Table of Contents

File **FPP-1996-056** Name: Helena Subdivision –2776 and 2789 Unaweep Avenue

Present	Scanned	
		A few items are denoted with an asterisk (*), which means they are to be scanned for permanent record on the ISYS retrieval system. In some instances, items are found on the list but are not present in the scanned electronic development file because they are already scanned elsewhere on the system. These scanned documents are denoted with (**) and will be found on the ISYS query system in their designated categories. Documents specific to certain files, not found in the standard checklist materials, are listed at the bottom of the page. Remaining items, (not selected for scanning), will be listed and marked present. This index can serve as a quick guide for the contents of each file.
X	X	**Table of Contents**
		***Review Sheet Summary**
X	X	***Application form**
X		Review Sheets
X		Receipts for fees paid for anything
X	X	***Submittal checklist**
X	X	***General project report**
		Reduced copy of final plans or drawings
X		Reduction of assessor's map.
		Evidence of title, deeds, easements
X	X	***Mailing list to adjacent property owners**
		Public notice cards
		Record of certified mail
X	X	Legal description
		Appraisal of raw land
		Reduction of any maps – final copy
		***Final reports for drainage and soils (geotechnical reports)**
		Other bound or non-bound reports
		Traffic studies
X	X	***Review Comments**
X	X	***Petitioner's response to comments**
X	X	***Staff Reports**
		***Planning Commission staff report and exhibits**
		***City Council staff report and exhibits**
		***Summary sheet of final conditions**

DOCUMENT DESCRIPTION:

X	X	Development Improvements Agreement - ** - Bk 2258 / Pg 183	X	X	Planning Commission Meeting Agenda – 4/2/96 - **
X	X	Release to Request Funds – 4/10/08	X	X	Planning Commission Minutes – 4/2/96 - **
X	X	Geotechnical Investigation Report – 3/4/96	X	X	Utility Coordinating Committee Approval – 4/29/96
X		Declaration of Covenants, Conditions and Restrictions-Bk 2258 / Pg 193	X	X	Certification of Plat – 5/9/96
X	X	Articles of Incorporation – Bk 2258 / Pg 184	X	X	Final Inspection checklist
X		Evidence of Title – 9/20/95 – Agreement to Amend/Extend Contract	X		Real Estate Settlement – Meridian Land Title Inc.
X		Planning Commission Notice of Public Hearing mail-out-sent 3/25/96	X		Letter from Bill Nebeker to Bobbie Paulson regarding check to be held for uncompleted improvements-8/20/96
X		E-mails	X	X	Utility Composite
X	X	Correspondence	X	X	Grayscale Location Map
X		Treasurer's Certificate of Taxes Due – 3/1/96	X	X	Sewer and Water Sheet 1 and 2
X	X	Final Drainage Report – 3/1/96	X		Sanitary Sewer Details
X		Posting of Public Notice Signs form– 3/2296	X		Street Sheets

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X		Posting of Public Notice Signs form– 3/2296	X		Street Sheets

X		Site Plan Utility Comp. - draft			
X		Existing Topography - draft			
X		Landscape Plan - draft			
X		Vicinity Sketch-draft			
X		Boundary Line Adjustment - final			

DEVELOPMENT APPLICATION

Community Development Department
250 North 5th Street, Grand Junction, CO 81501
(303) 244-1430

Receipt _____
Date _____
Rec'd By _____
File No. FPP-96-56

We, the undersigned, being the owners of property situated in Mesa County, State of Colorado, as described herein do hereby petition this:

PETITION	PHASE	SIZE	LOCATION	ZONE	LAND USE
☒ Subdivision Plat/Plan	☐ Minor ☒ Major ☐ Resub			RSF-8	
☐ Rezone				From: To:	
☐ Planned Development	☐ ODP ☐ Prelim ☐ Final				
☐ Conditional Use					
☐ Zone of Annex					
☐ Variance					
☐ Special Use					
☐ Vacation					☐ Right-of Way ☐ Easement
☐ Revocable Permit					

☒ PROPERTY OWNER	☒ DEVELOPER	☒ REPRESENTATIVE
MICHAEL QUEALLY AND BEN HILL		
Name	Name	Name
1209 N. 7TH STREET		
Address	Address	Address
GRAND JCT., COLORADO 81501		
City/State/Zip	City/State/Zip	City/State/Zip
970-241-7653		
Business Phone No.	Business Phone No.	Business Phone No.

NOTE: Legal property owner is owner of record on date of submittal.

We hereby acknowledge that we have familiarized ourselves with the rules and regulations with respect to the preparation of this submittal, that the foregoing information is true and complete to the best of our knowledge, and that we assume the responsibility to monitor the status of the application and the review comments. We recognize that we or our representative(s) must be present at all required hearings. In the event that the petitioner is not represented, the item will be dropped from the agenda, and an additional fee charged to cover rescheduling expenses before it can again be placed on the agenda.

Michael B. Qually — 2.28.96
Signature of Person Completing Application — Date

Ben D. Hill — 3-1-96

Signature of Property Owner(s) - attach additional sheets if necessary — Date

GENERAL PROJECT REPORT FOR A MAJOR SUBDIVISION:

HELENA SUBDIVISION

The proposed subdivision, located at 2776 and 2780 Unaweep Ave. is described as: approximatly 4 acres, 16 lots, 4 lots per acre (half the existing zoning of RSF8). There are 3 existing homes located on said property, one of which is a duplex, making up a total land area of approximately 5 acres. All existing homes will remain. The proposed use is a single family dwelling neighborhood.

This projects public benefit is the creation of moderately priced housing, targeted for the $70,000-$90,000 range. This will be compatible with the surrounding neighborhoods in price, lot size, etc. Another benefit will be that Acoma Dr. which is currently dead-ended at the back of the proposed site, will be connected up to Unaweep Ave. along with all existing utilities currently dead-ended in Acoma Dr.

The only special request of this proposed subdivision is that the existing duplex remain in use as a duplex. Existing tenants have expressed desire to continue living in the property due to the lack of decent affordable rental property, especially where both tenants are single women and one is of retirement age and on a fixed income. The surrounding area is residential. Site access will be off of Unaweep Ave. onto Acoma Dr. extension which will be located across from Lynwood Ave. Traffic patterns are considered to be 10 trips per house per day or 160 trips per day. These lots will have the availability of all utilities such as: Grand Junction Sanitation, Orchard Mesa Irrigation, Public Service, US West, Grand Junction Drainage, Ute Water, Grand Junction Fire, and United Cable. Fire hydrants (2) will be located at the SW corner of lots 11 and 18. There should be no special or unusual demands on utilities and effects on public facilities will be average. Site soils and geology are attached and impact of project on site geology and any such hazards are none. This subdivision will require one street sign (stop) located at the entrance onto Unaweep Ave. Also, there will be a Helena Subdivision sign to designate the proposed area.

The development schedule is from 6 months to a year and will be in one Phase.

Robert Conway
315 Acoma Dr.
Grand Junction, CO
81503

Daniel O'Conner
317 Acoma Dr.
Grand Junction,CO
81503

David Golden
319 Acoma Dr.
Grand Junction, CO
81503

Dennis Park
322 Acoma Dr.
Grand Junction, CO
81503

Geraldine Messall
319 Apache Dr.
Grand Junction, CO
81503

H.E. Kistler
322 Apache Dr.
Grand Junction, CO
81503

Ray Poarch
2767 C Rd.
Grand Junction, CO
81503

Paul Quam
2770 C Rd.
Grand Junction, CO
81503

Dow Hough
2780 C Rd.
Grand Junction, CO
81503

Rudy Herrera
2786 C Rd.
Grand Junction, CO
81503

Jerry Wolfe
2771 Cheyenne Dr.
Grand Junction, CO
81503

Johnny Silver
2772.5 Grant Ct.
Grand Junction, CO
81503

Alfonso Martinez
2773.5 Grant Ct.
Grand Junction, CO
81503

Mark Reed
2774 Grant Ct.
Grand Junction, CO
81503

Janice Hilken
2774.5 Grant Ct.
Grand Junction, CO
81503

Mathew Wakefield
2775.5 Grant Ct.
Grand Junction, CO
81503

Daniel Dunn
2775 Grant Ct.
Grand Junction, CO
81503

Louis Rhodes
2776 Grant Ct.
Grand Junction, CO
81503

Terence Mcevoy
2777 Grant Ct.
Grand Junction, CO
81503

Shirley Adams
2778 Grant Ct.
Grand Junction, CO
81503

Warren Knight
2778.5 Grant Ct.
Grand Junction, CO
81503

David La Pan
2779.5 Grant Ct.
Grand Junction, CO
81503

Edward Maes
2779 Grant Ct.
Grand Junction, CO
81503

Richard Tope
2780 Grant Ct.
Grand Junction, CO
81503

Mary Jo Montano
2780.5 Grant Ct.
Grand Junction, CO
81503

Dale Hunt
2781 Grant Ct.
Grand Junction, CO
81503

A Reid
2782 Grant Ct.
Grand Junction, CO
81503

Micheal Oney
2782.5 Grant Ct.
Grand Junction, CO
81503

Edward Junak
2783.5 Grant Ct.
Grand Junction, CO
81503

Kevin Johnson
2783 Grant Ct
Grand Junction, CO
81503

Teddy Garcia
2784 Grant Ct
Grand Junction, CO 81503

W.H.Lizer & Assoc.
576 25 Rd. Unit 8
Grand Junction CO 81505

Robert Griffin
2785 Grant Ct
Grand Junction, CO 81503

Roy Quinton
2779 Laguna
Grand Junction, CO 81503

HILL & HOLMES
1204 N. 7th
Grand Junction CO 81501

Vincent Holzer
2780 Laguna
Grand Junction, CO 81503

Maxine Baylock
2781 Laguna
Grand Junction, CO 81503

W Vines
2782 Laguna
Grand Junction, CO 81503

Donald Lagree
2783 Laguna
Grand Junction, CO 81503

Raymond Scheetz
2784 Laguna
Grand Junction, CO 81503

Raymond Erickson
2785 Laguna
Grand Junction, CO 81503

Lucy Walsh
2787 Laguna
Grand Junction, CO 81503

Ed Reed
317 Taos Dr
Grand Junction, CO 81503

W.H. LIZER & ASSOCIATES
Engineering Consulting and Land Surveying
576 25 road, Unit #8
Grand Junction, Colorado 81505
(970) 241-1129

March 1, 1996

FINAL DRAINAGE REPORT
FOR
HELENA SUBDIVISION
Part of the SE 1/4 of Section 24, T1S, R1W, U.M.
City of Grand Junction, Mesa County, Colorado

General

Helena Subdivision is located approximately 2000 feet East of the intersection of 27 3/8 and C Roads in the Orchard Mesa Area. The site is also located in the SE 1/4 of Section 24, T1S, R1W, U.M.

The site generally drains from East to West at approximately 0.50% slope. There is essentially no exterior contribution.

Method of Analysis

The site has no method of conveyance off-site, therefore, total retention is planned.

Percolation tests have been completed and the soils are suitable for a retention basin. Percolation test results and calculations are attached.

The site consists of approximately 4.6 acres.

The volume required for storm retention is:

$$V = \frac{2.01}{12} \times 0.78\, c_{100} \times 4.6 \times 43560$$

$$= 26179 \text{ cu. ft.}$$

A retention basin is designed along the West side of the parcel.

The street design will carry stormwater to drainage structures which will carry the water through drainage easements to the storm retention basin.

Respectfully submitted,

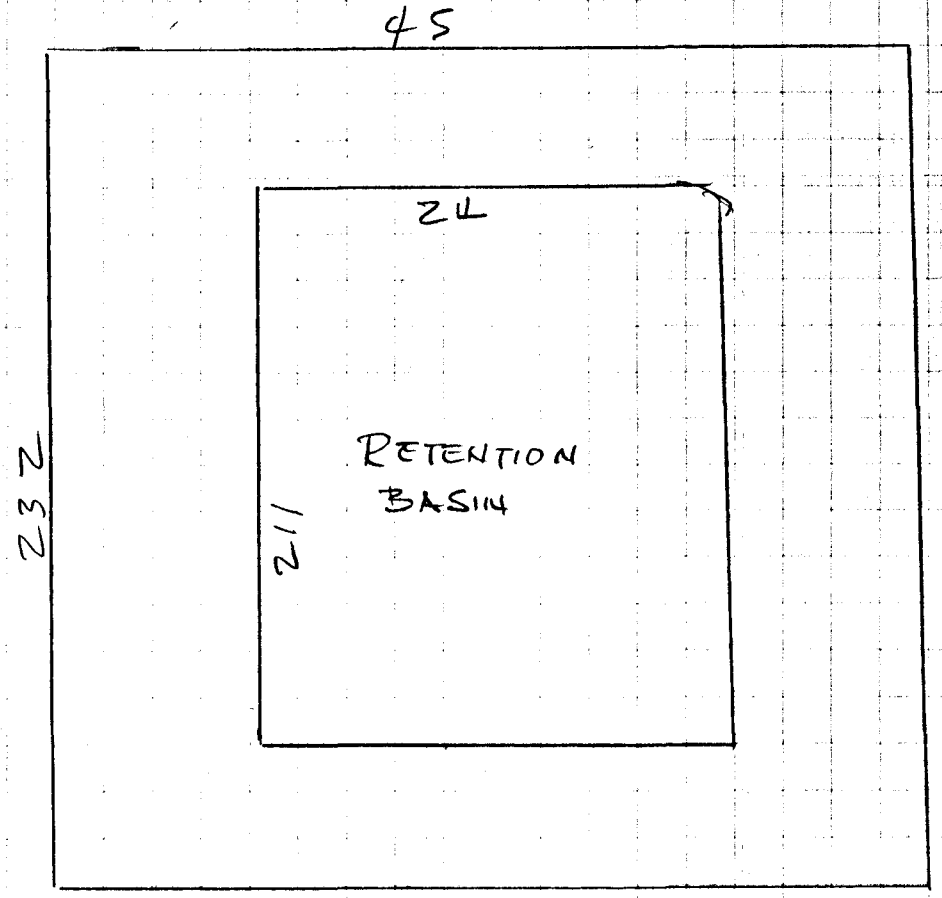
Wayne H. Lizer

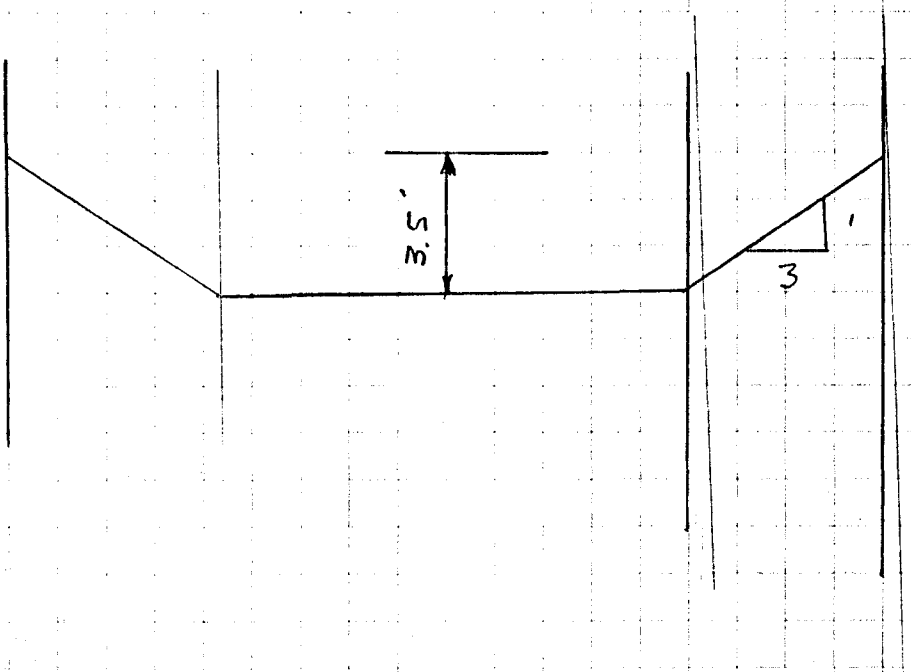
Wayne H. Lizer, P.E., P.L.S.

