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VICTORIAN HILLS

DRAINAGE REPORT

FEBRUARY 25, 1986

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PREPARED BY:

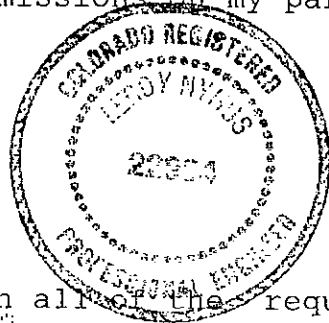
LEROY NYHUS, P.E.
CONSULTING ENGINEERING
4880 GALLEY ROAD, SUITE 107
COLORADO SPRINGS, CO. 80915
TELE: 596-0652

DRAINAGE REPORT STATEMENTS

Engineer's Statement:

The attached drainage plan and report were prepared under my direction and supervision and are correct to the best of my knowledge and belief. Said drainage report has been prepared according to the criteria established by the City for drainage reports and said report is in conformity with the master plan of the drainage basin. I accept responsibility for any liability caused by the negligent acts, errors or omissions on my part in preparing this report.

Name Lo Roy Myers



Developer's Statement:

The developer has read and will comply with all of the requirements specified in this drainage report.

Business Name

By: Richard Harpstone

Title: OWNER

Address: 214 HILL ST.

CO-SP65. CO 80905

City of Colorado Springs:

Filed in accordance with Section 15-3-906 of the Code of the City of Colorado Springs, 1980, as amended.

[Signature]
City Engineer

3/2/80
Date

Conditions:

SCOPE, PURPOSE, & INTENT

The scope of this drainage report includes lots 6, 7, 8, 9, 10, & 11, block 3 of Prospect Heights Addition and approximately one acre north of the above lots all located north of Bijou Street and west of Hill Street. The report includes existing and proposed drainage.

The purpose of the report is to determine the effects of the storm water run-off for the proposed development of five - four plexes.

GENERAL PROPERTY DESCRIPTION

The property description is lots 6, 7, 8, 9, 10, & 11, block 3 of Prospect Heights Addition, the vacated alley west of the above lots, and that part of the North West quarter of the North East quarter of Section 13, Township 14 South, Range 67 West, lying East of the west line extended of the alley in block 3 of Prospect Heights Addition, West of the east line of Hill Street extended North of Platte Avenue, South of the North line of Section 13, and North of the North line of lot 6, block 3 Prospect Heights Addition.

The area of the proposed development is 2.1 acres.

GENERAL EXISTING DRAINAGE CHARACTERISTICS

The property is not in an existing drainage basin but is classified as being in a miscellaneous drainage basin which does not have a prior drainage report. The site consists of a plateau with steep slopes on all sides. The property generally slopes to the east and to the west. Storm water drains from the property on the surface to adjacent property or to street right-of-way. An Existing Drainage Map is in the Appendix.

GENERAL PROPOSED DRAINAGE CHARACTERISTICS

The proposed development will be graded such that the 5 year storm run-off will not increase the flow to adjacent property. The additional 5 year storm

run-off due to the development will flow to Hill Street and then east on Bijou Street or will flow directly to Bijou Street and then to the west. The increase in flow will be minimal and will not adversely affect the surface flow in the streets.

HYDROLOGIC CALCULATIONS

The hydrologic calculations are based on the City of Colorado Springs "Determination of Storm Runoff Criteria" Manual, latest edition and uses the Modified SCS method. The property is divided into four drainage basins which are shown on the maps in the appendix. The hydrologic calculations showing the areas, runoff coefficients, time of concentrations, intensity, 5 year peak flow, and 100 year peak flow are tabulated in the appendix.

SOIL CLASSIFICATION

The soil classifications are based upon the Soil Survey of El Paso County Area, Colorado by the United States Department of Agriculture Soil Conservation Service. The soils are classified as Chaseville-Midway complex. This soil complex is on the steeper slopes and on ridgetops and can be assumed to be the type of soil in the proposed development. The Chaseville soil is in hydrologic soil group "A", and the Midway soil is in hydrologic soil group "D".

DRAINAGE FEES

The estimated drainage fees for this 2.1 acres at \$2925 per acre is \$6140. On-site drainage inlets or piping will not be required.

