CITY OF ALBUQUERQUE

Planning Department
Transportation Development Services

October 23, 2015

Eric Wrage, PE
Bohannan Huston, Inc.
7500 Jefferson St. NE
Albuquerque, NM 87109

Re: West Mesa High School Intensive Services Hub – Prototype
6701 Fortuna Road
Traffic/ Neighborhood Impact Analysis
Engineer's Stamp dated 09-29-15 (J10-D005)

Dear Mr. Wrage,

Based upon the information provided in your submittal received 10-05-15, the above referenced plan cannot be approved until the following comments are addressed. All of my comments revolve around presentation of report, but there are no real issues given the small amount of traffic and good LOS's. I also want to make sure the NIA ordinance requirements are explicitly met as well.

1. Provide map showing the bus drive off of Fortuna with Fortuna Road labeled in addition to the three driveways off of Glenrio. (Now, there are only the Glenrio driveways shown.) On this map label, "Student West", "Student East", "Bus Exit", and "Bus Entrance" to relate to the LOS tables in the report. Label distance from Bus Exit to existing driveway entrance to the west and label width of new curb cut. In body of report, document no change to Fortuna Road in terms of traffic or new facilities.
2. In Conclusions and Recommendations, also indicate width of proposed new curb cut.
3. Include a copy of the scoping letter in the Appendix. In body of report, mention that the COA had followed up with Mary Leonard (Environmental Health) on April 30 and with Shabih Rizvi (ABQ Ride) to document that they had no issues with the proposed site plan and its impact on air quality and transit facilities. On the last paragraph on Page 3 before "Site Traffic Analysis" section, specify that "all students of the ISHP will either arrive by APS bus or by private vehicle, just to make clear distinction between ABQ Ride and APS buses.
4. Provide diagram showing counts for all turning movements for each of the driveways that are analyzed in the back of the report. Have a diagram for existing traffic counts and for proposed traffic counts.

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

CITY OF ALBUQUERQUE

5. Provide up-front index to show body of report and Appendix page numbers. The Appendix would show page numbers for the drawings in back, traffic counts, and Synchro analyses.

Resubmit acceptable package along with fully completed Drainage Transportation Information Sheet to front counter personnel for log in and evaluation by Transportation. If you have any questions, please contact me at 924-3991.

Sincerely,

Racquel M. Michel, P.E.
Traffic Engineer, Planning Dept.
Development Review Services

\rm via: email
C: CO Clerk, File

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: West Mesa High School Intensive Services Hub – Prototype Building Permit #: _____ City Drainage #: J10D205

DRB#: _____ EPC#: _____ Work Order#: 749983

Legal Description: _____

City Address: West Mesa High School 6701 Fortuna Road

Engineering Firm: **Bohannan Huston, Inc** Contact: Eric Wrage

Address: 7500 Jefferson Str., NE, 87109

Phone#: 798-7859 Fax#: 798-7988 E-mail: ewrage@bhinc.com

Owner: **Albuquerque Public Schools** Contact: David Ritchie

Address: _____

Phone#: 848-8876 Fax#: _____ E-mail: ritchey_d@aps.edu

Architect: **Vigil and Associates** Contact: David Madden

Address: _____

Phone#: 890-5030 Fax#: _____ E-mail: dave@va-architects.com

Other Contact: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

____ HYDROLOGY/ DRAINAGE
_X_ TRAFFIC/ TRANSPORTATION
____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

____ ENGINEER/ ARCHITECT CERTIFICATION

____ CONCEPTUAL G & D PLAN
____ GRADING PLAN
____ DRAINAGE MASTER PLAN
____ DRAINAGE REPORT
____ CLOMR/LOMR

____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ EROSION & SEDIMENT CONTROL PLAN (ESC)

_X_ OTHER (SPECIFY) Site Traffic Analysis/Neighborhood Impact Analysis

IS THIS A RESUBMITTAL?: _____ Yes _X_ No

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY

____ PRELIMINARY PLAT APPROVAL
____ SITE PLAN FOR SUB'D APPROVAL
____ SITE PLAN FOR BLDG. PERMIT APPROVAL
____ FINAL PLAT APPROVAL
____ SIA/ RELEASE OF FINANCIAL GUARANTEE
____ FOUNDATION PERMIT APPROVAL
____ GRADING PERMIT APPROVAL
____ SO-19 APPROVAL
____ PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR

____ PRE-DESIGN MEETING
_X_ OTHER (SPECIFY) Curb Cut Permit

DATE SUBMITTED: September 29, 2015 By: Eric Wrage, BHI

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

Bohannan Huston

Courtyard I
7500 Jefferson St. NE
Albuquerque, NM
87109-4335

www.bhinc.com

voice: 505.823.1000
facsimile: 505.798.7988
toll free: 800.877.5332

September 29, 2015

Ms. Suzanne G. Lubar
City of Albuquerque Planning Director
600 2nd Street, NW
Albuquerque, NM 87102

Re: City Work Order 749983 – Proposed West Mesa High School Intensive Service Hub Prototype Neighborhood Impact Analysis and Site Traffic Analysis
West Mesa High School, 6701 Fortuna Road, Albuquerque, New Mexico

Dear Ms. Lubar:

Albuquerque Public Schools is developing an Intensive Services Hub Prototype at West Mesa High School. Ordinance O-2014-002 requires the completion of a Neighborhood Impact Analysis and Site Traffic Analysis whenever a school requests a new curb cut. The letter documents the results of the analyses.

PROJECT DESCRIPTION

The Intensive Services Hub Prototype (ISHP) provides educational services for students who require additional services beyond those required by the typical student. The facility will be a separate campus for these students, located within the West High School campus. The expected enrollment for the ISHP is approximately 30 students. Some of these students already attend West Mesa High School; however, students from throughout the APS District will also attend. As West Mesa High School has a current enrollment of approximately 1,600 students, the trips from these new students is negligible compared to the existing enrollment. For this reason, the City Engineer's representative did not require extensive traffic analysis.

As shown on the Site Plan included in the Enclosure 1, the ISHP will have a separate parking lot to accommodate student drop-off and visitor parking. This parking lot is the reason for the new curb cut request. As the majority of the students will be arriving by School buses dedicated for this facility, it is not anticipated that there will be many student drop-offs in the parking lot. Additionally, many of these students will require assistance entering and exiting the building, so the drop-off and exit from the school bus is not typical as with other students.

The school buses for the ISHP will enter at the same school bus entrance on Fortuna Road as the main campus buses; however, the ISHP buses will proceed to the drop-off zone for the ISHP (see Site Plan). The ISHP school buses will exit onto Glenrio Road at the same exit as the main campus school bus exit. The school bus circulation after completion of the facility will be identical to as it is today.

In the interim condition, during construction of the ISHP parking lot and driveway, the ISHP school buses will circulate in front of the ISHP building and drop-off students in the front of the building, then exit at the existing driveway east of the school bus exit. Staff and any parent drop-off will also use the existing driveway and drop-off students on the east side of the ISHP. This interim condition is expected to be in place approximately 12 months.

NEIGHBORHOOD IMPACT ANALYSIS

The adjacent land uses to the ISHP is primarily residential. The ISHP is located on the campus of West Mesa High School. East of the site there are some commercial facilities and truck warehouse transfer facilities due to the proximity of Interstate 40 (I-40). Farther to the east is Coors Boulevard, a major north-south arterial that has additional commercial developments. West of the site and south of Fortuna Road is a FedEx package processing facility. Cedar Ridge Park is located south of Fortuna, across the street from West Mesa High School. South of the site, south of Los Volcanes Road, there is additional commercial and warehouse facilities; however, these facilities are unlikely to access Fortuna or Glenrio Roads due to the availability of Los Volcanes Road to access Coors Boulevard or 98th Street.

Interstate 40 prohibits Glenrio Road and Fortuna Road from extending to the west. I-40 also prevents 64th Street NW, and other local streets from extending to the north. Therefore, there is not substantial through traffic in the area of the ISHP, other than the existing residential and commercial traffic.

Glenrio Road is a two-lane road, one (1) in each direction, with a speed limit of 25 MPH. There currently is no sidewalk along Glenrio Road along the north frontage of West Mesa High School, although there is a wide shoulder that is used by pedestrians. There also is no sidewalk on either side of Glenrio Road from Coors Boulevard west to 64th Street, or on the north side of Glenrio Road across the frontage of the first business west of 64 Street. All other frontage along Glenrio Road has sidewalk on both sides of the street.

Traffic counts were performed August 26, 2015 while school was in session. A 9-hour turning movement count was performed at the intersections affected by the ISHP. These were the School Bus Exit, the west Student Driveway (to be removed) and the east Student Driveway that aligns with 68th Street. These traffic counts included cars, trucks, school buses, pedestrians and bicyclists. A summary of the traffic counts is shown in the table below.

Totals During 9-Hour Count					
Driveway	**Pedestrians**	**Bicycles**	**Bus Exit**	**Cars Enter**	**Cars Exit**
Bus Access	16	16	24	0	26
West Student Drive	120	27	0	333	293
East Student Drive	217	16	0	43	48

It must be noted that the pedestrians and bicyclists in the above table likely are double counted due to the proximity of the driveways along Glenrio Road.

The traffic count is included in Enclosure 2.

As mentioned, Coors Boulevard is located approximately 2,000 feet to the west of the site. ABQ Ride Route 155 operates along Coors Boulevard, from Coors and Gun Club on the south, to the Northwest Transit Center at Ellison and Coors on the north. In the AM and PM peak hours, Route 155 also extends service to the Rio Rancho. This service operates weekdays at approximately 30-minute headways from approximately 7:00 AM to 10:00 PM near the site. Saturday and Sunday service has approximately 45-minute headways from approximately 8:00 AM to 8:00 PM near the site.

As an existing driveway is being removed to construct the ISHP parking lot, and a replacement driveway is being constructed, the net change in the number of driveways is zero. Therefore, pedestrians and bicyclists, as well as potential automobile and pedestrian conflict points will remain the same, albeit in a slightly different location, due to the driveway being shifted to the east.

As change in the number of students the ISHP adds to the entire West Mesa High School site is negligible (due to absences, etc. from a school population of 1,600 students), the potential noise and air quality impacts resulting from the ISHP will also be negligible.

The ISHP will have no impact on existing or planned transit routes or stops, as all students of the ISHP will either arrive by bus or by private vehicle.

SITE TRAFFIC ANALYSIS

Due to the low traffic volume on Glenrio Road and the low traffic volume utilizing the driveways onto Glenrio Road, all intersections operate at LOS A under existing conditions. All individual movements operate at LOA A or B. The Synchro analysis results for existing conditions are included in Enclosure 3.

	AM		**Noon**		**PM**	
Driveway	**Ave Delay (s)**	**LOS**	**Ave Delay (s)**	**LOS**	**Ave Delay (s)**	**LOS**
Bus Exit	0.4	A	0.1	A	0.1	A
Student West	2.6	A	1.2	A	4.7	A
Student East	4.3	A	4.1	A	2.0	A

As the construction of the ISHP will add a negligible number of students (approximately 30 students) to the overall student population of approximately 1,600 students, no additional trips have been added to the existing traffic in the Build analysis.

With construction of the ISHP, there will be a change in site traffic circulation, as the Student West Drive will be for ISHP traffic only. All student traffic will now be required to use the East driveway. Therefore, the Build analysis added the Student West Drive traffic onto the Student East Drive traffic. No changes were made to the Student West Drive traffic, as the existing traffic using that driveway was used to estimate the ISHP traffic, although it is likely far higher than what would actually occur for the approximately 30 students anticipated for the ISHP, as the bulk of ISHP students are expected to arrive by bus. Five more buses were added to account for ISHP students in the School Bus traffic. The Build analysis results are shown below, and the Build Synchro results are also included in Enclosure 4.

	AM		Noon		PM	
Driveway	Ave Delay (s)	LOS	Ave Delay (s)	LOS	Ave Delay (s)	LOS
Bus Exit	0.6	A	0.4	A	0.2	A
Student West	2.6	A	1.2	A	4.7	A
Student East	5.7	A	4.1	A	5.2	A

It can be seen from the table that traffic operations at the driveways will continue to operate at acceptable levels of service in the Build condition. All intersections will operate at LOS A. All movements again operate at LOS A or B, except for the southbound approach on 68th Street, which will now operate at LOS C in AM peak hour, due to the change in site circulation that results in all student traffic utilizing the East Student Drive.

CONCLUSIONS

Based on the above analysis:

1) The addition of the ISHP will not result in a material change in the number of students, traffic generation of the school, transit facilities and operations, noise or air quality that impact the surrounding neighborhood.
2) Traffic operations at the driveways affected by construction of the curb cut for the ISHP will remain at acceptable levels of service upon construction of the new curb cut. There will be a slight increase in delay for southbound 68th Street traffic upon construction of the ISHP. The average delay for the southbound approach of 68th Street at Glenrio Road will increase from 13.3 seconds, to 18.0 seconds. However, the approach will still operate at normally acceptable levels of service, and the overall intersection will still operate at LOS A.

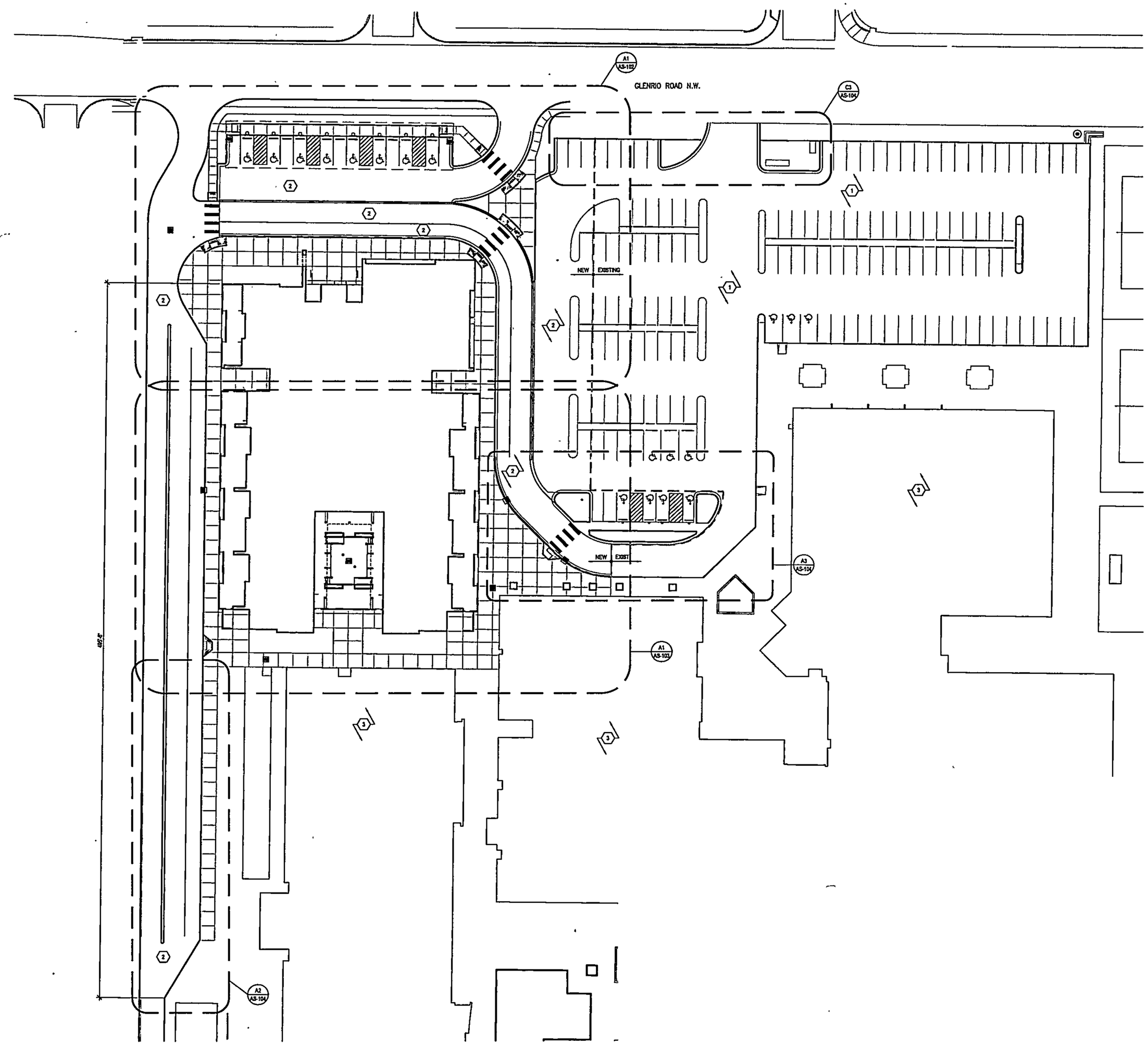
If you have any questions, please feel free to contact me at (505) 798-7859 or ewrage@bhinc.com.

Sincerely,

Eric J. Wrage, PE, PTOE
Senior Project Manager
Traffic & Transportation

EJW/jma
Enclosure
cc: Jeanne Wolfenbarger, COA (w/encl.)
David Ritchey (w/encl.)
David Madden, Vigil and Associates (w/encl.)
Jeff Mulberry (w/encl.)