WHL/sl

Attachments

Helena SUB





HELENA SUB

21

BOTTOM AREA = 211 x 24 = 5064

TOP AREA = 232 x 45 = 10440

15504

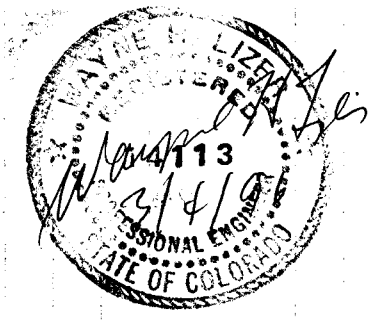
AUE = 7752 x 3.5' DEPTH

= 27132 CU FT.

PERK TEST AUE = 21 min/in

3.5 feet x 12 in/ft x 21 min/hr x hr/60 min =

= 14.7 hr to Drain By percolation

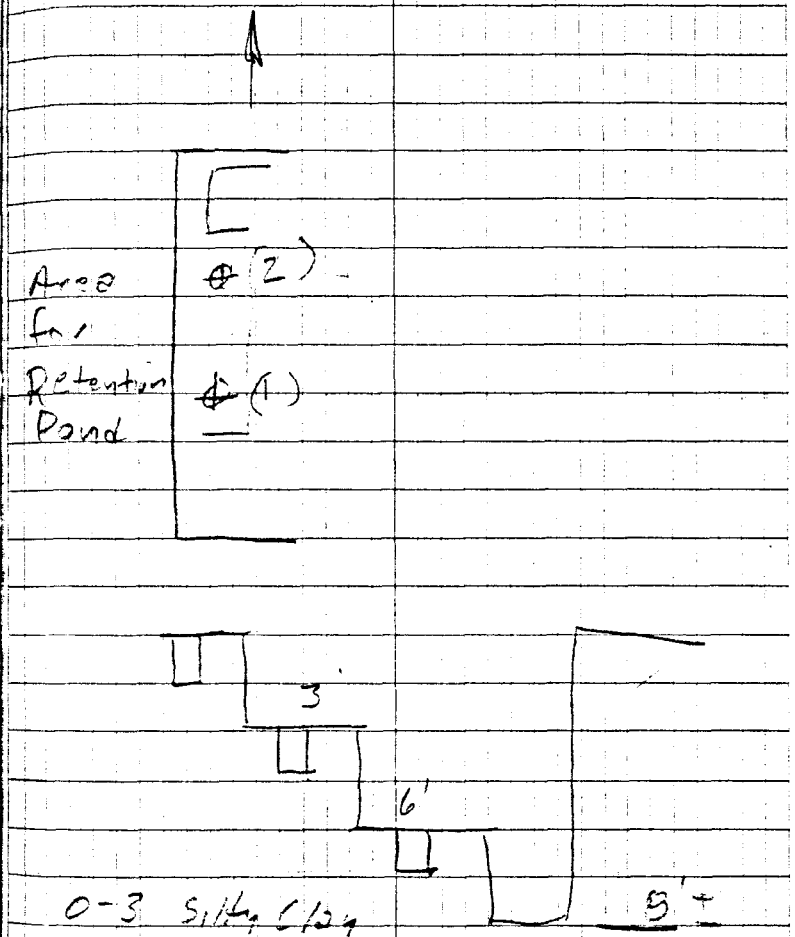


Helena Sub 2/29/96 WHL Mike Q.

Test - Hole 1

	Time	Reading
Sur	5:00	2½
	5:15	3¾
	5:30	4½
	6:00	6"
		3.5"
3'		1¼
		2½
		3¼
		5½
		4"
6'		1¼
		2¼
		2½
		3½
		2.25"

60 / 3.25 = Avg of 18½ min/in



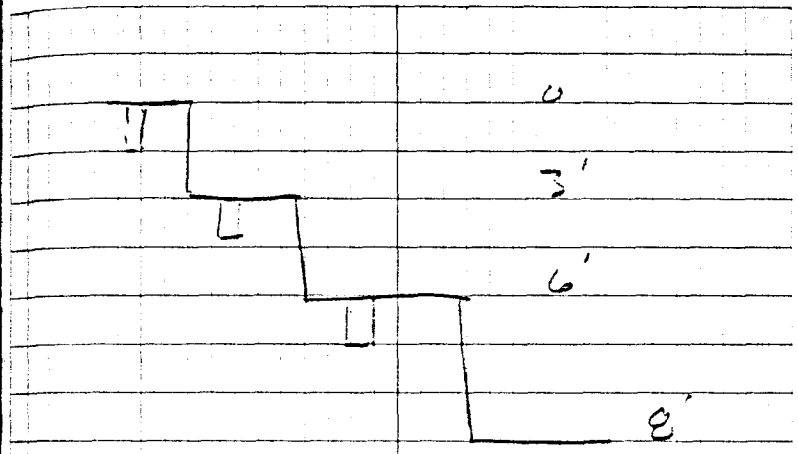
Helena Sub 2/29/96 WHY 70-26
Mike Q

Test Hole NO 2

	Time	Reading
surface	5:05	1½"
	5:20	2½
	5:35	3
	6:05	4
		2.5"
3'	5:05	2"
	5:20	2½
	5:35	3
	6:05	4½
		2.5"
6'	5:05	1 3/4"
	5:20	3½
	5:35	4 3/4
	6:05	9½
		7.75"

Use 2½"

Ave = $\frac{60}{2.5}$ = 24 min/in



Soil Log

0-3 Silty Clay

3-8 Silty Sand w/ Cobbles

GEOTECHNICAL INVESTIGATION FOR HELENA SUBDIVISION A PORTION OF THE SE 1/4, SECTION 24, T1S, R1W, UTE MERIDIAN MESA COUNTY, COLORADO

Prepared For:

Ben Hill and Mike Queally
1204 N. 7th. Street
Grand Junction, Colorado 81501

Prepared by:

Western Colorado Testing, Inc.
529 25½ Road, Suite B101
Grand Junction, Colorado 81505
(970) 241-7700

March 4, 1996
Job No. 201296

WESTERN
COLORADO
TESTING,
INC.

GEOTECHNICAL INVESTIGATION FOR HELENA SUBDIVISION A PORTION OF THE SE 1/4, SECTION 24, T1S, R1W, UTE MERIDIAN MESA COUNTY, COLORADO

Prepared For:

Ben Hill and Mike Queally
1204 N. 7th. Street
Grand Junction, Colorado 81501

Prepared by:

Western Colorado Testing, Inc.
529 25 1/2 Road, Suite B101
Grand Junction, Colorado 81505
(970) 241-7700

March 4, 1996
Job No. 201296

TABLE OF CONTENTS

INTRODUCTION

This report presents the results of the geotechnical investigation performed at the site of a proposed approximate 4.6 acre, 20 lot, single family housing project to be located in a portion of the southeast quarter of Section 24, Township 1 South, Range 1 West of the Ute Meridian, Mesa County Colorado. This investigation was authorized by Mr. Mike Queally on February 21, 1996.

Included in this investigation were test borings and a report of our conclusions and recommendations. The scope of our report was limited to the following:

- Evaluating the engineering properties of the subsoils encountered.
- Recommending types and depths of foundation elements.
- Evaluating soil bearing capacity and estimated settlement.
- Presenting recommendations for earthwork and soils related construction with respect to the subsoils encountered.
- Presenting recommended alternative pavement sections.

This report was prepared by the firm of Western Colorado Testing, Inc. (**WCT**) under the supervision of a professional engineer registered in the state of Colorado. Recommendations are based on the applicable standards of the profession at the time of this report within this geographic area. This report has been prepared for the exclusive use of **Ben Hill and Mike Queally** for the specific application to the proposed project in accordance with generally accepted geotechnical engineering practices.

The scope of this investigation did not include any environmental assessment for the presence of hazardous or toxic materials in the soil or groundwater on or near this site. If contamination is a concern, it is recommended an environmental assessment be performed.

SITE CONDITIONS

The majority of the site is currently vacant with a ground coverage of native grasses and weeds. Lots 10 and 12 had existing residences and lot 7 had a duplex with gravel driveways at the time of the field investigation. Along the east and west property lines was 1 to 2 foot deep irrigation ditches. Just beyond the property on the west was a 3 foot deep, concrete lined ditch. The site is relatively level with a slight slope to the south, southeast. To the north is residential housing. To the east and west is vacant ground used for agricultural purposes. To the south is Unaweep Avenue followed by residences. The site will need to be graded to provide good surface drainage around and away from the proposed structures.

PROPOSED CONSTRUCTION

The proposed construction will consist of single family dwellings. The proposed residences are anticipated to be constructed of conventional wood framing with siding or brick veneer. The structures are planned to be built over reinforced concrete foundations. Light foundation loads are anticipated.

FIELD EXPLORATION

The field investigation was conducted on February 23, 1996. The exploratory program consisted of four (4) soil borings as shown on the Boring Location Plan (Appendix, Figure 1). Borings were

located in the field by pacing distances from features shown on the boring location plan. The location of the borings should be considered accurate only to the degree implied by the method used.

Test borings were advanced to depths of from 7 1/2 to 13 feet with a truck-mounted Diedrich D-50 soil sampling rig using four inch continuous flight augers. Borings remained open during drilling, and stabilization drilling methods were not required within the depths investigated.

Soil samples were obtained at the sampling intervals shown on the Boring Logs (Appendix, Figures 2 through 5). Recovered samples were placed in bulk sample bags or extracted in the field, sealed in plastic or brass containers, labeled and protected for transportation to the laboratory for testing. Dames and Moore ring barrel and split barrel samples were obtained while performing Standard Penetration Tests (SPT) driven in general accordance with ASTM D-1586, "Penetration Test and Split Barrel Sampling of Soils". The N-Value, reported in blows per foot, equals the number of blows required to drive the sampler over the last 12 inches of the sample interval.

Stratification lines represent the approximate boundary between soil types, and the transition may be gradual.

LABORATORY TESTING

The field boring logs were reviewed to outline the depths, thickness, and extent of the soil strata, and a testing program was established to evaluate the engineering properties of the recovered samples. Specific tests that were performed include moisture contents, density determinations, particle size analysis, and Atterberg limits. These tests were performed in general accordance with current ASTM or state-of-the-art test procedures. An R-Value

test was also performed. The R-Value was determined according to the Colorado Department of Transportation (CDOT) procedures which is a modification to ASTM D-2844. The test results are presented on Figures 6 through 10.

Based on the results of this testing program the field logs were reviewed and supplemented as presented in the Appendix, Figures 2 through 5. These final logs represent our interpretation of the field logs, and reflect the additional information gained in the laboratory testing program.

SUBSURFACE CONDITIONS

As shown on the boring logs, Appendix, Figures 2 through 5, the subsurface conditions encountered at the site are fairly uniform. Generally, the soils encountered in the borings consisted of silty to sandy clay material followed by a silty sand and gravel material becoming a little more clayey with depth. Water was encountered in boring TH-1 at the time of drilling and was measured approximately 5 days following drilling at a depth of 12'-3".

Approximately 6 inches of top soil with organics was encountered at the site followed by a silty clay which was medium stiff, slightly moist to moist and dark brown in color. Below the silty clay in most cases was a sandy clay which was slightly moist and light brown to reddish brown in color. Penetration tests indicate the sandy clay is very stiff to hard. The sandy clay was followed at a depth of 1 to 5 feet by a silty, sand and gravel material which was slightly moist and light brown to reddish brown in color. Penetration test indicate the silty, sand and gravels were medium dense to dense. The sand and gravel material extend to the maximum depth explored, 13 1/2 feet.

CONCLUSIONS AND RECOMMENDATIONS

FOUNDATIONS

Based on the subsurface conditions encountered and the nature of the proposed construction, we recommend the residential structures be founded on shallow spread footings bearing on the natural undisturbed soils or new structural fill. The clays encountered in the borings are non-swelling or have low swell potential at there present moisture contents. However, the clay soils have a moderate plasticity and if moisture contents are allowed to fluctuate, the clays may undergo some shrink-swell potential.

The following design and construction details should be observed for spread footing foundation systems.

- Footings placed on the natural soils, below any top soil, or on new structural fill should be designed for an allowable soil bearing pressure of 2,500 pounds per square foot.

- The top 8 inches of the bearing soils should be moisture conditioned to (±)2% of optimum moisture and compacted to a minimum of 95% of ASTM D-698 prior to placing footings. Moisture contents should be maintained until covered. All footings should be proportioned as much as practicable to minimize differential settlement.

- Structural fill placed for support of footings should consist of a granular, non-expansive, non-free draining, material compacted to a minimum 95% of the maximum Standard Proctor density (ASTM D-698) at a moisture content (±) 2% of optimum. Structural fill should extend down from the bottom of the footings at a one horizontal to one vertical projection.

- We estimate total settlement for footings designed and constructed as discussed in this section will be one inch or less, which is generally considered acceptable and was used in our analysis.

- Exterior footings and footings in unheated areas should extend to below the frost depth. The local building codes should be consulted, however we would recommend a minimum depth of 24 inches.

- Continuous foundation walls should be reinforced top and bottom to span an unsupported length of at least twelve (12) feet. A sulfate resistant concrete should be used for all concrete exposed to the on site soils.

- All loose or disturbed material encountered at the foundation bearing level should be removed or compacted to a minimum 95% of ASTM D-698.

- The risk of foundation movement can be reduced by removing all clay soils encountered within 3 feet below the footings and replacing it with non-expansive structural fill.

- A representative of the geotechnical engineer should observe all foundation excavations prior to the placement of fill and/or concrete.

FLOOR SLABS

Slab-on-grade construction presents a problem where clay soils are present near floor slab elevation due to the potential for shrink-swell with fluctuations in moisture contents. The only way to prevent damage as a result of slab movement is to construct a structural floor above a well ventilated crawl space. The floor

should be supported on the foundation walls same as the main structure.

Slab-on-grade construction may be considered as an alternate for the floors provided the risk of distress resulting from floor slab movement is accepted by the owner and the following measures are taken to reduce the effects of movement.

- Floor slabs should be separated from all bearing walls, columns and utility lines with an expansion joint which allows unrestrained vertical movement.

- Interior nonbearing partitions resting on the floor slabs should be provided with slip joints at the bottom so that, if the slab moves, the movement cannot be transmitted to the upper structure. This detail is also important for wallboards, stairways and door frames. Slip joints which will allow at least 1 1/2 inches of vertical movement are recommended.

- Floor slabs should be provided with control joints to reduce damage due to shrinkage cracking.

- The top 6 to 8 inches of subgrade soils should be moisture conditioned to (±)2% of optimum and recompacted to minimum 95% of ASTM D-698. The moisture content should be maintained until the slabs are placed.

- All plumbing lines should be tested before operation. Where plumbing lines enter the floor, a positive bond break should be provided. Flexible connections should be provided for slab-bearing mechanical equipment.

- The risk of floor slab curling due to differential cure can be reduced by placing a 4 inch layer of free draining sand or gravel beneath the slabs.

- The risk of slab movement can be reduced by removing all clay encountered within 3 feet below the slabs and replacing it with structural fill.

- All fill placed below the slabs should consist of non-expansive, non free draining, granular material compacted to at least 95 percent of the maximum standard Proctor density at a moisture content (±)2% of optimum.

SURFACE DRAINAGE AND LANDSCAPING

The success of shallow foundation and slab-on-grade floor systems is contingent upon keeping the subgrade soils at a more or less constant moisture content, and by not allowing surface drainage a path to the subsurface. Positive surface drainage away from structures must be maintained at all times. Landscaped areas should be designed and built such that irrigation and other surface water will be collected and carried away from foundation elements.

The final grade of the foundations backfill and any overlying concrete slabs or sidewalks should have a positive slope away from foundation walls on all sides. We recommend a minimum slope of 8 inches in the first 10 feet; however, the slope can be decreased to 3 inches in 10 feet if the ground surface adjacent to foundations is covered with concrete slabs or sidewalks.

Backfill material should be placed near optimum moisture content and compacted to at least 90% of maximum standard Proctor density in landscaped areas and to at least 95% maximum standard Proctor density beneath structural areas (sidewalks, patios, driveways, etc.). All roof downspouts and faucets should discharge well

beyond the limits of all backfill. Irrigation within ten (10) feet of foundations should be carefully controlled and minimized.

