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File 1981-0092
Date 4/22/02

Project Name: Hawthorne Place atCrestview – Final Plan

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		A few items are denoted with an asterisk (*), which means they are to be scanned for permanent record on the in some instances, not all entries designated to be scanned by the department are present in the file. There are also documents specific to certain files, not found on the standard list. For this reason, a checklist has been provided. **Remaining items, (not selected for scanning), will be marked present on the checklist. This index can serve as a quick guide for the contents of each file.** **Files denoted with (**) are to be located using the ISYS Query System. Planning Clearance will need to be typed in full, as well as other entries such as Ordinances, Resolutions, Board of Appeals, and etc.**
X	X	***Summary Sheet – Table of Contents**
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		Public notice cards
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		Appraisal of raw land
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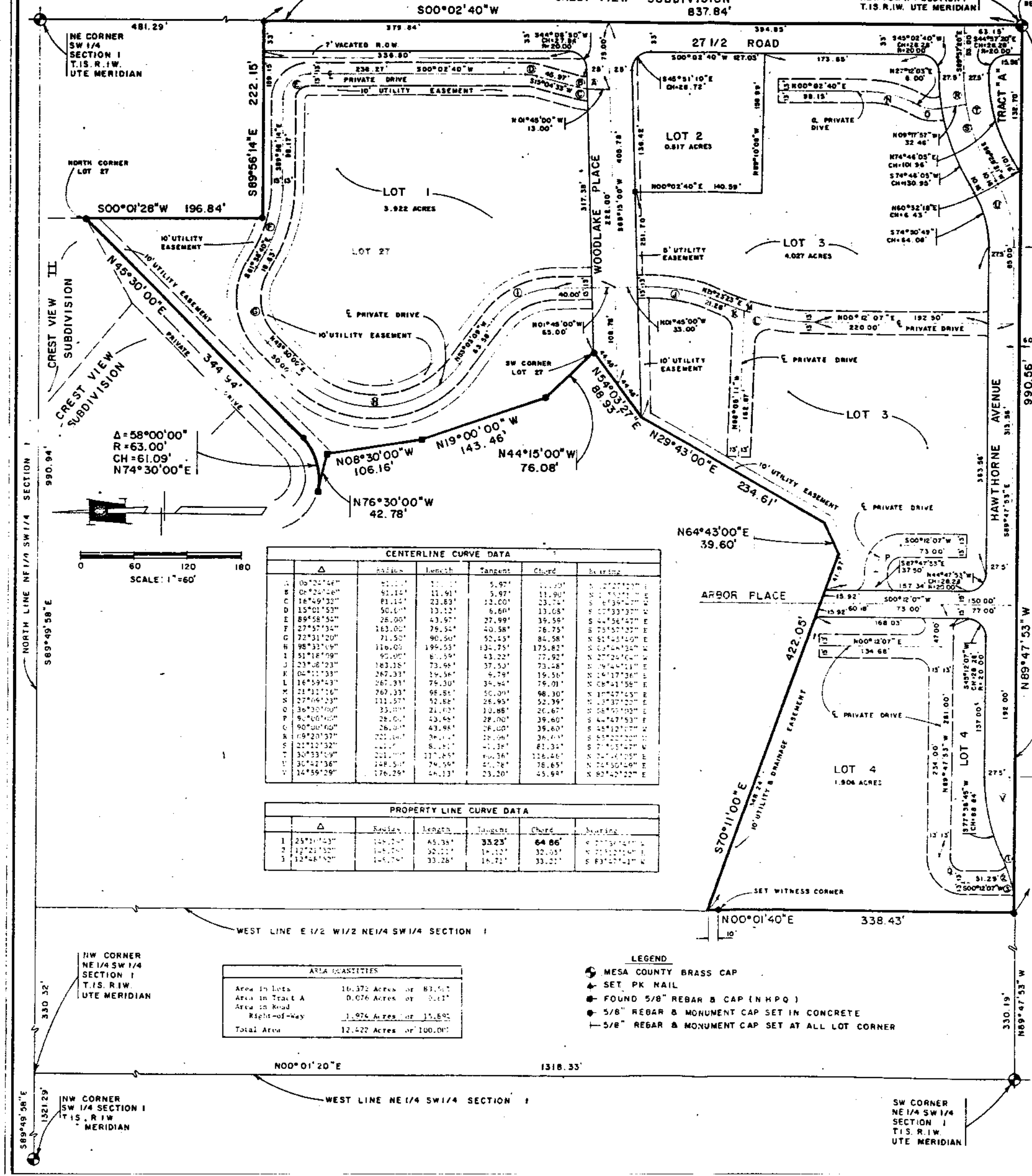
DOCUMENTS SPECIFIC TO THIS DEVELOPMENT FILE:

X	X	Action Sheet	X	X	Planning Commission Minutes - ** - 10/29/81, 1/5/82
X	X	Review Sheet Summary	X		Development Application - 9/20/81, 9/30/81
X		Review Sheets	X		Subdivision Summary Form – 10/1/81, 11/30/81
X		Legal Ad	X	X	Improvements Agreement - (not signed)
X	X	Extension Request – 3/26/84	X		Subsurface Soils Investigation
X	X	Memo from Planning Commission to All Petitioners re: enforcement of development schedule – 2/13/84	X		Letter from Katy McIntyre to Planning Dept. re: water rights non-transferable at the 1981 rate of ¼ miner's inch per acre.
X	X	Location Map	X		Peak Demand – Data Sheet
X	X	Preliminary Site & Landscaping Plan	X		Owner's Policy of Title Insurance
X	X	Preliminary – Sewer, Water, Grading & Drainage	X		Request for Treasurer's Certificate of Taxes Due – 11/25/81
X		Public Notice Posting – 10/17/81, 12/21/81	X		Gamma Radiation Survey – no tailings indicated – 11/17/78
X	X	Letter from Thomas Logue to Bob Goldin re: additional comments to City Eng.– 1/20/82			
X		Report from Crestview Ltd. to Planning re: property tracking- 2/23/84			

GENERAL INFO
TOTAL AREA 11.5± AC
TOTAL UNITS (INCLUDES 1 SINGLE FAMILY RESIDENCE ON 27½ ROAD) 85
TOTAL PARKING 220±
OPEN SPACE 67.2±
DENSITY 7.22±
27½ ROAD
HAWTHORNE AVE.
HAWTHORNE AVENUE
OFFICE COPY
#92-81
PARAGON ENGINEERING
PRELIMINARY SITE & LANDSCAPING PLAN
CREEKVIEW III
GRAND JUNCTION, COLORADO
SHEET
OF SHEETS

HAWTHORNE PLACE AT CREST VIEW

AND A REPLAT OF LOT 27
CREST VIEW SUBDIVISION



CENTERLINE CURVE DATA						
	Δ	Radius	Length	Tangent	Chord	Bearing
A	05°24'46"	[illegible]	[illegible]	5.97'	[illegible]	[illegible]
B	06°24'26"	91.14'	11.91'	5.97'	11.90'	[illegible]
C	16°49'33"	81.14'	23.83'	12.00'	23.74'	[illegible]
D	15°01'53"	50.00'	13.12'	6.60'	13.08'	S 07°33'37" W
E	89°58'54"	28.00'	43.97'	27.99'	39.59'	S 44°56'47" E
F	27°57'34"	163.00'	79.54'	40.58'	78.75'	S 75°57'27" E
G	72°31'20"	71.50'	90.50'	52.45'	84.58'	N 51°45'40" E
H	98°33'09"	116.00	199.53'	134.75'	175.82'	N 03°46'24" W
I	51°18'09"	95.00'	[illegible]	43.22'	77.92'	N 27°24'04" W
J	23°08'23"	183.18'	73.96'	37.53'	73.48'	N [illegible] E
K	04°11'33"	267.33'	19.56'	9.79'	19.56'	N 14°17'36" E
L	16°59'43"	267.33'	79.30'	39.94'	79.01'	N 08°41'59" E
M	21°11'16"	267.33'	98.86'	50.00'	98.30'	N 10°47'45" E
N	27°09'23"	111.57'	52.88'	26.95'	52.39'	N 13°37'22" E
O	36°30'00"	33.00'	21.02'	10.88'	20.67'	N 56°[illegible] E
P	90°00'00"	28.00'	43.98'	28.00'	39.60'	S 44°47'53" E
Q	90°00'00"	28.00'	43.98'	28.00'	39.60'	S 45°12'07" W
R	09°20'37"	[illegible]	[illegible]	18.06'	36.0[illegible]'	S [illegible] W
S	21°12'32"	[illegible]	[illegible]	[illegible]	81.34'	S [illegible] W
T	30°33'09"	221.[illegible]'	117.85'	60.36'	116.46'	N [illegible] E
U	30°42'36"	148.54'	79.59'	40.78'	78.65'	N 74°50'49" E
V	14°59'29"	176.29'	46.13'	23.20'	45.99'	N 82°40'22" E

PROPERTY LINE CURVE DATA						
	Δ	Radius	Length	Tangent	Chord	Bearing
1	25°30'43"	145.74'	65.35'	33.23'	64.86'	S [illegible] E
2	12°21'32"	145.74'	32.22'	16.12'	32.05'	N [illegible] E
3	12°48'52"	145.74'	33.26'	16.71'	33.21'	S 83°47'41" W

AREA QUANTITIES		
Area in Lots	10.372 Acres	or 83.5[illegible]%
Area in Tract A	0.076 Acres	or 0.61%
Area in Road Right-of-Way	1.974 Acres	or 15.89%
Total Area	12.422 Acres	or 100.00%

LEGEND

- MESA COUNTY BRASS CAP
- SET PK NAIL
- FOUND 5/8" REBAR & CAP (N H P Q)
- 5/8" REBAR & MONUMENT CAP SET IN CONCRETE
- 5/8" REBAR & MONUMENT CAP SET AT ALL LOT CORNER

DEDICATION

KNOW ALL MEN BY THESE PRESENTS:

That the undersigned Benchmark Communities LTD, an Ohio Partnership, is the owner of that real property situated in the City of Grand Junction, County of Mesa, State of Colorado and being a part of the NE¼ SW¼ of Section 1, Township 1 South, Range 1 West of the Ute Meridian and all of Lot 27 Crest View Subdivision as shown on the accompanying plat thereof, said tract being more particularly described as follows:

Beginning at the SE Corner of the NE¼ SW¼ of said Section 1; Thence N 89°47'53" W along the South line of the NE¼ SW¼ of said Section 1 a distance of 990.56 feet; Thence N 00°01'40" E along the West line of the E½ W½ NE¼ SW¼ of said Section 1 a distance of 338.43 feet to the Centerline of an existing wash; Thence along said Centerline by the following three courses and distances, (1) S 70°11'00" E, 422.05 feet; (2) N 64°43'00" E, 39.60 feet; (3) N 29°43'00" E, 234.61 feet; Thence N 54°03'27" E 88.93 feet to the SW Corner of Lot 27 Crest View Subdivision; Thence along the boundary of said Lot 27 by the following Eight (8) courses and distances: (1) N 44°15'00" W 76.08 feet; (2) N 19°00'00" W 143.46 feet; (3) N 08°30'00" W 106.16 feet; (4) N 76°30'00" W 42.78 feet; (5) along the arc of a curve to the left whose radius is 63.00 feet and whose long chord bears N 74°30'00" E 61.09 feet; (6) N 45°30'00" E 344.94 feet; (7) S 00°01'28" W 196.84 feet; (8) S 89°56'14" E 222.15 feet to a point on the East line NE¼ SW¼ of said Section 1; Thence S 00°02'40" E along said East line NE¼ SW¼ of said Section 1 a distance of 837.84 feet to the POINT OF BEGINNING; Containing 12.422 Acres.

That said owner has caused the said real property to be laid out and surveyed as Hawthorn Place at Crest View and a Replat of Lot 27 Crest View Subdivision, a subdivision of a part of the City of Grand Junction, County of Mesa, State of Colorado.

That said owner does hereby dedicate to the public all the roads as shown on the accompanying plat forever, except the private drives and dedicate to the Public Utilities those portions of said real property not occupied by structures and those that are labeled as utility easements on the accompanying plat as easements for the installation and maintenance of utilities, sanitary and water lines, irrigation and drainage facilities, including but not limited to electric lines, gas lines, telephone lines, together with the right to trim interfering trees and brush; together with the perpetual right of ingress and egress for installation, maintenance and replacement of such lines. Said easements and rights shall be utilized in a reasonable and prudent manner.

The area shown as Private Drives are dedicated to the owners of the property within said Hawthorn Place at Crest View for perpetual ingress and egress for themselves and the general public, including postal service, trash, fire, police, and emergency vehicles. Also, the areas shown as Tract "A" is dedicated to the owners of the property within said Hawthorn Place at Crest View for recreational and esthetic purposes as determined appropriate by said owners.

IN WITNESS WHEREOF said owner has caused its name to be hereunto subscribed this ______ day of ____________ A.D., 19__.

Benchmark Communities LTD, an Ohio Partnership

____
Todd Deutsch, General Partner

STATE OF)
) ss
COUNTY OF)

The foregoing instrument was acknowledged before me this ______ day of ______ A.D., 19__, by Todd S. Deutsch, General Partner of Benchmark Communities LTD, an Ohio Partnership.

Witness my hand and official seal. My Commission expires: ____________

____
Notary Public

CITY APPROVAL

[illegible]

City Manager — President of Council — [illegible]

Director of Development — Grand Junction City Engineer

CLERK AND RECORDERS CERTIFICATE

STATE OF COLORADO)

COUNTY OF MESA)

[illegible]

SURVEYOR'S CERTIFICATE

[illegible]

OFFICE COPY
#92-81

HAWTHORNE PLACE AT CREST VIEW

PARAGON ENGINEERING, INC.

SOIL CLASSIFICATION

BILLINGS SILTY CLAY LOAM, 0 to 2 percent slopes. Class IIs Land (Bc)

This soil, locally called adobe, is one of the most important and extensive in the Grand Valley. It is derived from deep alluvial deposits that came mainly from Mancos shale but in a few places from fine-grained sandstone materials. The deposits ordinarily range from 4 to 40 feet deep but in places exceed 40 feet. The deposits have been built up from thin sediments brought in by the streams that have formed the coalescing alluvial fans or have been dropped by the broad washes that have no drainage channel. The thickest deposit, near Grand Junction, was built up by Indian Wash.

Although moderately fine textured, this Billings soil permits successful growth of deep-rooted crops such as alfalfa and tree fruits. Its permeability is normally not so favorable as that of the Mesa, Fruita, and Ravola soils. Its tilth and workability are fair, but it puddles so quickly when wet and bakes so hard when dry that good tilth can be maintained only by proper irrigation and special cultural practices. Runoff is slow and internal drainage is very slow.

