Table of Contents

File FPP-1996-201 Name: Cottages at Wellington - #2 – SE Corner 15th Street / Wellington 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**
		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
		Reduction of assessor's map.
		Evidence of title, deeds, easements
		***Mailing list to adjacent property owners**
		Public notice cards
		Record of certified mail
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	Planning Commission Minutes - ** - 12/3/96	X	X	Landscape Plan
X	X	Subsurface Soils Exploration – 10/28/94	X	X	Composite Plan
X		Ownership and Encumbrance Report Transmittal - Meridian Land Title Inc. – 9/3/96	X		Utility/ Curb, Gutter & Sidewalk/ Drainage As-Builts
X	X	Improvements Agreement and Guarantee/Disbursement-release not signed – Bk 2289 / Pg 36 - ** - delivered to City Clerk for scanning and retention	X		Road Plan and Profiles
X		Discharge Agreement – Bk 2188 / Pg 1 – not conveyed to City	X		Sewer and Water Details and Notes
X	X	Correspondence	X		Storm Drainage Plan
X	X	Final Drainage Report - 5/24/95			
X		Treasurer's Certificate of Taxes Due – 9/3/96			
X		Property Profile - Meridian Land Title, Inc. - 9/3/96			
X		Quit Claim Deed – Bk 2180 / Pg 94 – not conveyed to City			
X	X	Addressed Plat			
X	X	Site Plan			

DEVELOPMENT APPLICATION

Community Development Department
250 North 5th Street, Grand Junction, CO 81501
(970) 244-1430

Receipt _____
Date _____
Rec'd By _____
File No. FPP-96-301

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				
❑ Rezone				From: To:	
☒ Planned Development	❑ ODP ❑ Prelim ☒ Final				
❑ Conditional Use					
❑ Zone of Annex					
❑ Variance					
❑ Special Use					
❑ Vacation					❑ Right-of Way ❑ Easement
❑ Revocable Permit					
❑ Site Plan Review					
❑ Property Line Adj.					

Property Owner Name	Developer Name	Representative Name
Wellington partners L.L.C.	Wellington ptnr's L.L.C.	Ron Abelon
PO Box 1765	same	same
Address	Address	Address
Grand Junction Co 81502	same	same
City/State/Zip	City/State/Zip	City/State/Zip
434-2160	same	434 6241
Business Phone No.	Business Phone No.	Business Phone No.

With Abelon 751 Hwy 6 & 50 81504

FAX 523-0706
Cell 250-7999

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.

Ronald Abelon — 9-1-96
Signature of Person Completing Application — Date

Ronald Abelon Pres CHAPARRAL West Inc. 9-1-96
Signature of Property Owner(s) - attach additional sheets if necessary — Managing Partner — Date

SUBMITTAL CHECKLIST

MAJOR SUBDIVISION: FINAL PLAN / PLAT

Location: SE Corner 15th Street & Wellington Ave Project Name: The Colleges at Wellington Filing #2

Date Received _____

Receipt # 4533

File # FPP-96-201

ITEMS		DISTRIBUTION																												
DESCRIPTION	SSID REFERENCE	● City Community Development	● City Dev. Eng.	● City Utility Eng.	● City Property Agent	● City Parks/Recreation	● City Fire Department	● City Attorney	● City G.J.P.C. (8 sets)	○ City Downtown Dev. Auth.	● City Police	○ County Planning	○ County Building Department	● [illegible]	○ Walker Field	● School Dist. #51	● Irrigation District - Grand Valley	● Drainage District - GVDD	○ Water District	○ Sewer District	● U.S. West	● Public Service	○ GVRP	○ CDOT	○ Corps of Engineers	○ Colorado Geologic Survey	● U.S. Postal Service	[illegible]	● TCI Cable			TOTAL REQ'D.
● Application Fee	VII-1	1																												
● Submittal Checklist*	VII-3	1																												
● Review Agency Cover Sheet*	VII-3	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			15
● Application Form*	VII-1	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			23
● Reduction of Assessor's Map	VII-1	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			23
● Evidence of Title	VII-2	1			1			1																								3
○ Appraisal of Raw Land	VII-1	1			1	1																										
● Names and Addresses*	VII-2	1																														1
● Legal Description*	VII-2	1			1																											2
○ Deeds	VII-1	1			1			1																								
○ Easements	VII-2	1	1	1	1			1													1	1	1						1			
○ Avigation Easement	VII-1	1			1			1							1																	
○ ROW	VII-2	1	1	1	1			1													1	1	1						1			
○ Covenants, Conditions & Restrictions	VII-1	1	1					1																								
○ Common Space Agreements	VII-1	1	1					1																								
● County Treasurer's Tax Cert.	VII-1	1																														1
● Improvements Agreement/Guarantee*	VII-2	1	1	1				1																								4
○ CDOT Access Permit	VII-3	1	1																													
○ 404 Permit	VII-3	1	1																													
○ Floodplain Permit*	VII-4	1	1																													
● General Project Report	X-7	1	1	1	1	1	1	1	8	1	1	1	1	1	X	1	1	1	1	1	1	2	1	1	1	1	1	1	1			24
● Composite Plan	IX-10	1	2	1	1																											5
● 11"x17" Reduction Composite Plan	IX-10	1				1	1	1	8	1	1	1	1				1	1	1	1	1	1	1	1	1	1		1	1			18
● Final Plat	IX-15	1	2	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			24
○ 11"X17" Reduction of Final Plat	IX-15	1							8	1	1	1			1	1	1	1	1	1	1	1	1				1		1			
● Cover Sheet	IX-11	1	2																													3
● Grading & Stormwater Mgmt Plan	IX-17	1	2															1							1	1			1			5
○ Storm Drainage Plan and Profile	IX-30	1	2															1			1	1	1						1			
● Water and Sewer Plan and Profile	IX-34	1	2	1			1												1	1	1	1	1					1	1			9
● Roadway Plan and Profile	IX-28	1	2															1														4
○ Road Cross-sections	IX-27	1	2																													
● Detail Sheet	IX-12	1	2																													3
● Landscape Plan	IX-20	2	1	1					8																							13
● Geotechnical Report	X-8	1	1																						X							2
○ Phase I & II Environmental Report	X-10,11	1	1																													
● Final Drainage Report	X-5,6	1	2															1														4
○ Stormwater Management Plan	X-14	1	2															1							1							
○ Sewer System Design Report	X-13	1	2	1																1												
○ Water System Design Report	X-16	1	2	1															1													
○ Traffic Impact Study	X-15	1	2																					1								
● Site Plan	IX-29	1	2	1	1		1		8																							14

NOTES: * An asterisk in the item description column indicates that a form is supplied by the City.

SUBSURFACE SOILS EXPLORATION

WELLINGTON at 15th

GRAND JUNCTION, COLORADO

Geotechnical

Prepared For:

Mr. Ron Abeloe
626 32 Road
Clifton, Colorado

Prepared By:

LINCOLN-DeVORE, INC.
1441 Motor Street
Grand Junction, CO 81505

October 28, 1994

Lincoln DeVore, Inc.
Geotechnical Consultants
1441 Motor St.
Grand Junction, CO 81505

TEL: (303) 242-8968
FAX: (303) 242-1561

October 28, 1994

Mr. Ron Abeloe
626 32 Road
Clifton, Colorado

Re: SUBSURFACE SOILS EXPLORATION

WELLINGTON at 15th

GRAND JUNCTION, COLORADO

Dear Sir:

Transmitted herein are the results of a Subsurface Soils Exploration for the proposed Wellington @ 15th, Residential Subdivision, located in Grand Junction, Colorado.

If you have any questions after reviewing this report, please feel free to contact this office at any time. This opportunity to provide Geotechnical Engineering services is sincerely appreciated.

Respectfully submitted,

LINCOLN-DeVORE, INC.

By: Edward M. Morris, E.I.T.
Western Slope Branch Manager
Grand Junction, Office

Reviewed by: 10/31/94
George D. Morris, P.E.
Colorado Springs Office

LDTL Job No. S1771-J

EMM/bh

TABLE OF CONTENTS

INTRODUCTION

PROJECT DESCRIPTION

This report presents the results of our geotechnical evaluation performed to determine the general subsurface conditions of the site applicable to construction of approximately 35 single and possibly some connected single family residences. A vicinity map is included in the Appendix of this report.

To assist in our exploration, we were provided with a preliminary site plan prepared by QED Surveying Systems. The Boring Location Plan attached to this report is based on that plan provided to us.

We understand that the proposed structures will consist of single family and possibly connected single family single story, wood framed structure with a either crawl spaces or concrete floor slabs on grade. Lincoln DeVore has not seen a full set of building plans, but structures of this type typically develop wall loads on the order of 400-1400 plf and column loads on the order of 5-12 kips.

The characteristics of the subsurface materials encountered were evaluated with regard to the type of construction described above. Recommendations are included herein to match the described construction to the soil characteristics found. The information contained herein may or may not be valid for other purposes. If the proposed site use is changed or types of construction proposed, other than noted herein, Lincoln DeVore should be contacted to determine if the information in this report can be used for the new construction without further

field evaluations.

PROJECT SCOPE

The purpose of our exploration was to evaluate the surface and subsurface soil and geologic conditions of the site and, based on the conditions encountered, to provide recommendations pertaining to the geotechnical aspects of the site development as previously described. The conclusions and recommendations included herein are based on an analysis of the data obtained from our field explorations, laboratory testing program, and on our experience with similar soil and geologic conditions in the area.

This report provides site specific information for the construction of a 35 unit single family residential subdivision. Included in this report are recommendations regarding general site development and foundation design criteria.

The scope of our geotechnical exploration consisted of a surface reconnaissance, a geophoto study, subsurface exploration, obtaining representative samples, laboratory testing, analysis of field and laboratory data, and a review of geologic literature.

Specifically, the intent of this study is to:

1. Explore the subsurface conditions to the depth expected to be influenced by the proposed construction.
2. Evaluate by laboratory and field tests the general engineering properties of the various strata which could influence the development.
3. Define the general geology of the site including likely geologic hazards which could have an effect on site development.

4. Develop geotechnical criteria for site grading and earthwork.

5. Identify potential construction difficulties and provide recommendations concerning these problems.

6. Recommend an appropriate foundation system for the anticipated structure and develop criteria for foundation design.

FIELD EXPLORATION AND LABORATORY TESTING

A field evaluation was performed on October 24, 1994,and consisted of a site reconnaissance by our geotechnical personnel and the drilling of 3 shallow exploration borings. These shallow exploration borings were drilled within the proposed building near the locations indicated on the Boring Location Plan. The exploration borings were located to obtain a reasonably good profile of the subsurface soil conditions. All exploration borings were drilled using a CME 45B, feet truck mounted drill rig with continuous flight auger to depths of approximately 14-23 feet. Samples were taken with a standard split spoon sampler, California Lined Spoon Sampler, Thin Walled Shelby Tubes and by bulk methods. Logs describing the subsurface conditions are presented in the attached figures.

Laboratory tests were performed on representative soil samples to determine their relative engineering properties. Tests were performed in accordance with test methods of the American Society for Testing and Materials or other accepted standards. The results of our laboratory tests are included in this report. The in-place moisture content and the standard penetration test values are presented on the attached drilling logs.

FINDINGS

SITE DESCRIPTION

The project site is located in the Northeast Quarter of the Northwest Quarter of Section 12, Township 1 South, Range 1 West of the Ute Principal Meridian, Mesa County, Colorado. More specifically the site is located at the Southeast corner of the intersection of Wellington Avenue and North 15th Street within the city limits of Grand Junction. The site is bounded on the North by Wellington Avenue, on the East by 15th Street, on the South by the Grand Valley Canal. The site contains approximately 4.8 acres.

The topography of the site is relatively flat, with a slight overall gradient to the South-Southwest. A small hill exists on the Northeast corner of the property. The exact direction of surface runoff on this site will be controlled by the proposed construction and therefore will be variable. In general, surface runoff is expected to travel to the detention pond area located in the Southwest corner of the proposed subdivision. It is expected the drainage will continue either into the Grand Valley Canal or along the street drainage system of North 15th Street, eventually entering the Colorado River to the South. Surface and subsurface drainage on this site would be described as fair to poor.

GENERAL GEOLOGY AND SUBSURFACE DESCRIPTION

The geologic materials encountered under the site consist of Alluvial soils which overly the Mancos

Shale Formation which is bedrock in this area. The geologic and engineering properties of the materials found in our 3 exploration borings will be discussed in the following sections.

The Alluvial surface soils on this site consist of a series of silty clay and sandy clay soils which are a product of mud flow/debris flow features which originate on the south-facing slopes of the Bookcliffs. These mud flow/debris flow features are a small part of a very extensive mud flow/debris flow complex along the base of the Bookcliffs and extending to the Colorado River. Utilizing recent events and standard evaluation techniques, this tract is not considered to be within with an active debris flow hazard area.

The surface soils are an erosional product of the upper Mancos Shale and the Mount Garfield Formations which are exposed on the slopes of the Bookcliffs. The soils contained within these mud flow/debris flow features normally exhibit a metastable condition which can range from very slight to severe. Metastable soil is subject to internal collapse and is very sensitive to changes in the soil moisture content. Based on the field and laboratory testing of the soils on this site, the severity of the metastable soils can be described as low.

The surface soils on this site have been designated Soil Type I. These soils are present over the majority of the tract, except for the small hill in the Northeast corner.

This Soil Type was classified as a silty clay (CL) under the Unified Classification System. This material

is of low plasticity, of low to moderate permeability, and was encountered in a low density, wet condition. If this soil is found in a relatively dry condition, it may undergo mild expansion with the entry of small amounts of moisture, but will undergo long-term consolidation upon the addition of larger amounts of moisture. This soil will settle after being loaded. The maximum allowable bearing capacity for this soil was found to be 800 psf. No minimum dead load pressure is required for these soils. The finer grained portion of Soil Type No. I contains sulfates in detrimental quantities.

The Alluvial Soils on this site are deposited over the Mancos Shale Formation, which is considered to be bedrock in this area. The Mancos Shale Formation is exposed on the small hill located in the Northeast portion of the tract. The Mancos Shale Formation has been designated Soil Type II in this report.

The Mancos Shale is described as a thinbedded, drab, light to dark gray marine shale, with thinly interbedded fine grain sandstone and limestone layers. Some portions of the Mancos Shale are bentonitic, and therefore, are highly expansive. The majority of the shale, however, has only a moderate expansion potential. Formational shale was encountered in all exploration borings at a depths ranging from near surface in the Northeast corner to depth of approximately 15 feet in exploration boring number 1 and 20 feet in exploration boring number 3. It is anticipated that this formational shale will effect the construction and performance of foundations on the

site which have foundation depths within 5 feet of the Formational Shale. If shallow foundations are utilized over the Western and Southern portion of this tract, it is not anticipated the Formational Shale will effect the performance and construction of such shallow foundations.

This soil type was classified as a Silty Clay (CL) under the Unified Classification System. The Standard Penetration Tests ranged from 46 blows per foot to 65 blows per foot. Penetration tests of this magnitude indicate that the soil is reasonably hard and of medium to high density. The moisture content varied from near saturated at the surface beneath the Alluvial Soils to 12-16% within the Formation, indicating a soil moisture. This soil is plastic and is sensitive to changes in moisture content. With decreased moisture, it will tend to shrink, with some cracking upon desiccation. Upon increasing moisture, it will tend to expand. Expansion tests were performed on typical samples of the soil and expansive pressures on the order of 1500-1900 psf were found to be typical. The allowable maximum bearing value was found to be on the order of 4500 psf. A minimum dead load of 2200 psf will be required. This soil was found to contain sulfates in detrimental quantities.

The Mancos Shale Formation is often highly fractured, with fillings of soluble sulfate salts being very common. The samples obtained in this drilling program indicated virtually all fractured faces and many bedding planes in the shale contain sulfate salt deposits. Some seams of sulfate salts up to 1/16 inch thick were observed.

The lines defining the change between

soil types or rock materials on the attached boring logs and soil profiles are determined by interpolation and therefore are approximations. The transition between soil types may be abrupt or may be gradual.

Sulfate Salts exhibit variable strength, depending upon surrounding moisture conditions and their chemistry as related to water. In addition, Sulfate Salts are soluble and may be physically removed from the soil by ground moisture conditions. Such removal may leave significant amounts of void areas within the Mancos Shale, which may affect the load bearing capacity of the formation. Many of the fractures in the Mancos Shale Formation are open, allowing the rapid transmission of water to occur. Some sandstone and siltstone strata within the Mancos Shale Formation also exhibit elevated permeability.

The boring logs and related information show subsurface conditions at the date and location of this exploration. Soil conditions may differ at locations other than those of the exploratory borings. If the structure is moved any appreciable distance from the locations of the borings, the soil conditions may not be the same as those reported here. The passage of time may also result in a change in the soil conditions at the boring locations.

GROUND WATER:

A free water table came to equilibrium during drilling at approximately 7 feet in the Northern part of the site and 4 1/2 feet in the Southern part, near the Grand

Valley Canal. This is probably not a true phreatic surface but is an accumulation of subsurface seepage moisture (perched water). In our opinion the subsurface water conditions shown are a permanent feature on this site. The depth to free water would be subject to fluctuation, depending upon external environmental effects.

Because of capillary rise, the soil zone within a few feet above the free water level identified in the borings will be quite wet. Pumping and rutting may occur during the excavation process, particularly if the bottom of the foundations are near the capillary fringe. Pumping is a temporary, quick condition caused by vibration of excavating equipment on the site. If pumping occurs, it can often be stopped by removal of the equipment and greater care exercised in the excavation process. In other cases, geotextile fabric layers can be designed or cobble sized material can be introduced into the bottom of the excavation and worked into the soft soils. Such a geotextile or cobble raft is designed to stabilize the bottom of the excavation and to provide a firm base for equipment.

Data presented in this report concerning ground water levels are representative of those levels at the time of our field exploration. Groundwater levels are subject to change seasonally or by changed environmental conditions. Quantitative information concerning rates of flow into excavations or pumping capacities necessary to dewater excavations is not included and is beyond the scope of this report. If this information is desired, permeability and field pumping tests will be required.

CONCLUSIONS AND RECOMMENDATIONS

GENERAL DISCUSSION

No geologic conditions were apparent during our reconnaissance which would preclude the site development as planned, provided the recommendations contained herein are fully complied with. Based on our investigation to date and the knowledge of the proposed construction, the site condition which would have the greatest effect on the planned development is the expansive Mancos Shale located in the Northeast corner of the tract and the quite soft, compressible Alluvial Soils in the West and Southern part of the tract.

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

OPEN FOUNDATION OBSERVATION

Since the recommendations in this report are based on information obtained through random borings, it is possible that the subsurface materials between the boring points could vary. Therefore, prior to placing forms or pouring concrete, an open excavation observation should be performed by representatives of Lincoln DeVore. The purpose of this observation is to determine if the subsurface soils directly below the

proposed foundations are similar to those encountered in our exploration borings. If the materials below the proposed foundations differ from those encountered, or in our opinion, are not capable of supporting the applied loads, additional recommendations could be provided at that time.

EXCAVATION:

Site preparation in all areas to receive structural fill should begin with the removal of all topsoil, vegetation, and other deleterious materials. Prior to placing any fill, the subgrade should be observed by representatives of Lincoln DeVore to determine if the existing vegetation has been adequately removed and that the subgrade is capable of supporting the proposed fills. The subgrade should then be scarified to a depth of 10 inches, brought to near optimum moisture conditions and compacted to at least 90% of its maximum modified Proctor dry density [ASTM D-1557]. The moisture content of this material should be within + or - 2% of optimum moisture, as determined by ASTM D-1557.

In general, we recommend all structural fill in the area beneath any proposed structure or roadway be compacted to a minimum of 90% of its maximum modified Proctor dry density (ASTM D1557). This structural fill should be placed in lifts not to exceed six (6) inches after compaction. We recommend that fill be placed and compacted at approximately its optimum moisture content (+/-2%) as determined by ASTM D 1557. Structural fill should be a granular, non-expansive soil.

We recommend that the amount of structural fill placed on the Western and Southern part of the site

during construction, either for the purpose of site grading or to raise floor slabs to a desired elevation, be kept to a minimum. The surcharge applied by a structural fill may consolidate the soft, fine grained soils on this site. If the underlying soils consolidate as a result of this applied surcharge, structural movement will follow.

Allowable slope angle for cuts in the native soils is dependent on soil conditions, slope geometry, the moisture content and other factors. Should deep cuts be planned for this site, we recommend that a slope stability analysis be performed when the location and depth of the cut is known.

No major difficulties are anticipated in the course of excavating into the surficial soils on the site. It is probable that safety provisions such as sloping or bracing the sides of excavations over 4 feet deep will be necessary. Any such safety provisions shall conform to reasonable industry safety practices and to applicable OSHA regulations. The OSHA Classification for excavation purposes on this site is Soil Class C for Soil Type I and Soil Class A for Soil Type IV (Formational Mancos Shale).

DRAINAGE AND GRADIENT:

Adequate site drainage should be provided in the foundation area both during and after construction to prevent the ponding of water and the saturation of the subsurface soils. We recommend that the ground surface around the structure be graded so that surface water will be carried quickly away from the building. The minimum gradient within 10 feet of

the building will depend on surface landscaping. We recommend that paved areas maintain a minimum gradient of 2%, and that landscaped areas maintain a minimum gradient of 8%. It is further recommended that roof drain downspouts be carried across all backfilled areas and discharged at least 10 feet away from the structure. Proper discharge of roof drain downspouts may require the use subsurface piping in some areas. Planters, if any, should be so constructed that moisture is not allowed to seep into foundation areas or beneath slabs or pavements.

If adequate surface drainage cannot be maintained, or if subsurface seepage is encountered during excavation for foundation construction, a full perimeter drain is recommended for these buildings. It is recommended that this drain consist of a perforated drain pipe and a gravel collector, the whole being fully wrapped in a geotextile filter fabric. We recommend that this drain be constructed with a gravity outlet. If sufficient grade does not exist on the site for a gravity outlet, then a sealed sump and pump is recommended. Under no circumstances should a dry well be used on this site.

The high water level found on portions of this site may require controlling to prevent large upward fluctuations of this water surface. For this purpose, we recommend that this be accomplished by construction of an area drain beneath any building areas which would have final excavated areas or floor slabs within 2 1/2 feet of the existing ground water surface. To control water surface movement, it is recommended that the drain outfall in a free gravity drain. If a gravity outfall is not possible, a sealed sump and pump is recommended to

remove the water.

The existing drainage on the sites must either be maintained carefully or improved. We recommend that water be drained away from structures as rapidly as possible and not be allowed to stand or pond near the building. We recommend that water removed from one building not be directed onto the backfill areas of adjacent buildings. We recommend that a hydrologist or drainage engineer experienced in this area be retained to complete a drainage plan for this site.

To give the buildings extra lateral stability and to aid in the rapidity of runoff, it is recommended that all backfill around the buildings and in utility trenches in the vicinity of the buildings be compacted to a minimum of 85% of its maximum Proctor dry density, ASTM D 698. The native soils on this site may be used for such backfill. We recommend that all backfill be compacted using mechanical methods. No water flooding techniques of any type may be used in placement of fill on this site.

