

A NEW TOWN IN THE  
POWDER RIVER BASIN  
OF WYOMING  
BY  
KIM ALAN RACKLEY

P378  
.R1155



LIBRARY  
MONTANA STATE UNIVERSITY  
BOZEMAN



A NEW TOWN IN THE POWDER RIVER BASIN OF WYOMING

UNDERGRADUATE THESIS IN ARCHITECTURAL DESIGN

by

KIM RACKLEY

Submitted to the School of Architecture as  
partial fulfillment of the requirements  
for the degree of Bachelor of Architecture

at

MONTANA STATE UNIVERSITY

Bozeman, Montana

June, 1977

TABLE OF CONTENTS



P378  
R1155

~~NADETO~~  
7/10.6  
M76  
R15

## TABLE OF CONTENTS

|    |                         |
|----|-------------------------|
| 1  | INTRODUCTION            |
| 2  | THESIS STATEMENT        |
| 7  | DEFINITIONS             |
| 10 | AESTHETICS              |
| 19 | ARCHITECTURE AS MEANING |
| 22 | DESIGN PROCESS          |
| 29 | PROJECT BACKGROUND      |
| 34 | THE NEW TOWN            |
| 40 | DESIGN SOLUTION         |
| 57 | BIBLIOGRAPHY            |



# INTRODUCTION

WHAT DO WE WISH ARCHITECTURE TO BE, WHAT IS ITS ULTIMATE END? CAN IT BE OTHER THAN TO SERVE MANKIND, TO BETTER THE LIVES OF MEN?

OUR CENTURY IS AWASH IN A SEA OF CONFUSION. WE HAVE BEEN UPROOTED BY CHANGE, CALL IT PROGRESS. WE HAVE LOST SOMETHING, A HERITAGE, TRADITION, CULTURE, PERSPECTIVE.

I STRONGLY BELIEVE THAT IN ORDER TO KNOW WHERE WE ARE GOING IT IS NECESSARY TO KNOW WHERE WE HAVE BEEN. HISTORY HOLDS MANY LESSONS FOR US, IT CAN PROVIDE DIRECTION. TWO THINGS I HAVE FOUND TO BE HISTORICALLY TRUE IS THAT ARCHITECTURE CREATES A BEAUTY THAT DIGNIFIES AND ENRICHES MAN, AND THAT IT ALSO IS SYMBOLIC OF MAN'S RELATION TO HIS UNIVERSE. WE HAVE LOST MUCH OF THIS TODAY.

CALL MY THESIS AN HYPOTHESIS, IT IS A CERTAIN UNDERSTANDING AT A CERTAIN POINT IN TIME. IT IS CONDITIONAL, IT IS NOT ABSOLUTE. IT WILL PROBABLY CHANGE WITH TIME AND UNDERSTANDING. IT IS AN ATTEMPT TO CLARIFY GOALS, AND A MEANS TO THOSE GOALS. IT IS AN ATTEMPT TO ESTABLISH SOME PRINCIPLES AND UNDERSTANDINGS THAT CAN NOT ONLY GUIDE A LIFETIME OF WORK, BUT ALSO GIVE IT A CAUSE. CAUSE IS IMPORTANT, IT NOT ONLY GIVES ONE SOMETHING TO WORK TOWARD, BUT IT ALSO PUSHES YOU ONWARD. IT GIVES YOU AN IMPETUS FOR LIVING.

I CHOSE A SMALL CITY FOR MY PROJECT BECAUSE CITIES EXEMPLIFY NOT ONLY A GOOD NUMBER OF THE WOES WHICH BESET ARCHITECTURE, BUT THEY ARE SYMPTOMATIC OF OUR SOCIETY - THEY COULD BE CALLED THE GREATEST EXPRESSION OF OUR SOCIETY, OR OF THE SICKNESS OF OUR SOCIETY. IT SEEMS TO ME THAT THE HUMANIZATION OF THE CITY SHOULD BE THE FIRST STEP IN BRINGING ABOUT A BETTER LIVING ENVIRONMENT FOR THE MULTITUDES. THIS WOULD LEAD TO AN ALL-AROUND BETTERING OF OUR BUILT ENVIRONMENT, AND WOULD BEGIN TO STRESS THE DIGNITY AND IMPORTANCE OF PEOPLE.

THERE IS LITTLE DOUBT THAT THERE WILL BE SWEEPING CHANGES IN STORE FOR OUR SOCIETY AND NATION IN FUTURE YEARS, AS WELL AS FOR OUR CITIES. WE, AS ARCHITECTS, CAN EITHER TAKE THE INITIATIVE WHILE OUR SOCIETY STILL HAS THE OPPORTUNITY TO GUIDE ITS DESTINY, OR WAIT UNTIL CATASTROPHE FORCES CHANGE UPON US. WHY NOT TAKE THE INITIATIVE?



# THESIS STATEMENT

AMONG THE MOST PRESSING NEEDS  
FACING ARCHITECTS TODAY ARE TO  
CREATE BEAUTY IN OUR WORK,  
TO INSTILL MEANING IN OUR WORK,  
AND TO DO SO IN A MANNER THAT  
IS SYMBIOTIC WITH NATURE.  
THIS CAN BE DONE THROUGH THE  
CREATION OF THE "GENIUS LOCI" -  
THE SPIRIT OF THE PLACE.



## THESIS EXPLANATION

DURING THE YEARS I HAVE STUDIED ARCHITECTURE I HAVE ARRIVED AT TWO GENERAL CONCLUSIONS CONCERNING THOSE BUILT CONSTRUCTS THAT HAVE HISTORICALLY BEEN CALLED ARCHITECTURE: FIRST, THAT THE ARCHITECTURE OF A GIVEN ERA IS USUALLY A SYMBOLIC REPRESENTATION OF MAN'S RELATION TO THE UNIVERSE AS IT WAS CONCEIVED IN THAT TIME PERIOD; AND SECOND, THAT ARCHITECTURE FINDS ITS CONCEPTION IN AN UNDERLYING PRINCIPLE I SHALL CALL BEAUTY.

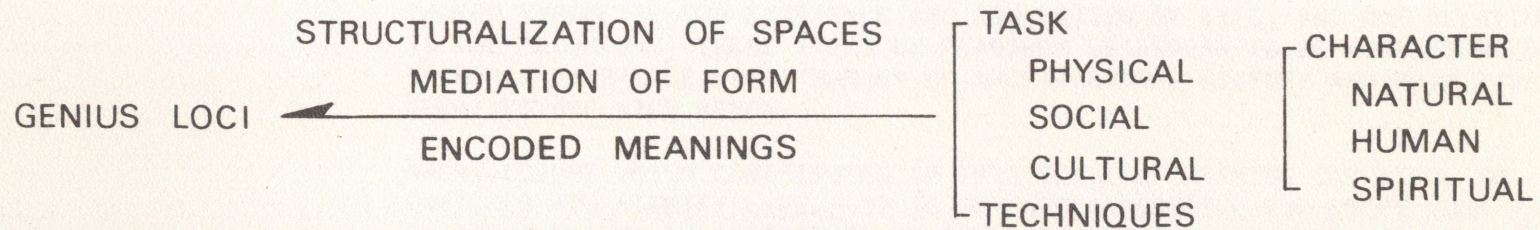
IT IS MY CONTENTION THAT WE, AS ARCHITECTS, SHOULD STRIVE TO CREATE BEAUTY IN OUR WORKS, TO INSTILL THESE WORKS WITH MEANINGS APPROPRIATE FOR OUR TIME, AND THAT WE SHOULD ACCOMPLISH THESE GOALS IN AN ENVIRONMENTALLY SOUND FASHION. I WOULD FURTHER OFFER, AS A MEANS OF ACHIEVING THESE GOALS, A DESIGN PROCESS WHICH STRIVES FOR THE CREATION OF THE "GENIUS LOCI", OR THE SPIRIT OF THE PLACE.

THE CONCEPT OF GENIUS LOCI INCLUDES THE INDIVIDUAL CHARACTERIZATION OF THE BUILDING AND PLACE; THE INTEGRATION OF REGIONAL CHARACTER, INCLUDING THE GEOGRAPHIC, CLIMATIC, HISTORICAL, SOCIAL, AND CULTURAL FACTORS OF THE REGION, WITH THEIR IMPLICATIONS OF MEANINGS; AND LASTLY THE DESIRE FOR THE CREATION OF TOTAL CHARACTER, WHICH HAS IMPLICATIONS OF BEAUTY.

THE PARTICULAR CHARACTERIZATION OF BUILDING-PLACE IS MADE CONCRETE THROUGH THE STRUCTURALIZATION OF SPACES ASSOCIATED WITH THE CHARACTER AND ITS INHERENT MEANINGS. THIS STRUCTURALIZATION OF SPACE COULD ALSO BE CALLED THE MEDIATION OF FORM, WHICH COMPRIZES BOTH THE BUILDING TASK AND TECHNIQUES, AND WHICH EMBODIES THE MEANINGS CONTRIBUTING TO THE CHARACTER; THESE TAKEN TOGETHER CREATE THE TOTAL CHARACTER, WHICH IS THE GOAL OF THE BUILT CONSTRUCT - IT IS A PHYSICAL SYMBOLIZATION OF THE MEANINGS WHICH DEFINE THE CHARACTER.



## CREATING SPIRIT OF THE PLACE





## THE NEED FOR BEAUTY

BEAUTY, BY DEFINITION, IS THAT WHICH ATTRACTS AND CHARMS US, OR THAT WHICH PLEASES US IN ITS APPERCEPTION; IT EVOKES A POSITIVE, APPRETIATIVE EMOTIONAL RESPONSE. THE APPREHENSION OF BEAUTY IS AN ENRICHING EXPERIENCE WHICH ARCHITECTURE SHOULD ATTEMPT TO PROVIDE.

## THE NEED FOR MEANING

A WORK OF ARCHITECTURE DOES CONVEY MEANING, AND IT IS THROUGH THESE MEANINGS THAT WE ARE ABLE TO KNOW HOW TO USE THE ARCHITECTURE. BEYOND PURELY FUNCTIONAL MEANINGS COMMUNICATED BY ARCHITECTURE MAY BE OTHER, MORE SYMBOLIC, MEANINGS WHICH COMMUNICATE CERTAIN SOCIAL OR CULTURAL VALUES. THESE MEANINGS RELATE TO OUR LIVES AND EXISTENCE, AND CAN INDEED SYMBOLIZE OUR EXISTENCE AND CONCEPTION OF LIFE, AND OUR RELATION TO THE "COSMOS". THESE TYPES OF MEANINGS DO APPEAR TO BE A BASIC NEED OF HUMAN EXISTENCE, AS A SURVEY OF ARCHITECTURAL HISTORY AND PRIMITIVE ARCHITECTURE WILL REVEAL.

ARCHITECTURE WHICH CONTRIBUTES TO THIS SENSE OF MEANING CAN SERVE TO ENRICHEN AND DIGNIFY LIFE. IT IS PERHAPS IMPOSSIBLE FOR EVERY WORK OF ARCHITECTURE TO CONTRIBUTE TO THESE EXISTENTIAL MEANINGS, BUT SUCH MEANINGS CERTAINLY MAY BE EVIDENCED IN THE OVERALL BUILT FABRIC OF OUR CIVILIZATION. THESE LARGE SCALE EXISTENTIAL MEANINGS WHICH CAN OCCUR AT THE URBAN LEVEL TRANSCEND CERTAIN LOWER LEVEL SYMBOLIZATIONS WHICH SERVE SOLEY AS INSTRUMENTS OF MASS COMMUNICATION AND MASS CULTURE.

## BEAUTY IMPLIES TOTALITY

IF WE AGREE THAT BEAUTY IS AKIN TO IDEA OR ESSENCE, THEN IT IS MADE APPREHENSIBLE TO US ONLY WHEN WE ARE ABLE TO PERCEIVE THE BEAUTIFUL OBJECT IN ITS TOTALITY. THIS IS BECAUSE IDEA OR ESSENCE DO NOT EXIST AS LESS THAN TOTALITIES. THIS DOES NOT MEAN THAT THE ESSENCE MUST BE MADE APPARENT IN ITS TOTALITY IMMEDIATELY, FOR IT THROUGH THE GRADUAL UNVEILING THAT WE COME TO EXPERIENCE ARCHITECTURE, AND THROUGH WHICH THE TOTAL EXPERIENCE IS HEIGHTENED.



## GENIUS LOCI IMPLIES TOTALITY

THE GENIUS LOCI, THE SPIRIT OF THE PLACE, IS REVEALED THROUGH MEANINGS WHICH EXIST AT THE GIVEN PLACE. ITS OBJECTIVE IS UNIQUENESS, A PARTICULAR CHARACTERIZATION OF THE PLACE, ITS PEOPLE, CUSTOMS, HISTORY, ETC. AS THE DISTINCTION BECOMES GREATER, A TOTALITY OF CHARACTER IS APPROACHED WHICH UNIQUELY DEFINES THE PLACE. IT IS TRUELY A "WORLD WITHIN A WORLD."

## GENIUS LOCI AS A DESIGN THEORY

MODERN DESIGN THEORY TENDS TO BE PROCEEDING IN SEVERAL DIRECTIONS IN TERMS OF PHILOSOPHY. SOME DESIGNERS ARE CONCERNED WITH CONCEPTS OF FORM AND GROWTH, OTHERS WITH THE BOUNDARY LAYER OF THE BUILDING, OTHERS WITH THE PLACE. OF THESE DIRECTIONS, I BELIEVE THAT THE PHILOSOPHY DEALING WITH THE SPIRIT OF THE PLACE OFFERS THE DESIGNER MORE FLEXIBILITY AND OPPORTUNITY THAN THE OTHER THEORIES, BECAUSE IT IS BETTER ABLE TO INCORPORATE MEANINGS AND TO SAY SOMETHING ABOUT PEOPLE, THEIR CULTURE AND SOCIETY, AND ABOUT THE SITE. IT ATTEMPTS TO ACHIEVE A COMPLETE CHARACTERIZATION OF THE PLACE AND A TOTALITY OF EXPERIENCE.

GENIUS LOCI TENDS TO BE AN OUTGROWTH OF REGIONALISM, WHICH IS NOW VIRTUALLY EXTINCT. PLACES REMAIN REGIONAL ONLY IN A GEOGRAPHIC SENSE, BUILDING MATERIALS ARE NO LONGER REGIONAL AS ARE PEOPLE, WHICH RESULTS IN A LOSS OF REGIONAL TRADITION, CULTURE, AND VALUES. GENIUS LOCI AVOIDS THE PITFALLS OF A TOTALLY EXCLUSIVIST APPROACH TO DESIGN WHICH OFTEN TENDS TOWARD GEOMETRIZATION AND A LOSS OF ALL BUT A FEW MEANINGS. AT THE OTHER EXTREME, AN INCLUSIVIST APPROACH TO DESIGN TRIES TO CREATE AN AGGREGATION OF PARTS WITH AN ATTEMPTED ARTICULATION THAT IS OFTEN UNSUCCESSFUL IN CREATING THE WHOLE BECAUSE IT LACKS COMPREHENSIBILITY. THE GENIUS LOCI ALSO PLACES GREAT IMPORTANCE UPON SPACE, WHICH IS THE THING THAT EMBODIES ARCHITECTURE, AND WHICH BRINGS IT INTO EXISTENCE.



# DEFINITIONS

## AESTHETICS

A BRANCH OF PHILOSOPHY DEALING WITH THE NATURE OF THE BEAUTIFUL AND WITH JUDGMENTS CONCERNING BEAUTY

## CHARACTER

"A SYMBOL AND MENTAL ABBREVIATION FOR A PECULIAR SET OF ACTS. ACTS ARE THE DATA; CHARACTER THE INFERRED PRINCIPLE. IDEAL CHARACTER IS THE ELIMINATION OF INDIVIDUAL ECCENTRICITIES."

-SANTAYANA

"CHARACTER INDICATES AN UNMISTAKABLE TOTALITY."

-NORBERG-SCHULZ

ONE OF THE ATTRIBUTES OR FEATURES THAT MAKE UP AND DISTINGUISH THE INDIVIDUAL.

A FEATURE USED TO SEPARATE DISTINGUISHABLE THINGS INTO CATEGORIES.

TRAITS MAKING A THING PECULIAR OR DISTINCTIVE.

A SPECIAL QUALITY, IDENTITY, RARITY, OR UNIQUENESS.



## FORM

"THE PRINCIPLE DETERMINING THE PECULIAR PERFECTION OF EVERYTHING WHICH IS THEIR SPIRITUAL ESSENCE."

-ST. THOMAS AQUINAS

"FORM IS AN AGGREGATION - IT MUST HAVE ELEMENTS AND THE MANNER OF THE COMBINATION OF THE ELEMENTS CONSTITUTES THE CHARACTER OF THE FORM. VARIETIES OF FORMS DEPEND UPON THE CHARACTER OF THE ELEMENTS AND THEIR METHOD OF UNIFICATION."

-SANTAYANA

"FORM IS THE EXPRESSION OF SPIRITUAL CONTENT."

-GIESELMANN

"FORM ENCOMPASSES A HARMONY OF SYSTEMS, A SENSE OF ORDER, AND THAT WHICH CHARACTERIZES ONE EXISTENCE FROM ANOTHER.

FORM IS CONCEIVED ORDER; IT IS THE RESULT OF THE ABILITY TO ENVISAGE FUNDAMENTAL CONFIGURATION AND ORDER."

-KAHN

THE ESSENTIAL NATURE OF A THING AS DISTINGUISHED FROM ITS MATTER.

FORM USUALLY SUGGESTS REFERENCE TO BOTH INTERNAL STRUCTURE AND EXTERNAL OUTLINE AND OFTEN THE PRINCIPLE THAT GIVES UNITY TO THE WHOLE.

TO FORM: TO BRING INTO EXISTENCE.



## STRUCTURE

THE INTERRELATION OF PARTS AS DOMINATED BY THE GENERAL CHARACTER OF THE WHOLE: ORGANIZATION.

TO STRUCTURE: THE MAKING UP OF INTERDEPENDENT PARTS INTO A DEFINITE PATTERN OF ORGANIZATION.

STRUCTURAL SIMILARITY: THE BRINGING OF FORMS TO CORRESPOND TO THE STRUCTURE OF THE TASK.

## STYLE

"A SYSTEM OF FORMS WITH A QUALITY AND A MEANINGFUL EXPRESSION THROUGH WHICH THE PERSONALITY OF THE ARTIST AND THE BROAD OUTLOOK OF THE GROUP ARE VISIBLE."

-SHAPIRO

"A CHARACTERISTIC FORMAL ORGANIZATION."

-NORBERG-SCHULZ

"STYLING - THE SUPERIMPOSITION OF NEW SECONDARY FUNCTIONS ON UNCHANGING PRIMARY FUNCTIONS - NEW RHETORICAL FORMS REITERATING CONVENTIONAL MESSAGES."

-ECO

A MANNER OF EXPRESSION CHARACTERISTIC OF AN INDIVIDUAL, PERIOD, SCHOOL, OR NATION.

A DISTINCTIVE OR CHARACTERISTIC MANNER.

TO DESIGN AND MAKE IN ACCORDANCE WITH A PREVAILING MODE.



# AESTHETICS

THE STUDY OF THE AESTHETICS OF MOST ERAS CAN GENERALLY BE DIVIDED INTO THREE DISTINCT, YET CLOSELY RELATED, FIELDS OF INQUIRY. THESE AREAS OF PHILOSOPHIC AND ARTISTIC INQUIRY CAN BE DESCRIBED IN TERMS OF THAT WHICH BEAUTY IS; HOW BEAUTY IS MADE APPREHENSIBLE OR STRUCTURED; AND THE END OR PURPOSE OF THE BEAUTIFUL OBJECT, WHICH GIVES RISE TO VARIOUS THEORIES OF ART AND ARCHITECTURE.

## BEAUTY

|        |         |          |            |
|--------|---------|----------|------------|
| IDEA   | ESSENCE | ORDER    | FORM       |
| SPIRIT | TRUTH   | GOODNESS | PERFECTION |

## APPREHENSION

HARMONY, PROPORTION, SYMMETRY  
NUMBER, MEASURE, ARRANGEMENT  
INTEGRITY, CLARITY OR SPLENDOR  
UTILITY, USEFULNESS, PURPOSIVENESS  
ORGANIC UNITY, FITNESS, FUNCTION  
DIRECTION OF THE MIND TOWARD A HIGHER MORALITY,  
REALITY, OR DIVINE PURPOSE

## PURPOSE

### PRAGMATIC THEORIES

ART AS MANUFACTURE  
ART AS AN INSTRUMENT OF:  
EDUCATION  
RELIGIOUS OR MORAL INSTRUCTION  
EXPRESSION AND COMMUNICATION  
VICARIOUS EXPANSION OF EXPERIENCE

### NATURALISTIC THEORIES

THE OBJECT AS AN IMITATION OR REPRESENTATION OF NATURE  
REALISM  
IDEALISM  
FICTION

### FORMAL THEORIES

ART AS AUTONOMOUS CREATION  
ART AS ORGANIC UNITY



# THE AESTHETIC JUDGMENT

"BEAUTY CAN BE DISCOVERED, BUT NOT DEFINED; IT IS A FORM WHICH PRODUCES PLEASURE."