Like all other soils in the area, this one has a low organic-matter content. Under natural conditions it contains a moderate concentration of salts derived from the parent rock (Mancos shale). In places, however, it contains so much salt that good yields cannot be used for crops. Generally, this soil is without visible lime, but it is calcareous. In many places small white flecks or indistinct light-colored streaks or seams indicate that lime, gypsum, or salts are present.

Soil limitations are classified as severe for local roads and streets (poor traffic-supporting capacity, moderate to high water tables common), shallow excavations (high water table common), and septic tank filter fields (slow permeability, poor internal drainage, seasonal high water table).

DRAINAGE CALCULATIONS

BASIN	AREA (AC)	C	T_c (MIN)	I_{10} (IN/HR)	I_{25} (IN/HR)	Q_{10} (CFS)	Q_{25} (CFS)	I_{100} (IN/HR)	Q_{100} (CFS)
A_1	3.0	.07	10	1.25	1.70	2.63	3.57	2.20	4.62
A_2	1.8	.07	10	1.25	1.70	1.58	2.14	2.20	2.77
A_3	1.5	.07	15	1.09	1.51	1.15	1.59	1.96	2.06
A_4	1.5	.06	25	1.05	1.46	0.95	1.32	1.89	1.70
A_5	9.0	.06	10	1.25	1.70	6.75	9.18	2.20	11.88
B	1.3	.05	8	1.30	1.80	0.85	1.17	2.33	1.51
C	1.9	.05	15	1.09	1.51	1.04	1.44	1.96	1.86

DRAINAGE NOTES

There is a minimum of offsite drainage impacting this site, all of it contained in a drain ditch which bisects the property. A portion of this drain shall be filled with the runoff pipe and running beneath the road. That portion of the ditch running along the boundary shall remain open.

Those drainage basins indicated "A" shall be discharged into the drain ditch. Basins "B" and "C" shall be self-contained, with run-off directed into the waterscaping.

LEGEND

- PROPOSED SANITARY SEWER
- PROPOSED WATER MAIN AND FIRE HYDRANT
- EXISTING CONTOURS
- PROPOSED CONTOURS
- DRAINAGE FLOW DIRECTION

B 1.3Ac

A1 3Ac

A2 1.8Ac

A3 1.5Ac

C 1.9Ac

27½ ROAD

HAWTHORNE AVE.

CARINA VALLEY SUBDIVISION

OFFICE COPY

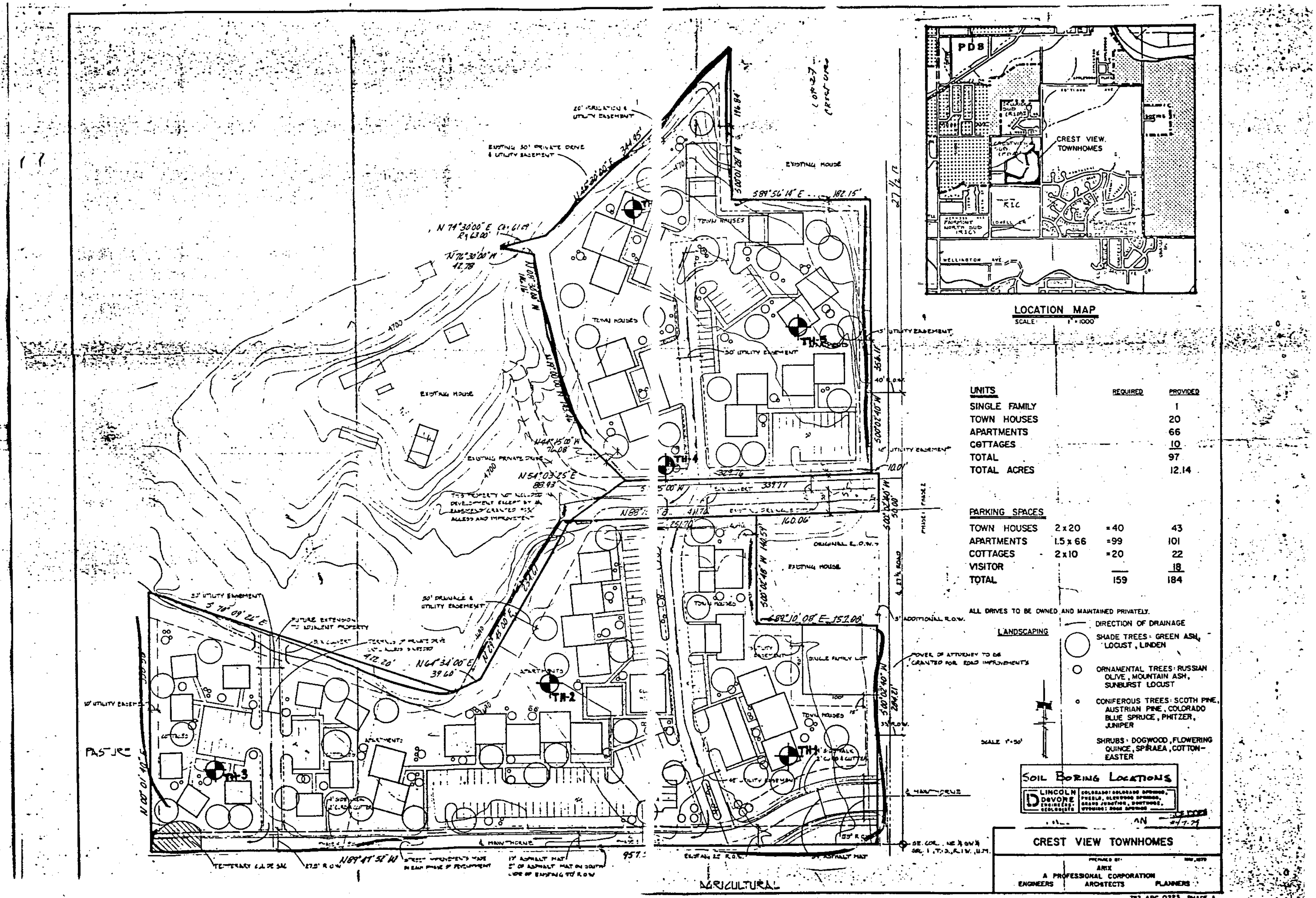
#92-8

PARAGON ENGINEERING, INC.

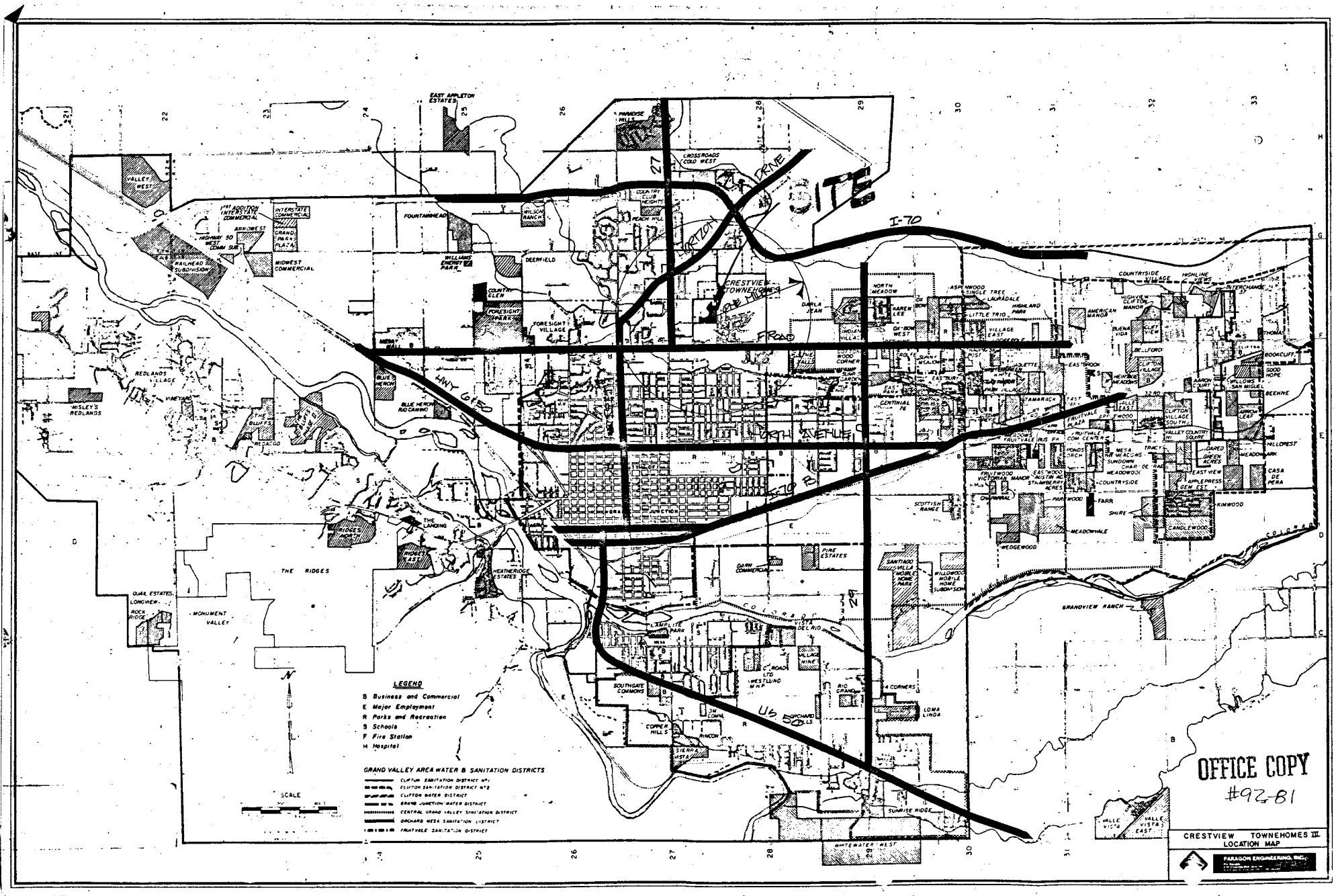
PRELIMINARY: SEWER, WATER, GRADING & DRAINAGE

CRESTVIEW III

GRAND JUNCTION, COLORADO



LOCATION MAP
SCALE: 1" = 1000'
PDB
CREST VIEW TOWNHOMES
WELLINGTON AVE
UNITS
REQUIRED
PROVIDED
SINGLE FAMILY 1
TOWN HOUSES 20
APARTMENTS 66
COTTAGES 10
TOTAL 97
TOTAL ACRES 12.14
PARKING SPACES
TOWN HOUSES 2 x 20 = 40 43
APARTMENTS 1.5 x 66 = 99 101
COTTAGES 2 x 10 = 20 22
VISITOR 18
TOTAL 159 184
ALL DRIVES TO BE OWNED AND MAINTAINED PRIVATELY.
DIRECTION OF DRAINAGE
LANDSCAPING
SHADE TREES: GREEN ASH, LOCUST, LINDEN
ORNAMENTAL TREES: RUSSIAN OLIVE, MOUNTAIN ASH, SUNBURST LOCUST
CONIFEROUS TREES: SCOTH PINE, AUSTRIAN PINE, COLORADO BLUE SPRUCE, PHITZER, JUNIPER
SHRUBS: DOGWOOD, FLOWERING QUINCE, SPIRAEA, COTTON-EASTER
SCALE 1" = 50'
SOIL BORING LOCATIONS
LINCOLN DeVORE
CREST VIEW TOWNHOMES
ARIX
A PROFESSIONAL CORPORATION
ENGINEERS ARCHITECTS PLANNERS
782 ARC 0223 PHASE A
EXISTING HOUSE
TOWN HOUSES
APARTMENTS
COTTAGES
SINGLE FAMILY LOT
TH-1
TH-2
TH-3
TH-4
TH-5
PASTURE
AGRICULTURAL
N 89°41'52" W
S 89°56'14" E 182.15'
S 89°10'08" E 152.08'
N 54°03'25" E 88.93
N 64°34'00" E 39.60
S 76°09'22" E
N 74°30'00" E
N 72°30'00" W 42.78


SITE
I-70
LEGEND
B Business and Commercial
E Major Employment
R Parks and Recreation
S Schools
F Fire Station
H Hospital
GRAND VALLEY AREA WATER & SANITATION DISTRICTS
CLIFTON SANITATION DISTRICT #1
CLIFTON SANITATION DISTRICT #2
CLIFTON WATER DISTRICT
GRAND JUNCTION WATER DISTRICT
CENTRAL GRAND VALLEY SANITATION DISTRICT
ORCHARD MESA SANITATION DISTRICT
FRUITVALE SANITATION DISTRICT
SCALE
OFFICE COPY
#92-81
CRESTVIEW TOWNEHOMES III
LOCATION MAP
PARAGON ENGINEERING, INC.

2945-013-00-016
Mraule, Robert
616 27¼ Road
Grand Junction, CO 81501
#92-81

2945-013-00-933
Mesa County

2945-013-00-044
Stokes, Robert
626 27¼ Road
Grand Junction, CO 81501
#92-81

2945-013-08-002
Common Open Space

2945-013-08-001, 005
Crestview Ltd.
3704 G 7/10 Road
Palisade, CO 81526
#92-81

2945-013-09-006
Stettner, Richard
2654 Spirber Lane
Grand Junction, CO 81501
U.D.
#92-81

Towne Properties Ltd.
c/o Todd Deutsch
2261 Francis Lane
Cinn. OH 45206
#92-81

Paragon Engineering
2784 Crossroads Blvd.
Grand Jct. CO 81501
#92-81

2945-013-09-007, 008
Crestview Ltd.
3704 G 7/10 Road
Palisade, CO 81526
#92-81

2945-013-00-038
McCallister, Milfred
647 27½ Road
Grand Junction, CO 81501
#92-81

2945-014-00-038
Erickson, Murdin
640 27½ Road Rt. #5
Grand Junction, CO 81501
#92-81

2945-014-00-080
Peach, Warie L. Jr.
624 27½ Road
Grand Junction, CO 81501
#92-81

2945-014-15-001
Meadon, Jack Paul Sr. & Sharon
3150 27½ Road
Grand Junction, CO 81501
#92-81

2945-014-15-002
Miller, Wilbert A. & Gladys L.
3130 27½ Road
Grand Junction, CO 81501
#92-81

2945-014-15-002
Carnes, C. Kris
c/o CR & BG Wahlberg Jr.
1910 Hawthorn Ave.
Grand Junction, CO 81501
#92-81

2945-013-00-048
Kahle, Helene
643 27½ Road
Grand Junction, CO 81501
#92-81

2945-013-00-004
Ulibarri, Joe A.
637 27½ Road
Grand Junction, CO 81501
#92-81

Lincoln DeVore
1000 West Fillmore St
Colorado Springs, Colorado 80907
(303) 632-3593
Home Office

August 13, 1981

Scheaffer & Rolland
1660 South Alboin St.
Denver, CO 80333

RE: PRELIMINARY

SUBSURFACE SOILS INVESTIGATION
HAWTHORNE PLACE AT CRESTVIEW
formerly Crestview Townhomes
SCHEAFFER AND ROLLAND

GRAND JUNCTION, COLORADO

Gentlemen:

Transmitted herein are the results of a Preliminary Subsurface Soils Investigation and Foundation Recommendations for the proposed Crest View Townhomes in Grand Junction, Colorado

Respectfully submitted,

LINCOLN-DeVORE TESTING LABORATORY, INC.