Should an automatic lawn irrigation system be used on this site, we recommend that the sprinkler heads be installed no less than 5 feet from the building. In addition, these heads should be adjusted so that spray from the system does not fall onto the walls of the building and that such water does not excessively wet the backfill soils.

It is recommended that lawn and landscaping irrigation be reasonably limited, so as to prevent complete saturation of subsurface soils. Several

methods of irrigation water control are possible, to include, but not limited to:

* Metering the Irrigation water.
* Sizing the irrigation distribution service piping to limit on-site water usage.
* Encourage efficient landscaping practices.
* Enforcing reasonable limits on the size of high water usage landscaping for each lot and any park areas.

FOUNDATIONS

SOIL TYPE I

We recommend the use of a conventional shallow foundation system consisting of continuous spread footings beneath all bearing walls and isolated spread footings beneath all columns and other points of concentrated load. Such a shallow foundation system, resting on the low density Alluvial Silty Clays of Soil Type I, may be designed on the basis of an allowable bearing capacity of 800 psf maximum. No minimum dead load is required.

Contact stresses beneath all continuous walls should be balanced to within + or - 150. psf at all points. Isolated interior column footings should be designed for contact stresses of about 150 psf less than the average used to balance the continuous walls. The criterion for balancing will depend somewhat upon the nature of the structure. Single-story, slab on grade structures may be balanced on the basis of dead load only. Multi-story structures may be balanced on the basis of dead load plus 1/2 live load, for up to 3 stories.

Stem walls for a shallow foundation system should be designed as grade beams capable of spanning at least 12 feet. These "grade beams" should be horizontally reinforced both near the top and near the bottom. The horizontal reinforcement required should be placed continuously around the structure with no gaps or breaks. A foundation system designed in this manner should provide a rather rigid system and, therefore, be better able to tolerate differential movements associat-

ed with the very soft, low density Alluvial soils of Soil Type I.

In some excavations, the soils may be extremely soft and experience rutting under the excavation equipment. In such cases, it may be desirable to utilize a structural fill, a minimum of 2 feet thick, which would be composed of granular, non-free draining soils. This structural fill should be placed in accordance with the recommendations contained in the following paragraphs for a structural slab foundation.

STRUCTURAL SLAB

If the design of the upper structure is such that loads can be balanced reasonably well, a floating structural slab type of foundation could be used on this site where the foundation soils are Soil Type I and the Mancos Shale is greater than 5 feet below the foundation level. Such a slab would require heavy reinforcing to resist differential bending along the rim wall. It is possible to design such a slab either as a thickened edge only, a solid or a ribbed slab. A rim wall must be used for confinement purposes. Any such slab must be specifically designed for the anticipated loading.

Such a foundation system may settle to some degree however, the use of a structural fill beneath the slab and rim wall will help reduce settlement and hold differential movement to a minimum. Relatively large slabs will tend to experience minor cracking and heave of lightly loaded interior portions, unless the slabs are specifically designed with this movement in mind.

The existing low density, metastable soils should be removed to a depth of 2 feet below the proposed bottom footing or rimwall elevation. Once it is felt that adequate soil removal has been achieved, it is recommended that the excavation be closely examined by a representative of Lincoln-DeVore to ensure that an adequate overexcavation depth has indeed occurred and that the exposed soils are suitable to support the proposed structural man-made fill.

Once this examination has been completed, it is recommended that a coarse-grained, non-expansive, non-free draining man-made structural fill be imported to the site. The native soils may be utilized as structural fill, if specifically approved by the Geotechnical Engineer. This imported fill should be placed in the overexcavated portion of this site in lifts not to exceed 6 inches after compaction. A minimum of 90% of the soils maximum Modified Proctor dry density (ASTM D-1557) must be maintained during the soil placement. These soils should be placed at a moisture content conducive to the required compaction (usually Proctor optimum moisture content $\pm$ 2%). The granular material must be brought to the required density by mechanical means. No soaking, jetting or puddling techniques of any type should be used in placement of fill on this site. To ensure adequate lateral support, we must recommend that the zone of overexcavation extend at least 2 feet around the perimeter of the proposed footing. To confirm the quality of the compacted fill product, it is recommended that surface density tests be taken at maximum 2 foot vertical intervals.

The placement of a geotextile fabric for separation between the native soils and the structural fill is may be recommended to aid the fill placement and to improve the stability of the completed fill.

When The structural fill is completed, an allowable bearing capacity of 1700 psf maximum may be assumed for proportioning the footings.

The placement of the structural fill a minimum of two feet beyond the edge of the structural slab should provide additional support for the eccentrically placed wall loads on the slab edges.

SETTLEMENT:

We anticipate that total and/or differential settlements for the proposed structures may be considered to be within tolerable limits, provided the recommendations presented in this report are fully complied with. In general, we expect total settlements for the proposed structure to be less than 1 inch.

SOIL TYPE II (EXPANSIVE MANCOS SHALE FORMATION)

Three foundation types which could be utilized for the Mancos Shale Formation are recommended based on our experience in this area. The choice between these foundation types depends on the internal loading of the foundation members and the amount of excavation planned to achieve the finished lower elevations.

The three foundation types preliminarily recommended are as follows:

1. The voided wall on grade foundation system with a stemwall resting directly on the shale formation.

2. The isolated pad and grade beam foundation system in which the grade beam is voided and loads are transferred to the isolated pads.

3. The drilled pier and fully voided grade beam system with the loads transferred to the piers.

Recommendations given in this report are given for the Shallow Foundation Types No. 1 and 2 and the Deep Foundation Type No. 3.

A conventional shallow foundation system consisting of either a voided wall on grade or an isolated pad and grade beam system, resting on the relatively unweathered expansive clays of the Mancos Shale Formation, may be designed on the basis of an allowable bearing capacity of 4500 psf maximum, and a minimum dead load of 2200 psf must be maintained. Contact stresses beneath all continuous walls should be balanced to within + or - 150 psf at all points. Isolated interior column footings should be designed for contact stresses of about 150 psf more than the average used to balance continuous walls. The criteria use for balancing will depend somewhat upon the nature of the structure. Single-story, slab on grade structures and single-story crawlspace structures may be balance on the basis of dead load only. Multi-story structures may be balanced on the basis of Dead Load plus one half live load, for up to three stories.

Stem walls for a shallow foundation system on the Mancos Shale should be designed as grade beams

capable of spanning at least 14 feet. These "grade beams" should be horizontally reinforced both near the top and near the bottom. The horizontal reinforcement required should be placed continuously around the structure with no gaps or breaks. A foundation system designed in this manner should provide a rather rigid system and, therefore, be better able to tolerate differential movements associated with the expansive Mancos Shale.

DRILLED PIERS:

We recommend that drilled piers have a minimum shaft length of 7 feet and be embedded at least 7 feet into the relatively unweathered clays of the Mancos Shale Formation. At this level,these piers may be designed for a maximum end bearing capacity of 25000 psf, plus 1800 psf side support considering only the side wall area embedded in the bedrock. Due to the expansive potential of the bedrock, a minimum dead load uplift is required, consisting of a point uplift of 2400 psf and 350 psf side uplift, based on the side wall embedded in the bedrock. The overburden is soft and no supporting or uplift values are assigned to this material. The weight of the concrete in the pier may be incorporated into the required dead load.

It is recommended that the bottoms of all piers be thoroughly cleaned prior to the placement of concrete. The amount of reinforcing in each pier will depend on the magnitude and nature of loads involved. As a rule of thumb, reinforcing equal to approximately 1/2 of 1% of the gross cross-sectional concrete area should be used. Additional reinforcing should be used if structural conditions warrant. We recommend

that reinforcing extend through the full length of pier.

To minimize the possibility of voids developing in the drilled piers, concrete with a slump of 5 to 6 inches is recommended. We recommend that piers be dewatered and thoroughly cleaned of all loose material prior to placing the steel cage and concrete. The pier excavation should contain no more than 2 inches of free water unless the concrete is placed by means of a tremie extending to the bottom of the pier. A free fall in excess of 5 feet is not recommended when placing concrete in drilled piers. We recommend that casing be pulled as the concrete is being placed and that a 5 foot head of concrete be maintained while pulling the casing. It is recommended that drilled piers be plumb with 2% of their length and that the shaft maintain a constant diameter for the full length of the pier and not allowed to "mushroom" at the top.

DRILLED PIER OBSERVATION:

The foundation installation for drilled piers should be continuously observed by a representative of Lincoln DeVore to determine that the recommended bearing material has been adequately penetrated and that soil conditions are as anticipated by the exploration. This observation will aid in attaining an adequate foundation system. In addition, abnormalities in the subsurface conditions encountered during foundation installation can be identified and corrective measures taken as required. Lincoln DeVore requires a minimum of one working day's notice, and a copy of the foundation plan, to schedule any

field observation.

GRADE BEAMS:

A reinforced concrete grade beam is recommended to carry the exterior wall loads in conjunction with the deep foundation system. We recommend that this grade beam be designed to span from bearing point to bearing point and not be allowed to rest on the ground surface between these points. We recommend a void space be left between the bottom of the grade beam and the subgrade below due to the expansive nature of the subgrade soils.

Based upon our experience in this area and due to rather poor surface and subsurface drainage conditions of the subdivision, a drilled pier foundation system may be the preferred system. It must be noted that a drilled pier and fully voided grade beam system is quite rigid and will be quite sensitive to relative differential movements of the individual piers. The presence of subsurface water and very moist zones of soluble sulfate salt in the Mancos Shale Formation indicates that a 'Stable Strata Below The Zone of Seasonal Moisture Change' may not be adequately defined at this period of time.

CONCRETE SLABS ON GRADE

Slabs could be placed directly on the natural soils or on a structural fill. We recommend that all slabs on grade be constructed to act independently of the other structural portions of the building. One method of allowing the slabs to float freely is to use expansion material at the slab-structure interface.

It is recommended that slabs on grade be constructed over Soil Type I or wherever the water table is within 4 feet of the slab surface be constructed over a capillary break of approximately 6 inches in thickness. We recommend that the material used to form the capillary break be free draining, granular material and not contain significant fines. A free draining outlet is also recommended for this break so that it will not trap water beneath the slab. A vapor barrier is recommended beneath the floor slab and above the capillary break. To prevent difficulty in finishing concrete, a 2 inch sand layer should be placed above the break. An alternate method of reducing finishing problems would be to place the vapor barrier beneath approximately 6 inches of a minus 3/4 inch gravel fill. This method must be very carefully accomplished to minimize excessive puncturing and tearing of the vapor barrier.

If the slab is to be placed directly on the expansive soils or on a thin fill overlying these soils, the risk of slab movement is high and stringent mitigation techniques are recommended. No design method known at this time will prevent slab movement should moisture enter the expansive soils below.

by continuous water application to the concrete surface or by the placement of a 'heavy' curing compound, formulated to minimize water evaporation from the concrete. Curing by continuous water application must be carefully undertaken to prevent the wetting or saturation of the subgrade soils.

EARTH RETAINING STRUCTURES

The active soil pressure for the design of earth retaining structures may be based on an equivalent fluid pressure of 50 pounds per cubic foot. The active pressure should be used for retaining structures which are free to move at the top (unrestrained walls). For earth retaining structures which are fixed at the top, such as basement walls, an equivalent fluid pressure of 65 pounds per cubic foot may be used. It should be noted that the above values should be modified to take into account any surcharge loads, sloping backfill or other externally applied forces. The above equivalent fluid pressures should also be modified for the effect of free water, if any.

The passive pressure for resistance to lateral movement may be considered to be 220 pcf per foot of depth. The coefficient of friction for concrete to soil may be assumed to be .24 for resistance to lateral movement. When combining frictional and passive resistance, the latter must be reduced by approximately 1/3.

REACTIVE SOILS

Since groundwater in the Grand Junction area typically contains sulfates in quantities detrimental to a Type I cement, a Type II or Type I-II or Type II-V cement is recommended for all concrete which is in contact with the subsurface soils and bedrock. Calcium chloride should not be added to a Type II, Type I-II or Type II-V cement under any circumstances.

LIMITATIONS

This report is issued with the understanding that it is the responsibility of the owner, or his representative to ensure that the information and recommendations contained herein are brought to the attention of the individual lot purchasers for the subdivision. In addition, it is the responsibility of the individual lot owners that the information and recommendations contained herein are brought to the attention of the architect and engineer for the individual projects and the necessary steps are taken to see that the contractor and his subcontractors carry out the appropriate recommendations during construction.

The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties. In addition, changes in acceptable or appropriate standards may occur or may result from legislation or the broadening of engineering knowledge. Accordingly, the findings of this report may be invalid, wholly or partially, by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of 3 years.

The recommendations of this report pertain only to the site investigated and are based on the assumption that the soil conditions do not deviate from those described in this report. If any variations or undesirable

conditions are encountered during construction or the proposed construction will differ from that planned on the day of this report, Lincoln DeVore should be notified so that supplemental recommendations can be provided, if appropriate.

Lincoln DeVore makes no warranty, either expressed or implied, as to the findings, recommendations, specifications or professional advice, except that they were prepared in accordance with generally accepted professional engineering practice in the field of geotechnical engineering.

SOILS DESCRIPTIONS:

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

ROCK DESCRIPTIONS:

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

SYMBOLS & NOTES:

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

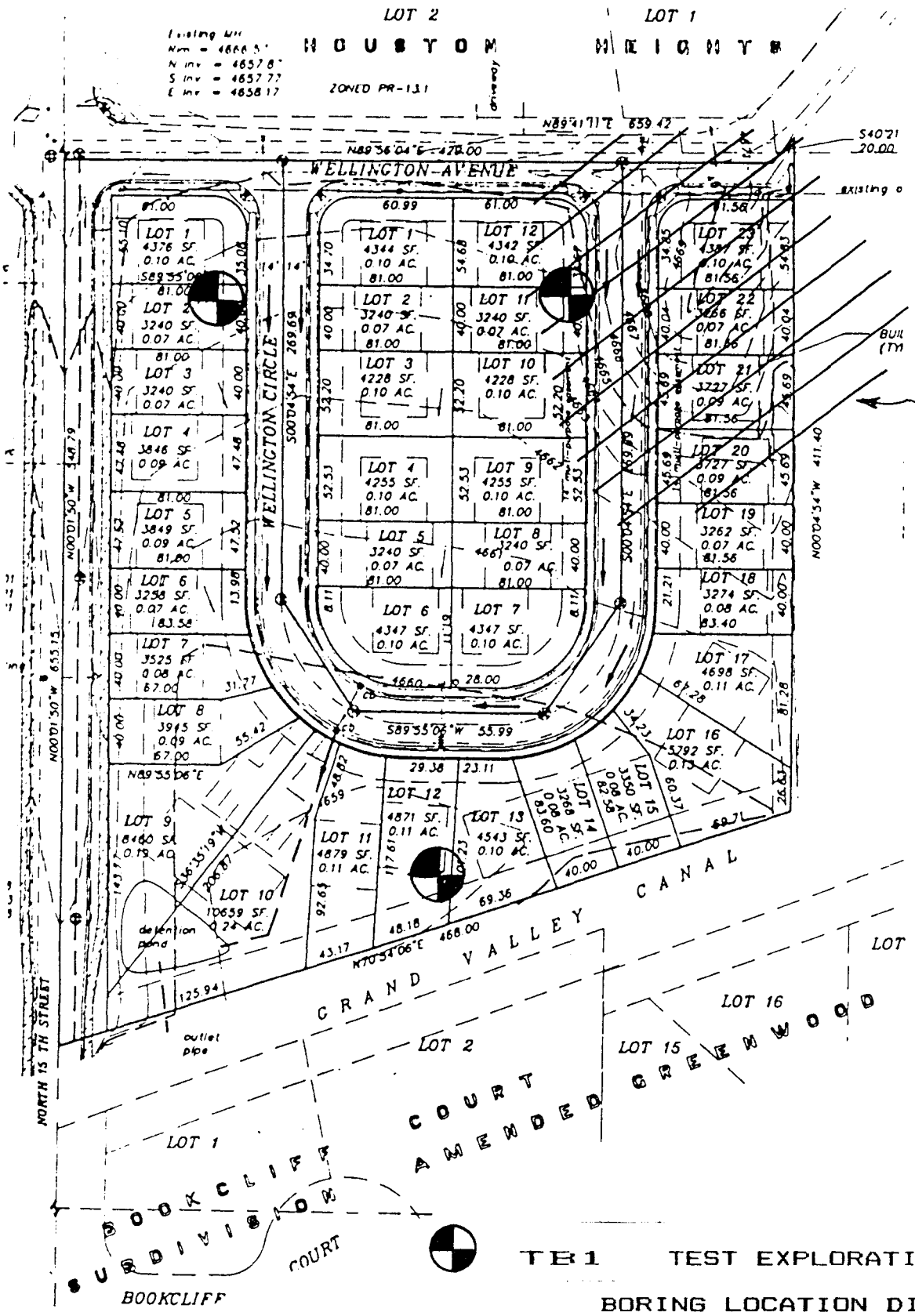
Standard Penetration Drives are made by driving a standard 1.4" split spoon sampler into the ground by dropping a 140 lb. weight 30". ASTM test des. D-1586.

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

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

LINCOLN DeVORE TESTING | COLORADO: Colorado Springs, Pueblo, Glenwood Springs, Montrose, Gunnison,

EXPLANATION OF BOREHOLE LOGS



TB1 TEST EXPLORATION BORING

BORING LOCATION DIAGRAM

Lincoln DeVore, Inc.
Geotechnical Consultants

WELLINGTON @ 15TH SUBDIVISION		
RON ABELOE - GRD. JCT., CO.		DATE 10-28-94
JOB NO. 91771-J	DRAWN EMM	

BORING NO 1

BORING ELEVATION:

DEPTH (FT.)	SOIL LOG	DESCRIPTION				BLOW COUNT	SOIL DENSITY pcf	WATER %
		Surface Reworked by Agriculture						
			Soft					
		Alluvial	Sandy	Compressible				
	I	Low Density		Sulfates	ST		97.7	10.3%
5	CL	Silty Clay		Wet	5			
	Free Water			Very Soft				
			Compressible					
	I				CS	1/6	95.5	23.6%
10	CL	Silty Clay	Low Density		10	2/12		
				Saturated		4/18		
		Soils are flowing into Drill Hole						
15					15			
	II			Near Saturated				
	Km	Mancos Shale Formation						
		Silty Clay	High Sulfates					
		Expansive	Softer Strata, due to Sulfates		SPT	9/6		16.4%
20			Decreasing Moisture with Depth		20	33/12		
		Fractured		Firm to Hard		91/18		
		High Moisture in some strata		High Sulfates				
			Siltstone Strata					
	II				SPT	48/6		12.9%
25	Km	Mancos Shale Formation		Hard to Drill	25	167/12		
			Silty Clay					
			Expansive					
30					30			
			Blow Counts are cumulative for each					
			6 inches of sampler penetration.					
			Free Water @ 5'					
			During Drilling 10-24-94					

LOG OF SUBSURFACE EXPLORATION

WELLINGTON @ 15TH

LINCOLN - DeVORE, Inc.

Grand Junction, Colorado

Mr. Ron Abelo

Grand Junction, CO.

Date **10-28-94**

Job No. **81771-J**

Drawn **EMM**

BORING NO **2**

DEPTH (FT.)	SOIL LOG	BORING ELEVATION: DESCRIPTION		BLOW COUNT	SOIL DENSITY pcf	WATER %
		I Surface Reworked by Agriculture				
		CL Silty Clay Alluvial Low Density				
		Km Mancos Shale Formation				
		II Expansive	SPT	14/6		12.9%
5		Medium to High Density High Sulfates	5	46/12		
		Thin Siltstone Strata		103/18		
		Decreasing Moisture with Depth				
		II Silty Clay				
		Km Mancos Shale Formation Variable Moisture	SPT	19/6		11.7%
10		Variable hardness due to Occ. High Sulfate Strata	10	65/12		
		Fractured Expansive				
			BULK			12.7%
15			15			
20			20			
25			25			
30		Siltstone Strata	30			
		Blow Counts are cumulative for each 6 inches of sampler penetration.				
		NO Free Water During Drilling 10-24-94				

LOG OF SUBSURFACE EXPLORATION

WELLINGTON @ 15TH

LINCOLN - DeVORE, Inc.

Grand Junction, Colorado

Mr. Ron Abelo		Date
Grand Junction, CO.		**10-28-94**
Job No.	Drawn	
81771-J	**EMM**	

BORING NO 3

DEPTH (FT.)	SOIL LOG	BORING ELEVATION: DESCRIPTION		BLOW COUNT	SOIL DENSITY pcf	WATER %
		Surface Reworked by Agriculture				
		Soft Wet				
		I Low Density				
		CL Silty Clay Compressibl Sulfates	CS	1/12	98.5	25.4%
5		Free Water	5	2/24		
		Very Soft				
		Alluvial Compressible				
		I	ST		90.9	25.6%
10		CL Silty Clay Low Density	10			
		Saturated				
		Compressible				
15		I Alluvial	15			
		CL Silty Clay				
		Soils are flowing into Drill Hole				
		Low Density				
20			20			
			SPT	13/6		17.3%
		Km Mancos Shale Formation High Sulfates		38/12		
		Silty Clay		64/18		
		Fractured Expansive				
25		High Moisture in some strata	25			
30		Siltstone Strata	30			
		Blow Counts are cumulative for each 6 inches of sampler penetration.				
		Free Water @ 4-1/2'				
		During Drilling 10-24-94				

LOG OF SUBSURFACE EXPLORATION

LINCOLN - DeVORE, Inc.

Grand Junction, Colorado

WELLINGTON @ 15TH

Mr. Ron Abelo

Grand Junction, CO.

Date **10-28-94**

Job No. **81771-J**

Drawn **EMM**

SUMMARY SHEET

Soil Sample: Alluvial, Low Plastic Clay (CL)
Test No.: 81771-J

Location: WELLINGTON at 15th & J.
Date: 10-28-94

Boring No.: 1 Depth: 3'
Sample No.: I
Test by: LRS

Natural Water Content (w): 10.3 %
Specific Gravity (Gs): _____
In Place Density (γo): 97.7 pcf

SIEVE ANALYSIS:

Sieve No.	% Passing
1 1/2"	
1"	
3/4"	
1/2"	
4	100
10	99
20	99
40	98
100	97
200	94

HYDROMETER ANALYSIS:

Grain size (mm)	%
.02	66
.005	42

Plastic Limit P.L.: 18 %
Liquid Limit L. L.: 29 %
Plasticity Index P.I.: 11 %
Shrinkage Limit: _____ %
Flow Index: _____
Shrinkage Ratio: _____ %
Volumetric Change: _____ %
Lineal Shrinkage: _____ %

MOISTURE DENSITY: ASTM METHOD

Optimum Moisture Content - wo: _____ %
Maximum Dry Density - γd: _____ pcf
California Bearing Ratio (av): _____ %
Swell: _____ Days _____ %
Swell against _____ psf Wo gain _____ %

BEARING:

Housel Penetrometer (av): 800 psf
Unconfined Compression (qu): _____ psf
Plate Bearing: _____ psf
Inches Settlement: _____
Consolidation 1.8% under 921 psf
3.7% under 2042 psf

PERMEABILITY:

K (at 20°C): _____
Void Ratio: _____

Sulfates 1500 ppm.