STREET PAVEMENTS

The pavement section thickness needed at the site is dependent mainly on the subgrade conditions and the traffic loadings. The pavement subgrade soils are indicated to be sandy clays. The clayey soils were tested for Atterberg limits and size distribution with the results used to classify the soil using both the Unified and AASHTO classification systems. The soil was then tested to determine the R-Value according to the Colorado Department of Transportation procedure which is a modification to ASTM D-2844.

An R-Value test was performed on the subsurface soils from boring TH-1. The R-Value test had a result of 12. Based on the test results, design manual procedures, freeze/thaw conditions and experience with similar projects, the following pavement section alternatives are indicated:

PAVEMENT ALTERNATIVE SECTIONS

Pavement Section	Design Criteria					Alternatives	Pavement Section-Inches			
	R	S_o	M_R	ΔPSI	SN		HBP	ABC	ASC	TOTAL
Residential	80	0.44	3803	2.5	2.45	A*	6			6
						B*	3	10		13
						C*	3	6	5 1/2	14 1/2
						D*	3	4	8 1/2	15 1/2

R - Reliability, %
S_o - Deviation
M_R - Resilient Modules (psi)
ΔPSI - Serviceability Loss
*City of Grand Junction minimum sections

SN - Structural Numbers
HBP - Hot Bituminous Pavement
ABC - Aggregate Base Course (Class 6)
ASC - Aggregate Subase Course (Class 2)

Once the cut and fill operation for the roadways has been determined and/or a better traffic count determined the above section should be re-evaluated prior to construction.

Aggregate base course material should conform with Class 6 (minus 3/4 inch) specifications of the Colorado Department of Transportation (CDOT) and be compacted to a minimum 95% of AASHTO T-180 at (±)2% of optimum moisture content. The aggregate subbase course material should conform with Class 2 CDOT specifications and be compacted to a minimum 90% of AASHTO T-180 at (±)2% of optimum moisture content.

Pavement performance is directly affected by the degree of compaction, uniformity, and the stability of the subgrade. It is recommended that the top 6 to 8 inches of the subgrade be compacted to a minimum of 95% of the maximum dry density as determined by AASHTO T-99 "Standard Proctor Moisture-Density Relationship". The moisture content should also be controlled to between (-)2% and (+)3% of optimum. The final subgrade should be proofrolled immediately prior to placement of the subbase or base course materials to detect any localized areas of instability. Unstable areas should be reworked to provide a uniform subgrade.

Positive drainage should be provided during construction and maintained throughout the life of the pavement. Adequate drainage is essential for continuing performance.

GENERAL

In the event that any changes in the nature, design, or location of the structures are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of this report modified or verified in writing.

The analysis and recommendations submitted in this report are based in part upon the data obtained from the four (4) soil borings. The nature and extent of variation between the borings may not become

evident until construction. If variations then appear, it will be necessary to reevaluate the recommendations in this report.

It is recommended that the geotechnical engineer be provided the opportunity for general review of the final designs and specifications in order that earthwork and foundation recommendations may be properly interpreted and implemented in the designs and specifications. It is also recommended that the geotechnical engineer be retained to provide continuous engineering services during construction of the foundations, excavations, and earthwork phases of the work. This is to observe compliance with the design concepts, specifications, or recommendations and to modify these recommendations in the event that subsurface conditions differ from those anticipated.

Respectfully Submitted,
WESTERN COLORADO TESTING, INC.

Gary L. Hamacher, P.E.
Senior Geotechnical Engineer

GLH/skl
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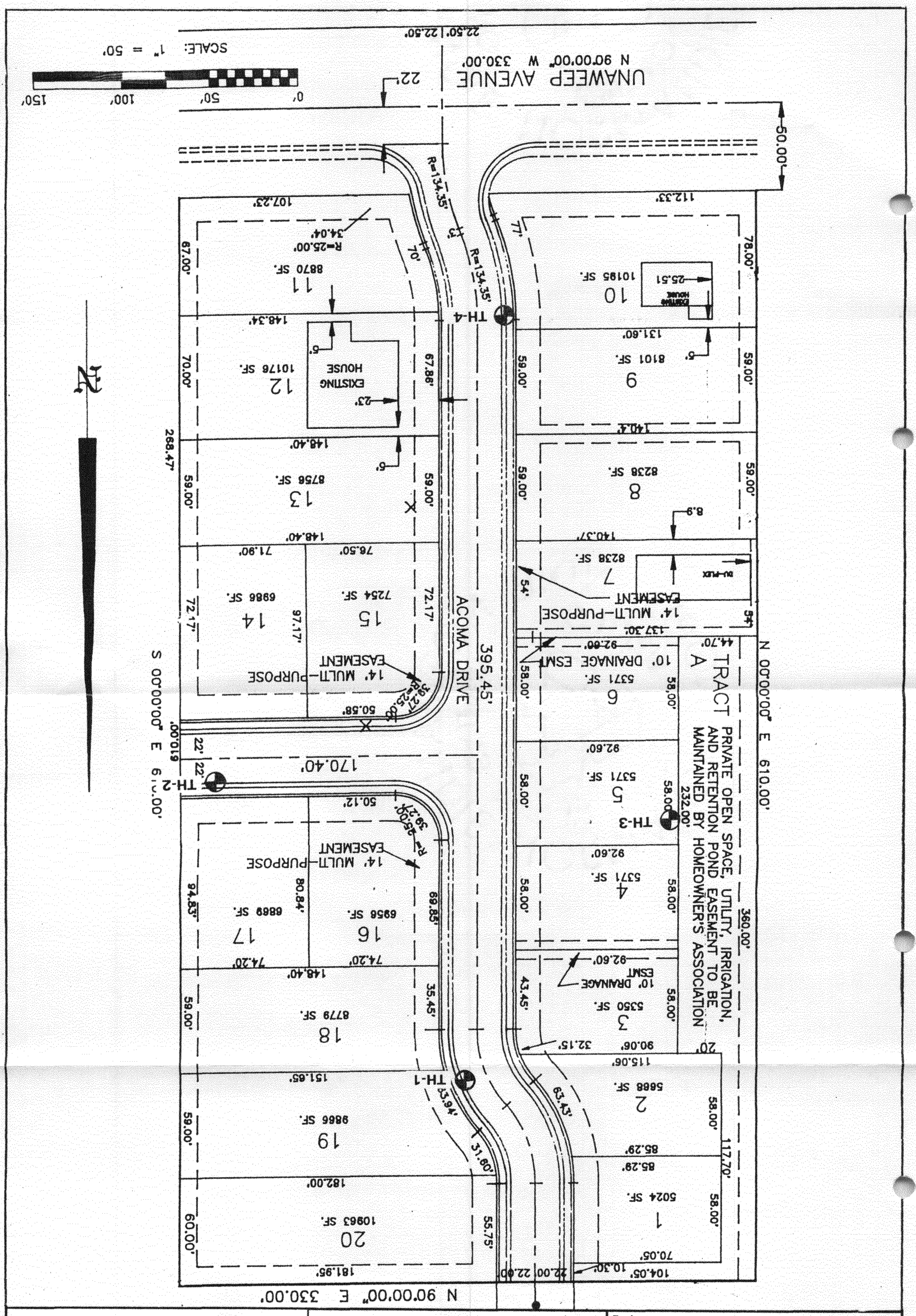
APPENDIX



WCT WESTERN COLORADO TESTING, INC.	**BORING LOCATION PLAN**	Project	Helena Subdivision
		Location	Grand Junction, CO
		Job No. 201296	Date 3-4-96

Figure 1

WESTERN COLORADO TESTING, INC.

Project He[illegible]a Subdivision

Location Grand Junction, Colorado

Job No 201296 Date 3-4-96

BORING LOG

DRILL HOLE NO.	LOCATION OF DRILL HOLE	DATE DRILLED	ELEVATION	DATUM	DRILLER	LOGGER
TH-1	See Boring Location Plan	2-23-96	-	-	S. Pendergrass	K. Alpha

WATER LEVEL OBSERVATIONS				TYPE OF SURFACE	DRILL RIG
				Native Grasses & Weeds	Diedrich D-50
WHILE DRILLING	END OF DRILLING	24 HOURS AFTER DRILLING	5 DAYS	DRILLING METHOD	TOTAL DEPTH
11'	12'-1"	-	12'-3"	4" Cont. Flight Augers	13 1/2'

DEP. FT	SAMPLE DATA			SOIL DESCRIPTION				LABORATORY DATA				DEP. FT
	SAMPLE NO. & TYPE	"N" BLOWS /FT	% REC.	COLOR	MOIST	CONS.	GEOLOGIC DESCRIPTION & OTHER REMARKS	% MC	DRY DENS pcf	qu tsf	CLASS	
				dark brown / dark brown	very moist / moist	loose / medium stiff	TOP SOIL- silty, with organics / CLAY, silty					
	DM-1	34	100	light brown to reddish brown	slightly moist	stiff	CLAY, silty, sandy, with some gravels	10.7	105.8		80.6% (-)# 200 LL = 38 PI = 24 CL	
5				light brown to reddish brown	slightly moist	dense	SAND & GRAVEL, silty					5
	SP-1	77	75	light brown to reddish brown	slightly moist	dense	SAND & GRAVEL, silty, with occasional cobble					
10				light brown to reddish brown	very moist / wet	dense	SAND & GRAVEL, silty, clayey					10
	SP-2	66	10				B.O.H. @ 13 1/2'					
15												15
20												20
25												25

WESTERN COLORADO TESTING, INC.

Project Hevela Subdivision

Location Grand Junction, Colorado

Job No 201296 Date 3-4-96

BORING LOG

DRILL HOLE NO.	LOCATION OF DRILL HOLE	DATE DRILLED	ELEVATION	DATUM	DRILLER	LOGGER
TH-2	See Boring Location Plan	2-23-96	-	-	S. Pendergrass	K. Alpha

WATER LEVEL OBSERVATIONS				TYPE OF SURFACE	DRILL RIG
				Native Grasses & Weeds	Diedrich D-50
WHILE DRILLING	END OF DRILLING	24 HOURS AFTER DRILLING	___ HOURS	DRILLING METHOD	TOTAL DEPTH
None	None	-	-	4" Cont. Flight Augers	12 1/2'

DEP. FT	SAMPLE DATA			SOIL DESCRIPTION				LABORATORY DATA				DEP. FT
	SAMPLE NO. & TYPE	"N" BLOWS /FT	% REC.	COLOR	MOIST	CONS.	GEOLOGIC DESCRIPTION & OTHER REMARKS	% MC	DRY DENS pcf	qu tsf	CLASS	
				dark brown	moist	loose	TOP SOIL- , silty, with organics					
				dark brown	moist to very moist	medium stiff	CLAY, silty					
				lt. brn to reddish brn	slightly moist	stiff	CLAY, silty, sandy, with some gravel					
	DM-1	62	100	light brown to reddish brown	slightly moist	dense	SAND & GRAVEL, silty, with cobbles	5.7			32.3% (-)#200	
5												5
	SP-1	18	50	light brown to reddish brown	slightly moist	medium dense	SAND & GRAVEL, silty, clayey, with occasional cobble					
10												10
							B.O.H. @ 12 1/2'					
15												15
20												20
25												25

WESTERN COLORADO TESTING, INC.

Project He[illegible]a Subdivision

Location Grand Junction, Colorado

Job No 201296 Date 3-4-96

BORING LOG

DRILL HOLE NO.	LOCATION OF DRILL HOLE	DATE DRILLED	ELEVATION	DATUM	DRILLER	LOGGER
TH-3	See Boring Location Plan	2-23-96	-	-	S. Pendergrass	K. Alpha

WATER LEVEL OBSERVATIONS				TYPE OF SURFACE	DRILL RIG
				Native Grasses & Weeds	Diedrich D-50
WHILE DRILLING	END OF DRILLING	24 HOURS AFTER DRILLING	___ HOURS	DRILLING METHOD	TOTAL DEPTH
None	None	-	-	4" Cont. Flight Augers	7 1/2'

DEP. FT	SAMPLE DATA			SOIL DESCRIPTION				LABORATORY DATA				DEP. FT
	SAMPLE NO. & TYPE	"N" BLOWS /FT	% REC.	COLOR	MOIST	CONS.	GEOLOGIC DESCRIPTION & OTHER REMARKS	% MC	DRY DENS pcf	qu tsf	CLASS	
				dark brown	moist	loose	TOP SOIL- silty, with organics					
				dark brown	moist	med. stiff	Clay, silty					
				light brown to reddish brown	slightly moist	dense	SAND & GRAVEL, silty, with cobbles					
	DM-1	49	100									
5							more gravels and cobbles, with less fines @ 4'					5
	SP-1	50	10									
							B.O.H. @ 7 1/2'					
10												10
15												15
20												20
25												25

WESTERN COLORADO TESTING, INC.

Project He[illegible]a Subdivision

Location Grand Junction, Colorado

Job No 201296 Date 3-4-96

BORING LOG

DRILL HOLE NO.	LOCATION OF DRILL HOLE	DATE DRILLED	ELEVATION	DATUM	DRILLER	LOGGER
TH-4	See Boring Location Plan	2-23-96	-	-	S. Pendergrass	K. Alpha

WATER LEVEL OBSERVATIONS				TYPE OF SURFACE	DRILL RIG
				Native Grasses	Diedrich D-50
WHILE DRILLING	END OF DRILLING	24 HOURS AFTER DRILLING	___ HOURS	DRILLING METHOD	TOTAL DEPTH
None	None	-	-	4" Cont. Flight Augers	8 1/2'

DEP. FT	SAMPLE DATA			SOIL DESCRIPTION				LABORATORY DATA				DEP. FT
	SAMPLE NO. & TYPE	"N" BLOWS /FT	% REC.	COLOR	MOIST	CONS.	GEOLOGIC DESCRIPTION & OTHER REMARKS	% MC	DRY DENS pcf	qu tsf	CLASS	
				dark brown / light brown	moist / slightly moist	loose / medium stiff	TOP SOIL- silty, with organics / CLAY, silty					
	C-1	26	50	light brown to reddish brown	slightly moist	stiff	CLAY, silty, sandy, with occasional cobble	13.2			69.6% (-) #200	
5				light brown to reddish brown	slightly moist	medium dense to dense	SAND & GRAVEL, silty, with occasional cobble					5
	SP-1	28	100									
							B.O.H. @ 8 1/2'					
10												10
15												15
20												20
25												25

WESTERN COLORADO TESTING, INC.

PHYSICAL PROPERTIES OF SOILS

Job No.: 201296

Lab/Invoice No.:

Date of Report: 3-4-96

Reviewed By: [signature]

Client: Ben Hill & Mike Queally | Project: Helena Subdivision

Location: Grand Junction, Colorado | Sampled By: K. Alpha | Date: 2-23-96

Type of Material: CLAY, sandy | Submitted By: K. Alpha | Date: 2-23-96

Source of Material: TH-1 @ 2.5' - 4' | Authorized By: Client | Date: 2-21-96

Sieve Analysis, ASTM D422-

Sieve Size	% Passing Accumulative	Specification
3"		
2 1/2"		
2"		
1 1/2"		
1"		
3/4"		
1/2"		
3/8"		
1/4"		
No. 4		
8		
10		
16	100	
30	99	
40	98	
50	97	
100	92	
Finer than 200 ASTM D1140-	80.6	

Soil Classification	Unified CL	AASHTO A-6(14)
Liquid Limit and Plasticity of Soils: ASTM D424-		LL= 39 PI= 24
Moisture - Density Relations ☐ ASTM D698- ☐ ASTM D1557- Method:		Maximum Dry Density, pcf : Optimum Moisture, % :
Specific Gravity of Soils (minus No. 4 material) ASTM D854-		Specific Gravity:
Resistance 'R' Value of Compacted Soils ASTM D2844-		'R' Value:

Other:

Natural Moisture Content 10.7%

Copies:

Figure 6

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WESTERN COLORADO TESTING, INC.