By: Gary M. Krzisnik
Gary M. Krzisnik, P.E.
Grand Junction Office

Reviewed by:

GMK/jb

LDTL Job No. 40646J

602 East 8th Street
Pueblo, Colo 81001
(303) 546-1150

P.O. Box 1427
Glenwood Springs, Colo 81601
(303) 945 6020

86 Rosemont Plaza
Montrose, Colo 81401
(303) 249 7838

P.O. Box 1882
Grand Junction, Colo 81501
(303) 242-8968

P O. Box 1643
Rock Springs, Wyo 82901
(307) 382-2649

ABSTRACT:

The contents of this report are a Preliminary Subsurface Soils Investigation and Foundation Recommendations for the proposed Crest View Townhomes in Grand Junction, Colorado.

Topographically, the site is generally level, with a southerly slope of 1 to 3 degrees in most areas and up to 7 degrees at its north end. Both surface and subsurface drainage are generally fair to poor.

The foundation soils encountered consisted of low density silty clay, underlain at varying depths by bedrock of the Mancos Shale formation. Feasible foundation types include shallow foundations of conventional and "no footing" types and a deep foundation system using drilled piers. Site specific examination of soils at each building site will be imperative at this property.

To limit differential movement in as much as possible, we would recommend that the foundation for the residential units across the subdivision be well balanced and heavily reinforced.

Adequate drainage must be provided at all times. Water must never be allowed to pond above the foundation soils.

Surface and subsurface drainage must be carefully designed and controlled. A perimeter drain would be recommended around the building exterior.

A Type II Cement would be recommended in all concrete in contact with the soil on this site.

More detailed recommendations can be found within the body of this report. All recommendations will be subject to the limitations set forth herein.

The information herein has been obtained to obtain a general and preliminary indication of the soils which will probably be found under presently unknown types of structures proposed for the site. Site specific information must be obtained beneath each proposed structure after its exact location is determined, since the soil types and conditions differ across the overall site and the types of structure proposed is not known.

This report is intended to identify general soil conditions on the site, as requested. Six test borings spread over a 10.5 acre site, can only be used as an overview of the soil conditions and not for site specific design purposes.

GENERAL:

The purpose of this investigation was to determine the general suitability of the site for construction of a residential (townhome) development to be located at 27½ Road and Hawthorne Street in Grand Junction, Colorado. The site is located in the E½, NE¼, SW¼, Section 1, T.15, R.1W of Mesa County, Colorado.

Although Lincoln-DeVore has not seen a set of construction drawings for any of the multiple family dwelling units proposed, we believe that they will be basically frame structures of more or less conventional design. Foundation loads for structures of this nature are normally light to medium weight in magnitude.

Topographically, the site slopes gently (about 1 to 3 degrees) toward the south. The north end of the site, and adjacent offsite areas, have a slope of about 7 degrees. Surface runoff will flow from north to south across the site, eventually entering drainage ditches south of the site and an irrigation ditch in the middle of the site that will channel runoff to the Colorado River, located south and southeast of the property. Surface drainage is fair to poor; subsurface drainage is generally poor.

The foundation soils encountered on this site consisted predominantly of alluvial deposits. The deposits are placed by past flooding action from the Colorado River. Both previous irrigation and construction activity were noted on this site. These soils were deposited over bedrock of the Mancos Shale Formation.

The Mancos Shale can broadly be described as a thin-bedded, drab, light to dark gray marine shale, with thinly interbedded, fine grain sandstone and limestone layers. Some portions of the Mancos Shale are bentonitic, and therefore, are highly expansive. The majority of the shale, however, has only a moderate expansion potential. Formational shale occurred at levels varying from the ground surface to over 26 feet deep. It is anticipated that this shale will form the principal foundation bearing material.

BORINGS, LABORATORY TESTS AND RESULTS:

Six test borings were drilled across the development site and are located approximately as shown on the attached Test Boring Location Diagram. The test borings were placed in such a manner as to obtain a reasonably good profile of the subsurface soils. All test borings were drilled with a power-driven, continuous auger drill. Samples were taken with a standard split-spoon sampler, thin-walled (Shelby) tube sampler, and by bulk methods.

The precise gradational and plasticity characteristics associated with the soils encountered during drilling can be found on the attached summary sheets. The representative number for each soil group is indicated in a small circle immediately below the sampling point on the Drilling Logs. The following discussion of the soil groups will be general in nature.

The soils profile found on this site can be broadly described as a two layer system. The upper stratum of the profile was found to be low density silty clay. Beneath this surface layer, the soils were found to consist of the Mancos Shale Formation.

Soil Type No. 1 classified as a silty clay (CL) of fine grain size. Soil Type No. 1 is of

moderate plasticity and water content and of low density. These soils have a slight tendency to expand upon the addition of moisture with swell pressures on the order of 980 psf being considered typical. While this magnitude of expansion should not be sufficient to affect the heavy structural members of the building, it can cause some movement beneath light structural members and floor slabs on grade. These soils will have a distinct tendency to long-term consolidate under applied foundation pressures. However, if the allowable bearing values given are not exceeded, we feel that differential movement would be tolerable. This soil group was found to have an allowable bearing value varying from 1000 to 2000 psf maximum. In some areas, the Type 1 Soil may not be suitable to support shallow foundations due to its very low density. Where Soil Type No. 1 is sufficiently dense to support lightweight buildings, a minimum foundation contact pressure of 500 psf will be required in order to provide the structural load needed to resist the potential swell of this soil group from the existing natural water contents.

Soil Type No. 2 classified as a silty clay (CL-ML) of fine grain size. Like Soil Type No. 1, Soil Type No. 2 is of moderate plasticity and water content and of low density. These soils have a tendency to expand

upon the addition of moisture with swell pressures on the order of 1720 psf being considered typical. While this magnitude of expansion should not be sufficient to affect the heavy structural members of the building, it can cause some movement beneath light structural members and floor slabs on grade. These soils will have a distinct tendency to long-term consolidate under applied foundation pressures. However, if the allowable bearing values given are not exceeded, we feel that differential movement would be tolerable. This soil group was found to have allowable maximum and minimum pressures of the same general order as those for Soil Type No. 1.

Soil Type No. 3 classified as a silty clay (CL) of fine grain size. Soil Type No. 3 is typical of the formational shale which underlies the site and serves as bedrock in the area. Soil Type No. 3 is plastic, of very low permeability and of high to very high density. The shales are expansive in nature with swell pressures on the order of 1230 psf being measured. Should drilled piers be used for the building, the expansive nature of the fine grained bedrock must be given consideration. Owing to its initial high density condition, these soils would have virtually no tendency to long-term consolidate. At a penetration of 5 to 10 feet into the shale layer, tip bearing capacities

on the order of 15,000 psf could be achieved. At shallow foundation depths in some locations, Soil Type No. 3 could develop maximum allowable bearing pressures varying from 3000 to 6000 psf. A minimum contact pressure of 1300 psf must be provided in order to resist the potential swell of the shale under either shallow or deep foundations. Soil Type No. 3 was found to contain sulfates in detrimental quantities.

Free water was found in the majority of the test borings placed on the site. The depth to this free water table varied from 11 to 17 feet below the existing grade over the site. Each building site should be investigated to determine the depth to free water, if any, prior to planning basements on the sites.

It is felt that rather than being a true free water surface, the moisture encountered was actually perched above the formational shale materials and was traveling through the fractures in the weathered zone. This is substantiated by the fact that moisture was noted in the fractures of the weathered shale. Due to the seepage encountered in this weathered shale zone, as well as the potential for seepage in the overlying materials, subsurface peripheral drains around the structures are strongly recommended. Additionally, water may be encountered during construction,

especially in deeper excavations and dewatering techniques may be necessary. It is felt that the quantities of water to be anticipated can be handled by sump pits and pumps during construction.

CONCLUSIONS AND RECOMMENDATIONS:

Since the exact magnitude and nature of the foundation loads are not precisely known at the present time, the following recommendations must be somewhat general in nature. Any special loads or unusual design conditions should be reported to Lincoln-DeVore so that changes in these recommendations may be made, if necessary. However, based upon our analysis of the soil conditions and project characteristics previously outlined, the following recommendations are made.

At the present time, it is difficult, to establish the exact maximum and minimum allowable design parameters for each residential lot across the subdivision. As noted earlier, the foundation soils are somewhat variable in terms of their classification and engineering characteristics. The engineering properties given in this report were based upon those soil materials encountered in our subsurface exploration program. While it is unlikely that drastically different soil types will be encountered during excavation for foundations, the possibility exists that intermediate variations between several of the soil types outlined here could be encountered.

It must, therefore, be recommended that the open foundation excavation be inspected prior to the placing of forms to establish the appropriate design parameters for each individual building lot. Further exploration on a lot to lot basis may be warranted. At the time of inspection or further investigation, the maximum and minimum bearing values can be established and recommendations made as to the suitable foundation type for that particular lot. Also, this inspection will ensure that no debris, soft spots, or areas of unusually low density are located within the foundation region. Any changes in the recommendations included in this report can easily be made at the time of such inspection.

The subsurface soils encountered at this site include low density silty clay and high density shale with engineering properties as discussed in the previous section of this report. Due to the varying depths of low and high density soils, several possible foundation configurations are considered feasible. These alternatives could include, but not be limited to, the following foundation options designed with the scope of allowable pressures discussed earlier in this report.

1) The first option would consist of the engineered no footing design, with the stem wall resting

directly on the ground surface. The judicious use of voids would be employed to balance the structure and to increase the contact stresses beneath any very light walls. For most moderately loaded foundation systems, this voided stem wall design would probably prove satisfactory considering the magnitude of expansion pressures encountered across the subdivision, and the anticipated foundation loads for these dwelling units. Most shallow foundations bearing on the upper (weathered zone) portion of the shale are likely to be of this type.

2) The second option would consist of a conventional shallow foundation system using continuous footings under walls and isolated spread footings under points of concentrated load. The above described "no footing" system is a variation of this type in which the footing size has, in effect, been decreased to the same width as the stem wall it supports. The conventional footing system would be used for light to moderate weight structures on low expansivity, low density silty clay at this site.

3) The third option would consist of a drilled pier and grade beam system. The expansive clays do have side frictional effects which must be taken into account when designing the drilled piers. The diameter and length of the pier must be balanced so that the appropriate load carrying capacity is developed while maintaining enough minimum pressure to prevent upward movement of the piers as a result of expansive action. The grade beam would span from pier to pier and be continually voided between these bearing points.

4) The fourth foundation configuration would essentially be a combination of one of the preceding alternatives in conjunction with an overexcavated, compacted, granular pad. The depth of overexcavation would be related to the expansion potential of the clays as well as the nature of the residential units. Typical depths of overexcavation should

range from about 3 to 10 feet. After over-excavation, a compacted granular pad using non-expansive, non-free draining soils could be constructed, maintaining a minimum of 90% of the soil's modified maximum Proctor dry density, ASTM D-1557. The purpose of this compacted pad is not to entirely overcome the expansive potential of the clays, but rather to provide a "buffer" zone between the clays and the foundations. A designed foundation system, similar to one of the preceding alternatives, would then be constructed on top of the granular pad. Frequent density tests would be required during pad construction to ensure that an adequate density level is being maintained. This option would also be used if any areas of uncontrolled fill are encountered during the excavation process.

Again, we must stress that the selection and use of any of the above recommended foundation types must depend upon site specific investigations at each building location. Specific construction plans of the building must also be used in selecting and designing the foundations.

Where shallow foundation systems are used, it is recommended that they be well balanced and heavily reinforced. Contact stresses beneath exterior foundation walls should be balanced to within $\pm$300 psf at all points. Isolated interior column footings should be designed for unit loads of about 150 psf more than the average of those selected for the exterior walls. The criteria for balancing will depend somewhat upon the nature of the structure.

Single-story, slab on grade structures may be balanced on the basis of dead load only. Multi-story structures should be balanced on the basis of dead load plus approximately one-half the live load.

Stem walls for a shallow foundation system should be designed as a grade beam capable of spanning at least 15 feet. These "grade beams" should be horizontally reinforced both near the top and near the bottom. Major reinforcing should be approximately equally distributed between the top and bottom of the section. For shallow foundations on formational shale the major reinforcement should be located at the top. The horizontal reinforcement required should be placed continuously around the structure with no gaps or breaks unless specially designed. Additional slant reinforcing (at 45^{o}) should be placed at any step in the foundation walls. Vertical reinforcing will not be required to resist lateral pressures unless the loaded wall exceeds 15 feet in height.

Where the stem walls are relatively shallow, vertical reinforcing will probably not be necessary. However, where the walls retain soil in excess of about 5 feet in height, vertical reinforcing may be necessary to resist the active pressure of the soils along the wall exterior.

To aid in designing such vertical reinforcing, the following equivalent fluid pressures can be utilized:

> 40 pcf for basement wall backfill consisting of a minimum 2 foot width of coarse, well draining sand and gravel.

It should be noted that the above values should be modified to take into account any surcharge loads applied at the top of the walls as a result of stored goods, live loads on the floor, machinery, or any other externally applied forces. The above equivalent fluid pressures should also be modified for the effects of any free water table.

A reinforced concrete grade beam is recommended to carry the exterior wall loads in conjunction with the aforementioned deep foundation alternatives. This grade beam should be designed to extend from bearing point to bearing point and should not be allowed to rest upon the ground surface between these two points. In the case of very long spans (25-foot or greater), the grade beam could be designed to only span half the distance between the bearing points with some load transfer being allowed mid-span. In all cases, the grade beam should be horizontally reinforced continuously around the structure with no gaps or breaks in the reinforcing steel unless they are specially designed.

Beams should be reinforced at both the top and the bottom with major reinforcement in all cases being placed in the bottom of the structure.

The bottom of all foundation components should rest a minimum of 1½ feet below finished grade or as required by the local building codes. Foundation components must not be placed on frozen soils.

Where floor slabs are used, they may be placed directly on grade or over a compacted gravel blanket of 4 to 6 inches in thickness. Under no circumstances should this gravel pad be allowed to act as a water trap beneath the floor slab. A vapor barrier is recommended beneath any and all floor slabs on grade which will lie below the finished exterior ground surface. All fill placed beneath the interior floor slabs must be compacted to at least 90% of its maximum Proctor dry density, ASTM D-698.

