Table of Contents

File _SPR-1995-039_

Date _7/12/99_

P r e s e n t	S c a n n e d	
		A few items are denoted with a (*) are to be scanned for permanent record on the ISYS retrieval system. In some instances, not all entries designated to be scanned, are present in the file. There are also documents specific to certain files, not found on the standard list. For this reason, a checklist has been included. Remaining items, (not selected for scanning), will be marked present on the checklist. This index can serve as a quick guide for the contents of each file. Files denoted with (**) are to be located using the ISYS Query System. Planning Clearance will need to be typed in full, as well as other entries such as Ordinances, Resolutions, Board of Appeals, and etc.
X	X	*Summary Sheet – Table of Contents
		Application form
X		Receipts for fees paid for anything
X	X	*Submittal checklist – Change of Use Review
X	X	*General project report
		Reduced copy of final plans or drawings
X		Reduction of assessor's map
		Evidence of title, deeds
		*Mailing list to adjacent property owners
		Public notice cards
		Record of certified mail
		Legal description
		Appraisal of raw land
		Reduction of any maps – final copy
X	X	*Final reports for drainage and soils (geotechnical reports)
		Other bound or nonbound reports
		Traffic studies
X		Individual review comments from agencies
X	X	*Consolidated review comments list
		*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
		*Letters and correspondence dated after the date of final approval (pertaining to change in conditions or expiration date)

DOCUMENTS SPECIFIC TO THIS DEVELOPMENT FILE:

X	X	Site & Landscape plan - accepted
X		Pond III Weir plate detail - accepted

SUBMITTAL CHECKLIST
SITE PLAN REVIEW

Location: 2892 North Ave.   Project Name: Warehouse Expansion

ITEMS			DISTRIBUTION																				TOTAL REQ'D.
DESCRIPTION	SSID REFERENCE	City Community Development	City Dev. Eng.	City Utility Eng.	City Property Agent	City Parks/Recreation	City Fire Department	City Attorney	City Downtown Dev. Auth.	County Planning	County Bldg. Dept.	Irrigation District	Drainage District	Water District	Sewer District	U.S. West	Public Service	GVRP	CDOT	Corps of Engineers	Walker Field	
		●	●	●	●	●	●	●	○	○	●	○	○	○	○	○	○	○	●	○	○	5
● Application Fee $115	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	
● Planning Clearance*	VII-3	1																				
● 11"x17" Reduction of Assessor's Map	VII-1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
● Evidence of Title	VII-2	1			1		1															
○ Appraisal of Raw Land	VII-1	1			1	1																
○ Deeds	VII-1	1			1		1															
○ Easements	VII-2	1	1	1	1		1															
○ Aviation Easement	VII-1	1			1		1															
○ ROW	VII-3	1	1	1	1		1															
○ Improvements Agreement/Guarantee	VII-2	1	1	1			1															
○ CDOT Access Permit	VII-3	1	1																			
○ Industrial Pretreatment Sign-off	VII-4	1		1																		
● General Project Report	X-7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
○ Elevation Drawing	IX-13	1	1																			
● Site Plan	IX-29	2	2	1	1																	
● 11"x17" Reduction of Site Plan	IX-29				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
● Grading and Drainage Plan	IX-16	1	2										1						1			
○ Storm Drainage Plan and Profile	IX-30	1	2										1				1	1	1			
○ Water and Sewer Plan and Profile	IX-34	1	2	1			1							1	1	1	1	1				
○ Roadway Plan and Profile	IX-28	1	2										1									
○ Road Cross-Sections	IX-27	1	2																			
○ Detail Sheet	IX-12	1	2																			
● Landscape Plan	IX-20	2	1	1																		
○ Geotechnical Report	X-8	1	1							1												
● Final Drainage Report	X-5,6	1	2										1									
○ Stormwater Management Plan	X-14	1	2										1						1			
○ Phase I and II Environmental Report	X-10,11	1	1																			
○ Traffic Impact Study	X-15	1	2																1			

NOTES:
1) An asterisk in the item description column indicates that a form is supplied by the City.
2) Required submittal items and distribution are indicated by filled in circles, some of which may be filled in during the pre-application conference. Additional items or copies may be subsequently requested in the review process.
3) Each submitted item must be labeled, named, or otherwise identified as described above in the description column.

PROJECT NARATIVE

SITE DEVELOPMENT PLAN FOR

2892 NORTH AVENUE

February , 1995

LOCATION - The 1.15 acre site is located in the Northeast Grand Junction area, North of North Avenue, approximately 100 feet East of Melody Lane. The property is located in part of the SE 1/4 of Section 7, Township One South, Range One East, of the Ute Meridian.

EXISTING LAND USE - The site is vacant of the proposed warehouse expansion is vacant of any structures and is in a fallow state. Topography of the property is considered to be "flat" in nature and slopes towards the South at a rate less than one percent . The subject property was zoned PB, planned business by the City of Grand Junction in 1994.

SURROUNDING LAND USE -The surrounding land use in the vicinity of the subject property is considered to be of high intensity. The most predominate use consists of three previous phases of a warehouse/retail sales facility, developed by the applicant, and adjoins the South boundary of the subject property. Other uses in the vicinity include auto related activities and retail sales such as the Wal-Mart facility. Residential uses are located one large lots to the North, West, and East.

PROPOSED LAND USE - The proposal calls for the 11,700 square foot expansion of an existing warehouse. The accompanying Site Development Plan depicts the relationship of the proposed warehouse expansion and mini-storage units to the property boundary, parking areas, and other features of the proposed development.

ACCESS - Primary access to the site will be from North Avenue designated as major arterial by the City of Grand Junction. 29 Road located several hundred feet East of the site serves as a major north/south arterial.

UTILITY SERVICE

DOMESTIC WATER - An existing 8 inch water main is located along the South boundary of the site. Other than fire protection, the warehouse and storage units do not require any domestic water service.

SANITARY SEWER - Due to the nature of the development, sanitary sewer service is not required.

ELECTRIC, GAS, PHONE & CATV - Gas and communication lines will not be required. Electric lines will be extended into the property to provide area lighting. Electricity will not be provided for the units.

DEVELOPMENT SCHEDULE - At this point in time it is anticipated that construction will begin on the warehouse expansion during February of 1995. Development of the future phases of the site will occur over a several year period.

DRAINAGE REPORT FOR:

DALTON PROPERTY, 2892 NORTH AVENUE
PHASE IV

December, 1994

Prepared For:
MAYS CONCRETE INC.
2399 River Road
Grand Junction, Colorado 81505
(303) 243-5669

Prepared By:
LANDesign LTD.
200 North 6th Street, Grand Junction, Colorado 81501
(303) 245-4099

Prepared By: _Monty D. Stroup_ 12/27/94

Monty D. Stroup

"I hereby certify that this report for the drainage design of the Dalton Property, 2892 North Avenue, Phase IV was prepared under my direct supervision."

Reviewed By: _Philip M. Hart_

Philip M. Hart, P.E.
State of Colorado, #19346

I. General Location and Description

A. Site and Major Basin Location:

The Dalton Property, 2892 North Avenue contains approximately 3.07 acres and is located within the City of Grand Junction. The property is located in part of the SE 1/4 of Section 7, Township One South, Range One East, of the Ute Meridian.

Streets in the vicinity include North Avenue which defines the south boundary line of the site. Located several hundred feet east of the site is 29 Road. Several hundred feet west of the site is Melody Lane.

Surrounding land use in the vicinity of the subject property is considered to be of high intensity. The most predominate use adjacent to the property is "Big O Tire Stores" located immediately east of and adjacent to the south 1/2 of the site. Remaining areas to the east, north and west are used primarily for single family residences on large lots. Areas south and southwest of North Avenue are commercial in nature and include the "Wal-Mart" facilities at Melody Lane and North Avenue.

B. Site and Major Basin Description:

The project site contains approximately 3.07 acres and is planned for a 9000 square foot building addition to the Phase III building located on the west portion of the site.

The entire site is currently void of vegetation.

Based on the "Soil Survey, Mesa County Area" (Reference 4, Exhibit 1.0) onsite soils are defined as (Ba), Billings silty clay, 0 to 2 percent slopes, hydrological soil group "C".

II. Existing Drainage Conditions

A. Major Basin:

The site is not affected by offsite runoff as it is bounded to the north and west by an existing irrigation system and offsite swales which direct flow away from the site. Land to the east is partially developed and directs runoff south to North Avenue away from the subject property. Topography of the property is flat in nature and slopes from the north to the south at approximately 1.07 percent.

There are no wetlands on the site.

