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File SPR-1996-210 Name: Unified Technical Center – 2518 / 2520 Blichmann

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**
		***Application form**
X		Review Sheets
X		Receipts for fees paid for anything
X	X	***Submittal checklist**
		***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
		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**
		***Staff Reports**
		***Planning Commission staff report and exhibits**
		***City Council staff report and exhibits**
		***Summary sheet of final conditions**

DOCUMENT DESCRIPTION:

X	X	Planning Clearance - ** - issued 10/3/96, 11 /18/96			
X	X	Correspondence			
X	X	Final Drainage Report – 9/19/96			
X		E-mails			
X	X	Landscape Plan –A-1 and A-2 - to be scanned			
X	X	New Site Plan			
X	X	Detail Maps			

SUBMITTAL CHECKLIST

SITE PLAN REVIEW

Location: 2518/2520 Bluchman Project Name: Unified Technical Center

Date Received 9-20-94

Receipt # _____

File # SPR-96-210

ITEMS		DISTRIBUTION																													
DESCRIPTION	SSID REFERENCE	● City Community Development	● City Dev. Eng.	● City Utility Eng.	O City Property Agent	O City Parks/Recreation	● City Fire Department	● ~~City Attorney~~	O City Downtown Dev. Auth.	● ~~County Planning~~ Forecast	● ~~County Bldg. Dept.~~ AMCO	O Irrigation District	O Drainage District	O Water District	O Sewer District	O U.S. West	O Public Service	O GVRP	O CDOT	O Corps of Engineers	O Walker Field	O Persigo WWT	O Mesa County Health	O State Environ. Health	O City Sanitation	O School Dist #51					TOTAL REQ'D.
● Application Fee $175.00	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					
● 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	1	1	1	1	1					
~~● Evidence of Title~~	VII-2	1			1			1																							
O Deeds	VII-1	1			1			1																							
O Easements	VII-2	1	1	1	1			1																							
O Avigation Easement	VII-1	1			1			1																							
O ROW	VII-2	1	1	1	1			1																							
O Improvements Agreement/Guarantee*	VII-2	1	1	1				1																							
O CDOT Access Permit	VII-3	1	1																												
O 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	1	1	1	1	1					
● Elevation Drawing	IX-13	1	1																												
● Site Plan	IX-29	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
O 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	1	1	1	1					
● Grading and Drainage Plan	IX-16	1	2										1							1											
O Storm Drainage Plan and Profile	IX-30	1	2										1			1	1	1													
O Water and Sewer Plan and Profile	IX-34	1	2	1			1							1	1	1	1	1													
O Roadway Plan and Profile	IX-28	1	2										1																		
O Road Cross-Sections	IX-27	1	2																												
O Detail Sheet	IX-12	1	2																												
● Landscape Plan	IX-20	2	1	1																											
O Geotechnical Report	X-8	1	1								1																				
● Final Drainage Report	X-5,6	1	2										1																		
O Stormwater Management Plan	X-14	1	2										1								1										
O Phase I and II Environmental Rerpot	X-10,11	1	1																												
O Traffic Impact Study	X-15	1	2																	1											

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

See also file # 36-91

PRE-APPLICATION CONFERENCE

Date: 9/13/96
Conference Attendance: Kathy P, Lou Grasso
Proposal: 25/8/2520 Blichmann
Location: Unified Technical Center
Tax Parcel Number: 2945-033-15-964
Review Fee: _____
(Fee is due at the time of submittal. Make check payable to the City of Grand Junction.)

Additional ROW required? _____
Adjacent road improvements required? _____
Area identified as a need in the Master Plan of Parks and Recreation? —
Parks and Open Space fees required? — Estimated Amount: _____
Recording fees required? — Estimated Amount: _____
Half street improvement fees/TCP required? ? Estimated Amount: _____
Revocable Permit required? —
State Highway Access Permit required? —
On-site detention/retention or Drainage fee required? yes

Applicable Plans, Policies and Guidelines _____

Located in identified floodplain? FIRM panel # _____
Located in other geohazard area? _____

Located in established Airport Zone? Clear Zone, Critical Zone, Area of Influence? _____
Avigation Easement required? _____

While all factors in a development proposal require careful thought, preparation and design, the following "checked" items are brought to the petitioner's attention as needing special attention or consideration. Other items of special concern may be identified during the review process.

O Access/Parking	O Screening/Buffering	O Land Use Compatibility
O Drainage	O Landscaping	O Traffic Generation
O Floodplain/Wetlands Mitigation	O Availability of Utilities	O Geologic Hazards/Soils

O Other _____
Related Files: _____

It is recommended that the applicant inform the neighboring property owners and tenants of the proposal prior to the public hearing and preferably prior to submittal to the City.

PRE-APPLICATION CONFERENCE

WE RECOGNIZE that we, ourselves, or our representative(s) must be present at all hearings relative to this proposal and it is our responsibility to know when and where those hearings are.

In the event that the petitioner is not represented, the proposed item will be dropped from the agenda, and an additional fee shall be charged to cover rescheduling expenses. Such fee must be paid before the proposed item can again be placed on the agenda. Any changes to the approved plan will require a re-review and approval by the Community Development Department prior to those changes being accepted.

WE UNDERSTAND that incomplete submittals will not be accepted and submittals with insufficient information, identified in the review process, which has not been addressed by the applicant, may be withdrawn from the agenda.

WE FURTHER UNDERSTAND that failure to meet any deadlines as identified by the Community Development Department for the review process may result in the project not being scheduled for hearing or being pulled from the agenda.

X _____ X _____

Signature(s) of Petitioner(s) Signature(s) of Representative(s)

CITY OF GRAND JUNCTION
ADMINISTRATIVE SERVICES
MEMORANDUM

DATE: September 18, 1996
TO: Mark Achen, Dave Varley, Ron Lappi, Jim Shanks, John Shaver, Greg Trainor
CC: Dan Wilson, Kathy Portner, Trent Prall
FROM: Jodi Romero, Customer Service Manager
RE: UTEC & Resulting Issues

After research into the UTEC situation, I have arrived at the following answers and questions regarding 3 basic issues:

ISSUE #1 -- <u>UTEC-Existing facility at 2508 Blichman Ave.</u>

The answer to everyone's question of how UTEC came to be on our sewer system without paying a PIF and getting a planning clearance is simple (however illegal it may be). UTEC is a cooperative educational effort between Mesa State and School District 51 and when Mesa State College was in charge of this construction project (spring '91) they **circumvented the entire process** by not obtaining a building permit. This means no certificate of occupancy, building permit, planning clearance, or sewer clearance (PIF) were issued for this project. It is my understanding that Mesa State has historically ignored local jurisdictions' procedures, processes, rules, etc.

This brings up the question of *what is the City's position on the past due PIF and monthly sewer charges (4 yrs worth) for this existing UTEC building?* This facility opened in August of 1992. I will wait for direction.

ISSUE #2 --<u>Present and Future Projects by School District 51</u>

At this time UTEC is looking to expand it's campus. Lou Grasso, consultant for School District 51, is the project manager. Grasso now has planning papers but has yet to submit anything in writing. It appears as though this expansion is to accommodate another 200 students and may possibly include a cafeteria. It also appears to be a completely separate structure.

It is my understanding that the School District has a written agreement with the Building Department that requires them to follow the building permit process. So because the School District is in charge of this UTEC project, they appear to be following the required processes right now?!

Per Kathy Portner, the City (Mark, Dan) is planning a meeting with the School District to come to a "final decision" on both this project and future projects of the District and whether they are within to City jurisdiction.

What is the City's position?? Again I will wait for direction on this issue.

ISSUE #3 -- <u>Mesa State College and other State Projects</u>

The final issue arising out of this is one with more of a legal angle. As I said before Mesa State has historically "ignored" us. *Do they have a legal basis to back them up??* Specifically in the last few years, Mesa has re-modeled their college center and more significantly is now constructing the new dormitories. My initial research into these results in the same scenario, that they did not go through the building permit process and therefore avoided all City processes. The college center is being billed monthly, but I can not find evidence of a PIF being paid. Of course the dormitories are not completed, but there is no evidence of a PIF being paid (which I am sure would be significant) and it brings up the additional problem of even getting the account/address into the system to set up billing for monthly sewer service fees.

The final question....*are both the City & County going to continue to allow Mesa State to ignore their processes? What is our legal vs. practical position?*

IN CONCLUSION --

We (Customer Service and Community Development) are doing all within our power to regulate construction and connection to the sewer system, but when the entire system is circumvented we obviously lose some ability to do so.

I wanted to include all participants in the E-mail circuit, but I would imagine initial direction would come from you Mark.

Thanks! If anyone wants more information, please contact me.

FINAL DRAINAGE REPORT
FOR
UTEC SITE IMPROVEMENT

PREPARED FOR:
SCHOOL DISTRICT 51
GRAND JUNCTION, COLORADO

PRESENTED TO:
THE CITY OF GRAND JUNCTION

ROLLAND ENGINEERING

405 RIDGES BLVD., SUITE A
GRAND JUNCTION, CO 81503
(970)-243-8300

ROLLAND ENGINEERING

405 RIDGES BOULEVARD, SUITE A
GRAND JUNCTION, COLORADO 81503
(970) 243-8300

Sep 19, 1996

Ms. Jody Kliska
Development Engineer
250 North 5th Street
Grand Junction, CO 81501

RE: FINAL DRAINAGE REPORT FOR UTEC SITE IMPROVEMENT

Dear Jody;

Enclosed you will find the Final Drainage Report for UTEC SITE IMPROVEMENT. Drainage computations for 2-Year and 100-Year design storms were performed for this report.

Please call us if you have any questions or need any additional information. Thank you very much for your time and consideration regarding this report.

Respectfully submitted

ROLLAND ENGINEERING

WEI LI; EIT

Enclosures

I HEREBY CERTIFY THAT THIS REPORT (PLAN) FOR THE FINAL DRAINAGE DESIGN OF "UTEC SITE IMPROVEMENT" WAS PREPARED UNDER MY DIRECT SUPERVISION.

REGISTERED PROFESSIONAL ENGINEER
STATE OF COLORADO, NUMBER 12896

FINAL DRAINAGE REPORT
FOR
UTEC SITE IMPROVEMENT

PREPARED FOR:
SCHOOL DISTRICT 51
GRAND JUNCTION, COLORADO

PREPARED BY:

ROLLAND ENGINEERING
405 RIDGES BLVD., SUITE A
GRAND JUNCTION, CO 81503
SEP 19, 1996

TABLES OF CONTENTS

UTEC DRAINAGE

GENERAL LOCATION AND DESCRIPTIONS

UTEC (United Technical Education Center) is an approximate 6.6 acres site located in the Foresight Industrial Park of Grand Junction, Colorado. The project site lies immediately South of F 1/2 Road, North of Blichman Ave, and approximately 700 feet East of 25 road. Access to the site can be gained from Blichman Ave and F 1/2 Road. The ground is covered with spare short native grasses and some dirt piles.

The site has soils consisting of a Ravola sandy loam (Rf) and a Billings silty clay loam (Bc).

EXISTING DRAINAGE CONDITIONS

The site has a natural slope of 1.0 % to 1.5% on average toward the Southwest. Drainage basin limits for this site are defined by the F 1/2 road just north of the property and site improvement just East of the property line. There is no off-site runoff contribution to this site. At present, the site drains to Southwest to Blichman Ave and Foresight Circle street gutter system. Runoff from this site ultimately drains to the canal on the south side of Patterson Road. There are no previously determined 100-Year floodplain on this site.

PROPOSED DRAINAGE CONDITIONS

Of the 6.6 acres site, approximately only 4.5 acre will be improved with paved parking lot, building or landscaping. Runoff from the entire site will drain to a proposed detention pond at the southwest corner of the property via valley pan, storm inlets and storm sewers. Stormwater will then be released to the street gutter on Blichman and Foresight Circle at historic rates.

DESIGN CRITERIA AND APPROACH

We are not aware of any Master Plan or any other limitations on this site.
The Hydrology and Hydraulic computations conducted for this site utilized the STORMWATER MANAGEMENT MANUAL (JUNE, 1994 Edition). The Rational Method was used to perform the analysis for the 2 and 100 Year Design Events.

UTEC DRAINAGE

SUMMARY

Summarized below are the drainage calculations for this project:

Project Area: A =6.6 acres

Drainage Calculation Method: Rational Method

Design Storm Events: 2-Year and 100-Year Storms

Pre-development Runoff Rates:

2-Year Historic Storm:
$Q_{2h} = 1.16$ cfs

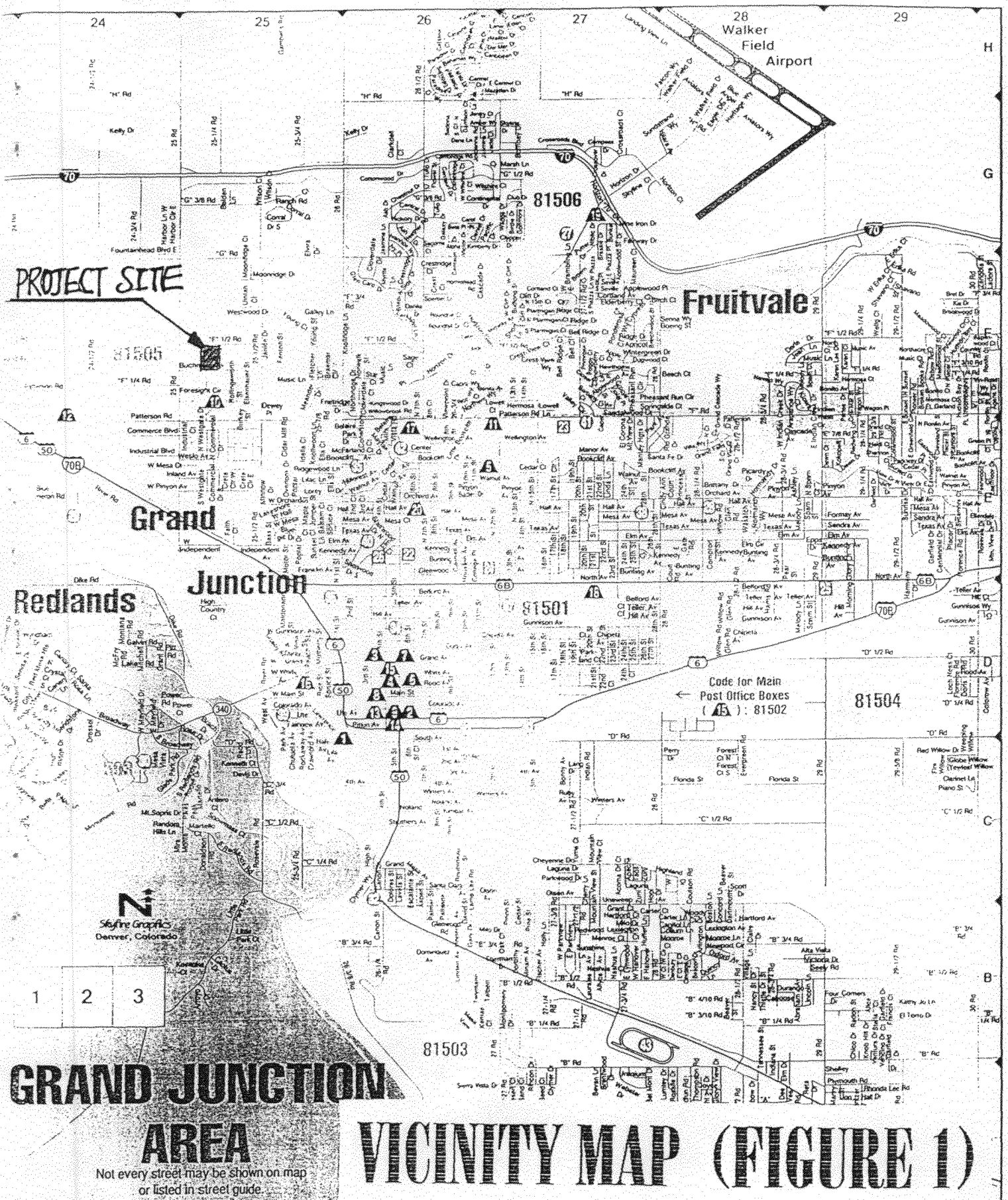
100-Year Historic Storm:
$Q_{100h} = 3.81$ cfs