-HUME

"...THE ONLY GROUND OF AESTHETIC JUDGMENT IS THE IMMEDIATE PLEASURE TAKEN IN AWARENESS OF THE OBJECT."

"JUDGMENTS OF BEAUTY ARE DIFFERENTIATED BY THEIR CHARACTER OF DISINTERESTEDNESS FROM JUDGMENTS RESTING ON SENSORY PLEASURE, UTILITY, OR GOODNESS. TASTE IS THE FACULTY FOR JUDGING AN OBJECT OR MODE OF REPRESENTATION BY SATISFACTION OR DISSATISFACTION APART FROM INTEREST. THE OBJECT OF SUCH SATISFACTION IS CALLED BEAUTIFUL."

-KANT

"BEAUTY IS A PLEASURE REGARDED AS THE QUALITY OF A THING. IT IS A POSITIVE INTRINSIC VALUE."

"EMOTIONAL CONSCIOUSNESS IS NEEDED. OBSERVATION WILL NOT DO, APPRECIATION IS REQUIRED."

-SANTAYANA

"BEAUTY IS THAT WHICH ATTRACTS AND CHARMS US."

-RAYMOND

IN GENERAL, AN OBJECT MAY BE CALLED BEAUTIFUL IF IT IS PLEASING TO THE BEHOLDER, IF IT ATTRACTS AND CHARMS US, IF IT EVOKES APPRECIATION, AND IF IT EVOKES A POSITIVE FEELING OR EMOTIONAL RESPONSE. THE APPREHENSION OF BEAUTY DEPENDS UPON THE OBJECT, THE OBSERVER, AND THE CONTEXT. THE AESTHETIC JUDGMENT AS TO WHETHER OR NOT AN OBJECT IS BEAUTIFUL IS NOT A UNIVERSAL, RATHER EACH OBSERVER MUST MAKE THE JUDGMENT FOR HIMSELF.



# ABSTRACT OF AESTHETICS

## CLASSICAL

MUCH OF THE CLASSICAL THOUGHT ON BEAUTY STEMMED FROM THE PHILOSOPHY OF PLATO, WHO SOUGHT TO ESTABLISH A REALM OF ABSOLUTES THROUGH THE FUNDAMENTAL METAPHYSICS OF ETERNAL IDEAS OR FORMS, EACH ANSWERING TO SOME CHANGELESS ABSTRACT CONCEPT OR UNIVERSAL. PLATO BELIEVED IN A CONNECTION BETWEEN BEAUTY, VIRTUE, GEOMETRY, AND THE COSMOS, WHICH TO THE GREEK WAS ORDER AND HARMONY. PLATO DISTINGUISHED BETWEEN ABSOLUTE AND RELATIVE BEAUTY, THE FORMER BEING THE DIVINE BEAUTY OR THE IDEA OF BEAUTY, AND THE LATTER THE BEAUTY OF PARTICULAR OBJECTS, WHICH WAS AN INFERIOR ORDER OF BEAUTY. TRUE BEAUTY COULD ONLY BE SEEN WITH THE EYE OF THE MIND.

"THE FORM OF GOOD, IS THE SOURCE AT ONCE OF THE REALITY OF ALL THINGS AND OF THE LIGHT BY WHICH THEY ARE APPREHENDED, AS WELL AS OF THEIR VALUES. GOOD IS THE SUPREME BEAUTY."

-PLATO

"BEAUTY IS FORM, THE ORDER IMPOSED BY REASON."

-PLOTINUS

ART AND ARCHITECTURE WERE SEEN AS IMITATIONS OF NATURE, WHICH IN TURN WAS AN IMITATION OR REFLECTION OF THE DIVINE IDEA. THESE IMITATIVE THEORIES OF ART AND ARCHITECTURE WERE FOUNDED PRIMARILY IN THE PHILOSOPHIES OF PLATO AND ARISTOTLE, IN WHICH NATURE BECAME THE SOURCE OF THE ARTISTIC INSPIRATION.

"ALL FORMS OF ART HAVE A COMMON DENOMINATOR IN NATURE...ART IMITATES NATURE, AND HAS CERTAIN ENDS.

THE ARTIST SHOULD IMITATE THINGS NOT AS THEY ARE, BUT AS THEY OUGHT TO BE. HE SHOULD GIVE US TRUTH, BUT A SELECTED TRUTH, RAISED ABOVE ALL THAT IS LOCAL AND ACCIDENTAL, PURGED OF ALL THAT IS ABNORMAL AND ECCENTRIC, SO AS TO BE IN THE HIGHEST SENSE REPRESENTATIVE. HE SHOULD IMPROVE UPON NATURE, WHICH MEANS DRAW FROM NATURE HERSELF.

ART IS THE ASSISTANCE NATURE NEEDS IN CARRYING OUT HER DESIGNS. NATURE IS CREATIVE, PURPOSEFUL ACTIVITY. ART COMPLETES WHAT NATURE CANNOT BRING TO A FINISH."

-ARISTOTLE



GREEK THEORY ASSESSED ARTISTIC ACTIVITIES IN TERMS OF THEIR CONTRIBUTION TO SOCIETY AND THE REALIZATION OF A WIDER IDEAL OF SOCIAL VALUES. EMPHASIS WAS PLACED ON THE USEFULNESS OF AN OBJECT - ITS FITNESS FOR ITS PURPOSE.

"BEAUTY IS EFFECTIVENESS FOR SOME GOOD PURPOSE."

-PLATO

"BEAUTY ARISETH FROM THE APPEARANCE OF USE, OR THE IMITATION OF NATURAL THINGS, WHOSE BEAUTY IS ORIGINALLY FOUNDED IN THE SAME THING"

-EUPHRANOR

PLATO, ARISTOTLE, AND OTHER CLASSICAL PHILOSOPHERS BELIEVED IN THE ORGANIC UNITY OF THE ARTISTIC COMPOSITION. THIS UNITY DERIVED FROM THE PRINCIPLES OF ORDER, HARMONY, EFFICIENCY, VARIATION, AND JUSTICE WHICH WERE THOUGHT TO BIND THE UNIVERSE INTO A FUNCTIONING INTITY.

"ARTISTIC WHOLENESS IS A UNITY WHICH IS UNFOLDED AND EXPANDED ACCORDING TO THE LAW OF ITS OWN NATURE - AN ORGANISM THAT DEVELOPS FROM WITHIN."

-ARISTOTLE

THIS DESIRE FOR ORGANIC UNITY WAS MANIFESTED IN VARIOUS THEORIES OF PROPORTION, USUALLY FOUNDED UPON THE HUMAN BODY. THE CANON OF POLYCLITUS STATED THAT BEAUTY CONSISTED NOT IN THE ELEMENTS, BUT IN THE HARMONIOUS PROPORTION OF THE PARTS...THE PROPORTION OF ONE FINGER TO THE OTHER, OF THE FINGERS TO THE REST OF THE HAND...OF ALL THE PARTS TO ALL OTHERS. VITRUVIUS WROTE

"ARCHITECTURE DEPENDS UPON:

ORDER - WHICH GIVES DUE MEASURE TO THE MEMBERS OF A WORK CONSIDERED SEPARATELY, AND SYMMETRICAL AGREEMENT TO THE PROPORTIONS OF THE WHOLE.

EURYTHMY - A BEAUTY AND FITNESS OF THE ADJUSTED MEMBERS.

SYMMETRY - A PROPER AGREEMENT BETWEEN THE MEMBERS OF A WORK, AND RELATION BETWEEN THE PARTS AND THE WHOLE IN ACCORDANCE WITH A CERTAIN PART SELECTED AS THE STANDARD.

PROPRIETY - THE PERFECTION OF STYLE WHEN A WORK IS CONSTRUCTED ON APPROVED PRINCIPLES.

ECONOMY - THE PROPER MANAGEMENT OF MATERIALS AND THE SITE, AS WELL AS A BALANCING OF COST AND COMMON SENSE IN THE CONSTRUCTION OF WORKS."



## MEDIEVAL

AESTHETIC THEORY OF THE MIDDLE AGES WAS DEEPLY INTERTWINED WITH BOTH THEOLOGY AND METAPHYSICS, AND WAS DISCUSSED IN TERMS OF TRUTH, BEAUTY, GOODNESS, MORALITY, AND THE DIVINE REVELATION, WILL, AND NATURE. MOST AESTHETIC THOUGHT IS BASED ON THE METAPHYSICS OF DIONYSUS THE PSEUDO-AREOPAGITE. HE CONCEIVED OF BEAUTY AS THE RADIATION OF TRUTH SHINING THROUGH THE SYMBOL WHICH ENABLES MEN, THROUGH THEM, TO ATTAIN A DIRECT INSIGHT INTO THE PERFECTION OF THE DIVINE NATURE. TRUE BEAUTY WAS SEEN AS BELONGING TO GOD, AND MANIFESTED ITSELF IN MATHEMATICAL HARMONY, PROPORTION, AND CONCINNITY, NOT BY SENSUAL CHARM.

"SPIRITUAL LIGHT IS THE FINAL CAUSE OF THE BEAUTY OF BEING, AND THE FORMAL CAUSE OF BEAUTY IS THE CONFORMITY OF THAT BEING WITH ITS 'LUMINOUS FORM', AND THE IDEAL AFTER WHICH IT ASPIRES AND IN WHICH ITS GOODNESS AND PERFECTION CONSISTS."

-DIONYSUS

"THE AESTHETIC OBJECT MUST BE DELIGHTFUL NOT TO THE SENSES ONLY, BUT TO THE MIND THROUGH THE SENSES. BEAUTY IS THE PRODUCT OF THE UNION OF TRUTH AND GOODNESS. ALL GOD'S CREATION IS AT ONCE GOOD, TRUE, AND BEAUTIFUL."

-ST. AUGUSTINE OF HIPPO

"THE ESSENCE OF BEAUTY IS THE BRILLIANCE OF FORM.

GOODNESS HAS THREE CATEGORIES: THE FITTING, THE USEFUL, AND THE PLEASANT; BEAUTY BELONGING TO THE LAST OF THESE.

BEAUTY IS DISTINGUISHED FROM OTHER ASPECTS OF GOODNESS IN THAT IT RELATES TO COGNITION."

-ST. THOMAS AQUINAS

THERE WAS MUCH PHILOSOPHIC SPECULATION ON HOW BEAUTY WAS MADE APPREHENSIBLE, AND UPON WHICH PRINCIPLES THIS COGNITION WAS MADE POSSIBLE. THOMAS AQUINAS THOUGHT OF COGNITION AS A PROCESS OF ASSIMILATION, AS IF IN KNOWING SOMETHING ONE IDENTIFIED WITH ITS FORM (THAT WHICH MAKES IT ESSENTIALLY WHAT IT IS), AND AS ORDER AND RATIONALITY MAKE A THING APPREHENSIBLE TO REASON, SO PROPORTION RENDERS AN OBJECT OF SENSATION APPREHENSIBLE TO SENSORY COGNITION. ST. THOMAS AQUINAS ALSO STATED THAT "THE FORMAL CONDITIONS OF BEAUTY ARE INTEGRITY, PROPORTION OR HARMONY, AND CLARITY OR SPLENDOR - THE SHINING FORTH OF THE FORM OF THE THING."



IN MEDIEVAL TIMES ART WAS GENERALLY DISCUSSED IN RELATION TO ITS USEFULNESS. THE WORK OF ART WAS THOUGHT OF AS A SYMBOL OR IMAGE. IT ACHIEVED ITS PURPOSE OF REVELATION OF DIVINE NATURE BY EVIDENCING IN ITS OWN STRUCTURE THAT CONCINNITY, OR MATHEMATICAL AND INTELLECTUAL APPREHENSIBLE CONSONSANCE AMONG DISSIMILAR PARTS, IN WHICH THE BEAUTY OF THE UNIVERSE WAS THOUGHT TO RESIDE. SCHOLASTIC PHILOSOPHY SAW THE OBJECT OF ART AS BEING ORDERED TO A DEFINITE END. FOR A WORK TO BE JUDGEED GOOD, IT HAD TO CONFORM TO THE END PECULIAR TO THE WORK PRODUCED.

## RENAISSANCE

DURING THE RENAISSANCE, THE IDEA OF BEAUTY WAS A LAW OF NATURE. IT WAS PRIMARY AND ABSOLUTE, THE GOAL TOWARD WHICH NATURE STRIVED IN ALL HER CREATIONS. BEAUTY WAS THE FINAL CAUSE OF NATURE. THE IDEA OF BEAUTY IMPARTED TO NATURE THE SAME RATIONAL, CREATIVE ACTIVITY THAT GIVES RISE TO THE HUMAN ACT. THE IMITATION IN ART AND ARCHITECTURE CAME TO BE ROOTED IN THE MOMENT OF RATIONAL FORMING, WHEN THE ARTIST AND NATURE, ALIKE, OBEYED THE SAME SUPREME LAW. BEAUTY HAD ALL THE CHARACTERISTICS OF A PLATONIC FORM.

THIS VIEW WAS FURTHERED BY SYSTEMATIC, RATIONAL ORDER ASCRIBED TO THE UNIVERSE BY THE SCIENTIFIC COSMOLOGY OF COPERNICUS, WHICH SHATTERED THE WORLD PICTURE OF MEDIEVAL COSMOLOGY AND AFFIRMED THE RENASCENT CONCEPTION OF AN HARMONIOUS, MATHEMATICAL WORLD ORDER. THE INVENTION OF SCIENTIFIC PERSPECTIVE BY ALBERTI PROVIDED THE LINK BETWEEN THE PLATONIC IDEA OF ART AS A SENSIBLE COPY OF NATURE AND ITS PHENOMENA, AND THE NEOPLATONIC IDEA OF ART AS A SYMBOL OF A TRANSCENDENT REALITY, WHICH WAS A SUPREME COSMIC ORDER. ALBERTI RESTORED THE IDEA OF SYMBOLIC IMITATION TO ART, BUT WITHOUT SUPPRESSING THE SENSE OF EMPIRICAL TRUTH WHICH HAD BEEN RECENTLY REGAINED.

CANONS OF PROPORTION AND CLASSICAL ORDERS WERE THOUGHT TO EXHIBIT THE SAME REGULARITY AS NATURE, SO THAT THE ORGANIC ANALOGY BETWEEN THE BUILDING AND THE BODY CAME TO BE MEDIATED BY THE IDEA OF A UNIVERSAL AND LAWFUL PROPORTIONAL ORDER. THE RATIOS OF THE BUILDINGS AND THE BODY ALIKE WERE GOVERNED BY RULES WHICH HUMAN REASON DISCERNED IN INDIVIDUAL EXAMPLES, BUT WHICH RECOGNIZED A SUPREME COSMIC LAW. THE IDEA OF PROPORTIONAL FORM, ARISING FROM THE REPRESENTATION OF THE HUMAN BODY AS A STRUCTURE OF RATIOS, BECAME THE SYMBOL AND MODEL OF VITAL STRUCTURE. ALBERTI SPOKE OF BEAUTY



AS "A HARMONY OF ALL THE PARTS, IN WHATSOEVER OBJECT IT APPEARS, FITTED TOGETHER WITH SUCH PROPORTION AND CONNECTION THAT NOTHING COULD BE ADDED, DIMINISHED, OR ALTERED, EXCEPT FOR THE WORST." ALBERTI WENT ON TO ESPOUSE A THEORY OF ARCHITECTURE IN WHICH THE IMITATION OF NATURE TAKES PLACE WITHIN THE NUMBER, MEASURE, AND ARRANGEMENT OF THE PARTS OF THE BUILDING. AN AGREEMENT AMONG THE PARTS IN EACH OF THESE CATEGORIES WOULD BRING ABOUT HARMONY, WHICH HE SAW AS THE ULTIMATE GOAL OF ARCHITECTURE. PALLADIO ALSO STATED THAT

"BEAUTY WILL RESULT FROM THE FORM AND THE CORRESPONDENCE OF THE WHOLE, WITH RESPECT TO THE SEVERAL PARTS, OF THE PARTS WITH REGARD TO EACH OTHER, AND OF THESE AGAIN TO THE WHOLE; THAT THE STRUCTURE MAY APPEAR AN ENTIRE AND COMPLETE BODY, WHEREIN EACH MEMBER AGREES WITH THE OTHER."

RENAISSANCE ART THEORY WAS FOUNDED ON THE IMITATION OF NATURE, AND AS ITS GOAL SOUGHT THE FORMAL UNITY OF THE INDIVIDUAL WORK RATHER THAN ITS SENSIBLE PARTICULARITY. THE AESTHETIC IDEAL OF CONGRUITY HELD IN MIND A CONCEPTION OF THE INDIVIDUAL WORK AS A RELATIONAL WHOLE DIRECTED TOWARD THE UNITY IN DIVERSITY. THE IMITATION OF NATURE AS IT WAS THEN SEEN WAS TO CAPTURE THE HARMONIOUS FORM OF THE INDIVIDUAL, AS IN THE HUMAN BODY. THE ARTISTIC GOAL NO LONGER WAS TO REFER TO SOMETHING THAT TRANSCENDED EXPERIENCE, BUT TO REPRESENT THE VISUAL EXPERIENCE ITSELF. ART WAS CONCEIVED AS SYMBOLIZING BY DIRECT EMBODIMENT THE PURELY STRUCTURAL FORM OF PHENOMENAL REALITY AS IT HAD COME TO BE MEDIATED BY THE LAWS OF PERSPECTIVE.

UNTIL THE TIME OF THE RENAISSANCE THE BEAUTIFUL HAD SERVED ONLY AN APPETITIVE PURPOSE - TO AWAKEN THE DESIRE OF THE SOUL FOR A TRANSCENDENT GOOD, IN WHICH THE BEAUTIFUL, SENSIBLE OBJECT SOMEHOW PARTICIPATED. RENAISSANCE ART THEORY SEVERED THE BOND BETWEEN THE BEAUTIFUL AND THE GOOD, AND ESTABLISHED A NEW LINK BETWEEN THE BEAUTIFUL AND THE TRUE. IN THE PERCEPTUAL FORM OF THE BUILDING THE ARCHITECT REPRESENTED THE UNIVERSAL, IDEAL RELATIONS THAT BIND THE WORLD, SETTING THEM FORTH IN A VISIBLE MEDIUM SO THAT THEY, AND THE HARMONY THEY COMPRISE, COULD BE IMMEDIATELY PERCEIVED AND UNDERSTOOD. THE ARCHITECT SERVED THE CAUSE OF KNOWLEDGE OF TRUTH, BY SERVING THAT OF BEAUTY. HE DISCOVERED AND EMBODIED IN HIS BUILDINGS ONLY THE REGULAR PATTERNS OF NATURE, EFFECTING A UNIFICATION OF TRUTH AND BEAUTY.



## ENLIGHTENMENT

THE ENLIGHTENMENT HAD A GENERAL FAITH IN THE PERFECTION, ORDER, AND BEAUTY OF NATURE, BUT DEVELOPED A MULTIPLICITY OF THEORIES AND PHILOSOPHIES CONCERNING THE NATURE OF BEAUTY, ITS PERCEPTION OR APPREHENSION, AND ITS END, AND A GROWING EMPHASIS ON THE SUBJECTIVITY OF BEAUTY. THE BEAUTIES OF NATURE AND ART WERE EXTOLLED FOR THEIR INFLUENCE LEADING TO A REVERENTIAL APPREHENSION OF DIVINE PROVIDENCE AND FOR INCLINING THE MIND TO PONDER THE MANIFESTATIONS OF DIVINE PURPOSE IN THE UNIVERSE. THE BEAUTY OF ART WAS DERIVED FROM THE BEAUTY OF WHAT IT DEPICTED. BEAUTY CAME TO BE SEEN SUBJECTIVELY, A CONSEQUENCE OF RELATING IT TO FEELING AND EMOTIONAL RESPONSE. EMPHASIS WAS PLACED ON "DISINTERESTED ATTENTION" - THE MIND BEING FULLY AWARE OF THE BEAUTIFUL OBJECT BUT HAVING NO CONCERN FOR ITS USEFULNESS OR PURPOSE.

"THERE ARE TWO TYPES OF BEAUTY. POSITIVE BEAUTY IS FOUNDED ON CONVINCING REASON: RICHNESS, GRANDEUR, PROPORTION; WHILE ARBITRARY BEAUTY IS FOUNDED ON CUSTOM, USAGE, MODE, ETC."

-PERRAULT

"THE SOURCES OF RELATIVE BEAUTY ARE DESIGN, FITNESS, UTILITY."

-ALISON

"FIRST PRINCIPLES ARE FOUNDED ON NATURE, TRUTH, REASON, AND THE FITNESS OF THINGS."

-SOANE

"THE ENTIRE VALIDITY OF ART DEPENDS ON ITS EITHER BEING FULL OF TRUTH, OR FULL OF USE."

