT SITE LIKE THE UNIVERSITY VILLAGE. PUSHING THE TRAFFIC TO THE OUTSIDE OF THE DEVELOPMENT WILL HELP WITH SOME OF THE PARKING PROBLEMS.

SECOND THIS CASE STUDY WILL HELP THE UNIVERSITY VILLAGE IS THROUGH THE IDEA OF PRESERVING THE SITE'S UNIQUE IDENTITY. PART OF THE UNIVERSITY VILLAGE WILL INCORPORATE THE OLD DOWNTOWN DEVELOPMENT FEEL WITH THE CONTINUOUS RETAIL FRONTAGES CLOSE TO THE STREET TO PROMOTE A PEDESTRIAN FRIENDLY MIXED-USE DEVELOPMENT. OTHER AREAS OF THE UNIVERSITY VILLAGE WILL BE NEO-TRADITIONAL STYLE SINGLE FAMILY HOUSING. STILL ANOTHER AREA WILL BE SIMILAR TO THE VIRGINIA TECH CAMPUS WITH LARGE OPEN SPACE AND INSTITUTIONAL STRUCTURES.

THIRD THIS CASE STUDY HAS BEEN USEFUL IS THE ENHANCEMENT OF THE PEDESTRIAN ENVIRONMENT. THIS WILL BE VERY USEFUL IN THE UNIVERSITY VILLAGE. FEATURES IN BLACKSBURG THAT ARE USEFUL TO MY DESIGN INCLUDE:

- ADDITION OF STREET TREES AND HANGING FLOWER BASKETS CREATE A SENSE OF VISUAL CONTINUITY AND CONSISTENCY THAT WELCOMES THE STROLLER
- PEDESTRIAN SCALE LIGHTING AND SIGNAGE
- STREET FURNITURE

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

BLACKSBURG, VIRGINIA

- BUILDINGS NEAR SIDEWALK
- BUILDINGS FACADES LARGER THAN STREET WIDTH
CREATE AN URBAN FEEL
- REDUCING STREET WIDTHS WITH LANDSCAPED
MEDIANS, TRAFFIC ISLANDS, AND RUMBLE STRIPS
- CREATING GATEWAYS AND CORRIDORS

THE FINAL WAY THAT BLACKSBURG BECAME A SMART GROWTH CITY WAS THROUGH THE PROMOTION OF THE URBAN LANDSCAPE. MOST OF THE FEATURES IMPLEMENTED HELP WITH THE IMPROVEMENT OF THE VEGETATION IN PUBLIC BUILDINGS AND OPEN SPACES. THESE FEATURES COULD VERY EASILY BE INCLUDED IN THE UNIVERSITY VILLAGE DESIGN.

- DESIGN, RENOVATE, AND MAINTAIN LANDSCAPES
AROUND ALL PUBLIC BUILDINGS
- OVERALL STREET AND SIDEWALK MAINTENANCE (I.
E. REMOVING WEEDS IN SIDEWALKS AND MEDIAN
BEDS)
- USE TREES AND URBAN VEGETATION TO HELP
SCREEN NOISE AND AIR POLLUTION, REPLENISH
WATER SUPPLIES, AND REDUCE FLOODING HAZ-
ARDS

ALL OF THESE CHARACTERISTICS USED IN BLACKSBURG WILL HELP TO MAKE THE UNIVERSITY VILLAGE A MORE SUCCESSFUL MIXED-USE DEVELOPMENT AND ENCOURAGE PEDESTRIAN TRAVEL.



Fig. 4:10 Downtown
Masterplan
(www.blacksburg.gov)

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

CASE STUDIES

DINKYTOWN AT U OF M

DINKY TOWN IS A SMALL FOUR BLOCK EXPANSE THAT RUNS JUST OUTSIDE THE BOUNDARIES OF THE UNIVERSITY OF MINNESOTA. THE AREA INCLUDES CLOTHING STORES, RESTAURANTS, BARS, APARTMENTS, BOOK STORES, BANKS, AND RECORD STORES. THIS IS AN AREA THAT IS DENSE WITH OFF-CAMPUS STUDENT HOUSING AND ALSO HOUSING FOR THE CITIES RESIDENTS. DINKYTOWN IS MOST KNOWN FOR ITS VARIETY OF ENTERTAINMENT AND EATING ESTABLISHMENTS. THE DEVELOPMENT PROMOTES A "SOLID FRONT" DURING PROMOTIONS AND SALES. THERE IS ALSO BUSINESS THAT ARE CELEBRATED FOR THEIR UNIQUE FEATURES AND OFF-THE-WALL REPUTATION.

DINKY TOWN IS MOST REMEMBERED BY STUDENTS AS A PLACE THEY CAN RETREAT FROM THE DAILY GRIND OF CAMPUS LIFE. EVERYTHING YOU NEED CAN BE FOUND IN THE LITTLE SHOPS AND STORES THAT INHABIT THE GROUND FLOOR OF MANY OF THE DINKYTOWN'S BUILDINGS.

RELEVANCE TO MY DESIGN

THE TYPE OF REPUTATION THAT DINKYTOWN ENJOYS IS THE TYPE OF FEELING THIS DEVELOPMENT SHOULD STRIVE TO CREATE. THE FIRST WAY THIS IS DONE IS THROUGH PROVIDING ALL OF THE AMENITIES ONE NEEDS IN DAY TO DAY LIFE IN A SMALL AREA. THIS INCLUDES FOOD, CLOTHING, BOOKS FOR STUDENTS, AND GAS STATIONS AND SMALL CONVENIENCE STORES.

SECOND, DINKYTOWN ACHIEVES ITS REPUTATION IS THROUGH SMALL SCALE GATHERING ESTABLISHMENTS WITH CHARACTER. THIS IDEA CAN BE ACHIEVED IN THE UNIVERSITY VILLAGE WITH SMALL RETAIL AREAS AND NO LARGE SCALE COMMERCIAL ESTABLISHMENTS.

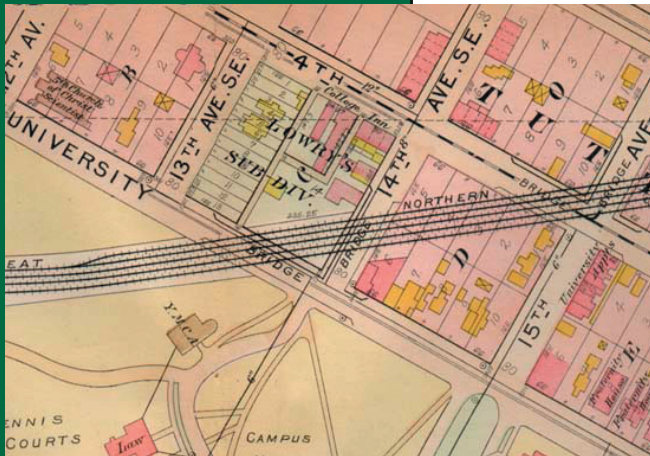


Fig. 4:11 Dinkytown Area
(www.lileks.com/mps/uofm)

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

DINKYTOWN AT U OF M

THIRD, DINKYTOWN KEEPS PEOPLE COMING BACK BY KEEPING ITS CONSUMERS AS CLOSE AS POSSIBLE. MOST OF THE USERS OF DINKYTOWN ACTUALLY LIVE IN THE APARTMENTS ABOVE THE COMMERCIAL STORES. THIS KEEPS THE BUSINESSES IN DINKYTOWN FOCUSED ON IMPROVING THE COMMUNITY THEY INHABIT.

ALL OF THESE IMPROVEMENTS CAN BE DONE THROUGH AESTHETIC AND ZONING FEATURES FOR THIS NEW DEVELOPMENT. BY KEEPING BUILDINGS AND BUSINESSES SMALL IN NATURE THE DEVELOPMENT PORTRAYS A "VILLAGE" AESTHETIC.



Fig. 4:12 Dinkytown Character (www.lileks.com/mpls/uofm)

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

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U OF W MILWAUKEE

THIS STUDY WAS DONE TO FORM AN ACTION PLAN FOR THE AREA AROUND THE UNIVERSITY OF WISCONSIN-MILWAUKEE. UWM IS LOCATED IN THE CITY OF MILWAUKEE'S HIGHEST QUALITY RESIDENTIAL AREAS. RECENTLY, THE CAMPUS AREA HAS FELT INCREASED PRESSURE FOR MORE

ON-STREET PARKING, NEAR-CAMPUS STUDENT HOUSING, AND STUDENT-ORIENTATED SERVICES. THE UNIVERSITY HAS DECIDED TO ENTITLE ITS NEW PLAN TO CREATE A MORE UNIFIED UNIVERSITY DESIGN AS A GREAT UNIVERSITY NEIGHBORHOOD.

THIS VISION INCLUDES THESE CHARACTERISTIC:
-DIVERSE GROUPS OF PEOPLE

-PLEASING PHYSICAL CHARACTER
-CULTURAL/COMMERCIAL AMENITIES

OTHER PHASES INCORPORATED IN THIS VISION ARE FOCUSED ON MAKING THIS AREA FUNCTION MORE FLUIDLY. THE FIRST PHASE IS SET TO HELP FIX THE PARKING PROBLEM. THESE ACTIONS INCLUDE:

-DEVELOP REMOTE PARKING FACILITIES
-ADAPT CLASS SCHEDULING TO REDUCE PEAK PARKING DEMAND
-SIMPLIFY PARKING REGULATIONS WITHIN THE STUDY AREA
-BUILD A PARKING STRUCTURE
-INCREASE ON STREET PARKING FOR NEIGHBORHOOD RESIDENTS
-INTEGRATE ACTIVE GROUND FLOOR USES IN PARKING STRUCTURES
-PROPERLY SCREEN AND LANDSCAPE SURFACE LOTS

THE THIRD PHASE IS TO ENHANCE THE PUBLIC TRANSIT AND ALTERNATE MODES OF TRANSPORTATION.



Fig. 4:13 University of Wisconsin-Milwaukee Aerial Photo(City of Milwaukee 2003)

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

U OF W MILWAUKEE

THIS IS DONE IN A VARIETY OF WAYS WHICH INCLUDE:

- SUPPORT ALTERNATE MODES OF TRANSPORTATION SUCH AS THE PROPOSED MILWAUKEE CONNECTOR
- BIKE TASK FORCE
- FREE BIKE LOAN PROGRAM
- REGIONAL BIKE PATH LINKAGES
- RETAIN AND ENHANCE THE MILWAUKEE CITY TRANSIT SYSTEM(MCTS) LEVEL OF BUS SERVICES
- DEVELOP A MARKETING STRATEGY FOR INCREASING UWM RIDERSHIP
- STUDY THE FEASIBILITY OF INCORPORATING CHANGING ROOM, LOCKER, AND SHOWER FACILITIES FOR BIKE RIDERS
- DEVELOP OFF-CAMPUS STUDENT HOUSING PROXIMATE TO CURRENT MCTS ROUTES
- EXPAND MCTS SERVICE TO CREATE INCREASED RIDERSHIP
- PROVIDE BUS STOPS NEAR OFF-CAMPUS STUDENT HOUSING
- PROMOTE BIKE ROUTES TO UWM THAT ARE SAFE, PLEASANT, CONVENIENT AND ATTRACTIVE TO BOTH COMMUTERS AND RECREATIONAL USERS
- IMPROVE PEDESTRIAN STREETScape ON MAJOR PEDESTRIAN CORRIDORS TO NEIGHBORHOODS
- IMPROVE THE COMFORT, APPEARANCE, AND LOCATION OF U-PARK SHUTTLES AND SHUTTLE STOPS.
- IMPROVE COMFORT, APPEARANCE, AND LOCATION OF U-PARK SHUTTLES AND SHUTTLE STOPS

THE FOURTH PHASE OF THIS DEVELOPMENT IS TO IMPROVE HOUSING FOR STUDENTS AND AREA RESIDENTS. THIS IS DONE THROUGH SEVERAL STEPS.

- REDEVELOP EXISTING BUILDINGS INCLUDING HOTELS, MANUFACTURING BUILDINGS, AND OTHER LARGE-SCALE FACILITIES
- ENFORCE EXISTING ZONING REGULATIONS THAT RESTRICT CONVERSION OF SINGLE FAMILY AND DUPLEX PROPERTIES INTO MULTIFAMILY PROPERTIES
- DEVELOP EMPLOYEE ASSISTED UWM WALK TO WORK HOME OWNERSHIP PROGRAM
- INCREASE AGGRESSIVE CODE ENFORCEMENT INCLUDING OCCUPANCY LIMITS



Fig. 4:14 Converted Hospital Building
(City of Milwaukee 2003)



Fig. 4:15 Land Use Map
(City of Milwaukee 2003)

U of W MILWAUKEE

THE FINAL PHASE OF THE UWM VISION IS IMPROVING THE QUALITY OF LIFE. THIS IS DONE THROUGH SEVERAL ACTIONS THAT ARE TAKEN BY THE UNIVERSITY. THESE ACTIONS INCLUDE:

- INCREASED NEIGHBORHOOD PATROL
- IMPROVED NEIGHBORHOOD ACCESS TO UWM FACILITIES AND EVENTS
- IDENTIFY NEW TOOLS FOR ENFORCING CONDUCT, NOISE, AND OTHER DISTURBANCE ISSUES

RELEVANCE TO MY DESIGN

THIS CASE STUDY WAS USED BASICALLY TO ADDRESS THE ISSUES OF PARKING PROBLEMS ON THE PROPOSED SITE AND TO SEE HOW ANOTHER UNIVERSITY HANDLES THE IDEA OF MASS TRANSIT. MOST OF THE INFORMATION FROM THIS CASE STUDY IS IMPLEMENTABLE PROGRAMS TO HELP WITH TRAFFIC CONGESTION. I BELIEVE IF THROUGH MY THESIS I COULD INFORM THE UNIVERSITY OF NORTH DAKOTA OFFICIALS OF THESE PROGRAMS IT WOULD BE GREATLY BENEFICIAL TO THE OVERALL DESIGN. PROGRAMS LIKE THE BIKE LOAN PROGRAM AND THE IMPROVEMENT OF BUS SHELTERS CAN BE EASILY IMPLEMENTED IN THE CAMPUS SETTING.

THE UWM CAMPUS HAS A SIMILAR PROBLEM TO THE UNIVERSITY OF NORTH DAKOTA IN THAT WHEN THIS DEVELOPMENT IS CONSTRUCTED PARKING WILL BE AT A PREMIUM. UWM HAS SUGGESTED SIMPLIFYING PARKING RESTRICTIONS AND SIGNAGE SO THERE ARE LESS PEOPLE PARKED ILLEGALLY, THIS TYPE OF SYSTEM CAN BE USED IN THE UND AREA. THE OTHER WAY THAT THE UWM CONTROLS ITS TRAFFIC PROBLEMS IS A PARKING STRUCTURE WHICH IS SOMETHING THAT THE UNIVERSITY COULD LOOK INTO AS WELL.

GRAND FORKS HISTORY

GRAND FORKS CITY WAS ORIGINALLY ESTABLISHED BY A FRENCH MAN NAMED CARTIER. IN 1734 CARTIER SETTLED IN THE REGION WHERE THE RED RIVER OF NORTH MET THE RED LAKE RIVER. FOR THIS REASON CARTIER CALLED THE SETTLEMENT LES GRANDES FOURCHES OR THE GRAND FORKS.

THE SETTLEMENT GREW SLOWLY UNTIL 1873 WHEN THE HUDSON BAY COMPANY ESTABLISHED ITS HEADQUARTERS IN THIS AREA. WITH THIS NEW BUSINESS GRAND FORKS BECAME THE MAIN SUPPLIER FOR HOMESTEADERS AND SETTLERS IN THE AREA. IN 1875 A MAN BY THE NAME OF ALEXANDER GRIGGS PLOTTED THE LAND WHERE GRAND FORKS LIES AND CAME TO BE KNOWN AS THE "FATHER OF THE CITY". IN 1880 THE RAILROAD ARRIVED IN GRAND FORKS AND BROUGHT WITH IT MANY NEW BUSINESSES AND RESIDENTS. FROM 1880 TO 1890 THE POPULATION MORE THAN DOUBLED. IN 1889 THE FIRST BRIDGE WAS CONSTRUCTED BETWEEN GRAND FORKS AND EAST GRAND FORKS. THIS WAS A MAJOR LANDMARK BECAUSE BEFORE THEN PEOPLE USED PONTOONS TO CROSS THE RED RIVER. SINCE THEN THE TWO CITIES HAVE GROWN TOGETHER INTO WHAT IS NOW KNOWN AS GRAND FORKS AND EAST GRAND FORKS. THE RED RIVER SEPARATES THE TWO TOWNS AS WELL AS THE TWO STATES(NORTH DAKOTA AND MINNESOTA).

DURING THE EARLY PART OF THE 20TH CENTURY GRAND FORKS BECAME A CITY GROWING ON THE FOUNDATION OF EDUCATION, TRADING, AND FARMING. GRAND FORKS SLOWED ITS GROWTH IN THE 1930s AND 1940s. IN 1954 GRAND FORKS ADDED THE AIR FORCE BASE TO ITS CITY WHICH PROVIDED MANY NEW JOBS AND RESIDENTS. THEN IN 1960 IT BEGAN TO DO WHAT MANY CITIES IN THE NATION DID AND BEGAN TO SPREAD OUTWARD. THIS DECENTRALIZATION IS STILL GOING ON TODAY. IN 1997 A MAJOR FLOOD DEVASTATED GRAND FORKS AND IT IS STILL RECOVERING TO THIS DAY. THE FLOOD CAUSED OVER 1 BILLION DOLLARS IN DAMAGE TO THE CITY. SINCE, THEN GRAND FORKS HAS BEEN WORKING DILIGENTLY ON CONTROLLING THE RED RIVER AND FOCUSING ON REWORKING HOW THE CITY RELATES TO ITS RIVERS AND STREAMS.