Post-development Runoff Rates:

2-Year Developed Storm:
$Q_{2d} = 4.09$ cfs

100-Year Developed Storm:
$Q_{100d} = 11.55$ cfs

Need help using this directory?
Call 1-800-422-1234

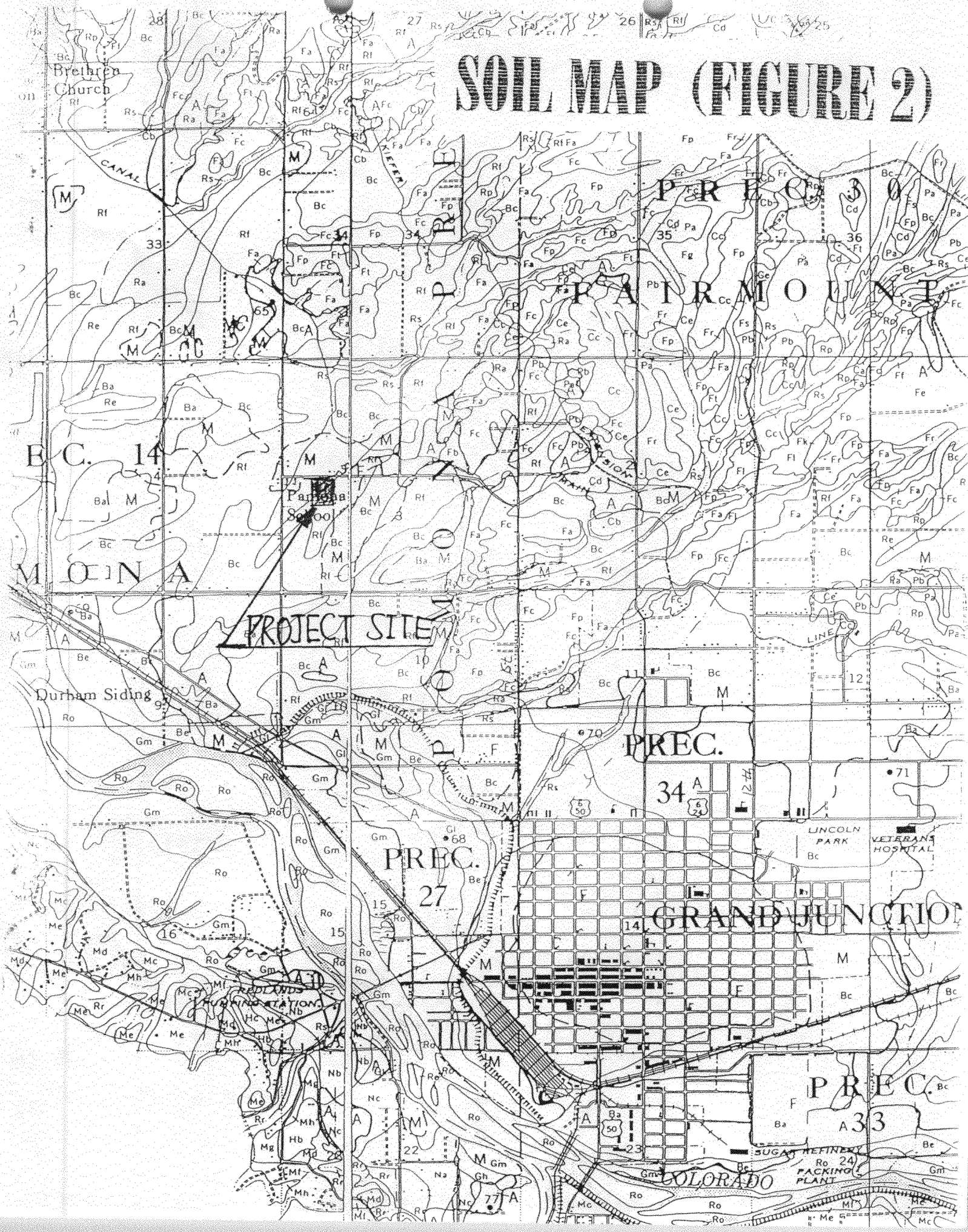


GRAND JUNCTION AREA

Not every street may be shown on map or listed in street guide.

VICINITY MAP (FIGURE 1)

SOIL MAP (FIGURE 2)



APPENDIX A

UTEC DRAINAGE

HISTORIC CONDITION

1. Drainage Area A = 6.6 Acre

(1)2-Year Storm:

Hydrological soil group: B

Runoff Coefficient C_{2h} = 0.20 (meadow)

Overland Flow Length L_o = 300 ft

Overland flow slope S_o =1.2%

Overland flow time To = $1.8(1.1-C)(L)^{0.5}/(S)^{0.333}$

$=1.8(1.1-0.20)(300)^{0.5}/(1.2)^{0.33} \approx 26.4$ min

Shallow concentrated flow length Ls=249 ft

Flow velocity V=1.1 ft/s (nearly bare and untilled)

Ts = 249/1.1/60 = 3.8 min

Time of concentration Tc=26.4 +3.8 =30.2 min

Intensity I_{2h} = 0.88 in/hr

Runoff Q_{2h} =CIA=0.20*0.88*6.6 =***1.16 cfs***

(2) 100-Year Storm:

Hydrological soil group: B

Runoff Coefficient C_{100h} = 0.25 (meadow)

Overland Flow Length L_o = 300 ft

Overland flow slope S_o =1.2%

Overland flow To = $1.8(1.1-C)(L)^{0.5}/(S)^{0.333}$

$=1.8(1.1-0.25)(300)^{0.5}/(1.2)^{0.33} \approx 24.94$ min

Shallow concentrated flow length Ls=249 ft

Flow velocity V=1.1 ft/s (nearly bare and untilled)

Ts = 249/1.1/60 = 3.8 min

Time of concentration Tc=24.94 +3.8 =28.7 min

Intensity I_{100h} = 2.31 in/hr

Runoff Q_{100h} =CIA=0.25*2.31*6.6 =***3.81 cfs***

DEVELOPED CONDITION

1. Drainage Area A = 6.6 Acres

(1)2-Year Storm:

Hydrological soil group: B

3 acres Pavement & Roof; Runoff Coefficient C_{2d} = 0.93

UTEC DRAINAGE

DEVELOPED CONDITION

3.6 acres bare ground & landscaping; Runoff Coefficient $C_{2d} = 0.20$
Composite runoff coefficient C_{2dc} =(0.2*3.6+0.93*3)/6.6=0.53
Overland Flow Length L_o = 300 ft
Overland flow slope S_o = 1.2%
Overland flow time To =$1.8(1.1-C)(L)^{0.5}/(S)^{0.333}$=$1.8(1.1-0.53)(300)^{0.5}/(1.2)^{0.333}$ =16.72 min

Storm sewer flow: 182.5 lf 8" PVC at 1.25%, V_8=5.6 ft/s
T_8 =182.5/5.6 /60=0.54 min

388 lf 15" PVC at 0.55%, V_{15}=5.6 ft/s
T_{15} =388/5.6 /60=1.15 min
Time of concentration Tc =16.72 +0.54+1.15=18.41
I_{2d}=1.17 in/hr
Q_{2d}=CIA=0.53*1.17*6.6=***4.09 cfs***

(1)100-Year Storm:
Hydrological soil group: B
3 acres Pavement & Roof; Runoff Coefficient $C_{2d} = 0.95$
3.6 acres bare ground & landscaping; Runoff Coefficient $C_{2d} = 0.25$
Composite runoff coefficient C_{2dc} =(0.25*3.6+0.95*3)/6.6=0.57
Overland Flow Length L_o = 300 ft
Overland flow slope S_o = 1.2%
Overland flow time To =$1.8(1.1-C)(L)^{0.5}/(S)^{0.333}$=$1.8(1.1-0.57)(300)^{0.5}/(1.2)^{0.333}$=15.56 min

Storm sewer flow: 182.5 lf 8" PVC at 1.25%, V_8=5.6 ft/s
T_8 =182.5/5.6 /60=0.54 min

388 lf 15" PVC at 0.55%, V_{15}=5.6 ft/s
T_{15} =388/5.6 /60=1.15 min
Time of concentration Tc =15.56 +0.54+1.15=17.25
I_{100d}=3.07 in/hr
Runoff Q_{100d} =CIA=0.57*3.07*6.6=***11.55cfs***

SUMMARY OF RUNOFF RATES

	HISTORIC CONDITION	DEVELOPED CONDITION
10-YEAR STORM:	Q_{2h} = 1.16cfs;	Q_{2d} = 4.09 cfs;
100-YEAR STORM:	Q_{100h} = 3.81 cfs;	Q_{100d} = 11.55 cfs;

UTEC DRAINAGE

INLET CAPACITY CHECKING

According to Table "G-1" (from City of Grand Junction Stormwater Management Manual, June, 1994) attached in the "References" of this report, single combination inlet has a capacity of 6.4 cfs for 2-Year storm and 13 cfs for 100-Year storm which are bigger than the calculated runoffs of Q_{2d}=4.09 cfs and Q_{100d}=11.55 cfs for this site.

STORM SEWER CAPACITY CHECKING

The 182.5 LF 8" PVC storm sewer from inlet #1 to inlet #2 has a slope of 1.25%, the capacity of this storm sewer is 1.9 cfs. (according to "Flow Chart for Pipe Flowing Full" attached in the "References" of this report). The drainage area for this storm sewer is about 1.2 acres. Runoff from this area are calculated as follows:

C_{100d} =0.25; Overland flow length L=300ft; Slope S=1.2%

Time of concentration $Tc=1.8(1.1-0.25)(300)^{0.5}/1.2)^{0.33}$ =25 min

I_{100d}=2.51 in/hr

Q_{100d}=CIA=0.25*2.51*1.2 =0.75 cfs (OK)

The 388 LF 15" PVC storm sewer from inlet #2 to the detention pond has a slope of 0.55%, the capacity of this storm sewer is 7.2 cfs. (according to "Flow Chart for Pipe Flowing Full" attached in the "References" of this report). The drainage area for this storm sewer is about half of the site, and half of 100-Year developed runoff for this site is 5.78 cfs.

The 170 LF 8" PVC storm sewer from inlet #4 to inlet #3 has a slope of 0.50%, the capacity of this storm sewer is 1.4 cfs. (according to "Flow Chart for Pipe Flowing Full" attached in the "References" of this report). The drainage area for this storm sewer is about 10% of the site, and 10% of 100-Year developed runoff for this site is 1.2 cfs.

The two (lay side by side) 99.5 LF 8" PVC storm sewer from inlet #3 to the detention pond has slope of 0.4%, the capacity of this storm sewer is 2.6 cfs (2*1.3=2.6 cfs) (according to "Flow Chart for Pipe Flowing Full" attached in the "References" of this report). The drainage area for this storm sewer is about 20% of the site, and 20% of 100-Year developed runoff for this site is 2.31 cfs.

DETENTION VOLUME DETERMINATION

(1) 2-Year Detention Volume

T_{2d} =18.41 min; T_{2h} =30.2 min

K=30.2/18.41 =1.64

Q_{2h}= 1.16 cfs; Q_r= 0.82*1.16 cfs =0.95 cfs

A=6.6 acres; C_{2d} =0.53

T_{d2} ={633.4*0.53*6.6/[0.95-0.95^2*18.41/(81.2*0.53*6.6)]$^{0.5}$-15.6 =34.3min

I_{d2} =40.6/(34.3+15.6)=0.81 in/hr

Q_{d2} =CIA =0.53 *0.81*6.6 = 2.83 cfs

V_{d2} =60{2.83*34.3-0.95*34.3-0.95*18.41+1.64*0.95*18.41/2 +0.95*0.95*18.41/(2*2.83)}

=3846 CF

UTEC DRAINAGE

DETENTION VOLUME DETERMINATION

(1) 100-Year Detention Volume

T_{100d} =17.25 min; T_{100h} =28.7 min

K=28.7/17.25 =1.66

Q_{100h}= 3.81 cfs; Q_r= 0.82*3.81 cfs =3.12 cfs

A=6.6 acres; C_{100d} =0.57

T_{d100} ={1832*0.57*6.6/[3.12-3.12^2*17.25/(213*0.57*6.6)]$^{0.5}$-17.2 =31.5min

I_{d100} =106.5/(31.5+17.2)=2.18 in/hr

Q_{d100} =CIA =0.57 *2.18*6.6 = 8.20 cfs

V_{d100} =60{8.20*31.5-3.12*31.5-3.12*17.25+1.66*3.12*17.25/2
+3.12*3.12*17.25/(2*8.20)}=9635 CF

DETENTION VOLUME AVAILABLE

Bottom of pond area=3880 sf; Bottom of pond elevation=4579.5

Top of pond area=12344 sf; Top of pond elevation=4581.5

The detention pond has a inside side slope 3:1

Detention volume available={3880+12344+(3880*12344)$^{0.50}$}*2/3=15430 CF

DETENTION POND RELEASE PIPES DESIGN

2-Year stormwater level in the detention pond is 4580.05

100-Year stormwater level in the detention pond is 4580.8

(1) 2-Year Release Pipe Size Determination

Try 8" PVC, Invert Elevation=4579.40; Cross-section area=0.35 sf

2-Year storm water depth=4580.05-4579.40=0.65 ft

Since 8" PVC diameter is 8"/12 = 0.67 ft, the pipe is flowing close to full. The capacity of the 8" PVC at 0.52% flowing full is 1.3 cfs (>Q_{2h}=1.16 cfs, OK)

(2) 100-Year Release Pipe Size Determination

Water depth above the centerline of 8" PVC H=4580.8-4579.4-0.67/2=1.07 ft

8" PVC release rate Q_8 =CA(2gH)$^{0.5}$ =0.6*0.35(2*32.2*1.07)$^{0.5}$ =1.74 cfs