-RUSKIN

"...THAT THE TRUE OBJECTS OF AESTHETIC PERCEPTION ARE PLATONIC IDEALS...THE PERMANENT ESSENTIAL FORMS OF THE WORLD AND ALL ITS PHENOMENA."

-SCHOPENHAUER

"IT IS IMPOSSIBLE TO FIND THEORETICAL RULES FOR THE CONSTRUCTION OF BEAUTIFUL OBJECTS. I MUST FEEL PLEASURE IMMEDIATELY IN THE REPRESENTATION OF THE OBJECT, AND I CANNOT BE TALKED INTO IT ON THE GROUNDS OF PROOF..."

DESIGN IS WHAT IS ESSENTIAL...IT IS NOT WHAT PLEASES BY SENSATION



BUT MERELY WHAT PLEASES BY ITS FORM.

THE BEAUTIFUL OBJECT, THE SOURCE OF THIS PLEASURE, IS THE OBJECT WHICH IS ADAPTED TO OUR COGNITIVE POWERS, WHICH ALLOWS THEM FREE AND UNRESTRICTED PLAY AND STIMULATES THEM IN THE FULL."

-KANT

ROMANTICISM STRESSED ORIGINALITY, GENIUS, EXPRESSION, EMOTION, AND SENTIMENT. ART CAME TO BE REGARDED AS AN INSTRUMENT THROUGH WHICH WE COME INTO CONTACT WITH THE CREATIVE MIND OF THE ARTIST. ART WAS A LANGUAGE OF THE EMOTIONS.

"MAN SHOULD NOT REASON OR ANALYZE, BUT FEEL."

-ROUSSEAU

## MODERN

MODERN AESTHETIC THEORY STRESSES THE SUBJECTIVITY OF THE AESTHETIC JUDGMENT CONCERNING THE BEAUTIFUL OBJECT, BUT AN UNDERLYING THEME STRESSING THE UNITY OF THE BEAUTIFUL OBJECT DOES SURFACE.

"TODAY IT IS FELT TO BE OF CENTRAL IMPORTANCE THAT THE ARTIST IMAGINATIVELY CONSTRUCT A NEW OBJECT, IN THE CONTEMPLATION OF WHICH BOTH THE ARTIST AND THE OBSERVER ACHIEVE A NEW FEELING - AN EXPERIENCE INHERENT IN THE CREATED OBJECT ALONE. THE WORK OF ART IS A CREATION TO BE PERCEIVED, CONTEMPLATED, AND ENJOYED, FOR NEW EMOTIONAL CONFIGURATIONS AMONG OTHER THINGS, AND NOT AS AN INSTRUMENT OF COMMUNICATION OR EXPRESSION OF AN EMOTIONAL STATE PRE-EXISTING ITS CREATION."

-OSBORNE

"AESTHETIC FORM COMES WHEN AN AESTHETIC PLEASURE ARISES FROM A COMBINATION OF ELEMENTS THAT INDIVIDUALLY HAVE LITTLE OR NO VALUE."

-SANTAYANA

"BEAUTY IS A CHARACTERISTIC OF ANY COMPLEX FORM OF VARIED ELEMENTS PRODUCING APPREHENSIBLE UNITY OF EFFECTS UPON THE MOTIVE ORGANS OF SENSATION. IT INCLUDES THE LIKES OF FITNESS, UTILITY, TRUTH, PERFECTION, AND GOODNESS."

-RAYMOND



# ARCHITECTURE AS MEANING

"FOR MANY SOCIETIES, THE SYMBOLIC SIGNIFICANCE OF THE PARTS OF THEIR STRUCTURES AND THE DISPOSITION OF THE BUILDINGS IS FUNDAMENTAL TO THEIR RELATIONSHIP TO THE WORLD OF INNER AND CONSCIOUS EXPERIENCE. THE MYSTICAL QUALITIES OF TOTALLY COHESIVE VERNACULAR COMMUNITIES LIES PARTLY IN THE SUMMATION OF THE SYMBOLIC VALUES OF THE CULTURE WHICH ARE EMBODIED IN THE STRUCTURES SHAPED BY THE LAND'S RESOURCES."

-OLIVER

"TO DISCUSS VILLAGE PLANNING IN THE PRIMITIVE WORLD MERELY IN TERMS OF FORMAL ARRANGEMENT IS VIRTUALLY MEANINGLESS...THE NATIVE VILLAGE ...IS NOT MERELY MODELLED ON THE COSMOS, IT HAS ALL THE SYMBOLIC ATTRIBUTES OF THE WORLD."

-FRASER

"...HOUSE FORM IS NOT SIMPLY THE RESULT OF PHYSICAL FORCES OR ANY SINGLE CASUAL FACTOR, BUT IS THE RESULT OF A WHOLE RANGE OF SOCIO-CULTURAL FACTORS SEEN IN THEIR BROADEST TERMS. FORM IS IN TURN MODIFIED BY CLIMATIC CONDITIONS, METHODS OF CONSTRUCTION, MATERIALS AVAILABLE, AND TECHNOLOGY...SOCIO-CULTURAL FORCES ARE PRIMARY, AND THE OTHERS SECONDARY.

THE FORMS OF PRIMITIVE AND VERNACULAR BUILDINGS ARE LESS THE RESULT OF INDIVIDUAL DESIRES THAN THE AIMS AND DESIRES OF THE UNIFIED GROUP FOR AN IDEAL ENVIRONMENT. THEY THEREFORE HAVE SYMBOLIC VALUE, SINCE SYMBOLS SERVE A CULTURE BY MAKING CONCRETE ITS IDEAS AND FEELINGS. THE SOCIO-CULTURAL COMPONENT OF GENRE DE VIE IS THE SUM OF THE CONCEPTS OF CULTURE, ETHOS, WORLD VIEW, AND NATIONAL CHARACTER."

-RAPOPORT

"SINCE REMOTE TIMES ARCHITECTURE HAS HELPED MAN IN MAKING HIS EXISTENCE MEANINGFUL...ARCHITECTURE OUGHT TO BE UNDERSTOOD IN TERMS OF MEANINGFUL (SYMBOLIC) FORMS."

-NORBERG-SCHULZ



THAT ARCHITECTURE ACTS AS A MEANINGFUL SYMBOL OF MAN'S RELATION TO HIS COSMOS AS WELL AS A CULTURAL SYMBOL IS WELL DEMONSTRATED IN PRIMITIVE AND VERNACULAR ARCHITECTURE, AND HOLDS TRUE THROUGH THE RENAISSANCE AND BAROQUE PERIODS. IT WAS NOT UNTIL THE INDUSTRIAL REVOLUTION THAT ARCHITECTURE BEGAN TO DISINTEGRATE AS A SYMBOL OF CULTURE. WITH THE COMING OF THE ENLIGHTENMENT AND THE RESULTING EXPLOSION OF PHILOSOPHIC AND SCIENTIFIC THINKING, THE UNIFIED VIEW OF MAN'S COSMOS FRAGMENTED INTO A DIVERSITY OF DIRECTIONS.

THE PAST DECADES HAVE SEEN THE CONTINUATION OF THIS TREND TOWARD A MULTIPLICITY OF RELIGIOUS, PHILOSOPHIC, AND SCIENTIFIC ORIENTATIONS, AND HAVE COUPLED IT WITH AN EMPHASIS ON INDIVIDUAL FREEDOM AND MOBILITY, WHILE MADISON AVENUE HAS GIVEN US A LIFESTYLE BASED UPON CONSPICUOUS CONSUMPTION AND THE PURSUIT OF LIESURE. THIS HAS MANIFESTED ITSELF AS A GENERAL LACK OF CULTURE AND TRADITION, A GLORIFICATION OF MOBILITY AND THE AUTOMOBILE, AND A CEASELESS SERIES OF FADS AND STYLES ENCOURAGING US TO CONSUME AS MUCH AS POSSIBLE JUST AS FAST AS WE ARE ABLE TO DO SO.

THIS LACK OF COSMIC AND CULTURAL VIEW, JOINED WITH MASS CONSUMPTION, IS REFLECTED IN THE GENERALLY CHAOTIC AND STRUCTURELESS NATURE OF OUR URBAN CONSTRUCTS. THE ARCHITECTURAL CONSEQUENCE HAS BEEN A LOSS OF CHARACTER AND REGIONALISM, WHILE THE BUILDING ITSELF OFTEN BECOMES A MERE ELEMENT OF OUR MASS CULTURE. URBAN AGGLOMMERATION, UNENDING COMMERCIAL STRIP, AND SPRAWLING SUBDIVISION MERGE INTO A JUMBLE OF MEANINGLESS CONFUSION OVERLOADED WITH SIGNS AND SYMBOLS VYING FOR OUR ATTENTION AS WE SPEED BY IN OUR AUTOMOBILES. EVERYWHERE THERE IS DRABNESS AND BANALITY.

THE AMERICAN DREAM IS CRUMBLING. THE DREAM OF A HOME IN GREEN SUBURBIA IS LOST ON THE CROWDED FREEWAY, IN THE SMOGGY AIR, AT THE CROWDED BEACH OR PARK. AS OUR HOMES AND FACTORIES STAND COLD AND SILENT WHILE WE STAND IN LINE AT THE GAS PUMPS, THERE IS AN AWAKENING REALIZATION THAT THERE MUST BE AN END TO OUR COLLECTIVE SELFISHNESS AND OUR WASTEFUL CONSUMPTION OF PRECIOUS RESOURCES. THE ECOLOGICAL CRISIS IS SHOWING US THAT WE CANNOT CONTINUE TO ABUSE THE EARTH FOR MUCH LONGER AND STILL EXPECT TO MAINTAIN ANY SEMBLANCE OF A QUALITY OF LIFE. EVEN SO, AN INCREASING NUMBER OF AMERICANS ARE WONDERING WHAT QUALITY THERE IS IN OUR LIVES EVEN NOW, AND IF THERE IS NOT SOME BETTER ALTERNATIVE. OUR ATTITUDE IS SHIFTING FROM ONE OF MAN HAVING GOD - GIVEN DOMINION OVER NATURE TO ONE OF MAN NEEDING TO LIVE IN SYMBIOSIS WITH NATURE IF WE ARE TO SURVIVE.



TODAY WE HAVE AN APPARENT PARADOX IN WHICH OUR ARCHITECTURAL-URBAN CONSTRUCT TENDS TO BE AN APPROPRIATE EXPRESSION OF OUR MASS CULTURE AND SOCIETY, AND OUR OUTLOOK, YET IT TENDS TO HAVE LITTLE MEANING, OTHER THAN AS A REFLECTION OF OUR MASS VULGARITY. IT MAY SIGNIFY THAT WE ARE A CULTURE LACKING MEANING AND VALUES. PERHAPS WE SHOULD ASK OURSELVES SEVERAL QUESTIONS. WHAT DOES OUR ARCHITECTURE TODAY REPRESENT? IS THIS AN APPROPRIATE EXPRESSION OF OUR SOCIETY? SHOULD IT BE THE DESIRED EXPRESSION? IS THERE AN ALTERNATIVE?

IT IS MY CONTENTION THAT IT IS POSSIBLE TO HAVE AN ARCHITECTURE THAT ACTS AS AN EXISTENTIAL SYMBOL FOR OUR SOCIETY, BUT THAT IT MUST EXIST AT AN URBAN SCALE RATHER THAN AT THE SCALE OF THE INDIVIDUAL BUILDING. OUR CITIES CAN ACT AS MEANINGFUL "OVERSYMBOLS" WHICH CAN GIVE OUR SOCIETY STRUCTURE WHICH THE INHABITANT CAN COMPREHEND AND TO WHICH HE CAN RELATE. OUR CITIES SHOULD PLACE COMMERCIAL AND LIESURE ACTIVITIES IN A DOMINANT CENTRAL LOCATION SURROUNDED BY THE COMMUNITY. THE DIGNITY AND HUMANITY OF THE INHABITANT COMES TO THE FORE IN THE CITY DESIGNED FOR PEOPLE RATHER THAN FOR THE CONVENIENCE OF THE AUTOMOBILE, AND WE CAN BEGIN TO MANAGE OUR RESOURCES WISELY THROUGH COALESCENCE OF BOTH BUSINESS AND HOUSING INTO A MUCH DENSER STRUCTURE WHICH PERMITS ECONOMIES IN BUILDING, HEATING, AND TRANSPORTATION.



# DESIGN PROCESS

IT IS THROUGH THE STRUCTURALIZATION OF SPACES, THEIR PHYSICAL EMBODIMENT, THAT ARCHITECTURE IS CREATED, AND THROUGH THE BUILT FORM THAT MEANINGS ARE INCLUDED. THIS STRUCTURALIZATION OF SPACE COULD BE CALLED THE MEDIATION OF FORM - THE FORMING THROUGH WHICH ARCHITECTURE COMES INTO EXISTENCE AND IS ENCODED WITH MEANINGS. TWO PROCESSES OCCUR SIMULTANEOUSLY DURING THE CONCEPTION OF FORM, ONE DEALING WITH THE STRUCTURAL SIMILARITY BETWEEN FORM AND TASK, AND THE OTHER DEALING WITH THE MEANINGS ENCODED IN AND REVEALED THROUGH THE FORM. THESE TWO PROCESSES CANNOT BE SEPARATED, THEY ARE LIKE THE TWO SIDES OF A COIN, INSEPARABLE, AND BOTH MUST WORK SUCCESSFULLY IF THE ARCHITECTURAL CONSTRUCT IS TO BE A TOTALITY.

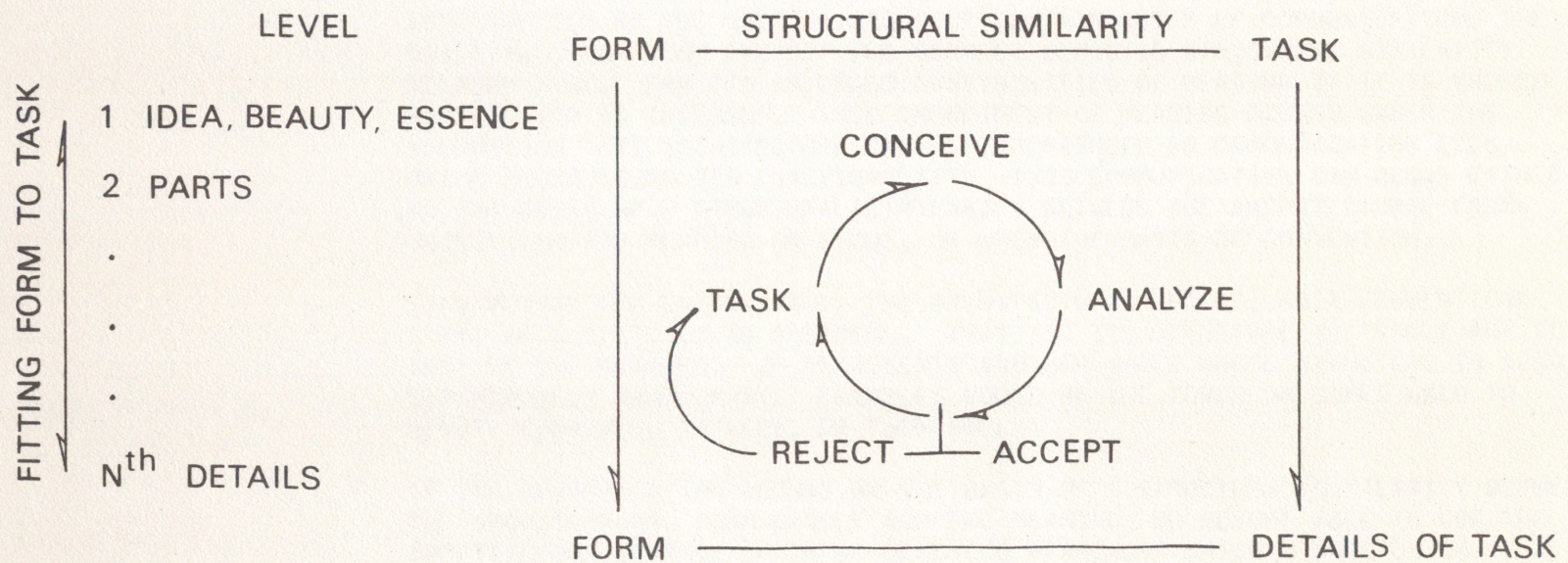
## MEDIATION OF FORM

THE FIRST PROCESS IS THE MEDIATION OF FORM - THE CONCEIVING OF A FORM THAT NOT ONLY HAS THE ABILITY TO UNIFY ALL OF THE PARTS INTO A COMPREHENSIBLE WHOLE, BUT WHICH ALSO HAS A STRUCTURAL SIMILARITY TO THE TASK. ANALOGOUSLY, THE SPACIAL ORGANIZATION OF THE BUILDING MUST NOT ONLY HAVE A STRUCTURAL SIMILARITY TO THE BUILDING TASK, BUT IT MUST ALSO ORGANIZE ALL OF THE INDIVIDUAL TASKS INTO A COMPREHENSIBLE, FUNCTIONING WHOLE. IT IS AN ORDERING PROCESS. THERE ARE NO RULES FOR ITS ACCOMPLISHMENT, IT IS INTUITIVE, IT IS THE CONCEPTUAL ACT.

THE CONCEPTION OF FORM OCCURS ON MULTIPLE LEVELS AND GOES THROUGH A SERIES OF CYCLES IN A FITTING PROCESS. THE FIRST LEVEL IS THAT OF CONCEPT - THE IDEA, BEAUTY - AND IMPLIES THE TOTALITY OF CHARACTER. THE STRUCTURE OF THE FORM-IDEA IS COMPARED TO THAT OF THE TASK, AND IF FOUND COMPATIBLE, PROCEEDS TO FURTHER LEVELS OF STRUCTURALIZATION CONCERNED WITH PROGRESSIVELY MORE DETAILED ASPECTS OF THE TASK. THE STRUCTURING PROCESS IS ONE OF CONCEIVING FORM, AND THEN REFUTING OR ADJUSTING THIS FORM UNTIL THE DESIRED LEVEL OF STRUCTURAL CONGRUENCE IS OBTAINED, AT WHICH POINT THE PROCESS SHIFTS TO A LOWER LEVEL OF CONCEPTION - REJECTION CONCERNED WITH A MORE DETAILED LEVEL OF THE TASK. A MAJOR INCONGRUENCE BETWEEN THE FORM AND THE TASK AT ANY LEVEL CAN REQUIRE MODIFYING ALL OF THE PRECEDING LEVELS OF STRUCTURE. EVENTUALLY A NUMBER OF LEVELS OF STRUCTURALIZATION ARE OBTAINED: THE FIRST CONCERNED WITH THE GENERAL FORM AND THE TOTALITY, COMPREHENSIBILITY, AND ORGANIZATION, AND SUBSEQUENT LEVELS CONCERNED WITH



## GIVING FORM





THE DETAILS. EACH SUCCESSIVE LEVEL IS SUBSUMED BY ITS PREDECESSORS.

THE MEDIATION OF FORM IS OFTEN ACCOMPLISHED SOMEWHAT IN ABSTRACTION, OFTEN USING GEOMETRIZATION AS AN ORGANIZING MEANS. THIS CAN OCCUR INDEPENDENTLY OF A STYLE (A FORMAL MODE OF ORGANIZATION), HOWEVER, THE FORMAL ELEMENTS OF A STYLE MAY COLOR THE THOUGHT PROCESS WHICH THEREBY YIELDS A FORM WHICH IS ADAPTED TO A GIVEN STYLISTIC MODE OF REPRESENTATION.

## ENCODING MEANINGS

THE SECOND OF OUR TWO SIMULTANEOUS PROCESSES DEALS WITH THE ENCODEMENT OF MEANINGS OR VALUES, OR THEIR POSSIBILITY, IN THE ARCHITECTURAL FORM. THE SUBSEQUENT PHYSICAL OBJECT THEN ACTS AS A SIGN VEHICLE WHICH IS INTERPRETTED BY THE USER IN LIGHT OF CERTAIN CODES OF COMMUNICATION. THE CONCEIVED FORM MUST EXHIBIT THE CORRECT SEMIOTIC STRUCTURAL SIMILATITY BETWEEN ITSELF AND ITS INTENDED POSSIBILITIES OF MEANING IF IT IS INDEED TO FUNCTION AS INTENDED. THIS EMBODIMENT OF MEANING OCCURS UNDER THE ASSUMPTION THAT ARCHITECTURE CAN BE EXPERIENCED AS COMMUNICATION EVEN WHILE RECOGNIZING ITS FUNCTIONALITY. THIS COMMUNICATION CAN OCCUR EITHER ON THE BASIS OF A STRUCTURAL SIMILARITY BETWEEN THE ARCHITECTURAL FORM-OBJECT AND THE MEANING OR VALUE, OR UPON THE BASIS OF CONVENTION.