Fig 5:1 Alexander Griggs
Founder of Grand Forks
(www.grandforksgov.com)



Fig 5:2 Boats on Main
Flood of 1997
(www.grandforksgov.com)

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

PROJECT
CITY



Fig 5:3 Old Main the First Building 1880s
(www.und.edu)



Fig 5:4 Military Training UND Campus 1943
(www.und.edu)



Fig 5:5 Student Protest for Civil Rights 1968
(www.und.edu)

UND HISTORY

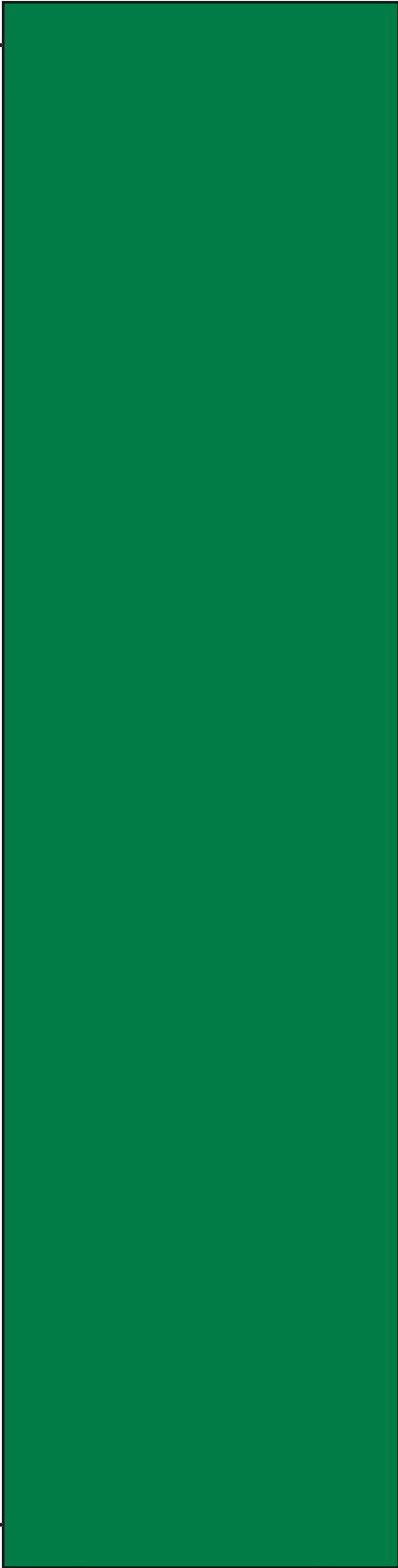
THE UNIVERSITY OF NORTH DAKOTA GOT ITS START EVEN BEFORE NORTH DAKOTA ITSELF WAS A STATE. IN 1883 A MAN NAMED GEORGE WALSH SUBMITTED A BILL TO THE TERRITORIAL LEGISLATURE TO HAVE THE UNIVERSITY LOCATED IN GRAND FORKS. IN THE 1890S THE UNIVERSITY ALMOST WENT UNDER BECAUSE THE STATE OF NORTH DAKOTA REFUSED TO FUND THE SCHOOL. THE CITY OF GRAND FORKS HELPED TO PITCH IN \$26,000 AND THE PROFESSORS TOOK A 25% PAY CUT TO KEEP THE UNIVERSITY IN BUSINESS. IN THE 1930'S UND FELL ON HARD TIMES MUCH LIKE THE REST OF THE NATION STUDENTS HAD TO GET JOBS TO HELP PAY FOR THEIR SCHOOLING. IN THE 1940'S THE CAMPUS BECAME A MILITARY CAMP BECAUSE OF WWII. THE ENROLLMENT DROPPED ALL THE WAY DOWN TO 775.

IN 1960 JOHN F. KENNEDY VISITED THE SITE ONLY TWO MONTHS BEFORE HIS ASSASSINATION. THE 1970S BROUGHT PROTESTING TO UND. MANY STUDENTS PROTESTED THE VIETNAM WAR AND SUPPORTED THE CIVIL RIGHTS MOVEMENT. ANOTHER POPULAR TOPIC WAS THE LACK OF NATIVE AMERICAN STUDIES IN A STATE WITH A STRONG NATIVE AMERICAN POPULATION. IN THE LATE 70S UND INTEGRATED ITS FIRST CLASSES IN NATIVE AMERICAN STUDIES. IN THE 1980S UND EXPANDED ITS ROLL IN ITS THREE MAJOR EMPHASES OF LAW, MEDICINE, AND AVIATION. THE SCHOOL ALSO BECAME PROFESSIONALLY CERTIFIED IN THESE AREAS.

THE FLOOD OF 1997 AFFECTED UND GREATLY AS THE CAMPUS BECAME THE HEADQUARTERS FOR THE FEDERAL EMERGENCY MANAGEMENT AGENCY. THE 2000S HAS SEEN THE DEVELOPMENT OF NEW FACILITIES ALL OVER THE GROWING UND CAMPUS. THE FOOTBALL TEAM HAS A NEW STADIUM IN THE ALERUS CENTER AND THE HOCKEY TEAM NOW PLAYS IN THE NEW \$100 MILLION RALPH ENGELSTAD ARENA.

SITE HISTORY

THE SITE HAS ACTUALLY VERY LITTLE PERSONAL HISTORY. IT WAS DUBBED THE BRONSON PROPERTY BY THE UNIVERSITY AND HAS SAT MOSTLY UNUSED UNTIL 1997. BEFORE THEN THE PROPERTY HOUSED A SMALL MOBILE HOME PARK, INTRAMURAL FIELDS, TENNIS COURTS, AND A TWELVE FOOT WIDE OBSERVATORY. SINCE 1997, THE BRONSON PROPERTY HAS BECOME A RELATIVE BOOM TOWN. THE RALPH ENGELSTAD ARENA CAUSED THIS LAND TO BECOME A DEVELOPABLE AREA NORTH OF THE UND CAMPUS. FOLLOWING THE ARENA THE UNIVERSITY BUILT A BARNES AND NOBLE BOOKSTORE, FAMILY MEDICINE CENTER, WELLNESS CENTER, AND THE BETTY ENGELSTAD ARENA. CURRENTLY, THE DEVELOPMENT IS LOOKING FOR A DIRECTION IN WHICH IT CAN KEEP EXPANDING THE CAMPUS INTO THE COMMUNITY.



UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

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GRAND FORKS DEMOGRAPHICS

Table 1:1 (www.grandforksgov.com)	
POPULATION	
2003 -	50,872
2001 -	49,366
2000 -	49,321
1990 -	49,425
1980 -	43,765
1976 -	42,581
1970 -	39,008
1960 -	34,451
1950 -	26,836
1940 -	20,228
1930 -	17,112
CITY GOVERNMENT	
DATE OF INCORPORATION:	FEBRUARY 22, 1881
ADOPTION OF HOME RULE CHARTER:	NOVEMBER 3, 1970
FORM OF GOVERNMENT	STRONG MAYOR/COUNCIL
CITY EMPLOYEES	454
INFRASTRUCTURE	
AREA IN SQUARE MILES:	
2001 -	19.35 Sq M
2000 -	19.25 Sq M
1998 -	17.38 Sq M
1997 -	17.01 Sq M
1996 -	16.5 Sq M
1995 -	16.36 Sq M
1994 -	16.0 Sq M
AREA IN SQUARE MILES:	
2001 -	19.35 Sq M
2000 -	19.25 Sq M
1998 -	17.38 Sq M
1997 -	17.01 Sq M
1996 -	16.5 Sq M
1995 -	16.36 Sq M
1994 -	16.0 Sq M
MILES OF STREETS AND ALLEYS - 2002	
PAVED STREETS:	178.12 MILES
PAVED ALLEYS:	4.32 MILES

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

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GRAND FORKS DEMOGRAPHICS

FIRE STATIONS	
STATIONS:	1
EMPLOYEES:	91
OFFICERS:	77
CLERICAL:	13
NUMBER OF STREET LIGHTS	
OVERHEAD & ORNAMENTAL:	4000
TRAFFIC SIGNALS:	57
SCHOOL CROSSING LIGHTS:	26
SEWER UTILITY	
SANITARY SEWER	115.75 MILES
STORM SEWER	91.13 MILES
EDUCATION	
ELEMENTARY	12
JUNIOR HIGH	4
HIGH SCHOOLS	3
UNIVERSITY OF NORTH DAKOTA	
GRAND FORKS PUBLIC LIBRARY	
HOUSING	
PERCENTAGE OF POPULATION THAT OWNS HOME	54%
AVERAGE COST FOR A THREE-BEDROOM HOME	\$85,000
AVERAGE PRICE OF HOMES IN ACTIVE MARKET	\$107,300
RENTAL VACANCY RATE	6.7%
COST TO RENT ONE-BEDROOM	\$250 - \$700/MONTH
COST TO RENT TWO-BEDROOM	\$400 - \$900/MONTH
RECREATION	
PARKS	34
BIKE/JOGGING	25 MILES
SWIMMING POOLS	1
GOLF COURSES	3
TENNIS COURTS	28
BALL DIAMONDS	29
SKATING RINKS	14

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

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Table 1:2 (www.und.edu)		UND DEMOGRAPHICS			
		POPULATION			
2003	13,034	1970	8,129	1910	490
2002	12,423	1965	6,519	1900	124
2000	11,031	1960	4,491	1890	24
1995	11,512	1955	3,347	1885	8
1990	11,885	1950	2,653		
1985	11,106	1940	1,757		
1980	10,217	1930	1,765		
1975	8,632	1920	1,124		
		GEOGRAPHIC ORIGIN			
		TOTAL	PERCENT		
NORTH DAKOTA*		6,707	50.9		
OTHER STATES		6,022	45.6		
MINNESOTA		3,503	26.6		
OTHER COUNTRIES		458	3.5		
CANADA		129	0.9		
TOTAL		13,187	100.0		
		RACE/ETHNICITY			
		MEN	WOMEN	TOTAL	PERCENT
AMERICAN INDIAN		143	264	407	3.0
BLACK/NON HISPANIC AMER.		86	28	114	0.8
ASIAN/PACIFIC ISLANDER		104	77	181	1.3
HISPANIC AMERICAN		70	61	131	1.3
WHITE/NON-HISPANIC AMER.		5,958	5,678	11,636	88.2
NON-RESIDENT ALIEN		296	196	492	3.7
NOT REPORTED		139	87	226	1.7
TOTAL		6,796	6,391	13,187	100.0
		AGE			
		MEN	WOMEN	TOTAL	%
UNDER 18		17	23	40	0.3
18-19		1,898	1,777	3,675	27.9
20-21		1,882	1,653	3,535	26.8
22-24		1,564	1,281	2,845	21.6
25-29		717	633	1,350	10.2
30-34		291	275	566	4.3
35-39		155	222	377	2.9
40-49		197	359	556	4.2
50-64		71	164	235	1.8
65 AND OVER		3	2	5	0.0
NOT REPORTED		1	2	3	0.0
TOTAL		6,796	6,391	13,187	100.0

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

SITE INVENTORY

CULTURAL INVENTORY

SITE ZONING

THE SITE WILL BE A UNIQUE TYPE OF MIXED-USE ZONING SIMILAR TO THAT USED IN THE CAMPUS SETTING. THE UNIVERSITY VILLAGE WILL BE ZONED TO ALLOW COMMERCIAL, RESIDENTIAL, AND INSTITUTIONAL BUILDINGS IN CLOSE PROXIMITY TO EACH OTHER. THIS TYPE OF DEVELOPMENT IS SIMILAR TO MOST UNIVERSITY CAMPUSES UNIONS WERE COMMERCIAL MEETS RESIDENTIAL. SOME AREAS OF THE NEW DEVELOPMENT WILL NOT BE ABLE TO HOUSE BUILDINGS BECAUSE OF FLOODPLAIN RESTRICTIONS HELD NEAR THE ENGLISH COOLIE.

REGION TRANSPORTATION

GROUND TRANSPORTATION

GRAND FORKS IS LOCATED AT THE JUNCTION OF US HIGHWAY 2, A FOUR-LANE HIGHWAY RUNNING EAST AND WEST, AND INTERSTATE-29, A NORTH-SOUTH LIMITED ACCESS FREEWAY. JUST 75 MILES SOUTH OF GRAND FORKS, I-29 INTERSECTS WITH INTERSTATE-94 IN FARGO, A MAJOR EAST-WEST FREEWAY. GRAND FORKS IS LOCATED 70 MILES SOUTH OF THE PEMBINA BORDER CROSSING - THE 4TH BUSIEST PORT OF ENTRY INTO CANADA. .

CITY OF GRAND FORKS ZONING MAP INCLUDING EXTRA-TERRITORIAL AREA Ordinance 3421 - Effective July 1, 1994 Revised February 1, 2002 Reflects Changes through Ordinance No. 3911

Classification of Districts

A1 Limited Development	B1 Limited Business
A2 Agricultural Reserve	B2 Shopping Center
R1 Single Family Residential	B3 General Business
R2 One & Two Family Residential	B4 Central Business
R3 Multiple Family Residential (Medium Density)	I1 Light Industrial
R4 Multiple Family Residential (High Density)	I2 Heavy Industrial
R5 Mobile Home Residential	UD University District
RM Manufactured Home Residential	AD Airport District
PUD Planned Unit Development	

LEGEND

Zoning District or PUD Boundary	Section Line
Concept and/or Detailed Development Boundary	Quarter Section Line
Grand Forks Zoning and Subdivision Jurisdiction Boundary	Block
Grand Forks City Limit	Parcel (Property Boundary)

This ordinance establishes the boundaries of all zoning districts including Planned Unit Developments (PUDs) and delineates permitted uses within PUDs. All other features, such as parcel boundaries and street names, are shown for reference purposes only and may not be current or complete.

FLOODWAY - FLOODPLAIN OVERLAY ZONES

F1 Floodway	Letter of Map Revision (LOMR)
F2 100 Year Floodplain	Letter of Map Amendment (LOMA)
	LOMA for Existing Structures Only

Floodway and floodplain areas are intended to be those delineated on the most recent Flood Hazard and Floodway Map prepared by the Federal Emergency Management Agency, except that the Floodway is to be extended north and south to the river-mile jurisdiction line as shown. Letters of Map Revision (LOMR) and Letters of Map Amendment (LOMA) indicate areas in which FEMA has taken action from the Floodway and Floodway. Some LOMRs and LOMAs may not be shown. Contact Grand Forks City Inspections Department for information concerning individual properties.

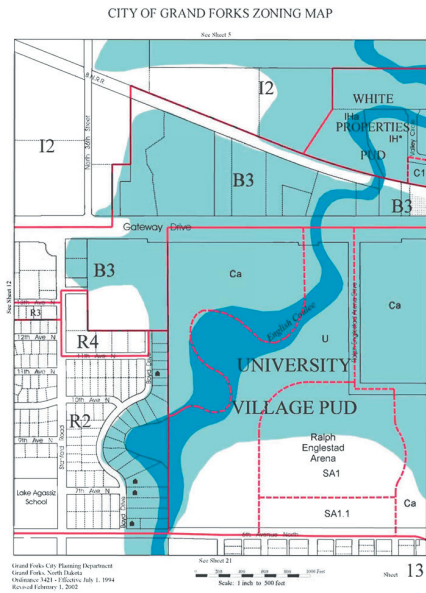


Fig 6:1 Zoning Map
(www.grandforksgov.com)

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

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SITE INVENTORY



Fig 6:2 Campus Bus Routes
(www.und.edu)

RAIL TRANSPORTATION

GRAND FORKS IS ALSO SERVED BY BOTH PASSENGER AND CARGO RAIL SERVICE. PASSENGER SERVICE IS PROVIDED BY AMTRAK, WHICH HAS A STATION ONE MILE WEST OF GRAND FORKS. FREIGHT SERVICE IS PROVIDED BY THE BURLINGTON NORTHERN-SANTE FE RAILROAD COMPANY WITH DIRECT SERVICE TO WINNIPEG, CANADA AND MINNEAPOLIS, MINNESOTA.

AIR TRANSPORTATION

THE GRAND FORKS INTERNATIONAL AIRPORT (GFK) IS THE PRIMARY COMMERCIAL AIRPORT SERVING ALL OF NORTHEASTERN NORTH DAKOTA AND NORTHWESTERN MINNESOTA. NORTHWEST AND MESABA AIRLINES PROVIDE AIR SERVICE WITH SEVEN DAILY ARRIVALS AND DEPARTURES. DISTRIBUTION CHANNELS AND JUST-IN-TIME PRODUCTION IS EFFICIENTLY SUPPORTED THROUGH THE FEDEX REGIONAL AIR CARGO HUB AT GFK AND EVERGREEN AVIATION GROUND LOGISTICS ENTERPRISES PERFORMS EXPRESS AND PRIORITY MAIL CONSOLIDATION FOR THE US POSTAL SERVICE IN PARTNERSHIP WITH FEDEX. FEDEX'S GRAND FORKS HUB SERVES THE ENTIRE STATE OF NORTH DAKOTA AND NORTHWESTERN MINNESOTA, PROVIDING BUSINESS WITH TIMELY AND COST-EFFECTIVE SERVICE.

GFK FLIGHT SUPPORT PROVIDES A FULL RANGE OF FIXED BASE OPERATOR SERVICES TO THE REGION'S GENERAL AVIATION AND CORPORATE AVIATION COMMUNITY. SERVICES PROVIDED INCLUDE CHARTER AIR SERVICE, AIRCRAFT MAINTENANCE AND REPAIR SERVICE, AIRCRAFT FUELING AND FLIGHT TRAINING.

THE UNIVERSITY OF NORTH DAKOTA'S WORLD RENOWNED JOHN D. ODEGARD SCHOOL OF AEROSPACE SCIENCES CONDUCTS ITS FLIGHT TRAINING OPERATIONS AT GFK WHERE IT FLIES NEARLY 100 AIRCRAFT AND ENROLLS CLOSE TO 2,000 STUDENTS IN DEGREE AND PROFESSIONAL AVIATION PROGRAMS.(WWW.GRANDFORKSGOV.COM)

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

SITE INVENTORY

SITE TRANSPORTATION

MOST OF THE SITE TRANSPORTATION IS CURRENTLY BY AUTOMOBILE. THE SITE IS JUST OVER A HALF A MILE FROM MOST OF THE MAIN CAMPUS BUILDINGS CAUSING MOST STUDENTS AND SITE USERS TO DRIVE TO THE SITE. THE PEOPLE WHO VISIT THE SITE ALSO USE THE AUTOMOBILE AS A MAIN FORM OF TRANSPORTATION. THE SITE HAS FOUR MAIN ACCESS POINTS CURRENTLY. THE FIRST ENTRY POINT IS COMING FROM THE EAST OFF OF NORTH COLUMBIA DRIVE ONTO 10TH AVENUE OR 6TH AVENUE. THE SECOND ACCESS POINT OR POINTS IS FROM ONE OF THE MANY ROADS COMING UP FROM THE CAMPUS TO THE SOUTH. THE SOUTHERN ENTRANCES, THE 10TH AVENUE AND 6TH AVENUE ENTRANCE ARE THE THREE FORMS OF ACCESS THAT MOST STUDENTS USE TO ENTER THE SITE. THE THIRD ENTRY WAY IS OFF OF STANFORD DRIVE TO THE WEST. THIS ENTRY WAY IS SELDOM USED TO ACCESS THE MAJORITY OF THE BRONSON PROPERTY AREA. THE FINAL ENTRY WAY IS PROBABLY THE MOST USED BY VISITORS AND IT CONSISTS OF ENTERING THE SITE FROM HIGHWAY 2 TO THE NORTH. MOST VISITORS COME FROM I-29 TO THE WEST AND EXIT OFF ON THE HIGHWAY 2 EXIT. THEN THE VISITORS GO EAST TO RALPH ENGELSTAD DRIVE.

ANOTHER OPTION OF GETTING TO THE SITE IS THROUGH MASS TRANSIT. THE CAMPUS HAS MANY SHUTTLE BUS ROUTES THAT RUN ALL DAY AND SOME THROUGH THE NIGHT. THESE BUS ROUTES ARE FREE TO STUDENTS AND VISITORS. MOST STUDENTS USE THE BUS TO GET HOME FROM CLASS OR TO GET TO THEIR PARKING AREA.