Try 12" PVC, Invert elevation=4580.2 , slope S=1%, Cross-section area=0.79 sf

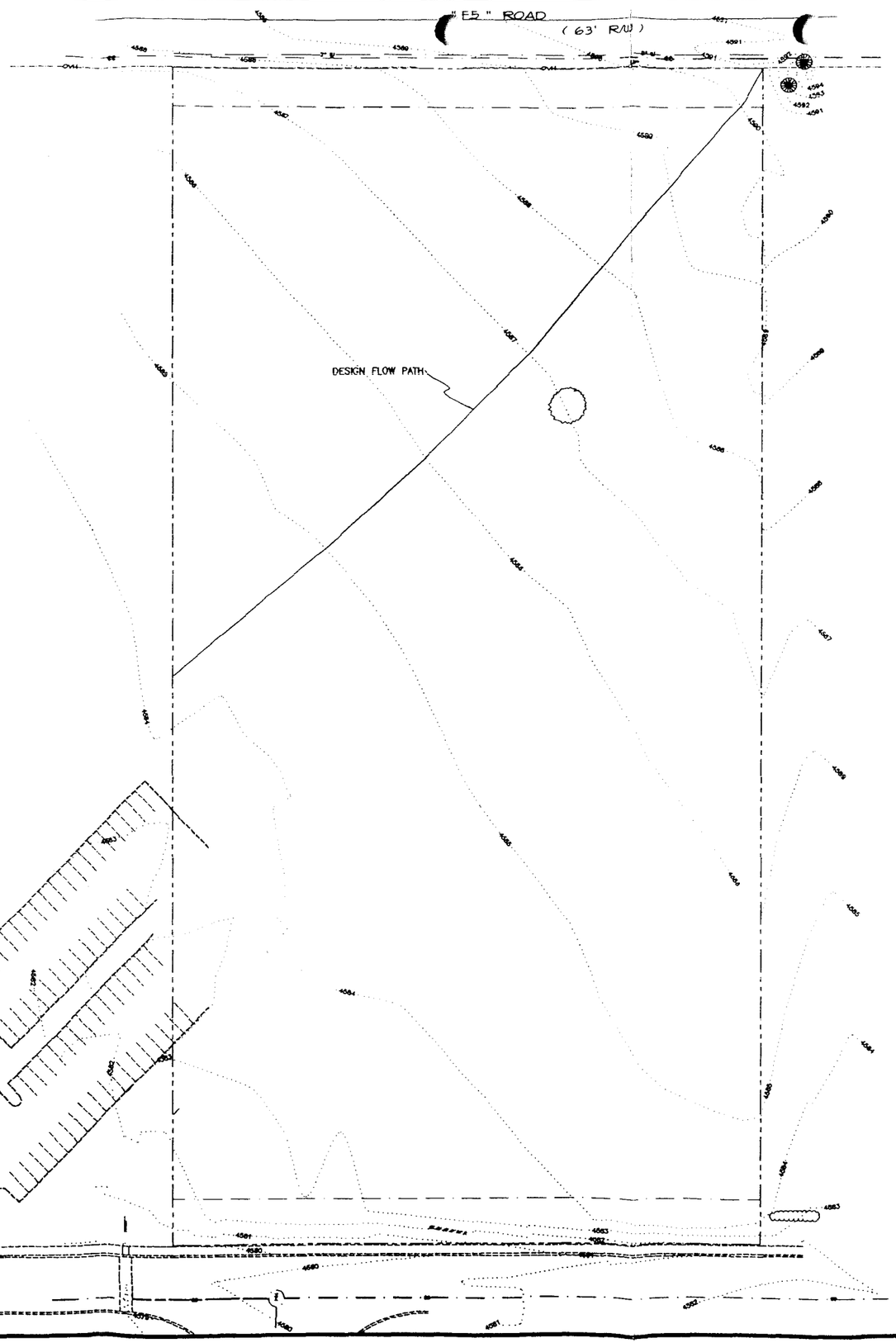
water depth above the invert of the pipe=4580.8-4580.2=0.6 ft (flowing half full)

For flowing half full, Hydraulic radius R=0.13 ft,

then the release rate Q=1.49*A*R$^{2/3}$*S$^{1/2}$/n

=1.49*(0.79/2)*(0.13)$^{2/3}$*(0.11)$^{1/2}$ /0.009=5.5 cfs (OK)

APPENDIX B



DILLON–HUNT P.C.

ARCHITECTURE AND FACILITY MANAGEMENT

804 BRAND AVENUE
GRAND JUNCTION, CO 81501
(970) 245-7283
(970) 245-7427 (FAX)

H+L ARCHITECTURE

1621 18TH STREET
SUITE 110
DENVER, COLORADO 80202
(303) 295-1782
(303) 292-6437 (FAX)

PROJECT PHASE
PHASE

VERSION

NOT FOR CONSTRUCTION
PDATE

PROJECT NO. PROJECT
DATE ISSUED DATE
FILE NAME TITLE
DRAWN BY DRAWING
SCALE SCALE
PROJECT MGR. OWNER

TITLE1 UTEC Site Improvement
TITLE2
TITLE3 pre-development Drainage map

SHEET NO. SHT
OF TOTAL

C:\UTEC\GDPLAN Fri Sep 20 13:25:22 1996 ROLLAND ENGINEERING

APPROVED FOR CONSTRUCTION

CITY DEVELOPMENT ENGINEER

DATE

CITY UTILITY ENGINEER

DATE

ACCEPTED AS CONSTRUCTED

CITY DEVELOPMENT ENGINEER

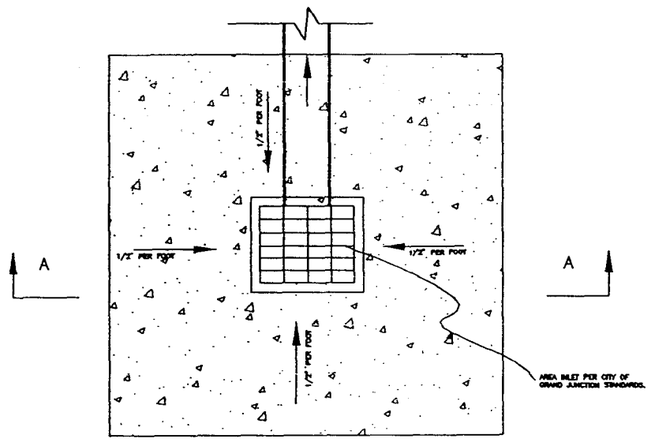
DATE

CITY UTILITY ENGINEER

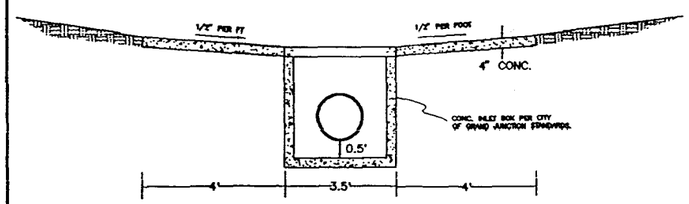
DATE

NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES IN THE FIELD PRIOR TO PERFORMING ANY WORK AFFECTING THEM.
2. ALL STORM SEWER SHALL BE C-900 PVC PIPE.
3. STORM INLET #2 AND #3 SHALL BE SINGLE GRATE WITH CURB OPENING NEENAH R-3246. STORM INLET #1 & #4 SHALL BE AREA INLET. CONSTRUCT STORM INLETS, FRAMES AND INLET BOXES PER CITY OF GRAND JUNCTION STDS..
4. PLEASE REFER TO THE ARCHITECTURAL SITE PLANS PER CURB, CURB GUTTER V-PAN DETAILS.
5. ALL WORKMANSHIP, MATERIAL AND ANY OTHER CONSTRUCTION REQUIREMENTS SHALL BE IN COMPLIANCE WITH THE CITY OF GRAND JUNCTION CONSTRUCTION SPECIFICATIONS.



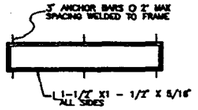
INLET #1 & #4 PLAN VIEW



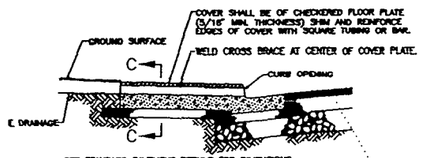
INLET A-A SECTION

AREA INLET DETAILS

NOT TO SCALE

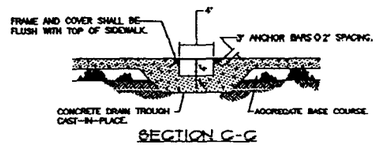


FRAME FOR SIDEWALK DRAIN TROUGH



SEE STANDARD PAVEMENT DETAILS FOR DIMENSIONS OF MONOLITHIC CURB GUTTER AND SIDEWALK.
NOTE: BOTH FRAME AND COVER SHALL BE FABRICATED STEEL. ALL STEEL SURFACES SHALL BE GALVANIZED PER AASHTO M-111.

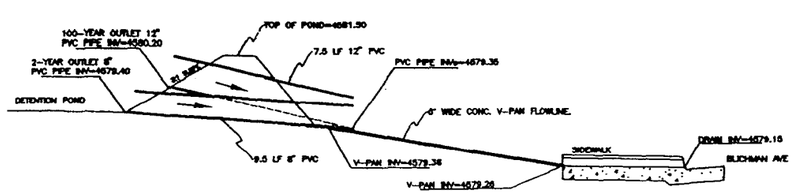
DRAIN TROUGH FOR SIDEWALK CROSSING



SECTION C-C

SIDEWALK CROSSING DETAILS

NOT TO SCALE



SCHEMATIC HYDRAULIC PROFILE

NOT TO SCALE

DILLON-HUNT P.C.
ARCHITECTURE AND FACILITY MANAGEMENT
804 GRAND AVENUE
GRAND JUNCTION, CO 81501
(970) 245-7383
(970) 245-7427 (FAX)

H+L ARCHITECTURE
1221 19TH STREET
SUITE 110
DENVER, COLORADO 80202
(303) 295-1782
(303) 293-8457 (FAX)

PROJECT PHASE
FINAL
APPROVED BY:

VERSION
NOT FOR CONSTRUCTION
PDATE

PROJECT NO. 95-007
DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: SHEFFERMAN
SCALE
DWG NO.

TITLE1 UTEC SITE IMPROVEMENT
TITLE2
TITLE3 POST-DEVELOPMENT DRAINAGE MAP

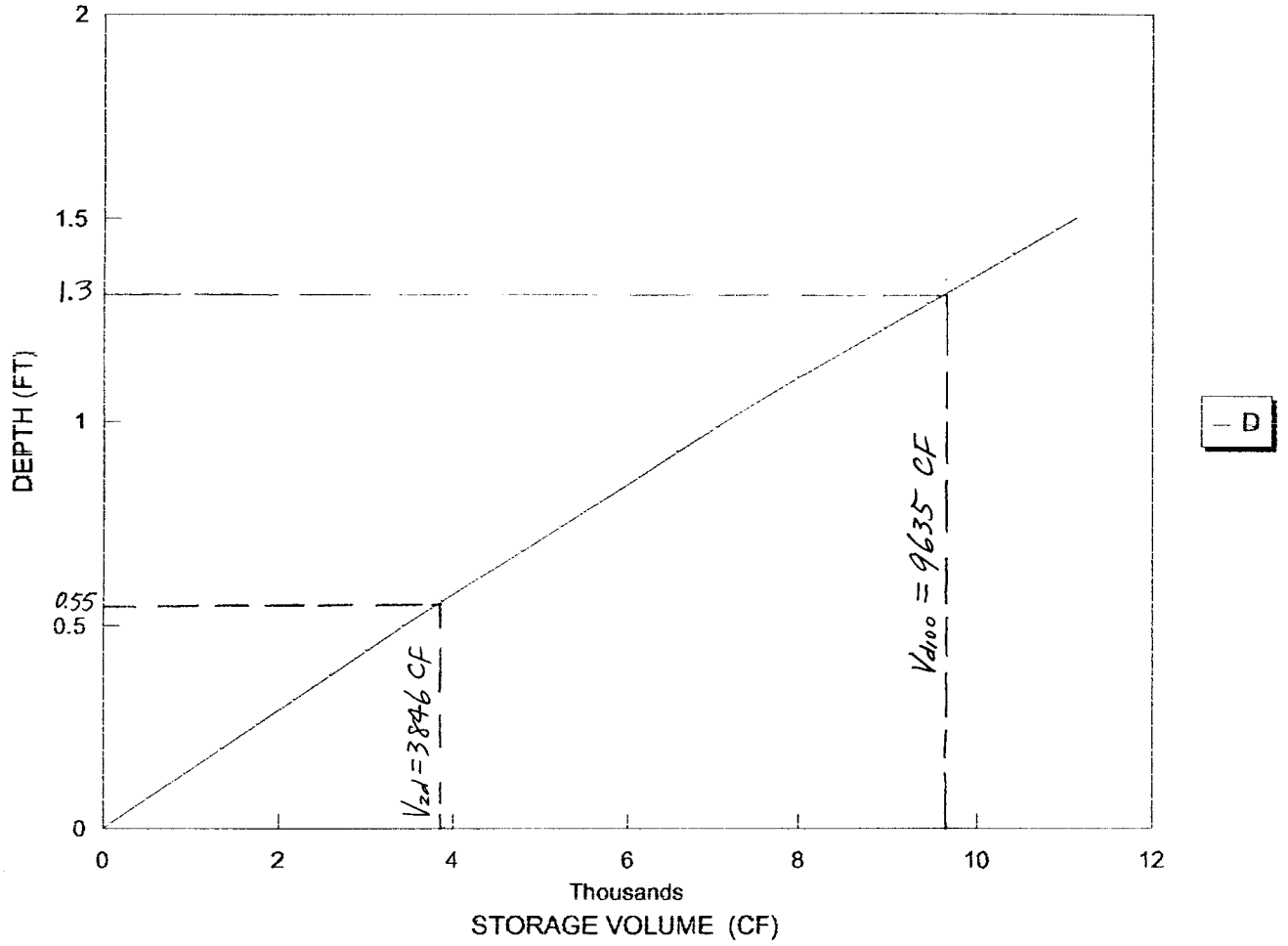
SHEET NO. SHT
OF TOTAL

C:\UTEC\GDPLAN Fri Sep 20 13:13:58 1996 ROLLAND ENGINEERING

APPENDIX C

VOLUME & DEPTH RELATIONSHIP

UTEC SITE PLAN



SUPPLEMENT

5. Hydrologic Soil Group In addition to values being listed by ARC classification, they are also listed according to a hydrologic soil group (HSG). Infiltration varies considerably with soil type, and the difference is accounted for by selecting a CN value under the appropriate soil type. The four HSGs are defined by SCS TR-55 as follows:

Group A soils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sands or gravels and have a high rate of water transmission (greater than 0.30 in/hr).

Group B soils have moderate infiltration rates when thoroughly wetted and consist chiefly of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately coarse textures. These soils have a moderate rate of water transmission (0.15-0.30 in/hr).

Group C soils have low infiltration rates when thoroughly wetted and consist chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine to fine texture. These soils have a low rate of water transmission (0.05-0.15 in/hr).

Group D soils have high runoff potential. They have low infiltration rates when thoroughly wetted and consist chiefly of clay soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. These soils have a very low rate of water transmission (0.-0.05 in/hr).

The SCS has published Soil Surveys for most areas, which map out soil "names" along with hydraulic properties allowing one to classify the HSG. Most soil surveys already contain a listing of the HSG, however. Another source that classifies the HSG once the soil "name" is known is the SCS TR-55 or NEH-4 (SCS 1972 & 1986).

In initial selection of the Hydrologic Soil Group (A, B, C, or D), care should be taken in matching soil profile conditions. Hydrologic Soil Groups (HSGs) taken from SCS Soil Surveys generally consider the profile to a depth to 60 inches, which is adequate. But they only reflect information found at the time of the survey. Earthwork in the area may have changed conditions, and there may have been changes in groundwater levels as well. These should be considered.

Some areas may not be mapped by an SCS Soil Survey. HSG must be selected by other general descriptions such as those summarized below.

HSG	Soil textures
A	Sand, loamy sand, or sandy loam
B	Silt loam or loam
C	Sandy clay loam
D	Clay loam, silty clay loam, sandy clay, silty clay, or clay

Billings silty clay loam, 0 to 2 percent slopes (Bc).—This soil, locally called adobe, is one of the most important and extensive in the Grand Valley. It covers nearly one-fifth of the Grand Junction Area. The areas occur on the broad flood plains and very gently sloping coalescing alluvial fans along streams. Many large areas are north of the Colorado River.

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

The color and texture of the soil profile vary from place to place. The 8- to 10-inch surface soil normally consists of gray, light-gray, light olive-gray, or light brownish-gray silty clay loam. This layer grades into material of similar color and texture that extends to depths of 3 or 4 feet. Below this depth the successive depositional layers show more variation. Although the dominant texture is silty clay loam, the profile may have a loam, clay loam, fine sandy loam, or a very fine sandy loam texture.

Where there are fairly uniform beds of Mancos shale and where the soil is not influenced by materials deposited by adjoining drainage courses, the profile varies only slightly within the upper 3 or 4 feet. In areas bordering drainage courses, however, the soil varies more in texture and color from the surface downward.

One small area about 1½ miles southeast of Loma consists of light grayish-brown or pale-brown heavy silty clay loam that shows only slight variation in texture to depths of 4 to 6 feet. The underlying soil material is more variable. Below depths of 6 to 10 feet the layers generally are somewhat thicker and have a higher percentage of coarse soil material.