PSFA PROJECT NO: XXX-XXX



A1 ARCHITECTURAL SITE PLAN
SCALE: 1" = 30'-0"

NORTH

0 15' 30' 60'
SCALE: 1" = 30'

GENERAL SHEET NOTES

A. REFER TO LANDSCAPE SHEETS (LJ 101)FOR IRRIGATION SLEEVING LOCATIONS.
B. AT AREAS OF CUTTING AND TRENCHING AT EXISTING ASPHALT SURFACES FOR NEW WORK, THE CONTRACTOR SHALL PATCH AND REPAIR DAMAGED ASPHALT TO MATCH EXISTING ADJACENT SURFACES.
C. ALL UNDERGROUND UTILITIES SHOWN ARE BASED ON EXISTING RECORD DRAWINGS AND WAVE NOT BEEN FIELD VERIFIED. GENERAL CONTRACTOR IS RESPONSIBLE TO VERIFY/LOCATE ALL UNDERGROUND UTILITIES WITH LOCAL UTILITY COMPANIES AND TO SITE INVESTIGATE (HAND DIG - AS NEED'D) UTILITY LINES SHOWN FOR VERIFICATION PRIOR TO WORK.
D. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CONFLICT WITH SITE UTILITIES OR FEATURES AND OBTAIN RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.
E. THE CONTRACTOR SHALL COORDINATE SITE ACCESS AND STAGING AREA WITH OWNER/ARCHITECT.
F. CONTRACTOR SHALL TAKE PRECAUTIONS AS NECESSARY TO PROTECT FROM DAMAGING EXISTING UTILITY LINES, WALKS, LANDSCAPING, ETC. WHICH WILL REMAIN AS PART OF THE FINAL SYSTEM. CONTRACTOR SHALL REPAIR AND/OR RESTORE THESE ITEMS AS REQUIRED TO PRE-CONSTRUCTION CONDITION.
G. SEE LANDSCAPE DRAWINGS FOR SITE IRRIGATION & NEW LANDSCAPING.
H. SLOPE PAVEMENT MINIMUM 1%, MAXIMUM 2% FOR ACCESSIBILITY. SEE CIVIL DRAWINGS FOR GRADING AND DRAINAGE.
I. SEE ENLARGED SITE PLANS FOR MORE DETAILED INFORMATION.
J. REFER TO CIVIL FOR PAVING SECTIONS AT DRIVEWAYS.
K. REFER TO SHEET 1101 FOR EXTERIOR COLORED CONC AND CMU WALL COLORS.

SHEET KEYNOTES

1. EXISTING ASPHALT PARKING LOT TO REMAIN
2. NEW ASPHALT PAVING - SEE CIVIL
3. EXISTING BUILDING TO REMAIN

VIGIL & ASSOCIATES
ARCHITECTURAL GROUP, P.C.
www.VA-architects.com
4377 Irving Blvd, Suite A - Albuquerque, NM 87114 - 505.890.5700
PO Drawer Z, 1720 Paseo De Saludos - Taos, NM 87571 - 575.737.9700

75% CD
NOT FOR
CONSTRUCTION

INTENSIVE SUPPORT PROGRAM HUB
WEST MESA HIGH SCHOOL
ALBUQUERQUE PUBLIC SCHOOLS

OVERALL SITE PLAN

date:	09-15-15
drawn by:	VAA
checked by:	RRV
file name: 14-034_AS-101.dwg	
revisions:	

AS-101

project no. 14-034

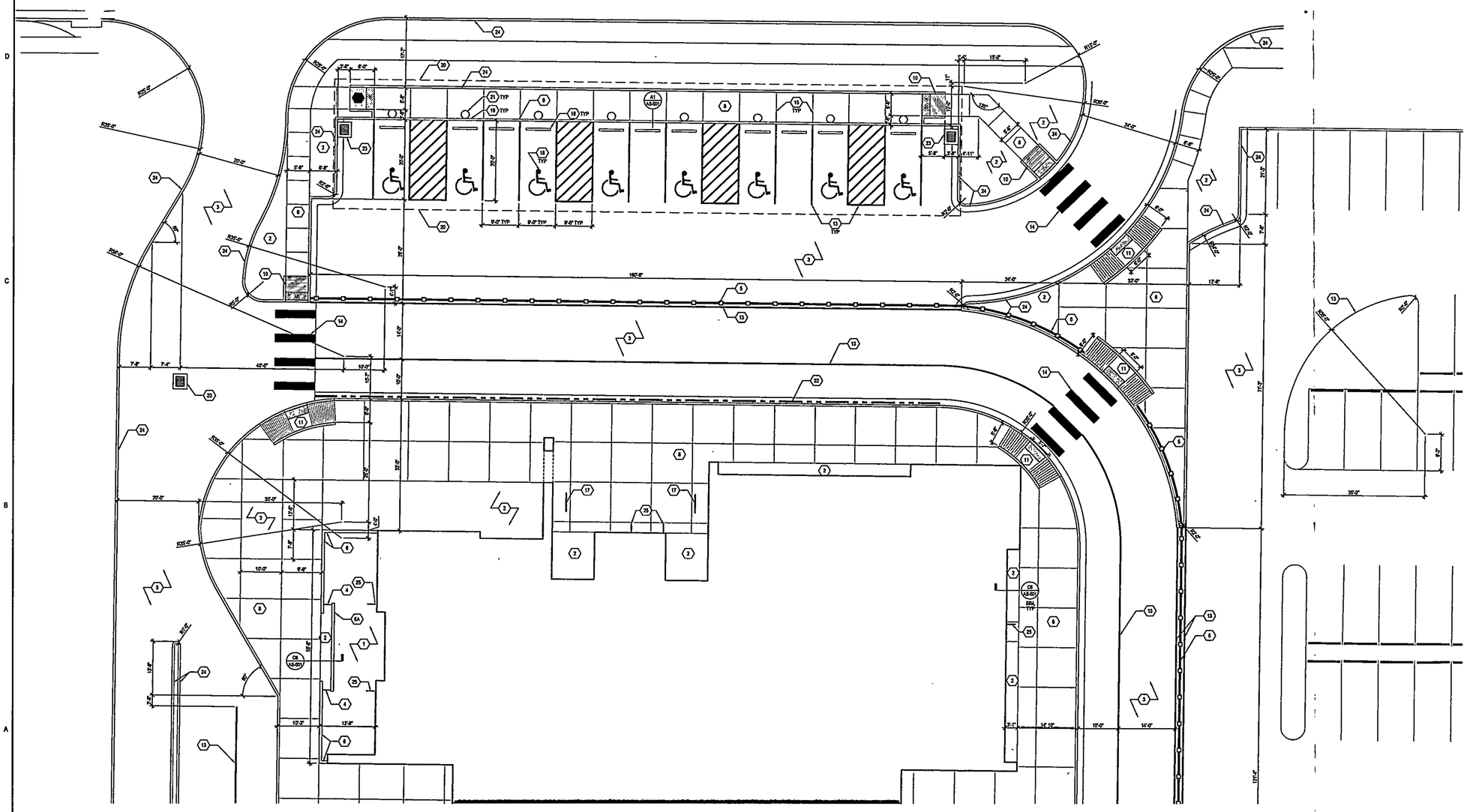
PSFA PROJECT NO: XXX-XXX

SHEET KEYNOTES

1. COURTYARD - SEE LANDSCAPE PLANS
2. LANDSCAPE AREA - SEE LANDSCAPE PLANS
3. ASPHALT PAVING
4. 84"H DECORATIVE STEEL TUBE FENCE, SEE DETAIL D4/AS-501
5. 48"H DECORATIVE STEEL TUBE FENCE, SEE DETAIL D5/AS-501
6. 84"H CMU SITE WALL, SEE DETAIL A5/AS-501
6A. SITE WALL WITH DECORATIVE FENCING, SEE DETAIL A5/AS-502
7. NOT USED
8. CONCRETE SIDEWALK
9. FLUSH CURB - SEE A1/AS-501 & CIVIL
10. RETURNED CURB RAMP, SEE C3/AS-501
11. CURB RAMP, SEE C3/AS-501
12. NOT USED
13. 4" WIDE PAINTED WHITE PARKING STRIPING
14. CROSSWALK, SEE DETAIL E1/AS-501
15. ALIGN CONCRETE CONTROL JOINTS WITH PARKING STRIPING
16. WHEEL STOP, SEE B3/AS-501
17. BICYCLE RACK, SEE E3/AS-501
18. ACCESSIBLE PARKING SYMBOL, SEE E8/AS-501
19. ACCESSIBLE PARKING SIGN, COLUMN MOUNTED, SEE C2/AS-501
20. LINE OF PV SHADE CANOPY ABOVE, NIC, SEE PV-120
21. COLUMN FOR PV SHADE CANOPY, N.IC, SEE PV-1001
22. FIRE LANE STRIPING
23. STORM DRAIN INLET, SEE CIVIL
24. CONCRETE CURB, SEE DETAIL C1/AS-501
25. DOOR STOP, SEE E4/AS-501
26. BOLLARD, TYP., SEE DETAIL E3/AS-501
27. LIGHT POLE - SEE ELEC

GENERAL SHEET NOTES

A. REFER TO LANDSCAPE SHEETS (L1.101)FOR IRRIGATION SLEEVING LOCATIONS.
B. AT AREAS OF CUTTING AND TRENCHING AT EXISTING ASPHALT SURFACES FOR NEW WORK, THE CONTRACTOR SHALL PATCH AND REPAIR DAMAGED ASPHALT TO MATCH EXISTING ADJACENT SURFACES.
C. ALL UNDERGROUND UTILITIES SHOWN ARE BASED ON EXISTING RECORD DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED. GENERAL CONTRACTOR IS RESPONSIBLE TO VERIFY/LOCATE ALL UNDERGROUND UTILITIES WITH LOCAL UTILITY COMPANIES AND TO SITE INVESTIGATE (HAND DIG - AS REQ'D) UTILITY LINES SHOWN FOR VERIFICATION PRIOR TO WORK.
D. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CONFLICT WITH SITE UTILITIES OR FEATURES AND OBTAIN RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.
E. THE CONTRACTOR SHALL COORDINATE SITE ACCESS AND STAGING AREA WITH OWNER/ARCHITECT.
F. CONTRACTOR SHALL TAKE PRECAUTIONS AS NECESSARY TO PROTECT FROM DAMAGING EXISTING UTILITY LINES, WALKS, LANDSCAPING, ETC. WHICH WILL REMAIN AS PART OF THE FINAL SYSTEM. CONTRACTOR SHALL REPAIR AND/OR RESTORE THESE ITEMS AS REQUIRED TO PRE-CONSTRUCTION CONDITION.
G. SEE LANDSCAPE DRAWINGS FOR SITE IRRIGATION & NEW LANDSCAPING.
H. SLOPE PAVEMENT MINIMUM 1%, MAXIMUM 2% FOR ACCESSIBILITY. SEE CIVIL DRAWINGS FOR GRADING AND DRAINAGE.
I. SEE ENLARGED SITE PLANS FOR MORE DETAILED INFORMATION.
J. REFER TO CIVIL FOR PAVING SECTIONS AT DRIVEWAYS.
K. REFER TO SHEET 1101 FOR EXTERIOR COLORED CONC AND CMU WALL COLORS.



A1 ENLARGED ARCHITECTURAL SITE PLAN
SCALE: 1" = 10'-0"

NORTH
SCALE: 1" = 10'

VIGIL & ASSOCIATES
ARCHITECTURAL GROUP, P.C.
4777 Irving NW, Suite 1 • Albuquerque, New Mexico 87114 • (505) 839-0200
www.vigilandassociates.com
PO Drawer Z, 1705 Trees Du Desiste • Mesilla, NM 88046 • 575.377.5420

75% CD
NOT FOR
CONSTRUCTION

ENLARGED SITE PLAN

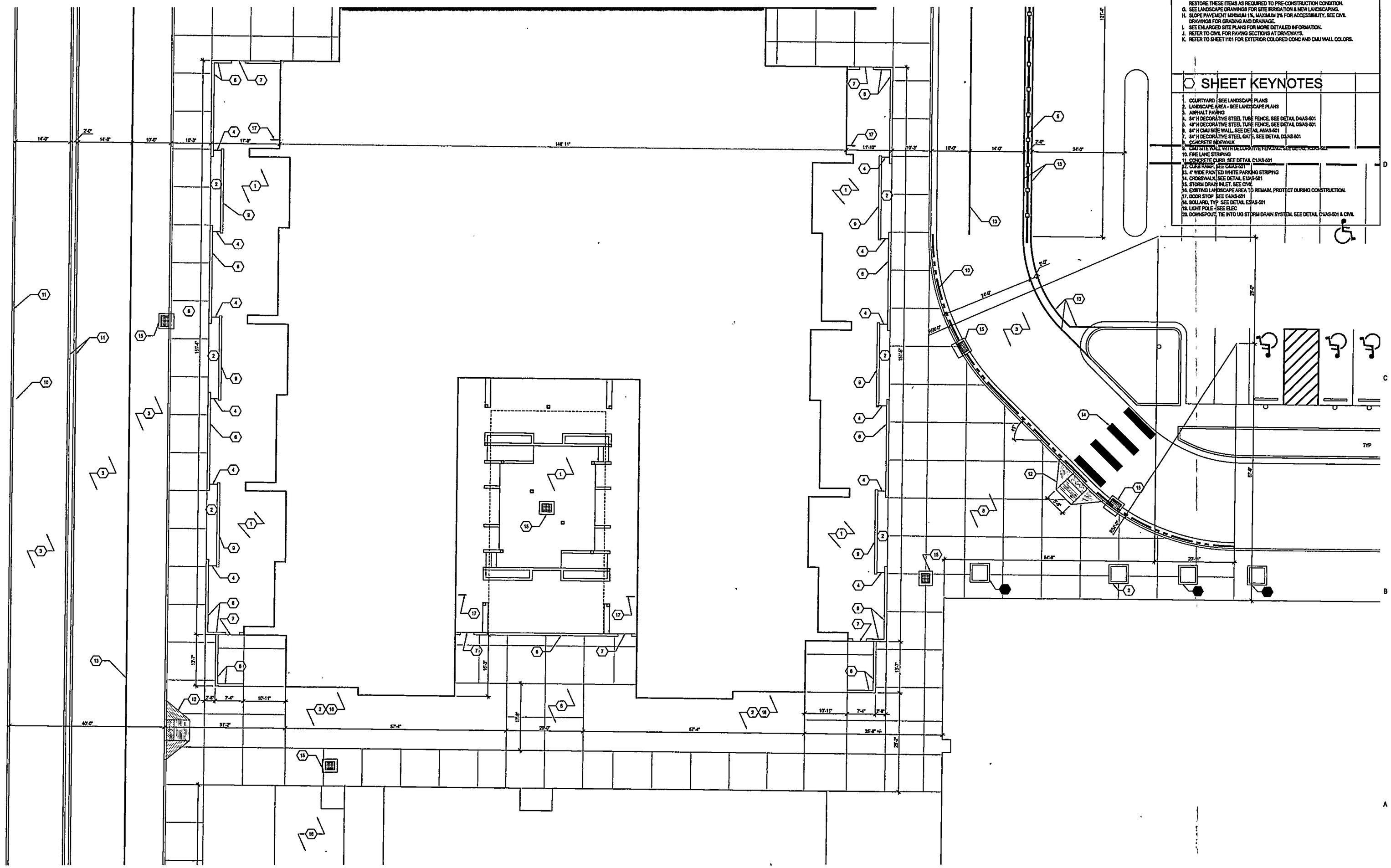
INTENSIVE SUPPORT PROGRAM HUB
WEST MESA HIGH SCHOOL
ALBUQUERQUE PUBLIC SCHOOLS

date:	09-15-15
drawn by:	VJA
checked by:	RRV
file name: 14-034_AS-102.dwg	
revisions:	

AS-102

project no. 14-034

PSFA PROJECT NO: XXX-XXX



A1 ENLARGED ARCHITECTURAL SITE PLAN
SCALE: 1" = 10'-0"

NORTH
SCALE: 1" = 10'

GENERAL SHEET NOTES

A. REFER TO LANDSCAPE SHEETS L1.101 FOR IRRIGATION SLEEVING LOCATIONS.
B. AT AREAS OF CUTTING AND TRENCHING AT EXISTING ASPHALT SURFACES FOR NEW WORK, THE CONTRACTOR SHALL PATCH AND REPAIR DAMAGED ASPHALT TO MATCH EXISTING ADJACENT SURFACES.
C. ALL UNDERGROUND UTILITIES SHOWN ARE BASED ON EXISTING RECORD DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED. GENERAL CONTRACTOR IS RESPONSIBLE TO VERIFY/LOCATE ALL UNDERGROUND UTILITIES WITH LOCAL UTILITY COMPANIES AND TO SITE INVESTIGATE (HAND DIG - AS REQ'D) UTILITY LINES SHOWN FOR VERIFICATION PRIOR TO WORK.
D. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CONFLICT WITH SITE UTILITIES OR FEATURES AND OBTAIN RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.
E. THE CONTRACTOR SHALL COORDINATE SITE ACCESS AND STAGING AREA WITH OWNER/ARCHITECT.
F. CONTRACTOR SHALL TAKE PRECAUTIONS AS NECESSARY TO PROTECT FROM DAMAGING EXISTING UTILITY LINES, WALKS, LANDSCAPING, ETC. WHICH WILL REMAIN AS PART OF THE FINAL SYSTEM. CONTRACTOR SHALL REPAIR AND/OR RESTORE THESE ITEMS AS REQUIRED TO PRE-CONSTRUCTION CONDITION.
G. SEE LANDSCAPE DRAWINGS FOR SITE IRRIGATION & NEW LANDSCAPING.
H. SLOPE PAVEMENT MINIMUM 1%, MAXIMUM 2% FOR ACCESSIBILITY. SEE CIVIL DRAWINGS FOR GRADING AND DRAINAGE.
I. SEE ENLARGED SITE PLANS FOR MORE DETAILED INFORMATION.
J. REFER TO CIVIL FOR PAVING SECTIONS AT DRIVEWAYS.
K. REFER TO SHEET H101 FOR EXTERIOR COLORED CONC AND CMU WALL COLORS.