The subject site is within Zone X as determined by the FIRM (Flood Insurance Rate Map).

1

B. Site:

The south 1/2 of the site is fully improved and is occupied by 2 commercial/retail structures, (Phases I, II and III), approximately 22,510 square feet and an associated asphalt parking lot. This area generates developed runoff which is conveyed and attenuated by existing Detention Pond I adjacent to North Avenue (Reference 5). This area defined as "Basin III" by previous report has no impact on the hydrologic and hydraulic calculations for the remainder of the site or the proposed improvements.

The north 1/2 of the site is vacant of structures and is in a fallow state. Agricultural production has not occurred on the north 1/2 of the property. This area currently generates undeveloped runoff which is collected and conveyed via Phase I, II and III improvements directly to North Avenue.

III. Proposed Drainage Conditions

A. Changes in Drainage Patterns:

Historic offsite drainage patterns within the north 1/2 of the site will be altered. All of the future drainage from the north 1/2 of the site will continue to be directed south by site improvements to North Avenue. The proposal (Phase IV) calls for the construction of a 9000 square foot building addition, associated parking lot and drain pans which will collect, convey and discharge developed runoff to two proposed onsite detention ponds and subsequently to North Avenue. The proposed site plan divides the site into 2 sub-basins labeled as "A1" (1.60 acres) and "B1" (0.43 acres).

The runoff from sub-basin "A1" shall be collected and redirected via building roof drains, parking lot grading and drain pans towards the northeast corner of the existing Phase III building at design point #1. The area between the east line of the building and the east property line shall be excavated, regraded and resurfaced with shotcrete to form Detention Pond II. This detention pond is sized to attenuate the 2 year and 100 year storm events. The outlet from the pond shall be a dual stage combination weir (Exhibit 10.0) sized to release the 2 year and 100 year historic flow rates. Runoff released from the pond shall be conveyed south along the east property line via existing curb and gutter and a proposed curb drain through directly to North Avenue.

The runoff from sub-basin "B1" shall be collected and redirected via building roof drains, parking lot grading and drain pans towards the northwest corner of the existing Phase II building at design point #2. The area between the west line of the building and the west property line shall be excavated, regraded and resurfaced with shotcrete to form Detention Pond III. This detention pond is sized to attenuate the 2 year and 100 year storm events. The outlet from the pond shall be a dual stage combination weir (Exhibit

13.0) sized to release the 2 year and 100 year historic flow rates. Runoff released from the pond shall be conveyed south along the west property line via an existing drainage catch and an existing curb drain through directly to North Avenue.

B. Maintenance Issues:

Access to and through the site shall be by private driveway.

Ownership and responsibility for maintenance of the proposed onsite improvements shall be that of the building owner and or the building tenants.

Ownership and responsibility for maintenance of the proposed offsite improvements shall be that of the City of Grand Junction.

IV. Design Criteria & Approach

A. Hydrology:

The "Stormwater Management Manual, City of Grand Junction, Colorado" (Reference 1) and the "Mesa County Storm Drainage Criteria Manual" (Reference 2) were used as the basis for analysis and facility design.

Since the project is a commercial development containing approximately 3.07 acres the "Rational Method" is used to calculate historic and developed flow rates. The minor storm is the 2 year frequency rainfall event and the major storm is the 100 year frequency rainfall event.

Runoff Coefficients used in the computations are based on the most recent City of Grand Junction criteria as defined in Reference 1 and shown on Exhibit 2.0. These coefficients were assigned based on land use and hydrological soils group "C"

The project is located within the Grand Junction Urbanized area, therefore the Intensity Duration Frequency Curves (IDFC) shown on Exhibit 3.0 were used in the analysis and design.

Times of Concentration were calculated based on the Determination of Overland Flow Time and Average Velocities for Overland Flow Curves as provided in Reference 1 and shown on Exhibits 5.0 and 5.1.

Calculation of the required minimum detention pond storage volumes and the size of outlet control elements was based on the most recent City of Grand Junction criteria as defined in Reference 1.

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Because offsite flows are directed away from the project site, compliance with offsite drainage considerations are mitigated.

B. Hydraulics:

All site facilities and conveyance elements are designed in accordance with the City of Grand Junction guidelines as provided in Reference 1.

V. Conclusions

Detention Ponds II and III will serve the Phase IV building addition and all future Phases through and including final buildout of the site. Additional detention requirements for future Phases or additions is not needed. The total detention storage volume required and provided with the construction of ponds II and III are as summarized as follows:

POND	2 YEAR REQUIRED	2 YEAR PROVIDED	100 YEAR REQUIRED	100 YEAR PROVIDED
II	2,382 CF	3,640 CF	5,377 CF	6,103 CF
III	650 CF	990 CF	1,473 CF	1,546 CF

Because the development of this project will result in the disturbance of less than five acres of land a "Construction Stormwater Discharge Permit" is not required.

This Drainage Report has been prepared to address site-specific drainage concerns in accordance with the requirements of the City of Grand Junction, Colorado. The Appendix of this report includes criteria, exhibits, tables and calculations used in the design and analysis.

VI. References

1. <u>Stormwater Management Manual (SWMM)</u>, City of Grand Junction, Colorado, Department of Public Works, June 1994.

2. <u>Mesa County Storm Drainage Criteria Manual, Final Draft</u>, Mesa County, Colorado, March, 1992.

3. <u>Flood Insurance Rate Map, Mesa County, Colorado, (Unincorporated Areas)</u>, Community Panel Number 080115 0460 B, Federal Emergency Management Agency, Map Revised July 15th, 1992.

4. <u>Soil Survey, Mesa County Area, Colorado</u>, , U.S. Department of Agriculture, issued November, 1955.

5. <u>Drainage Study Prepared For Mr. Emory Cantrell</u>, Western Engineers, Inc., Grand Junction, Colorado, January, 1993.