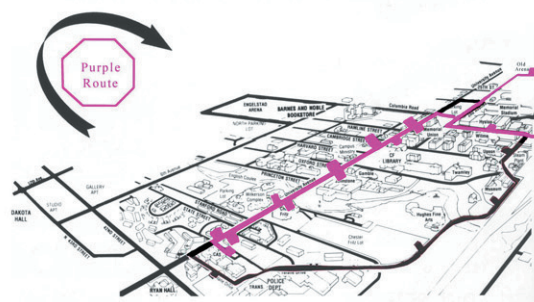
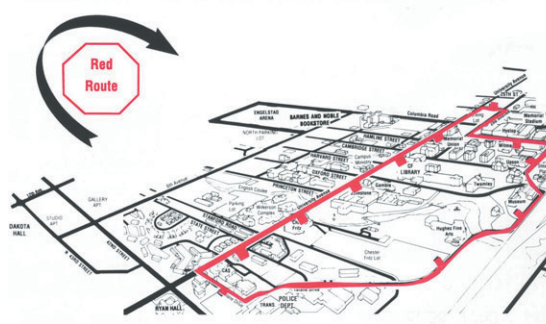
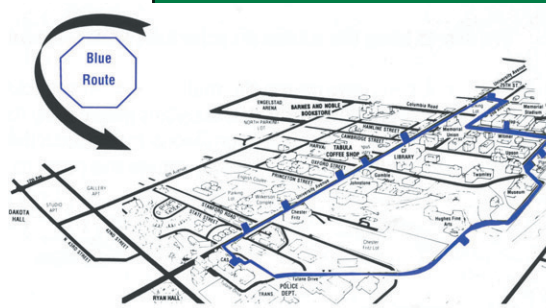
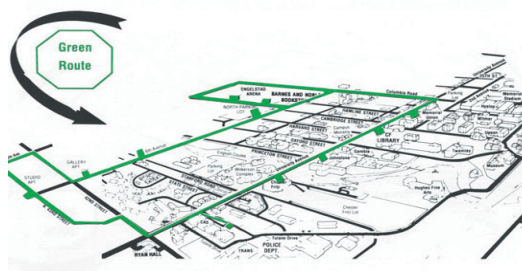


Fig 6:3 Shuttle Bus Routes
(www.und.edu)

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

SITE INVENTORY

SITE INVENTORY

THE FINAL OPTION THAT SOME STUDENTS USE IS THROUGH WALKING OR BIKE RIDING. THERE ARE TWO BIKE PATHS ONE THAT BORDER THE SITE TO THE EAST AND THE OTHER RUNS ALONG THE ENGLISH COOLIE TO THE WEST. THE SIDEWALK CONNECTS THESE TWO PATHS BY RUNNING ALONG THE SOUTH SIDE OF THE SITE. THESE PATHS ARE USED FOR TRANSPORTATION AND RECREATION.

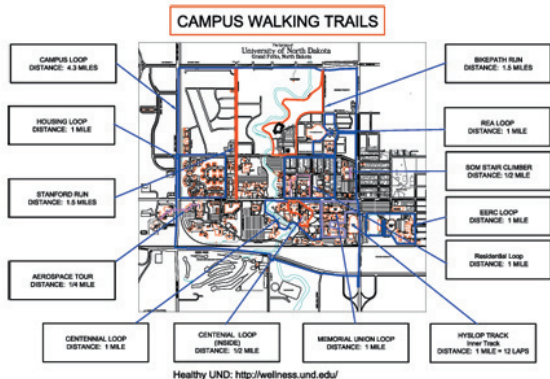


Fig 6:4 Campus Walking Paths
(www.und.edu)

PARKING

THE TOTAL SITE IS AREA IS CURRENTLY ABOUT 10% PARKING LOT. THE RALPH ENGELSTAD(REA) ALONE HAS ROUGHLY 1,500 PARKING SPOTS. THESE PARKING AREAS MOSTLY FOCUS AROUND THE REA AND ARE FOR VISITORS. THESE PARKING AREAS ARE RARELY USED BY STUDENTS.

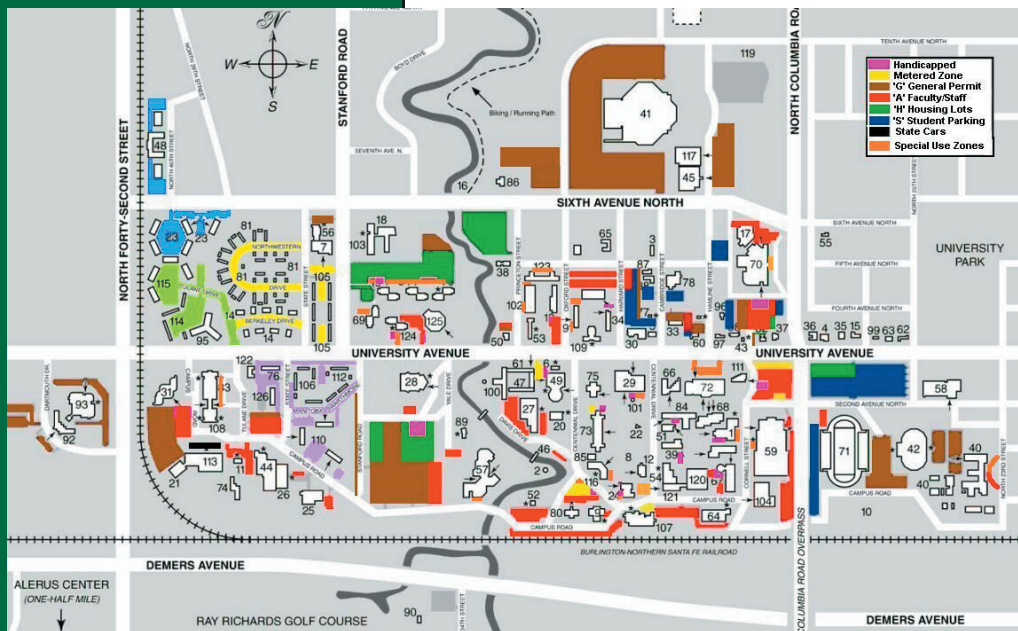


Fig 6:5 Campus Parking
(www.und.edu)

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

SITE INVENTORY

STRUCTURES

THE SITE CURRENTLY CONTAINS FIVE PERMANENT STRUCTURES. THE MAIN STRUCTURE BEING THE RALPH ENGELSTAD ARENA(REA). THE REA COVERS ROUGHLY 400,000 SQUARE FEET OF SPACE. THE REA HOSTS ALL OF THE UNIVERSITY'S HOME HOCKEY GAMES. THIS ARENA ALSO HOLDS CONCERTS AND OTHER SPECIAL EVENTS. THE ARENA HAS RESTAURANTS, THE SIOUX HOCKEY HALL OF FAME, BARS, CONCESSION AREAS, AND A FULL SIZE OLYMPIC SIZE PRACTICE ARENA. AT CAPACITY THE REA CAN HOUSE ROUGHLY 11,500 PEOPLE. THE ARENA ALSO HAS ABOUT 2,500 ON SITE PARKING SPACES WITH ANOTHER 1,500 OFF SITE SPACES.

THE SECOND BUILDING ON THE SITE IS THE NEW UNIVERSITY BOOKSTORE. THE BOOK STORE IS RUN BY THE BARNES AND NOBLE CORPORATION. THIS BUILDING COVERS ROUGHLY 32,000 SQUARE FEET AND HOUSES A BOOK STORE, CAFÉ, AND SEVERAL READING AND GATHERING SPACES.

THE THIRD BUILDING ON THE SITE IS THE UND FAMILY PRACTICE CENTER. THIS BUILDING HOUSES 27 EXAM ROOMS, CONFERENCE ROOMS WITH MULTIMEDIA CAPABILITY, A MEDICAL LIBRARY, LAB AND X-RAY FACILITIES, OBSTETRICAL ULTRASOUND, EKG, STRESS TESTING AND MULTIPLE OTHER FACILITIES TO ASSIST IN THE CARE OF PATIENTS. THE BUILDING COVERS ABOUT 31,000 SQUARE FEET. THIS CURRENTLY IS THE ONLY BUILDING ON CAMPUS USED DAILY BY THE UNIVERSITY.

THE FOURTH BUILDING IS A FIRE STATION ON THE EAST SIDE OF THE SITE COVERING ABOUT 7,000 SQUARE FEET.

THE FIFTH BUILDING CURRENTLY STANDING ON THE BRONSON PROPERTY IS THE PHI DELTA THETA FRATERNITY HOUSE. THIS BUILDING IS AN ALL MALE DORMITORY FOR THE MEMBERS OF PHI DELTA THETA.



Fig 6:6 Ralph Engelstad Arena
(www.theralph.com)



Fig 6:7 Family Life Center



Fig 6:8 Fire Station



Fig 6:9 Phi Delta Theta Fraternity

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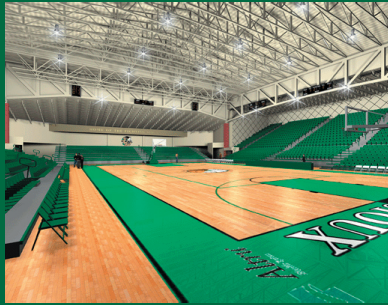


Fig 6:10 Betty Engelstad
Arena
(www.theralph.com)



Fig 6:11 Site Access from
Ralph Engelstad Drive to
Hwy. 2

SITE INVENTORY

TWO BUILDINGS ARE CURRENTLY IN THEIR CONSTRUCTION PHASES AT UND. THE FIRST BUILDING IS THE BETTY ENGELSTAD ARENA WHICH IS ATTACHED TO THE REA. THIS BUILDING WILL HOUSE THE BASKETBALL AND VOLLEYBALL GAMES OF UND. THE BUILDING COVERS ROUGHLY 50,000 SQUARE FEET AND SEATS 2,600 PEOPLE. THE ARENA ALSO HAS A VIP HOSPITALITY ROOM THAT SEATS AROUND 200 PEOPLE.

THE SECOND BUILDING IS THE NEW STUDENT FUNDED WELLNESS CENTER. THE NEW WELLNESS CENTER HAS A MULTI-PURPOSE GYM, RUNNING TRACK, AND MANY MEETING AND WORKOUT ROOMS. THIS BUILDING ALSO BUILT A NEW PARKING LOT ADDING 256 SPACES TO THE SITE.

ACCESS

VISITOR ACCESS TO THE SITE IS MOSTLY DONE THROUGH TRAVEL FROM INTERSTATE 29. EXIT NUMBER 141 IS THE MOST POPULAR EXIT USED SINCE VISITORS CAN BYPASS THE CITY OF GRAND FORKS AND REACH THE REA WITHOUT HAVING TO DRIVE THROUGH CAMPUS. OTHER USERS COMING FROM MINNESOTA ACCESS THE SITE COMING WEST ON HIGHWAY 2. ONCE THE VISITORS GET TO THE SITE THEY WILL EITHER ENTER IT ON RALPH ENGELSTAD DRIVE FROM THE NORTH OR 10TH AVENUE AND 6TH AVENUE FROM THE EAST. VISITORS WHO PARK OFF SITE USE THE PEDESTRIAN PROMENADE TO THE EAST OF THE SITE. OTHER THAN THAT ENTRY WAY THE REA AND THE REST OF THE SITE HAS VERY FEW PEDESTRIAN ACCESS POINTS FOR VISITORS.

WHEN ON-CAMPUS STUDENTS ENTER THE SITE USINS THE 10TH AVENUE ENTRANCE. STUDENTS WHO WALK TO THE FAMILY MEDICAL CENTER OR THE REA USE THE BIKE PATHS THAT ENTER THE SITE ON THE SOUTH SIDE ALONG THE ENGLISH COOLIE. OFF-CAMPUS STUDENTS ENTER THE SITE FROM A VARIETY OF WAYS. ALMOST ALL OFF-CAMPUS STUDENTS THAT DRIVE TO THE SITE USE THE 10TH AVENUE ENTRANCE AND THE FIVE ROADS THAT COME UP FROM THE SOUTH.

SITE INVENTORY

INFRASTRUCTURE

ROADS

THE SITE'S FIVE PRIMARY ROADS ARE 6TH AVENUE NORTH, 10TH AVENUE NORTH, COLUMBIA ROAD NORTH, HIGHWAY 2, AND RALPH ENGELSTAD DRIVE. RALPH ENGELSTAD DRIVE RUNS NORTH AND SOUTH THROUGH THE CENTER OF THE SITE AND IS A TWO LANE STREET WITH TWO WAY TRAFFIC. 10TH AVENUE NORTH RUNS EAST AND WEST THROUGH THE CENTER OF THE SITE. THE AVENUE IS A TWO LANE STREET WITH TWO LANE TRAFFIC. THE OTHER THREE STREETS ARE ALL THE BORDER ROADS OF THE SITE. COLUMBIA ROAD NORTH BORDERS THE SITE TO THE EAST AND IT IS A FOUR LANE STREET WITH A BOULEVARD IN BETWEEN THE TWO WAY TRAFFIC. HIGHWAY 2 IS A FOUR LANE STREET THAT BORDERS THE SITE TO THE NORTH AND HAS TWO WAY TRAFFIC. THIS STREET IS THE NEAREST CONNECTION TO INTERSTATE 29 WHICH PARALLELS THE SITE TO THE WEST. 6TH AVENUE NORTH BORDERS THE SITE TO THE SOUTH AND IS A TWO LANE ROAD WITH TWO WAY TRAFFIC.

THE SITE HAS SEVERAL SECONDARY ROADS MOST OF WHICH ALLOW ACCESS TO THE PARKING LOTS ON THE SITE. HAMLINE STREET, CAMBRIDGE STREET, OXFORD STREET, AND PRINCETON STREET ARE ALL TWO WAY ROADS THAT CONNECT CAMPUS TO THE PARKING AREAS ON THE SITE. HAMLINE HAS THE HEAVIEST TRAFFIC OF THE SECONDARY ROADS AS IT IS THE MAIN TURNOFF TO ACCESS THE PARKING AREAS IN FRONT OF THE BOOK STORE AND MEDICAL CENTER. THIS SITE ALSO CONTAINS 8 PARKING STALLS.

UTILITIES

THE SITE IS ALREADY EQUIPPED WITH UNDERGROUND POWER LINES, STEAM HEATING PIPES, SEWER SYSTEM, STREET LIGHTING AND COMMUNICATION LINES. THESE LINES WERE ALL ESTABLISHED BY THE UNIVERSITY WHEN THE REA WAS BUILT. THE STEAM HEATING PIPES RUN FROM THE UNIVERSITY HEATING SYSTEM IN THE CENTER OF CAMPUS

*For more graphic inventory of the site refer to the Traffic Inventory Map(Fig: 6:15) on page 43.



Fig 6:12 Sidewalk Lighting

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

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Fig 6:13 Bike Path on North Side of Site Jerke(2005)



Fig 6:14 Richter Field Army ROTC Training Area Jerke(2005)

SITE INVENTORY

RECREATION

THE SITE CONTAINS SEVERAL RECREATIONAL AREAS. THE FIRST IS THE BIKE PATH THAT TRAVERSES THE SITE ON THE EAST, WEST, AND SOUTH SIDE. THE BIKE PATH CAN TAKE THE USER TO THE WELLNESS CENTER, ALONG THE ENGLISH COOLIE, OR BACK ONTO CAMPUS.

THE SITE ALSO HAS THREE OUTDOOR ACTIVITY AREAS. THE UND SOCCER FIELD IS LOCATED ON THE EAST SIDE OF THE SITE AND HOLDS ALL THE UND SOCCER TEAM'S HOME GAMES. THE WEST SIDE OF THE SITE HAS TWO OUTDOOR TENNIS COURTS THAT CAN BE USED BY THE PUBLIC. THE FINAL AREA IS AN ARMY ROTC TRAINING FIELD CALLED RICHTER FIELD LOCATED ON THE NORTH SIDE OF THE DEVELOPMENT. THE SITE CONTAINS CLIMBING POLES AND AN OBSTACLE COURSE

PARKS AND OPEN SPACES

THE SITE CURRENTLY HAS NO DEVELOPED OPEN SPACES OTHER THAN THE SOCCER FIELD AND AREA ALONG THE BIKE PATH. SINCE THIS IS A NEW DEVELOPMENT THIS AREA HAS NOT ESTABLISHED THE NEED FOR THESE AMENITIES YET.