PHYSICAL PROPERTIES OF SOILS

Job No.: 201296

Lab/Invoice No.:

Date of Report: 3-4-96

Reviewed By:

Client: Ben Hill & Mike Queally | Project: Helena Subdivision

Location: Grand Junction, Colorado | Sampled By: K. Alpha | Date: 2-23-96

Type of Material: SAND & GRAVEL, clayey | Submitted By: K. Alpha | Date: 2-23-96

Source of Material: TH-2 @ 2.5' - 4.0' | Authorized By: Client | Date: 2-21-96

Sieve Analysis, ASTM D422-

Sieve Size	% Passing Accumulative	Specification
3"		
2 1/2"		
2"	100	
1 1/2"	89	
1"	78	
3/4"	76	
1/2"	66	
3/8"	64	
1/4"	-	
No. 4	60	
8	58	
10	57	
16	55	
30	51	
40	46	
50	42	
100	36	
Finer than 200 ASTM D1140-	32.3	

Soil Classification

Liquid Limit and Plasticity of Soils: LL=

ASTM D424- PI=

Moisture - Density Relations — Maximum Dry Density, pcf :

☐ ASTM D698- ☐ ASTM D1557- Method: Optimum Moisture, % :

Specific Gravity of Soils (minus No. 4 material)

ASTM D854- Specific Gravity:

Resistance 'R' Value of Compacted Soils

ASTM D2844- 'R' Value:

Other:

Natural Moisture Content 5.7%

Copies:

Figure 7

msa:2012fg7.doc

WESTERN COLORADO TESTING, INC.

PHYSICAL PROPERTIES OF SOILS

Job No.: 201296

Lab/Invoice No.:

Date of Report: 3-4-96

Reviewed By:

Client: Ben Hill & Mike Queally Project: Helena Subdivision

Location: Grand Junction, Colorado Sampled By: K. Alpha Date: 2-23-96

Type of Material: CLAY, sandy Submitted By: K. Alpha Date: 2-23-96

Source of Material: TH-4 @ 2.0' - 3.0' Authorized By: Client Date: 2-21-96

Sieve Analysis, ASTM D422-

Sieve Size	% Passing Accumulative	Specification
3"		
2 1/2"		
2"		
1 1/2"		
1"		
3/4"	100	
1/2"	98	
3/8"	98	
1/4"	97	
No. 4	-	
8	97	
10	97	
16	97	
30	96	
40	95	
50	93	
100	83	
Finer than 200 ASTM D1140-	69.6	

Soil Classification		
Liquid Limit and Plasticity of Soils:		LL=
ASTM D424-		PI=
Moisture - Density Relations		Maximum Dry Density, pcf :
☐ ASTM D698-	☐ ASTM D1557- Method:	Optimum Moisture, % :
Specific Gravity of Soils (minus No. 4 material)		
ASTM D854-		Specific Gravity:
Resistance 'R' Value of Compacted Soils		
ASTM D2844-		'R' Value:
Other:		

Copies:

Figure 8

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WESTERN COLORADO TESTING, INC.

Job No. 201296

Lab./Invoice No.

Date 3-4-96

Reviewed by BZM

RESISTANCE 'R' VALUE AND EXPANSION PRESSURE

Client Ben Hill & Mike Queally Project Helena Subdivision

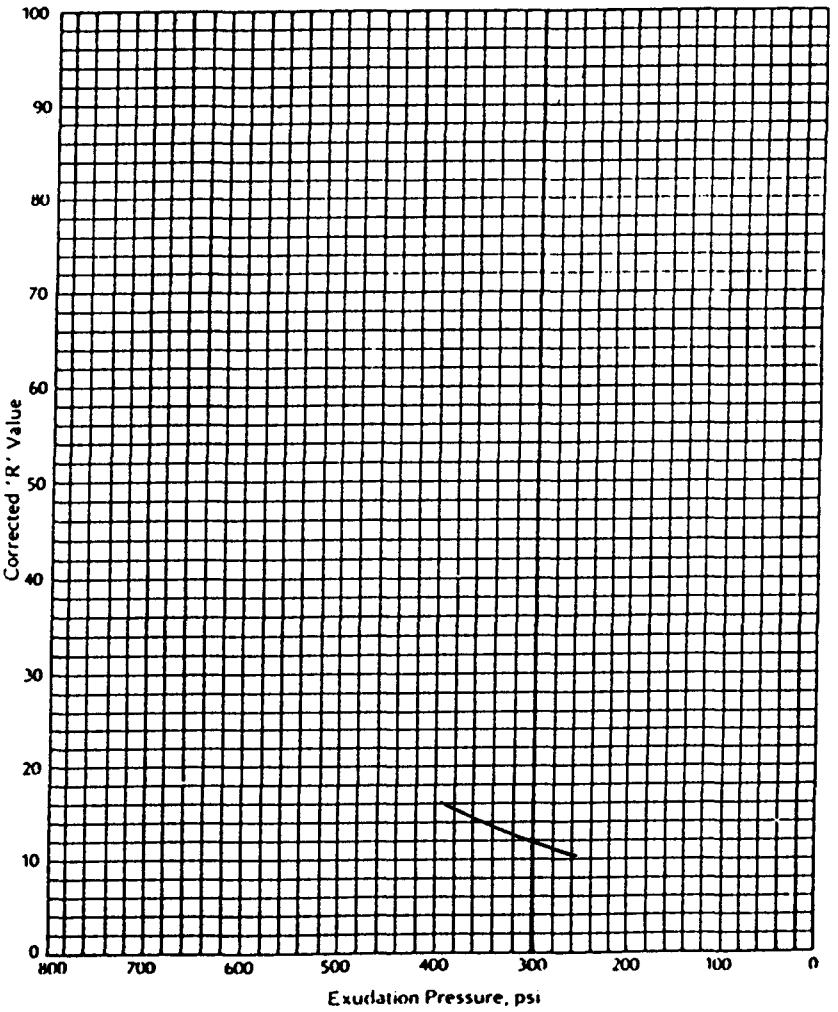
Location Grand Junction, CO Sampled By K. Alpha Date 2-23-96

Type of Material CLAY, sandy Submitted By K. Alpha Date 2-23-96

Source of Material TH-1 @ 0.0' - 4.0' Authorized By Client Date 2-21-96

ASTM D2844-	Specimen		
	A	B	C
Compactor Pressure, psi	125	90	60
Exudation Pressure, psi	374	326	279
Moisture at Compaction, %	17.5	19.2	21.1
Dry Density at Compaction, pcf	109.1	107.3	98.9
Corrected 'R' Value	15	13	11
Expansion Dial Read, $x10^{-4}$			
Expansion, psf			
Atterberg Limits, ASTM D424-	LL = 39	PI = 24	

Corrected 'R' Value at 300 psi 12



Sieve Analysis, ASTM D422-

Sieve Size	% Passing Accumulative	Specification	As Tested Grading
3"			
2½"			
2"			
1½"			
1"			
¾"			
½"			
⅜"			
¼"			
No. 4			
No. 8			
No. 10			
No. 16	100		
No. 30	99		
No. 40	98		
No. 50	97		
No. 100	92		
Finer than 200 ASTM D1140-	80.6		

Figure 9

WESTERN COLORADO TESTING, INC.

SUMMARY OF SOIL TESTS

Job No.: 201296
Client: Ben Hill & Mike Queally
Project.: Helena Subdivision
Location: Grand Junction, Colorado

Test Hole No.	Sample No.	Sample Depth (ft)	Sample Dia. (in)	Sample Hgt. (in)	Water Content (%)	Density		R-Value	Unconfined Compression		Atterberg Limits			Cons Test	% Pass #200 Sieve	Classification or Remarks
						Wet (pcf)	Dry (pcf)		QU (tsf)	Strain (%)	LL	PL	PI			
TH-1	D-1	2.5 - 4.0	2.42		10.7	117.1	105.8				39	15	24		80.6	CLAY, sandy, CL
TH-1	B-1	0.5 - 4.0	Bulk					12								
TH-2	D-1	2.5 - 4.0	2.42		5.7										32.3	
TH-4	C-1	2.0 - 3.5	1.94		10.1	103.7	94.2								69.6	

Figure 10

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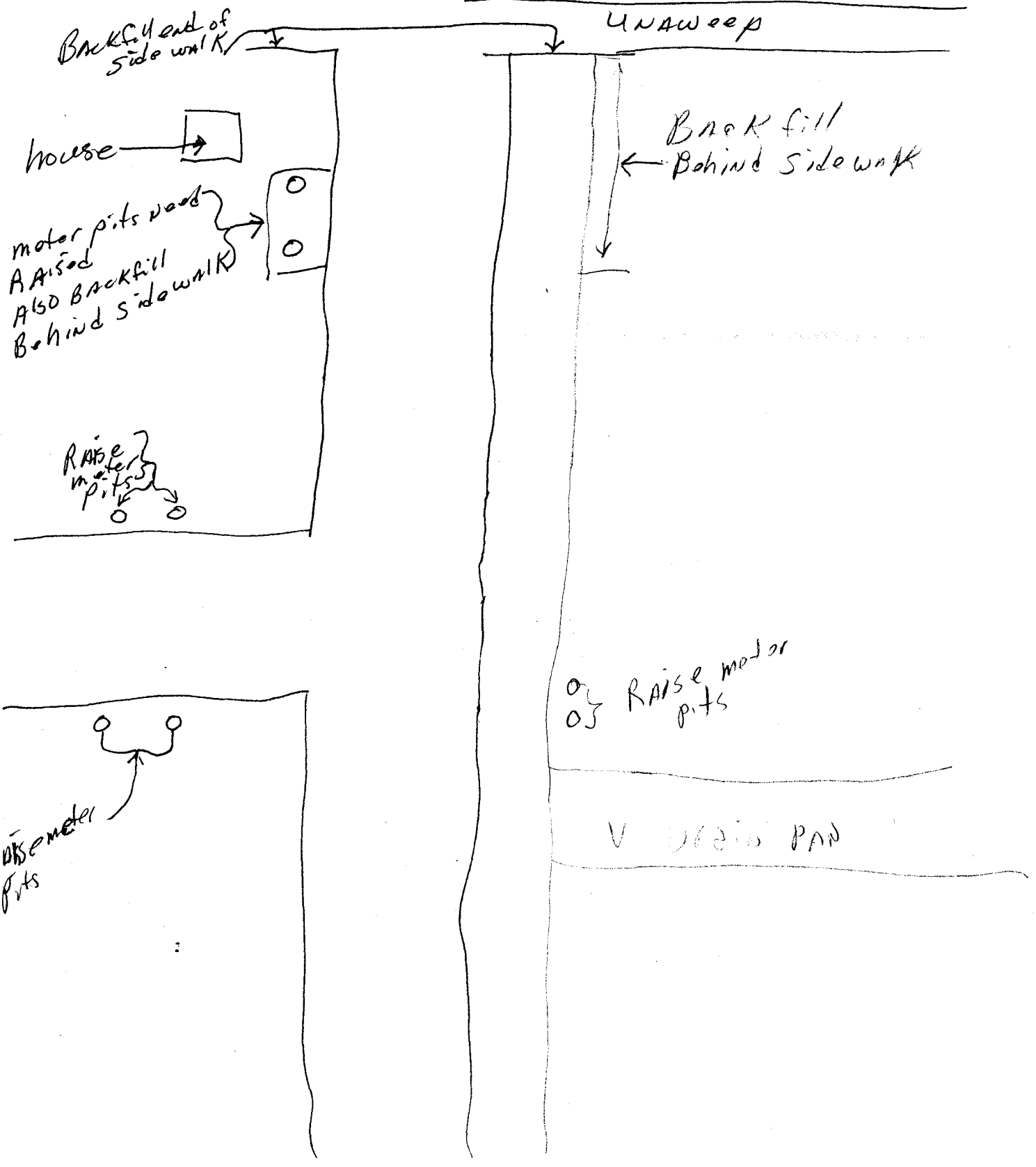
CITY OF GRAND JUNCTION

DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PROJECT _____

SUBJECT _____

DATE _____ BY _____ FILE NO. _____ SHEET ____ OF ____



REVIEW COMMENTS

FILE #FPP-96-56 **TITLE HEADING:** Helena Subdivision

LOCATION: 2776 & 2780 Unaweep Avenue

PETITIONER: Michael Queally

PETITIONER'S ADDRESS/TELEPHONE: 1204 N 7th Street
Grand Junction, CO 81501
241-7653

PETITIONER'S REPRESENTATIVE: Wayne Lizer

STAFF REPRESENTATIVE: Bill Nebeker

NOTE: THE PETITIONER IS REQUIRED TO SUBMIT FOUR (4) COPIES OF WRITTEN RESPONSE AND REVISED DRAWINGS ADDRESSING ALL REVIEW COMMENTS ON OR BEFORE 5:00 P.M., MARCH 22, 1996.

U.S. WEST **3/5/96**
Max Ward **244-4721**

For timely telephone service, as soon as you have a plat and power drawing for your housing development, please.....

MAIL COPY TO:
U.S. West Communications
Developer Contact Group
P.O. Box 1720
Denver, CO 80201

AND

CALL THE TOLL-FREE NUMBER FOR:
Developer Contact Group
1-800-526-3557

We need to hear from you at least 60 days prior to trenching.

PUBLIC SERVICE COMPANY **3/7/96**
John Salazar **244-2781**

GAS & ELECTRIC: No objections.

CITY PROPERTY AGENT **3/12/96**
Steve Pace **256-4003**

1. Missing north arrow and graphic scale.
2. The legal description does not quite match what is platted, i.e. S.W. cor lot 8 & P.O.B.
3. Line holder approval certificate, if needed.
4. What type of easement is being shown along the line common to Lots 3 & 4 and Lots 6 & 7.
5. Need to address the retention pond easement in the dedication.
6. Interior lot corners?

CITY COMMUNITY DEVELOPMENT **3/13/96**
Bill Nebeker **244-1447**

1. Provide a 10' wide pedestrian access easement along the north line of lot 1 or some other appropriate location for pedestrian access to the west. An 8' wide concrete path shall be constructed within the easement. Cost of the path shall be included in the improvements agreement.
2. Include the following in the dedication statement, "All Pedestrian Easements to the City of Grand Junction as perpetual easements for ingress and egress use by the general public pedestrian."
3. Change Outlot A to Tract A on plat.
4. Evidence must be submitted prior to plat recordation that shows that a homeowner's association has been established in the subdivision.
5. An Open Space Fee is required prior to plat recordation.
6. TCP is required.
7. Identify 10' drainage easement between lots 3 & 4, 6 & 7.
8. What is the easement between lots 8 & 9?
9. If Tract A is a utility, irrigation and retention pond easement, what does the dashed line within it refer to?
10. Your narrative states there are 16 lots; I assume you meant 20.
11. Where will the Helena Subdivision sign be located? On private property?

CITY POLICE DEPARTMENT **3/13/96**
Dave Stassen **244-3587**

No comments.

CITY DEVELOPMENT ENGINEER **3/14/96**
Jody Kliska **244-3587**

Submitted plans and report were deficient, so redlined plans and SSID checklists are being returned with these comments. Acceptable plans and report must be submitted by the response to comments date or the project will be pulled from the Planning Commission agenda. Please see the attached for detailed comments.

TCI CABLEVISION **3/11/96**
Glen Vancil **245-8777**

See attached comments.

CITY FIRE DEPARTMENT **3/14/96**
Hank Masterson **244-1414**

The Fire Department has no problems with this proposal.

CITY UTILITY ENGINEER **3/15/96**
Trent Prall **244-1590**

SEWER - CITY

1. PLEASE SEE PAGE IX-35 (DRAWING STANDARDS CHECKLIST) OF THE SSID MANUAL. IN THE BEST INTEREST OF THE PETITIONER'S AS WELL AS CITY STAFF'S TIME, PLEASE VERIFY EACH ITEM HAS BEEN ADEQUATELY ADDRESSED PRIOR TO RESUBMITTAL.