SOIL ANALYSIS

LINCOLN-DeVORE TESTING LABORATORY
COLORADO SPRINGS, COLORADO

SUMMARY SHEET

Soil Sample MANCOS SHALE (CL) Low Plastic Clay
Location WELLINGTON or 15th G.J.
Boring No. 2 Depth 3'
Sample No. II

Test No. 81771-J
Date 10-28-94
Test by LRS

Natural Water Content (w) 12.9 %
Specific Gravity (Gs) _____

In Place Density (γ_o) _____ pcf

SIEVE ANALYSIS:

Sieve No.	% Passing
1 1/2"	
1"	
3/4"	
1/2"	
4	100
10	99
20	95
40	93
100	90
200	88.8

HYDROMETER ANALYSIS:

Grain size (mm)	%
.02	66
.005	36

Plastic Limit P.L. 24 %
Liquid Limit L. L. 36 %
Plasticity Index P.I. 12 %
Shrinkage Limit _____ %
Flow Index _____
Shrinkage Ratio _____ %
Volumetric Change _____ %
Lineal Shrinkage _____ %

MOISTURE DENSITY: ASTM METHOD

Optimum Moisture Content - w_o _____ %
Maximum Dry Density - γ_d _____ pcf
California Bearing Ratio (av) _____ %
Swell: 1 Days 3.9 %
Swell against 1520 psf Wo gain 7.3 %

BEARING:

Housel Penetrometer (av) 4000+ psf
Unconfined Compression (qu) _____ psf
Plate Bearing: _____ psf
Inches Settlement _____
Consolidation % under psf

PERMEABILITY:

K (at 20°C) _____
Void Ratio _____

Sulfates 2000+ ppm.

SOIL ANALYSIS

LINCOLN-DeVORE TESTING LABORATORY
COLORADO SPRINGS, COLORADO

Lincoln DeVore, Inc.
Geotechnical Consultants
1441 Motor St.
Grand Junction, CO 81505

TEL: (303) 242-8968
FAX: (303) 242-1561

May 30, 1995

Mr. Ron Abelo
626 32 Road
Clifton, Colorado. 81520

Re: Proposed Pavement Sections
Wellington & 15th Street Subdivision
Grand Junction, Colorado

Dear Mr Abelo;

At your request the proposed road sections at the above referenced site was sampled by personnel of LINCOLN DeVORE, INC.. The samples were subjected to Laboratory Testing and appropriate road sections were computed. Following are our findings and recommendations.

Samples of the surficial native soils at this property that may be required to support pavements have been evaluated using the Hveem-Carmany method (ASTM D-2844) to determine their support characteristics. The results of the laboratory testing are as follows:

AASHTO Classification - A-4(6) Unified Classification - ML

R	=	24
Expansion @ 300 psi	=	0.0
Displacement @ 300 psi	=	3.56

No estimates of traffic volumes have been provided to Lincoln DeVore. However, we assume that the roads will be classified as residential.

Two methods of design were utilized for this project. The design procedures utilized are first, The Asphalt Institute (MS-1) and second, those recognized by the Colorado Department of Highways and the 1986 AASHTO design procedure. A design life of 20 years was used.

Lincoln DeVore, Inc.
Geotechnical Consultants
1441 Motor St.
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Two methods of design were utilized for this project. The design procedures utilized are first, The Asphalt Institute (MS-1) and second, those recognized by the Colorado Department of Highways and the 1986 AASHTO design procedure. A design life of 20 years was used.

ASPHALT INSTITUTE Method

The Mean Annual Air Temperature (MAAT) of 60°F was chosen to characterize the environmental conditions.

PROPOSED PAVEMENT SECTIONS

Residential Roadway, 18k EAL = 5:
Asphalt-Base Course

3 inches of asphaltic concrete pavement
on 6 inches of aggregate base course
on 8 inches of recompacted native material

Full Depth Asphalt:
Not recommended, Site requires Subgrade Improvement or Gravel Base due to Soft, Wet Subgrade Soils.

1986 AASHTO Method

Based upon the existing topography, the anticipated final road grades and the anticipated future irrigation practices in the local area, a Drainage Factor of 0.6 (1986 AASHTO procedure) has been utilized for the section analysis.

The terminal Serviceability Index of 2.0, a Reliability of 70 and a design life of 20 years have been utilized, based on recommendations by the Highway Department. An 18 kip EAL of 5, also recommended by the Highway Department, was used for the analysis.

PROPOSED PAVEMENT SECTIONS

Residential Roadway, 18k EAL = 5 :
Asphalt-Base Course

3 inches of asphaltic concrete pavement
on 6 inches of aggregate base course
on 8 inches of recompacted native material

Full Depth Asphalt:
Not recommended, Site requires Subgrade Improvement or Gravel Base due to Soft, Wet Subgrade Soils.

Rigid Concrete:

Doweled, not tied to shoulder slabs or curbing

6 inches of portland cement pavement
on 4 inches of aggregate base course
on 8 inches of recompacted native material

INCREASED ROAD SECTION/SOFT - WET SUBGRADE

Due to the probability of very high soil moisture in the subgrade soils, the use of a Geotextile Fabric for separation and minor reinforcement (such as Mirafi 500-X or 140-N), placed beneath the Aggregate Base Course, may be required in some areas on this site.

It is possible that additional Structural Fill Sections for areas of moderately unstable subgrade (pumping), due to permanent or seasonally high water table, may be required. The placement of Geotextile Fabric, or possibly a Biaxial Geogrid, may require extra Structural Fill (ABC or Approved 'Pitrun') in order to achieve proper fill compaction and Section Stability.

The specific areas which will require placement of either the Biaxial Geogrid or the Geotextile Fabric will depend on the actual conditions encountered during construction. The subgrade and road section construction should be monitored by representatives of the Geotechnical Engineer. The Following Section should be the average required for the anticipated conditions.

RESIDENTIAL ROADS [18k EAL/day = 5]

	3"	Asphaltic Concrete Pavement
on	8"	Aggregate Base Course (ABC)
on		Biaxial Geogrid or Geotextile for reinforcement
on	6"	Imported Structural Fill (Hveem-Carmany R>70)
on		Geotextile for separation and reinforcement

Geotextile Fabric for separation and minor reinforcement may be either woven with a minimum Grab Strength of 180 lb., in the weakest direction (such as Mirafi 500-X) or non-woven/needle punched with a minimum Grab Strength of 110 lbs., in the weakest direction (such as Mirafi 140-N). If free water is encountered in the excavation, a non-woven fabric is often recommended.

Biaxial Geogrid for reinforcement shall have a minimum Tensile Strength @ 5% Strain of 550 lb/ft., in the weakest direction (such as Tensar BX 1100).

The imported Structural Fill (Hveem-Carmany >70) is to be Granular, Medium to Coarse Grained, Very low plastic (PI<4), Non Free-Draining, Compactable and within the following Gradation:

Maximum size, by screening	6"
Passing the #4 screen	20% - 85%
Passing the #40 screen	10% - 60%
Passing the #200 screen	3% - 15%

Imported Structural Fill and Aggregate Base Course (ABC) to be compacted to 90% of its maximum Modified Proctor dry density (ASTM-D-1557) at a moisture content within ± 20% of optimum moisture.

PAVEMENT SECTION CONSTRUCTION

We recommend that the asphaltic concrete pavement meet the State of Colorado requirements for a Grade C mix. In addition, the asphaltic concrete pavement should be compacted to a minimum of 95% of its maximum Hveem density. The aggregate base course should meet the requirements of State of Colorado Class 5 or Class 6 material, and have a minimum R value of 78. We recommend that the base course be compacted to a minimum of 95% of its maximum Modified Proctor dry density (ASTM D-1557), at a moisture content within + or -2% of optimum moisture. The native subgrade shall be scarified and recompacted to a minimum of 90% of their maximum Modified Proctor day density (ASTM D-1557) at a moisture content within + or -2% of optimum moisture.

All pavement should be protected from moisture migrating beneath the pavement structure. If surface drainage is allowed to pond behind curbs, islands or other areas of the site and allowed to seep beneath pavement, premature deterioration or possibly pavement failure could result.

Concrete Pavement

We recommend that the rigid concrete pavement have a minimum flexural strength (F_t) of 650 psi at 28 days. This strength requirement can be met using Class P or AX or A or B Concrete as

defined in Section 600 of the Standard Specifications for Road and Bridge Construction, Colorado DOT. It is recommended that field control of the concrete mix be made utilizing compressive strength criteria.

Flexural Strength should only be used for the design process. Concrete with a lower flexural strength may be allowed by the agency having jurisdiction however, the design section thicknesses should be confirmed. In addition, the final durability of the pavement should be carefully considered.

Control joints should be placed at a minimum distance of 12 feet in all directions. If it is desired to increase the spacing of control joints, then 66-66 welded wire fabric should be placed in the mid-point of the slab. If the welded wire fabric is used, the control joint spacing can be increased to 40 feet. Construction joints to be designed so that positive joint transfer is maintained by the use of dowels.

The concrete should be placed at the lowest slump practical for the method of placement. In all circumstances, the maximum slump should be limited to 4 inches. Proper consolidation of the plastic concrete is important. The placed concrete must be properly protected and cured.

It is believed that all pertinent points have been addressed. If any further questions arise regarding this project or if we can be of any further assistance, please do not hesitate to contact this office at any time.

Respectfully Submitted,

LINCOLN DeVORE, Inc.

by: Edward M. Morris EIT
Engineer/Western Slope Manager

Reviewed By: George D. Morris, PE 6/30/95

LD Job No.: 81771-J

Wellington Gardens
Final Drainage Report

prepared 24 May, 1995

NICHOLS
ASSOCIATES, INC.

Certification Sheet

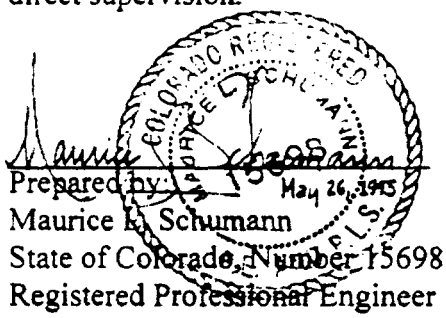
May 26, 1995

Development Staff
City of Grand Junction, Colorado

Ladies and Gentlemen:

A storm drainage system for the proposed Wellington Gardens has been designed to convey storm water and route it to a detention pond. The detention pond is designed to discharge storm water produced during a 2-year event at the historic 2-year rate. The storm drainage system is also designed to convey the 100-year event at the historic 100-year rate as required.

I certify this report for the final drainage design of Wellington Gardens was prepared under my direct supervision.



Prepared by:
Maurice L. Schumann
State of Colorado, Number 15698
Registered Professional Engineer

Eric C. Marquez
State of Colorado, Number 19097
Engineer In Training

TABLE OF CONTENTS

I. GENERAL DESCRIPTION AND LOCATION

A. Site and Major Basin Location

Wellington Gardens is a proposed residential housing development to be built at the southeast corner of 15th Street and Wellington Avenue in the City of Grand Junction, County of Mesa, Colorado. The property is bounded on the east by a pasture; on the south by the Grand Valley Canal; on the west by 15th Street; and on the north by Wellington Avenue. The property south of the canal is developed with multi-family housing and single family housing. The property across 15th Street from the proposed site is developed with multi-family housing. Two houses are located near the north and east borders of the property: one house is located just north of the property and on Wellington Street, the other house is about 500 feet east of the northeast corner of the proposed development.

B. Site and Major Basin Description

The site has an area of 4.5 acres. Ground cover on the site is comprised of an abandoned agricultural grain field that has been overgrown with scattered native grasses and bushes. Soils at the site consist of Alluvial soils that overly the Mancos Shale Formation. The alluvial surface soils consist of silty clay and sandy clay and have been mapped as the Sagers-Billings Urban Complex by the U.S. Soil Conservation Service. The site has high runoff potential, therefore the existing hydrologic soil type is Group D.

The major basin has an area of approximately 14 acres. The major basin also includes two other fields that have been previously or are currently used for agriculture. Soil cover mostly includes weathered products derived from the Mancos Shale Formation and the Mount Garfield Formation. The major basin can also be classified as Group D hydrologic soil type.

II. EXISTING DRAINAGE CONDITIONS

A. Major Basin

The topography of the major basin is generally comprised of gentle slopes with rolling hills in the northeast section. The major basin generally slopes to the south from a high elevation of 4687 feet in the northeast corner to the Grand Valley Canal at the south with an elevation of 4660 feet. The major basin boundary is generally defined by city streets. Fifteenth street bounds the west side of the major basin from the canal to the parking lot of Grand Villa Assisted Living Residential Community. The boundary then extends southeast along the high points of the rolling hills southeast of Grand Villa until it intersects the curve in Wellington Avenue. The boundary then follows the Wellington Avenue curve as it intersects the old 17th Street thoroughfare and follows it to the canal. The major basin boundary then follows the canal maintenance road back to 15th street.

Irrigation ditches are scattered throughout the major basin. Irrigation water enters the major basin at the northeast extremity of the basin. Historically, all runoff drains into the Grand Valley Canal and there are no wetlands on the property.

The property as well as the major basin are zoned X (i.e. outside of the 500-year floodplain) by the National Flood Insurance Program. Though the Flood Insurance Rate Maps (FIRMs) do not necessarily identify all areas subject to flooding, no local features have been identified to suggest the FIRM is incorrect.

B. Site

Drainage patterns for the site are similar to those described for the major basin. Irrigation ditches follow the property lines on the north and east edges. The ditch on the north edge appears to have been used to distribute water to the property when it was used for

agriculture. The ditch bordering on the east diverts upstream flow and intercepts inflow from the neighboring pasture and directs the combined flow into a culvert discharging into the Grand Valley Canal. An unknown amount of inflow may enter the property at the low spot on the northern border. Since runoff has historically been discharged into the Grand Valley Canal, there have not been effects to downstream subbasins due to runoff from the site.

III. PROPOSED DRAINAGE CONDITIONS

A. Changes in Drainage Patterns

Drainage patterns in the major basin will not be affected due to changes in drainage patterns on the proposed property.

The property for the proposed development currently drains from north to south. The development will not alter the general slope direction. The discharge point is currently in the southeast corner of the property but will be relocated west approximately 425 feet to the southwest corner of the property.

Storm water routed to the street gutters will travel to the south end of the cul-de-sac to a single grate combination inlet box. The inlet grate and pipe will be able to convey the 2-year event to the detention pond. The 100-year event will produce an amount of water sufficient to overtop the sidewalk at the inlet grate and will be routed to the detention pond along a swale. Stormwater will be released from the detention pond at historic 2- and 100-year rates through a 2-stage discharge box.

The 2-stage discharge box is specified to have inside dimensions of 36 inches by 36 inches and be 20.4 inches high. The 2-year inlet will be located at the floor elevation of the detention pond. The 100-year inlet is the top of the box. From the discharge box, the storm water will travel through a 15 inch ADS pipe to the Grand Valley Canal.

The 2-year event peak flow rate will increase approximately 247% from historic flows, and the 100-year event peak flow rate will increase approximately 249% from historic flows. As a result in the increased peak flow rates, a detention basin volume of approximately 6000 cubic feet has been specified.

Drainage patterns in the proposed development will be affected by completion of the proposed development in several aspects as follows:

- Runoff will be channeled and diverted through engineered structures.
- Runoff will be diverted and detained at a detention pond in the southwest corner.
- Runoff will be discharged to the canal at or near historical 2-year and 100-year flows through a multistage discharge structure.

B. Maintenance Issues

The drainage system will be located within dedicated easements to insure access to all parts of the system. A homeowners association will be formed to accept responsibility of maintenance of the drainage system. Maintenance of the system will include:

- aesthetic maintenance,
- nuisance maintenance, and
- operations and structural maintenance.

The association will perform periodic inspections of the system and make necessary adjustments and repairs as well as maintain appropriate records of repairs.

IV. DESIGN CRITERIA & APPROACH

A. General Considerations

Master planning issues are limited in scope due to the planned discharge into the canal and the absence of downstream subbasins. The criteria affecting master planning are the same criteria driving the requirements to submit a drainage report.

The most significant site consideration was placement of the detention pond. The size and amount of impervious area of the proposed development governs a quantity of water must be detained. Placement of the detention basin near the outfall into the canal was desired to minimize site grading and use of underground sewers.

B. Hydrology

Design storm durations conform with Table VI-2 of the City of Grand Junction Storm Water Management Manual, June 1994 (SWMM). Rainfall intensity information will also be obtained from the SWMM without adjustment for basin area. Runoff calculations were performed using the Rational Method. Detention basin design was determined using the Modified Rational Method as outlined in the SWMM. Input parameters for the modeling methods were chosen in accordance with the procedures as outlined in the SWMM.

C. Hydraulics

Hydraulic calculations and methods followed those recommended in the SWMM. Input parameters were selected in accordance with standard engineering practices for the materials chosen for inlets, conveyance, and outlets

V. RESULTS AND CONCLUSIONS

A. Existing and Proposed Runoff Rates (2- and 100-year storm)

	Runoff Rates	
	2-Year Event (cfs)	100-Year Event (cfs)
Existing total site	1.07	3.10
Existing discharging to Grand Valley Canal	1.07	3.10
Proposed total site (after detention)	0.86	3.00
Proposed discharging to Grand Valley Canal (after detention)	0.86	3.00

B. Overall Compliance

The design of the proposed drainage system conforms to the requirements of the Grand Junction Stormwater Management Manual. The methods used to analyze stormwater quantities, rates, and volumes have been used in accordance with policy in Sections I through V of the SWMM. Criteria for approved methods were followed as outlined in Tables I-1, and I-2 of the SWMM.

VI. REFERENCES

United States Department of Agriculture, Soil Conservation Service. Soil Survey for Mesa County Colorado.

Colorado Water Conservation Board, Floodplain Information Index.

United States Federal Emergency Management Agency, National Flood Insurance Program, 1992 (July). *Flood Insurance Rate Map.*

County of Mesa, Colorado, 1992 (April). *Mesa County Storm Drainage Criteria Manual*

Intensity- Duration - Frequency Curves, Mesa County Colorado.

City of Grand Junction, Colorado. 1994 (June). *Stormwater Management Manual.*

Bras, Rafael L., 1990. *Hydrology*. Addison-Wesley Publishing Company, Inc., U.S.A.

NEENAH Foundry Company, 1989. *Construction Castings Catalog "R" 11th Edition.*

American Iron and Steel Institute, 1990. *Modern Sewer Design.* Johnson Design Group, Inc., Virginia

VII. APPENDICES

NICHOLS ASSOCIATES, INC.

Wellington Gardens
Drainage Areas

SUBBASIN	NO. OF LOTS	TOTAL AREA (SF/ACRES)	LOT AREA (SF/ACRES)	STREET AREA (SF/ACRES)	BUILDING AREA (SF/ACRES)	TOTAL AREA IMPERVIOUS (SF/ACRES)	TOTAL AREA LANDSCAPED (SF/ACRES)	% IMPERVIOUS
A	6	49984	35307	14677	11100	25777	24207	
		1.15	0.81	0.34	0.25	0.59	0.56	52%
B	6	43773	29150	14623	11100	25723	18050	
		1.00	0.67	0.34	0.25	0.59	0.41	59%
C	14	102325	78217	24108	25900	50008	52317	
		2.35	1.80	0.55	0.59	1.15	1.20	49%
Totals	26	196082	142674	53408	48100	101508	94574	
		4.50	3.28	1.23	1.10	2.33	2.17	
				27%	25%	52%	48%	

NOTES:
TOTAL AREA IMPERVIOUS = STREET AREA + BUILDING AREA
% IMPERVIOUS = TOTAL AREA IMPERVIOUS / TOTAL AREA

NICHOLS ASSOCIATES, INC.
751 Horizon Court - Suite 102
Grand Junction, Colorado 81506

26-May-95

Wellington Gardens

Runoff rates for Developed conditions.

BASIN	AREA SURFACE TYPE	AREA Ac.	RUNOFF COEF. C2	RUNOFF COEF. C100	REACH	LENGTH ft	SLOPE (S) %	V fps	2-Yr TIME MIN.	100-Yr TIME MIN.	INTENSITY Inches/Hour 2-Yr	INTENSITY Inches/Hour 100-Yr	DISCHARGE CFS (Q=CIA) 2-Yr	DISCHARGE CFS (Q=CIA) 100
A	Landscaped	0.56	0.24	0.32	A-1	210	1.0	0.11	22.4	20.3				
	Paved & Roofs	0.59	0.93	0.95	A-2	560	1.5	2.50	3.7	3.7				
	Total/Average	1.15	0.60	0.64					26.2	24.1	0.96	2.57	0.66	1.90
B	Landscaped	0.41	0.24	0.32	B-1	180	1.0	0.12	20.8	18.8				
	Paved & Roofs	0.59	0.93	0.95	B-2	595	1.5	2.50	4.0	4.0				
	Total/Average	1.00	0.65	0.69					24.7	22.8	0.98	2.63	0.64	1.82
C	Landscaped	1.20	0.24	0.32	A-1	195	1.0	0.11	21.6	19.6				
	Paved & Roofs	1.15	0.93	0.95	A-2	400	1.5	2.50	2.7	2.7				
	Total/Average	2.35	0.58	0.63					24.3	22.3	1.00	2.70	1.36	3.98
												Sub-Total:	2.65	7.71
												Off site drainage:	0.00	0.00
Total Ac./weighted C		4.50	0.60	0.65				MAX. Tc	26.2	24.1		TOTAL Q:	2.65	7.71

Wellington Gardens

Runoff rates for Historic conditions and amount increase due to development.

BASIN	AREA SURFACE TYPE	AREA Ac.	RUNOFF COEF. C2	RUNOFF COEF. C100	REACH	LENGTH ft	SLOPE (S) %	V fps	2-Yr TIME MIN.	100-Yr TIME MIN.	INTENSITY Inches/Hour 2-Yr	INTENSITY Inches/Hour 100-Yr	DISCHARGE CFS (Q=CIA) 2-Yr	DISCHARGE CFS (Q=CIA) 100-Yr
A	Native grass & scattered bushes	4.50	0.29	0.32	A-1	700	1.5	0.05	33.7	32.5				
	10" pipe				A-2	25	1.5	2.50	0.2	0.2				
	Total/Average	4.50	0.29	0.32					33.9	32.6	0.82	2.15	1.07	3.10
								MAX. Tc	33.9	32.6		TOTAL Qh:	1.07	
												INCREASE:	1.58	4.61
													247%	249%

Wellington Gardens

Detention pond outlet oriface calculations.