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

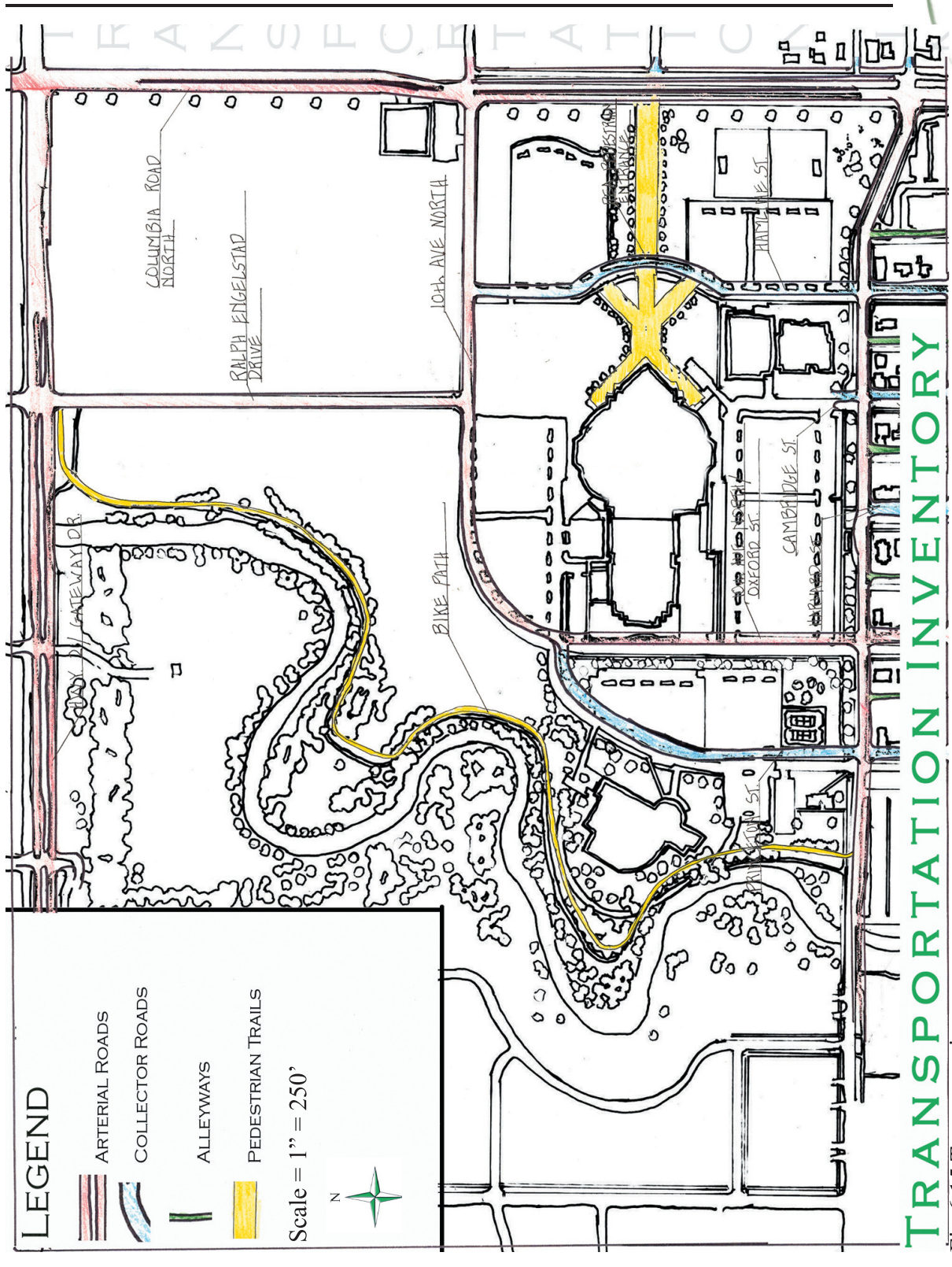


Fig 6:15 Transportation Inventory (Jerke 2005)

SITE INVENTORY

PHYSICAL INVENTORY

GEOLOGIC HISTORY



Fig 6:16 Lake Agassiz
(www.state.nd.us/ndgs/Agassiz/Lake%20Agassiz.htm)

THIS SITE LIKE MANY IN THE REGION WAS A LAKE BOTTOM ROUGHLY 11,000 YEARS AGO. A GLACIAL LAKE NAMED LAKE AGASSIZ COVERED MUCH OF THE REGION FOR ROUGHLY 2,000 YEARS. WHEN THE LAKE RECEDED IT LEFT BEHIND A VERY FLAT PLAIN OF LAND THAT RUNS OVER ALMOST ALL OF THE NORTH DAKOTA/MINNESOTA BORDER FROM SOUTH DAKOTA TO CANADA. THE LAKE AGGASIZ GLACIER ALSO CUT OXBOWS, DELTAS, AND GROOVES. THE ENGLISH COOLIE THAT RUNS THE LENGTH OF MY SITE IS ONE OF THESE GROOVES.

MANY OF GRAND FORKS PROBLEMS WERE CAUSE BECAUSE OF LAKE AGASSIZ. THE RED RIVER OF THE NORTH WHICH RUNS THROUGH GRAND FORKS ISN'T A RIVER LIKE MANY YOU SEE THROUGHOUT THE COUNTRY. THIS RIVER EXISTS BASICALLY BECAUSE IT IS THE LOWEST SPOT

ON THE MASSIVE FLAT PLAIN THAT IS THE LAKE AGASSIZ LAKE BOTTOM. BECAUSE THE RED RIVER VALLEY HAS SUCH A GRADUAL SLOPE IT LEAVES ITSELF OPEN TO MASSIVE FLOODING. THIS TYPE OF FLOODING HAS HAPPENED THROUGH GRAND FORKS HISTORY WITH THE MOST RECENT FLOOD BEING THE MOST DAMAGING. SINCE THE FLOOD MANY STEPS HAVE BEEN TAKEN BY THE FEDERAL GOVERNMENT AND THE GRAND FORKS COMMUNITY TO PROTECT ITSELF FROM FLOODING.

LAKE AGASSIZ DIDN'T ONLY AFFECT THE HYDROLOGY OF THE AREA IT ALSO AFFECTED THE SOIL COMPOSITION. IN THE SOIL SECTION YOU WILL LEARN OF GRAND FORK'S VERY CLAY HEAVY SOILS. THESE SOILS WERE SEDIMENT LEFT BEHIND BY LAKE AGASSIZ. THIS SOIL IS VERY VOLATILE AND EXPANDS AND CONTRACTS IN DIFFERENT TEMPERATURES. THE SOIL IS ALSO VERY FERTILE AND CAN PRODUCE MANY DIFFERENT TYPES OF CROPS. ALTHOUGH MANY EVENTS HAVE HAPPENED IN THE GEOLOGIC HISTORY OF THIS AREA LAKE AGGASIZ HAS HAD BY FAR THE GREATEST IMPACT.

SITE INVENTORY

SOILS

THE GENERAL SOIL OVER ALL OF GRAND FORKS IS DOMINANTLY LEVEL, MODERATELY FINE TEXTURED, SALINE SOIL. THE SOIL ON THE SITE SPECIFICALLY IS A BEARDEN SILTY CLAY LOAM SOIL. THE SOIL WHEN COMPACTED BECOMES A MOSTLY CLAY MIXTURE. SINCE THE SOIL IS A MOSTLY CLAY MIXTURE IT HAS A MODERATE SHRINK/SWELL TENDENCY. A MODERATE SHRINK/SWELL TENDENCY MEANS THAT WHEN IT RAINS THE SOIL PARTICLES EXPAND SLIGHTLY AND CAN CRACK CONCRETE BASEMENTS, SIDEWALKS, AND OTHER IMPERMEABLE STRUCTURES ON THE GROUND PLAIN. THIS TYPE OF SOIL ALSO HAS A HIGH WATER TABLE. THIS MEANS THAT THE GROUND CANNOT HOLD MUCH MOISTURE BEFORE IT BECOMES SATURATED AND FLOODS. THE SITE ALSO HAS A SMALL PORTION OF TOP SOIL THAT IS OF THE ZELL MIXTURE. THIS TYPE OF SOIL IS MORE OF A SILT LOAM SOIL AND IS FOUND ON SLIGHTLY STEEPER SLOPES THAN THE BEARDEN SOILS. IT IS ALSO AT LESS OF A RISK TO BECOME SATURATED AND HAS A SMALLER SHRINK/SWELL FREQUENCY. ALTHOUGH THESE TWO TYPES OF SOIL USE TO COMPRISE MOST OF THE SITES TOPSOIL THE SITE RECENTLY WAS COVERED IN FILL TO RAISE THE FLOODPLAIN ELEVATION. MOST OF THE SITE'S FILL WAS FROM A HIGHWAY CONSTRUCTION SOUTH OF THE SITE. THIS SOIL WAS MOST LIKELY OF THE BEARDEN TYPE AS WELL, BUT MAY HAVE SOME DIFFERENT CHARACTERISTICS. SINCE THREE FEET OF SOIL WAS PLACED ON TOP OF THE ORIGINAL GROUND PLAIN THE TENDENCY FOR THAT GROUND TO SETTLE IS VERY HIGH. THIS CAN CAUSE BUILDINGS TO SHIFT, CONCRETE TO CRACK, AND SINK HOLES IN OPEN AREAS. THE NEXT FEW YEARS WILL BE CRITICAL IN THE DEVELOPMENT OF THIS SITE AND THE COMPACTION OF THE SOIL. (USDA 1980)

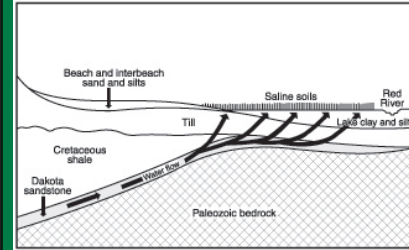


Fig 6:17 Soil Type
(www.state.nd.us/ndgs/Agassiz/Lake%20Agassiz.htm)

SITE INVENTORY

TOPOGRAPHY

THIS SITE IS VERY FLAT LIKE THE REST OF THE REGION BECAUSE IT LIES ON THE LAKE AGGAS-IZ LAKE BOTTOM. THE SITE DOES HAVE SOME SLIGHT ELEVATION CHANGES NEAR THE ENGLISH COOLIE. THESE SLOPES HAVE BEEN ACCENTED SINCE THE NEW LEVEE WAS INSTALLED ON BOTH SIDES OF THE COOLIE. UNFORTUNATELY, SINCE THIS WORK WAS DONE JUST THIS YEAR THERE IS LITTLE VISUAL INFORMATION FOR THIS SITE. ONE FACT THAT IS KNOWN IS THAT THE TOP OF THE LEVEE HAS TO START AT THE ELEVATION LINE 833. THIS MEANS THAT ALONG THE LEVEE THE ELEVATION WAS RAISED ALMOST 6 FEET IN SOME AREAS.



Fig 6:18 River Contours
(Jerke 2005)

THE SITE ALSO HAS SOME OTHER SUBTLE ELEVATION CHANGES THROUGHOUT. THE SITE DOES START TO TAPER DOWN ALONG THE NORTH EAST SIDE TOWARDS HIGHWAY 2. THERE IS ALSO SOME STEEPER LAND ON THE WEST SIDE OF THE ENGLISH COOLIE ON THE NORTH-EAST CORNER OF THE SITE.

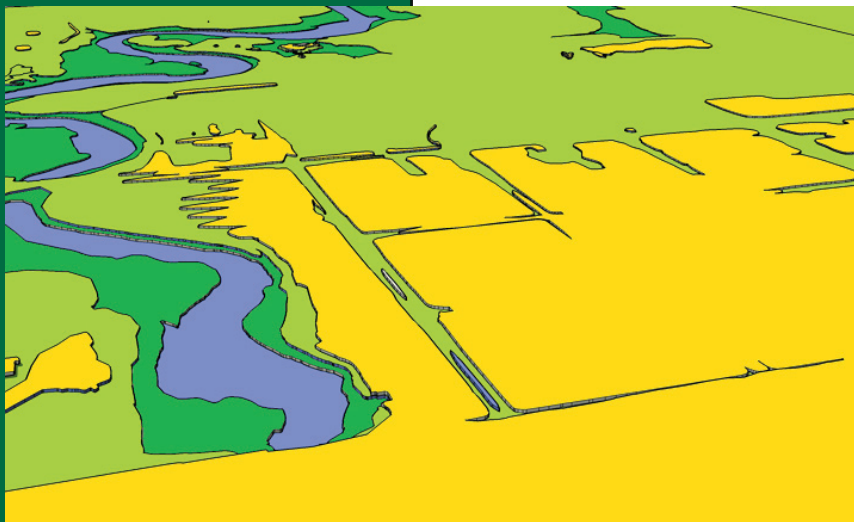


Fig 6:19 Site Contours
(Jerke 2005)

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

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Fig: 6:20 Topographic Map
Scale 1" = 600'

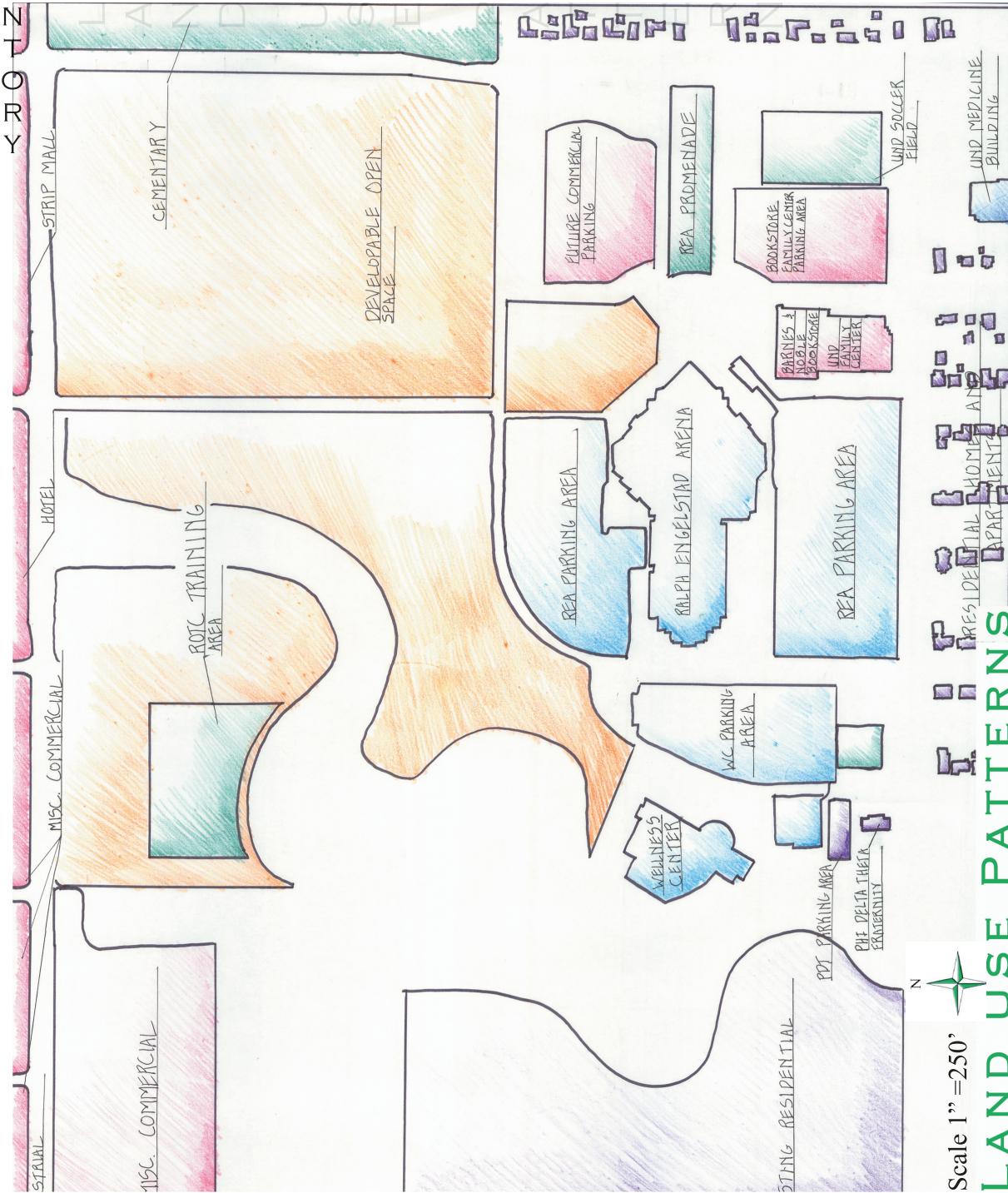


UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

SITE PLAN

Fig 6:21 Land Use Patterns
(Jerke 2005)



Scale 1" = 250'
LAND USE PATTERNS

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA



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NATURAL INVENTORY



Scale 1" = 250'
 Fig 6:22 Natural Inventory
 (Jerke 2005)

SITE INVENTORY

HYDROLOGY

THE SITE HAS BEEN REDESIGNED SO THAT ALMOST ALL ON SITE RUNOFF AND DRAINAGE RUN INTO EITHER THE GRAND FORKS SEWER SYSTEM OR THE ENGLISH COOLIE. THE SITE HAS MANY IMPERMEABLE SURFACES (I. E. PARKING LOTS AND RECREATIONAL COURTS) AND MOST OF THE RUN-OFF FROM THESE SURFACES IS HANDLED IN UNDERGROUND SEWER SYSTEMS. HYDROLOGY IS VERY IMPORTANT TO THE STUDENTS AND FACULTY SINCE THE FLOOD OF 1997. THE NEW LEVEE SYSTEM OF THE ENGLISH COOLIE WAS CONSTRUCTED TO HELP ALLEVIATE THESE PROBLEMS AND HAS BEEN THE MAIN FOCUS OF HYDROLOGY EFFORTS ON CAMPUS.

CLIMATE

THE SITE HAS THE COLD NORTHERN CLIMATE TYPICAL TO THE GRAND FORKS AREA. THIS TYPE OF CLIMATE HAS A MODERATE AMOUNT OF MOISTURE. THE CLIMATE ALSO HAS A VERY WIDE RANGE OF TEMPERATURES. WITH THE SITE BEING ON THE GREAT PLAINS IT ALSO HAS THE TENDANCY TO BE VERY WINDY

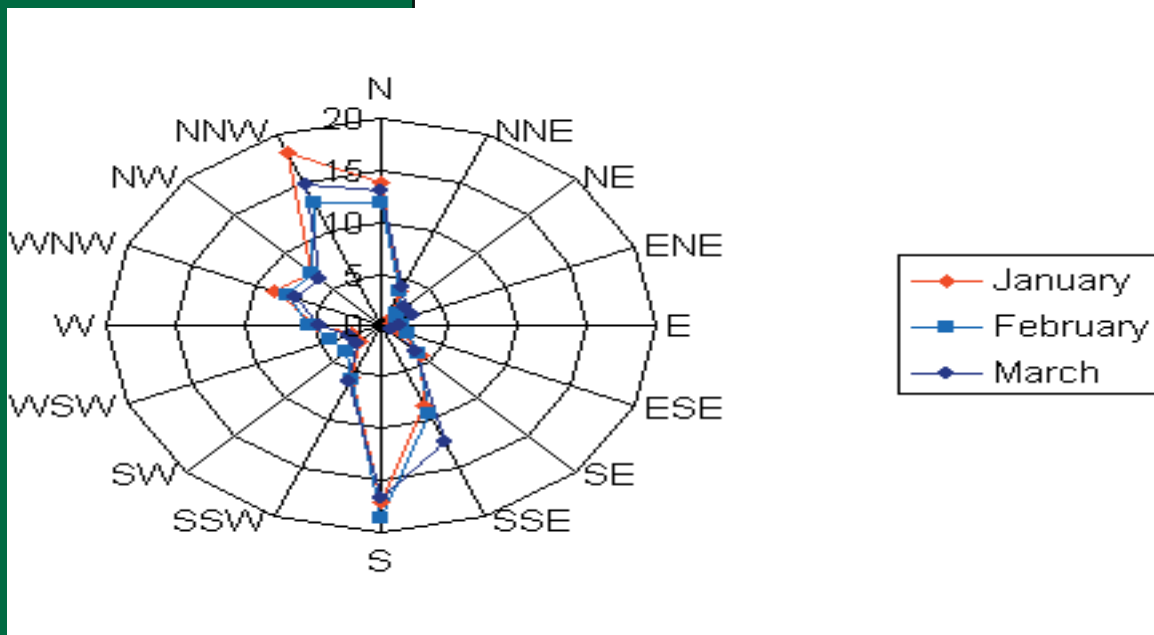


Fig 6:23 Grand Forks Wind Rose
(climate.umn.edu)

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

SITE INVENTORY

SITE INVENTORY

Table 1:3 Grand Forks Climate
(www.weatherbase.com)

AVERAGE TEMPERATURE(F)							MONTHS					
FOR THE YEAR	J	F	M	A	M	J	J	A	S	O	N	D
40	5	11	24	42	55	64	59	67	57	45	27	11
AVERAGE SNOWFALL(INCHES)							MONTHS					
FOR THE YEAR	J	F	M	A	M	J	J	A	S	O	N	D
40.2	7.9	5.8	3.4	.3	-	-	-	-	.1	1.6	6.3	6.6
RAINY DAYS(DAYS)							MONTHS					
FOR THE YEAR	J	F	M	A	M	J	J	A	S	O	N	D
9.5	8	6	7	7	9	10	10	9	8	7	6	8
AVERAGE PRECIPITATION(INCHES)							MONTHS					
FOR THE YEAR	J	F	M	A	M	J	J	A	S	O	N	D
19.8	.7	.5	1	1.5	2.5	3	2.7	2.6	2.3	1.4	.7	.6

BIOLOGICAL INVENTORY

VEGETATION

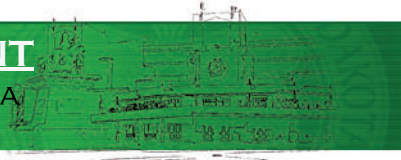
THE SITE HAS BEEN CLEARED OF ALMOST ALL LARGE SCALE TREES AND SHRUBS IN PREPARATION FOR THE DEVELOPMENT. THE ENGLISH COOLIE DOES STILL HAVE SOME RIPARIAN VEGETATION INCLUDING SOME POPLAR TREES(POPULUS TREMLOIDES), COTTONWOODS(POPULUS DELTOIDES), BUR OAK (QUERCUS MACROCARPA), AND RED-TWIGGED DOGWOOD(CORNUS ALBA). RECENTLY, STREET TREES HAVE ALSO BEEN ADDED.