SHEET KEYNOTES

1. COURTYARD - SEE LANDSCAPE PLANS
2. LANDSCAPE AREA - SEE LANDSCAPE PLANS
3. ASPHALT PAVING
4. 84" H DECORATIVE STEEL TUBE FENCE. SEE DETAIL D4/AS-501
5. 48" H DECORATIVE STEEL TUBE FENCE. SEE DETAIL D5/AS-501
6. 84" H CMU SITE WALL. SEE DETAIL A4/AS-501
7. 84" H DECORATIVE STEEL GATE. SEE DETAIL D2/AS-501
8. CONCRETE SIDEWALK
9. CMU SITE WALL WITH DECORATIVE FENCING. SEE DETAIL H3/AS-501
10. FIRE LANE STRIPING
11. CONCRETE CURB. SEE DETAIL C1/AS-501
12. CURB RAMP. SEE C4/AS-501
13. 4" WIDE PAINTED WHITE PARKING STRIPING
14. CROSSWALK. SEE DETAIL E1/AS-501
15. STORM DRAIN INLET. SEE CIVIL
16. EXISTING LANDSCAPE AREA TO REMAIN. PROTECT DURING CONSTRUCTION.
17. DOOR STOP - SEE E4/AS-501
18. BOLLARD, TYP - SEE DETAIL E5/AS-501
19. LIGHT POLE - SEE ELEC
20. DOWNSPOUT. TIE INTO UG STORM DRAIN SYSTEM. SEE DETAIL C1/AS-501 & CIVIL

VIGIL & ASSOCIATES
ARCHITECTURAL GROUP, P.C.
4777 Irving NW, Suite A • Albuquerque, NM 87114 • 505.565.5030
PO Drawer Z, 1708 Pierce De Leaide • Leaide, NM 88048 • 575.337.5030

75% CD
NOT FOR
CONSTRUCTION

ENLARGED SITE PLAN

INTENSIVE SUPPORT PROGRAM HUB
WEST MESA HIGH SCHOOL
ALBUQUERQUE PUBLIC SCHOOLS

date:	09-15-15
drawn by:	VGA
checked by:	RRV
file name: 14-034_AS-103.dwg	
revisions:	

AS-103

project no. 14-034

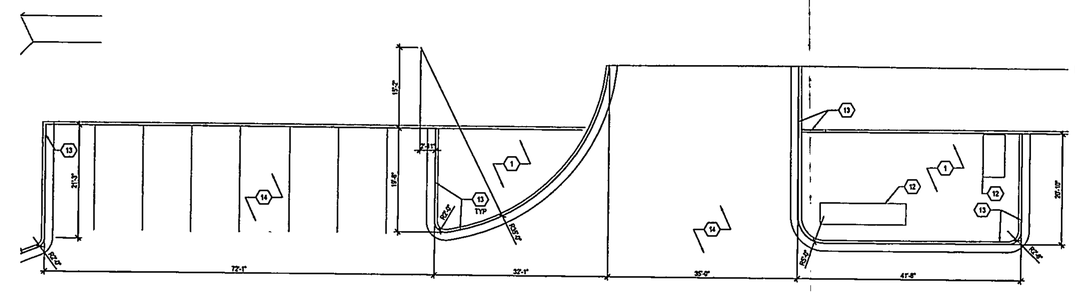
PSFA PROJECT NO: XXX-XXX

SHEET KEYNOTES

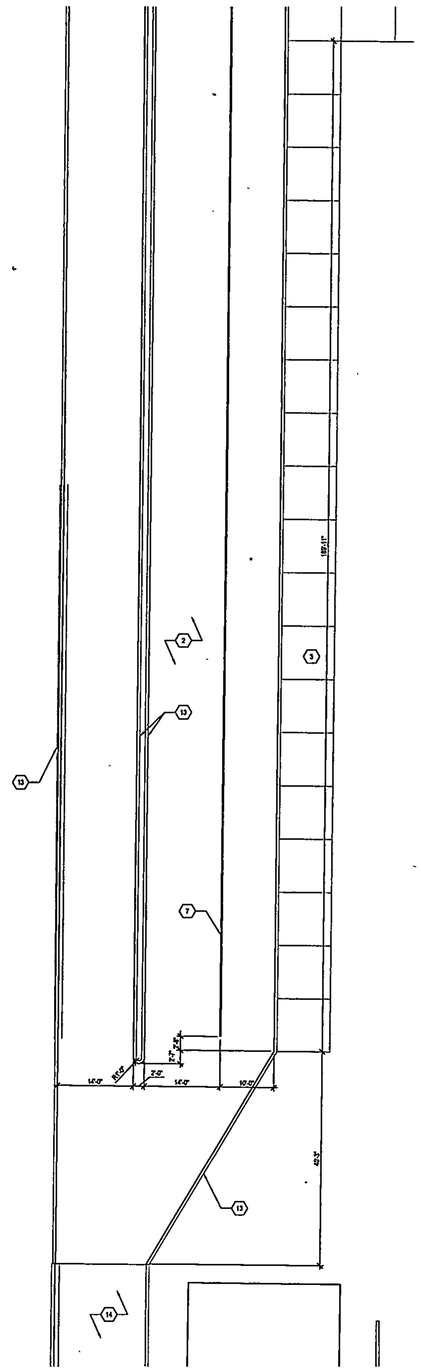
1. LANDSCAPE AREA - SEE LANDSCAPE PLANS
2. NEW ASPHALT PAVING
3. CONCRETE SIDEWALK
4. FIRE LANE STRIPING
5. NEW FIRE HYDRANT, SEE CIVIL
6. CURB RAMP, SEE C2A3-501
7. 4" WIDE PAINTED WHITE PARKING STRIPING
8. CROSSWALK, SEE DETAIL E3A3-501
9. STORM DRAIN INLET, SEE CIVIL
10. ACCESSIBLE PARKING SYMBOL, SEE E3A3-501
11. ACCESSIBLE PARKING SIGN, SEE C3A3-501
12. BACKFLOW PREVENTION DEVICE & HEATED ENCLOSURE - SEE CIVIL
13. NEW CONCRETE CURB, SEE C1A3-501
14. EXISTING ASPHALT PAVING TO REMAIN
15. EXISTING HC SYMBOL TO REMAIN
16. EXISTING LANDSCAPE AREA TO REMAIN. PROTECT DURING CONSTRUCTION.
17. WHEEL STOP, SEE E3A3-501
18. FLUSH CURB, SEE A1A3-501 & CIVIL
19. LIGHT POLE - SEE ELEC

GENERAL SHEET NOTES

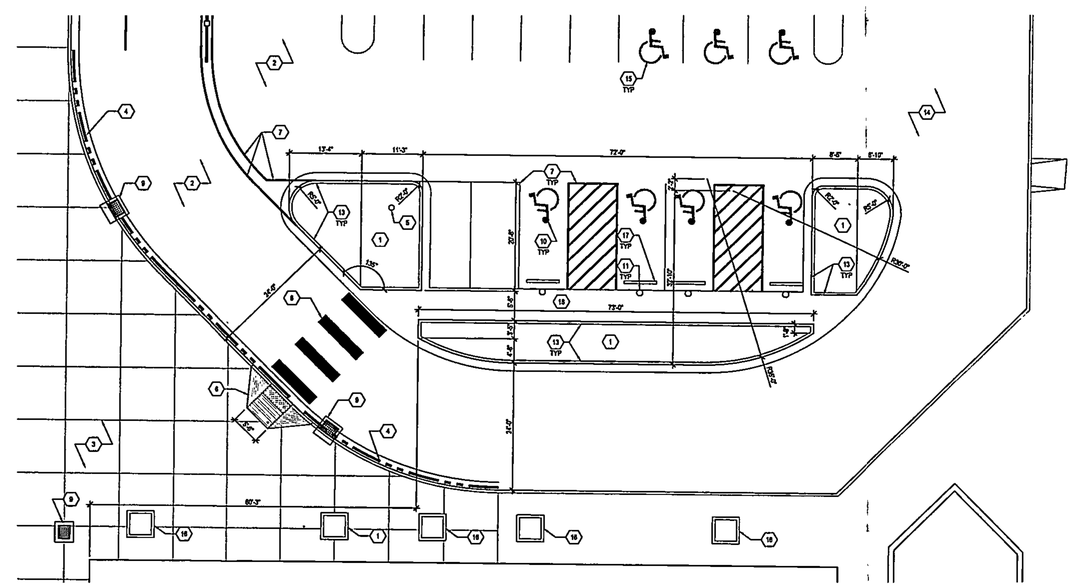
A. REFER TO LANDSCAPE SHEETS (L1.101)FOR IRRIGATION SLEEVING LOCATIONS.
B. AT AREAS OF CUTTING AND TRENCHING AT EXISTING ASPHALT SURFACES FOR NEW WORK, THE CONTRACTOR SHALL PATCH AND REPAIR DAMAGED ASPHALT TO MATCH EXISTING ADJACENT SURFACES.
C. ALL UNDERGROUND UTILITIES SHOWN ARE BASED ON EXISTING RECORD DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED. GENERAL CONTRACTOR IS RESPONSIBLE TO VERIFY/LOCATE ALL UNDERGROUND UTILITIES WITH LOCAL UTILITY COMPANIES AND TO SITE INVESTIGATE (HAND DIG - AS REQ'D) UTILITY LINES SHOWN FOR VERIFICATION PRIOR TO WORK.
D. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CONFLICT WITH SITE UTILITIES OR FEATURES AND OBTAIN RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.
E. THE CONTRACTOR SHALL COORDINATE SITE ACCESS AND STAGING AREA WITH OWNER/ARCHITECT.
F. CONTRACTOR SHALL TAKE PRECAUTIONS AS NECESSARY TO PROTECT FROM DAMAGING EXISTING UTILITY LINES, WALKS, LANDSCAPING, ETC. WHICH WILL REMAIN AS PART OF THE FINAL SYSTEM. CONTRACTOR SHALL REPAIR AND/OR RESTORE THOSE ITEMS AS REQUIRED TO PRE-CONSTRUCTION CONDITION.
G. SEE LANDSCAPE DRAWINGS FOR SITE IRRIGATION & NEW LANDSCAPING.
H. SLOPE PAVEMENT MINIMUM 1%, MAXIMUM 2% FOR ACCESSIBILITY. SEE CIVIL DRAWINGS FOR GRADING AND DRAINAGE.
I. SEE ENLARGED SITE PLANS FOR MORE DETAILED INFORMATION.
J. REFER TO CIVIL FOR PAVING SECTIONS AT DRIVEWAYS.
K. REFER TO SHEET H01 FOR EXTERIOR COLORED CONC AND CMU WALL COLORS.



C3 ENLARGED ARCHITECTURAL SITE PLAN
SCALE: 1" = 10'-0"



A2 ENLARGED ARCHITECTURAL SITE PLAN
SCALE: 1" = 10'-0"



A3 ENLARGED ARCHITECTURAL SITE PLAN
SCALE: 1" = 10'-0"

NORTH
SCALE: 1" = 10'

VIGIL & ASSOCIATES
ARCHITECTURAL GROUP, P.C.
www.vigilarchitects.com
4477 Indian School, Suite A1 • Albuquerque, NM 87110 • 505.855.5200
PO Drawer Z, 1720 Third Ave. Southe • Nampa, Idaho 83686 • 208.467.5200

75% CD
NOT FOR
CONSTRUCTION

INTENSIVE SUPPORT PROGRAM HUB
WEST MESA HIGH SCHOOL
ALBUQUERQUE PUBLIC SCHOOLS

ENLARGED SITE PLAN

date:	09-15-15
drawn by:	VAA
checked by:	RRV
file name: 14-034_AS-104.dwg	
revisions:	

AS-104

project no. 14-034

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

Counter:RC

File Name : Bus Access-1
Site Code : 08262015
Start Date : 8/26/2015
Page No : 1

Groups Printed- Cars - Trucks - Buses

	Glenrio Eastbound				Glenrio Westbound				Bus Access Northbound				Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	18	0	18	0	6	0	6	0	0	1	1	0	0	0	0	25
06:15 AM	0	32	0	32	0	16	0	16	0	0	1	1	0	0	0	0	49
06:30 AM	0	20	0	20	0	8	0	8	0	0	0	0	0	0	0	0	28
06:45 AM	0	26	0	26	0	8	0	8	4	0	0	4	0	0	0	0	38
Total	0	96	0	96	0	38	0	38	4	0	2	6	0	0	0	0	140
07:00 AM	0	74	0	74	0	26	0	26	1	0	1	2	0	0	0	0	102
07:15 AM	0	67	0	67	0	40	0	40	0	0	4	4	0	0	0	0	111
07:30 AM	0	35	0	35	0	18	0	18	0	0	2	2	0	0	0	0	55
07:45 AM	0	10	0	10	0	10	0	10	0	0	1	1	0	0	0	0	21
Total	0	186	0	186	0	94	0	94	1	0	8	9	0	0	0	0	289
08:00 AM	0	13	0	13	0	9	0	9	0	0	0	0	0	0	0	0	22
08:15 AM	0	24	0	24	0	8	0	8	1	0	0	1	0	0	1	1	34
08:30 AM	0	26	0	26	0	13	0	13	0	0	0	0	0	0	0	0	39
08:45 AM	0	23	0	23	0	10	0	10	0	0	0	0	0	0	0	0	33
Total	0	86	0	86	0	40	0	40	1	0	0	1	0	0	1	1	128
*** BREAK ***																	
11:00 AM	0	16	0	16	0	13	0	13	0	0	0	0	0	0	0	0	29
11:15 AM	0	10	0	10	0	11	0	11	0	0	2	2	0	0	0	0	23
11:30 AM	0	11	0	11	0	8	0	8	0	0	0	0	0	0	0	0	19
11:45 AM	0	15	0	15	0	16	0	16	0	0	0	0	0	0	0	0	31
Total	0	52	0	52	0	48	0	48	0	0	2	2	0	0	0	0	102
12:00 PM	0	11	0	11	0	12	0	12	0	0	0	0	0	0	0	0	23
12:15 PM	0	20	0	20	0	26	0	26	0	0	2	2	0	0	0	0	48
12:30 PM	0	18	0	18	0	19	0	19	0	0	0	0	0	0	0	0	37
12:45 PM	0	15	0	15	0	21	0	21	0	0	0	0	0	0	0	0	36
Total	0	64	0	64	0	78	0	78	0	0	2	2	0	0	0	0	144
01:00 PM	0	17	0	17	0	7	0	7	0	0	0	0	0	0	0	0	24
01:15 PM	0	10	0	10	0	10	0	10	1	0	3	4	0	0	1	1	25
01:30 PM	0	11	0	11	0	17	0	17	0	0	1	1	0	0	0	0	29
01:45 PM	0	12	0	12	0	11	0	11	0	0	3	3	0	0	0	0	26
Total	0	50	0	50	0	45	0	45	1	0	7	8	0	0	1	1	104
02:00 PM	0	17	0	17	0	29	0	29	0	0	2	2	0	0	0	0	48
02:15 PM	0	16	0	16	0	33	0	33	4	0	6	10	0	0	0	0	59
02:30 PM	0	26	0	26	0	52	0	52	1	0	2	3	0	0	0	0	81
02:45 PM	0	21	0	21	0	29	0	29	0	0	0	0	0	0	0	0	50
Total	0	80	0	80	0	143	0	143	5	0	10	15	0	0	0	0	238
*** BREAK ***																	
04:30 PM	0	23	0	23	0	22	0	22	1	0	2	3	0	0	0	0	48
04:45 PM	0	24	0	24	0	26	0	26	0	0	1	1	0	0	0	0	51
Total	0	47	0	47	0	48	0	48	1	0	3	4	0	0	0	0	99
05:00 PM	0	20	0	20	0	35	0	35	0	0	0	0	0	0	0	0	55
05:15 PM	0	23	0	23	0	35	0	35	0	0	1	1	0	0	0	0	59
05:30 PM	0	30	0	30	0	43	0	43	0	0	0	0	0	0	0	0	73
05:45 PM	0	25	0	25	0	51	0	51	0	0	1	1	0	0	0	0	77
Total	0	98	0	98	0	164	0	164	0	0	2	2	0	0	0	0	264
06:00 PM	0	36	0	36	0	31	0	31	0	0	1	1	0	0	0	0	68
06:15 PM	0	24	0	24	0	24	0	24	0	0	0	0	0	0	0	0	48
Grand Total	0	819	0	819	0	753	0	753	13	0	37	50	0	0	2	2	1624
Apprch %	0	100	0		0	100	0		26	0	74		0	0	100		
Total %	0	50.4	0	50.4	0	46.4	0	46.4	0.8	0	2.3	3.1	0	0	0.1	0.1	
Cars	0	815	0	815	0	743	0	743	3	0	23	26	0	0	0	0	1584
% Cars	0	99.5	0	99.5	0	98.7	0	98.7	23.1	0	62.2	52	0	0	0	0	97.5

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

File Name : Bus Access-1
Site Code : 08262015
Start Date : 8/26/2015
Page No : 2

Groups Printed- Cars - Trucks - Buses

	Glenrio Eastbound				Glenrio Westbound				Bus Access Northbound				Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Trucks	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% Trucks	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0.1
Buses	0	4	0	4	0	9	0	9	10	0	14	24	0	0	2	2	39
% Buses	0	0.5	0	0.5	0	1.2	0	1.2	76.9	0	37.8	48	0	0	100	100	2.4