All floor slabs on grade must be constructed to act independently of the other structural portions of the building. These floor slabs should contain deep construction or contraction joints to facilitate even breakage and to help minimize any unsightly cracking which could result from differential movement. Floor slabs on grade should be placed in sections no greater than 25 feet on a side. Prior to constructing slabs on grade, all existing

topsoil and organics must be removed from the building interior. Likewise, all foundations must penetrate the topsoil layer.

Any interior, non-load bearing partitions which will be constructed to rest on the floor slab should be constructed with a minimum space of 1½ inches at either the top or bottom of the wall. The bottom of the wall would be the preferred location for this space. This space will allow for any future potential expansion of the subgrade soils and will prevent damage to the wall and/or roof section above which could be caused by this movement.

Adequate drainage must be provided in the foundation area both during and after construction to prevent the ponding of water. The ground surface around the building should be graded so that surface water will be carried quickly away from the structure. The minimum gradient within 10 feet of the building will depend upon surface landscaping. Bare or paved areas should maintain a minimum gradient of 2%, while landscaped areas should maintain a minimum gradinet of 5%. Roof drains must be carried across all backfilled areas and discharged well away from the structure.

The existing drainage in the area must either be maintained or improved. Water should be

drained away from the structures as rapidly as possible and should not be allowed to stand or pond in the area of the buildings. The surface drainage across the entire subdivision must be carefully controlled to prevent infiltration and saturation of the foundation soils. All backfill around the buildings should be compacted to a minimum of 90% of its maximum Proctor dry dentisy, ASTM D-698. Roof drains must be carried across all backfilled regions and discharged well away from the structure.

A subsurface peripheral drain, including an adequate gravel collector, sand filter and perforated drain pipe, should be constructed around the outside of the building at foundation level. Dry wells should not be used anywhere on this site. The discharge pipe should be given a free gravity outlet to the ground surface. If "daylight" is not available, a sealed sump and pump should be used.

The amount of structural fill transported to the site during construction, either for purposes of site grading or to raise the interior floor slabs to their desired design elevation, should be kept to a minimum. The surcharge applied by the structural fill could consolidate the soft, fine grained soils previously described.

Obviously, if the underlying soils consolidate as a result of this applied surcharge, some structural movement would follow.

Due to the soft, wet condition of the soil materials encountered, construction of basements may be difficult and dewatering techniques may be necessary during construction. Additionally, problems with basement foundations may be encountered during periods of strong seepage due to uplift against the foundation and the possibility of seepage into the basement. While we would not entirely recommend against the construction of basements on this site, it is strongly recommended that basement or half basement foundations be well sealed and that they be provided with the peripheral drains and underslab drainage layers described in this report. It is extremely important that the subsurface drains be properly installed and in good working order.

A specimen of the typical subgrade has been tested using the Hveem-Carmany procedure to determine its support characteristics for pavement design purposes. The following Hveem-Carmany data resulted from the tests:

R = 10
Average Displacement @ psi = 4.87
Average Expansion Pressure @ psi = 11

A displacement in excess of 4.50 indicates that these soils are unstable unless confined. If

you so desire, we would be pleased to further assist you by designing concrete pavement sections for the traffic loads you expect in this subdivision.

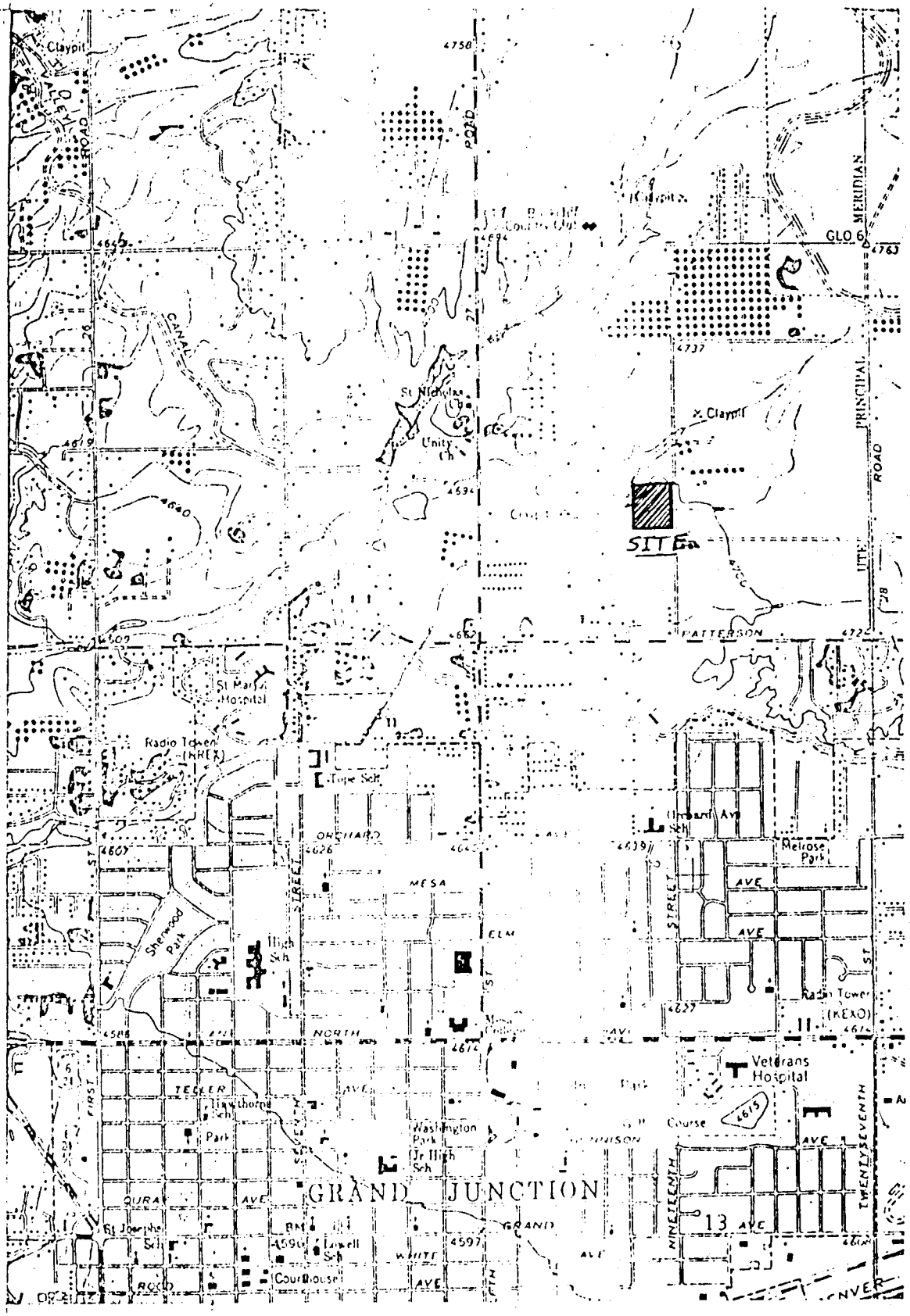
No major difficulties in excavation are expected in the low density surficial soils or severely weathered shale. Where construction extends into less severely weathered shale, some ripping may be necessary to excavate basements and/or foundations at isolated locations.

The soils on this site were found to contain sulfates in detrimental quantities. Therefore, a Type II Cement would be recommended in all concrete in contact with the soil. Under no circumstances should calcium chloride ever be added to a Type II Cement. In the event that Type II Cement is difficult to obtain, a Type I Cement may be used, but only if it is protected from the soils by an impermeable membrane.

The open foundation excavation must be inspected prior to the placing of forms and pouring of concrete to establish that adequate design bearing materials have been reached and that no debris, soft spots or areas of unusually low density are located within the foundation region. All fill placed below the foundations must be fully controlled and tested to ensure that adequate densification has occurred.

It is extremely important due to the nature of data obtained by the random sampling of such a heterogeneous material as soil that we be informed of any changes in the subsurface conditions observed during construction from those outlined in the body of this report. Construction personnel should be made familiar with the contents of this report and instructed to relate any differences immediately if encountered.

It is believed that all pertinent points concerning the subsurface soils on this site have been covered in this report. If questions arise or further information is required, please feel free to contact Lincoln-DeVore at any time.



LDTL #40646 J

LINCOLN | COLORADO: COLORADO SPRINGS, PUEBLO, GLENWOOD SPRINGS

SOILS DESCRIPTIONS:

SYMBOL	USCS	DESCRIPTION
		Topsoil
		Man-made Fill
	GW	Well-graded Gravel
	GP	Poorly-graded Gravel
	GM	Silty Gravel
	GC	Clayey Gravel
	SW	Well-graded Sand
	SP	Poorly-graded Sand
	SM	Silty Sand
	SC	Clayey Sand
	ML	Low-plasticity Silt
	CL	Low-plasticity Clay
	OL	Low-plasticity Organic Silt and Clay
	MH	High-plasticity Silt
	CH	High-plasticity Clay
	OH	High-plasticity Organic Clay
	Pt	Peat
	GW/GM	Well-graded Gravel, Silty
	GW/GC	Well-graded Gravel, Clayey
	GP/GM	Poorly-graded Gravel, Silty
	GP/GC	Poorly-graded Gravel, Clayey
	GM/GC	Silty Gravel, Clayey
	GC/GM	Clayey Gravel, Silty
	SW/SM	Well-graded Sand, Silty
	SW/SC	Well-graded Sand, Clayey
	SP/SM	Poorly-graded Sand, Silty
	SP/SC	Poorly-graded Sand, Clayey
	SM/SC	Silty Sand, Clayey
	SC/SM	Clayey Sand, Silty
	CL/ML	Silty Clay

ROCK DESCRIPTIONS:

SYMBOL	DESCRIPTION
	SEDIMENTARY ROCKS
	CONGLOMERATE
	SANDSTONE
	SILTSTONE
	SHALE
x x x x x x	CLAYSTONE
	COAL
	LIMESTONE
	DOLOMITE
	MARLSTONE
	GYPSUM
	Other Sedimentary Rocks
	IGNEOUS ROCKS
	GRANITIC ROCKS
+ + + + + +	DIORITIC ROCKS
	GABBRO
	RHYOLITE
	ANDESITE
	BASALT
	TUFF & ASH FLOWS
	BRECCIA & Other Volcanics
	Other Igneous Rocks
	METAMORPHIC ROCKS
	GNEISS
	SCHIST
	PHYLLITE
	SLATE
	METAQUARTZITE
	MARBLE
	HORNFELS
	SERPENTINE
	Other Metamorphic Rocks

SYMBOLS & NOTES:

SYMBOL	DESCRIPTION
	9/12 Standard penetration drive Numbers indicate 9 blows to drive the spoon 12" into ground.
	ST 2-1/2" Shelby thin wall sample
	W_o Natural Moisture Content
	W_x Weathered Material
Free water	Free water table
	γ^o Natural dry density
	T.B. – Disturbed Bulk Sample
	② Soil type related to samples in report
15' W_x / Form.	Top of formation
	Test Boring Location
	Test Pit Location
	Seismic or Resistivity Station. Lineation indicates approx. length & orientation of spread (S = Seismic, R = Resistivity)

Standard Penetration Drives are made by driving a standard 1.4" split spoon sampler into the ground by dropping a 140 lb. weight 30". ASTM test des. D-1586.

Samples may be bulk, standard split spoon (both disturbed) or 2-1/2" I.D. thin wall ("undisturbed") Shelby tube samples. See log for type.

The boring logs show subsurface conditions at the dates and locations shown, and it is not warranted that they are representative of subsurface conditions at other locations and times.

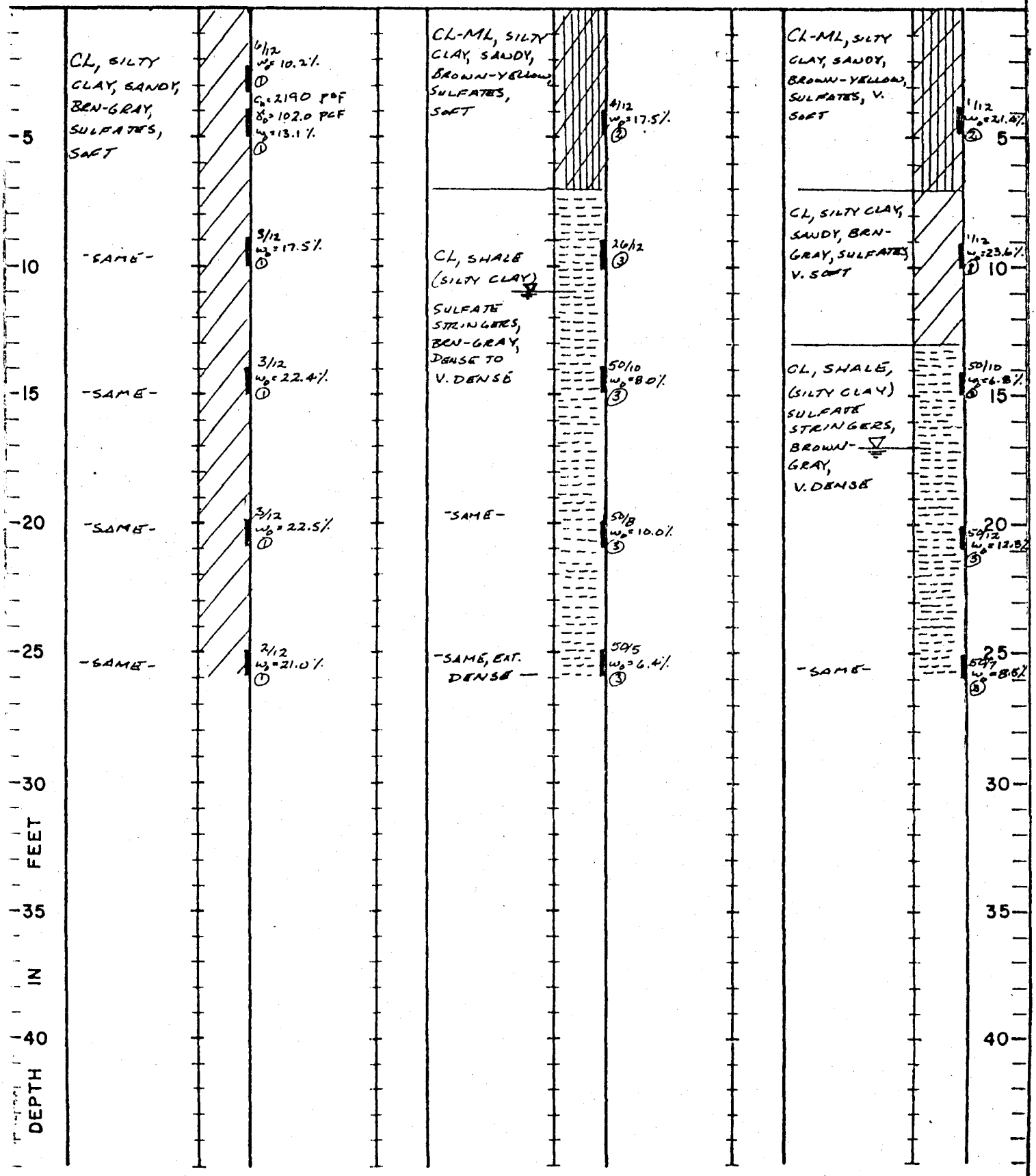
LINCOLN DeVORE TESTING LABORATORY

COLORADO: Colorado Springs, Pueblo, Glenwood Springs, Montrose, Gunnison, Grand Junction. – WYO. – Rock Springs