APPENDIX

6

SOILS MAP
EXHIBIT 1.0
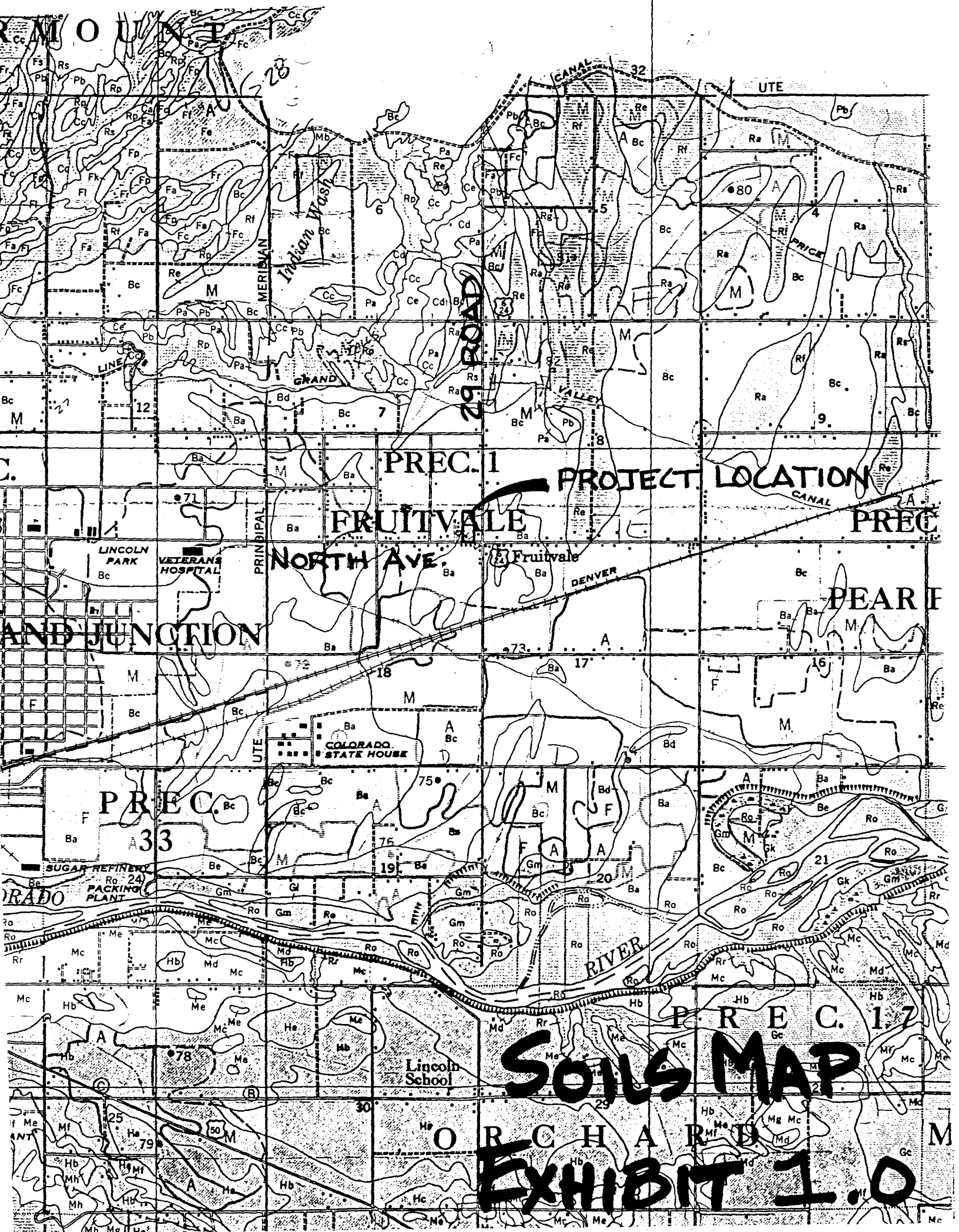
EXHIBIT 2.0 B-3

LAND USE OR SURFACE CHARACTERISTICS	SCS HYDROLOGIC SOIL GROUP (SEE APPENDIX "C" FOR DESCRIPTIONS)											
	A			B			C			D		
	0-2%	2-6%	6%+	0-2%	2-6%	6%+	0-2%	2-6%	6%+	0-2%	2-6%	6%+
UNDEVELOPED AREAS Bare ground	.10-.20 / .14-.24	.16-.26 / .22-.32	.25-.35 / .30-.40	.14-.22 / .20-.28	.22-.30 / .28-.36	.30-.38 / .37-.45	.20-.28 / .26-.34	.28-.36 / .35-.43	.36-.44 / .40-.48	.24-.32 / .30-.38	.30-.38 / .40-.48	.40-.48 / .50-.58
Cultivated/Agricultural	.08-.18 / .14-.24	.13-.23 / .18-.28	.16-.26 / .22-.32	.11-.19 / .16-.24	.15-.23 / .21-.29	.21-.29 / .28-.36	.14-.22 / .20-.28	.19-.27 / .25-.33	.26-.34 / .34-.42	.18-.26 / .24-.32	.23-.31 / .29-.37	.31-.39 / .41-.49
Pasture	.12-.22 / .15-.25	.20-.30 / .25-.35	.30-.40 / .37-.47	.18-.26 / .23-.31	.28-.36 / .34-.42	.37-.45 / .45-.53	.24-.32 / .30-.38	.34-.42 / .42-.50	.44-.52 / .52-.60	.30-.38 / .37-.45	.40-.48 / .50-.58	.50-.58 / .62-.70
Meadow	.10-.20 / .14-.24	.16-.26 / .22-.32	.25-.35 / .30-.40	.14-.22 / .20-.28	.22-.30 / .28-.36	.30-.38 / .37-.45	.20-.28 / .26-.34	.28-.36 / .35-.43	.36-.44 / .44-.52	.24-.32 / .30-.38	.30-.38 / .40-.48	.40-.48 / .50-.58
Forest	.05-.15 / .08-.18	.08-.18 / .11-.21	.11-.21 / .14-.24	.08-.16 / .10-.18	.11-.19 / .14-.22	.14-.22 / .18-.26	.10-.18 / .12-.20	.13-.21 / .16-.24	.16-.24 / .20-.28	.12-.20 / .15-.23	.16-.24 / .20-.28	.20-.28 / .25-.33
RESIDENTIAL AREAS 1/8 acre per unit	.40-.50 / .48-.58	.43-.53 / .52-.62	.46-.56 / .55-.65	.42-.50 / .50-.58	.45-.53 / .54-.62	.50-.58 / .59-.67	.45-.53 / .53-.61	.48-.56 / .57-.65	.53-.61 / .64-.72	.48-.56 / .56-.64	.51-.59 / .60-.68	.57-.65 / .69-.77
1/4 acre per unit	.27-.37 / .35-.45	.31-.41 / .39-.49	.34-.44 / .42-.52	.29-.37 / .38-.46	.34-.42 / .42-.50	.38-.46 / .47-.55	.32-.40 / .41-.49	.36-.44 / .45-.53	.41-.49 / .52-.60	.35-.43 / .43-.51	.39-.47 / .47-.55	.45-.53 / .57-.65
1/3 acre per unit	.22-.32 / .31-.41	.26-.36 / .35-.45	.29-.39 / .38-.48	.25-.33 / .33-.41	.29-.37 / .38-.46	.33-.41 / .42-.50	.28-.36 / .36-.44	.32-.40 / .41-.49	.37-.45 / .48-.56	.31-.39 / .39-.47	.35-.43 / .43-.51	.42-.50 / .53-.61
1/2 acre per unit	.16-.26 / .25-.35	.20-.30 / .29-.39	.24-.34 / .32-.42	.19-.27 / .28-.36	.23-.31 / .32-.40	.28-.36 / .36-.44	.22-.30 / .31-.39	.27-.35 / .35-.43	.32-.40 / .42-.50	.26-.34 / .34-.42	.30-.38 / .38-.46	.37-.45 / .48-.56
1 acre per unit	.14-.24 / .22-.32	.19-.29 / .26-.36	.22-.32 / .29-.39	.17-.25 / .24-.32	.21-.29 / .28-.36	.26-.34 / .34-.42	.20-.28 / .28-.36	.25-.33 / .32-.40	.31-.39 / .40-.48	.24-.32 / .31-.39	.29-.37 / .35-.43	.35-.43 / .46-.54
MISC. SURFACES Pavement and roofs	.93 / .95	.94 / .96	.95 / .97	.93 / .95	.94 / .96	.95 / .97	.93 / .95	.94 / .96	.95 / .97	.93 / .95	.94 / .96	.95 / .97
Traffic areas (soil and gravel)	.55-.65 / .65-.70	.60-.70 / .70-.75	.64-.74 / .74-.79	.60-.68 / .68-.76	.64-.72 / .72-.80	.67-.75 / .75-.83	.64-.72 / .72-.80	.67-.75 / .75-.83	.69-.77 / .77-.85	.72-.80 / .79-.87	.75-.83 / .82-.90	.77-.85 / .84-.92
Green landscaping (lawns, parks)	.10-.20 / .14-.24	.16-.26 / .22-.32	.25-.35 / .30-.40	.14-.22 / .20-.28	.22-.30 / .28-.36	.30-.38 / .37-.45	.20-.28 / .26-.34	.28-.36 / .35-.43	.36-.44 / .42-.52	.24-.32 / .30-.38	.30-.38 / .40-.48	.40-.48 / .50-.58
Non-green and gravel landscaping	.30-.40 / .34-.44	.36-.46 / .42-.52	.45-.55 / .50-.60	.45-.55 / .50-.60	.42-.50 / .48-.56	.50-.58 / .57-.65	.40-.48 / .46-.54	.48-.56 / .55-.63	.56-.64 / .64-.72	.44-.52 / .50-.58	.50-.58 / .60-.68	.60-.68 / .70-.78
Cemeteries, playgrounds	.20-.30 / .24-.34	.26-.36 / .32-.42	.35-.45 / .40-.50	.35-.45 / .40-.50	.32-.40 / .38-.46	.40-.48 / .47-.55	.30-.38 / .36-.44	.38-.44 / .45-.53	.46-.54 / .54-.62	.34-.42 / .40-.48	.40-.48 / .50-.58	.50-.58 / .60-.68

NOTES:
1. Values above and below pertain to the 2-year and 100-year storms, respectively.
2. The range of values provided allows for engineering judgement of site conditions such as basic shape, homogeneity of surface type, surface depression storage, and storm duration. In general, during shorter duration storms (Tc ≤ 10 minutes), infiltration capacity is higher, allowing use of a "C" value in the low range. Conversely, for longer duration storms (Tc) 30 minutes), use a "C" value in the higher range.
3. For residential development at less than 1/8 acre per unit or greater than 1 acre per unit, and also for commercial and industrial areas, use values under MISC SURFACES to estimate "C" value ranges for use.