Reservoir Release Rate Formula: Q=CA(2gH)^.5

Where: Q=Orifice flow in CFS
C=Coefficient
g=Gravitational constant
H=Height of water above the centroid of the orifice opening in feet
D=Orfice diameter
Qo=Discharge Rate

Subscripts: h = Historic flow
2 = Two year storm
100 = One hundred year storm
t = Top orifice
b = Bottom orifice
T = total

Where:
Q=Weir flow in CFS
C=Coefficient
L=Length of overflow
H=Depth from the weir crest
to the pond water surface

Bottom orifice

The bottom orifice must pass the historic 2-year storm

Storage depth above centroid of lower orifice = 1.80

Q2= 1.07 Total Qh from page 2
C= 0.65
g= 32.20
Hb= 1.80
A (sf) = Q/C(2gH)^.5
= 0.153 Inlet Dia = 5.30 "
Qo= 0.86 Opening 4.4 " x 5.0"

Top orifice

The bottom & top orifices must pass the historic 100 Yr storm

Storage depth above bottom of top orfice =

C = 0.65
Ht = 0.6 Hb = 1.5
Bottom orifice Q = CA(2gH)^.5 where H = Hb + Ht
Qb = 1.14

Top orifice Q = Qh100 - Q bottom orifice
Qt = 3.47 CFS QT = 4.61 CFS
L= 144.0 " H= 7.0 " = 0.58 '
Qo = 3.00

36.0 "
36.0 "
Top view
Inside dimensions of box
L = Perimiter

Wellington Gardens

Street flow depth at the gutter for critical sections.

Flow Through Street, Curb & Gutter
Discharge quantity is calculated by the following formula:
Q=0.56*(Z/n)*S^.5*d^2.67

Where:

Q = Discharge in CFS (Cubic Feet per Second)
Z = Inverse pavement cross slope
n = Manning roughness coefficient
S = Longitudinal slope of the street or gutter
d = Depth of gutter flow in feet

Solving for maximum depth at gutter

Manning Roughness Coefficient= 0.016

Capacity For Storm Drain Inlets
curb opening length = grate length
Ponding Q= .6 A (2gH)^.5]
Clogging factors: grate=0.5, box=0.0
H2 = 0.5 Ft. H100 = 1.0 Ft.

Subbasin Drainage	Street Locn. ID	Inverse Pave. x slope 1/ft/ft	Min. Long. Slope S ft/ft	Required 2 Year Capacity Q CFS	2 year Water Depth d Ft.	100 Yr Capacity Q CFS	100 Yr Water Depth d Ft.	Grate Type NEENAH	Open Area Sq. Ft.	Capacity 2 Yr CFS	Required 2 Yr CFS	Capacity 100 Yr CFS	Required 100 Yr CFS
1	X	66.67	0.005	0.66	0.13	2.57	0.21	na		0.00	0.66	0.00	2.57
2	Y	66.67	0.005	0.64	0.12	2.63	0.21	na		0.00	0.64	0.00	2.63
3	Z	66.67	0.005	2.65	0.21	7.90	0.32	R-3246 C	2.08	7.08	2.65	10.01	7.90

Storm Drainage Pipe Capacities

Storm Drain Location	Pipe Diameter Inches	Slope Feet/Feet	Rough. Coeff. n	Capacity Q CFS	Required Q CFS	
S. End of Wellington Court	12	0.0050	0.010	3.3	2.6	ADS pipe
Detention Basin Discharge	15	0.0100	0.010	8.4	7.9	ADS pipe

Wellington Gardens

Required detention volume.

2 year storm detention volume			100 year storm detention volume	
A	4.50		A	4.50
Qo	0.856		Qo	2.997
Td2	32.29		Td100	32.57
Id2	0.85		Id100	2.03
Qd	2.28		Qd	5.91
K	1.29		K	1.35
V	2,788 Cu Ft	REQUIRED STORAGE	V	5,934 Cu Ft
Irrigation Storage:	0 Cu Ft			0 Cu Ft
Total required volume:	2,788 Cu Ft	TOTAL REQUIRED VOLUME:		5,934 Cu Ft

Wellington Gardens

Detention pond depth vs capacity curve.

Elevation Ft.	Area Ft. Sq.	Volume Cu. Ft.	Accum. Volume Cu. Ft.
4,658.0	0	0	0
4,658.2	82	5	5
4,658.4	260	33	38
4,658.6	566	115	121
4,658.8	1,110	165	285
4,659.0	1,600	270	555
4,659.2	2,280	386	941
4,659.4	3,100	536	1,477
4,659.6	4,046	713	2,189
4,659.8	4,961	899	3,088
4,660.0	6,200	1,114	4,202
4,660.2	6,900	1,309	5,511
4,660.4	5,250	1,211	6,723
4,660.6	5,500	1,075	7,798
4,660.8	5,589	1,109	8,906
4,661.0	5,679	1,127	10,033

Storage Required Below 100 Yr Orfice: **2,787.94**

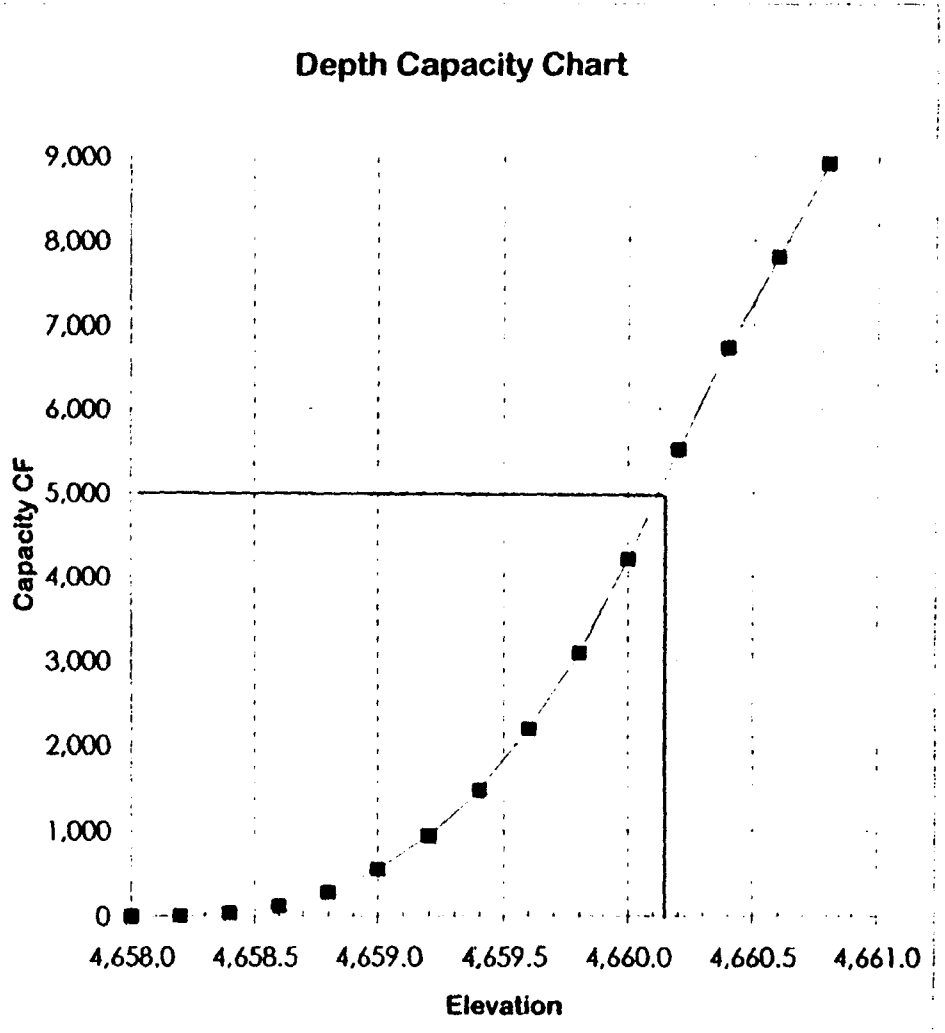
TOTAL STORAGE REQUIREMENT: 5,934.

Maximum detention pond elevation
4660.3

100 year orifice
4659.70

2 Yr. orifice
4658.20

Bottom
4658.00



523-0706

RON ABELOE -

1. **Just a few minor comments on the setback chart for revisions to both Plat and Plan. Otherwise, okay. We will need a mylar of the Final Plat and the Site Plan (both get recorded).**

2. **Also need a diskette of Final Plat.**

3. **Not only waiting for the Bank--there are places for you to sign the DIA and Disbursement. There is also a place for Terry Nichols to sign the Disbursement.**

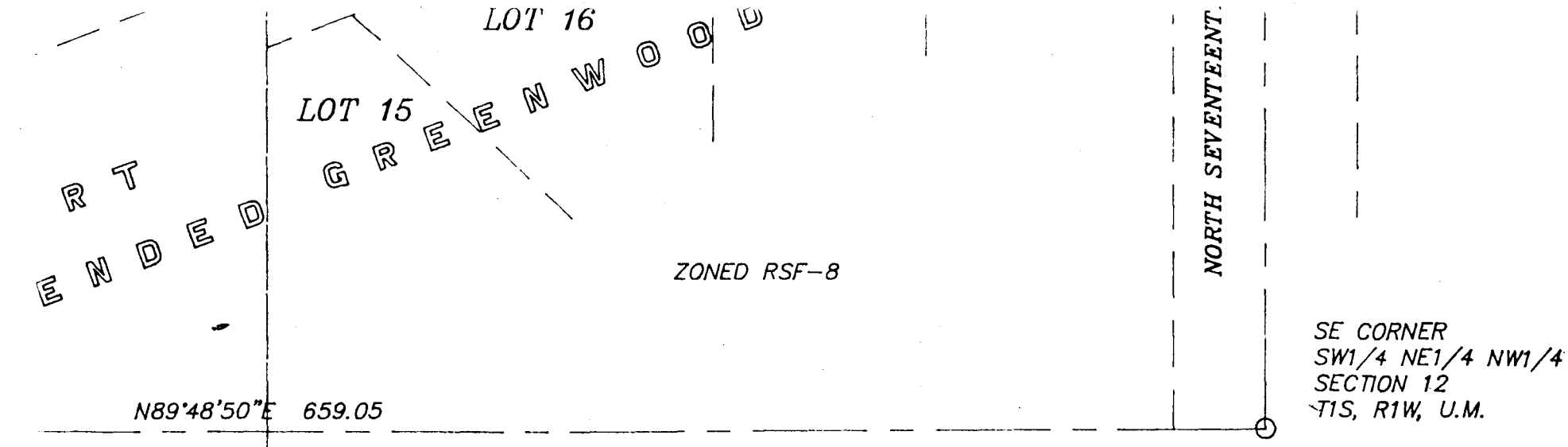
4. **Please submit 6 sets of construction drawings, stamped and sealed by Terry Nichols. Please make sure that the version of the road plan submitted shows the cross-section of the path as concrete (my latest version does, but not all have). Once these are received and approved by the City, Jody can schedule a pre-construction meeting.**

5. **Total recording fees for Plat, Plan, DIA and Disbursement is $89.00 payable to Mesa County Clerk & Recorder.**

6. **Will there be a TCP credit request for this filing or was that just for Filing 1?**

Let me know if you have questions

KRIS
244-1437



MINIMUM BUILDING SETBACK REQUIREMENTS				
LOT NO.	FRONT	RIGHT SIDE	LEFT SIDE	REAR
1	14 FEET	5 FEET	5 FEET	5 FEET
2	14 FEET	3 FEET	3 FEET	5 FEET
3	14 FEET	3 FEET	7.5 FEET	20 FEET
4	14 FEET	7.5 FEET	3 FEET	20 FEET
5	14 FEET	3 FEET	3 FEET	20 FEET
6	14 FEET	5 FEET	5 FEET	0 FEET
7	14 FEET	5 FEET	5 FEET	0 FEET
8	10 FEET	5 FEET	5 FEET	0 FEET
9	10 FEET	5 FEET	5 FEET	0 FEET
10	10 FEET	5 FEET	3 FEET	0 FEET
11	10 FEET	3 FEET	5 FEET	15 FEET
12	10 FEET	5 FEET	5 FEET	15 FEET
13	14 FEET	10 FEET	5 FEET	5 FEET
NOTE: IF SETBACKS ARE LESS THAN EASEMENTS THEN SETBACKS EQUAL EASEMENT WIDTHS.				

still appear to encroach

okay

okay

3' shown

5' shown

LEGEND & NOTES

● SET NO. 5 RE-BAR W/CAP L.S. 16 IN CONCRETE

⊥ SET NO. 5 RE-BAR W/CAP L.S. 16

◆ MESA COUNTY SURVEY MARKER

○ FOUND SURVEY MONUMENTS SET BY

NOTICE:

ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL AC ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISC DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATIO

NGLE	TANGENT
2"	21.69
5"	12.24
8"	15.74
1"	21.05
4"	5.54
5"	18.65
1"	9.47
3"	8.47
4"	28.98
0"	8.76
0"	4.80
6"	30.18

ENCUMBRANCER'S RATIFICATION AND APPROVAL

The undesigned financial institution holds a first deeda of trust on the herein described real property, and ratifies and approves this plat of THE COTTAGES AT WELLINGTON FILING TWO.

BY:

, of Norwest Bank

434-2160

CITY OF GRAND JUNCTION
250 North 5th Street
Grand Junction, CO 81501-2668
FAX: (970) 244-1599

FACSIMILE

Date: 12/12
To: RON ABELOE
Location: _____

Telephone Number: _____
FAX Number: _____

From: Kris, Community Development
Telephone Number: (970) _____

Number of Pages Including Cover Sheet: 3

Special Instructions:

_____

_____

_____

If the telecopy you have received is incomplete or illegible, please call _____ at (970) _____.

GENERAL

1. IN ADDITION TO THE COPIES REQUESTED ABOVE, provide 9 copies of an 11'x17" reduction of the Site Plan, Final Plat, Composite Plan and Landscape Plans and 9 copies of the revised narrative (re: setbacks).

FINAL PLAT

1. The easement between Lots 3 & 4 was included in Filing 1 as a 15-foot easement--shown on filing 2 as only a 10-foot easement. Unless other documentation is provided, this may only be changed with a vacation process. If a vacation is requested, provide a legal description for the portion(s) to be vacated.

2. The 25-foot easement along the canal must be a separate tract. Refer to attached suggested dedication language.

3. The pedestrian easement between the end of the cul-de-sac and the canal must also be dedicated as a separate tract.

4. Need a dedication statement for the common access easement for Lots 2 & 3.

5. Table of Setbacks:

Prefer that the side yard setbacks be 5' as indicated on the plat rather than the 10-foot separation stated in the narrative. Which is being requested?

The narrative suggests a 10-foot rear yard setback for interior lots but the plat shows 5-foot setbacks. Which is correct?

Add a note regarding garage setback, minimum 20 feet at shortest measurement from property line at private drive and from public street.

COMPOSITE PLAN

1. Show lot lines for Lots 5 & 6.

SITE PLAN

1. Include a table of setbacks as on the Final Plat.

2. Revise Note 5 to clarify: Driveways shall be no less than 20 feet long at the shortest point measured from the property line at private drive or from public street.

3. Footprints shown on Lots 2, 3 and 13 clearly encroach in the setback. Need to revise.

4. Add a note regarding addition of decks, patios, etc. For guidance City/Building Dept. does not allow any encroachment into any setback. The Zoning and Development Code states: "Porches, Patios or decks which are open and uncovered may extend into any required SETBACK area not more than six feet but in no case closer than three feet to any property line." If something encroaches, it may never be covered/enclosed.

5. Shown any fencing that may be proposed, such as split rail fencing in Filing 1.

ROAD PLANS AND PROFILES

1. Cross-section of private drive should not be labled right-of-way. "Width" or "Easement". This should be revised on several of the drawing sheets.

LANDSCAPE PLANS

1. Use correct site plan for landscape plans--there are no attached units proposed, yet landscape plan shows all attached units.

DEVELOPMENT IMPROVEMENTS AGREEMENT (DIA)

1. Do the lump sums included in DIA include all of the landscaping shown on the plan including that in the pond (unless it is existing)?

2. Need to submit a revised DIA that includes construction of the path between the cul-de-sac and canal.

REVIEW COMMENTS

FILE #FPP-96-201 **TITLE HEADING:** The Cottages at Wellington, Filing #2

LOCATION: SE corner of 15th & Wellington

PETITIONER: Ron Abeloe

PETITIONER'S ADDRESS/TELEPHONE: Wellington Partners LLC
P.O. Box 1765
Grand Junction, CO 81502
434-2160

PETITIONER'S REPRESENTATIVE: Nichols Associates

STAFF REPRESENTATIVE: Kristen Ashbeck

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., SEPTEMBER 23, 1996.

CITY COMMUNITY DEVELOPMENT **9/16/96**
Kristen Ashbeck **244-1437**

GENERAL

1. The name of this project is The Cottages At Wellington not Wellington Gardens. Please revise all plans.
2. The remainder of the project will be completed as Filing 2. Delete all references to Filing 2 and Filing 3 on the plans AND in the Project Narrative.
3. Provide 9 copies of an 11" x 17" reduction of the Site Plan and Final Plat and 9 copies of the revised Project Narrative.

FINAL PLAT

1. Dedication refers to Tract B -- there is no Tract B.
2. Drainage easement for detention pond must be on separate tract dedicated to homeowners' association rather than continue to be an easement within private lots.
3. The easement along the eastern boundary was shown as an existing 15-foot drainage and irrigation easement. The Filing 2 plat shows it as only a 10-foot easement. This is incorrect on all of the plan sheets. Please correct.
4. The easement between lots 3 & 4 was included in Filing 1 as a 15-foot easement--shown on Filing 2 as only a 10-foot easement.
5. "Canal easement" is not dedicated. It should be multipurpose and dedication should be for pedestrian purposes as well. This was a requirement of Preliminary Plan approval.
6. Also a requirement of Preliminary Plan approval was a pedestrian path between the end of the cul-de-sac and the canal. This should be a 12-foot wide easement with an 8-foot concrete path. Construction of the path must be included in the Improvements Agreement and Guarantee.

7. The area of Tract A that is to be used for off-street parking is not large enough to correspond with the amount of spaces shown on the plan underlying the composite drawing.
8. If it is intended that some of the units be attached, why is a side yard setback shown on all lots?
9. Show a front yard setback on all lots.
10. Since the plan underlying the composite plan does not show lot lines, and since a Site Plan was not provided, it cannot be determined exactly but it appears the siting of some of the attached units does not correspond with where the lot line/common wall would be. (e.g. lots 9 & 10)?
11. A common access easement must be shown and dedicated for Lots 2 & 3 to share a driveway.

COMPOSITE PLAN

1. Correctly label easement along canal to correspond with how it is dedicated on the plat.
2. Eliminate reference to Filing 2 and Filing 3.
3. Define limits of existing/proposed improvements.
4. Show lot lines.
5. Note that the underlying plan shows 14 units not 13. Please correct this on the Site Plan and include the correct plan as the underlying drawing on all other plan sheets.

SITE PLAN

1. Filing 2 not shown.
2. Eliminate reference to Filing 2 and Filing 3.
3. Show and dimension all setbacks including garage setback. Make sure attached units show a 0-foot setback.
4. How will additions such as encroachment of patios/covered patios be handled?
5. Include a table of setbacks. Identify which lots have the 0-foot/common wall setback.
6. Further comments once a Site Plan is submitted.
7. Show any fencing that may be proposed, such as split rail fencing in Filing 1.

ROAD PLANS AND PROFILES

1. Provide a cross-section of the common private drive.
2. Provide a cross-section of the pedestrian path.
3. Identify limits of existing/proposed construction.

STORM DRAINAGE PLAN

1. The plan doesn't really address Filing 2 at all since a temporary swale is still shown. I assume this is to be eliminated. Show drainage around the cul-de-sac instead.
2. How/where does drainage from private drive go?
3. Identify limits of existing/proposed construction.

LANDSCAPE PLAN

1. Use the correct underlying plan and show lot lines.
2. Identify limits of existing/proposed landscaping.
3. Do the lump sums included in the Improvements Agreement and Guarantee include all of the landscaping shown on the plan including that in the pond (unless it is existing)? (see also comments form Development Engineer)
4. Berm within the easement along the canal is probably not acceptable to canal company. It would also be an impediment to a future trail along the canal.

CITY DEVELOPMENT ENGINEER **9/6/96**
Jody Kliska **244-1591**

1. The submitted soils report does not contain the pavement design information. Please submit the pavement design information to verify the proposed structural section.
2. Filing 1 appears to have incomplete concrete sections on Wellington. A final inspection has not been done on filing 1, so the improvements have not been accepted by the City. As a reminder, we require submittal of as-built drawings and a compilation of all test results and inspection logs prior to final acceptance.
3. The plans submitted do not clearly indicated what is to be constructed with this filing or what has been constructed with filing 1. Please clarify the extent of this filing's improvements on the drawings.
4. Section VIII-6 of the SWMM manual requires the detention pond to be controlled for erosion by placement of ground cover or landscaping. The landscaping plan indicates placement of cobble rock and some shrubbery. Is this included in the improvements guarantee?
5. A site plan was submitted for filing 1, but not 2&3.

CITY UTILITY ENGINEER **9/12/96**
Trent Prall **244-1590**

1. Improvements agreement:
   - MH shall have a minimum unit price of $1200.
   - Sewer services minimum unit price shall be $8 and be totaled.

2. The origami performed on the submitted plan sheets were definitely unique, however in the best interest of all those involved, any further submittals folded in this fashion will be rejected.
3. Decide what the project title will be and be consistent throughout the plan set. "Wellington Gardens" or the "The Cottages at Wellington"?
4. Please clearly identify work performed under Phase I as existing.
5. All service lines shall have full body wyes coupled in.
6. Please ensure the following water related note is added: "Water meter pits and setters will be provided by City inspector for installation by contractor".
7. Please ensure the following notes are on the sewer plans:
   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.
   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 of acceptance of the sewer line extension.
   H. The Contractor shall obtain City of Grand Junction Street Cut Permit for all work within existing City 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 _____

CITY PROPERTY AGENT **9/13/96**
Steve Pace **256-4003**

1. Dimension building setbacks on the easterly ½ of this Filing #2.
2. Note on the 25' canal easement: previously dedicated on Filing #1 or re-address it on this Filing #2.
3. Label 14' multi-purpose easement somewhere along cul-de-sacs.
4. Label setback distance at the north portions of Lots 1 & 2.

CITY FIRE DEPARTMENT **9/11/96**
Hank Masterson **244-1414**

This proposal is acceptable to the Fire Department.

GRAND VALLEY IRRIGATION **9/16/96**
Phil Bertrand **242-2762**

See previous review comments.

GRAND JUNCTION DRAINAGE DISTRICT **9/11/96**
John Ballagh **242-4343**

The site is north of the Grand Valley Irrigation Canal, hence outside the boundaries of the Grand Junction Drainage District. The Grand Valley Irrigation Company canal appears to be the recipient of the surface waters from this development. The District's Logan Drain is located in Bookcliff Street - it is at capacity for very frequent storms - NO new areas should be added to the basin which is drained by the Logan Drain.

