

City Clerk
400 N. 1st St.
Sparks, NV 89411

8.2 (38) 6.11 (94)
11-13-01 10.22.01

BILL NO. 2279

INTRODUCED BY COUNCIL

ORDINANCE NO. 2113
See Ord 2112; T-2-00 Sky Ridge Subdivision

Z-7-00 - Barker Homes Inc.

A GENERAL ORDINANCE REZONING REAL PROPERTY OWNED BY BARKER HOMES INC. FROM PD (PLANNED DEVELOPMENT - CANYON HILLS) TO PD (PLANNED DEVELOPMENT - SKY RIDGE) ON APPROX. 10.73 ACRES LOCATED AT THE EASTERN TERMINUS OF DISC DRIVE AND WESTERN TERMINUS OF CANTINA DRIVE AND THE EASTERN TERMINUS OF CLOUD PEAK DRIVE; AND PROVIDING OTHER MATTERS PROPERLY RELATING THERETO.

THE CITY COUNCIL OF THE CITY OF SPARKS DOES ORDAIN:

SECTION 1: The property described in Exhibit "A" which is attached hereto and incorporated herein by reference, situated in the City of Sparks, County of Washoe, State of Nevada, is hereby changed from PD (Planned Development - Canyon Hills) to PD (Planned Development - Sky Ridge) classification.

SECTION 2: The plan (Exhibit B), together with its errata sheets (Exhibit C), subject to the terms and conditions contained within the findings of fact accompanying this action (Exhibit D), and submitted for final approval, is hereby certified in accordance with N.R.S. 278A.570.

SECTION 3: The zoning map of the City of Sparks is hereby amended in accordance with the rezoning herein.

SECTION 4: All ordinances or parts of ordinances in conflict herewith are hereby repealed.

SECTION 5: The City Clerk is instructed and authorized to publish the title to this ordinance as provided by law and to record the plan certified herein as provided by law.

SECTION 6: This ordinance shall become effective upon passage, approval and publication.

SECTION 7: The provisions of this ordinance shall be liberally construed to effectively carry out its purposes in the interest of the public health, safety, welfare and convenience.

SECTION 8: If any subsection, phrase, sentence or portion of this section is for any reason held invalid or unconstitutional by

CITY OF SPARKS
OFFICE OF THE CITY CLERK

OCT 30 2001



8.2 (39)
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any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions.

SECTION 9: The City Council finds that this ordinance is not likely to impose a direct and significant economic burden upon a business or directly restrict the formation, operation or expansion of a business, or is otherwise exempt from Nevada Revised Statutes Chapter 237.

PASSED AND ADOPTED this 13th day of NOVEMBER, 2001, by the following vote of the City Council:

AYES: SALERNO, MARTINI, CARRIGAN, SCHMITT

NAYS: MAYER

ABSENT: NONE

ABSTAIN: NONE

APPROVED this 13th day of NOVEMBER, 2001 by:

TONY ARMSTRONG, Mayor

ATTEST:

DEBORINE L. DOLAN
City Clerk
(PUB. 11/15/2001)



APPROVED AS TO FORM & LEGALITY:

CHESTER H. ADAMS
City Attorney

CITY OF SPARKS
OFFICE OF THE CITY CLERK
OCT 30 2001





**Zone Change for Barker Homes Parcel
Legal Description of
PD (Canyon Hills) to PD (Sky Ridge)**

All that certain real property situate within the West Half (W1/2) of Section Twenty-Six (26), Township Twenty North (T.20 N.), Range Twenty East (R.20 E.), M.D.M., City of Sparks, Washoe County, Nevada, being more particularly described as follows:

Commencing at the north quarter corner of said Section Twenty-Six;

THENCE along the north line of said Section Twenty-Six, North 89°23'44" West, 936.83 feet to the POINT OF BEGINNING;

THENCE from said Point of Beginning, South 83°00'00" East, 46.51 feet;

THENCE the following sixteen courses:

- South 70°41'00" East, 48.67 feet;
- South 49°55'00" East, 86.06 feet;
- South 14°55'00" East, 82.28 feet;
- South 22°04'00" East, 41.87 feet;
- South 02°48'00" East, 22.24 feet;
- South 11°16'00" West, 200.09 feet;
- South 04°58'00" West, 188.25 feet;
- South 19°43'00" East, 71.42 feet;
- North 89°56'00" West, 96.51 feet;
- South 27°06'00" West, 179.97 feet;
- South 53°55'00" West, 70.04 feet;
- South 82°40'00" West, 80.50 feet;
- North 74°28'00" West, 80.81 feet;
- South 47°45'00" West, 52.73 feet;
- South 16°09'00" West, 150.30 feet;

THENCE South 54°57'00" West, 101.76 feet to a point on the east line of Parcel A of Southview Unit 2, recorded as Tract Map No. 2945 on June 18, 1993 in the Official Records of Washoe County, Nevada;

THENCE along the east line of said Southview Unit 2, North 00°23'44" East, 1101.04 feet to the northeast corner of Lot 14 of said Southview Unit 2;

THENCE along the north line of said Section 26, South 89°23'44" East, 384.72 feet to the Point of Beginning.

The above described parcel contains 10.73 acres of land, more or less.

BASIS OF BEARINGS: The courses as shown on said Tract Map No. 2945.

Note: As of this date, the parcel described above has not been created by legal methods prescribed by statute. This description is provided for development application purposes only and is not intended to be used to convey property.

Prepared by:

Joe D. Lacey, P.L.S.

CITY OF SPARKS
OFFICE OF THE CITY CLERK

OCT 30 2001

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City Clerk
AS

250 South Rock Blvd.

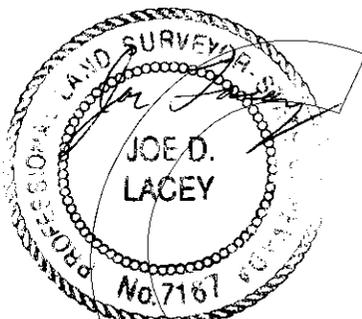
Suite 100

Reno, Nevada 89502

Phone (775) 332-4920

Fax (775) 332-4933

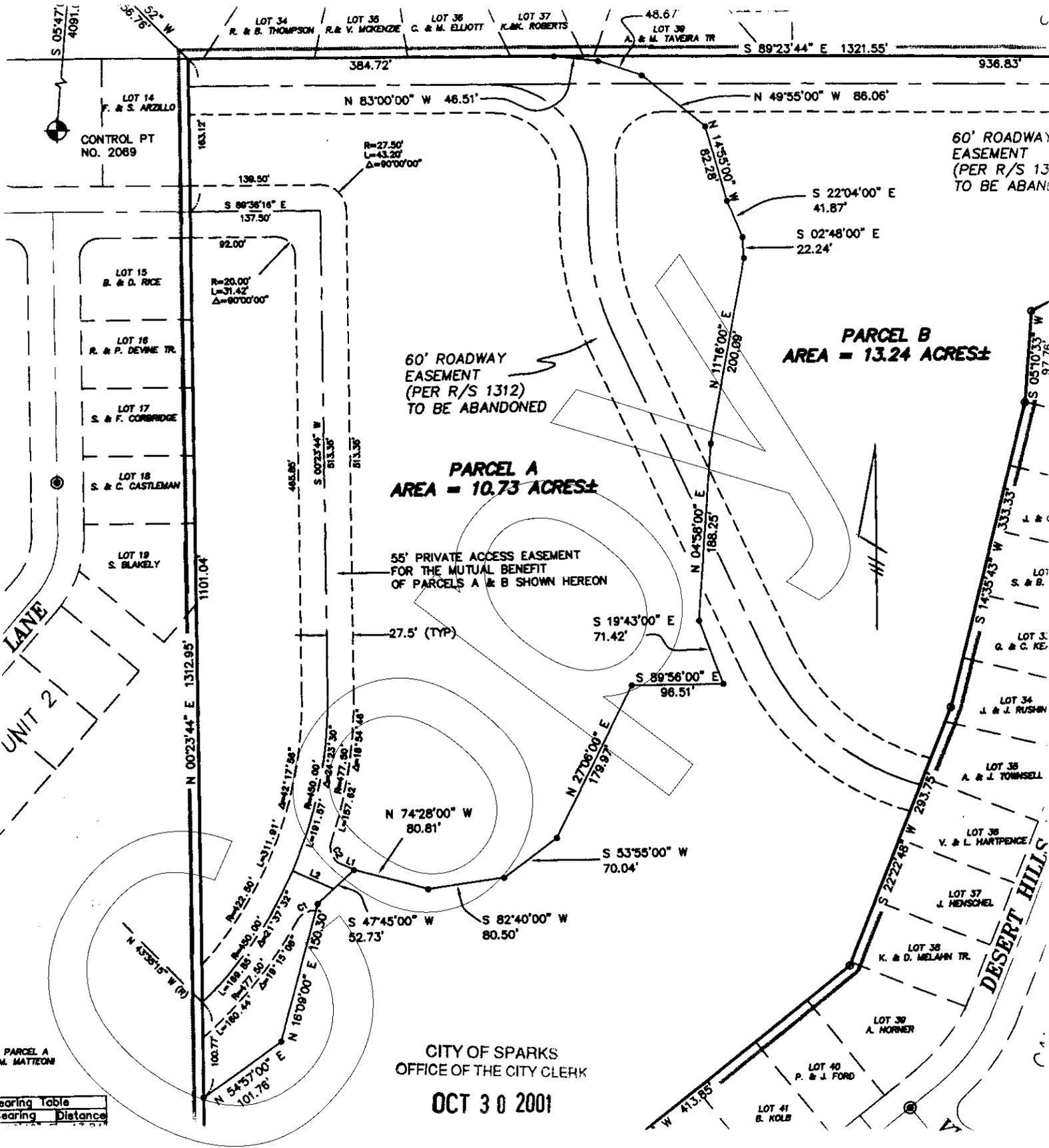
E-mail fpe@fpe-reno.com



10/5/01

EXHIBIT A

82 (41) 6-11-97
11-13-01 10-22-01



Bearing	Distance
N 00°23'44" E	1312.95'
S 89°23'44" E	1321.55'
N 83°00'00" W	46.51'
N 49°55'00" W	86.06'
S 22°04'00" E	41.87'
S 02°48'00" E	22.24'
N 117°16'00" E	200.09'
N 04°58'00" E	188.25'
S 19°43'00" E	71.42'
S 89°56'00" E	96.51'
N 27°06'00" E	173.97'
S 53°55'00" W	70.04'
S 82°40'00" W	80.50'
S 47°45'00" W	52.73'
N 74°28'00" W	80.81'
N 18°08'00" E	150.30'
N 54°57'00" E	101.76'
N 03°35'15" W (P)	4097.1'





250 South Rock Blvd. Ste.100
Reno, Nevada 89502

Development Standards Handbook

Sky Ridge

Planned Development

Prepared for:

*TMB Builders
4635 Village Green Parkway
Reno, Nevada 89509*



AUG 13 2001

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August 9, 2001



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Graphic Reductions
Existing Zoning Map
Proposed Zoning Map

MAP POCKET

Site Plan
Grading Plan
Utility Plan





INTRODUCTION

Sky Ridge is a residential development on ± 54.28 acres located within Section 26, Township, 20 North, Range 20 East with a proposed 115-lot maximum. This planned development is an in-fill residential subdivision adjacent to the Vistas in Sparks. The project is contiguous to Canyon Hills Unit 1 subdivision to the east, Southview subdivision to the north and Southview Unit 2 subdivision to the west, and Promontory subdivision to the south-west. There are two distinct segments, separated by common area. The lower, northern segment is accessible via Disc Drive, east from Vista Boulevard. The upper, southern segment is accessible via Cantina Drive.

A maximum of 115 single-family units are located on lots, that range in size from 7,000 to more than 12,000 square feet, with an average lot size of $\pm 7,767$ square feet. The minimum lot size for corner lots are 8,000 square feet. Approximately three-fourths of the lots are between 7,000 and 8,000 square feet; the remaining one-fourth are larger than 8,000 square feet. The development contains two sizes of house envelopes: a smaller 45-foot wide by 50-foot deep pad, and a larger 50-foot wide by 60-foot deep pad.

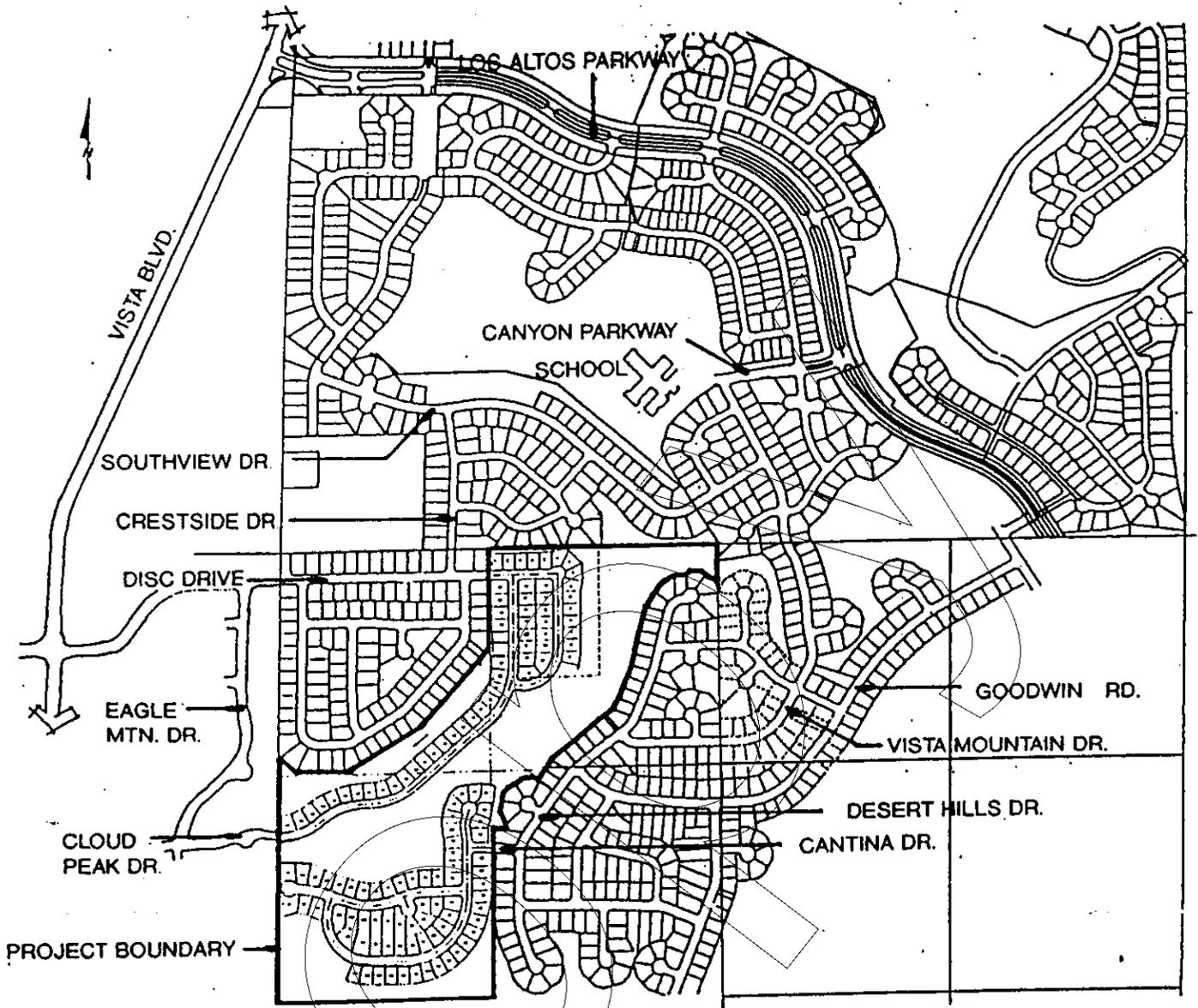
PROJECT GOALS AND POLICIES

Goals

- To develop a community that utilizes its natural resources efficiently and effectively.
- To provide comfortable, valuable housing for the community.
- To compliment the "Vistas" and Canyon Hills Planned Development and the other surrounding subdivisions within the City of Sparks.

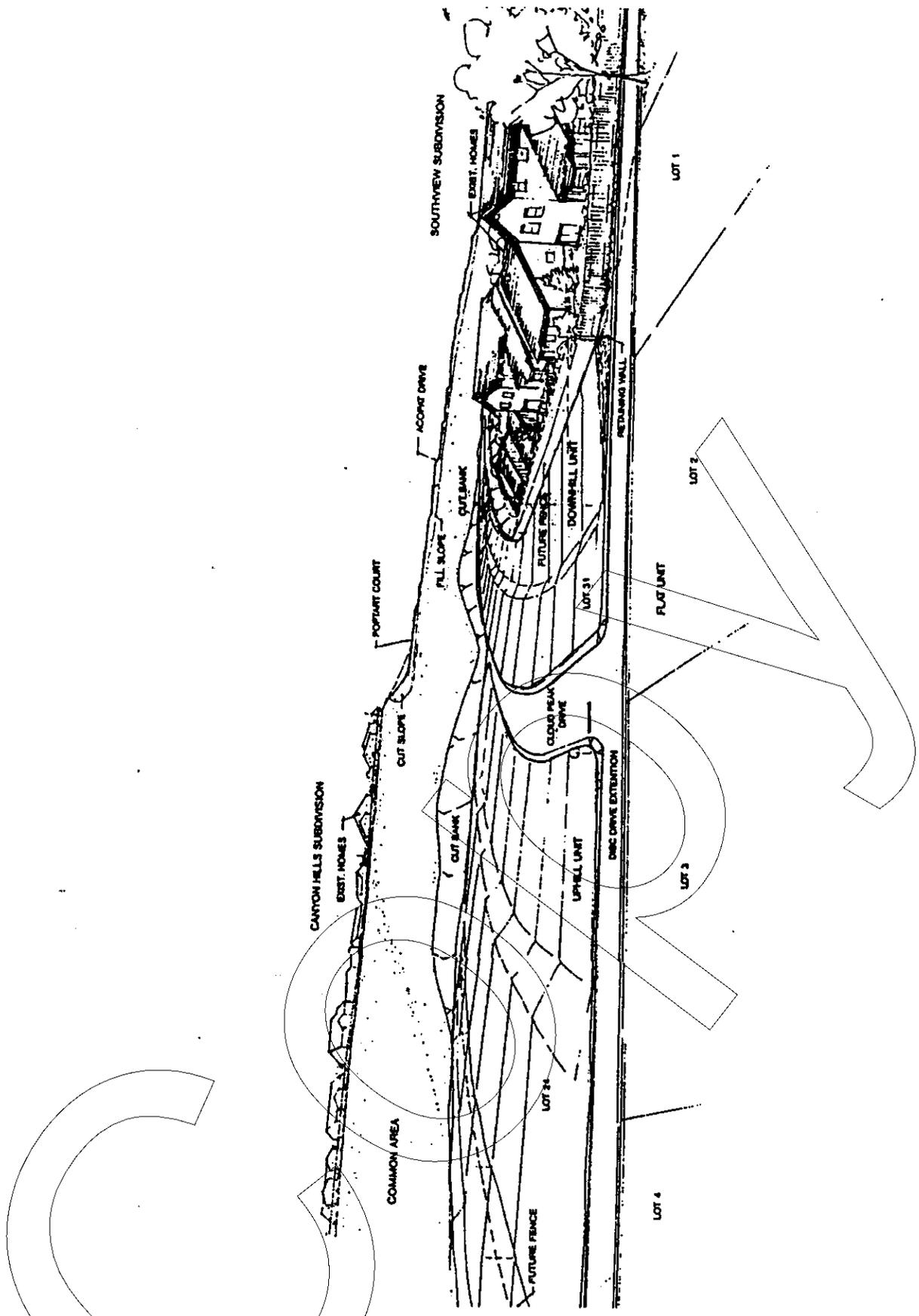
Policies

- Eliminate unnecessary grading by using home designs that complement the natural environment.
- Minimize environmental effects and insure that sensitive areas are left in a natural state by developing only the most useable portions of the site.
- To retain natural open spaces.
- Employ energy saving measures that are cost effective at installation to yield energy efficient housing.
- Supply a variety of housing styles and sizes in order to meet expected demands.
- Annex Sky Ridge into the Vistas Homeowners Association and submit to and comply with all criteria as set forth in The Vistas CC & R's. A separate and distinct Sky Ridge Homeowners Association shall be created if Sky Ridge is not annexed into the Vistas Homeowners Association.



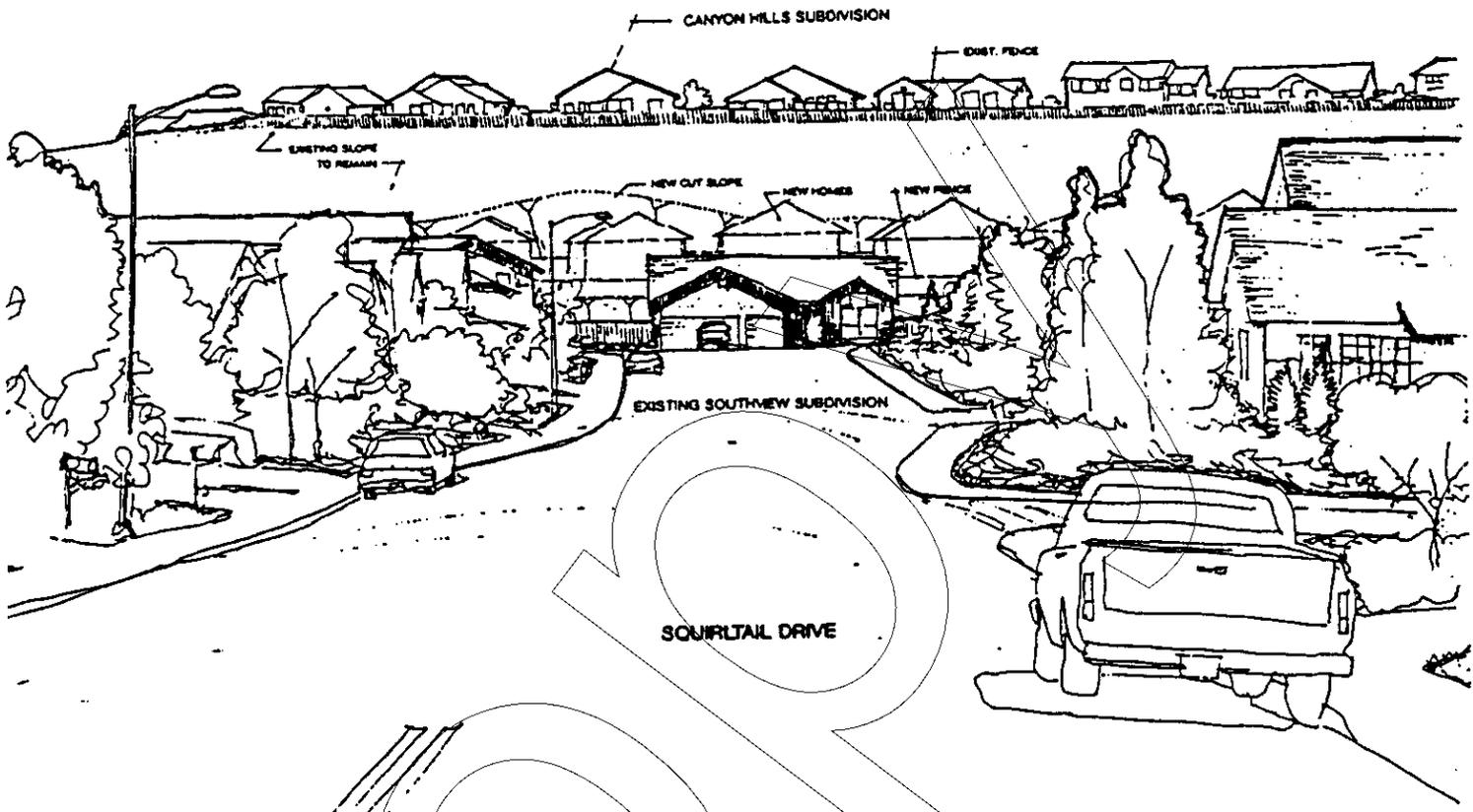
VICINITY MAP





CONCEPTUAL VIEW LOOKING SOUTH FROM DISC





CONCEPTUAL VIEW LOOKING EAST FROM SQUIRRELTAIL

Sky Ridge Planned Development
Development Standards Handbook

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ADMINISTRATION

This Handbook contains the development guidelines for the Sky Ridge Planned Development. Upon approval by the City Council, this Handbook will function as the zoning for this development. The City Engineer and the Community Development Director shall have the responsibility to interpret these standards. When issues not covered in this development standards handbook come forth, the regulations of the City of Sparks shall govern.

Minor deviations to the plans, standards and/or guidelines may be approved by the City Engineer and Community Development Director provided that such changes further the goals and policies of the Sky Ridge Planned Development and that no quantitative amount is varied by more than 5%. Amendments to the handbook and alterations beyond the scope of minor deviations shall be processed by the City of Sparks in accordance with local and state laws.

STATEMENT OF OBJECTIVES

1. *In what respects the plan is or is not consistent with the statement of objectives of a planned unit development.*

The plan makes a strong effort to address the objectives of a planned unit development. First, it complies with the hillside ordinance with regard to minimizing disturbance to the topography of the property and attempting to "design with nature." Second, the location of common open space makes the effort to maintain the natural break both onsite and from the surrounding properties. Third, by the use of split level design of housing, the development seeks to address the topographic challenges of the site. Thus, the plan design allows for diversity of building types that are designed to take into account the topographic challenges of the site.

2. *The extent to which the plan departs from zoning and subdivision regulations, otherwise applicable to the property including, but not limited to, density, bulk, and use and the reasons why these departures are or are not deemed to be in the public interest.*

This plan as proposed falls into the City of Sparks Master Plan land use designation of estate density residential of one to three dwelling units per acre. The plan conforms to the percentage and amount of disturbed area allowable under the categories of the City's Hillside Development ordinance. The plan is an infill project covering \pm 54.28 acres with development surrounding the plan. As such, it is economical to the City relative to the provisions of public services since the majority of the necessary infrastructure is already in place. The plan is contributing to the correction of infrastructure deficiencies that presently exist both upstream and downstream. The infrastructure investment will specifically aid storm drainage and make corrections to the public infrastructure that presently exist. The deviation from standard zoning and land use requirements on this site allows for approximately 46 percent of the site to be in permanent open space. The design of the homes with split level floor plans allows for site adaptation and an efficient site utilization. The site design and provisions of attractive housing with scenic views allows for utilization of the site within the existing suburban context.



3. *The ratio of residential to non-residential use in the planned unit development.*

There is not any non-residential use.

4. *The purpose, location, and amount of common open space in the planned unit development, the reliability of the proposals for maintenance and conservation of the common open space and the adequacy or inadequacy of the amount and purpose of the common open space as related to the proposed density and type of residential housing.*

Most of the common open space is of steep terrain. It does provide a physical and visual break to the surroundings existing developments. The plan as it builds out will still contribute to the park construction tax to the tune of approximately \$125,000 for the City of Sparks. It will also be expanding the existing detention facility at Disc Drive and Vista Boulevard so that this facility will detain more flood waters but will also be a large landscaped public open space. The requirements for open space maintenance will be specifically called out within the homeowners association covenants, conditions, and restrictions and shall be sufficient to preserve the presentation and maintenance of the acreage as undisturbed common open space area in perpetuity. This open space acts as a substantive buffer to the existing surrounding residential land uses. The proposed common open space allows for the protection of significant rock outcroppings and scenic vistas from the site.

5. *The physical design of the plan and the manner in which the design does or does not make adequate provision for public services and utilities, provide adequate control over vehicular traffic and further the amenities of the light, air recreation, and visual enjoyment.*

The physical design of the plan has made every effort to take advantage of existing infrastructure connections. In terms of roadways, there are three roadways that terminate into the site: Disc Drive, Cloud Peak, and, at the upper end, Cantina Drive. Because of the infill nature of the plan, the community does not have to extend utilities, expand service areas, or put an unreasonable strain on city resources. Within this context it should also be noted that the project has seriously evaluated the drainage challenges traversing the site and stands poised to assist the upgrading of the public infrastructure at its private interface points.

The site basically has an upper and a lower reach that divides and separates the traffic. The Disc Drive/Cloud Peak portion of the plan contains 52 residential units and the Cantina Drive portion of the plan has the remaining 63 residential units.

Again, the houses and the lots are of a substantial size so as to not create cramped housing conditions that would reduce the amenities of the light, air, recreation, and visual enjoyment.



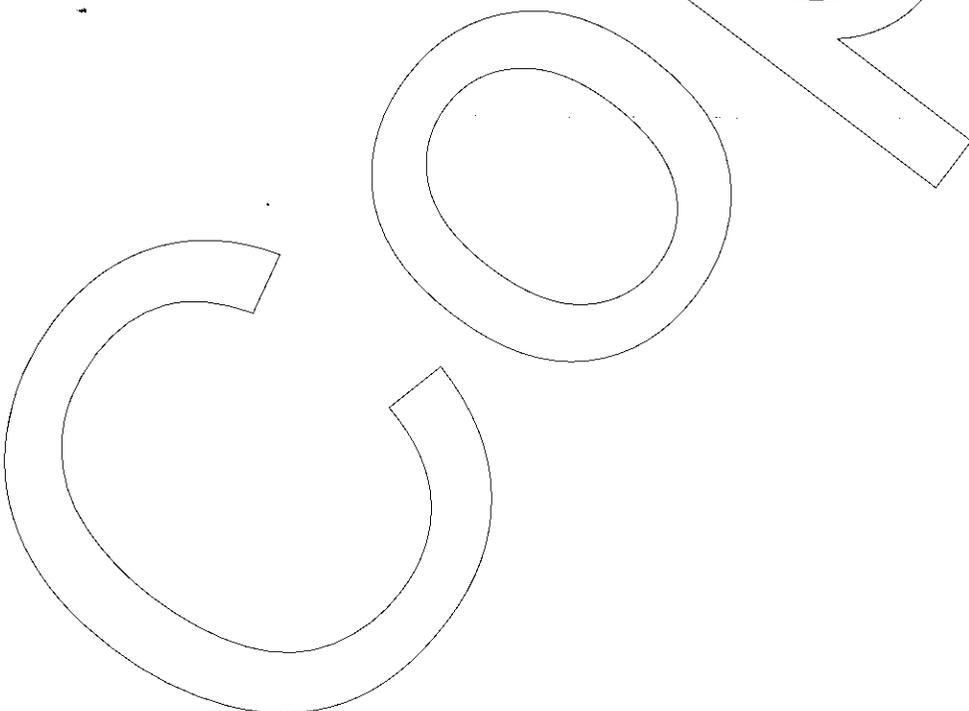
6. *The relationship, beneficial or adverse, of the proposed planned unit development to the neighborhood in which it is proposed to be established.*

The plan includes lot dimensions that match or exceed any existing or adjoining lot. The density of the surrounding existing developments are either higher or the same as the proposed planned development. The proposed planned unit proposes the use of split lot grades in an effort to lessen the impact to the existing physical environment of the adjoining surrounding development.

The proposed open space areas will provide a protected buffer to the surrounding neighborhoods.

7. *In the case of a plan which proposes development over a period of years, the sufficiency of terms and conditions intended to protect the interest of the public, residents, and owners of the planned unit development in the integrity of the plan.*

The PD (Planned Development) zoning district requires a development map as well as the Design Handbook. The project includes a tentative subdivision map that has been submitted in conjunction with the rezoning request. At this time, the Nevada Revised Statutes (NRS) requires the applicant to submit within two (2) years from the date of approval a final subdivision map for the project or portion of the project. The tentative map would expire after that time if no final map is submitted within the time limits designated in NRS. The rezoning would remain with the property and any development would have to still comply with or go through the rezoning process in order to amend the approved Design Handbook standards and submit a new tentative map that accurately reflects the standards of the existing or amended Design Handbook.





DEVELOPMENT STANDARDS

The Sky Ridge Planned Development is designed as a residential neighborhood. In order to meet the goals and policies of this planned development, slight modifications to standard zoning is proposed. Whereas the overall gross density of this project is significantly less than two dwelling units per acre (± 2.1 d.u./ac.) and approximately $\pm 46\%$ of the project is designated open space, special considerations are warranted to increase the ability to develop of the remaining area, through reduced setbacks. The standards listed below shall guide the development and use of this planned unit development. Where no standards are listed, R1-7 zoning and other appropriate local, state and federal regulations shall apply.

PERMITTED USES

Uses permitted in the Sky Ridge Planned Development are as follows:

- Single-family dwellings of a permanent nature;
- Accessory uses and buildings in conformance with SMC 20.43 (included in the Appendix);
- In-home child care for one child care giver, in accordance with the rules and regulations for child care facilities;
- Temporary subdivision sales offices and model homes, as provided in the MODEL HOMES AND TEMPORARY SALES OFFICES section of the design handbook; and
- Public Utility structures, subject to the approval of a special use permit.

LOT AND SETBACKS REQUIREMENTS AND HEIGHT LIMITS

Lot and setback requirements and heights limits shall be as follows:

Lot Requirements

- Minimum lot area:
 - Interior lots: 7,000 square feet
 - Corner lots: 8,000 square feet
- Maximum coverage of lot by structures: 45%
- Minimum lot width:
 - Interior lots: 70 feet
 - Corner lots: 80 feet
- Minimum lot frontage: 35 feet

Setback Requirements

- Front:
 - Front-load garage: 20 feet
 - Side-load garage: 15 feet
 - Structure: 15 feet
- Staggering a minimum of 2 feet, average of 4 feet, is required on continuous, rectilinear street frontages



Side:

Homes with Two-Car Garages: 7.5 feet, with a minimum of 20 feet between buildings on adjacent lots.

Homes with Three-Car Garages: 10 and 5 feet, alternating with a minimum 15 feet between structures on adjacent lots.

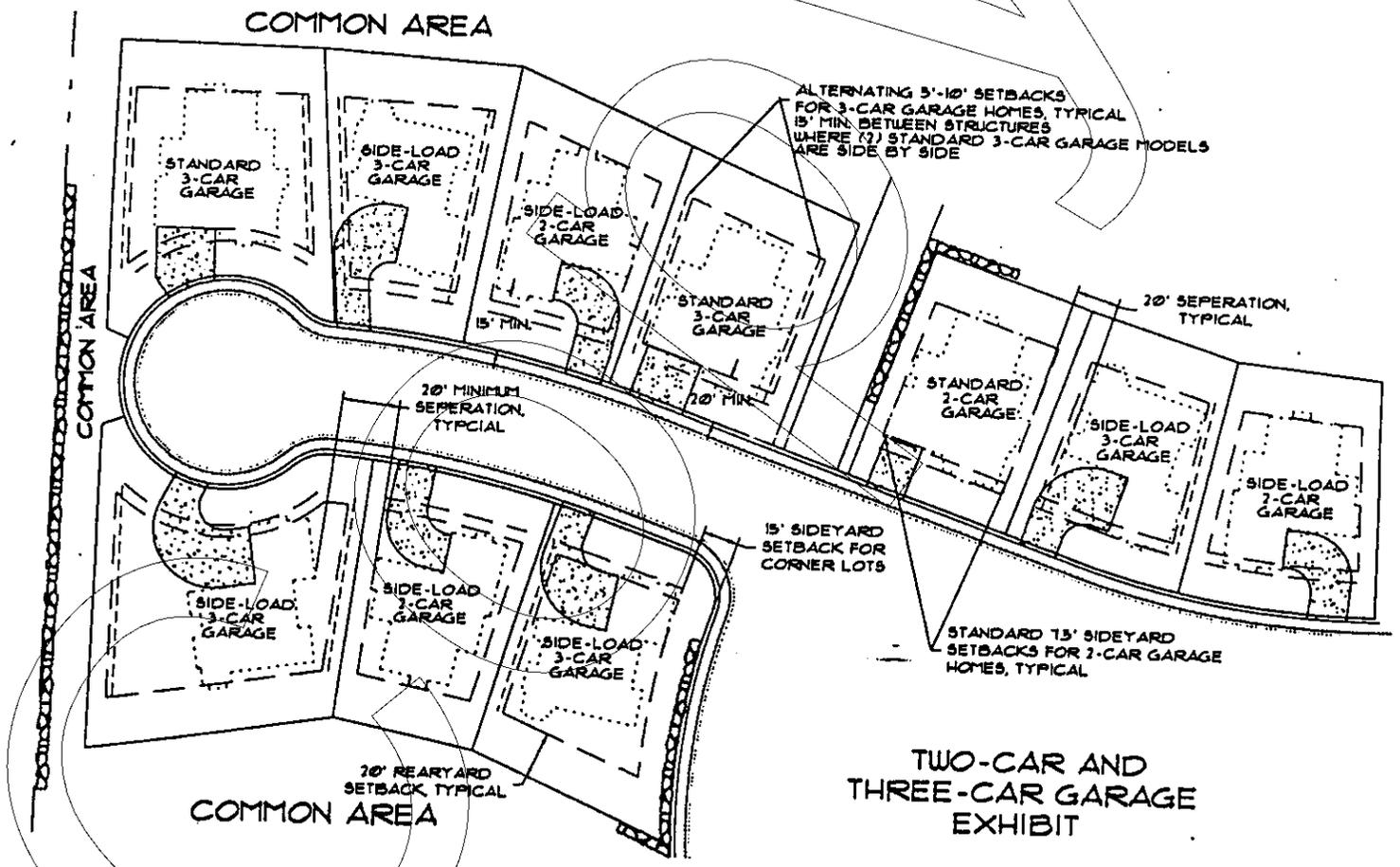
Rear: 20 feet

Encroachments of no more than 2 feet are permitted for architectural features on front and rear setbacks only, and limited to a maximum of 10 square feet per encroachment. Encroachment elements are limited to gas fireplaces, chimneys, greenhouses, and bay windows only. No sideyard setback encroachments will be allowed.

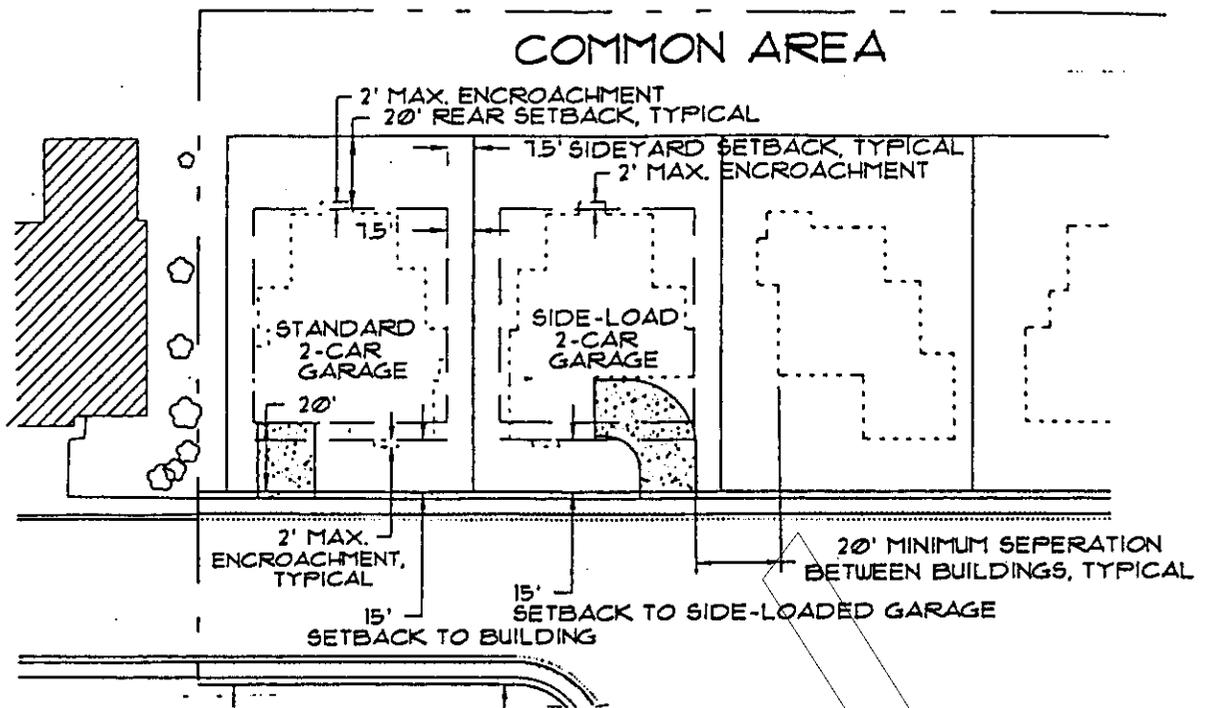
Height Limit of Buildings and Structures

- Residential structures: 30 feet, 2½ stories, including daylight basements
- Accessory Structures: 18 feet
- Public Facilities: by approval of a special use permit

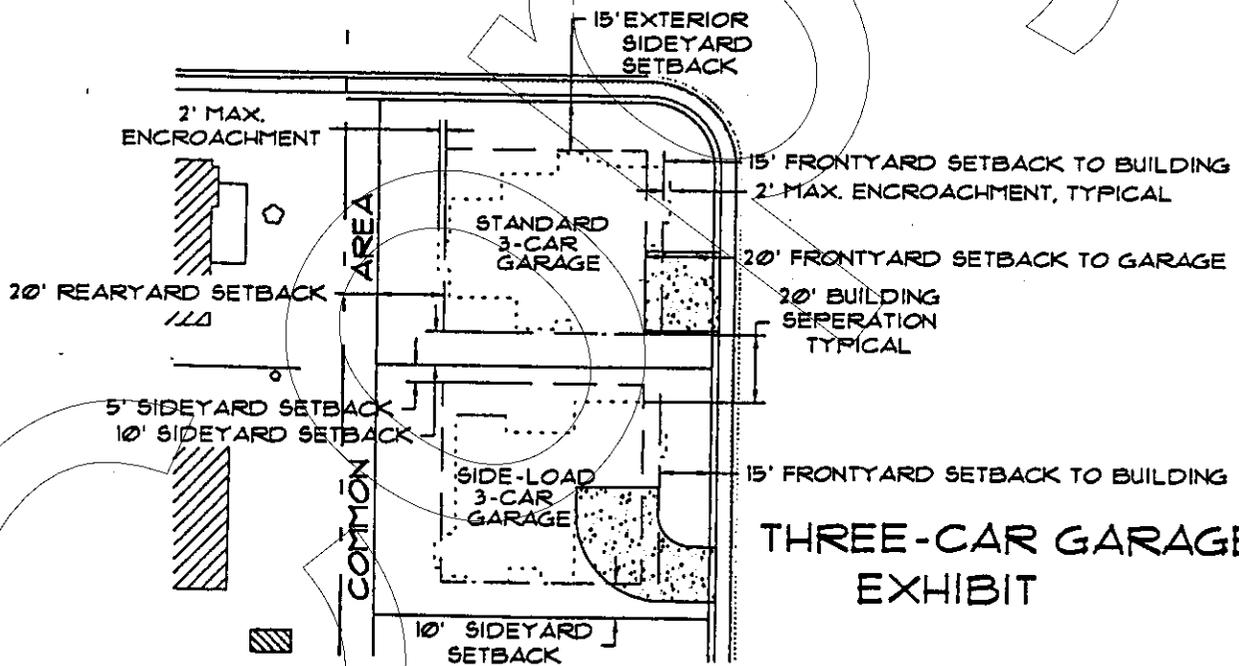
Accessory structures setbacks shall be consistent with the main structure setbacks unless under 7 feet in height and under 120 square feet in size. If under 7' in height and 120 square feet in size, then the accessory structures are allowed within the front yard.



SETBACK DETAILS



TWO-CAR GARAGE EXHIBIT



THREE-CAR GARAGE EXHIBIT

SETBACK DETAILS





BUILDING SITING/ENVELOPES

There are three lot configurations for the two envelope sizes. There is the standard "flat" lot, and to be responsive to the varied topography two terrain adaptive lots, one for an "uphill" situation, and one for a "downhill" situation that avoid over-grading to force flat lots onto the sloping site.

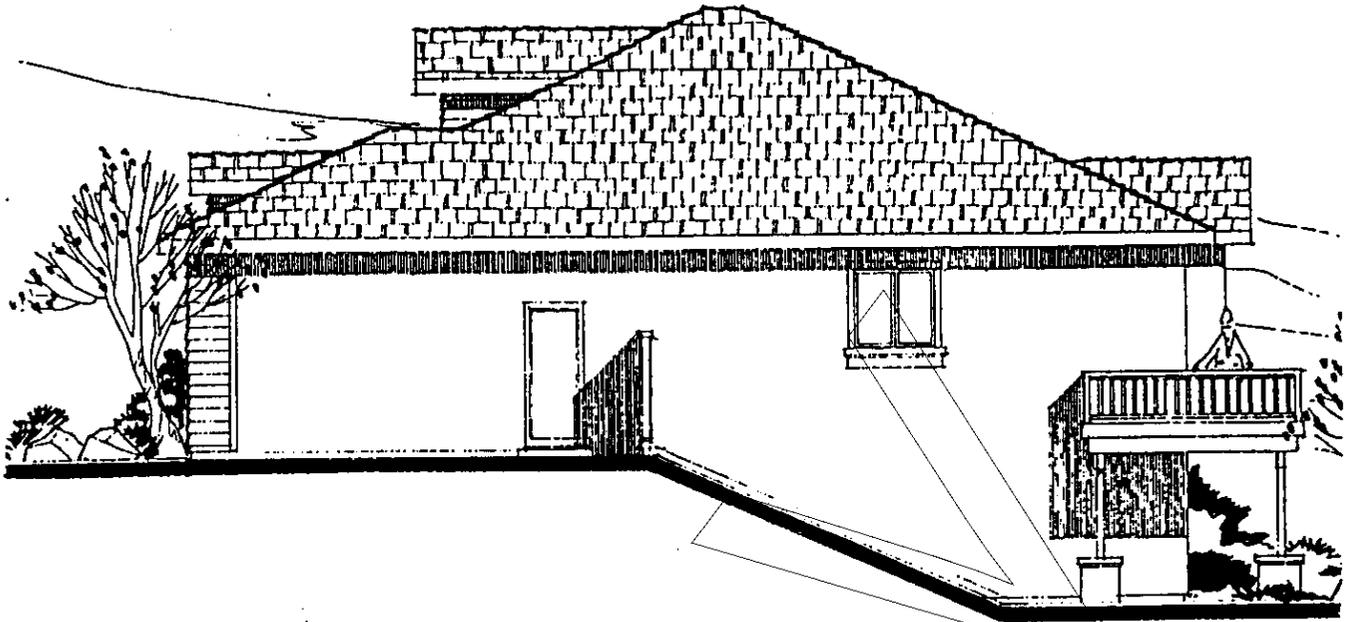
The two terrain adaptive lot configurations are typically the smaller 45-foot by 50-foot pads are where the majority of split-level grading situations occur. These two lot configurations shall allow walk-out basements or step-up front areas, depending on which direction the lot slopes. These units will vary in size from approximately 1,800-square foot, three-bedroom to 3,400-square foot, four-bedroom models.

The larger 50-foot by 60-foot pads are logically where the single-story models, ranging in size from 1,800-square foot, three-bedroom homes up to 3400-square foot, five-bedroom homes, will be built.

In accordance with the FOOTINGS section of this design manual, building foundations will be a combination of pier and grade beam and spread footings. This lot by lot determination will be made by the Geotechnical Engineer during grading at time of mass grading. See ANTICIPATED FOUNDATION TYPES.

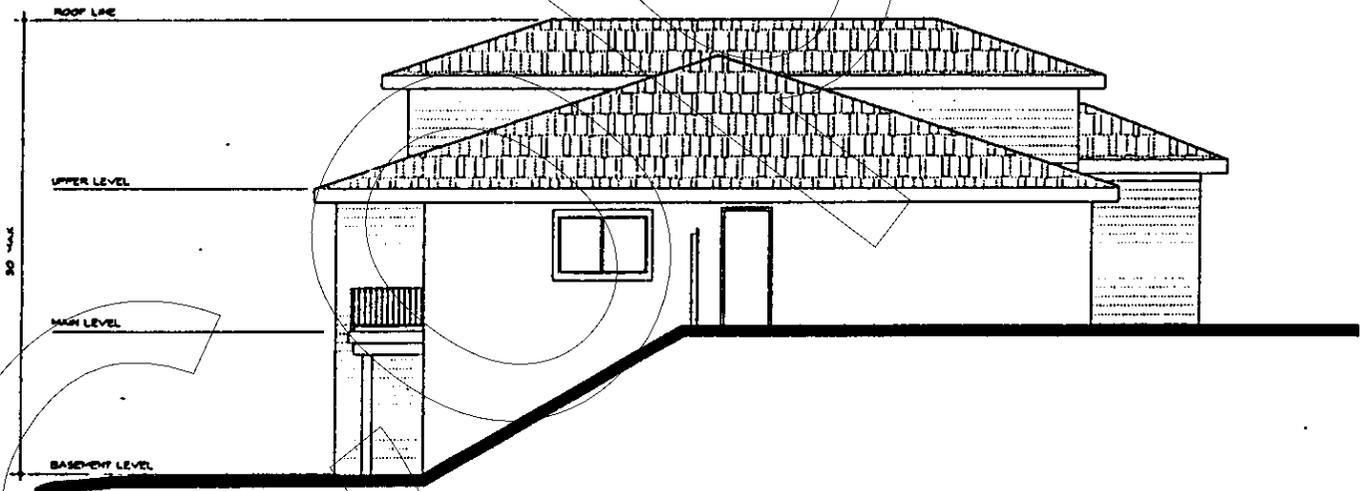
ARCHITECTURE

The architectural treatment will include at least three different elevations for each floor plan, three different floor plans for each type of lot, and standard two-car, an optional side-loaded two-car or larger three-car garage. It is the goal of the handbook to offer unique solutions to a bland street scape, and to that end, approximately 30% of the units will have side-loaded garages. All units will have tile roofs. The exterior elevations of each unit will be stucco, except for variations in the front elevations. Three front elevation alternates, consisting of three tab lap wood horizontal panels, 7" wood horizontal panels, or stucco will be provided. The alternate front elevations and roofing materials will provide a more varied street scape. Homes located on the west side of the extension of Cloud Peak Drive will be limited to 1½ story homes.