RATIONAL METHOD RUNOFF COEFFICIENTS
(Modified from Table 4, UC-Davis, which appears to be a modification of work done by Rawls)

TABLE "B-1"

INTENSITY DURATION FREQUENCY CURVES
GRAND JUNCTION, COLORADO

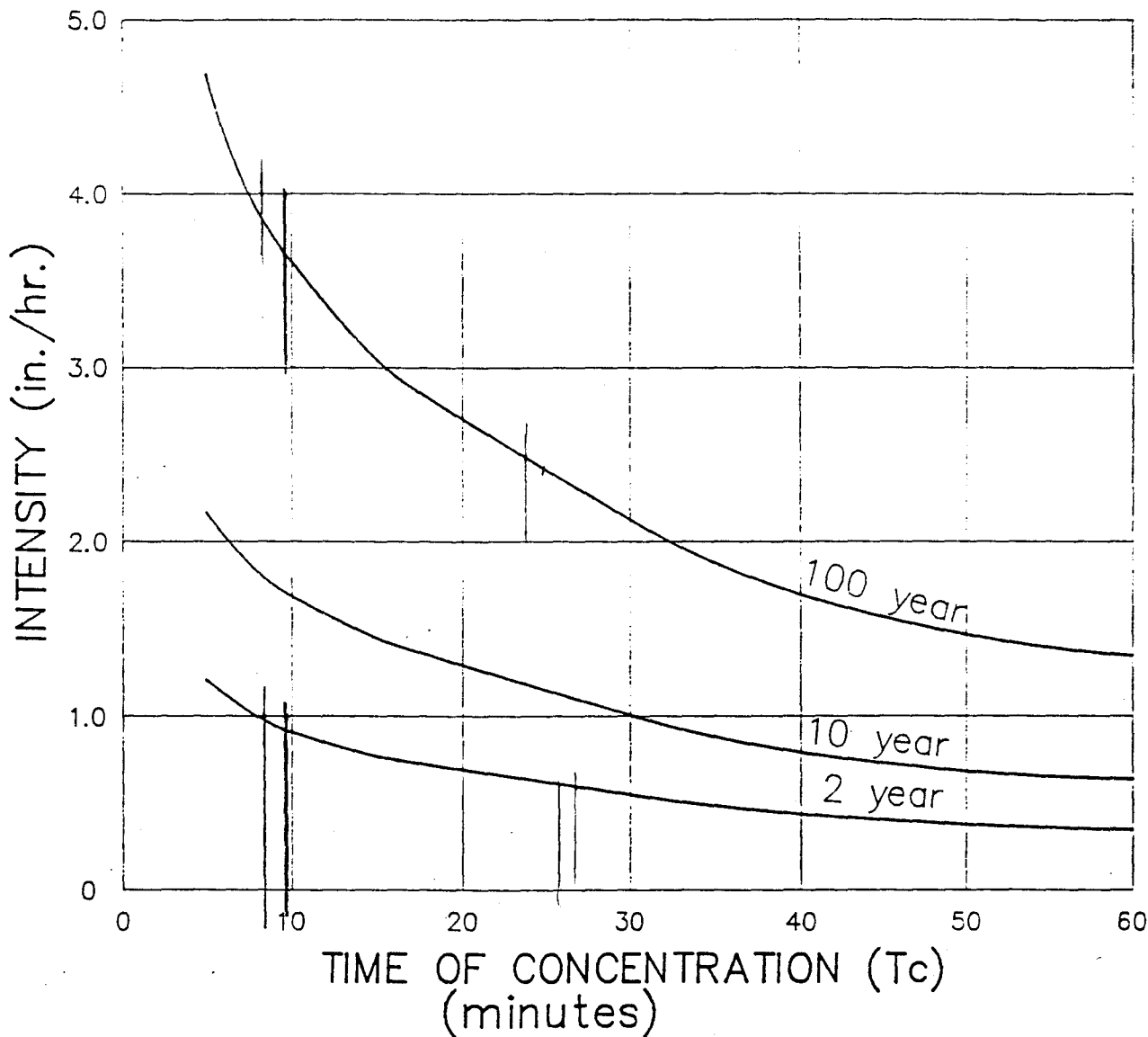TIME OF CONCENTRATION (Tc)
(minutes)

EXHIBIT 3.0

Triangular Channel Analysis & Design
Open Channel – Uniform flow

Worksheet Name: DALTON PROPERTY

Comment: 4' V-PAN CAPACITY CHECK

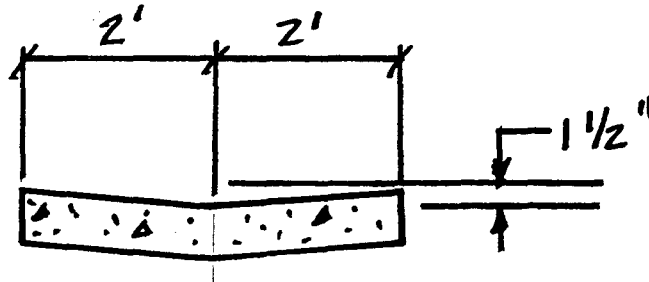Solve For Discharge

Given Input Data:
```
        Left Side Slope..    16.00:1 (H:V)
        Right Side Slope.    16.00:1 (H:V)
        Manning's n......     0.013  CONCRETE
        Channel Slope....     0.0050 ft/ft  0.50%
        Depth...........      0.13 ft
```

Computed Results:
```
        Discharge........    0.32 cfs
        Velocity.........    1.27 fps
        Flow Area........    0.25 sf
        Flow Top Width...    4.00 ft
        Wetted Perimeter.    4.01 ft
        Critical Depth...    0.12 ft
        Critical Slope...    0.0063 ft/ft
        Froude Number....    0.90 (flow is Subcritical)
```
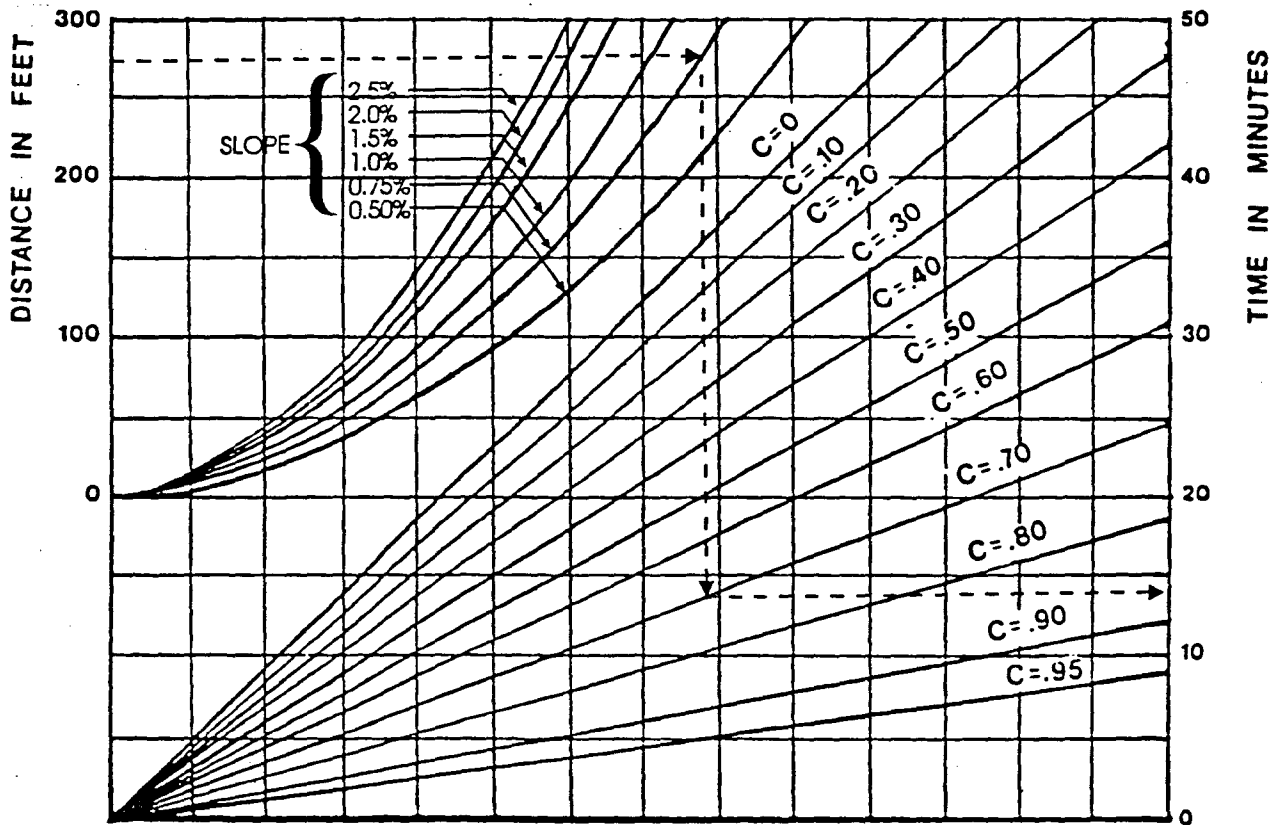