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

File Name : Bus Access-1
Site Code : 08262015
Start Date : 8/26/2015
Page No : 3

	Glenrio Eastbound				Glenrio Westbound				Bus Access Northbound				Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	0	26	0	26	0	8	0	8	4	0	0	4	0	0	0	0	38
07:00 AM	0	74	0	74	0	26	0	26	1	0	1	2	0	0	0	0	102
07:15 AM	0	67	0	67	0	40	0	40	0	0	4	4	0	0	0	0	111
07:30 AM	0	35	0	35	0	18	0	18	0	0	2	2	0	0	0	0	55
Total Volume	0	202	0	202	0	92	0	92	5	0	7	12	0	0	0	0	306
% App. Total	0	100	0		0	100	0		41.7	0	58.3		0	0	0		
PHF	.000	.682	.000	.682	.000	.575	.000	.575	.313	.000	.438	.750	.000	.000	.000	.000	.689
Cars	0	201	0	201	0	91	0	91	0	0	0	0	0	0	0	0	292
% Cars	0	99.5	0	99.5	0	98.9	0	98.9	0	0	0	0	0	0	0	0	95.4
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	1	0	1	0	1	0	1	5	0	7	12	0	0	0	0	14
% Buses	0	0.5	0	0.5	0	1.1	0	1.1	100	0	100	100	0	0	0	0	4.6
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:15 PM																	
12:15 PM	0	20	0	20	0	26	0	26	0	0	2	2	0	0	0	0	48
12:30 PM	0	18	0	18	0	19	0	19	0	0	0	0	0	0	0	0	37
12:45 PM	0	15	0	15	0	21	0	21	0	0	0	0	0	0	0	0	36
01:00 PM	0	17	0	17	0	7	0	7	0	0	0	0	0	0	0	0	24
Total Volume	0	70	0	70	0	73	0	73	0	0	2	2	0	0	0	0	145
% App. Total	0	100	0		0	100	0		0	0	100		0	0	0		
PHF	.000	.875	.000	.875	.000	.702	.000	.702	.000	.000	.250	.250	.000	.000	.000	.000	.755
Cars	0	70	0	70	0	73	0	73	0	0	1	1	0	0	0	0	144
% Cars	0	100	0	100	0	100	0	100	0	0	50.0	50.0	0	0	0	0	99.3
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
% Buses	0	0	0	0	0	0	0	0	0	0	50.0	50.0	0	0	0	0	0.7
Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	0	23	0	23	0	35	0	35	0	0	1	1	0	0	0	0	59
05:30 PM	0	30	0	30	0	43	0	43	0	0	0	0	0	0	0	0	73
05:45 PM	0	25	0	25	0	51	0	51	0	0	1	1	0	0	0	0	77
06:00 PM	0	36	0	36	0	31	0	31	0	0	1	1	0	0	0	0	68
Total Volume	0	114	0	114	0	160	0	160	0	0	3	3	0	0	0	0	277
% App. Total	0	100	0		0	100	0		0	0	100		0	0	0		
PHF	.000	.792	.000	.792	.000	.784	.000	.784	.000	.000	.750	.750	.000	.000	.000	.000	.899
Cars	0	114	0	114	0	159	0	159	0	0	3	3	0	0	0	0	276
% Cars	0	100	0	100	0	99.4	0	99.4	0	0	100	100	0	0	0	0	99.6
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% Buses	0	0	0	0	0	0.6	0	0.6	0	0	0	0	0	0	0	0	0.4

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

Counter:RC

File Name : Bus Access-1
Site Code : 08262015
Start Date : 8/26/2015
Page No : 1

Groups Printed- Cars

	Glenrio Eastbound					Glenrio Westbound					Bus Access Northbound					Southbound							
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
06:00 AM	0	18	0	0	18	0	6	0	0	6	0	0	1	0	1	0	0	0	0	0	0	25	25
06:15 AM	0	32	0	0	32	0	16	0	0	16	0	0	1	0	1	0	0	0	0	0	0	49	49
06:30 AM	0	20	0	0	20	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	27	27
06:45 AM	0	26	0	0	26	0	8	0	0	8	0	0	0	0	0	0	0	0	1	0	1	34	35
Total	0	96	0	0	96	0	37	0	0	37	0	0	2	0	2	0	0	0	1	0	1	135	136
07:00 AM	0	73	0	0	73	0	26	0	0	26	0	0	0	0	0	0	0	0	0	0	0	99	99
07:15 AM	0	67	0	0	67	0	39	0	0	39	0	0	0	0	0	0	0	0	0	0	0	106	106
07:30 AM	0	35	0	0	35	0	18	0	0	18	0	0	0	0	0	0	0	0	1	0	1	53	54
07:45 AM	0	10	0	0	10	0	10	0	0	10	0	0	1	0	1	0	0	0	0	0	0	21	21
Total	0	185	0	0	185	0	93	0	0	93	0	0	1	0	1	0	0	0	1	0	1	279	280
08:00 AM	0	13	0	0	13	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	21	21
08:15 AM	0	23	0	0	23	0	7	0	0	7	1	0	0	0	1	0	0	0	0	0	0	31	31
08:30 AM	0	25	0	0	25	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	0	38	38
08:45 AM	0	23	0	0	23	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0	32	32
Total	0	84	0	0	84	0	37	0	0	37	1	0	0	0	1	0	0	0	0	0	0	122	122
*** BREAK ***																							
11:00 AM	0	16	0	0	16	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	0	29	29
11:15 AM	0	9	0	0	9	0	11	0	0	11	0	0	2	0	2	0	0	0	0	0	0	22	22
11:30 AM	0	11	0	0	11	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	19	19
11:45 AM	0	15	0	0	15	0	15	0	0	15	0	0	0	0	0	0	0	0	0	0	0	30	30
Total	0	51	0	0	51	0	47	0	0	47	0	0	2	0	2	0	0	0	0	0	0	100	100
12:00 PM	0	11	0	0	11	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	0	23	23
12:15 PM	0	20	0	0	20	0	26	0	0	26	0	0	1	0	1	0	0	0	0	0	0	47	47
12:30 PM	0	18	0	0	18	0	19	0	0	19	0	0	0	0	0	0	0	0	0	0	0	37	37
12:45 PM	0	15	0	0	15	0	21	0	0	21	0	0	0	0	0	0	0	0	0	0	0	36	36
Total	0	64	0	0	64	0	78	0	0	78	0	0	1	0	1	0	0	0	0	0	0	143	143
01:00 PM	0	17	0	0	17	0	7	0	0	7	0	0	0	0	0	0	0	0	1	0	1	24	25
01:15 PM	0	10	0	0	10	0	9	0	0	9	1	0	3	0	4	0	0	0	0	0	0	23	23
01:30 PM	0	11	0	0	11	0	17	0	0	17	0	0	1	0	1	0	0	0	2	0	2	29	31
01:45 PM	0	12	0	0	12	0	11	0	0	11	0	0	3	0	3	0	0	0	3	0	3	26	29
Total	0	50	0	0	50	0	44	0	0	44	1	0	7	0	8	0	0	0	6	0	6	102	108
02:00 PM	0	17	0	0	17	0	27	0	0	27	0	0	2	0	2	0	0	0	4	0	4	46	50

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

File Name : Bus Access-1
Site Code : 08262015
Start Date : 8/26/2015
Page No : 2

Groups Printed- Cars

	Glenrio Eastbound					Glenrio Westbound					Bus Access Northbound					Southbound							
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
02:15 PM	0	16	0	0	16	0	33	0	0	33	0	0	0	0	0	0	0	0	0	0	0	49	49
02:30 PM	0	26	0	0	26	0	52	0	0	52	0	0	2	0	2	0	0	0	2	0	2	80	82
02:45 PM	0	21	0	0	21	0	29	0	0	29	0	0	0	0	0	0	0	0	0	0	0	50	50
Total	0	80	0	0	80	0	141	0	0	141	0	0	4	0	4	0	0	0	6	0	6	225	231
*** BREAK ***																							
04:30 PM	0	23	0	1	23	0	22	0	0	22	1	0	2	0	3	0	0	0	1	0	2	48	50
04:45 PM	0	24	0	0	24	0	26	0	0	26	0	0	1	0	1	0	0	0	0	0	0	51	51
Total	0	47	0	1	47	0	48	0	0	48	1	0	3	0	4	0	0	0	1	0	2	99	101
05:00 PM	0	20	0	0	20	0	35	0	0	35	0	0	0	0	0	0	0	0	0	0	0	55	55
05:15 PM	0	23	0	0	23	0	35	0	0	35	0	0	1	0	1	0	0	0	0	0	0	59	59
05:30 PM	0	30	0	0	30	0	43	0	0	43	0	0	0	0	0	0	0	0	0	0	0	73	73
05:45 PM	0	25	0	0	25	0	50	0	0	50	0	0	1	0	1	0	0	0	0	0	0	76	76
Total	0	98	0	0	98	0	163	0	0	163	0	0	2	0	2	0	0	0	0	0	0	263	263
06:00 PM	0	36	0	0	36	0	31	0	0	31	0	0	1	0	1	0	0	0	0	0	0	68	68
06:15 PM	0	24	0	0	24	0	24	0	0	24	0	0	0	0	0	0	0	0	0	0	0	48	48
Grand Total	0	815	0	1	815	0	743	0	0	743	3	0	23	0	26	0	0	0	15	0	16	1584	1600
Apprch %	0	100	0			0	100	0			11.5	0	88.5			0	0	0					
Total %	0	51.5	0		51.5	0	46.9	0		46.9	0.2	0	1.5		1.6	0	0	0		0	1	99	

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

Counter:RC

File Name : bus access-1
Site Code : 08262015
Start Date : 8/26/2015
Page No : 1

Groups Printed- Bikes

	Glenrio Eastbound					Glenrio Westbound					Bus Access Northbound					Southbound							
Start Time	Left	Thru	Right	Bikes	App. Total	Left	Thru	Right	Bikes	App. Total	Left	Thru	Right	Bikes	App. Total	Left	Thru	Right	Bikes	App. Total	Exclu. Total	Inclu. Total	Int. Total
*** BREAK ***																							
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
06:45 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Total	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3
07:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
*** BREAK ***																							
07:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
07:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
*** BREAK ***																							
08:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
*** BREAK ***																							
Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
*** BREAK ***																							
11:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
*** BREAK ***																							
12:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
*** BREAK ***																							
01:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
02:00 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
*** BREAK ***																							
02:30 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
*** BREAK ***																							
Total	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
*** BREAK ***																							
05:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	2

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

File Name : bus access-1
Site Code : 08262015
Start Date : 8/26/2015
Page No : 2

Groups Printed- Trucks

	Glenrio Eastbound					Glenrio Westbound					Bus Access Northbound					Southbound							
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
*** BREAK ***																							
Grand Total	0	0	0	14	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	15	1	16
Apprch %	0	0	0			0	0	0			0	0	0			0	0	0					
Total %	0	0	0		0	0	0	0		100	0	0	0		0	0	0	0		0	93.8	6.2	

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

Counter:RC

File Name : Student 1
Site Code : 08262015
Start Date : 8/26/2015
Page No : 1

Groups Printed- Cars - Trucks - Buses

	Glenrio Eastbound				Glenrio Westbound				Student Parking West Northbound				Apt Access Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	1	12	6	19	8	5	0	13	1	0	3	4	1	0	0	1	37
06:15 AM	0	15	18	33	19	4	0	23	12	0	17	29	1	0	0	1	86
06:30 AM	0	19	1	20	8	7	1	16	1	0	1	2	1	0	0	1	39
06:45 AM	1	23	3	27	10	8	1	19	0	0	3	3	0	0	0	0	49
Total	2	69	28	99	45	24	2	71	14	0	24	38	3	0	0	3	211
07:00 AM	0	61	17	78	25	24	0	49	0	0	2	2	2	0	2	4	133
07:15 AM	2	51	16	69	30	37	0	67	1	0	3	4	2	0	2	4	144
07:30 AM	3	33	0	36	0	11	0	11	1	0	0	1	6	0	2	8	56
07:45 AM	1	18	0	19	0	9	2	11	0	0	0	0	1	0	1	2	32
Total	6	163	33	202	55	81	2	138	2	0	5	7	11	0	7	18	365
08:00 AM	0	13	0	13	0	9	3	12	0	0	0	0	3	0	0	3	28
08:15 AM	1	23	0	24	0	4	1	5	1	0	0	1	2	0	3	5	35
08:30 AM	0	26	0	26	0	12	2	14	0	0	0	0	1	0	1	2	42
08:45 AM	2	21	0	23	1	9	4	14	0	0	0	0	0	0	1	1	38
Total	3	83	0	86	1	34	10	45	1	0	0	1	6	0	5	11	143
*** BREAK ***																	
11:00 AM	0	16	0	16	0	13	1	14	0	0	0	0	1	0	0	1	31
11:15 AM	0	12	0	12	0	11	1	12	0	0	0	0	1	0	0	1	25
11:30 AM	0	11	0	11	0	8	0	8	0	0	0	0	0	0	0	0	19
11:45 AM	1	14	0	15	0	16	3	19	0	1	0	1	1	0	0	1	36
Total	1	53	0	54	0	48	5	53	0	1	0	1	3	0	0	3	111
12:00 PM	3	8	0	11	2	12	2	16	0	0	0	0	3	0	0	3	30
12:15 PM	0	20	2	22	0	26	1	27	0	0	0	0	1	0	0	1	50
12:30 PM	0	18	0	18	0	16	1	17	0	0	0	0	1	0	3	4	39
12:45 PM	0	15	0	15	0	20	0	20	0	0	0	0	5	0	1	6	41
Total	3	61	2	66	2	74	4	80	0	0	0	0	10	0	4	14	160
01:00 PM	1	16	0	17	0	7	4	11	0	0	0	0	1	0	0	1	29
01:15 PM	0	14	0	14	0	9	0	9	0	0	0	0	3	0	1	4	27
01:30 PM	2	11	0	13	0	16	4	20	0	0	0	0	1	0	1	2	35
01:45 PM	0	15	0	15	0	10	3	13	0	0	0	0	2	0	1	3	31
Total	3	56	0	59	0	42	11	53	0	0	0	0	7	0	3	10	122
02:00 PM	0	19	0	19	0	29	3	32	0	0	0	0	1	0	0	1	52
02:15 PM	2	32	3	37	5	26	3	34	5	1	13	19	1	0	2	3	93
02:30 PM	0	26	4	30	9	31	2	42	19	0	33	52	4	0	2	6	130
02:45 PM	4	14	3	21	3	22	2	27	4	0	15	19	1	0	3	4	71
Total	6	91	10	107	17	108	10	135	28	1	61	90	7	0	7	14	346
*** BREAK ***																	
04:30 PM	4	19	2	25	1	17	2	20	4	0	3	7	0	0	1	1	53
04:45 PM	1	18	6	25	17	20	2	39	3	0	15	18	2	0	3	5	87
Total	5	37	8	50	18	37	4	59	7	0	18	25	2	0	4	6	140
05:00 PM	0	16	5	21	14	27	1	42	8	0	17	25	2	0	0	2	90
05:15 PM	1	20	2	23	12	32	2	46	2	0	4	6	0	0	1	1	76
05:30 PM	3	21	7	31	16	33	4	53	9	0	19	28	1	0	1	2	114
05:45 PM	3	16	6	25	17	37	5	59	14	0	27	41	3	0	0	3	128
Total	7	73	20	100	59	129	12	200	33	0	67	100	6	0	2	8	408
06:00 PM	1	24	11	36	14	20	3	37	10	0	16	26	1	0	2	3	102
06:15 PM	3	20	1	24	9	21	7	37	0	0	6	6	3	0	3	6	73
Grand Total	40	730	113	883	220	618	70	908	95	2	197	294	59	0	37	96	2181
Apprch %	4.5	82.7	12.8		24.2	68.1	7.7		32.3	0.7	67		61.5	0	38.5		
Total %	1.8	33.5	5.2	40.5	10.1	28.3	3.2	41.6	4.4	0.1	9	13.5	2.7	0	1.7	4.4	
Cars	40	707	113	860	220	610	70	900	95	1	197	293	59	0	35	94	2147
% Cars	100	96.8	100	97.4	100	98.7	100	99.1	100	50	100	99.7	100	0	94.6	97.9	98.4

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

File Name : Student 1
Site Code : 08262015
Start Date : 8/26/2015
Page No : 2

Groups Printed- Cars - Trucks - Buses

	Glenrio Eastbound				Glenrio Westbound				Student Parking West Northbound				Apt Access Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Trucks	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
% Trucks	0	0.1	0	0.1	0	0.2	0	0.1	0	0	0	0	0	0	0	0	0.1
Buses	0	22	0	22	0	7	0	7	0	1	0	1	0	0	2	2	32
% Buses	0	3	0	2.5	0	1.1	0	0.8	0	50	0	0.3	0	0	5.4	2.1	1.5

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

File Name : Student 1
Site Code : 08262015
Start Date : 8/26/2015
Page No : 3

	Glenrio Eastbound				Glenrio Westbound				Student Parking West Northbound				Apt Access Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	1	23	3	27	10	8	1	19	0	0	3	3	0	0	0	0	49
07:00 AM	0	61	17	78	25	24	0	49	0	0	2	2	2	0	2	4	133
07:15 AM	2	51	16	69	30	37	0	67	1	0	3	4	2	0	2	4	144
07:30 AM	3	33	0	36	0	11	0	11	1	0	0	1	6	0	2	8	56
Total Volume	6	168	36	210	65	80	1	146	2	0	8	10	10	0	6	16	382
% App. Total	2.9	80	17.1		44.5	54.8	0.7		20	0	80		62.5	0	37.5		
PHF	.500	.689	.529	.673	.542	.541	.250	.545	.500	.000	.667	.625	.417	.000	.750	.500	.663
Cars	6	159	36	201	65	79	1	145	2	0	8	10	10	0	6	16	372
% Cars	100	94.6	100	95.7	100	98.8	100	99.3	100	0	100	100	100	0	100	100	97.4
Trucks	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% Trucks	0	0.6	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0.3
Buses	0	8	0	8	0	1	0	1	0	0	0	0	0	0	0	0	9
% Buses	0	4.8	0	3.8	0	1.3	0	0.7	0	0	0	0	0	0	0	0	2.4
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	3	8	0	11	2	12	2	16	0	0	0	0	3	0	0	3	30
12:15 PM	0	20	2	22	0	26	1	27	0	0	0	0	1	0	0	1	50
12:30 PM	0	18	0	18	0	16	1	17	0	0	0	0	1	0	3	4	39
12:45 PM	0	15	0	15	0	20	0	20	0	0	0	0	5	0	1	6	41
Total Volume	3	61	2	66	2	74	4	80	0	0	0	0	10	0	4	14	160
% App. Total	4.5	92.4	3		2.5	92.5	5		0	0	0		71.4	0	28.6		
PHF	.250	.763	.250	.750	.250	.712	.500	.741	.000	.000	.000	.000	.500	.000	.333	.583	.800
Cars	3	60	2	65	2	74	4	80	0	0	0	0	10	0	4	14	159
% Cars	100	98.4	100	98.5	100	100	100	100	0	0	0	0	100	0	100	100	99.4
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% Buses	0	1.6	0	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0.6
Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	1	20	2	23	12	32	2	46	2	0	4	6	0	0	1	1	76
05:30 PM	3	21	7	31	16	33	4	53	9	0	19	28	1	0	1	2	114
05:45 PM	3	16	6	25	17	37	5	59	14	0	27	41	3	0	0	3	128
06:00 PM	1	24	11	36	14	20	3	37	10	0	16	26	1	0	2	3	102
Total Volume	8	81	26	115	59	122	14	195	35	0	66	101	5	0	4	9	420
% App. Total	7	70.4	22.6		30.3	62.6	7.2		34.7	0	65.3		55.6	0	44.4		
PHF	.667	.844	.591	.799	.868	.824	.700	.826	.625	.000	.611	.616	.417	.000	.500	.750	.820
Cars	8	81	26	115	59	121	14	194	35	0	66	101	5	0	4	9	419
% Cars	100	100	100	100	100	99.2	100	99.5	100	0	100	100	100	0	100	100	99.8
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% Buses	0	0	0	0	0	0.8	0	0.5	0	0	0	0	0	0	0	0	0.2