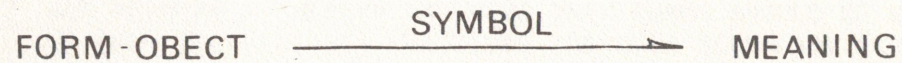
CONSIDERING THE LATTER CASE, THE ARCHITECTURAL OBJECT, AS A CONVENTIONAL SIGN, ACTS STRICTLY AS A SYMBOL, THAT IS, ITS STRUCTURE IS IRRELEVANT TO THAT OF THE MEANING. IT REPRESENTS ANOTHER WHOLE WHOSE STRUCTURE IS ALSO SEMANTICALLY IRRELEVANT. EXAMPLES WOULD BE THE TOWER OR DOMES USED TO DENOTE CHURCHES, PALACES, OR TOWN HALLS.

IF THE COMMUNICATION OCCURS ON THE BASIS OF A STRUCTURAL SIMILARITY BETWEEN THE ARCHITECTURAL FORM-OBJECT AND THE MEANING, WE BECOME ABLE TO USE THE ARCHITECTURE BECAUSE OF THESE REVEALED MEANINGS, WHICH DIPOSE US TO PARTICULAR FUNCTIONAL USES OF THE OBJECT, OR THE CONVEYENCE OF CERTAIN VALUES. WE DISTINGUISH BETWEEN THE SIGN VEHICLE AND ITS MEANING; THE FORMER OBSERVABLE AND DESCRIBABLE APART FROM THE MEANINGS WE ATTRIBUTE TO THEM, THE LATTER VARIABLE AND DETERMINED BY THE CODES IN LIGHT OF WHICH WE READ THE SIGN VEHICLE. IN ARCHITECTURAL OBJECTS WE CAN RECOGNIZE SIGN VEHICLES THAT CAN BE OBSERVED AND CLASSIFIED, WHICH CAN DENOTE PRECISE FUNCTIONS PROVIDED THEY ARE INTERPRETTED IN LIGHT OF CERTAIN CODES, AND SUCCESSIVE MEANINGS WHOSE ATTRIBUTION OCCURS, BOTH DENOTATIVELY AND

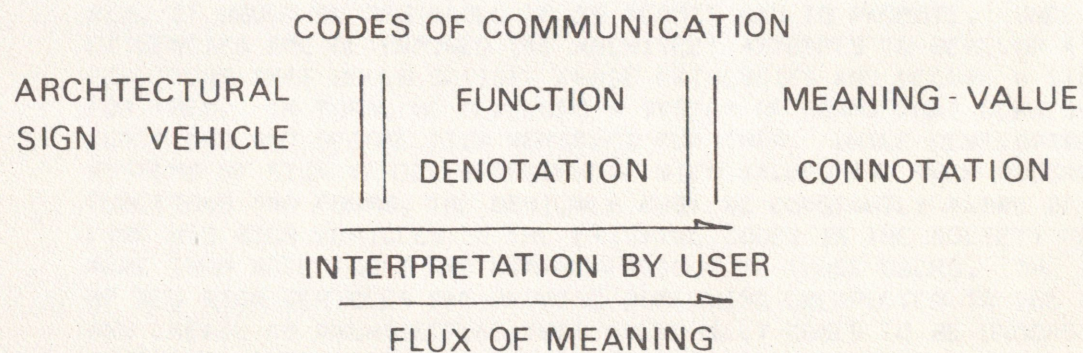
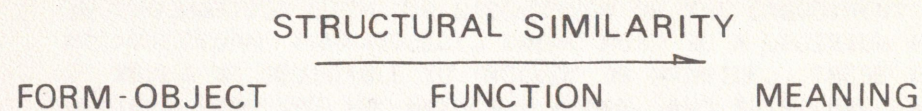


# ARCHITECTURE AS COMMUNICATION

## 1. AS A CONVENTIONAL SIGN



## 2. BY STUCTURAL SIMILARITY





CONNOTATIVELY, ON THE BASIS OF FURTHER CODES.

THE FORM OF THE OBJECT MUST, BESIDES MAKING THE FUNCTION POSSIBLE, DENOTE THE FUNCTIONS CLEARLY ENOUGH TO MAKE THEM PRACTICABLE AS WELL AS DESIRABLE. FORM DENOTES A FUNCTION OR MEANING ONLY ON THE BASIS OF A SYSTEM OF ESTABLISHED HABITS AND EXPECTATIONS (CODES). SIGN VEHICLES UNDERGO UNPREDICTABLE FLUXES OF MEANING - THE PROCESS OF DISSOCIATION BETWEEN FORM AND MEANING - THEREBY IMPLYING THAT FORMS SHOULD BE CREATED FOR VARIABLE PRIMARY (DENOTATIVE) FUNCTIONS AND OPEN SECONDARY (CONNOTATIVE) FUNCTIONS. NOTHING CREATED BY THE ARCHITECT IS GOING TO PREVENT EVENTS FROM TAKING AN AUTONOMOUS COURSE AROUND THEM, THUS FORMS SHOULD BE CREATED SO AS TO REMAIN RELEVANT UNDER DIFFERENT CODES OF READING. HISTORICALLY, SIGNIFIED MEANINGS TEND TO BE EXTREMELY LIABLE, QUESTIONABLE, AND UNGOVERNABLE.

## SIGN VEHICLES

IN CONJUNCTION WITH OUR DISCUSSION ON THE EMBODIMENT OF MEANING IN THE ARCHITECTURAL FORM-OBJECT, THERE MUST BE A DECISION AS TO WHAT MEANINGS IT WOULD BE DESIRABLE TO INCLUDE OR PROVIDE. THESE POSSIBLE MEANINGS ARE DERIVED FROM THE THE NATURAL, HUMAN, AND SPIRITUAL VALUES ASSOCIATED WITH THE PHYSICAL, SOCIAL, AND CULTURAL ASPECTS OF THE TASK. THESE MEANINGS AND VALUES MAY ALREADY EXIST, OR THE ARCHITECT MAY TRY TO ANTICIPATE THEM BY THE IMPLICATIONS OF LIKELY FUTURE DEVELOPMENTS (HISTORICAL, CULTURAL, TECHNOLOGICAL), OR UPON THE CHANGING NEEDS OF THE USERS. THE ARCHITECT ATTEMPTS TO DETERMINE WHICH FUNCTIONS AND MEANINGS, BOTH EXISTING AND NEW, IT WOULD BE DESIRABLE TO TO PERMIT AND TO PROMOTE. ONCE THESE EXIGENCIES ARE DETERMINED THE ARCHITECT ATTEMPTS TO DEVELOP A SYSTEM OF FUNCTIONS THAT WOULD SATISFY THOSE EXIGENCIES AND BECOME A SIGN VEHICLE FOR THEM. IN TURN, HE DEVELOPS A SYSTEM OF FORMS THAT CORRESPOND TO THE FUNCTIONS AND BECOME SIGN VEHICLES FOR THEM. WHILE DEVELOPING HIS SYSTEMS OF SIGN VEHICLES BEGINNING WITH VALUES AND THEN PROGRESSING TO FUNCTIONS AND FORMS, THE DESIGNER MUST BE CONSTANTLY AWARE OF WHAT WILL LINK HIS SIGN VEHICLES TO THE EXISTING CODES IN THE SOCIETY OF USERS AND MAKE THEM ACCEPTABLE AND COMPREHENSIBLE TO THOSE USERS. THE INTRODUCTION OF NEW SIGN VEHICLES CAN PROVIDE SOMETHING UNEXPECTED IN THE ARCHITECTURE, AND CREATE AN ARCHITECTURE THAT EVENTUALLY COMES TO BE UNDERSTOOD AND ACCEPTED IN TERMS OF THE SOCIETY'S EXISTING EXPECTATIONS AND EVENTUALLY INTEGRATED INTO THE SOCIETY'S SYSTEM OF CULTURAL COMMUNICATION.

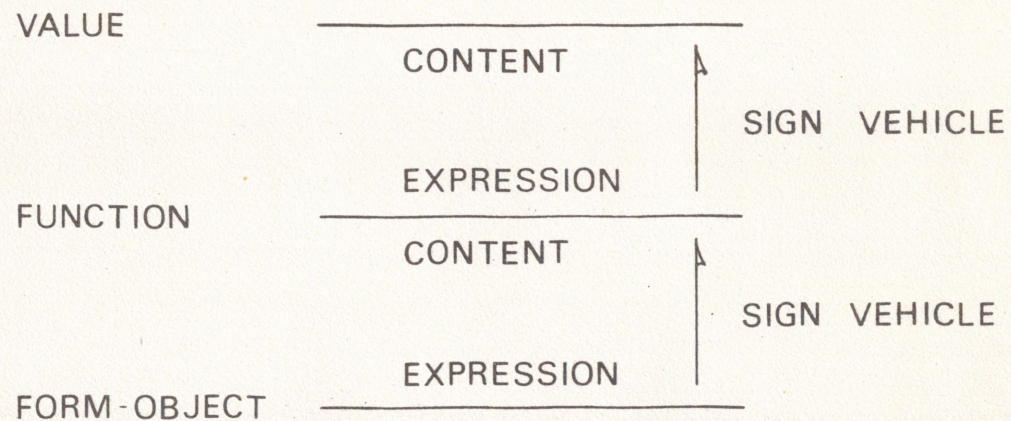


## ENCODING MEANINGS

MEANINGS AND VALUES: EXISTING OR DERIVED FROM EXIGENCIES

FUNCTIONS: SATISFY MEANINGS

FORM-OBJECT: SATISFY FUNCTIONS





WHILE THE ARCHITECTURAL FORM-OBJECTS CONSTITUTE THEMSELVES INTO A SYSTEM, THEY ONLY BECOME A CODE WHEN COUPLED WITH SYSTEMS LYING OUTSIDE ARCHITECTURE. THE SYSTEM OF SIGN VEHICLES (PLANE OF EXPRESSION) IS COUPLED TO A SEMANTIC SYSTEM (PLANE OF CONTENT) LYING OUTSIDE IT. VARIOUS PLANES OF EXPRESSION AND CONTENT EVOLVE. THE ARCHITECTURAL OBJECT, AS A PLANE OF EXPRESSION, MAY HAVE AS ITS PLANE OF CONTENT ANOTHER SYSTEM OF SIGNIFICATIONS CONSISTING OF STILL FURTHER PLANES OF EXPRESSION AND CONTENT. THE FORM-OBJECT CAN ACT AS A SIGN VEHICLE FOR A GIVEN FUNCTION, WHICH IN TURN ACTS AS A SIGN VEHICLE FOR A SET OF VALUES OR MEANINGS.



# PROJECT BACKGROUND

THE POWDER RIVER BASIN OF NORTHERN WYOMING IS THE SCENE OF THE MOST UNPRECEDENTED INDUSTRIAL GROWTH IN THE HISTORY OF THE STATE. THE REGION IS RICH IN URANIUM, OIL, AND CONTAINS THE LARGEST COAL RESERVES IN THE UNITED STATES. CAMPBELL COUNTY CONTAINS HALF OF ALL COAL IN WYOMING, AND HAS MORE COAL THAN ANY OTHER COUNTY IN THE NATION. PLANS HAVE BEEN MADE TO EXPORT THIS COAL FROM TEN MINES, WITH ADDITIONAL COAL BEING CONSUMED FOR TWO GASIFICATION PLANTS AND TWO POWER PLANTS EXPECTED TO BE BUILT IN THE NEAR FUTURE. THE POPULATION OF CAMPBELL COUNTY MAY GROW FROM ITS PRESENT LEVEL OF 17,000 TO MORE THAN 30,000 BY 1980 IF ALL PROPOSED PROJECTS ARE IMPLEMENTED.

## GROWTH PROBLEMS

AT THE PRESENT TIME, 40% OF THE POPULATION OF CAMPBELL COUNTY LIVES IN TRAILER HOMES, MOST OF WHICH ARE CLOSELY CROWDED INTO THE FEW EXISTING MOBILE HOME PARKS. STREETS ARE UNPAVED, THERE ARE FEW LAUNDRY FACILITIES, TREES, RECREATION FACILITIES, AND EVEN GRASS IS SCARCE. THESE TRAILER PARKS ARE APTLY DESCRIBED AS "ALUMINUM GHETTOS".

THE PROBLEMS OF GILLETTE, WYOMING, THE COUNTY SEAT OF CAMPBELL COUNTY, ARE TYPICAL OF THOSE OF A SMALL COMMUNITY SUFFERING FROM INDUSTRIAL IMPACT. THE QUALITY OF LIFE IS DEGRADED. HOUSING SERVICES, RECREATION AND EDUCATIONAL FACILITIES ALL LAG BEHIND THE NEED. THE PACE OF LIFE SPEEDS UP, THERE IS CROWDING AND CONGESTION, PRICE INFLATION EXISTS. OUTRIGHT TENSION AND HOSTILITY FLARE BETWEEN LONG TIME RESIDENTS AND NEWCOMERS. THERE IS A LACK OF ACTIVITY AND BELONGING FOR NEW RESIDENTS, ESPECIALLY WIVES, AND ALCOHOLISM AND MENTAL HEALTH PROBLEMS ABOUND.

SPECIFIC PROBLEMS ARE THOSE SUCH AS A HOUSING MARKET THAT HAS BROKEN DOWN; NEW HOUSING IS TOO EXPENSIVE FOR THE AVERAGE WORKER TO AFFORD, AND MOBILE HOMES BECOME THE ONLY ALTERNATIVE. FRINGE SETTLEMENTS AND A SCARCITY OF JOBS MAKE LIFE IN THE AREA DIFFICULT FOR WIVES AND MOTHERS. HEALTH SERVICES ARE OVERBURDENED, AND ARE CRITICALLY LACKING IN THE MENTAL HEALTH FIELDS. MANY RESIDENTS ARE FORCED TO GO OUTSIDE THE COUNTY FOR ROUTINE MEDICAL CARE. THE CRIME RATE HAS RISEN DRAMATICALLY, AS HAS ALCOHOLISM, AND MENTAL HEALTH CASES ARE UP AS MUCH AS 1000%.



INDUSTRIAL PRODUCTIVITY FALLS BECAUSE OF HIGH EMPLOYEE TURNOVER AND THE PIRATING OF WORKERS BETWEEN EMPLOYERS. EMPLOYEE RECRUITMENT IS DIFFICULT, EVEN AT HIGH WAGE LEVELS, BECAUSE OF THE POOR QUALITY OF LIFE IN THE AREA.

SURVEY RESEARCH INDICATES THAT MOST RESIDENTS SEE A NEED FOR IMPROVEMENTS IN THE AREAS OF MEDICAL AND HEALTH CARE, ROAD AND STREET MAINTENANCE, SUITABLE HOUSING, POLICE PROTECTION, AND MORE SCHOOLS AND TEACHERS. MANY OF THESE PROBLEMS STEM FROM THE FACT THAT THE INDUSTRIAL PROJECTS CREATING THE GROWTH LIE OUTSIDE CITY LIMITS AND THEREFORE PAY NO CITY TAXES, WHILE THE TOWNS REAP THE INCREASE IN POPULATION AND THE ASSOCIATED PROBLEMS.

## BOOM TOWN PROBLEMS

WHEN A SMALL COMMUNITY IS FACED WITH SUDDEN INDUSTRIAL GROWTH IT EVOLVES THROUGH A CYCLE CHARACTERISTIC OF BOOM TOWNS. DURING THE FIRST PHASE OF THIS CYCLE, THE POPULATION GROWS AT BOOM RATES AND EXISTING LOCAL SERVICES FALL SHORT OF NEEDS; SCHOOLS, RETAIL INVENTORIES, HOUSING, AND HEALTH SERVICES ARE INADEQUATE. RECREATION OPPORTUNITIES ARE LIMITED AND THE GENERAL QUALITY OF LIFE SUFFERS. WITH THE ONSET OF PHASE TWO IT BECOMES DIFFICULT TO ATTRACT WORKERS TO THE ISOLATED COMMUNITY WHICH HAS ONLY A SMALL INDIGENOUS LABOR FORCE TO SERVE THE ECONOMIC GROWTH. THERE IS AN INADEQUATE SUPPLY OF LABOR, WHICH IS UNSTABLE AND DISSATISFIED AT BEST. WORKERS OFTEN DO NOT WISH TO STAY, AND THOSE THAT DO ARE SWITCHING BETWEEN EMPLOYERS. EMPLOYEE TURNOVER RATES AND ABSENTEEISM INCREASE. IT IS DIFFICULT TO ATTRACT AND MAINTAIN A SATISFACTORY WORK FORCE, REGARDLESS OF THE TYPE OF WORK AND WAGES, AND PRODUCTIVITY AND PROFITS DROP. DURING PHASE THREE, BECAUSE OF THE DECLINING PRODUCTIVITY, THERE IS EVEN LESS MONEY COMING IN TO SUPPORT PUBLIC SECTOR ACTIVITIES. PRIVATE INVESTORS ARE UNWILLING TO INVEST IN COMMERCIAL FACILITIES, HOUSING, OR OTHER NEEDS. THE SITUATION RETURNS TO ITS STARTING POINT, WITH LOCAL SERVICES AND FACILITIES FINDING IT EVEN HARDER TO KEEP UP WITH THE INCREASING POPULATION AND DEMAND.

THE POPULACE AND ELECTED OFFICIALS OF THE TOWN FACED WITH BOOM GROWTH USUALLY UNDERGO A FOURFOLD SHIFT OF ATTITUDE TOWARD THE IMPENDING GROWTH. AT FIRST THERE IS ENTHUSIASM OVER THE ANTICIPATION OF ECONOMIC GROWTH WHICH SATISFIES THE AMBITION OF THE SMALL, OFTEN DECLINING TOWN, TO KEEP THE YOUNG FOLKS AT HOME. THEN UNCERTAINTY SETS IN CONCERNING THE



DEMAND FOR PUBLIC SERVICES TO MEET THE GROWTH, AND IS FOLLOWED BY OUTRIGHT PANIC OVER THE GAP BETWEEN PROSPECTIVE REVENUES AND EXPENDITURES, COUPLED WITH THE REALIZATION THAT THE TOWN AND ITS SCHOOL DISTRICT DO NOT HAVE NEARLY ENOUGH BONDING CAPACITY TO BUILD THE NEEDED FACILITIES TO ACCOMMODATE THE GROWTH. FINALLY, A PROBLEM SOLVING ATTITUDE EVOLVES AS THE ELECTED OFFICIALS AND THE PUBLIC START TRYING TO UNDERSTAND THE PROBLEMS AND HOW TO SOLVE THEM. OFTEN THEY TURN TO STATE AND FEDERAL GOVERNMENT, ONLY TO FIND AN UNSATISFACTORY RESPONSE. FUNDS ARE SOLICITED FROM INDUSTRY, LEADING TO COMPETITION AMONG THE TOWN, SCHOOL DISTRICT, AND COUNTY, ALL OF WHOM ARE SEEKING SUPPORT. LOCAL GOVERNMENT IS OFTEN AMBIVALENT ABOUT LAND USE PLANNING AND ZONING. RANCHERS AND LANDOWNERS ARE STRONGLY OPPOSED TO ANY CONTROLS OVER THEIR LAND. CONFUSION AND UNCERTAINTY ABOUND. THE FISCAL VIABILITY OF THE LOCAL GOVERNMENT IS THREATENED.

## SOCIAL PROBLEMS

THE SOCIAL PROBLEMS WHICH ARISE IN THE WAKE OF GROWTH ARE SECOND ONLY TO THOSE PROBLEMS ASSOCIATED WITH THE INCREASED DEMANDS FOR FACILITIES AND SERVICES. AS THE COMMUNITY FACES WIDESPREAD GROWTH ITS POPULACE IS FACED WITH AN UNCERTAINTY AS TO WHAT THE FUTURE HOLDS, AND ANTAGONISM DEVELOPS AMONG VARIOUS GROUPS, STRAINING THE FORMAL AND INFORMAL RELATIONSHIPS WHICH ALLOW THEM TO WORK TOGETHER TO ACHIEVE LOCAL GOALS. SUSPICION AND MISTRUST AMONG GROUPS ARE COMMON. LOCAL RESIDENTS MISTRUST THE NEW COMERS AND THE INDUSTRIAL COMPANIES, AND THERE EXISTS ANTAGONISM AND MUTUAL AVOIDANCE BETWEEN LOCALS HOLDING DIVERGENT VIEWPOINTS ON SUCH ISSUES AS ENERGY DEVELOPMENT. THERE IS A LOSS OF THE SENSE OF COOPERATION AND TRUST NECESSARY FOR SOCIAL INTERACTION.

AN ATMOSPHERE OF ANOMIE AND UNCERTAINTY PERVADES. LOCAL RESIDENTS HAVE FEELINGS OF FUTILITY, DESPAIR, RULELESSNESS, AND POWERLESSNESS RESULTING FROM THE SWEEPING SOCIAL CHANGES OVER WHICH THEY HAVE LITTLE CONTROL AND WHICH THEY CONSIDER TO BE OPPRESSIVE. THESE FEELINGS ARE EVEN MORE PRONOUNCED AMONG THE NEWCOMERS. THERE IS LITTLE OPPORTUNITY FOR THE WIVES OF WORKERS, THEY SIT IN THEIR TRAILERS WATCHING TV, EATING, AND GETTING FAT. THEIR HUSBANDS DRINK AND FIGHT. THERE IS A SENSE OF IMPERMANENCE, OF BOREDOM, DISSERTION AND DIVORCE ARE COMMON. DIVISION AND SOCIAL STRATIFICATION DEVELOP BETWEEN LOCALS AND NEWCOMERS. SOCIAL POSITION IS DEFINED BY LENGTH OF RESIDENCE, OCCUPATION, ECONOMIC STATUS, POSITION



ON DEVELOPMENT. MANY OF THE LONG TERM EMPLOYEES EVENTUALLY DO BEGIN TO ACCEPT LOCAL VALUES AND DO BECOME BONAFAIDE MEMBERS OF THE COMMUNITY.