EXPLANATION OF BOREHOLE LOGS AND LOCATION DIAGRAMS

TEST HOLE NO. 1 2 3

TOP ELEVATION



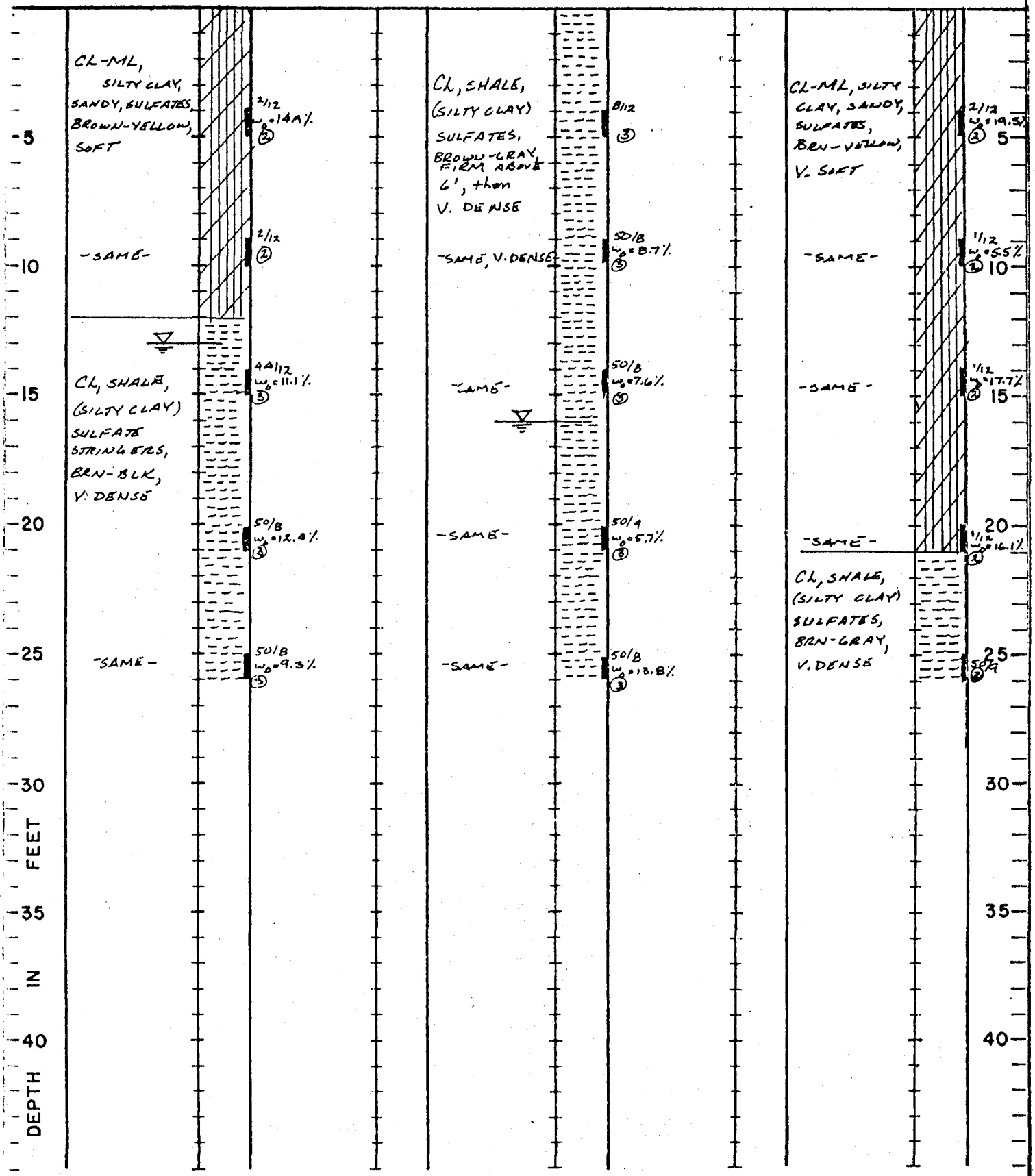
DRILLING LOGS

LINCOLN DeVORE ENGINEERS

COLORADO: COLORADO SPRINGS, PUEBLO, GLENWOOD SPRINGS, GRAND JUNCTION, MONTROSE

TEST HOLE NO. 4 5 6

TOP ELEVATION



DRILLING LOGS

LINCOLN DeVORE ENGINEERS

COLORADO: COLORADO SPRINGS, PUEBLO, GLENWOOD SPRINGS, GRAND JUNCTION, MONTROSE

SUMMARY SHEET

Soil Sample CL

Test No. 40646 J

Location Crestview Townhomes - Gv. Jct., CO

Date 8-3-81

Boring No. _____ Depth _____

Sample No. 1

Test by ADD

Natural Water Content (w) _____ %

Specific Gravity (Gs) _____

In Place Density (γ_o) _____ pcf

SIEVE ANALYSIS:

Sieve No.	% Passing
1 1/2"	
1"	
3/4"	
1/2"	
4	
10	100.0
20	99.8
40	99.6
100	97.3
200	87.6

HYDROMETER ANALYSIS:

Grain size (mm)	%
0.02	47.8
0.005	25.9

Plastic Limit P.L. 16.5 %

Liquid Limit L. L. 23.6 %

Plasticity Index P.I. 7.1 %

Shrinkage Limit _____ %

Flow Index _____

Shrinkage Ratio _____ %

Volumetric Change _____ %

Lineal Shrinkage _____ %

MOISTURE DENSITY: ASTM METHOD

Optimum Moisture Content _____ %

Maximum Dry Density - γ_d _____ pcf

California Bearing Ratio (av) _____ %

Swell: _____ Days _____ %

Swell against 980 psf Wo gain 13.5 %

BEARING:

Housel Penetrometer (av) _____ psf

Unconfined Compression (qu) _____ psf

Plate Bearing: _____ psf

Inches Settlement _____

Consolidation % under psf

PERMEABILITY:

K (at 20°C) _____

Void Ratio _____

Sulfates ppm.

SOIL ANALYSIS

LINCOLN-DeVORE TESTING LABORATORY
COLORADO SPRINGS, COLORADO

SUMMARY SHEET

Soil Sample CL-ML

Test No. 40646 J

Location CRESTVIEW TOWNHOMES - GD. JCT., CO

Date 8-3-81

Boring No. _____ Depth _____

Sample No. 2

Test by ADD

Natural Water Content (w) _____ %

Specific Gravity (Gs) _____

In Place Density (γ_o) _____ pcf

SIEVE ANALYSIS:

Sieve No.	% Passing
1 1/2"	
1"	
3/4"	
1/2"	
4	100.0
10	99.6
20	98.8
40	96.8
100	90.9
200	82.6

HYDROMETER ANALYSIS:

Grain size (mm)	%
0.02	42.6
0.005	23.2

Plastic Limit P.L. 19.0 %

Liquid Limit L. L. 25.9 %

Plasticity Index P.I. 6.9 %

Shrinkage Limit _____ %

Flow Index _____

Shrinkage Ratio _____ %

Volumetric Change _____ %

Lineal Shrinkage _____ %

MOISTURE DENSITY: ASTM METHOD

Optimum Moisture Content _____ %

Maximum Dry Density - γ_d _____ pcf

California Bearing Ratio (av) _____ %

Swell: _____ Days _____ %

Swell against 1720 psf Wo gain 10.6 %

BEARING:

Housel Penetrometer (av) _____ psf

Unconfined Compression (qu) _____ psf

Plate Bearing: _____ psf

Inches Settlement _____

Consolidation _____ % under _____ psf

PERMEABILITY:

K (at 20°C) _____

Void Ratio _____

Sulfates _____ ppm.

SOIL ANALYSIS

LINCOLN-DeVORE TESTING LABORATORY
COLORADO SPRINGS, COLORADO

SUMMARY SHEET

Soil Sample SHALE - CL

Test No. 40646 J

Location CRESTVIEW TOWNHOMES - GD. JCT., CO

Date 8-3-81

Boring No. _____ Depth _____

Sample No. 3

Test by ADD

Natural Water Content (w) _____ %

Specific Gravity (Gs) _____

In Place Density (γ_o) _____ pcf

SIEVE ANALYSIS:

Sieve No.	% Passing
1 1/2"	
1"	
3/4"	
1/2"	
4	
10	100.0
20	99.9
40	98.1
100	95.5
200	92.8

HYDROMETER ANALYSIS:

Grain size (mm)	%
0.02	56.9
0.005	29.4

Plastic Limit P.L. 19.6 %

Liquid Limit L. L. 35.4 %

Plasticity Index P.I. 15.8 %

Shrinkage Limit _____ %

Flow Index _____

Shrinkage Ratio _____ %

Volumetric Change _____ %

Lineal Shrinkage _____ %

MOISTURE DENSITY: ASTM METHOD

Optimum Moisture Content w_o _____ %

Maximum Dry Density - γ_d _____ pcf

California Bearing Ratio (av) _____ %

Swell: _____ Days _____ %

Swell against 1230 psf Wo gain 17.1 %

BEARING:

Housel Penetrometer (av) _____ psf

Unconfined Compression (qu) _____ psf

Plate Bearing: _____ psf

Inches Settlement _____

Consolidation % under psf

PERMEABILITY:

K (at 20°C) _____

Void Ratio _____

Sulfates ppm.

SOIL ANALYSIS

LINCOLN-DeVORE TESTING LABORATORY
COLORADO SPRINGS, COLORADO

RAVOLA LOAM, 0 to 2 percent slopes, Class I Land (Re)

This soil occupies relatively broad alluvial fans and flood plains along streams. It is at a slightly higher elevation than the bordering areas of Billings silty clay loam soils. It has developed in an alluvial deposit derived largely from Mancos shale and to lesser extent from the fine-grained sandstone of the Mesaverde formation. The soil is very similar to Ravola very fine sandy loam, 0 to 2 percent slopes, but it contains less very fine sand and a definitely larger amount of silt. In a number of small areas the texture approaches, or may be, a silt loam. From the Ravola clay loam soils, this soil differs in being coarser textured and not so gritty.

The 10- or 12-inch surface layer consists of light brownish-gray to pale-yellow, calcareous, heavy loam. The subsoil, similar to the surface soil in color, invariably contains a higher percentage of silt than the subsoil of the Ravola very fine sandy loams. Differences among the thin alluvial layers in the subsoil are almost imperceptible to depths of 3 to 4 feet. At depths greater than this, however, 1- to 3-inch layers of either silt or very fine sandy loam commonly occur among the more numerous layers of loam.

All areas of this soil have a friable and moderately permeable profile suitable for production of shallow- and deep-rooted crops. Surface runoff is slow and internal drainage is medium. Well-disseminated lime is present throughout the profile. A few saline areas have developed because of local inadequate drainage and excessive use of irrigation water. The tilth is good in spite of the generally low organic-matter content.

No severe soil limitations exist for this soil type.

BILLINGS SILTY CLAY LOAM, 0 to 2 percent slopes, Class IIs Land (Bc)

This soil, locally called adobe, is one of the most important and extensive in the Grand Valley. It is derived from deep alluvial deposits that came mainly from Mancos shale but in a few places from fine-grained sandstone materials. The deposits ordinarily range from 4 to 40 feet deep but in places exceed 40 feet. The deposits have been built up from thin sediments brought in by the streams that have formed the coalescing alluvial fans or have been dropped by the broad washes that have no drainage channel. The thickest deposit, near Grand Junction, was built up by Indian Wash.

Although moderately fine textured, this Billings soil permits successful growth of deep-rooted crops such as alfalfa and tree fruits. Its permeability is normally not so favorable as that of the Mesa, Fruita, and Ravola soils. Its tilth and workability are fair, but it puddles so quickly when wet and bakes so hard when dry that good tilth can be maintained only by proper irrigation and special cultural practices. Runoff is slow and internal drainage is very slow.

Like all other soils in the area, this one has a low organic-matter content. Under natural conditions it contains a moderate concentration of salts derived from the parent rock (Mancos shale). In places, however, it contains so much salt that good yields cannot be used for crops. Generally, this soil is without visible lime, but it is calcareous. In many places small white flecks or indistinct light-colored streaks or seams indicate that lime, gypsum, or salts are present.

Soil limitations are classified as severe for local roads and streets (poor traffic-supporting capacity, moderate to high water tables common), shallow excavations (high water table common), and septic tank filter fields (slow permeability, poor internal drainage, seasonal high water table).

File Crest View

GEOLOGIC HAZARD INVESTIGATION

SCOPE

This report is the result of our geologic hazard investigation at the site of a proposed residential development. The purposes of this investigation were to find which, if any, of the geologic hazards named in H. B. 1041 are present at this site and to determine their effects on the proposed project. This investigation was made during November 1978.

LOCATION

The site under investigation is approximately two miles northeast of the center of Grand Junction. The location is southwest of the intersection of F-1/2 and 27-1/2 Roads in the northeast quarter of the southwest quarter (NE 1/4 SW 1/4) of Section 1, Township 1 South, Range 1 West of the Ute Meridian.

TOPOGRAPHY

The site varies considerably in topography. Portions are nearly flat; however, the topography is broken by a drainage channel and low ridges on either side. These slopes are from 5 to 10 percent. The general slope is to the southwest.

GEOLOGY

The surface geology consists of a thin mantle of Fruita and Ravola sandy loams over most of the site. These soils have developed over the Mancos Shale which is the bedrock in this location. The Billings clay is reported by the Soil Conservation Service to occur in the southwest corner of the site. No outcroppings of the Mancos Shale occur within the site.

GEOLOGIC HAZARDS

A geologic hazard is defined in H. B. 1041 as "a geologic phenomenon which is so adverse to past, current, or foreseeable construction or land use as to constitute a significant hazard to public health and safety or to property." Several of the specific hazards listed in H. B. 1041 are not applicable to this location because of its gentle topography.

A. Seismic Activity -- All of Colorado is in Seismic Risk Zone 1 (Minor Damage). There is no evidence or history of seismic activity in this vicinity.

B. Expansive Soil and Rock -- The volumetric expansion of "swelling clays" is usually a result of increasing the water content of the clay. If the water content remains uniform, no expansion or shrinkage will occur. The

#92-81

Billings clay frequently exhibits this characteristic in the Grand Junction area. The Mancos Shale which is bedrock in the area also exhibits this characteristic at some locations.