Also included with this soil are several small areas totaling about 3 square miles that are dominantly pale yellow. These are located 2½ to 3½ miles northeast of Fruita, 5 miles north of Fruita, 2½ miles northeast of Loma, 3 to 5 miles north of Loma, 1½ miles northwest of Loma, and 4 miles northwest of Mack. In these areas the 8- or 10-inch surface soil is pale-yellow silty clay loam, and the subsoil is a relatively uniform pale-yellow silty clay loam to depths of 4 to 8 feet. The accumulated alluvial layers are difficult to distinguish, but in a few places transitional to Fruita soils there are small areas having a pale-brown to light-yellowish brown color. These transitional areas are included with Billings silty clay loam because they have a finer textured subsoil than is characteristic of the Ravola soils.

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

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

Use and management.—About 80 percent of this soil is cultivated. The chief irrigated crops are alfalfa, corn, dry beans, sugar beets, small grains, and tomatoes and other truck crops. Where the soil is located so as to avoid frost damage, tree fruits are grown.

Most of the field crops are grown in the central and western parts of the valley, or from Grand Junction westward. The entire acreage in tree fruits—approximately 3 square miles—lies between Grand Junction and Palisade. Because the climate is more favorable near Palisade, the acreage in orchard fruits is greater there. A few small orchards are located northeast of Grand Junction in the direction of Clifton. The main fruit acreage is between Clifton and Palisade. Peach orchards predominate, but a considerable acreage is in pears, especially near Clifton. Yields depend on the age of the trees and other factors, including management, but the estimated potential yield is somewhat less on this soil than on Mesa soils. This takes into account the slower internal drainage of this soil and its susceptibility to salinity if overirrigated. Yields of other crops vary according to the length of time the land has been irrigated, internal drainage or subdrainage, salt content of the soil, management practices, and local climate.

The uncultivated areas of this soil are mostly inaccessible places adjoining the larger washes, which occur mainly in the western part of the area, and those places that cannot be cropped profitably because they have inadequate drainage and a harmful concentration of salts. The uncultivated land supports a sparse growth of greasewood, saltbush, shadscale, rabbitbrush, ryegrass, peppergrass, and saltgrass. From 70 to 90 acres are required to pasture one animal during a season.

A number of places shown on the map by small marsh symbols are low and seepy. They could be ditched, but their acreage is likely too small to justify the expense. Left as they are, their salt content makes them worthless for any use except pasture.

Sizeable acreages of this soil apparently were overirrigated in the past. Irrigation water applied at higher levels to the north seeps upward in this soil where it occurs in low areas toward the river. Even now, new saline areas are appearing, and existing areas are getting larger. The total acreage affected by salts has remained more or less the same for the last two decades, but affected areas will continue to change in size and shape because of seepage.

Most fields are ditched where necessary. Some uncultivated areas require both leveling and ditching. In places subdrainage is inadequate because irregularities in the underlying shale tend to create pockets and prevent underground water from flowing into the drainage ditches. Also, in some areas where the alluvial mantle is 30 to 40 feet thick, the ditches are not always deep enough to drain the soil. Some areas are seepy because there are no ditches running in an east-west direction to intercept lateral flow of ground water from the over-

irrigated, permeable, medium-textured, stratified soils on the upper parts of the fan to the north. After being leveled, uncultivated areas would have to be cropped for 3 years before their salt content would be reduced enough to permit good yields.

Farmers can increase the organic-matter content of this soil by applying manure liberally and by growing alfalfa or clovers at least part of the time. A combination field crop and livestock type of farming favors improvement of this soil. Many of the small imperfectly drained areas may be kept in pasture. Strawberry clover and sweetclover are well suited, and mixtures of pasture grasses grow well.

Billings silty clay loam, 2 to 5 percent slopes (BD).—This soil covers a relatively small acreage in the Grand Valley. The areas are widely scattered. Except for its stronger slope, the soil is almost the same as Billings silty clay loam, 0 to 2 percent slopes. In a few places, notably north of Loma, there are areas having a pale-yellow color rather than the gray typical of the Billings soils.

Use and management.—Only about 15 percent of this soil is cultivated. Many of the areas lie along large drainageways or washes where they are difficult to reach. Even a larger number have such an uneven surface that considerable leveling would have to be done before they could be cropped. The cost of leveling, together with the expense of controlling erosion and gullying, discourages farmers from using them.

Many of the uncultivated areas have moderate concentrations of salts, but they are not particularly difficult to reclaim because they border natural ditches or washes which afford free disposal of irrigation water. Furthermore, for the most part, they have a porous substratum.

About the same crops are grown on this soil as on Billings silty clay loam, 0 to 2 percent slopes. The average yields are approximately the same.

Billings silty clay, 0 to 2 percent slopes (BA).—This soil, locally called heavy adobe, occurs well toward the Colorado River. It is on alluvial materials—4 to about 40 feet thick—that largely came from Mancos shale. Most of this soil lies east and southeast of Grand Junction and along the railroad between Grand Junction and Fruita.

The 8- or 10-inch surface soil consists of light brownish-gray, gray, or olive-gray silty clay. The layer is similar to the surface layer of Billings silty clay loam soils but it is harder and, in many places, darker. The subsoil consists of similarly colored layers of silty clay loam, silt loam, and silty clay. In places the soil is silty clay to depths exceeding 4 feet.

The entire profile is firm when moist and has a massive structure. The subsoil has many small irregularly shaped light-gray specks or indistinct mottles. Poorly defined light-colored streaks indicate the presence of lime, gypsum, or salts. The surface soil and subsoil are calcareous, the lime being well distributed. The fine texture of the soil greatly retards penetration of roots, moisture, and air.

Surface runoff is very slow to slow where the slope is less than 1 percent. Internal drainage is very slow because the subsoil is massive and very slowly permeable. Even with ample drainage ditches, the discharge of irrigation water is slow.

Tilth and workability are not good, because the soil has a fine texture and a low content of organic matter. Moreover, some fields contain areas 20 to 60 feet across that have excessive amounts of salts. Slick spots also occur. These salty areas and slick spots produce low or negligible yields of most crops and are extremely difficult to eliminate.

Use and management.—About 75 percent of this soil is cultivated. Most of the rest is affected by salts. Small grains, beans, sugar beets, and alfalfa are the chief crops. They yield less than on Billings silty clay loam, 0 to 2 percent slopes. Ordinarily, newly broken fields are cropped to oats or other small grains the first few seasons so that excess salts can be removed. Afterwards, if drainage is adequate, they may be planted to pinto beans, sugar beets, corn, or alfalfa. The very slow permeability of this soil makes it unsuitable for orchard crops. Also, it is located mainly in areas where the frost hazard is great. Probably the greater part of the irrigable acreage is used for sugar beets. Small grains, alfalfa, and pinto beans usually follow in the order named.

Billings silty clay, 2 to 5 percent slopes (BB).—This soil is similar to Billings silty clay, 0 to 2 percent slopes. It differs mainly in having greater slopes and a slightly finer textured and darker gray surface soil. In places, below depths of 3 or 4 feet, the silty clay or clay material is light olive gray.

The tilth and workability are poor. Surface runoff is medium, and internal drainage is very slow. The soil is better suited to irrigation than most of the larger nearly level areas of Billings silty clay, 0 to 2 percent slopes, many of which are affected by salts. Approximately 12 acres of this soil is in peach orchards. All the rest is normally used for cultivated crops, principally corn, pinto beans, and alfalfa. This soil is suited to about the same crops as Billings silty clay, 0 to 2 percent slopes, but it generally produces better yields.

Billings silty clay, moderately deep over Green River soil material, 0 to 2 percent slopes (BE).—This soil occurs on the outer margin of coalescing alluvial fans where 1 to 4½ feet of fine-textured deposits derived from shale overlies Green River soil materials.

Except for a few strips only a few rods wide that adjoin low-lying areas of Green River soils, this soil has not been altered by high overflows from the Colorado River. It is not likely that the main part of the soil will be covered by floodwaters from the Colorado River, as it lies well above the level of normal overflow.

Use and management.—About 85 percent of this soil is cultivated. The principal crops are alfalfa, corn, sugar beets, and pinto beans. A few peach orchards are on this soil near Clifton. Because the underlying strata are coarser, crops produce better on this soil than on most areas of the other Billings silty clay soils. Drainage and saline conditions have to be corrected before the soil will produce well.

Uncultivated acreages of this soil northwest of Grand Junction are saline, imperfectly drained, or both. Their tilth and workability are poor because they have a fine texture and a low content of organic matter.

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comparatively sharp rises or undulations having slopes of more than 5 percent that extend 4 to 6 feet above the prevailing level or in small irregularly shaped bodies on relatively smooth topography. Wherever the areas of Chipeta soil occur, they are too small and too intricately associated with the Persayo soil to be mapped separately.

Use and management.—About 25 percent of this complex is cultivated, but practically all of it could be. The Chipeta soil is not difficult to level, but the expense of leveling and the isolated location of the areas have not favored development for irrigation and cropping. The kinds of crops grown, the management practiced, and the yields produced are approximately the same as for Persayo-Chipeta silty clay loams, 0 to 2 percent slopes.

Ravola clay loam, 0 to 2 percent slopes (RA).—This soil, the second most extensive in the area, has developed in material that consists largely of reworked Mancos shale but includes an appreciable amount of sandy alluvium from the higher Mesaverde formation. The surface of these deposits is relatively level, but the depth of the deposits ranges from 5 to 30 feet. The soil is associated with the Billings silty clay loams and the Ravola fine sandy loams. The most important areas are east, northeast, and southeast of Fruita, north and northwest of Palisade, and north and northwest of Clifton.

The soil is much like the Billings silty clay loams but more porous because it contains more fine sand, especially in the subsoil. Ordinarily, the 10- or 12-inch surface layer consists of light brownish-gray to very pale-brown light clay loam. The underlying layers vary from place to place in thickness and texture and become more sandy below depths of 4 to 5 feet. The range in the subsoil is from fine sandy loam to clay loam.

Small fragments of shale and sandstone are common from the surface downward and are especially noticeable in areas nearest the source of the soil material. The entire profile is calcareous and friable, so internal drainage is medium and development of plant roots is not restricted. The surface is smooth. Most areas are at slightly higher levels than the associated areas of Billings silty clay loams and therefore have better drainage and a lower content of salts. The soil, however, is slightly saline under native cover, and in places it has strongly saline spots and a high water table.

Use and management.—About 95 percent of this soil is cultivated. The chief crops are alfalfa, corn, pinto beans, small grains, and, where climate is favorable, orchard fruits. Practically all the acreage used for tree fruits is near Clifton and Palisade. The acreage used for field crops varies from year to year, but by rough estimate about 30 percent is cropped to corn, 25 percent to alfalfa, 15 percent to pinto beans, 13 percent to orchard fruits, 10 percent to small grains, and the rest to sugar beets, tame hay, tomatoes, and various vegetable crops.

In general, the tilth and workability of this soil are favorable. The content of organic matter is generally less than 1 percent, but many farmers are improving the supply by growing more alfalfa and by using other improved management.

Ravola clay loam, 2 to 5 percent slopes (RB).—This soil differs from Ravola clay loam, 0 to 2 percent slopes, mainly in having greater slopes. Although the combined areas total only seven-tenths of a square mile, this soil is important because the largest single area—

approximately 300 acres—is located southeast of Palisade in the Vinelands and is used for peach growing. The remaining areas, widely scattered over the valley, total about 150 acres and are of minor importance.

The large area occupies a position intermediate between the Green River soils and the higher Mesa soils. Its underlying gravel and stone strata consist not only of sandstone but also of granite, schist, basalt, and lava. Much of the lava was deposited by drainage from the southeast. This large area was included with the soil unit largely because its color was similar to that of the other soil areas. Not many years ago subdrainage became inadequate for existing tree fruits and it was not until a number of tile drains were laid, as deep as 7 to 8 feet in places, that subdrainage was corrected in parts of this particular area.

Use and management.—All of the large soil area is in peaches. On it peach yields average as high as in any section of the valley, primarily because the danger of frost damage is negligible. Some of the orchards are now more than 50 years old but have produced steadily and still yield more than 400 bushels an acre according to reports from local growers. About half of the small scattered areas are cultivated. They are used largely for field crops because climatic conditions are not so favorable for peach growing. In building up the organic matter content, the growing of legumes, application of manure in large amounts, and use of commercial fertilizer generally are practiced.

Ravola very fine sandy loam, 0 to 2 percent slopes (RF).—This extensive and important soil occurs either along washes or arroyas extending from the north or on broad coalescing alluvial fans. The alluvial material from which the soil has developed was derived from sandstone and shale and ranges from 4 to 20 feet deep. The principal areas of the soil are north and northwest of Grand Junction and north, northwest, and southwest of Fruita.

This soil is much like Ravola fine sandy loam, 0 to 2 percent slopes, but is generally more uniformly level. The texture is prevailingly very fine sandy loam, but the percentage of silt is noticeably higher in some places. A few small areas that have a loam texture are included.

The 10- or 12-inch surface layer consists of light brownish-gray to very pale-brown very fine sandy loam. In some places the underlying thin depositional layers vary only slightly in color or texture. In other places, especially near drainage courses, the layers are more variable and may grade to loam, silt loam, or fine sandy loam. Nevertheless, layers of very fine sandy loam are more numerous. Below depths of 4 to 5 feet, the texture is sandier, and at depths of 8 to 12 feet strata of loamy fine sand, gravel, and scattered sandstone rock are common.

Disseminated lime occurs from the surface downward. Owing to the friable consistence of the successive layers, the tilth, internal drainage, available supply of moisture for plants, permeability to plant roots, and other physical properties are favorable and assure a wide suitability range for crops. The organic-matter content, however, is low. The soil is slightly saline under native cover and has a few strongly saline spots. Occasionally the water table is high.

Use and management.—More than 99 percent of this soil is cultivated. The chief crops are alfalfa, corn, pinto beans, small grains,

and truck crops. Corn is planted on an estimated 35 percent of the area, alfalfa on 20 percent, beans on 20 percent, small grains on 10 percent, and potatoes, tomatoes, sugar beets, and irrigated pasture on the rest. The percentage of land planted to the various crops fluctuates considerably. Yields have been increased by using improved soil management, such as application of barnyard manure; the growing of clovers and alfalfa frequently after corn, potatoes, sugar beets, and other crops; and the more liberal use of treble superphosphate and mixed commercial fertilizer.

Ravola very fine sandy loam, 2 to 5 percent slopes (Rg).—This soil, of minor importance because of its limited extent, occurs chiefly in the northwestern part of the county. Except for greater slope, it is very similar to Ravola very fine sandy loam, 0 to 2 percent slopes. Most of it is not cultivated. If it were leveled and cultivated, it would need about the same management as Ravola very fine sandy loam, 0 to 2 percent slopes, and should produce approximately the same yields.

Ravola fine sandy loam, 0 to 2 percent slopes (Rc).—This soil, fairly important agriculturally, occurs mostly east, northeast, and north of Fruita. The soil-forming material is derived largely from sandstone but has some admixture of silt or finer sediments of shale origin.

The 10- or 12-inch surface layer consists of light brownish-gray, pale-brown, or very pale-brown fine sandy loam. The underlying depositional layers generally range from 1 to 3 inches thick; they may have a fine sandy loam, fine sandy clay, very fine sandy loam, or loam texture. The gradation in texture from one layer to another is almost imperceptible in some places, but fairly distinct in others. In most places the material below 4 feet is more sandy and slightly lighter grayish brown than that above.

The soil is calcareous from the surface downward, but the lime is not visible. Because the successive layers are friable, deep-rooted crops are well suited. Internal drainage is medium to rapid, and moisture relations are favorable. Though the organic-matter content is low, other physical properties are favorable and allow good tilth, good drainage, and moderate permeability for deep-rooted crops. The soil is slightly saline under native cover and strongly saline in a few spots. It is subject to an occasional high water table.

Use and management.—About 98 percent of this soil is cultivated. The most important field crops are potatoes, corn, alfalfa, and pinto beans. Comparatively smaller acreages are in sugar beets, small grains, and tomatoes, cucumbers, and other truck crops. An estimated 30 percent of the cultivated acreage is cropped to corn, 25 percent to alfalfa, 20 percent to potatoes, 15 percent to pinto beans, 5 percent to small grains, and the rest to truck crops, largely tomatoes.