THE SOCIAL PATHOLOGIES OF THE BOOM TOWN HAVE BEEN COINED "THE GILLETTE SYNDROME" BY PSYCHOLOGIST ELDEAN KOHRS. THEY ARE ALSO KNOWN AS THE "FOUR D'S"; DRUNKENNESS, DELINQUENCY, DEPRESSION, AND DIVORCE. CROWDED AND UNSANITARY CONDITIONS, LACK OF COMMUNITY SERVICES, RECREATION OUTLETS, COMMUNITY IDENTITY, PERMANENCE, AND LONG HOURS AT AN UNREWARDING TASK ALL CONTRIBUTE TO THE SYNDROME. SUICIDE ATTEMPTS ARE FREQUENT. SCHOOL DROPOUT RATES ARE HIGH, AS IS TRUANCY, DELINQUENCY IS COMMON, AND CRIMINAL FACILITIES ARE OVERTAXED. THERE IS FEAR FOR PERSONAL SAFETY AND THAT OF PROPERTY.

A WESTERN LIFESTYLE IS DEPENDENT UPON A RURAL ATMOSPHERE, OPEN SPACES, ENJOYMENT OF, AND AN ACKNOWLEDGED DEPENDENCE UPON THE NATURAL ENVIRONMENT, AND AN UNHURRIED WAY OF LIFE. LONGTIME RESIDENTS OF BOTH WYOMING AND MONTANA DO NOT WISH TO SEE THEIR STATES SACRIFICED ONLY TO POSTPONE, FOR A SHORT WHILE, THE NATION'S INEVITABLE DAY OF DECISION CONCERNING ITS WASTEFUL LIFESTYLE.

## STATE RESPONSE

THE GENERAL SESSION OF THE 1975 WYOMING LEGISLATURE PASSED A COMPREHENSIVE PACKAGE OF FINANCING LEGISLATION TO DEAL WITH THE IMPACTS OF ENERGY DEVELOPMENT. THE LEGISLATIVE SELECT COMMITTEE ON INDUSTRIAL DEVELOPMENT OUTLINED THE FISCAL IMPACT OF DEVELOPMENT AS FOLLOWS:

- THE EFFECTS OF ENERGY DEVELOPMENT WILL OCCUR THROUGHOUT THE STATE.
- HISTORICAL AND ANTICIPATED REVENUE PATTERNS SHOW THAT MUNICIPALITIES WILL NOT BE CAPABLE OF MEETING PROJECTED DEMANDS FOR SERVICES AND PUBLIC FACILITIES.
- THE ANTICIPATED TAX BASE FROM LARGE INDUSTRIAL DEVELOPMENT WILL ACCRUE PRIMARILY TO THE COUNTIES AND TO SPECIAL DISTRICTS, WHILE THE PUBLIC DEMAND FOR SERVICES WILL FALL ON THE MUNICIPALITIES.
- DEBT RESTRICTIONS LIMIT THE COMMUNITY'S ABILITY TO REASONABLY RESPOND TO NEEDS.
- MAJOR PROBLEMS IN CAPITAL FINANCING INCLUDE SCHOOLS, HOUSING, WATER AND SEWER FACILITIES, AND HIGHWAYS AND ROADS.



THE LEGISLATION PACKAGE ADOPTED BY THE STATE OF WYOMING CONSISTS OF:

1. THE WYOMING COMMUNITY DEVELOPMENT ACT

THE COMMUNITY DEVELOPMENT AUTHORITY IS CAPABLE OF ISSUING UP TO \$100 MILLION IN TAX FREE GENERAL PURPOSE REVENUE BONDS.

THE AUTHORITY CAN BORROW AND LEND MONEY, BUILD AND LEASE PROJECTS, AND PLAY THE ROLE OF A PRIVATE BANK.

2. CONSTITUTIONAL AMENDMENT TO RAISE DEBT LIMITATIONS FOR COUNTIES, CITIES, AND SCHOOL DISTRICTS

3. JOINT POWERS ACT

THIS ACT EXPANDS THE ABILITY OF COUNTIES TO AID CITIES IN FINANCING CAPITAL IMPROVEMENTS.

4. INCREASED SALES TAX DISTRIBUTION

5. END OF USE TAX EXEMPTION

6. COAL TAX FOR IMPACT ASSISTANCE

THIS ASSUMES THAT THE COAL INDUSTRY SHOULD HELP PAY FOR THE IMPACT IT CAUSES. MAXIMUM LIMIT ON THE FUND IS \$120 MILLION.

SIXTY PERCENT OF THIS REVENUE IS TO BE SPENT BY LOCAL GOVERNMENTS AND THE STATE HIGHWAY DEPARTMENT, WITH THE REMAINDER USED TO FINANCE WATER AND SEWER PROJECTS.



# THE NEW TOWN

DUE TO THE RAPID INDUSTRIAL GROWTH IN THE POWDER RIVER BASIN, THE ISOLATION OF MANY INDUSTRIAL SITES, AND THE IMPACTED NATURE OF THE EXISTING COMMUNITIES, THE CREATION OF ONE OR MORE NEW TOWNS WOULD BE A HIGHLY VIABLE ALTERNATIVE TO ATTEMPTING TO ACCOMMODATE POPULATION GROWTH IN THE EXISTING TOWNS. THE CREATION OF A NEW TOWN WOULD EASE THE IMPACT ON SUCH TOWNS AS GILLETTE, PROVIDE AN OPPORTUNITY FOR COMPREHENSIVE PLANNING WHICH COULD PREVENT MANY OF THE PROBLEMS WHICH ARE OCCURRING IN OTHER COMMUNITIES, AND FINALLY LOCATE WORKERS CLOSER TO THEIR PLACE OF EMPLOYMENT, THEREBY AVOIDING A LONG DAILY COMMUTE. THE NEW TOWN COULD PROVIDE A GOOD QUALITY OF LIFE FOR ITS INHABITANTS, AND WOULD PROVIDE A STABLE AND PRODUCTIVE WORK FORCE FOR INDUSTRY.

THE LOCATION OF THE NEW TOWN WOULD BE 50 MILES SOUTH OF GILLETTE, WYOMING, NEAR RENO JUNCTION. THE TOWNSITE IS THREE MILES EAST OF WYOMING HIGHWAY 59 ON A SERVICE ROAD LEADING TO INDUSTRIAL SITES. THIS LOCATION IS WITHIN TEN MILES OF BOTH THE JACOBS RANCH AND BLACK THUNDER MINES. THESE TWO MINES HAVE A PROJECTED EMPLOYMENT OF ABOUT 750, AND PROPOSED MINES IN THE GENERAL AREA COULD DOUBLE OR TRIPLE THIS FIGURE WITHIN A DECADE. EACH JOB IN BASIC INDUSTRY IS ESTIMATED TO CREATE AN ADDITIONAL 1.5 JOBS IN SUPPORT INDUSTRY AND IN THE DELIVERY OF GOODS AND SERVICES. IN ESTABLISHING THE SIZE OF THE NEW TOWN I HAVE ARBITRARILY SET THE NUMBER OF DWELLING UNITS AT ABOUT 1300, YIELDING A POPULATION OF ABOUT 5000 PERSONS.

IT IS MY INTENTION IN THIS PROJECT TO DO THE GENERAL PLANNING AND DESIGN OF THE NEW TOWN WITHOUT BECOMING OVERLY INVOLVED WITH EXACT PROGRAMMING DETAILS. WITHIN THE SCOPE OF MY RESEARCH IT IS AN IMPOSSIBILITY TO DETERMINE THE EXACT NUMBER OF DWELLINGS REQUIRED, THE NUMBER OF CLASSROOMS OR HOSPITAL BEDS, OR THE OR THE EXACT NUMBER OF BUSINESS THAT WILL LOCATE IN THE TOWN. NOR DO I INTEND TO TRY TO DETERMINE THE FINANCIAL MECHANICS THROUGH WHICH THE TOWN WOULD BE FINANCED, OTHER THAN BY SUGGESTING THAT A CONSORTIUM OF THE MAJOR EMPLOYERS IN THE AREA, PERHAPS ACTING THROUGH A DEVELOPER, PERHAPS AIDED BY FUNDS FROM THE WYOMING COMMUNITY DEVELOPMENT AUTHORITY, WOULD BE THE PRIMARY BACKERS OF THE TOWN, WHICH WOULD BENEFIT THEIR INTERESTS BY PROVIDING A STABLE, PRODUCTIVE, WORK FORCE.



## THE PEOPLE

THE INHABITANTS OF THE NEW TOWN WOULD PRIMARILY BE BLUE-COLLAR WORKERS EMPLOYED IN THE ENERGY EXTRACTION INDUSTRY. PREDOMINANT OCCUPATIONS WOULD BE MINING, MILL AND PLANT WORK, AND JOBS IN SERVICE INDUSTRY. IT WOULD BE EXPECTED THAT MOST WORKERS WOULD BELONG TO LABOR UNIONS AND WOULD MAKE A RELATIVELY GOOD INCOME WITH ASSOCIATED BENEFITS. THERE WOULD ALSO BE A NUMBER OF PROFESSIONAL EMPLOYEES LIVING IN THE TOWN, SUCH AS GEOLOGISTS, ENGINEERS, MANAGERS, AND BUSINESSMEN.

THE POPULATION OF THE TOWN WOULD TEND TOWARD YOUNGER PERSONS DRAWN TO THE AREA BY THE AVAILABILITY OF WORK AND HIGH WAGES. THERE WOULD PROBABLY BE AN INITIAL PERIOD OF HIGH TRANSIENCY AMONG THE EMPLOYEES, ESPECIALLY THOSE WHO ARE UNMARRIED, BUT IT WOULD BE EXPECTED THAT WITH THE PROVISION OF GOOD LIVING FACILITIES A PERMANENT POPULATION WOULD BE ESTABLISHED. THIS POPULATION WOULD BE COMPRISED OF YOUNGER COUPLES, WITH AND WITHOUT FAMILIES, AND THAT EVENTUALLY A STABLE COMMUNITY WOULD EVOLVE WITH A REPRESENTATION OF ALL AGE GROUPS.

SOCIOLOGICAL RESEARCH DONE ON THE BLUE-COLLAR WORKERS LIVING IN THE ISOLATED MINING CAMPS OF SHIRLEY BASIN, WYOMING, HAS INDICATED THAT THE LIFESTYLE THERE IS SIMILAR TO THAT OF OTHER BLUE-COLLAR WORKERS LIVING IN LESS ISOLATED SURROUNDINGS, AND CAN GIVE A TYPICAL PROFILE OF THE WORKER AND FAMILY THAT COULD BE EXPECTED TO BE FOUND IN THE NEW TOWN. ABOUT HALF OF THE WORKERS WOULD BE HIGH SCHOOL GRADUATES, ONE QUARTER WOULD HAVE SOME HIGH SCHOOL TRAINING, AND ONE FIFTH WOULD HAVE VOCATIONAL OR COLLEGE TRAINING. THE EDUCATIONAL PROFILE OF THE WIVES IS QUITE SIMILAR. MOST FAMILIES HAVE AT LEAST ONE CHILD AT HOME, WITH ONE THIRD HAVING TWO CHILDREN, AND AN ADDITIONAL THIRD HAVING THREE OR MORE CHILDREN. EDUCATION OF CHILDREN IS STRESSED, WITH MOST PARENTS DESIRING A COLLEGE EDUCATION FOR THEIR OFFSPRING. THE TYPICAL BLUE-COLLAR PATTERN OF NON-AFFILIATION IN VOLUNTARY ORGANIZATIONS COULD BE EXPECTED. WITH THE EXCEPTION OF UNION MEMBERSHIP, ONLY ABOUT ONE THIRD OF THE RESIDENTS COULD BE EXPECTED TO AFFILIATE WITH SUCH AN ORGANIZATION, THOSE BEING PRIMARILY THE LIKES OF THE PTA, LODGES, OR VETERANS GROUPS. THE MAJORITY WILL SHOW A RELIGIOUS PREFERENCE, ALTHOUGH LESS THAN HALF WOULD ATTEND CHURCH REGULARLY. MOST LIESURE TIME IS SPENT WITH THE IMMEDIATE AND EXTENDED FAMILY, HOWEVER, GREATER SOCIAL INTERACTION WITH OTHER FAMILIES COULD BE



EXPECTED DUE TO THE ISOLATED LOCATION AND THE ABSENCE OF AN EXTENDED FAMILY. THE MAJORITY OF LIESURE TIME IS SPENT OUT OF DOORS DURING THE SUMMER, WITH SUCH ACTIVITIES AS HUNTING, FISHING, ROCK HUNTING, PICNICKING, MOTOR EXCURSIONS, AND SPORTS. TELEVISION IS ALSO A MAJOR LIESURE ACTIVITY, AND MOST FAMILIES MAINTAIN A NEWSPAPER SUBSCRIPTION, AS WELL AS A SUBSCRIPTION TO A LEAST ONE MAGAZINE.

THE ARCHITECTURE OF THE NEW TOWN, IN RESPONSE TO THE FUTURE INHABITANTS, SHOULD STRIVE TO ACHIEVE A COMMUNITY WHICH FOSTERS SOCIAL INTERACTION BETWEEN FAMILIES, AND TO LESSEN POSSIBLE SOCIAL ILLS BY PROVIDING ADEQUATE ALTERNATIVES AND OPPORTUNITIES FOR THE POPULACE TO ENJOY ITS LIESURE TIME AND TO DEVELOP OUTSIDE INTERESTS. THE TOWN SHOULD FOSTER THE SENSE OF COMMUNITY, OF "WE". INDIVIDUALISM IS AN IMPORTANT ELEMENT OF THE WESTERN LIFESTYLE, AND THE TOWN SHOULD ALLOW FOR INDIVIDUAL EXPRESSION WITHIN ITS OVERALL FRAMEWORK. THIS IS ESPECIALLY TRUE IN THE HOUSING UNITS. IT SEEMS APPROPRIATE THAT THE ARCHITECTURE OF THE NEW TOWN REFLECT AN INNER WARMTH THAT TENDS TO PERVADE THE PEOPLE. ALTHOUGH THERE OFTEN APPEARS TO BE A COLD HARD SHELL SURROUNDING A PERSON, THERE IS USUALLY A FRIENDLY WILLINGNESS TO LEND A HAND, TO HELP A NEIGHBOR OUT - PERHAPS IT COMES FROM THE SPIRIT OF THE OLD WEST AND THE MUTUAL NEED TO UNITE IN ORDER TO SURVIVE.



## THE PLACE

"...THE MAIN IMPRESSION OF PRAIRIE PLANNING IS THAT OF VASTNESS, THE FEELING THAT THE LITTLE TWO STORY HOUSES ARE FAR TOO PUNY AND TEMPORARY TO MATCH UP TO THE MONUMENTAL, OVERPOWERING SPACE... THE PARADOX OF CONCENTRATED ISOLATIONISM."

-CULLEN

THE PLACE IS NORTH CENTRAL WYOMING. THE PERVADING FEELING IS ONE OF LONLINESS AND INHOSPITALITY. AS FAR AS THE EYE CAN SEE THERE ARE ONLY WIND SWEEPED, TREELESS, YELLOW-BROWN COLORED HILLS. EVEN THE PRAIRIE GRASS AND SAGEBRUSH SEEM TO HAVE A HARD TIME SURVIVING. THEN THERE IS THE WIND, IT IS SELDOM ABSENT. THE PLEASANT COOLING BREEZES OF SUMMER YIELD IN SEPTEMBER TO THE INCESSANT SOUTHWESTERLIES OF FALL AND WINTER. ALL WINTER THE WIND PERSISTS. THIRTY MPH IS COMMON, FOR WEEKS ON END. THE WIND AND COLD ARE TOO MISERABLE TO TOLERATE THE OUTDOORS FOR LONG PERIODS OF TIME.

THE LAND IS SCALELESS, IT EXTENDS WITHOUT MEASURE TO THE HORIZON, WHICH COULD BE A MILE, OR TEN MILES, OR FORTY MILES AWAY. THREE HUNDRED FOOT HIGH COAL SILOS ARE LOST AMONG THE ROLLING HILLS, YET A SINGLE FENCE POST CAN BECOME A MONUMENTAL EVENT.

WHAT THE PLACE DEMANDS OF ARCHITECTURE IS STRENGTH. STRENGTH TO BE WARM AND INVITING, TO BE A "HOME", IN THE MIDST OF THE BARREN, COLD, WINDY LAND. IT DEMANDS THE STRENGTH TO BAR THE ELEMENTS FROM ENTRY INTO MAN'S INNER DOMAIN. THE ARCHITECTURE WANTS INTERIORITY - AN ISLAND MAN CAN CALL HIS OWN, WHERE HE CAN BE SECURE. ARCHITECTURE THAT BLURS THE DISTINCTION BETWEEN INSIDE AND OUTSIDE JUST DOES NOT WORK. THERE MUST BE AN INSIDE, AND AN OUTSIDE. TO LIVE IN AN ILL-DEFINED DOMAIN BETWEEN CREATES PSYCHOLOGICAL HARDSHIP. THE PLACE ALSO DEMANDS AN ARCHITECTURE THAT CAN WITHSTAND THE SCALE OF THE SPACES, THAT CAN REST COMFORTABLY WITHIN THE SPACE, WHILE NOT BECOMING LOST WITHIN IT.

THIS ARCHITECTURE OF STRENGTH, OF INTERIORITY, CAN BE CREATED WITHOUT AFFRONTING THE LAND, IN HARMONY WITH IT. IT CAN BE DONE BY CREATING AN ENVIRONMENT FOR MAN WITHIN THAT OF NATURE'S. MAN ENHANCING NATURE.



## DESIGN IMPLICATIONS

THE ARCHITECT MUST STRIVE TO CREATE BEAUTIFUL, MEANINGFUL, ENRICHING WORKS.  
TO HAVE BEAUTY, ARCHITECTURE MUST BE BASED UPON AN UNDERLYING PRINCIPLE,  
CALL IT ESSENCE, FORM, ORDER. THIS COMES BEFORE DESIGN, BEFORE STYLE.  
TO BE MEANINGFUL, ARCHITECTURE MUST RELATE TO THE EXISTENCE OF THE PEOPLE  
IT SERVES, THEIR SOCIETY, THEIR CULTURE, THE PLACE WHERE IT EXISTS.  
TO BE ENRICHING, ARCHITECTURE MUST BE BOTH COMPREHENSIBLE AND IMAGEABLE.

### FROM PLACE

STRENGTH  
INTERIORITY  
DEFINITION OF INSIDE/OUTSIDE  
IMPLICATION OF THE "OASIS"

### FROM SOCIETY

FOSTER SOCIAL INTERACTION  
PROVIDE RECREATION AND LIESURE FACILITIES  
MAINTAIN INDIVIDUALITY

### FROM MEANINGS

SYMBOLIZE THE IMPORTANCE OF LIESURE AND CONSUMPTION IN OUR SOCIETY BY  
PLACING BUSINESS AND RECREATION IN A DOMINANT CENTRAL LOCATION

THE STRUCTURE OF THE TOWN SHOULD EXPRESS THE DYNAMIC NATURE OF SOCIETY  
BY HAVING IMPLICATIONS FOR GROWTH AND CHANGE

SYMBOLIZE THE DESIRE FOR A RETURN TO HARMONY WITH NATURE, AN END TO  
SELFISHNESS AND WASTEFUL CONSUMPTION, A RETURN TO COMMUNITY

RETURN DIGNITY TO THE HUMAN, AN ARCHITECTURE FOR PEOPLE, AN END TO THE  
DOMINATION OF THE CITY BY THE AUTOMOBILE

EXPRESS THE DUALITY OF THE CITY AS A PLACE OF DYNAMISM, BUT ALSO OF REST,  
LIESURE, RELAXATION, PEACE, CONTEMPLATION.



FROM THE  
NATIONAL IMPERATIVE

ENERGY CONSERVATION  
MASS HOUSING  
MASS TRANSIT  
CONSOLIDATION OF GROWTH  
MANAGEMENT OF URBAN SPRAWL



# DESIGN SOLUTION

SEVERAL MAJOR CONSIDERATIONS COME TO BEAR UPON THE CONCEPT - THE IDEA - OF THE NEW TOWN. THESE RELATE TO THE BASIC CATEGORIES OF PLACE, PEOPLE AND SOCIETY, MEANINGS, AND ENVIRONMENTAL EXIGENCIES. THROUGH THE PROCESS OF STRUCTURALIZATION OF SPACES AND THE EMBODIMENT OF MEANINGS AS DESCRIBED IN THE DESIGN PROCESS IS ACHIEVED THE CREATION OF GENIUS LOCI - THE SPIRIT OF THE PLACE. THIS SPIRIT IS PRIMARILY ONE OF A SMALL MAN-MADE ISLAND, AN OASIS, A COMMUNITY, IN THE MIDST OF A VERY LONELY, INHOSPITABLE LAND.