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

Counter:RC

File Name : Student 1
Site Code : 08262015
Start Date : 8/26/2015
Page No : 1

Groups Printed- Cars

	Glenrio Eastbound					Glenrio Westbound					Student Parking West Northbound					Apt Access Southbound							
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
06:00 AM	1	12	6	0	19	8	5	0	1	13	1	0	3	0	4	1	0	0	1	1	2	37	39
06:15 AM	0	15	18	1	33	19	4	0	0	23	12	0	17	0	29	1	0	0	3	1	4	86	90
06:30 AM	0	19	1	0	20	8	6	1	0	15	1	0	1	1	2	1	0	0	2	1	3	38	41
06:45 AM	1	22	3	3	26	10	8	1	0	19	0	0	3	6	3	0	0	0	0	0	9	48	57
Total	2	68	28	4	98	45	23	2	1	70	14	0	24	7	38	3	0	0	6	3	18	209	227
07:00 AM	0	56	17	0	73	25	24	0	4	49	0	0	2	2	2	2	0	2	4	4	10	128	138
07:15 AM	2	49	16	1	67	30	36	0	3	66	1	0	3	5	4	2	0	2	0	4	9	141	150
07:30 AM	3	32	0	0	35	0	11	0	1	11	1	0	0	0	1	6	0	2	0	8	1	55	56
07:45 AM	1	18	0	0	19	0	9	2	3	11	0	0	0	0	0	1	0	1	0	2	3	32	35
Total	6	155	33	1	194	55	80	2	11	137	2	0	5	7	7	11	0	7	4	18	23	356	379
08:00 AM	0	13	0	0	13	0	8	3	0	11	0	0	0	0	0	3	0	0	0	3	0	27	27
08:15 AM	1	22	0	0	23	0	4	1	2	5	1	0	0	0	1	2	0	2	1	4	3	33	36
08:30 AM	0	25	0	0	25	0	12	2	2	14	0	0	0	2	0	1	0	1	0	2	4	41	45
08:45 AM	2	21	0	1	23	1	8	4	0	13	0	0	0	1	0	0	0	1	0	1	2	37	39
Total	3	81	0	1	84	1	32	10	4	43	1	0	0	3	1	6	0	4	1	10	9	138	147
*** BREAK ***																							
11:00 AM	0	16	0	0	16	0	13	1	0	14	0	0	0	0	0	1	0	0	0	1	0	31	31
11:15 AM	0	11	0	0	11	0	11	1	0	12	0	0	0	0	0	1	0	0	0	1	0	24	24
11:30 AM	0	11	0	2	11	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	2	19	21
11:45 AM	1	14	0	0	15	0	15	3	0	18	0	0	0	0	0	1	0	0	0	1	0	34	34
Total	1	52	0	2	53	0	47	5	0	52	0	0	0	0	0	3	0	0	0	3	2	108	110
12:00 PM	3	8	0	0	11	2	12	2	1	16	0	0	0	0	0	3	0	0	0	3	1	30	31
12:15 PM	0	19	2	0	21	0	26	1	0	27	0	0	0	0	0	1	0	0	0	1	0	49	49
12:30 PM	0	18	0	0	18	0	16	1	1	17	0	0	0	0	0	1	0	3	0	4	1	39	40
12:45 PM	0	15	0	0	15	0	20	0	0	20	0	0	0	0	0	5	0	1	0	6	0	41	41
Total	3	60	2	0	65	2	74	4	2	80	0	0	0	0	0	10	0	4	0	14	2	159	161
01:00 PM	1	16	0	0	17	0	7	4	4	11	0	0	0	0	0	1	0	0	0	1	4	29	33
01:15 PM	0	13	0	0	13	0	9	0	0	9	0	0	0	0	0	3	0	0	0	3	0	25	25
01:30 PM	2	10	0	0	12	0	16	4	0	20	0	0	0	0	0	1	0	1	0	2	0	34	34
01:45 PM	0	15	0	0	15	0	10	3	2	13	0	0	0	1	0	2	0	1	0	3	3	31	34
Total	3	54	0	0	57	0	42	11	6	53	0	0	0	1	0	7	0	2	0	9	7	119	126
02:00 PM	0	19	0	0	19	0	27	3	11	30	0	0	0	0	0	1	0	0	0	1	11	50	61

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

File Name : Student 1
Site Code : 08262015
Start Date : 8/26/2015
Page No : 2

Groups Printed- Cars

	Glenrio Eastbound					Glenrio Westbound					Student Parking West Northbound					Apt Access Southbound							
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
02:15 PM	2	26	3	1	31	5	26	3	1	34	5	1	13	0	19	1	0	2	2	3	4	87	91
02:30 PM	0	24	4	4	28	9	31	2	4	42	19	0	33	2	52	4	0	2	2	6	12	128	140
02:45 PM	4	14	3	1	21	3	22	2	3	27	4	0	15	0	19	1	0	3	5	4	9	71	80
Total	6	83	10	6	99	17	106	10	19	133	28	1	61	2	90	7	0	7	9	14	36	336	372
*** BREAK ***																							
04:30 PM	4	19	2	2	25	1	17	2	1	20	4	0	3	3	7	0	0	1	1	1	7	53	60
04:45 PM	1	18	6	0	25	17	20	2	2	39	3	0	15	0	18	2	0	3	0	5	2	87	89
Total	5	37	8	2	50	18	37	4	3	59	7	0	18	3	25	2	0	4	1	6	9	140	149
05:00 PM	0	16	5	3	21	14	27	1	0	42	8	0	17	0	25	2	0	0	1	2	4	90	94
05:15 PM	1	20	2	0	23	12	32	2	2	46	2	0	4	0	6	0	0	1	0	1	2	76	78
05:30 PM	3	21	7	1	31	16	33	4	0	53	9	0	19	0	28	1	0	1	1	2	2	114	116
05:45 PM	3	16	6	0	25	17	36	5	0	58	14	0	27	0	41	3	0	0	0	3	0	127	127
Total	7	73	20	4	100	59	128	12	2	199	33	0	67	0	100	6	0	2	2	8	8	407	415
06:00 PM	1	24	11	1	36	14	20	3	1	37	10	0	16	0	26	1	0	2	3	3	5	102	107
06:15 PM	3	20	1	0	24	9	21	7	1	37	0	0	6	0	6	3	0	3	0	6	1	73	74
Grand Total	40	707	113	21	860	220	610	70	50	900	95	1	197	23	293	59	0	35	26	94	120	2147	2267
Apprch %	4.7	82.2	13.1			24.4	67.8	7.8			32.4	0.3	67.2			62.8	0	37.2					
Total %	1.9	32.9	5.3		40.1	10.2	28.4	3.3		41.9	4.4	0	9.2		13.6	2.7	0	1.6		4.4	5.3	94.7	

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

Counter:RC

File Name : Student 1
Site Code : 08262015
Start Date : 8/26/2015
Page No : 1

Groups Printed-Bikes

	Glenrio Eastbound					Glenrio Westbound					Student Parking West Northbound					Apt Access Southbound							
Start Time	Left	Thru	Right	Bikes	App. Total	Left	Thru	Right	Bikes	App. Total	Left	Thru	Right	Bikes	App. Total	Left	Thru	Right	Bikes	App. Total	Exclu. Total	Inclu. Total	Int. Total
*** BREAK ***																							
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
06:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
06:45 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Total	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	3	1	4
07:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
*** BREAK ***																							
07:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
07:45 AM	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Total	0	1	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	1	4
*** BREAK ***																							
08:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
*** BREAK ***																							
Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
*** BREAK ***																							
11:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1
*** BREAK ***																							
11:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	2
*** BREAK ***																							
12:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	0	2
*** BREAK ***																							
12:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	3	0	3
*** BREAK ***																							
01:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1
01:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1
01:45 PM	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	3	0	3
Total	0	0	0	1	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0	0	5	0	5
02:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
*** BREAK ***																							
02:30 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	3

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

File Name : Student 1
Site Code : 08262015
Start Date : 8/26/2015
Page No : 2

Groups Printed- Bikes

	Glenrio Eastbound					Glenrio Westbound					Student Parking West Northbound					Apt Access Southbound							
Start Time	Left	Thru	Right	Bikes	App. Total	Left	Thru	Right	Bikes	App. Total	Left	Thru	Right	Bikes	App. Total	Left	Thru	Right	Bikes	App. Total	Exclu. Total	Inclu. Total	Int. Total
*** BREAK ***																							
Total	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0	4
*** BREAK ***																							
05:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1
*** BREAK ***																							
05:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	0	2
Total	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	4	0	4
*** BREAK ***																							
Grand Total	0	1	0	12	1	0	1	0	8	1	0	0	0	1	0	0	0	0	4	0	25	2	27
Apprch %	0	100	0			0	100	0			0	0	0			0	0	0					
Total %	0	50	0		50	0	50	0		50	0	0	0		0	0	0	0		0	92.6	7.4	

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

Counter: JB

File Name : student 2
Site Code : 08262015
Start Date : 8/26/2015
Page No : 1

Groups Printed- Cars - Trucks - Bus

	Glenrio Eastbound				Glenrio Westbound				Student Parking East Northbound				68th Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	4	12	0	16	0	10	0	10	0	0	0	0	1	0	4	5	31
06:15 AM	5	27	0	32	1	20	3	24	0	0	1	1	0	0	4	4	61
06:30 AM	5	19	0	24	0	10	1	11	0	0	1	1	2	0	4	6	42
06:45 AM	3	21	0	24	2	9	1	12	0	0	0	0	3	0	9	12	48
Total	17	79	0	96	3	49	5	57	0	0	2	2	6	0	21	27	182
07:00 AM	25	37	0	62	1	39	8	48	0	0	1	1	15	0	11	26	137
07:15 AM	21	41	0	62	1	52	6	59	0	0	0	0	11	0	28	39	160
07:30 AM	8	36	1	45	3	11	2	16	0	0	1	1	5	0	3	8	70
07:45 AM	5	15	0	20	0	11	2	13	0	0	0	0	0	0	2	2	35
Total	59	129	1	189	5	113	18	136	0	0	2	2	31	0	44	75	402
08:00 AM	3	13	0	16	1	8	2	11	0	0	0	0	3	0	4	7	34
08:15 AM	2	18	1	21	1	4	2	7	0	0	0	0	0	0	2	2	30
08:30 AM	3	25	0	28	0	11	0	11	0	0	0	0	3	0	2	5	44
08:45 AM	5	18	10	33	7	11	5	23	0	0	2	2	1	0	6	7	65
Total	13	74	11	98	9	34	9	52	0	0	2	2	7	0	14	21	173
*** BREAK ***																	
11:00 AM	2	15	0	17	0	11	1	12	0	0	1	1	0	0	2	2	32
11:15 AM	0	10	0	10	0	13	0	13	0	0	1	1	0	0	1	1	25
11:30 AM	0	11	0	11	2	9	1	12	0	0	0	0	1	0	1	2	25
11:45 AM	2	12	0	14	0	13	1	14	0	0	2	2	0	0	6	6	36
Total	4	48	0	52	2	46	3	51	0	0	4	4	1	0	10	11	118
12:00 PM	1	10	2	13	2	13	2	17	1	0	0	1	1	0	3	4	35
12:15 PM	4	17	1	22	0	11	2	13	6	1	12	19	0	1	12	13	67
12:30 PM	2	16	1	19	1	15	1	17	0	0	0	0	1	0	3	4	40
12:45 PM	3	17	0	20	0	11	1	12	6	0	7	13	1	1	7	9	54
Total	10	60	4	74	3	50	6	59	13	1	19	33	3	2	25	30	196
01:00 PM	1	13	0	14	2	9	0	11	0	0	0	0	1	0	2	3	28
01:15 PM	2	11	0	13	1	8	0	9	0	0	0	0	2	0	2	4	26
01:30 PM	2	11	0	13	1	17	2	20	1	0	1	2	2	0	3	5	40
01:45 PM	7	14	0	21	0	15	2	17	0	0	1	1	2	0	1	3	42
Total	12	49	0	61	4	49	4	57	1	0	2	3	7	0	8	15	136
02:00 PM	3	16	0	19	0	27	5	32	1	0	0	1	3	0	4	7	59
02:15 PM	3	35	0	38	0	24	2	26	0	0	0	0	5	0	14	19	83
02:30 PM	12	63	0	75	0	32	3	35	0	0	0	0	9	0	10	19	129
02:45 PM	4	27	0	31	1	22	3	26	0	0	0	0	2	0	6	8	65
Total	22	141	0	163	1	105	13	119	1	0	0	1	19	0	34	53	336
*** BREAK ***																	
04:30 PM	2	16	0	18	0	19	1	20	0	2	0	2	4	0	4	8	48
04:45 PM	6	29	0	35	0	28	3	31	0	0	0	0	5	0	7	12	78
Total	8	45	0	53	0	47	4	51	0	2	0	2	9	0	11	20	126
05:00 PM	5	27	0	32	0	29	1	30	0	0	0	0	2	0	10	12	74
05:15 PM	3	22	0	25	0	42	0	42	0	0	0	0	4	0	4	8	75
05:30 PM	7	30	0	37	0	44	3	47	0	0	0	0	2	0	9	11	95
05:45 PM	2	42	0	44	0	51	1	52	0	0	0	0	3	0	11	14	110
Total	17	121	0	138	0	166	5	171	0	0	0	0	11	0	34	45	354
06:00 PM	5	36	0	41	0	31	2	33	0	0	0	0	3	0	9	12	86
06:15 PM	3	23	0	26	0	26	5	31	0	0	0	0	2	0	5	7	64
Grand Total	170	805	16	991	27	716	74	817	15	3	31	49	99	2	215	316	2173
Apprch %	17.2	81.2	1.6		3.3	87.6	9.1		30.6	6.1	63.3		31.3	0.6	68		
Total %	7.8	37	0.7	45.6	1.2	32.9	3.4	37.6	0.7	0.1	1.4	2.3	4.6	0.1	9.9	14.5	
Cars	161	790	15	966	26	709	67	802	15	3	30	48	95	2	205	302	2118
% Cars	94.7	98.1	93.8	97.5	96.3	99	90.5	98.2	100	100	96.8	98	96	100	95.3	95.6	97.5

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

File Name : student 2
Site Code : 08262015
Start Date : 8/26/2015
Page No : 2

Groups Printed- Cars - Trucks - Bus

	Glenrio Eastbound				Glenrio Westbound				Student Parking East Northbound				68th Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Trucks	1	2	0	3	1	4	2	7	0	0	1	1	1	0	4	5	16
% Trucks	0.6	0.2	0	0.3	3.7	0.6	2.7	0.9	0	0	3.2	2	1	0	1.9	1.6	0.7
Bus	8	13	1	22	0	3	5	8	0	0	0	0	3	0	6	9	39
% Bus	4.7	1.6	6.2	2.2	0	0.4	6.8	1	0	0	0	0	3	0	2.8	2.8	1.8

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

File Name : student 2
Site Code : 08262015
Start Date : 8/26/2015
Page No : 3

	Glenrio Eastbound				Glenrio Westbound				Student Parking East Northbound				68th Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	3	21	0	24	2	9	1	12	0	0	0	0	3	0	9	12	48
07:00 AM	25	37	0	62	1	39	8	48	0	0	1	1	15	0	11	26	137
07:15 AM	21	41	0	62	1	52	6	59	0	0	0	0	11	0	28	39	160
07:30 AM	8	36	1	45	3	11	2	16	0	0	1	1	5	0	3	8	70
Total Volume	57	135	1	193	7	111	17	135	0	0	2	2	34	0	51	85	415
% App. Total	29.5	69.9	0.5		5.2	82.2	12.6		0	0	100		40	0	60		
PHF	.570	.823	.250	.778	.583	.534	.531	.572	.000	.000	.500	.500	.567	.000	.455	.545	.648
Cars	54	130	1	185	6	111	17	134	0	0	1	1	34	0	50	84	404
% Cars	94.7	96.3	100	95.9	85.7	100	100	99.3	0	0	50.0	50.0	100	0	98.0	98.8	97.3
Trucks	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
% Trucks	0	0	0	0	14.3	0	0	0.7	0	0	50.0	50.0	0	0	0	0	0.5
Bus	3	5	0	8	0	0	0	0	0	0	0	0	0	0	1	1	9
% Bus	5.3	3.7	0	4.1	0	0	0	0	0	0	0	0	0	0	2.0	1.2	2.2
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	1	10	2	13	2	13	2	17	1	0	0	1	1	0	3	4	35
12:15 PM	4	17	1	22	0	11	2	13	6	1	12	19	0	1	12	13	67
12:30 PM	2	16	1	19	1	15	1	17	0	0	0	0	1	0	3	4	40
12:45 PM	3	17	0	20	0	11	1	12	6	0	7	13	1	1	7	9	54
Total Volume	10	60	4	74	3	50	6	59	13	1	19	33	3	2	25	30	196
% App. Total	13.5	81.1	5.4		5.1	84.7	10.2		39.4	3	57.6		10	6.7	83.3		
PHF	.625	.882	.500	.841	.375	.833	.750	.868	.542	.250	.396	.434	.750	.500	.521	.577	.731
Cars	9	60	4	73	3	49	6	58	13	1	19	33	3	2	24	29	193
% Cars	90.0	100	100	98.6	100	98.0	100	98.3	100	100	100	100	100	100	96.0	96.7	98.5
Trucks	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% Trucks	0	0	0	0	0	2.0	0	1.7	0	0	0	0	0	0	0	0	0.5
Bus	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
% Bus	10.0	0	0	1.4	0	0	0	0	0	0	0	0	0	0	4.0	3.3	1.0
Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	3	22	0	25	0	42	0	42	0	0	0	0	4	0	4	8	75
05:30 PM	7	30	0	37	0	44	3	47	0	0	0	0	2	0	9	11	95
05:45 PM	2	42	0	44	0	51	1	52	0	0	0	0	3	0	11	14	110
06:00 PM	5	36	0	41	0	31	2	33	0	0	0	0	3	0	9	12	86
Total Volume	17	130	0	147	0	168	6	174	0	0	0	0	12	0	33	45	366
% App. Total	11.6	88.4	0		0	96.6	3.4		0	0	0		26.7	0	73.3		
PHF	.607	.774	.000	.835	.000	.824	.500	.837	.000	.000	.000	.000	.750	.000	.750	.804	.832
Cars	17	130	0	147	0	166	5	171	0	0	0	0	12	0	32	44	362
% Cars	100	100	0	100	0	98.8	83.3	98.3	0	0	0	0	100	0	97.0	97.8	98.9
Trucks	0	0	0	0	0	1	1	2	0	0	0	0	0	0	1	1	3
% Trucks	0	0	0	0	0	0.6	16.7	1.1	0	0	0	0	0	0	3.0	2.2	0.8
Bus	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% Bus	0	0	0	0	0	0.6	0	0.6	0	0	0	0	0	0	0	0	0.3