If foundations are properly designed and if site drainage reflects the condition, potential damage can be avoided.

C. High Water Table -- Test holes have indicated that the water table elevation at the southwest part of the site is at a depth of 3 to 5 feet. Construction of utilities at or below the water table depth will be difficult and costly. Construction of buildings and/or foundations near or below the water table depth will require special construction.

CONCLUSIONS

A. The geology of the site is a relatively thin mantle of sandy clay soils over the Mancos Shale.

B. The clays on the site have considerable potential to be expansive. This possibility should be investigated by a detailed soils investigation and laboratory analysis of the soils. The design of foundations for building should follow the recommendations of a competent soils engineer.

C. Portions of the site have a high water table. The effects of this condition should also be investigated by a complete subsurface soils study of the site. The design of foundations should reflect the recommendations of a competent soils engineer. This condition may also be corrected by adding fill to the areas where the water table is high. Consideration of surface and subsurface drainage will be required if filling is desired.

D. If the site is carefully studied by a detailed subsurface soils investigation and the construction is designed following the recommendations of a competent soils engineer, the site can be developed for use as residential homesites.

Respectfully submitted,

Gordon W. Bruchner

Gordon W. Bruchner
Professional Geologist

November 17, 1978

#9281

CITY OF GRAND JUNCTION IMPROVEMENTS AGREEMENT

In re: Hawthorn Place at Crest View North of F & 27½ Road W of Spring Valley Filing No. 4
name of subdivision or other improvement *location*

Intending to be legally bound, the undersigned subdivider hereby agrees to provide throughout this subdivision and as shown on the subdivision plat of

Hawthorn Place at Crest View, dated _____, 19____, the
name of subdivision

following improvements to City of Grand Junction standards.

Improvements	*Unit or Description*	*Total Cost*	*Completion Date*
Street grading			
Street base	4,925 SY @ 10 SY	49,250	1988
Street paving			
Curbs			
Sidewalks	2955 LF @ 8:00	23,640	"
Storm sewer facilities	325 LF of 18" RCP & 3 Inlets	10,000	"
Sanitary sewers	3585 LF & 25 MH		
Trunk lines	10 LF @ 750 each	54,600	"
Mains			
Laterals or House Connections	25 blds @ 200 each	5,000	"
Water mains	4800 LF Inc Valves & Fittings @12.00 LF	57,600	"
On-site water supply			
Fire hydrants	11 each @ 1200	13,200	"
Monuments	NA		
Street lights	NA		
Street name signs	6 @ 100	600	"
Survey monuments boxes			
SUB TOTAL		213,890	

Supervision of all installations
(should normally not exceed 4% of subtotal $8,000.00

TOTAL ESTIMATED COST OF IMPROVEMENTS AND SUPERVISION $ 221,890.00

The above improvements shall be constructed in accordance with all requirements and specifications, and conformance with this provision shall be determined solely by the below-named City or its duly authorized agent.

The improvements shall be constructed in accordance with the time schedules shown above.

_____
signature of subdivider

(If corporation, to be signed by President and attested to by Secretary, together with the corporate seal.)

Dated: _____, 19 _____.

ACCEPTANCE

Approved by City Engineer Date _____, 19 _____

_____
City Engineer

F

REVIEW SHEET SUMMARY

FILE NO. 92-81 DUE DATE 10/15/81

ACTIVITY Crestview Townhomes III & Revised Final Plan Crestview I

PHASE Preliminary Plan ACRES

LOCATION NW. of F¼ Rd. & 27½ Rd.

PETITIONER Towne Prop. Ltd., c/o Todd Deutsh

PETITIONER ADDRESS 2261 Francis Lane, Cincinnati, O. 45206

ENGINEER Paragon Engineering, Inc.

OVERALL CONSIDERATIONS

☐ ☐ **OVERALL COMPATABILITY**

☐ ☐ **CONSISTENCY**

The area is surrounded by Multi-family development.

☐ ☐ **ADJACENT PROPERTY**

☐ ☐ **CHANGE IN THE AREA**

This area is in transition due to previous multi-family approval.

☐ ☐ **TRAFFIC IMPACT**

Will impact 27½ Road and Patterson Rd.

HAS BEEN ADDRESSED HAS NOT BEEN ADDRESSED

DATE REC.	AGENCY	COMMENTS
10/7/81	Ute Water	Eight inch water lines exist at the intersection of 27½ Rd. and Hawthorne, 27½ Rd. & Ridge Dr., and in 15th St. where Hawthorne would intersect. The anticipated high fire flow requirements for a multi-family housing development of this nature may require that all three of the above mentioned water mains be interconnected. In any event, the development would be required to install 8" diameter water mains in 27½ Rd. from Hawthorne, North to a point equal the N.E. property corner, and in Hawthorne (F¼ line) West to a point equal the S.W. property corner. Lines would be AC Class 150 pipe, installed within the North and East 1/2 of dedicated road ROW. Policies and fees in effect at the time of application would apply.
10/8/81	Transportation Engineer	Entrance to the parking area on the N.W. corner of Hawthorne & 27½ Rd. is too close to the intersection. Access point to the parking area just east of the "dedicated 30' R.O.W." should be closed. The "22' Private Drive" is too close to the intersection of 27½ Rd. and the "Proposed Dedicated R.O.W.", North of the exist single family unit.
10/13/81	City Fire Dept.	The requirements for this type development calls for hydrant spacing of 300' on 8" main. This office requires the addition of 1 additional fire hydrant, for a total of 8 hydrants. They must be on an 8" main. Supply lines must be a minimum of 8". The 4" main on 27½ Rd. must be up graded to 8". Contact Ute Water to see what size mains are in the area. Fire hydrants must be in place before construction begins.

DATE REC.	AGENCY	COMMENTS
	City Fire Dept. Continued	For further information contact Fire Dept. 242-2900 Additional hydrant to be placed off Hawthorne Ave. Street between lots A_3 and C.
10/14/81	Mountain Bell	We will need easements as shown in red on plat. Mountain Bell will utilize street easements, joint easements with power where possible and open area if accessable, for additional easements. We may need additional easements, as plans are further developed.
10/15/81	City Parks & Rec.	No comment.
10/15/81	City Police Dept.	Need additional information on security lighting and any security devices.
10/15/81	Staff Comments SIC	1) Adequate for ODP submittal, Preliminary requires more detail. 2) Landscaping needs to be detailed. 3) Setback of principal structures need to be indicated on plan (i.e. rear - side and front). 4) As per Sec. 5-4-6 public park land needs to be worked out with Ken Idlemen - City Park and Recreation Directo 5) Amenities for the over all plan needs to be detailed. 6) How will open space be maintained and who will be responsible for the up keep? 7) Signage needs to be detailed. 8) POA needs to be provided for 27½ Rd. 9) Screening needs to be detailed. 10) The propose dedicated R.O.W. needs to be dimensioned and a name applied. 11) Elevation dimensions needed. 12) Trash pick-up needs to be coordinated with Bill Reeves. 13) Covenants for Crestview III? (Will they apply to existing house). 14) Will guest parking be designated? 15) Drainage needs to be approved prior tc final submittal. 16) Will existing gravel drive be kept open? If so, What is to prevent cars from utilizing that area and roadway? 17) All concerns of T.E. same for staff. Project must obtain building permit within 1 year of final approval or be scheduled for a rehearing.
10/16/81	City Engineer Late	Subdivision Improvements Agreement is not in City format. New agreement should be submitted. Surface soils apparentl are soft with high ground water according to their geology and soils report. Sanitary sewer layout looks OK. 20 ft. wide easements will be needed on all sanitary sewers outside of dedicated streets. Dedicated streets right-of-way and proposed improvements look OK except that 10 ft. radii are needed at all street corners and I do not understand why that 30 ft. dedication north from Hawthorne is proposed nor what improvements are proposed in it. Who will be responsible for maintaining the "waterscapes"? The developer should construct the sanitary sewer to the existing line in 15th Street and should furnish 20 ft. easements for any portions not in dedicated right-of-way. A temporary cul-de-sac will probably be needed at the west end of Hawthorne unless it is improved through to 15th Street. The two common driveway entrances from Hawthorne and the court next to 27½ Road are too close to 27½ Road and should be moved westerly. How will the storm runoff from Hawthorne at the west end be handled? Power of attorney for full street improvements on 27½ Road should be obtained.
10/16/81	Grand Valley Water User's Assoc. Late	So far as the Grand Valley Water User's Assoc. is concernec there are at least 2 problems to be resolved regarding this development: 1) One of the Assoc.'s irrigation laterals has existed for 60 plus years at or near the south boundary of this property and its modification and/or relocation to provide for a street as proposed, will have to be acceptable to the Assoc., 2) The existing drainage ditch

DATE REC.	AGENCY	COMMENTS
	Continued Grand Valley Water Users' Assoc.	should be tiled throughout the property to do the best job and enhance the development, but in the event some of the ditch is left open, it will be necessary to leave at least 50' (not 30') of right-of-way for its future operatio and maintenance. All plans for tiling or piping the existing drain ditch must be approved by the Assoc. Also, it should be noted if it is not already known, that the developers must not interfere with Ulibarris' historica ability to receive irrigation water.
10/19/81	Public Service Late	Electric & Gas: No objections to "Preliminary Plan"; developer to consider front or side utility points of service A/C "Waterscaping" & access. Utility easements to be determined later. Request developer contact PSCo. to discuss. THI 10-6-81 CB 10-8-81
10/27/81		TRANSMEIER/RINKER PASSED 5-0 A MOTION TO SUBMIT #92-81, CRESTVIEW TOWNHOMES III, PRELIMINARY PLAN, TOWNE PROPERTIES, LTD, PETITIONER, LOCATED AT THE NORTHWEST CORNER OF 27.5 ROAD AND F.25 ROAD, TO THE CITY COUNCIL FOR CONSIDERATION, WITH A RECOMMENDATION OF APPROVAL, WITH THE STIPULATION THAT THE STAFF COMMENTS BE RESOLVED BEFORE SUBMISSION TO CITY COUNCIL. TRANSMEIER/RINKER PASSED 5-0 A MOTION TO SUBMIT #92-81, REVISED FINAL PLAN, CRESTVIEW I, TOWNE PROPERTIES, LTD, PETITIONER, LOCATED AT THE NORTHWEST CORNER OF 27.5 ROAD AND F.25 ROAD, TO THE CITY COUNCIL FOR CONSIDERATION, WITH A RECOMMENDATION OF APPROVAL, WITH THE STIPULATION THAT THE STAFF COMMENTS BE RESOLVED BEFORE SUBMISSION TO CITY COUNCIL.
11/13/81	Transportation Engineer REVISED	The drive into the cabana should have provisions for a turn-around at the end
11/16/81	City Engineer REVISED	20 Ft. radii should be provided on all corners of streets rights-of-way. 20 ft. wide easements centered on the pipes should be provided along all sanitary and storm sewers outside of streets rights-of-way. A power-of-attorney should be provided for street improvements on 27½ Road or preferably the improvements constructed in accordance with my November 3, 1981, letter to Paragon Engineering concerning this matter. A subdivision improvements agreement in proper form should be submitted. A financial guarantee in accordance with Development Regulations Section 27-2.3 should be obtained for all public improvements. Detail construction plans for all public improvements should be submitted for my approval prior to construction. Hawthorne Avenue should have a gravel street thru to 27¼ Road (15th St.) or a 40 ft. radius gravel cul-de-sac. The gravel improvements and required rights-of-way should be provided by the petitioner. Who will maintain those "waterscapes"? The petitioner should construct the required sanitary sewer to 15th Street and provided necessary right-of-way.
	SIC	All other previous review comments except those aforementioned have been addressed on the plans received November 6, 1981.

October 27 1981

RESPONSE TO REVIEW SHEET COMMENTS

File No.: 92-81
Item: Crestview Townhomes III
Phase: Preliminary Development Plan
Location: NW of F½ Road and 27½ Road

Agency	Response
Ute Water	Ute water's comments were information in nature and will be incorporated with the preparation of the Final Development Plan.
Transportation Engineer	1) The entrances to the two private drives paralleling 27½ Road will be relocated further west along the adjacent dedicated roadways. 2) The south access point to the parking area just east of the dedicated 30' right-of-way will be closed. Access to the aforementioned parking will be from the proposed dedicated 30' right-of-way as shown.
City Fire Department	The Fire Department comments were informational in nature and will be incorporated with the submission of the Final Development Plan including the additional hydrant as requested.
Mountain Bell	All requested easements required by Mountain Bell will be provided on the Final Plat.
City Parks and Recreation	Had no comment.
City Police Department	Parking lot security lighting as well as walk lighting will be provided for throughout the entire Crestview III development.
City Engineer	1) A new subdivision improvements agreement and City format will be provided with the Final Plan and Plat. 2) A 20' wide easement will be provided on the submitted Final Plat for all sanitary sewers located outside of dedicated streets. 3) A 10' radius will be provided at all street corners.

City Engineer Continued	4) The proposed dedicated 30' right-of-way is provided as a dedicated right-of-way to the adjoining parcel to the North. Improvements planned within this 30' dedicated right-of-way include a 24' paved section with 2' vertical curb and gutter adjoining along each side.
	5) Maintenance of all waterscapes will become the responsibility of the Corporate Homeowners Association for Crestview III.
	6) A 20' wide utility easement will be provided to 15th Street for any portions of a proposed sanitary sewer not lying within dedicated right-of-way.
	7) The proposed private drive located at the westerly end of Hawthorn Avenue could service as a cul-de-sac. It is the petitioners understanding that the ultimate plan for Hawthorn Avenue including an extention to 15th Street as adjoining parcels develop.
	8) Streets - Please refer to Transportation Engineer response 1) above.
	9) Storm runoff at the west end of Hawthorn is minimal. It is proposed that this runoff will be carried in an impervious surface to 15th Street.
	10) A power of attorney for actual improvements to 27½ Road will be granted.
Grand Valley Water Users Association	1) Any modification to the Association irrigation lateral will be done in accordance to Association standards and specifications.
	2) Appropriate easement will be granted for the existing drainage ditch located along the northern portions of the development.
Public Service	Easements required by Public Service will be provided on the submitted Final Plat.
Staff Comments	1) Upon a detailed check of Preliminary Plan requirements, petitioner feels that the submitted Preliminary Development Plan complies in every respect.
	2) Detailed landscaping information will be submitted with the Final Development Plan

Staff Comments Continued

2) Continued .
in accordance with current requirements. The submitted Preliminary Development Plan indicates landscaped areas and a suggested list of trees and shrubs.

3) The submitted Preliminary Development Plan indicates that the principal structure setbacks vary throughout the site. Below are the typical minimum setbacks as shown on the plan:

Front 15' minimum - but varies
Side 15' minimum - 20' typical in most cases.
Rear varies

4) The petitioner will comply with Section 5-4-6 in respect to public park land.

5) Amenities for the overall plan will be detailed with submission of the Final Development Plan and Plat in accordance with staff wishes.