THE PLACE DEMANDS AN ARCHITECTURE CAPABLE OF STANDING UP TO THE OVERPOWERING SPACES, OF WITHSTANDING THE PHYSICAL ELEMENTS, AN ARCHITECTURE OF STRENGTH. IT DEMANDS AN ARCHITECTURE THAT CLEARLY CREATES A PLACE FOR MAN, ONE IN WHICH HE CAN BE SHELTERED. IT HAS IMPLICATIONS INDICATING A CERTAIN COMPACTNESS AND THE DEFINITION OF WHERE NATURE ENDS AND THE MAN-MADE ENVIRONMENT BEGINS; THE TOWN WANTS TO HAVE AN EDGE.

IN RESPONSE TO THE PEOPLE AND SOCIETY, THE NEW TOWN WANTS TO BECOME A COMMUNITY. IT WANTS TO FOSTER A SENSE OF "WE", OF "OUR TOWN". THE TOWN WANTS TO BE A PLACE ITS INHABITANTS CAN CALL HOME, A HOME OF WHICH THEY CAN BE PROUD. IT WANTS TO BE PERMANENT, TO HAVE ROOTS. THE TOWN WANTS TO OFFER A GOOD ENVIRONMENT IN WHICH TO LIVE AND RAISE A FAMILY.

THE DESIGN OF THE TOWN RECOGNIZES THAT THE POPULACE IS LIKELY TO BE AFFECTED BY SOCIAL PATHOLOGIES PECULIAR TO THIS GROUP OF PEOPLE, AND IT ATTEMPTS TO RESPOND TO BOREDOM, DESPAIR, AND DEPRESSION. IT DOES THIS NOT ONLY BY CREATING A GOOD ENVIRONMENT TO BEGIN, BUT ALSO THROUGH AN ABUNDANCE OF RECREATIONAL FACILITIES WHICH GIVES RESIDENTS THE OPPORTUNITY TO ENJOY LEISURE TIME THAT MIGHT OTHERWISE TURN TO BOREDOM. THE DESIGN CONCEPT FOSTERS SOCIAL INTERACTION THROUGH SUCH MEANS AS GROUP HOUSING, PEDESTRIAN STREETS, AND TOWN FACILITIES WHICH ENCOURAGE THE FACE TO FACE MEETING OF PEOPLE.

IN RESPONSE TO THE NEED FOR MEANING IN THE ARCHITECTURAL CONSTRUCT THE CONCEPT OF THE TOWN DOES NOT ATTEMPT ELABORATE SYMBOLISM, BUT SIMPLY TO FURTHER THE SENSE OF COMMUNITY BY UNDERSCORING THOSE INSTITUTIONS AND ACTIVITIES WHICH FORM THE MAJOR FOCI OF OUR EXISTENCE AS COMMUNITIES OF



PEOPLE. TODAY, THESE FOCII TEND TOWARD THE PURSUIT OF LIESURE AND CONSUMPTION. THE TOWN CONCEPT PLACES BUSINESS AND RECREATION FACILITIES ALONG WITH EDUCATIONAL, CIVIC, AND RELIGIOUS STRUCTURES AT THE CENTER. THIS OCCURS NOT ONLY IN TERMS OF THE GEOGRAPHY OF THE TOWN, BUT ALSO IN VISUAL TERMS. IT EMPHASIZES THOSE THINGS WE ALL USE TOGETHER AS A COMMUNITY.

THE CONCEPT OF THE TOWN REALIZES THAT OUR NATION CAN NO LONGER AFFORD TO BE WASTEFUL OF ITS RESOURCES, AND THAT WE MAY NOT SOME DAY ENJOY OUR PRESENT AFFLUENCE. A COMPACT TOWN DESIGN REDUCES THE NEED FOR ENERGY FOR BOTH HEATING AND TRANSPORTATION NEEDS. MASS HOUSING CONSERVES MATERIAL AND ENERGY. THE ISOLATED LOCATION DICTATES THE MAXIMUM USE OF PREFABRICATED UNITS, WHICH BECOME ECONOMICAL WHEN PRODUCED IN LARGE NUMBERS AND WHICH SAVE ON ERECTION COSTS. THE TOWN COULD ALSO USE A CENTRAL ENERGY SUPPLY SYSTEM, AND WITH AN UNLIMITED SUPPLY OF COAL AT HAND, A CENTRAL COAL FIRED STEAM PLANT IS VIRTUALLY DICTATED.

THE IDEA OF THE TOWN STRESSES AN ALTERNATIVE TO AUTOMOBILES WITHOUT TOTALLY ELIMINATING THEM AT THE PRESENT TIME. YET, IF THE AUTO BECOMES OBSOLETE OR UNUSABLE IN THE FUTURE, THE TOWN MUST BE ABLE TO FUNCTION WITHOUT IT. THIS IMPLIES EITHER PUBLIC TRANSPORTATION, OR BETTER YET, A DESIGN SO COMPACT SO AS TO ALLOW WALKING. THE DESIGN CONCEPT DISCOURAGES USE OF THE AUTOMOBILE BY DESIGNING ROADS AS MERELY A MEANS OF ACCESS, BUT NOT AS AN EFFICIENT DISTRIBUTION SYSTEM. THIS IS ALSO CONSISTENT WITH THE PHILOSOPHY OF MAKING THE CITY A PLACE FOR PEOPLE, RATHER THAN HAVING THEM RELEGATED TO A SECONDARY POSITION BY THE AUTOMOBILE.



## THE ARCHITECTURAL SOLUTION

THE FORM OF THE TOWN IS THE RESULT OF A LONG AND DIFFICULT PROCESS OF EVOLUTION, YET IT IS QUITE SIMPLE - TWO INTERSECTING AXES DEFINING, AND SURROUNDED BY, FOUR RESIDENTIAL QUADRANTS. IT HAS A CENTER AND AN EDGE, YET ALSO HAS CLEAR IMPLICATIONS AS TO HOW FUTURE GROWTH SHOULD OCCUR. THE EAST-WEST AXIS CONTAINS A SINGLE LARGE STRUCTURE HOUSING THE TOWN'S RETAIL BUSINESSES. THE NORTH-SOUTH AXIS IS AN OPEN SPACE FOR THE SITING OF SCHOOLS, CHURCHES, AND RECREATIONAL FACILITIES AND CIVIC STRUCTURES. BOTH OF THESE AXES CONTAIN SUFFICIENT SPACE TO ALLOW FOR A SIGNIFICANT AMOUNT OF GROWTH WITHOUT EXPANDING BEYOND THE ORIGINAL TOWN BOUNDARY. THE RESIDENTIAL QUADRANTS SURROUND THE TWO SPACIAL AXES, EXCEPT AT THE VERY ENDS OF THE AXES, AND CREATE AN EDGE TO THE TOWN. THIS EDGE IS FURTHER REINFORCED BY LOW EARTH BERMS, AND EARTH RAMPS TERMINATING THE ENDS OF THE NORTH-SOUTH AXIS. THESE RAMPS EFFECTIVELY DEFINE THE EXTENT OF THE SPACIAL AXIS, YET VISUALLY EXTEND IT OUT INTO THE REGION. IN THIS WAY THE TOWN, WHILE DEFINING ITS BOUNDARY, CAN PROJECT ITS PRESENCE OUTWARD TO POSSESS THE SURROUNDING SPACES.

THE PROVISION FOR GROWTH IS A CENTRAL ELEMENT OF THE TOWN FORM, YET WAS PROBLEMATICAL FROM ITS INCEPTION. A CONCEPT OF THE TOWN WHICH HAS A CENTER AND AN EDGE IS CONTRADICTORY TO A TOWN DESIGNED TO GROW. YET IF THESE ARE NOT RECONCILED BY A FORM CAPABLE OF BOTH, THE IDEA OF THE TOWN WILL BE LOST IN ONLY A FEW YEARS AS GROWTH OCCURS IN AN UNPLANNED MANNER. THE PROVISION FOR GROWTH IS A CRITICAL PART OF THE TOWN FORM. IN MY SOLUTION IT IS INTENDED THAT GROWTH OCCUR BY EXTENDING THE TOWN OUTWARD ALONG THE NORTH-SOUTH AXIS, ADDING RESIDENTIAL BLOCKS SITED PARALLEL TO THOSE EXISTING UNITS IN THE PARTICULAR QUADRANT WITH A CORRESPONDING LENGTHENING OF THE BLOCKS WHICH DEFINE THE OUTER EXTREMITY OF THE TOWN. THE EARTH BERMS AT THE NORTH AND SOUTH EDGES OF THE TOWN MAY BE LEFT IN PLACE OR REMOVED AS GROWTH OCCURS. THE TOWN EXISTS AS A TOTAL ENTITY AT ANY POINT IN TIME AND AT ANY STAGE OF GROWTH.

IN ITS OVERALL PLAN THE TOWN IS QUITE SMALL, MEASURING ONLY 3200 x 2400 FEET. ITS BOUNDARIES CONTAIN 147 ACRES, YIELDING A NET DENSITY OF 35 PERSONS PER ACRE. THIS IS SMALL ENOUGH THAT A PEDESTRIAN CAN EASILY WALK ANYWHERE IN TOWN, AND ALL MAJOR BUILDINGS ARE LINKED WITH EITHER INTERNAL PEDESTRIAN STREETS OR WITH ELEVATED ENCLOSED WALKWAYS, AS DICTATED BY



CLIMATIC CONDITIONS AT THE SITE. THE AUTOMOBILE HAS BEEN DE-EMPHASIZED, AS THE LIMITED AMOUNT OF ROADWAY IS GENERALLY CONFINED TO THE PERIPHERY OF THE TOWN AND IS INTENDED ONLY TO ALLOW ACCESS TO RESIDENTIAL AREAS, RATHER THAN AS BEING A MEANS TO GET ABOUT TOWN. A MAJOR SERVICE ROAD DOES ENTER THE TOWN ALONG THE CENTER OF THE EAST-WEST AXIS, BUT IT DESCENDS UNDER THE TOWN CENTER AND IS USED FOR SERVICE AND DELIVERIES, AS WELL AS FOR A LIMITED AMOUNT OF PARKING ACCESS.

THE RESIDENTIAL AREAS OF THE TOWN ARE COMPOSED OF BLOCKS OF DWELLING UNITS, EACH CONTAINING AN INTERNAL, OUTWARD LOOKING PEDESTRIAN STREET, LINKED END TO END TO CREATE LONG, LINEAR SUPERBLOCKS. AN EXAMINATION OF THE ATTITUDES OF THE RESIDENTS DICTATED READY ACCESS TO THEIR AUTOS, AND PLACING PARKING DIRECTLY UNDER THE DWELLING UNITS, AT GROUND LEVEL, PROVED MUCH MORE FEASIBLE THAN EITHER UNDERGROUND PARKING WITH ASSOCIATED RAMPS OR PLACING PARKING BESIDE THE UNITS WHERE THE LARGE NUMBER OF AUTOS WOULD BECOME A VISUAL PROBLEM IN ADDITION TO REQUIRING A HUGE AMOUNT OF SPACE. A STORAGE AND SHOP AREA IS ALSO PROVIDED FOR EACH UNIT AT THE GROUND LEVEL. THE RESIDENTIAL BLOCKS CONSIST OF THREE LEVELS OF TERRACED, PREFABRICATED UNITS, STEPPING BACK SO AS TO GIVE MOST UNITS A SOUTH FACING EXTERIOR DECK, WHILE SIMULTANEOUSLY FORMING THE INTERNAL PEDESTRIAN STREET WHICH FACES OUTWARD IN THE OPPOSITE DIRECTION. THIS PARTICULAR ARRANGEMENT TENDED TO OPTIMIZE PRIVATE EXTERIOR SPACE, WHILE YIELDING THE PEDESTRIAN STREET WHICH WAS ALSO VISUALLY CONNECTED WITH THE OUTDOORS. I DID NOT FIND IT IMPORTANT TO PROVIDE EACH DWELLING UNIT WITH A TRADITIONAL GROUND LEVEL "YARD", SO LONG AS A PRIVATE EXTERIOR SPACE WAS MADE AVAILABLE THROUGH THE USE OF DECKS.

EACH RESIDENTIAL UNIT IS COMPOSED OF A BASIC MODULE OF 25 x 32 FEET, PREFABRICATED IN HALVES FOR EASY SHIPMENT, AND ASSEMBLED AT THE SITE. THE MODULES WOULD BE MADE OF PRECAST, POST TENSIONED COMPONENTS, UTILIZING A BEARING WALL SYSTEM. EACH UNIT WOULD HAVE ITS OWN SUPPORTING WALLS, STRUCTURAL FLOOR AND CEILING. WHEN JOINED TOGETHER A CAVITY IS FORMED BETWEEN THE WALLS, AND BETWEEN THE FLOOR AND CEILING, WHICH WOULD CONTAIN MECHANICAL AND SERVICE EQUIPMENT. THIS SYSTEM IS ALSO FIREPROOF. INTERIORS WOULD BE FACTORY FINISHED IN A MULTITUDE OF PLANS AND STYLES, WHILE THE EXTERIOR OF ALL UNITS WOULD BE A LIGHT WHITE COLORED EXPOSED STRUCTURAL CONCRETE. THE UNITS WOULD BE HANDLED SIMILARLY TO CONDOMINIUMS FROM A PROPERTY STANDPOINT, WITH RESIDENTS FREE TO DO AS THEY WISH WITH THE INTERIORS AND THEIR DECK SPACE.



THE TOWN CENTER CONTAINS ALL RETAIL BUSINESS ACTIVITY AND IS THE MAJOR BUILDING OF THE TOWN. WITH AN OVERALL LENGTH OF 1200 FEET, THE EQUIVALENT OF TWO CITY BLOCKS, THE CENTER BECOMES THE DOMINANT DESIGN ELEMENT IN THE TOWN. THE CENTER CONSISTS OF AN UNDERGROUND SERVICE AND PARKING LEVEL, TWO LEVELS OF RETAIL BUSINESS, AND A THIRD LEVEL OF OFFICES. INTERNALLY THE CENTER CONTAINS A THREE STORY DEEP PEDESTRIAN MALL WHICH OPENS INTO A LARGE OPEN SPACE AT THE CENTER OF THE BUILDING, WHICH ALSO COINCIDES WITH THE GEOGRAPHICAL CENTER OF THE TOWN. THE BUILDING LITERALLY IS AN ENCLOSED AND SKYLIGHTED MAINSTREET FOR PEOPLE.

THE BUILDING EXPRESSES A TENSION WHICH WANTS TO DRAW IT OUTWARD ALONG THE EAST-WEST AXIS AND INTO THE CRESENTS FORMED BY THE RESIDENTIAL UNITS. THIS TENSION IS REFLECTED IN THE CONNECTIONS WHERE THE PEDESTRIAN WALKS PENETRATE THE STRUCTURE, AND ALSO IN THE FACADE. MY DESIRE IN GIVING THE BUILDING A TENSILE QUALITY IS TO STRESS THE FACT THAT IT IS TO CONTINUE TO GROW OUTWARD, AND TO REFLECT THE SPECIAL NATURE OF THE CENTRAL UNIT AT THE CENTER OF THE TOWN. THE FACADE OF THE TOWN CENTER IS TREATED AS A WEIGHTLESS PLANE WHICH LITERALLY FLOATS ABOVE THE GROUND, SHELTERING AN ARCADE BELOW. THE SIMPLICITY OF ITS TREATMENT RELATES TO THE MONUMENTAL SCALE OF THE SURROUNDING REGION, WHERE ANY SMALL ARTICULATIONS OR REPETITIVE UNITS WOULD BECOME LOST. THE FACADE UNDERScores UNITY ON A VERY LARGE SCALE. BY CANTILEVERING THE FACADE OUTWARD TWELVE FEET AT THE SECOND LEVEL, AN ARCADE IS CREATED AT GROUND LEVEL THAT CAN BE SCALED TO THE PEDESTRIAN, WHILE THE REST OF THE STRUCTURE IS SCALED TO RELATE TO THE TOWN AND REGION. THE FACADE WOULD BE MADE OF A SLIGHTLY LUSTERous BLUE-TONED METAL PANEL AND A SLIGHTLY REFLECTIVE BLUE GLASS. THIS GIVES THE FACADE AN ENERGY WHICH EMPHASIZES ITS LIGHTNESS AND UNITY, AND ESTABLISHES SOMEWHAT OF A CONTRADICTORY ELEMENT WHEN ONE CONSIDERS THAT SUCH A LARGE ELEMENT SHOULD BE VERY HEAVY AND SHOULD BE SUPPORTED IN A MUCH MORE OBVIOUS MANNER RATHER THAN GIVEN A FLOATING APPEARANCE. THIS TREATMENT OF THE TOWN CENTER DIFFERENTIATES IT FROM THE RESIDENTIAL BLOCKS, ITS UNIQUENESS IS UNDERScoreD, AND THUS ITS IMPORTANCE AND CENTRALITY ARE EMPHASIZED.

ELEVATED PEDESTRIAN WALKS CONNECT THE VARIOUS BUILDINGS OF THE TOWN AND PERMIT PEDESTRIAN MOVEMENT IN ALL CLIMATIC CONDITIONS. THE TWO PRIMARY "TUBES" PENETRATE THROUGH THE TOWN CENTER AND DEFINE THE LATERAL EDGES OF THE NORTH-SOUTH AXIS. THE TUBES ARE ELEVATED ONE LEVEL ABOVE GROUND TO EASILY JOIN THE PEDESTRIAN WALKS IN THE RESIDENTIAL BLOCKS, AND TO ALLOW



OPEN SPACE TO FLOW UNDER THEM. THE WALKWAYS ASSUME THE FORM OF TUBES TO MORE EASILY INTEGRATE INTO A DESIGN VOCABULARY WHICH IS VERY MACHINE-LIKE IN NATURE, CONSIDERING THE LARGE NUMBER OF PREFABRICATED ELEMENTS USED IN THE TOWN AND THE VARIETY OF MACHINE PRODUCED SURFACES SUCH AS GLASS AND METAL PANELS. THESE TUBES ALSO PICK UP AN INDUSTRIAL THEME WHICH CAN BE SEEN IN A NUMBER OF THE NEARBY INDUSTRIAL PLANTS SUCH AS THE HUGE COAL STORAGE SILOS WITH THEIR COVERED CONVEYORS.

I CONSIDER THE TOWN TO BE COMPOSED OF A NUMBER OF INDIVIDUAL SPACES WHICH ARE LINKED TOGETHER VISUALLY INTO A FLUID SPACIAL CONTINUUM OF VARIOUS DOMAINS. THESE SPACES ARE DEFINED BY EDGES CREATED BY BUILDINGS, THE PEDESTRIAN TUBES, AND THE EARTH BERMS. MAJOR SPACES ARE THOSE THAT OCCUR ON THE NORTH-SOUTH AXIS, AND THE EAST-WEST AXIS, WHICH INCLUDES THE RESIDENTIAL CRESENTS. MINOR SPACES OCCUR WITHIN THE RESIDENTIAL NEIGHBORHOODS. THE BOUNDARIES OF THE SPACES OF THE TWO MAJOR AXES ARE HANDLED IN A RATHER FORMAL, SYMMETRICAL MANNER TO STRESS THEIR CENTRALITY AND THEIR CONTINUITY AS DOMAINS, YET THEIR INTERNAL STRUCTURING IS MUCH LESS RIGID. GENERALLY, THE SPACES WITHIN THE TOWN BECOME LESS AND LESS FORMALLY DEFINED AND STRUCTURED AS ONE PROGRESSES FARTHER AWAY FROM THE TOWN CENTER AND THE MAJOR AXES.

THE MOST OBVIOUS SINGLE SPACE WITHIN THE TOWN IS THE OPEN LAND OF THE NORTH-SOUTH AXIS. THIS AREA IS THE SITE FOR PUBLIC, EDUCATIONAL, RECREATIONAL, AND RELIGIOUS BUILDINGS. AS THESE BUILDINGS ARE CONSTRUCTED, THE OVERALL FORMAL HANDLING OF THE SPACE WILL BE DIFFERENTIATED INTO A COLLECTION OF SMALLER, LESS STRUCTURED SPACES, WHILE RETAINING THE DEFINITION OF THE AXIS AS A DOMAIN WITHIN THE FABRIC OF THE TOWN.

THE TWO SPACES DEFINED BY THE RESIDENTIAL CRESENTS WILL ABSORB GROWTH OF THE TOWN CENTER. ALTHOUGH THE EDGES OF THESE SPACES ARE FORMALLY STRUCTURED BY THE DWELLING UNITS AND PLANTING, THEIR INTERIORS, PRIOR TO ANY FUTURE GROWTH, ARE USED AS LOOSELY STRUCTURED RECREATION AREAS.