U S WEST **9/9/96**
Max Ward **244-4721**

For timely telephone service, as soon as you have a plat and power drawing for your 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 **9/11/96**
John Salazar **244-2781**

GAS & ELECTRIC: Please label the 14 foot area at the front of the lots as a "14' multi-purpose easement" on final plat.

LATE COMMENTS

TCI CABLEVISION **9/16/96**
Glen Vancil **245-8777**

1. We require the developers to provide, at no charge to TCI Cablevision, an open trench for cable service where underground service is needed and when a roadbore is required, that too must be provided by the developer. The trench and/or roadbore may be the same one used by other utilities so long as there is enough room to accommodate all necessary lines.
2. We require developers to provide, at no charge to TCI Cablevision, fill-in of the trench once cable has been installed in the trench.
3. We require developers to provide, at no charge to TCI Cablevision, a 4" PVC conduit at all utility road crossings where cable TV will be installed. This 4" conduit will be for the sole use of cable TV.
4. Should your subdivision contain cul-de-sac's the driveways and property lines (pins) must be clearly marked prior to the installation of underground cable. If this is not done, any need to relocate pedestals or lines will be billed directly back to your company.
5. TCI Cablevision will provide service to your subdivision so long as it is within the normal cable TV service area. Any subdivision that is out of the existing cable TV area may require a construction assist charge, paid by the developer, to TCI Cablevision in order to extend the cable TV service to that subdivision.
6. TCI will normally not activate cable service in a new subdivision until it is approximately 30% developed. Should you wish cable TV service to be available for the first home in your subdivision it will, in most cases, be necessary to have you provide a construction assist payment to cover the necessary electronics for that subdivision.

CITY PARKS & RECREATION **9/16/96**
Shawn Cooper **244-3869**

1. Require trail easement along canal.
2. Parks & Open Space Fee - 13 lots x $225 = $2,925.

TO DATE, NO COMMENTS RECEIVED FROM:
City Attorney
City Police
Mesa County School District #51
US Postal Service

September 17, 1996

Grand Junction Community Development Department
Planning • Zoning • Code Enforcement
250 North Fifth Street
Grand Junction, Colorado 81501-2668
(970) 244-1430 FAX (970) 244-1599

Mr. Ron Abeloe
Wellington Partners L.L.C.
PO Box 1765
Grand Junction, Colorado 81502-1765

RE: FPP-96-201 Cottages at Wellington

Dear Ron,

As per our conversation this afternoon, due to the number of deficiencies relative to the City's Submittal Standards for Improvements and Development (SSID) manual and the scope of the revisions required on the plans for the project referenced above, the submittal cannot be considered complete and a resubmittal is required. Therefore, the item will not be heard at the October Planning Commission meeting. Provided a full resubmittal is received no later than 5:00 pm October 1, 1996, the item will be tentatively scheduled for the November Planning Commission meeting. A review schedule for that meeting will be sent to you once the resubmittal is received.

Please do not hesitate to contact me if you have further questions regarding this project.

Sincerely,

Kristen Ashbeck
Planner

Resubmittal

Chaparral West Inc.
Managing Partner, Wellington Partner L.L.C.
P.O. Box 1765
Grand Junction, Co. 81502

October 1, 1996

(construct path public/private?
easement vacation?

Mr. Michael Drollinger
City of Grand Junction
Community Development Department

Subject: General Project Report
The Cottages at Wellington
Filing II

Dear Mr. Drollinger:

The submittal is for final approval of our plat for Filing II of our previously approved preliminary plan.

Our preliminary plan was approved December 13, 1994 our approval was for 34 units on approximately 4.8 acres in the PR8 Zone. This site is located on the southeast corner of 15th and Wellington in Grand Junction. Our original approval for 34 units allowed for a density of approximately seven units per acre. We have chosen to reduce the density to a total 25 units, most of them being detached, single family residences with two-car garages. Filing II will consist of 13 total units. The units will be single story and should not exceed 20 feet in total height. The units will range from 1100 sq. ft. to 1400 sq. ft. and will be two and three bedrooms, typical of what is currently completed and under construction at this time.

The landscaping in the entire project will be maintained by the Home Owner's Association including any detention area or open space area.

The access to the project will be from an extension of Wellington Court which is partially built at this time.

In Filing II there will be one private drive that will serve a maximum of six units. The remaining units will take access off of Wellington Court via individual driveways with the exception of one other area where there is a very short common driveway leading to two individual driveways. The private or common driveways will be built a minimum of 20 ft wide. The drainage will go into an existing detention area that was constructed with Filing I.

The set backs we are requesting are similar to those in Filing I. From Wellington Court to side

yards we would request the set backs to be 14 ft. From Wellington Court to the front of any garage we would require a minimum of 20 ft for adequate two-car parking when access is taken off of Wellington Court. From Wellington Court to the front of any unit we would request a minimum of 14 ft again with the minimum to the front of the garage being 20 ft. From 15th Street to the rear or the side of any unit a minimum of 20 ft. We request a minimum of 10 ft rear yard set back. A minimum of 10 ft between units unless the units are built to meet the fire code for connected units then there would be no minimum. Since some of our units have been proposed to be connected at the garages. We would request a 20 ft minimum from the edge of the asphalt to the front of the garage on the units that will take access from the private drive therefore giving them a minimum of two-car parking in front of the garage with a 5 ft minimum from the edge of pavement on the private drive to any portion of the building. These set backs are very close to what is currently being built at Wellington. These set backs give us the flexibility for locating the units in a variety of positions within the project.

Most of the utilities have been installed for this project with services and some extensions needing to be completed for Filing II from the utilities that were installed for Filing I. The private drive in Filing II would be posted as per the requirements for the private drives in Filing I. The private drives as well as all landscaped and open space areas will be maintained by the Home Owner's Association.

Thank you for your time and look forward to your comments into our public hearing. If you have any questions, please feel free to contact me at 434-2160.

Sincerely,

Ronald A. Abeloe
President, Chaparral West Inc.

RAA/law
07-well.wpd

Grand Junction Community Development Department
Planning • Zoning • Code Enforcement
250 North Fifth Street
Grand Junction, Colorado 81501-2668
(970) 244-1430 FAX (970) 244-1599

October 29, 1996

Mr. Ron Abeloe
Chaparral West, Inc.
PO Box 1765
Grand Junction, CO 81502-1765

RE: FPP-96-201 The Cottages at Wellington Filing 2

Dear Ron,

As we discussed yesterday, staff made the decision to accept the response to comments for the project referenced above after the October 24th deadline due to our failure to provide comments to you in a timely manner. However, this acceptance was subject to review of your response. In doing so, staff finds the response inadequate and the item will be postponed to the December Planning Commission hearing rather than being scheduled for the hearing next week.

By just a cursory review of the response, staff finds the deficiencies listed below. There may be further comments once these items are addressed and a more detailed review is completed.

1. No pavement design was included with the response as required in comment set #1.

2. The question asked about the discharge agreement with the canal company was not answered. If one was required with Phase 1, please provide a copy.

3. No response is shown as to erosion control/landscaping in the detention pond, as required by City SWWM manual.

4. No response to Police Department comment.

5. No profile view for the proposed sewer line C.

6. Why did the width of the private drive change from 25 feet to 20 feet? The plat still shows a 25-foot width. 18-foot paved width is unacceptable to the Fire Department.

7. Walking path on site plan is 4-foot width with no indication of material. Detail still shows 8-foot concrete. Which is correct? No separate dedication of pedestrian easement.

A complete response to these and any other previous comments not yet addressed (e.g. information requested by City Attorney) is due no later than November 15, 1996. In addition, the applicant is responsible for payment of a $50.00 re-advertisement fee at that time in order to schedule the item for the December hearing.

Please do not hesitate to contact me if you have further questions about this project.

Sincerely,

Kristen Ashbeck
Planner

CITY OF GRAND JUNCTION
250 North 5th Street
Grand Junction, CO 81501-2668
FAX: (970) 244-1599

FACSIMILE

Date: 10/29/96
To: Ron Abeloe
Location: Chaparral West

Telephone Number: _____
FAX Number: _____

From: Kristen, Community Development
Telephone Number: (970) _____

Number of Pages Including Cover Sheet: 3

Special Instructions:
RE: Postponement of Filing 2 Cottages at Wellington

If the telecopy you have received is incomplete or illegible, please call _____ at (970) _____.

Approved PC 12/3/96 w/ conditions see next pg

CITY OF GRAND JUNCTION **DATE: November 27, 1996**

PLANNING COMMISSION **STAFF PRESENTATION:** Kristen Ashbeck

AGENDA TOPIC: Final Plat and Plan

SUMMARY: Filing 2 of the Cottages at Wellington

ACTION REQUESTED: Approval of the Cottages at Wellington Filing 2 Final Plat and Plan

BACKGROUND INFORMATION:

Location: Southeast Corner 15th Street & Wellington Avenue

Applicant: Chapparal West, Inc.

Existing Land Use: Vacant

Proposed Land Use: 13 Detached Single Family Units

Surrounding Land Use:
North: Single Family Residential (The Cottages at Wellington Filing 1)
South: Grand Valley Canal and Multifamily Residential
East: Vacant
West: Multifamily Residential

Existing Zoning: Planned Residential 8 units per acre (PR-8)

Proposed Zoning: Same

Surrounding Zoning:
North: Planned Residential 13.1 units per acre (PR-13.1)
South: Residential Multifamily 16 units per acre (RMF-16) and
Residential Single Family 8 units per acre (RSF-8)
East: PR-8
West: RSF-8

Relationship to Comprehensive Plan: The Growth Plan shows this area as residential Medium 4 - 7.9 units per acre.

Due to the likelihood that uncovered porches and decks may be enclosed in the future, staff does not support statements 1 and 2. This should be revised to indicate that covered and uncovered decks or porches extend no closer than 3 feet to property line. According to the Mesa County Building Department, minimum building separation is 6 feet.

County Building Department and City policy is that there be no encroachment in any easement. Thus, statement 3 should be revised to read "no structure, including covered and uncovered porches and decks , may extend into any easement". Due to the petitioner's request to extinguish a portion of the easement along the eastern boundary, this statement may not be necessary but could be included as notice to a home builder or buyer.

Site Amenities. A condition of approval of the Preliminary Plan was that the developer provide a pedestrian connection between the end of the cul-de-sac and the canal area. Planning Commission specified that the path could be private (not dedicated to the public). Thus, rather than dedicating a separate tract or easement for public access, the developer has proposed a 4-foot possibly gravel path along the eastern edge of and within Tract B. The location and width of the private path are acceptable, however, staff recommends that it be paved rather than gravel for longevity of the surface and accessibility.

The developer is proposing a landscaped berm for a buffer along the entire length of 15th Street and will provide grass within the detention basin as required by the City's Stormwater Management Manual (SWMM) . A landscaping package will be provided to each property owner to be installed with construction of the home. A typical planting plan for a lot and the berm are shown on the proposed landscape plan.

RECOMMENDATION:

STAFF RECOMMENDATION: Approval of the Final Plat and Final Plan for Filing 2 of the Cottages at Wellington subject to the following conditions:

1. The private path be paved with ~~asphalt or~~ concrete.
2. The notes for building envelopes be ~~changed as recommended in the staff report.~~ Worked out between staff & developer

SUGGESTED PLANNING COMMISSION MOTION:

Mr. Chairman, on item FPP-96-201, the Final Plat and Final Plan for Filing 2 of the Cottages at Wellington, I move that we approve the proposal subject to staff recommendations.

Staff Analysis:

Project Background/Summary. The Preliminary Plan for the Cottages at Wellington was approved by Planning Commission in December 1994 for a total of 33 attached single family units. Filing 1 was approved in late 1995 with a total of 12 units, some of which were detached units. The current Filing 2 proposes 13 detached single family units. Thus, the density of the project has been lowered by 8 units to an overall project density of 5.2 units per acre.

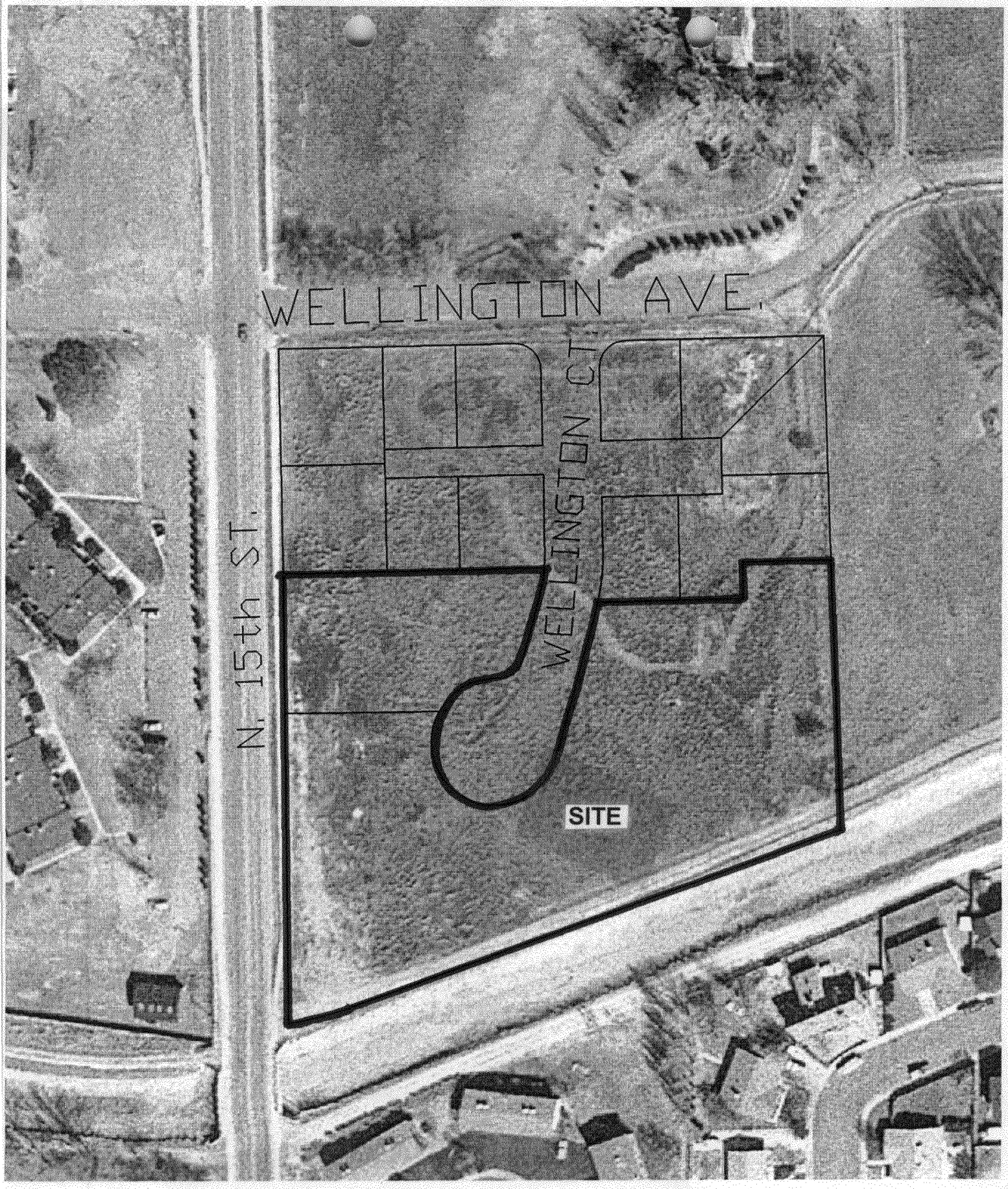
Access/Circulation. The developer has completed a single public cul-de-sac into the property from Wellington Avenue with Filing 1. All of the existing lots in Phase 1 and those proposed in Phase 2 access this cul-de-sac (Wellington Court). Six of the proposed lots (8 through 13) will directly access a common private drive. Use of the private drives was approved with the Preliminary Plan provided it met certain design criteria. Lots 2 and 3 are proposed to have a common driveway off of Wellington Court. Three additional off-street parking spaces are provided in the private street area which was also required as part of the private drive design criteria.

Drainage/Utilities. All on-site drainage for the entire project is being directed towards a detention basin in the southwest corner of the site which is shown as Tract B on the Final Plat. The tract will be dedicated to the homeowners' association for maintenance responsibilities. Water from the basin is released at a historic rate into the Grand Valley Canal. A Discharge Agreement with the Grand Valley Irrigation Company for the entire project was previously recorded with Filing 1.

Concurrent with the Final Plat and Final Plan request, the developer is requesting that a portion of the existing irrigation and drainage easement along the eastern boundary of the site be extinguished upon recording the Final Plat. This easement was platted with Filing1 and is used for the irrigation system for the subdivision. The developer finds that the easement width is greater than necessary for this use and extinguishment of a portion allows more buildable area for the lots along that side of the property. The developer is proposing to submit an application to vacate a similar portion of the remainder of the easement in Filing 1. This is acceptable to staff.

Building Envelopes. The developer is proposing front yard setbacks of 14 feet for the homes, but with a minimum 20-foot setback for the garage to provide a car length for parking on the driveway. The side and rear yards vary by lot--either 5 feet or 3 feet for side yards and 5 feet to 15 feet for rear yards. These are acceptable to staff, however, the developer has also defined setbacks for other architectural features such as covered/uncovered decks or porches. The notes on the proposed Site Plan state:

1. Uncovered decks or porches may extend to the property line.
2. Covered porches may extend no more than 3 feet from the property line.
3. Covered porches may not extend into any easement except the irrigation easement along the east boundary.



FPP-96-201 THE COTTAGES AT WELLINGTON FILING 2
SE CORNER 15TH STREET AND WELLINGTON AVENUE
PETITIONER: CHAPARRAL WEST, INC

N

COMMENTS ON RESPONSE TO COMMENTS 11/18/96

FINAL PLAT

1. Revise plat to show proposed vacation of portion of easement along eastern boundary.

2. For clarity, label pedestrian easement within Tract B.

3. Revise building setback table per comments under Site Plan below.

SITE PLAN

1. Need to show the 14-foot front yard setback for lots 8 thru 13 (setback from Tract A).

2. Lot 1 - dimension the setback from ingress-egress easement.

3. Lot 13 - footprint still appears to possibly encroach in the setback on the right side. Suggest 3-foot setback on this side instead of 5?

4. Setback Table - Clarify/correct the following on both Site Plan and Final Plat:

   Lot 4 - 5 feet left side listed, 3 feet shown on plan
   Lot 5 - Right side has both 3- & 5- foot setbacks
   Lot 10 - 5 feet left side listed, 3 feet shown on plan
   Lots 6 thru 10 - rear yard setback from inside edge of Tract C, not perimeter of parcel, therefore, can't have 25-foot setback
   Lot 13 - possibly revise setback per #3 above
   Lot 12 - 15 feet on rear to east as listed, but rear yard to north is shown on plan as 5 feet

5. Note 6

   Staff does not support statement "uncovered decks or porches may extend to the property line" because of the likelihood these may be enclosed in the future. Prefer these also only extend no closer than 3 feet to property line.

   Replace 3rd statement with "No structure, including covered and uncovered porches, may extend into any easement".

   Delete 4th statement due to vacation of a portion of the easement.

6. Staff will be recommending that the path connecting the cul-de-sac and the canal still be paved (narrow width okay).

LATE COMMENTS

TCI CABLEVISION **9/16/96**
Glen Vancil **245-8777**

1. We require the developers to provide, at no charge to TCI Cablevision, an open trench for cable service where underground service is needed and when a roadbore is required, that too must be provided by the developer. The trench and/or roadbore may be the same one used by other utilities so long as there is enough room to accommodate all necessary lines.
2. We require developers to provide, at no charge to TCI Cablevision, fill-in of the trench once cable has been installed in the trench.
3. We require developers to provide, at no charge to TCI Cablevision, a 4" PVC conduit at all utility road crossings where cable TV will be installed. This 4" conduit will be for the sole use of cable TV.
4. Should your subdivision contain cul-de-sac's the driveways and property lines (pins) must be clearly marked prior to the installation of underground cable. If this is not done, any need to relocate pedestals or lines will be billed directly back to your company.
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6. TCI will normally not activate cable service in a new subdivision until it is approximately 30% developed. Should you wish cable TV service to be available for the first home in your subdivision it will, in most cases, be necessary to have you provide a construction assist payment to cover the necessary electronics for that subdivision.

CITY PARKS & RECREATION **9/16/96**
Shawn Cooper **244-3869**

1. Require trail easement along canal.
2. Parks & Open Space Fee - 13 lots x $225 = $2,925.

COMMENTS ON RE-SUBMITTAL

CITY COMMUNITY DEVELOPMENT **9/16/96**
Kristen Ashbeck **244-1437**

GENERAL

1. IN ADDITION TO THE COPIES REQUESTED ABOVE, provide 9 copies of an 11"x17" reduction of the Site Plan, Final Plat, Composite Plan and Landscape Plans and 9 copies of the revised narrative (re: setbacks).

FINAL PLAT

1. The easement between Lots 3 & 4 was included in Filing 1 as a 15-foot easement--shown on filing 2 as only a 10-foot easement. Unless other documentation is provided, this may only be changed with a vacation process. If a vacation is requested, provide a legal description for the portion(s) to be vacated.
2. The 25-foot easement along the canal must be a separate tract. Refer to attached suggested dedication language.

3. The pedestrian easement between the end of the cul-de-sac and the canal must also be dedicated as a separate tract.
4. Need a dedication statement for the common access easement for Lots 2 & 3.
5. Table of Setbacks:

   Prefer that the side yard setbacks be 5' as indicated on the plat rather than the 10-foot separation stated in the narrative. Which is being requested?

   The narrative suggests a 10-foot rear yard setback for interior lots but the plat shows 5-foot setbacks. Which is correct?

   Add a note regarding garage setback, minimum 20 feet at shortest measurement from property line at private drive and from public street.

COMPOSITE PLAN

1. Show lot lines for Lots 5 & 6.

SITE PLAN

1. Include a table of setbacks as on the Final Plat.
2. Revise Note 5 to clarify: Driveways shall be no less than 20 feet long at the shortest point measured from the property line at private drive or from public street.
3. Footprints shown on Lots 2, 3 and 13 clearly encroach in the setback. Need to revise.
4. Add a note regarding addition of decks, patios, etc. For guidance City/Building Dept. does not allow any encroachment into any setback. The Zoning and Development Code states: "Porches, Patios or decks which are open and uncovered may extend into any required SETBACK area not more than six feet but in no case closer than three feet to any property line." If something encroaches, it may never be covered/enclosed.
5. Shown any fencing that may be proposed, such as split rail fencing in Filing 1.

ROAD PLANS AND PROFILES

1. Cross-section of private drive should not be labeled right-of-way. "Width" or "Easement". This should be revised on several of the drawing sheets.

LANDSCAPE PLANS

1. Use correct site plan for landscape plans--there are no attached units proposed, yet landscape plan shows all attached units.