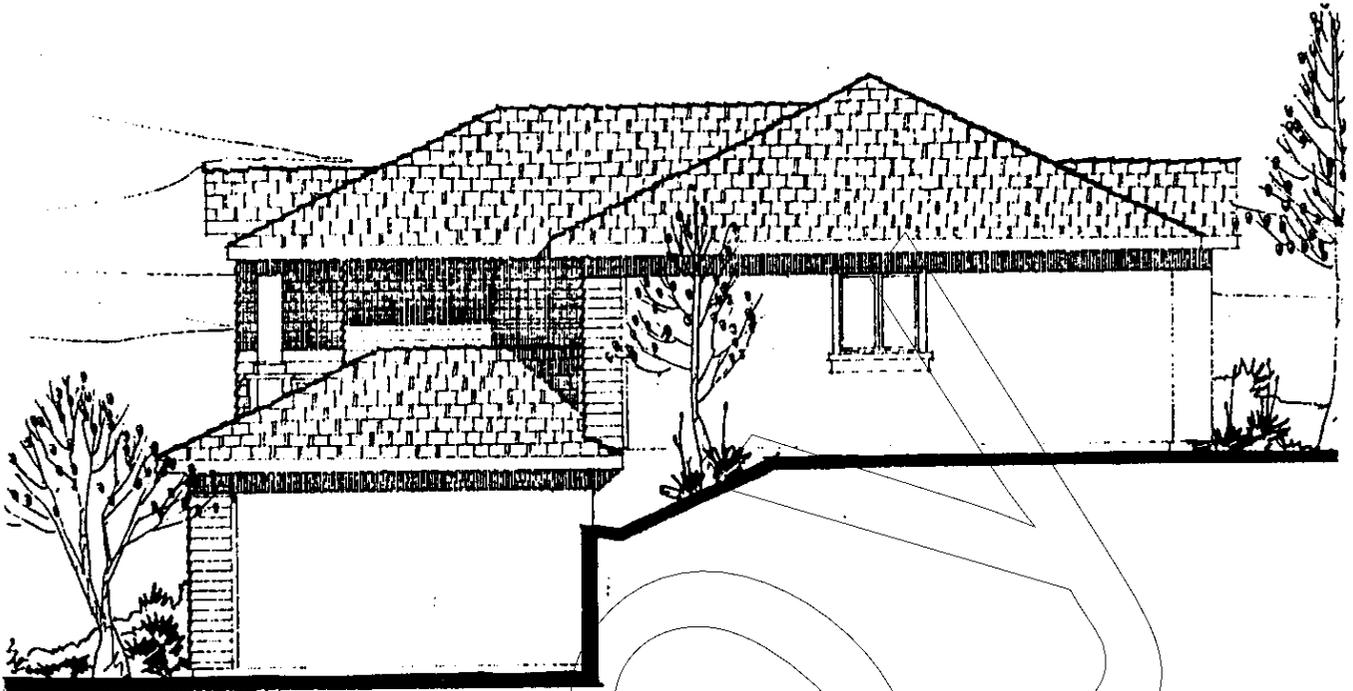
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TYPICAL DOWN-HILL UNIT



TYPICAL 2-STORY DOWNHILL UNIT W/ DAYLITE BASEMENT

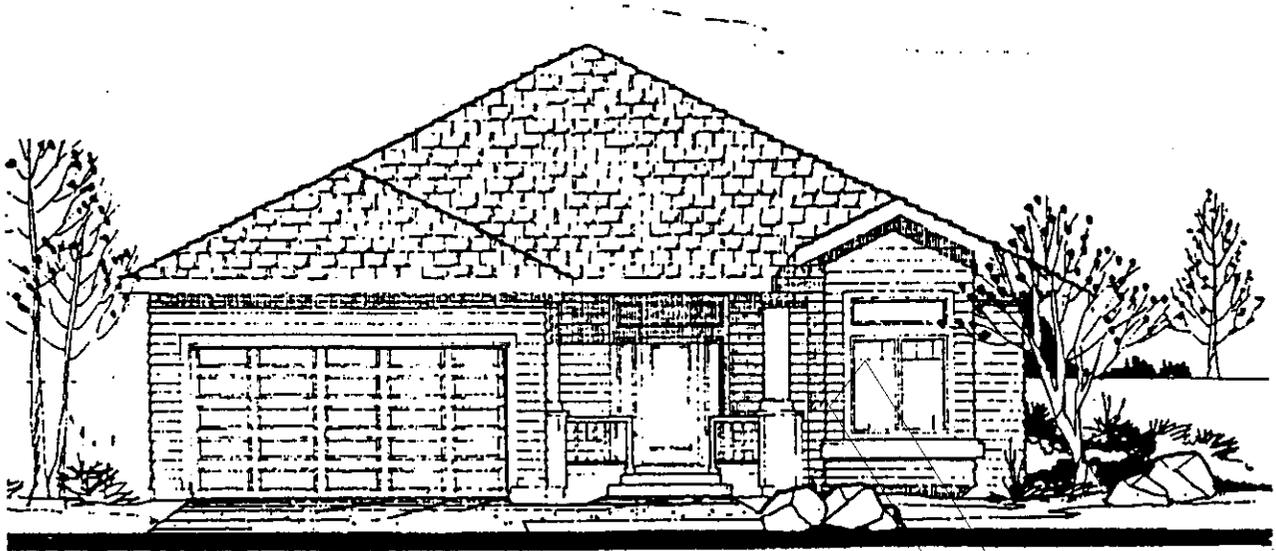
TYPICAL DOWNHILL UNITS



TYPICAL UP-HILL UNIT

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Planning

TYPICAL UPHILL UNIT

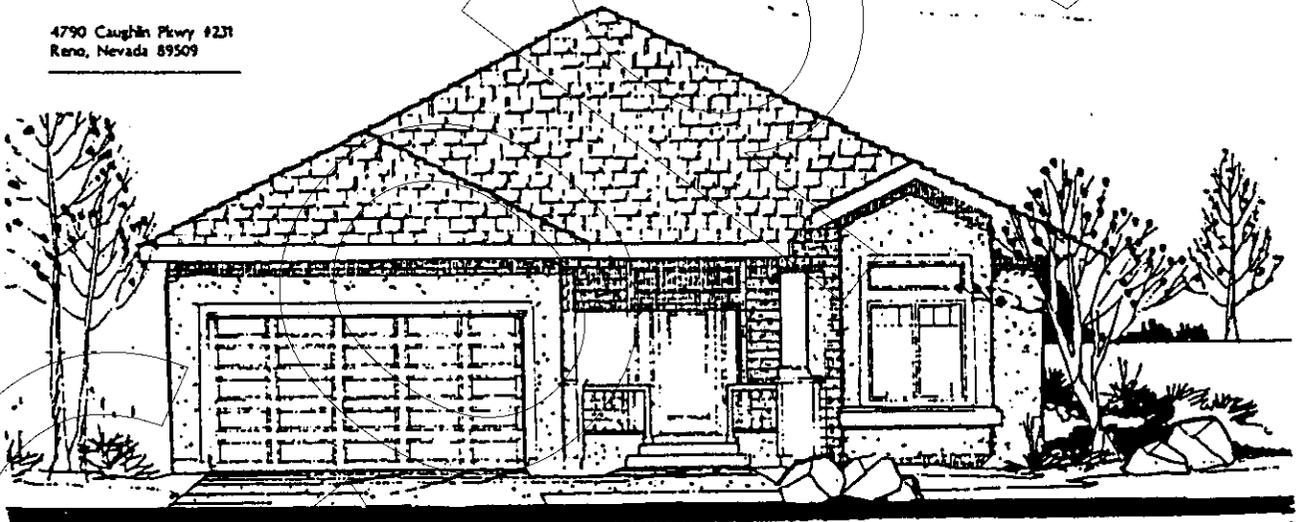


WOOD ELEVATION

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4790 Caughlin Pkwy #231
Reno, Nevada 89509



STUCCO ELEVATION

ONE-STORY, FRONT-LOADED GARAGE



WOOD ELEVATION

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Planning

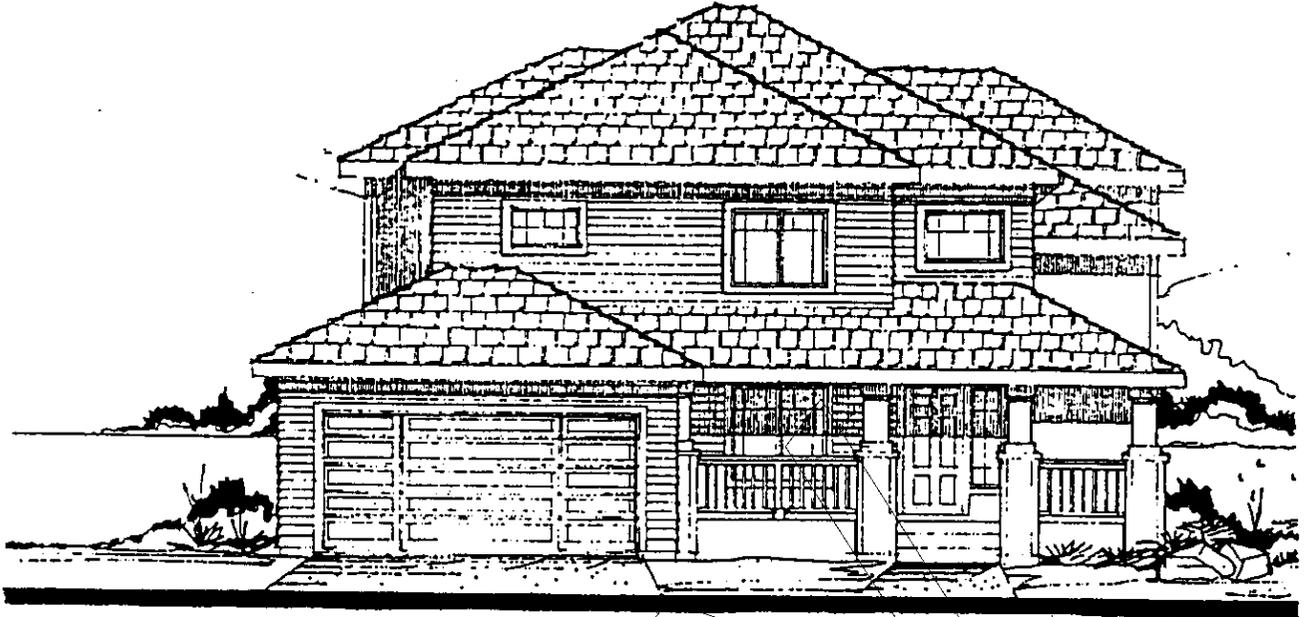
0702 322-5478

4790 Caughlin Pkwy #231
Reno, Nevada 89509



STUCCO ELEVATION

ONE-STORY, SIDE-LOADED GARAGE

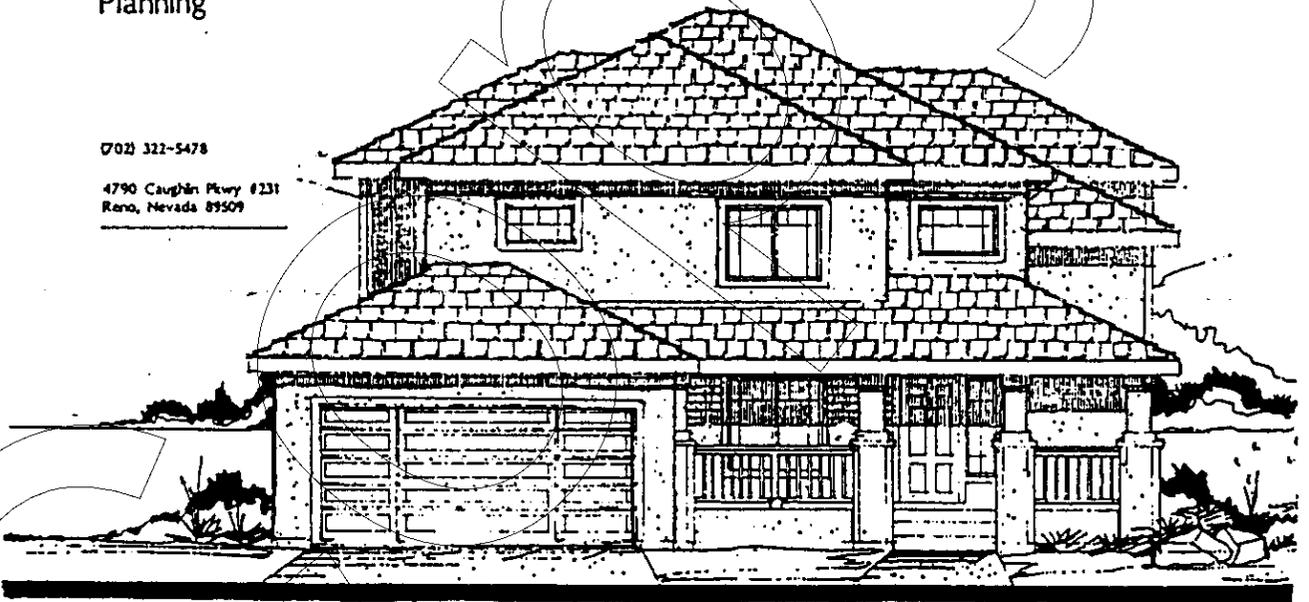


WOOD ELEVATION

Dean Abbott
Architecture/
Planning

702 322-5478

4790 Caughlin Pkwy #231
Reno, Nevada 89509



STUCCO ELEVATION

TWO-STORY, FRONT-LOADED GARAGE



LANDSCAPING

Construction operations will be restricted to the developable portions under construction in order to minimize impacts to sensitive natural areas. Construction will also be done to the standards recommended in the SLOPE STABILITY & EROSION CONTROL and SITE DRAINAGE sections of this design handbook.

Residential Sites

At development, each front yard shall have landscaping installed by the developer prior to final inspection of the individual houses, with turf, shrubs and a minimum of one (1) tree. The developer-provided tree shall be a minimum of six-feet tall for evergreen trees and two-inch caliper (measured at breast height) for deciduous trees. Side and rear yards with slopes will be stabilized per slope treatments approved by the City of Sparks; otherwise, these yards shall be landscaped by individual homeowners within two years of receiving a final permit. This provision shall be enforced by the Homeowners Association. An automatic irrigation system will be installed with the front yard landscaping, be stubbed out to the side and rear yards, and contain the necessary back-flow prevention measures to the approval of the City.

Side yard slopes greater than three (3) feet in height will be stabilized mechanically, utilizing a seed mixture and application method approved by the City Engineer and Community Development Director, in accordance with the SLOPE STABILITY & EROSION CONTROL and SITE DRAINAGE sections of this design handbook or landscaped by individual homeowners.

Grading will be accomplished as required for the creation of appropriate house pads and lot drainage. Lot elevation transitions shall be accomplished with side slopes not to exceed 3:1 ratio and/or retaining walls. Requirements will generally follow FHA standards except where site conditions warrant otherwise. Lots will be graded to drain toward streets. Lined, or paved swales in common areas will direct drainage as necessary to the approval of the City Engineer. All artificial slopes shall have slope gradients that do not exceed a 3:1 ratio on residential sites, except where split level lots are shown rough graded to 2:1 between splits to allow structure to take up elevation difference. Side lots will be graded to 3:1 or retained in some manner.

Common Areas

As much as practical, common areas and open space will be left undisturbed in its natural state. The stabilization of any disturbed common areas shall be accomplished through naturalistic grading, the use of an approved revegetative seed mixture and application method, as described below. All landscaping standards will conform to the standards included in the SLOPE STABILITY & EROSION CONTROL and SITE DRAINAGE sections of this design handbook.

Common areas not disturbed by construction activities will remain in their existing natural state. Disturbed common areas will be stabilized as follows:

- Erosion control, such as described below, will be applied to cut and fill slopes 5:1 or steeper.



- Slopes between 3:1 and 5:1, as outlined in the SLOPE STABILITY & EROSION CONTROL section will be stabilized with an approved seed mixture applied utilizing hydro mulching or other method approved by the on-site geotechnical engineer, to the satisfaction of the City Engineer. Temporary irrigation shall be provided by the developer until the revegetation has become established to the approval of the City Engineer and the Community Development Director.
- All artificial slopes shall have a slope gradient not to exceed 3:1, except 2:1 slope gradients may be located solely and exclusively within the project's common area where the Homeowners Association shall maintain these slopes and where these slope gradients have been approved by a registered soils engineer stamped report, the City Engineer and the Community Development Director. Slopes steeper than 3:1 will be mechanically stabilized as outlined in the SLOPE STABILITY & EROSION CONTROL section. Vegetative stabilization will be applied as approved by the City Engineer and Community Development Director. Temporary irrigation shall be provided by the developer until the revegetation has become established to the approval of the City Engineer and the Community Development Director.

Retaining walls will be utilized to reduce grading impact in common areas and where required, as grade transitions between lots. Walls will be constructed of rock (rockery) or split-faced concrete masonry block. Retaining walls shall be required to meet Uniform Building Code standards. Fences at retaining walls will be constructed as provided in the FENCING section.

Public Rights-of-Way

No public right-of way landscaping is proposed. The individual single family front yard landscaping will provide a landscape treatment adjacent to the public or in areas of single loaded streets, the two-foot wide area beyond the roadway improvements will be returned to a natural state on the side of the street without lots by the developer installing revegetation with native plant material and a temporary irrigation system until the revegetation has become established to the approval of the City Engineer and Community Development Director.

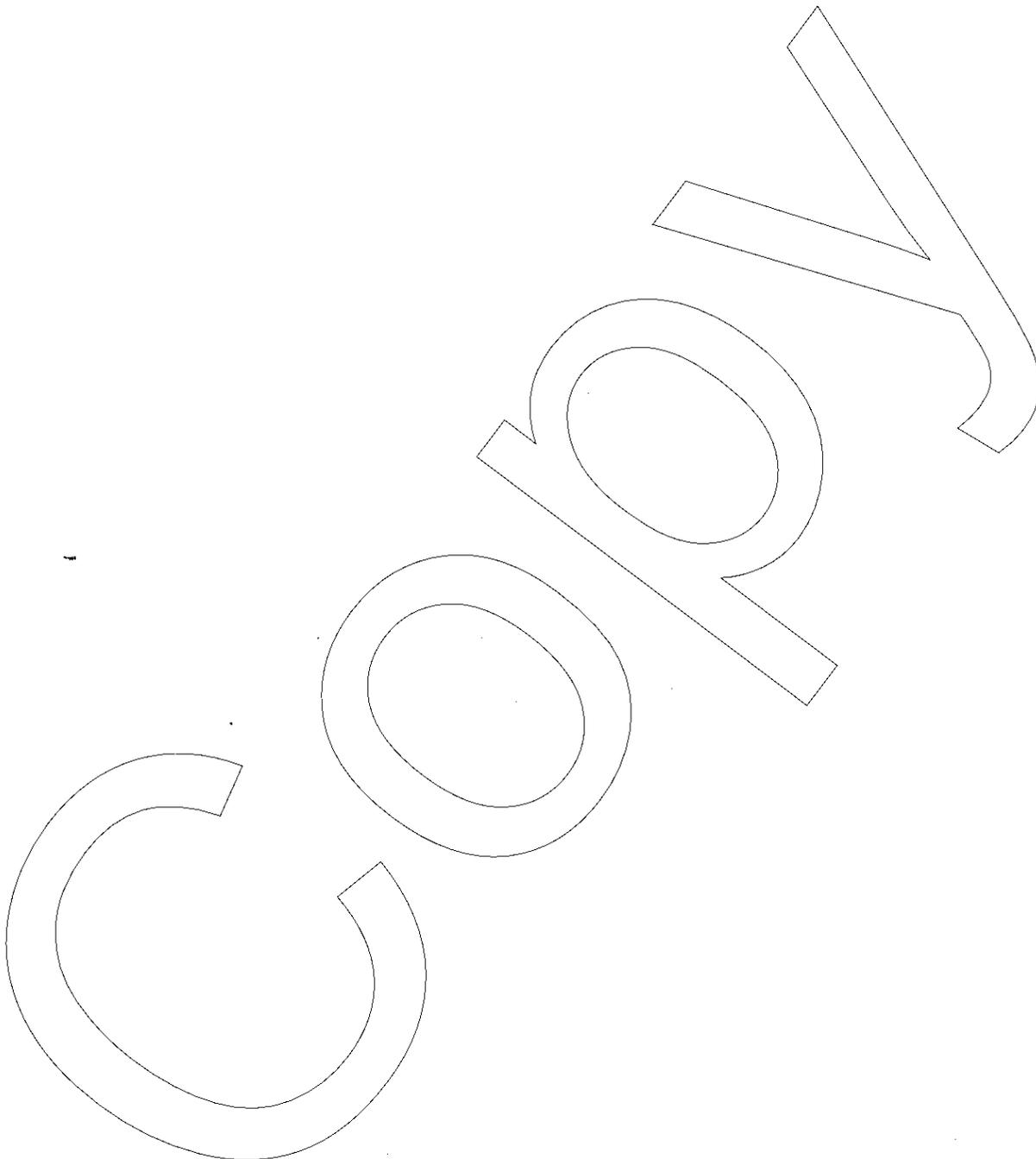
Emergency Access Route

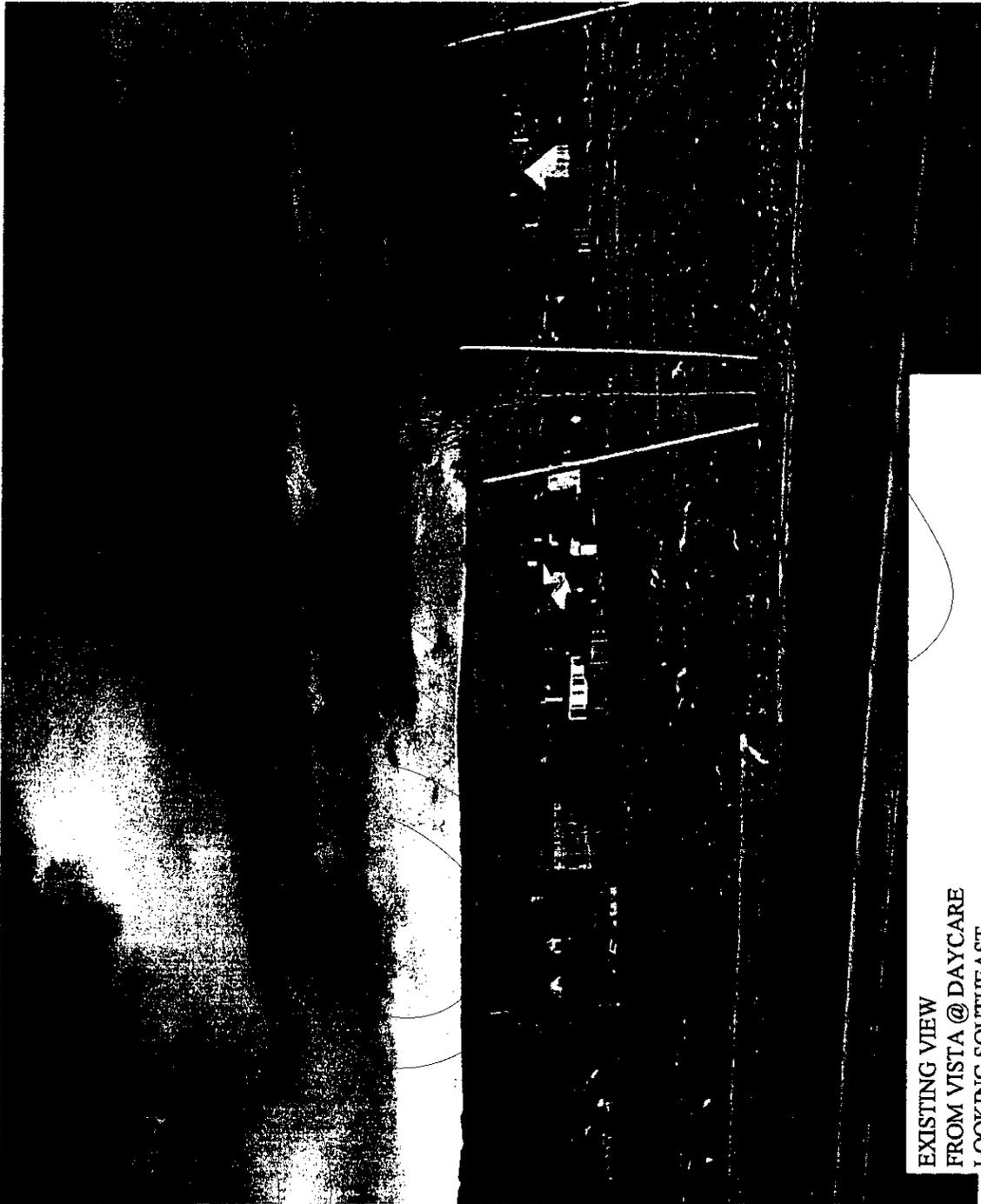
The emergency access route has been designed with consideration for limiting aesthetic degradation of the site. The design with rockery treatments, revegetation using native plant materials, and naturalistic contoured grading will help reduce any erosion, sedimentation, or other hazards.

The landscape architectural treatment of the emergency access route section and its associated slopes will have a naturalistic treatment. The rockeries on the upper slope edge will soften and stabilize any significant cut on the down slope. The finished grading will be naturalistic in its treatment. There will not be any long slopes with sharp transitions in this route section. The route section has been carefully positioned on the contour lines so as to create minimum impact to the visual environment.



As is depicted in the exhibit pertaining to Sky Ridge rockery wall and emergency access route treatment example, the route is designed to be as unobtrusive as possible. The rockeries will also form an aesthetically pleasing slope transition. The plant materials have been selected to blend with the environmental setting and surrounding open space. The finished grading is designed to resemble natural land forms as much as practical. The height of the rockeries will not exceed a height limit of six feet.

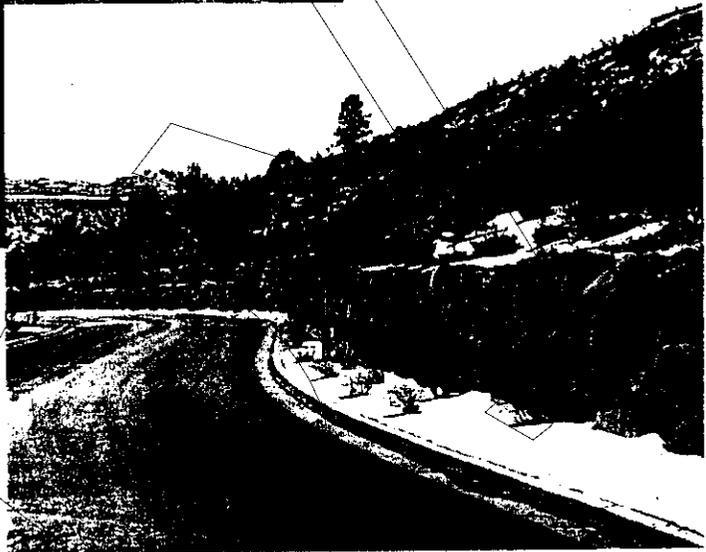
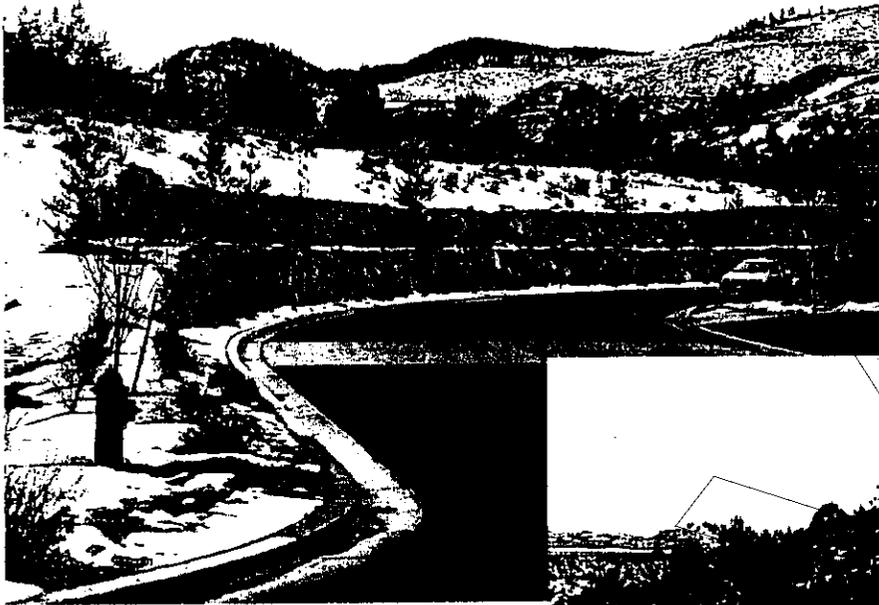




EXISTING VIEW
FROM VISTA @ DAYCARE
LOOKING SOUTHEAST



SKY RIDGE
VIEW FROM VISTA @ DAYCARE
LOOKING SOUTHEAST



SKY RIDGE
ROCK WALL & ACCESS ROAD TREATMENT EXAMPLES



SKY RIDGE ROCK WALL & ACCESS ROAD TREATMENT EXAMPLES SOIL CONDITIONS AND EROSION CONTROL

Black Eagle Consulting, Inc. prepared a thorough geotechnical investigation of this site on October 25th, 1999. The following is a summary of the recommendations of this report. If ANY questions or clarifications are needed regarding the nature of the summarized recommendations, it is advised that the reader first consult this Black Eagle Consulting report. This report has been prepared to provide information allowing the architect or engineer to design the project. The owner shall make available this report to all designers and contractors whose work is directly affected by geotechnical aspects. This report does not reflect variations that may become evident during construction operations. Otherwise, these summarized recommendations are to be used as a broad guideline, to be valid for the original subdivision design concept.

The site is overlain with a one to two foot layer of expansive clay soil. The bedrock is comprised of volcanic parent material. Final determination of foundation type for each lot and over excavation requirements are to be undertaken on a lot-by-lot and station-by-station basis at the time of mass grading. Utility trenches will need to be carefully examined to verify that surface clays are removed from beneath the structural section, and over excavation of any remaining clays and/or expansive bedrock is accomplished according to the recommendations published in Black Eagle's report, which states:

"It should be clearly understood that unless the clay soils and expansive bedrock could be completely removed and replaced with nonexpansive soils, some differential movements should be anticipated."

Generalized Geotechnical Recommendations from this report are:

General Information

- ▶ Quality control should be performed to verify that the recommendations presented in Black Eagle's report are followed.

Seismic Design Criteria

- ▶ Structures should be designed for Seismic Zone 3

Site Preparation

- ▶ All vegetation should be stripped and grubbed from structural areas
- ▶ Failure to recognize and properly mitigate expansive materials will result in damage to improvements - physical separation of improvements from expansive clay soils are from 1.5 feet to 3 feet, depending on the improvement
- ▶ Separation may be achieved through over excavating and replacing of unsatisfactory soil, which may be extensive.
- ▶ A 90% relative compaction is required on any soil receiving structural fills.



- ▶ Mechanical stabilization of slopes in wet-weather situations may be achieved through air-drying the top foot of sub-grade, then compacting it.
- ▶ Mechanical stabilization of slopes in other situations may be achieved through over-excavation and/or placement of an initial 12- to 18-inch-thick lift of 12-inch-minus, 3-inch-plus, well graded, angular rock.

Trenching & Excavation

- ▶ Trenching and excavating will be difficult at the upper, southern end of site, possibly requiring aggressive techniques.
- ▶ Blasting for mass-grading operations is not considered practical on this site because of the surrounding residential developments.
- ▶ Temporary trenches should be stable to a depth of approximately five feet. The client, owner, design engineer, contractor, or individual homeowner, when undertaking trenching operations shall refer to Appendix A, and B of Subpart P of the Federal Register Regulations, Volume 54, Number 209, table B-1 for complete definitions and requirements on sloping and benching of trench sidewalls and Appendices C through F for shoring methods
- ▶ Sloping or benching for excavations greater than 20 feet deep shall be designed by a registered professional engineer
- ▶ Maximum backfill particle size of 4 inches for trenches six feet or less, and maximum particle size of 12 inches for trenches wider than six feet.
- ▶ Site soils are predominantly Type A
- ▶ Trenching should be performed in accordance with local, state and OSHA standards

Grading & Filling

- ▶ Highly expansive clay soils were found to exist from the ground surface up to depths of 2 feet below the ground surface, whose laboratory tested plasticity is indicative of highly expansive in nature.
- ▶ Underlying bedrock shows a wide and unpredictable range of expansion potential
- ▶ Clays should be removed or separated from improvements
- ▶ Pier and grade beam foundations could be used on some lots to decrease over-excavation
- ▶ Native clays should be placed as fill only in nonstructural areas or within 4 inches from areas of grade and beam foundations
- ▶ maximum size of rocks used in fill operations from soil harvested from the southern end of the project are limited to 18 inches
- ▶ The upper 12 inches of the building envelope should be capped with a 4-inch minus material
- ▶ Oversized rock can be stockpiled and used for erosion control protection or placed in the bottom of deep fills
- ▶ Scatter these oversized rocks in such a manner as to preclude voids (nesting)
- ▶ Any fill placed on hillsides steeper than 5:1 should be keyed into existing materials
- ▶ Maximum vertical separation between benches should be 8 feet
- ▶ All structural fill should be placed in maximum 8-inch-thick (loose) lifts
- ▶ Structural fill lifts can be increased to 12-inches, or 18-inches if larger-than-normal grading equipment is approved for use by the soils engineer
- ▶ All structural fill and utility trench backfill should be densified to a minimum 90 percent relative compaction



- ▶ All non-structural fill should be densified to at least 85 percent relative compaction
- ▶ The finished surface should be smooth, firm, and show no signs of deflection
- ▶ Grading should not be performed with or on frozen soils

Subsidence & Shrinkage

- ▶ Where native clays are to remain, subsidence of about 0.1 feet should be expected
- ▶ Subsidence of exposed bedrock should be negligible
- ▶ Bedrock used as fill will have varying degrees of shrinkage, based on the size and quality when placed
- ▶ An overall earthwork quantity balance, therefore, becomes very difficult to predict

General Foundation Design

- ▶ Final determination of foundation type for each lot and over excavation requirements are to be undertaken on a lot-by-lot and station-by-station basis at the time of mass grading
- ▶ Near surface and altered/weathered rock are poor foundation soils such that footings should not bear directly in these materials
- ▶ Standard spread footings must be separated at least 3 feet from these materials by structural fill.
- ▶ Fresh bedrock will provide good support for standard spread footings
- ▶ Pier and grade beam foundations may be used
- ▶ A combination of pier and grade beam foundations on most lots and standard spread footings on selected lots identified during mass grading is the most economical

Spread Footing Foundation Design

- ▶ Spread footings can be designed to a net maximum allowable bearing pressure of 3,000 pounds per square inch (psf), whose pressure should be used for dead plus ordinary live loads
- ▶ Total loads are defined as the maximum load imposed by requiring combinations of dead load, live loads, snow loads, and wind or seismic loads.
- ▶ Total settlements of 3/4 or less for bedrock should be anticipated
- ▶ Differential settlements should not exceed two-thirds of this value
- ▶ Recommended coefficient of base friction is 0.43 and has been reduced by a factor of 1.5 on the ultimate soil strength
- ▶ Design value for active equivalent fluid pressures are 37 pounds per square inch (PSI) per foot of depth
- ▶ Design value for passive equivalent fluid pressures are 425 pounds per square inch (PSI) per foot of depth
- ▶ All exterior footings should be placed a minimum of two feet below adjacent finish grade for frost protection

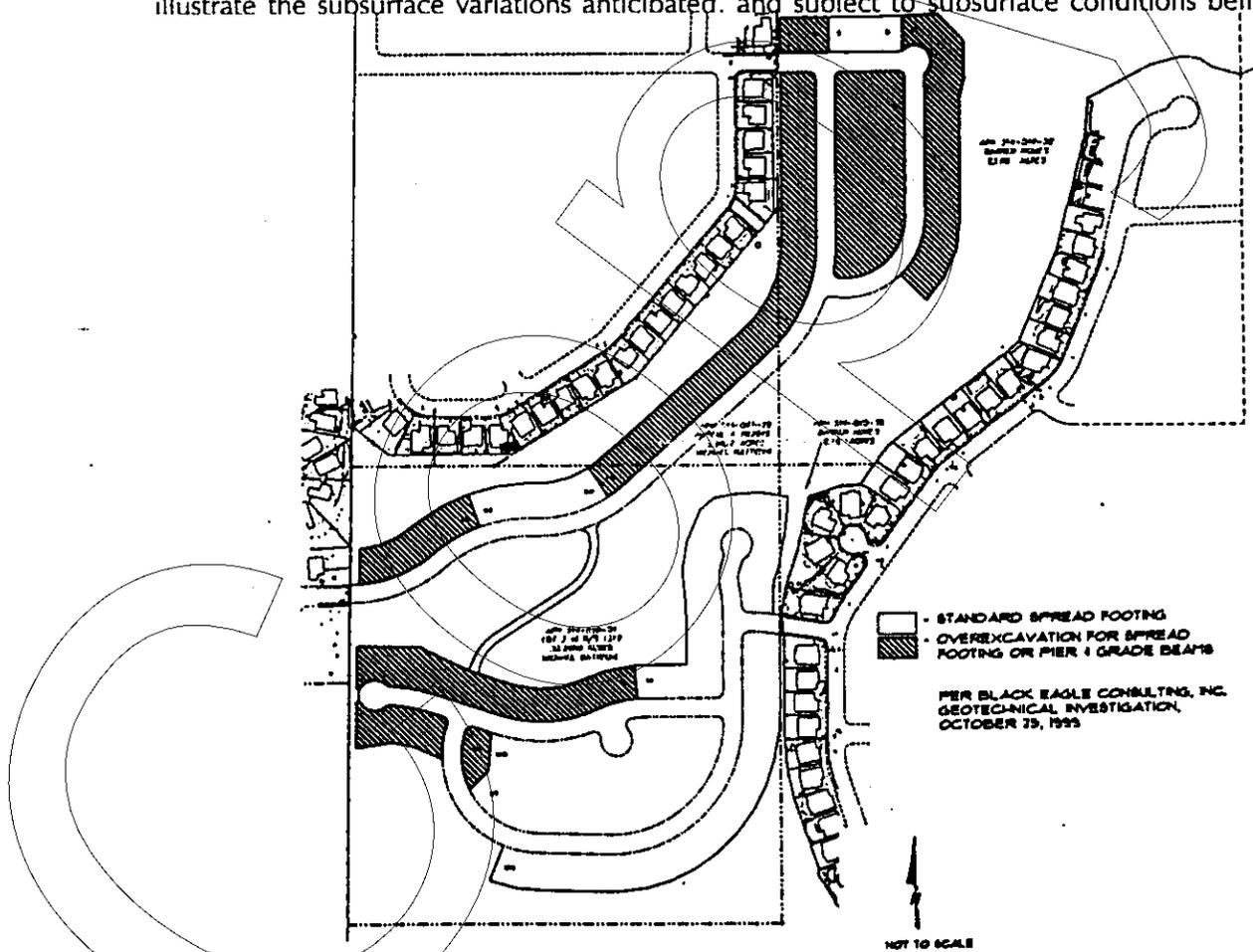
Pier & Grade Beam Foundation Design

- ▶ Pier and grade beam foundations can be designed with a variety of diameter-length-load relationships, requiring appropriate calculations, at the time of building permit review.
- ▶ Minimum embedment depth of 8 feet and a minimum diameter of 8 inches is recommended to penetrate uniform soil moisture that mitigate the nature of expansive clay forces.



- ▶ Actual design length at each lot will need to be specifically checked (by a qualified geotechnical specialist)
- ▶ In the event that bedrock is encountered (refusal), the pier can be halted at that depth
- ▶ In no case shall the depth be less than 2 feet below adjacent finished grade
- ▶ The bottom of the hole shall be compacted until no further deflection is observed
- ▶ Maintain minimum concrete cover on placed reinforcing bars
- ▶ Concrete should be poured with a plasticizer to achieve an 8-inch slump and vibrated
- ▶ A one-half inch maximum concrete mix should be used to allow the mix to flow around reinforcing steel
- ▶ Longer piers may be necessary to penetrate native clays in lots with fill
- ▶ Consult the Geotechnical report for design criteria relating to designing for loads
- ▶ Grade beams must be separated from native fill soils by at least 4 inches of compressible material, specifically designed for this purpose
- ▶ Over excavating and replacement will still be required for the garage door slab, driveway, and all other exterior concrete flatwork

The exhibit below, based on table 6 of the Black Eagle Report, dated October 25, 1999, is for **PLANNING PURPOSES ONLY**, and based on the original preliminary grading. It is included to illustrate the subsurface variations anticipated, and subject to subsurface conditions being field



ANTICIPATED FOUNDATION TYPES



ANTICIPATED FOUNDATION TYPES

Retaining Walls

- ▶ These design parameters are for walls with vertical back faces, horizontal backfill, and no surcharge loads, including traffic and construction equipment.
- ▶ A geotechnical engineer should be consulted for walls with unusual conditions such as sloping backfill or located on slopes
- ▶ A geotechnical engineer should be consulted for walls exceeding 10 feet in height
- ▶ Retaining wall foundation design per section, above
- ▶ Lateral loads will be resisted by friction along the base of the wall footings and by passive resistance against buried foundation walls
- ▶ Footings resting on bedrock or compacted structural fill may be designed using a coefficient of base friction of 0.47
- ▶ This factor has been reduced by a factor of 1.5 on the ultimate soil strength
- ▶ All walls must include a minimum of 1-1/2 foot width of drain rock backfill
- ▶ A plastic collection pipe should be placed at the toe of the foundation and sloped to daylight
- ▶ A wall that is free to yield at least 0.2% of the wall height, an equivalent fluid density of 37 pcf can be employed for active pressure design
- ▶ Walls should be designed to resist at-rest equivalent fluid density of 55 pcf
- ▶ Passive pressures can be used in design, where appropriate, but no passive pressure should be developed within two feet of final grade
- ▶ An equivalent fluid density of 212 pcf developing passive pressure can be used for native soil and/or structural fill
- ▶ To develop passive resistance, the wall must translate as much as 0.2 to 0.3% of the wall height
- ▶ The value of 212 pcf has been reduced from the ultimate passive resistance of 425 pcf by a factor of 2 to limit deflection
- ▶ Backfill behind walls should be compacted to 90% of the material's maximum dry density according to ASTM D 1557-78, but not more than 92% relative density
- ▶ To reduce temporary loads, heavy equipment should not be within 3 feet of the wall
- ▶ Hand operated equipment should be used to compact soils adjacent to the wall
- ▶ Rockery walls can be used
- ▶ Site harvested rock may be suitable, but carefully selected
- ▶ Construct rockery walls by a qualified, experienced contractor
- ▶ Rockery walls should be constructed in a battered configuration
- ▶ Maximum height of any rockery wall should be 6 feet in areas of fill
- ▶ Maximum height of any rockery wall should be 8 feet in areas of cut
- ▶ Walls can be staggered to achieve greater retained heights
- ▶ The net effect of staggered walls should not exceed 1.5:1 slope in cut, or 2:1 slope in fill.
- ▶ Hard bedrock in cut may allow for steeper slopes, up to 1:1
- ▶ All walls in fill should be constructed from trimmed, over-filled compacted slopes

Slope Stability & Erosion Control

- ▶ Uniform Building Code(UBC, 1997), adopted by the City of Sparks, allows cut and fill slopes up to 2:1 in the type of soils present at this site.
- ▶ Erosion control is required on slopes of 5:1 or steeper
- ▶ Slopes between 3:1 and 5:1 can be stabilized by hydro seeding



- ▶ Slopes greater than 3:1 require mechanical stabilization
- ▶ Other methods may be accepted if it is demonstrated to be as effective as mechanical
- ▶ Temporary and permanent erosion control will be required for all disturbed areas
- ▶ Dust control will be the responsibility of the contractor, during construction, an in compliance with all applicable regulations
- ▶ A dust control plan shall be submitted to Washoe County District Health Department
- ▶ Dust control will be the responsibility of the owner, after acceptance of the project

Site Drainage

- ▶ Surface drainage should be provided away from each structure
- ▶ A system of roof gutters and down spouts is recommended to collect roof drainage and direct it away from the foundations
- ▶ If pavement extends to the foundations, down spouts are not needed
- ▶ If rain gutter drainage is to be piped underground, it must be in a solid pipe, with tightly glued joints, to ensure it does not infiltrate into the foundation area
- ▶ Stemwall backfill should be thoroughly compacted
- ▶ positive crawlspace drainage should be provided
- ▶ If confined planters are to be placed adjacent to foundation areas (within 10 feet), they should be lined and sloped to drain away from foundations
- ▶ Changes in site drainage and poor irrigation practices may result in wet crawlspaces

Concrete Slabs

- ▶ All concrete slabs should be directly underlain by Type 2, Class B aggregate base
- ▶ The thickness of base material shall be 6 inches beneath curb and gutters
- ▶ The thickness of base material shall be 4 inches beneath sidewalks and private flatwork
- ▶ Aggregate base courses should be densified to, at least, 95% relative compaction
- ▶ Subgrade preparation and separation from expansive material should be performed in accordance with earlier sections outlined above.
- ▶ Type II cement should be used in all concrete work
- ▶ Concrete in Sparks is prone to excessive shrinking and curling
- ▶ All placement and curing of concrete shall be performed in accordance with procedures outlined by the American Concrete Institute
- ▶ Special considerations should be given to concrete placed and cured during hot or cold weather
- ▶ Control Joints and reinforcing should be provided
- ▶ Concrete should not be placed on frozen in-place soils

Asphaltic Concrete (AC)

- ▶ Recommended structural section for residential streets is 4 inches of AC, over 8 inches of Type 2 Base
- ▶ In areas of hard bedrock, the base course should be reduced to a 4 inch leveling course
- ▶ All aggregate base beneath asphalt pavements should be densified to, at least, 95% relative compaction

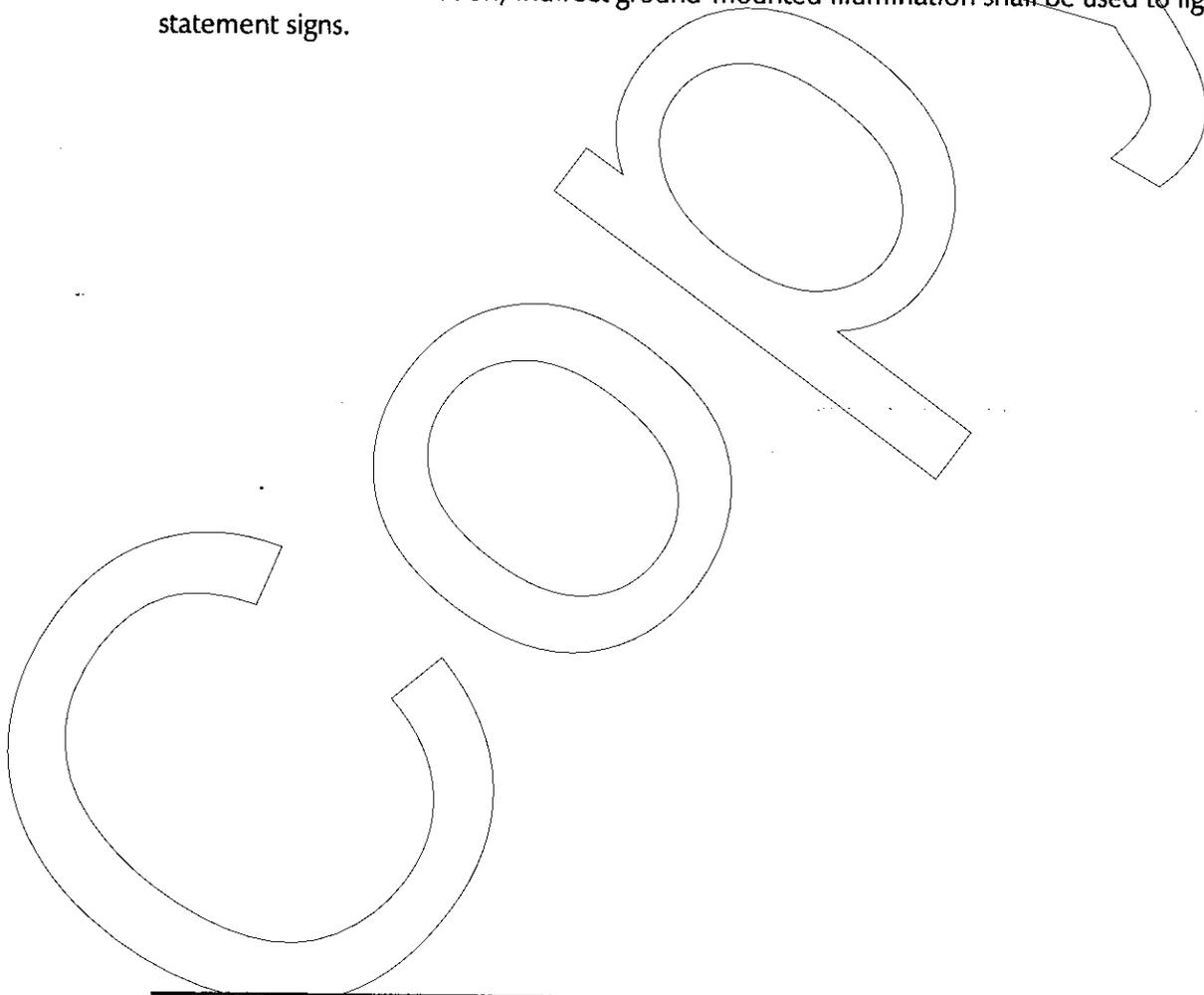


Corrosion Potential

- ▶ Due to the presence of gypsum, all footings and stemwall concrete, not in areas of hard bedrock cut or hard bedrock fill should be designed with a minimum of 5.5 sacks of Type II cement
- ▶ Maximum water to cement ratio of 0.50 to provide sulfate resistance
- ▶ 4,000 psi (28 day) required for dedicated improvements will provide sufficient sulfate resistance
- ▶ Pier and grade beam foundations can use lesser strength concrete, as designed by a structural engineer

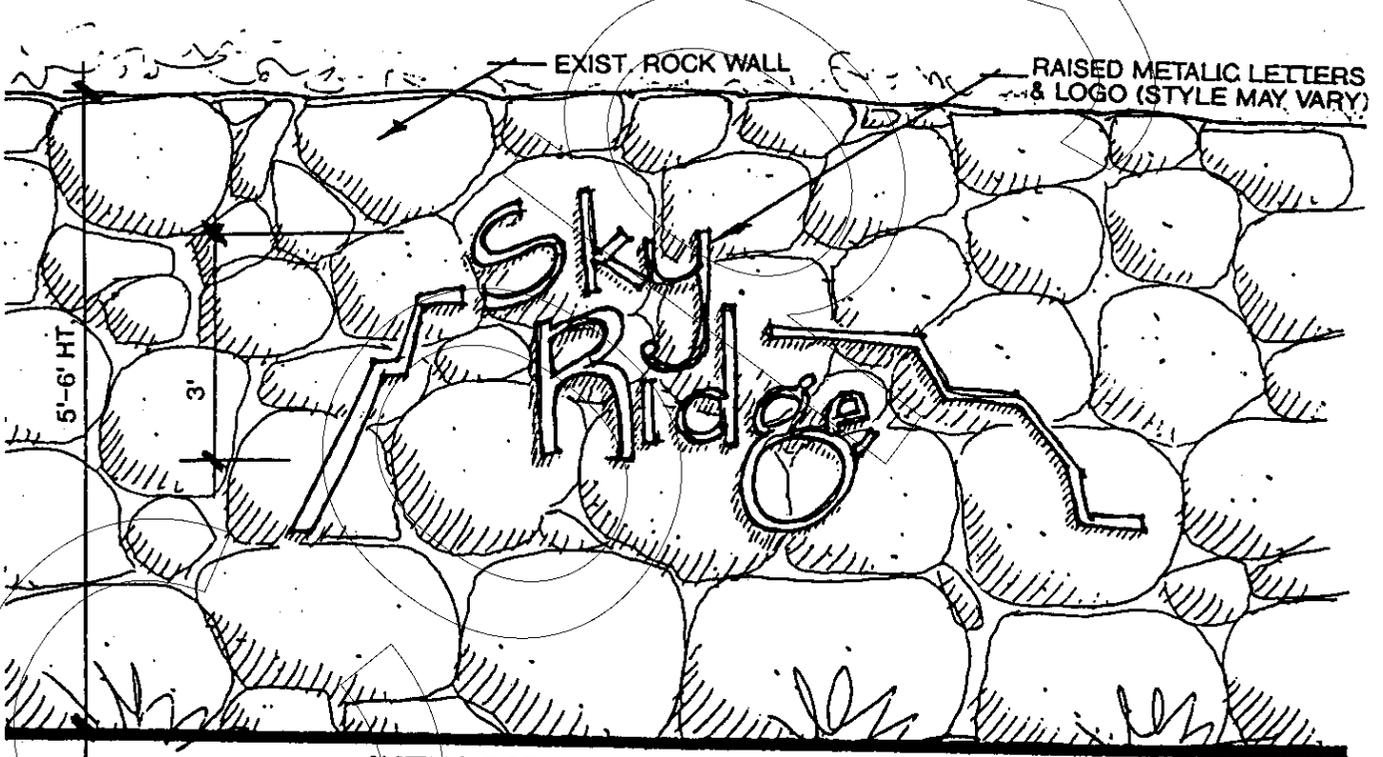
SIGNS

Only entry statement signs are permitted. These signs are limited to the project entrances of Disc Drive, Cloud Peak Drive, and Cantina Drive. The signs shall be rockery monuments with bronzed "Sky Ridge" lettering (see the Entry Sign Details exhibit, next page). The signs will not contain internal illumination; indirect ground-mounted illumination shall be used to light the entry statement signs.