SPACES WITHIN THE RESIDENTIAL NEIGHBORHOODS ARE HANDLED VERY INFORMALLY, BUT DO RETAIN DEFINITION OF THEIR EDGES THROUGH PLANTING AND BERMING SO AS TO DEFINE SMALL DOMAINS. I DID NOT THINK THESE SPACES HAD TO BE STRUCTURED OR HAVE A FOCUS, AND THAT BEING IN A RESIDENTIAL AREA THE MORE INFORMALLY THEY WERE TREATED, THE BETTER THE SOLUTION.



FROM OUTSIDE THE TOWN, IT ASSUMES THE APPEARANCE OF A WALLED CITY. EARTH BERMS AND THE LONG, LOW BLOCKS OF DWELLINGS CREATE A DEFINITE EDGE WHICH PREVENTS THE INTRUSION OF EXTERIOR SPACES, WHILE YET EXTENDING THE PRESENCE OF THE TOWN OUTWARD THROUGH THE MEANS OF THE VISUALLY UNTERMINATED NORTH-SOUTH AXIS. THE TOWN CENTER BECOMES THE DOMINANT VISUAL ELEMENT OF THE TOWN AND GIVES DEFINITION TO THE EAST-WEST AXIS, AS WELL AS DEFINING THE CENTER OF THE TOWN.

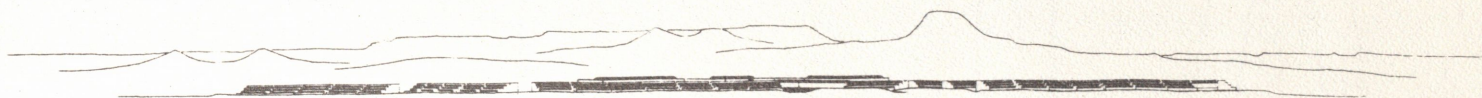
## CONCLUSION

MY NEW TOWN IS INTENDED TO SHOW THAT THERE IS AN ALTERNATIVE TO THE FORM TAKEN BY OUR PRESENT CITIES AND TOWNS. IT IS A CITY OF TRANSITION, ONE THAT WE CAN USE AND LIVE IN HAVING OUR PRESENT ATTITUDES AND LIFESTYLE, YET ONE THAT WILL HELP US TO ADJUST TO NEW ATTITUDES AND A NEW LIFESTYLE THAT WE WILL SOMEDAY HAVE TO ADOPT IN RESPONSE TO THE NECESSITY TO CONSERVE RESOURCES. THIS CITY OF TRANSITION WILL GIVE US THE TIME TO LEARN THESE NEW ATTITUDES AND VALUES, RATHER THAN HAVING THEM FORCED UPON US BY AN IMPENDING CATASTROPHE. MY TOWN ALSO DEMONSTRATES THAT WE CAN HAVE CITIES THAT CONTRIBUTE TO THE DIGNITY OF THE HUMAN BEING, CITIES THAT ARE PLACES FOR PEOPLE.

THIS PROJECT, AS A THESIS, HAS HELPED CLARIFY MY UNDERSTANDING OF THE MANNER IN WHICH I DESIGN, AND HAS ALSO SHOWN ME HOW TO DESIGN SO AS TO INCORPORATE MEANINGS AND VALUES. I BELIEVE THAT THE PROCESS OF CREATING THE GENIUS LOCI - THE SPIRIT OF THE PLACE - IN RESPONSE TO MEANINGS AND VALUES, EITHER REVEALED AT THE PLACE OR BY THE PEOPLE, OR IN RESPONSE TO VARIOUS EXIGENCIES, HAS BEEN DEMONSTRATED NOT ONLY TO WORK, BUT ALSO TO YIELD VALID AND WORTHWHILE RESULTS.

I BELIEVE THAT WE CAN CREATE BEAUTY IN OUR WORKS, WORKS THAT HAVE AND CONVEY MEANING, AND THAT THIS CAN BE DONE IN HARMONY WITH NATURE. I FURTHER BELIEVE THAT THE MEANS TO THESE GOALS IS THE CREATION OF THE SPIRIT OF THE PLACE.

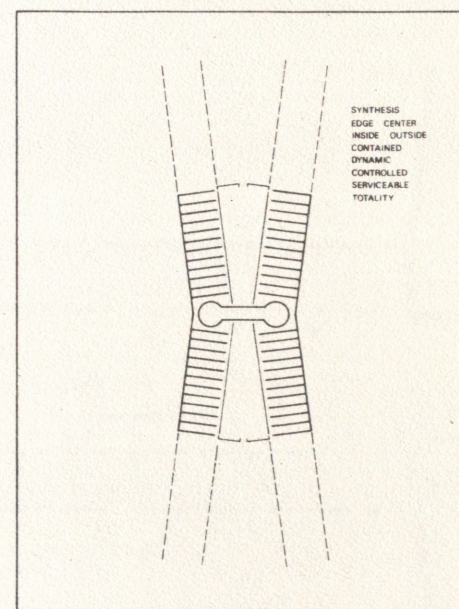
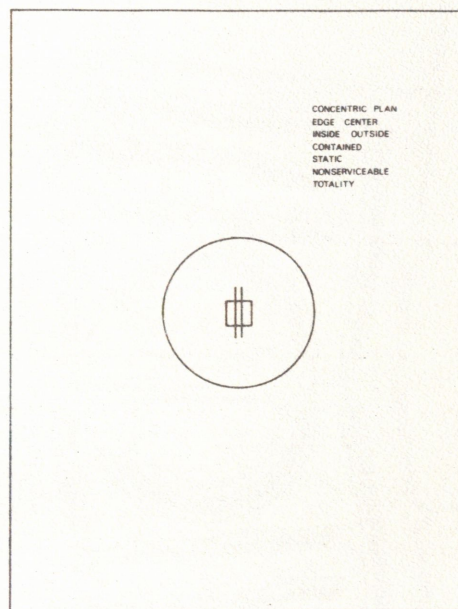
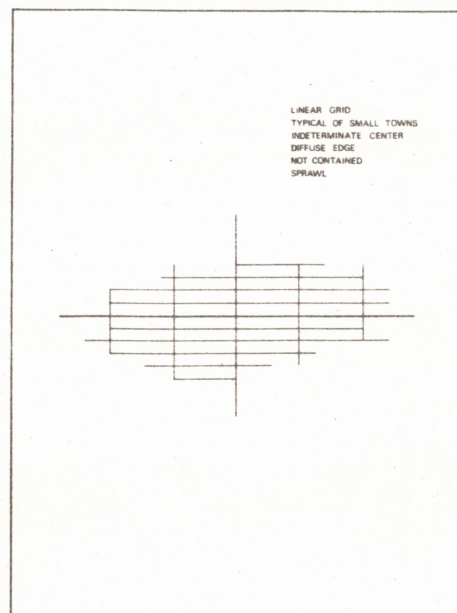




AMONG THE MOST PRESSING NEEDS FACING ARCHITECTS TODAY  
ARE TO CREATE BEAUTY IN OUR WORK, TO INSTILL MEANING  
IN OUR WORK, AND TO DO SO IN A MANNER THAT IS  
SYMBIOTIC WITH NATURE  
THIS CAN BE DONE THROUGH THE CREATION OF  
'GENIUS LOCI' THE SPIRIT OF THE PLACE

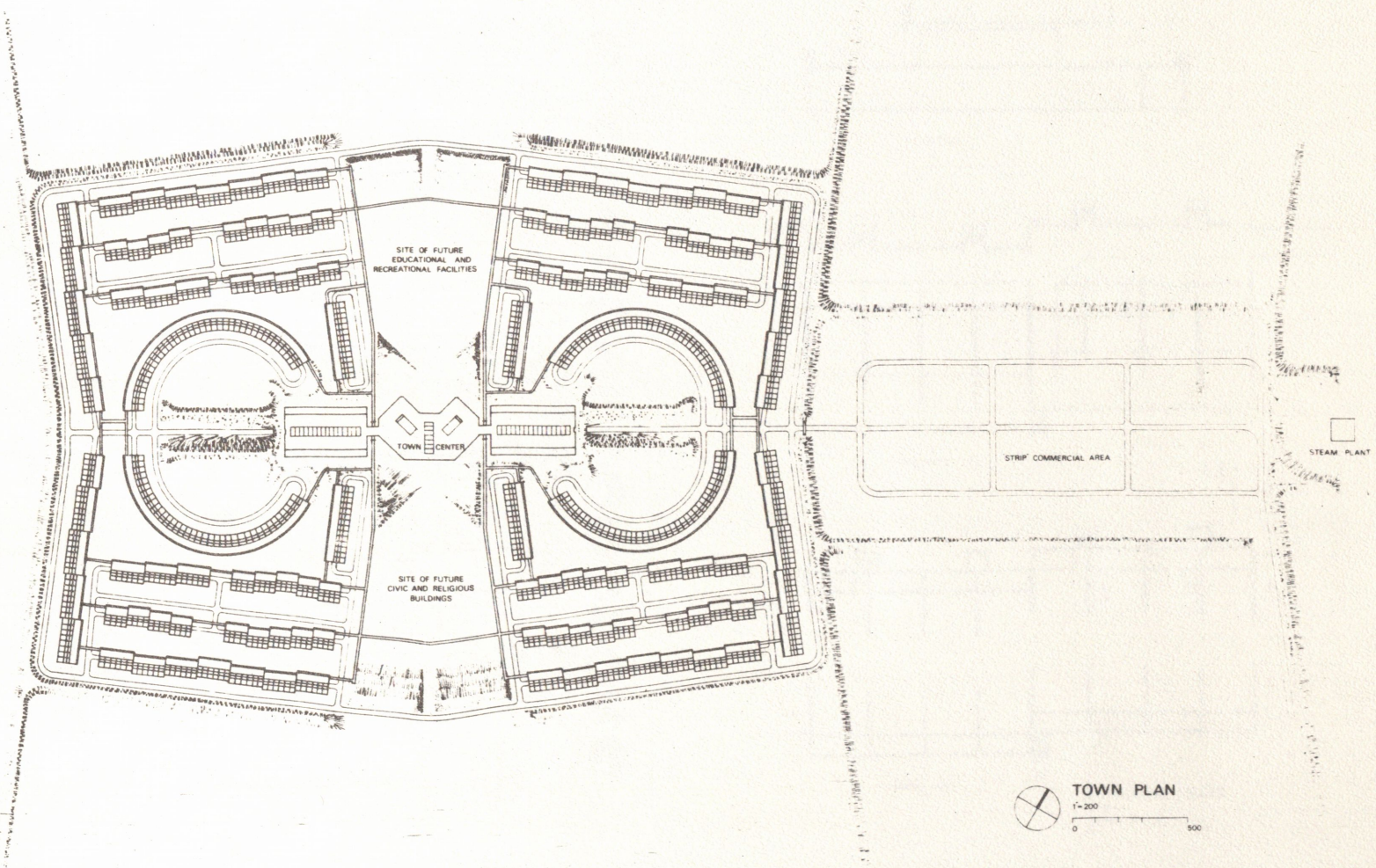
KIM ALAN RACKLEY  
THESIS 1977



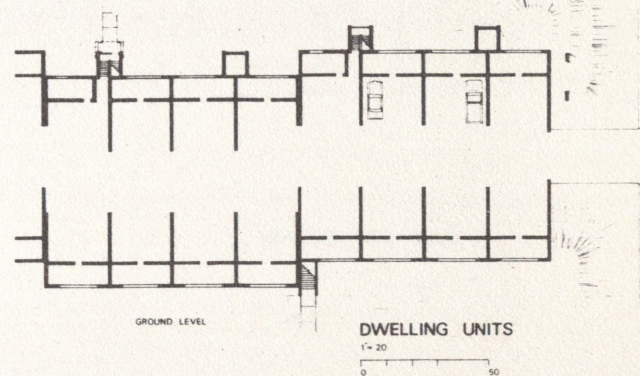
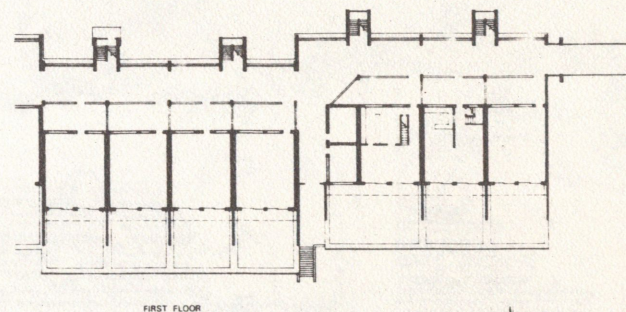
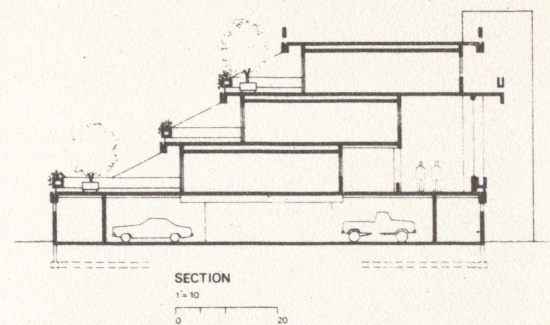
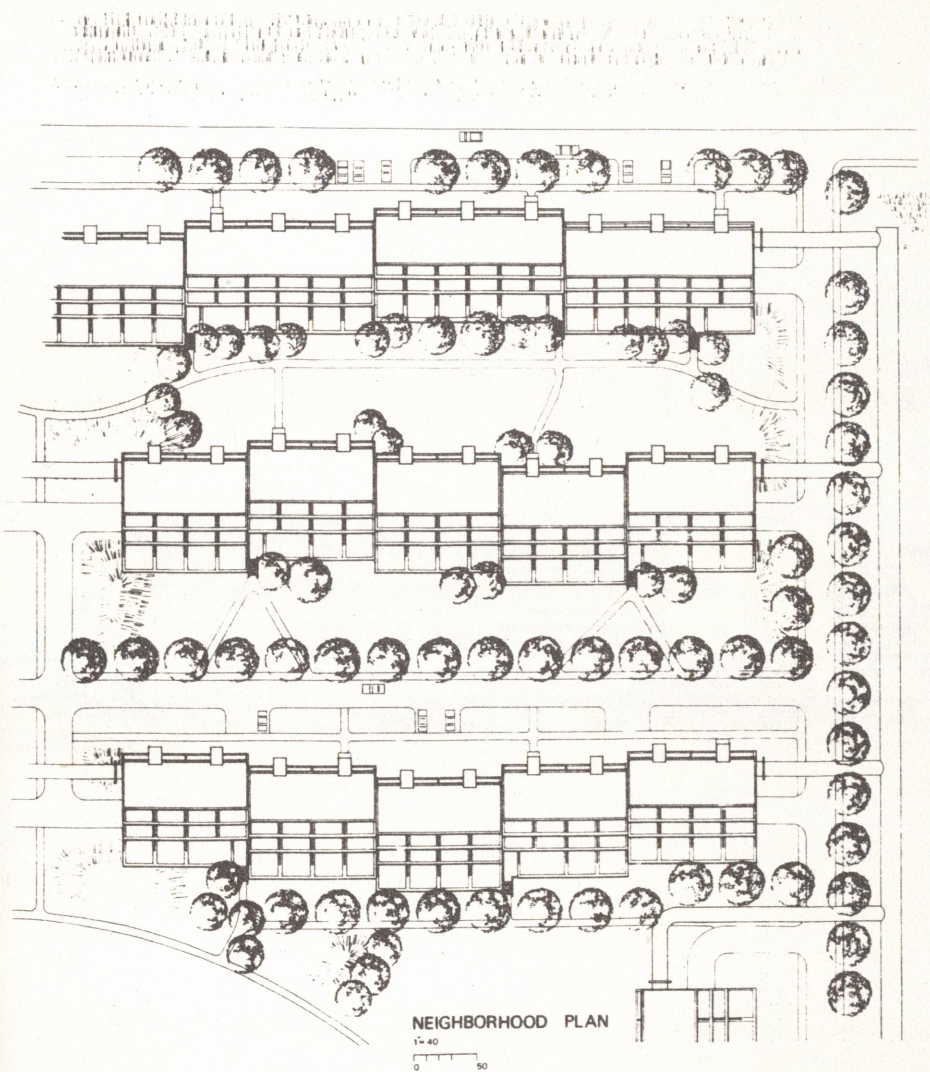