Open Channel Flow Module, Version 3.16 (c) 1990
Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708

EXHIBIT 4.0

THE ABOVE CURVES ARE A SOLUTION OF THE FOLLOWING EQUATION:

$$To = \frac{1.8 \ (1.1 - C)\sqrt{L}}{\sqrt[3]{S}}$$

WHERE: To = OVERLAND FLOW TIME (MIN.)
        S = SLOPE OF BASIN (%)
        C = RUNOFF COEFFICIENT (SEE TABLE "B-1" IN APPENDIX "B")
        L = LENGTH OF BASIN (ft)

EXHIBIT 5.0

GRAPHICAL DETERMINATION OF "To:" FAA METHOD	FIGURE "E-2"

DETERMINATION OF "Ts"

EXHIBIT 6.1

FIGURE "E-3"

SLOPE IN PERCENT

VELOCITY IN FEET PER SECOND

FOREST WITH HEAVY GROUND LITTER & HAY MEADOW

TRASH FALLOW OR MINIMUM TILLAGE CULTIVATION: CONTOUR OR STRIP CROPPED & WOODLAND

SHORT GRASS PASTURE

NEARLY BARE AND UNTILLED

CULTIVATED, STRAIGHT ROW

& ALLUVIAL FANS WESTERN MOUNTAIN REGIONS

GRASSED WATERWAY

PAVED AREA (SHEET FLOW): & SMALL UPLAND GULLIES

TIME OF CONCENTRATION CALCULATIONS

(2 YEAR STORM EVENT)
HISTORIC CONDITION - CITY OF GRAND JUNCTION, COLORADO

PROJECT: DALTON PROPERTY @ 2892 N. AVENUE
JOB # 94113.40
LANDesign LTD.

DATE:
06-Dec-94

BASIN	C 2	AREA AC.	LENGTH FT.	SLOPE %	Ti MIN.	LENGTH FT.	SLOPE %	VEL F.P.S.	Tt MIN.	Tc MIN.	TOTAL LENGTH FT.	Tc = (L/180)+10 MIN.	FINAL Tc MIN.	REMARKS
			SUB-BASIN DATA			INITIAL / OVERLAND TIME (Ti)			TRAVEL TIME TIME (Tt)		INITIAL	Tc CHECK (URBANIZED BASINS)			REMARKS
A1	0.28	1.60	315.0	1.07	25.61									OVERLAND SHEET FLOW - SOUTH
						---	---	---	---	25.61	315.00	11.75	25.61	TOWARDS NORTH AVENUE
--	--	--	--	--	--	--	--	--	--	--	--	--	--	---
B1	0.28	0.43	345.0	1.07	26.80									OVERLAND SHEET FLOW - SOUTH
						---	---	---	---	26.80	345.00	11.92	26.80	TOWARDS NORTH AVENUE

FORMULAS

$$Ti = \frac{1.8(1.1-C)(L)^{1/2}}{1/3} \qquad Tt = \frac{(L)}{60 \text{ SEC/MIN. (V F.P.S.)}}$$

TIME OF CONCENTRATION CALCULATIONS

(100 YEAR STORM EVENT)
HISTORIC CONDITION - CITY OF GRAND JUNCTION, COLORADO

PROJECT: DALTON PROPERTY @ 2892 N. AVENUE
JOB # 94113.40
LANDesign LTD.

DATE:
06-Dec-94

BASIN	C 10	AREA AC.	LENGTH FT.	SLOPE %	Ti MIN.	LENGTH FT.	SLOPE %	VEL F.P.S.	Tt MIN.	Tc MIN.	TOTAL LENGTH FT.	Tc = (L/180)+10 MIN.	FINAL Tc MIN.	REMARKS
			SUB-BASIN DATA			INITIAL / OVERLAND TIME (Ti)			TRAVEL TIME TIME (Tt)		INITIAL	Tc CHECK (URBANIZED BASINS)			REMARKS
A1	0.34	1.60	315.0	1.07	23.74									OVERLAND SHEET FLOW - SOUTH
						---	---	---	---	23.74	315.00	11.75	23.74	TOWARDS NORTH AVENUE
--	--	--	--	--	--	--	--	--	--	--	--	--	--	---
B1	0.34	0.43	345.0	1.07	24.84									OVERLAND SHEET FLOW - SOUTH
						---	---	---	---	24.84	345.00	11.92	24.84	TOWARDS NORTH AVENUE

FORMULAS

$$Ti = \frac{1.8(1.1-C)(L)^{1/2}}{1/3} \qquad Tt = \frac{(L)}{60 \text{ SEC/MIN. (V F.P.S.)}}$$

EXHIBIT 6.0

TIME OF CONCENTRATION CALCULATIONS

(2 YEAR STORM EVENT)
DEVELOPED CONDITION - CITY OF GRAND JUNCTION, COLORADO

PROJECT: DALTON PROPERTY @ 2892 N. AVENUE
JOB # 94113.40
LANDesign LTD.

DATE: 06-Dec-94

BASIN	C 2	AREA AC.	LENGTH FT.	SLOPE %	Ti MIN.	LENGTH FT.	SLOPE %	VEL F.P.S.	Tt MIN.	Tc MIN.	TOTAL LENGTH FT.	Tc = (L/180)+10 MIN.	MIN.	REMARKS
A1	0.93	1.60	10.0	1.00	0.97									SHEET FLOW - ROOFTOP
						651.0	0.50	1.27	8.54	9.51	661.00	13.67	9.51	FLOW IN V-PAN TO DETENTION POND II
--	--	--	--	--	--	--	--	--	--	--	--	--	--	---
B1	0.93	0.43	10.0	1.00	0.97									SHEET FLOW - ROOFTOP
						550.0	0.50	1.27	7.22	8.19	560.00	13.11	8.19	FLOW IN V-PAN TO DETENTION POND III

FORMULAS

$$Ti = \frac{1.8(1.1-C)(L)^{1/2}}{1/3} \qquad Tt = \frac{(L)}{60 \text{ SEC/MIN. (V F.P.S.)}}$$

TIME OF CONCENTRATION CALCULATIONS

(100 YEAR STORM EVENT)
DEVELOPED CONDITION - CITY OF GRAND JUNCTION, COLORADO

PROJECT: DALTON PROPERTY @ 2892 N. AVENUE
JOB # 94113.40
LANDesign LTD.

DATE: 06-Dec-94

BASIN	C 10	AREA AC.	LENGTH FT.	SLOPE %	Ti MIN.	LENGTH FT.	SLOPE %	VEL F.P.S.	Tt MIN.	Tc MIN.	TOTAL LENGTH FT.	Tc = (L/180)+10 MIN.	MIN.	REMARKS
A1	0.95	1.60	10.0	1.00	0.85									SHEET FLOW - ROOFTOP
						651.0	0.50	1.27	8.54	9.40	661.00	13.67	9.40	FLOW IN V-PAN TO DETENTION POND II
--	--	--	--	--	--	--	--	--	--	--	--	--	--	---
B1	0.95	0.43	10.0	1.00	0.85									SHEET FLOW - ROOFTOP
						550.0	0.50	1.27	7.22	8.07	560.00	13.11	8.07	FLOW IN V-PAN TO DETENTION POND III

FORMULAS

$$Ti = \frac{1.8(1.1-C)(L)^{1/2}}{1/3} \qquad Tt = \frac{(L)}{60 \text{ SEC/MIN. (V F.P.S.)}}$$

EXHIBIT 6.1

STORM DRAINAGE SYSTEM DESIGN DATA

PROJECT: DALTON PROPERTY @ 2892 N. AVENUE
JOB #   94113.40
LANDesign LTD.

LOCATION OR NODE	BASINS	LENGTH FEET	INLET TIME min.	FLOW TIME STREET	FLOW TIME PIPE	Tc min.	COEFF. "C"	INTENSITY "I"	DESIGN VELOC.	DESIGN VELOC.	STREET	PIPE	REMARKS
1	A1					25.61	0.28		F.P.S.	F.P.S.			OVERLAND SHEET FLOW SOUTH TOWARDS N. AVE.
2	B1					26.80			F.P.S.				OVERLAND SHEET FLOW SOUTH TOWARDS N. AVE.