2. Locations of manholes need to be identified either by coordinates, bearings, or offsets from property lines..
3. Please add the following notes to the sewer plan and profile.
   A. Contractor shall have one signed copy of plans and a copy of the City of Grand Junction's Standard Specifications at the job site at all times.
   B. All sewer mains shall be PVC SDR 35 (ASTM 3034) unless otherwise noted.
   C. All sewer mains shall be laid to grade utilizing a pipe laser.
   D. All service line connections to the new main shall be accomplished with full body wyes or tees. Tapping saddles will not be allowed.
   E. No 4" services shall be connected directly into manholes. 6" service connections with the mainline will a manhole.
   F. The contractor shall notify the City inspection 48 hours prior to commencement of construction.
   G. The Contractor is responsible for all required sewer line testing to be completed in the presence of the City Inspector. Pressure testing will be performed after all compaction of street subgrade and prior to street paving. Final lamping will also be accomplished after paving is completed. These tests shall be the basis for issuing initial acceptance of the sewer line extension.
   H. The Contractor shall obtain City of Grand Junction Street Cut Permit for all work within existing City road right-of-way prior to construction.
   I. A clay cut-off wall shall be placed 10 feet upstream from all new manholes unless otherwise noted. The cut-off wall shall extend from 6 inches below to 6 inches above granular backfill material and shall be 2 feet wide. If native material is not suitable, the contractor shall import material approved by the engineer.
   J. Benchmark _____
   H. Helena Street stub out shall be capped and plugged at development property line. Stub out shall be identified with a steel fence post buried 1' below finished grade. As-built surveying of stub out required PRIOR to backfill.

WATER - CITY

1. Provide fitting angles for water line.
2. Show water / sewerline crossings in profile and associated protection.
3. Please add note stating that water meter pits and setters will be provided by City inspector for installation by the contractor. Curb stop is not required as a stop is incorporated in the City standard setter.

CITY PARKS & RECREATION DEPARTMENT **3/15/96**

Shawn Cooper **244-3869**

Parks & Open Space Fees -17 dwelling units @ $225 = $3,825.00.

Review Comments - Bill Nebeker
Helena Subdivision - #FPP-96-56
3-13-96

Final Plat Comments

1. Provide a 10' wide pedestrian access easement along the north line of lot 1 or some other appropriate location for pedestrian access to the west. An 8' wide concrete path shall constructed within the easement. Cost of the path shall be included in the improvements agreement.

2. Include the following in the dedication statement, "All Pedestrian Easements to the City of Grand Junction as perpetual easements for ingress and egress use by the general public pedestrian."

3. Change Outlot A to Tract A on plat.

4. Evidence must be submitted prior to plat recordation that shows that a homeowner's association has been established in the subdivision.

5. An Open Space Fee is required prior to plat recordation.

6. TCP is required.

7. Identify 10' drainage easement between lots 3 & 4, 6 & 7.

8. What is the easement between lots 8 & 9?

9. If Tract A is a utility, irrigation and retention pond easement, what does the dashed line within it refer to?

10. Your narrative states there there are 16 lots; I assume you meant 20.

11. Where will the Helena Subdivision sign be located? On private property?

To: Marcia Rabideaux
From: Jody Kliska
Subject: FPP-96-56 Helena Sub.
Date: 3/14/96 Time: 3:03PM

1. Submitted plans and report were deficient, so redlined plans and SSID checklists are being returned with these comments. Acceptable plans and report must be submitted by the response to comments date or the project will be pulled from the Planning Commission agenda. Please see the attached for detailed comments.

2. If not pulled

RECEIVED GRAND JUNCTION
PLANNING DEPARTMENT
MAR 14 1996

HELENA SUB.

DRAWING STANDARDS CHECKLIST

ROADWAY PLAN & PROFILE

ITEM		GRAPHIC STANDARDS	OK	NA
SECTION VIII	A	Scale: 1" = 20', 30', 40', or 50' H: 1" = 2', 3', 4', or 5' V		
	B	Sheet size: 24" x 36"		
	C	Primary features consist only of lighting and traffic features		
	D	Notation: All non-construction text, and also construction notation for all primary features		
	E	Line weights of existing and proposed (secondary and primary) features per City standards		
	F	Location: All primary facilities are fully located horizontally and vertically		
	G	Horizontal control: Subdivisions and all public utilities (final drawings) tied to Section aliquot corners		
	H	Vertical control: Existing and proposed benchmarks on U.S.G.S. datum		
	I	Orientation and north arrow		
	J	Stamped and sealed drawings by registered professional competent in the work		
	K	Title block with names, titles, preparation and revision dates		
	L	Reference to City Standard Drawings and Specifications		
	M	Legend of symbols used		
	N	List of abbreviations used		
	P	Multiple sheets provided with overall graphical key and match lines		
	Q	Contouring interval and extent		
	R	Neatness and legibility		

ITEM	FEATURES	Plan	Profile	OK	NA
1	Use the Composite or Site Plan as a base map or otherwise provide similar information	X			
2	Segmentize plan view as required to provide profiles below plan views	X			
3	Show all existing and proposed profiles at C_L and right and left FIs. Provide slopes with "+" or "-"		X		
4	Show existing and proposed profiles at edge of pavement if there is no gutter		X		
5	Note adjustment of all MH rims and valve covers for final grade	X			
6	Elevation of F_L at fillet/valley pan interface	X			
7	Station & elevation of F_L at BCRs, ECRs, and handicap ramps	X			
8	Station & elevation of pavement C_L and F_L at endpoints, BCRs, ECRs, PCs, PTs, PRCs, and PCCs		X		
9	Station & elevation at all grade changes and C_L and F_L VPIs, VPCs, VPTs and high & low points.		X		
10	Station & elevation at all grade changes and C_L pavement warp at valley pans		X		
11	Provide pavement, base, and subgrade specifications				
12	Barricades, turn-arounds, tapers, delineators, driveways	X			
13	Street lights, signals, signing, and other traffic controls	X			
14	Show future road extension alignment to support current design, where applicable	X	X		
15	Provide all necessary details or reference detail and/or cross-section sheets				
16	Show proposed permanent benchmark (for new subdivisions) and all proposed horizontal control survey markers and street intersections, offset if required	X			
17	Space for approval signature by City Engineering with date and title.				

COMMENTS

1. For a definition of abbreviations used above, see page VIII-4.

HELENA SUB,

DRAWING STANDARDS CHECKLIST

WATER & SEWER PLAN & PROFILE

	ITEM	GRAPHIC STANDARDS	OK	NA
SECTION VIII	A	Scale: 1" = 20', 30', 40', or 50' H: 1" = 2', 3', 4', or 5' V		
	B	Sheet size: 24" x 36"		
	C	Primary features consist only of proposed water and sewer facilities		
	D	Notation: All non-construction text, and also construction notation for all primary features		
	E	Line weights of existing and proposed (secondary and primary) features per City standards		
	F	Location: All primary facilities are fully located horizontally and vertically		
	G	Horizontal control: Subdivisions and all public utilities (final drawings) tied to Section aliquot corners		
	H	Vertical control: Existing and proposed benchmarks on U.S.G.S. datum		
	I	Orientation and north arrow		
	J	Stamped and sealed drawings by registered professional competent in the work		
	K	Title block with names, titles, preparation and revision dates		
	L	Reference to City Standard Drawings and Specifications		
	M	Legend of symbols used		
	N	List of abbreviations used		
	P	Multiple sheets provided with overall graphical key and match lines		
	Q	Contouring interval and extent		
	R	Neatness and legibility		

	ITEM	FEATURES	Plan	Profile	OK	NA
WATER & SEWER DESIGN INFO	1	Use the Composite or Site Plan as a base map, or otherwise provide similar information	X			
	2	Segmentize plan view as required to provide profiles below plan views	X			
	3	Show all existing and proposed sewer facilities in profile		X		
	4	Show all existing and proposed buried facilities that cross the sewer		X		
	5	Show water mains at dips or crossings with other buried facilities		X		
	6	Dimension separation between water and sanitary or storm sewers	X	X		
	7	Show and identify encasement or structural pipe where applicable	X	X		
	8	Add water and sewer services	X			
	9	Station and label al manholes, add rim and invert elevations		X		
	10	Add sewer main slopes and distances between manholes (centerline to centerline)		X		
	11	Add existing and proposed surface profile		X		
	12	Call out water and sewer pipe type in notes				
	13	Call out minimum cover over water and sewer in notes				
	~~14~~	Provide all necessary details or reference detail sheet(s) PROVIDED				
	15	Systems shown conform to water and sewer report, if any	X	X		
	16	Provide note regarding separation of water and sewer mains				
	17	Provide note regarding service line markers and endpoint locations	X	X		
	18	Space for approval signature by City Engineering with date and title				
	19	Provide note requiring all Ute water lines be tested in accordance with City standards prior to street construction	X			

COMMENTS

HELENA SUB.

DRAWING STANDARDS CHECKLIST

STORM DRAINAGE PLAN & PROFILE

ITEM		GRAPHIC STANDARDS	OK	NA
SECTION VIII	A	Scale: 1" = 20', 30', 40', or 50' H: 1" = 2', 3', 4', or 5' V		
	B	Sheet size: 24" x 36"		
	C	Primary features consist only of proposed storm drainage facilities		
	D	Notation: All non-construction text, and also construction notation for all primary features		
	E	Line weights of existing and proposed (secondary and primary) features per City standards		
	F	Location: All primary facilities are fully located horizontally and vertically		
	G	Horizontal control: Subdivisions and all public utilities (final drawings) tied to Section aliquot corners		
	H	Vertical control: Existing and proposed benchmarks on U.S.G.S. datum		
	I	Orientation and north arrow		
	J	Stamped and sealed drawings by registered professional competent in the work		
	K	Title block with names, titles, preparation and revision dates		
	L	Reference to City Standard Drawings and Specifications		
	M	Legend of symbols used		
	N	List of abbreviations used		
	P	Multiple sheets provided with overall graphical key and match lines		
	Q	Contouring interval and extent		
	R	Neatness and legibility		

ITEM		FEATURES	Plan	Profile	OK	NA
	1	Use the Composite or Site Plan as a base map or otherwise provide similar information	X			
DRAINAGE INFO	2	Segmentize plan view as required to provide profiles below plan views	X			
	3	Show all existing and proposed drainage facilities in profile		X		
	4	Show all existing and proposed buried facilities that cross drainage facilities		X		
	5	Dimension separation between storm drains and waterlines		X	X	
	6	Show and identify encasement or structural pipe where applicable	X	X		
	7	Station and label all manholes, inlets, culverts, add rim and invert elevations		X		
	8	Add storm drain slopes and distances between MH's and/or inlets		X		
	9	Add existing and proposed surface profile over facilities		X		
	10	Call out pipe and culvert type and any special bedding classes in notes				
	11	Call out minimum cover over culverts and pipes				
	12	Provide all necessary details or reference detail sheet(s)				
	13	Facilities shown conform to drainage report				
	14	Space for signature approval by City Engineering with date and title				

COMMENTS

HELENA SUB.

DRAWING STANDARDS CHECKLIST

GRADING AND DRAINAGE PLAN

ITEM		GRAPHIC STANDARDS	OK	NA
SECTION VIII	A	Scale: Match the Site Plan scale		
	B	Sheet size: 24" x 36"		
	C	Primary features consist only of proposed grading and drainage facilities		
	D	Notation: All non-construction text, and also construction notation for all primary features		
	E	Line weights of existing and proposed (secondary and primary) features per City standards		
	F	Location: All primary facilities are fully located horizontally and vertically		
	G	Horizontal control: Subdivisions and all public utilities (final drawings) tied to Section aliquot corners		
	H	Vertical control: Benchmarks on U.S.G.S. datum if public facilities other than SW are proposed		
	I	Orientation and north arrow		
	J	Stamped and sealed drawings by registered professional competent in the work		
	K	Title block with names, titles, preparation and revision dates		
	L	Reference to City Standard Drawings and Specifications		
	M	Legend of symbols used		
	N	List of abbreviations used		
	P	Multiple sheets provided with overall graphical key and match lines		
	Q	Contouring interval and extent		
	R	Neatness and legibility		

ITEM		FEATURES	OK	NA
ADDITIONAL INFORMATION	1	Use the Site Plan as a base map or otherwise provide the same information		
	2	Add existing contours		
	3	Add proposed contours. Do not show them under buildings or at concrete and asphalt pavement locations		
	4	Finish floor elevations are provided and are at least 1.0 foot above 100-year flood level, and 0.5 foot above the site outfall		
	5	Show grades at all points of curvature, angle, tangency, grade breaks and changes, swales, channels, pipes, inlets, and other primary features, and also existing grades at tie-in locations		
	6	Provide grade slopes between elevations provided in (5) above		
	7	Show detention/retention basins with contours (off pavement) or delineation(on pavement)		
	8	Indicate 2- and 100-year runoff storage volumes and ponded water surface elevation		
	9	If the site involves 5 acres or more that will be disturbed, then: a. Show or identify limits of surface disturbance due to construction b. Identify areas to be used for storage of building materials, fuels, or wastes c. Show location, type, and extent of BMP and erosion control practices		
	10	Space for approval signature by City Engineering with date and title		

COMMENTS

1 This plan may also have full horizontal control on it if not provided on the Site Plan

HELENA SUB-

REPORT CHECKLIST AND OUTLINE

FINAL DRAINAGE REPORT

CHECKLIST	OK	NA
Typed Text (appendices may be handwritten)		
Bound with staple, bar binder, spiral binder or other method (not a notebook)		
Title Page: a. Name of report and preparer, date of preparation and revision (if any) b. Professional's seal and signature		
Table of Contents: For text and appendices, if any (appendices shall be paged)		
Exhibits: Folded to 8½"x11" size		
Maps attached to or contained in the report: Preliminary Major Basin Drainage Map — Pre-development Drainage Map Final Major Basin Drainage Map — Post-development Drainage Map		

OUTLINE

I to IV. Same as for the Preliminary Drainage Report (see X-12)

V RESULTS AND CONCLUSIONS
- A. Runoff Rates for 2 and 100 Year Storm (use tabular format)
  1. Existing total site runoff rates
  2. Existing runoff rates to individual private properties
  3. Proposed total site runoff rates (after detention/retention)
  4. Proposed runoff rates to individual private properties (after detention/retention)
- B. Overall Compliance
  1. Policy
  2. Criteria
  3. Constraints

VI REFERENCES

VII APPENDICES
- A. Existing Runoff (2 and 100 year)
  1. Precipitation (if different than shown in SWMM)
  2. Runoff coefficients
  3. Times of concentration or lag times
  4. Intensities or other parameters
  5. Runoff calculations (individual sub-basins and combined at all design points)
  6. Tabular summary of runoff rates
- B. Proposed Runoff (2 and 100 year)
  1. Precipitation (if different than shown in SWMM)
  2. Runoff coefficients
  3. Times of concentration or lag times
  4. Intensities or other parameters
  5. Runoff calculations (individual sub-basins and combined at all design points)
  6. Tabular summary of runoff rates
- C. Detention Basin Calculations (2 and 100 year)
  1. If Rational & Modified Rational methods are used
     a. Average release rate
     b. Critical durations and intensities
     c. Volume required
     d. Volume available
     e. Storage - depth - discharge
     f. Lower stage outlet
     g. Upper stage outlet
     h. Erosion protection
  2. If Computer or other method of analysis is used
     a. Provide discharge parameters
     b. Provide basin parameters
     c. Provide inflow/outflow information
     d. Erosion protection

HELENA SUB.

REPORT CHECKLIST AND OUTLINE

FINAL DRAINAGE REPORT (continued)

OUTLINE

D. Retention Basin Calculations (100 year)
   1. Basin Feasibility
      a. Groundwater depths
      b. Soil percolation results
      c. Letter from geotechnical Engr.
   2. If Rational Method is used
      a. Volume to be retained
      b. Volume available
   3. If computer or other analysis is used
      a. Provide basin parameters
      Provide inflow information

E. Street Flow
   1. Rate
   2. Depth and velocity

F. Inlets
   1. Rate
   2. Interception
   3. Bypass and to where

G. Storm Drains
   1. Rate
   2. Size and "n" value
   3. Capacity
   4. Hydraulic gradient (if pipe is surcharged or if frictional slope is greater than the pipe slope)

H. Open Channel Flow
   1. Channel geometrics
   2. "n" values and velocities
   3. Erosion protection
   4. Freeboard

I. Culverts
   1. Completed HDS-5 nomographs

J. Miscellaneous Hydraulic calculations

COMMENTS

1. It may not be necessary to cover all of the above topics, but the report should address all concerns applicable to the proposed project, even issues not identified above.

HELENA JOB.