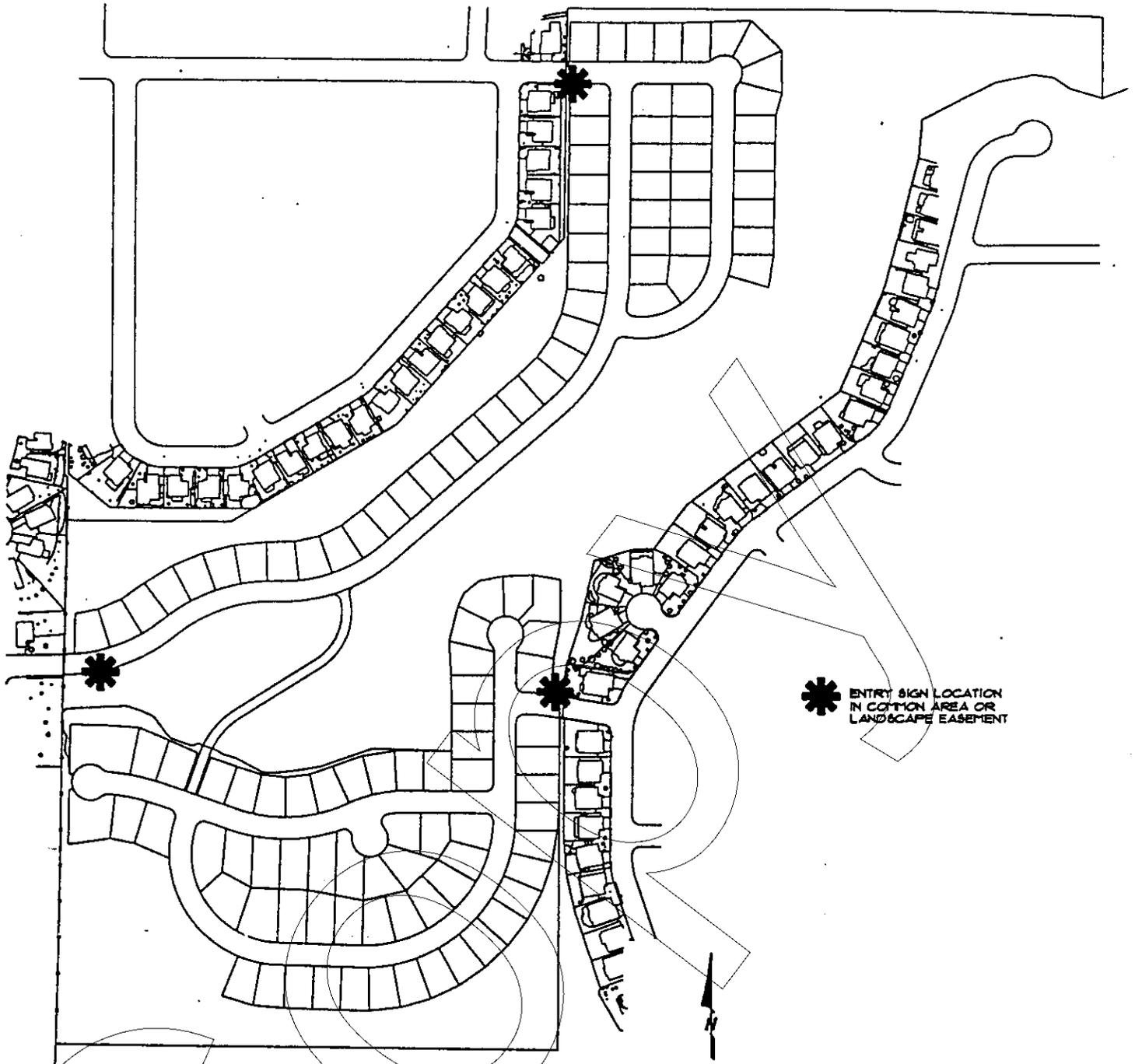


FREE-STANDING ENTRY MONUMENT



INTEGRATED ENTRY MONUMENT

ENTRY SIGN DETAILS



★ ENTRY SIGN LOCATION
IN COMMON AREA OR
LANDSCAPE EASEMENT

NOT TO SCALE

ENTRY SIGN
LOCATIONS

SKY RIDGE

PE PLANNING
ENGINEERING
LAND SURVEYING
LANDSCAPE ARCHITECTURE

260 South Rock Blvd. Ste. 100
Reno, Nevada 89502

Phone (775) 332-4920 E-mail: pe@pe-reno.com Fax (775) 332-4925

REVISED 2/18/00

ENTRY SIGN LOCATIONS



LIGHTING

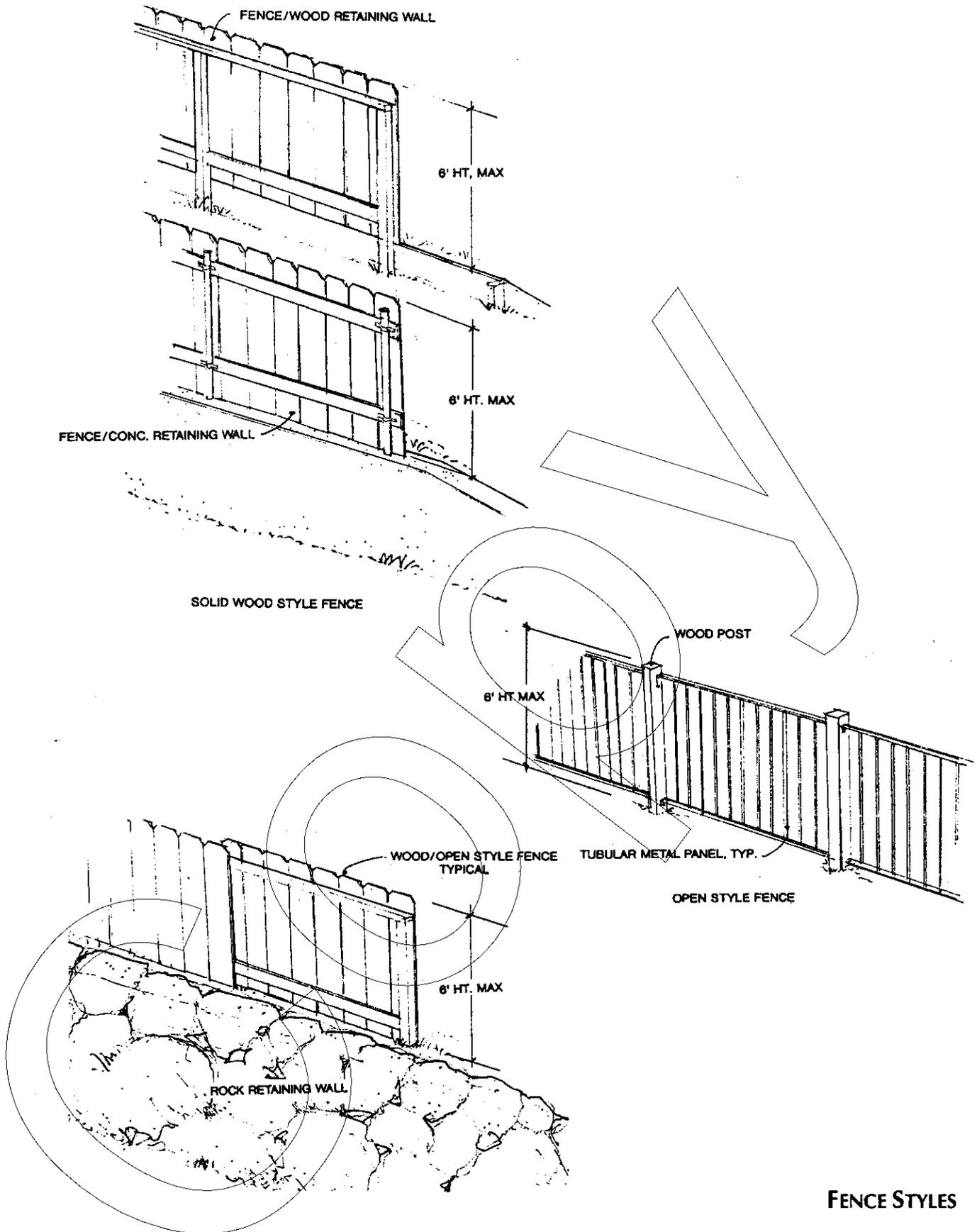
Lighting will be standard Sierra Pacific light poles, designed and installed at their direction. Public lighting fixtures will be placed in accordance with City of Sparks standard of maximum spacing of 300 feet with no more than 150 feet into a cul-de-sac.

FENCING

All units will have fenced side and rear yards. Two fencing options are permitted: a standard solid wood and an open tubular steel style. Both styles are limited to 6 feet in height. The open fencing option is designed for rear yards that back up to restricted access common area and solid view screening is not necessary for privacy. The location of fences shall comply with Sparks Municipal Code standards. A fence permit from the City is required prior to the erection of any fence and/or wall.

Where retaining walls are used to separate grades at adjacent properties, the fencing will be constructed in the following manner. Where the retaining walls are small and wooden, fencing will be constructed as part of the retaining walls. Fences located on larger retaining walls, up to six feet high, will be constructed in easy to access, sturdy panels. These panels will consist of standard fence material attached to vertical metal poles that slide into metal shafts imbedded in the retaining wall. Where more than six feet is retained, the fences shall be located on the "above" lot at a safe distance from the retaining wall. Retaining walls shall meet all Uniform Building Code standards.





FENCE STYLES



SITE DATA

Sky Ridge is an in-fill development to be created by combining two parcels owned by the Matteoni family with one parcel to be carved from a parcel owned by Barker Homes, Inc. and developed into the project. The sizes and open spaces of the component parts, known as the Matteoni and Barker parcels, are described below.

The following chart, with the accompanying figures on following pages, demonstrates the types of areas to be provided in Sky Ridge. Refer to the Analysis of Development on Slopes, Hilltops and Ridges section for slope category breakdown information.

Overall Site Data		
	Area (AC)	% of Total
DISTURBED AREA (Fig. 4):	35.85	66%
NET UNDISTURBED (Fig. 5):	18.43	34%
TOTAL SITE AREA (Fig. 1):	54.28	100%
OPEN SPACE (Fig. 6):	25.08	46%
ROADWAYS (Fig. 7):	8.6	16%
LOTS (Fig. 8):	20.6	38%
TOTAL SITE AREA (Fig. 1):	54.28	100%

	MATTEONI (Fig. 2)		BARKER (Fig. 3)		TOTAL	
	Area (AC)	%	Area (AC)	%	Area (AC)	%
OVERALL SITE:	43.28	80%	11.0	20%	54.28	100%
OPEN SPACE:	22.25	51%*	2.83	26%*	25.08	46%

*Percent of open space in each parcel
Numbers are rounded slightly

The third and final chart demonstrates that there is an excess amount of open space with the Barker Homes, Inc. Canyon Hills development. A reserve of 32 dwelling units on 11 acres was indicated on the original Canyon Hills development. This 11-acre reserve is the developable portion of the Barker parcel. Even with the open space required to be provided in the development of the 11-acre reserve, the 20% open space requirement of the City's Planned Development zoning district for the Canyon Hills development is still provided. The required 20% open space for Sky Ridge is also provided.



Canyon Hills Data

SITE AREA: 79.3 Acres 100%

Open Space Provided

Common Area 1: 2.91 Acres
Common Area 2: 4.69 Acres
Common Area 3: 12.98 Acres
Common Area 4: 0.78 Acres

Total Open Space Provided: 21.36 Acres 26.9%

Total Open Space Required: 15.86 Acres 20%

The original Barker Reserve was 23.98 acres with 12.98 acres retained as permanent open space and 11 acres converted to Sky Ridge. Of the 11 acres which was converted to Sky Ridge, 9.2 acres is to be developed, see Figure 9.

Canyon Hills planned development open space:

- 23.98 ac
 - 0.78 ac
 - 2.91 ac
 - 4.69 ac
- 32.36 ac actual open space or 35.8% of total development site: $(32.36\text{ac}/90.3\text{ ac}) \times 100 = 35.84\%$
- Per Canyon Hills planned development handbook, 22.76 acres of open space or 25.2% of total development site: $(22.76\text{ ac}/90.3) \times 100 = 25.2\%$
 - Per PD zoning district requirements, minimum of 20% of development site or 18.06 acres of open space required: $90.3\text{ ac} \times 20\% = 18.06\text{ acres of open space required.}$



As a part of the Sky Ridge planned development project , an 11.0 acre parcel will be removed from the 23.98 acre Canyon Hills planned development open space parcel. This action affects the Canyon Hills planned development open space total in the following manner:

- 90.3 ac - 11.0 ac = 79.3 acres total is what the Canyon Hills planned development is reduced to.
- 79.3 ac x 20% = 15.86 acres of open space required to remain as a part of the Canyon Hills planned development to comply with the City's PD standards.
- The amount of open space remaining with the Canyon Hills planned development exceeds the minimum:

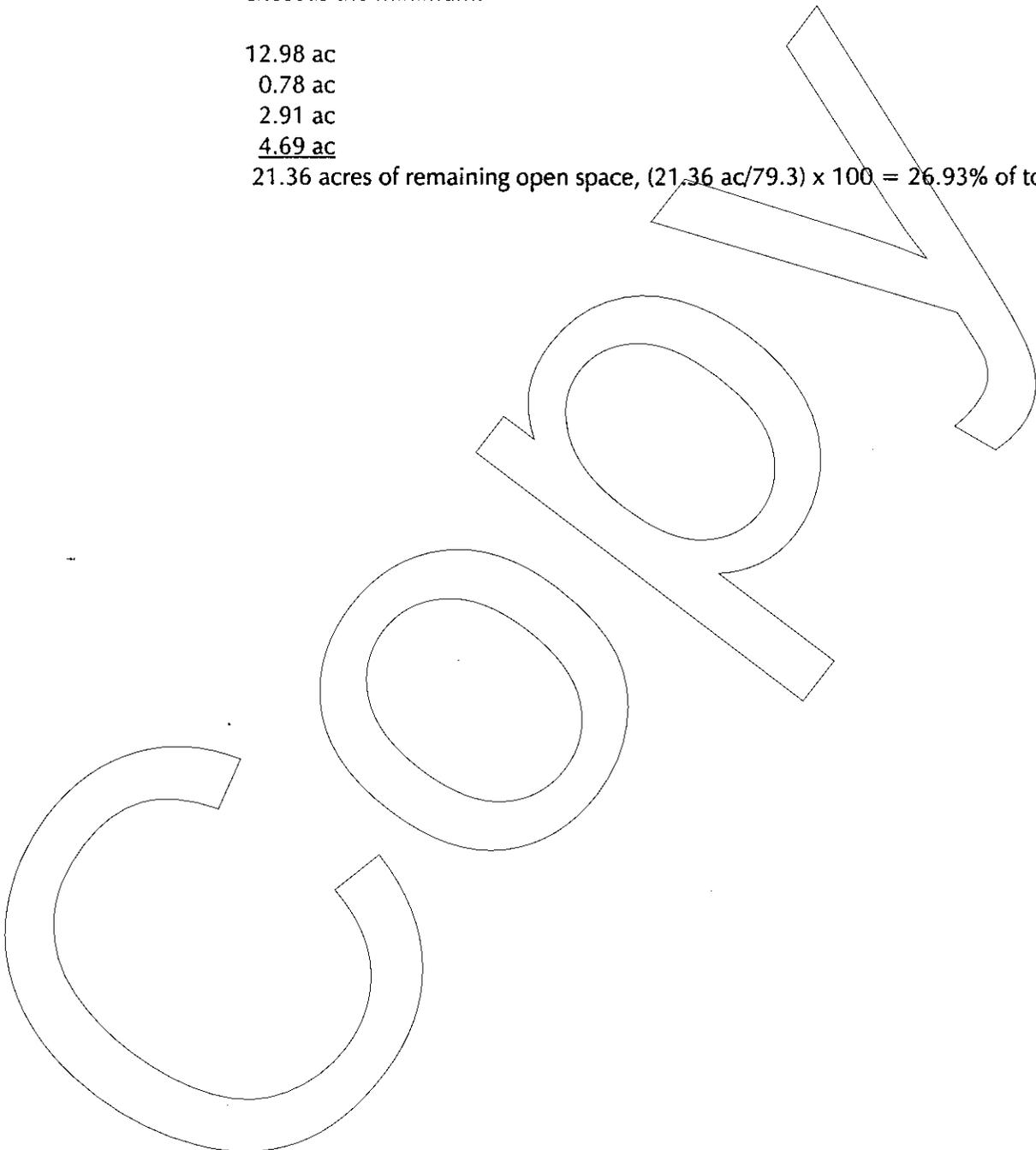
12.98 ac

0.78 ac

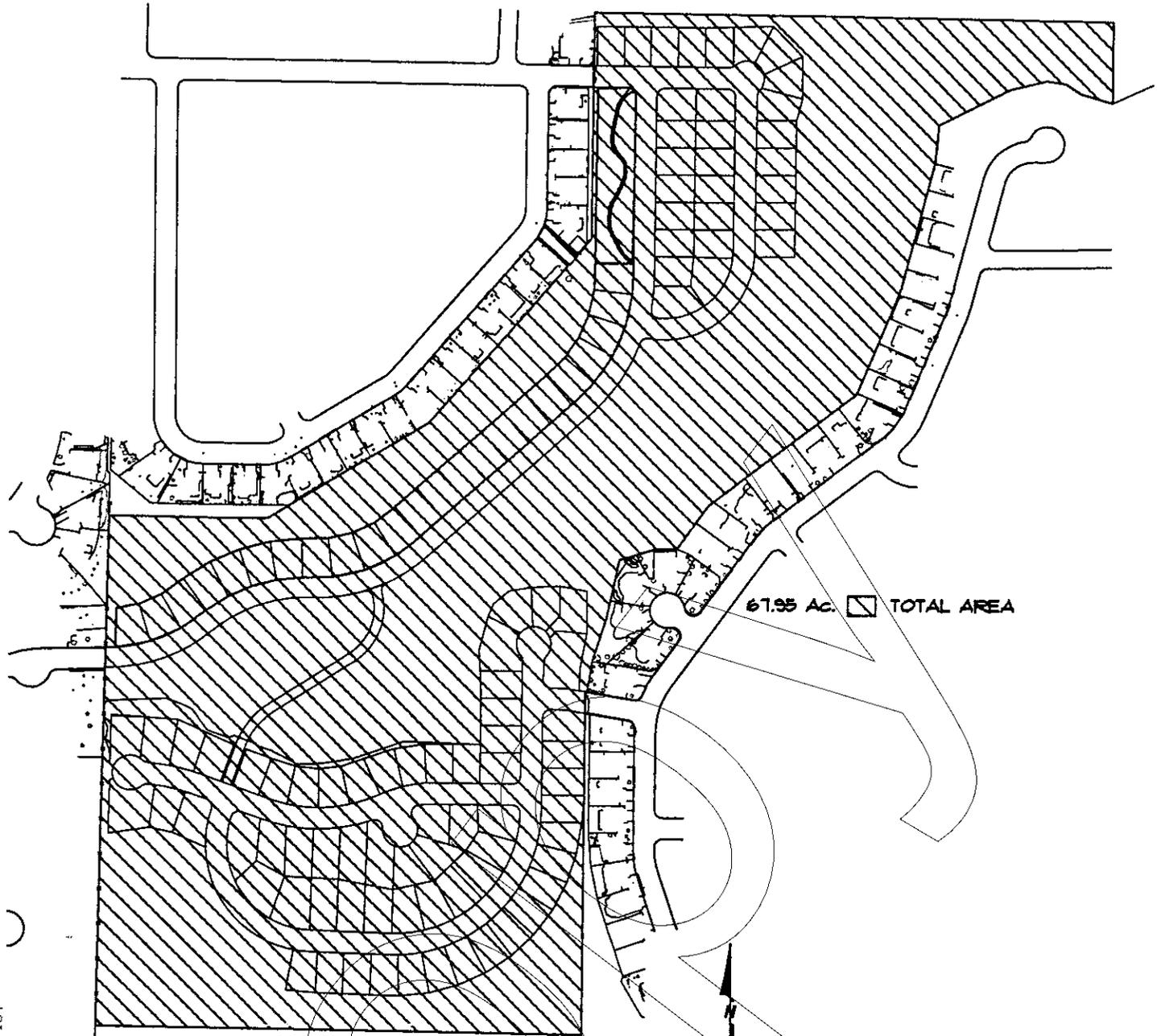
2.91 ac

4.69 ac

21.36 acres of remaining open space, $(21.36 \text{ ac} / 79.3) \times 100 = 26.93\%$ of total site.



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12/06/2001
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67.95 AC. [hatched box] TOTAL AREA



FIGURE 1

SKY RIDGE OVERALL AREA

PEP
PLANNING
ENGINEERING
LAND SURVEYING
LANDSCAPE ARCHITECTURE
250 South Rock Blvd. Ste. 100
Reno, Nevada 89502
Phone (775) 332-4020 E-mail tpe@tpe-reno.com Fax (775) 332-4033

REVISED 6/27/01

FIGURE 1—OVERALL AREA

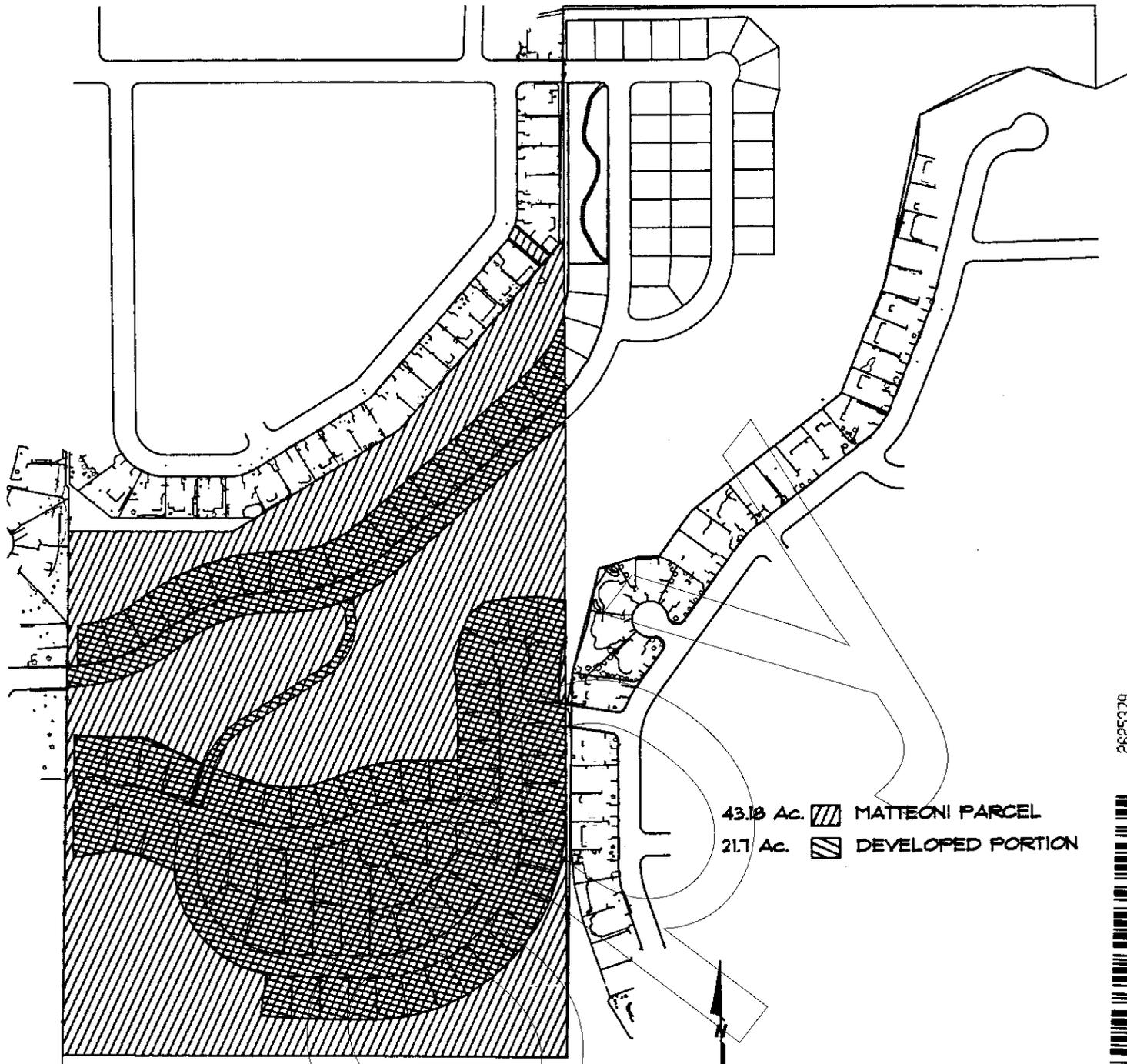


FIGURE 2

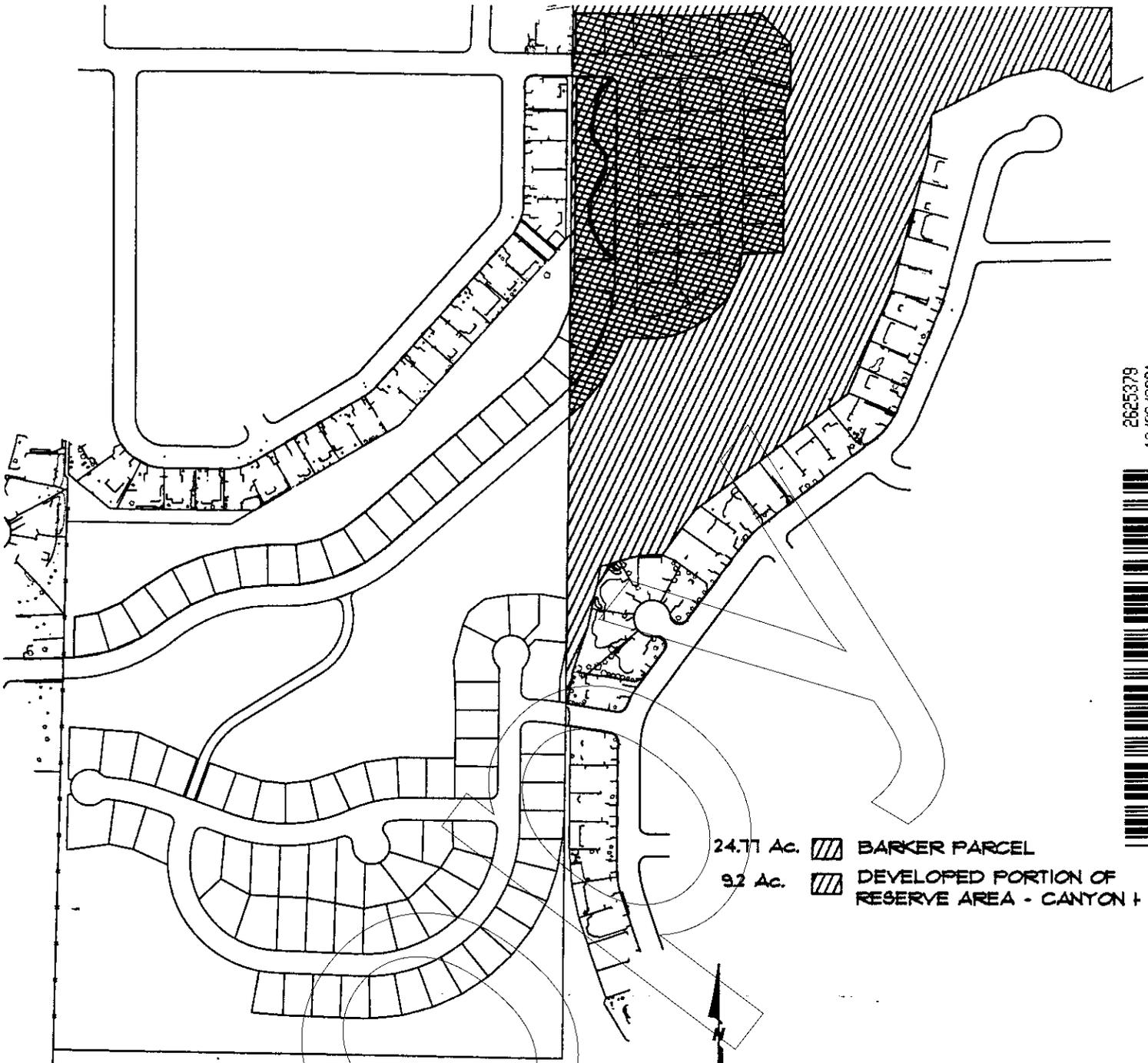
SKY RIDGE MATTEONI PARCEL

LEP PLANNING
ENGINEERING
LAND SURVEYING
LANDSCAPE ARCHITECTURE
250 South Rock Blvd. Ste. 100
Reno, Nevada 89502
Phone (775) 332-4920 E-mail lpo@lpo-reno.com Fax (775) 332-4933
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FIGURE 2—MATTEONI PARCEL



24.71 Ac. [diagonal hatching symbol] BARKER PARCEL
 92 Ac. [diagonal hatching symbol] DEVELOPED PORTION OF RESERVE AREA - CANYON HILLS

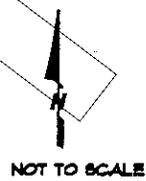


FIGURE 3

SKY RIDGE BARKER PARCEL (PART OF CANYON HILLS)

PEP PLANNING
 ENGINEERING
 LAND SURVEYING
 LANDSCAPE ARCHITECTURE
 250 South Rock Blvd. Ste. 100
 Reno, Nevada 89602
 Phone (775) 332-4920 Email spe@pep-reno.com Fax (775) 332-4833
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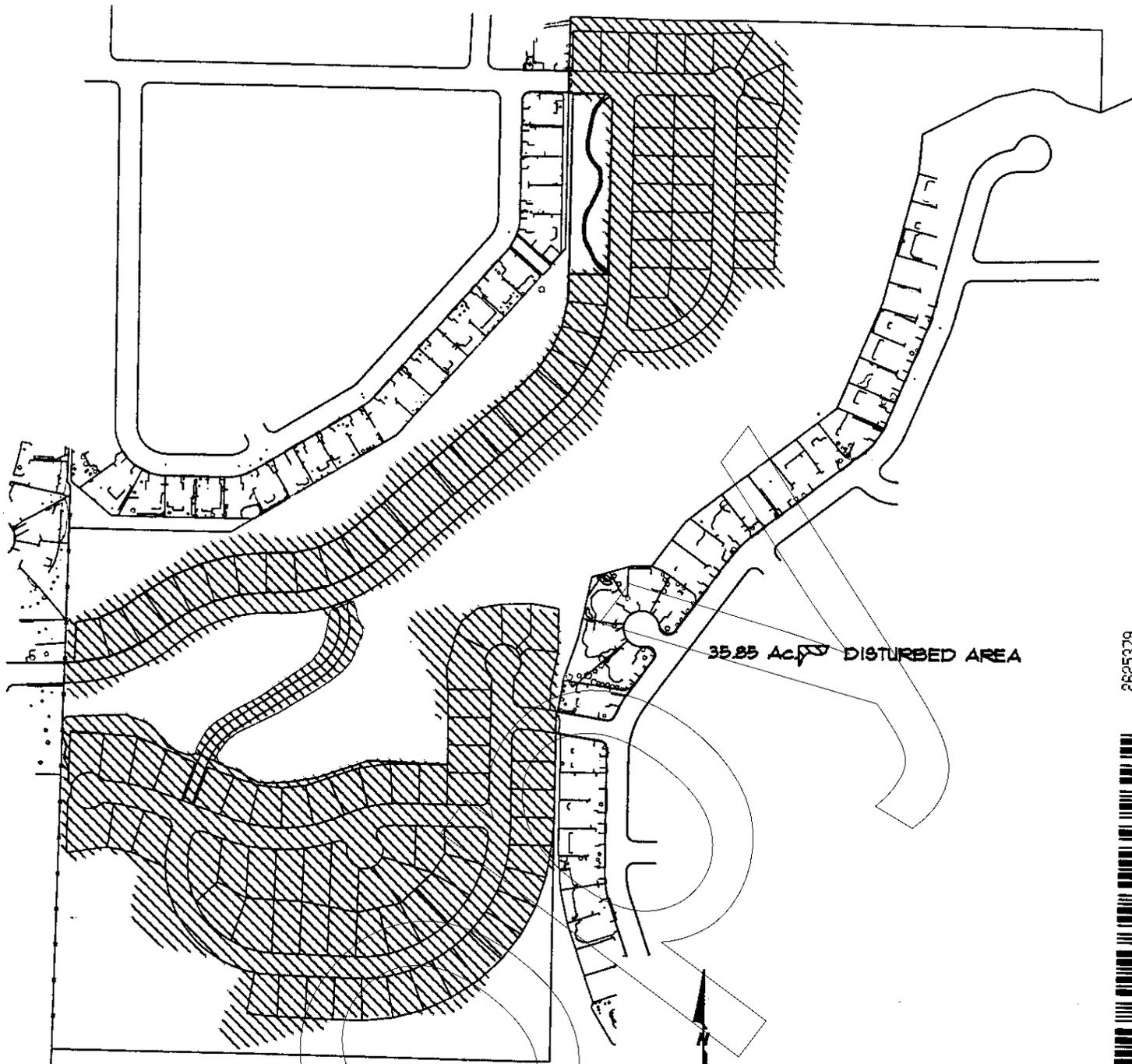


FIGURE 4

SKY RIDGE DISTURBED AREA

NOT TO SCALE



PLANNING
ENGINEERING
LAND SURVEYING
LANDSCAPE ARCHITECTURE

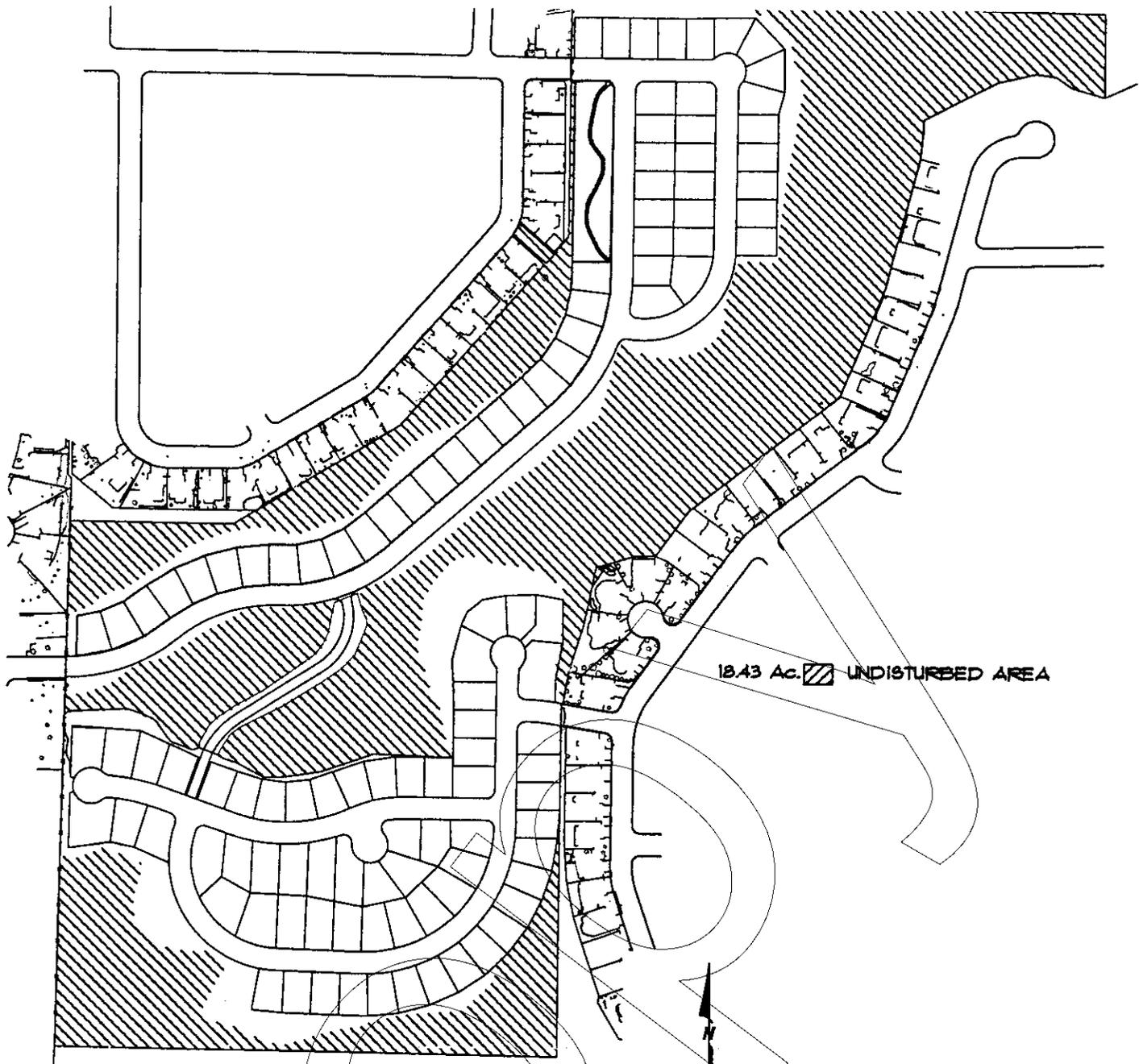
250 South Rock Blvd. Ste. 100
Reno, Nevada 89502

Phone (775) 332-4920 E-mail tpe@tpe-reno.com Fax (775) 338-4933

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FIGURE 4-DISTURBED AREA

2625379
12/06/2001
48 of 184



18.43 Ac. UNDISTURBED AREA



FIGURE 5

SKY RIDGE UNDISTURBED AREA

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FIGURE 5—UNDISTURBED AREA



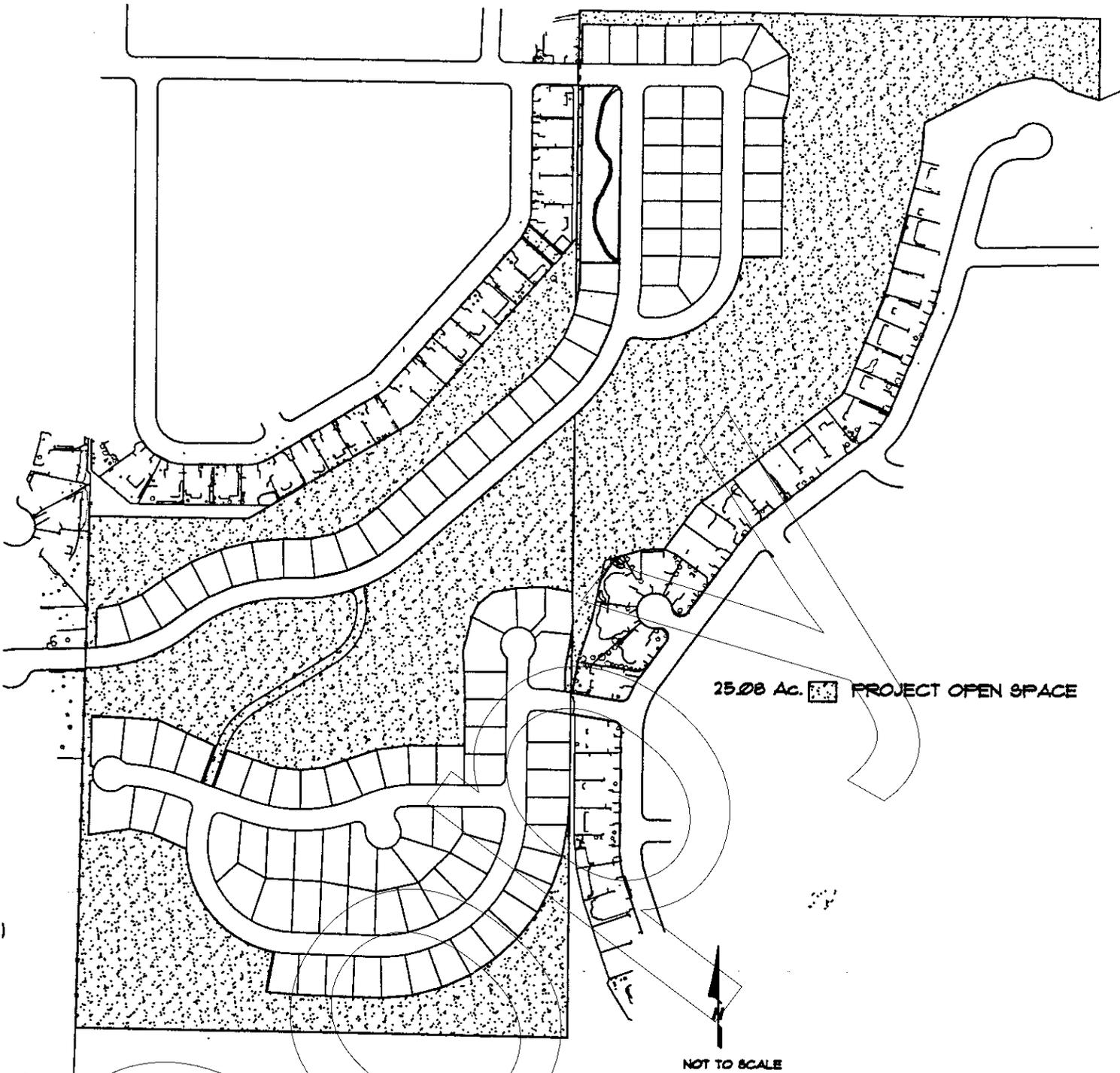


FIGURE 6

SKY RIDGE OVERALL OPEN SPACE



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FIGURE 6—OVERALL OPEN SPACE



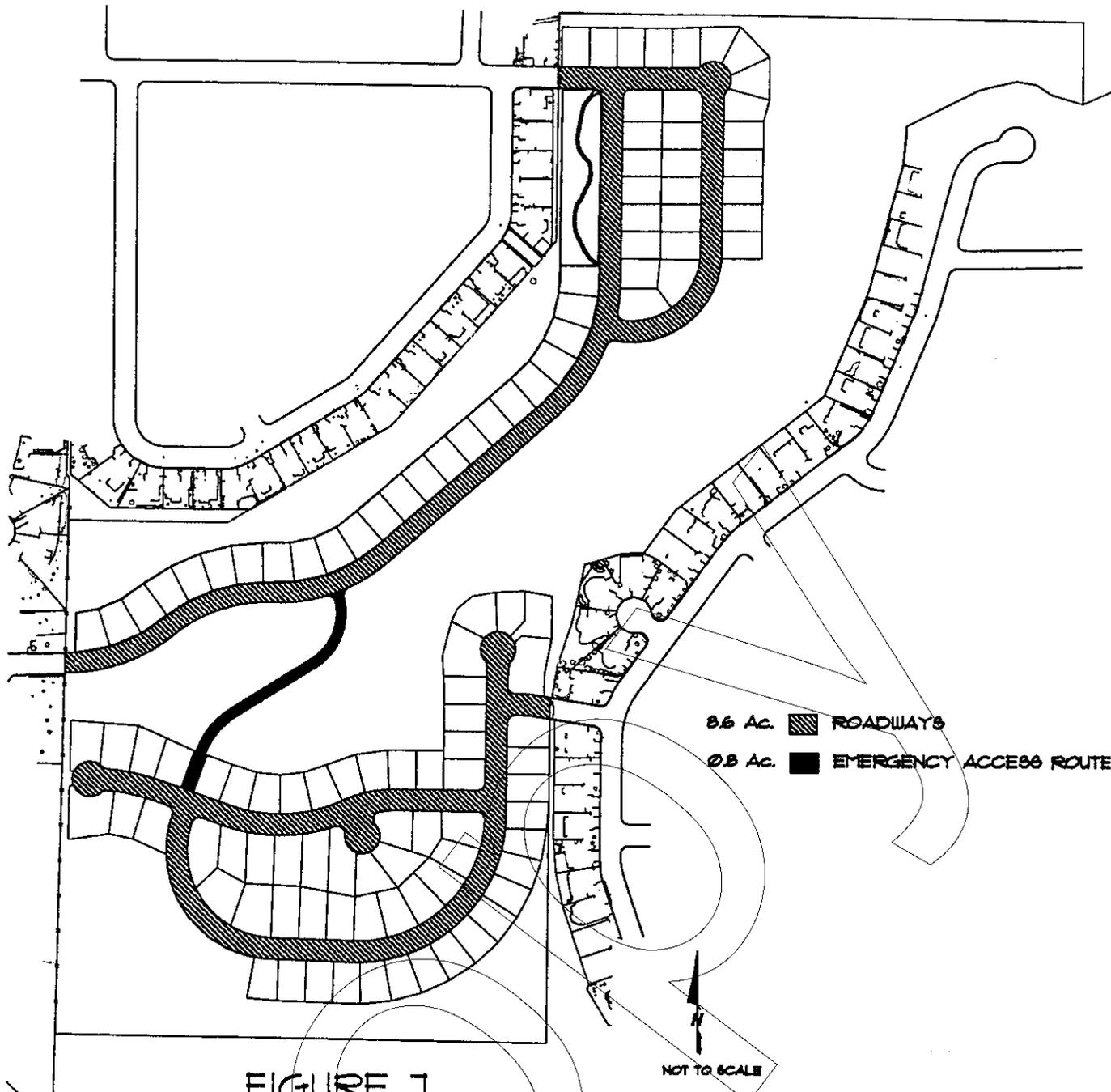


FIGURE 7

SKY RIDGE
ROADWAYS



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LANDSCAPE ARCHITECTURE

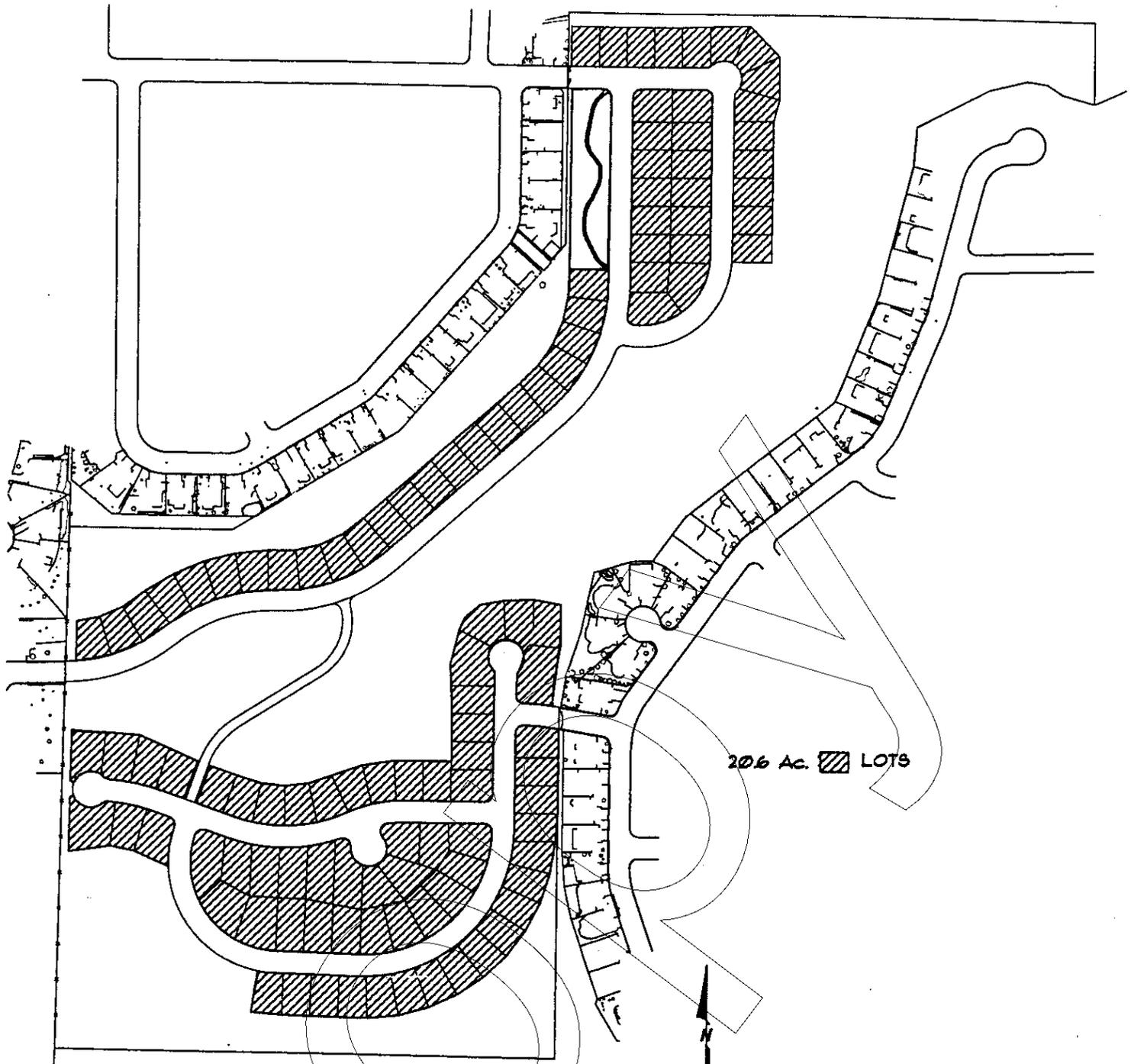
250 South Rock Blvd. Ste. 100
Reno, Nevada 89502