6) All open spaces as well as private roadways will be owned and maintained by the Corporate Homeowners Association for Crestview III.

7) Signage details will be submitted with the Final Development Plan.

8) A power of attorney for actual improvements will be provided for 27½ Road.

9) Screening will consist of landscaped buffers or wood fencing.

10) The proposed dedicated right-of-way will be constructed in accordance with current City standards for a court road and will be named with the submission of the Final Development Plan in accordance with City street naming standards.

11) The submitted Preliminary Development Plan includes a building elevation indicating that the structure will not exceed two stories in height.

12) Trash pickup needs will be coordinated with Bill Reeves.

Staff Comments Continued

13) Covenants for Crestview III will be incorporated for all residents within Crestview III except the existing single family structure.

14) Guest parking will be designated.

15) All drainage requirements will receive approval prior to final submittal.

16) The existing gravel drive will be kept open in order to provide access as currently utilized by the existing undeveloped parcels adjoining the site immediately to the west. Appropriate signage will be provided in order to discourage utilization of this private drive by individuals utilizing the proposed dedicated right-of-way for access.

17) Concerns of Transportation Engineer have been addressed in the body of this response.

OFF OOOOOOC OOOOOOOOOa tion sheet O

Acres 11.5
Units
Density

preliminary plan

File No. #92-81
Zone PR-8
Tax Parcel Number

Activity Crestview Townhomes III
Phase Prelim
Common Location N.W. Cor of 27½ Rd & F¼ Rd.

Date Submitted 10/1/81 Date Mailed Out 10/5/81 Date Posted 10/16/81 called 10/19
10 day Review Period Return by 10/15/81 MCC Information Sent
Date Adjacent Property Owners Notified of MCPC/GJPC Date Adjacent Property Owners Notitfied of MCC/CIC

review agencies

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG
● Development Dept.	•		•			•	•	•	•		•	•		•		•	•	•	•		•		•	•			•					•	
○ County Road	•		•			•		•	•					•			•										•						
○ County Health	•		•			•		•	•		•	•															•			•			
○ County Surveyor	•		•			•	•																				•						
○ County Parks/Recreation	•		•			•	•									•											•						
○ County Engineer	•		•			•	•		•	•			•		•		•										•						
● Transportation Engineer	•		•			•	•										•										•						
● City Engineer	•		•			•	•		•	•			•		•		•										•						
● City Utilities	•		•			•	•								•												•						
● City Parks/Recreation	•		•			•	•									•											•						
● City Police Dept.	•		•			•	•																				•						
○ County Sheriff	•		•			•	•																				•						
○ Floodplain Administration	•		•			•	•				•																•						
○ Comprehensive Planning	•		•			•	•																				•						
● G.J. Dept. of Energy	•		•			•	•																				•						
● Fire CITY	•		•			•	•												•								•			•			
● Irrigation Grand V.	•		•			•	•							•													•			•			
● Drainage G. Dist.	•		•			•	•				•			•													•			•			
● Water (Ute, Clifton)	•		•			•	•												•								•			•			
○ Sewer	•		•			•	•												•								•			•			
○ G.V. Rural Power	•		•			•	•																				•			•			
● Mountain Bell	•		•			•	•																				•			•			
● Public Service (2 sets)	•		•			•	•																				•			•			
○ Soil Conservation	•		•			•	•		•																		•						
○ State Highway Dept.	•		•			•	•	•	•					•			•										•						
○ State Geological	•		•			•	•	•	•					•													•						
○ State Health Dept.	•		•			•	•	•	•		•																•						
○ Transamerica	•		•			•	•														•			•			•						
○ Water & Power Resources	•		•			•	•																				•						
○ Mack, Mesa, Collbran, Palisade, Fruita, DeBeque, G.J., Mesa Cnty.	•		•			•	•									•	•										•						
● OTHER: 7 copies GJPC	•		•			X	X																				•			•			
● 7 copies CIC	•		•																											•			
○ Client																																	
totals																																	

BOARDS

	DATE	
GJPC	10/27/81	Appr subject to ~~staff~~ req's be resolved.
CC	11/18/81	Appr CR
GJPC	4/30/85	rec. for REVERSION

STAFF

Full fee will be paid @ submittal

Open Space Dedication (acreage) 5% O. S. Fee Required $ Paid Receipt #
Recording Fee Required $ Paid (Date) Date Recorded
Date Resolution Mailed

City
County
Development
Department OOOOOOOOOOOOOOOOOOOO

Received
11/17/81

November 17, 1981

RESPONSE TO REVIEW SHEET COMMENTS

File No: 92-81
Item: Hawthorn Place at Crestview
Phase: Preliminary Plan

Agency	Response
Transportation Engineer	The drive that extends to the cabana is in reality a parking lot. A back out return is being provided at the North end. As the cabana is not a club house, but just a storage area, it will not see much use except by the local residents. Therefore, a turn-around is not warranted.
City Engineer	1) 20' radi is being provided on all right-of-way corners. 2) 20' wide easements will be provided on all sewer and waterline lying outside road rights-of-way. 3) The petitioner plans to construct the improvements along 27½ Road. 4) A subdivision improvements agreement and financial guarantee will be provided. 5) Detailed construction plans will be provided for review and approval prior to construction. 6) Hawthorn Ave. will either be graveled through to 15th Street or have a 40' radius gravel cul-de-sac as requested. 7) The petitioner is endeavoring to obtain the necessary rights-of-way from Mesa County for offsite road and sewer improvements. 8) The waterscapes will be maintained by the Home Owners Association.

October 27, 1981

RESPONSE TO REVIEW SHEET COMMENTS

RECEIVED MESA COUNTY DEVELOPMENT DEPARTMENT
OCT 27 1981

File No.: 92-81
Item: Crestview Townhomes III
Phase: Preliminary Development Plan
Location: NW of F¼ Road and 27½ Road

Agency	Response
Ute Water Need to make sure that it is on the final.	Ute water's comments were information in nature and will be incorporated with the preparation of the Final Development Plan.
Transportation Engineer	1) The entrances to the two private drives paralleling 27½ Road will be relocated further west along the adjacent dedicated roadways. 2) The south access point to the parking area just east of the dedicated 30' right-of-way will be closed. Access to the aforementioned parking will be from the proposed dedicated 30' right-of-way as shown.
City Fire Department Need to make sure that it is done on the final	The Fire Department comments were informational in nature and will be incorporated with the submission of the Final Development Plan including the additional hydrant as requested.
Mountain Bell	All requested easements required by Mountain Bell will be provided on the Final Plat.
City Parks and Recreation	Had no comment.
City Police Department	Parking lot security lighting as well as walk lighting will be provided for throughout the entire Crestview III development.
City Engineer ok	1) A new subdivision improvements agreement and City format will be provided with the Final Plan and Plat.
ok	2) A 20' wide easement will be provided on the submitted Final Plat for all sanitary sewers located outside of dedicated streets.
ok	3) A 10' radius will be provided at all street corners.

City Engineer Continued

4) The proposed dedicated 30' right-of-way is provided as a dedicated right-of-way to the adjoining parcel to the North. Improvements planned within this 30' dedicated right-of-way include a 24' paved section with 2' vertical curb and gutter adjoining along each side.

need this document

5) Maintenance of all waterscapes will become the responsibility of the Corporate Homeowners Association for Crestview III.

need to ck @ final ck

6) A 20' wide utility easement will be provided to 15th Street for any portions of a proposed sanitary sewer not lying within dedicated right-of-way.

7) The proposed private drive located at the westerly end of Hawthorn Avenue could service as a cul-de-sac. It is the petitioners understanding that the ultimate plan for Hawthorn Avenue including an extention to 15th Street as adjoining parcels develop.

8) Streets - Please refer to Transportation Engineer response 1) above.

9) Storm runoff at the west end of Hawthorn is minimal. It is proposed that this runoff will be carried in an impervious surface to 15th Street.

10) A power of attorney for actual improvements to 27½ Road will be granted.

Grand Valley Water Users Association

need to ck @ final

1) Any modification to the Association irrigation lateral will be done in accordance to Association standards and specifications.

2) Appropriate easement will be granted for the existing drainage ditch located along the northern portions of the development.

Public Service

ck Easements required by Public Service will be provided on the submitted Final Plat.

Staff Comments

1) Upon a detailed check of Preliminary Plan requirements, petitioner feels that the submitted Preliminary Development Plan complies in every respect.

ck 2) Detailed landscaping information will be submitted with the Final Development Plan.

Staff Comments Continued

2) Continued .
in accordance with current requirements. The submitted Preliminary Development Plan indicates landscaped areas and a suggested list of trees and shrubs.

3) The submitted Preliminary Development Plan indicates that the principal structure setbacks vary throughout the site. Below are the typical minimum setbacks as shown on the plan:

Front 15' minimum - but varies
Side 15' minimum - 20' typical in most cases.
Rear varies

setbacks needs to be establish on final plan

OK 4) The petitioner will comply with Section 5-4-6 in respect to public park land.

ck 5) Amenities for the overall plan will be detailed with submission of the Final Development Plan and Plat in accordance with staff wishes.

need agreement

6) All open spaces as well as private roadways will be owned and maintained by the Corporate Homeowners Association for Crestview III.

ck 7) Signage details will be submitted with the Final Development Plan.

ck 8) A power of attorney for actual improvements will be provided for 27½ Road.

Need to be detailed @ final

9) Screening will consist of landscaped buffers or wood fencing.

ck 10) The proposed dedicated right-of-way will be constructed in accordance with current City standards for a court road and will be named with the submission of the Final Development Plan in accordance with City street naming standards.

detailed @ final

11) The submitted Preliminary Development Plan includes a building elevation indicating that the structure will not exceed two stories in height.

ck 12) Trash pickup needs will be coordinated with Bill Reeves.

Staff Comments Continued

Need copy of Covenants

13) Covenants for Crestview III will be incorporated for all residents within Crestview III except the existing single family structure.

ck 14) Guest parking will be designated.

15) All drainage requirements will receive approval prior to final submittal.

Need @ final

16) The existing gravel drive will be kept open in order to provide access as currently utilized by the existing undeveloped parcels adjoining the site immediately to the west. Appropriate signage will be provided in order to discourage utilization of this private drive by individuals utilizing the proposed dedicated right-of-way for access.

17) Concerns of Transportation Engineer have been addressed in the body of this response.

REVIEW SHEET SUMMARY

FILE NO. 92-81 DUE DATE 12/14/81

ACTIVITY Hawthorne Place at Crestview (formerly Crestview III)

PHASE Final ACRES

LOCATION NW corner of 27½ and F¼ Rds.

PETITIONER Towne Properties Ltd, c/o Todd Deutsch

PETITIONER ADDRESS 2261 Francis Lane, Cincinnati, Ohio 45206

ENGINEER Paragon Engineering

OVERALL CONSIDERATIONS

HAS BEEN ADDRESSED	HAS NOT BEEN ADDRESSED	
☐	☐	OVERALL COMPATABILITY
☐	☐	CONSISTENCY
☐	☐	ADJACENT PROPERTY
☐	☐	CHANGE IN THE AREA
☐	☐	TRAFFIC IMPACT

Δ ADDRESS TO HENRY FASS. PER BOBG.

DATE REC.	AGENCY	COMMENTS
12/3/81	City Police	We are requesting additional information on security lighting and locks.
12/7/81	G.J. Drainage	Out of district.
12/10/81	Transportation Engineer	All dead end streets should have provisions for a turn-around at the end.
12/11/81	City Fire	Hydrant spacing appears to be adequate. We request that further details on the square footage of building and number of stories to be provided. Without this information we cannot determine the required fire flow. We presume the building to be is wood frame. We would estimate a fire flow requirement of 3500 to 4000 gpm. We request that you obtain a statement from Ute Water on how much water that can be delivered to the development through the 8 inch line. It may be necessary to increase the size of the 8 inch line to obtain the required fire flow. All private streets, which dead end, must be provided with a cul-de-sac with a minimum 40 ft. radius for turning and manuvering fire trucks.
12/14/81	City Utilities	None.
12/14/81	Public Service	Gas & Electric: Request that developer contact P.S.Co. concerning loads and points of service prior to design of gas and electric systems to serve subdivision. No objections to "final phase". HT 12-4-81 12-7-81 THI

DATE REC.	AGENCY	COMMENTS
12/15/81	Grand Valley Water Users Late	On the plans received herewith for review, matters pertaining to irrigation and drainage facilities controlled by Grand Valley Water Users Assoc. appear to be in order, however if unaddressed questions and problems appear, the Association will expect continued cooperation from the developer and his technical and professional representatives to satisfactorily resolve such problems.
12/15/81	City Engineer Late	I assume this development is providing a "blanket" type utility easement from the statement on the plat. Power-of-attorney should be provided for street improvements on 27½ Road or preferably the improvements constructed in accordance with my November 3, 1981 letter to Paragon. Signs and landscaping at street intersections should be located so as to not have sight-distance problems. A sidewalk should be provided on Arbor Place as agreed with Paragon. Street details will be reviewed and separate letter response will be sent to Paragon. Detailed sanitary sewer and storm sewer plans should be submitted for approval prior to construction. In general, the street layouts shown are as agreed with Paragon in previous reviews. A financial guarantee should be obtained for all public improvements. Hawthorne Avenue should be extended to 15th Street and brought up to at least gravel standards by the petitioner. Right-of-way needed at the west end of Hawthorne on the south side and whatever is needed to transition to a 22 ft. gravel street to the west on dedicated right-of-way should be provided by the petitioner. A 20 ft. drainage easement should be provided centered on the proposed pipe and swale which replaces the existing drain ditch from Woodlake Place to the west property line and centered on the 15 inch pipe at the west property line which will carry drainage from Hawthorne Avenue to the existing wash. Proposed modifications to the concrete irrigation ditch in Hawthorne Avenue should be submitted to the irrigation user's organization for review and approval. I request a copy of their written approval prior to my approving the street improvements for Hawthorne Avenue. Sanitary sewer layouts look OK. Petitioner should construct the sewer to 15th Street and obtain necessary easements for it.
12/15/81	Staff Comments	1) Setbacks of principal structures are not indicated on the final plan, but are indicated on the revised plan. Does revised plan setback apply to the final? 2) Trash pick-up needs to be coordinated with Bill Reeves. 3) Private drives should provide adequate turn around. 4) 5% open space fee paid prior to recording of plat. (Sec. 5-4). 5) Need power of attorney for 27½ Rd. 6) Need copy of covenants. 7) Dimensions of covered parking needed. 8) Will there be any on Street parking on private drives? May want to place "no parking" signs if not. 9) Min. parking stall is 18'5" with no overhang allowed. Shown as 18' on plan. 10) On building envelopes, is it 4 plexes shown for area south of Woodlake Pl.? 11) On final - what is the total number of parking spaces? Will they be designated for specific units? Project must obtain building permit within 1 year of final approval or be scheduled for a rehearing.