FLOODPLAIN STATEMENT

The proposed development is not in a designated floodplain.

EROSION AND SEDIMENTATION CONTROL

All areas disturbed during construction outside of the streets shall be sodded or seeded as soon as practical after construction. All slopes greater than 3:1 disturbed or constructed during construction shall receive slope protection or terracing.

APPENDIX

CONTENTS

Computation of Soil Curve Numbers

Hydrologic Calculations

Soil Map

Existing Drainage Map

Proposed Drainage Map

Grading Plan

COMPUTATION OF SOIL CURVE NUMBERS

Existing Condition

<u>Land Use</u>	<u>Soil Group</u>	<u>Percent</u>	<u>Number</u>	<u>Curve Curve No.</u>	<u>Average</u>
Basin No. 1					
Buildings	A		10.7	98	10.4
Farmstead	A		89.3	59	52.7
TOTAL			100.0		63.1
Basin No. 2					
Farmstead	A		33.7	59	19.9
Fair Grass Cover	D		66.3	84	55.7
TOTAL			100.0		75.6
Basin No. 3					
Fair Grass Cover	D		100.0	84	84.0
TOTAL			100.0		84.0
Basin No. 4					
Farmstead	A		39.7	59	23.4
Fair Grass Cover	D		39.7	84	33.4
Buildings	A		20.6	98	20.1
TOTAL			100.0		76.9
Hill Street					
Fair Grass Cover	D		50.0	84	42.0
Gravel Surface	D		50.0	91	45.5
TOTAL			100.0		87.5

COMPUTATION OF SOIL CURVE NUMBERS

Developed Condition

<u>Land Use</u>	<u>Soil Group</u>	<u>Percent</u>	<u>Number</u>	<u>Curve Curve No.</u>	<u>Average</u>
Basin No. 1					
Impervious	A		44.1	98	44.1
Fair Grass Cover	A		55.9	49	27.4
TOTAL			100.0		71.5
Basin No. 2					
Impervious	A		8.4	98	8.2
Fair Grass Cover	D		91.6	84	77.0
TOTAL			100.0		85.2
Basin No. 3					
Fair Grass Cover	D		85.9	84	72.2
Impervious	D		14.1	98	13.8
TOTAL			100.0		86.0
Basin No. 4					
Impervious	D		28.6	98	28.0
Fair Grass Cover	A		71.4	84	60.0
TOTAL			100.0		88.0
Hill Street					
Fair Grass Cover	D		40.0	84	33.6
Gravel Surface	D		60.0	98	58.8
TOTAL			100.0		92.4

HYDROLOGIC CALCULATIONS

EXISTING DRAINAGE VICTORIAN HILLS

BASIN	AREA (ACRES)	TC (HR)	SOIL TYPE	CN	Qp (CSM/IN)	RUNOFF 5yr	RUNOFF 100yr	PEAK FLOW 5yr	PEAK FLOW 100yr
1	0.65	<.1	A	63	1280	0.12	0.66	0.16	0.86
2	0.55	<.1	A & D	76	1280	0.47	1.36	0.51	1.50
3	0.67	<.1	D	84	1280	0.82	1.94	1.10	2.60
4	0.17	<.1	A & D	77	1280	0.51	1.43	0.17	0.48
HILL ST	0.03	<.1	D	88	1280	1.05	2.27	0.06	0.13
TOTAL =	2.07						TOTAL =	2.00	5.57

PROPOSED DRAINAGE VICTORIAN HILLS

BASIN	AREA (ACRES)	TC (HR)	SOIL TYPE	CN	Qp (CSM/IN)	RUNOFF 5yr	RUNOFF 100yr	PEAK FLOW 5yr	PEAK FLOW 100yr
1	1.05	<.1	A	72	1280	0.34	1.12	0.72	2.35
2	0.30	<.1	D	85	1280	0.87	2.02	0.52	1.21
3	0.55	<.1	D	86	1280	0.92	2.10	1.01	2.31
4	0.14	<.1	D	88	1280	1.05	2.27	0.29	0.63
HILL ST	0.03	<.1	D	92	1280	1.33	2.64	0.08	0.16
TOTAL =	2.07						TOTAL =	2.62	6.66

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