DATE: 06-Dec-94

STORM DRAINAGE SYSTEM DESIGN DATA

EXHIBIT 9.0   JUNE 1994

TABLE K-2
VALUES OF C IN THE BROAD CRESTED WEIR EQUATION
(Table 5-3 in *Handbook of Hydraulics*, Brater and King, 6th Edition)

Measured head in feet, H	Breadth of Crest of Weir in Feet										
	0.50	0.75	1.00	1.50	2.00	2.50	3.00	4.00	5.00	10.00	15.00
0.2	2.80	2.75	2.69	2.62	2.54	2.48	2.44	2.38	2.34	2.49	2.68
0.4	2.92	2.80	2.72	2.64	2.61	2.60	2.58	2.54	2.50	2.56	2.70
0.6	3.08	2.89	2.75	2.64	2.61	2.60	2.68	2.69	2.70	2.70	2.70
0.8	3.30	3.04	2.85	2.68	2.60	2.60	2.67	2.68	2.68	2.69	2.64
1.0	3.32	3.14	2.98	2.75	2.66	2.64	2.65	2.67	2.68	2.68	2.63
1.2	3.32	3.20	3.09	2.86	2.70	2.65	2.64	2.67	2.66	2.69	2.64
1.4	3.32	3.26	3.20	2.92	2.77	2.68	2.64	2.65	2.65	2.67	2.64
1.6	3.32	3.29	3.28	3.07	2.89	2.75	2.68	2.66	2.65	2.64	2.63
1.8	3.32	3.32	3.31	3.07	2.88	2.74	2.68	2.66	2.65	2.64	2.63
2.0	3.32	3.31	3.30	3.03	2.85	2.76	2.72	2.68	2.65	2.64	2.63
2.5	3.32	3.32	3.31	3.28	3.07	2.89	2.81	2.72	2.67	2.64	2.63
3.0	3.32	3.32	3.32	3.32	3.20	3.05	2.92	2.73	2.66	2.64	2.63
3.5	3.32	3.32	3.32	3.32	3.32	3.19	2.97	2.76	2.68	2.64	2.63
4.0	3.32	3.32	3.32	3.32	3.32	3.32	3.07	2.79	2.70	2.64	2.63
4.5	3.32	3.32	3.32	3.32	3.32	3.32	3.32	2.88	2.74	2.64	2.63
5.0	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.07	2.79	2.64	2.63
5.5	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	2.88	2.64	2.63

For "C" values and/or roadway overtopping conditions, reference is made to HDS-5 or Appendix "L", Section B-2.

PROJECT: DALTON PROPERTY @ 2892 N. AVENUE

LOCATION: CITY OF GRAND JUNCTION, COLORADO

SUBJECT: REQUIRED DETENTION POND VOLUME POND II   BASINS: A1

DATE: 07-Dec-94

CALC. BY: STROUP

FORMULAS PER CITY OF GRAND JUNCTION

$D_{avg.} = 0.67 D_{max}$

2 YEAR RELEASE (WEIR ONLY)

$Q_w = C L (H)^{1.5}$ =   0.2699 CFS

C=	3.19	
L=	1.5000 inches	0.1250 feet
H=	9.2500 inches	0.7708 feet

$Q_r = 0.55 Q_{max}$. (Weir using Qmax. or "h") =   0.1484

100 YEAR RELEASE (COMPOND WEIR)

$Q_{max} = C_1 L_1 (H_t)^{1.5} + C_2 (L_2 - L_1) H_t - H_1$ = 1.3408 CFS

C_1 =	3.32	H_t = 12.8400 inches	1.0700 feet
C_2 =	2.56	H= 9.2500 inches	0.7708 feet
L_2 =	26.7500 inches	2.2292 feet

$H_u = H_t - H = 0.2992$

$Q_r = C_1 L_1 (H_t - (H_u/3))^{1.5} + C_2 (L_2 - L_1)(0.67 H_u)^{1.5}$

     =   0.3966 +   0.4834 = 0.8800

DETENTION FORMULAS

$Td_2 = (633.4 C_d A / (Q_r - (Q_r T_{cd} / (81.2 C_d A))))^{0.5} - 15.6$

$Td_{100} = (1832 C_d A / (Q_r - (Q_r T_{cd} / (213 C_d A))))^{0.5} - 17.2$

$Id_2 = $ Intensity at $Td_2 = 40.6 / (Td_2 + 15.6)$

$Id_{100} = $ Intensity at $Td_{100} = 106.5 / (Td_{100} + 17.2)$

$Q_d = C_d A I_d$

$K = T_{ch} / T_{cd}$

$V = 60(Q_d Td - Q_r Td - Q_r T_{cd} + K Q_r T_{cd} / 2 + Q_r^2 T_{cd} / (2 Q_d))$

WHERE:

T_d = Time of Critical Storm Duration,
C = Weir Coefficient; OR
C = Runoff Coefficient;
A = Area in Acres;
Q_o = Detention Pond Average Releas
T_c = Time of Concentration, Minutes;
I_d = Intensity at Td, Inches Per Hour;
Q_d = Runoff Rate at Td, CFS;
K = Ratio of Pre and Post- Developm
V = Storage Volume in CF;

SUBSCRIPTS:

2 = 2 - Year Storm
100 = 100 - Year Storm
h = Historic Condition
d = Developed Condition

$Q_{MAX.} = Q_{w_L} + Q_{w_U}$
$= C L_L H_L^{1.5} + C(L_U - L_L) H_U^{1.5}$

$Q_r = Q_{w_L} + Q_{w_U}$
$= C L_L (H_L - \frac{H_U}{3})^{1.5} + C(L_U - L_L)(.67 H_U)^{1.5}$

REQUIRED 2 YEAR STORAGE VOLUME

Td_2	Cd	A	Qr	Tc_h	Tc_d	Id_2	Qd_2	K	V_2
64.56	0.93	1.60	0.1484	25.61	9.51	0.51	0.75	2.6930	2382.18

REQUIRED 100 YEAR STORAGE VOLUME

Td_{100}	Cd	A	Qr	Tc_h	Tc_d	Id_{100}	Qd_{100}	K	V_{100}
39.79	0.95	1.60	0.8800	23.74	9.40	1.87	2.84	2.5255	5376.57
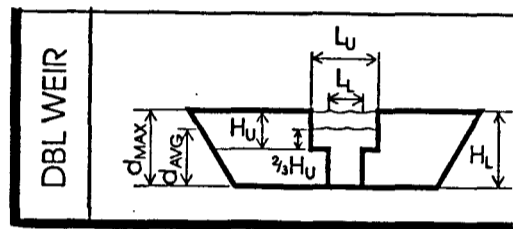
EXHIBIT 10.0

RESERVOIR No = 2.   2. RESERVOIR NAME = POND II.....
S = Ks * Z^b
 Ks = 0............   b = 0..........
 START ELEV = 0.....   INCREMENT = 0...

STAGE ft	ELEVATION ft	CO AREA sq ft	INC STORAGE cu ft	TOT STORAGE cu ft
0.00	33.27.	3312....	0	0
0.23	33.50.	3711....	807	807
0.73	34.00.	6214....	2481	3288
1.07	34.34.	10347...	2815	6103
0.00	0.00.	0.......	0	0
0.00	0.00.	0.......	0	0
0.00	0.00.	0.......	0	0
0.00	0.00.	0.......	0	0
0.00	0.00.	0.......	0	0
0.00	0.00.	0.......	0	0
0.00	0.00.	0.......	0	0

[áↄ] to cont   [PgUp]   [PgDn]   [Esc] to exit

Reservoir No. 2   STAGE / STORAGE / DISCHARGE   POND II.....