REPORT CHECKLIST AND OUTLINE

PRELIMINARY DRAINAGE REPORT

CHECKLIST	OK	NA
Typed text		
Size: 8½ x 11" format		
Bound: Use bar or spiral binder or staple. Do not use a notebook.		
Title Page: Name of report and preparer, date of preparation and revision (if any)		
Exhibits: Maximum 11" high and 32" wide, bound in report and folded as required to 8½"x11" size		
Maps attached to or contained in the report: Vicinity Map and Preliminary Major Basin Drainage Map		

OUTLINE

I. GENERAL LOCATION AND DESCRIPTION
   - A. Site and Major Basin Location
     1. Streets in the vicinity
     2. Development in the vicinity
   - B. Site and Major Basin Description
     1. Acreage
     2. Ground cover types
     3. Hydrologic soil types

II. EXISTING DRAINAGE CONDITIONS
   - A. Major Basin
     1. General topography, drainage patterns and features, canals, ditches, wetlands
     2. Previously determined 100-year floodplains
   - B. Site
     1. Historic drainage patterns
     2. Inflow characteristics from upstream
     3. Discharge characteristics to downstream sub-basins

III. PROPOSED DRAINAGE CONDITIONS
   - A. Changes in Drainage Patterns
     1. Major basin
     2. Site
   - B. Maintenance Issues
     1. Access
     2. Ownership and responsibility

IV. DESIGN CRITERIA & APPROACH
   - A. General Considerations
     1. Previous drainage studies performed for the area
     2. Master planning issues (large scale considerations)
     3. Constraints imposed by site and other proposed development
   - B. Hydrology
     1. Design storms and precipitation
     2. Runoff calculation method
     3. Detention/retention basin design method
     4. Parameter selection procedures
     5. Analysis and design procedures
     6. Justification of proposed methods not presented or referenced in SWMM
   - C. Hydraulics
     1. Hydraulic calculation methods
     2. Parameter selection procedures
     3. Analysis and design procedures
     4. Justification of proposed methods not presented or referenced in SWMM

COMMENTS

1. No calculations are required for the Preliminary Drainage Report.
2. It may not be necessary to cover all of the above topics, but the report should address all concerns applicable to the proposed project, even issues not identified above.

HELENA SB1 – SUBMIT W/DRAINAGE REPORT

DRAWING STANDARDS CHECKLIST

PRELIMINARY MAJOR BASIN DRAINAGE MAP

	ITEM	GRAPHIC STANDARDS	OK	NA
SECTION VIII	A	Scale: 1" = 50', 60', 100', or 200'		
	B	Sheet size: 11" x 17" or 24" x 36"		
	H	Vertical control: Benchmarks on U.S.G.S. datum if public facilities other than SW are proposed		
	I	Orientation and north arrow		
	J	Stamped and sealed drawings by registered professional competent in the work		
	K	Title block with names, titles, preparation and revision dates		
	M	Legend of symbols used		
	N	List of abbreviations used		
	P	Multiple sheets provided with overall graphical key and match lines		
	Q	Contouring interval and extent		
	R	Neatness and legibility		

	ITEM	FEATURES	OK	NA
-	1	Use "Drainage Information" items of the Preliminary Plan (or that same portion of Item 1 of the Composite plan reduced as required, as a portion of the map). The map must show the site and the entire upstream watershed, which together is the "major basin"		
MAJOR BASIN INFO	2	Add a Vicinity Map if the major basin does not include collector or arterial roads		
	3	Show ROWs, canals, drains, ditches, culverts, ponds, detention basins, wetlands, and other major drainage features in the off-site area of the major basin		
	4	Provide township, range, section, and quarter section information		
	5	Identify existing subdivisions by name and show approximately boundary of the proposed subdivision		
	6	Identify prominent soil types and land uses		
	7	Show general off-site topography using available contour mapping		
	8	Show 100-year floodplains in the off-site area		
	9	Show major basin and off-site sub-basin runoff boundaries		
	10	Identify off-site sub-basin and major basin areages		
	11	Show existing off-site drainage patterns		
	12	Identify areas referenced in the report as having been previously studied		
ON-SITE INFO	13	Show existing characteristics of inflow to, through, and from the site		
	14	Show existing on-site drainage patterns		
	15	Show proposed on-site drainage patterns		

COMMENTS

"On-site Info" items above must be deleted prior to use as a base for the Final Major Basin Drainage Map

W.H. LIZER & ASSOCIATES
Engineering Consulting and Land Surveying
576 25 road, Unit #8
Grand Junction, Colorado 81505
(970) 241-1129

March 1, 1996

FINAL DRAINAGE REPORT
FOR
HELENA SUBDIVISION
Part of the SE 1/4 of Section 24, T1S, R1W, U.M.
City of Grand Junction, Mesa County, Colorado

General

Helena Subdivision is located approximately 2000 feet East of the intersection of 27 3/8 and C Roads in the Orchard Mesa Area. The site is also located in the SE 1/4 of Section 24, T1S, R1W, U.M.

The site generally drains from East to West at approximately 0.50% slope. There is essentially no exterior contribution.

Method of Analysis

The site has no method of conveyance off-site, therefore, total retention is planned.

Percolation tests have been completed and the soils are suitable for a retention basin. Percolation test results and calculations are attached.

The site consists of approximately 4.6 acres.

The volume required for storm retention is:

$$V = \frac{2.01}{12} \times 0.78\, c_{100} \times 4.6 \times 43560$$

$$= 26179 \text{ cu. ft.}$$

A retention basin is designed along the West side of the parcel.

The street design will carry stormwater to drainage structures which will carry the water through drainage easements to the storm retention basin.

Respectfully submitted,

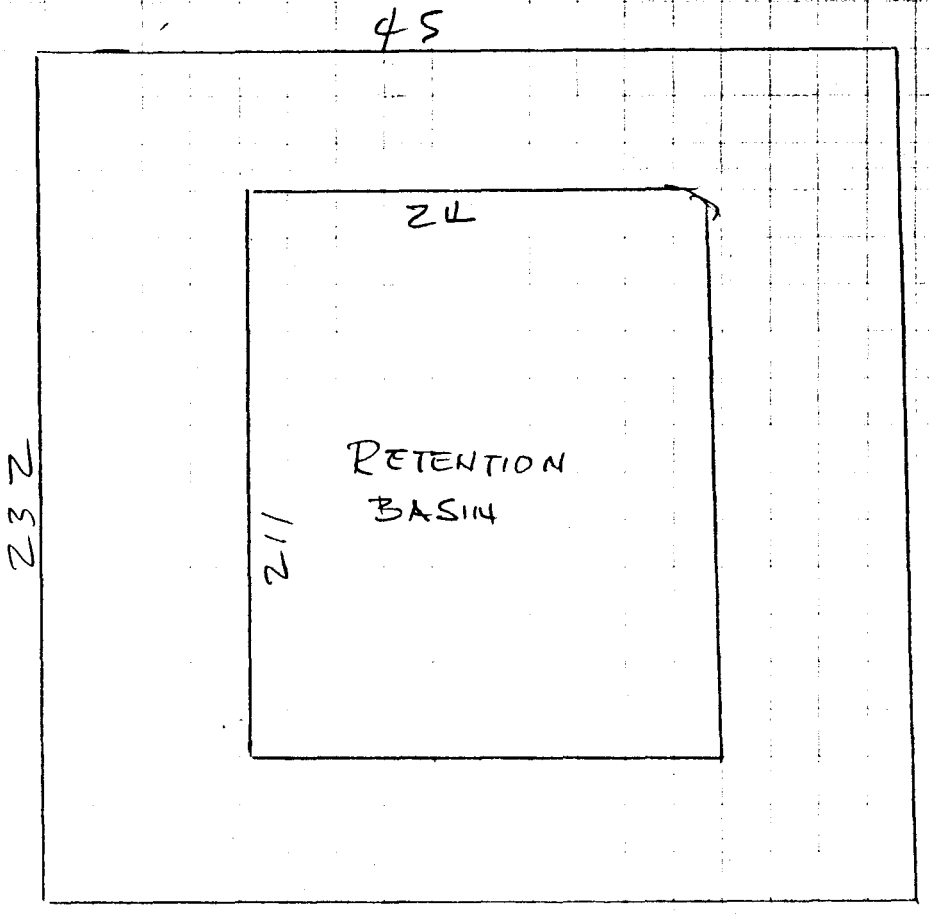
Wayne H. Lizer

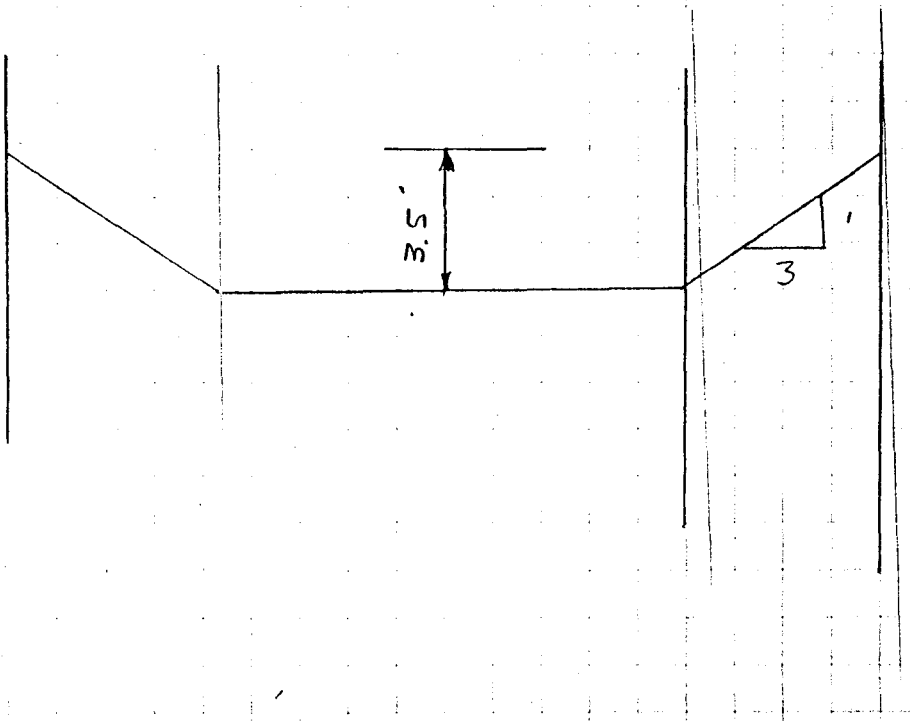
Wayne H. Lizer, P.E., P.L.S.

WHL/sl

Attachments

Helena Sub





HELENA SUB

21

BOTTOM AREA = 211 x 24 = 5064

TOP AREA = 232 x 45 = 10440

15504

AVE = 7752 x 3.5' DEPTH

= 27132 CU FT.

PERK TEST AVE = 21 min/in

3.5 feet x 12 in/ft x 21 min/hr x hr/60 min =

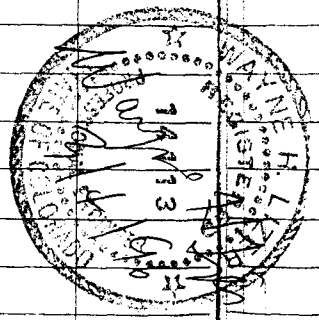
= 14.7 hr to Drain By percolation

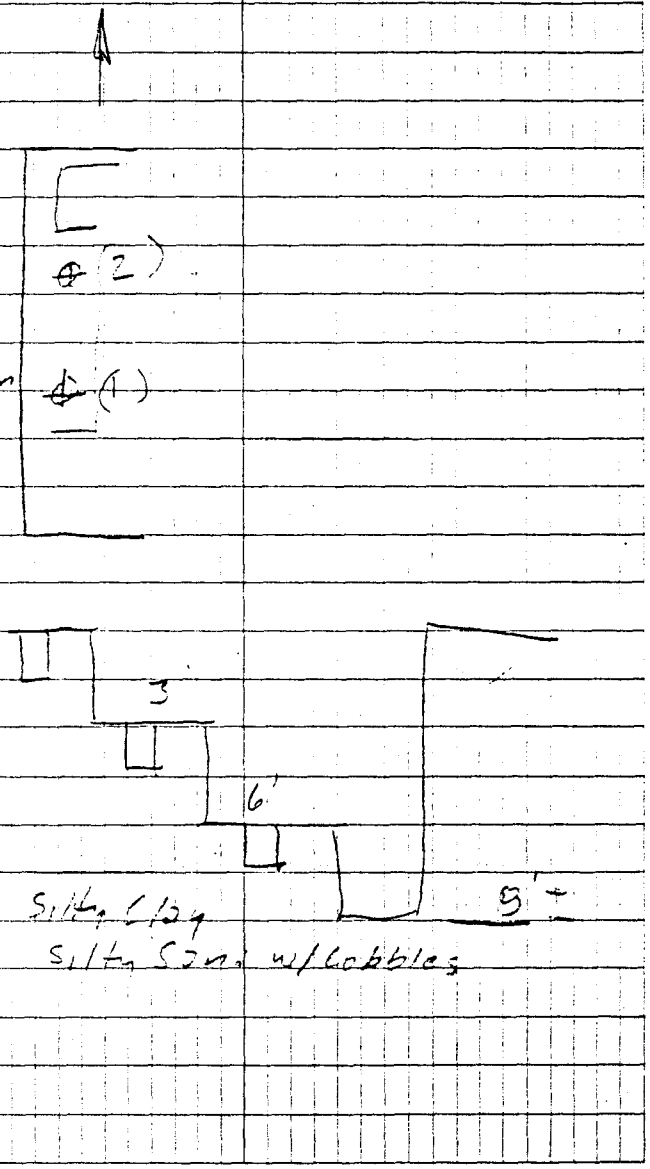
Helena Sub 2/29/96 WHL Mike Q.

Tes- Hole 1

	Time	Reading
Sur	5:00	2½
	5:15	3¾
	5:30	4½
	6:00	6"
		3.5"
3'		1¼
		2¼
		3¼
		5½
		4"
6'		1¼
		2¼
		2¾
		3½
		2.25"

60 / 3.25 = Ave. of 19½ min/in





Helena Sub 2/29/96 WHY 70-26

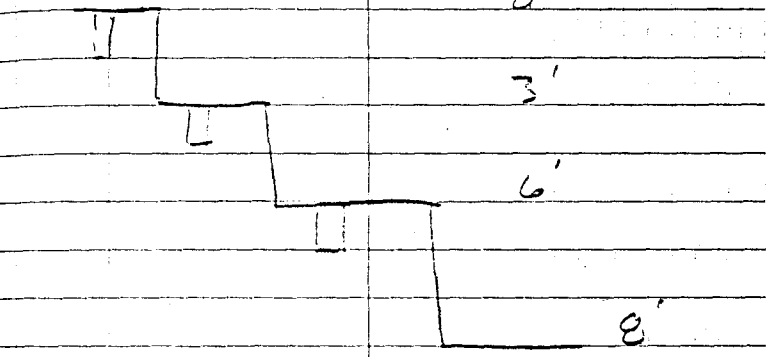
Mike Q

Test Hole NO 2

	Time	Reading
Surface	5:05	1½"
	5:20	2½
	5:35	3
	6:05	4
		2.5"
3'	5:05	2"
	5:20	2½
	5:35	3
	6:05	4½
		2.5"
6'	5:05	1 3/4"
	5:20	3½
	5:35	4 3/4
	6:05	9½
		7.75"

Use 2½"

Ave = 60 / 2.5 = 24 min/in



Soil Log

0-3 Silty Clay

3-8 Silty Sand w/ Cobbles

POSTING OF PUBLIC NOTICE SIGNS

The posting of the Public Notice Sign is to make the public aware of development proposals. The requirement and procedure for public notice sign posting are required by the City of Grand Junction Zoning and Development Code.

To expedite the posting of public notice signs the following procedure list has been prepared to help the petitioner in posting the required signs on their properties.

1. All petitioners/representatives will receive a copy of the Development Review Schedule for the month advising them of the date by which the sign needs to be posted. **IF THE SIGN HAS NOT BEEN PICKED UP AND POSTED BY THE REQUIRED DATE, THE PROJECT WILL NOT BE SCHEDULED FOR THE PUBLIC HEARING.**
2. A deposit of $50.00 per sign is required at the time the sign is picked up.
3. You must call for utility locates before posting the sign. Mark the location where you wish to place the sign and call 1-800-922-1987. You must allow two (2) full working days after the call is placed for the locates to be performed.
4. Sign(s) shall be posted in a location, position and direction so that:
   a. It is accessible and readable, and
   b. It may be easily seen by passing motorists and pedestrians.
5. Sign(s) MUST be posted at least **10 days** before the Planning Commission hearing date and, if applicable, shall stay posted until after the City Council Hearing(s).
6. **After the Public Hearing(s) the sign(s) must be taken down and returned to the Community Development Department within FIVE (5) working days to receive a full refund of the sign deposit.** For each working day thereafter the petitioner will be charged a $5.00 late fee. After eight working days Community Development Department staff will retrieve the sign and the sign deposit will be forfeited in its' entirety.