DEVELOPMENT IMPROVEMENTS AGREEMENT (DIA)

1. Do the lump sums included in DIA include all of the landscaping shown on the plan including that in the pond (unless it is existing)?
2. Need to submit a revised DIA that includes construction of the path between the cul-de-sac and canal.

CITY ATTORNEY **10/10/96**
Dan Wilson **244-1505**

1. Southern easements should be labeled, as should the plat dedication so that bicycling and other non-motorized uses are clearly allowed, along with City vehicular for maintenance and emergency purposes.
2. Plat suggests Grand Valley has the fee south of the south property line. Is this true?
3. Tract A - who owns and maintains? homeowners? viable association?
4. Tract B - dedication to a viable homeowner's association, with ability to lien and maintain.
5. Multi-purpose easements - need to clearly dedicate to the City and public for access as well.
6. Who are the "beneficiaries", referred to on plat (owners? others?)?
7. I need to see title work, association covenants and evidence that this phase will be incorporated as well.

CITY POLICE DEPARTMENT **10/7/96**
Lisa Dicamillo **244-3587**

There needs to be some type of lighting on the common private drive where the extra parking spaces are located.

GRAND VALLEY IRRIGATION **10/7/96**
Phil Bertrand **242-2762**

September 1996:
See previous review comments.

October 16, 1996:
NO Pedestrian use of canal right-of-way or easement!

GRAND JUNCTION DRAINAGE DISTRICT **10/7/96**
John Ballagh **242-4343**

1. The site is outside the boundaries of the drainage district. No facilities are proposed to become drainage district facilities in this subdivision.
2. The nearest GJDD system is the Logan Drain a system that is at capacity! This development should not expect to drain into the Logan Drain.

U S WEST **10/8/96**
Max Ward **244-4721**

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

CITY PARKS & RECREATION **10/7/96**
Shawn Cooper **244-3869**

Parks & Open Space fees - 13 units @ $225 = $2,925.00.

CITY PROPERTY AGENT **10/14/96**
Steve Pace **256-4003**

1. Address the ingress / egress easement for Lot 2 & 3 in the dedication.
2. Address water and utility easements in the dedication.
3. It appears that the existing sewer easement crossing portions of Lots 5 & 6 also extend into the building envelope for those lots.

CITY UTILITY ENGINEER **10/16/96**
Trent Prall **244-1590**

1. Please clearly differentiate work which was completed under Filing 1 and proposed work under Filing
2. Improvements agreement not submitted for review.
3. Please resubmit with a COMPLETE set of plans ensuring that the following notes are on the plans:

SEWER:

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.
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 of acceptance of the sewer line extension.
H. The Contractor shall obtain City of Grand Junction Street Cut Permit for all work within existing City 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_____.

WATER:

Contractor is responsible for installing water meter pits and yokes. City of Grand Junction will supply the pits and yokes. Water services will be extended to the multipurpose easement line, and marked with a metal or wood post painted blue. Meter pits to be located 2 feet back of curb.

CITY DEVELOPMENT ENGINEER **10/15/96**
Jody Kliska **244-1591**

1. The improvements agreement needs to include more money for City Inspection fees. Filing 1 fees were just over $500.
2. Is the pedestrian path construction included in the improvements agreement?
3. Do you have an agreement with Grand Valley Canal for stormwater discharge?

FP-96-201

To: Trenton Prall
From: Mic Cochran
Subject: Wellington Gardens Phase 2
Date: 1/6/97 Time: 1:55PM

Wellington Gardens Phase 2 new sewer line was lamped today and found acceptable with A full moon.

The sewer line was also pressure tested at 4 psi and was acceptable with no air lose.

Mick Cochran

JANUARY 7,1997

STANLEY CONSTRUCTION
196½ GLORY VIEW DRIVE
GRAND JUNCTION CO 81503
241-7304 or 260-5378

"INVOICE"

WELLINGTON PARTNERS,LLC
P.O.BOX 1765
GRAND JUNCTION CO 81502

CONTRACT AMOUNT		$20,385.98
CHANGE ORDER #1.		[$ 2,491.70]
CHANGE ORDER #2.		$ 1,572.59
CHANGE ORDER #3.		$ 1,977.20
CHANGE ORDER #4.		$ 966.63
	TOTAL DUE	$22,410.70

RESPECTFULLY SUBMITTED,

KERRY STANLEY

APPROVED

City of Grand Junction

Community Development Department
Planning • Zoning • Code Enforcement
250 North 5th Street
Grand Junction, CO 81501-2668

Phone: (970) 244-1430
FAX: (970) 244-1599

Ron Abeloe
Wellington Partners LLC
PO Box 1765
Grand Junction, Colorado 81502-1765

February 19, 1997

RE: MC 96-201 - The Cottages at Wellington Filing 2 - Amendment to Setbacks

Dear Ron,

By this letter, the City of Grand Junction Community Development Department is approving a minor change to the Final Plat and Plan for the Cottages at Wellington Filing 2. This change redefines the rear yard setback for Lots 11 and 12 and the easterly rear yard setback for Lot 10 as 10 feet. The change also amends the notes on the recorded Site Plan to allow for construction of a covered porch, patio or deck to within 5 feet of the property line along the rear yards of Lots 10, 11 and 12. However, such patios, porches and decks may only be enclosed to the extent allowed by the 10-foot setback as defined above. Covered portions extending between 10 and 5 feet of the property line will not be allowed to be enclosed.

Please do not hesitate to contact me if you have questions regarding the approval of this minor change to the Cottages at Wellington Filing 2 Final Plat and Plan.

Sincerely,

Kristen

Kristen Ashbeck
Planner

FPP-1996-201

Post-it® Fax Note 7671 | Date | # of pages ▶
To Jodi Elliott | From Ron Abeloe
Co./Dept. | Co.
Phone # | Phone # 434-2160
Fax # 244 1599 | Fax # 523-0706

rg consulting

March 17, 1997

Ron Abeloe
Chaparral West
P.O. Box 1765
Grand Junction, CO 81502

RECEIVED
MAR 17 1997

RE: The Cottages at Wellington-Filing 2
RGCE Job No 189001

Dear Ron:

At your request we have investigated the use of a curb opening in place of a grated curb inlet at the southern end of Wellington Court, in The Cottages at Wellington-Filing 2.

The Final Drainage Report by Nichols Associates, Inc., dated May 24, 1995 specifies using a storm drain inlet grate, draining into a 12 inch ADS, to convey the 2 year storm of 2.65 cfs, and a 7.5' drainage swale at the surface to pass the 100 year storm of 7.90 cfs. (The 100 year event will overtop into the swale). Each flow into a detention pond at the southwest corner of the property.

To satisfy the 2 year flows provided in the drainage report, a 4 ft. wide curb opening is needed. In order to convey the 100 year storm event, a 6 ft. wide concrete V-pan 0.6 ft. deep, or rectangular concrete channel, six inches deep, with a 4 ft. bottom width is required.

Please call if you have any questions.

Sincerely,

RG CONSULTING ENGINEERS, INC.

Stuart J. Gardner, P.E.
Civil Engineer

1018 colorado avenue • grand junction, colorado 81501
(970) 242-7540 • fax (970) 241-7025

Q.E.D.
SURVEYING SYSTEMS, INC.
1018 Colorado Ave., Grand Junction, CO 81501
(970) 241-2370 (970) 464-7568

April 12, 1999

Kerrie Ashbeck
Development Engineer
City of Grand Junction
250 N. 5th Street
Grand Junction, CO 81501

Re: Drainage for "The Cottages at Wellington"

The plans for "The Cottages at Wellington" call for the drainage from Wellington Avenue fronting the site to drain to Wellington Court and south on Wellington Court to the detention pond. Wellington Court also picks up the drainage from the lots and delivers it to the detention pond. This has been accomplished.

The plans called for a storm drain inlet with curb opening to collect the storm water from Wellington Court and deliver it in a 12" ADS to the detention pond. This was not done. A side walk drain was installed in Wellington Court and the storm water delivered to the detention pond in a 7.5 foot wide concrete pan.

Page 4 of the Final Drainage Report States the inside dimensions of the discharge box is to be 36 inches by 36 inches and be 20.4 inches high. The outlet box shown on the plans show 36 inches by 36 inches inside measure but 20.5 inches outside measure. The design elevations show the top of the box to be 59.70 with the centroid of the 5"x 5" 2 year orifice to be 58.20. Correcting for the centroid elevation, the inside height of the designed box is 1.71 feet, which is equal to 20.5 inches. The asbuilts elevations show the top of the box to be 60.06 and the centroid of 5 inch by 5 inch 2 year opening to be 59.02. This amounts to an inside height of 1.25 feet or 15 inches.

The plans call for the outlet box to be 15" ADS storm pipe. It is 15" PVC pipe.

The Drainage Report on page 7 shows the proposed outlet discharge to be 3.0 cubic feet per second to the Grand Valley Canal. Using the orifice formula results in 4.0 CFS being released to the Grand Valley Canal.

The Final Drainage Report in the last sentence on page 4 states the detention pond is to have 6,000 cubic feet of storage volume. The volume based on elevation 60.00, which is the elevation water will flow from the pond, is 1,355 cubic feet.

Leslie G. Wood
Professional Engineer

June 30, 1999

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

Ron Abeloe
Chapparal West
P.O. Box 1765
Grand Junction, CO 81502

RE: Cottages at Wellington Filings 1and 2

Dear Mr. Abeloe:

A final inspection of the streets, utilities and drainage facilities in the Cottages at Wellington was conducted on October 15 , 1996. A follow-up inspection was conducted last Fall. As a result of these final inspections, a list of items remaining to be completed was given to you and a financial guarantee for their completion was posted with the City. These items were since re-inspected and found to be satisfactorily completed.

"As Built" record drawings, detention pond certification, and required test results for the utilities and public streets were received from QED Surveying and Engineering. These documents have been reviewed and found to be acceptable.

In light of the above, the public street and utility improvements within the public right-of-way are eligible to be accepted for future maintenance by the City of Grand Junction one year after the date of substantial completion. The date of substantial completion is April 5, 1999.

Your warranty obligation for all materials and workmanship for a period of one year beginning with the date of substantial completion will expire upon acceptance by the City.

If you are required to replace or correct any defects which are apparent during the period of the warranty, a new acceptance date and extended warranty period will be established by the City.

Thank you for your cooperation in the completion of the work on this project.

Sincerely,

Kerrie Ashbeck, P.E.
City Development Engineer

Sincerely,

Trent Prall, P.E.
City Utility Engineer

cc: Don Newton
Doug Cline
Walt Hoyt
Jerry-OBrien
Community Development File #FPP-1996-201

July 2, 1997

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

Mr. Ron Abeloe
Chaparral West , Inc.
626 32 Road
Clifton, CO 81520

Re: Cottages at Wellington

Dear Mr. Abeloe:

I visited filing 2 of the Cottages at Wellington recently and observed the site has been filled on the east side to create the building pads. The approved plans show the grading for the site with what appears to be a swale along the eastern boundary to transport runoff to the existing pipe into the canal. The site and landscaping work in progress appear to have buried the pipe and eliminated any way for drainage along the eastern boundary to get to the pipe. It appears runoff from this portion of the development will discharge onto the adjacent property.

Please provide this office with a response on how the runoff will be accommodated without imposing on the adjacent property.

Sincerely,

Jody Kliska
Development Engineer

cc: Kristen Ashbeck, Community Development

Chaparral West Inc.
Managing Partner, Wellington Partner L.L.C.
P.O. Box 1765
Grand Junction, Co. 81502

September 2, 1996

Mr. Michael Drollinger
City of Grand Junction
Community Development Department

Subject: General Project Report
The Cottages at Wellington
Filings II & III

Dear Mr. Drollinger:

The submittal is for final approval of our plat for Filings II & III of our previously approved preliminary plan.

Our preliminary plan was approved December 13, 1994 our approval was for 34 units on approximately 4.8 acres in the PR8 Zone. This site is located on the southeast corner of 15th and Wellington in Grand Junction. Our original approval for 34 units allowed for a density of approximately seven units per acre. We have chosen to reduce the density to a total 25 units, most of them being detached, single family residences with two-car garages. Filings II & III will consist of 13 total units. The units will be single story and should not exceed 20 feet in total height. The units will range from 1100 sq. ft. to 1400 sq. ft. and will be two and three bedrooms, typical of what is currently completed and under construction at this time.

The landscaping in the entire project will be maintained by the Home Owner's Association including any detention area or open space area.

The access to the project will be from an extension of Wellington Court which is partially built at this time.

In Filings II & III there will be one private drive that will serve a maximum of six units. The remaining units will take access off of Wellington Court via individual driveways with the exception of one other area where there is a very short common driveway leading to two individual driveways. The private or common driveways will be built a minimum of 20 ft wide. The drainage will go into an existing detention area that was constructed with Filing I.

The set backs we are requesting are similar to those in Filing I. From Wellington Court to side

yards we would request the set backs to be 14 ft. From Wellington Court to the front of any garage we would require a minimum of 20 ft for adequate two-car parking when access is taken off of Wellington Court. From Wellington Court to the front of any unit we would request a minimum of 14 ft again with the minimum to the front of the garage being 20 ft. From 15th Street to the rear or the side of any unit a minimum of 20 ft. We request a minimum of 10 ft rear yard set back. A minimum of 10 ft between units unless the units are built to meet the fire code for connected units then there would be no minimum. Since some of our units have been proposed to be connected at the garages. We would request a 20 ft minimum from the edge of the asphalt to the front of the garage on the units that will take access from the private drive therefore giving them a minimum of two-car parking in front of the garage with a 5 ft minimum from the edge of pavement on the private drive to any portion of the building. These set backs are very close to what is currently being built at Wellington. These set backs give us the flexibility for locating the units in a variety of positions within the project.

Most of the utilities have been installed for this project with services and some extensions needing to be completed for Filings II & III from the utilities that were installed for Filing I. The private drive in Filings II & III would be posted as per the requirements for the private drives in Filing I. The private drives as well as all landscaped and open space areas will be maintained by the Home Owner's Association.

Thank you for your time and look forward to your comments into our public hearing. If you have any questions, please feel free to contact me at 434-2160.

Sincerely,

Ronald A. Abeloe
President, Chaparral West Inc.

RAA/law
well-02.wpd

ANNA M FORNEY
1631 WELLINGTON AVE
GRAND JUNCTION, CO 81501-8234

JAMES W MURRIE
1434 WELLINGTON AVE
GRAND JUNCTION, CO 81501-8231

STEVE STAR
2245 A N 15TH ST
GRAND JUNCTION, CO 81501-5372

HILLTOP SPECIAL SERVICES DIVISION INC
1100 PATTERSON RD
GRAND JUNCTION, CO 81506-8219

HILLTOP SPECIAL SERVICES DIV INC
2503 FORESIGHT CIR
GRAND JUNCTION, CO 81505-1007

JOHN K MALAN
1531 LOWELL LN
GRAND JUNCTION, CO 81506

ROGER MALAN
1529 BOOKCLIFF CT APT C
GRAND JUNCTION, CO 81501-4279

ROGER C MALAN
1529 BOOKCLIFF CT #C
GRAND JUNCTION, CO 81501

NEIL H TRIPP
2241 N 17TH CIR
GRAND JUNCTION, CO 81501-4229

JAMES ROBERT HOWARD
724 FULTON ST
AURORA, CO 80010-3914

LOIS K PRICHARD
2301 N 17TH CIR
GRAND JUNCTION, CO 81501-4230

ST LOUIS FAMILY LTD PARTNERSHIP
2311 N 17TH CIR
GRAND JUNCTION, CO 81501-4230

MELECIO E MARTINEZ
2321 N 17TH CIR
GRAND JUNCTION, CO 81501-4230

LUCY M COSSLETT
2235 N 15TH ST APT A
GRAND JUNCTION, CO 81501-4281

JOHN H MCARTHUR
PO BOX 1419
GRAND JUNCTION, CO 81502-1419

ROLLO B HALL
2235 N 15TH ST APT C
GRAND JUNCTION, CO 81501-4281

HAZEL M WILLIS
2235 N 15TH ST APT D
GRAND JUNCTION, CO 81501-4281

RICHARD E FULTON
1556 WELLINGTON AVE
GRAND JUNCTION, CO 81501-8233

RICHARD E FULTON
1556 WELLINGTON AVE
GRAND JUNCTION, CO 81501-8233

SALVADOR V SALAS
1442 WELLINGTON AVE
GRAND JUNCTION, CO 81501

FRANK M STEVENSON
1447 KENNEDY AVE
GRAND JUNCTION, CO 81501

MICHAEL R GALLEGOS
2515 N 15TH ST
GRAND JUNCTION, CO 81501

TRENTON S WEISZBROD
2525 N 15TH ST
GRAND JUNCTION, CO 81501

WELLINGTON PARTNERS LLC
626 32 RD
CLIFTON, CO 81520

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626 32 RD
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626 32 RD
CLIFTON, CO 81520

Terry Nichols
Nichols Associates
751 Horizon Ct.
Grand Junction, CO 81506

Ron Abeloe
Wellington Partners LLC
P.O. Box 1765
Grand Junction, CO 81502

City of Grand Junction
Community Development Dept.
250 N 5th St.
Grand Junction, CO 81501

Chaparral West Inc.
Managing Partner, Wellington Partner L.L.C.
P.O. Box 1765
Grand Junction, Co. 81502

October 1, 1996

Mr. Michael Drollinger
City of Grand Junction
Community Development Department

Subject: General Project Report
The Cottages at Wellington
Filing II

Dear Mr. Drollinger:

The submittal is for final approval of our plat for Filing II of our previously approved preliminary plan.

Our preliminary plan was approved December 13, 1994 our approval was for 34 units on approximately 4.8 acres in the PR8 Zone. This site is located on the southeast corner of 15th and Wellington in Grand Junction. Our original approval for 34 units allowed for a density of approximately seven units per acre. We have chosen to reduce the density to a total 25 units, most of them being detached, single family residences with two-car garages. Filing II will consist of 13 total units. The units will be single story and should not exceed 20 feet in total height. The units will range from 1100 sq. ft. to 1400 sq. ft. and will be two and three bedrooms, typical of what is currently completed and under construction at this time.

The landscaping in the entire project will be maintained by the Home Owner's Association including any detention area or open space area.

The access to the project will be from an extension of Wellington Court which is partially built at this time.

In Filing II there will be one private drive that will serve a maximum of six units. The remaining units will take access off of Wellington Court via individual driveways with the exception of one other area where there is a very short common driveway leading to two individual driveways. The private or common driveways will be built a minimum of 20 ft wide. The drainage will go into an existing detention area that was constructed with Filing I.

The set backs we are requesting are similar to those in Filing I. From Wellington Court to side

yards we would request the set backs to be 14 ft. From Wellington Court to the front of any garage we would require a minimum of 20 ft for adequate two-car parking when access is taken off of Wellington Court. From Wellington Court to the front of any unit we would request a minimum of 14 ft again with the minimum to the front of the garage being 20 ft. From 15th Street to the rear or the side of any unit a minimum of 20 ft. We request a minimum of 10 ft rear yard set back. A minimum of 10 ft between units unless the units are built to meet the fire code for connected units then there would be no minimum. Since some of our units have been proposed to be connected at the garages. We would request a 20 ft minimum from the edge of the asphalt to the front of the garage on the units that will take access from the private drive therefore giving them a minimum of two-car parking in front of the garage with a 5 ft minimum from the edge of pavement on the private drive to any portion of the building. These set backs are very close to what is currently being built at Wellington. These set backs give us the flexibility for locating the units in a variety of positions within the project.

Most of the utilities have been installed for this project with services and some extensions needing to be completed for Filing II from the utilities that were installed for Filing I. The private drive in Filing II would be posted as per the requirements for the private drives in Filing I. The private drives as well as all landscaped and open space areas will be maintained by the Home Owner's Association.

Thank you for your time and look forward to your comments into our public hearing. If you have any questions, please feel free to contact me at 434-2160.

Sincerely,

Ronald A. Abeloe
President, Chaparral West Inc.

RAA/law
07-well.wpd

Chaparral West Inc.
Managing Partner, Wellington Partner L.L.C.
P.O. Box 1765
Grand Junction, Co. 81502

October 25, 1996

Mr. Michael Drollinger
City of Grand Junction
Community Development Department

Subject: General Project Report
The Cottages at Wellington
Filings II & III

Dear Mr. Drollinger:

The submittal is for final approval of our plat for Filings II & III of our previously approved preliminary plan.

Our preliminary plan was approved December 13, 1994 our approval was for 34 units on approximately 4.8 acres in the PR8 Zone. This site is located on the southeast corner of 15th and Wellington in Grand Junction. Our original approval for 34 units allowed for a density of approximately seven units per acre. We have chosen to reduce the density to a total 25 units, most of them being detached, single family residences with two-car garages. Filings II & III will consist of 13 total units. The units will be single story and should not exceed 20 feet in total height. The units will range from 1100 sq. ft. to 1400 sq. ft. and will be two and three bedrooms, typical of what is currently completed and under construction at this time.

The landscaping in the entire project will be maintained by the Home Owner's Association including any detention area or open space area.

The access to the project will be from an extension of Wellington Court which is partially built at this time.

In Filings II & III there will be one private drive that will serve a maximum of six units. The remaining units will take access off of Wellington Court via individual driveways with the exception of one other area where there is a very short common driveway leading to two individual driveways. The private or common driveways will be built a minimum of 20 ft wide. The drainage will go into an existing detention area that was constructed with Filing I.

The set backs we are requesting are similar to those in Filing I. From Wellington Court to side

yards we would request the set backs to be 14 ft. From Wellington Court to the front of any garage we would require a minimum of 20 ft for adequate two-car parking when access is taken off of Wellington Court. From Wellington Court to the front of any unit we would request a minimum of 14 ft again with the minimum to the front of the garage being 20 ft. From 15th Street to the rear or the side of any unit a minimum of 20 ft. We request a minimum of 10 ft rear yard set back and request that we be able to designate any side other than the front of the building as a rear yard. Side yards set back would be as noted on the site plan. We would request a 20 ft minimum from the edge of the asphalt to the front of the garage on the units that will take access from the private drive therefore giving them a minimum of two-car parking in front of the garage with a 5 ft minimum from the edge of pavement on the private drive to any portion of the building. These set backs are very close to what is currently being built at Wellington. These set backs give us the flexibility for locating the units in a variety of positions within the project.

Most of the utilities have been installed for this project with services and some extensions needing to be completed for Filings II & III from the utilities that were installed for Filing I. The private drive in Filings II & III would be posted as per the requirements for the private drives in Filing I. The private drives as well as all landscaped and open space areas will be maintained by the Home Owner's Association.

Fencing other than what is along Wellington Avenue and along 15th Street will be installed at the buyers request and will match perimeter fences. Our original approval was for split rail fencing 36" high.

Thank you for your time and look forward to your comments into our public hearing. If you have any questions, please feel free to contact me at 434-2160.

Sincerely,

Ronald A. Abeloe
President, Chaparral West Inc.