WILDLIFE

WILDLIFE ON SITE IS RATHER SPARSE BECAUSE OF ITS LOCATION WITHIN CITY LIMITS. THE SITE DOES HOUSE YOUR NORMAL COMMUNITY RODENTS, SQUIRRELS(SCIURUS CAROLINENSIS), AND RABBITS(SYLVILAGUS FLORIDANUS). THE ENGLISH COOLIE DOES HAVE SOME WILDLIFE INCLUDING THE OCCASIONAL WHITE-TAIL DEER(ODOCOILEUS VIRGINIANUS), RACCOONS(PROCYON LOTOR), BEAVERS (CASTOR CANADENSIS), AND VARIOUS DIFFERENT BIRDS.

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA



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SITE ANALYSIS

OPPORTUNITIES AND CONSTRAINTS

OPPORTUNITIES

THE ENGLISH COOLIE ADDS A GREAT PHYSICAL FEATURE THAT WILL ATTRACT MANY PEOPLE TO THE SITE

THE LEVEE CREATES A NICE SEPARATION FROM THE URBAN AREA TO THE NATURAL AREA

THE SITE'S TOPOGRAPHY ALLOWS FOR EASY DEVELOPMENT BECAUSE OF THE FLAT LANDSCAPE

THE SITE'S LOCATION IS A HIGH VOLUME AREA ALLOWING FOR MANY VISITORS TO USE THE SITE'S AMENITIES

THE RALPH ENGELSTAD ARENA IS A WORLD CLASS BUILDING AND PROVIDES A SOLID FOCAL POINT FOR THE SITE.

THE NEW WELLNESS CENTER WILL ATTRACT USERS THAT ARE ACTIVE AND WANT TO INTERACT WITH THE SITE.

THE ENGLISH COOLIE PROVIDES A SCENIC GETAWAY FOR THE EVERYDAY URBAN USER.

THE SITE ALLOWS FOR DIRECT CONNECTION TO THE EXISTING UNIVERSITY SITE.

THE SITE'S PROXIMITY TO AN INTERSTATE EXIT ALLOWS EASY ACCESS FOR VISITORS.

THE CLIENT(UND) IS OPEN TO NEW TYPES OF DEVELOPMENT.

THE CAMPUS ATMOSPHERE ALLOWS FOR A PEDESTRIAN SCALE DEVELOPMENT.

THE ENGLISH COOLIE PROVIDES A NICE SEPARATION IN THE MIDDLE OF THE SITE ALLOWING FOR TWO OR THREE DEVELOPMENT TYPES TO BE USED.

CONSTRAINTS

THE SITE HAS UNSIGHTLY VIEWS ON THE NORTH AND WEST SIDES.

THE ENGLISH COOLIE HAS FLOODED IN THE PAST AND ALTHOUGH MEASURES HAVE BEEN TAKEN TO PREVENT THE FLOODING AGAIN THE CLIENT IS STILL CONCERNED.

THE SITE MUST PROVIDE A LOT OF UNATTRACTIVE ON-SITE PARKING FOR EVENTS AND STUDENTS.

THE FLAT ELEVATION OF THE SITE MAKES IT HARD TO FRAME VIEWS AND SCENIC AREAS.

THE MIDWEST CLIMATE IS HOSTILE TOWARDS A PEDESTRIAN TYPE OF DEVELOPMENT.

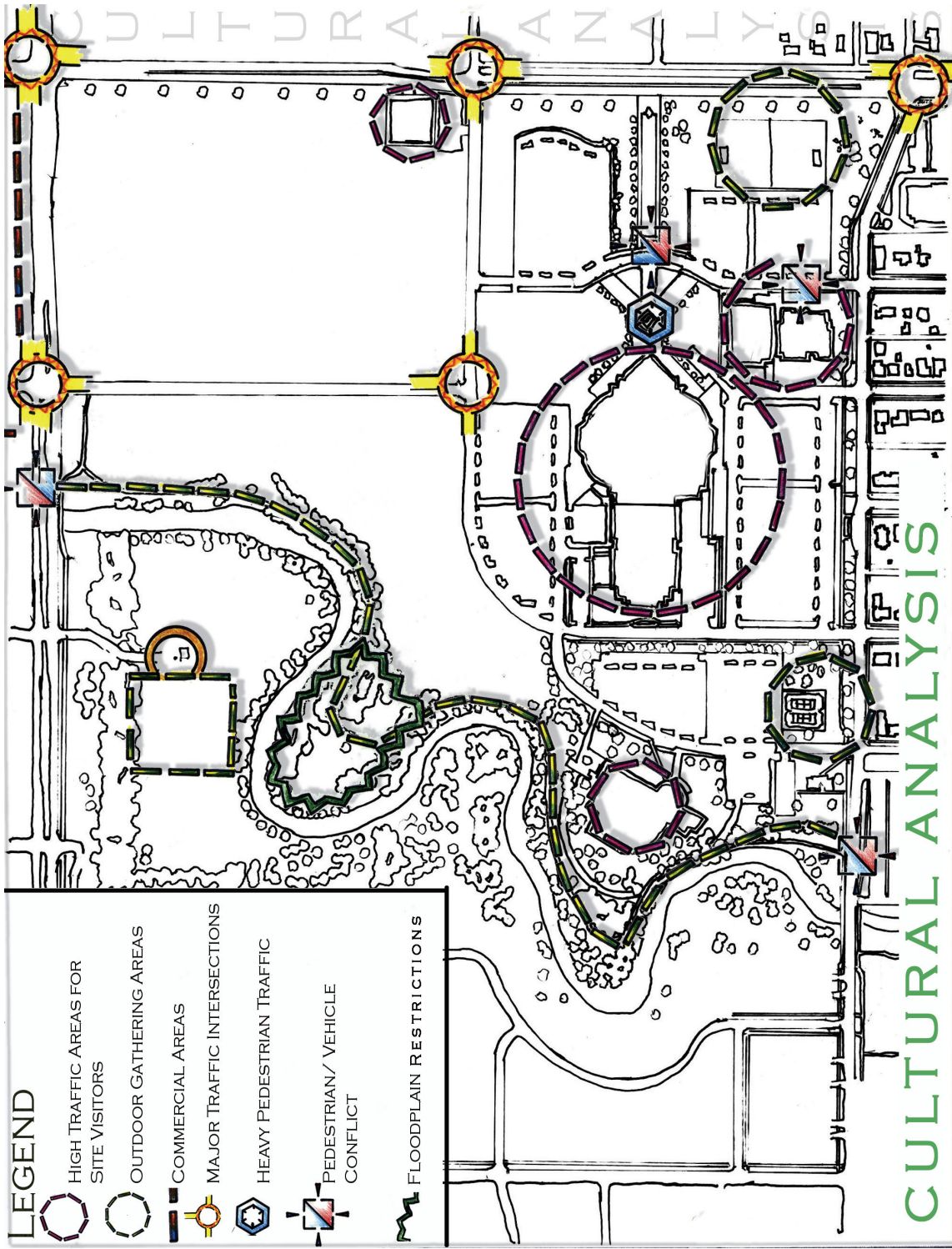
THE UNIVERSITY BUDGET CAN FLUCTUATE FROM YEAR TO YEAR MAKING THE COMPLETION OF THIS DESIGN DIFFICULT.

A PUBLIC UNIVERSITY DESIGN MUST BE APPROVED BY MANY COMITIES AND GROUPS WHICH MAY CAUSE SOME OF THE DESIGN ELEMENTS TO BECOME LOST

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

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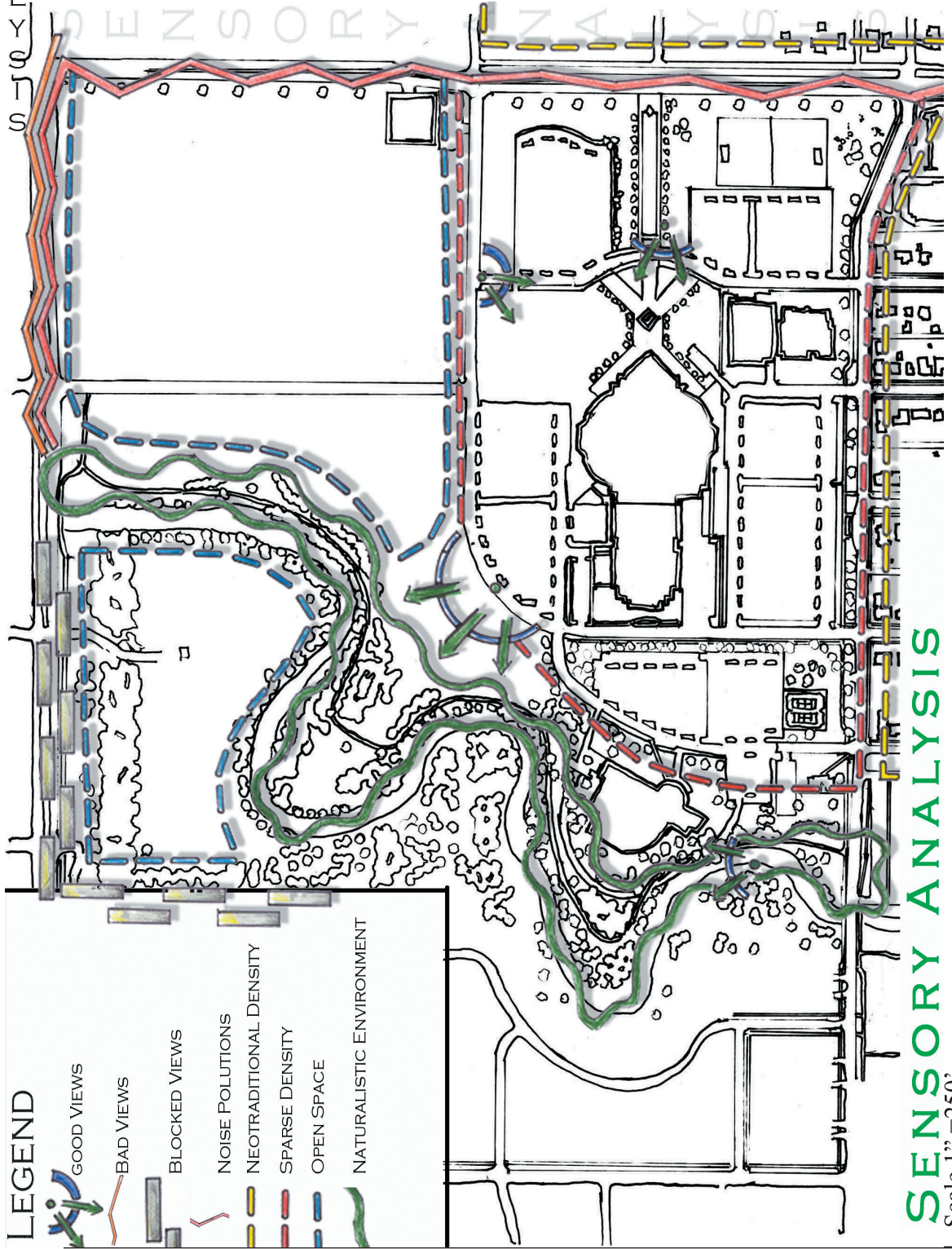


UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

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Fig 6:25 Sensory Analysis
(Jerke 2005)



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UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

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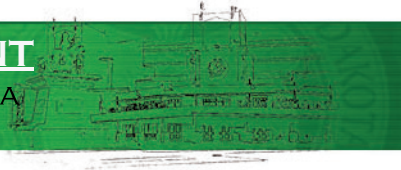
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UND UNIVERSITY VILLAGE DEVELOPMENT

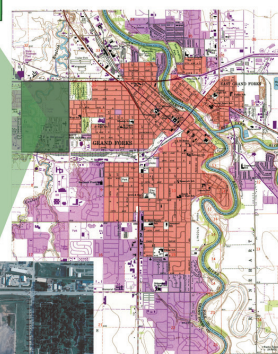
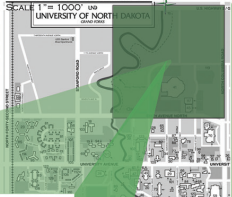
FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

Site Orientation

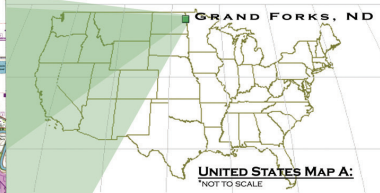
INTRODUCTION

THIS PROJECT IS A RESULT OF THE SUDDEN DEMAND FOR AMENITIES NEAR THE NEW RALPH ENGELSTAD ARENA. THE CURRENT EXPANSION OF THE DEVELOPMENT NORTH OF THE RALPH ENGELSTAD HAS BEEN SO RAPID THAT A MASTER PLAN WAS NEVER FULLY DESIGNED. THIS LAND WILL BE DEVELOPED FULLY IN THE COMING YEARS AND WITHOUT A COMPREHENSIVE PLAN TRAFFIC PROBLEMS AND OVERALL SITE ORGANIZATION WILL BECOME A MAJOR PROBLEM.

UND CAMPUS MAP C:
SCALE 1"=1000'

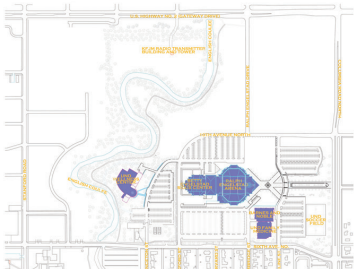


GRAND FORKS MAP B:
SCALE 1"=500'



UNITED STATES MAP A:
NOT TO SCALE

THE CITY OF GRAND FORKS AS LONG BEEN A CITY SPLIT INTO TWO. EAST GRAND FORKS LIES ON THE MINNESOTA SIDE OF THE MINNESOTA AND NORTH DAKOTA BORDER WITH THE ACTUAL CITY OF GRAND FORKS BEING IN NORTH DAKOTA. THESE TWO CITIES RECENTLY CHANGED THEIR NAME TO THE GRAND CITIES TO GIVE THE CITIES A FEELING OF NEW LIFE. AFTER THE FLOOD OF 1997 THE CITIES NEEDED A NEW IDENTITY TO ATTRACT NEW CITIZENS. THE NORTHERN HALF OF THESE CITIES HAS DESPERATELY NEEDED SOME FORM OF DEVELOPMENT SINCE THE FLOOD AND MY SITE IS LOCATED IN A PRIME AREA TO HELP WITH THIS DILEMMA. THE SITE IS A QUARTER SECTION OF LAND ON THE NORTHERN PART OF THE UNIVERSITY OF NORTH DAKOTA(UND) CAMPUS. THIS SITE IS BORDERED BY TWO MAJOR STREETS. THE FIRST ONE IS HIGHWAY 2 TO WHICH RUNS EAST AND WEST AND CREATES THE NORTH BOUNDARY OF THE SITE. ALONG THE EAST SIDE OF THE NORTH COLUMBIA ROAD CREATES THE BOUNDARY AND IS THE MAIN THOROUGHFARE ALONG ALL OF THE EAST SIDE OF THE UND CAMPUS. 6TH AVENUE CREATES THE SOUTHERN BOUNDARY OF THE SITE. THIS ROAD ISN'T AS BUSY AS THE FIRST TWO, BUT STILL GETS USED FREQUENTLY TO ACCESS THE SITE'S PARKING AREAS. THE FINAL BOUNDARY TO THE WEST HAS NO DEFINITE LINE. THE SITE STOPS AT THE QUARTER SECTION. THE SITE'S WESTERN BOUNDARY RUNS THROUGH THE ENGLISH COOLIE AND COMES OUT JUST WEST OF THE NEW WELLNESS CENTER.



SITE MAP D:
SCALE 1"=700'

AERIAL PHOTO A:
SCALE 1"=600'

Site Inventory

PHYSICAL INVENTORY

GEOLOGIC HISTORY

THIS SITE LIKE MANY IN THE REGION WAS A LAKE BOTTOM ROUGHLY 11,000 YEARS AGO. A GLACIAL LAKE NAMED LAKE AGGASIZ COVERED MUCH OF THE REGION FOR ROUGHLY 2,000 YEARS. WHEN THE LAKE RECEDED IT LEFT BEHIND A VERY FLAT PLAIN OF LAND THAT RUNS OVER ALMOST ALL OF THE NORTH DAKOTA/MINNESOTA BORDER FROM SOUTH DAKOTA TO CANADA. THE LAKE AGGASIZ GLACIER ALSO CUT OXBOWS, DELTAS, AND GROOVES. THE ENGLISH COOLIE THAT RUNS THE LENGTH OF MY SITE IS ONE OF THESE GROOVES.

TOPOGRAPHY

THIS SITE IS VERY FLAT LIKE THE REST OF THE REGION BECAUSE IT LIES ON THE LAKE AGGASIZ LAKE BOTTOM. THE SITE DOES HAVE SOME SLIGHT ELEVATION CHANGES NEAR THE ENGLISH COOLIE. THESE SLOPES HAVE BEEN ACCENTED SINCE THE NEW LEVEE WAS INSTALLED ON BOTH SIDES OF THE COOLIE. UNFORTUNATELY, SINCE THIS WORK WAS DONE JUST THIS YEAR THERE IS LITTLE VISUAL INFORMATION FOR THIS SITE. ONE FACT THAT IS KNOWN IS THAT THE TOP OF THE LEVEE HAS TO START AT THE ELEVATION LINE 833. THIS MEANS THAT ALONG THE LEVEE THE ELEVATION WAS RAISED ALMOST 6 FEET IN SOME AREAS.