Storage values were input manually
Discharge values: Culvert struct A. Q = .6 * A * [2gh/k]^.5 * 0
                   Culvert struct B. Q = .6 * A * [2gh/k]^.5 * 0
                   Weir struct A.   Q = 3 * 0 * H ^ 1.5
                   Weir struct B.   Q = 3 * 0 * H ^ 1.5

STAGE	ELEVATION	INC STOR cu ft	TOT STOR cu ft	OUTFLOW cfs
0.23	33.50	81	807	0.00
0.28	33.55	248	1055	0.00
0.33	33.60	248	1303	0.00
0.38	33.65	248	1551	0.00
0.43	33.70	248	1799	0.00
0.48	33.75	248	2047	0.00
0.53	33.80	248	2296	0.00
0.58	33.85	248	2544	0.00
0.63	33.90	248	2792	0.00
0.68	33.95	248	3040	0.00
0.73	34.00	248	3288	0.00
0.76	33.03 *34.04*	282	3570 *3,640*	0.00
0.80	34.07 *2 YEAR*	282	3851	0.00
0.83	34.10	282	4133	0.00
0.87	34.14	282	4414	0.00
0.90	34.17	282	4696	0.00
0.93	34.20	282	4977	0.00
0.97	34.24	282	5259	0.00
1.00	34.27	282	5540	0.00
1.04	34.31	282	5822	0.00
1.07	34.34	282	6103	0.00

100 YEAR

EXHIBIT 11.0

Rectangular Channel Analysis & Design
Open Channel – Uniform flow

Worksheet Name: CURB FLOW THROUGH

Comment: DRAIN THROUGH SIDEWALK AT NORTH AVENUE

Solve For Depth

Given Input Data:

Bottom Width.....	1.50 ft
Manning's n......	0.015
Channel Slope....	0.0050 ft/ft
Discharge........	1.35 cfs ⎤ *100 Year Release From Pond II*

Computed Results:

Depth............	0.34 ft
Velocity........	2.66 fps
Flow Area.......	0.51 sf
Flow Top Width...	1.50 ft
Wetted Perimeter.	2.18 ft
Critical Depth...	0.29 ft
Critical Slope...	0.0077 ft/ft
Froude Number....	0.80 (flow is Subcritical)
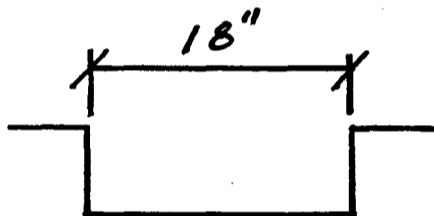
18"

Open Channel Flow Module, Version 3.16 (c) 1990
Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708

EXHIBIT 12.0

PROJECT: **DALTON PROPERTY @ 2892 N. AVENUE**

LOCATION: **CITY OF GRAND JUNCTION, COLORADO**

SUBJECT: **REQUIRED DETENTION POND VOLUME POND III**   BASINS: **B1**

DATE: **15-Dec-94**

CALC. BY: **STROUP**

FORMULAS PER CITY OF GRAND JUNCTION

Davg. = 0.67Dmax

2 YEAR RELEASE (WEIR ONLY)

$Qw = CL(H)^{1.5}$ =   **0.0696 CFS**

C=	3.14		
L=	0.5000 inches	0.0417 feet	
H=	7.8750 inches	0.6563 feet	

Qr = 0.55Qmax. (Weir using Qmax. or "h") =   0.0383

100 YEAR RELEASE (COMPOND WEIR)

$Qmax = C_1 L_1 (Ht)^{1.5} + C_2 (L_2 - L_1)Ht-H$ = **0.3579 CFS**

C_1 =	3.32	Ht =	12.0000 inches	1.0000 feet
C_2 =	3.32	H=	7.8750 inches	0.6563 feet
L_2 =	4.4375 inches		0.3698 feet	

Hu=Ht-H =   0.3438

$Qr = C_1 L_1 (Ht-(Hu/3))^{1.5} + C_2 (L_2 - L_1)(0.67Hu)^{1.5}$

=   0.1153 +   0.1204 = 0.2357

DETENTION FORMULAS

$Td_2 = (633.4 Cd A / (Qr - (Qr Tcd / (81.2Cd A))))^{0.5} - 15.6$

$Td_{100} = (1832 Cd A / (Qr - (Qr Tcd / (213Cd A))))^{0.5} - 17.2$

Id_2 = Intensity at Td_2 = 40.6 / (Td_2 + 15.6)

Id_{100} = Intensity at Td_{100} = 106.5 / (Td_{100} + 17.2)

Qd = Cd AId

K = Tch /Tcd

$V = 60(QdTd-QrTd-QrTcd +KQrTcd /2+Qr Tcd^2 /(2Qd))$

WHERE:

Td = Time of Critical Storm Duration,
C = Weir Coefficient; OR
C = Runoff Coefficient;
A = Area in Acres;
Qo = Detention Pond Average Release
Tc = Time of Concentration, Minutes;
Id = Intensity at Td, Inches Per Hour;
Qd = Runoff Rate at Td, CFS;
K = Ratio of Pre and Post- Development
V = Storage Volume in CF;

SUBSCRIPTS:

2 = 2 - Year Storm
100 = 100 - Year Storm
h = Historic Condition
d = Developed Condition

$Q_{MAX.} = Q_{W_L} + Q_{W_U}$
$= CL_L H_L^{1.5} + C(L_U-L_L)H_U^{1.5}$

$Qr = Q_{W_L} + Q_{W_U}$
$= CL_L(H_L-\dfrac{H_U}{3})^{1.5} + C(L_U-L_L)(.67H_U)^{1.5}$

REQUIRED 2 YEAR STORAGE VOLUME

Td_2	Cd	A	Qr	Tc_h	Tc_d	Id_2	Qd_2	K	V_2
66.12	0.93	0.43	0.0383	26.80	8.19	0.50	0.20	3.2723	**650.04**

REQUIRED 100 YEAR STORAGE VOLUME

Td_{100}	Cd	A	Qr	Tc_h	Tc_d	Id_{100}	Qd_{100}	K	V_{100}
39.77	0.95	0.43	0.2357	24.84	8.07	1.87	0.76	3.0781	**1472.82**
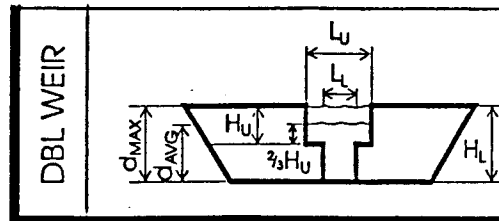
EXHIBIT 13.0

STAGE / STORAGE TABLE

1. RESERVOIR No = 3.   2. RESERVOIR NAME = POND III....
3. S = Ks * Z^b
     Ks = 0............   b = 0..........
     START ELEV = 0.....   INCREMENT = 0...

	STAGE ft	ELEVATION ft	CO AREA sq ft	INC STORAGE cu ft	TOT STORAGE cu ft
4	0.00	33.46.	1384....	0	0
5	0.54	34.00.	1560....	794	794
6	1.00	34.46.	1713....	752	1546
7	0.00	0.00.	0.......	0	0

Reservoir No. 3   STAGE / STORAGE / DISCHARGE   POND III....

Storage values were input manually
Discharge values: Culvert struct A.   Q = .6 * A * [2gh/k]^.5 * 0
                   Culvert struct B.   Q = .6 * A * [2gh/k]^.5 * 0
                   Weir struct A.   Q = 3 * 0 * H ^ 1.5
                   Weir struct B.   Q = 3 * 0 * H ^ 1.5

STAGE	ELEVATION	INC STOR cu ft	TOT STOR cu ft	OUTFLOW cfs
0.00	33.46	0	0	0.00
0.05	33.51	79	79	0.00
0.11	33.57	79	159	0.00
0.16	33.62	79	238	0.00
0.22	33.68	79	318	0.00
0.27	33.73	79	397	0.00
0.32	33.78	79	476	0.00
0.38	33.84	79	556	0.00
0.43	33.89	79	635	0.00
0.49	33.95	79	715	0.00
0.54	34.00	79	794	0.00
0.59	34.05	75	869	0.00
0.63	34.09 **34.12**	75	944 **990**	0.00
0.68	34.14 **2 YEAR**	75	1020	0.00
0.72	34.18	75	1095	0.00
0.77	34.23	75	1170	0.00
0.82	34.28	75	1245	0.00
0.86	34.32	75	1320	0.00
0.91	34.37	75	1396	0.00
0.95	34.41	75	1471	0.00
1.00	34.46 **100 YEAR**	75	1546	0.00

EXHIBIT 14.0

REVIEW COMMENTS

FILE #SPR-95-39   TITLE HEADING: Site Plan Review - Warehouse
                                                           Expansion - Carpets by Dalton

LOCATION: 2892 North Avenue

PETITIONER: Mays Concrete

PETITIONER'S ADDRESS/TELEPHONE: P.O. Box 4150
                                           Grand Junction, CO   81502
                                           242-5669

PETITIONER'S REPRESENTATIVE: Tom Logue, Landesign Ltd.