RAA/law
14-well.wpd

Public Service

Public Service
Company of Colorado

P.O. Box 849
Grand Junction, CO 81502

October 30, 1996

Ron Abeloe
Chaparral West, Inc.
P.O. Box 1765
Grand Junction, CO 81502

Re: Relocation of proposed street light in cul-de-sac at Wellington Ct., Cottages At Wellington #2 (JOB/CREG No. 277-96)

Dear Ron:

As requested by the city and you, Public Service Company wi install the proposed street light on the east side of Wellington Court just north of the private drive entrance (southwest corner of lot 13).

The light's location will be adjusted as needed depending on where the fire hydrant is placed in the same general area.

Sincerely,

John Salazar
Planner

Chaparral West Inc.
Managing Partner, Wellington Partner L.L.C.
P.O. Box 1765
Grand Junction, Co. 81502

October 31, 1996

Ms. Kristen Ashbeck
City of Grand Junction
Community Development Department
250 North Fifth Street
Grand Junction, CO 81501-2668

RE: FPP-96-201 The Cottages at Wellington Filing 2

Dear Kristen:

Please find enclosed our response to your seven items listed as deficiencies to our application.

No 1 No pavement design was included.
Response: Please find attached another copy of the pavement design which was clearly stated on the plans and which was required for the entire project as a part of Filing I. Also, which the city has several copies already.

No. 2 No discharge agreement.
Response: Please find attached a copy of the discharge agreement which was required for the entire project which the city recorded as a part of Filing I which is a matter of public record also of which the city has several copies. Please find one additional copy.

No. 3 No response to erosion control at detention pond.
Response: Please find a copy of our plans with a note per a verbal discussion with Jody Klisca that buffalo grass will be planted in and on the slopes of the detention pond.

No. 4 No response to police department comment.
Response: Prior to our application, I had a discussion with the representative for the police department where she said to me that moving the street light to the other side of the road would be more than adequate. Please find a letter from Public Service stating that they are going to at my request relocate the street light to the east side of the cul-de-sac at Wellington Court.

No. 5 No profile view for proposed sewer line.
Response: This was never a prior comment in any of our other comment packages, although you have in your possession two copies of signed and stamped plans that do have

a profile. I personally delivered one copy to Trent Praull.

No. 6 Why did the width of the private drive change?

Response: Our conditions of approval require a minimum 20 foot private drive. We have revised the drawing to show 21 feet of width with 12 inch roll over curb on each side which gives 20 feet of driveable surface: 19 feet of asphalt and 12 inches of concrete gutter.

No. 7 Walking path on site plan is 4 foot width with no indication of material. Detail shows eight feet.

Response: There is a note on the plan that discusses the material to be used under the walk there is also a plan change now showing the section for the eight foot walk to be four foot. Our conditions do not require this path to be concrete and since it is a private walk we would like the option of using a natural material such as base or a decorative gravel or concrete at our discretion.

Also enclosed is a copy of recorded CC&R's as well as our state certificate for the H.O.A. as the city attorney requested. He also mentioned title work but did not indicate what he wanted the title work on. If he needs this, he must specify what parcel or parcels so that we can place an order for this.

Please make a complete review of all items submitted as soon as possible so we can address any additional comments.

It is obvious that none of these items would be a prerequisite to a planning commission hearing. It is clear to Wellington Partners that your intent was never to take this to the planning commission due to your inability to process our application in a timely fashion. There should be no further excuses or reasons for this item not to be put on the December agenda. If there is any additional information that is necessary for the recording of the plat immediately after the hearing or the posting of the improvements agreement or any other items necessary for us to immediately proceed with the recording of our plat, we would like to know it at an early a date as possible so we do not experience any more unnecessary delays due to the city's desire to always postpone for the slightest reasons rather than move forward.

Your cooperation in this matter would be much appreciated.

P.S. A copy of The Deed was Included For Don wilson at his request.

Sincerely,

Ronald A. Abeloe

Ronald A. Abeloe
Managing Partner, Wellington Partners, L.L.C.
President, Chaparral West, Inc.

RAA/law
C:\OFFICE\WPWIN\WPDOCS\LETTERLO\15-WELL.WPD

Wellington Partners, LLC
P.O. Box 1765
Grand Junction, CO 81502

December 17, 1996

City of Grand Junction
Community Development
Attention: Kristen Asbeck

Subject: Cottages at Wellington Filing II

Dear Kristen:

We are requesting that you credit the Wellington Avenue improvements against any traffic fees that would normally be assessed for the issuance of building permits. Please refer to our previously submitted and approved cost break down for costs associated with building our portion of Wellington Avenue. These costs were generated by our engineers Nichols and Associated and if you have any questions you could contact them at 245-7101.

Please contact me after you have reviewed this information at 434-2160.

Sincerely,

Ronald A. Abeloe
President, Chaparral West, Inc.
Managing Partner, Wellington Partners LLC

RAA/law

C:\OFFICE\WPWIN\WPDOCS\LETTERLO\22-WELL.WPD

TCP Credit calculation

Wellington Partners, LLC
P.O. Box 1765
Grand Junction, CO 81502

December 17, 1996

City of Grand Junction
Community Development
Attention: Kristen Asbeck

Subject: Cottages at Wellington Filing II

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Sincerely,

Ronald A. Abeloe
President, Chaparral West, Inc.
Managing Partner, Wellington Partners LLC

RAA/law

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UTILITY LINES — GRAVEL PRODUCTS — EXCAVATION

PARKERSON CONSTRUCTION, INC.

710 S. 15th Street
Grand Junction, Colorado 81501
242-8134

CHAPARRAL WEST INC.
626 - 32 ROAD
CLIFTON CO 81520

PROJECT:

PAGE: 2
INVOICE NUMBER: 0960593-IN
INVOICE DATE: 11/30/95
CUSTOMER NO: CHA WES
SHIP VIA:
SALES TAX CODE: CO MES
TERMS: NET 30
CUSTOMER P.O.:

DESCRIPTION	QUANTITY		PRICE	AMOUNT
STREET PHASE 1 / SIDE STREETS				
1. EXCAVATION (PHASE 1&2)	2100.000	C.Y.	2.000	4,200.00
2. SUBGRADE PREP	20590.000	SQFT	.090	1,853.10
3. CL-6 BASE 6" THICK	20590.000	SQFT	.350	7,206.50
4. HBP 3" THICK	19224.000	SQFT	.600	11,534.40
5. RAISE MANHOLES & VALVES TO GRADE	6.000	EACH	150.000	900.00
6. CONSTRUCT DETENTION POND	1.000	L.S.	1,850.000	1,850.00
7. 15" ADS CULVERT TO CANAL	.000	LF	.000	.00
8. TEMPORARY SWALE	290.000	LF	1.000	290.00
9. 2 STAGE OUTLET W/GRATE	.000	EACH	1,050.000	.00
10. COMPLIANCE TESTING	1.000	L.S.	850.000	850.00
11. INLET	.000	EACH	.000	.00
12. 12" ADS CULVERT TO POND	.000	LF	.000	.00
13. DENSITY TESTS ON SLEEVE				35.00
SUBTOTAL	28,719.00			

141-0160

NET INVOICE: 77,582.40
SALES TAX: .00
INVOICE TOTAL: 77,582.40

1½% per month (18% per annum) charged on all balances older than 30 days

Pd 12-8-95
Ck # 1009
9097.00

Alpine Concrete Construction

2934 VIEW DRIVE
GRAND JUNCTION, CO. 81504-5357

PHONE: (970) 241-7828
FAX: (970) 256-7573

DECEMBER 5, 1995

STATEMENT

CHAPARRAL WEST INC.
626 32 ROAD
CLIFTON, COLORADO 81520

PROJECT
15TH & WELLINGTON

RE: BILLING FOR JOB COMPLETE (15TH & WELLINGTON).

BREAKDOWN

1. VERTICAL CURB GUTTER & SIDEWALK (299 L.FT.)	$4'634.50
2. DRIVEOVER CURB GUTTER & SIDEWALK (356 L.FT.)	$5'162.00
3. HANDI-CAP RAMPS (2) (500 SQ.FT.)	$1'500.00
4. 2.0' VERTICAL CURB & GUTTER (NO SIDEWALK) 10 L.FT.	$ 75.00
TOTAL DUE THIS REQUEST * * * * * * * * * * * * * * * * *	$11'371.50

40% Early

RON
PLEASE FIND ENCLOSED THE INVOICES FOR MATERIALS (CONCRETE) THAT WAS USED ON THIS JOB TOTALING $6'021.17. I HAVE ALSO TALKED TO ALEN WITH PARKERSON CONSTRUCTION AND HE TOLD ME THAT WE WOULD BE BACKCHARGED FOR 86 SQ.FT OF ASPHALT AS A RESULT OF THE MISTAKE WE MADE ON THIS JOB.

Pay Jointly with Whitewater Building Materials
Pay 9,097.20
Pay 12/8/95
W-150 151

SINCERELY

RICHARD W. GIRTEN
ALPINE CONCRETE CONSTRUCTION BUSINESS MANAGER / PARTNER

Wellington Avenue Improvements Detail
DATE 13-Sep-95
NAME OF DEVELOPMENT: Wellington Gardens
LOCATION: Wellington Avenue East of 15th Street
PRINTED NAME OF PERSON PREPARING: Eric Marquez

		Units	Total Quantity	Unit Price	Total Amount
III	**STREETS**				
1	Sawcut and remove ashpalt and base material	C.Y.	70	$10	$700
2	Earthwork, including excavation and embankment construction	C.Y.	0	$2.00	$0
3	Utility relocations	Ea.	0	$0	$0
4	Aggregate sub-base course (cubic yard)	C.Y.	0	$6	$0
5	Aggregate base course (cubic yard)	C.Y.	90	$20	$1,800
6	Sub-grade stabilization	Ea.	1	$600	$600
7	Asphalt pavement	Ton	42	$35	$1,471
8	Curb, gutter & sidewalk (linear feet)	L.F.	312	$22	$6,864
9	Driveway sections (square yard)	S.Y.	0		$0
10	Crosspans and fillets	Ea.	0	$0	$0
11	Retaining walls/structures	Ea.	0		$0
12	Storm drainage system	L.S.	0	$0	$0
13	Signs and other traffic control devices	Ea.	0	$0	$0
14	Construction staking	L.S.	1	$1,000	$1,000
15	Dust control	L.S.	1	$250	$250
16	Street lights (each)	Ea.	0	$1,000	$0
	SUB TOTAL:				$12,685
V	**MISCELLANEOUS**				
1	Design/ Engineering	%		12.0%	$1,372
2	Surveying	%		8.0%	$915
3	Developer's inspection costs	%		2.0%	$228
4	Quality control testing	%		5.0%	$572
5	Construction traffic control				$500
6	Rights-of-way/Easements				$0
7	City inspection fees	%		1.3%	$150
8	Permit fees				
9	Recording costs				
10	Bonds				
11	Newsletters				
12	General Construction Supervision				
13	Other: As-built Drawings				$500
14	Other -Testing				$3,000
	TOTAL ESTIMATED COST OF IMPROVEMENTS:				$18,823

THE COTTAGES AT WELLINGTON FILING #2
TCP Credit Summary

Filing #1

6 detached sf units @ $500/unit = $3000
6 attached sf units @ $400/unit = $2400

TOTAL $5,400

Filing #2

13 detached sf units @ $500/unit = $6,500

~~Estimated C~~Credit for Wellington Avenue improvements: ~~$19,923~~ $13,916.91

NET TCP FOR FILING #2: ~~$0 per unit~~ $0

APPROVED:

Jody Kliska 12-23-96

Jody Kliska, City Development Engineer Date

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

****

Lot 1, Block 3 The Cottages at Wellington Filing I.

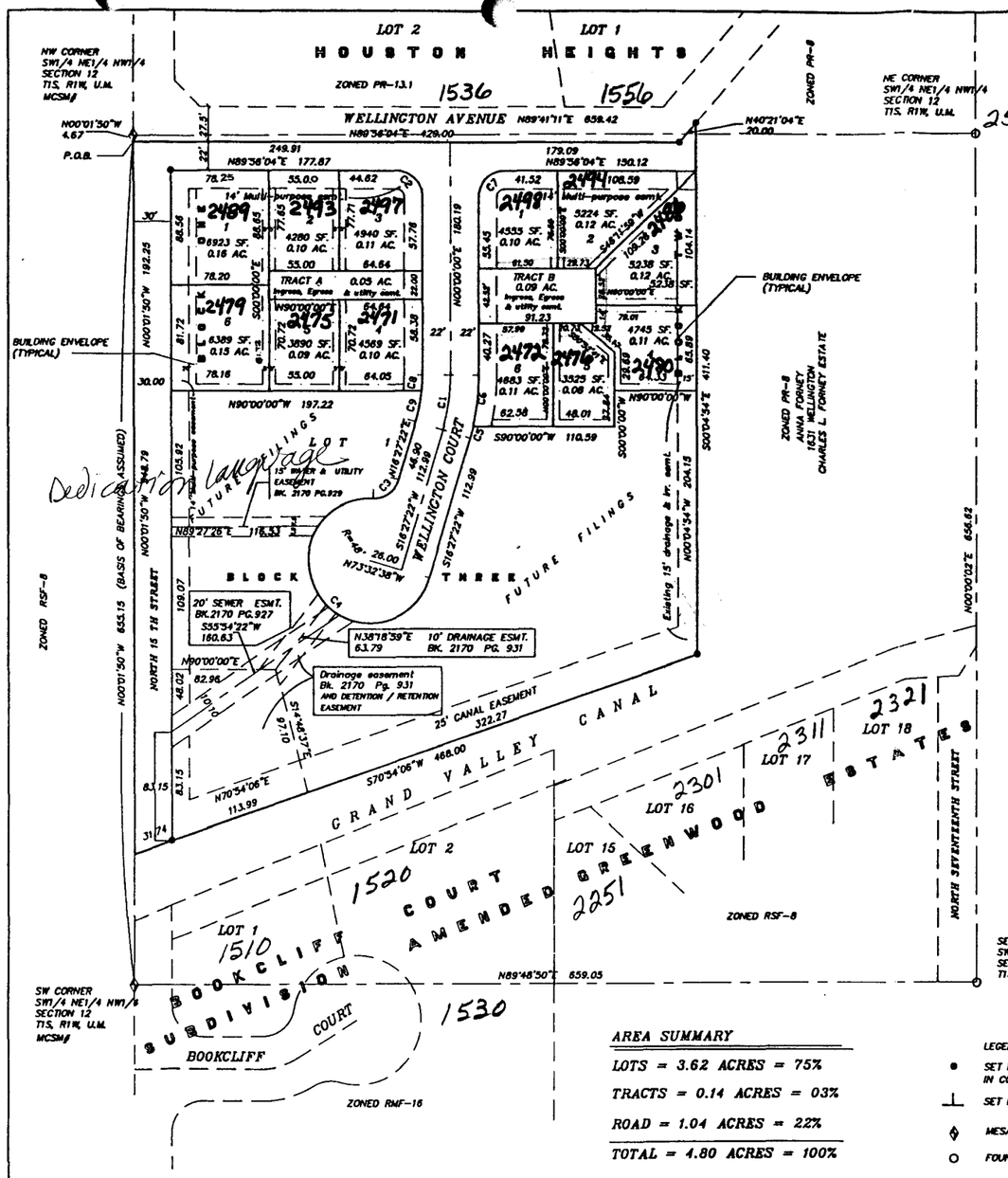
All Addresses off Wellington Court.

See Site Plan for Bldg. Envelopes

THE COTTAGES AT WELLINGTON FILING ONE

TCP $0.

FPP-95-104



CURVE TABLE

CURVE#	RADIUS	LENGTH	CHORD	CHORD BEARING	DELTA ANGLE	TANGENT
C1	150.00	43.08	42.93	S08°13'41"W	16°27'22"	21.69
C2	20.00	31.44	28.30	S45°01'58"E	90°03'56"	20.02
C3	20.00	26.67	24.73	S34°39'06"W	76°23'28"	15.74
C4	48.00	214.79	73.45	N35°28'54"W	256°23'28"	61.01
C5	172.00	9.59	9.59	S14°51'32"W	03°11'40"	4.80
C6	172.00	39.81	39.72	S06°37'51"W	13°15'42"	19.99
C7	20.00	31.39	28.27	N44°58'02"E	89°56'04"	19.98
C8	128.00	12.36	12.36	S02°45'59"W	05°31'57"	6.18
C9	128.00	24.48	24.37	S10°59'40"W	10°55'23"	12.24

NOTICE:

ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.

AREA SUMMARY

LOTS = 3.62 ACRES = 75%

TRACTS = 0.14 ACRES = 03%

ROAD = 1.04 ACRES = 22%

TOTAL = 4.80 ACRES = 100%

LEGEND & NOTES

- ● SET NO. 5 RE-BAR W/CAP L.S. 16413 IN CONCRETE
- ⊥ SET NO. 5 RE-BAR W/CAP L.S. 16413
- ◈ MESA COUNTY SURVEY MARKER
- ○ FOUND SURVEY MONUMENTS SET BY OTHERS

DEDICATION

KNOW ALL MEN BY THESE PRESENTS:

That the undersigned, Richard G. Kosier, Joan E. Kosier, Thomas L. Colt, and Pamela Colt, are the owners of that real property situated in the County of Mesa, State of Colorado, and is described in Book 2121 at Page 247 of the Mesa County Clerk and Recorders Office, and being situated in the SW1/4 NE1/4 NW1/4 Section 12, Township 1 South, Range 1 West of the Ute Meridian, Mesa County, Colorado as shown on the accompanying plat, said property being additionally described as follows:

A parcel of land situate in the NE1/4 NW1/4 of Section 12, T1S, R1W, Ute Meridian, being described as follows:

Beginning at a point which bears S00°01'50"E 4.67 feet from the NW Corner of the SW1/4 NE1/4 NW1/4 of said Section 12; and considering the West line of said SW1/4 NE1/4 NW1/4 of Section 12 to bear N00°01'50"W and all bearings contained herein to be relative thereto; thence N89°36'04"E 429.00 feet; thence N40°21'04"E 20.00 feet; thence S00°04'34"E 411.40 feet; thence S70°54'06"W 468.00 feet; thence N00°01'50"W 348.79 feet to the Point of Beginning.

That said owners have caused the said real property to be laid out and surveyed as THE COTTAGES AT WELLINGTON FILING ONE, a subdivision of a part of City of Grand Junction, County of Mesa, State of Colorado.

That said owners do hereby dedicate and set apart real property as shown and labeled on the accompanying plat as follows:

All streets and rights-of-way as shown on the accompanying plat to the City of Grand Junction, for the use of the public forever;

All Multi-purpose easements and Tracts A & B to the City of Grand Junction for the use of the public utilities as perpetual easements for the installation, operation, maintenance and repair of utilities and appurtenances thereto including, but not limited to electric lines, cable TV lines, natural gas pipelines, sanitary sewer lines, water lines, telephone lines, and also for the installation and maintenance of traffic control facilities, street lighting, and grade structures;

All Irrigation Easements to the Property owners of the lots and tracts hereby platted as perpetual easements for the installation, operation, maintenance and repair of private irrigation systems;

All Drainage Easements to the Property owners of lots and tracts hereby platted as perpetual easements for the conveyance of runoff water which originating within the area hereby platted or from upstream areas, through natural or man-made facilities above or below ground;

All Detention/Retention Easements to the Property owners of lots and tracts hereby platted to the purpose of conveying and detaining/retaining runoff water which originates from the area hereby platted, and also for the conveyance of runoff from upstream areas;

THE ADJOINING

Tracts A & B Utility Easements to the owners of lots or tracts specifically identified on the plat as perpetual easements for ingress and Egress purposes for the use by said lot or tract owners, their guests, and invitees, and also for use by public services, including but not limited to, postal service, trash collection, fire, police, emergency vehicles, and The City of Grand Junction.

All easements include the right of ingress and egress on, along, over, under, and through said areas by the beneficiaries, their successors, or assigns, together with the right to trim or remove interfering trees and brush, and in Drainage and Detention/Retention easements, the right to dredge; provided, however, that the beneficiaries of said easements shall utilize the same in a reasonable and prudent manner. Furthermore, the owners of lots or tracts hereby platted not burden non-overburden said easements by erecting or placing any improvements thereon which may prevent reasonable ingress and egress to and from the easement.

That all expenses for street paving or improvements shall be furnished by the seller or purchaser, not the City of Grand Junction.

IN WITNESS WHEREOF, said owners have caused their names to be hereunto subscribed this 26th day of September A.D., 1995.

Richard G. Kosier — Joan E. Kosier

Thomas L. Colt — Pamela Colt

STATE OF COLORADO } ss.
COUNTY OF MESA }

The foregoing instrument was acknowledged before me this 26th day of September, 1995 by Richard G. Kosier, Joan E. Kosier, Thomas L. Colt, and Pamela Colt.

My commission expires: 1-30-97

Witness my hand and official seal. Stacy Papas — Notary Public

Address 2317 H Rd.

NOTARY PUBLIC STACY PAPAS STATE OF COLORADO

CLERK AND RECORDERS CERTIFICATE

STATE OF COLORADO } ss.
COUNTY OF MESA }

I hereby certify that this instrument was filed in my office at 2:37 o'clock P.M. this 20th day of Nov. A.D. 1995 and is duly recorded in Plat Book No. 15 Page 485

CITY APPROVAL

This plat of THE COTTAGES AT WELLINGTON FILING ONE, a subdivision of the City of Grand Junction, County of Mesa, and State of Colorado was approved and accepted this day of A.D. 199

City Manager — President of Council

SURVEYOR'S CERTIFICATE

I, Max E. Morris, certify that the accompanying plat of THE COTTAGES AT WELLINGTON FILING ONE, a subdivision of a part of the City of Grand Junction, County of Mesa, State of Colorado has been prepared under my direct supervision and accurately represents a field survey of same. I further certify that this plat conforms to all applicable requirements of the Zoning and Development Code of the City of Grand Junction and all applicable state laws and regulations.

Max E. Morris, Q.E.D. Surveying Systems Inc.
Colorado Registered Professional Land Surveyor L.S. 16413

10/12/1995 Date

MAX EUGENE MORRIS 16413 10/12/95 LAND SURVEYOR STATE OF COLORADO

ENCUMBRANCER'S RATIFICATION AND APPROVAL

The undersigned financial institution holds a trust deeds of trust on the herein described real property, and hereby ratifies and approves this plat of THE COTTAGES AT WELLINGTON FILING ONE.

Norman L. Cooper Sr. V.P.
BY: Bob Johnson
By: Norman L. Cooper of The Bank of Grand Junction

STATE OF COLORADO } ss.
COUNTY OF MESA }

The foregoing Encumbrancer's Ratification and Approval was acknowledged before me this 26th day of September A.D. 1995, by Bob Johnson, Norman L. Cooper of The Bank of Grand Junction

My commission expires: 1-30-97

Witness my hand and official seal. Stacy Papas — Notary Public

Address Nebraska

NOTARY PUBLIC STACY PAPAS STATE OF COLORADO

THE COTTAGES AT WELLINGTON FILING ONE

FINAL PLAT

SITUATED IN THE NE1/4 NW1/4 SECTION 12, TOWNSHIP 1 SOUTH, RANGE 1 WEST, U.M.