TOPO MAP A:
SCALE 1"=1500'

- RIVER LEVEL 815 FT
- 820 FT
- 825 FT
- 830 FT

SOIL TYPES

THE GENERAL SOIL OF GRAND FORKS IS DOMINANTLY LEVEL, MODERATELY FINE TEXTURED, SALINE SOIL. THE SOIL ON THE SITE SPECIFICALLY IS A BEARDEN SILTY CLAY LOAM SOIL. THE SOIL WHEN COMPACTED

SOIL STRUCTURE A:
SCALE 1"=1500'

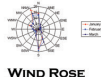
BECOMES A MOSTLY CLAY MIXTURE. SINCE THE SOIL IS A MOSTLY CLAY MIXTURE IT HAS A MODERATE SHRINK/SWELL TENDENCY. A MODERATE SHRINK/SWELL TENDENCY MEANS THAT WHEN IT RAINS THE SOIL PARTICLES EXPAND SLIGHTLY AND CAN CRACK CONCRETE BASEMENTS, SIDEWALKS, AND OTHER IMPERMEABLE STRUCTURES ON THE GROUND PLAIN.

HYDROLOGY

THE SITE HAS BEEN REDESIGNED SO THAT ALMOST ALL ON SITE RUNOFF AND DRAINAGE RUNS INTO EITHER THE GRAND FORKS SEWER SYSTEM OR THE ENGLISH COOLIE. THE SITE HAS MANY IMPERMEABLE SURFACES (I. E. PARKING LOTS AND RECREATIONAL COURTS) AND MOST OF THE RUNOFF FROM THESE SURFACES IS HANDLED IN UNDERGROUND SEWER SYSTEMS. HYDROLOGY IS VERY IMPORTANT TO THE STUDENTS AND FACULTY SINCE THE FLOOD OF 1997. THIS NEW LEVEE SYSTEM OF THE ENGLISH COOLIE WAS CONSTRUCTED TO HELP ALLEVIATE THESE PROBLEMS AND HAS BEEN THE MAIN FOCUS OF HYDROLOGY EFFORTS ON CAMPUS.

CLIMATE

THE SITE HAS THE COLD NORTHERN CLIMATE TYPICAL TO THE GRAND FORKS AREA. THIS TYPE OF CLIMATE HAS A MODERATE AMOUNT OF MOISTURE, THE CLIMATE ALSO HAS A VERY WIDE RANGE OF TEMPERATURES. WITH THE SITE BEING ON THE GREAT PLAINS IT ALSO HAS THE TENDENCY TO BE VERY WINDY.



WIND ROSE

BIOLOGICAL INVENTORY

VEGETATION

THE SITE HAS BEEN CLEARED OF ALMOST ALL LARGE SCALE TREES AND SHRUBS IN PREPARATION FOR THE DEVELOPMENT. THE ENGLISH COOLIE DOES STILL HAVE SOME RIPARIAN VEGETATION INCLUDING SOME POPULUS DELTOIDES, QUERCUS MACROCARPA, AND CORNUS ALBA. SOME STREET TREES AND SHRUBS WERE PLANTED ALONG NORTH COLUMBIA ROAD AS A BUFFER FOR THE SITE FROM THIS BUSY STREET.

VEGETATION WAS ALSO ADDED ALONG THE PROMENADE TO THE EAST TO PROTECT PEDESTRIANS FROM THE ELEMENTS AND TO PROVIDE SHADE. THE CAMPUS TO THE SOUTH IS HEAVILY VEGETATED WITH LARGE DECIDUOUS TREES.

CULTURAL INVENTORY

SITE USERS

THE USERS OF THIS SITE CONSIST OF THREE BASIC GROUPS: THE STUDENTS OF UND, VISITORS TO THE RALPH ENGELSTAD ARENA, AND OTHER AREA BUSINESSES, AND PERMANENT RESIDENTS(INCLUDING ALUMNI). THESE USERS WILL HAVE TO INTERACT ON ALMOST A DAILY BASIS.

SITE HISTORY

THE SITE HAS ACTUALLY VERY LITTLE PERSONAL HISTORY. IT WAS DUBBED THE BRONSON PROPERTY BY THE UNIVERSITY AND HAS SAT MOSTLY UNUSED UNTIL 1997. SINCE 1997, THE BRONSON PROPERTY HAS BECOME A RELATIVE BOOM TOWN. THE RALPH ENGELSTAD ARENA CAUSED THIS LAND TO BECOME A DEVELOPABLE AREA NORTH OF THE UND CAMPUS.

SITE TRANSPORTATION

MOST OF THE SITE TRANSPORTATION IS CURRENTLY BY AUTOMOBILE. THE SITE IS JUST OVER A HALF A MILE FROM MOST OF THE MAIN CAMPUS BUILDINGS CAUSING MOST STUDENTS AND SITE USERS TO DRIVE TO THE SITE. THE PEOPLE WHO VISIT THE SITE ALSO USE THE AUTOMOBILE AS A MAIN FORM OF TRANSPORTATION.

SITE STRUCTURES

THE SITE CURRENTLY CONTAINS FIVE PERMANENT STRUCTURES. THE MAIN STRUCTURE BEING THE RALPH ENGELSTAD ARENA(REA). THE REA COVERS ROUGHLY 400,000 SQUARE FEET OF SPACE. THE SECOND BUILDING ON THE SITE IS THE NEW UNIVERSITY BOOKSTORE. THIS BUILDING COVERS ROUGHLY 32,000 SQUARE FEET. THE THIRD BUILDING ON THE SITE IS THE UND FAMILY PRACTICE CENTER. THE FOURTH BUILDING IS A FIRE STATION ON THE EAST SIDE OF THE SITE COVERING ABOUT 7,000 SQUARE FEET. THE FIFTH BUILDING CURRENTLY STANDING ON THE BRONSON PROPERTY IS THE PHI DELTA THETA FRATERNITY HOUSE.

Site Map

Board 1: Site Orientation and Site Inventory

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA



Board 2: Site Master Plan
and Sections

UND UNIVERSITY VILLAGE DEVELOPMENT

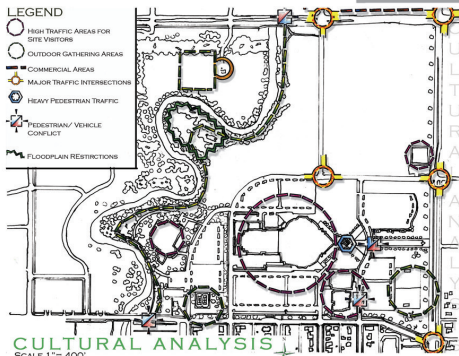
FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

Site Analysis

OPPORTUNITIES

LEGEND

- HIGH TRAFFIC AREAS FOR SITE VISITORS
- OUTDOOR GATHERING AREAS
- COMMERCIAL AREAS
- MAJOR TRAFFIC INTERSECTIONS
- HEAVY PEDESTRIAN TRAFFIC
- PEDESTRIAN/VEHICLE CONFLICT
- FLOORPLAIN RESTRICTIONS



CULTURAL ANALYSIS

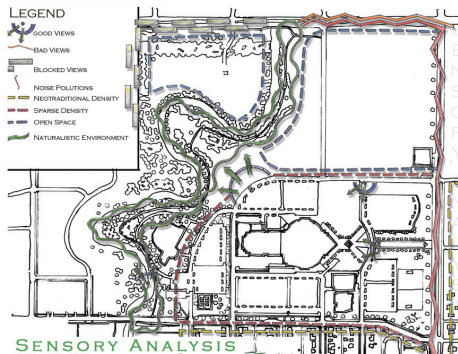
CONSTRAINTS

- THE SITE HAS UNSIGHTLY VIEWS ON THE NORTH AND WEST SIDES.
- THE ENGLISH COOLIE HAS FLOODED IN THE PAST AND ALTHOUGH MEASURES HAVE BEEN TAKEN TO PREVENT THE FLOODING FROM HAPPENING AGAIN THE CLIENT IS STILL CONCERNED.
- THE SITE MUST PROVIDE A LOT OF UNATTRACTIVE ON-SITE PARKING FOR EVENTS AND STUDENTS.
- THE FLAT ELEVATION OF THE SITE MAKES IT HARD TO FRAME VIEWS AND SCENIC AREAS.
- THE MIDWEST CLIMATE IS HOSTILE TOWARDS A PEDESTRIAN TYPE OF DEVELOPMENT.
- THE UNIVERSITY BUDGET CAN FLUCTUATE FROM YEAR TO YEAR MAKING THE COMPLETION OF THIS DESIGN DIFFICULT.
- A PUBLIC UNIVERSITY DESIGN MUST BE APPROVED BY MANY COMMITTEES AND GROUPS WHICH MAY CAUSE SOME OF THE DESIGN ELEMENTS TO BECOME LOST.



LEGEND

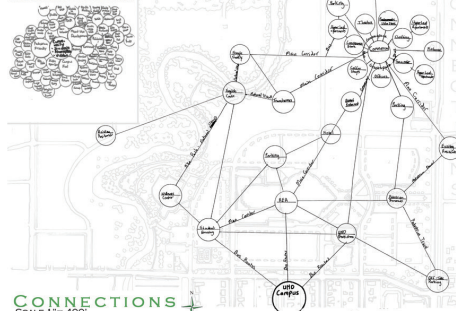
- GOOD VIEWS
- BAD VIEWS
- BLOCKED VIEWS
- NOISE POLLUTIONS
- MEDIOCRATIONAL DENSITY
- SPARSE DENSITY
- OPEN SPACE
- NATURALISTIC ENVIRONMENT



SENSORY ANALYSIS

Design Development

BUBBLE DIAGRAM



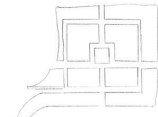
CONNECTIONS

SCALE 1"=400'



THIS FIRST PATTERN WAS BASED SOLELY ON A GEOMETRIC GRID PATTERN

THIS DESIGN FOCUSED ON MAKING ON SITE CONNECTIONS INSIDE A GRID PATTERN.



WITH THIS CONCEPT I TRIED TO FOCUS ON CONSOLIDATING THE GRID PATTERN INTO LARGER BLOCKS.

RELATIONSHIP



RELATIONSHIP DIAGRAM

SCALE 1"=400'

THIS CONCEPT FOCUSES ON MAKING CONNECTIONS OFF OF THE SITE.

THIS WAS BASICALLY THE FINAL CONCEPT. THE MAJOR BISECTING NORTH-SOUTH ROAD CHANGED SLIGHTLY AS I TRIED TO EASE TRAFFIC CONGESTION.

DESIGN PHASES

MY DESIGN PROCESS ALWAYS BEGINS WITH A SERIES OF BUBBLE DIAGRAMS THAT RANGE FROM BROAD IDEAS TO COMPLEX RELATIONSHIP DIAGRAMS. THE NEXT STEP THAT WAS TAKEN WAS TO CONSTRUCT A GEOMETRIC PATTERN USING THE GRID PATTERN OF MOST NEW URBANIST DESIGNS. AN EMPHASIS WAS PLACED ON CONNECTING MAJOR POINTS OF INTEREST THROUGHOUT THE SITE. THESE CONNECTIONS ARE SHOWN BELOW. THE SKETCHES BELOW WERE MADE OVER AN UNDEVELOPED BASE MAP WITH THE EXISTING STRUCTURES AND STREETS. A COMBINATION OF SEVERAL OF THESE SKETCHES WAS USED IN THE FINAL BASE MAP DESIGN.



DAVID JERKE
CAPSTONE PROJECT 2005

UNIVERSITY VILLAGE DEVELOPMENT

UNIVERSITY OF NORTH DAKOTA

GRAND FORKS, NORTH DAKOTA

NORTH DAKOTA STATE UNIVERSITY
LANDSCAPE ARCHITECTURE DEPARTMENT

Board 3: Site Analysis and Design Development

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

Concept



DESIGN STATEMENT

THIS DESIGN IS INTENDED TO OPEN A WINDOW OF OPPORTUNITY FOR CAMPUSES OF HIGHER EDUCATION TO EXPAND INTO THE COMMUNITIES THEY INHABIT. UNIVERSITIES AND COLLEGES HAVE LONG BEEN VIEWED AS SEPARATE "CAMPUSES" FROM THEIR SURROUNDING COMMERCIAL AND PUBLIC NEIGHBORS. THIS DESIGN BEGINS TO BRING LOCAL BUSINESSES AND THE UNIVERSITY TOGETHER ON THE SAME LAND, AND SOMETIMES EVEN IN THE SAME BUILDING. A DEVELOPMENT OF THIS TYPE WILL ALLOW ITS INHABITANTS TO MOVE UP THE SOCIAL LADDER WITHOUT EVER HAVING TO ABANDON THE AREA THEY LOVE. THE DEVELOPMENT WILL ALSO ALLOW INTERACTION BETWEEN MANY DIFFERENT LEVELS OF SOCIETY, CREATING A COMMUNITY THAT IS DIVERSE IN ITS ABILITIES AND OBJECTIVES.

THE SECOND AREA THAT THIS DEVELOPMENT DEALS WITH IS THE LOOSENING OF DEPENDENCE ON THE AUTOMOBILE. THIS SITE IS MASS TRANSIT AND PEDESTRIAN ORIENTATED. TRYING TO BRING BACK THE TYPE OF VILLAGE FEEL THAT WAS SO COMMON BEFORE THE RISE OF SUBURBAN LIFE. WITH A DESIGN THAT MAKES A DIRECT ATTEMPT TO BRING ITS INHABITANTS BACK TO THE BOARDWALKS AND PATHWAYS THAT USED TO CRISSCROSS EVERY SMALL TOWN IN AMERICA, THIS DESIGN WILL LEAD TO MORE SOCIAL AND INTERACTIVE COMMUNITY.

The Life of John Doe

THE FOLLOWING GRAPHICS ARE A TIMELINE OF A TYPICAL RESIDENT OF THE UNIVERSITY VILLAGE DEVELOPMENT. JOHN DOE LIVES HIS LIFE LIKE ANY OTHER GRAND FORKS RESIDENT HE JUST HAS THE OPPORTUNITY TO SEE EVERYTHING THAT A WELL DEVELOPED, PEDESTRIAN ORIENTATED COMMUNITY, HAS TO OFFER.

THE LIFE OF JOHN DOE IS NOT THAT DIFFERENT FROM MANY NORTH DAKOTA AND MINNESOTA GRADUATES. JOHN CHOOSE TO GO TO THE UNIVERSITY OF NORTH DAKOTA BECAUSE OF THERE EXCELLENT AIRPORT MANAGEMENT DEPARTMENT. UPON ARRIVING AT UND JOHN WAS GIVEN A DORMITORY IN THE NEW UNIVERSITY VILLAGE STUDENT HOUSING. JOHN HAD ENJOYED THE THE UNIVERSITY VILLAGE IN HIS CAMPUS VISIT BECAUSE OF THE MANY OUTDOOR ACTIVITIES AVAILABLE ON THE SITE. JOHN ALSO LIKED THE IDEA OF HAVING CHOICES OF WHERE TO EAT AND BUY SUPPLIES WITH HIS NEW UNIVERSITY DOLLARS CARD. LIVING ABOVE THE COMMERCIAL BUILDINGS OF THE UNIVERSITY VILLAGE ALSO ALLOWED JOHN TO WORK AT THE SANDWICH SHOP LOCATED DIRECTLY UNDERNEATH HIS DORMITORY.



COLLEGE FRESHMEN

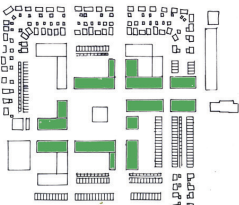
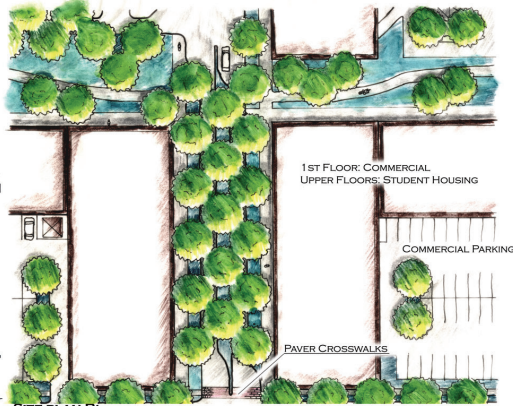


FIGURE GROUND A:
SCALE 1"=200'



SITE PLAN B:
SCALE 1"=40'



THE DOWNTOWN STUDENT AREA IS THE CENTER FOR ACTIVITY ON THE SITE. BUS STOPS ARE LOCATED OUTSIDE EACH STUDENT HOUSING UNIT TO TRANSPORT STUDENTS TO THE SOUTH SIDE OF CAMPUS FOR THEIR CLASSES. AT CAPACITY THE SITE WILL BE ABLE TO HOUSE 350 STUDENTS. THIS DOES NOT INCLUDE ESTIMATES FOR COLLEGE OPERATED FAMILY HOUSING. PARKING FOR THESE DORMITORIES WILL BE LOCATED SOUTH OF THE SITE IN A LOT CURRENTLY USED FOR SPORTING EVENTS. STUDENTS WILL BE ENCOURAGED TO RELY ON MASS TRANSIT FOR THEIR TRANSPORTATION TO THE SOUTH CAMPUS.

THE DOWNTOWN AREA WILL HAVE A 20 FOOT BUILDING SETBACK FROM THE STREET AND BUILDINGS WILL BE PLACED DIRECTLY ON THE SETBACK LINE. POSSIBLE USES FOR THE COMMERCIAL AREAS INCLUDE: OFFICE SPACE, COFFEE SHOPS, EATING ESTABLISHMENTS, THEATRE, ART GALLERIES, AND TAVERNS.

DETAIL A: PAVER CROSSWALK
SCALE 1"=3'

MIXED-USE DEVELOPMENT A:
NOT TO SCALE

Board 4: Design Concept and Design Phase 1

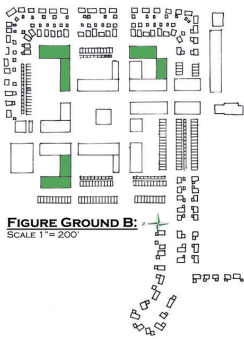
UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA

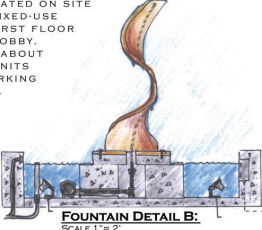


FIVE YEARS AFTER COMING TO UND JOHN GRADUATED WITH A DEGREE IN BUSINESS ADMINISTRATION. HE WENT STRAIGHT TO WORK FOR A COMPANY CALLED DAKOTA PRODUCTS THAT HAD A SMALL SATELLITE OFFICE IN THE UNIVERSITY VILLAGE. JOHN'S APARTMENT OVERLOOKS THE GREENWAY WHERE HE TAKES HIS RUNS EVERY MORNING. HE WALKS TO WORK USUALLY STOPPING BY THE OPEN PLAZA. IN THE SUMMERTIME, TO HAVE A CUP OF COFFEE. JOHN NOW HAS A PARKING SPACE DIRECTLY BEHIND HIS BUILDING WHERE HE PARKS HIS CAR, THOUGH HE RARELY DRIVES BECAUSE HE IS JUST SECONDS FROM THE LOCAL BUS STOP. RECENTLY, JOHN HAS BEEN LOOKING INTO A TOWNHOME ON THE EDGE OF THE UNIVERSITY VILLAGE. JOHN ENJOYS GOING TO THE LOCAL TAVERNS AND THE HOCKEY GAMES JUST DOWN THE ROAD IN THE WINTER TIME. HIS CURRENT LIFESTYLE IS VERY SOCIAL AND HE VISITS MANY EVENTS STILL ON CAMPUS.