STAFF REPRESENTATIVE: Michael Drollinger

NOTE: WRITTEN RESPONSE (4 COPIES) BY THE PETITIONER TO THE REVIEW COMMENTS IS REQUIRED. A PLANNING CLEARANCE WILL NOT BE ISSUED UNTIL ALL ISSUES HAVE BEEN RESOLVED.

| MESA COUNTY BUILDING DEPARTMENT | 2/24/95 |
| Bob Lee | 244-1656 |

No comments.

| GRAND JUNCTION FIRE DEPARTMENT | 2/28/95 |
| Hank Masterson | 244-1414 |

1.   A fire flow survey is required - submit a complete set of building plans to the Fire Department for this purpose.
2.   Also, submit a floor plan of the warehouse showing storage areas, storage commodities and storage heights above floor level.
3.   Fire Department access is adequate according to site plan.

| CITY DEVELOPMENT ENGINEER | 3/6/95 |
| Jody Kliska | 244-1591 |

TCP - 11,700 s.f. x 4.88 trips/1000 s.f. - 57 weekday trips
TCP = $500 x 57/10 - $2,850.00

| COMMUNITY DEVELOPMENT DEPARTMENT | 3/8/95 |
| Michael Drollinger | 244-1439 |

See attached comments.

TO DATE, COMMENTS NOT RECEIVED FROM:
Colorado Department of Transportation

STAFF REVIEW

FILE: #SPR 95-39
DATE: March 2, 1995
STAFF: Michael Drollinger
REQUEST: Site Plan Review
LOCATION: 2892 North Avenue
ZONING: PC

STAFF COMMENTS:

1. Landscaping proposed meets the intent of the perimeter screening requirement.

2. If additional employees are anticipated in conjunction with this expansion, additional parking must be provided at a ratio of one (1) parking space per employee.

PLEASE TAKE NOTE OF THE FOLLOWING:

1. ALL SIGNS TO BE ERECTED ON THE SITE WILL REQUIRE A SIGN PERMIT PRIOR TO INSTALLATION OF THE SIGN.

2. SITE IMPROVEMENTS (INCLUDING LANDSCAPING) MUST BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS. ANY MODIFICATIONS MUST BE APPROVED, IN WRITING, BY THE COMMUNITY DEVELOPMENT DEPARTMENT. FAILURE TO INSTALL SITE IMPROVEMENTS AS PER THE APPROVED PLANS MAY DELAY THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

3. SITE IMPROVEMENTS (E.G. LANDSCAPING, SIDEWALK, ETC.) NOT COMPLETED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY MUST BE GUARANTEED.

You are urged to contact the Community Development Department if you require clarification or further explanation of any items.

95-39.wpd

STAFF REVIEW

██

FILE: #120-94

DATE: August 10, 1994

REQUEST: Rezone RSF-8/C-1 to PC

LOCATION: 2892 North Avenue

APPLICANT: Emory Cantrell

██

EXECUTIVE SUMMARY:

A proposed rezone from C-1 and RSF-8 to PC (Planned Commercial) at 2892 North
Avenue to permit the future expansion of a warehouse and the construction of mini-storage
units. The rear half of the 1.5 acre site is presently vacant while the front half along North
Avenue is developed as a retail/warehouse use.

EXISTING LAND USE: Vacant

PROPOSED LAND USE: Warehouse/Mini-storage

SURROUNDING LAND USE:
        NORTH: Single Family Residential
        SOUTH: Commercial (Vacant Store & Subway)
        EAST: Commercial (Big-O Tires)/Single Family Residential
        WEST: Commercial (Rent-a-Car & Berry's Garage)/Single Family Residential

EXISTING ZONING: C-1; RSF-8

PROPOSED ZONING: PC (Planned Commercial)

SURROUNDING ZONING:
        NORTH: RSF-8
        SOUTH: C-1
        EAST: RSF-8/C-1
        WEST: RSF-8/C-1

██

RELATIONSHIP TO COMPREHENSIVE PLAN:

No comprehensive plan exists for this area.

STAFF ANALYSIS:

The petitioner is requesting a rezoning of a 1.5 acre parcel at 2892 North Avenue to PC (Planned Commercial). The subject parcel is presently zoned RSF-8. The proposed uses on the property are warehousing and mini-storage. The property is bounded on the west, north and east by residential zones and uses. Access to the back portion of the site is presently limited to North Avenue, however, it may be possible that additional access could be secured through purchase of vacant or developed parcels to the north or east. Thus, development of the parcel under current zoning may be possible.

[handwritten left margin:] Objective?

[handwritten insert:] → staff believes

~~Any nonresidential development of the subject parcel must be designed to minimize impacts on the surrounding residential area, thus~~ a Planned Development concept for the property is appropriate. ~~Since the development on both the front and back portions of the site are integral, the entire parcel should be the subject of this rezoning application.~~ *[handwritten: as we have recommended]* ~~The Planned Commercial (PC) zone for this parcel will specify a maximum development density for the parcel, a list of permitted uses, and design standards.~~ Subsequent to approval by Planning Commission and City Council of the PC zoning, the petitioner will need only site plan review (administrative process) for all site development as long as the development conforms to the densities and standards set forth in the PC zoning. Therefore, we recommend that no final ~~plan approval be given in~~ conjunction with this application at this time.

[handwritten right margin:] The PC zone as recommended by staff specifies a maximum development density, a list of permitted uses and design standards.

Staff supports a rezone of the subject parcel ~~expanded to include both the existing developed area along North Avenue and the undeveloped area~~ to PC (Planned Commercial) ~~only if~~ the zoning includes the permitted uses, densities and design standards set forth ~~below.~~ *[handwritten: in the staff report]*

[handwritten right margin:] Petitioner will need final review of any development proposal subject to conformance with the recommended zoning requirements

[handwritten left margin:] Briefly →

(a.) **Permitted Uses:** uses permitted in the PC zone shall be limited to the following:
    (1) warehousing
    (2) retail showrooms not to exceed 10% of the gross square footage of site development permitted.
    (3) mini-storage with the restrictions as set forth in (f).

(b.) **Density:** the maximum FAR (Floor Area Ratio) permitted in the PC zone shall be 0.35. Given the existing site development (21,400 sq. ft.), the proposed FAR would permit an additional 29,420 sq. ft. of development.

(c.) **Setbacks:** all setbacks shall be as follows
    (1) minimum setback of all structures from residential uses or zones - 10 ft.
    (2) minimum distance between rows of mini-storage buildings - 25 ft.

(d.) **Screening and Buffering:** screening and buffering from adjacent residential uses and zones shall at minimum consist of both of the following:
    (1) a minimum eight (8) foot planted screen along the property line consisting of evergreen trees (min. height 5 feet) planted in offset rows. All landscaping must be provided with a pressurized, underground irrigation system.
    (2) a six (6) foot high solid wood or slatted chain-link fence.

e. **Parking:** parking shall be provided for the mini-storage facility at a minimum of one (1) stall per 50 storage units or fraction thereof. Parking for the warehouse and retail uses shall be as per City Code.

f. **Additional Restrictions**

(1) the following uses shall be prohibited in the mini-storage facility:

(a) Auctions, commercial, wholesale or retail sales, or garage sales;

(b) the servicing, repair or fabrication of motor vehicles, boats, trailers, lawn mowers, appliances, or other similar equipment;

(c) the operation of power tools, spray-painting equipment, table saws, lathes, compressors, welding equipment, kilns or other similar equipment;

(d) the establishment of a transfer and storage business;

(e) any use which is noxious or offensive because of odors, dust, noise, fumes or vibrations;

(f) no boats, vacant trailers and recreation vehicles may be stored on site.

limit the nuisance factor which may be associated w/ storage use the minor

g. **Signage:** The sign regulations of Section 5-7-7 pertaining to commercial zones shall apply.

h. **Site Plan Review:** Subsequent development proposals shall be subject to Site Plan Review provided that all the above criteria are met.

~~In the July 21, 1994 response to review comments,~~ the petitioner *has* agreed to incorporate the Community Development comments regarding driveway marking, lighting, pavement and building elevations into the final site design. *and will address other staff concerns regards drainage and or truck maneuvering* Other relevant site plan review considerations include site drainage. Also, the warehouse loading dock must be designed to accommodate a WB-50 truck.

STAFF RECOMMENDATION:

Staff recommends approval of the rezone of the entire tract with the conditions detailed in the staff analysis.

PLANNING COMMISSION RECOMMENDATION:

Planning Commission recommends approval of the rezone with the conditions in the staff report.

Objective: ~~Allow to be~~ ~~Permit development which is compatible~~ ~~with adjacent~~

Objective of development of the counts (margin note)

Permit development of property in a manner which protects the surrounding established residential neighborhood

• development of parcel under residential zoning is difficult (but possible) — would require purchase of adjacent lands

• Staff believes that any non residential development of the subject parcel must be designed to minimize impacts ~~of~~ on the surrounding res area, thus the Planned Development concept for the property is appropriate.