The trend in recent years has been toward larger acreages of potatoes, tomatoes, and pinto beans. In earlier days, a considerable acreage was used for tree fruits, mainly pears. Severe blight, excessive cost of growing and marketing the fruit, and unsuitable climate have caused gradual conversion to field crops.

With proper management, this soil should remain productive indefinitely. Definite rotations normally are not followed. Frequently, alfalfa is grown 4 or 5 years, corn 1 or 2 years, then oats or wheat, and finally pinto beans. Manure, if available, generally is applied to the corn crop. The most common fertilizer is treble superphosphate, applied at the rate of 100 to 150 pounds an acre for field crops and truck crops. Some potato growers use commercial fertilizer at the rate of about 150 pounds an acre.

Ravola fine sandy loam, 2 to 5 percent slopes (Rd).—Except for scattered areas totaling about 25 acres, most of this soil is in the Vinelands section east of Palisade. The soil-forming material is mostly local alluvium derived from shale and sandstone that has been brought down the drainage courses from the southeast. In areas east of Palisade a few scattered, rounded igneous gravel, cobbles, stones, and boulders in the lower subsoil indicate that there has been some admixture of sediments deposited in the past by the Colorado River.

The 10- or 12-inch surface layer is light brownish-gray or very pale-brown loam. The subsoil layers are similarly colored and dominantly of a fine sandy loam texture. Nevertheless, in places fine sandy loam, loam, and clay loam textures are represented in the subsoil. The soil is calcareous throughout. Although the organic-matter content is low, other physical properties insure good tilth, drainage, and permeability to deep-rooted crops. The soil is slightly saline under native cover and includes some strongly saline spots. Occasionally the water table is high.

Use and management.—Practically all of this soil is cultivated; deep-rooted crops are well suited. The two areas east of Palisade are in peach orchards and produce yields comparing favorably with those on Ravola clay loam soils in the same area. These two areas are small but valuable because they are located where the climate is ideal for tree fruits. The productivity of this soil, especially for orchard fruits, is practically the same as that of Mesa clay loam soils.

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

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

Northeast of Fruita, northwest of Mack, and southeast and northeast of Loma, this soil consists of pale-yellow to light-gray surface

REFERENCES

TABLE "A-1"
INTENSITY-DURATION-FREQUENCY (IDF) TABLE

Time (min)	2-Year Intensity (in/hr)	100-Year Intensity (in/hr)	Time (min)	2-Year Intensity (in/hr)	100-Year Intensity (in/hr)
5	1.95	4.95	33	0.83	2.15
6	1.83	4.65	34	0.82	2.12
7	1.74	4.40	35	0.81	2.09
8	1.66	4.19	36	0.80	2.06
9	1.59	3.99	37	0.79	2.03
10	1.52	3.80	38	0.78	2.00
11	1.46	3.66	39	0.77	1.97
12	1.41	3.54	40	0.76	1.94
13	1.36	3.43	41	0.75	1.91
14	1.32	3.33	42	0.74	1.88
15	1.28	3.24	43	0.73	1.85
16	1.24	3.15	44	0.72	1.82
17	1.21	3.07	45	0.71	1.79
18	1.17	2.99	46	0.70	1.76
19	1.14	2.91	47	0.69	1.73
20	1.11	2.84	48	0.68	1.70
21	1.08	2.77	49	0.67	1.67
22	1.05	2.70	50	0.66	1.64
23	1.02	2.63	51	0.65	1.61
24	1.00	2.57	52	0.64	1.59
25	0.98	2.51	53	0.63	1.57
26	0.96	2.46	54	0.62	1.55
27	0.94	2.41	55	0.61	1.53
28	0.92	2.36	56	0.60	1.51
29	0.90	2.31	57	0.59	1.49
30	0.88	2.27	58	0.58	1.47
31	0.86	2.23	59	0.57	1.45
32	0.84	2.19	60	0.56	1.43

Source: Mesa County 1991

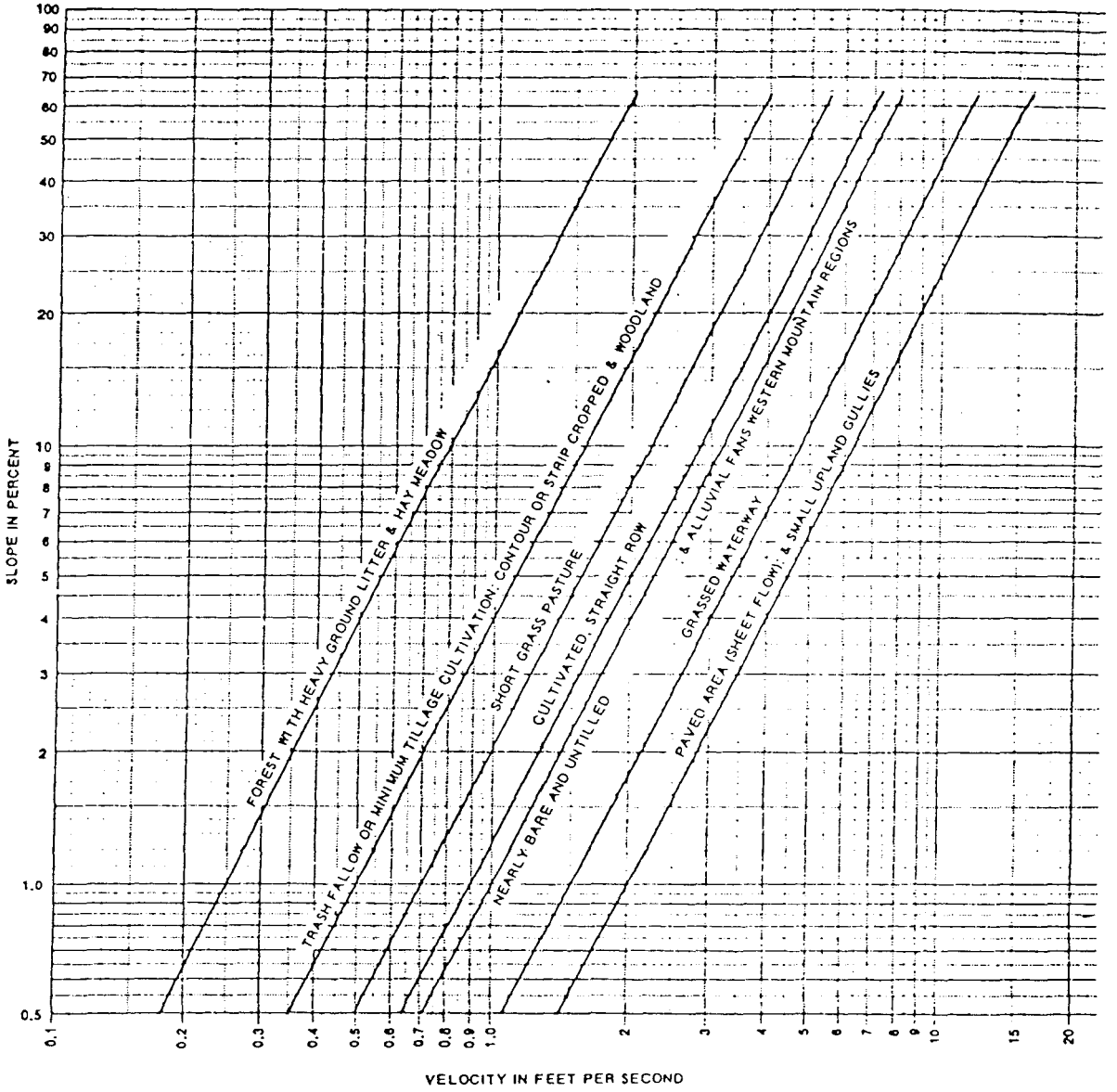
LAND USE OR SURFACE CHARACTERISTICS	SCS HYDROLOGIC SOIL GROUP (SEE APPENDIX "C" FOR DESCRIPTIONS)											
	A			B			C			D		
	0-2%	2-6%	6%+	0-2%	2-6%	6%+	0-2%	2-6%	6%+	0-2%	2-6%	6%+
UNDEVELOPED AREAS Bare ground	.10 - .20 .14 - .24	.16 - .26 .22 - .32	.25 - .35 .30 - .40	.14 - .22 .20 - .28	.22 - .30 .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"

REPRODUCED FROM FIGURE 15.2, SCS 1972



DETERMINATION OF "Ts" | FIGURE "E-3"

ROAD TYPE	COMBINATION INLET CAPACITY (CFS)					
	SINGLE		DOUBLE		TRIPLE	
	2-YR	100-YR	2-YR	100-YR	2-YR	100-YR
Urban Residential (local)	6.4	13	9.5	22	12.7	31
Residential Collector, Commercial and Industrial Streets	3.2	13	4.9	22	6.5	31
Collector Streets (3000 - 8000 ADT)	2.7	13	4.0	22	5.3	31
Principal and Minor Arterials	6.0	13	9.0	22	12.0	31

Inlet capacities shown above are based upon: 1) use of non-curved vane grates (similar to HEC-12 P-1 7/8-4 grates; 2) HEC-12 procedures; 3) clogging factors per Section VI; and 4) City/County standard inlets with 2-inch radius on curb face and type C grates. Capacities shown for 2-year storms are based upon depths allowed by maximum street inundation per Figure "G-3". The 100-year capacities are based upon a ponded depth of 1.0 foot. Note that only combination inlets are allowed in sag or sump conditions.

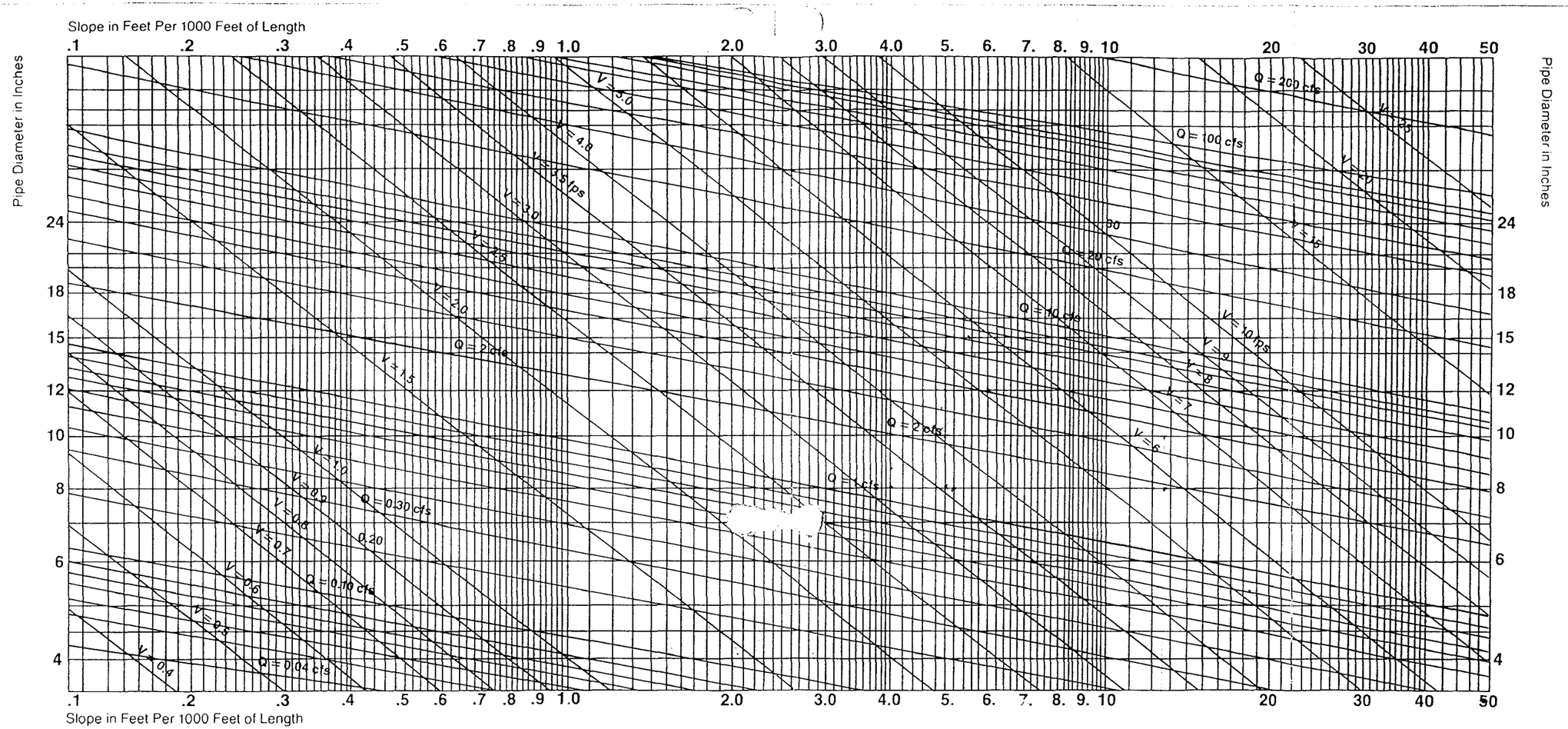
MAXIMUM INLET CAPACITIES: SUMP OR SAG CONDITION — TABLE "G-1"

Flow Chart for Pipe Flowing Full

Coefficient of Flow
n 0.009

Derived from the MANNING Formula
$v = \frac{1.486}{n} R^{2/3} S^{1/2}$

PVC Gravity Sewer Pipes have a coefficient of n = 0.009. Their high carrying capacities may often result in the use of flatter grades or in the use of smaller diameter pipe.



Conversion Chart
Table 1
Slope Values

Slope values derived from this chart are for coefficient of flow n = 0.009. They may be converted to slopes for other coefficients of flow by means of the following multiplying factors:

0.79	for n = 0.008	1.77	for n = 0.012
1.00	for n = 0.009	2.086	for n = 0.013
1.23	for n = 0.010	2.42	for n = 0.014
1.494	for n = 0.011	2.778	for n = 0.015

Conversion Chart
Table 2
Diameters

Diameters derived from this chart are for coefficient of flow n = 0.009. These may be converted to diameters for other coefficients of flow by means of the following multiplying factors:

0.956	for n = 0.008	1.114	for n = 0.012
1.000	for n = 0.009	1.147	for n = 0.013
1.040	for n = 0.010	1.180	for n = 0.014
1.078	for n = 0.011	1.211	for n = 0.015

Conversion Factors
CFS. MGD. GPM

To convert cubic feet per second (cfs) to million gallons per day (MGD), multiply cfs by 0.646. To convert cubic feet per second (cfs) to gallons per minute, multiply cfs by 448.83.

One cubic foot of water = 7.48 gallons

Example 1

Assume:

Flow Coefficient n = 0.009
Length = 2800 ft.
Pipe Size = 8 inch
Elevations—Upstream = 215'-0"
Downstream = 213'-0"

Required:

1) Flow rate when flowing full
2) Velocity

Difference in elevation divided by length of pipe line equals slope in ft./ft. Multiplying by 1000 = slope 0.7 ft./1000 ft. Enter graph at 0.7 slope and also at 8 inch diameter pipe. At intersection, lines for velocity and flow rate also intersect. These give flow rate of 0.5 cu. ft. per second and velocity of 1.3 feet per second.

Example 2

Assume:

Flow Coefficient n = 0.013
Pipe Size = 8 inch
Flow rate = 0.5 cu. ft./sec.

Required:

Slope

First solve for slope based on flow coefficient n = 0.009, then multiply result by the correcting factor as follows: Enter graph at 8" diameter and at flow rate 0.5 cu. ft./sec. At intersection find slope 0.71 ft./1000 ft. Correcting factor for n = 0.013 is 2.086 (See Table 1). Multiply 0.71 by factor 2.086 for corrected slope of 1.481 ft./1000 ft. for n = 0.013.