GRADUATE

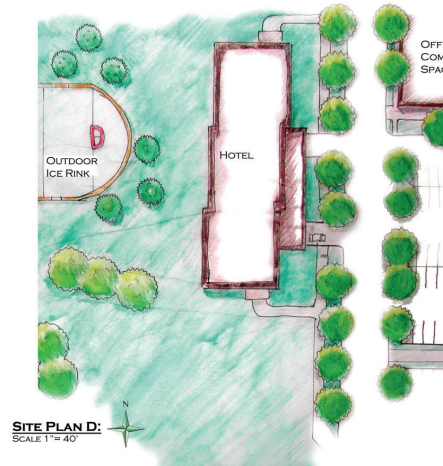
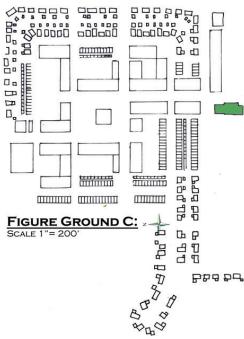


THE APARTMENT COMPLEXES LOCATED ON SITE ARE NOT DISSIMILAR FROM THE MIXED-USE STRUCTURES EXCEPT THAT THE FIRST FLOOR IS USED AS A SOCIAL AREA AND LOBBY. THE SITE HAS ENOUGH AREA FOR ABOUT 100 APARTMENT UNITS. THESE UNITS WOULD ALL BE PROVIDED ONE PARKING SPACE FOR EVERY TWO BEDROOM. THIS IS LOWER THAN MOST DEVELOPMENTS IN THIS AREA, BUT WILL HELP TO PROMOTE A MORE MASS TRANSIT ORIENTED DEVELOPMENT. ALL OF THE APARTMENTS ARE LOCATED EITHER NEAR A POCKET PARK OR GREENWAY TO PROMOTE COMMUNITY OUTDOOR ACTIVITY.

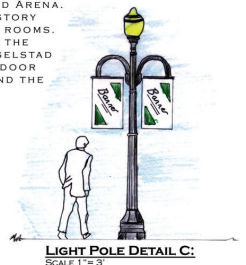


WHEN JOHN TURNED 25 HE MOVED AWAY FROM GRAND FORKS TO HELP HIS COMPANY IN THE TWIN CITIES. JOHN WOULD RETURN TO THE SITE TO GO TO FIGHTING SIOUX HOCKEY GAMES AND WAS ON SEVERAL ALUMNI COMMITTEES. JOHN ENJOYED COMING BACK TO THE SITE AND VISITING FORMER CO-WORKERS AND PROFESSORS. HE ALSO ENJOYED THE PROXIMITY OF THE HOTEL TO ALL THE UNIVERSITIES AMENITIES. JOHN COULD DRIVE UP FOR THE WEEKEND AND LEAVE HIS CAR IN THE HOTEL PARKING LOT FOR THE DURATION OF HIS STAY.

YOUNG EXECUTIVE



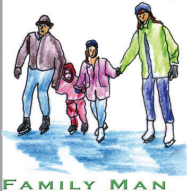
THIS SITE CONTAINS MANY AMENITIES FOR VISITORS INCLUDING THE ALUMNI CENTER AND RALPH ENGELSTAD ARENA. THE SITE'S HOTEL IS A THREE STORY STRUCTURE WITH ROUGHLY 50 ROOMS. THE HOTEL HAS SITE LINES TO THE TOWN CENTER AND RALPH ENGELSTAD ARENA. THERE IS ALSO AN OUTDOOR ACTIVITY AREA DIRECTLY BEHIND THE HOTEL.



Board 5: Design Phase 2 and 3

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA



FAMILY MAN

WHEN JOHN TURNED 28 HE MOVED BACK TO GRAND FORKS WITH HIS WIFE AND TWO CHILDREN. JOHN PURCHASED A LARGE HOME ALONG THE ENGLISH COOLIE. HIS CHILDREN USE THE BIKE PATH BEHIND THE HOUSE ALMOST EVERYDAY. THE FAMILY ALSO ENJOYS PICNICS IN THE GAZEBO AT THE PARK. JOHN WORKED DOWNTOWN AND FOUND THAT HE COULD WALK TO THE BUS STATION IN THE MORNING. JANE (JOHN'S WIFE) WORKED AS A PROFESSOR ON CAMPUS. WITH JANE BEING A UNIVERSITY EMPLOYEE THEIR FAMILY COULD USE THE WELLNESS CENTER LOCATED SOUTH OF THEIR HOME ALONG THE BIKE PATH.

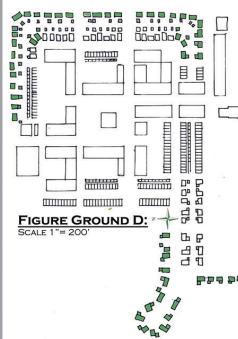
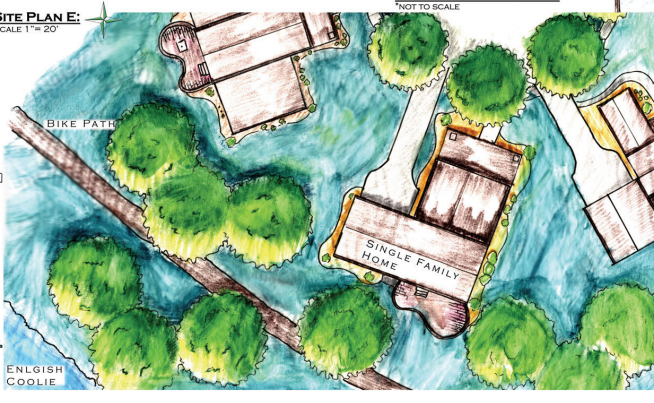


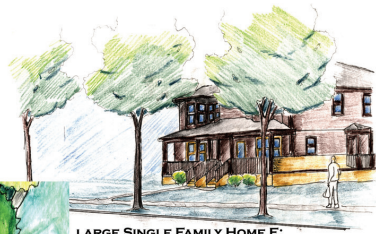
FIGURE GROUND D:
SCALE 1"=200'



SITE PLAN E:
SCALE 1"=20'

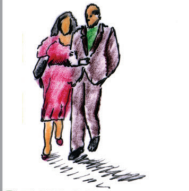
GAZEBO PICNIC AREA D:
NOT TO SCALE

BIKE PATH DETAIL D:
SCALE 1"=5'



LARGE SINGLE FAMILY HOME E:
NOT TO SCALE

THIS SITE CONTAINS THREE DIFFERENT LOT SIZES FOR SINGLE FAMILY DWELLING UNITS. THERE ARE 35 SMALL LOTS (4,000-5,000 SQ. FT.), 35 MEDIUM LOTS (5,000-7,000 SQ. FT.), AND 18 LARGE LOTS (7,000-10,000 SQ. FT.). THE MAXIMUM SETBACK FOR EACH HOME IS 20 FEET AND EACH HOME IS REQUIRED TO HAVE A FRONT PORCH. THIS PUSHES ACTIVITY BACK ONTO THE FRONT SIDE OF THE HOMES CREATING MORE INTERACTION BETWEEN NEIGHBORS. GARAGES ARE TO BE SET BEHIND OR ON THE REAR OF THESE UNITS TO CREATE A MORE WELCOMING CURB APPEAL. ALL HOMES HAVE ON-STREET PARKING CREATING A BUFFER BETWEEN PEDESTRIANS ON THE SIDEWALK AND MOVING TRAFFIC.



SENIOR CITIZEN

AFTER JOHN'S CHILDREN MOVED OUT OF THE HOUSE HE DECIDED TO RENT A TOWNHOME. RENTING A TOWNHOME ALLOWED JOHN TO VACATION WITHOUT WORRYING ABOUT MAINTENANCE OF HIS PROPERTY AND BUILDING. JOHN AND JANE ARE BIG SUPPORTERS OF THE SIOUX HOCKEY TEAM AND ATTEND ALL OF THE HOCKEY BOOSTER MEETINGS AT THE ALUMNI CENTER. JOHN ALSO ENJOYS WALKING THE GREENWAY AND REMEMBERING HIS COLLEGE DAYS. YESTERDAY, JOHN BOUGHT A LOT FOR HIMSELF ACROSS THE STREET FROM THE UNIVERSITY VILLAGE. HE ALSO BOUGHT A LOT FOR HIS WIFE RIGHT BESIDE HIM UNDER A BIG OAK TREE, IN MEMORIAL PARK CEMETERY. MOST OF HIS LIFE JOHN LIVED ON ONE SMALL QUARTER SECTION OF LAND, THAT OFFERED HIM A WORLD OF OPPORTUNITIES.

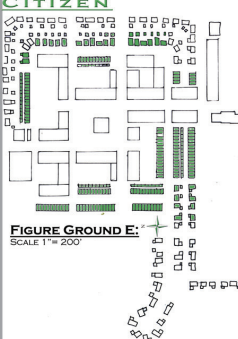
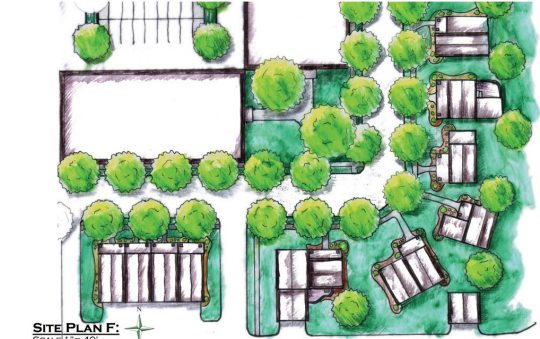



FIGURE GROUND E:
SCALE 1"=200'




SITE PLAN F:
SCALE 1"=40'




TOWNHOME G:
NOT TO SCALE

THIS SITE CONTAINS MANY RENTAL PROPERTIES FOR USERS WHO PREFER A LOWER MAINTENANCE LEVEL OR SHORTER TERM LIVING ARRANGEMENT. THERE ARE 75 TOWNHOMES WITH TUCK UNDER GARAGE UNITS AND 40 UNITS WITH DETACHED GARAGES. THE TOWNHOMES HAVE A SETBACK OF 10 FEET AND HAVE A FRONT PATIO. THIS ALLOWS THE TOWNHOMES TO HAVE A SIMILAR FUNCTION TO THE RESIDENTIAL HOMES. THE ALUMNI CENTER SHOWN ABOVE IS THE TOWN CENTER OF THIS DEVELOPMENT. THE BUILDING HAS MORE ELEVATION THAN ANY OTHER BUILDING ON THE SITE AND IS LOCATED DIRECTLY IN THE MIDDLE OF THIS DESIGN TO CREATE A STRONG FOCAL POINT.



ALUMNI CENTER F:
NOT TO SCALE

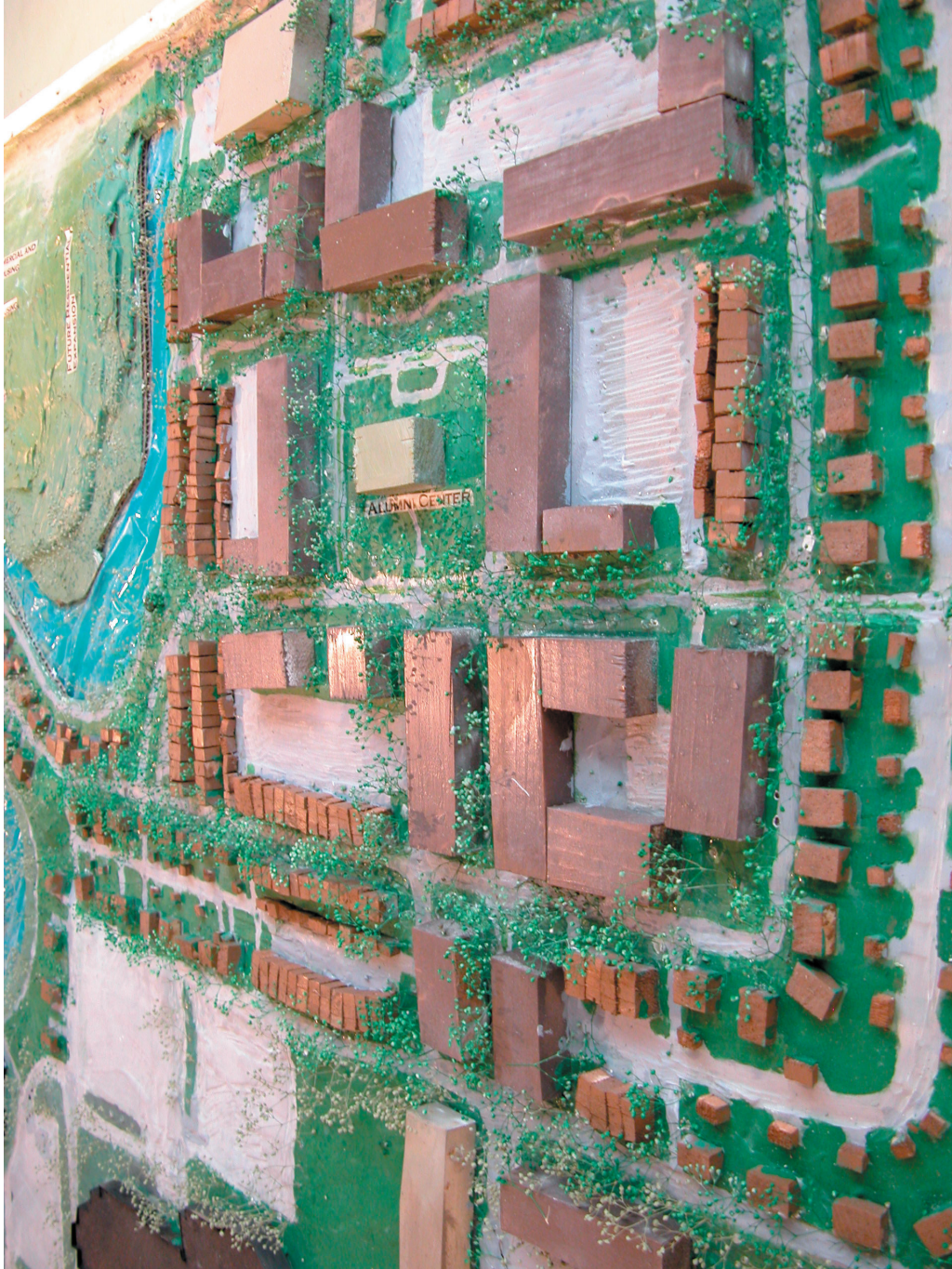


PATH SIGN DETAIL E:
SCALE 1"=5'

Board 6: Design Phase 4
and 5

UND UNIVERSITY VILLAGE DEVELOPMENT

FINDING COMMUNITY IN A DIVERSELY POPULATED AREA



Site Model

PERSONAL INFORMATION

MY NAME IS DAVID JERKE AND THIS IS MY YEAR LONG THESIS PROGRAM. I HAVE SPENT THE PAST FIVE YEARS HERE AT NORTH DAKOTA STATE UNIVERSITY STUDYING LANDSCAPE ARCHITECTURE. BEFORE ATTENDING THIS UNIVERSITY I SPENT ONE YEAR STUDYING POLITICAL SCIENCE AT THE UNIVERSITY OF SOUTH DAKOTA. DURING THE PAST 24 YEARS OF MY LIFE I HAVE LIVED IN SEVERAL AREAS IN THE MIDWEST AS WELL AS CANADA. I HAVE AMBITIONS TO BECOME A CITY PLANNER PAST GRADUATION AND HOPE TO HELP SPREAD IDEAS ABOUT HOW CITY DEVELOPMENT CAN FUNCTION MORE EFFICIENTLY. AT THE END OF THIS SEMESTER I WILL BE STARTING MY FIRST LAND PLANNING JOB FOR A FIRM IN WHEATON, ILLINOIS.

I HOPE WHAT YOU HAVE FOUND IN THIS DOCUMENT TO BE USEFUL IN YOUR EXPLORATION OF CAMPUS AND CITY PLANNING.



APPENDIX B: THESIS PROPOSAL

Thesis Proposal

a. Title

University of North Dakota Residential Community
Finding Community in a Diversely Populated Area

b. Project Type

This project is a mixed use development containing residential, commercial, and University affiliated activities including student housing. This area will become a new center of activity for the northern portion of the University of North Dakota and the community of Grand Forks.

c. Conceptual Basis or Unifying Idea

Through the study of integrating separate social classes and interaction between public and private places I will develop a unified design. This basis will be explored through the gathering of information about relationships in other cultures and societies. The research will focus on human interaction, as well as the interaction of spaces and structures. My focus will be mainly on foreign models as I feel that the current solutions for developments have become so encompassed in rules and regulations that all forms of originality have been lost. Research will not only include interaction in design, but also basic human interaction in differing regions of the world. This will drive my thesis towards a design that creates a socially healthy community that interacts on a personal level, instead of a “supply and demand” level.

d. Project Justification

The north end of Grand Forks has been stagnant for many years. Until recently, the land north of campus was considered flood land and open unused field. With the construction of the new Ralph Engelstad Arena the interest in this area has grown almost exponentially. With many businesses and developers asking for zoning requirements and leasing land, development of this area soon began. The growth of this area spread so rapidly that no development plan was ever developed. Currently, the architects are piecemealing the development together as interest arises. This type of construction will only cause a fragmented and segregated community. Through this thesis I will give this area a sense of wholeness as well as creating a more positive interaction between all users.

e. Emphasis

- Community Development Design
To have a holistic design that encompasses the needs of all its users including residential, commercial, and educational.
- Open Space Design
To design functional public spaces that all of the sites users can enjoy.
- Campus Adaptability
To prepare for future expansion of the universities campus.

Thesis Proposal

f. Site

The proposed site is in the Northeast region of North Dakota. The site lies within 5 miles of the North Dakota/Minnesota border and is located just inside Grand Forks city limits. Highway 2 borders the site to the North and a small coolie borders the site to the West. The site covers roughly one hundred acres and has been undeveloped for some time. The following section is devoted to giving you an overview of the area.

The first aspect is the economic base. Most of the Grand Forks area is dependant on agricultural in accordance with the rest of North Dakota. The site's economic base however is academic and entertainment. The Ralph Engelstad Arena draws a large group of visitors to the site almost weekly. The campus also uses the area for recreation and future expansion.

The next section to emphasize is the demographics of the site. Your average person in Grand Forks is roughly 28 years of age, Caucasian, and lives in their own household with two other people. As far as the site goes the demographics are a little different because of the campus. The average student on campus is Caucasian, about 21 years old, and lives off campus. Most of these students come from Minnesota and North Dakota. The new site will diversify this user type quite a bit.