The Community Development Department staff will field check the property to ensure proper posting of the sign. If the sign is not posted, or is not in an appropriate place, the item will be pulled from the public hearing agenda.

I have read the above information and agree to its terms and conditions.

Michael B. Queally — 3-22-96

SIGNATURE — DATE

FILE #/NAME FPP-96-56 Helena Sub — RECEIPT # 3720

PETITIONER/REPRESENTATIVE: Michael Queally — PHONE # 241-7653

DATE OF HEARING: 4/2/96 — **POST SIGN(S) BY:** 3/22/96

DATE SIGN(S) PICKED-UP 3/22/96 — **RETURN SIGN(S) BY:** 4/9/96

DATE SIGN(S) RETURNED 4/3/96 — RECEIVED BY: SG

Hill & Holmes
Real Estate

3/22/96

MLS

PETITIONERS RESPONSE LETTER to REVIEW COMMENTS
for FINAL APPROVAL of HELENA SUBDIVISION

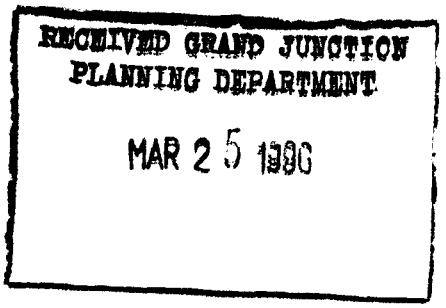
CITY PROPERTY AGENT:
-All six items addressed

CITY COMMUNITY DEVELOPMENT:
-Items 1 through 9 addressed
-Item 10, there are 20 lots total in the proposed subdivision, but only 16 being developed.
-Item 11, the subdivision sign will be located either on lot 10 or 11 on private property.

CITY DEVELOPMENT ENGINEER:
-Redlined preliminary plan items have been corrected and are attached.

CITY UTILITY ENGINEER:
-All items have been addressed

CITY PARKS & RECREATION DEPARTMENT:
-Should these fees be based on 16 or 20 lots?



Michael B. Queally

1204 North 7th • Grand Junction, Colorado 81501 • (970) 241-7653 • FAX (970) 242-7304

To: Bill Nebeker
From: Jody Kliska
Subject: Helena Sub.
Date: 4/1/96 Time: 11:15a

Bill,

Because the water will be in the OM canal on Wednesday, the developer of Helena suddenly realized he needed to get a pipe in the ditch before the water for access. He has been talking with Mike Curtis because it involves coordination with the Unaweep project. Anyway, I would like you to add the following to the conditions of approval for the subdivision:

1. A letter from Orchard Mesa Irrigation approving the temporary pipe in the ditch and detailing the minimum acceptable pipe for a permanent installa ion.

2. Final plans for the intersection which detail the permanent structure with roadway grades approved by the City Engineer that match the design of the Unaweep reconstruction.

3. An improvements agreement which guarantees completion of the intersectio to its approved permanent design.

Let me know if you have questions.

Jody

STAFF REVIEW

FILE:	FPP-96-56
DATE:	April 2, 1996
STAFF:	Bill Nebeker
REQUEST:	Final Plat to subdivide a 4.6 acre parcel into 20 residential lots in an RSF-8 zone.
LOCATION:	North side of Unaweep Avenue at Acoma Drive (extended) 2776 & 2780 Unaweep
APPLICANT:	Michael Queally & Ben Hill

EXECUTIVE SUMMARY: Staff recommends approval of this 20 lot residential subdivision north of Unaweep Avenue. The approval of this subdivision will create 17 new affordable lots in the city. Most technical issues of final plat approval have been resolved. Minor corrections to utility and improvement plans are required before final approval.

EXISTING LAND USE: Two single family homes and one duplex; vacant on remainder of proposed lots

PROPOSED LAND USE: Single family homes (duplex will remain on lot 7)

SURROUNDING LAND USE:

NORTH:	Single Family Residential
SOUTH:	Single Family Residential
EAST:	Generally vacant (Rural residential on large lot with pasture)
WEST:	Vacant

EXISTING ZONING: RSF-8

SURROUNDING ZONING: RSF-8

RELATIONSHIP TO COMPREHENSIVE PLAN: The Orchard Mesa Neighborhood Plan recommends 5 dwelling units per gross acre for this area. The preferred alternative for the Growth Plan (Concentrated Urban Growth) recommends that this area develop at 4-8 dwelling units per acre. The density of this ~~minor~~ subdivision is 4.3 dwellings per gross acre.

STAFF ANALYSIS: The applicant proposes to develop a residential single family subdivision on two, 2.3 acre parcels on Unaweep Avenue. 20 single family residential lots are proposed. Minimum lot size for RSF-8 zoning is 4000 square feet. The average lot size in this subdivision is 7623 square feet. There are three existing structures on the lots -two single family homes and a duplex. The duplex is a legal nonconforming use. Seventeen buildable

lots will be developed.

The proposed subdivision is located between the Lynwood Subdivision to the south and the Reservation Subdivision to the north. Acoma Drive within the latter subdivision is being extended to serve the lots in this subdivision. Acoma Drive will align with Lynwood Street to the south. Helena Street will serve as access to 4 lots within this subdivision and provide access to adjacent future development to the east.
An easement is being provided for future pedestrian/bicycle access to the west. The plat must be revised to show a 10 foot wide pedestrian easement within Tract A, directly north of the north lot line of lot 1. The latest revisions showed the entire tract as a pedestrian easement. An 8 foot wide concrete sidewalk must be provided within the pedestrian easement to the west property line. A section drawing shall be provided on the street plans for this path and the cost of it included in the development improvements agreement.

Tract A which is reserved for drainage and private open space has not been identified consistently on the plat and improvement plans. Some plans label it as an outlot; others as a tract. It should be labeled as Tract A on the plat, in the dedication statement and on improvement plans. The labeling of Tract A as private open space, utility, irrigation and retention pond easements must also be consistent with the dedication statement. Evidence must be submitted prior to final plat recordation that shows that a homeowner's association has been formed to maintain the tract.

An open space fee of $3825 and a transportation capacity payment (TCP) of $8500 will be required, based on the potential for 17 new dwellings on 17 lots. The TCP may be paid at the time a building permit is granted.

Some corrections are needed to utility and improvement plans prior to final approval.

STAFF RECOMMENDATION: Staff recommends approval with the following conditions.

1. Revise the plat to show a 10 foot wide pedestrian easement within a portion of Tract A, directly north of the north lot line of lot 1, not the entire tract. An 8 foot wide concrete sidewalk must be provided within the pedestrian easement from Acoma Street to the west property line. Improvement plans must include the sidewalk and its cost included in the development improvements agreement.

2. Label Tract A consistently on plat, in dedication statement and on improvement plans.

3. Submit evidence prior to plat recordation that shows that a homeowner's association has been formed to maintain Tract A.

4. An open space fee of $3825 and a TCP of $8500 is required.

RECOMMENDED PLANNING COMMISSION MOTION:

Mr. Chairman, on item 96-56, I move that we approve a ~~preliminary~~ FINAL plat for 20 residential lots in Helena Subdivision subject to the conditions outlined in staff's recommendation.

AMENDMENT TO STAFF REPORT

FILE:	FPP-96-56
DATE:	April 2, 1996
STAFF:	Bill Nebeker
PROJECT:	Helena Subdivision

The following conditions should be added to staff's recommendation.

5. The applicant shall submit a letter from Orchard Mesa Irrigation District approving the temporary pipe in the ditch along Unaweep Road and detailing the minimum acceptable pipe for a permanent installation.

6. Final plans for the intersection of Unaweep and Acoma, which detail the permanent structure over the ditch with approved roadway grades that match the design of the Unaweep reconstruction, shall be submitted for review and approval by the City Engineer.

7. The improvements agreement shall be submitted for this subdivision which guarantees completion of the intersection to its approved permanent design.

N VAN/SIC

(WANTED A SPEED BUMP)

- V BUTTER TO SLOW TRAFFIC
- TYPE OF HOUSING
- DOESN'T WANT ANYMORE DEVELOPMENT IN THIS AREA

FAXED 3.26.96
2 PAGES

CITY OF GRAND JUNCTION
COMMUNITY DEVELOPMENT DEPARTMENT

MEMORANDUM

DATE: March 26, 1996

TO: Wayne Lizer
Michael Queally

FROM: Bill Nebeker BN
Senior Planner

SUBJECT: Helena Final Subdivision

.....

Attached are responses to your revised plans for Helena Subdivision. In the future please make a specific response to each comment by reviewing agencies, rather than just stating that all items have been addressed.

Staff's report to Planning Commission will include the following conditions:

1. Revise the plat to show a 10 foot wide pedestrian easement within a portion of Tract A, directly north of the north lot line of lot 1, not the entire tract. An 8 foot wide concrete sidewalk must be provided within the pedestrian easement from Acoma Street to the west property line. Improvement plans must include the sidewalk and its cost included in the development improvements agreement.

2. Label Tract A consistently on plat, in dedication statement and on improvement plans.

   Regarding this condition, please also revise the plat for consistency between the labeling of Tract on the plat and in the dedication statement. Wording on the plat states that Tract A is private open space, utility, irrigation and retention pond easement, yet the dedication statement dedicates this area to the homeowner's association. Does this mean that the utility easement is private? You may want to call Steve Pace (256-4003) regarding this wording.

3. Submit evidence prior to plat recordation that shows that a homeowner's association has been formed to maintain Tract A.

4. An open space fee of $3825 and a TCP of $8500 is required.

Attached are comments from Jody and Trent also. If you have any questions please call them or me at 244-1447. Thanks.

To: Bill Nebeker
From: Trenton Prall
Subject: Fwd: FPP-96-56 Helena Sub Response to Comments
Date: 3/25/96 Time: 12:03p

Originated by: TRENTONP @ CITYHALL on 3/25/96 11:58a
Forwarded by: TRENTONP @ CITYHALL on 3/25/96 12:03p (CHANGED)

Please also include the following:

4. Locations of manholes still need to be identified either by coordinates, bearings, or offsets from property lines.

TCP
********** ORIGINAL MESSAGE FOLLOWS **********

Please note my following concerns.

1. Spelling error in water notes: meter instead of merer.

2. Lot 15 is shown having 2 sewer taps, please revise to only show one.

3. Fitting angles for water lines still not shown.

4.
TCP

To: Bill Nebeker,Marcia Rabideaux
From: Jody Kliska
Subject: Helena Subdivision Final Plans
Date: 3/25/96 Time: 1:44p

Submitted plans with response to comments are complete enough to go on to Planning Commissiion. The following needs to be addressed, however, prior to hearing: Please provide calculations for the proposed sidewalk trough to verify the size of the opening.

ORCHARD MESA IRRIGATION DISTRICT

Grand Valley Project
Telephone: (303) 464-7885
P.O. Box 356 — 668 38 Road
Palisade, CO 81526-0356

April 24, 1996

Mike Queally
1204 N. 7th Street
Grand Junction, CO 81501

Re: Acoma Street crossing OMID Ditch from Helena Subdivision

Dear Mike:

Orchard Mesa Irrigation District has allowed as a temporary street crossing for the Acoma Street the installation of two 24 inch concrete pipes. During the 1996 irrigation, OMID will monitor the crossing to see if it is creating water flow restrictions or extra work for OMID staff because of trash. If either of the above are determined to occur then the crossing will have to be redesigned to eliminate the problems. The crossing installation to date has plugged once with trash causing the ditch to overflow.

If you have any questions, give us a call.

Sincerely,

James D. Rooks
District Manager

CITY OF GRAND JUNCTION FILE **FPP-96-56 HELENA SUBDIVISION** LOCATED AT 2776 & 2780 UNAWEEP AVENUE HAS BEEN REVIEWED AND APPROVED BY THE UTILITY COORDINATING COMMITTEE.

L. Dale Clawson — 4/29/96

~~CHAIRMAN~~ Public Service Co. DATE

HOLD BY PUBLIC SERVICE TO SHOW LOTS & BLOCKS

Phil Bertrand — 4-29-96

Chairman 1996

May 9, 1996

City of Grand Junction, Colorado
250 North Fifth Street
81501-2668
FAX:(970)244-1599

Michael Queally
Hill & Holmes
1204 N. 7th Street
Grand Junction, CO 81501

RE: Helena Subdivision

Dear Mr. Queally:

I have reviewed the submitted intersection plans, siphon design and addendum to the improvements agreements and offer the following response.

Based on the proposed temporary and final grades, the installation of the siphon will be required to meet the City's maximum allowable street approach grades. The design of the siphon must be approved by the Orchard Mesa Irrigation District as they are responsible for the maintenance of the facility. As shown on the fax from Grand Junction Pipe, the design would not meet City requirements because our jet truck cannot clean out the pipe with the proposed 45 degree bends. If the facility were to be maintained by the City, manholes would be required for maintenance access.

Construction of the siphon will be required with the development of the subdivision. The cost of this must be included in the improvements agreement and guarantee to be recorded with the plat. Construction of the siphon must be complete prior to water in the ditch in the spring of 1997.

Your construction plans will be approved and signed once the improvements agreement is amended to include the siphon and the agreement is signed by all parties. Construction may proceed once the plans are signed and we conduct a pre-construction meeting on-site.

Please contact me with any questions you may have.

Sincerely,

Jody Kliska, P.E.
City Development Engineer

cc: Bill Nebeker, City Community Development
Jim Rooks, Orchard Mesa Irrigation District

CITY OF GRAND JUNCTION
DEPARTMENT OF PUBLIC WORKS & UTILITIES
250 NORTH 5TH STREET
GRAND JUNCTION, CO 81501
(970) 244-4003

TO THE MESA COUNTY CLERK & RECORDER:

THIS IS TO CERTIFY that the herein named Subdivision Plat,

HELENA SUBDIVISION,

Situated in the SE 1/4 of Section 24,

Township 1 SOUTH, Range 1 WEST,

of the UTE Meridian in the City of Grand Junction, County of Mesa, State of Colorado, has been reviewed under my direction and, to the best of my knowledge, satisfies the requirements pursuant to C.R.S. 38-51-106 and the Zoning and Development Code of the City of Grand Junction for the recording of subdivision plats in the office of the Mesa County Clerk and Recorder.

This certification makes no warranties to any person for any purpose. It is prepared to establish for the County Clerk and Recorder that City review has been obtained. This certification does not warrant: 1) title or legal ownership to the land hereby platted nor the title or legal ownership of adjoiners; 2) errors and/or omissions, including, but not limited to, the omission(s) of rights-of-ways and/or easements, whether or not of record; 3) liens and encumbrances, whether or not of record; 4) the qualifications, licensing status and/or any statement(s) or representation(s) made by the surveyor who prepared the above-named subdivision plat.

Dated this 9 day of May, 1996.

City of Grand Junction,
Department of Public Works & Utilities

By: James L. Shanks
James L. Shanks, P.E., P.L.S.
Director of Public Works & Utilities

Recorded in Mesa County

Date: _____

Plat Book: 15 Page: 142

Drawer: CC57

1768423 1018AM 08/20/96
MONIKA TODD CLK&REC MESA COUNTY CO

g:\special\platcert.doc

241-7653 DUS
MQ 242-7304 Fax

Mick & Bill to call after inspection

Final Inspection Checklist

HELENA Subdivision

Date: 8-8-96

City of Grand Junction, Colorado
250 North Fifth Street
81501-2668
FAX: (303) 244-1599

Streets

__ Pavement — 9 PGS - ARTICLE OF INCORP

__Concrete

__Manholes

X Signs — INSTALL STOP SIGNS, STREET NAME SIGNS, END OF ROADWORKS

__Lighting

__Site Grading

__Other

Utilites & Drainage

1:00

X Water Lines — LOT 20/18 LOT 1 METER - ADJUST TO GRADE — METER PIT INSPECTION REMARKS.