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

Counter: JB

File Name : student 2
Site Code : 08262015
Start Date : 8/26/2015
Page No : 1

Groups Printed- Cars

	Glenrio Eastbound					Glenrio Westbound					Student Parking East Northbound					68th Southbound							
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
06:00 AM	4	12	0	0	16	0	10	0	2	10	0	0	0	0	0	1	0	4	0	5	2	31	33
06:15 AM	5	26	0	0	31	1	20	3	1	24	0	0	1	0	1	0	0	4	3	4	4	60	64
06:30 AM	5	19	0	0	24	0	10	1	1	11	0	0	1	0	1	2	0	3	1	5	2	41	43
06:45 AM	3	20	0	0	23	1	9	1	4	11	0	0	0	0	0	3	0	9	7	12	11	46	57
Total	17	77	0	0	94	2	49	5	8	56	0	0	2	0	2	6	0	20	11	26	19	178	197
07:00 AM	23	35	0	0	58	1	39	8	9	48	0	0	0	0	0	15	0	11	22	26	31	132	163
07:15 AM	20	39	0	0	59	1	52	6	13	59	0	0	0	0	0	11	0	27	41	38	54	156	210
07:30 AM	8	36	1	0	45	3	11	2	3	16	0	0	1	0	1	5	0	3	1	8	4	70	74
07:45 AM	5	15	0	0	20	0	10	2	6	12	0	0	0	0	0	0	0	2	0	2	6	34	40
Total	56	125	1	0	182	5	112	18	31	135	0	0	1	0	1	31	0	43	64	74	95	392	487
08:00 AM	3	13	0	0	16	1	8	1	0	10	0	0	0	0	0	3	0	3	0	6	0	32	32
08:15 AM	2	17	0	0	19	1	3	2	2	6	0	0	0	0	0	0	0	2	0	2	2	27	29
08:30 AM	2	24	0	2	26	0	11	0	2	11	0	0	0	0	0	3	0	2	0	5	4	42	46
08:45 AM	5	18	10	0	33	7	11	4	2	22	0	0	2	0	2	1	0	5	7	6	9	63	72
Total	12	72	10	2	94	9	33	7	6	49	0	0	2	0	2	7	0	12	7	19	15	164	179
*** BREAK ***																							
11:00 AM	2	15	0	0	17	0	11	1	1	12	0	0	1	0	1	0	0	0	0	0	1	30	31
11:15 AM	0	9	0	0	9	0	12	0	0	12	0	0	1	0	1	0	0	1	0	1	0	23	23
11:30 AM	0	11	0	0	11	2	9	1	2	12	0	0	0	0	0	0	0	1	0	1	2	24	26
11:45 AM	2	12	0	1	14	0	13	1	0	14	0	0	2	0	2	0	0	6	2	6	3	36	39
Total	4	47	0	1	51	2	45	3	3	50	0	0	4	0	4	0	0	8	2	8	6	113	119
12:00 PM	1	10	2	0	13	2	13	2	1	17	1	0	0	0	1	1	0	3	0	4	1	35	36
12:15 PM	3	17	1	0	21	0	11	2	1	13	6	1	12	2	19	0	1	11	2	12	5	65	70
12:30 PM	2	16	1	0	19	1	15	1	1	17	0	0	0	0	0	1	0	3	1	4	2	40	42
12:45 PM	3	17	0	0	20	0	10	1	1	11	6	0	7	2	13	1	1	7	1	9	4	53	57
Total	9	60	4	0	73	3	49	6	4	58	13	1	19	4	33	3	2	24	4	29	12	193	205
01:00 PM	1	13	0	0	14	2	9	0	3	11	0	0	0	0	0	1	0	2	0	3	3	28	31
01:15 PM	2	11	0	0	13	1	8	0	0	9	0	0	0	0	0	2	0	2	0	4	0	26	26
01:30 PM	1	11	0	0	12	1	17	2	0	20	1	0	1	0	2	2	0	3	0	5	0	39	39
01:45 PM	6	14	0	0	20	0	15	2	2	17	0	0	1	1	1	2	0	1	0	3	3	41	44
Total	10	49	0	0	59	4	49	4	5	57	1	0	2	1	3	7	0	8	0	15	6	134	140
02:00 PM	3	16	0	0	19	0	26	3	10	29	1	0	0	0	1	2	0	2	0	4	10	53	63

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

File Name : student 2
Site Code : 08262015
Start Date : 8/26/2015
Page No : 2

Groups Printed- Cars

	Glenrio Eastbound					Glenrio Westbound					Student Parking East Northbound					68th Southbound							
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
02:15 PM	3	35	0	1	38	0	24	2	2	26	0	0	0	0	0	4	0	14	0	18	3	82	85
02:30 PM	10	58	0	2	68	0	32	3	20	35	0	0	0	3	0	9	0	10	3	19	28	122	150
02:45 PM	4	27	0	0	31	1	22	3	3	26	0	0	0	0	0	2	0	6	0	8	3	65	68
Total	20	136	0	3	156	1	104	11	35	116	1	0	0	3	1	17	0	32	3	49	44	322	366
*** BREAK ***																							
04:30 PM	2	16	0	0	18	0	19	0	1	19	0	2	0	11	2	4	0	4	0	8	12	47	59
04:45 PM	6	29	0	0	35	0	28	3	0	31	0	0	0	0	0	4	0	7	0	11	0	77	77
Total	8	45	0	0	53	0	47	3	1	50	0	2	0	11	2	8	0	11	0	19	12	124	136
05:00 PM	5	27	0	0	32	0	29	0	0	29	0	0	0	0	0	2	0	10	0	12	0	73	73
05:15 PM	3	22	0	0	25	0	42	0	2	42	0	0	0	0	0	4	0	4	0	8	2	75	77
05:30 PM	7	30	0	0	37	0	44	3	0	47	0	0	0	1	0	2	0	9	0	11	1	95	96
05:45 PM	2	42	0	0	44	0	49	1	1	50	0	0	0	2	0	3	0	11	0	14	3	108	111
Total	17	121	0	0	138	0	164	4	3	168	0	0	0	3	0	11	0	34	0	45	6	351	357
06:00 PM	5	36	0	0	41	0	31	1	1	32	0	0	0	0	0	3	0	8	0	11	1	84	85
06:15 PM	3	22	0	0	25	0	26	5	1	31	0	0	0	0	0	2	0	5	0	7	1	63	64
Grand Total	161	790	15	6	966	26	709	67	98	802	15	3	30	22	48	95	2	205	91	302	217	2118	2335
Apprch %	16.7	81.8	1.6			3.2	88.4	8.4			31.2	6.2	62.5			31.5	0.7	67.9					
Total %	7.6	37.3	0.7		45.6	1.2	33.5	3.2		37.9	0.7	0.1	1.4		2.3	4.5	0.1	9.7		14.3	9.3	90.7	

Cleland Counts

1441 Camino Cerritos S.E
Albuquerque New Mexico 87123
(505) 414-0465

Counter: JB

File Name : student 2
Site Code : 08262015
Start Date : 8/26/2015
Page No : 1

Groups Printed- Bikes

	Glenrio Eastbound					Glenrio Westbound					Student Parking East Northbound					68th Southbound							
Start Time	Left	Thru	Right	Bikes	App. Total	Left	Thru	Right	Bikes	App. Total	Left	Thru	Right	Bikes	App. Total	Left	Thru	Right	Bikes	App. Total	Exclu. Total	Inclu. Total	Int. Total
*** BREAK ***																							
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
06:45 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	2	2
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1
*** BREAK ***																							
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	2	2
*** BREAK ***																							
08:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
*** BREAK ***																							
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
*** BREAK ***																							
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2	2
*** BREAK ***																							
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2	2
*** BREAK ***																							
12:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
*** BREAK ***																							
01:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
02:00 PM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	1	0	0	0	1	0	3	3
*** BREAK ***																							
Total	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	1	0	0	0	1	0	3	3
*** BREAK ***																							
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
06:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	2	2
06:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Grand Total	1	2	0	0	3	1	4	2	0	7	0	0	1	0	1	1	0	4	0	5	0	16	16
Apprch %	33.3	66.7	0			14.3	57.1	28.6			0	0	100			20	0	80					
Total %	6.2	12.5	0		18.8	6.2	25	12.5		43.8	0	0	6.2		6.2	6.2	0	25		31.2	0	100	

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	202	0	0	92	5	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	57	57	75	75
Heavy Vehicles, %	2	2	2	2	100	100
Mvmt Flow	297	0	0	161	7	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	297	0	458	297
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	161	-
Critical Hdwy	-	-	4.12	-	7.4	7.2
Critical Hdwy Stg 1	-	-	-	-	6.4	-
Critical Hdwy Stg 2	-	-	-	-	6.4	-
Follow-up Hdwy	-	-	2.218	-	4.4	4.2
Pot Cap-1 Maneuver	-	-	1264	-	417	560
Stage 1	-	-	-	-	575	-
Stage 2	-	-	-	-	677	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1264	-	417	560
Mov Cap-2 Maneuver	-	-	-	-	417	-
Stage 1	-	-	-	-	575	-
Stage 2	-	-	-	-	677	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	490	-	-	1264	-
HCM Lane V/C Ratio	0.033	-	-	-	-
HCM Control Delay (s)	12.6	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	168	36	65	80	1	2	0	8	10	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	67	67	54	54	54	62	62	62	50	50	50
Heavy Vehicles, %	4	4	4	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	251	54	120	148	2	3	0	13	20	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	150	0	0	304	0	0	692	687	278	692	712	149
Stage 1	-	-	-	-	-	-	296	296	-	390	390	-
Stage 2	-	-	-	-	-	-	396	391	-	302	322	-
Critical Hdwy	4.14	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1419	-	-	1257	-	-	358	370	761	358	358	898
Stage 1	-	-	-	-	-	-	712	668	-	634	608	-
Stage 2	-	-	-	-	-	-	629	607	-	707	651	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1419	-	-	1257	-	-	323	329	761	322	318	898
Mov Cap-2 Maneuver	-	-	-	-	-	-	323	329	-	322	318	-
Stage 1	-	-	-	-	-	-	706	663	-	629	545	-
Stage 2	-	-	-	-	-	-	556	544	-	689	646	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	3.6	11.2	14.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	599	1419	-	-	1257	-	-	424
HCM Lane V/C Ratio	0.027	0.006	-	-	0.096	-	-	0.075
HCM Control Delay (s)	11.2	7.6	0	-	8.2	0	-	14.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.3	-	-	0.2

Intersection												
Int Delay, s/veh	4.3											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	57	135	1	7	111	17	0	0	2	34	0	51
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	57	57	57	50	50	50	54	54	54
Heavy Vehicles, %	5	5	5	2	2	2	2	2	2	2	2	2
Mvmt Flow	74	175	1	12	195	30	0	0	4	63	0	94

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	225	0	0	177	0	0	605	573	176	560	559	210
Stage 1	-	-	-	-	-	-	324	324	-	234	234	-
Stage 2	-	-	-	-	-	-	281	249	-	326	325	-
Critical Hdwy	4.15	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1326	-	-	1399	-	-	410	430	867	439	438	830
Stage 1	-	-	-	-	-	-	688	650	-	769	711	-
Stage 2	-	-	-	-	-	-	726	701	-	687	649	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1326	-	-	1399	-	-	344	399	867	413	407	830
Mov Cap-2 Maneuver	-	-	-	-	-	-	344	399	-	413	407	-
Stage 1	-	-	-	-	-	-	645	610	-	721	704	-
Stage 2	-	-	-	-	-	-	637	694	-	641	609	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.3	0.4	9.2	13.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	867	1326	-	-	1399	-	-	591
HCM Lane V/C Ratio	0.005	0.056	-	-	0.009	-	-	0.266
HCM Control Delay (s)	9.2	7.9	0	-	7.6	0	-	13.3
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.2	-	-	0	-	-	1.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	70	0	0	73	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	57	57	75	75
Heavy Vehicles, %	2	2	2	2	100	100
Mvmt Flow	103	0	0	128	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	103	0	231	103
Stage 1	-	-	-	-	103	-
Stage 2	-	-	-	-	128	-
Critical Hdwy	-	-	4.12	-	7.4	7.2
Critical Hdwy Stg 1	-	-	-	-	6.4	-
Critical Hdwy Stg 2	-	-	-	-	6.4	-
Follow-up Hdwy	-	-	2.218	-	4.4	4.2
Pot Cap-1 Maneuver	-	-	1489	-	584	740
Stage 1	-	-	-	-	725	-
Stage 2	-	-	-	-	704	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1489	-	584	740
Mov Cap-2 Maneuver	-	-	-	-	584	-
Stage 1	-	-	-	-	725	-
Stage 2	-	-	-	-	704	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	740	-	-	1489	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	9.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	3	61	2	2	74	4	0	0	0	10	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	67	67	54	54	54	62	62	62	50	50	50
Heavy Vehicles, %	4	4	4	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	91	3	4	137	7	0	0	0	20	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	144	0	0	94	0	0	253	253	93	249	251	141
Stage 1	-	-	-	-	-	-	101	101	-	148	148	-
Stage 2	-	-	-	-	-	-	152	152	-	101	103	-
Critical Hdwy	4.14	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1426	-	-	1500	-	-	700	650	964	705	652	907
Stage 1	-	-	-	-	-	-	905	811	-	855	775	-
Stage 2	-	-	-	-	-	-	850	772	-	905	810	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1426	-	-	1500	-	-	691	646	964	702	648	907
Mov Cap-2 Maneuver	-	-	-	-	-	-	691	646	-	702	648	-
Stage 1	-	-	-	-	-	-	902	809	-	852	773	-
Stage 2	-	-	-	-	-	-	840	770	-	902	808	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.2	0	10
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1426	-	-	1500	-	-	750
HCM Lane V/C Ratio	-	0.003	-	-	0.002	-	-	0.037
HCM Control Delay (s)	0	7.5	0	-	7.4	0	-	10
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	10	60	4	3	50	6	13	1	19	3	2	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	57	57	57	50	50	50	54	54	54
Heavy Vehicles, %	5	5	5	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	78	5	5	88	11	26	2	38	6	4	46

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	98	0	0	83	0	0	235	215	81	230	213	93
Stage 1	-	-	-	-	-	-	106	106	-	104	104	-
Stage 2	-	-	-	-	-	-	129	109	-	126	109	-
Critical Hdwy	4.15	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1476	-	-	1514	-	-	720	683	979	725	684	964
Stage 1	-	-	-	-	-	-	900	807	-	902	809	-
Stage 2	-	-	-	-	-	-	875	805	-	878	805	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1476	-	-	1514	-	-	676	675	979	689	676	964
Mov Cap-2 Maneuver	-	-	-	-	-	-	676	675	-	689	676	-
Stage 1	-	-	-	-	-	-	892	800	-	894	807	-
Stage 2	-	-	-	-	-	-	827	803	-	834	798	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.4	9.8	9.3
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	823	1476	-	-	1514	-	-	902
HCM Lane V/C Ratio	0.08	0.009	-	-	0.003	-	-	0.062
HCM Control Delay (s)	9.8	7.5	0	-	7.4	0	-	9.3
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	114	0	0	160	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	57	57	75	75
Heavy Vehicles, %	2	2	2	2	100	100
Mvmt Flow	168	0	0	281	0	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	168	0	449	168
Stage 1	-	-	-	-	168	-
Stage 2	-	-	-	-	281	-
Critical Hdwy	-	-	4.12	-	7.4	7.2
Critical Hdwy Stg 1	-	-	-	-	6.4	-
Critical Hdwy Stg 2	-	-	-	-	6.4	-
Follow-up Hdwy	-	-	2.218	-	4.4	4.2
Pot Cap-1 Maneuver	-	-	1410	-	422	675
Stage 1	-	-	-	-	671	-
Stage 2	-	-	-	-	587	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1410	-	422	675
Mov Cap-2 Maneuver	-	-	-	-	422	-
Stage 1	-	-	-	-	671	-
Stage 2	-	-	-	-	587	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	675	-	-	1410	-
HCM Lane V/C Ratio	0.006	-	-	-	-
HCM Control Delay (s)	10.4	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	81	26	59	122	14	35	0	66	5	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	67	67	54	54	54	62	62	62	50	50	50
Heavy Vehicles, %	4	4	4	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	121	39	109	226	26	56	0	106	10	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	252	0	0	160	0	0	625	634	140	674	641	239
Stage 1	-	-	-	-	-	-	164	164	-	457	457	-
Stage 2	-	-	-	-	-	-	461	470	-	217	184	-
Critical Hdwy	4.14	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1302	-	-	1419	-	-	397	397	908	368	393	800
Stage 1	-	-	-	-	-	-	838	762	-	583	568	-
Stage 2	-	-	-	-	-	-	581	560	-	785	747	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1302	-	-	1419	-	-	363	358	908	300	354	800
Mov Cap-2 Maneuver	-	-	-	-	-	-	363	358	-	300	354	-
Stage 1	-	-	-	-	-	-	830	754	-	577	517	-
Stage 2	-	-	-	-	-	-	523	510	-	686	740	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	2.3	13.3	14.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	597	1302	-	-	1419	-	-	415
HCM Lane V/C Ratio	0.273	0.009	-	-	0.077	-	-	0.043
HCM Control Delay (s)	13.3	7.8	0	-	7.7	0	-	14.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.1	0	-	-	0.2	-	-	0.1