DATE REC.	AGENCY	COMMENTS
12/14/81	Ute Water	The 8" line in 27½ Road must be continued North to Ridge Drive and connected to an existing 8". The 8" line in Hawthorne Avenue must be continued West to 15th Street and connected to an existing 8". A double check Back-Flow Prevention Device, equal in size to the service line for the swimming pool, will be required immediately on the down stream side of the meter. Domestic meter locations are not indicated for some units North of Hawthorne Avenue (See Sheet U2-3). The above requirements must be indicated on the Final presented for U.C.C. sign-off. Each dwelling unit should have its own individual domestic service line, originating from the centrally located meter or meter cluster. Policies and fees in effect at the time of application will apply.

Late Review Sheets
Mr. Bell

12/21/81 - Copy petitioner & engineer.

1/20/82

Minutes of 1/5/82

COMMISSIONER DUNIVENT: "I MAKE A MOTION ON ITEM #92-81, FINAL PLAT THAT WE SUBMIT IT TO CITY COUNCIL FOR APPROVAL SUBJECT TO STAFF CONCERNS BEING RESOLVED."

COMMISSIONER DUNIVENT: "I MAKE A MOTION ON ITEM #92-81, FINAL PLAN BE FORWARDED TO CITY COUNCIL WITH RECOMMENDATION FOR APPROVAL SUBJECT TO ALL STAFF COMMENTS AND CONCERNS BEING RESOLVED PRIOR TO."

December 28, 1981

RESPONSE TO REVIEW SHEET COMMENTS

File No. 92-81
Item: Hawthorn Place at Crestview
Phase: Final
Location: NW corner of 27½ Road and F½ Road

Agency	Response
City Police	Street lights will be provided as per Colorado Public Service. Additional exterior lighting will be provided at front and rear of units plus, where required, some additional area yard lights may be provided.
Grand Junction Drainage	Not in district, therefore no comments necessary.
Transportation Engineer	All "dead end streets" as referenced to in the Review Sheet Summary, are parking lots and therefore do not require turn arounds. Several of the short streets were originally shown as loop drives through the parking lots but were changed at the request of this agency during the preliminary plan review.
City Fire Department	The proposed buildings will be wood frame construction. a) The Square Footages - The duplex units of the Villas are approximately 1500 Sq. Ft.± each and the fourplexes are approximately 1200 Sq. Ft± each. All units will be two stories above grade and will have full basements. The townhome units found in the Arbors consist of three types. The end units are one story and contain approximately 900 Sq. Ft ±. Both interior units are two story. The largest unit contains approximately 1200 Sq. Ft. and the smaller unit contains approximately 900 ± Sq. Ft. Some units contain full basements, some contain crawl spaces. See sheets G-1, G-2, & G-3 for designation.

City Fire Department Continued	b) We have requested a written statement from Ute Water to determine water flow capacities in existing 8" waterlines in 27½ Road at Hawthorn and in 15 Road, West of the site. This information will be forwarded as soon as possible. c) The "Private Streets" are parking lots and therefore should not be required to have turnarounds.
City Utilities	Had no comments.
Public Service	Gas & Electric - Comment is informational in nature. We will contact the Public Service Company prior to Final Design of Systems.
Grand Valley Water Users	Agency reviewed proposed plans and approved of them. As to their request, we will definitely contact them concerning any future problems should they arise.
City Engineer	a) Blanket Easement - Yes, anything not covered by a building structure or patio is considered to be an easement. This allows for maximum flexibility in the placement of utility services. Developer will coordinate service locations with appropriate utilities. b) Power of attorney will be provided for street improvements on 27½ Road, if in the event 27½ Road improvements are not constructed. c) Signs, at the corners adjacent to 27½ Road, will be placed so as not to create a visability problem. Landscaping will be carefully selected and placed so that the visibility at ALL intersections is maintained for safe traffic conditions. d) A detached sidewalk at Arbor Place is provided for at the front of the units on the east side of Arbor Place East. The walk will tie to the public walk along Hawthorn Avenue and will flow north along the parking lot and drive to Arbor Place and then north inside the right-of-way to the property line. e) All remaining comments have been, are being, or will be complied with.

Staff Comments

a) Setbacks as shown on the revised plans do apply to the final.

b) Trash pick-up will be coordinated with Bill Reeves.

c) Private drives - See comments above for City Engineer and City Fire Department.

d) Developer will pay open space fee of 5% prior to recording of plat.

e) Power of Attorney for 27½ Road will be provided as requested.

f) Covenants for the proposed development will be provided as requested.

g) Dimensions of Carports - Carport structures will provide for stalls of 10'x 20'±. Building size will be based on this parking requirement and the number of cars to be housed. Carports are proposed to be 22' deep with an additional 3' of approach from back of curb line to the front of the carport.

h) On street parking is not proposed for the private streets and as such, extra guest parking stalls have been provided. Should on-street parking occur, other methods of control will be tried prior to the placement of "no parking" signs.

i) The minimum parking stall dimension should typically read 18'-6" by 9'-0" wide, with bumper overhang over the front curbs. This is why a 5'-0" sidewalk is specified at parking stalls in the Arbors.

j) The area south of Wooklake Place is called "The Arbors" and it contains both four-plexes and six-plexes. (see plans). Designated parking is not required in this area, may be done if desired by Developer or future tenants.

k) The total number of parking spaces in the Villas is 52 (two per unit - one in garage and one in driveway - for the owners) plus 11 guest parking stalls (½ per unit) for an overall parking ratio of 2½ stalls per unit.

The total number of parking stalls in the Arbors is 129, 81 open and 48 covered. This is a ratio of 2.3± stalls per unit. Designated parking will be provided in this area.

Ute Water	All of the review comments from this agency will be incorporated in the final plans.

OFF ○○○○○○○ ○○○○○○○○action sheet

Acres 11.5
Units
Density REVERTED

final plat & PLAN

File No. #92-81
Zone PR-8
Tax Parcel Number

Activity Hawthorne Place at Crestview Previously Crestview III
Phase
Common Location 27½ & F.¼

Date Submitted 12/1/81 Date Mailed Out 12/2/81 Date Posted 12/24/81 - called 12/21/81
10 day Review Period Return by 12/14/81 MCC Information Sent
Date Adjacent Property Owners Notified of MCC/GJPC Date Adjacent Property Owners Notitfied of MCC/CIC

review agencies

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG
● Development Dept.	●		●	●	●	●	●		●	●		X	●	●	●	●	●	●	●	●	●	●	●	●	●			●		●	●	●	●
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○ County Health	●			●	●	●			●				●	●																	●		
● County Surveyor	●			●	●	●																											
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○ Sewer	●			●	●	●							●	●	●																●		
○ G.V. Rural Power	●			●	●	●							●																		●		
● Mountain Bell	●			●	●	●							●																		●		
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BOARDS

DATE		
1/5/82	GJPC	Approved - subject to review comments
2/4/82	CC	Appr. CA subject to PC & staff req's
3/20/84	GJPC	Rec. EXTENSION TO APRIL 1ST, 1985
4/18/84	CIC	Appr. " "
GJPC	4/30/85	rec. for reversion (at request of owners)
CIC	5/15/85	reversted under CI

STAFF

See Prelim. submittal

Open Space Dedication (acreage) 5% O. S. Fee Required $ Paid Receipt #
Recording Fee Required $ Paid (Date) Date Recorded
Date Resolution Mailed

City County Development Department ○○○○○○○○○○○○○○○○○○○○

PARAGON ENGINEERING, INC.

2784 Crossroads Blvd., Suite 104
Grand Junction, Colorado 81501 (303) 243-8966

January 20, 1982

City/County Planning Department
559 White Avenue Room 60
Grand Junction, CO 81501
Attn: Bob Golden

Dear Mr. Golden;

In response to our phone conversation on January 19, 1982, consider the following responses to the City Engineer's additional comments.

1. Any road designs affecting ~~15th Street~~ will incorporate future plans by the City for improvements on 15th Street.

2. A sidewalk on Arbor Place, along the east right-of-way will be provided.

3. The petitioner does not plan to complete any improvements to Hawthorn Avenue west of their west boundary. All site drainage will be collected at an inlet at this point and directed north to a waste ditch. It should be pointed out that total right-of-way width is not available at this time for that extension of Hawthorn Avenue, west of Woodlake Trails.

4. All necessary drainage and utility easements will be provided on the plat or in the form of a recorded deed, concurrently with the recording of the final plat.

Sincerely,

Thomas A. Logue

Thomas A. Logue

TAL:crl

PARAGON ENGINEERING, INC.
2784 Crossroads Blvd., Suite 104
Grand Junction, Colorado 81501 (303) 243-8966

February 2, 1982

Ron Rish/City Engineer
City of Grand Junction
250 N 5th Street
Grand Junction, CO 81501

Dear Mr. Rish:

In response to your review comments in reference to Hawthorn Place at Crestview, consider the following:

1. This development is providing a "blanket" type utility easement. Any land that is not covered by building structure or patio is considered to be an easement. This type of easement allows for the maximum flexibility in respect to the placement of utility services. The petitioner will coordinate service locations with appropriate utility companies.

2. As requested by the Planning Commission, actual half-street improvements will be completed along 27½ Road running from Hawthorn Avenue to the North boundary line of Hawthorn Place at Crestview.

3. Signs at the intersections adjacent to 27½ Road will be placed so as not to create a visibility problem. Additionally, all landscaping will be carefully selected and placed so that visibility at ALL intersections is maintained for safe traffic conditions.

4. A detached sidewalk will be provided along Arbor Place.

5. A financial guarantee will be provided for all public improvements. This guarantee will be submitted to your office for review prior to recording of the final plat.

6. A gravel standard will be provided along those portions of Hawthorn Avenue lying between 15th Street and the West boundary line of the subject parcel. Appropriate right-of-way will be obtained along the above mentioned Hawthorn Avenue in order to construct an appropriate transition from the proposed pavement section to a 22' gravel street section.

7. A 20' drainage easement will be provided centered on the proposed pipe and swell which replaces the existing drain ditch from Woodlake Place to the West property line and centered on the 15" pipe at the West property line which will carry drainage from Hawthorn Avenue to the existing waste ditch.

8. Proposed modifications to the concrete irrigation ditch in Hawthorn Avenue have been reviewed by the Irrigation District. A copy of their written approval will accompany all street improvements and utility layouts prior to actual construction.

9. The petitioner will construct sanitary sewer and domestic water mains to 15th Street which will be located within necessary easements or right-of-ways.

Should the above responses be unsatisfactory, or if you have any questions, please feel free to contact our office.

Sincerely,

Thomas A. Logue

Thomas A. Logue

TAL:crl

cc: Todd Deutsch
Jack Rogers
City/County Development Department

CITY - COUNTY PLANNING
grand junction-mesa county 559 white ave. rm. 60 grand jct.,colo. 81501
(303) 244-1628

February 13, 1984

TO: All Owners/Petitioners

FROM: Grand Junction Planning Commission
Grand Junction Planning Department

RE: Enforcement of Development Schedules

Enforcement of development schedules of previously approved projects is an on-going concern for the City of Grand Junction. The City Planning Commission will be having their annual Extension/Reversion public hearing on Tuesday, March 20, 1984 at 7:00 p.m. in the City/County Auditorium, 520 Rood Avenue, Grand Junction, Colorado. You or your representative must be present.

By using the timeframes expected for development, the City is able to anticipate the needs for public services and improvements to provide service for these projects and surrounding areas. The City can also schedule those capital improvements required to be completed in conjunction with the project development itself.

The hearing will not be a re-review of the project for technical issues. It will be a discussion of anticipated timeframes for project buildout, and the likelihood of the project itself. Any project discussed without the Owner/Petitioner or representative present at the special hearing will be automatically recommended for reversion.

If an extension is requested by the Owner/Petitioner, the Grand Junction Planning Commission may grant an extension for one year. If the Owner/Petitioner requests a reversion, the Grand Junction Planning Commission will recommend reversion of that project and/or zone.

Enclosed is your project violation of the Grand Junction Zoning and Development Code. Also enclosed is the required submittal information for the Grand Junction Planning Commission to review.

We appreciate your continued cooperation in this process.

If you have any questions, please contact the City Planning Department at 244-1628.

Thank you.

BG/tt

Enclosures

Address to Henry Fraussone from Todd Deutsch.

This is to inform you that your project File # 92-81

Project Name Hawthorne Place at Crestview III

approved on 2/2/82 by the Grand Junction City Council,

is now in violation of the Grand Junction Zoning and Development Code.

It violates the development schedule process as indicated below:

____	Sec. 6-9-2C (Final Plat)	All final plats shall be recorded within one year from the date of final approval. Failure to record within this time shall require re-review and processing as per the final plat processing procedure.
____	Sec. 7-5-7 (Prel. & Final Plan)	Enforcement of the Development Schedule and Procedures for Reversion. If the owner or owners of property in the PD have failed to meet a mutually-approved development schedule, failed to submit a preliminary or final plan within the agreed-upon period of time, or failed to obtain an extension, the Planning Commission may initiate action to withdraw approval of the Planned Development. This action shall consist of a formal recommendation for reversion to the prior zone, to be deliberated at a public meeting for which the property was signed and abutting property owners notified. This public meeting shall not be an advertised public hearing. The Commission's recommendation shall then be forwarded to the Governing Body. After holding an advertised public hearing, the Governing Body may extend the limits of the development schedule or withdraw the Planned Zone designation; in which case the land will revert to its previous zoning.

The Grand Junction Planning Commission is requiring the following information to be provided to this department a minimum of ten (10) days prior to the Special Public Hearing on March 20, 1984.*

Eight (8) copies of:

a) Location, current property owner, and representative if applicable.

b) Brief discussion of current status of the approved project. This should include the feasibility, likelihood of buildout, or anticipated changes to the approved plan.

c) Development schedule anticipated for completion of next phase or buildout.

d) Any work completed to date on the project to fulfill the next development process requirements. (i.e. if final approval, when is plat to be recorded, or if preliminary approval, when is final plan to be submitted?)

e) Extension requested (one year maximum).

* Any packets not received or received after this date may result in automatic reversion.

CITY - COUNTY PLANNING
grand junction-mesa county 559 white ave. rm. 60 grand jct.,colo. 81501
(303) 244-1628

TO: All Petitioners

FROM: City Planning Dept./Grand Jct. Planning Commission

DATE: March 26, 1984

RE: Extension Requests

A public hearing of the Grand Junction Planning Commission was held on March 20, 1984 to recommend extension requests to all those Petitioners requesting one.

Your project # 92-81 was granted an extension until April 1, 1985.

We appreciate your response and time in helping us with these items. It will benefit the City in dealing with future improvements. Enclosed please find a copy of the minutes of those hearings.

Good luck on your projects and we will be in touch next year.

Thanks again.

BG/tt

Enclosure

file