The site's history hasn't changed much until recently. Most of the land has belonged to the University since the early 1900's. It has been know as the Bronson Property since as far back as anybody can remember. Recently, with the construction of the Ralph Engelstad Arena in 2001 the site has become a center of growth in the Grand Forks Community.

This area has only a few environmental issues some of which include an excess of run-off due to the large amount of parking lots. The Engelstad Arena also causes the area to have some litter problems due to the large amounts of guests that the site holds. Other minor environmental issues are that some of the undeveloped land still lies on a flood plain. Currently, all new town home construction has to be raised 3 feet to the contour of 831 in order for the city to allow anything to be built. The flood of 1997 has caused many in the area to be extra careful when it comes to dykes, floodplains, and water levels. Also, some of the new development is being proposed on the one hundred year floodplain, because the assumption is the floodplain will move lower when the dyke is completed.

The site area is North Grand Forks, North Dakota. It is straight east of the Highway 2 exit off of I-29. The site is bordered by the campus to the south, the English coolie to the East, cemetery to the West, and strip mall to the North. Surrounding the site are three roads: Highway 2 to the North, Columbia to the East, and 6th Ave North to the South.

This site has one major landmark that affects everything that happens on it and that is the Ralph Engelstad Arena. You could consider the campus another landmark as well, but most of what affects the site from campus comes through the arena. Another landmark that is further away is the Grand Forks Air Force Base. Some of the other existing structures include a Barnes and Noble Bookstore, the new Campus Wellness Center, and an older strip mall to the north.

Thesis Proposal

This site has relatively little topography except near the English Coolie. Almost all the runoff from this site drains into the Coolie. The rest of the site is as near to flat as you can be.

Vegetation on the site currently is very minimal. Since, development of this project is already underway most of the trees and grasses have been destroyed. This is a shame since any new development will have to rely solely on new vegetation. There is still some riparian vegetation near the Coolie such as a few American Elm trees and the insurgence of some Common Buckthorn.

The geologic history of this site is similar to much of north-eastern North Dakota as its soil is comprised of sediments left behind by Lake Agassiz about 12,000 years ago. The problem with this area is that it lies in the Red River "Valley". The Red River Valley is actually not even a valley as one would see it. The river is actually just the lowest spot in the giant lake floor of Agassiz. This causes the area to flood frequently, but also gives us are fertile soil for agriculture. The particular soil in this area is actually a deep, poorly drained soil. It consists of 10 inches of silty clay loam, followed by 60 inches of mottled silty clay loam. This soil has a moderate shrink/swell tendency and the available water capacity is high.

This leads me into my next feature of the site which is hydrology. The actual hydrology of this site is partially man-made. The English Coolie into which all the site's run-off flows is actually reinforced by dykes and ravines to flow around the city of Grand Forks and into the Red River. This diversion is due to the relatively low lying topography of some of the site.

The transportation of this site is almost strictly vehicular currently. Highway 2 and Columbia Road are the two main traffic arteries. There is also a bike and running path that parallels the English Coolie. This path was installed only a year ago and is intended for the future residents of this site as well as the students.

The size of this sight offers many differing views as you explore the area. The views to the Northeast can be unpleasant because of existing rundown businesses located on Highway 2. The views down to the English Coolie can be accented to give users a more rustic feel. Most users will want open views to the Engelstad Arena as it is the area's main focal point. Other views can be created throughout the site with organization of structures and spaces.

The Grand Forks area has a similar climate to other cities in the Red River Valley. The winter's usually run from November until mid March. The average temperature in spring is 51 F, in summer is 79 F, fall the average temperature is 49 F, and in winter the average temperature is 17 F.

g. User/Client Description

Users on this site will be very diverse in background. The residents living in this area will be the most frequent users. These residents can be from either a college background or permanent residents of Grand Forks. There will be 300-400 residents in the finished development. The residents will require privacy, security, and access to resources.

Thesis Proposal

The next user of the site will be the students of the University of North Dakota. Housing for some of the upper level students will be held in this new development and they will be on the site daily.

The site's third user will be central businesses such as a grocery store, bank, small shops, and gas stations. These businesses will employ 200 or more employees on any given day, as well as certain businesses being open at night and during events at the Ralph Engelstad Arena. These businesses require parking and easily accessible entrances.

The final user will be guests visiting events at the Ralph Engelstad Arena. The arena holds approximately 11,500 spectators. It also has 55 full-time employees and 400 part-time employees. The most important thing guests require is parking and amenities. At peak use this development could contain roughly 13,000 people. Although, most likely these users will not be in direct contact with each other at all times.

The client for this project is Dakota Commercial Development, ICON Architects, and the University of North Dakota. These three bodies are overseeing all site developments and improvements.

h. Major Project Elements

- Residential Communities
- Shopping Centers
- Bank
- Family Practice Center
- Grocery Store
- Eating Establishments
- Convenience Store
- Future Campus Expansion

i. Design Methodology

In researching case studies, I will discover how design can be incorporated into developing a community. This discovery will also lead me to explore possibilities for interaction between businesses, residential and commercial areas, and students and site inhabitants. The next step will be to find materials and organizational systems that will best appease all the users of the site.

j. Realization of the Design Method in the Design Process

To discover the design method I will research many different case studies on University Village development as well as information on cultural communities. This research will then lead me into the preliminary design phase with some ideas of how certain communities interact.

Thesis Proposal

h. Schedule

Fall Semester

Week #1 (10/4-10/10)

Thesis Proposal Due 10/7
Student Critic Preference Slips Due 10/7
Cover Page Due 10/7

Research

Week #2 (10/11-10/17)

Students and Faculty Return Preference Slips 10/14

Research

Week #3 (10/18-10/24)

Students Primary and Secondary Critics Announced 10/21

Research

Week #4 (10/25-10/31)

Last Day of Arch/LA 561 10/28

Research

Define the Program

Week #5 (11/1-11/7)

Research

Further work on the Program

Week #6 (11/8-11/14)

Veteran's Day Holiday 11/11

Work on Draft of Program

Week #7 (11/15-11/21)

Final Week of LA/Arch 571

Work on Draft of Program

Week #8 (11/22-11/28)

Draft Thesis Program due to Primary Critic 12/9

Thanksgiving Holiday

Week #9 (11/29-12/5)

Work on Final Draft Program

Start Future Site Analysis

Week #10 (12/6-12/12)

Last day of classes 12/10

Work on Final Draft Program

Week #11 (12/13-12/19)

Program grade due to AR/LA 561 course instructor 12/16

Final Examinations

Week #12 (12/20-12/26)

Christmas Break

Preliminary Design Research

Thesis Proposal

Week #13 (12/27-1/2)

Christmas Break

Preliminary Design Research

Week #14 (1/3-1/9)

Christmas Break

Conceptual and Schematic Design Work

Spring Semester

Week #15 (1/10-1/16)

Classes begin 1/11

Conceptual and Schematic Design Work

Week #16 (1/17-1/23)

Martin Luther King, Jr. Holiday 1/17

Conceptual and Schematic Design Work

Week #17 (1/14-1/30)

Conceptual and Schematic Design Work

Week #18 (1/31-2/6)

Conceptual and Schematic Design Work

Week #19 (2/7-2/13)

Conceptual and Schematic Design Work

Week #20 (2/14-2/20)

Design Development

Week #21 (2/21-2/27)

President's Day Holiday

Design Development

Week #22 (2/28-3/6)

Design Development

Week #23 (3/7-3/13)

Mid-semester Thesis Reviews

Design Development

Week #24 (3/14-3/20)

Spring Break

Week #25 (3/21-3/27)

4th year Statements of Intent due in AR/LA 472 3/23

Easter Holiday 3/25-3/28

Presentation Drawings

Week #26 (3/28-4/3)

Presentation Drawings

Week #27 (4/4-4/10)

Presentation Drawings

Week #28 (4/11-4/17)

Presentation Drawings

Week #29 (4/18-4/24)

Thesis Proposal

Presentation Drawings

Week #30 (4/25-5/1)

Thesis Projects due at 4:30pm in the Memorial Union Ballroom 4/25

Annual Thesis Exhibit in the Memorial Union Ballroom 4/26-4/27

Final Thesis Reviews

Week #31 (5/2-5/9)

Draft of Thesis document Due to Primary Critics

Last day of classes 5/6

Final Thesis Reviews

Week #32 (5/10-5/16)

Final Thesis Document due at 4:30pm in the Department office 5/12

Final examinations

Commencement at 4:00pm Fargodome 5/13

j. Documentation of the Design Process

The documentation of this process will be done through various sketch exercises and a design journal. Preliminary work will also be based on sketches and diagrams. Full documentation will be achieved partially on final boards and through the program.

I. Bibliography

Periodicals

Periodicals researched will include Landscape Architecture Magazine, Urban Planning Magazine, Urban Land Institute Technical Bulletin, and magazines that explore cultural communities such as National Geographic.

Books

1. Dober, Richard. Campus Planning. Cambridge, Massachusetts: Reinhold Publishing Company. 1963.
2. Dober, Richard. The New Campus in Britain. New York, New York: Educational Facilities Laboratories. 1965.
3. Lamont, Robert, and Ray Wilbur. Planning for Residential Districts. Washington D.C.: National Capital Press, 1932.
4. Wienstock, Ruth. An Urban University Expands. New York, New York: Educational Facilities Laboratories. 1958

Other books researched will include urban planning books, community relationship books, informational books on educational design, and human interaction.

Thesis Proposal

Internet

1. Creating Livable Sustainable Communities.(n.d.) Retrieved October 5, 2004, from <http://www.newurbanism.org>
2. Congress for New Urbanism. (n.d.) Retrieved October 5, 2004, from <http://www.cnu.org>
3. Grand Forks Property Development. (n.d.) Retrieved August 29, 2004. from <http://www.grandforks.com/mld/grandforks/9762908.htm>

Other internet sources researched will include studies on diverse cultural communities and urban planning. Some websites will also work with campus development.

I. Previous Design Studio Work

	Fall	Spring
2 nd Year	<u>Tim Kennedy</u> -Six Pack Design -Precedents Study -Design Scenarios -Plains Art Museum Café -Ideal Landscape	<u>Dennis Colliton</u> -Camp Wilderness Amphitheatre -Devil's Lake Open Space and Park Development -NDSU Fountain Plaza
3 rd Year	<u>Josh Walter</u> -Car Park Ideal Design -Sheyenne National Grasslands Campground	<u>Tim Kennedy</u> -Pool Area Perspective -Camp Cormorant Graphics -Upper Landing Housing Development -Masonry Competition
4 th Year	<u>Josh Walter, Mark Barnhouse, Cindy Urness</u> - Fargo Downtown Revitalization	<u>Angela Hansen</u> -Broadway Square -Edgeley Design Charette -Fort Totten Historic Preservation -Stone Competition

APPENDIX C: STATEMENT OF INTENT

University of North Dakota Residential Community
Finding Community in a Diversely Populated Area
Grand Forks, North Dakota
Author: David Jerke

The University of North Dakota has expanded continuously since its establishment in 1883. The campus expanded in all directions to meet the needs of an ever-growing student body. The latest development on this campus is intended to expand the campus into the residential and commercial community. The current design is set to expand the campus beyond the education level and become a contributing part of the community. My design thesis will focus on this development and ways to create a cohesive overall plan.

Of great concern with this development is the interaction of upper income families and college students. Although students don't use the site considered for this design frequently they are constantly in the surrounding area. The interaction between students and residents of this community is the main focus of this design. I will study this interaction and discover a way to design for both users to successfully use the site. The intent is to have both users successfully interact through the site without creating tension between the two groups.

Another important aspect of my thesis is the incorporation of residential and commercial buildings into the campus setting. I hope to do this through the replication of campus pathways and open spaces while still giving the residents a sense of community.

Still another important aspect of this project is the creation of a sense of individuality in a typology that often relies on repetition. New communities are known for their repetition of similar lot spaces and building styles. By designing a community with multiple lot sizes, forms, and elevations, the entire site will become more cohesive.

Through the study of integrating separate social classes in public and private spaces I hope to cover all these aspects and create one final community.

**APPENDIX D:
BRONSON PROPERTY
ARTICLE**

Posted on Sun, Sep. 26, 2004

BRONSON PROPERTY DEVELOPMENT: Boom Town University Village is going up fast

By Ryan Bakken
Herald Staff Writer

In 1997, the Bronson Property was mostly grass.

The 160 acres were home to a small mobile home park, garden plots, intramural fields, tennis courts, an abandoned 12-foot-wide observatory that was used for storage and lots and lots of lawn.

And now?

"It's the most expensive quarter of land north of the Twin Cities," says Rick Tonder, UND's associate facilities director.

The big reason it's so expensive, of course, is the \$104 million Ralph Engelstad Arena, the centerpiece of the property. "It's the 500-pound gorilla," Tonder says.

The arena also is the engine that is driving the other construction on the property, now called University Village. Although the image of a village is of quiet and cozy simplicity, that isn't so in this case. In 2004, this village is a boomtown.

Completed this year were the Betty Engelstad Sioux Center (\$7 million) and a mini-mall (\$1.2 million).

Under construction are the 104,000 square-foot UND Wellness Center (\$22 million), 13 townhomes (\$7 million), the University Station gas station/convenience store (\$2.2 million), an unnamed restaurant (\$2 million) and a Community Bank of the Red River Valley branch (\$1 million).

They join the arena, the Barnes & Noble Bookstore (\$4 million) and the UND Family Practice Center (\$4 million) on the property.

The skyline is filled with structures in varying degrees of completion. Piles of wood, steel, cement blocks, clay and other building materials litter the landscape, ready to further enrich this now-expensive piece of real estate.

"And we haven't even used half of the property yet," Tonder said.

High-quality

The unnamed restaurant, located across the street from the arena's plaza, pays the highest rent. But Andrew Olson of Grand Forks, a major partner, said it's worth it.

"Being just outside the arena, it's a great location with all the major events going on there," Olson said. "It's also close to the university and there is nothing else like it out on the north end of town."

"Our restaurant fits in with the REA because of its feel."

Olson, whose main partner is Randy Brown of Grand Forks, said the restaurant will be upscale, but with a casual feel along the lines of the franchised Fox Sports Grill and ESPN Zone, which also play off sports themes. It will have plasma television sets and a patio. Kim Holmes, owner of the Sanders 1997 restaurant downtown, is developing the menu.

Mike Kuntz, who was construction manager for Ralph Engelstad Arena, designed the restaurant because "we want to maintain consistency as far as appearance. And we're trying to keep everything local," Olson said.

Developers don't have a choice when it comes to building in a manner that complements the arena. The lease agreements demand a similar look and the use of comparable high-end materials. They'll all have some red brick and multiple roof lines.

"We want all the children to look like the parent," Tonder said.

Larry LePier, the operating partner in University Station, said those requirements mean an additional \$200,000 in building costs compared to other convenience stores of 6,000 square feet. A resident of Fosston, Minn., he owns three convenience stores in northwestern Minnesota.

In addition to the usual fare, University Station will have a touchless car wash and a deli where discounts will be offered for customers ordering food online.

"People in Fosston order their pizzas and subs quite often online," LePier said. "So I imagine that with 12,500 students behind us, all with laptops and knowing how to use the Web, that we'll capture quite the audience with this option."

The restaurant and University Station plan to be ready in time for the crowds coming to the World Juniors hockey tournament that begins Dec. 25.

"Our traffic will be campus, REA events and some people off U.S. Highway 2," LePier said. "There's no question it's going to work."

Already operating in the 10,000 square foot mini-mall are Curves, a health club for women, and Club Tan, a tanning salon. Opening soon are SuperCuts, a hair salon, and Jimmy John's, a submarine sandwich shop. The Community Bank branch located next door should be open in October.

"When it's all done, you can get fit, get a tan, get your hair cut and get a low-carb sub on the same trip," said Nanette Hons, Club Tan manager.

Reconnections

The mall also includes the office of Dakota Commercial and Development Co., the developer of University Village. Dakota owner Kevin Ritterman works with UND and its prospective renters. His company also has varying degrees of ownership in the mini-mall, townhomes, restaurant and convenience store.

Thirteen townhome duplexes - or 26 units - are under construction along the coulee. Four more duplexes will be built next year, with the option to build others on the west side of the coulee if there's demand.

Fifteen units - which start at \$182,900 - have been sold, Ritterman said. They'll be ready in December.

The University Village townhomes were designed to appeal to alumni or former UND employees who want to be near the university atmosphere. It will be a gated community, largely to prevent its streets from being clogged with cars during REA events.

"Our average age of buyer is about 50, with most downsizing from a house or adding a second home," Ritterman said. "Some are coming because of the proximity to the Ralph or UND, and the majority are alumni."

"Anyone can buy here. But it's not like you can turn it into a rental for college students."

The housing and service businesses will feed off each other, Ritterman said.

"And when the Wellness Center is going, it will generate another 1,000 people a day out there," Tonder said.

Room for more

Ritterman said he likely will build another \$1.2 million mini-mall next year. "Like the first one, it will have service-oriented businesses, not retail," he said. "The retail center remains on the south end."

An area between Barnes & Noble and Columbia Road - currently used as a soccer field - is being reserved for future expansion of the School of Medicine.

But the most dynamic likely use of the land is student housing. It wouldn't be a conventional dormitory, but rather more of an apartment complex. On other campuses, a popular setup has a shared common area of living room and kitchen, with each roommate having a separate bedroom, bathroom and work station.

"Students are more mature now and looking for more amenities," Tonder said.

Details still are in the planning stage, including whether it would be privately owned or UND-owned. Because it needs legislative approval, the earliest it could be ready would be the fall of 2006.

"When prospective students visit, the likes of the Wellness Center and REA will attract them," Tonder said. "This student housing would be another attraction. Then, if and when it happens, what else would fit in to make life more pleasurable? A movie theater? A university cafeteria?"

Expectations met

Currently, the properties in place will pay \$80,000 in annual rent. But with more development and with escalating rents, UND President Charles Kupchella said the property eventually will bring \$1 million annually to the school.

"That's money for university needs that we won't have to go elsewhere for," Kupchella said.

The idea is to develop a version of the University of Minnesota's Dinkytown, a group of small shops and entertainment options on the edge of campus. "We decided to build a first-class one of those," Kupchella said.

He said University Village so far is exactly what he had in mind.

"There are lots of threads that connect with the other threads," he said. "It's designed to bring services to students, faculty and staff. It's becoming a highly integrated complex that enlivens and gives zip to the whole environment of teaching and learning."

Kupchella has an answer to those who might think UND land shouldn't be used for private, commercial development.

"It's probably lost on most people that we already have quite a commercialization complex at UND," he said. "Not only do we have research and tech parks, but we have government installations and research and spin-off companies located on many acres, from the EERC on the east to Meridian

Environmental on the west."

Bakken reports on local news and writes a column. Reach him at 780-1125, (800) 477-6572 extension 125 or rbakken@gfherald.com.