Phone (775) 332-4920 Email ps@pe-reno.com Fax (775) 332-4923

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FIGURE 7-ROADWAYS





20.6 Ac.  LOTS

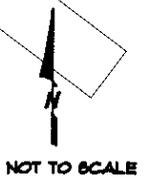


FIGURE 8

SKY RIDGE
LOTS

PEP PLANNING
ENGINEERING
LAND SURVEYING
LANDSCAPE ARCHITECTURE

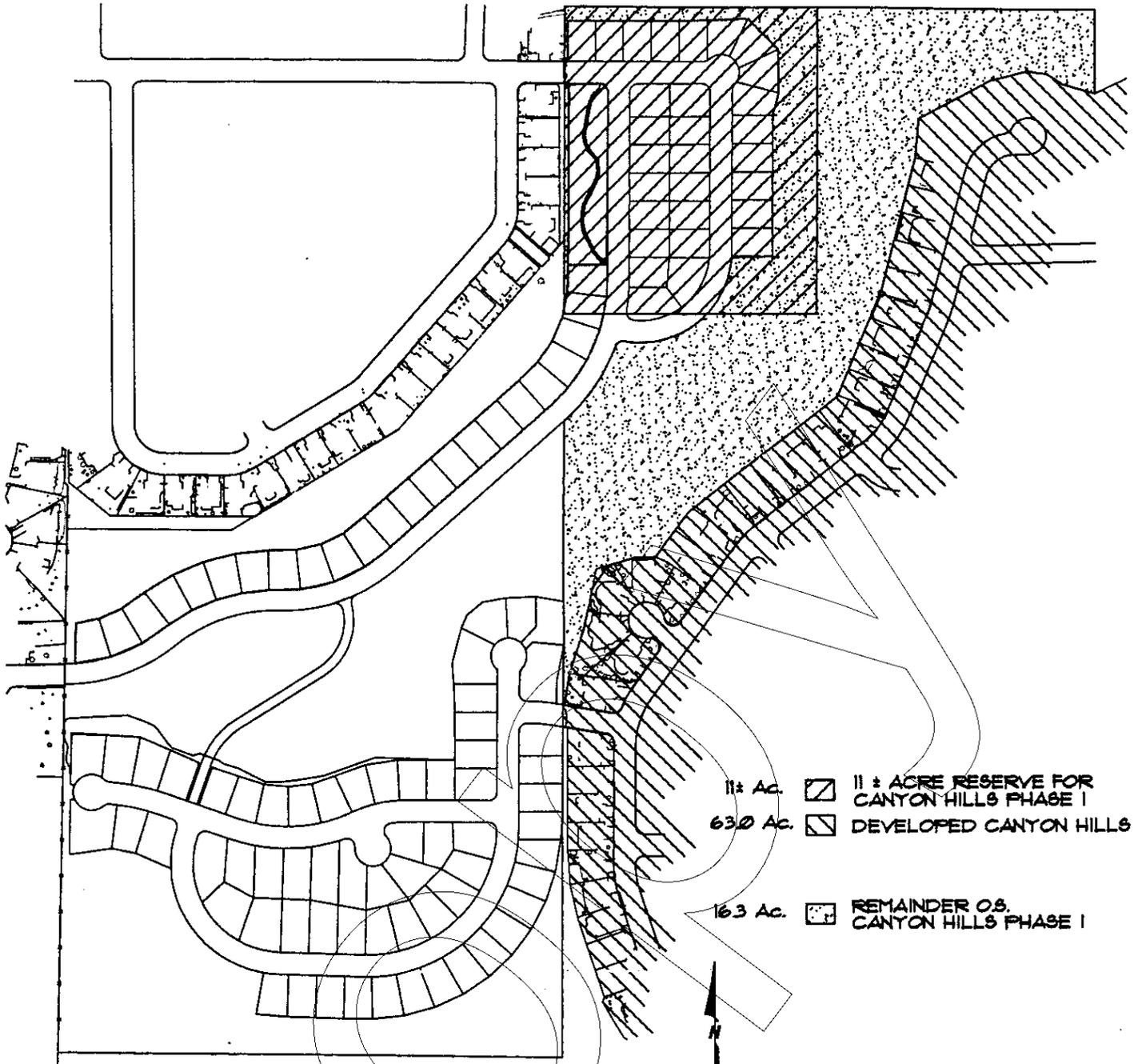
250 South Rock Blvd. Ste. 100
Reno, Nevada 89502

Phone (775) 332-4920 E-mail ipe@ipe-reno.com Fax (775) 332-4933

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FIGURE 8—LOTS





- 11 ± Ac. 11 ± ACRE RESERVE FOR CANYON HILLS PHASE I
- 630 Ac. DEVELOPED CANYON HILLS
- 16.3 Ac. REMAINDER OF CANYON HILLS PHASE I

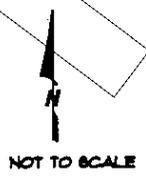


FIGURE 9

SKY RIDGE CANYON HILLS

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Reno, Nevada 89502

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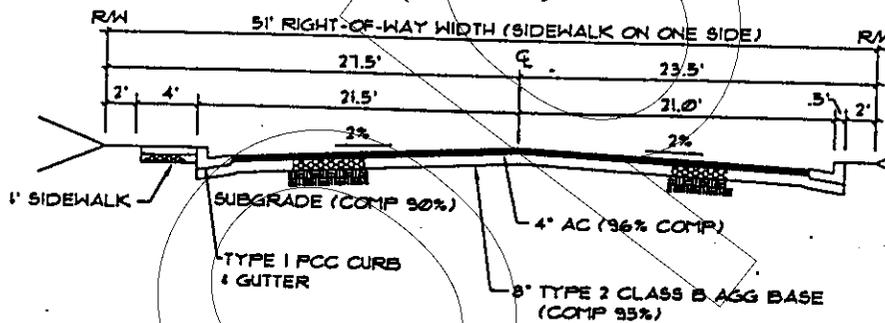
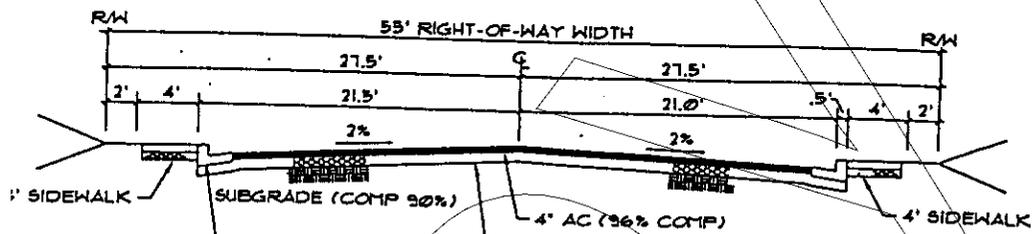
REVISED 6/27/01

FIGURE 9—CANYON HILLS



STREET RIGHTS-OF-WAY

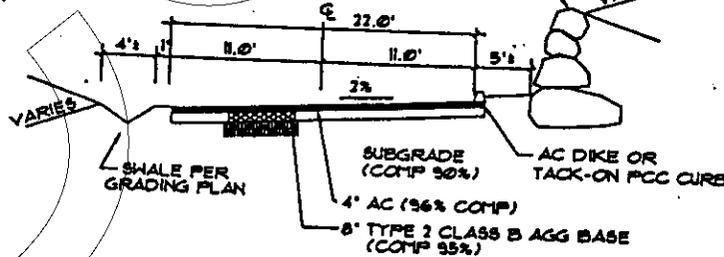
The streets within the Sky Ridge Subdivision are designed to compliment the natural terrain. This is done in two distinct manners. First the location and geometry of the streets was selected in order to reduce the effects of grading the site. Secondly, a modified street section is proposed where there are houses on only one side of street. This modification consists of the elimination of sidewalk on the side of the street without houses, reducing the overall street width. This modified street section will reduce grading of the site and disturbance of the common areas. The location of the modified street section does not impair pedestrian access; no homes front on the sidewalk-less sides of these streets. The following diagrams illustrate the style and location of the standard and modified street types used in Sky Ridge. These roadway cross-sections or alternative roadway cross-sections to the approval of the City Engineer with input from the Fire Chief shall be used within the Sky Ridge Planned Development.



RIGHTS OF WAY

22' WIDE MIN. ROAD SURFACE

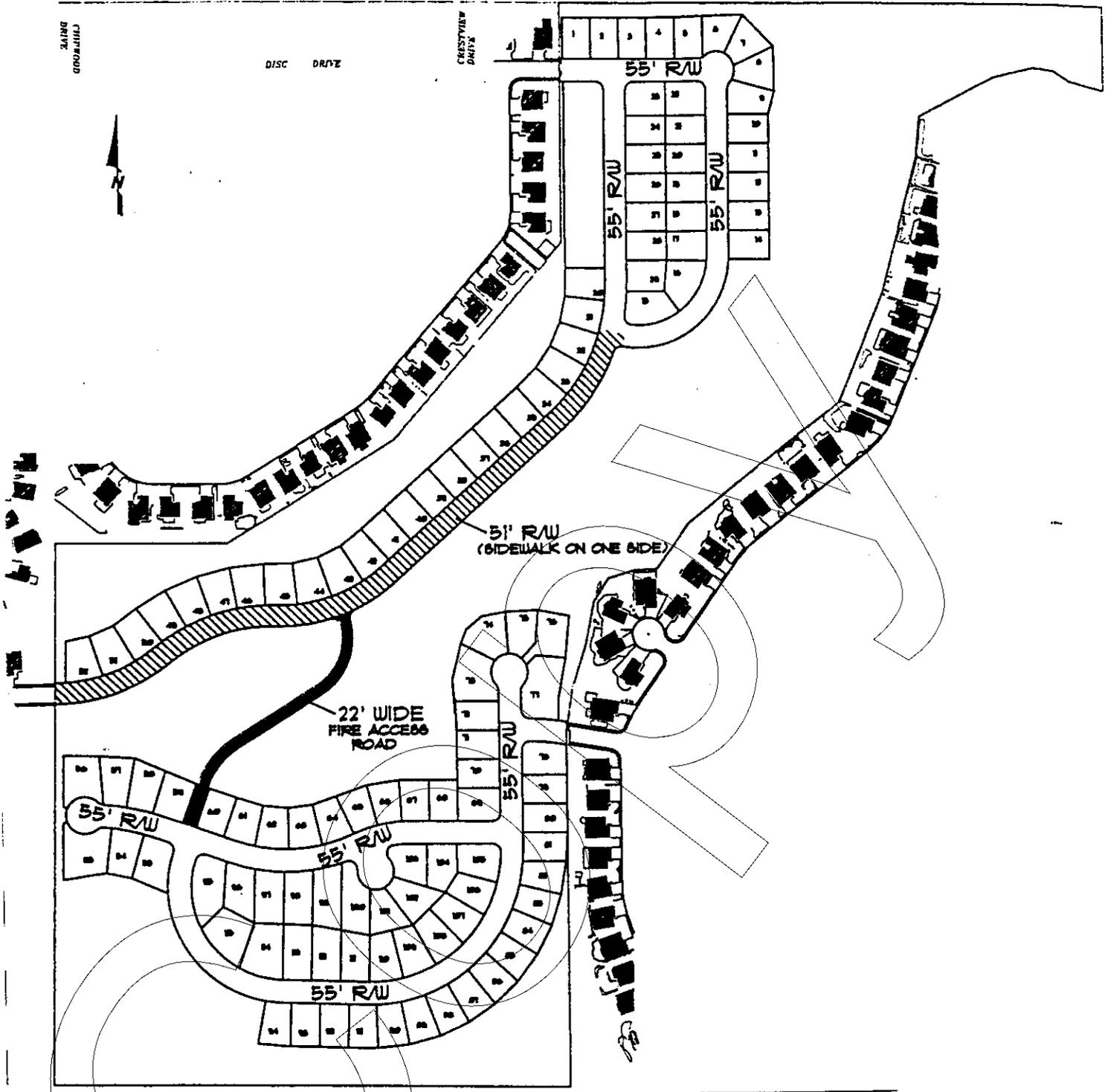
ROCKERY WALL GRADING PLAN



EMERGENCY ACCESS ROUTE

STREET SECTIONS





STREET PLAN



CIRCULATION/FIRE ACCESS AND PROTECTION

The main access to the lower portion of the project will be Vista Boulevard to Disc Drive, east to the terminus of Disc Drive as illustrated on the following page. It may also be reached via Vista Boulevard, Disc Drive, Eagle Mountain Drive, and Cloud Peak Drive.

The main access to the upper portion of the project will be Vista Boulevard, Los Altos Parkway, Goodwin Road, Desert Hill Drive, and Cantina Drive. It may also be reached via Disc Drive, Crestside Drive, Southview Drive, Vista Mountain Drive, Desert Hills Drive, and Cantina Drive.

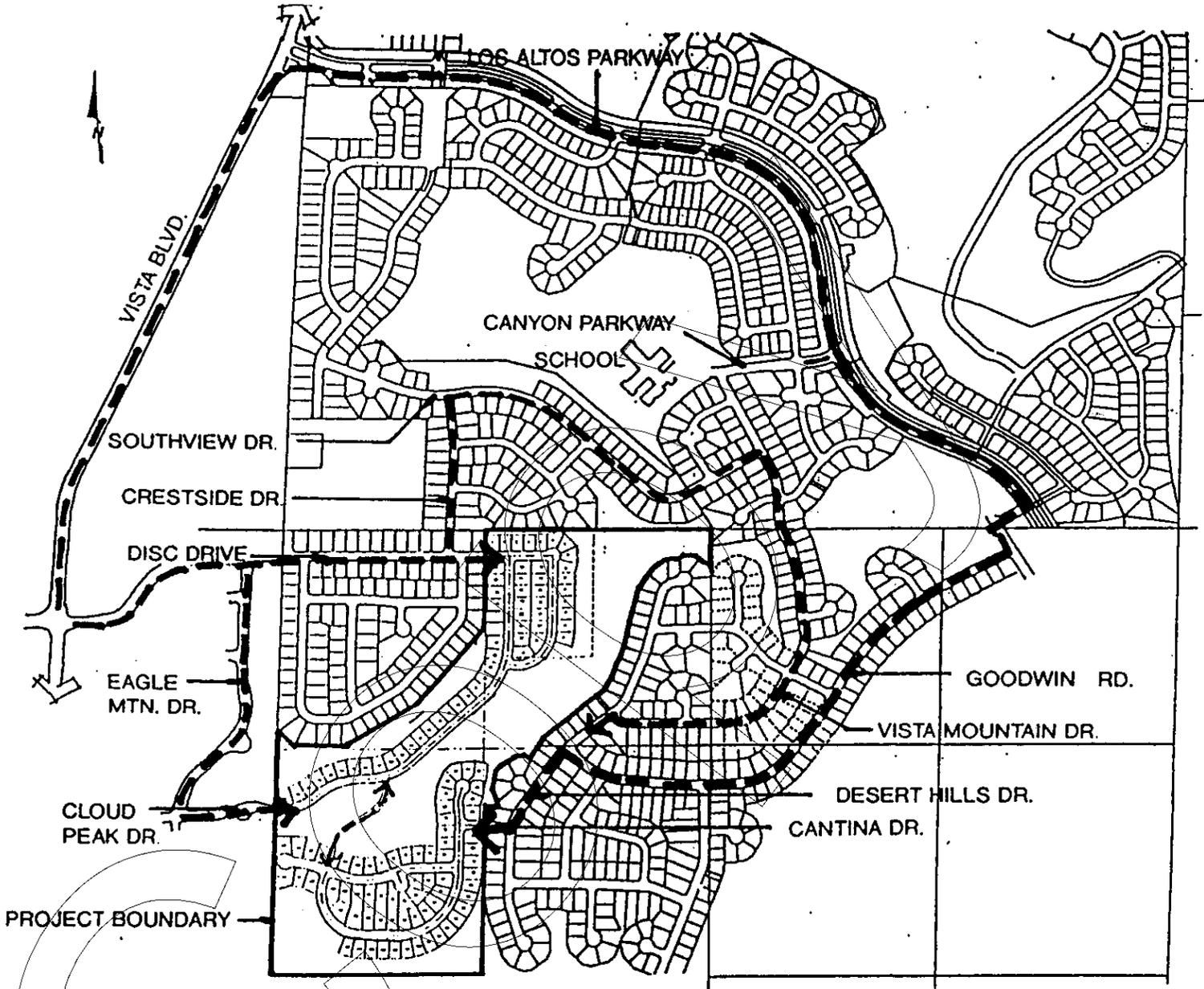
A private 22-foot wide emergency access route is provided to facilitate emergency vehicle access between upper and lower portions of the project and is the main access for emergency services to the southern portion of the project. The private emergency access route shall be barricaded to the approval of the City Engineer, Fire Chief and Police Chief. The barricade design and installation shall include a device that senses strobe lights and is compatible with the equipment used by the City of Sparks traffic division. The design and installation shall include a keypad entry system for police. The barricades shall also include a manual opening system in the event of a power outage. The method of barricading shall be reviewed and approved by the City Engineer, Fire Chief and Police Chief prior to approval of a final map for the project. All lots in Sky Ridge will be offered automatic residential sprinklers as an upgrade option.

WATER AND SEWER DEMANDS

The estimated water demand for this project is 65 acre-feet annually. The estimated sewer demand is approximately 43,750 gallons per day. The calculations for these numbers are provided in the APPENDIX. These are preliminary estimates subject to a final determination by Sierra Pacific Power Company. Sanitary sewer service is designed to utilize standard 8-inch pipes. Connection to the existing system is designed at Cloud Peak Drive and Disc Drive.

UTILITIES

Sky Ridge will be serviced by existing utility lines and suppliers. Water, electricity and natural gas is to be provided by Sierra Pacific Power Company. Solid waste will be provided by Reno Disposal. Nevada Bell provides local telephone service and TCI of Nevada provides cable television.



FIRE AND GENERAL ACCESS ROUTES

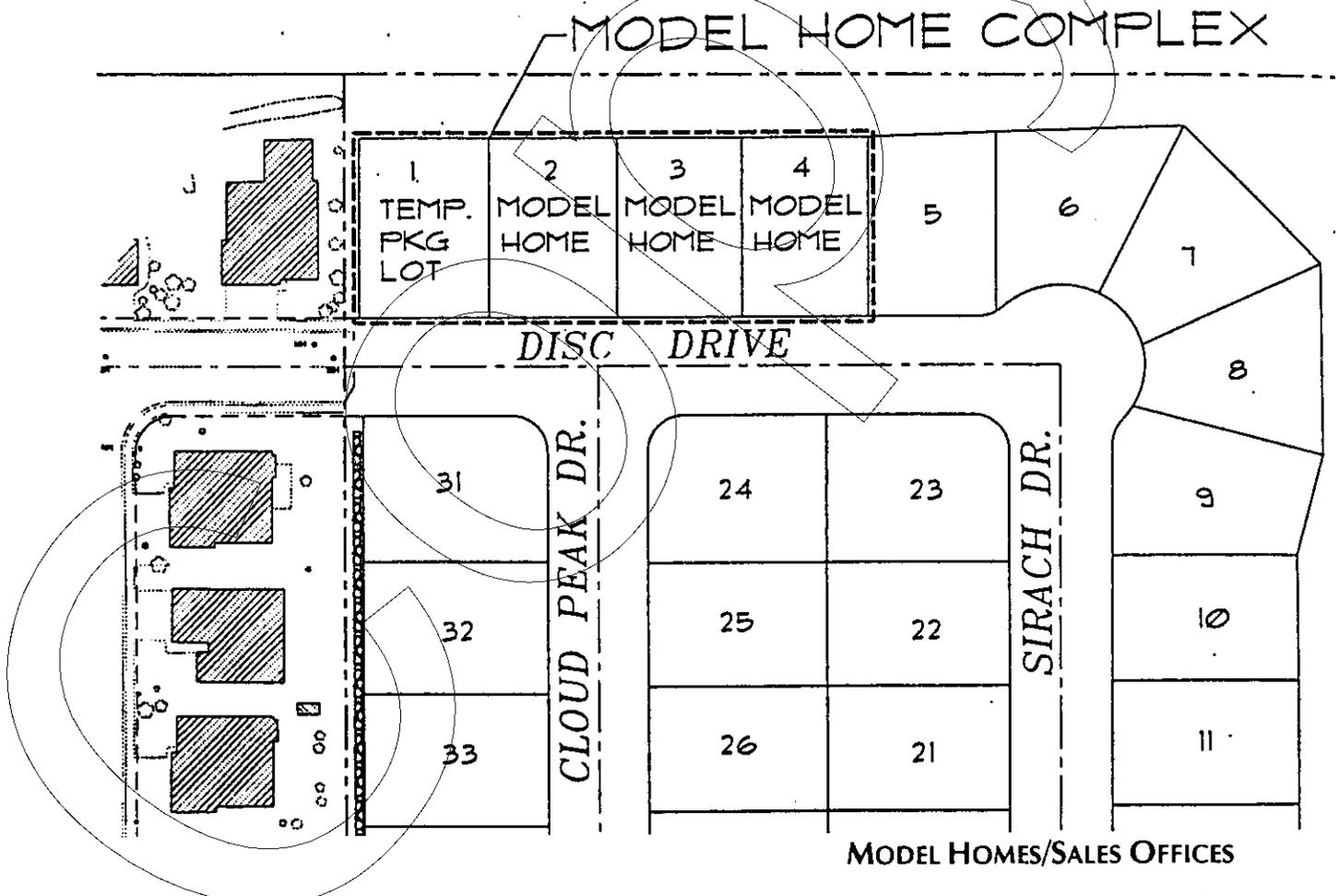


MODEL HOMES AND TEMPORARY SALES OFFICES

The initial development of Sky Ridge will contain model homes for prospective buyers to inspect and for the developer to showcase the development. A temporary sales office will be included inside one of the model homes and operate in a non-intrusive manner. In order to accomplish this purposes, model homes and the sales offices shall be governed by this handbook. A business licence and building permit for the sales office shall be submitted and approved by the City prior to the installation of the sales office and start of the business operation.

Model homes and the sales office are permitted by right to operate until the subdivision is sold out, at which time the use will be removed and not permitted. Office hours will be from 8 a.m. to 7 p.m., weekdays and weekends. The following diagram details where the model homes are to be located.

Temporary parking for this use will comply with all City of Sparks codes for parking lots, including but not limited to: spaces, design and paving. At least one van accessible parking disabled space will be provided, the remaining parking will be designed to minimize grading impacts yet yield the highest number of parking spaces in the designated parking lot.





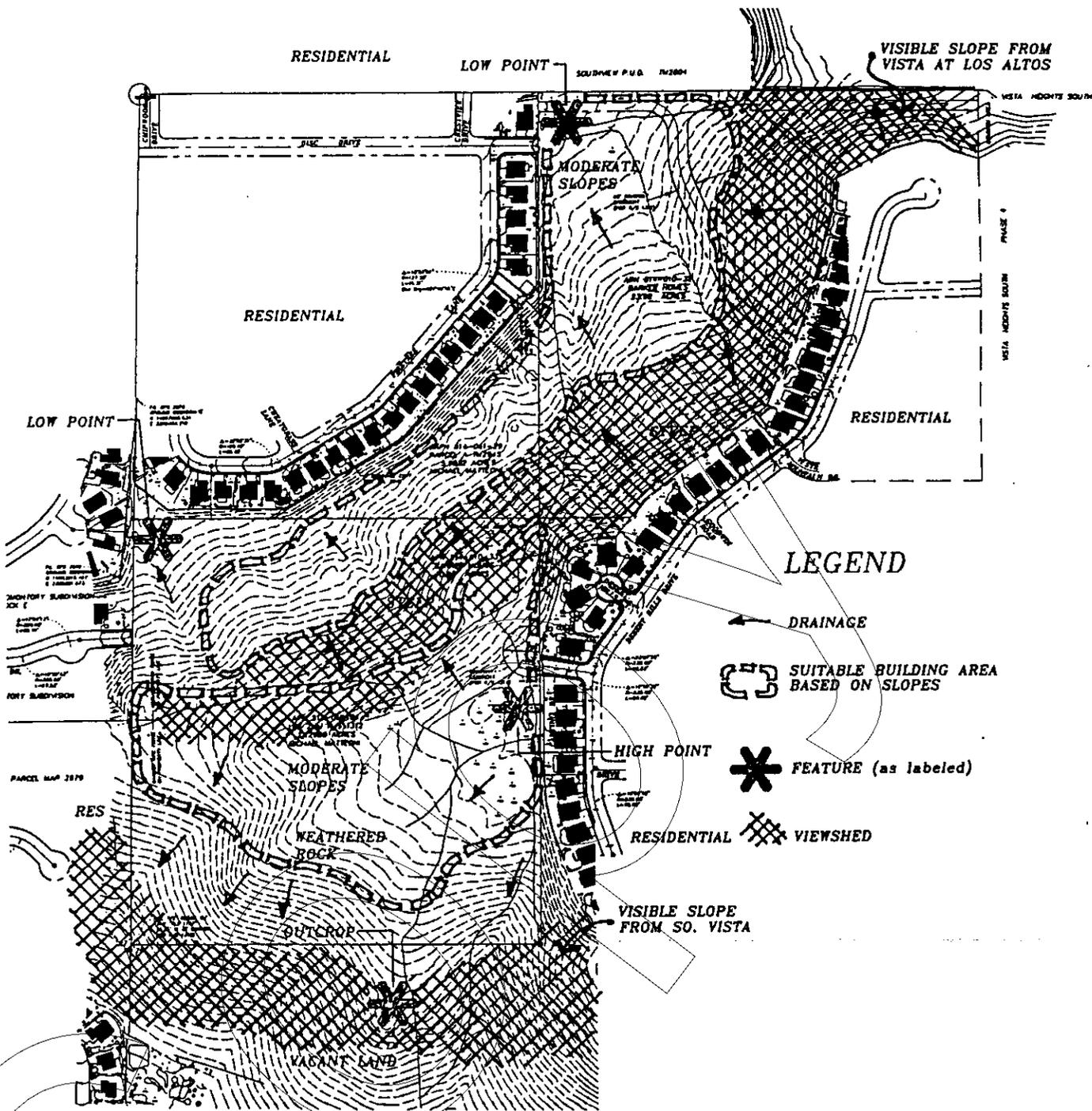
ANALYSIS OF DEVELOPMENT ON SLOPES, HILLTOPS AND RIDGES

Sky Ridge has been designed to be sensitive to its natural surroundings. This has been accomplished in accordance with the best applicable engineering and planning practices. Special attention has been given to the environmental constraints of the site. The recommendations included in the GEOTECHNICAL INVESTIGATION section will be followed throughout the development of this project.

The Sky Ridge Planned Development site has been analyzed to identify natural constraints such as hydrology, geology, soils, slopes. This infill development is designed to settle into the existing built environment. There are no significant rock outcroppings, or significant undisturbed ridge lines, in the project area. Due to the soil conditions, foundations will not be placed directly on existing natural materials, as in accordance with the geotechnical recommendations and standard engineering practice. Due to the presence of significant slopes on much of this site, an analysis of the existing topography has been made to determine the most developable sections. Sky Ridge has been designed to avoid the areas of significant slope, in excess of proportions required by S.M.C. 20.99.

Sky Ridge has been designed to respect the visual, aesthetic qualities of the area. The most visible areas and the steepest slopes have generally been kept in common area and undisturbed where possible. This has the result of reducing the potential visual impact from Vista Boulevard at Disc Drive. The development will be visible from the intersection of Vista and Los Altos Avenue primarily due to the existing vacant, Iratcabal property. As the Iratcabal property is developed, Sky Ridge will become less noticeable in its visual impact.

Building design and placement shall minimize the impacts to the slopes of the site. To this end there are three distinct lot configurations: "flat", "uphill" and "downhill" (see BUILDING SITING/ENVELOPES section). These lot configurations will be located in accordance with the topography of the home sites. Sites that are flat will be developed with "flat" homes, uphill lots will be "uphill", etc. By specifically tailoring the homes to the site, superfluous grading will be eliminated. Instead of grading flat pads throughout the site for the homes, the homes will be fitted to the site's slopes.



FEMA FLOOD ZONE 'X'
 SOILS: ROCK OUTCROP (XMAM)
 STEEP TO MODERATE EXPANSIVE
 STONEY CLAY (RISLEY)

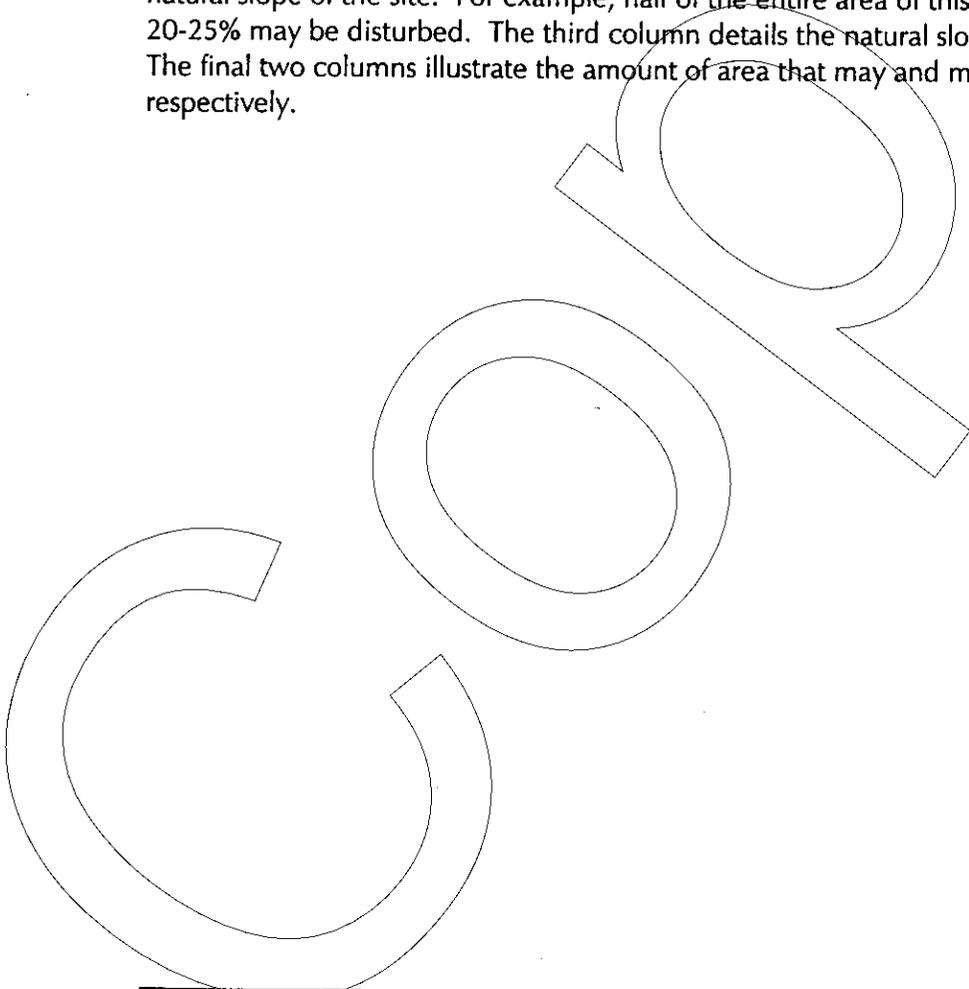
SITE FEATURES ANALYSIS



SLOPE REDUCTION CALCULATIONS

Slope Category	Allowed Disturbed Area (%)	Area (AC)	Allowed Disturbed Area (AC)	Disturbed Area (AC)
0-10%	100%	9.34	9.34	8.86
10-15%	75%	9.02	6.77	6.98
15-20%	67%	13.13	8.8	8.82
20-25%	50%	12.44	6.22	6.89
25-30%	33%	6.36	2.1	3.01
>30%	20%	3.99	.8	1.29
Total		54.28	34.03	35.85

According to Sparks Municipal Code Chapter 20.99 (Development on Slopes, Hilltops and Ridges) "the portion of any development site which may be cleared, graded or otherwise disturbed by construction is limited to a percentage of the site area, based on the natural slope of the site...Disturbed areas can be aggregated and do not need to be specific to the slope category." The first two columns describe the percentage of disturbed area permitted, given the natural slope of the site. For example, half of the entire area of this site that has slopes between 20-25% may be disturbed. The third column details the natural slopes that exist on site by acre. The final two columns illustrate the amount of area that may and may not be disturbed respectively.





HYDROLOGY

The hydrological analysis is detailed in the Storm Drainage Master Plan for Sky Ridge Planned Development, included into this handbook by reference.

COPY



COPY

GEOTECHNICAL INVESTIGATION



GEOTECHNICAL INVESTIGATION

SKY RIDGE

RESIDENTIAL SUBDIVISION

SPARKS, NEVADA

October 1999

prepared for

TMB Builders
Washoe County, Nevada





October 25, 1999
Project No.: 0166-01-1

Mr. Tom M. Brown
TMB Builders
4635 Village Green Parkway
Reno, NV 89509



Black Eagle Consulting, Inc.

**Re: Sky Ridge Residential Subdivision;
Geotechnical Investigation**

Dear Mr. Brown:

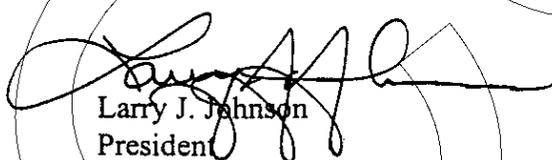
We are pleased to present the results of our geotechnical investigation for the proposed Sky Ridge Residential Subdivision in Sparks, Nevada.

The site is underlain by volcanic bedrock of the Alta Formation in various degrees of weathering and hydrothermal alteration. In many areas the bedrock is overlain by several feet of highly expansive clay. The bedrock itself ranges from highly altered and moderately expansive to fresh hard rock that will be difficult to excavate. A combination of pier and grade beam and standard spread footing foundations is recommended for this site. Final determinations will need to be made in the field on a lot-by-lot basis during mass grading. Because the site contains severely to moderately expansive materials, grading will be difficult and full-time inspection will be required to make best use of on-site materials and minimize potential shrink-swell problems.

The following report summarizes our methodologies and findings and presents geotechnical recommendations for design and construction of the proposed project. We wish to thank you for the opportunity to provide our services and look forward to working with you during construction.

Sincerely,

Black Eagle Consulting, Inc.


Larry J. Johnson
President

RDH:vjr

C:\MyFiles\TMB Builders\esdr.sbdvsn.ltr.wpd


Dal Hunter, Ph.D., P.E.
Vice President
R.E. 9343

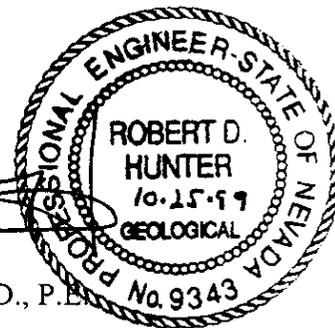




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- 2 - Test Pit Logs
- 3 - Graphic Soils Classification Chart
- 4 - Index Test Results

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- I - R-Value Test Results
- II - AASHTO Pavement Design Calculations



GEOTECHNICAL INVESTIGATION

SKY RIDGE

RESIDENTIAL SUBDIVISION

SPARKS, NEVADA

INTRODUCTION

Presented herein are the results of Black Eagle Consulting, Inc.'s geotechnical investigation, laboratory testing, and associated geotechnical design recommendations for the proposed residential subdivision to be located in Sparks, Nevada. These recommendations are based on surface and subsurface conditions encountered in our explorations and on details of the proposed project as described in this report. The objectives of this study were to:

1. Determine general soil, bedrock, and ground water conditions pertaining to design and construction of the proposed subdivision.
2. Provide recommendations for design and construction of the project, as related to these geotechnical conditions.

The area covered by this report is shown on Plate 1 - Plot Plan. Our investigation included field exploration, laboratory testing, and engineering analysis to determine the physical and mechanical properties of the various on-site materials. Results of our field exploration and testing programs are included in this report and form the basis for all conclusions and recommendations.

The services described above were conducted in accordance with the Black Eagle Consulting, Inc. proposal and Professional Geotechnical Services Agreement dated September 10, 1999, that was signed by Mr. Tom Brown of TMB Builders, Inc.



PROJECT DESCRIPTION

The proposed residential subdivision is still in the planning stages; however, current plans call for 127 lots constructed in clusters, with large areas of open space, partially dictated by the steep terrain. The average lot size will be 7,700 square feet. The single-family homes are expected to be of wood-frame construction with raised, wooden floors and a stucco finish for the exteriors. Structural loads are anticipated to be light, with foundation support provided by either standard spread footings or pier and grade beams, depending on soil conditions at each lot. The homes will be served by paved streets dedicated to the City of Sparks, including curbs, gutters, and sidewalks. Storm drain and sewer lines will also be dedicated to the City of Sparks, with water, gas, and electricity provided by the Sierra Pacific Power Company. Because of the steep topography on this site, maximum cut and fill slopes are expected to be in the range of 25 feet. Most cuts and fills will be in the range of 0 to 10 feet. It is anticipated that retaining walls, rockery walls, or other retention structures, will be required in some areas.

SITE CONDITIONS

The site consists of three contiguous parcels located in the northwest quarter of Section 26, Township 20 North, Range 20 East. The largest parcel is square and comprises 37.3 acres in the south end of the project. The central parcel is triangular in shape, consisting of approximately 6 acres; and, the northern parcel is a 25±-acre rectangle (refer to Plate 1 - Plot Plan).

The project is located on portions of a northwest, west, and southwest facing slope of a volcanic mountain and includes small portions of the mountain's relatively flat top. The maximum slopes on this site approach 35 percent, with typical slopes in the range of 10 to 20. Some outcrops of volcanic rock are present, particularly in the upper reaches of the slopes.

Vegetation is generally sparse, consisting of sagebrush, rabbit brush, and grasses. Access to the site can currently be obtained from the eastern termination of Disc Drive on the north, as well as Catalina Drive on the east. A number of dirt roads currently traverse the site.

The northern and eastern site boundaries consist of undeveloped land, while the southern and western sides are bordered by existing residential developments.



EXPLORATION

The residential subdivision site was explored in August 1999 by excavation of a series of 23 test pits using a Cat 350 trackhoe. Locations of the test pits are shown on Plate 1 - Plot Plan. The maximum depth of exploration was 12 feet below the existing ground surface. Some excavations were halted at depths of a few feet due to very hard bedrock. Bulk samples for index testing were collected from the trench wall sides at specific depths in each soil horizon. Pocket penetrometer testing was performed in exposed, fine grained soil strata to evaluate in-place, unconfined compressive strength for evaluating trench stability.

Material Classification

A geological engineer examined and classified all soils in the field in accordance with ASTM D 2488. During test pitting, representative bulk samples were placed in sealed plastic bags and returned to our Sparks, Nevada, laboratory for testing. Additional soil classification was subsequently performed in accordance with ASTM 2487 (Unified Soil Classification System [USCS]) upon completion of laboratory testing as described below in the **Laboratory Testing** section. Logs of the test pits are presented as Plate 2 - Test Pit Logs, and a USCS chart has been included as Plate 3 - Graphic Soils Classification Chart.

LABORATORY TESTING

All soils testing performed in the Black Eagle Consulting, Inc. soils laboratory is conducted in accordance with the standards and methodologies described in Volume 4.08 of the ASTM Standards.

Index Testing

Samples of each significant soil type were analyzed to determine their in situ moisture content (ASTM D 2216), grain size distribution (ASTM D 422), and plasticity index (ASTM D 4318), and the results of these tests are shown on Plate 4 - Index Test Results. Results of these tests were used to classify the soils according to ASTM D 2487 and to verify the field logs, which were then updated as appropriate. Classification in this manner provides an indication of the soil's mechanical properties and can be correlated with standard penetration testing and published charts (Bowles, 1988; NAVFAC, 1986) to evaluate bearing capacity, lateral earth pressures, and settlement potential.



R-Value Test

A resistance value test (ASTM D 2844) was performed on representative samples of subgrade soil. R-value testing is a measure of subgrade strength and expansion potential and is used in design of flexible pavements. Results of the R-value test are shown as Appendix I - R-Value Test Results.

GEOLOGIC AND GENERAL SOIL CONDITIONS

The site lies among volcanic flows of the Alta Formation of Tertiary age, as well as thin Quaternary soils derived from the weathering of the underlying bedrock. The Tertiary period in Nevada was a time of extensive volcanic and hydrothermal activity. Some of these hydrothermal systems are still active in the Truckee Meadows. Tertiary hydrothermal systems over a large part of Nevada are responsible for ore deposits such as those found at Virginia City and Goldfield. The bedrock exposed in our exploration is all part of the same formation cropping out on hills south of the site. The Tertiary Alta Formation is a series of lava, debris, and pyroclastic flows and ash falls that have been deposited over one another on undulating topography caused by periods of erosion between flows. The intense alteration by hydrothermal solutions is often largely confined to pyroclastic flows and ash. Locally and unpredictably, the alteration persists into the more competent flows. In many ways the ash fall deposits are the most difficult, since they readily alter to clays and are spatially random. The ash was deposited from the air over a rugged, ancient topography. Subsequent erosion, overlying volcanic flows, and hydrothermal alteration have left small pockets to large zones of expansive material that are often buried beneath reasonably solid rock.

The surface of the site consists of a veneer of low to high plastic sandy clay. This clay typically contains 60 to 70 percent fines with a plastic index in the range of 35 to 50.

Volcanic bedrock, in various stages of chemical weathering and hydrothermal alteration, underlies all the surficial soils. Some of this rock is reasonably fresh, and not closely fractured. In other areas, the rock is highly weathered and/or altered. There is a practical, as well as technical, distinction between hydrothermally-altered rock and weathered rock. Weathering occurs when cool surface waters percolate down through rock exposed at or near the surface. The water leaches out silica and other ions, leaving a surface clay horizon. With depth, the rock shows a decreasing intensity of weathering, generally over a short distance and in a fairly uniform and predictable manner. Hydrothermally-altered rock is caused by water, heated in the subsurface, that rises through fractures in the overlying rocks,



cools, and descends through other fractures. The result is often major chemical changes that range from completely replacing the rock with silica to changing the rock to a variety of clay minerals. The clays are discontinuous both laterally and vertically. What appears as only weakly-altered rock in a footing excavation may conceal a pocket of expansive clay only inches, or less, below. The location of expansive clay minerals that develop along the fractures is no more predictable than the gold and silver deposits that are occasionally found in hydrothermal systems.

The clay within weakly- to moderately-altered bedrock typically has liquid limits in the 40's and plastic indices in the range of 15 to 30. The highly-altered bedrock of the Alta Formation typically contains clay with liquid limits that vary from 65 to 80, with plastic indices which vary from 35 to 50. On previous projects, expansive pressures of over 20,000 psf have been measured in this material, as opposed to 1,100 psf for less-altered rock. Expansion of 10 to 30 percent by volume is typical for the moderately- to highly-altered rock in the worst cases.

GEOLOGIC HAZARDS

Seismicity

Much of the Western United States is a region of moderate to intense seismicity related to movement of the crustal masses (plate tectonics). By far, the most active regions, outside of Alaska, center around the San Andreas fault system of western California. Other seismically active areas include the Wasatch Front in Salt Lake City, Utah, which forms the eastern boundary of the Basin and Range physiographic province, and the eastern front of the Sierra Nevada Mountains, which is the western margin of the province. The Reno-Sparks area lies along the eastern base of the Sierra Nevada, within the western extreme of the Basin and Range. It must be recognized that there are probably few regions in the United States not underlain at some depth by older bedrock faults. Even areas within the interior of North America have a history of strong seismic activity.

The Truckee Meadows lies within Seismic Zone 3, an area with a potential for earthquake damage. Seismicity within the Reno-Sparks area is considered about average for the western Basin and Range Province (Ryall and Douglas, 1976). It is generally accepted that the maximum credible earthquake in this area would be in the range of magnitude 7 to 7.5 along the frontal fault system of the Eastern Sierra Nevada. The most active segment of this fault system in the Reno area is located at the base



of the mountains near Thomas Creek, Whites Creek, and Mt. Rose Highway, over 15 miles southeast of the project.

Faults

No earthquake hazards map is available for the project area. The published geologic map (Bell and Bonham, 1987) shows a pre-Quaternary (bedrock) fault striking northeast, no less than 1,000 feet east of the site. A Quaternary-age fault is mapped over 2,000 feet northwest of Sky Ridge, also striking to the northeast. A group of 3 parallel, northwest faults are mapped about 3,000 feet south of the property's southern boundary.

The criteria for evaluation of Quaternary earthquake faults has been developed and adopted by the State of Nevada Seismic Safety Council. These standards are consistent with the State of California Alquist-Priolo Act of 1972, which defines active faults as those with evidence of displacement within the past 11,000 years (Holocene time). Those faults with evidence of displacement during Pleistocene time (11,000 to 2,000,000 years before present) are generally considered potentially active. Based on the geologic map, the faults in the vicinity of the project are considered potentially active. Potentially active is a rather alarming and unfortunate term in that it suggests a higher degree of risk than is justified in most cases. Recurrence intervals for Nevada earthquakes along faults that have been studied are estimated to be in the range of 6,000 to 18,000 years in western Nevada (Bell, 1984). The very active eastern boundary faults of the Sierra Nevada mountains may have a shorter recurrence interval of 1,000 to 2,000 years. No additional fault evaluation and no building setbacks are required for Sky Ridge.

Ground Motion and Liquefaction

Because the site area is underlain by bedrock, no amplification of ground motion would be expected during an earthquake. Mapping by the U. S. Geological Survey (1996) shows that there is a 10 percent probability that a *bedrock* ground acceleration of 0.30 to 0.40 will be exceeded at this site in 50 years. Liquefaction potential is negligible due to the types of materials present.

Flood Plains

The site has been identified as being the Federal Emergency Management Agency's (FEMA's) Zone X. Flood Zone X in this case lies above the predicted 500-year flood elevation.



Other Geologic Hazards

A high potential for dust generation is present if grading is performed in dry weather. No other geologic hazards were identified.

DISCUSSION AND RECOMMENDATIONS

General Information

The majority of the site is overlain by a 1- to 2-foot thick veneer of moderate to high plastic (expansive) clay developed as a weathering product of the underlying bedrock. The volcanic bedrock in this area consists of andesite ranging from hard, fresh rock with few fractures to extremely weathered and/or hydrothermally altered. The weathered and altered bedrock areas, which comprise the majority of the site, are highly unpredictable in their expansive properties. Although in this report we attempt to generalize areas which will require pier and grade beam foundations, as well as overexcavation of garage floor slabs, driveways, and dedicated improvements, final determinations will need to be made during mass grading on a lot-by-lot basis for structures and on a station-by-station basis for dedicated improvements. Utility trenches will need to be carefully examined to verify that surface clays are removed from beneath the structural section and that overexcavation of any remaining clays and/or expansive bedrock is accomplished in accordance with the recommendations presented below.

It should be clearly understood that unless the clay soils and expansive bedrock could be completely removed and replaced with nonexpansive soils, some differential movements should be anticipated. The recommendations presented below, if strictly followed, should limit these movements to tolerable levels.

The recommendations provided herein, and particularly under **Site Preparation, Grading and Filling, Foundation Design, Site Drainage and Quality Control**, are intended to minimize risks of structural distress related to consolidation or expansion of native soils and/or structural fills. These recommendations, along with proper design and construction of the structure and associated improvements, work together as a system to improve overall performance. If any aspect of this system is ignored or poorly implemented, the performance of the project will suffer. Sufficient quality control should be performed to verify that the recommendations presented in this report are followed.



Structural areas referred to in this report include all areas of buildings, concrete slabs, asphalt pavements, as well as pads for any minor structures. All compaction requirements presented in this report are relative to ASTM D 1557-78. For the purposes of this project:

- Fine grained soils are defined as those with more than 40 percent by weight passing the number 200 sieve and a plastic index lower than 15.
- Clay soils (including weathered/altered bedrock) are defined as those with more than 30 percent passing the number 200 sieve, and a plastic index greater than 15.
- Granular soils are those not defined by the above criteria.

Any evaluation of the site for the presence of surface or subsurface hazardous substances is beyond the scope of this investigation. When suspected hazardous substances are encountered during routine geotechnical investigations, they are noted in the exploration logs and immediately reported to the client. No such substances were revealed during our exploration.