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	130	0	0	168	6	0	0	0	12	0	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	57	57	57	50	50	50	54	54	54
Heavy Vehicles, %	5	5	5	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	169	0	0	295	11	0	0	0	22	0	61

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	305	0	0	169	0	0	544	518	169	513	513	300
Stage 1	-	-	-	-	-	-	213	213	-	300	300	-
Stage 2	-	-	-	-	-	-	331	305	-	213	213	-
Critical Hdwy	4.15	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1239	-	-	1409	-	-	450	462	875	472	465	740
Stage 1	-	-	-	-	-	-	789	726	-	709	666	-
Stage 2	-	-	-	-	-	-	682	662	-	789	726	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1239	-	-	1409	-	-	407	453	875	465	456	740
Mov Cap-2 Maneuver	-	-	-	-	-	-	407	453	-	465	456	-
Stage 1	-	-	-	-	-	-	773	711	-	695	666	-
Stage 2	-	-	-	-	-	-	626	662	-	773	711	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	0	11.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1239	-	-	1409	-	-	639
HCM Lane V/C Ratio	-	0.018	-	-	-	-	-	0.13
HCM Control Delay (s)	0	8	0	-	0	-	-	11.5
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	202	0	0	92	7	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	57	57	75	75
Heavy Vehicles, %	2	2	2	2	100	100
Mvmt Flow	297	0	0	161	9	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	297	0	458	297
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	161	-
Critical Hdwy	-	-	4.12	-	7.4	7.2
Critical Hdwy Stg 1	-	-	-	-	6.4	-
Critical Hdwy Stg 2	-	-	-	-	6.4	-
Follow-up Hdwy	-	-	2.218	-	4.4	4.2
Pot Cap-1 Maneuver	-	-	1264	-	417	560
Stage 1	-	-	-	-	575	-
Stage 2	-	-	-	-	677	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1264	-	417	560
Mov Cap-2 Maneuver	-	-	-	-	417	-
Stage 1	-	-	-	-	575	-
Stage 2	-	-	-	-	677	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	491	-	-	1264	-
HCM Lane V/C Ratio	0.046	-	-	-	-
HCM Control Delay (s)	12.7	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	168	36	65	80	1	2	0	8	10	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	67	67	54	54	54	62	62	62	50	50	50
Heavy Vehicles, %	4	4	4	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	251	54	120	148	2	3	0	13	20	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	150	0	0	304	0	0	692	687	278	692	712	149
Stage 1	-	-	-	-	-	-	296	296	-	390	390	-
Stage 2	-	-	-	-	-	-	396	391	-	302	322	-
Critical Hdwy	4.14	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1419	-	-	1257	-	-	358	370	761	358	358	898
Stage 1	-	-	-	-	-	-	712	668	-	634	608	-
Stage 2	-	-	-	-	-	-	629	607	-	707	651	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1419	-	-	1257	-	-	323	329	761	322	318	898
Mov Cap-2 Maneuver	-	-	-	-	-	-	323	329	-	322	318	-
Stage 1	-	-	-	-	-	-	706	663	-	629	545	-
Stage 2	-	-	-	-	-	-	556	544	-	689	646	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	3.6	11.2	14.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	599	1419	-	-	1257	-	-	424
HCM Lane V/C Ratio	0.027	0.006	-	-	0.096	-	-	0.075
HCM Control Delay (s)	11.2	7.6	0	-	8.2	0	-	14.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.3	-	-	0.2

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	57	135	37	72	111	17	2	0	10	34	0	51
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	57	57	57	50	50	50	54	54	54
Heavy Vehicles, %	5	5	5	2	2	2	2	2	2	2	2	2
Mvmt Flow	74	175	48	126	195	30	4	0	20	63	0	94

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	225	0	0	223	0	0	857	824	199	819	833	210
Stage 1	-	-	-	-	-	-	347	347	-	462	462	-
Stage 2	-	-	-	-	-	-	510	477	-	357	371	-
Critical Hdwy	4.15	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1326	-	-	1346	-	-	277	308	842	294	304	830
Stage 1	-	-	-	-	-	-	669	635	-	580	565	-
Stage 2	-	-	-	-	-	-	546	556	-	661	620	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1326	-	-	1346	-	-	215	257	842	251	254	830
Mov Cap-2 Maneuver	-	-	-	-	-	-	215	257	-	251	254	-
Stage 1	-	-	-	-	-	-	626	594	-	543	505	-
Stage 2	-	-	-	-	-	-	432	497	-	604	580	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2	2.9	11.6	18
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	567	1326	-	-	1346	-	-	432
HCM Lane V/C Ratio	0.042	0.056	-	-	0.094	-	-	0.364
HCM Control Delay (s)	11.6	7.9	0	-	8	0	-	18
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.3	-	-	1.6

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	70	0	0	73	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	57	57	75	75
Heavy Vehicles, %	2	2	2	2	100	100
Mvmt Flow	103	0	0	128	0	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	103	0	231	103
Stage 1	-	-	-	-	103	-
Stage 2	-	-	-	-	128	-
Critical Hdwy	-	-	4.12	-	7.4	7.2
Critical Hdwy Stg 1	-	-	-	-	6.4	-
Critical Hdwy Stg 2	-	-	-	-	6.4	-
Follow-up Hdwy	-	-	2.218	-	4.4	4.2
Pot Cap-1 Maneuver	-	-	1489	-	584	740
Stage 1	-	-	-	-	725	-
Stage 2	-	-	-	-	704	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1489	-	584	740
Mov Cap-2 Maneuver	-	-	-	-	584	-
Stage 1	-	-	-	-	725	-
Stage 2	-	-	-	-	704	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	740	-	-	1489	-
HCM Lane V/C Ratio	0.013	-	-	-	-
HCM Control Delay (s)	9.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	3	61	2	2	74	4	0	0	0	10	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	67	67	54	54	54	62	62	62	50	50	50
Heavy Vehicles, %	4	4	4	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	91	3	4	137	7	0	0	0	20	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	144	0	0	94	0	0	253	253	93	249	251	141
Stage 1	-	-	-	-	-	-	101	101	-	148	148	-
Stage 2	-	-	-	-	-	-	152	152	-	101	103	-
Critical Hdwy	4.14	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1426	-	-	1500	-	-	700	650	964	705	652	907
Stage 1	-	-	-	-	-	-	905	811	-	855	775	-
Stage 2	-	-	-	-	-	-	850	772	-	905	810	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1426	-	-	1500	-	-	691	646	964	702	648	907
Mov Cap-2 Maneuver	-	-	-	-	-	-	691	646	-	702	648	-
Stage 1	-	-	-	-	-	-	902	809	-	852	773	-
Stage 2	-	-	-	-	-	-	840	770	-	902	808	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.2	0	10
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1426	-	-	1500	-	-	750
HCM Lane V/C Ratio	-	0.003	-	-	0.002	-	-	0.037
HCM Control Delay (s)	0	7.5	0	-	7.4	0	-	10
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	10	60	6	5	50	6	13	1	19	3	2	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	57	57	57	50	50	50	54	54	54
Heavy Vehicles, %	5	5	5	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	78	8	9	88	11	26	2	38	6	4	46

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	98	0	0	86	0	0	244	224	82	239	223	93
Stage 1	-	-	-	-	-	-	108	108	-	111	111	-
Stage 2	-	-	-	-	-	-	136	116	-	128	112	-
Critical Hdwy	4.15	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1476	-	-	1510	-	-	710	675	978	715	676	964
Stage 1	-	-	-	-	-	-	897	806	-	894	804	-
Stage 2	-	-	-	-	-	-	867	800	-	876	803	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1476	-	-	1510	-	-	665	665	978	678	666	964
Mov Cap-2 Maneuver	-	-	-	-	-	-	665	665	-	678	666	-
Stage 1	-	-	-	-	-	-	889	799	-	886	799	-
Stage 2	-	-	-	-	-	-	817	795	-	832	796	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.6	9.8	9.3
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	815	1476	-	-	1510	-	-	899
HCM Lane V/C Ratio	0.081	0.009	-	-	0.006	-	-	0.062
HCM Control Delay (s)	9.8	7.5	0	-	7.4	0	-	9.3
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	114	0	0	160	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	57	57	75	75
Heavy Vehicles, %	2	2	2	2	100	100
Mvmt Flow	168	0	0	281	0	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	168	0	449	168
Stage 1	-	-	-	-	168	-
Stage 2	-	-	-	-	281	-
Critical Hdwy	-	-	4.12	-	7.4	7.2
Critical Hdwy Stg 1	-	-	-	-	6.4	-
Critical Hdwy Stg 2	-	-	-	-	6.4	-
Follow-up Hdwy	-	-	2.218	-	4.4	4.2
Pot Cap-1 Maneuver	-	-	1410	-	422	675
Stage 1	-	-	-	-	671	-
Stage 2	-	-	-	-	587	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1410	-	422	675
Mov Cap-2 Maneuver	-	-	-	-	422	-
Stage 1	-	-	-	-	671	-
Stage 2	-	-	-	-	587	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	675	-	-	1410	-
HCM Lane V/C Ratio	0.016	-	-	-	-
HCM Control Delay (s)	10.4	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	81	26	59	122	14	35	0	66	5	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	67	67	54	54	54	62	62	62	50	50	50
Heavy Vehicles, %	4	4	4	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	121	39	109	226	26	56	0	106	10	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	252	0	0	160	0	0	625	634	140	674	641	239
Stage 1	-	-	-	-	-	-	164	164	-	457	457	-
Stage 2	-	-	-	-	-	-	461	470	-	217	184	-
Critical Hdwy	4.14	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1302	-	-	1419	-	-	397	397	908	368	393	800
Stage 1	-	-	-	-	-	-	838	762	-	583	568	-
Stage 2	-	-	-	-	-	-	581	560	-	785	747	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1302	-	-	1419	-	-	363	358	908	300	354	800
Mov Cap-2 Maneuver	-	-	-	-	-	-	363	358	-	300	354	-
Stage 1	-	-	-	-	-	-	830	754	-	577	517	-
Stage 2	-	-	-	-	-	-	523	510	-	686	740	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	2.3	13.3	14.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	597	1302	-	-	1419	-	-	415
HCM Lane V/C Ratio	0.273	0.009	-	-	0.077	-	-	0.043
HCM Control Delay (s)	13.3	7.8	0	-	7.7	0	-	14.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.1	0	-	-	0.2	-	-	0.1

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	130	26	14	168	6	35	0	66	12	0	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	57	57	57	50	50	50	54	54	54
Heavy Vehicles, %	5	5	5	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	169	34	25	295	11	70	0	132	22	0	61

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	305	0	0	203	0	0	610	584	186	645	596	300
Stage 1	-	-	-	-	-	-	230	230	-	349	349	-
Stage 2	-	-	-	-	-	-	380	354	-	296	247	-
Critical Hdwy	4.15	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1239	-	-	1369	-	-	407	423	856	385	417	740
Stage 1	-	-	-	-	-	-	773	714	-	667	633	-
Stage 2	-	-	-	-	-	-	642	630	-	712	702	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1239	-	-	1369	-	-	362	405	856	315	400	740
Mov Cap-2 Maneuver	-	-	-	-	-	-	362	405	-	315	400	-
Stage 1	-	-	-	-	-	-	758	700	-	654	619	-
Stage 2	-	-	-	-	-	-	576	616	-	590	688	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.6	14.5	12.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	581	1239	-	-	1369	-	-	544
HCM Lane V/C Ratio	0.348	0.018	-	-	0.018	-	-	0.153
HCM Control Delay (s)	14.5	8	0	-	7.7	0	-	12.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.5	0.1	-	-	0.1	-	-	0.5

CITY OF ALBUQUERQUE

May 19, 2015

Graeme Means, P.E.
High Mesa Consulting Group
6010-B Midway Park Blvd NE
Albuquerque, New Mexico 87109

RE: **West Mesa High School Storm Drain Connection**
Classroom Wing "M" Replacement and Courtyard Improvements
Grading and Drainage Plan
Engineer's Stamp Date 5-14-2015 (J10D005)

Dear Mr. Means,

Based upon the information provided in your submittal received 5/19/15, this plan dated 5/14/15 is acceptable for Grading Permit and Paving Permit.

Please attach a copy of this approved plan to the construction sets in the permitting process prior to sign-off by Hydrology.

When completed please provide a copy of the as-build for our records.

If you have any questions, please contact me at 924-3695 or Rudy Rael at 924-3977.

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Hydrology
Planning Department

RR/RH
C: File

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

City of Albuquerque

Planning Department
Development & Building Services Division
DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(REV 02/2013)

Project Title: West Mesa High School Storm Drain Connection Building Permit #: _____ City Drainage #: J-10/D005
DRB#: _____ EPC#: _____ Work Order#: 749982
Legal Description: Tracts 166 Through 172, Town of Atrisco Grant, Airport Unit
City Address: 6701 Fortuna RD NW

Engineering Firm: High Mesa Consulting Group Contact: Graeme Means #13676
Address: 6010-B Midway Park Blvd NE, Albuquerque, NM 87109
Phone#: 345-4250 Fax#: _____ E-mail: gmeans@highmesacg.com

Owner: Albuquerque Public Schools Contact: David Ritchey
Address: 915 Oak Street SE, Albuquerque, NM 87106
Phone#: 848-8876 Fax#: _____ E-mail: ritchey_d@aps.edu

Architect: Mahlman Studio Architecture Contact: Steve Hall
Address: 206 Broadway SE, Albuquerque, NM 87102
Phone#: 243-0101 Fax#: _____ E-mail: slhall@mahlmanstudio.com

Surveyor: High Mesa Consulting Group Contact: Chuck Cala #11184
Address: 6010-B Midway Park Blvd NE, Albuquerque, NM 87109
Phone#: 345-4250 Fax#: _____ E-mail: ccala@highmesacg.com

Contractor: N/A Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
X DRAINAGE PLAN 1st SUBMITTAL
____ DRAINAGE PLAN RESUBMITTAL
____ CONCEPTUAL G & D PLAN
____ GRADING PLAN
____ EROSION & SEDIMENT CONTROL PLAN (ESC)
____ ENGINEER'S CERT (HYDROLOGY)
____ CLOMR/LOMR
____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ ENGINEER'S CERT (TCL)
____ ENGINEER'S CERT (DRB SITE PLAN)
____ ENGINEER'S CERT (ESC)
____ SO-19
____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ SIA/FINANCIAL GUARANTEE RELEASE
____ PRELIMINARY PLAT APPROVAL
____ S. DEV. PLAN FOR SUB'D APPROVAL
____ S. DEV. FOR BLDG. PERMIT APPROVAL
____ SECTOR PLAN APPROVAL
____ FINAL PLAT APPROVAL
____ CERTIFICATE OF OCCUPANCY (PERM)
____ CERTIFICATE OF OCCUPANCY (TCL TEMP)
____ FOUNDATION PERMIT APPROVAL
____ BUILDING PERMIT APPROVAL
____ GRADING PERMIT APPROVAL
____ PAVING PERMIT APPROVAL
X WORK ORDER APPROVAL
____ GRADING CERTIFICATION
____ SO-19 APPROVAL
____ ESC PERMIT APPROVAL
____ ESC CERT. ACCEPTANCE
____ OTHER (SPECIFY)

RECEIVED
DEC 31 2014
LAND DEVELOPMENT SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED: X Yes ____ No X Copy Provided
DATE SUBMITTED: 12/31/2014 By: J. Graeme Means

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, anc scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the followin

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

CITY OF ALBUQUERQUE
PLANNING DEPARTMENT
Hydrology Section
Predesign Meeting Conference Notes
DATE: 9-10-14

ZONE ATLAS PAGE: J10
DRAINAGE FILE: J10D060S
PROJECT SCOPE:

ADDRESS:

ATTENDANCE: Graeme Means

FINDINGS:

1. It is acceptable to drain Basins 104 and 105 from the 2000 Wilson & Company Study to the Fortuna Storm drain. Explain justification on narrative

The undersigned agrees that the above findings are summarized accurately and are subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: Curtis A. Cherne
NAME (PRINT): Curtis A. Cherne

SIGNED: Graeme Means
NAME (PRINT):

NOTE: PLEASE INCLUDE A CCOPY OF THIS SHEET WITH YOIUR DRAINAGE SUBMITTAL

RECEIVED
APR 14 2015
LAND DEVELOPMENT SECTION

CITY OF ALBUQUERQUE
DEVELOPMENT & BUILDING SERVICES CENTER
PLANNING DEPARTMENT/HYDROLOGY SECTION

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NUMBER: J10/D005 DATE: 02-13-2014
CROSS REFERENCE NUMBERS: EPC_____ DRB_____ DRC_____
SUBJECT: M HALL ADDITION AND COURTYARD RECONSTRUCTION, WEST MESA HIGH SCHOOL
STREET ADDRESS: 6701 FORTUNA ROAD NW
SUBDIVISION NAME: TRACTS 168 THROUGH 172, INCLUSIVE, TOWN OF ATRISCO GRANT AIRPORT UNIT, PLUS A PORTION OF 68TH STREET

TYPE OF APPROVAL

_____ PRELIMINARY PLAT
_____ SITE DEVELOPMENT PLAN
_____ OTHER _____
_____ FINAL PLAT
__X___ BUILDING PERMIT
_____ ROUGH GRADING

ATTENDEE:	ORGANIZATION:	PHONE:
CURTIS CHERNE	HYDROLOGY	924-3986
JEFF MORTENSEN	HMCG	345-4250

FINDINGS:

1. GRADING AND DRAINAGE PLAN REQUIRED FOR BUILDING PERMIT APPROVAL
2. REFERENCE DRAINAGE MASTER PLAN FOR SITE PREPARED BY WILSON & COMPANY 01-14-2010. ADDRESS HOW PROPOSED PLAN COMPLIES WITH DRAINAGE MASTER PLAN ON A BASIN BY BASIN BASIS.
3. REFERENCE PARKING LOT IMPROVEMENTS DRAINAGE SUBMITTAL BY WILSON & COMPANY 01-14-2010 WITH RESPECT TO DOWNSTREAM CAPACITY. CERTIFICATION OF THIS PRIOR PLAN [redacted]/NOT REQUIRED AS A CONDITION OF BUILDING PERMIT APPROVAL
4. VERIFICATION OF DOWNSTREAM CAPACITY NOT REQUIRED HOWEVER SHOULD BE ADDRESSED QUALITATIVELY (I.E. SUMP CONDITIONS AT INLETS IN PARKING LOT PROVIDE FOR OVERFLOW CAPACITY)
5. PROPERTY SERVED BY WEST MESA DIVERSION PROJECT (CPN 538103) THAT DISCHARGES TO WEST MESA POND IMMEDIATELY ADJACENT TO AND DOWNSTREAM FROM SCHOOL SITE
6. FREE DISCHARGE TO ONSITE PRIVATE STORM DRAIN PERMISSIBLE DUE TO PROXIMITY TO WEST MESA POND
7. IF THE PROJECT DISTURBS GREATER THAN ONE ACRE OF LAND, AN EROSION AND SEDIMENT CONTROL PLAN IS REQUIRED AS A CONDITION FOR BUILDING PERMIT APPROVAL. THIS IS A SEPARATE SUBMITTAL IN ADDITION TO THE GRADING AND DRAINAGE PLAN FOR BUILDING PERMIT.