FOR: COIT

SCALE: 1"IN = 50'FT

DATE: 9/23/95

Q.E.D. SURVEYING SYSTEMS Inc.
1016 COLO. AVE.
GRAND JUNCTION
COLORADO 81501
(303) 241-2370
464-7568

SURVEYED BY: SB MF

DRAWN BY: MEM

ACAD ID: WGFIN4

SHEET NO.

FILE: 94261

APPROVED FOR CONSTRUCTION

CITY OF GRAND JUNCTION DATE

INITIAL ACCEPTANCE

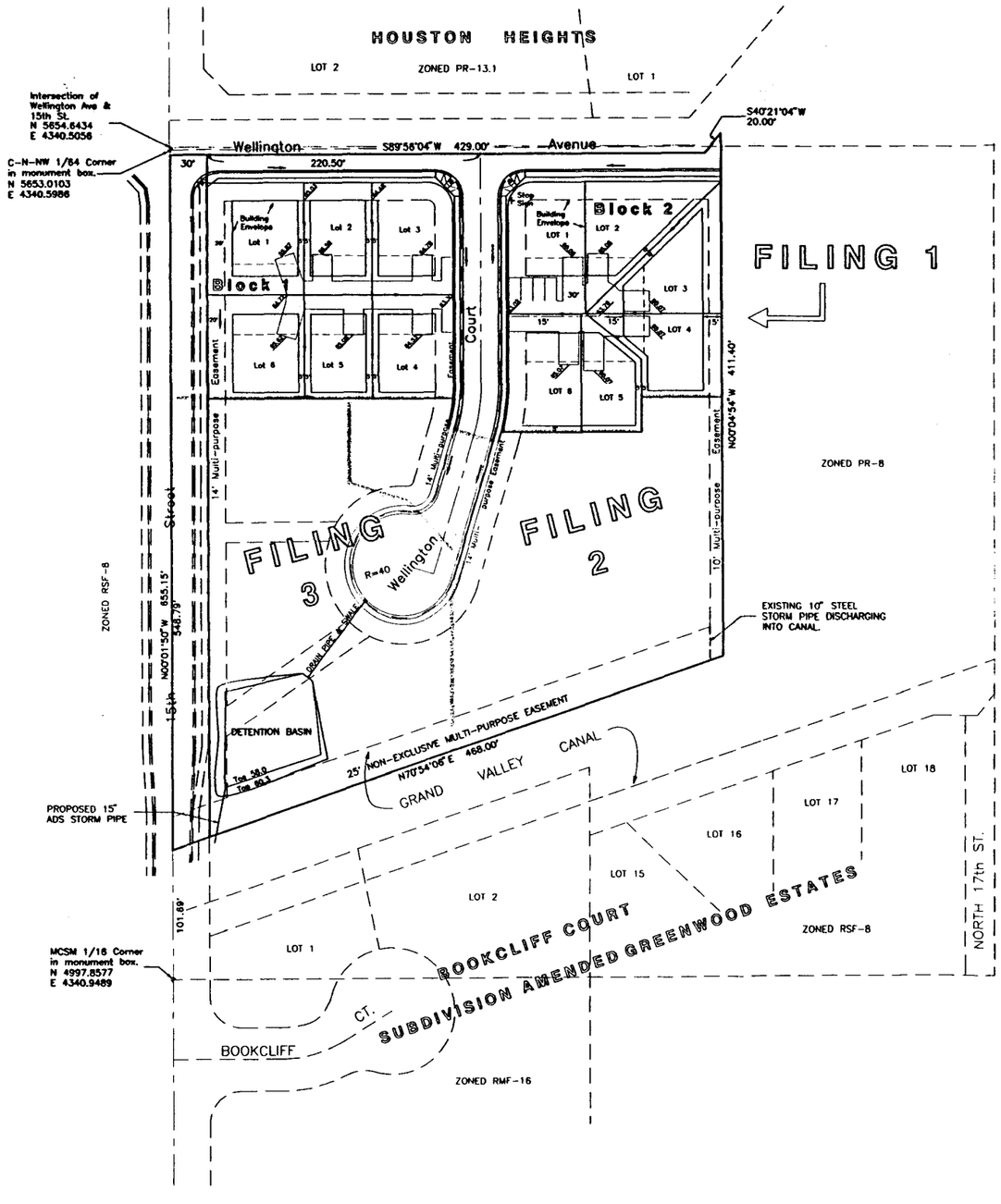
CITY OF GRAND JUNCTION DATE

WELLINGTON GARDENS

SITE PLAN

Located in Section 12, T1S, R1W, Ute PM

Grand Junction, Mesa County, Colorado



LEGEND

- PROPOSED STORM FLOW DIRECTION
- PROPOSED STORM DRAIN
- 4568 TYPICAL FINISH ELEVATION
- GARAGE SETBACK

SCALE

1 inch = 50 feet (1:600)

25 0 25 50 100 150 FEET

10 0 10 20 30 40 50 METERS

NOTES

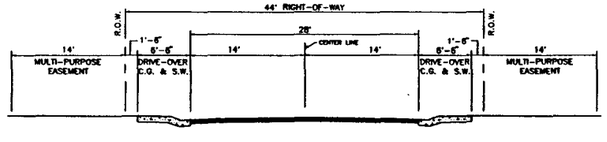
1. Project BENCHMARK is C-N-NW 1/64 Corner, Section 12, T1S, R1W, Ute Meridian. Elevation = 4664.64 feet.
2. Utility Providers:

WATER	CITY OF GRAND JUNCTION
SEWER	CITY OF GRAND JUNCTION
ELECTRIC	PUBLIC SERVICE
TELEPHONE	US WEST COMMUNICATIONS
GAS	PUBLIC SERVICE COMPANY

3. Area Summary:

	ACRES	%
LOTS:	1.2	24
STREETS:	1.45	30
OPEN SPACE:	2.22	46
TOTAL:	4.5	100

4. All materials and construction shall comply with city standards and specifications.
5. Drain slope away from buildings at 5% for 10 feet. In between buildings, construct swale with flowline midway, and 0.5 feet minimum below lowest finish floor. Flowline grade to be 1% minimum.
6. Detention basin will be constructed during Filing 1 construction.
7. Driveways shall be no less than 20 feet long measured from the edge of the private drives.



WELLINGTON COURT CROSS SECTION:

NOT TO SCALE

DESIGNED BY ECM

DRAWN BY ECM

SURVEY DATE

REVISIONS

NO.	DATE	REMARKS	BY
1	6-29-95	Resp. to Comments	ECM
2	8-7-95	Remove contours	ECM

WELLINGTON GARDENS
SITE PLAN

CIVIL ENGINEERING • PHOTOGRAMMETRY • SURVEYING
731 Horizon Court • Grand Junction, Colorado 81506 • Phone: 970-245-7101
NICHOLS ASSOCIATES, INC.

DATE DRAWN
May 31, 1995

SCALE
1 inch = 50 feet

PROJECT NUMBER
3220

SHEET NUMBER
4 OF 9

	AUSTRIAN PINE 5' (PINUS NIGRA)	AP	10
	AUTUMN PURPLE ASH 1½" (FRAXINUS AMERICANA 'AUTUMN PURPLE')	APA	10
	BLUE MIST SPIREA 5 GAL. (CARYOPTERIS X CLANDONENSIS)	BMS	4
	FROBEL SPIREA 5 GAL. (SPIRAEA BUMALDA 'FROBELL')	FS	3
	BUFFALO JUNIPER 5 GAL. (JUNIPERUS SABINA 'BUFFALO')	BJ	9
	NEWPORT FLOWERING PLUM 5 GAL. (PRUNUS CERASIFERA)	NPFP	7

WELLINGTON GARDENS PHASE II

1" = 20'

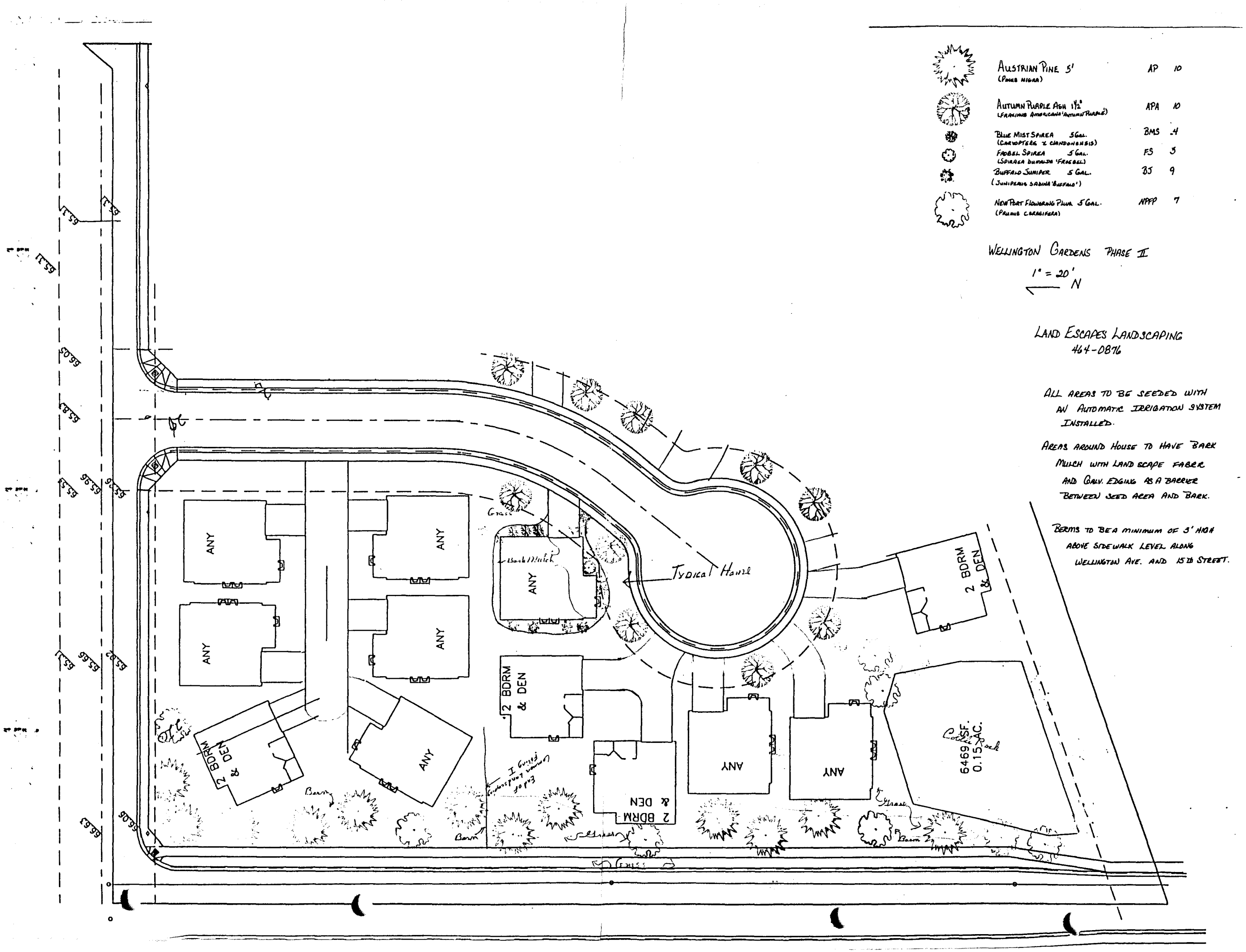
N

LAND ESCAPES LANDSCAPING
464-0876

ALL AREAS TO BE SEEDED WITH AN AUTOMATIC IRRIGATION SYSTEM INSTALLED.

AREAS AROUND HOUSE TO HAVE BARK MULCH WITH LANDSCAPE FABRIC AND GALV. EDGING AS A BARRIER BETWEEN SEED AREA AND BARK.

BERMS TO BE A MINIMUM OF 3' HIGH ABOVE SIDEWALK LEVEL ALONG WELLINGTON AVE. AND 15TH STREET.



THE COTTAGES AT WELLINGTON FILING 2

Grand Junction, Mesa County, Colorado

COMPOSITE PLAN

Located in Section 12, T1S, R1W, Ute PM

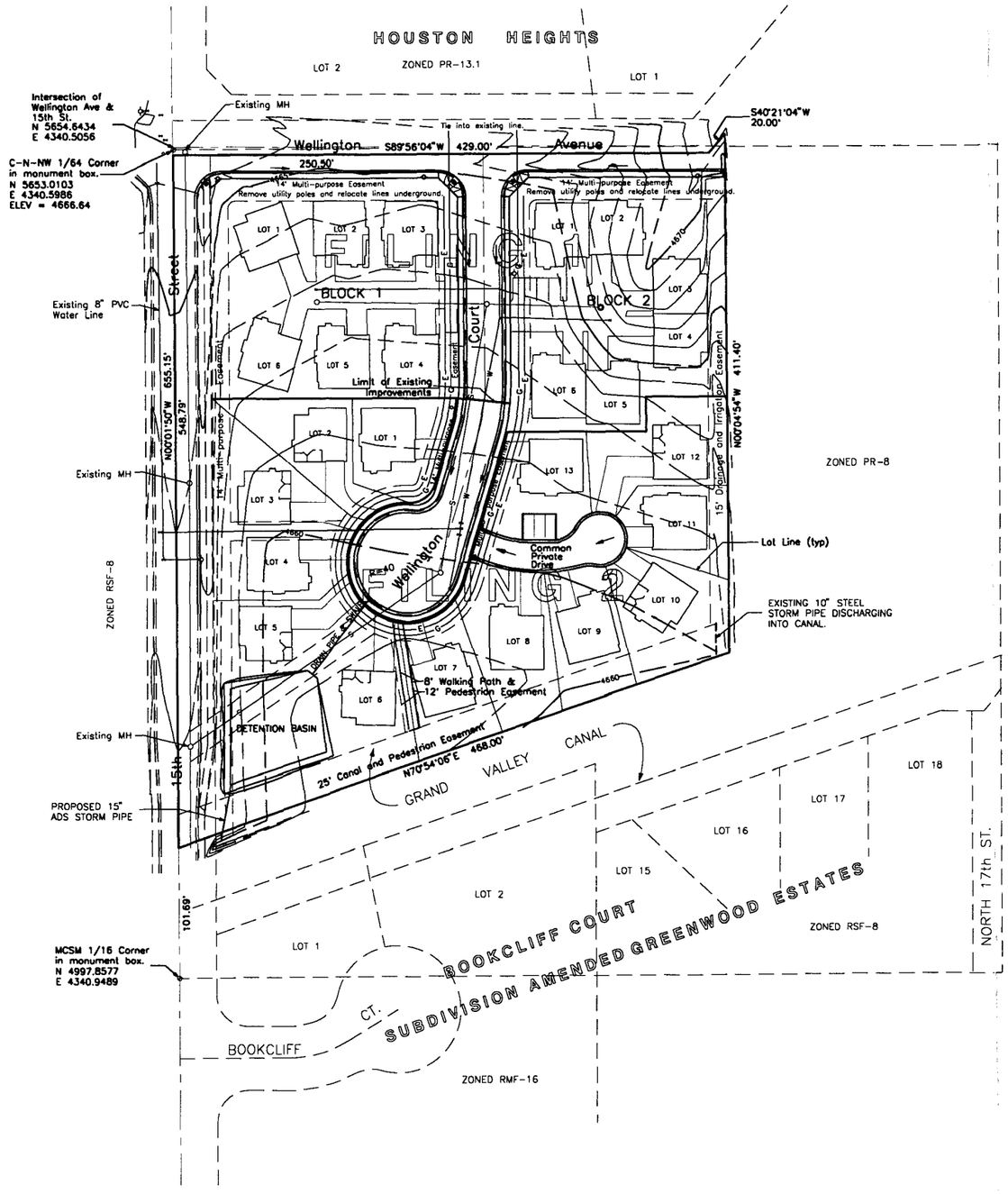
APPROVED FOR CONSTRUCTION

CITY OF GRAND JUNCTION DATE

INITIAL ACCEPTANCE

CITY OF GRAND JUNCTION DATE

NOT FOR CONSTRUCTION
FOR REVIEW ONLY



NOTES

1. Project BENCHMARK is C-N-NW 1/64 Corner, Section 12, T1S, R1W, Ute Meridian. Elevation = 4666.64 feet.
2. Utility Providers:

WATER	CITY OF GRAND JUNCTION
SEWER	CITY OF GRAND JUNCTION
ELECTRIC	PUBLIC SERVICE
TELEPHONE	US WEST COMMUNICATIONS
GAS	PUBLIC SERVICE COMPANY

3. Area Summary:

	ACRES	%
LOTS:	1.2	24
STREETS:	1.45	30
OPEN SPACE:	2.22	46
TOTAL:	4.5	100

5. Detention basin and drainage easements are included in Filing 1.

SCALE

1 inch = 50 feet (1:600)

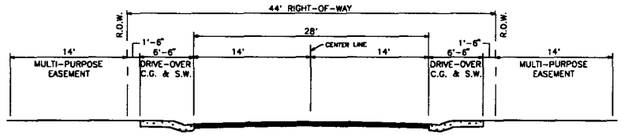
25 0 25 50 100 150 FEET

10 0 10 20 30 40 50 METERS

CONTOUR INTERVAL: 1 FOOT

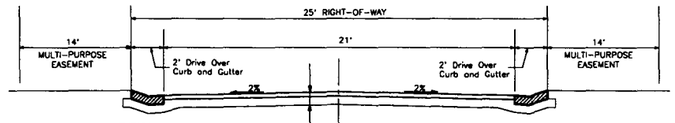
LEGEND

- FIRE HYDRANT
- EXISTING WATER VALVE
- NEW WATER VALVE
- THRUST BLOCK
- MANHOLE
- STREET LITE
- EXISTING POWER POLE
- PROPOSED STORM FLOW DIRECTION
- PROPOSED STORM DRAIN
- PROPOSED 10" WATER LINE
- PROPOSED 8" SANITARY SEWER LINE
- MCSM – Mesa County Survey Monument



WELLINGTON COURT CROSS SECTION:

NOT TO SCALE



TYPICAL
3" Asphalt Pavement on
6" of Aggregate Base Course, on
8" Recompacted Native Material

COMMON PRIVATE DRIVE CROSS SECTION:

NOT TO SCALE

DESIGNED BY ECM

DRAWN BY ECM

SURVEY DATE

REVISIONS

NO.	DATE	REMARKS	BY
1	6-29-95	Resp. to Comments	ECM
2	8-7-95	Sewer and water	ECM
3	12-8-95	Benchmark Elev	ECM

THE COTTAGES AT WELLINGTON - FILING 2
COMPOSITE PLAN

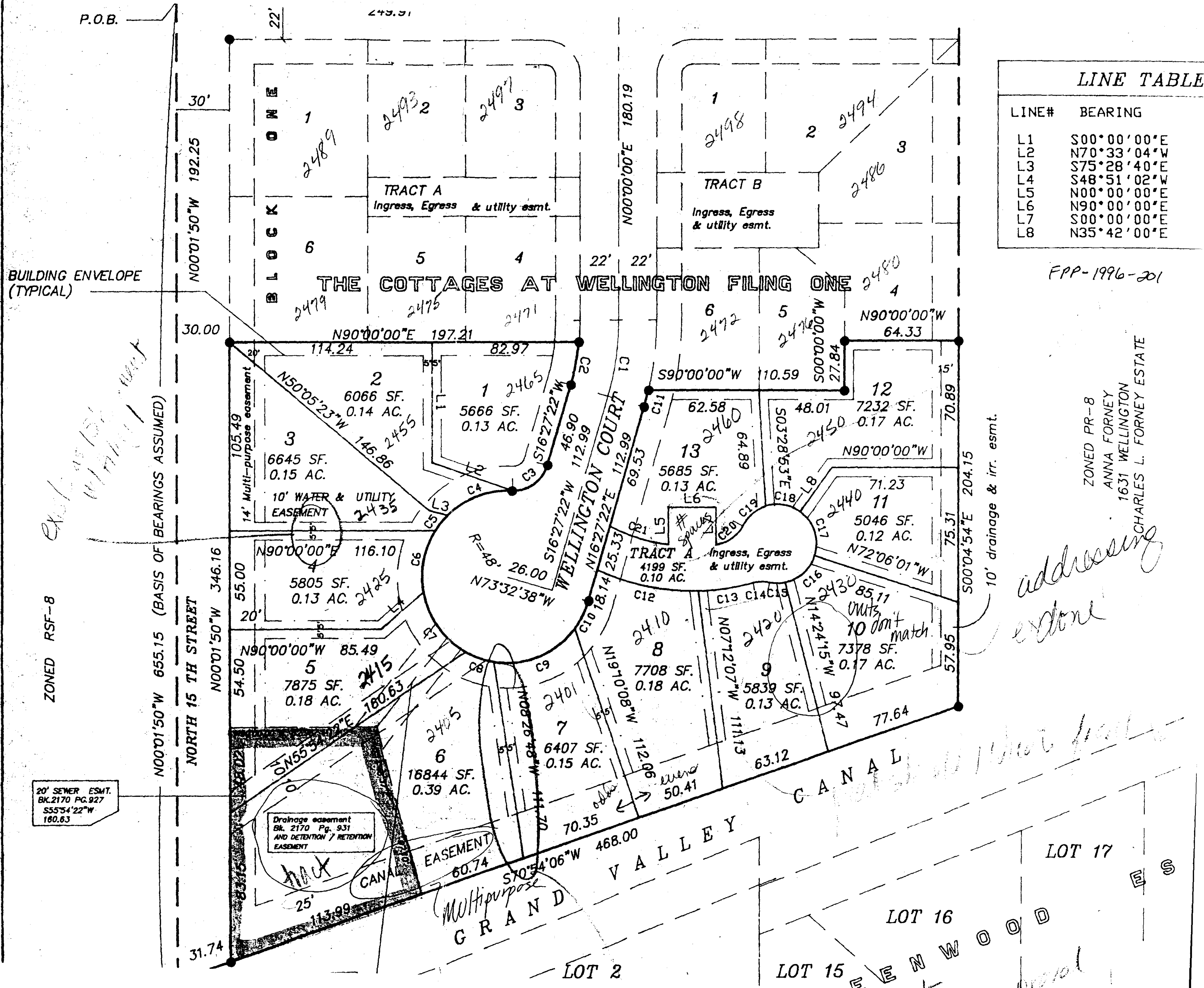
NICHOLS ASSOCIATES, INC.
CIVIL ENGINEERING • PHOTOGRAMMETRY • SURVEYING
751 Horizon Court • Grand Junction, Colorado 81506 • Phone: 970-245-7101

DATE DRAWN
September 30, 1996

SCALE
1 inch = 50 feet

PROJECT NUMBER
3220

SHEET NUMBER
3 OF 9



LINE#	BEARING
L1	S00°00'00"E
L2	N70°33'04"W
L3	S75°28'40"E
L4	S48°51'02"W
L5	N00°00'00"E
L6	N90°00'00"E
L7	S00°00'00"E
L8	N35°42'00"E