The test pits were excavated by backhoe at the approximate locations shown on the site plan. Locations were determined in the field by approximate means. All test pits were backfilled upon completion of the field portion of our study. The backfill was compacted to the extent possible with the equipment on hand. However, the backfill was not compacted to the requirements presented herein under **Grading and Filling**. If structures, concrete flatwork, pavement, utilities or other improvements are to be located in the vicinity of any of the test pits, the backfill should be removed and recompact in accordance with the requirements contained in the soils report. Failure to properly compact backfill could result in excessive settlement of improvements located over test pits.

Seismic Design Criteria

All structures at this site should be designed for Seismic Zone 3. The 1997 *Uniform Building Code* has recently been adopted by the City of Sparks. Technically, this code requires detailed soils evaluation to a depth of 100 feet to develop the appropriate soils criteria. However, the proposed Sky Vista Subdivision sits on volcanic bedrock in various stages of weathering and alteration. Based on our experience and the geology in the area, it is our opinion that the default soils profile, S_B , is appropriate. With that assumption, the recommended seismic design criteria are as follow:

Table 1 - Seismic Design Criteria	
Seismic Zone Factor, Z : (UBC Table 16-I)	0.30
Seismic Profile Type (UBC Table-16-J)	S_B
Seismic Coefficient, C_a (UBC Table 16-Q)	0.30
Seismic Coefficient, C_v (UBC Table 16-R)	0.30
Near Source Factor, N_a (UBC Table 16-S)	1.0
Near Source Factor, N_v (UBC Table 16-T)	1.0
Seismic Source Type: (UBC Table 16-U)	B

These parameters were derived from a maximum moment magnitude earthquake of 7 to 7.5 occurring on the eastern Sierra frontal fault system, over 15 kilometers southwest of Sky Ridge.

Site Preparation

All vegetation should be stripped and grubbed from structural areas and removed from the site. A stripping depth of 0.2 feet is anticipated. Surficial clay soils and weathered/altered rock on this site will exhibit considerable shrink-swell with changes in moisture content. Failure to recognize and properly mitigate expansive materials will result in damage to improvements. Clay soils/altered rock should be separated from improvements by structural fill in order to decrease potential shrink-swell movements. The minimum separation is presented in Table 2.

Table 2 – Required Thickness of Structural Fill Between Clay Soils and Improvements	
<u>Improvement</u>	<u>Minimum Separation</u>
Footings	3 feet*
Garage Floor Slab	2 feet
Exterior Concrete Slabs, including driveways, curbs, gutters, and sidewalks	1.5 feet**
Asphalt Pavements	1.5 feet**

* Not required if the pier and grade beam foundation system is selected.
 ** includes aggregate base section.



The required separation may be achieved by any combination of site filling or overexcavation and replacement. Depending on final design elevations, considerable overexcavation could be required.

Any clays to be left in place and covered with fill should be moisture conditioned to 2 to 4 percent over optimum for a minimum depth of 12 inches. Altered bedrock surfaces should be thoroughly wetted. This moisture level will significantly decrease the magnitude of shrink-swell movements in the upper foot of clay. The high moisture content must be maintained by periodic surface wetting, or other methods, until the surface is covered by, at least, one lift of fill.

Any soils to receive structural fill or structural loading should be densified to, at least, 90 percent relative compaction. Where less than 70 percent passes the 3/4-inch sieve, soils are too coarse for standard density testing techniques. In this case, as will generally occur here, a proof rolling of a minimum five single passes with a minimum 10-ton roller in mass grading, or five complete passes with hand compactors in footing trenches is recommended. In all cases, the final surface should be smooth, firm and exhibit no signs of deflection. This alternate has proved to provide adequate project performance as long as all other geotechnical recommendations are closely followed.

If wet weather construction is anticipated, surface soils and localized deeper zones may be well above optimum moisture and impossible to compact. In some situations, stabilization may be possible by scarifying the top 12 inches of subgrade and allowing it to air dry to near-optimum moisture, prior to compaction. Where this procedure is ineffective or where construction schedules preclude delays, mechanical stabilization will be necessary. Mechanical stabilization may be achieved by overexcavation and/or placement of an initial 12- to 18-inch-thick lift of 12-inch-minus, 3-inch-plus, well graded, angular rock fill. The more angular and well graded the rock is, the more effective it will be. This fill should be densified with large equipment, such as a self-propelled sheeps-foot or a large loader, until no further deflection is noted. Additional lifts of rock may be necessary to achieve adequate stability.

Trenching and Excavation

Trenching and excavation will be difficult in the southern end of the site, where hard, fresh bedrock was encountered in our test pits. Trenching will be particularly difficult, requiring aggressive techniques such as hoe rams, or ripping with a single-tooth bulldozer. We anticipate that most of the mass excavation can be performed with large (D-10) bulldozers, although localized zones in areas of



the deepest cuts could require fracturing by expansive grout techniques. (Blasting is not considered practical on this site because of the surrounding residential developments.)

Temporary trenches with near vertical side walls should be stable to a depth of approximately five feet in soils and much deeper in altered or fresh bedrock. Regulations amended in Part 1926, Volume 54, Number 209 of the Federal Register (Table B-1, October 31, 1989) require that the temporary sidewall slopes be no greater than those presented in Table 3.

Table 3 - Maximum Allowable Temporary Slopes	
Soil or Rock Type	Maximum Allowable Slopes ¹ for Deep Excavations less than 20 Feet Deep ²
Stable Rock	Vertical (90 degrees)
Type A ³	3H:4V (53 degrees)
Type B	1H:1V (45 degrees)
Type C	3H:2V (34 degrees)
<i>Notes:</i>	
1.	Numbers shown in parentheses next to maximum allowable slopes are angles expressed in degrees from the horizontal. Angles have been rounded off.
2.	Sloping or benching for excavations great than 20 feet deep shall be designed by a registered professional engineer.
3.	A short-term (open 24 hours or less) maximum allowable slope of 1H:2V (63 degrees) is allowed in excavation in type A soil that are 12 feet or less in depth. Short-term maximum allowable slopes for excavations greater than 12 feet in depth shall be 3H:4V (53 degrees).

These regulations, including the classification system and the maximum slopes, have been adopted and are strictly enforced by the State of Nevada, Department of Industrial Relations, Division of Occupational Safety and Health. In general, Type A soils are cohesive, non-fissured soils, with an unconfined compressive strength of 1.5 tons per square foot (tsf) or greater. Type B are cohesive soils with an unconfined compressive strength between 0.5 and 1.5 tsf, while those designated as Type C have an unconfined compressive strength below 0.5 tsf. Numerous additional factors and exclusions are included in the formal definitions. The client, owner, design engineer, and contractor shall refer to Appendix A and B of Subpart P of the previously referenced Federal Register for complete definitions and requirements on sloping and benching of trench sidewalls. Appendices C through F of Subpart P apply to requirements and methodologies for shoring.



On the basis of our exploration, the site soils are predominately Type A, and the underlying bedrock can generally be considered stable rock, except where weathered to a Type A clay. Any area in question should be specifically examined by the geological engineer during construction. All trenching should be performed and stabilized in accordance with local, state, and OSHA standards.

If trench width is less than six feet, maximum particle size in the backfill should be four inches. For wider trenches, where full-sized rollers can be used for compaction, maximum particle size can be increased up to 12 inches. Bedding and initial backfill 12 inches over the pipe will require import, but native granular soil will provide adequate final backfill as long as oversized particles are excluded. Bedding and initial backfill should conform to the requirements of the utility having jurisdiction. No ground water, per se, is expected, even in the deepest utility trenches. Some seepage may be encountered along fractures in the bedrock. In the late winter to early summer, some of this seepage could produce significant flows that would need to be treated as ground water. Excavations with high seepage, if encountered, will likely require dewatering. Below the waterline, bedding and backfill should consist of compacted drain rock graded in accordance with the requirements for Class C drain backfill presented in the City of Sparks *Standard Specifications for Public Works Construction*. Above the waterline, trenches should be backfilled in maximum eight-inch-thick (loose) lifts in all structural areas. Each lift should be densified to a minimum of 90 percent relative compaction (ASTM D 1557-78).

Grading and Filling

Highly expansive clay soils were found to exist from the ground surface up to depths of 2 feet below the ground surface. The clay soils were generally classified as moist, soft to hard, and as exhibiting high plasticity. Laboratory testing performed on these materials indicates the clay soils exhibit plasticity indices on the order of 40, indicative of highly expansive soils (Nelson and Miller, 1992). The underlying altered/weathered bedrock shows a wide and unpredictable range of expansion potential. The clays and altered/weathered rock should be either removed from structural areas or separated from improvements by structural fill, as required by Table 2. Pier and grade beam foundations could be used on some lots to decrease the required overexcavation.

Native clay soils should be placed as fill only in nonstructural areas or areas of pier and grade beam foundations. Altered bedrock will be suitable for structural fill provided particles larger than four inches are removed and the requirements of Table 2 are followed. The material can be placed to within 4 inches of foundation grade for beams with pier and grade beam foundations.



Much of the fill from this site will come from extensive cuts in the southern end of the development. We anticipate that this material will consist of fresh, hard volcanic rock that will excavate with difficulty to a mixture of gravel, cobbles, and boulders, some of them quite large. Rock from this area can be placed as rock fill provided that it is limited to a maximum lift thickness and particle size of 18 inches. A large, sheeps-foot (Caterpillar) 815 or 825) or equal will be required for compaction. While suitable for mass grading, fill of this type is impossible to fine grade for finished pads and is difficult to excavate for sewer laterals, etc. At least the upper 12 inches of the building envelope should be capped with a 4-inch-minus rock fill or soil meeting the specification of Table 4.

Oversized rock can be stockpiled for later use as erosion protection or placed in the bottom of deep nonstructural fills. In deep fills, oversized rocks must be scattered in such a manner as to preclude development of voids between the particles (nesting). If imported structural fill is required on this project, we recommend the specifications of Table 4.

Table 4 - Guideline Specification for Imported Structural Fill

<u>Sieve Size</u>	<u>Percent by Weight Passing</u>		
4 Inch	100		
3/4 Inch	70 - 100		
No. 40	15 - 70		
No. 200	5 - 30		
	<u>Percent Passing No. 200 Sieve</u>	<u>Maximum Liquid Limit</u>	<u>Maximum Plastic Index</u>
	5 - 10	50	20
	11 - 20	40	15
	21 - 30	35	10

These recommendations are intended as guidelines to specify a readily available, prequalified material. Adjustments to the recommended limits can be provided to allow the use of other granular, non-expansive material, including rock fills. Any such adjustments must be made and approved by the geological engineer, in writing, prior to importing fill to the site.



Any fill placed on hillsides steeper than 5:1 (horizontal to vertical) should be keyed into existing materials in equipment wide benches. Maximum vertical separation between benches should be eight feet.

All soil structural fill should be placed in maximum eight-inch-thick (loose) lifts. All soil structural fill and utility trench backfill in all structural areas should be densified to a minimum 90 percent relative compaction. Nonstructural fill should be densified to, at least, 85 percent relative compaction to minimize consolidation and erosion. Rock fills by definition have greater than 30 percent retained on the 3/4-inch sieve, such that standard density testing is not valid. A proof rolling program of, at least, five single passes of a minimum 10-ton roller in mass grading or, at least, five complete passes with hand compactors in footing trenches is required. Lift thickness and maximum particle size can be up to 12 inches (after compaction), if an 815 or equivalent sheeps-foot roller is used for compaction. The lift thickness and maximum particles size can be increased to 1.5 feet (after compaction), if the sheeps-foot is an 825 or larger. Acceptance of rock fill is based upon observation of lift thickness, moisture content, applied compactive effort, and proof rolling. A high moisture content will be required due to the expansive nature of the on-site material. In all cases, the finished surface should be smooth, firm, and show no signs of deflection. Grading should not be performed with or on frozen soils.

Subsidence and Shrinkage

Where the full depth of native clay soils are to remain in place, subsidence of about 0.1 feet should be anticipated from construction traffic. Subsidence of bedrock exposed in cut should be negligible.

Bedrock will have varying degrees of quantity shrinkage to actual swell when excavated and placed as fill, depending on the degree of alteration. Deeply altered bedrock will exhibit a quantity shrinkage similar to granular soil (approximately 10 to 15 percent). Firm bedrock, as encountered in some of the explorations, may exhibit no quantity shrinkage. Where hard bedrock excavates into gravel and larger sized particles, a quantity swell of up to 30 percent could be experienced. This volume increase will be counteracted by removal of oversize particles, which will vary with geology and excavation methods. An overall earthwork quantity balance, therefore, becomes very difficult to predict and manage.



Foundation Design

The near surface sandy clays and altered/weathered volcanic rock are poor foundation soils such that footings should not bear directly in these materials. Standard spread footings must be separated from these materials by at least 3 feet of structural fill, as required by Table 2. Fresh bedrock will provide good support for standard spread footings. As an alternate, pier and grade beam foundations, as detailed below, may be used and the site graded indiscriminately. The most cost effective approach on this site is probably a combination of pier and grade beam foundations on most lots and spread footings on selected lots identified during grading.

Spread Footings

Individual column footings and continuous wall footings underlain by a minimum of 3 feet of structural fill, granular native soil, or hard bedrock can be designed for a net maximum allowable bearing pressure of 3,000 pounds per square foot (psf). The net allowable bearing pressure is that pressure at the base of the footing in excess of the adjacent overburden pressure. This allowable bearing value should be used for dead plus ordinary live loads. Ordinary live loads are defined as being that portion of the design live load which will be present during the majority of the life of the structure. Design live loads are those loads which are produced by the use and occupancy of the building, such as by moveable objects, including people or equipment, as well as snow loads. This bearing value may be increased by one-third for total loads. Total loads are defined as the maximum load imposed by the required combinations of dead load, design live loads, snow loads, and wind or seismic loads.

With this allowable bearing pressure, total settlements of approximately $3/4$ or less for bedrock should be anticipated. Differential settlements between footings with similar loads, dimensions, and base elevations should not exceed two-thirds of the values provided above for total settlements. The majority of the anticipated settlement will occur during the construction period as the loads are applied.

Lateral loads, such as wind or seismic, may be resisted by passive soil pressure and friction on the bottom of the footing. The recommended coefficient of base friction is 0.43 and has been reduced by a factor of 1.5 on the ultimate soil strength. Design values for active and passive equivalent fluid pressures are 37 and 425 pounds per square foot per foot of depth, respectively. These design values



are based on spread footings bearing on and backfilled with structural fill. All exterior footings should be placed a minimum two feet below adjacent finish grade for frost protection.

If loose, soft, wet, or disturbed fill or bedrock is encountered at the foundation subgrade, these materials should be removed to expose undisturbed material and the resulting overexcavation backfilled with compacted structural fill or lean concrete. The base of all excavations should be dry, dense, and free of loose soils at the time of concrete placement.

Pier and Grade Beams

Pier and grade beam foundations can be designed with a variety of diameter-length-load relationships. Drilled shaft (pier) foundations mitigate expansive clay forces by penetrating sufficiently below the ground surface to reach a zone where soil moisture remains uniform, throughout the seasons. In the Reno area, including the effects of landscape irrigation, this depth is about 8 feet. For the variable material conditions at Sky Vista, we recommend a minimum embedment depth of 8 feet and a minimum diameter of 8 inches.

The actual design length of the piers at each lot will need to be specifically checked, due to the sloping topography and the required cuts and fills. The concern is transition lots, where the eight-foot minimum length is not sufficient to penetrate at least 3 to 4 feet into the native soils. For some cut and fill lots, overexcavation of the cut side, as necessary, may be economical, so that spread footings can be used.

In the event that hard bedrock is encountered (refusal), the pier can be halted at that depth. However, in no case shall the bottom of any pier be less than 2 feet below adjacent finished grade in order to provide the required frost protection. Refusal at shallower depth will require excavation with a track excavator, hoe ram, or other technique, as appropriate. All excavations should be cleaned of loose materials to the extent practical with the auger, or by hand for wide, shallow excavations. The bottom of auger holes should be compacted with a 4 inch by 4 inch wooden post, until no further deflection is observed.

Reinforcing bar should be placed so as to maintain the required concrete cover. Concrete should be poured with a plasticizer to achieve an 8-inch slump and vibrated. A one-half inch maximum concrete mix should be used to allow the mix to flow around the reinforcing steel.



Pier and grade beam foundations extending to a depth of 8 feet, or refusal in solid bedrock, can be designed for the loads of Table 5. Longer piers may be necessary to penetrate native clays in lots with fill.

Table 5 - Axial Capacity of 8-Foot-Deep Drilled Piers (in Kips)			
Mode	Diameter in Inches		
	<i>8</i>	<i>10</i>	<i>12</i>
Compression	4.9	6.9	9.4
Uplift	2.4	3.0	3.8

The grade beams must be separated from native or fill soils by, at least, 4 inches of compressible material specifically designed for this purpose. Various treated-cardboard products and styrofoam with very low compressive strength are available.

Although pier and grade beams will be effective in minimizing shrink-swell movements of the house, overexcavation and replacement will still be required for the garage floor slab, driveway, and all other exterior concrete flatwork.

For planning purposes, we have attempted to separate the lots that will be founded on hard rock and thick fills from those that will require overexcavation and replacement or pier and grade beam foundations. These groups were made on the basis of the current grading plan and our exploration. Significant changes to the groups will probably be required once mass grading starts and soil/rock conditions are revealed over a much larger area.

Table 6 - Anticipated Foundation Requirements	
Anticipated Foundation	Lots
Suitable for standard spread footings	3-5; 50-54; 74-106; 108-127
Requiring overexcavation for spread footings or pier and grade beams	1,2; 6-49; 55-73; 107



Retaining Walls

The following recommendations are for retaining walls with vertical back faces, horizontal backfill, and no surcharge loads next to the top of the wall. Surcharge loads, including construction equipment and traffic loads, should be added to the following values. While the recommendations here may be suitable for other conditions, the geotechnical engineer should be consulted for retaining walls with unusual conditions such as sloping backfill or sloping retaining walls. The geotechnical engineer should also be consulted where retaining walls exceed 10 feet in height.

Foundation design and preparation should be in accordance with previous sections of this report (**Site Preparation; Foundation Design**). Lateral loads will be resisted by friction along the base of retaining wall footings and by passive resistance against buried foundation walls. Foundation wall footings bearing directly on bedrock, or on properly compacted structural fill, may be designed using a coefficient of base friction of 0.47. This factor has been reduced by a factor of 1.5 on the ultimate soil strength.

All retaining walls must include a minimum 1-1/2 foot width of drain rock backfill adjacent to the full height of the wall. A plastic collection pipe should be placed at the toe of the foundation and sloped to daylight. For a wall which is free to yield at least 0.2 percent of the wall height, an equivalent fluid density of 37 pcf can be employed for active pressure design. Restrained walls should be designed to resist an at-rest equivalent fluid density of 55 pcf.

Passive pressures can be used in design for retaining walls where appropriate, but no passive pressure should be developed within two feet of final grade. An equivalent fluid density of 212 pcf developing passive pressure can be used for native soil and/or structural fill. To develop full passive resistance, the wall must translate as much as 0.2 to 0.3 percent of the retaining wall height. Therefore, the value of 212 pcf has been reduced from the ultimate passive resistance of 425 pcf by a factor of 2 to limit deflection.

Backfill behind retaining walls should be compacted to 90 percent of the material's maximum dry density in accordance with ASTM D 1557-78, but should not be densified to more than about 92 percent relative density to minimize pressure against the wall. Care should be exercised when compacting backfill against retaining walls and foundations. To reduce temporary construction loads on the walls, heavy equipment should not be used for placing and compacting fill within a region as determined by a 0.5:1 line drawn upward from the bottom of the wall, or within 3 feet of the wall,



whichever is greater. We recommend that hand-operated compaction equipment be used to compact soils adjacent to walls.

As an alternate to retaining walls in yard areas, rockery walls may be constructed. Some of the rock on this site may be suitable for rockery wall construction. On-site rock would have to be selected very carefully, since even weakly altered rock will crumble when wet. All rockery walls should be constructed by a qualified and experienced contractor in a battered configuration. Maximum height of any single rockery wall should be 6 feet in areas of fill, and 8 feet in areas of cut. Walls may be staggered for greater retained heights; however, the net effect should not generally exceed a 1.5 slope in cut and a 2:1 slope in fill. For hard bedrock in cut, steeper slopes may be possible, probably up to 1:1. All walls constructed in fill areas should be constructed from a trimmed over-filled compacted slope.

Slope Stability and Erosion Control

Stability of cut and filled surfaces involves two separate aspects. The first concerns true slope stability related to mass wasting, landslides or the enmasse downward movement of soil or rock. Stability of cut and fill slopes is dependent upon shear strength, unit weight, moisture content, and slope angle. The *Uniform Building Code (UBC, 1997)* adopted by the City of Sparks allows cut and fill slopes up to 2:1 in the type of soils present at this site. The exploration and testing program conducted during this investigation confirms 2:1 slopes will be stable.

The second aspect of stability involves erosion potential and is dependent on numerous factors involving grain size distribution, cohesion, moisture content, slope angle and the velocity of the water or wind on the ground surface. The City of Sparks requires erosion control of cut and fill slopes 5:1 or steeper. Slopes between 3:1 and 5:1 can be stabilized by hydroseeding. Slopes steeper than 3:1 require mechanical stabilization. The City of Sparks may accept other methods of stabilization on slopes steeper than 3:1 if it can be demonstrated to be as effective as mechanical stabilization. Protection could be provided by a variety of methods such as rip-rap or "geo-cell" systems; however, vegetative stabilization would likely be the most cost effective and attractive.

Dust potential at this site will be moderate during dry periods. Temporary (during construction) and permanent (after construction) erosion control will be required for all disturbed areas. The contractor shall prevent dust from being generated during construction in compliance with all applicable city, county, state, and federal regulations and shall submit an acceptable dust control plan to the Washoe



County District Health Department prior to starting site preparation or earthwork. The project specifications should include an indemnification by the contractor of the owner and engineer for any dust generation during the construction period. The owner will be responsible for mitigation of dust after his acceptance of the project.

Site Drainage

Due to the presence of expansive material, moisture control is vital to performance of all improvements. Surface drainage should be provided away from each structure. In all cases, drainage slopes should be as steep as practical. Type B drainage could be considered on lots adjacent to open space to minimize the effects of steeper slopes. A system of roof gutters and downspouts is recommended to collect roof drainage and direct it away from the foundations unless pavement extends to the walls. If rain gutter drainage is to be piped underground, it must be in solid pipe with tightly glued joints to ensure that it does not infiltrate into the foundation system and/or crawlspace.

Stemwall backfill should be thoroughly compacted to decrease permeability and reduce the potential for irrigation and storm water to enter the crawlspace. Positive crawlspace drainage should be provided. This is most easily accomplished by grading the crawlspace to drain to one or more localized areas and providing three-inch diameter pipes to daylight beneath the footings. This should be possible on lots adjacent to open areas. Often, design grades preclude adequate drainage by daylighting a direct drain. A less preferable alternate is to grade the crawlspace to drain to the sewer lateral and gravel packing the lateral from the crawlspace to the sewer main in the street. Ponding of water on finish grade or at the edge of slabs or pavements should be prevented by proper grading. If planters are to be located adjacent to foundation areas, they should be lined and sloped to drain away from foundations to improve foundation performance. Raised planters bearing directly on concrete slabs would be preferred. Planters are defined as localized landscaped and irrigated areas lying within 10 feet of the building perimeter and confined by decorative structures such as rock, wood or brick.

It is our opinion that the systems described above meet City of Sparks and Federal Housing Authority requirements for positive crawlspace drainage. These systems are sufficient to drain water that may occasionally occur from large snowmelt, major storms, or broken pipes within a few days. These systems, however, may not be entirely sufficient to prevent all homeowner complaints. It has been our experience that most problems with wet crawlspaces are directly related to changes in site drainage or poor irrigation practices by the homeowner. It is usually difficult to convince the homeowner of his responsibility in these matters, and the problem can often become time consuming, resulting in ill-



will and even lawsuits between the homeowner and developer. For these reasons, some builders are using more positive drainage systems, such as pea gravel blankets, interior perimeter drains, or exterior subdrains. Any such drains must be designed with steep slopes to minimize ponding of water adjacent to foundations. Certain lots may be prone to collect upslope irrigation and storm drainage through subsurface flow that daylights in the crawlspace.

Concrete Slabs

All concrete slabs should be directly underlain by Type 2, Class B aggregate base. The thickness of base material shall be 6 inches beneath curb and gutters, 4 inches beneath sidewalks, and 4 inches beneath private flatwork. Aggregate base courses should be densified to, at least, 95 percent relative compaction. Subgrade preparation and separation from expansive material should be performed in accordance with earlier sections (**Site Preparation, Grading and Filling**) of this report.

Type II cement should be used for all concrete work. The Sparks area is a region with exceptionally low relative humidity. As a consequence, concrete flatwork is prone to excessive shrinking and curling. Concrete mix proportions and construction techniques, including the addition of water and improper curing, can adversely affect the finished quality of the concrete and result in cracking, curling, and spalling of slabs. We recommend that all placement and curing be performed in accordance with procedures outlined by the American Concrete Institute. Special considerations should be given to concrete placed and cured during hot or cold weather conditions. Proper control joints and reinforcing should be provided to minimize any damage resulting from shrinkage. Concrete should not be placed on frozen in-place soils.

Asphaltic Concrete

An R-value of 72 was measured for the weakly altered rock, similar to material that could be used for subgrade fills. The sample included minor amounts of surface clays in order to reflect the difficulties that will be encountered in separating the on-site materials during site preparation and grading. For design purposes, a conservative R-value of 25 was used to accommodate severe variations in fill quality due to the complex mixture of on-site materials. Subgrade preparation and separation from expansive material should be performed in accordance with earlier sections (**Site Preparation, Grading and Filling**) of this report.



The residential streets within the proposed subdivision will carry minimal traffic due to the limited number (127) of lots involved. Based on the current design, no street could serve more than 68 lots. The Equivalent 18 kip single axle load (ESAL) for the residential streets was estimated in a very conservative manner using the procedure summarized in Table 7.

<u>Table 7 - Traffic Analysis For Residential Streets</u>	
Design Life	20 years (7,300 days)
Maximum Lots	68
10 Trips per day per lot (Institute Transportation Engineers, 1991)	
2 Percent Trucks with Truck Factor of 0.30 (Assumed)	
Construction Traffic + 20 trucks per lot at T.F. = 0.59 (Assumed)	
$ESAL_{20} = (7,300)(68)(10)(.02)(.30) + (68)(20)(1.0)$	
$ESAL_{20} = 29,784 + 1,360 = 3.1 \times 10^4$	

<u>Table 8 - Recommended Structural Sections</u>			
<u>Street</u>	<u>Classification</u>	<u>AC</u>	<u>Type 2 Base*</u>
all	residential	4"	8"

*In areas of hard bedrock the base course should be reduced to a 4-inch leveling course.

If the ultimate traffic exceeds the anticipated levels, it may be necessary to reevaluate and overlay the pavement at some time in the future.

All aggregate base beneath asphalt pavements should be densified to, at least, 95 percent relative compaction.

Corrosion Potential

The site is comprised of altered and weathered volcanic rock that often includes visible gypsum ($CaSO_4 \cdot 2H_2O$). As a consequence, there is potential for sulfate levels in the range of 1,200 ppm in these materials. All footing and stemwall concrete, not in areas of hard bedrock cut or hard bedrock fill, should be designed with a minimum of 5.5 sacks of Type II cement and with a maximum water:cement ratio of 0.50 to provide sulfate resistance. The 4,000 psi (28 day) requirement for



dedicated improvements will provide sufficient sulfate resistance. Pier and grade beam foundations can use lesser strength concrete, as designed by the structural engineer.

ANTICIPATED CONSTRUCTION PROBLEMS

Depending on the season of construction, soft, wet surface soils may make for difficult travel by construction equipment. Some difficulty will also be encountered in excavation and trenching due to the presence of localized zones of very hard rock. Identification and segregation of expansive material will be a constant challenge during site preparation and grading/filling of this project.

QUALITY CONTROL

All plans and specifications should be reviewed for conformance with this geotechnical report and approved by the geotechnical engineer prior to submitting to the building department for review.

The recommendations presented in this report are based on the assumption that this firm will be retained to provide full-time field testing and construction review during all geotechnical-related phases of construction. We should review the final plans and specifications for conformance with the intent of our recommendations. Prior to construction, a pre-job conference should be scheduled to include, but not be limited to, the owner, architect, civil engineer, the general contractor, earthwork and materials subcontractors, building official, and geotechnical engineer. The conference will allow parties to review the project plans, specifications, and recommendations presented in this report and discuss applicable material quality and mix design requirements. All quality control reports should be submitted to and reviewed by the geotechnical engineer.

During construction, we should have the opportunity to provide full-time on-site observation of preparation and grading, overexcavation, fill placement, foundation installation, and paving. These observations would allow us to verify that the geotechnical conditions are as anticipated and that the contractor's work is in conformance with the approved plans and specifications.



STANDARD LIMITATION CLAUSE

This report has been prepared in accordance with generally accepted geotechnical practices. The analyses and recommendations submitted are based upon field exploration performed at the locations shown on Plate 1 - Plot Plan of this report. This report does not reflect soils variations that may become evident during the construction period, at which time re-evaluation of the recommendations may be necessary. Our firm must be retained to perform construction observation in all phases of the project related to geotechnical factors to insure compliance with our recommendations. We can not be responsible for any aspect of project performance unless we are retained to provide these services. The owner shall be responsible for distribution of this geotechnical investigation to all designers and contractors whose work is related to geotechnical factors.

Equilibrium water level readings were made on the date shown on Plate 2 - Test Pit Logs of this report. Fluctuations in the water table may occur due to rainfall, temperature, seasonal runoff or adjacent irrigation practices. Construction planning should be based on assumptions of possible variations.

This report has been prepared to provide information allowing the architect or engineer to design the project. The owner is responsible for distribution of this report to all designers and contractors whose work is affected by geotechnical aspects. In the event of changes in the design, location, or ownership of the project from the time of this report, recommendations should be reviewed and possibly modified by the geotechnical engineer. If the geotechnical engineer is not accorded the privilege of making this recommended review, he can assume no responsibility for misinterpretation or misapplication of his recommendations or their validity in the event changes have been made in the original design concept without his prior review. The geotechnical engineer makes no other warranties, either expressed or implied, as to the professional advice provided under the terms of this agreement and included in this report.

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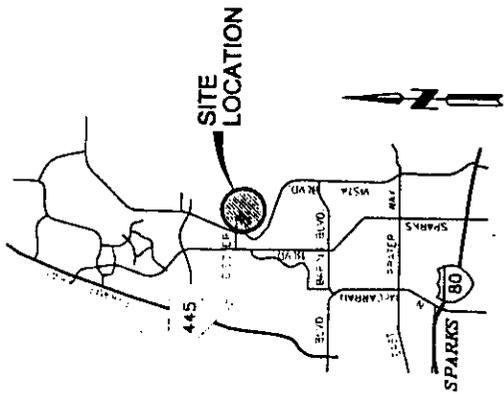
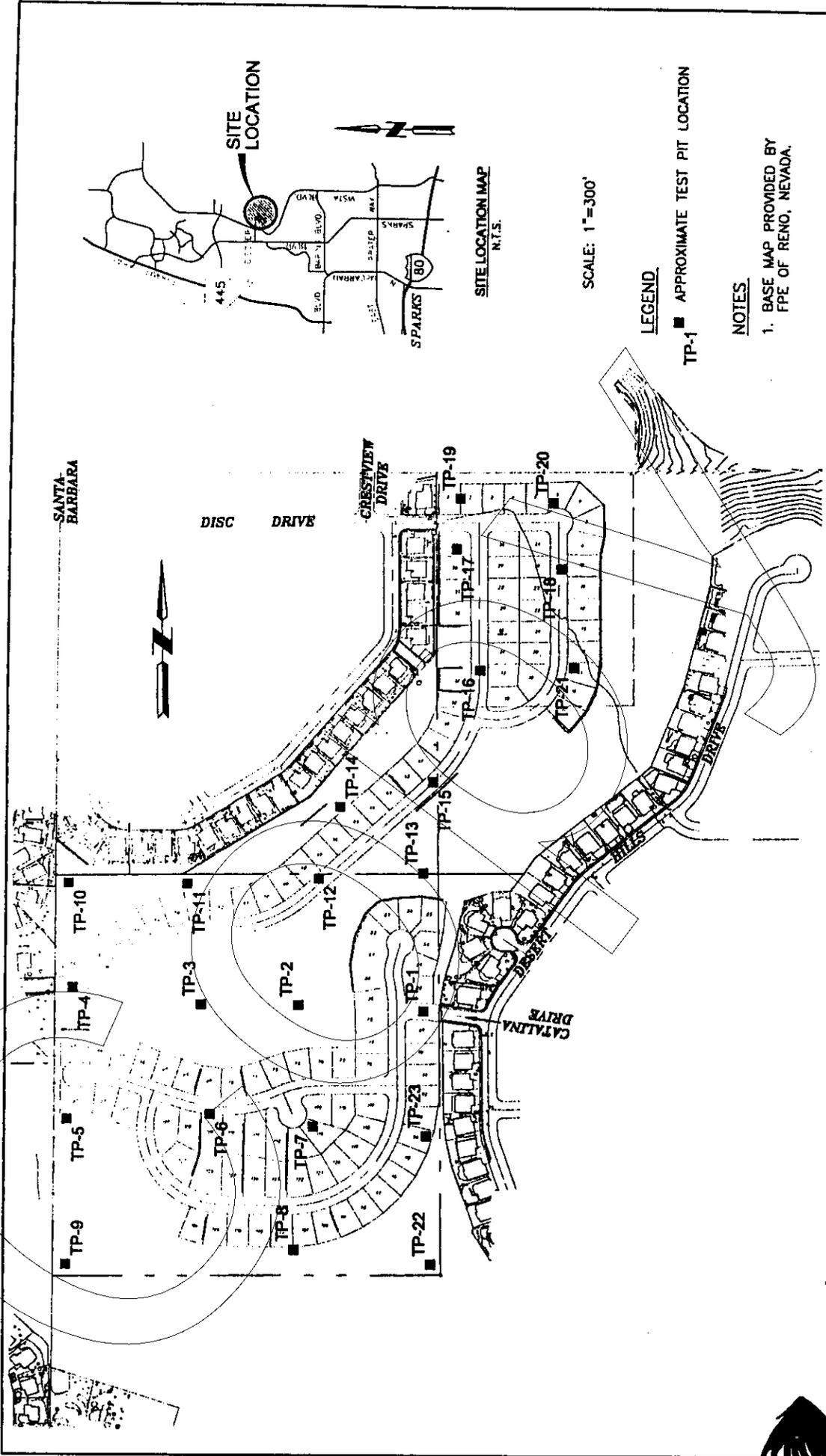
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SCALE: 1"=300'

LEGEND

TP-1 ■ APPROXIMATE TEST PIT LOCATION

NOTES

- 1. BASE MAP PROVIDED BY FPE OF RENO, NEVADA.

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PLOT PLAN

SKY VISTA RESIDENTIAL SUBDIVISION
 SPARKS, NEVADA

Project No.
0166-01-1

Plate 1





LOG OF TEST PIT TP-01

Date Excavated: 8/12/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4720.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE	MATERIAL DESCRIPTION
					5	SM		Brown, dry, SILTY SAND , with an estimated 30-40% non-plastic to low plastic fines, 60-70% fine to medium sand. Unit also contains fragments of volcanic bedrock.
					10			Dark brown to grey, dry, very hard, VOLCANIC BEDROCK , moderately fractured, fresh, with minor interstitial silt and sand.

LOG OF TEST PIT TP-02

Date Excavated: 8/12/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4689.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE	MATERIAL DESCRIPTION
2A		>4.5				SC		Dark brown, slightly moist, very hard, SANDY FAT CLAY with an estimated 80% medium to high plastic fines, 20% fine to coarse sand.
2B		1.0			5	CL		Orange brown, slightly moist, very hard, LEAN CLAY WITH SAND with an estimated 75-90% medium to high plastic fines, 10-25% fine to coarse sand.
						SC		Pale green, dry to slightly moist, firm, HIGHLY ALTERED VOLCANIC BEDROCK with an estimated 90% high plastic fines, 10% fine sand. Unit exhibits the mechanical properties of a Fat Clay.
2C					10	SC		Pale green to brown, dry, hard, HIGHLY ALTERED VOLCANIC BEDROCK , with an estimated 80% high plastic fines, 20% fine to medium sand. Unit contains lenses of Sandy Clay. Unit exhibits the mechanical properties of a Fat Clay.

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LOG OF TEST PIT TP-03

Date Excavated: 8/12/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4668.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE	MATERIAL DESCRIPTION
3A								Dark brown, slightly moist, stiff, SANDY FAT CLAY , with an estimated 85% high plastic fines, 10-15% fine sand, and minor gravel and cobbles.
3B		<1.0						Olive brown, slightly moist, firm, LEAN CLAY WITH SAND , 80-90% medium to high plastic fines, 10-20% fine sand.
					5			Pale green to pale white, slightly moist, hard, HIGHLY ALTERED VOLCANIC BEDROCK , with an estimated 95-100% high plastic fines, trace fine sand. Unit exhibits the mechanical properties of a Fat Clay.
3C								Brown, slightly moist, very hard, VOLCANIC BEDROCK , moderately to highly fractured, slightly to moderately altered, with minor interstitial clay.
					10			

LOG OF TEST PIT TP-04

Date Excavated: 8/12/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4637.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE	MATERIAL DESCRIPTION
4A		2.0->5.0						Dark brown, dry to slightly moist, hard, SANDY FAT CLAY , with an estimated 85% medium plastic fines, 15% fine to medium sand.
					5			Orange brown to pale olive green, slightly moist, stiff to hard, HIGHLY TO INTENSELY ALTERED VOLCANIC BEDROCK , with 41% high plastic fines, 39% fine to coarse sand, 20% fine to coarse subangular gravel to +1 1/2" in diameter.. Unit exhibits the mechanical properties of a Sandy Fat Clay with Gravel. (Note: Degree of alteration is not depth dependent)
4B		2.0->5.0	19	51				
					10			
4C		2.0->5.0						

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LOG OF TEST PIT TP-05

Date Excavated: 8/12/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4615.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE
5A		1.0-4.0				ML	MATERIAL DESCRIPTION Dark brown, dry to slightly moist, firm to stiff, SANDY SILT , with an estimated 60% low plastic fines, 30% fine to medium sand, and 10% fine to coarse, angular gravel to +2" in diameter. Light brown, dry, soft to firm, SANDY FAT CLAY , with an estimated 80% high plastic fines, 10% fine to medium sand, and 10% fine to coarse gravel to +2" in diameter. Light brown to yellow brown, dry to slightly moist, hard, VOLCANIC BEDROCK , highly fractured, moderately altered with abundant interstitial clay. (Note: Degree of alteration varies throughout the interval and is not depth dependent)
					5		
5B					10		

LOG OF TEST PIT TP-06

Date Excavated: 8/12/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4696.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE
						CL	MATERIAL DESCRIPTION Dark brown, slightly moist, soft, LEAN CLAY WITH SAND , with an estimated 80% medium plastic fines, 20% fine to medium sand. Brown to grey, slightly moist, very hard, VOLCANIC BEDROCK , moderately fractured, fresh with interstitial clay.
					5		
					10		

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LOG OF TEST PIT TP-07

Date Excavated: 8/12/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4708.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE
					5		
					10		
							<p>MATERIAL DESCRIPTION</p> <p>Dark brown, dry to slightly moist, soft, LEAN CLAY WITH SAND, with an estimated 80% medium plastic fines, 20% fine to medium sand.</p> <p>Brown to grey, slightly moist, very hard, VOLCANIC BEDROCK, moderately fractured, with minor interstitial clay.</p> <p>Test pit abandoned at 2' due to the extreme difficulty of excavation.</p>

LOG OF TEST PIT TP-08

Date Excavated: 8/12/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4665.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE
8A					5	ML	
					10		
							<p>MATERIAL DESCRIPTION</p> <p>Dark brown, dry to slightly moist, soft, SILT WITH SAND, with an estimated 60% non-plastic fines, 25% fine to coarse sand, 15% fine to coarse, angular gravel to +1 1/2" in diameter.</p> <p>Brown to grey, dry to slightly moist, very hard, VOLCANIC BEDROCK, highly fractured, fresh with minor interstitial clay.</p>

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LOG OF TEST PIT TP-09

Date Excavated: 8/12/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4556.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE	MATERIAL DESCRIPTION
								Dark brown, dry, soft, CLAY WITH SAND , with an estimated 70% medium plastic fines, 20% fine to coarse sand, 10% fine to coarse, angular gravel to +1.5" in diameter.
9A	☉	>5.0			5			Light brown, slightly moist, hard, HIGHLY ALTERED VOLCANIC ROCK , highly fractured, with an estimated 40% medium to high plastic fines, 10% fine sand, 50% fine to coarse, subangular gravel to +1 1/2" in diameter. Unit exhibits the mechanical properties of a Clayey Gravel.
9B	☞	>5.0			10			Orange brown to light brown, slightly moist to moist, stiff to very stiff, INTENSELY ALTERED VOLCANIC BEDROCK , with an estimated >95% high plastic fines. Unit exhibits the mechanical properties of a Fat Clay.

LOG OF TEST PIT TP-10

Date Excavated: 8/12/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4547.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE	MATERIAL DESCRIPTION
								Dark brown, dry, soft, LEAN CLAY WITH SAND , with an estimated 80% low plastic fines, 15% fine to coarse sand, 5% fine, subangular gravel to +1/2" in diameter.
10A	☉				5			Brown, dry, soft to firm, FAT CLAY WITH SAND , with an estimated 80% high plastic fines, 20% fine to coarse sand.
10B	☞	>5.0			10			Light brown to yellow brown, slightly moist, stiff to very stiff, INTENSELY ALTERED VOLCANIC ROCK , with an estimated 90-95% high plastic fines, 5-10% fine to medium sand, and trace gravel. Unit exhibits the mechanical properties of a Fat Clay. (Note: Remnant structure of original volcanic bedrock is still visible)

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LOG OF TEST PIT TP-11

Date Excavated: 8/12/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4562.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE	MATERIAL DESCRIPTION
11A	☞				5			Dark brown, dry to slightly moist, firm to very stiff, FAT CLAY , with an estimated 85% high plastic fines, 10% fine to coarse sand, 5% fine to coarse, subangular gravel to +2" in diameter.
								Brown, dry, stiff to very stiff, FAT CLAY , with an estimated 85% high plastic fines, 10% fine to coarse sand, 5% fine, subangular gravel to +1/2" in diameter.
11B	☞				10			Brown, dry, stiff to very stiff, FAT CLAY , with an estimated 85% high plastic fines, 10% fine to coarse sand, 5% fine to coarse, subangular gravel to +2" in diameter. Unit also contains 10-15% small, subround cobbles.
								Brown to orange brown, dry to slightly moist, very stiff to hard, INTENSELY ALTERED VOLCANIC ROCK , with an estimated 80% high plastic fines, 5% fine to medium sand, 15% fine gravel. Unit exhibits the mechanical properties of a Fat Clay with Gravel. (Note: Degree of alteration varies throughout this unit, and is not depth dependent)

LOG OF TEST PIT TP-12

Date Excavated: 8/12/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4618.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE	MATERIAL DESCRIPTION
12A	☞				5			Dark brown, moist, soft, FAT CLAY WITH SAND , with an estimated 85% medium to high plastic fines, 15% fine to coarse sand, and trace gravel and cobbles.
12B	☞				10			Light brown to pale green, slightly moist, very stiff to hard, HIGHLY ALTERED VOLCANIC ROCK , highly fractured, with an estimated 30-40% medium to high plastic fines, 10-20% fine to coarse sand, 50% fine to coarse gravel to +2" in diameter. Unit exhibits the mechanical properties of a Clayey Gravel with Sand.

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LOG OF TEST PIT TP-13

Date Excavated: 8/13/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4679.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE	MATERIAL DESCRIPTION
13A					5			Dark brown, slightly moist, very hard, VOLCANIC BEDROCK , highly fractured, with abundant interstitial clay.
					10			Dark brown, slightly moist, very hard, VOLCANIC BEDROCK , moderately fractured, moderately altered, with moderate interstitial clay.

LOG OF TEST PIT TP-14

Date Excavated: 8/13/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4591.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE	MATERIAL DESCRIPTION
14A					5			Dark brown, slightly moist, stiff to very stiff, FAT CLAY , with an estimated 90% high plastic fines, 10% fine to coarse sand.
14B					10			Orange brown to yellow brown, slightly moist, stiff to hard, HIGHLY ALTERED VOLCANIC ROCK , with an estimated 60% low to medium plastic fines, 25-30% fine to coarse sand, 10-15% fine to coarse gravel. Unit exhibits the mechanical properties of a Sandy Lean Clay.

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LOG OF TEST PIT TP-15

Date Excavated: 8/13/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4622.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE	MATERIAL DESCRIPTION
15A					5			Brown to dark brown, slightly moist, soft, LEAN CLAY WITH SAND , with an estimated 85% medium plastic fines, 15% fine to medium sand. Light brown to pale green, slightly moist, hard to very hard, VOLCANIC BEDROCK , moderately to highly fractured, moderately to highly altered. (Note: Alteration generally increases with depth)
					10			

LOG OF TEST PIT TP-16

Date Excavated: 8/13/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4553.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE	MATERIAL DESCRIPTION
16A					5			Dark brown, dry, soft, LEAN CLAY WITH SAND , with an estimated 85-90% low to medium plastic fines, 10-15% fine to medium sand. Light grey, dry, hard to very hard, VOLCANIC BEDROCK , moderately to highly fractured, moderately altered. (Note: Fracturing is almost exclusively horizontal) Light brown to light grey, dry, hard to very hard, VOLCANIC BEDROCK , unfractured, unaltered to slightly altered. (Note: Degree of alteration decreases with depth)
					10			

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LOG OF TEST PIT TP-17

Date Excavated: 8/13/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4550.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE	MATERIAL DESCRIPTION
								Dark brown, dry, hard, FAT CLAY , with an estimated 90% high plastic fines, 10% fine to coarse sand.
17A	☐					CL		Brown, slightly moist, firm, LEAN CLAY WITH SAND , with an estimated 80% medium plastic fines, 10% fine to coarse sand, 10% fine to coarse, subangular to subround gravel to + 2" in diameter. Unit also contains 5-10% subround cobbles to approximately 10" in diameter.
17B	☐				5	CL		Light brown, dry, firm to stiff, LEAN CLAY WITH SAND , with an estimated 80% medium plastic fines, 20% fine to coarse sand, and trace gravel to +2" in diameter. Base of unit also contains approximately 5% cobbles.
17C	☐					CL		Yellow brown to pale green, slightly moist, stiff to very stiff, CLAY WITH SAND , with an estimated 85% medium to high plastic fines, 15% fine to coarse sand.
					10			

LOG OF TEST PIT TP-18

Date Excavated: 8/13/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4562.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE	MATERIAL DESCRIPTION
								Dark brown, slightly moist, firm to stiff, SILTY SAND WITH GRAVEL (FILL) , with an estimated 30-40% low plastic fines, 50% fine to coarse sand, 10-20% fine to coarse, subangular to subround gravel to +2" in diameter. Unit also contains approximately 5% cobbles.
18A	☐					SM		Brown, moist, firm to stiff, SANDY LEAN CLAY WITH GRAVEL , with an estimated 50% low to medium plastic fines, 30% fine to coarse sand, 20% fine to coarse, angular to subangular gravel to +1" in diameter. Unit also contains minor calcite veining.
18B	☐				5	CL		
					10			

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LOG OF TEST PIT TP-19

Date Excavated: 8/13/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4540.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE
							MATERIAL DESCRIPTION Dark brown, slightly moist, soft, LEAN CLAY WITH SAND , with an estimated 85% low plastic fines, 15% fine to coarse sand. Grey, dry, hard, VOLCANIC BEDROCK , unfractured, moderately altered.
					5		Test pit abandoned at 2 feet due to the difficulty of excavation.
					10		

LOG OF TEST PIT TP-20

Date Excavated: 8/13/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4551.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE
20A	3						MATERIAL DESCRIPTION Dark brown, slightly moist, soft, LEAN CLAY WITH SAND , with an estimated 85% low plastic fines, 15% fine to coarse sand. Grey, dry, hard, VOLCANIC BEDROCK , unfractured, moderately altered.
					5		Test pit abandoned at 2 feet due to the difficulty of excavation.
					10		

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SOIL CLASSIFICATION CHART

MAJOR DIVISIONS		SYMBOLS		TYPICAL		
		GRAPH	LETTER	DESCRIPTIONS		
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS - GRAVEL - SAND MIXTURES LITTLE OR NO FINES	
				GP	POORLY-GRADED GRAVELS - GRAVEL - SAND MIXTURES LITTLE OR NO FINES	
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS - GRAVEL - SAND - SILT MIXTURES	
				GC	CLAYEY GRAVELS - GRAVEL - SAND - CLAY MIXTURES	
	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS - GRAVELLY SANDS, LITTLE OR NO FINES	
				SP	POORLY-GRADED SANDS - GRAVELLY SAND - LITTLE OR NO FINES	
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES	
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES	
			FINE GRAINED SOILS			
			SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML
	CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS				
	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY				
LIQUID LIMIT GREATER THAN 50		MH		INORGANIC SILTS - MICACEOUS OR OSMOTACEOUS FINE SAND OR SILTY SOILS		
		CH		INORGANIC CLAYS OF HIGH PLASTICITY		
		OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS		
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS		

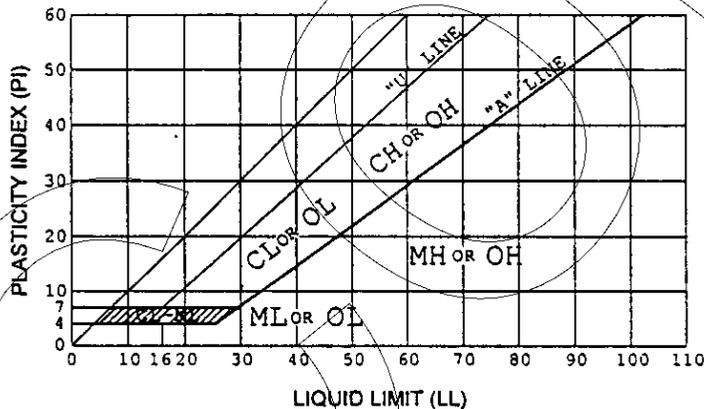
GRAIN SIZE TERMINOLOGY

Major Component of Sample	Size Range
Boulders	Over 12 in. (300mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 2mm)
Sand	#4 to #200 sieve (2mm to 0.074mm)
Silt or Clay	Passing #200 sieve (0.074mm)

RELATIVE DENSITY OF GRANULAR SOILS:

N-Blows/ft.	Relative Density
0-4	Very Loose
5-10	Loose
11-30	Medium Dense
31-50	Dense
greater than 50	Very Dense

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS



PLASTICITY CHART

FOR CLASSIFICATION OF FINE-GRAINED SOILS AND FINE-GRAINED FRACTION OF COARSE-GRAINED SOILS

CONSISTENCY OF COHESIVE SOILS:

Unconfined Compressive Strength, psi	N-Blows/ft	Consistency
less than 500	0-1	Very Soft
500-1,000	2-4	Soft
1,000-2,000	5-8	Firm
2,000-4,000	9-15	Stiff
4,000-8,000	16-30	Very Stiff
8,000-16,000	31-80	Hard
greater than 16,000	greater than 80	Very Hard

USCS CHART 0166011.GPJ US LAB GDT 10/27/89



Black Eagle Consulting, Inc.
1380 Greg Street, Suite 218
Sparks, Nevada 89431
Telephone: (775) 359-6600
Fax: (775) 359-7766

USCS Soil Classification

Project: Sky Ridge

Location: Sparks, Nevada

Project Number: 0166-01-1

Plate Number: 3



LOG OF TEST PIT TP-21

Date Excavated: 8/13/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4592.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water:NE	MATERIAL DESCRIPTION	
21A	☐		24.6	35	5			Dark brown, slightly moist, soft, FAT CLAY WITH SAND , with an estimated 85% medium plastic fines, 15% fine to coarse sand.	
21B	☐						10		Light grey to light brown, slightly moist, firm to stiff, HIGHLY ALTERED VOLCANIC BEDROCK , very highly fractured, with an estimated 60% high plastic fines, 25% fine to coarse sand, 15% fine gravel to +3/8" in diameter. (Note: Unit contains remnant structure and texture of original volcanic bedrock, but exhibits the mechanical properties of a Fat Clay with Sand)
21C	☐								Light grey to pale green, slightly moist, very stiff to hard, HIGHLY ALTERED VOLCANIC ROCK , highly fractured, with 50% high plastic fines, 40% fine to coarse sand, 10% fine to coarse, angular to subangular gravel to +1 1/2" in diameter. Unit exhibits the mechanical properties of a Sandy Fat Clay.