X Sewer Lines — MH #5 - GROUT NEEDED ON ~~BASE~~ TOP OF CONE

__Inlet Structures

X Detention Facilities — BACKFILL V-PAN TO RETENTION. SEED POND & PAN — INSTALL WED

__Outlet Structures — EROSION CONTROL AT PAN OUTLET

Inspected by:

City Development Engineer

Developer or Representative:

Final Acceptance of the Streets and Drainage Facilities will be made when the above items have been corrected and inspected. Please call 244-1591 when ready for final acceptance.

244 - 1436

$13,500 - SIPHON

+ 3,825 - OPEN SPACE FEE Sep. CHECK

+ 2,900 - PEDES. SIDEWALK

+ 704. - GLASS POND & PAN

+ 640 - SIGNS

$21,569.- ($20,225.-)

First American Title
(970) 241-8555

CITY OF GRAND JUNCTION PLANNING COMMISSION
GRAND JUNCTION, COLORADO

FOR	)	**FINAL DECISION**
Michael Queally Ben Hill Hill & Holmes Real Estate 1204 N. 7th Street Grand Junction, CO 81501	)	**FPP-96-56**

An application by Michael Queally and Ben Hill, requesting approval of Helena Final Subdivision Plat, was considered by the Planning Commission of the City of Grand Junction on April 2, 1996.

After considering all the pertinent testimony and reviewing various data, the Planning Commission approved the final subdivision with the following conditions:

CONDITIONS

1. Revise the plat to show a 10 foot wide pedestrian easement within a portion of Tract A, directly north of the north lot line of lot 1, not the entire tract. An 8 foot wide concrete sidewalk must be provided within the pedestrian easement from Acoma Street to the west property line. Improvement plans must include the sidewalk and its cost included in the development improvements agreement.

2. Label Tract A consistently on plat, in dedication statement and on improvement plans.

3. Submit evidence prior to plat recordation that shows that a homeowner's association has been formed to maintain Tract A.

4. An open space fee of $3825 and a TCP of $8500 is required.

5. The applicant shall submit a letter from Orchard Mesa Irrigation District approving the temporary pipe in the ditch along Unaweep Road and detailing the minimum acceptable pipe for a permanent installation.

6. Final plans for the intersection of Unaweep and Acoma, which detail the permanent structure over the ditch with approved roadway grades that match the design of the Unaweep reconstruction, shall be submitted for review and approval by the City Engineer.

7. The improvements agreement shall be submitted for this subdivision which guarantees completion of the intersection to it approved permanent design.

The undersigned does hereby declare that the said Planning Commission reached its decision as heretofore noted.

Bill Nebeker
Senior Planner

File Close-out Summary

File #: FPP-1996-056

Name: Helena Subdivision - 2776 Unaweep

Staff: Bill Nebeker

Action: Recorded 5-9-96; plat book 15, page 142, drawer CC57

Comments: Outstanding DIA for improvements (cash) expires 12-11-97

File Turned In: 9-4-97

To: Mike Curtis, Jody Kliska, KerrieA
From: Bill Nebeker
Subject: Siphon at Helena Subdivision
Date: 4/7/98 Time: 4:47PM

Mike Queally informed me that the siphon on Acoma (intersecting with Unaweep) for the Orchard Mesa Irrigation canal has been completed. I need it to be inspected and signed-off by someone in Public Works before I release their money. Could any of you direct me to the proper person to perform this inspection.

To: BILLN (Bill Nebeker)
From: Kerrie Ashbeck
Subject: Re: Siphon at Helena Subdivision
Date: 4/8/98 Time: 11:40AM

Originated by: BILLN @ CITYHALL on 4/7/98 4:47PM
Replied by: KERRIEA @ CITYHALL on 4/8/98 11:40AM

I just saw Mike Curtis in the hall and he informed me that the siphon is o.k. It has been inspected by us and we can release their $.

Kerrie

To: BILLN (Bill Nebeker)
From: Mike Curtis
Subject: Re: Siphon at Helena Subdivision
Date: 4/8/98 Time: 2:04PM

Originated by: BILLN @ CITYHALL on 4/7/98 4:47PM
Replied by: MIKEC @ CITYHALL on 4/8/98 2:04PM

Bill

Mark Barslund, Walt Hoyt, and Richard Bailey have inspected the siphon and will sign off if needed. Let me know if you need anything else.

Mike

Improvements Guarantee

☐ Deposit ☒ Request to Release Funds

Date:	**April 10, 1998**	
File No.	**FPP-1996-056**	
Purpose:	**Guarantee for improvements in the Helena Subdivision**	
Project Name	**Helena Subdivision (Mike Queally)**	
Payee:	**MK Services**	
Mailing Address:	**2860 C 1/2 Road Grand Junction CO 81501**	
ACCOUNTING INFORMATION		
	Amount	***Receipt/PA No.***
DEPOSIT	**$16,954.00**	**Aug 1996**
Refund Amount	**$ 2,150.00**	**I9704955 6/20/97**
Refund Amount	**$ 4,255.00**	
Refund Amount	**$0**	
BALANCE	**$10,549.00**	
Fund-Account No.	**207-21090**	
Planner's Name	**Bill Nebeker**	

400 WATER PITS
4255 P/ROCK RETENTION POND
9300 SIPHON
649 MISC
200 INSPECTION

14,804
- 4255

10,549

10,149 - STARTED CONSTRUCTION

9949 600

- SIPHON
- MISC
- WATER PITS
- INSPECTION

H:\ig\queally.doc

To: BobbieP
From: Bill Nebeker
Subject: Release of Funds
Date: 4/15/98 Time: 12:05PM

Please release the remaining funds in account # for Helena Subdivision; FPP-1996-056. Of the remaining $10,549, $9949 should be payable to Stanley Construction and $600 payable to HHQ/LLC. Please return the checks to me and I will get them to the applicant. Thanks

TYPE LEGAL DESCRIPTION (S) BELOW, USING ADDITIONAL SHEETS AS NECESSARY. USE SINGLE SPACING WITH A ONE INCH MARGIN ON EACH SIDE.

****

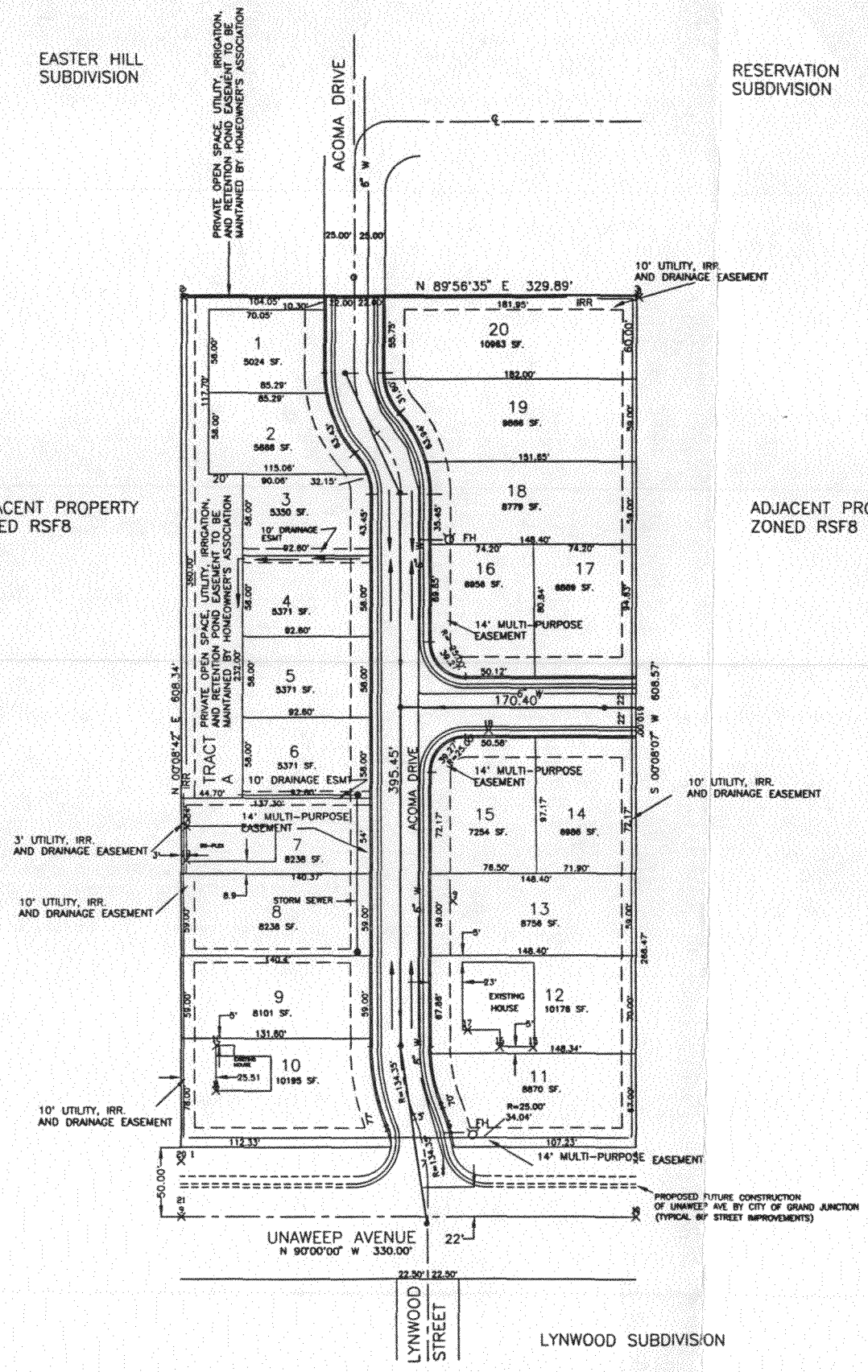
LOCATION 2776 UNAWEEP AVENUE
BEG SW COR LOT 8 SEC 24 1S 1W N 40 RODS E 10 RODS S 40 RODS W 10 RODS TO BEG EXC S 50FT FOR ROAD

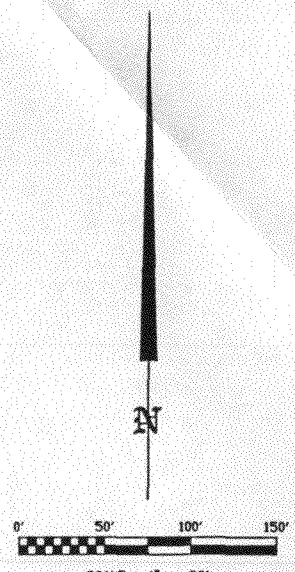
LOCATION 2780 UNAWWP AVENUE

BEG 10 RODS E OF SW COR LOT 8 SEC 24 1S 1W N 40 RODS E 10 RODS S 40 RODS W 10 RODS TO BEG EXC S 50FT FOR ROAD

HELENA SUBDIVISION

SE 1/4 SECTION 24, T.1S., R.1W., U.M.
MESA COUNTY, COLORADO





5

IRR — PROPOSED IRRIGATION
8" W — PROPOSED 8" WATER LINE
8" S — PROPOSED 8" SANITARY SEWER
PROPOSED MANHOLE
PROPOSED FIRE HYDRANT

HELENA SUBDIVISION
UTILITY COMPOSITE

SE 1/4 SECTION 24, T.1S., R.1W., U.M.
MESA COUNTY, COLORADO

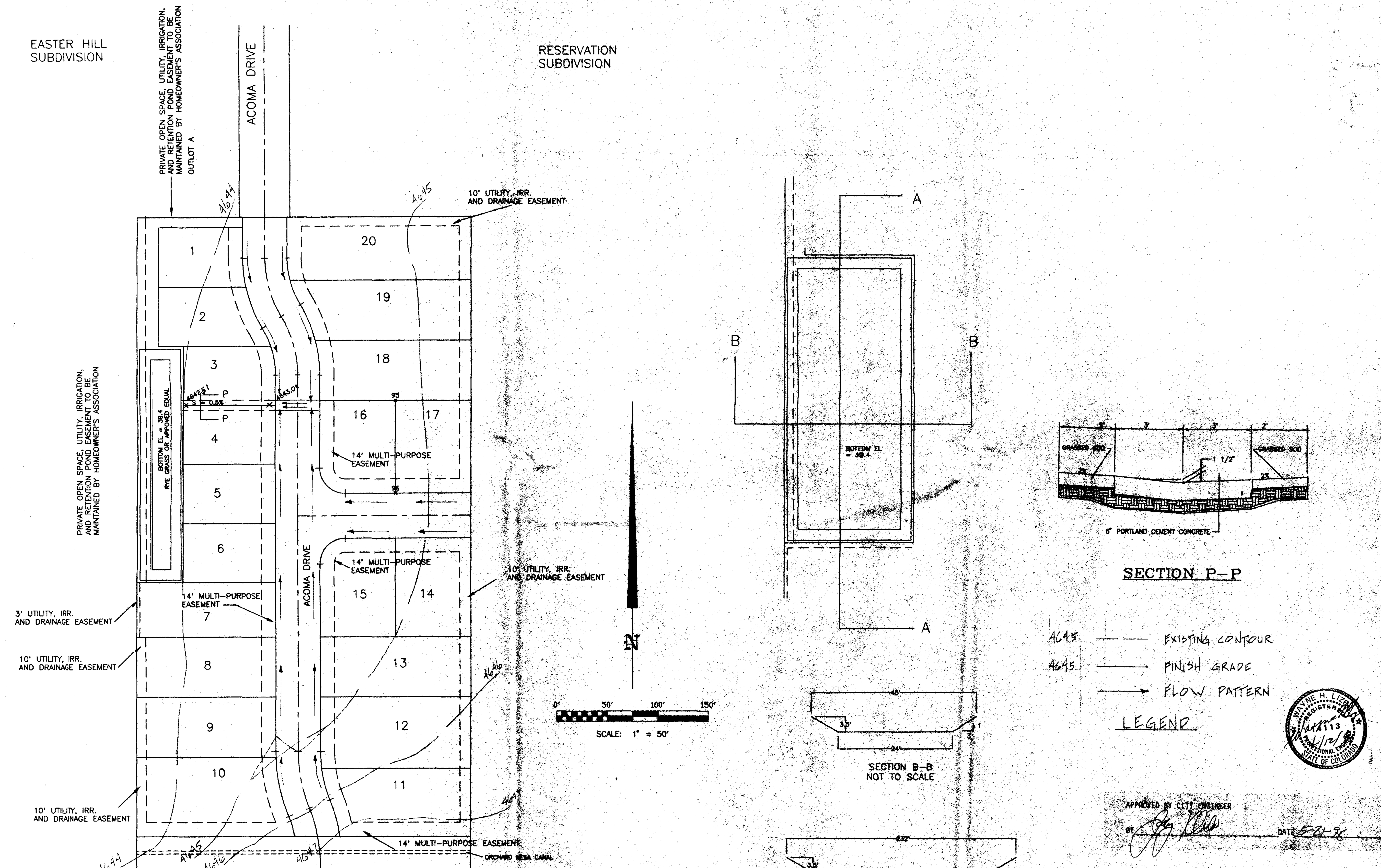
W.H. LIZER AND ASSOCIATES
ENGINEERING CONSULTING AND LAND SURVEYING
576 25 ROAD--UNIT 8
GRAND JUNCTION, COLORADO

DATE:	PROJ. NO.	SCALE:	FILE NAME:	DRAWN BY:	CHECKED BY
MAY 1995	95319-4	1" = 50'	HELEHUTY	DP	W.H.L.

ZUNI
LAGUNA
ACOMA
THIS Location
JUNIPER
COMMERCIAL

HELENA SUBDIVISION

SE 1/4 SECTION 24, T.1S., R.1W., U.M.
MESA COUNTY, COLORADO



GRADING AND DRAINAGE PLAN

HELENA SUBDIVISION
SE 1/4 SECTION 24, T.1S., R.1W., U.M.
MESA COUNTY, COLORADO

W.H. LIZER AND ASSOCIATES
ENGINEERING CONSULTING AND LAND SURVEYING
576 25 ROAD-UNIT 8
GRAND JUNCTION, COLORADO

DATE:	PROJ. NO.	SCALE:	FILE NAME:	DRAWN BY:	CHECKED BY:
AR. 1998	[illegible]	1"=50'	[illegible]	WHL	WHL