(Must use approximately twice the slope)

Example 3

Assume:

Flow Coefficient n = 0.013
Slope = 0.7 ft./1000 ft.
Flow rate = 0.5 cu. ft./sec.

Required:

Pipe Size

First find pipe size for flow coefficient n = 0.009, then convert result as follows: Enter flow chart at 0.7 slope and also at flow rate 0.5 cu. ft./sec. At intersection also find pipe diameter 8". Converting factor for n = 0.013 is 1.147 (See Table 2). Multiply 8" x factor 1.147 for corrected pipe diameter = 9.17". (Must use next size larger.)

Example 4

Assume:

An 8-inch diameter pipe with n = 0.009 installed at a slope of 1.6 ft/1000 ft. will give a minimum full flow velocity of 2 fps and flow rate of 0.698 cfs.

Required:

What will be the flow rate and velocity if the pipe is flowing 3/10ths full?

At Y/D = 0.3 Vp/Vf = 0.77 and Qp/Qf = .19 from the hydraulic elements chart on cover. Therefore Vp = .77 Vf or 1.54 fps and Qp = 19 Qf or 0.132 cfs.

Kathy,

I have turned in the packets for the UTEC project. With regard to the fire department, I did give them a copy of the plans and specifications about ten days ago so one of the packets does not include said plans.

You did indicate that you would speed up this process and I am most appreciative of that. We hope to obtain our building permit Friday, September 27,1996.

As we have not involved in this process in the past, please feel free to contact me if you need something else or you can give me direction in some area.

Again, because of the short time frame to have this project ready for the start of school next year, I am hopeful that everything will be in order.

Thank you for your time and effort.

Lou

UNIFIED TECHNICAL EDUCATION CAMPUS - PHASE II PROJECT
2508 Blichmann Ave.
Grand Junction, Colorado 81505

The Phase II UTEC project will consist of a building approximately forty thousand square feet(40,000s/f). Design and external materials will be similar to the current facility. Landscaping will also be consistent with the current facility and the guidelines established for Foresight.

Programs in the new structure include:

Culinary Arts	Computer Technology
Public Television	Bio-Health
CAD	Executive Development
Foods Incubator	Support Functions

Approximately two hundred students will be accommodated in the facility at any given time. Opening of the facility is scheduled for the 1997-98 school year. In addition to the current parking areas, new paved areas to accommodate 144 vehicles will be constructed. A new drive will be established on F1/2 road to access a new student parking area. This will alleviate a great deal of the traffic now occurring on Blichmann avenue. The current center parking area will be dedicated to visitor parking. Another area to the east of the new structure will be a new parking area for persons using the Public Television and Executive Development areas of the building.

As indicated in the building plans and specifications, drainage of the site has been addressed.

Total cost of the facility including construction, professional fees, utilities, fixed equipment and administrative costs is anticipated to be approximately $3,550,000

Submitted by: Louis A. Grasso Jr.
Project Administrator.

REVIEW COMMENTS

FILE #SPR-96-210 **TITLE HEADING:** UTEC Expansion

LOCATION: 2518 / 2520 Blichmann

PETITIONER: Mesa County Valley School District #51

PETITIONER'S ADDRESS/TELEPHONE: 2115 Grand Avenue
Grand Junction, CO 81501
245-2422 / 242-8500

PETITIONER'S REPRESENTATIVE: Lou Grasso

STAFF REPRESENTATIVE: Kathy Portner

NOTE: THE PETITIONER IS REQUIRED TO SUBMIT FOUR (4) COPIES OF WRITTEN RESPONSE AND REVISED DRAWINGS ADDRESSING ALL REVIEW COMMENTS.

CITY COMMUNITY DEVELOPMENT **10/3/96**
Kathy Portner **244-1446**

1. The plan must show the existing curb cuts on Blichman to be closed.
2. The landscaping plan must include a note indicating an underground, pressurized irrigation system will be provided for all landscaped areas.
3. A parking lot lighting plan must be provided as per section 5-5-1.F.2.i of the Zoning and Development Code.
4. Please show location and size of all proposed signage.
5. Please indicate the maximum number of employees using the facility at any given time. The parking requirement is one space per two students, plus one space for each employee.
6. The parking lot and street landscaping requirements are as follows (section 5-5-1.F):
   a. one street tree for each 50' of street frontage.
   b. a landscape barrier between the parking lot and the street is required to shield the lot from the street. The barrier cannot exceed 3 ½ feet in height at maturity, but must be at least 2 ½ feet at the time of planting. The barrier can be achieved either with plantings and/or berming.
   c. the parking areas must provide a minimum of 5% of the net interior area as landscaping and must meet the requirements of 5-5-1.F.c of the Zoning and Development Code.

I suggest we set up a time to meet and discuss the comments. Please call our main number at 244-1430 to set up an appointment.

CITY DEVELOPMENT ENGINEER **10/1/96**
Jody Kliska **244-1591**

1. Access to F ½ Road will not be allowed. The new parking lot needs to connect with the existing lot for efficient and sensible site circulation.

2. The entrance to the east parking lot needs to be relocated east away from the street intersection and line up with the entrance to Refrigeration Industries.
3. Please show the existing curb cuts on the site plan. It appears several existing curb cuts will need to be closed and replaced with curb, gutter and sidewalk.
4. The Transportation Capacity Payment is calculated at $25,740.00.
5. A permit from the City Engineer's office is required for any work in the public right of way.
6. The 15" storm sewer pipe running under the parking lot appears to have minimal cover. You may want to either use heavier pipe or increase the cover.

CITY FIRE DEPARTMENT **10/1/96**
Hank Masterson **244-1414**

If the proposed new building does not include an approved fire sprinkler system our requirements are:

1. Fire Department emergency vehicle access is required to within 150' of all exterior portions of the building. The existing site plan does not provide this access and must be revised.
2. On-site fire hydrants will be required and they must be located no more than 225' from required fire truck access. A fire hydrant is required at the north entrance to the site along F ½ Road. The total number of on-site hydrants required is three.
3. Fire flow requirements for a 40,000 square foot Type II one-hour building is 3,000 gallons per minute. The existing looped 8" fire line along Blichman will provide about 1800 gpm. Additional water supply must be provided-this can be accomplished by extending an 8" line west from 25 Road along F ½ Road to the north entrance to the site and supplying the required hydrant.

If the proposed building does include a complete fire sprinkler system:

1. The requirements for Fire Department access may be modified if the building is fully fire sprinkled-the Fire Department will accept the proposed site plan and the existing fire hydrants along Blichman as adequate for a fully sprinkled building.
2. The building type of construction can be Type II, non rated rather than Type II, One-hour.
3. The area separation wall can be eliminated.
4. The fire flow requirement for a fully sprinkled 40,000 square foot Type II, One-hour building is 1,100 gpm (fire flow can be reduced 75% in a sprinkled building). The number of required hydrants is one. The existing hydrants along Blichman are adequate and will provide the needed flows.

CITY UTILITY ENGINEER **10/3/96**
Trent Prall **244-1590**

CONTACT DAN TORELLO AT THE PERSIGO WASTEWATER TREATMENT PLANT FOR AN INDUSTRIAL WASTE REVIEW AT 244-1487.

SEWER PLANT INVESTMENT FEES APPEAR TO BE IN ORDER.

SEWER SERVICE LINE NOT SHOWN ON PLAN. IF UNREAL IS TO BE A 6" LINE A MANHOLE IS REQUIRED ON MAINLINE.

NO FURTHER OBJECTIONS. TCP

SPR-96-210

Foresight Park Owner & Tenants Association
P.O. Box 1509
604 25 Road
Grand Junction,
Colorado 81502

Post-it™ brand fax transmittal memo 7671	# of pages ▸ 2
To Ms Kathy Portner	From Bud Haupt
Co. Comm. Dev. Dept.	Co. Poma
Dept.	Phone # 241-4642
Fax # 244-1599	Fax # 241-3023

October 16, 1996

Mr. Lou Grasso
School District 51
2115 Grand Ave.
Grand Junction, CO 81501

Re: Unified Technical Education Campus - Phase II project

Dear Mr. Grasso :

The Foresight Park Architectural Control Committee (ACC) has reviewed the plans you submitted for the above project. We have the following comments and suggestions:

- The drawings indicate an access road from F ⅛ Road that is 30 feet wide. While the covenants require access roads have a maximum width of 26 feet, the ACC has agreed to grant you this variance.

- The covenants require that up to 20% of a front yard can be devoted to parking. The plans indicate that over 20% of the front yard is used for parking. The ACC has reviewed this and agreed to grant you this variance.

- We suggest that consideration be given to providing an unloading strip of pavement off of Blichmann to allow safer and easier loading and unloading of students from buses (an insert in the street may be enough to remove the buses from traffic). This would be a safety measure to protect people popping out from behind a bus to cross a street. This is just a suggestion and not mandated by the committee.

Before giving our final approval, the committee needs to review the following additional information:

1. A detailed landscape plan has been submitted for the south area. Could you please provide this plan for the north?

RECEIVED GRAND JUNCTION
PLANNING DEPARTMENT
OCT 16

Foresight Park [redacted] Owner & Tenants Association
P.O. Box 1509
604 25 Road
Grand Junction,
Colorado 81502

2. What will be the maximum number of employees working at one time? We need this information to verify that the amount of parking conforms with the covenants.

3. We eventually need plans for proposed signs. While this is not needed immediately, we need to review plans for signs before they are installed.

If you have any questions, please contact me at 241-4442 or by fax at 241-3023. I look forward to receiving the requested information.

Sincerely,

Bud Haupt
President
Foresight Park Owners & Tenants Association

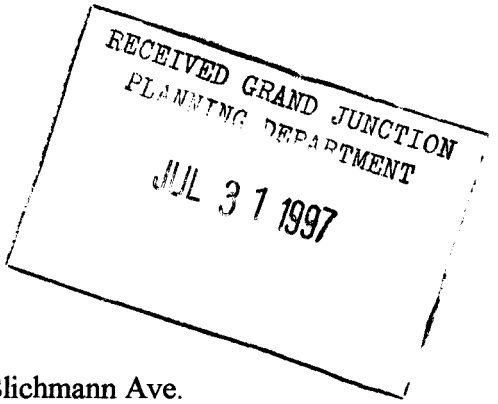
cc: Ms. Kathy Portner - via fax #244 - 1599
Community Development Department
250 No. 5th Street
Grand Junction, CO 81501

SPT-1996-210

file on UTECH

July 29, 1997

To: Community Development Department
250 N.5th st.,
Grand Junction, Colo. 81501



From: Lou Grasso
Mesa County Valley School District No. 51
2115 Grand Avenue,
Grand Junction, Colo. 81501

Subject: TCP fee for UTEC Phase II project: 2520 Blichmann Ave.

Please be advised that the invoice for the TCP fee in the amount of $6,000.00 has been submitted to the purchasing department. You should receive payment within the next twenty days.

Thank you for your time and consideration in this matter. I feel the amount is an appropriate one.

Respectfully,

Louis A. Grasso Jr.

RESPONSE:REVIEW COMMENTS
UTEC EXPANSION
October 7, 1996

City Community Development-Kathy Portner

1. Propose to use the existing curb cut to the east for entry to the parking area and close the existing curb cut to the west by installing curb/gutter and sidewalk.
2. An underground irrigation system is planned for the landscaped areas. Control boxes are indicated on page P-10of the project plans.
3. Parking lot lighting has been provided for in the plans. Please see page E.1.1.
4. Existing campus signage will be used.
5. It is anticipated that ten employees will be assigned to this facility at any given time. Please note that several of these employees are already on campus and working in the temporary units Using a 200 student number and ten employees, 110 spaces are required. 144 spaces have been incorporated into the plan.
6. (a) and (b) will be provided for. For safety reasons we do not wish to included raised concrete areas in the interior areas of the parking lots. As you will note on the plans, the north area parking is only slightly visible from Blichmann Avenue.

City Development Engineer-Jody Kliska

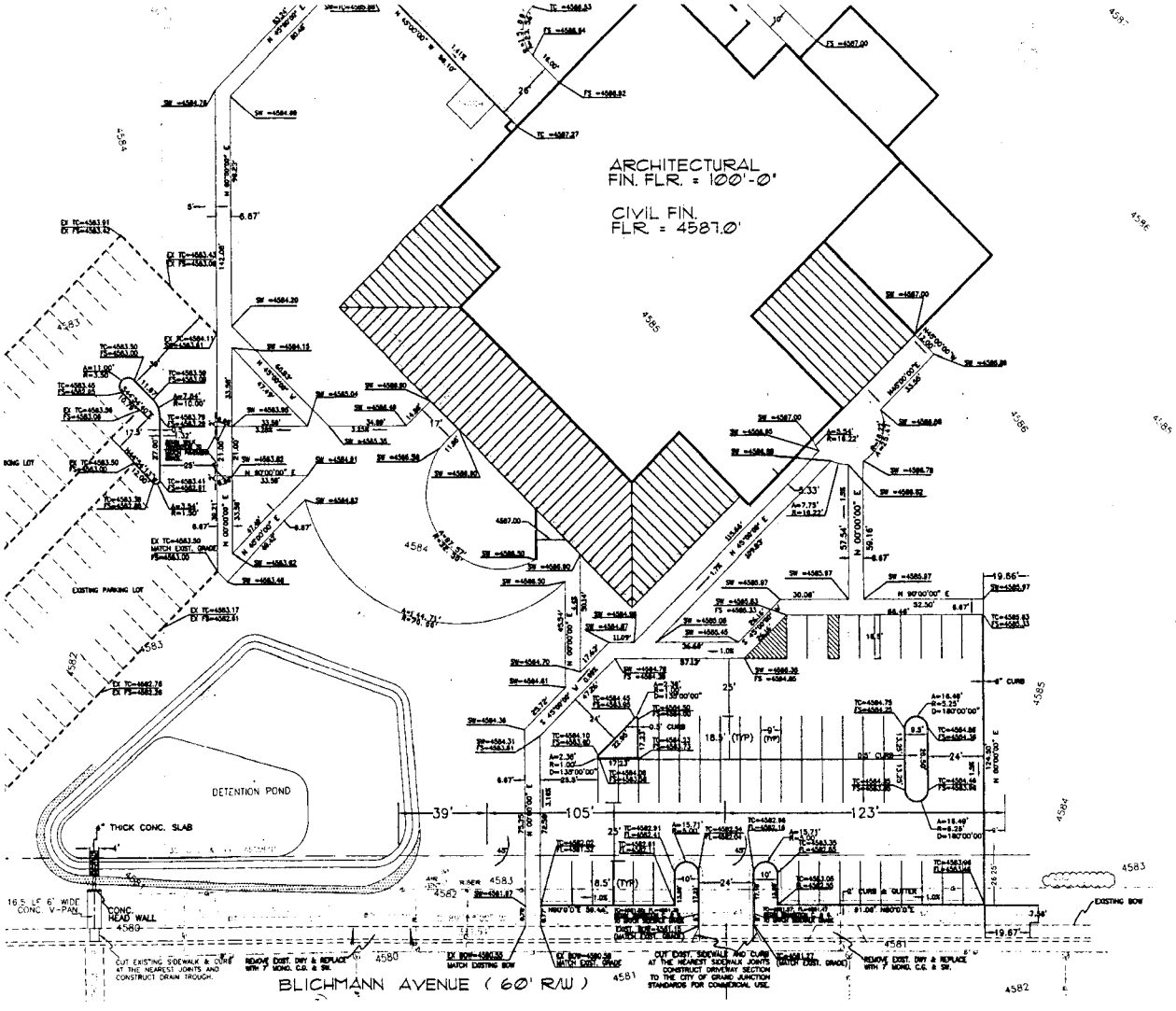
1, We are requesting that the plan as presented be allowed. It is not efficient or safe to connect the new north area to the existing lot. If necessary we would sign the north area lot to indicate a "No Right Turn" when exiting the lot to prevent traffic from proceeding east on F ½ road.
2. Please see the response to #1 under City Community Development.
3. Please see the response to #1 under City Community Development.
4. We do not believe this fee should be charged to the project. **We are not a developer and we are not a commercial venture.**
5. This will occur.
6. This will be reviewed by our engineer.