LOG OF TEST PIT TP-22

Date Excavated: 8/13/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

Surface Elevation(ft): 4650.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (tsf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water:NE	MATERIAL DESCRIPTION
					5			Dark brown, dry, soft to stiff, LEAN CLAY , with an estimated 90% medium plastic fines, 10% fine to coarse sand.
					10			Brown, dry, moderately dense to very dense, CLAYEY GRAVEL WITH SAND , with an estimated 15% low plastic fines, 25% fine to coarse sand, 60% fine to coarse, angular to subround gravel to +3" in diameter. Unit contains 10-20% cobbles.

BEC-TP1 0166011.GPJ LAGNN07.GDT 10/21/99

Black Eagle Consulting, Inc.
1380 Greg Street, Suite 218
Sparks, Nevada 89431
Phone: (775) 359-6600 Fax: (775) 359-7766

TMB Builders
Sky Ridge
Sparks, Nevada 0166-01-1 Plate 2



LOG OF TEST PIT TP-23

Date Excavated: 8/13/99

Logged by: JRO

Equipment: Cat 325L Trackhoe

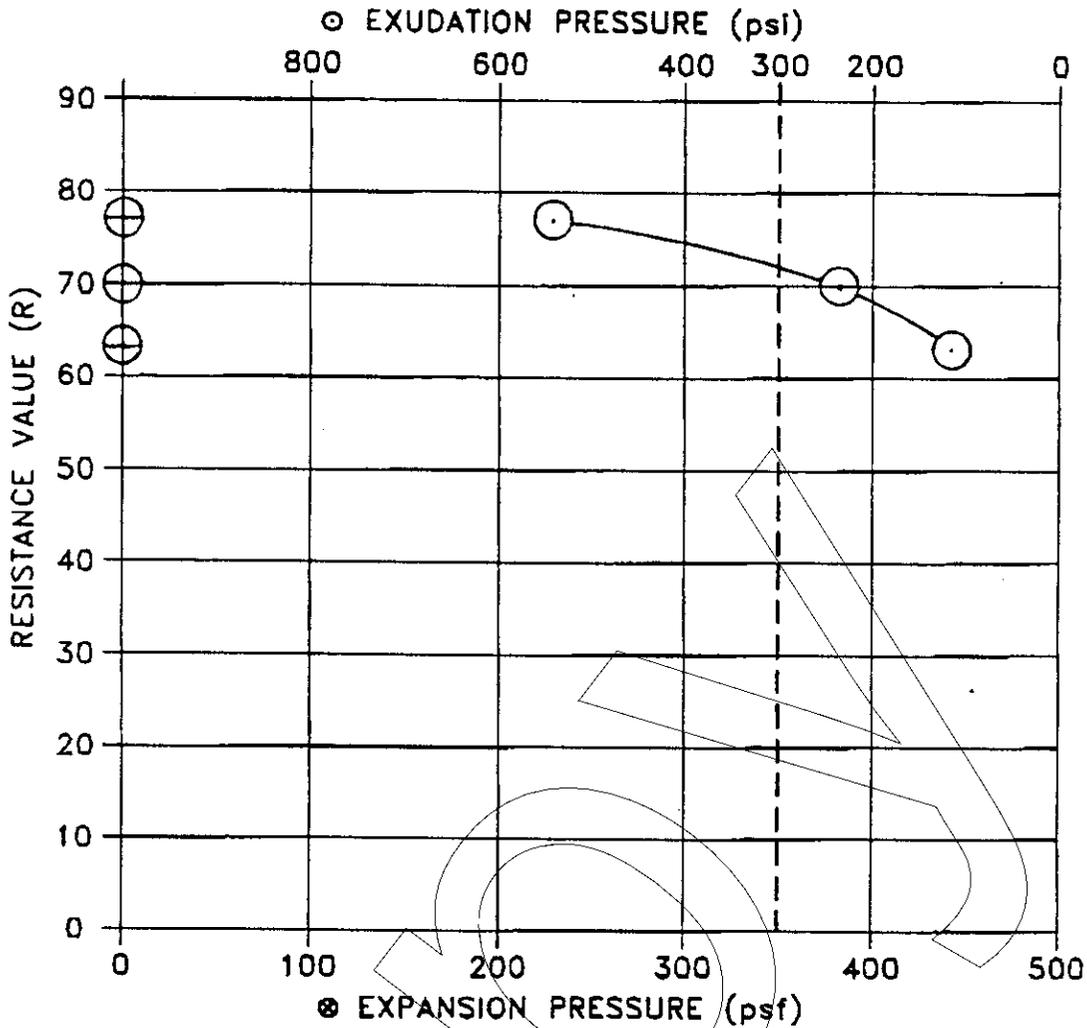
Surface Elevation(ft): 4715.0

SAMPLE NUMBER	SAMPLE	HAND PEN. (Isf)	MOISTURE (%)	PI	DEPTH (feet)	GRAPHIC LOG	Depth to Ground Water: NE	MATERIAL DESCRIPTION
23A	☉		14.5	40				Dark brown, slightly moist, soft to very stiff, SANDY FAT CLAY , with an 64% high plastic fines, 33% fine to coarse sand, and trace fine gravel to +3" in diameter.
23B	☉							Light brown, dry, hard, VOLCANIC BEDROCK , highly fractured, slightly altered, with minor interstitial clay.
23C	☉				5			Pale yellow to pale green, dry to slightly moist, hard, MODERATELY ALTERED VOLCANIC ROCK , highly fractured. (Note: Unit exhibits the mechanical properties of a Clayey Gravel with Sand)
					10			

BEC-TP1 0166011.GPJ LAGNN07.GDT 10/21/99

Black Eagle Consulting, Inc.
1380 Greg Street, Suite 218
Sparks, Nevada 89431
Phone: (775) 359-6600 Fax: (775) 359-7766

TMB Builders
Sky Ridge
Sparks, Nevada 0166-01-1 Plate 2



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Specimen No.	4	6	5
Moisture Content (%)	8.2	9.5	10.2
Dry Density (psf)	117.1	121.0	122.5
Exudation Pressure (psi)	541	235	115
Expansion Pressure (psf)	0	0	0
Resistance Value (R)	77	70	63

TEST DATA

Sample Source	Classification	Sand Equivalent	Expansion Pressure	R-value
BULK SAMPLE	RED BROWN SILTY SAND WITH GRAVEL-(SM) ALTERED VOLCANIC ROCK		0	72

AGRA Earth & Environmental, Inc.
780 Vista Boulevard, Suite 100
Sparks, Nevada 89434-6656
PH: 775-331-2375; FAX: 775-331-4153

RESISTANCE VALUE TEST DATA

BLACK EAGLE CONSULTING, INCORPORATED
TMB BUILDERS
BEC PROJECT NO. 0165-01.1

AEE Job No. 8-419-000309 Appr: SN Date 10-20-99

BLACK EAGLE CONSULTING
Geotechnical and Construction Services

Date: 10-21-99
Project No. 166-01-1

Designed By: DH
Checked By: mcd

ROAD NAME: SKY VISTA SUBDIVISION

STRUCTURAL SECTION DESIGN for FLEXIBLE PAVEMENT USING AASHTO METHOD

- References:
- 1.) AASHTO, 1993, *Design manual for design of rigid and flexible pavements*
 - 2.) Nevada Dept. of Transportation, 1997, *Pavement structural section design and policy manual*
 - 3.) The Asphalt Institute, 1991, *Thickness design-asphalt pavemts for highways and streets, Manual Series No. 1 (MS-1)*.
 - 4.) Institute of Transportation Engineers, 1991, *Trip Generation Manual Code 210, 5th edition*

CALCULATION OF SIMPLE EQUIVALENT SINGLE AXLE LOAD, ESAL

VARIABLES:

- Number of Lots: $N := 68$
- Average Trips per Day per Lot: $T_d := 10$ (Reference No. 4)
- Percent (of ADT) Heavy Trucks: $T := 2.0$
- Average Initial Truck Factor (ESAL/Trucks): $T_f := 30$ (Reference No. 3)
- Design Life: $D := 20$ years
- Construction Traffic: Assume 20 trucks per lot with an average truck factor of 1.0
- $T_{cf} := 1.0$ $T_c := 20$

$$ESAL_{20} := \left(20.365 \cdot N \cdot T_d \cdot \frac{T}{100} \cdot T_f \right) + N \cdot T_{cf} \cdot T_c$$

$$ESAL_{20} = 3.114 \cdot 10^4$$



CALCULATION OF RESILIENT MODULUS, M_r

Design R-Value: $R_v := 25$

$$M_r := 555 \cdot R_v + 1155$$

$$M_r = 1.503 \cdot 10^4$$

CALCULATION OF STRUCTURAL NUMBER, SN

VARIABLES:

Reliability:

	<u>Urban</u>	<u>Rural</u>
Interstate:	85-95%	80-90%
U.S. Routes:	80-90%	75-85%
State Routes:	75-85%	70-8-%
Low Volume:	50-80%	50-80%

Select: $R := 85$

Standard Deviation: $s_o := .45$

Initial Serviceability Index: $P_o := 4.5$ for Profilegraph < 5 in/mile

Terminal Serviceability Index:

ADT > 750: 2.5
 ADT = 750: 2.5
 ADT < 750: 2.0

Select: $P_t := 2.5$

Change in Serviceability: $\Delta PSI := P_o - P_t$

$\Delta PSI = 2$

SN to start iteration: $SN := 3$

$$M_r = 1.503 \cdot 10^4$$

$$ESAL_{20} = 3.114 \cdot 10^4$$



Interpolate Value for Z_R for the selected Reliability, R:

$r :=$	$z :=$
50	.000
60	-.253
70	-.524
80	-.841
90	-1.28
95	-1.64
99	-2.32
99.9	-3.09

$$Z_R := \text{interp}(r, z, R)$$

$$Z_R = -1.06$$

$$SN := \text{root} \left[Z_R \cdot S_o + 9.36 \cdot \log(SN + 1) - 0.20 + \frac{\log\left(\frac{\Delta PSI}{4.2 - 1.5}\right)}{0.40 + \frac{1094}{(SN + 1)^{5.19}}} + 2.32 \cdot \log(M_r) - 8.07 - \log(ESAL_{20}), SN \right]$$

$$SN = 1.401$$

PAVEMENT THICKNESS DESIGN

Layer Coefficients from Reference 2:

Material Type	Coefficient
---------------	-------------

Plantmix Surface (AC):	0.35
------------------------	------

$$AC := 0.35$$

Plantmix Base (PB):	0.32
---------------------	------

$$PB := 0.32$$

Cement Treated Base (CTB):	0.20
----------------------------	------

$$CTB := 0.20$$

Type 2 Base (AB):	0.10
-------------------	------

$$AB := 0.10$$

Borrow (SF):	0.07
--------------	------

$$SF := 0.07$$



Calculate required thickness of components where: $SN = D \times AC + T \times AB$

D = thickness of Plantmix Surface, AC

D := 3, 3.5, .. 8

Solve for thickness of Type 2 Base (T):

Thickness of Plantmix in Inches	D =	$\frac{SN - AC \cdot D}{AB}$	Thickness of Type 2 Base in Inches (T)
	3	3.513	
	3.5	1.763	
	4	0.013	
	4.5	-1.737	
	5	-3.487	
	5.5	-5.237	
	6	-6.987	
	6.5	-8.737	
	7	-10.487	
	7.5	-12.237	
	8	-13.987	

DESIGN RECOMMENDATIONS

Recommend use of 4" AC on 8" of Type 2 base in accordance with City of Sparks minimum. Note that this section is adequate for an R-value as low as 7 if the soil was not expansive. Base course should be reduced to a 4 inch levelling course for hard bedrock, as determined during grading.



Summary of Average Vehicle Trip Generation
 For 82 Dwelling Units of Single Family Detached Housing
 May 02, 2001

	24 Hour Two-Way Volume	7-9 AM Pk Hour Enter	Exit	4-6 PM Pk Hour Enter	Exit
Average Weekday	863	16	50	57	32

	24 hour Two-Way Volume	Peak Hour Enter	Exit
Saturday	856	45	39
Sunday	713	45	40

Note: A zero indicates no data available.
 The above rates were calculated from these equations:

24-Hr. 2-Way Volume: $LN(T) = .92LN(X) + 2.707, R^2 = 0.96$
 7-9 AM Peak Hr. Total: $T = .7(X) + 9.477$
 $R^2 = 0.89, 0.25$ Enter, 0.75 Exit
 4-6 PM Peak Hr. Total: $LN(T) = .901LN(X) + .527$
 $R^2 = 0.91, 0.64$ Enter, 0.36 Exit
 AM Gen Pk Hr. Total: $T = .704(X) + 12.09$
 $R^2 = 0.89, 0.25$ Enter, 0.75 Exit
 PM Gen Pk Hr. Total: $LN(T) = .887LN(X) + .605$
 $R^2 = 0.91, 0.64$ Enter, 0.36 Exit
 Sat. 2-Way Volume: $LN(T) = .956LN(X) + 2.54, R^2 = 0.92$
 Sat. Pk Hr. Total: $T = .886(X) + 11.065$
 Sun. 2-Way Volume: $T = 8.832(X) + -11.604, R^2 = 0.94$
 Sun. Pk Hr. Total: $T = .756(X) + 23.815$
 $R^2 = 0.86, 0.53$ Enter, 0.47 Exit

Source: Institute of Transportation Engineers
 Trip Generation, 6th Edition, 1997.

TRIP GENERATION BY MICROTRANS



Summary of Average Vehicle Trip Generation
 For 125 Dwelling Units of Single Family Detached Housing
 May 02, 2001

	24 Hour Two-Way Volume	7-9 AM Pk Hour		4-6 PM Pk Hour	
		Enter	Exit	Enter	Exit
Average Weekday	1273	24	73	84	48
	24 hour Two-Way Volume	Peak Hour			
		Enter	Exit		
Saturday	1281	66	56		
Sunday	1093	63	55		

Note: A zero indicates no data available.
 The above rates were calculated from these equations:

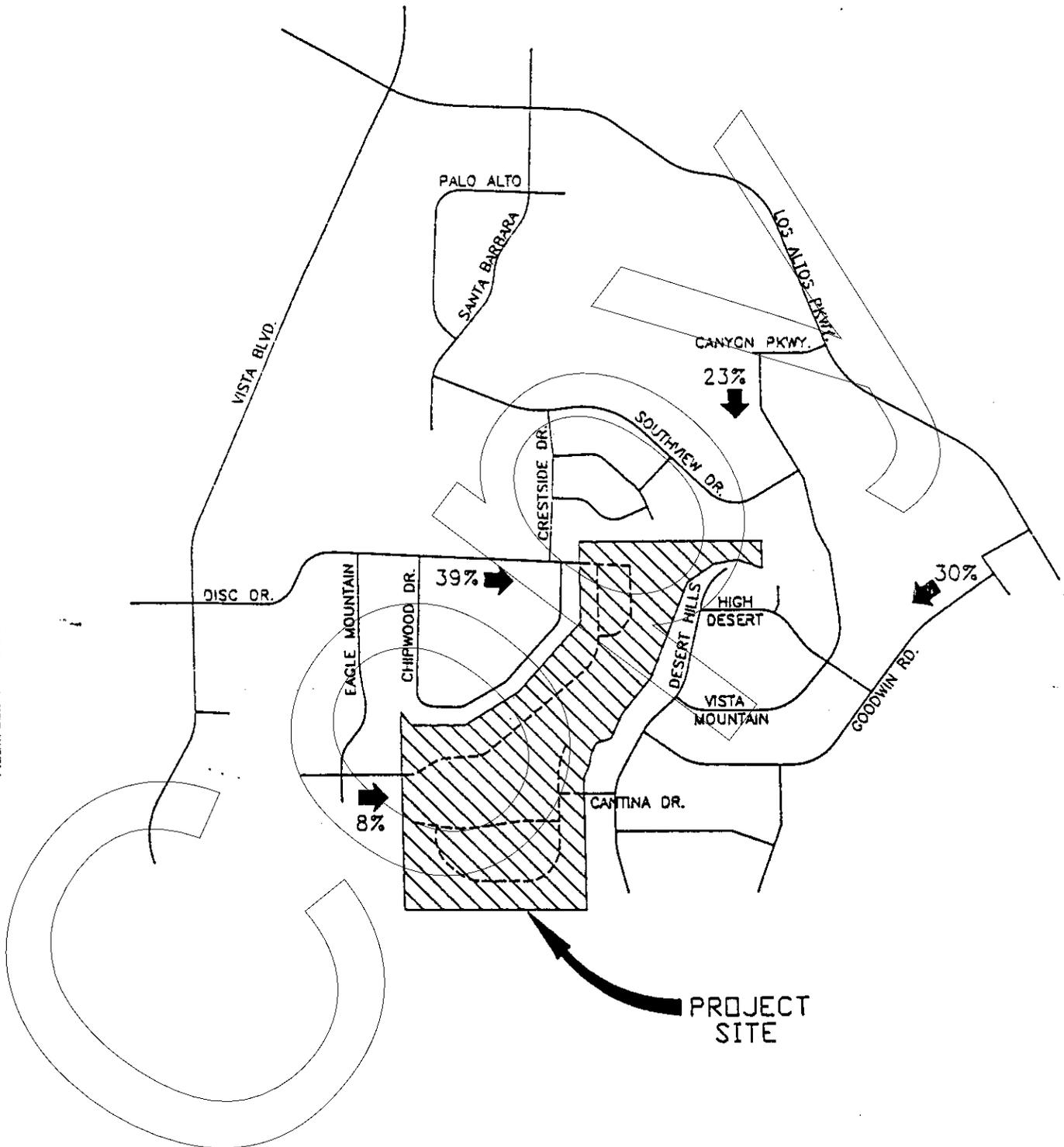
24-Hr. 2-Way Volume: $LN(T) = .92LN(X) + 2.707, R^2 = 0.96$
 7-9 AM Peak Hr. Total: $T = .7(X) + 9.477$
 $R^2 = 0.89, 0.25$ Enter, 0.75 Exit
 4-6 PM Peak Hr. Total: $LN(T) = .901LN(X) + .527$
 $R^2 = 0.91, 0.64$ Enter, 0.36 Exit
 AM Gen Pk Hr. Total: $T = .704(X) + 12.09$
 $R^2 = 0.89, 0.25$ Enter, 0.75 Exit
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 $R^2 = 0.91, 0.64$ Enter, 0.36 Exit
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 $R^2 = 0.86, 0.53$ Enter, 0.47 Exit

Source: Institute of Transportation Engineers
 Trip Generation, 6th Edition, 1997.

TRIP GENERATION BY MICROTRANS



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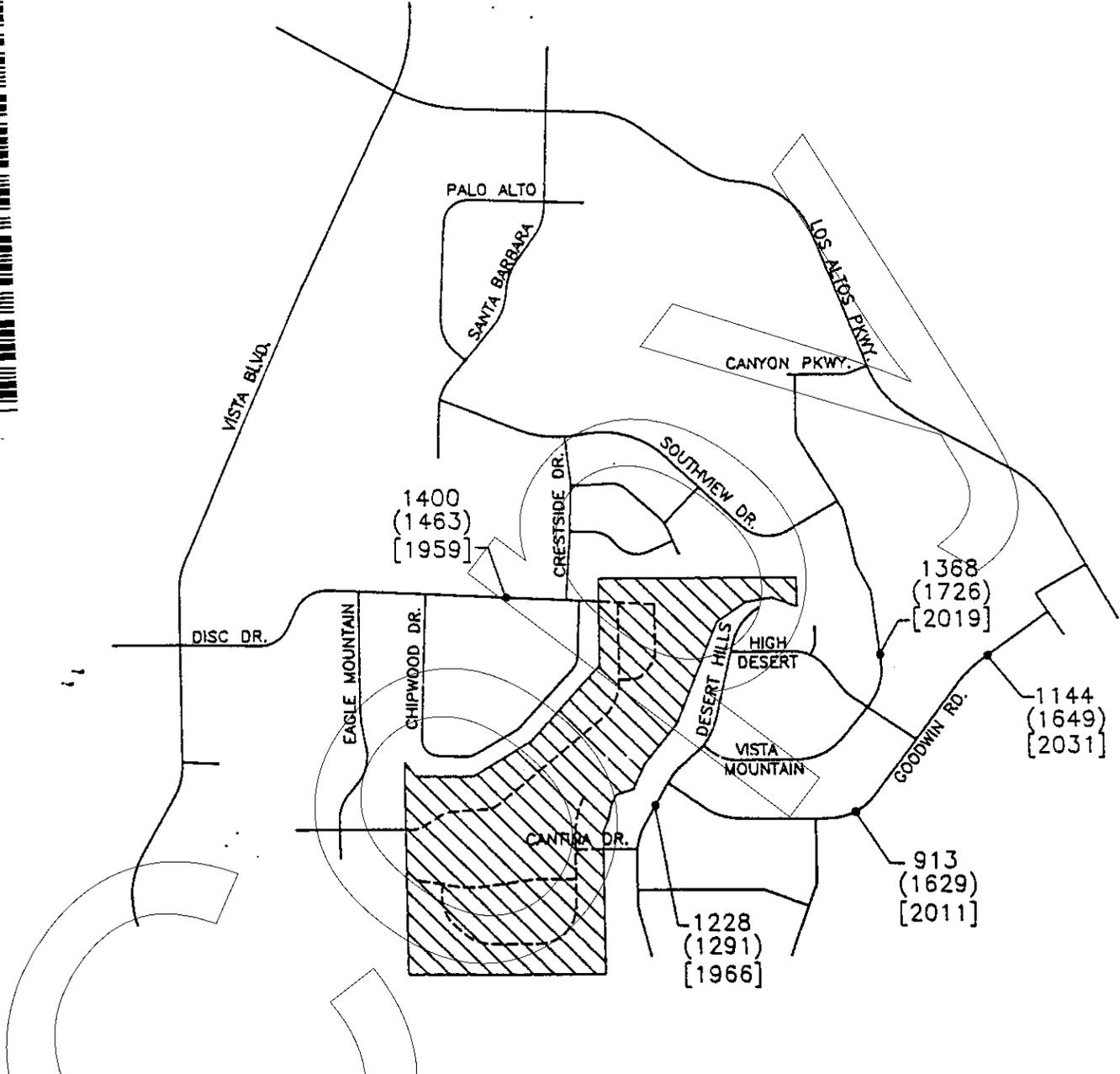


SKY RIDGE PLANNED DEVELOPMENT
DIRECTIONS OF APPROACH
FIGURE 1

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SOLAEGUI
ENGINEERS LTD.



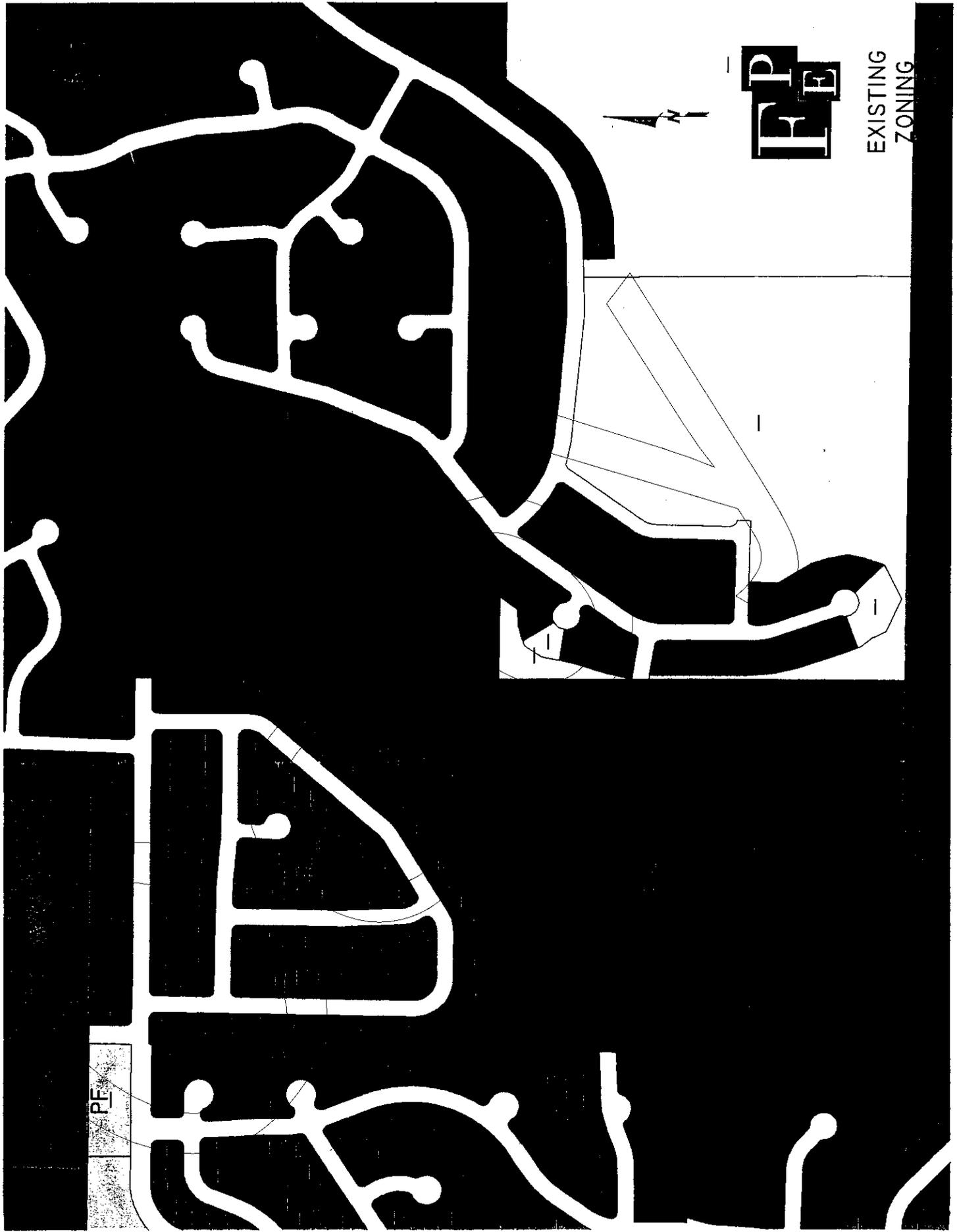
- EXISTING
 (-) EXISTING + OTHER
 [-] EXISTING + OTHER + SKY RIDGE

SKY RIDGE PLANNED DEVELOPMENT
AVERAGE DAILY TRAFFIC VOLUMES
FIGURE 3



APPENDIX

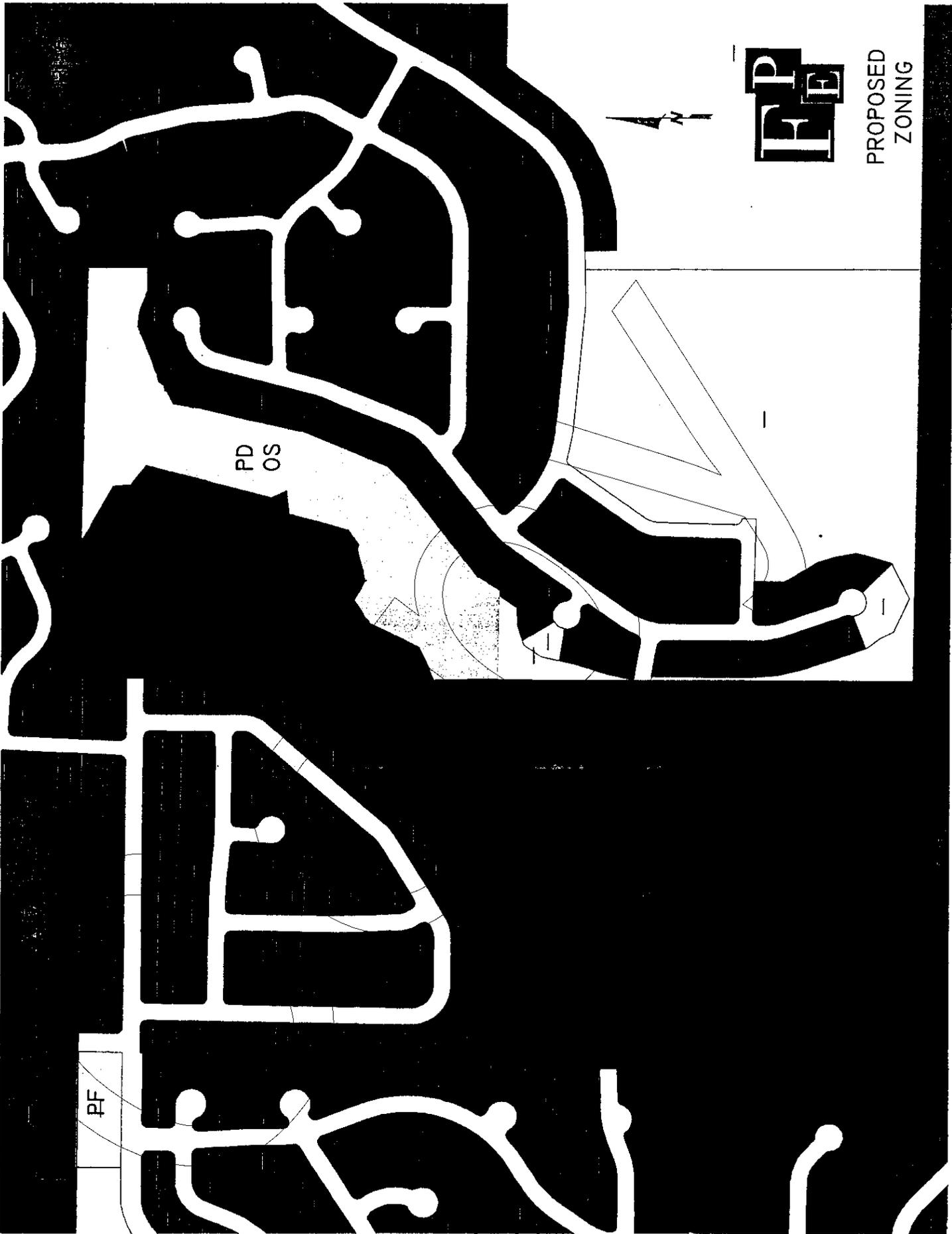
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F P

EXISTING
ZONING

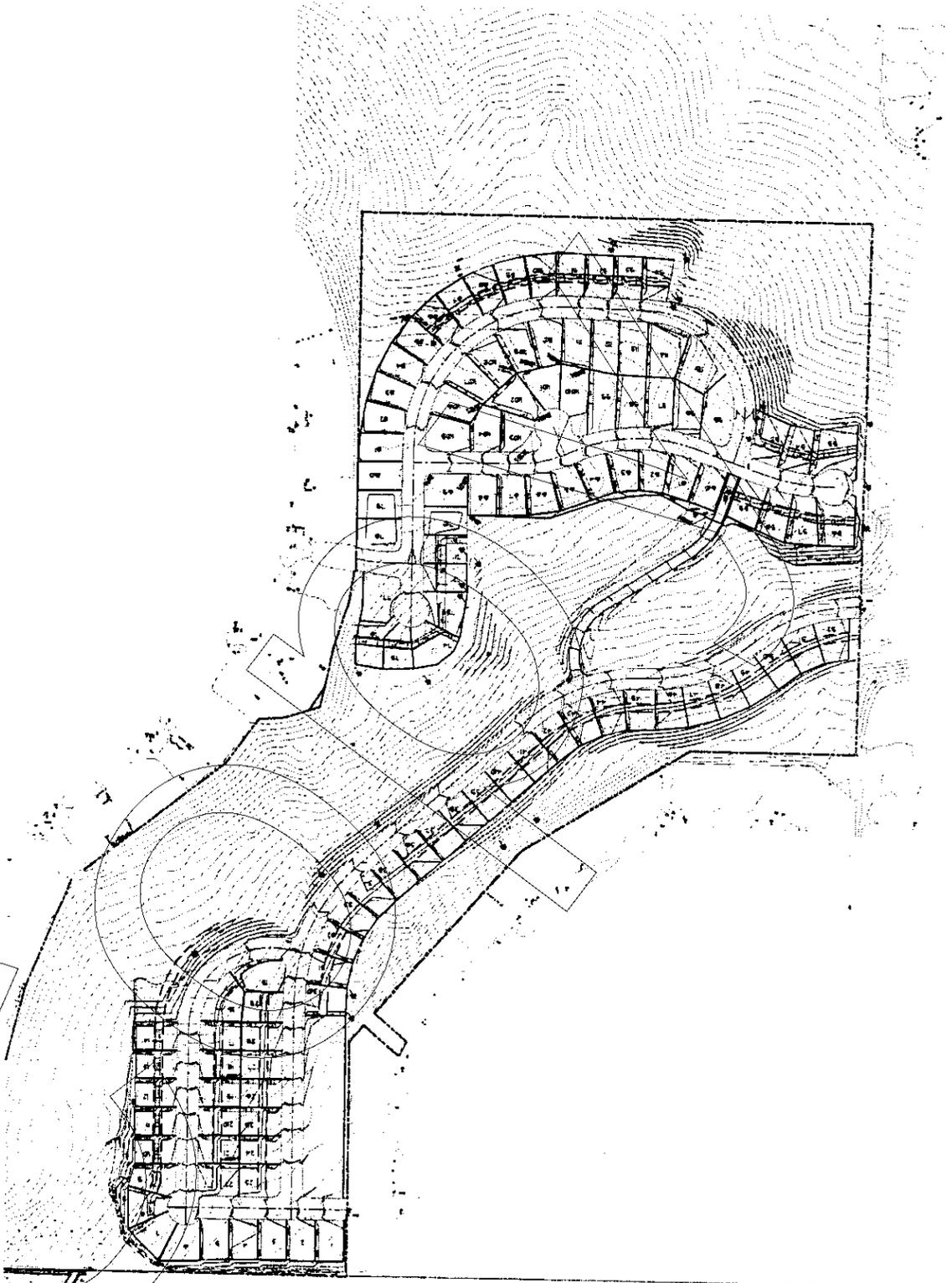
P E



FPF

PROPOSED
ZONING

**SKY RIDGE SUBDIVISION
GRADING PLAN - CUT/FILL EXHIBIT
ANNEXATION & PD SUBDIVISION
SHEET 2 OF 3**

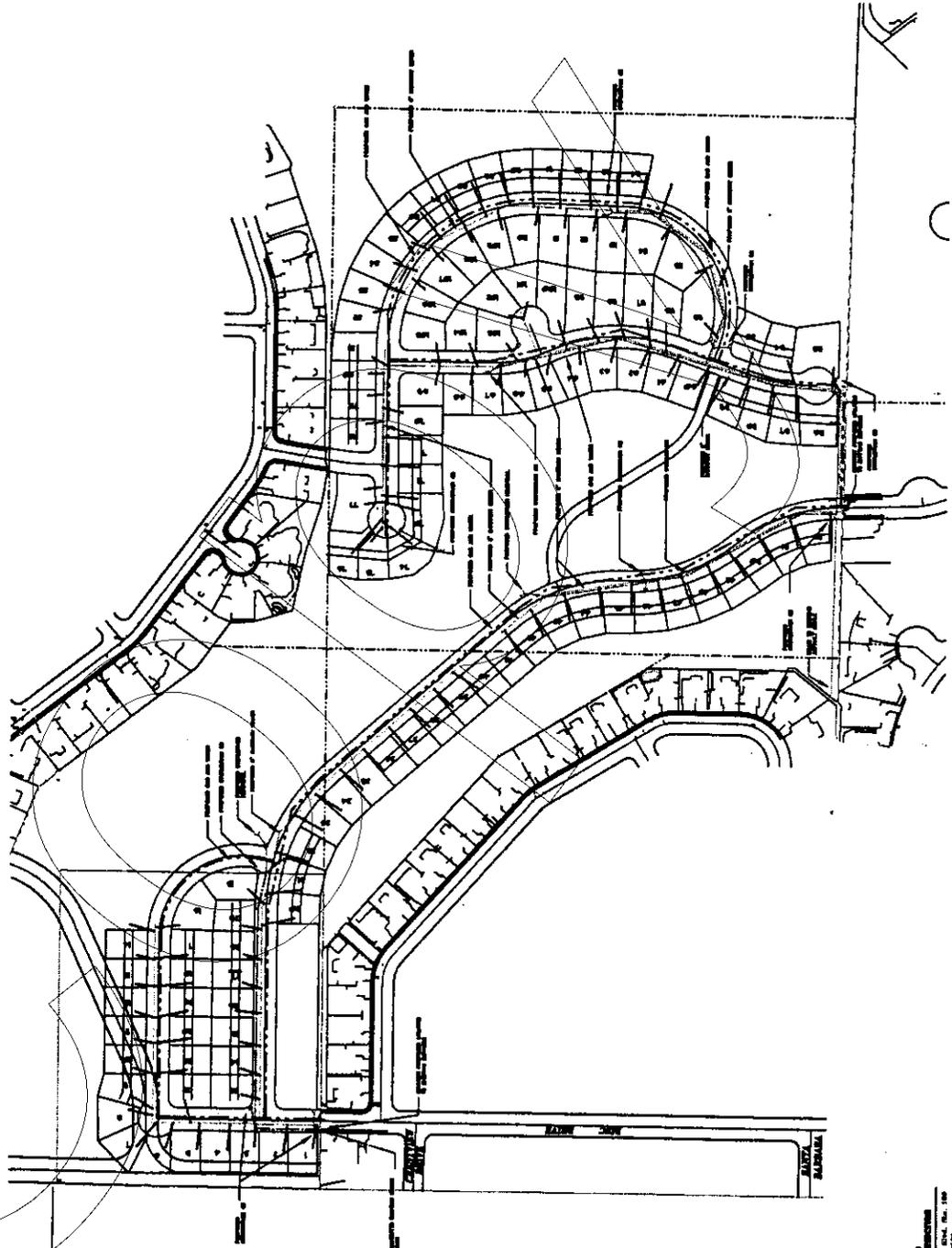


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**SKY RIDGE SUBDIVISION
UTILITY PLAN
ANNEXATION & PD SUBDIVISION
SHEET 3 OF 3**



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200 South Main Street, Ste. 100
P.O. Box 10000
Tampa, Florida 33601
Phone: (813) 288-1000
Fax: (813) 288-1001
www.enr.com

Errata sheet

for Sky Ridge Planned Development handbook dated August 9, 2001

Handbook Page 3:

Change the Conceptual Project Layout to accurately reflect the number of lots stated in the handbook text (115) versus the previous layouts (125).

Handbook Page 4:

Amend the graphic: Indicate the location of the emergency access route and identify its impacts in the conceptual view.

Handbook Page 5:

Amend the graphic to state AND illustrate: New cut slope shall not show above the second floor homes.

Handbook Page 6:

Please note: Due to recent title changes within the Community Development Department, all references in the Sky Ridge Planned Development Design Handbook to the previous position within the Community Development Department known as 'Community Development Director' need to be changed throughout the document to 'Administrator' and the Administrator shall be defined in this section of the Handbook as the term is defined in Title 20 of the Sparks Municipal Code under Section 20.05.030.

ADMINISTRATION

This Handbook contains the development guidelines for the Sky Ridge Planned Development. Upon approval by the City Council, This Handbook will function as the zoning for this development. The City Engineer and the ~~Community Development Director~~ Administrator shall have the responsibility to interpret these standards. When issues not covered in this development standards handbook come forth, the regulations of the City of Sparks shall govern.

Minor deviations to the plans, standards and/or guidelines may be approved by the City Engineer and ~~Community Development Director~~ Administrator provided that such changes further the goals and policies of the Sky Ridge Planned Development and that no quantitative amount is varied by more than 5%. Amendments to the handbook and alterations beyond the scope of minor deviations shall be processed by the City of Sparks in accordance with local and state laws.

Add in the S.M.C. 20.050.030 Administrator definition.



Errata sheet

for Sky Ridge Planned Development handbook dated August 9, 2001

STATEMENT OF OBJECTIVES

1. *In what respects the plan is or is not consistent with the statement of objectives of a planned unit development.*

The plan makes a strong effort to address the objectives of a planned unit development. First, it complies with the hillside ordinance with regard to minimizing disturbance to the topography of the property and attempting to "design with nature." Second, the location of common open space makes the effort to maintain the natural break both onsite and from the surrounding properties. Third, by the use of split level design of housing, the development seeks to address the topographic challenges of the site. Thus, the plan design allows for a diversity of building types that are designed to take into account the topographic challenges of the site.

2. *The extent to which the plan departs from zoning and subdivision regulations, otherwise applicable to the property including, but not limited to, density, bulk, and use and the reasons why these departures are or are not deemed to be in the public interest.*

This plan as proposed falls into the City of Sparks Master Plan land use designation of estate density residential of one to three dwelling units per acre. The plan conforms to the percentage and amount of disturbed area allowable under the categories of the City's Hillside Development ordinance. The plan is an infill project covering ~~±54.3~~ 54.01 acres with development surrounding the plan. As such, it is economical to the City relative to the provisions of public services since the majority of the necessary infrastructure is already in place. The plan is contributing to the correction of infrastructure deficiencies that presently exist both upstream and downstream. The infrastructure investment will specifically aid storm drainage and make corrections to the public infrastructure that presently exist. The deviation from standard zoning and land use requirements on this site allows for approximately 46 percent of the site to be in permanent open space. The design of the homes with split level floor plans allows for site adaptation and an efficient site utilization. The site design and provisions of attractive housing with scenic views allows for utilization of the site within the existing suburban contest.

Handbook Page 8:

3. *The relationship, beneficial or adverse, of the proposed planned unit development to the neighborhood in which it is proposed to be established.*



Errata sheet

for Sky Ridge Planned Development handbook dated August 9, 2001

The plan includes lot dimensions that match or exceed any existing or adjoining lot. The density of the surrounding existing developments are either higher or the same as the proposed planned development. The proposed planned unit development proposes the use of split lot grades in an effort to lessen the impact to the existing physical environment of the adjoining surrounding development.

The proposed open space areas will provide a protected buffer to the surrounding neighborhoods.

Handbook Page 9:

DEVELOPMENT STANDARDS

The Sky Ridge Planned development is designed as a residential neighborhood. In order to meet the goals and policies of this planned development, slight modification to standard zoning is proposed. Whereas the overall gross density of this project is ~~significantly less than~~ two dwelling units per acres (± 2.3 d.u./ac.) and approximately 25.08 ($\pm 46\%$) of the project is designated open space, ~~special considerations are warranted~~ the plan proposes to increase the ability to develop the remaining area through reduced setbacks. The standards listed below shall guide the development and uses of this planned unit development. Where no standards are listed, R1-7 zoning and other appropriate local, state and federal regulations shall apply.

PERMITTED USES

(move down the handbook page, correct text not included in this errata sheet)

- Accessory uses and buildings in conformance with ~~SMC 20.43 (included in the Appendix)~~ Sparks Municipal Code - *Not included in the Appendix; just leave in reference to Sparks Municipal Code standards for accessory uses and buildings.*

LOT SETBACKS REQUIREMENTS AND HEIGHT LIMITS

Handbook Page 10:

Side:

Homes with Two-Car garages: 7.5 feet, with a minimum of 20 feet between buildings on adjacent lots. Where homes with 2-car garages abut homes with 3-car garages, the side yard setback shall be a minimum of 20 feet between



Errata sheet

for Sky Ridge Planned Development handbook dated August 9, 2001

buildings. *[add hard return]*

Homes with Three-Car Garages: 10 and 5 feet, alternating with a minimum 15 feet between structures on adjacent lots with 3-car garages. Where homes with 3-car garages abut homes with 2-car garages, the side yard setback shall be a minimum of 20 feet between buildings.

[move down the handbook page, correct text not included in this errata sheet]

Accessory structures setbacks shall be consistent with the main structure setbacks unless under 7 feet in height and under 120 square feet in size. If under 7' in height and under 120 square feet in size, then the accessory structure setbacks shall be a minimum of 5' from the side and rear property lines, but may be closer if comply with Uniform Building Code construction materials standards. No accessory structures are allowed within the front yard.

Amend the graphic: remove the word "typical" and correct the spelling of the word "separation" throughout graphic.

Handbook Page 11:

Amend the Two-car Garage graphic: place the graphic on a separate page, increase the size of the graphic, correct the spelling of the word "separation", remove the encroachment of building to the left of the side-load 2-car garage example and in the exhibit entitled "TWO-CAR GARAGE EXHIBIT" add the following wording:

15' FRONTYARD SETBACK TO BUILDING AND SIDE-LOADING GARAGES

7.5 SIDEYARD SETBACK WITH 20' SEPARATION MINIMUM BETWEEN BUILDINGS,
TYPICAL

2' MAX. ENCROACHMENT, TYPICAL (UNDER 10 SQUARE FEET IN SIZE)

20' SETBACK TO FRONT-LOADED GARAGE

Amend the Three-Car Garage graphic: place the graphic on a separate page, increase the size of the graphic, correct the spelling of the word "separation" and in the exhibit entitled "THREE-CAR GARAGE EXHIBIT" add the following wording:

15' FRONTYARD SETBACK TO BUILDING AND SIDE-LOADED GARAGES

2' MAX. ENCROACHMENT, TYPICAL (UNDER 10 SQUARE FEET IN SIZE)



Errata sheet

for Sky Ridge Planned Development handbook dated August 9, 2001

20' 15' BUILDING SEPERATION SEPARATION, TYPICAL

20' SETBACK TO FRONT-LOADED GARAGE

Handbook Page 12:

BUILDING SITING/ENVELOPES

The two terrain adaptive lot configurations are typically the smaller 45-foot by 50-foot pads which are utilized where the majority of split-level grading situations occur. These two lot configurations shall allow walk-out basements or step-up front areas, depending on which direction the lot slopes. These units will vary in size from approximately 1,800 square foot, three-bedroom to 3,400 square foot, four-bedroom models.

ARCHITECTURE

The architectural treatment will include at least three different elevations for each floor plan, three different floor plans for each type of lot, and either a standard two-car, an optional side-loaded two-car or a larger three-car garage. It is the goal of the handbook to offer unique solutions to a bland street scape, and to that end, approximately 30% of the units will have side-loaded garages. All units will have tile roofs. The exterior elevations of each unit will be stucco, except for variations in the front elevations. Three front elevation alternates, consisting of three tab lap wood horizontal panels, 7" wood horizontal panels or stucco will be provided. The alternate front elevations and roofing materials will provide a more varied streetscape. Homes located on the west side of the extension of Cloud Peak Drive will be limited to 1 ½ story homes.

Handbook Page 18:

LANDSCAPING

Residential Sites

(move down the handbook page, correct text not included in this errata sheet)

Side yard slopes greater than three (3) feet in height will be stabilized mechanically, utilizing a seed mixture and application method approved by the City Engineer and ~~Community Development Director~~ Administrator, in accordance with the SLOPE STABILITY & EROSION CONTROL and SITE DRAINAGE section of this design handbook or landscaped by individual homeowners.



Errata sheet

for Sky Ridge Planned Development handbook dated August 9, 2001

Grading will be accomplished as required for the creation of appropriate house pads and lot drainage. Lot elevation transitions shall be accomplished with side slopes not to exceed 3:1 ratio and/or retaining walls. Requirements will generally follow FHA standards except where site conditions warrant otherwise. Lots will be graded to drain toward streets. Lined or paved swales in common areas will direct drainage as necessary to the approval of the City Engineer. All artificial slopes shall have slope gradients that do not exceed a 3:1 ratio on residential sites, ~~except where split level lots are shown rough graded to 2:1 between splits to allow structure to take up elevation difference.~~ Side lots will be graded to slopes that do not exceed 3:1 ratio or ~~retained in some manner~~ utilize retaining walls.

Common Areas

(move down the handbook page, correct text not included in this errata sheet)

All common areas associated with the Sky Ridge planned development shall be maintained by the Sky Ridge Homeowners Association. The language that specifies the requirements of the maintenance of the common open space areas shall be specifically called out within the Sky Ridge planned development's homeowners association covenants, conditions and restrictions (C. C. & R.'s) and shall be sufficient to preserve the presentation and maintenance of the acreage as disturbed and undisturbed common open space area in perpetuity. Common areas not disturbed by construction activities will remain in their natural state.