GENESIS OF PLAN

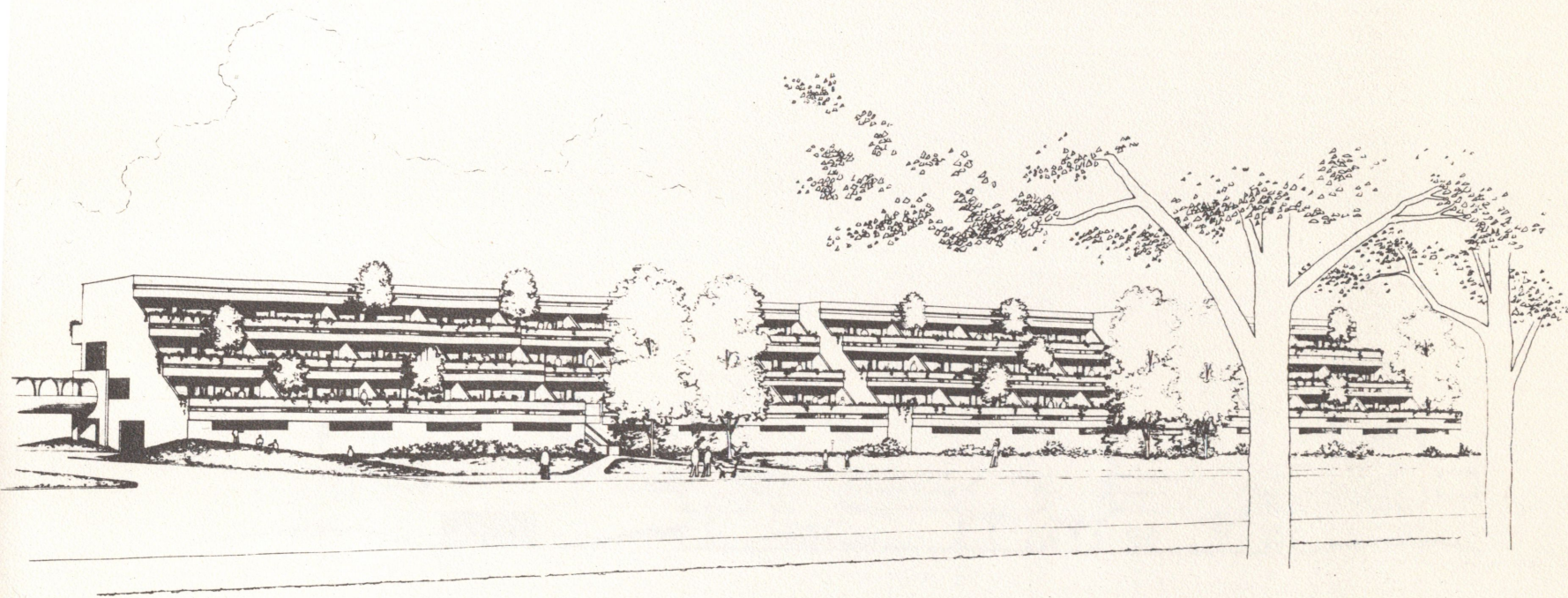






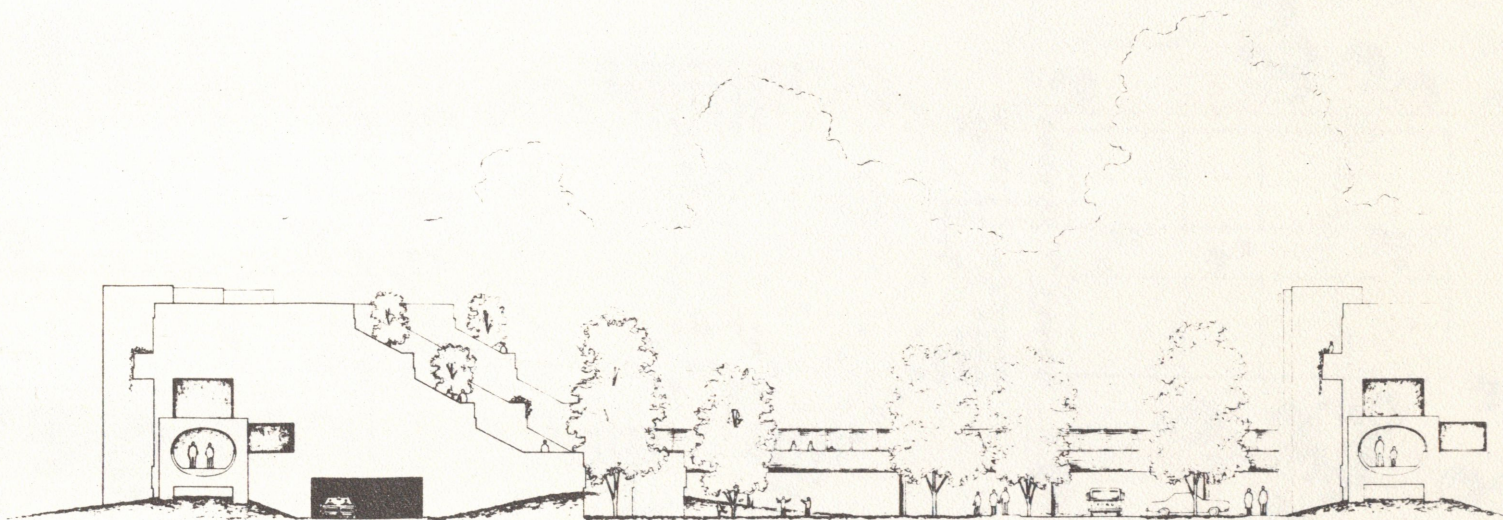






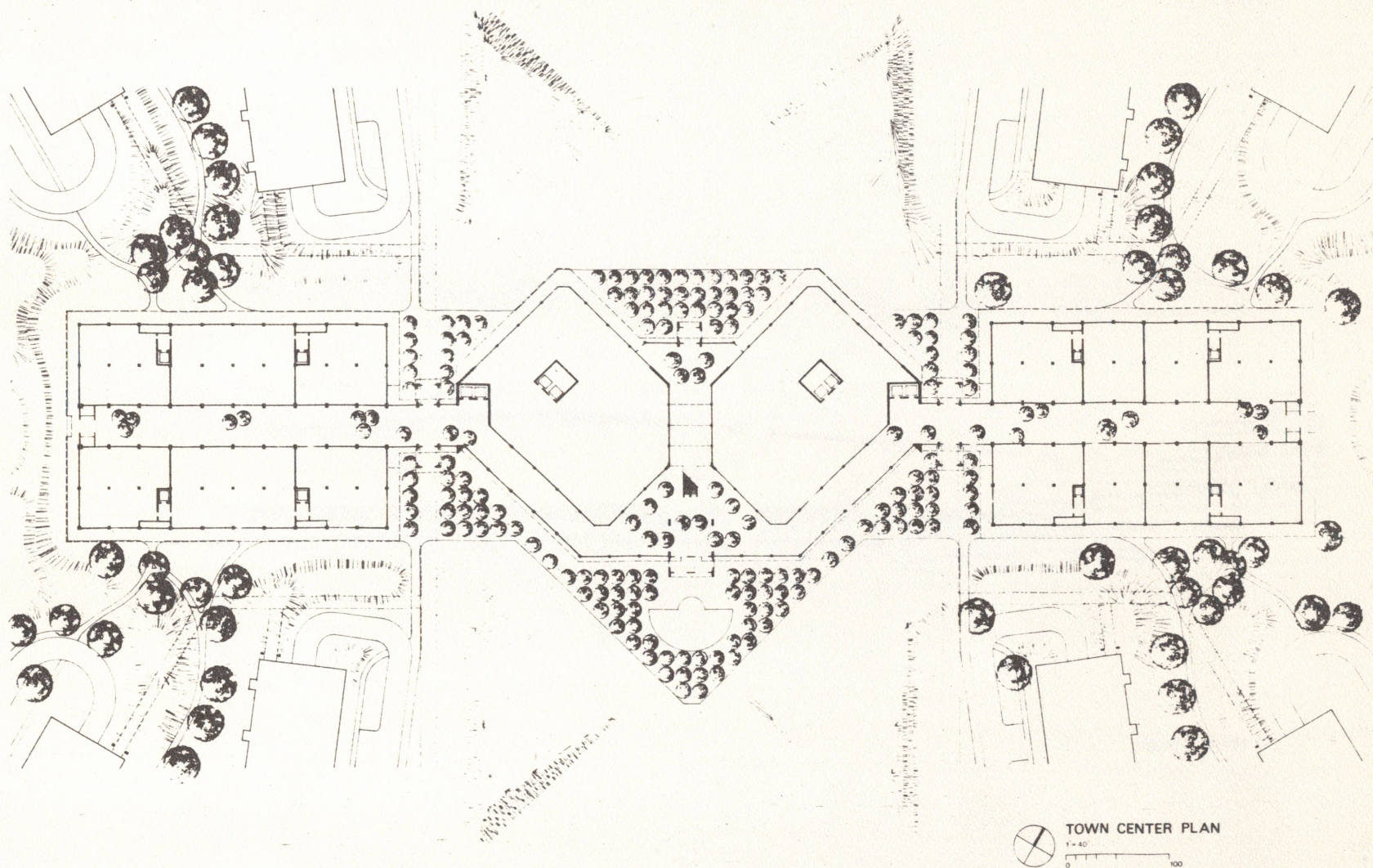
NEIGHBORHOOD BLOCK





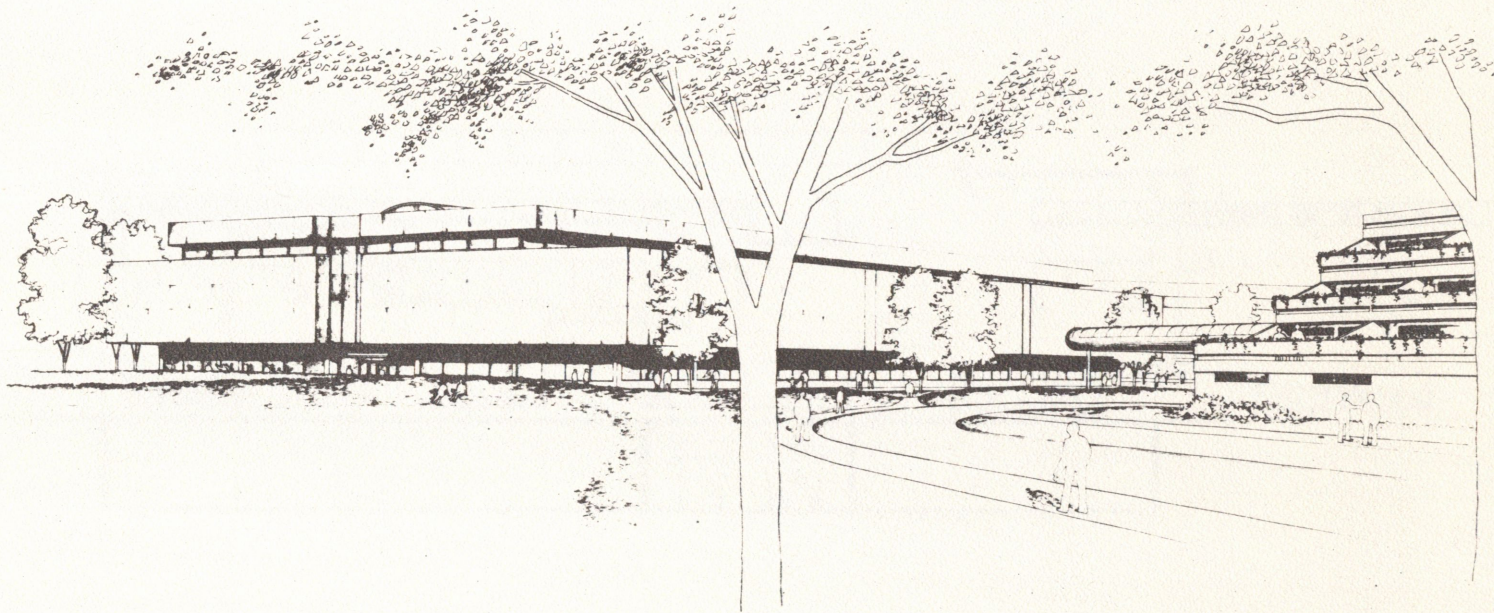
NEIGHBORHOOD





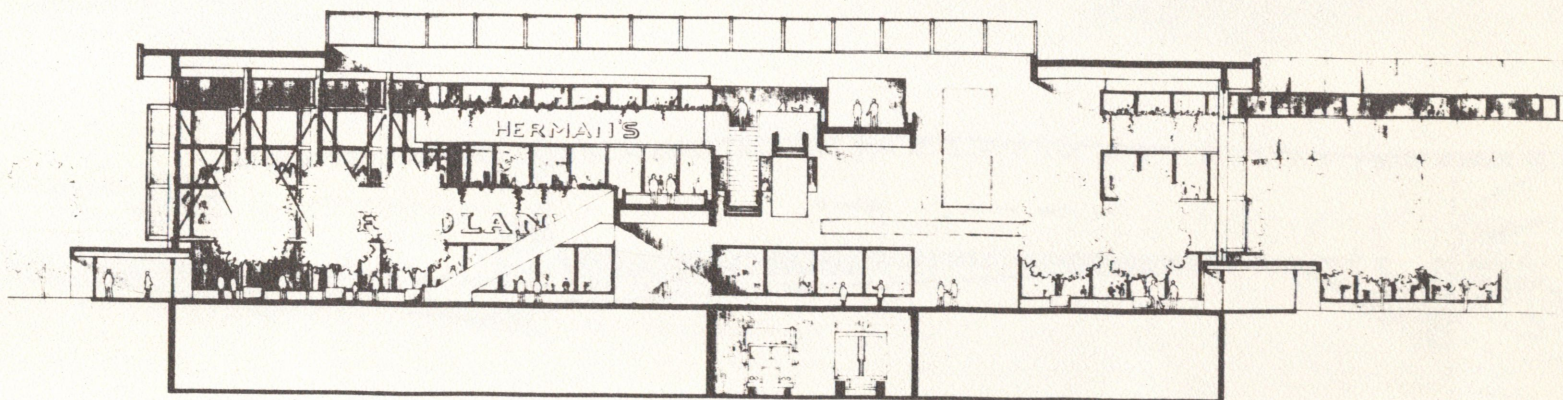
TOWN CENTER PLAN  
1" = 40'  
0 100





TOWN CENTER

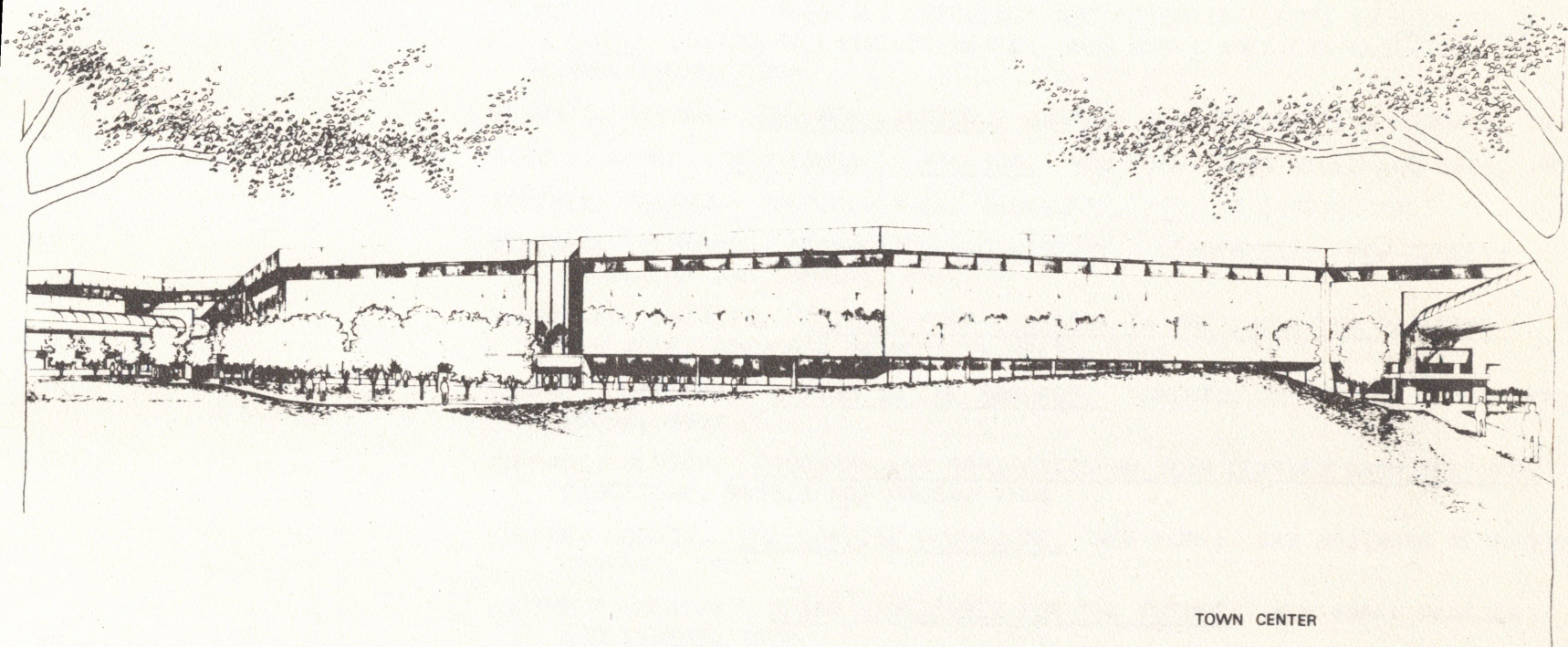




TOWN CENTER SECTION

1" = 10'  
0 25





TOWN CENTER



# BIBLIOGRAPHY

- ALEXANDER, CHRISTOPHER. THE OREGON EXPERIMENT. NEW YORK: OXFORD UNIVERSITY PRESS, 1975
- ALLEN, JAMES. THE COMPANY TOWN IN THE AMERICAN WEST. NORMAN, OKLAHOMA: UNIVERSITY OF OKLAHOMA PRESS, 1966
- ARDALAN, NADER, AND BAKHTIAR, LALEH. THE SENSE OF UNITY. CHICAGO: UNIVERSITY OF CHICAGO PRESS, 1973
- ARNHEIM, RUDOLPH. "GESTALT PSYCHOLOGY AND ARTISTIC FORM", IN ASPECTS OF FORM. EDITED BY LANCELOT WHYTE. NEW YORK: AMERICAN ELSEVIER PUBLISHING, 1968
- BABBITT, IRVING. THE NEW LAOKOON. BOSTON: HOUGHTON MIFFLIN COMPANY, 1910
- BAILEY, JAMES. NEW TOWNS IN AMERICA. NEW YORK: JOHN WILEY AND SONS, 1973
- BARTHES, ROLAND. "SEMIOLOGY AND URBANISM", VIA, II (1973)
- BERENSON, BERNARD. AESTHETICS AND HISTORY. GARDEN CITY, NEW JERSEY: DOUBLEDAY AND COMPANY, 1948
- BLANSHARD, FRANCIS. RETREAT FROM LIKENESS IN THE THEORY OF PAINTING. NEW YORK, COLUMBIA UNIVERSITY PRESS, 1949
- CARVER, HUMPHERY. CITIES IN THE SUBURBS. TORONTO: UNIVERSITY OF TORONTO PRESS, 1962
- CONRADS, ULRICH. PROGRAMS AND MANIFESTOS ON 20TH CENTURY ARCHITECTURE. CAMBRIDGE, MASS.: MIT PRESS, 1964
- CULLEN, GORDON. THE CONCISE TOWNSCAPE. NEW YORK: VAN NOSTRAND REINHOLD COMPANY, 1961
- DAHINDEN, JUSTUS. URBAN STRUCTURES FOR THE FUTURE. NEW YORK: PRAEGER PUBLISHERS, 1972
- DOBER, RICHARD. ENVIRONMENTAL DESIGN. NEW YORK: VAN NOSTRAND REINHOLD COMPANY, 1969
- EASTMAN, JOHN. "BLUE-COLLAR COMMUNITY: A DESCRIPTIVE ANALYSIS OF THE FAMILY LIFE STYLE OF URANIUM WORKERS IN AN ATYPICAL SOCIAL ENVIRONMENT". MASTER'S THESIS. DEPARTMENT OF SOCIOLOGY, UNIVERSITY OF WYOMING, LARAMIE. 1972



- ECO, UMBERTO. "FUNCTION AND SIGN: SEMIOTICS OF ARCHITECTURE", VIA II (1973)
- ERICKSON, RONALD. "SOCIAL IMPACTS OF COAL GASIFICATION"
- FEIN, ALBERT. FREDERICK LAW OLMSTEAD AND THE AMERICAN ENVIRONMENTAL TRADITION. NEW YORK: GEORGE BRAZILLER, 1972
- GADOL, JOAN. LEON BATTISTA ALBERTI - UNIVERSAL MAN OF THE EARLY RENAISSANCE. CHICAGO: UNIVERSITY OF CHICAGO PRESS, 1969
- GOMBRICH, E.H. "MEDITATIONS ON A HOBBY HORSE", IN ASPECTS OF FORM. EDITED BY LANCELOT WHYTE. NEW YORK: AMERICAN ELSEVIER PUBLISHING, 1968
- GOLD, RAYMOND. "SOCIAL IMPACTS OF STRIP MINING AND OTHER INDUSTRIALIZATIONS OF COAL.
- INTERNATIONAL CITY MANAGERS ASSOCIATION. PRINCIPLES AND PRACTICE OF URBAN PLANNING. 1968
- JACOBS, JANE. THE DEATH AND LIFE OF GREAT AMERICAN CITIES. NEW YORK: RANDOM HOUSE, 1961
- JENCKS, CHARLES. MODERN MOVEMENTS IN ARCHITECTURE. GARDEN CITY, NEW JERSEY: ANCHOR PRESS, 1973
- JOHNSON, JAMES. URBAN GEOGRAPHY. OXFORD: PERGAMON PRESS, 1972
- KAHN, LOUIS. "FORM AND DESIGN" IN LOUIS I. KAHN. VINCENT SCULLY, JR. NEW YORK: GEORGE BRAZILLER, 1962
- LEMASTERS, E.E. BLUE-COLLAR ARISTOCRATS. MADISON, WISCONSIN: THE UNIVERSITY OF WISCONSIN PRESS, 1975
- LEVITAN, SAR. BLUE-COLLAR WORKERS. NEW YORK: MCGRAW-HILL, 1971
- LEWIS, DAVID. URBAN STRUCTURE. NEW YORK: JOHN WILEY AND SONS, 1968
- LYNCH, KEVIN. THE IMAGE OF THE CITY. CAMBRIDGE: THE MIT PRESS, 1960
- MACKENZIE, GAVIN. THE ARISTOCRACY OF LABOR. CAMBRIDGE: CAMBRIDGE UNIVERSITY PRESS, 1973
- MARITAIN, JACQUES. ART AND SCHOLASTICISM. NEW YORK: CHARLES SCRIBNER'S SONS, 1923



MONTANA ENERGY ADVISORY COUNCIL STAFF REPORT. "MONTANA ENERGY POSITION PAPER", 1976

MOUNTAIN WEST RESEARCH, INCORPORATED. "ROSEBUD COUNTY, MONTANA ECONOMIC-DEMOGRAPHIC ANALYSIS, BASELINE AND PROJECTIONS 1977-1990, JUNE, 1976

NEWTON, NORMAN. DESIGN ON THE LAND. CAMBRIDGE: THE BELKNAP PRESS, 1971

NORBERG-SCHULZ, CHRISTIAN. INTENTIONS IN ARCHITECTURE. CAMBRIDGE: MIT PRESS, 1965

NORBERG-SCHULZ, CHRISTIAN. MEANING IN WESTERN ARCHITECTURE. NEW YORK: PRAEGER PUBLISHERS, 1975

OLIVER, PAUL. SHELTER AND SOCIETY. NEW YORK: PRAEGER PUBLISHERS, 1969

OSBORNE, HAROLD. AESTHETICS AND ART THEORY. NEW YORK: E.P. DUTTON COMPANY, 1970

RAYMOND, GEORGE. THE ESSENTIALS OF AESTHETICS. NEW YORK: GEORGE PUTNAM SONS, 1909

RAPOPORT, AMOS. HOUSE FORM AND CULTURE. ENGLEWOOD CLIFFS, NEW JERSEY: PRENTICE-HALL, 1969

READ, HERBERT. ICON AND IDEA. NEW YORK: SCHOCKEN BOOKS, 1965

SANTAYANA, GEORGE. THE SENSE OF BEAUTY. NEW YORK: CHARLES SCRIBNER SONS, 1936

SCULLY, VINCENT. AMERICAN ARCHITECTURE AND URBANISM. PRAEGER PUBLISHERS, 1969

SMITHSON, ALISON. TEAM 10 PRIMER. CAMBRIDGE: THE MIT PRESS, 1968

TAYLOR, JOHN. DESIGN AND EXPRESSION IN THE VISUAL ARTS. NEW YORK: DOVER PUBLICATIONS, 1964

VENTURI, ROBERT. COMPLEXITY AND CONTRADICTION IN ARCHITECTURE. NEW YORK: THE MUSEUM OF MODERN ART, 1966

VITRUVIUS. THE TEN BOOKS ON ARCHITECTURE. NEW YORK: DOVER PUBLICATIONS



MONTANA STATE UNIVERSITY LIBRARIES  
stks 720.6.M76R115 CA  
A new town in the Powder River Basin of



3 1762 00158544 5

~~107540~~  
~~100.0~~  
~~1110~~  
~~1115~~