City Fire Department-Hank Masterson

The building will include a fire sprinkler system. Plans and specifications with a 1,100gpm are now being developed and will be submitted to your office as soon as possible.

City Utility Engineer-Trent Prall

1. Mr. Tonello as submitted a clearance to the building department.
2. The sewer PIF has been paid to Ms. Jody Romero.
3. A manhole will be installed as requested.



APPROVED FOR CONSTRUCTION

CITY DEVELOPMENT ENGINEER

DATE 11-13-96

CITY UTILITY ENGINEER

DATE

ACCEPTED AS CONSTRUCTED

CITY DEVELOPMENT ENGINEER

DATE

CITY UTILITY ENGINEER

DATE

LEGENDS

FL: FLOW LINE
TC: TOP OF CURB
SW: SIDEWALK
FS: FINISHED SURFACE
BT: BURIED TELEPHONE
BE: BURIED ELECTRICAL
IRR: IRRIGATION LINE
G: GAS LINE
W: WATER LINE
V: VALVE

DILLON–HUNT P.C.
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(970) 245-7437 (FAX)

HHL ARCHITECTURE
1621 18TH STREET
SUITE 110
DENVER, COLORADO 80202
(303) 295-1792
(303) 292-6437 (FAX)

PROJECT PHASE: DD

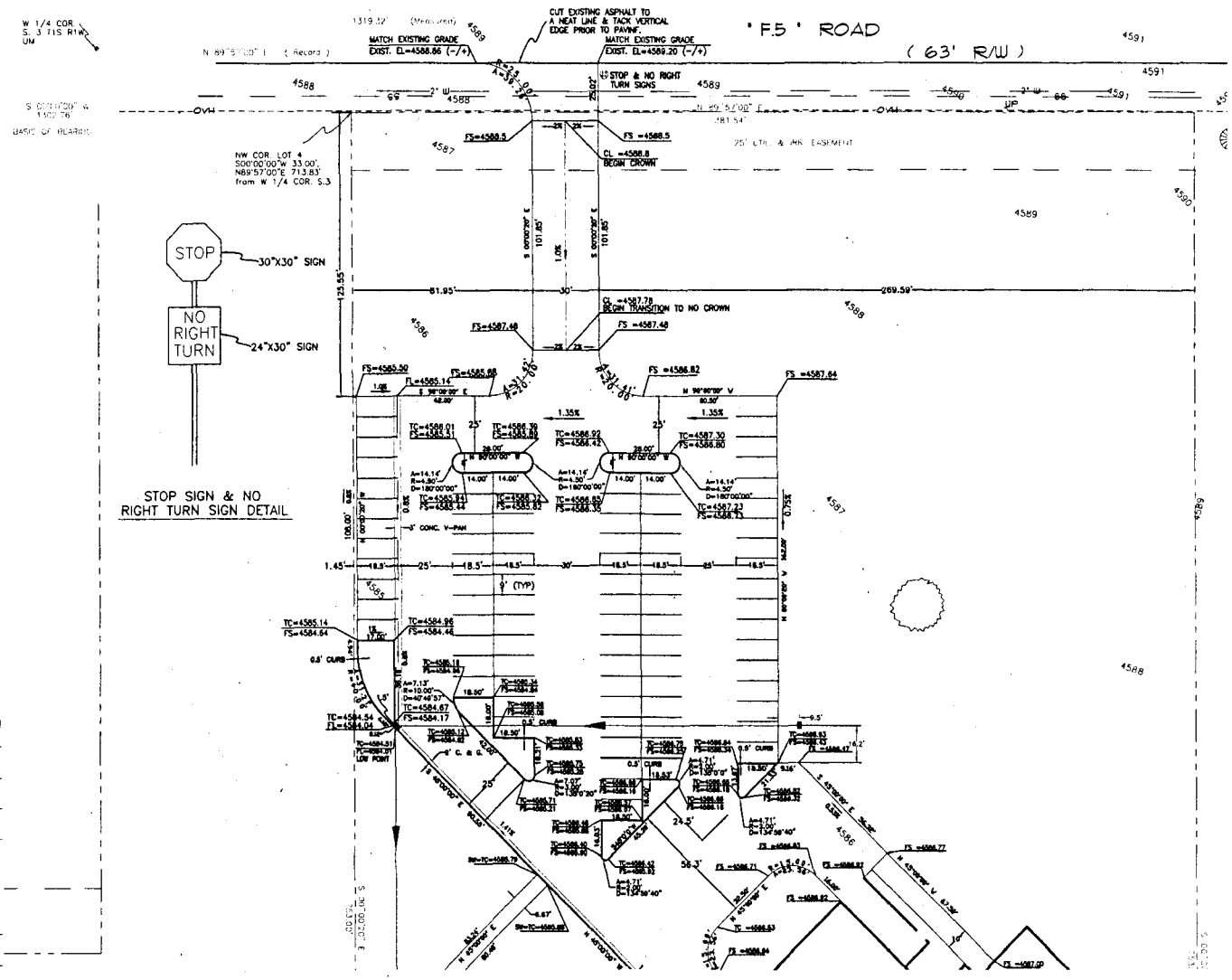
APPROVED BY:

PROJECT NO: 9514
DATE ISSUED: 10-28-96
TIME ISSUED: 11:38
DRAWN BY: WL
SCALE: 1"=20'-0"
SHEET SIZE: 42x30

UNIFIED TECHNICAL EDUCATION CAMPUS
PHASE II REVISED FIELD ORDER #3

SHEET NO.
C1.2R
OF

SPR-1996-20



APPROED FOR CONSTRUCTION

CITY DEVELOPMENT ENGINEER

DATE 11-13-96

CITY UTILITY ENGINEER

DATE

ACCEPTED AS CONSTRUCTED

CITY DEVELOPMENT ENGINEER

DATE

CITY UTILITY ENGINEER

DATE

LEGENDS

FL: FLOW LINE
TC: TOP OF CURB
SW: SIDEWALK
FS: FINISHED SURFACE
OVH: OVERHEAD UTILITY LINE
SS: SANITARY SEWER
W: WATER LINE
UP: UTILITY POLE

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1621 18TH STREET SUITE 110 DENVER, COLORADO 80202
(303) 295-1782
(303) 292-6457 (FAX)

PROJECT PHASE: DD

APPROVED BY:

JAMES D. ROLLINS REGISTERED ARCHITECT STATE OF COLORADO

PROJECT NO. 9514
DATE ISSUED 10-28-96
FILE ISSUED 11:38
DRAWN BY WL
SCALE 1"=20'-0"
SHEET NO. 42x30

UNIFIED TECHNICAL EDUCATION CAMPUS PHASE II REVISED FIELD ORDER #3

SHEET NO.
C1.3R
OF

SPR 1996-210

APPROVED FOR CONSTRUCTION

CITY DEVELOPMENT ENGINEER

DATE 11-13-96

CITY UTILITY ENGINEER

DATE

ACCEPTED AS CONSTRUCTED

CITY DEVELOPMENT ENGINEER

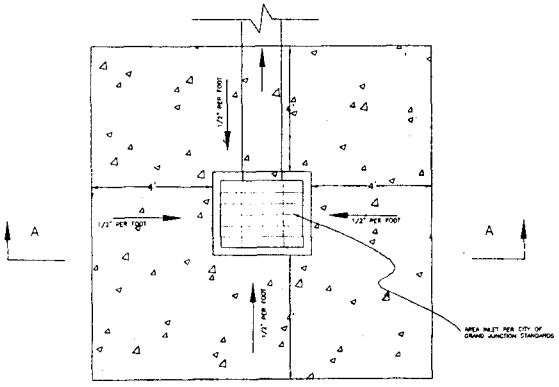
DATE

CITY UTILITY ENGINEER

DATE

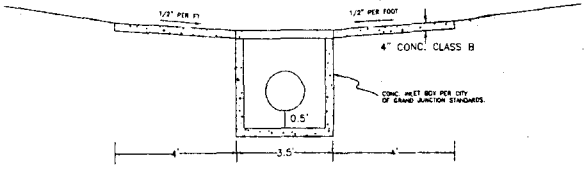
NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES IN THE FIELD PRIOR TO PERFORMING ANY WORK AFFECTING THEM.
2. ALL STORM SEWER SHALL BE C-900 PVC PIPE.
3. STORM INLET #2, #3 AND #5 SHALL BE SINGLE GRATE WITH CURB OPENING NEENAH R-3248. STORM INLET #1 & #4 SHALL BE AREA INLET. CONSTRUCT STORM INLETS, FRAMES AND INLET BOXES PER CITY OF GRAND JUNCTION STDS.
4. PLEASE REFER TO THE ARCHITECTURAL SITE PLANS PER CURB, CURB GUTTER V-PAN DETAILS.
5. ALL WORKMANSHIP, MATERIAL AND ANY OTHER CONSTRUCTION REQUIREMENTS SHALL BE IN COMPLIANCE WITH THE CITY OF GRAND JUNCTION CONSTRUCTION SPECIFICATIONS.



INLET #1 & #4 PLAN VIEW

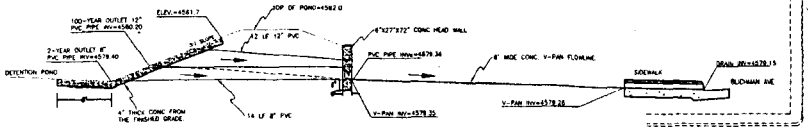
NOT TO SCALE



INLET A-A SECTION

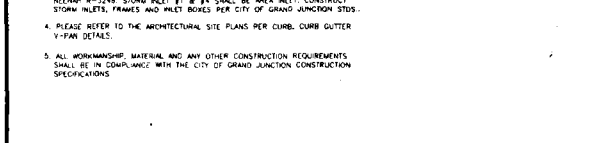
AREA INLET DETAILS

NOT TO SCALE

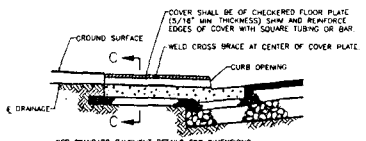


SCHEMATIC HYDRAULIC PROFILE

NOT TO SCALE



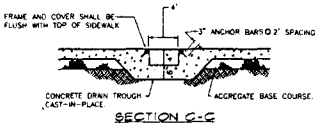
FRAME FOR SIDEWALK DRAIN TROUGH



SEE STANDARD PAVEMENT DETAILS FOR DIMENSIONS OF MONOLITHIC CURB GUTTER AND SIDEWALK.

NOTE: BOTH FRAME AND COVER SHALL BE FABRICATED STEEL. ALL STEEL SURFACES SHALL BE GALVANIZED PER AASHTO M-111.

DRAIN TROUGH FOR SIDEWALK CROSSING



SECTION C-C

SIDEWALK CROSSING DETAILS

NOT TO SCALE

DILLON–HUNT P.C.

ARCHITECTURE AND FACILITY MANAGEMENT

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PROJECT PHASE 00

APPROVED BY

JAMES S. HOLT REGISTERED PROFESSIONAL ENGINEER STATE OF COLORADO

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UNIFIED TECHNICAL EDUCATION CAMPUS
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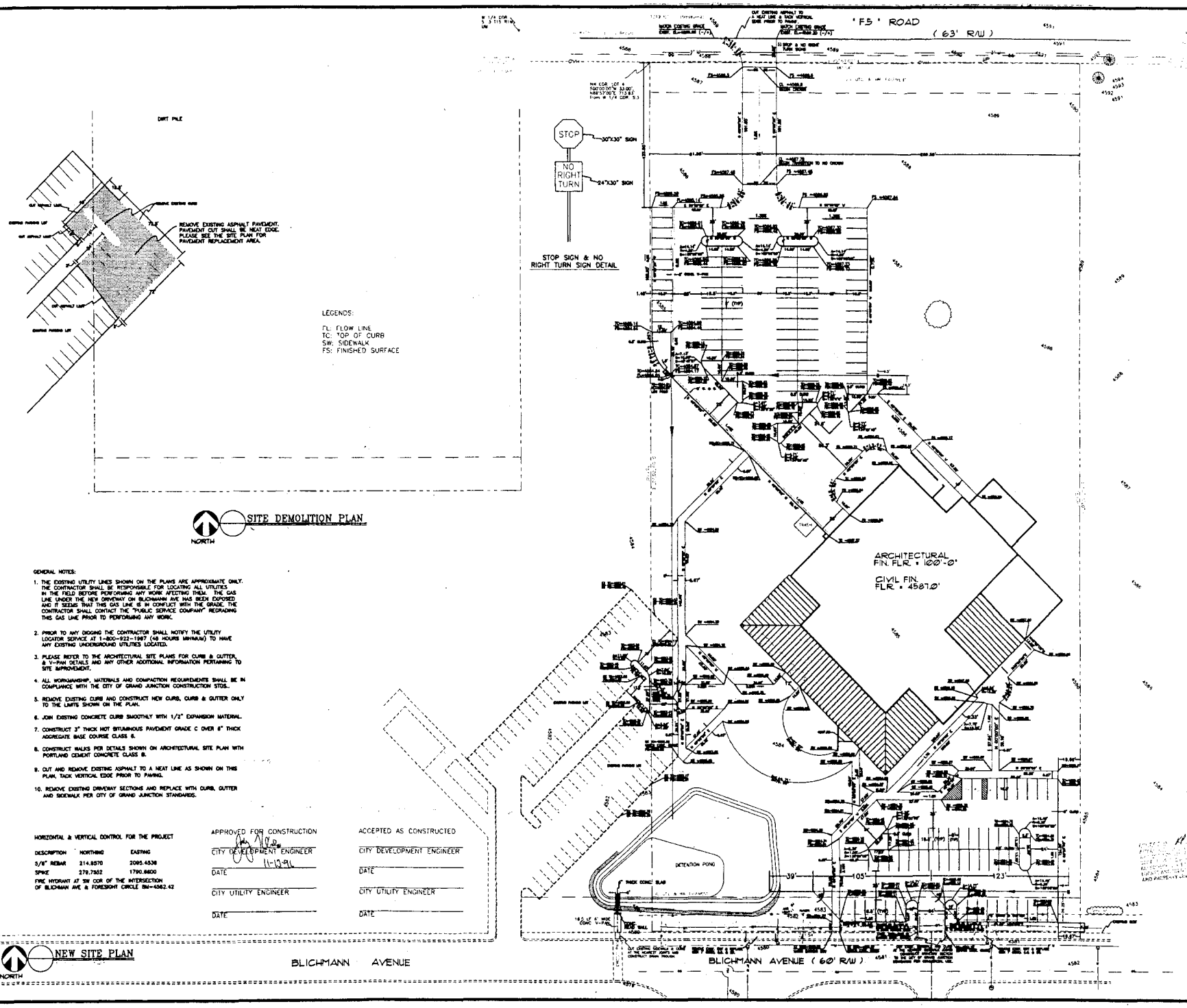
SHEET NO. C1.4R OF

SPR-1996-210



GENERAL NOTES:

1. THE EXISTING UTILITY LINES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES IN THE FIELD BEFORE PERFORMING ANY WORK AFFECTING THEM. THE GAS LINE UNDER THE NEW DRIVEWAY ON BLICHMANN AVE HAS BEEN EXPOSED AND IT SEEMS THAT THIS GAS LINE IS IN CONFLICT WITH THE GRADE. THE CONTRACTOR SHALL CONTACT THE "PUBLIC SERVICE COMPANY" REGRADING THIS GAS LINE PRIOR TO PERFORMING ANY WORK.
2. PRIOR TO ANY DIGGING THE CONTRACTOR SHALL NOTIFY THE UTILITY LOCATOR SERVICE AT 1-800-922-1987 (48 HOURS MINIMUM) TO HAVE ANY EXISTING UNDERGROUND UTILITIES LOCATED.
3. PLEASE REFER TO THE ARCHITECTURAL SITE PLANS FOR CURB & GUTTER, & V-PAN DETAILS AND ANY OTHER ADDITIONAL INFORMATION PERTAINING TO SITE IMPROVEMENT.
4. ALL WORKMANSHIP, MATERIALS AND COMPACTION REQUIREMENTS SHALL BE IN COMPLIANCE WITH THE CITY OF GRAND JUNCTION CONSTRUCTION STDS..
5. REMOVE EXISTING CURB AND CONSTRUCT NEW CURB, CURB & GUTTER ONLY TO THE LIMITS SHOWN ON THE PLAN.
6. JOIN EXISTING CONCRETE CURB SMOOTHLY WITH 1/2" EXPANSION MATERIAL.
7. CONSTRUCT 3" THICK HOT BITUMINOUS PAVEMENT GRADE C OVER 6" THICK AGGREGATE BASE COURSE CLASS 6.
8. CONSTRUCT WALKS PER DETAILS SHOWN ON ARCHITECTURAL SITE PLAN WITH PORTLAND CEMENT CONCRETE CLASS B.
9. CUT AND REMOVE EXISTING ASPHALT TO A NEAT LINE AS SHOWN ON THIS PLAN, TACK VERTICAL EDGE PRIOR TO PAVING.
10. REMOVE EXISTING DRIVEWAY SECTIONS AND REPLACE WITH CURB, GUTTER AND SIDEWALK PER CITY OF GRAND JUNCTION STANDARDS.