Handbook Page 19:

Temporary irrigation shall be provided by the developer until the revegetation has become established to the approval of the City Engineer and the ~~Community Development Director~~ Administrator.

- All artificial slopes shall have a slope gradient not to exceed 3:1, except 2:1 slope gradients may be located solely and exclusively within the project's common area where the Homeowners Association shall maintain these slopes and where these slope gradients have been approved by a registered soils engineer stamped report, the City Engineer and the ~~Community Development Director~~ Administrator. Slopes steeper than 3:1 will be mechanically stabilized as outlined in the SLOPE STABILITY & EROSION CONTROL section. Vegetative stabilization will be applied as approved by the City Engineer and ~~Community Development Director~~ the Administrator. Temporary irrigation shall be provided by the developer until the revegetation has become established to the approval of the City Engineer and the ~~Community Development Director~~ the Administrator.



Errata sheet

for Sky Ridge Planned Development handbook dated August 9, 2001

Retaining walls will be utilized to reduce grading impact in common areas and where required, as grade transitions between lots. Walls will be ~~constricted~~ constructed of rock (rockery) or split-faced concrete masonry block. Retaining walls shall not exceed six (6) feet in height within the Sky Ridge common open space areas nor four (4) feet in height within the interior developed lots of the Sky Ridge project. Retaining walls shall be required to meet Uniform Building Code standards. Fences at retaining walls will be constructed as provided in the FENCING section, ~~page 27~~.

Pubic Rights-of-Way

No public right-of way landscaping is proposed. The individual single family front yard landscaping will provide a landscape treatment adjacent to the public right-of-way or in areas of single loaded streets, the two-foot wide area beyond the roadway improvements will be returned to a natural state on the side of the street without lots by the developer installing revegetation with native plant material and a temporary irrigation system until the revegetation has become established to the approval of the City Engineer and ~~Community Development Director~~ the Administrator.

Handbook Page 22:

On the computer-generated illustration: The emergency access route appears to be "penciled" in. This graphic doesn't show visually the impacts of the associated cuts and fills necessary to make the emergency access route a reality.

Handbook Page 28:

RETAINING WALLS

3rd bullet -

~~→ A geotechnical engineer should be consulted for walls that exceed 10 feet in height.~~

23rd bullet -

▶ Maximum height of any rockery wall should be 6 feet in areas of fill. However, all retaining walls shall not exceed six (6) feet in height within the Sky Ridge common open space areas nor four (4) feet in height within the interior developed lots of the Sky Ridge project.

24th bullet -

▶ Maximum height of any rockery wall should be 8 feet in areas of fill. However, all retaining walls shall not exceed six (6) feet in height within the Sky Ridge common open space areas nor four (4) feet in height within the interior developed lots of the Sky Ridge project.



Errata sheet

for Sky Ridge Planned Development handbook dated August 9, 2001

Handbook Page 31:

Amend ENTRY SIGN DETAILS Graphic: Correct spelling of "metallic" throughout graphic.

Handbook Page 33:

[move down the handbook page, correct text not included in this errata sheet]

FENCING

All units will have fenced side yard and rear yards. Two fencing options are permitted: a standard solid wood and an open tubular steel style. Both styles are limited to 6 feet in height. The open fencing option is designed for rear yards that back up to restricted access common area and solid view screening is not necessary for privacy. The location of fences shall comply with Sparks Municipal Code standards. A fence permit from the City is required prior to the erection of any fence and/or wall.

Note: provide a graphic illustration where the "open tubular steel style" fencing is permitted and where the "standard solid wood style" fencing is permitted.

Handbook Page 35:

SITE DATA

The following chart, with the accompanying figures on the following pages, demonstrates the types of areas to be provided in Sky Ridge. Refer to the Analysis of Development on Slopes, Hilltops and Ridges section for slope category breakdown information.

Overall Site Data

	Area (AC)	% of Total
DISTURBED AREA (Fig. 4):	37.55	69%
NET UNDISTURBED (Fig. 5):	16.64	31%
TOTAL SITE AREA (Fig. 1):	54.3	100%

Staff's note: There is a 0.27 acre/11,761.2 square foot discrepancy between the handbook total site area acreage and the legal descriptions and parcel map splitting off 10.73 acres as opposed to the 11.0 acres as described in the Handbook from the Canyon Hills open space parcel (54.3 acres - Handbook versus 54.014 acres - legal description & parcel map). This requires recalculation of all of the numbers in this table.



Errata sheet

for Sky Ridge Planned Development handbook dated August 9, 2001

OPEN SPACE (Fig 6):	25.08	46%
ROADWAYS (Fig. 7):	8.6	16%
LOTS (Fig 8):	20.6	38%
TOTAL SITE AREA (Fig. 1):	54.3	100%

Staff's note: There is a 0.27 acre/11,761.2 square foot discrepancy between the handbook total site area acreage and the legal descriptions and parcel map splitting off the Canyon Hills open space parcel (54.3 acres - Handbook versus 54.014 acres - legal description & parcel map). This requires recalculation of all of the numbers in this table.

Specific Site Data
(Fig. 2) (Fig. 3)

	MATTEONI		BARKER		TOTAL	
	Area (AC)	%	Area (AC)	%	Area (AC)	%
OVERALL SITE:	43.28	80%	11.0	20%	54.28	100%
OPEN SPACE:	22.25	51%*	2.83	26%*	25.8	46%

*Percent of open space in each parcel

**Rounded slightly (WHICH NUMBERS OR PERCENTAGES ARE 'ROUNDED SLIGHTLY?')

(Staff's note: There is a 0.27 acre/11,761.2 square foot discrepancy between the handbook total site area acreage and the legal descriptions and parcel map splitting off the Canyon Hills open space parcel (54.3 acres - Handbook versus 54.014 acres - legal description & parcel map). This requires recalculation of all of the numbers in this table.)

Handbook Page 36:

Canyon Hills Data - pre-Sky Ridge

SITE AREA:	79.3 90.3 Acres	100%
Open Space Provided		
Common Area 1:	2.91 Acres	
Common Area 2:	4.69 Acres	
Common Area 3:	12.98 23.98 Acres	
Common Area 4:	<u>0.78 Acres</u>	
Total Open Space Provided:	21.36 32.36 Acres	26.9% 40.8%
Total Open Space Required:	18.03 15.86 Acres	20%



Errata sheet

for Sky Ridge Planned Development handbook dated August 9, 2001

The original ~~Barker Reserve~~ Canyon Hills Planned Development included ~~was~~ an open space area of 23.98 acres with 12.98 acres retained as permanent open space and the potential for approximately 11 acres ~~converted~~ to be developed into a maximum of 32 single family residential dwelling units ~~Sky Ridge~~. ~~Of the 11 acres which was converted to Sky Ridge, 9.2 acres is to be developed, see Figure 9.~~

Canyon Hills planned development open space:

- ▶ Currently (2000), the Canyon Hills planned development open space total is as follows:

(Remove the following bullets per 04/05/01 corrections)

- ~~23.98 ac~~
- ~~0.78 ac~~
- ~~2.91 ac~~
- ~~4.69 ac~~

32.36 ac actual open space or 35.8% of total development site: $(32.36 \text{ ac}/90.3 \text{ ac}) \times 100 = 35.84\%$

- Per Canyon Hills planned development handbook, 22.76 acres of open space or 25.2% of total development site: $(22.76/90.3) \times 100 = 25.2\%$
- Per PD zoning district requirements, minimum of 20% of development site or 18.06 acres of open space required: $90.3 \text{ ac.} \times 20\% = 18.06 \text{ acres of open space required.}$

As a part of the Sky Ridge planned development project, an ~~11.0~~ 10.73 acre parcel will be removed from the 23.98 acre Canyon Hills planned development open space parcel. This action affects the Canyon Hills planned development open space total in the following manner:

- $90.3 \text{ ac} - \del{11.0} 10.73 \text{ ac} = \del{79.3} 79.57$ acres total is what the Canyon Hills planned development is reduced to.
- $\del{79.3} 79.57 \text{ ac} \times 20\% = \del{15.86} 15.91$ acres of open space required to remain as a part of the Canyon Hills planned development to comply with the City's PD standards.



Errata sheet

for Sky Ridge Planned Development handbook dated August 9, 2001

- The amount of open space remaining with the Canyon Hills planned development exceeds the minimum:

~~12.98~~

13.24 ac

0.78 ac

2.91 ac

4.69 ac

~~21.36~~ 21.62 acres of remaining open space, (~~21.36~~ 21.62/79.3) x 100 = ~~26.93~~ 27.17 % of total site.

Of the 10.73 acres which is to be converted to the Sky Ridge planned development, approximately 9.2 acres is to be developed with the remaining acres as open space, see Figure 9.

Handbook Page 38:

Amend the Figure 1 graphic:

The numbers in the legend -Overall Area to accurately reflect the total area under consideration: "~~67.95~~ 68.04 Ac."

[Per staff's calculations:

<i>Matteoni</i>	-	<i>43.28 acres</i>
<i>Canyon Hills open space parcel</i>	-	<i>23.98 acres</i>
<i>Canyon Hills open space parcel</i>	-	<i><u>0.78 acre</u></i>
<i>Total Overall Acreage</i>	-	<i>68.04 acres]</i>

Handbook Page 39:

Amend the Figure 2 graphic:

Change the numbers in the graphic's legend for Figure 2 - Matteoni Parcel to accurately reflect the current Site Data table information: "~~43.18~~ 43.28 Ac." (*For the Matteoni Parcel*) and "~~21.7~~ 21.03 Ac." (*for the Developed Portion*).



Errata sheet

for Sky Ridge Planned Development handbook dated August 9, 2001

Handbook Page 40:

Amend Figure 3 graphic:

Within the legend of - change the cross-hatch in legend box titled "Developed Portion of Reserve Area - Canyon H..." to reflect graphic representation;

Change acreage number to reflect correct amount and change legend box title to: "~~9.2 Ac. Developed Portion of Reserve Area - Canyon H~~" - "10.73 Ac. - Portion of Canyon Hills Planned Development converting to Sky Ridge Planned Development".

Handbook Page 41:

Amend Figure 4 graphic:

The disturbed acreage is to accurately reflect the corrections based on the total project site equaling 54.01 acres versus 54.28 acres per the corrections reflected in Overall Site Data table.

Handbook Page 42:

Amend Figure 5 graphic:

Delineate the 18.43 acres of Sky Ridge undisturbed area outside of the Canyon Hills undisturbed areas.

Handbook Page 43:

Amend the Figure 6 graphic:

Alter the graphic and the acreage to accurately reflect that the emergency access road does not count as part of the project's open space.

Handbook Page 46:

Amend the Figure 9 graphic:

Correct the acreage amount for the "Remainder O.S. Canyon Hills Phase I" to accurately reflect the remaining acreage after the parcel map (13.24 ac. and 0.78 ac.) and remove cross-hatch beneath "11 ± Ac. Reserve for Canyon Hills Phase I".



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Handbook Page 47:

Amend the Street Sections graphic at the bottom of the page:

Remove the label stating "22' WIDE MIN. ROAD SURFACE" from between RIGHTS OF WAY and ROCKERY WALL GRADING PLAN.

Show on the emergency access route cross-section graphic a concrete curb & gutter on both sides of the road surface and label as follows: CONCRETE CURB & GUTTER, AC DIKE OR TACK-ON PCC CURB TO THE APPROVAL OF THE CITY ENGINEER."

Handbook Page 49:

CIRCULATION /FIRE ACCESS AND PROTECTION

The main access to the lower portion of the project will be Vista Boulevard to Disc Drive, east to the terminus of Disc Drive as illustrated on the following page. It may also be reached via Vista Boulevard, Disc Drive, Eagle Mountain Drive and Cloud Peak Drive.

The main access to the upper portion of the project will be Vista Boulevard, Los Altos Parkway, Goodwin Road, Desert hills Drive and Cantina Drive. It may also be reached via Disc Drive, Crestside Drive, Southview Drive, Vista Mountain Drive, Desert hills Drive and Cantina Drive.

Based on the project's traffic study dated July 26, 2001, as well as a review of the project's impacts to the surrounding street system with and without the completion of the Silvio Estates project, the traffic mitigation measures required for the Silvio Estates project (a traffic calming device installed within Crestside Drive) as well as the traffic calming devices recommended in the July 26, 2001 traffic report for Sky Ridge (a total of three (3) traffic calming devices installed in Goodwin Road) shall be installed by the Sky Ridge project developer prior to issuance of a Certificate of Occupancy for a single family residence within the project. If the Silvio Estates project installs the device within Crestside Drive prior to the development of the Sky Ridge project, then the mitigation for Crestside Drive is complete.

A private 22-foot wide emergency access route is provided to facilitate emergency vehicle access between upper and lower portions of the project and is the main access for emergency services to the southern portion of the project. The private emergency access route shall be barricaded at both ends to the approval of the City Engineer, Fire Chief and Police Chief. The barricade design and installation shall include a device that senses strobe lights and is compatible with the equipment used by the City of Sparks traffic division. The design and installation shall include a keypad entry system for police. The barricades shall also include a manual opening system in the event of a power outage. The method of barricading shall be reviewed and approved by the City Engineer, Fire Chief and Police Chief prior to



Errata sheet

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approval of a final map for the project. As an alternative, the emergency access route may be designated as a secondary access for emergency services; but if so designated, then all of the lots located in the southern portion of the project (that portion of the project accessed from Cantina Drive) shall have automatic residential fire sprinklers systems installed with the initial construction of those lots. All lots in Sky Ridge will be offered automatic residential sprinklers as an upgrade option.

Handbook Page 50:

Amend the graphic: Include a label identifying the "EMERGENCY ACCESS ROUTE."

Handbook Page 52:

SLOPE REDUCTION CALCULATIONS

(Staff's note: There is a 0.27 acre/11,761.2 square foot discrepancy between the handbook total site area acreage and the legal descriptions and parcel map splitting off the Canyon Hills open space parcel (54.3 acres - Handbook versus 54.014 acres - legal description & parcel map). This requires recalculation of all of the numbers in this table.)

Slope Reduction Calculations has the following incongruities:

- Table has 54.28 acres as total acreage for the project; per legal description and parcel map splitting off the Canyon Hills open space parcel, 54.01 acres is the total for the project with 10.73 acres cut out of the Canyon Hills open space.
- Maximum disturbed area acreage exceeded in five (4) of the six (6) slope categories, with the smallest amount of 0.02 acre to the largest amount as 1.58 acres and a total of 2.49 acres over the allowable disturbed area allotment without justification or demonstration that in by being permitted to exceed the allowed disturbed areas, the proposed additional disturbance through grading is a better solution.
- Figure 2 showed 37.55 acres being disturbed verses 37.14 acres shown in the table.

Handbook Appendix:

Traffic report:

- Remove May 2, 2001 traffic report information and replace with the complete July 26, 2001 traffic report.

Proposed Zoning graphic:

- Does this rezoning request propose to alter the Canyon Hills 23.78 acie parcel into PD-



Errata sheet

for Sky Ridge Planned Development handbook dated August 9, 2001

OS? Use alternative different colors consistently for the Sky Ridge planned development versus the Canyon Hills planned development versus the Vistas planned development.

Sky Ridge Subdivision Site Plan - Sheet 1 of 3:

- Reduced Sheet 1 of 3 is illegible.
- 08/10/01 Full-sized Sheet 1 of 3 has the following discrepancies:
 - The incorrect property lines;
 - Does not describe what all of the dashed lines on the map are indicating;
 - Does not call out the sizes of the open common space parcels;
 - Does not list all of the lot frontages
 - Did not redesign Lots 76 & 77 to provide sufficient lot frontage for Lot 76;
 - The site statistics list the incorrect project acreage for the project;
 - Does not call out the phasing of the project;
 - Lists Sierra Pacific as the water service purveyor;
 - Does not include the emergency access route width; and
 - Does not include both sets of setbacks for the two- and three-car garage models and lists the right-of-way returns twice.
- 08/17/01 Full-sized Sheet 1 of 3 has the following discrepancies:
 - The incorrect property lines;
 - Does not describe what all of the dashed lines on the map are indicating;
 - Does not call out the sizes of the open common space parcels;
 - The site statistics list the incorrect project acreage for the project;
 - Does not call out the phasing of the project;
 - Lists Sierra Pacific as the water service purveyor;
 - Does not include the emergency access route width; and
 - Does not include both sets of setbacks for the two- and three-car garage models and lists the right-of-way returns twice.

Sky Ridge Subdivision Grading Plan - Cut/Fill Exhibit Sheet 2 of 3:

- Reduced Sheet 2 of 3 is illegible.
- 08/10/01 Full sized Sheet 2 of 3 has the following discrepancies:
 - There is no Sheet 2 of 3; there is a Sheet 1 of 2 and Sheet 2 of 2 - Grading plan South and North. Same discrepancies as 08/17/01 Sheets 2a and 2b, except included north arrow.



Errata sheet

for Sky Ridge Planned Development handbook dated August 9, 2001

- 08/17/01 Full sized Sheet 2a and 2b of 3 has the following discrepancies:
 - Does not include a scale;
 - Does not include a contour interval;
 - Does not include a legend defining what the map symbols are (ex., heavier lines on property lines on Sheet 2b, but not included on Sheet 2a);
 - Difficult to read top-of-wall and bottom-of-wall elevations or partial elevations (only tops)
 - Map indicates some 2:1 slopes remaining within private properties in violation of the Handbook language;
 - Missing slope gradient on cut and fill slopes;
 - Rockery walls exceeding 8 feet in height(extreme examples include a 15- and 31-foot high rockery wall); and
 - Indicates the continuation of the 3:1 bench through to the vacant cut slope south of the northern portion of the project's lots.

Sky Ridge Subdivision Utility Plan Sheet 3 of 3:

- Reduced Sheet 3 of 3 is illegible.
- 08/10/01 Full sized Sheet 3 of 3 has the following discrepancies:
 - Does not include a north arrow and scale.
- 08/17/01 Full sized Sheet 3 of 3 has the following discrepancies:
 - Does not include a north arrow and scale.





Exhibit
D

Office of the
CITY CLERK

CERTIFICATION

STATE OF NEVADA)
) SS
COUNTY OF WASHOE)

I, **DEBORINE J. DOLAN**, City Clerk and Clerk of the City Council of the City of Sparks, Washoe County, Nevada, hereby certify that the attached copy of

THE SPARKS CITY COUNCIL MEETING MINUTES OF NOVEMBER 13, 2001

are a true copy of the approved Minutes on record in my office; and that I am the duly authorized custodian of the records of the City of Sparks, County of Washoe, State of Nevada.

WITNESS MY HAND AND OFFICIAL SEAL OF THE CITY OF SPARKS THIS
27th day of November, 2001

Deborine J. Dolan
DEBORINE J. DOLAN, CITY CLERK
and Clerk of the City Council
City of Sparks, Washoe County, Ne



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November 21, 2001

Thomas M. Brown
TMB Builders
5435 Village Green Parkway
Reno, NV 89509

Reference: Ordinance No. 2112 Rezoning Land (Z-4-00)
Ordinance No. 2113 Rezoning Land (Z-7-00)
Tentative Map No. TM000002

Dear Mr. Brown:

Please take note that on November 14, 2001, I filed written notice in the City Clerk's Office of the final action of the Sparks City Council regarding your items brought forth at a public hearing held on November 13, 2001. The council approved the following:

- A. Rezoning the real property owned by J. Michael and Pamela O. Matteoni from R1-7 (Single Family Residential, one dwelling unit per 7000 sq. ft.) and R1-40 (Single Family Residential, one dwelling unit per 40,000 sq. ft.) to PD (Planned Development) - Ordinance No. 2112 (Bill No. 2278).

The Council adopted the facts and findings of the Planning Commission, except PD6 and PD18, and requested the developer to come back to Council with a compliance to the Hillside Ordinance or a plan that is better, or that the developer's option is better than the Hillside Ordinance, and that this will be done within one year according to the Planning Commission's wishes and pursuant to State statute.

- B. Rezoning the real property owned by Barker Homes Inc. from PD (Planned Development - Canyon Hills) to PD (Planned Development - Sky Ridge) - Ordinance No. 2113 (Bill No. 2279).

The Council adopted the facts and findings of the Planning Commission, except PD6 and PD18, and made the same requests as stated above.

A photocopy of each Ordinance referenced above will be sent to you after they have been recorded and returned to us by the Washoe County Recorder's Office.



Thomas M. Brown
November 21, 2001
Page 2

- C. Tentative Subdivision Map (TM000002) to allow 115 single-family detached residential lots on approximately 54.01 acres in the PD (Planned Development - Sky Ridge) zoning district at the eastern terminus of Disc Drive; western terminus of Cantina Drive and eastern terminus of Cloud Peak Drive.

Approved with the amended conditions as outlined in the enclosed tabulation dated November 19, 2001. The date by which the final subdivision map must be filed is two years from the Council approval date. The final must be filed on November 12, 2003 or sooner.

Sincerely,



Deborine J. Dolan, CMC
City Clerk and
Clerk of the City Council

Iza
Enclosure
Copy:

Greg Evangelatos, FPE
Terri Thomas, Finance Director
Planning Department
Building Inspector
Revenue Division
Fire Chief
Agenda Items 8.1; 8.2 and 8.3
File - Ordinance No. 2112 (Z-4-00)
Ordinance No. 2113 (Z-7-00)
TM000002





Conditions for: TM000002

at:

1: APPROVAL STATEMENT:

THE PROJECT IS APPROVED AS SUBMITTED AND CONDITIONED. ANY SUBSTANTIVE CHANGE SHALL REQUIRE REVIEW AND APPROVAL BY THE PLANNING COMMISSION AND CITY COUNCIL.

2: PROJECT APPROVAL:

THE PROJECT IS APPROVED AT A MAXIMUM OF 125 SINGLE FAMILY DETACHED LOTS (THROUGH LOTS - MINIMUM 7,000 SQUARE FEET/CORNER LOTS - 8,000 SQUARE FEET) WITH A MINIMUM OF 23.3 ACRES OF COMMON OPEN SPACE ON 54.3 ACRES.

3: WATER RIGHTS DEDICATION:

THE DEVELOPER SHALL DEDICATE SUFFICIENT WATER RIGHTS PER S.M.C. SECTION 17.12.075 TO ADEQUATELY SERVE THE PROJECT PRIOR TO THE APPROVAL OF A FINAL MAP FOR THE PROJECT OR PORTION OF THE PROJECT.

4: DEVELOPMENT STANDARDS:

THE DEVELOPER SHALL COMPLY WITH THE DEVELOPMENT STANDARDS AS SET FORTH IN THE APPROVED SKY RIDGE PLANNED DEVELOPMENT STANDARDS HANDBOOK UNLESS IN CONFLICT WITH LOCAL, STATE OR FEDERAL REGULATIONS, IN WHICH CASE THE MORE STRINGENT

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Conditions for: TM000002

at:

REGULATION SHALL TAKE PRECEDENCE. THE DEVELOPER SHALL COMPLETE THE SKY RIDGE DEVELOPMENT HANDBOOK CORRECTIONS AS APPROVED BY THE PLANNING COMMISSION AND CITY COUNCIL AND SUBMIT THE CORRECTED VERSION OF THE DEVELOPMENT HANDBOOK FOR REVIEW OF COMPLIANCE WITH THE APPROVALS WITH THE PLANNING COMMISSION AND CITY COUNCIL WITHIN ONE (1) YEAR OF THE DATE OF CITY COUNCIL APPROVAL OF THE SKY RIDGE PLANNED DEVELOPMENT REZONING REQUESTS AND PRIOR TO SUBMITTAL OF A FINAL MAP FOR THE PROJECT OR PORTION OF THE PROJECT OR ISSUANCE OF A GRADING AND/OR BUILDING PERMIT FOR THE SUBJECT SITE.

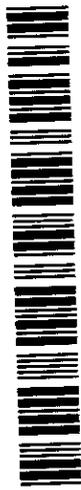
5: TENTATIVE MAP REDESIGN:

THE DEVELOPER SHALL SUBMIT TO THE ADMINISTRATOR THE RE-DESIGN OF THE TENTATIVE SUBDIVISION MAP OF THE SKY RIDGE PROJECT THAT COMPLIES WITH DEVELOPMENT HANDBOOK AS MODIFIED AND APPROVED BY THE PLANNING COMMISSION AND CITY COUNCIL INCLUDING, BUT NOT LIMITED TO THE REMOVAL OF ALL 2:1 OR STEEPER GRADIENT SLOPES LOCATED WITHIN THE SINGLE FAMILY RESIDENTIAL LOTS, A TREATMENT METHOD FOR ALL 2:1 SLOPES LOCATED WITHIN THE COMMON OPEN SPACE AREAS THAT IS ACCEPTABLE TO THE CITY ENGINEER AND ADMINISTRATOR (NOT

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Conditions for: TM000002

at:

RIP-RAP) AND REMOVAL OF ALL "FLAG" LOTS. THE RE-DESIGN OF THE TENTATIVE MAP SHALL BE SUBMITTED WITHIN ONE (1) YEAR OF THE DATE OF APPROVAL OF THE TENTATIVE MAP BY THE CITY COUNCIL.

6: STORM DRAINAGE;

THE DEVELOPER SHALL SUBMIT A FINAL HYDROLOGICAL MASTER PLAN REPORT FOR THE SKY RIDGE PROJECT THAT IS PREPARED IN ACCORDANCE WITH THE CITY OF SPARKS HYDROLOGICAL CRITERIA AND DRAINAGE DESIGN MANUAL TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO THE ACCEPTANCE OF A FINAL MAP FOR THE PROJECT OR PORTION OF THE SKY RIDGE PROJECT. THE STORM WATER AND DRAINAGE PLANS FOR THE PROJECT SHALL BE REVIEWED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE ISSUANCE OF A GRADING PERMIT FOR THE PROJECT OR PORTION OF THE PROJECT.

7: GRADING PERMIT:

THE DEVELOPER SHALL SUBMIT A GRADING AND DRAINAGE PLAN FOR THE PROJECT FOR REVIEW AND APPROVAL BY THE CITY ENGINEER, ADMINISTRATOR AND BUILDING OFFICIAL PRIOR TO THE ISSUANCE OF GRADING PERMIT FOR THE PROJECT. THE GRADING AND DRAINAGE PLAN SHALL INCLUDE A STOCKPILING PLAN FOR THE PROJECT OR

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Conditions for: TM000002

at:

PORTION OF THE PROJECT UNDER CONSTRUCTION. THE STOCKPILING PLAN SHALL INCLUDE A SCHEDULE FOR THE REMOVAL OF THE STOCKPILED MATERIAL, PROPOSED STABILIZATION METHODS OF THE STOCKPILED MATERIAL, SITE RECLAMATION METHODS, HAUL ROUTES, ETC. FOR REVIEW AND APPROVAL BY THE CITY ENGINEER, ADMINISTRATOR AND BUILDING OFFICIAL PRIOR TO THE ISSUANCE OF A GRADING PERMIT FOR THE PROJECT OR PORTION OF THE PROJECT.

8: WASHOE COUNTY DISTRICT HEALTH:

THE DEVELOPER SHALL SUBMIT TO THE CITY ENGINEER, ADMINISTRATOR AND BUILDING OFFICIAL DOCUMENTATION OF COMPLIANCE WITH THE REQUIREMENTS OF THE WASHOE COUNTY DISTRICT HEALTH DEPARTMENT (WCDH) PRIOR TO APPROVAL OF EITHER A FINAL MAP, A GRADING PERMIT OR A BUILDING PERMIT FOR THE PROJECT (BASED ON THE REQUIREMENTS PER THE WCDH LETTER DATED APRIL 3, 2000).

9: STREET LIGHTING:

THE DEVELOPER SHALL FORM A HOMEOWNERS ASSOCIATION OR OTHER METHOD (I.E. LIGHTING & LANDSCAPING DISTRICT) TO PROVIDE FOR THE MAINTENANCE OF STREET LIGHTING FOR THE PROJECT.

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at:

EITHER METHOD OF MAINTENANCE SHALL BE IDENTIFIED AND ESTABLISHED PRIOR TO THE APPROVAL OF A FINAL MAP FOR THE PROJECT OR PORTION OF THE PROJECT AND SUBJECT TO APPROVAL BY THE CITY ENGINEER AND THE ADMINISTRATOR.

10: COMMON AREA/OPEN SPACE LANDSCAPING:

THE DEVELOPER SHALL SUBMIT THE LANDSCAPE AND IRRIGATION PLANS FOR THE PROJECT FOR REVIEW AND APPROVAL BY THE PARKS & RECREATION DIRECTOR, CITY ENGINEER AND ADMINISTRATOR. ALL SUCH AREAS SHALL BE CONSISTENT WITH THE CITY POLICIES REGARDING SIGHT DISTANCE VISIBILITY AT INTERSECTIONS OF PUBLIC STREETS AND AT INTERSECTIONS OF PUBLIC STREETS AND PRIVATE DRIVEWAYS. THE COMMON AREAS/OPEN SPACES LANDSCAPING AND IRRIGATION SHALL BE INSTALLED PER THE APPROVED PLANS AS ABUTTING/ADJACENT DEVELOPMENT OF THE PROJECT OCCURS TO THE APPROVAL OF THE PARKS & RECREATION DIRECTOR, CITY ENGINEER AND ADMINISTRATOR.

11: RIGHTS-OF-WAY DEDICATIONS:

THE DEVELOPER SHALL RESERVE FROM DEVELOPMENT THE ULTIMATE RIGHT-OF-WAY WIDTHS FOR ALL PUBLIC STREETS WITHIN OR ABUTTING THE PROJECT WITH THE RECORDATION OF A FINAL MAP

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Conditions for: TM000002

at:

FOR THE PROJECT OR PORTION OF THE PROJECT TO THE APPROVAL OF THE CITY ENGINEER.

12: ROAD SECTIONS:

THE DEVELOPER SHALL SUBMIT IMPROVEMENT PLANS WITH ROADWAY CROSS-SECTIONS THAT COMPLY WITH THE CITY'S PAVEMENT STANDARDS TO THE APPROVAL OF THE CITY ENGINEER. THE INSTALLED PAVEMENT SECTIONS SHALL COMPLY WITH THE APPROVED IMPROVEMENT PLANS. THE PLANS SHALL ALSO INCLUDE ALL NECESSARY IMPROVEMENTS TO PROVIDE IRRIGATION TO LANDSCAPED MEDIANS AND ISLANDS WITHIN THE RIGHT-OF-WAY TO THE APPROVAL OF THE CITY ENGINEER, THE PARKS & RECREATION DIRECTOR AND ADMINISTRATOR.

13: STREET IMPROVEMENTS:

THE DEVELOPER SHALL INSTALL FULL-STREET IMPROVEMENTS FOR THE PROJECT PER THE APPROVED IMPROVEMENT PLANS, INCLUDING LANDSCAPING AND IRRIGATION IMPROVEMENTS. THE TIMING OF THE INSTALLATION OF THE IMPROVEMENTS SHALL OCCUR AS THE ABUTTING/ADJACENT DEVELOPMENT OF THE PROJECT OCCURS TO THE APPROVAL OF THE CITY ENGINEER.

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Conditions for: TM000002

at:

14: CONSTRUCTION HOURS LIMITATIONS:

THE DEVELOPER SHALL LIMIT ALL CONSTRUCTION AND CONSTRUCTION-RELATED ACTIVITIES TO THE HOURS BETWEEN 7:00 A.M. THROUGH 7:00 P.M., MONDAY THROUGH FRIDAY AND BETWEEN THE HOURS OF 9:00 A.M. THROUGH 5:00 P.M. ON SATURDAYS ONLY, WITH NO CONSTRUCTION OR CONSTRUCTION-RELATED ACTIVITIES TO OCCUR ON SUNDAYS. THE DEVELOPER SHALL POST SIGNS IN CONSPICUOUS LOCATIONS AT ALL ENTRANCES INTO THE PROJECT PRIOR TO THE START OF CONSTRUCTION AND THE DEVELOPER SHALL BE RESPONSIBLE FOR ENSURING THESE SIGNS SHALL REMAIN IN PLACE AND BE MAINTAINED IN GOOD REPAIR UNTIL CONSTRUCTION IS COMPLETED TO THE APPROVAL OF THE ADMINISTRATOR. UPON COMPLETION OF THE PROJECT, THE DEVELOPER SHALL REMOVE THE SIGNS FROM THE SITE. THE DEVELOPER SHALL RESTRICT ACCESS INTO THE PROJECT TO ENSURE COMPLIANCE WITH THE CONSTRUCTION AND CONSTRUCTION-RELATED ACTIVITIES HOURS LIMITATIONS.

15: PROJECT CONTACT:

THE DEVELOPER SHALL DESIGNATE TO THE ADMINISTRATOR A PROJECT CONTACT PERSON RESPONSIBLE/AUTHORIZED TO CORRECT PROBLEMS REGARDING THE PROJECT ON A 24-HOURS/7-DAYS A WEEK BASIS. THE DEVELOPER SHALL DESIGNATE THE PROJECT CONTACT

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Conditions for: TM000002

at:

PERSON TO THE COMMUNITY DEVELOPMENT DIRECTOR PRIOR TO
ISSUANCE OF A GRADING PERMIT FOR THE PROJECT OR PORTION OF
THE PROJECT.

16: EMERGENCY ACCESS ROUTE:

THE DEVELOPER SHALL INSTALL BARRICADES AT THE TOP AND
BOTTOM OF THE EMERGENCY ACCESS ROUTE TO THE APPROVAL OF THE
FIRE CHIEF, POLICE CHIEF AND CITY ENGINEER. THE BARRICADE
DESIGN AND INSTALLATION SHALL INCLUDE A DEVICE THAT SENSES
STROBE LIGHTS AND IS COMPATIBLE WITH THE EQUIPMENT USED BY
THE CITY OF SPARKS TRAFFIC DIVISION. THE DESIGN AND
INSTALLATION SHALL INCLUDE A KEYPAD ENTRY SYSTEM FOR THE
POLICE. THE BARRICADES SHALL ALSO INCLUDE A MANUAL OPENING
SYSTEM IN THE EVENT OF A POWER OUTAGE. THE METHOD OF
BARRICADING THE EMERGENCY ACCESS ROUTE SHALL BE REVIEWED
AND APPROVED BY THE POLICE CHIEF, FIRE CHIEF AND CITY
ENGINEER PRIOR TO THE APPROVAL OF A FINAL MAP FOR THE
PROJECT OR PORTION OF THE PROJECT.

17: RETAINING WALL HEIGHT LIMITS:

ALL RETAINING WALLS SHALL BE LIMITED IN HEIGHT TO A MAXIMUM
OF SIX (6) FEET IN HEIGHT WITHIN THE COMMON OPEN SPACE

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Conditions for: TM000002

at:

AREAS OF THE SKY RIDGE PROJECT AND A MAXIMUM OF FOUR (4) FEET IN HEIGHT WITHIN THE INTERIOR LOT LINES OF THE DEVELOPED PORTIONS OF THE SKY RIDGE PROJECT.

18: HOMEOWNERS ASSOCIATION:

THE DEVELOPER SHALL ESTABLISH A HOMEOWNERS ASSOCIATION FOR THE PROJECT OR JOIN IN THE VISTAS PLANNED DEVELOPMENT HOMEOWNERS ASSOCIATION TO PROVIDE FOR THE MAINTENANCE OF THE COMMON OPEN SPACE AREAS OF THE PROJECT PRIOR TO APPROVAL OF A BUILDING PERMIT FOR THE PROJECT.

19: LOTS ABUTTING CANYON HILLS:

THE DEVELOPER SHALL LIMIT THE HEIGHT OF THE STRUCTURES ON THE LOTS ABUTTING THE CANYON HILLS SUBDIVISION TO A MAXIMUM HEIGHT OF ONE (1) STORY AND LOWER THE FINISHED GRADE OF THE LOTS ABUTTING THE CANYON HILLS SUBDIVISION BY FIVE (5) TO NINE (9) FEET FROM THE CANYON HILLS SUBDIVISION LOTS FINISHED GRADES.

20: LOTS ABUTTING SOUTHVIEW:

THE DEVELOPER SHALL INSTALL A MINIMUM 20-FOOT WIDE BUFFER BETWEEN THE SOUTHVIEW SUBDIVISION AND THE LOTS ABUTTING THE

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at:

SOUTHVIEW SUBDIVISION THAT INCLUDES A LANDSCAPED STORM DRAINAGE CHANNEL TO THE APPROVAL OF THE CITY ENGINEER, THE ADMINISTRATOR AND THE PARKS & RECREATION DIRECTOR. THE LOTS ABUTTING THE SOUTHVIEW SUBDIVISION SHALL HAVE FINISHED GRADES EIGHT (8) TO TEN (10) FEET LOWER THAN THE SOUTHVIEW SUBDIVISION LOTS FINISHED GRADES.

21: MAXIMUM ALLOWABLE DISTURBED AREA CATEGORIES:

THE DEVELOPER SHALL COMPLY WITH THE SPARKS MUNICIPAL CODE 20.99 SLOPE CATEGORY MAXIMUM ALLOWED DISTURBED AREA STANDARDS WITH THE FINAL APPROVAL OF THE PROJECT.

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REGULAR MEETING OF THE SPARKS CITY COUNCIL
November 13, 2001

3:15 p.m.

1.
Call to Order

Tape 1, 0739

The regular meeting of the Sparks City Council was called to order by Mayor Tony Armstrong at 3:15 p.m. in the Council Chambers of the Legislative Building, 745 Fourth Street, Sparks, Nevada.

2.
Roll Call

Tape 1, 0755

Mayor Tony Armstrong, City Clerk Deborine Dolan, Council Members John Mayer, Phillip Salerno, Geno Martini, Mike Carrigan, Ron Schmitt, City Manager Shaun Carey, City Attorney Chester Adams, PRESENT.

Staff Present: Terri Thomas, Stan Sherer, John Dotson, Neil Krutz, Robert King, Wayne Seidel, Terry Gough, Christie Thunder, Randy Mellinger, Lee Leighton, Larry Lovejoy, Steve Driscoll, Rob Pyzel, Rick Nollenberger, Margaret Powell, Frank Rothwell, Pete Etchart and Sandra Garcia.

Staff Present for the 7:00 p.m. Session: John Martini, Susan Buchanan, Robin Pagni and Rhonda Knox.

Invocation Speaker

Tape 1, 0771

The invocation was given by Pastor Gary Grundman from the Sparks United Methodist Church.

Comments from the Public

Tape 1, 0897

Comment from Mr. Sam Dehne, Reno, Nevada.

Approval of Agenda - Consideration of taking items out of sequence, deleting items and adding items which require action upon a finding that an emergency exists.

Tape 1, 1118

Mayor Armstrong asked that agenda item 4.8 be moved up before item 3.

A motion was made by Council Member Mayer, seconded by Council Member Salerno, to move agenda item 4.8 to be heard before agenda item 3. Council Members Mayer, Salerno, Martini, Carrigan, Schmitt, YES. Motion carried.

A motion was made by Council Member Mayer, seconded by Council Member Salerno to approve the agenda as amended. Council Members Mayer, Salerno, Martini, Carrigan, Schmitt, YES. Motion carried.

3.
Minutes

Tape 1, 2717

A motion was made by Council Member Martini, seconded by Council Member Salerno, to approve the minutes of the Regular Meeting of October 22, 2001. Council Members Mayer, Salerno, Martini, Carrigan, Schmitt, YES. Motion carried.



4. Announcements, Presentations and Recognition Items and Items of Special Interest:

4.1

Presentation of Plaques of Appreciation for Ross Mitchell and Monica Jaye for their Support of the Sparks Project Impact Campaign

Tape 1, 2753

Mr. Mitchell and Ms. Jaye were unable to attend therefore Mayor Armstrong recommended that this item be continued.

A motion was made by Council Member Salerno, seconded by Council Member Martini, to continue item 4.1 to the December 10th meeting. Council Members Mayer, Salerno, Martini, Carrigan, Schmitt, YES. Motion carried.

4.2

Presentation by Representatives of The Adoption Exchange Program

Tape 1, 2815

An agenda item from Mayor Tony Armstrong and Director of Human Resources Larry Lovejoy recommending that Council show it's support of The Adoption Exchange Program by it's participation.

Cheryl Smith gave a presentation and stated that currently there are over 4,000 children with special needs in the State of Nevada who long for a permanent family. In northern Nevada there are over 1,000 children with special needs who are in need of "forever families."

Some of the ways that the Mayor and City Council can be involved are as follows:

- 1) Include a picture and story of a "Waiting Child" on a Television Commercial (SNCAT).
- 2) Include adoption related material in city literature.
- 3) Place, display "Waiting Child/Children's" picture and story in appropriate locations throughout the City.
- 4) Include the "2001 Adoption Campaign" logo on promotional materials to give to community and clients.
- 5) Partner one child with each City Council Member in efforts to find that child a "forever family."

4.3

Award to Recreation/Special Projects Division from the Nevada Humane Society - 13th Annual Community Animal Protection Award

Tape 1, 4255

No Show.

4.4

Introduction of New Employees

Tape 1, 4288

None.

4.5

Tape 1, 4301

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Monthly Report - Sparks
Citizens Advisory
Committee

Rescheduled to November 26, 2001.

4.6

Commendation - Sparks
Human Resources Director
Larry Lovejoy

Tape 1, 4310

Mayor Armstrong commended Human Resources Director Larry Lovejoy for the countless hours spent to ensure the successful acquisition of the water system. Mr. Lovejoy accepted the certificate and gave thanks to the Council.

4.7

Commendation - Reno
Assistant City Manager
Ralph Jaeck

Tape 1, 4310

Mayor Armstrong commended Reno Assistant City Manager Ralph Jaeck for the countless hours spent to ensure the successful acquisition of the water system. Mr. Jaeck accepted the certificate and gave thanks to the Council.

4.8

Request by Retired Sparks
Employees to be Extended
up to 90 Days the
Implementation of the
City's Cost Increase
Associated with their
Health Benefits

Tape 1, 1255

An agenda item from the Sparks Organization of Retired Employees recommending that Council give direction to the City manager that a resolution be prepared to be introduced (similar in language to Resolution 2214) to establish and maintain health insurance premiums for all retired city employees and their dependents in accord with cost of living increases of Nevada PERS.

Will Brown and Jim Nielson gave a presentation to Council and stated that the Sparks Organization of Retired Employees would request that the City Council postpone the implementation of the new premiums charged to affected retirees until this matter is explored in depth with management and the steering committee. The intent is to bring back to the City Council alternatives and options to the current action to immediately implement the new premiums.

Council Member Schmitt believed it was in the best interest of the City that the request be extended for 30 days in order to resolve the issue sooner.

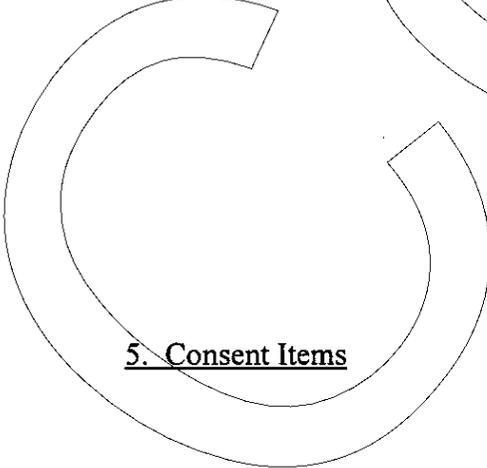
A motion was made by Council Member Schmitt, seconded by Council Member Carrigan, to postpone the implementation of the cost increase for the retired employees for 30 days to enable them to meet with Randy Waterman to work out a compromise. Council Members Mayer, Salerno, Martini, Carrigan, Schmitt, YES. Motion carried.

5. Consent Items

Tape 1, 4870

A motion was made by Council Member Salerno, seconded by Council Member Mayer, to approve Consent Items 5.1

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through 5.6. Council Members Mayer, Salerno, Martini, Carrigan, Schmitt, YES. Motion carried.

5.1
Report of Claims and Bills
and Appropriation
Transfers

An agenda item from Finance Director Terri Thomas recommending approval of the Report of Claims and Bills paid and the Appropriation Transfers made since the last regular Council Meeting for the period covering October 4, 2001 through October 24, 2001.

5.2
Approval of an
Application from Greg
Galletti for an On-
Premises Alcoholic
Beverage License for
Coney Island Bar, 2644
Prater Way

An agenda item from Police Chief John Dotson recommending that Council approve an application by Greg Galletti who resides at 3235 Probasco Way, Sparks, NV, for an On-Premises Alcoholic Beverage License for Coney Island Bar, located at 2644 Prater Way, Sparks, Nevada, contingent upon the location being inspected and approved by every city, county, district and state agency having jurisdiction over the matter and upon fingerprints being returned from the FBI that do not reflect any disqualifying arrests or convictions. Approval will result in \$1,000.00 + \$1.00 per \$1,000.00 over \$50,000.00 annually.

This will be Mr. Galletti's first license in Sparks. Mr. Galletti's father, who is recently deceased, was the original license holder and owner of the Coney Island Bar. Mr. Galletti has worked at the Coney Island Bar for the last 17 years as the manager and is now the sole owner.

5.3
Approval of an
Application from Harold
Shields for an On-Premises
Alcoholic Beverage
Package License for
HALBOB, Inc., DBA The
Sidebar & Grill, 300
Kresge Lane

An agenda item from Police Chief John Dotson recommending that Council approve an application by Harold Shields who resides at 3681 Grant Dr. #A, Reno, NV, for an On-Premises Alcoholic Beverage Package License for HALBOB, Inc., d.b.a. The Sidebar & Grill located at 300 Kresge Ln., Sparks, Nevada, contingent upon the location being inspected and approved by every city, county, district and state agency having jurisdiction over the matter and upon fingerprints being returned from the FBI that do not reflect any disqualifying arrests or convictions. Approval will result in \$1,000.00 + \$1.00 per \$1,000.00 over \$50,000.00 annually.

This will be Mr. Shields' first liquor license for the City of Sparks. Mr. Shields bought The Forklift Bar & Grill and is changing the name to Sidebar & Grill. Mr. Shields formed his own corporation, HALBOB, Inc., on 07/26/01. From 1985 until 1997, Mr. Shields was an attorney at his own law firm, H.R. Shields, in California.

5.4
Approval of a Final
Subdivision Map for The

An agenda item from Deputy Director Community Development Neil Krutz recommending that Council approve the Final Subdivision Map for The Highlands at



Highlands at Cimarron
East Phase 1

Cimarron East Phase 1.

The Highlands at Cimarron East - Phase 1 subdivision is a Planned Development within the Spanish Springs Valley and was formerly known as the Wyndam Hill planned development. The Highlands at Cimarron East will be generally located south of La Posada Drive, east of the existing Cimarron planned development. Access to the subdivision will be from La Posada Drive. This subdivision will create 58 lots on 57.9 acres. The current zoning for this subdivision is PD and the developer will be Cimarron East LLC.

The final subdivision map and improvement drawings have been checked and found to be technically correct, conforming to local ordinances and state law. The appropriate plan checking and inspection fees have been paid. A performance bond has been filed with the City Clerk to guarantee the construction of the public improvements.

5.5
Approval of a Bid Award
for 2 2002 Model Front
Wheel Drive 4-Door Mid-
Size Sedans from
Champion Chevrolet in the
Amount of \$28,876

An agenda item from City Engineer Wayne Seidel recommending that Council accept the total bid offer of \$28,876 for two each 2002 model (Chevy Malibu) 4 door front wheel drive mid size sedans from Champion Chevrolet, under the State of Nevada vehicle bid umbrella, bid number 6543. Each unit cost is \$14,438 on our bid 00/01-011 and has 60-90 day lead time after receipt of order. These unmarked vehicles are for the Police Department Detectives and will replace their 1996 Chevrolet Lumina, vehicles 219C and 223F.

Public Works Motor Vehicle Maintenance Fund has allocated \$38,000 (\$19,000 each) for the replacement of vehicles 219C which has 76,832 miles and 223F which has 75,448 miles. Each vehicle adds approximately 1,000 miles monthly to its odometer and will be in excess of 80,000 miles when the vehicles are taken out of service.

5.6
Approval of a Capital
Improvement Projects
from the Miscellaneous
Projects Category CIP
No. 236 (\$176,000)

An agenda item from City Engineer Wayne Seidel recommending that Council approve Capital Improvement Projects from the miscellaneous projects category CIP number 236. The financial impact will be \$176,000 from fund 1405. Miscellaneous projects category in the Capital Improvement Projects program was approved by Council April 9, 2001.

On April 9, 2001, City Council approved \$200,000 in miscellaneous Capital Improvement Projects (CIP No. 236) as part of the City's 2001/2002 Capital Improvement Projects Five Year Plan.



To date, \$23,235 has been used or obligated for four projects as outlined on the accompanying detailed Miscellaneous Projects document. The Public Works Department requested all City Departments to submit Capital Improvement Projects to be considered with the balance of the \$200,000 miscellaneous funding approved by the Council April 9, 2001.

6. General Business

Any item on the 3:15 p.m. Session, not completed by 5:45 p.m., will automatically be continued to the 7:00 p.m. Session.

6.1
Council Appointment to
Board of Massage
Examiners

Tape 1, 4919

An agenda item from City Manager Shaun Carey recommending that Council appoint one of their members as an ex officio member to the Board of Massage Examiners.

The Board of Massage Examiners was established a number of years ago for the purpose of overseeing the procedure whereby a massage therapist can obtain a license to practice massage in the City of Sparks. Initially, the board met every month or two while they were creating the procedures and tests to ensure that only qualified applicants could obtain a license. Now that this procedure is in place, the board meets once or twice a year. Council Member Martini has attended the past several meetings and feels since this board is sanctioned by the City Council, a Council Member should serve as an ex officio member. He is willing to assume this assignment or defer to whomever the council selects.

A motion was made by Council Member Carrigan, seconded by Council Member Mayer, to appoint Council Member Geno Martini. Council Members Mayer, Salerno, Martini, Carrigan, Schmitt, YES. Motion carried.

6.2
Request to Allow Private
Schools in the R5 District
Subject to Approval of a
Special Use Permit

Tape 1, 5060

A motion was made by Council Member Salerno, seconded by Council Member Mayer, to have staff begin the process to bring this item back to Council for consideration to allow private schools in the R5 district subject to approval of a special use permit. Council Members Mayer, Salerno, Martini, Carrigan, Schmitt, YES. Motion carried.