HORIZONTAL & VERTICAL CONTROL FOR THE PROJECT

DESCRIPTION	NORTHING	EASTING
5/8" REBAR	214.8570	2095.4536
SPIKE	279.7352	1790.8600

FIRE HYDRANT AT SW COR OF THE INTERSECTION OF BLICHMAN AVE & FORESIGHT CIRCLE BM=4582.42

APPROVED FOR CONSTRUCTION

CITY DEVELOPMENT ENGINEER _____ DATE 11-13-96

CITY UTILITY ENGINEER _____ DATE _____

ACCEPTED AS CONSTRUCTED

CITY DEVELOPMENT ENGINEER _____ DATE _____

CITY UTILITY ENGINEER _____ DATE _____

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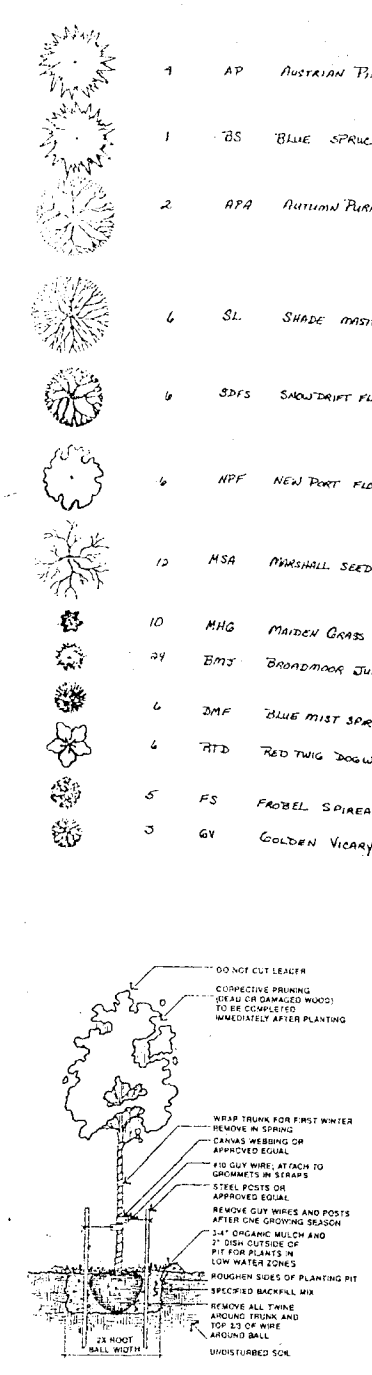
UNIFIED TECHNICAL EDUCATION CAMPUS PHASE II REVISED FIELD ORDER #3

SHEET NO. C1.1R OF

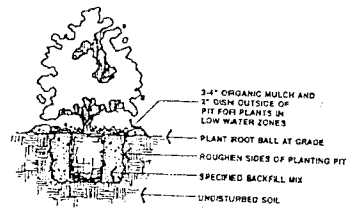
SPR-1996-210

4	AP	AUSTRIAN PINE	PINUS NIGRA	6'	B+B
1	BS	BLUE SPRUCE	PICEA PUNGENS	6'	B+B
2	APA	AUTUMN PURPLE ASH	FRAXINUS AMERICANA	2"	B+B
6	SL	SHADE MASTER LOCUST	GLEDITSIA TRIACANTHOS	2"	B+B
6	SDFS	SNOWDRIFT FLOWERING CRAB	MALUS spp.	2"	B+B
6	NPF	NEW PORT FLOWERING PLUM	PRUNUS CERASIFERA	1½"	B+B
12	MSA	MARSHALL SEEDLESS ASH	FRAXINUS PENNSYLVANICA	2"	B+B
10	MMG	MAIDEN GRASS	MISCANTHUS SINENSIS	5 GAL.
24	BMJ	BROADMOOR JUNIPER	JUNIPERUS SABINA	5 GAL.
6	BMF	BLUE MIST SPIREA	CARYOPTERIS X CLAND.	5 GAL.
6	RTD	RED TWIG DOGWOOD	CORNUS SERICEA	5 GAL.
5	FS	FROBEL SPIREA	SPIRAEA BUMALDA	5 GAL.
3	GV	GOLDEN VICARY	LIGUSTRUM X VICARYI	5 GAL.



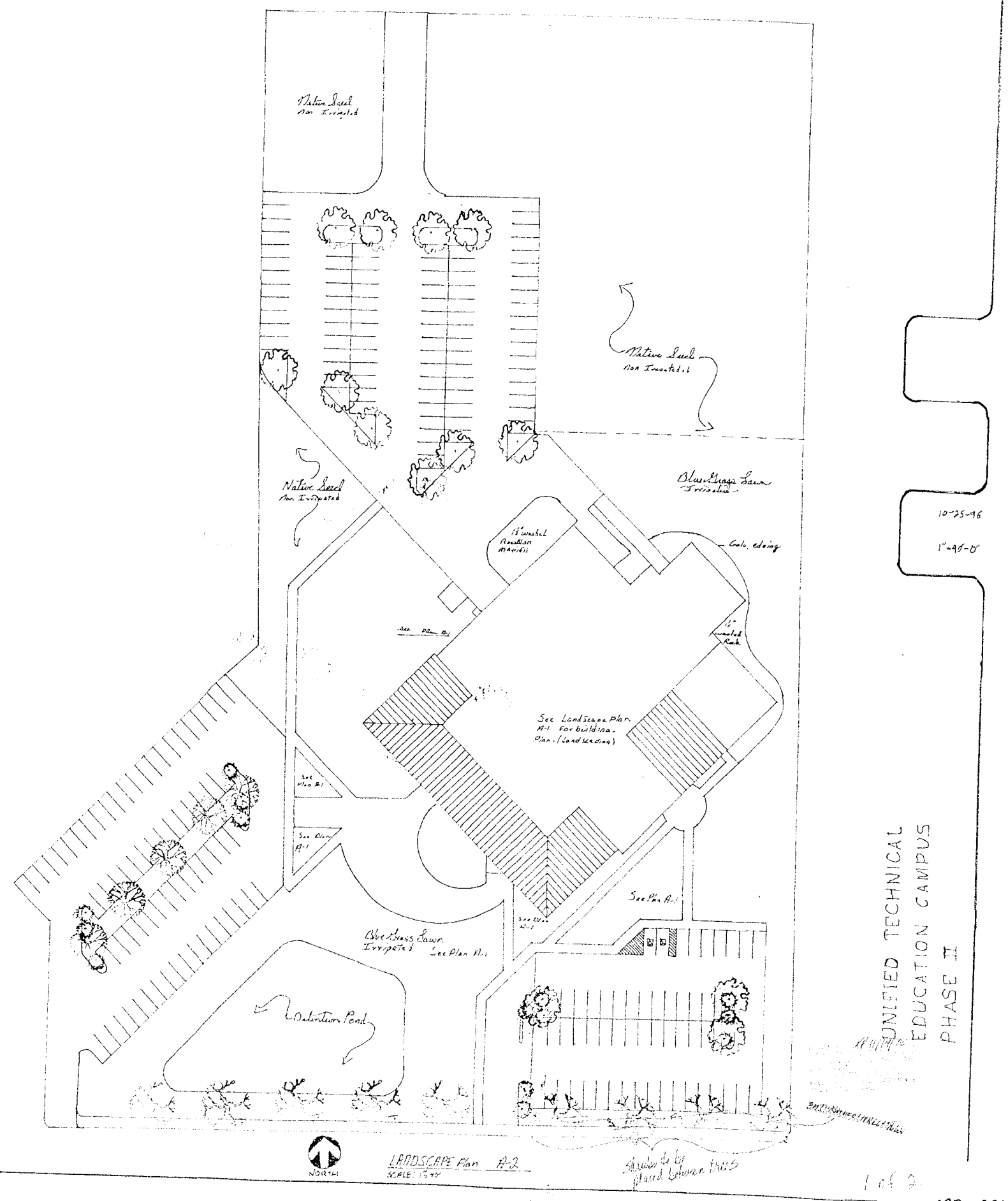
B+B or Container Tree - Dryland
NO SCALE

ZX-3



Container Shrub - Dryland
NO SCALE

ZX-13



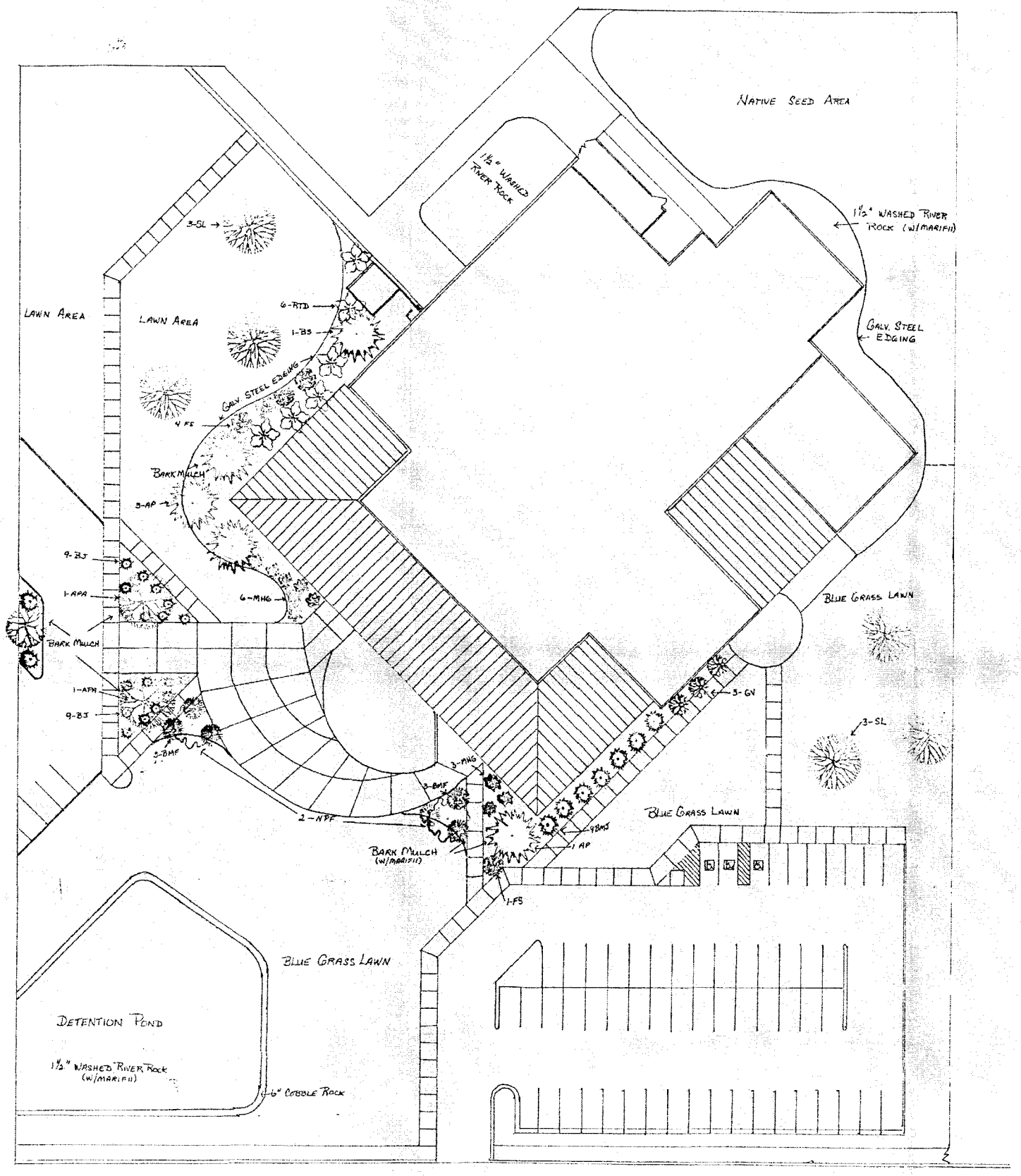
10-25-96

1"=40'-0"

UNIFIED TECHNICAL EDUCATION CAMPUS
PHASE II

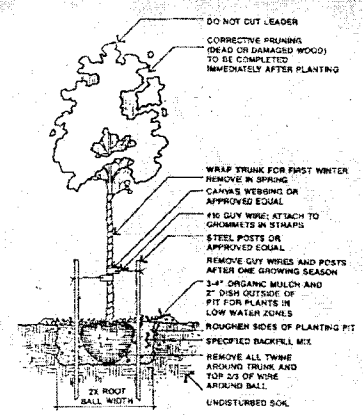
1 of 2

SPR-1996-210

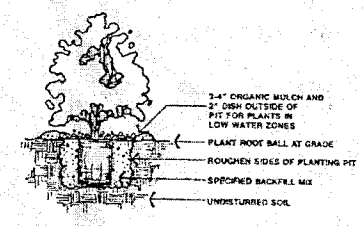


LANDSCAPE PLAN (SOUTH) A-1
SCALE: 1"=30'-0"

1	AP	AUSTRIAN PINE	PINUS NIGRA	6'	B+B	
1	BS	BLUE SPRUCE	PICEA PUNGENS	6'	B+B	
2	APA	AUTUMN PURPLE ASH	FRAXINUS AMERICANA	2"	B+B	
6	SL	SHADE MASTER LOCUST	GLEDITSIA TRIACANTHOS	2"	B+B	
6	SDFS	SARGENT FLOWERING CRAB	MALUS SPP.	2"	B+B	
6	NPF	NEW PORT FLOWERING PLUM	PRUNUS CERASIFERA	1½"	B+B	
10	MSA	MARSHALL SEEDLESS ASH	FRAXINUS PENNSYLVANICA	2"	B+B	
10	MHG	MAIDEN GRASS	MISCANTHUS SINENSIS	5 GAL.		
24	BMJ	BROADMOOR JUNIPER	JUNIPERUS SABINA	5 GAL.		
6	BMF	BLUE MIST SPIREA	CARYOPTERIS X CLAND.	5 GAL.		
6	RTD	RED TWIG DOGWOOD	CORNUS SERICEA	5 GAL.		
5	FS	FROBEL SPIREA	SPIRAEA BUMALDA	5 GAL.		
3	GV	GOLDEN VICARY	LIGUSTRUM X VICARYI	5 GAL.		



B & B or Container Tree - Dryland
NO SCALE



Container Shrub - Dryland
NO SCALE

LANDSCAPES
CHRIS M. NASH
P.O. Box 357
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(970) 464-0875
Irrigation Design & Construction
Landscape Design & Construction
Waterfalls, Decks, Ponds, Etc.

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2 of 2

SPR: 1996-210