6.3
Approval for Acquisition
of 37,479 Sq. Ft. from
Manke Properties, LLC for
Right of Way Purposes for
Extension of Lincoln Way

Tape 1, 5208

An agenda item from City Engineer Wayne Seidel recommending approval of an acquisition of a portion of the Manke Properties parcel required for right of way purposes for the extension of Lincoln Way, Marina Park Lake Project, Redevelopment Area 2. The acquisition of 37,479 square feet is a portion of 450 Howard Drive, APN 037-030-20,



(\$182,000 to \$190,000)

owned by Manke Properties, LLC. The sale price is \$182,000-\$190,000 which includes related closing and title costs.

The need for the extension of Lincoln Way through the Marina Park to Sparks Boulevard has been discussed, studied and documented throughout the Marina Park planning process. The RTC calls for four traffic lanes on Lincoln Way between McCarran Boulevard and Sparks Boulevard. The modeling is based on land use information from the Marina Village Project, preliminary land use data from David Dahl for the Ghiggheri property and the originally planned hotel-casino based development for the Blume property.

A motion was made by Council Member Martini, seconded by Agency Member Schmitt, to approve with modifications to 6E and 6F to indicate an environmental report has been done on the adjoining properties and that an appraisal has been done. The approval is contingent on the successful completion of the sale of Marina Bond Anticipation Notes. Council Members Mayer, Salerno, Martini, Armstrong, Carrigan, Schmitt, YES. Motion carried.

6.4

Approval of Capital Contribution Front Ending Agreement (CCFEA) with Marina Marketplace LLC for the Offered Capacity Improvements to Sparks Boulevard

Tape 1, 5252

An agenda item from Deputy Director Community Development Neil Krutz recommending that Council approve a Capital Contribution Front Ending Agreement (CCFEA) with Marina Marketplace, LLC, (Developer of Record) for the offered capacity improvements to Sparks Boulevard.

Under the Regional Road Impact Fee (RRIF) Program, developers who build and/or donate right-of-way (ROW) for capacity improvements contained in the RRIF Capital Improvement Program (CIP) will be "paid" for these contributions in fee credits. To do this, the Developer of Record must enter into a CCFEA with the RTC and the local government which will own said right-of-way. The CCFEA specifically identifies the offered capacity improvements made to Sparks Boulevard, the credits that will be earned, and the duties and responsibilities of each party. The CCFEA being authorized by this action will result in an estimated \$85,000 in RRIF credits being issued to the Developer of Record. The amount of the final credit to the developer will be based upon actual costs subject to a test of reasonableness.

A motion was made by Council Member Martini, seconded by Council Member Mayer, to approve. Council Members Mayer, Martini, Carrigan, Schmitt, YES. Council Member Salerno, ABSENT. Motion carried.



6.5

Approval of Resolution
No. 2763 Authorizing the
Acceptance of Tuition
Scholarship Grant Award
Funds (\$1327.50) Under
the Stop Violence Against
Women Grant

Tape 1, 5430

An agenda item from City Attorney Chester Adams recommending that Council accept the approved grant funding in the amount of \$1,327.50 under the Violence Against Women Act of Project No. 99-VAWG-54 and to comply with grant conditions. The City must provide a \$442.50 match in cash which has already been budgeted for under travel and training of the City Attorney's Office.

The City Attorney's Office scheduled and paid for three prosecutors and one victim advocate to attend the National College of District Attorneys "Eleventh Annual National Conference on Domestic Violence" training in Sparks, Nevada, October 28, through November 1, 2001. On or about September 20, 2001, the City Attorney's Office became aware that the office of the Nevada Attorney General had tuition scholarship grant funds available under the STOP (Services-Training-Officers-Prosecutors) grant program of the Violence Against Women Act. The City Attorney's Office requested \$1,327.50 the maximum grant funding (75% of the total tuition costs.)

On October 8, 2001, the Attorney General's Office notified the City that the grant application was approved in the amount of \$1,327.50, and that the City would be required to provide \$442.50 in matching funds. Thus, the award period for this grant is October 1, 2001 through November 30, 2001.

A motion was made by Council Member Mayer, seconded by Council Member Salerno, to approve Resolution No. 2763. Council Members Mayer, Salerno, Martini, Carrigan, Schmitt, YES. Motion carried.

6.6

Approval of Resolution
No. 2764 Accepting a
Donation of \$2355 from
the Friends of the National
Multiple Sclerosis Society

Tape 1, 5626

An agenda item recommending that Council approve Resolution No. 2764 accepting a donation of \$2355 from the friends of the National Multiple Sclerosis Society for the purpose of purchasing an all-terrain wheelchair to be offered to people with disabilities in order to access the beach areas at the Sparks Marina Park.

Parks and Recreation Director Stan Sherer gave an overview per the staff report. He addressed some of the Council's concerns and questions regarding this item.

A motion was made by Council Member Salerno, seconded by Council Member Schmitt, to approve Resolution No. 2764. Council Members Mayer, Salerno, Martini, Carrigan, Schmitt, YES. Motion carried.



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6.7

1st Reading and Possible Discussion of Bill No. 2280, A Proposed Ordinance Approving a Development Agreement with Bailey & Dutton

Tape 1, 6177

City Clerk Deborine Dolan read Bill No. 2280 by title. A proposed ordinance approving a Development Agreement with Bailey & Dutton (a Nevada General Partnership) extending the schedule for submitting final subdivision maps for the Mesa Meadows Planned Development and providing other matters properly related thereto.

Public Hearing and Second Reading of this Bill will be conducted at the Regular City Council Meeting on November 26, 2001.

6.8

1st Reading and Possible Discussion of Bill No. 2281, (A-2-01), A Proposed Ordinance to Provide for Annexation of Certain Lands to the City of Sparks

Tape 1, 6225

City Clerk Deborine Dolan read Bill No. 2281 by title. (A-2-01), A proposed ordinance to provide for Annexation of certain lands to the City of Sparks; addition to Table V of Sparks Municipal Code "Annexations" and provide other matters properly related thereto regarding the City's request to allow the Annexation of lands for the corporate boundaries of an existing earthen flood control dam; the land more specifically described as a site approximately 6.39 acres owned by the City of Sparks, located on the West side of Vista Blvd, North of Vista Del Rancho Parkway.

Public Hearing and Second Reading of this Bill will be conducted at the Regular City Council Meeting on November 26, 2001.

6.9

1st Reading and Possible Discussion of Bill No. 2282, (RZ01000006), A Proposed Ordinance to Rezone Real Property, Amend Zoning Map of City of Sparks and Provide Other Matters Properly Related Thereto

Tape 1, 6285

City Clerk Deborine Dolan read Bill No. 2282 by title. (RZ01000006), A proposed ordinance to rezone real property, amend zoning map of the City of Sparks and provide other matters properly related thereto regarding a zone change request form S (Study) to PF (Public Facility) on approximately 6.39 acres on the West side of Vista Boulevard north of Vista Del Rancho Parkway.

Public Hearing and Second Reading of this Bill will be conducted at the Regular City Council Meeting on November 26, 2001.

6.10

Possible Motion to Conduct Labor Relations Proceeding (Closed Per NRS 288.220)

Tape 1, 6343

None.

6.11

Performance Review by Council of City Manager

Tape 1, 6373

A motion was made by Council Member Martini, seconded by Council Member Mayer, to adjourn to a Closed



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Carey (A Closed Session
May be Held Pursuant to
NRS 241.030(1))

Personnel Session. Council Members Mayer, Salerno,
Martini, Carrigan, Schmitt, YES. Motion carried.

Recess

Tape 1, 6498
The meeting was recessed at 4:30 p.m.

7:00 P.M.
Pledge of Allegiance

Tape 2, 0032
Pledge of Allegiance was led by Fire Chief Lee Leighton.

Comments from the Public

Tape 2, 0064
None.

6. General Business continued From 3:30 P.M. Session

6.12

Action to be Taken as a
Result of the Closed
Personnel Session
Regarding a Performance
Review by City Council of
City Manager Shaun Carey

Tape 2, 0092
A motion was made by Council Member Schmitt, seconded
by Council Member Carrigan, to give City Manager Carey
a raise to the top of his range, approximately 2.7%.
Council Members Mayer, Salerno, Martini, Carrigan,
Schmitt, YES. Motion carried.

A motion was made by Council Member Carrigan,
seconded by Council Member Martini, to give City
Manager Carey a \$5,000.00 bonus. Council Members
Salerno, Martini, Carrigan, YES. Council Members Mayer
and Schmitt, NO. Motion carried.

7. Public Hearings and Action Items Unrelated to Planning and Zoning

8. Planning and Zoning Public Hearings and Action Items

8.1

Adoption of Bill No. 2278,
(Z-4-00), TMB
Builders/Sky Ridge
Subdivision, A Proposed
Ordinance to Rezone Real
Property, Amend Zoning
Map of City of Sparks and
Provide Other Matters
Properly Related Thereto

Tape 2, 0283
An agenda item from the Planning Commission
recommending that Council approve Z-4-00, a request from
the Matteoni family/TMB Builders proposing to change the
existing zoning designations on two parcels (a 37.301 acre
parcel and a 5.983 acre parcel) generally located at the
eastern terminus of Cloud Peak Drive, the western terminus
of Cantina Drive and south of the Southview Unit 2
subdivision from R1-7 and R1-40 to PD (Planned
Development-Sky Ridge) and, in combination with the
rezoning request (Z-7-00) by Barker Homes, Inc./TMB
Builders and the tentative map request (TM000002) by the
Matteoni family, Barker Homes and TMB Builders, create
the Sky Ridge planned development. Both rezoning
request staff reports review the proposed Sky Ridge
planned development's development handbook, while the
tentative map reviews the subdivision request as if the two



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rezoning requests have been approved subject to adding the corrections listed in the errata sheets provided by staff.

Mayor Armstrong stated that items 8.1 through 8.3 would be heard at the same time due to the relating contents.

Planning Manager Rob Pyzel gave an overview per the staff report and answered the Council's questions and concerns regarding items 8.1 through 8.3.

The October 22, 2001 City Council meeting was when the First Reading of this item occurred.

Greg Evangelatos gave a lengthy description on items 8.1 through 8.3. He believes that the Findings that Mr. Pyzel discussed have been dealt with in front of the Planning Commission. There was disagreement on four of the Findings. He also believes that this project has been designed within the rules and regulations of the City.

Council Member Carrigan asked Mr. Evangelatos why it's better to go over the amount of disturbed area. Mr. Evangelatos pointed out that the amount of disturbed area is less than what Mr. Pyzel indicated making it an acre and a half over the amount. Mr. Evangelatos added that some of the disturbed areas were added by the requirements relating to public safety in terms of the fire access road.

Council Member Carrigan insists they are not in compliance with the Hillside Ordinance.

There was a lengthy discussion between Council, Mr. Evangelatos and Mr. Fricke regarding the Hillside Ordinance.

Mr. Soligui spoke in regards to the traffic in the Sky Ridge and neighboring properties.

Alex Flangas, Reno, NV, attorney for T.M.B Builders gave his opinion in regards to various issues concerning the development.

Tom Brown, T.M.B. Builders, addressed the Council and gave his opinion on this issue.

Don Garner and Jim Hengles, 4405 Desert Hills Drive, Sparks, NV, stated they were in opposition of the Sky Ridge Development and addressed a letter to Council which read:

"To the Sparks City Council:



We urge you to listen to the concerns and fears voiced to you tonight by the residents who live around the proposed Sky Ridge development. We have questions about what is described as a negative impact on our community, by the unresolved and unanswered safety concerns and by the increased traffic on existing residential streets that this project will generate. Are the questions about safety being addressed or simply dismissed? Are we willing to gamble on how dangerous our streets will become? Are new homes more important than our existing neighborhoods? We urge you to consider our rights when you make decisions that will affect our community. Thank you for your time and consideration."

Barry Spencer, 4465 Dessert Hills Drive, Sparks, NV, represented the Vista Homeowners Association. He stated their concerns and questions regarding the emergency access road, traffic and water pressure in the area.

Stanley and Olga Miller, 4610 Goodwin Rd., Sparks, NV; in opposition.

Jim and Kathryn Riley, 4394 Desert Hills Dr., Sparks, NV; in opposition.

Duayne Meinert, 4591 Mt. McKinley Dr., Sparks, NV; in opposition.

Bob Lacy, 1498 Cloud Peak Drive, Sparks, NV; in opposition. Mr. Lacy believes Sky Ridge is not in compliance with the Hillside Ordinance.

Jim Stanley, 4525 Eagle Mountain Drive, Sparks, NV; in opposition. Mr. Stanley's concern is about the increase in traffic. He recommended that Cloud Peak be used as an emergency access road only.

Thomas and Eleanor Ballinger, 4355 Desert Hills Dr., Sparks, NV; in opposition. Mr. and Mrs. Ballinger are concerned about the traffic issues, the loss of views from the neighboring properties and slopes not being up to City codes.

Alex Flangas, Reno, NV; in favor.

Arthur and Shirley Morrison, 4375 Desert Hills Drive, Sparks, NV; in opposition.

Dennis Pflederer, 1494 Cloud Peak, Sparks, NV; in opposition. Mr. Pflederer recommends that Cloud Peak be used as an emergency access road only.



John Schweitzer, 4365 Desert Hills Dr., Sparks, NV; in opposition. He is concerned about the obstructed views of the City.

Michael Lorman, 4525 Goodwin Rd., Sparks, NV; in opposition. His concern is about density and speed bumps.

Lynn Thompson, 1655 Black Oak Rd., Sparks, NV; in opposition. Her concern is about the width of the ditch behind her house and asked that the homes behind her be single-story only.

Ardena Perry, 4660 Goodwin, Sparks, NV; in opposition. Her concern is about density and speed bumps.

Mike and Pam Matteoni, 2206 Desert Cove Ct., Sparks, NV; in favor. Mr. Matteoni addressed some of his concerns to the Council. Mrs. Matteoni thanked Council for listening.

Louis Matteoni, 460 "J" St., Sparks, NV; in favor.

S.J. Matteoni, 1703 "G" St., Sparks, NV; in favor. Mr. Matteoni stated his concerns to Council.

Paul Matteoni, 4718 Tierra Park Ct., Reno, NV; in favor. He expressed his feelings toward this issue.

Thomas Comstock, 4475 Black Diamond Dr., Sparks, NV; in opposition. His concern is about the water pressure in the area going down. Mayor Armstrong believed that this should be addressed to TMWA.

On September 27, 2001, the Planning Commission voted to forward a recommendation of approval of this item based on the following Findings:

FINDING PD1

The plan is not consistent with the objective of furthering the public health, safety, morals and general welfare by not providing for housing of all types and design.

This was a neutral finding.

FINDING PD2

The plan is not consistent with the objective of furthering the public health, safety, morals and general welfare by not providing for necessary commercial and industrial facilities conveniently located to the housing.

This was a neutral finding.



FINDING PD3

The plan **is consistent** with the objective of furthering the public health, safety, morals and general welfare by providing for the more efficient use of land and public or private services.

The Development on Slopes, Hilltops and Ridges ordinance encourages the efficient use of those areas suitable for development and the emergency access route required as a part of the proposed planned development will provide enhanced emergency services by reducing the Fire Department response time to the Sky Ridge and Canyon Hills planned developments.

FINDING PD4

The plan **is not consistent** with the objective of furthering the public health, safety, morals and general welfare by not providing for changes in technology of land development so that resulting economies may be available to those in need of homes. *This was a neutral finding.*

FINDING PD5

The plan **is consistent** with the objective of furthering the public health, safety, morals and general welfare by providing for flexibility of substantive regulations over land development so that proposals for land development are disposed of without undue delay.

The planned development review process allows for combining of the normally-separated review processes necessary (rezoning request, a Special Use Permit request for Development on Slopes, Hilltops and Ridges and a tentative subdivision map request) for such a project. The net effect is that three development review processes are accomplished in one review, reducing the amount of time required if the three requests were reviewed in separate processes. Since the planned development can incorporate the specific design standards, the allowable and conditionally-allowed land uses and density as long as the project is in compliance with the Master Plan, the planned development review process provides the objective of furthering public health, safety and welfare by providing flexibility through incorporating a number of required entitlement processes to reduce the delay of the disposal of land for development.

FINDING PD7

The plan **does not depart** from zoning and subdivision regulations otherwise applicable to the property, and these departures **are in the public interest** for bulk.

The proposed Sky Ridge development standards for bulk as listed in the Sky Ridge Design Handbook essentially reflect the City's R1-7 zoning district standards, with some minor differences and that the plan's departures are in the



public interest.

FINDING PD8

The plan **does depart** from zoning and subdivision regulations otherwise applicable to the property, and these departures **are in the public interest** for use.

The plan's only departure for use is a deviation from the R1-7 zoning standards is that the Sky Ridge Design Handbook does allow by right temporary subdivision sales offices and model homes, subject to the development standards as listed in the handbook. These development standards for model homes and temporary subdivision sales offices reflect the typical City standards and requirements for these facilities and the departure is in the public interest.

FINDING PD9

The ratio of residential to nonresidential use in the planned development **is 100% residential** to 0% nonresidential.

This is a neutral finding.

FINDING PD10

Common open space in the planned development **exists for what purpose, is located where within the project, and comprises how many acres** (or what percentage of the development site taken as a whole).

The common areas proposed for the Sky Ridge planned development exist due to the steepness of the development site's topography. The steepness of the common open space areas make the development of those areas cost-prohibitive and the City's Development on Slopes, Hilltops and Ridges further limits the development potential of the proposed common open space areas. The location of the common open space does serve as a physical and visual buffer between the existing surrounding development and the development site. The amount of common open space area acreage is sufficient for the plan and complies with the required 20% of the total development site requirement.

FINDING PD11

The plan **does not provide** for the maintenance and conservation of the common open space.

The method for maintenance and conservation as listed in the staff's recommended errata sheets attached to the staff report are sufficient.

FINDING PD12

Given the plan's proposed density and type of residential development, the **amount and/or purpose of the common open space is determined to be adequate.**

The amount of common open space proposed appears to



be sufficient for the density of the Sky Ridge planned development in that it complies with the City's Planned Development ordinance requirement of a minimum of 20% of the development site to be open space. The purpose of the common open space as proposed provides a visual and a physical buffer to a portion of the surrounding existing developments.

FINDING PD13

The plan **does provide** for public services. If the plan provides for public services, then **these provisions are adequate**.

The plan does provide for public services, such as fire services, police services, domestic water and sewer service, etc., and those provisions are determined to be adequate.

FINDING PD14

The plan **does provide** control over vehicular traffic.

The Engineering Services Manager agreed with the traffic report's conclusions with regards to providing vehicular traffic controls (three new speed humps in Goodwin Road) with the provision of adding one (1) traffic calming device to be installed within Crestside Drive if not installed by the Silvio Estates subdivision at time of development of Sky Ridge).

FINDING PD15

The plan **does provide** for the furtherance of access to light, air, recreation and visual enjoyment.

The plan does provide for access to light, air, recreation and visual enjoyment through the minimum building height and setback requirements, the site's topography and proposed common open space areas.

FINDING PD16

The relationship of the proposed planned development to the neighborhood in which it is proposed to be established **is beneficial**.

With the issue of traffic affecting the existing surrounding developments, the project's traffic report addresses the impacts and mitigation measures necessary for the infill project to be beneficial to the neighborhood in which it is to be established.

FINDING PD17

To the extent the plan proposed development over a number of years, the terms and conditions intended to protect the interests of the public, residents and owners of the planned development in the integrity of the plan **are sufficient**.



The Nevada Revised Statutes (NRS) requires the applicant to submit within two (2) years from the date of tentative map approval a final subdivision map for the project or portion of the project. If the tentative map expires after that time (no final map is submitted within the time limits designated in NRS), the PD zoning designation remains on the properties, including the design standards as approved by City Council. Any other proposed development of the project site would have to comply with the existing approved PD zoning standards or be required to go through the rezoning process in order to amend the approved Design Handbook standards and submit a new tentative map that accurately reflects either the standards of the existing or the amended Design Handbook.

FINDING PD19

The project **is consistent** with the surrounding existing land uses.

The project is consistent with surrounding existing land uses in that the lot sizes, house sizes and roofing material are either compatible or exceed those of the surrounding existing developments.

FINDING PD20

Public notice **was given** and a **public hearing held** per the requirements of the Sparks Municipal Code.

A public notice was given and the Planning Commission and City Council meetings function as the public hearing for these rezoning requests.

FINDING PD 21

The proposed modification to the Canyon Hills Planned Development **further the mutual interest of the residents of the Canyon Hills Planned Development, the owners of the Canyon Hills Planned Development and of the public in the preservation of the integrity of the Canyon Hills Planned Development plan as finally approved.**

The amendment to the Canyon Hills Planned Development to remove 10.73 acres from the common open space area of that project to add to the Sky Ridge Planned Development does further the mutual interests of the residents of the Canyon Hills Planned Development by providing better fire service response time, the owners of the Canyon Hills Planned Development by allowing the development of the 11-acre/32 unit reserve as shown in the Canyon Hills Planned Development handbook and the public by permitting an infill project that conforms to the existing surrounding neighborhoods and provides better fire service within Canyon Hills, the Vistas and portions of Desert Highlands Planned Developments.

Findings PD6 and PD18 were not approved by Council.



FINDING PD6

The plan **does not depart** from zoning and subdivision regulations otherwise applicable to the property, and these departures **are in the public interest** for density.

Due to the slopes associated with the development site, there are limitations on the allowable disturbed (or developed) portions of the subject site based on the City's Development on Slopes, Hilltops and Ridges ordinance. This ordinance limits the amount of allowable disturbed area based on the amount of slope gradient percentages for site and the site generally complies with those standards. While the plan proposes to develop above the allowable disturbed amounts for the different slope categories as called out in Sparks Municipal Code 20.99.040 with no explanation as to how the additional amount of grading proposed will provide a better solution than conformance to the standards established in that section of the Code, the plan is close enough to the standards to warrant a recommendation of approval.

FINDING PD18

The project, as submitted and conditioned, **is consistent** with the City of Sparks Master Plan.

The project complies with the designated land use designations, density and a sufficient number of the goals, policies and action strategies of the Master Plan. There is sufficient information to determine compliance with the Master Plan policies SIP4b, SIP4c and SIP4d. While the project proposes to develop above the allowable disturbed amounts for the different slope categories as called out in Sparks Municipal Code 20.99.040 with no explanation as to how the additional amount of grading proposed will provide a better solution than conformance to the standards established in that section of the Code, the project is close enough to the standards to warrant a recommendation of approval.

It was recommended by the City Attorney Chester Adams that Council make a motion that it has reviewed the Findings of the Planning Commission, it is aware of the findings of the Planning Commission, it accepts and adopts these particular findings made by the Planning Commission with the exceptions of Findings PD6 and PD18 and pursuant to NRS 278A.496(2) the City Council would add the additional conditions and substitute those conditions in for PD6 and PD18 that the applicant shall, prior to this submittal, and ultimate approval of the final plan, comply with the Hillside Ordinance or otherwise demonstrate that they are not in compliance with the Hillside Ordinance, but provides greater protection to the public as is otherwise set forth in the Hillside Ordinance.

A motion was made by Council Member Carrigan,



seconded by Council Member Martini, to approve and adopt the Facts and Findings of the Planning Commission, except PD6 and PD18, that they come back to Council with a compliance to the Hillside Ordinance or a plan that is better, or that their option is better than the Hillside Ordinance, and that this will be done within one year according to the Planning Commission wishes and pursuant to State Statute. Council Members Salerno, Martini, Carrigan, Schmitt, YES. Council Member Mayer, NO. Motion carried.

8.2

Adoption of Bill No. 2279,
(Z-7-00) TMB
Builders/Sky Ridge
Subdivision, A Proposed
Ordinance to Rezone Real
Property, Amend Zoning
Map of City of Sparks and
Provide Other Matters
Properly Related Thereto

Tape 2, 0283

An agenda item from the Planning Commission recommending that Council approve Z-7-00, the rezoning request by Barker Homes, Inc./TMB Builders proposing to carve a 10.73 acre portion of the existing Canyon Hills planned development open space parcel located at the current eastern terminus of Disc Drive through a parcel map request, change the existing zoning designation for the new 10.73 acre parcel from PD (Planned Development - Sky Ridge) and, in combination with the rezoning request (Z-4-00) by the Matteoni family/TMB Builders and the tentative map request (TM000002) by the request staff reports review the proposed Sky Ridge planned development's development handbook, while the tentative map reviews the subdivision request as if the two rezoning have been approved including the errata sheets provided by staff.

The October 22, 2001 City Council meeting was when the First Reading of this item occurred.

On September 27, 2001, the Planning Commission voted to forward a recommendation of approval of this item based on the following Findings:

FINDING PD1

The plan is not consistent with the objective of furthering the public health, safety, morals and general welfare by not providing for housing of all types and design.

This was a neutral finding.

FINDING PD2

The plan is not consistent with the objective of furthering the public health, safety, morals and general welfare by not providing for necessary commercial and industrial facilities conveniently located to the housing.

This was a neutral finding.

FINDING PD3



The plan *is consistent* with the objective of furthering the public health, safety, morals and general welfare by providing for the more efficient use of land and public or private services.

The Development on Slopes, Hilltops and Ridges ordinance encourages the efficient use of those areas suitable for development and the emergency access route required as a part of the proposed planned development will provide enhanced emergency services by reducing the Fire Department response time to the Sky Ridge and Canyon Hills planned developments.

FINDING PD4

The plan *is not consistent* with the objective of furthering the public health, safety, morals and general welfare by not providing for changes in technology of land development so that resulting economies may be available to those in need of homes. *This was a neutral finding.*

FINDING PD5

The plan *is consistent* with the objective of furthering the public health, safety, morals and general welfare by providing for flexibility of substantive regulations over land development so that proposals for land development are disposed of without undue delay.

The planned development review process allows for combining of the normally-separated review processes necessary (rezoning request, a Special Use Permit request for Development on Slopes, Hilltops and Ridges and a tentative subdivision map request) for such a project. The net effect is that three development review processes are accomplished in one review, reducing the amount of time required if the three requests were reviewed in separate processes. Since the planned development can incorporate the specific design standards, the allowable and conditionally-allowed land uses and density as long as the project is in compliance with the Master Plan, the planned development review process provides the objective of furthering public health, safety and welfare by providing flexibility through incorporating a number of required entitlement processes to reduce the delay of the disposal of land for development.

FINDING PD7

The plan *does not depart* from zoning and subdivision regulations otherwise applicable to the property, and these departures *are in the public interest* for bulk.

The proposed Sky Ridge development standards for bulk as listed in the Sky Ridge Design Handbook essentially reflect the City's R1-7 zoning district standards, with some minor differences and that the plan's departures are in the public interest.



FINDING PD8

The plan **does depart** from zoning and subdivision regulations otherwise applicable to the property, and these departures **are in the public interest** for use.

The plan's only departure for use is a deviation from the R1-7 zoning standards is that the Sky Ridge Design Handbook does allow by right temporary subdivision sales offices and model homes, subject to the development standards as listed in the handbook. These development standards for model homes and temporary subdivision sales offices reflect the typical City standards and requirements for these facilities and the departure is in the public interest.

FINDING PD9

The ratio of residential to nonresidential use in the planned development **is 100% residential** to 0% nonresidential.

This is a neutral finding.

FINDING PD10

Common open space in the planned development **exists for what purpose, is located where within the project, and comprises how many acres** (or what percentage of the development site taken as a whole).

The common areas proposed for the Sky Ridge planned development exist due to the steepness of the development site's topography. The steepness of the common open space areas make the development of those areas cost-prohibitive and the City's Development on Slopes, Hilltops and Ridges further limits the development potential of the proposed common open space areas. The location of the common open space does serve as a physical and visual buffer between the existing surrounding development and the development site. The amount of common open space area acreage is sufficient for the plan and complies with the required 20% of the total development site requirement.

FINDING PD11

The plan **does not provide** for the maintenance and conservation of the common open space.

The method for maintenance and conservation as listed in the staff's recommended errata sheets attached to the staff report are sufficient.

FINDING PD12

Given the plan's proposed density and type of residential development, the **amount and/or purpose of the common open space is determined to be adequate.**

The amount of common open space proposed appears to be sufficient for the density of the Sky Ridge planned development in that it complies with the City's Planned



Development ordinance requirement of a minimum of 20% of the development site to be open space. The purpose of the common open space as proposed provides a visual and a physical buffer to a portion of the surrounding existing developments.

FINDING PD13

The plan **does provide** for public services. If the plan provides for public services, then **these provisions are adequate**.

The plan does provide for public services, such as fire services, police services, domestic water and sewer service, etc., and those provisions are determined to be adequate.

FINDING PD14

The plan **does provide** control over vehicular traffic.

The Engineering Services Manager agreed with the traffic report's conclusions with regards to providing vehicular traffic controls (three new speed humps in Goodwin Road) with the provision of adding one (1) traffic calming device to be installed within Crestside Drive if not installed by the Silvio Estates subdivision at time of development of Sky Ridge).

FINDING PD15

The plan **does provide** for the furtherance of access to light, air, recreation and visual enjoyment.

The plan does provide for access to light, air, recreation and visual enjoyment through the minimum building height and setback requirements, the site's topography and proposed common open space areas.

FINDING PD16

The relationship of the proposed planned development to the neighborhood in which it is proposed to be established **is beneficial**.

With the issue of traffic affecting the existing surrounding developments, the project's traffic report addresses the impacts and mitigation measures necessary for the infill project to be beneficial to the neighborhood in which it is to be established.

FINDING PD17

To the extent the plan proposed development over a number of years, the terms and conditions intended to protect the interests of the public, residents and owners of the planned development in the integrity of the plan **are sufficient**.

The Nevada Revised Statutes (NRS) requires the applicant to submit within two (2) years from the date of



tentative map approval a final subdivision map for the project or portion of the project. If the tentative map expires after that time (no final map is submitted within the time limits designated in NRS), the PD zoning designation remains on the properties, including the design standards as approved by City Council. Any other proposed development of the project site would have to comply with the existing approved PD zoning standards or be required to go through the rezoning process in order to amend the approved Design Handbook standards and submit a new tentative map that accurately reflects either the standards of the existing or the amended Design Handbook.

FINDING PD19

The project *is consistent* with the surrounding existing land uses.

The project is consistent with surrounding existing land uses in that the lot sizes, house sizes and roofing material are either compatible or exceed those of the surrounding existing developments.

FINDING PD20

Public notice *was given* and a *public hearing held* per the requirements of the Sparks Municipal Code.

A public notice was given and the Planning Commission and City Council meetings function as the public hearing for these rezoning requests.

FINDING PD 21

The proposed modification to the Canyon Hills Planned Development *further* ***the mutual interest of the residents of the Canyon Hills Planned Development, the owners of the Canyon Hills Planned Development and of the public in the preservation of the integrity of the Canyon Hills Planned Development plan as finally approved.***

The amendment to the Canyon Hills Planned Development to remove 10.73 acres from the common open space area of that project to add to the Sky Ridge Planned Development does further the mutual interests of the residents of the Canyon Hills Planned Development by providing better fire service response time, the owners of the Canyon Hills Planned Development by allowing the development of the 11-acre/32 unit reserve as shown in the Canyon Hills Planned Development handbook and the public by permitting an infill project that conforms to the existing surrounding neighborhoods and provides better fire service within Canyon Hills, the Vistas and portions of Desert Highlands Planned Developments.

Findings PD6 and PD18 were not approved by Council.

FINDING PD6



The plan **does not depart** from zoning and subdivision regulations otherwise applicable to the property, and these departures **are in the public interest** for density.

Due to the slopes associated with the development site, there are limitations on the allowable disturbed (or developed) portions of the subject site based on the City's Development on Slopes, Hilltops and Ridges ordinance. This ordinance limits the amount of allowable disturbed area based on the amount of slope gradient percentages for site and the site generally complies with those standards. While the plan proposes to develop above the allowable disturbed amounts for the different slope categories as called out in Sparks Municipal Code 20.99.040 with no explanation as to how the additional amount of grading proposed will provide a better solution than conformance to the standards established in that section of the Code, the plan is close enough to the standards to warrant a recommendation of approval.

FINDING PD18

The project, as submitted and conditioned, **is consistent** with the City of Sparks Master Plan.

The project complies with the designated land use designations, density and a sufficient number of the goals, policies and action strategies of the Master Plan. There is sufficient information to determine compliance with the Master Plan policies SIP4b, SIP4c and SIP4d. While the project proposes to develop above the allowable disturbed amounts for the different slope categories as called out in Sparks Municipal Code 20.99.040 with no explanation as to how the additional amount of grading proposed will provide a better solution than conformance to the standards established in that section of the Code, the project is close enough to the standards to warrant a recommendation of approval.

A motion was made by Council Member Carrigan, seconded by Council Member Martini, to approve and adopt the Facts and Findings of the Planning Commission, except PD6 and PD18, that they come back to Council with a compliance to the Hillside Ordinance or a plan that is better, or that their option is better than the Hillside Ordinance, and that this will be done within one year according to the Planning Commission wishes and pursuant to State Statute. Council Members Salerno, Martini, Carrigan, Schmitt, YES. Council Member Mayer, NO. Motion carried.

Tape 2, 0283

An agenda item from Planning Commission recommending that Council approve TM000002, a tentative subdivision map request by the Matteoni family, Barker Homes, Inc.

8.3
(TM000002) TMB
Builders/Sky Ridge
Subdivision, Request for



Approval of a Tentative
Subdivision Map

and TMB Builders proposing to combine two existing Matteoni parcels with a third parcel to be carved out from the existing Canyon Hills Planned Development common open space parcel into a development site generally located at the eastern terminus of Disc Drive, the eastern terminus of Cloud Peak Drive and the western terminus of Cantina Drive and then subdivide the combined approximately 54.01 acres of common open space area. The concurrent rezoning requests by the Matteoni family/TMB Builders (Z-4-00) and by Barker Homes, Inc./TMB Builders (Z-7-00) in combination with the tentative map request (TM000002) would create the proposed Sky Ridge Planned Development.

On September 27, 2001, the Planning Commission voted to forward a recommendation of approval of this item based on the following Findings:

FINDING T1

The request conforms to the Master Plan and zoning ordinances.

CONDITIONS FOR: TM000002

1: APPROVAL STATEMENT:

THE PROJECT IF APPROVED AS SUBMITTED AND CONDITIONED. ANY SUBSTANTIVE CHANGE SHALL REQUIRE REVIEW AND APPROVAL BY THE PLANNING COMMISSION AND CITY COUNCIL.

2: PROJECT APPROVAL:

THE PROJECT IS APPROVED AT A MAXIMUM OF 125 SINGLE FAMILY DETACHED LOTS (THROUGH LOTS - MINIMUM 7,000 SQUARE FEET/CORNER LOTS - 8,000 SQUARE FEET) WITH A MINIMUM OF 23.3 ACRES OF COMMON OPEN SPACE ON 54.3 ACRES.

3: WATER RIGHTS DEDICATION:

THE DEVELOPER SHALL DEDICATE SUFFICIENT WATER RIGHTS PER S.M.C. SECTION 17.12.075 TO ADEQUATELY SERVE THE PROJECT PRIOR TO THE APPROVAL OF A FINAL MAP FOR THE PROJECT OR PORTION OF THE PROJECT.

4: DEVELOPMENT STANDARDS:

THE DEVELOPER SHALL COMPLY WITH THE DEVELOPMENT STANDARDS AS SET FORTH IN THE APPROVED SKY RIDGE PLANNED DEVELOPMENT STANDARDS HANDBOOK UNLESS IN CONFLICT WITH LOCAL, STATE OR FEDERAL REGULATIONS, IN WHICH CASE THE MORE STRINGENT REGULATION SHALL TAKE PRECEDENCE. THE DEVELOPER SHALL COMPLETE THE SKY RIDGE DEVELOPMENT HANDBOOK CORRECTIONS AS APPROVED BY THE PLANNING COMMISSION AND CITY COUNCIL AND SUBMIT THE CORRECTED VERSION OF THE DEVELOPMENT HANDBOOK FOR REVIEW OF COMPLIANCE WITH THE APPROVALS WITH THE PLANNING COMMISSION AND CITY COUNCIL WITHIN ONE (1) YEAR OF THE DATE OF CITY COUNCIL APPROVAL OF THE SKY RIDGE PLANNED DEVELOPMENT



REZONING REQUESTS AND PRIOR TO SUBMITTAL OF A FINAL MAP FOR THE PROJECT OR PORTION OF THE PROJECT OR ISSUANCE OF A GRADING AND/OR BUILDING PERMIT FOR THE SUBJECT SITE.

5: TENTATIVE MAP REDESIGN:

THE DEVELOPER SHALL SUBMIT TO THE ADMINISTRATOR THE RE-DESIGN OF THE TENTATIVE SUBDIVISION MAP OF THE SKY RIDGE PROJECT THAT COMPLIES WITH DEVELOPMENT HANDBOOK AS MODIFIED AND APPROVED BY THE PLANNING COMMISSION AND CITY COUNCIL INCLUDING, BUT NOT LIMITED TO THE REMOVAL OF ALL 2:1 OR STEEPER GRADIENT SLOPES LOCATED WITHIN THE SINGLE FAMILY RESIDENTIAL LOTS, A TREATMENT METHOD FOR ALL 2:1 SLOPES LOCATED WITHIN THE COMMON OPEN SPACE AREAS THAT IS ACCEPTABLE TO THE CITY ENGINEER AND ADMINISTRATOR (NOT RIP-RAP) AND REMOVAL OF ALL "FLAG" LOTS. THE RE-DESIGN OF THE TENTATIVE MAP SHALL BE SUBMITTED WITHIN ONE (1) YEAR OF THE DATE OF APPROVAL OF THE TENTATIVE MAP BY THE CITY COUNCIL.

6: STORM DRAINAGE:

THE DEVELOPER SHALL SUBMIT A FINAL HYDROLOGICAL MASTER PLAN REPORT FOR THE SKY RIDGE PROJECT THAT IS PREPARED IN ACCORDANCE WITH THE CITY OF SPARKS HYDROLOGICAL CRITERIA AND DRAINAGE DESIGN MANUAL TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO THE ACCEPTANCE OF A FINAL MAP FOR THE PROJECT OR PORTION OF THE SKY RIDGE PROJECT. THE STORM WATER AND DRAINAGE PLANS FOR THE PROJECT SHALL BE REVIEWED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE ISSUANCE OF A GRADING PERMIT FOR THE PROJECT OR PORTION OF THE PROJECT.

7: GRADING PERMIT:

THE DEVELOPER SHALL SUBMIT A GRADING AND DRAINAGE PLAN FOR THE PROJECT FOR REVIEW AND APPROVAL BY THE CITY ENGINEER, ADMINISTRATOR AND BUILDING OFFICIAL PRIOR TO THE ISSUANCE OF GRADING PERMIT FOR THE PROJECT. THE GRADING AND DRAINAGE PLAN SHALL INCLUDE A STOCKPILING PLAN FOR THE PROJECT OR PORTION OF THE PROJECT UNDER CONSTRUCTION. THE STOCKPILING PLAN SHALL INCLUDE A SCHEDULE FOR THE REMOVAL OF THE STOCKPILED MATERIAL, SITE RECLAMATION METHODS, HAUL ROUTES, ETC. FOR REVIEW AND APPROVAL BY THE CITY ENGINEER, ADMINISTRATOR AND BUILDING OFFICIAL PRIOR TO THE ISSUANCE OF A GRADING PERMIT FOR THE PROJECT OR PORTION OF THE PROJECT.

8: WASHOE COUNTY DISTRICT HEALTH:

THE DEVELOPER SHALL SUBMIT TO THE CITY ENGINEER, ADMINISTRATOR AND BUILDING OFFICIAL DOCUMENTATION OF COMPLIANCE WITH THE REQUIREMENTS OF THE WASHOE COUNTY DISTRICT HEALTH DEPARTMENT (WCDH) PRIOR TO APPROVAL OF EITHER A FINAL MAP, A GRADING PERMIT OR A BUILDING PERMIT FOR THE PROJECT (BASED ON THE REQUIREMENTS PER THE WCDH LETTER DATED APRIL 3, 2000).

9: STREET LIGHTING:

THE DEVELOPER SHALL FORM A HOMEOWNERS ASSOCIATION OF OTHER METHOD (I.E. LIGHTING AND LANDSCAPING DISTRICT) TO PROVIDE FOR THE MAINTENANCE OF STREET LIGHTING FOR THE PROJECT. EITHER METHOD OF MAINTENANCE SHALL BE IDENTIFIED AND ESTABLISHED PRIOR TO THE APPROVAL OF A FINAL MAP FOR THE PROJECT OR PORTION OF THE PROJECT



AND SUBJECT TO APPROVAL BY THE CITY ENGINEER AND THE ADMINISTRATOR.

10: COMMON AREA/OPEN SPACE LANDSCAPING:

THE DEVELOPER SHALL SUBMIT THE LANDSCAPE AND IRRIGATION PLANS FOR THE PROJECT FOR REVIEW AND APPROVAL BY THE PARKS & RECREATION DIRECTOR, CITY ENGINEER AND ADMINISTRATOR. ALL SUCH AREAS SHALL BE CONSISTENT WITH THE CITY POLICIES REGARDING SIGHT DISTANCE VISIBILITY AT INTERSECTIONS OF PUBLIC STREETS AND PRIVATE DRIVEWAYS. THE COMMON AREAS/OPEN SPACES LANDSCAPING AND IRRIGATION SHALL BE INSTALLED PER THE APPROVED PLANS AS ABUTTING/ADJACENT DEVELOPMENT OF THE PROJECT OCCURS TO THE APPROVAL OF THE PARKS & RECREATION DIRECTOR, CITY ENGINEER AND ADMINISTRATOR.

11: RIGHTS-OF-WAY DEDICATIONS:

THE DEVELOPER SHALL RESERVE FROM DEVELOPMENT THE ULTIMATE RIGHT-OF-WAY WIDTHS FOR ALL PUBLIC STREETS WITHIN OR ABUTTING THE PROJECT WITH THE RECORDATION OF A FINAL MAP FOR THE PROJECT OR PORTION OF THE PROJECT TO THE APPROVAL OF THE CITY ENGINEER.

12: ROAD SECTIONS:

THE DEVELOPER SHALL SUBMIT IMPROVEMENT PLANS WITH ROADWAY CROSS-SECTIONS THAT COMPLY WITH THE CITY'S PAVEMENT STANDARDS TO THE APPROVAL OF THE CITY ENGINEER. THE INSTALLED PAVEMENT SECTIONS SHALL COMPLY WITH THE APPROVED IMPROVEMENT PLANS. THE PLANS SHALL ALSO INCLUDE ALL NECESSARY IMPROVEMENTS TO PROVIDE IRRIGATION TO LANDSCAPED MEDIANS AND ISLANDS WITHIN THE RIGHT-OF-WAY TO THE APPROVAL OF THE CITY ENGINEER, THE PARKS & RECREATION DIRECTOR AND ADMINISTRATOR.

13: STREET IMPROVEMENTS:

THE DEVELOPER SHALL INSTALL FULL-STREET IMPROVEMENTS FOR THE PROJECT PER THE APPROVED IMPROVEMENT PLANS, INCLUDING LANDSCAPING AND IRRIGATION IMPROVEMENTS. THE TIMING OF THE INSTALLATION OF THE IMPROVEMENTS SHALL OCCUR AS THE ABUTTING/ADJACENT DEVELOPMENT OF THE PROJECT OCCURS TO THE APPROVAL OF THE CITY ENGINEER.

14: CONSTRUCTION HOURS LIMITATIONS:

THE DEVELOPER SHALL LIMIT ALL CONSTRUCTION AND CONSTRUCTION-RELATED ACTIVITIES TO THE HOURS BETWEEN 7:00 A.M. THROUGH 7:00 P.M., MONDAY THROUGH FRIDAY AND BETWEEN THE HOURS OF 9:00 A.M. THROUGH 5:00 P.M. ON SATURDAYS ONLY, WITH NO CONSTRUCTION OR CONSTRUCTION-RELATED ACTIVITIES TO OCCUR ON SUNDAYS. THE DEVELOPER SHALL POST SIGNS IN CONSPICUOUS LOCATIONS AT ALL ENTRANCES INTO THE PROJECT PRIOR TO THE START OF CONSTRUCTION AND THE DEVELOPER SHALL BE RESPONSIBLE FOR ENSURING THESE SIGNS SHALL REMAIN IN PLACE AND BE MAINTAINED IN GOOD REPAIR UNTIL CONSTRUCTION IS COMPLETED TO THE APPROVAL OF THE ADMINISTRATOR. UPON COMPLETION OF THE PROJECT, THE DEVELOPER SHALL REMOVE THE SIGNS FROM THE SITE. THE DEVELOPER SHALL RESTRICT ACCESS INTO THE PROJECT TO ENSURE COMPLIANCE WITH THE CONSTRUCTION AND CONSTRUCTION-RELATED ACTIVITIES HOUR LIMITATIONS.

15: PROJECT CONTACT:



THE DEVELOPER SHALL DESIGNATE TO THE ADMINISTRATOR A PROJECT CONTACT PERSON RESPONSIBLE/AUTHORIZED TO CORRECT PROBLEMS REGARDING THE PROJECT ON A 24-HOURS/7-DAYS A WEEK BASIS. THE DEVELOPER SHALL DESIGNATE THE PROJECT CONTACT PERSON TO THE COMMUNITY DEVELOPMENT DIRECTOR PRIOR TO ISSUANCE OF A GRADING PERMIT FOR THE PROJECT OR PORTION OF THE PROJECT.

16: EMERGENCY ACCESS ROUTE:

THE DEVELOPER SHALL INSTALL BARRICADES AT THE TOP AND BOTTOM OF THE EMERGENCY ACCESS ROUTE TO THE APPROVAL OF THE FIRE CHIEF, POLICE CHIEF AND CITY ENGINEER. THE BARRICADE DESIGN AND INSTALLATION SHALL INCLUDE A DEVICE THAT SENSES STROBE LIGHTS AND IS COMPATIBLE WITH THE EQUIPMENT USED BY THE CITY OF SPARKS TRAFFIC DIVISION. THE DESIGN AND INSTALLATION SHALL INCLUDE A KEYPAD ENTRY SYSTEM FOR THE POLICE. THE BARRICADES SHALL ALSO INCLUDE A MANUAL OPENING SYSTEM IN THE EVENT OF A POWER OUTAGE. THE METHOD OF BARRICADING THE EMERGENCY ACCESS ROUTE SHALL BE REVIEWED AND APPROVED BY THE POLICE CHIEF, FIRE CHIEF AND CITY ENGINEER PRIOR TO THE APPROVAL OF A FINAL MAP FOR THE PROJECT OR PORTION OF THE PROJECT.

17: RETAINING WALL HEIGHT LIMITS:

ALL RETAINING WALLS SHALL BE LIMITED IN HEIGHT TO A MAXIMUM OF SIX (6) FEET IN HEIGHT WITHIN THE COMMON OPEN SPACE AREAS OF THE SKY RIDGE PROJECT AND A MAXIMUM OF FOUR (4) FEET IN HEIGHT WITHIN THE INTERIOR LOT LINES OF THE DEVELOPED PORTIONS OF THE SKY RIDGE PROJECT.

18: HOMEOWNERS ASSOCIATION:

THE DEVELOPER SHALL ESTABLISH A HOMEOWNERS ASSOCIATION FOR THE PROJECT OR JOIN IN THE VISTAS PLANNED DEVELOPMENT HOMEOWNERS ASSOCIATION TO PROVIDE FOR THE MAINTENANCE OF THE COMMON OPEN SPACE AREAS OF THE PROJECT PRIOR TO APPROVAL OF A BUILDING PERMIT FOR THE PROJECT.

19: LOTS ABUTTING CANYON HILLS:

THE DEVELOPER SHALL LIMIT THE HEIGHT OF THE STRUCTURES ON THE LOTS ABUTTING THE CANYON HILLS SUBDIVISION TO A MAXIMUM HEIGHT OF ONE (1) STORY AND LOWER THE FINISHED GRADE OF THE LOTS ABUTTING THE CANYON HILLS SUBDIVISION LOTS FINISHED GRADES.

20: LOTS ABUTTING SOUTHVIEW:

THE DEVELOPER SHALL INSTALL A MINIMUM 20-FOOT WIDE BUFFER BETWEEN THE SOUTHVIEW SUBDIVISION AND THE LOTS ABUTTING THE SOUTHVIEW SUBDIVISION THAT INCLUDES A LANDSCAPED STORM DRAINAGE CHANNEL TO THE APPROVAL OF THE CITY ENGINEER, THE ADMINISTRATOR AND THE PARKS & RECREATION DIRECTOR. THE LOTS ABUTTING THE SOUTHVIEW SUBDIVISION SHALL HAVE FINISHED GRADES EIGHT (8) TO TEN (10) FEET LOWER THAN THE SOUTHVIEW SUBDIVISION LOTS FINISHED GRADES.

21: MAXIMUM ALLOWABLE DISTURBED AREA CATEGORIES:

THE DEVELOPER SHALL COMPLY WITH THE SPARKS MUNICIPAL CODE 20.99 SLOPE CATEGORY MAXIMUM ALLOWED DISTURBED AREA STANDARDS WITH THE FINAL APPROVAL OF THE PROJECT.



Minutes of the Regular Sparks City Council Meeting for November 13, 2001

Approved Findings T1 through T12 for Tentative Map TM000002 are attached as Attachment "A" and made part of the official minutes.

A motion was made by Council Member Carrigan, seconded by Council Member Martini, to approve Tentative Map TM000002, adopting Findings T1 through T12 and the facts supporting these Findings as set forth in the staff report, subject to the Conditions of Approval 1 through 21. (Conditions 17 through 21 added to require a Homeowner's Association, maintenance of common areas, limiting some lots to single story homes, fixing some finished grades and requiring a minimum 20 foot landscaped buffer. Council Members Salerno, Martini, Carrigan, Schmitt, YES. Council Member Mayer, NO. Motion carried.

9.1
Comments from the
Council and City Manager

Tape 4, 3578
City Manager Shaun Carey advised the Council that the Redevelopment Workshop set for Monday, November 19th has been canceled due to a lack of quorum.

9.2
Comments from the Public

Tape 4, 3621
None.

10.
Adjournment

Tape 4, 3626
There being no further business, the meeting was adjourned at 11:00 p.m.

ATTEST:

Mayor

City Clerk>>>



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BK1

Requested By

TMB BUILDERS LLC

Washoe County Recorder

Kathryn L. Burke - Recorder

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