THE UNDERSIGNED AGREE THAT THE ABOVE FINDINGS ARE SUMMARIZED ACCURATELY AND ARE ONLY SUBJECT TO CHANGE IF FURTHER INVESTIGATION

REVEALS THAT THE FINDINGS ARE NOT REASONABLE OR THAT THEY ARE BASED UPON INACCURATE INFORMATION.

SIGNED: _____
TITLE: HYDROLOGY (COA)
DATE: 2-28-14

SIGNED: _____
TITLE: CONSULTANT
DATE: 02-28-2014

NOTE: PROVIDE A COPY OF THIS RECAP WITH DRAINAGE SUBMITTAL

CITY OF ALBUQUERQUE
PLANNING DEPARTMENT
DEVELOPMENT SERVICE / HYDROLOGY SECTION

DATE: 2-26-15
CONFERENCE RECAP

ZONE ATLAS PAGE NO: J16
DRAINAGE FILE: J10 D005
ZONING:
DRB:
SUBJECT: Building permit ~~[illegible]~~ ISHP
STREET ADDRESS (IF KNOWN):
SUBDIVISION NAME:

APPROVAL REQUESTED:

ATTENDANCE: Jeff Mulberry, Curtis Cherne

FINDINGS:

1. Since no new impervious area is proposed, first flush retainage is not required. However this should be stated.

2. New onsite storm drain to tie into existing onsite storm drain per previously approved plans

THE UNDERSIGNED AGREES THAT THE ABOVE FINDINGS ARE SUMMARIZED ACCURATELY AND ARE SUBJECT TO CHANGE IF FURTHER INVESTIGATION REVEALS THAT THEY ARE NOT REASONABLE OR THAT THEY ARE BASED ON INACCURATE INFORMATION.

SIGNED: Curtis A Cherne
NAME (PRINT): Curtis A. Cherne

SIGNED: Jeff Mulberry
NAME (PRINT): [illegible]

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH YOUR DRAINAGE SUBMITTAL.

CITY OF ALBUQUERQUE

July 29, 2016

Tom Wilber, R.A.
NCA Architects
1306 Rio Grande Blvd NW
Albuquerque, NM 87104

Re: West Mesa High School New Classroom Buildings
6701 Fortuna Rd., NW
Request for Certificate of Occupancy- Transportation Development
Architect's Stamp dated 6-8-15 (J10-D005)
Certification dated 07-25-16

Dear Mr. Wilber,

Based upon the information provided in your submittal received 07-29-16, Transportation Development has no objection to the issuance of a Permanent Certificate of Occupancy. This letter serves as a "green tag" from Transportation Development for a Permanent Certificate of Occupancy to be issued by the Building and Safety Division.

If you have any questions, please contact Monica Ortiz at (505) 924-3981 or me at (505)924-3991.

Sincerely,

Racquel M. Michel, P.E.
Traffic Engineer, Planning Dept.
Development Review Services

mao via: email
C: CO Clerk, File

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: WEST MESA HIGH SCHOOL **Building Permit #:** 201591759 **City Drainage #:** J10D005

DRB#: EPC#: Work Order#:

Legal Description: PUBLIC SCHOOL (HIGH SCHOOL)

City Address: 6701 FORTUNA RD. NW ALBUQUERQUE, NM 87121

Engineering Firm: Contact:

Address:

Phone#: Fax#: E-mail:

Owner: ALBUQUERQUE PUBLIC SCHOOLS Contact: KAREN ALARID

Address: 6400 UPTOWN BLVD NE ALBUQUERQUE, NM 87110

Phone#: 505-848-8810 Fax#: 505-246-9020 E-mail: ALARID_K@APS.EDU

Architect: MAHLMAN STUDIO ARCHITECTURE Contact: DAVID MAHLMAN

Address: 7600 BROADWAY BLVD. SE ALBUQUERQUE, NM 87102

Phone#: 505-243-0101 Fax#: 505-243-1334 E-mail:

Other Contact: NCA ARCHITECTS Contact: TOM WILBER

Address: 1306 RIO GRANDE BLVD. NW ALBUQUERQUE, NM 87104

Phone#: 505-255-6400 Fax#: 505-268-6954 E-mail: TWILBER@NCA-ARCHITECTS.COM

Check all that Apply:

DEPARTMENT:

____ HYDROLOGY/ DRAINAGE
X TRAFFIC/ TRANSPORTATION
____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

____ ENGINEER/ ARCHITECT CERTIFICATION

____ CONCEPTUAL G & D PLAN
____ GRADING PLAN
____ DRAINAGE MASTER PLAN
____ DRAINAGE REPORT
____ CLOMR/LOMR

____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ EROSION & SEDIMENT CONTROL PLAN (ESC)

____ OTHER (SPECIFY) _____ $50.00

RECEIVED
JUL 29 2016
LAND DEVELOPMENT SECTION

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ BUILDING PERMIT APPROVAL
X CERTIFICATE OF OCCUPANCY

____ PRELIMINARY PLAT APPROVAL
____ SITE PLAN FOR SUB'D APPROVAL
____ SITE PLAN FOR BLDG. PERMIT APPROVAL
____ FINAL PLAT APPROVAL
____ SIA/ RELEASE OF FINANCIAL GUARANTEE
____ FOUNDATION PERMIT APPROVAL
____ GRADING PERMIT APPROVAL
____ SO-19 APPROVAL
____ PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR

____ PRE-DESIGN MEETING
____ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: ____ Yes ____ No

DATE SUBMITTED: _____ By: _____

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

ARCHITECTS • PLANNERS • AIA

Robert M. Calvani
John C. Layman
Thomas C. Wilber

07.25.2016

Krystal Metro
Traffic Engineer
Development and Building Services
Planning Department
City of Albuquerque

RE: Approval of Certificate of Occupancy for
APS-West Mesa High School
6701 Fortuna Road NW
Albuquerque, NM 87121

Dear Krystal,

I Tom Wilber, a registered Architect in the State of New Mexico of the firm NCA Architects, herby certify that this project is in substantial compliance with and in accordance with the design intent of the approved plan dated **04.24.2015.** The record information edited onto the original design document has been obtained by Tom Wilber of the firm NCA Architects. I further certify that I have personally visited the project site on **07.19.2016** and have determined by visual inspection that the survey data provided is representative of actual site conditions and is true and correct to the best of my knowledge and belief. This certification is submitted in support of a request for Final Certificate of Occupancy.

The record information presented heron is not necessarily completed and intended only to verify substantial compliance of the traffic aspects of this project. Those relying on the record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

Sincerely,

Tom Wilber
Architect

RECEIVED
JUL 29 2016
LAND DEVELOPMENT SECTION

1306 Rio Grande Blvd. | Albuquerque, NM 87104 | 505.255.6400 Office | 505.266.5945 Fax | www.nca-architects.com

30 years
Smart design for a Excellent life

CITY OF ALBUQUERQUE

Planning Department
Transportation Development Services

June 9, 2015

Mr. David Mahlman
Mahlman Studio Architecture
206 Broadway SE
Albuquerque, NM 87102

Re: West Mesa High School New Classroom Buildings
6701 Fortuna Rd., NW
Traffic Circulation Layout
Engineer's/Architect's Stamp dated 6-8-15 (J10-D005)

Dear Mr. Mahlman,

The TCL submittal received 6-8-15 is approved for Building Permit. A copy of the stamped and signed plan will be needed for each of the building permit plans. Please keep the original to be used for certification of the site for final C.O. for Transportation.

When the site construction is completed and a Certificate of Occupancy (C.O.) is requested, use the original City stamped approved TCL for certification. Redline any minor changes and adjustments that were made in the field. A NM registered architect or engineer must stamp, sign, and date the certification TCL along with indicating that the development was built in "substantial compliance" with the TCL. Submit this certification TCL with a completed Drainage and Transportation Information Sheet to front counter personnel for log in and evaluation by Transportation.

Once verification of certification is completed and approved, notification will be made to Building Safety to issue Final C.O. To confirm that a final C.O. has been issued, call Building Safety at 924-3690.

Sincerely,

Racquel M. Michel, P.E.
Senior Engineer, Planning Dept.
Development Review Services

c: File
CO Clerk

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

J10 D005

Project Title: West Mesa High School New Classroom Buildings Building Permit #: _____ City Drainage #: _____

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: Tracts 166 Through 172, Town of Atrisco Grant, Airport Unit

City Address: 6701 Fortuna RD NW

Engineering Firm: High Mesa Consulting Group Contact: Graeme Means #13676

Address: 6010-B Midway Park Blvd NE, Albuquerque, NM 87109

Phone#: 345-4250 Fax#: _____ E-mail: gmeans@highmesacg.com

Owner: Albuquerque Public Schools Contact: David Ritchey

Address: 915 Oak Street SE, Albuquerque, NM 87106

Phone#: 848-8876 Fax#: _____ E-mail: ritchey_d@aps.edu

Architect: Mahlman Studio Architecture Contact: David Mahlman

Address: 206 Broadway SE, Albuquerque, NM 87102 dmahlman@mahlman

Phone#: 243-0101 Fax#: _____ E-mail: studio.com

Surveyor: High Mesa Consulting Group Contact: Chuck Cala #11184

Address: 6010-B Midway Park Blvd NE, Albuquerque, NM 87109

Phone#: 345-4250 Fax#: _____ E-mail: ccala@highmesacg.com

Contractor: N/A Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
____ DRAINAGE PLAN 1st SUBMITTAL
____ DRAINAGE PLAN RESUBMITTAL
____ CONCEPTUAL G & D PLAN
____ GRADING PLAN
____ EROSION & SEDIMENT CONTROL PLAN (ESC)
____ ENGINEER'S CERT (HYDROLOGY)
____ CLOMR/LOMR
X TRAFFIC CIRCULATION LAYOUT (TCL)
____ ENGINEER'S CERT (TCL)
____ ENGINEER'S CERT (DRB SITE PLAN)
____ ENGINEER'S CERT (ESC)
____ SO-19
____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ SIA/FINANCIAL GUARANTEE RELEASE
____ PRELIMINARY PLAT APPROVAL
____ S. DEV. PLAN FOR SUB'D APPROVAL
____ S. DEV. FOR BLDG. PERMIT APPROVAL
____ SECTOR PLAN APPROVAL
____ FINAL PLAT APPROVAL
____ CERTIFICATE OF OCCUPANCY (PERM)
____ CERTIFICATE OF OCCUPANCY (TCL TEMP)
____ FOUNDATION PERMIT APPROVAL
X BUILDING PERMIT APPROVAL
____ GRADING PERMIT APPROVAL
____ PAVING PERMIT APPROVAL
____ WORK ORDER APPROVAL
____ GRADING CERTIFICATION
____ SO-19 APPROVAL
____ ESC PERMIT APPROVAL
____ ESC CERT. ACCEPTANCE
____ OTHER (SPECIFY)

RECEIVED
JUN 08 2015
LAND DEVELOPMENT SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED: ____ Yes ____ No X Copy Provided

DATE SUBMITTED: 6/8/2015 By: David Mahlman

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the followin

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report**: Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

CITY OF ALBUQUERQUE

July 28, 2016

J. Graeme Means, PE
High Mesa Consulting Group
6010 –B Midway Park Blvd NE
Albuquerque, NM 87109

Re: West Mesa High School New Classroom Building A
6701 Fortuna Rd NW
Request Permanent C.O. - Accepted
Engineer's Stamp dated: 4/13/2015 (J10D005)
Certification dated: 7-22-16

Dear Mr. Graeme,

Based on the Certification received 7/28/2016, the site is acceptable for release of Certificate of Occupancy by Hydrology.

- The North side of New Classroom Building A will remain fenced off during construction of the New Classroom Building B.
- The grated lid at the NW corner of building A will remain swaddled during construction of the New Classroom Building B.

If you have any questions, you can contact me at 924-3695 or Totten Elliott at 924-3982.

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

TE/RH
C: email, Cordova, Camille C.; Miranda, Rachel; Sandoval, Darlene M.; Lois Blocker

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

2015.184.9

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: West Mesa High School New Classroom Building **Building Permit #:** _____ **City Drainage #:** J-10/D005

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: Tracts 166 Through 172, Town of Atrisco Grant, Airport Unit

City Address: 6701 Fortuna RD NW

Engineering Firm: High Mesa Consulting Group Contact: J. Graeme Means

Address: 6010-B Midway Park Blvd NE, Albuquerque, NM 87109

Phone#: 505-345-4250 Fax#: 505-345-4254 E-mail: Gmeans@highmesacg.com

Owner: Albuquerque Public Schools Contact: David Ritchey

Address: 915 Oak Street SE, Albuquerque, NM 87106

Phone#: 505-848-8876 Fax#: 505-246-9020 E-mail: ritchey_d@aps.edu

Architect: NCA Architects Contact: Tom Wilber

Address: 1306 Rio Grande Blvd NW, Albuquerque NM 87104

Phone#: 505-255-6400 Fax#: _____ E-mail: twilber@nca-architects.com

Other Contact: N/A Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

x HYDROLOGY/ DRAINAGE
____ TRAFFIC/ TRANSPORTATION
____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

X ENGINEER/ ARCHITECT CERTIFICATION

____ CONCEPTUAL G & D PLAN
____ GRADING PLAN
____ DRAINAGE MASTER PLAN
____ DRAINAGE REPORT
____ CLOMR/LOMR

____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ EROSION & SEDIMENT CONTROL PLAN (ESC)

____ OTHER (SPECIFY) _____

RECEIVED 7-28-16

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ BUILDING PERMIT APPROVAL
X CERTIFICATE OF OCCUPANCY

____ PRELIMINARY PLAT APPROVAL
____ SITE PLAN FOR SUB'D APPROVAL
____ SITE PLAN FOR BLDG. PERMIT APPROVAL
____ FINAL PLAT APPROVAL
____ SIA/ RELEASE OF FINANCIAL GUARANTEE
____ FOUNDATION PERMIT APPROVAL
____ GRADING PERMIT APPROVAL
____ SO-19 APPROVAL
____ PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR

____ PRE-DESIGN MEETING
____ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: X Yes ____ No

DATE SUBMITTED: 7-28-16 By: Graeme Means

J. Graeme Means

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

CITY OF ALBUQUERQUE

July 26, 2016

J. Graeme Means, PE
High Mesa Consulting Group
6010 –B Midway Park Blvd NE
Albuquerque, NM 87109

Re: West Mesa High School New Classroom Building
6701 Fortuna Rd NW
Request Permanent C.O. – Not Accepted
Engineer's Stamp dated: 4/13/2015 (J10D005)
Certification dated: 7-22-16

Dear Mr. Means

Based on the Certification received 7/22/2016, the above mentioned site cannot be accepted for release of Certificate of Occupancy by Hydrology until the following comments are addressed:

- The grated lid at the northwest corner of the building is covered. The fabric needs to be removed.
- There is an open trench on the north side of the building that needs to be backfilled.
- The parking lots are fenced off with construction equipment, trucks, materials, etc. thru-out the lots and drive entrances. The parking lots need to be opened and cleared.

An inspection by our office will need to take place after these corrects are made.

If you have any questions, you can contact me at 924-3695 or Totten Elliott at 924-3982.

Sincerely,

Rita T. H

Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

TE/RH
C: email Cordova, Camille C.; Miranda, Rachel; Sandoval, Darlene M.; Lois Blocker

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

2015.184.9

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: West Mesa High School New Classroom Building Building Permit #: _____ City Drainage #: J-10/D005

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: Tracts 166 Through 172, Town of Atrisco Grant, Airport Unit

City Address: 6701 Fortuna RD NW

Engineering Firm: High Mesa Consulting Group Contact: J. Graeme Means

Address: 6010-B Midway Park Blvd NE, Albuquerque, NM 87109

Phone#: 505-345-4250 Fax#: 505-345-4254 E-mail: Gmeans@highmesacg.com

Owner: Albuquerque Public Schools Contact: David Ritchey

Address: 915 Oak Street SE, Albuquerque, NM 87106

Phone#: 505-848-8876 Fax#: 505-246-9020 E-mail: ritchey_d@aps.edu

Architect: NCA Architects Contact: Tom Wilber

Address: 1306 Rio Grande Blvd NW, Albuquerque NM 87104

Phone#: 505-255-6400 Fax#: _____ E-mail: twilber@nca-architects.com

Other Contact: N/A Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

x HYDROLOGY/ DRAINAGE
____ TRAFFIC/ TRANSPORTATION
____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

X ENGINEER/ ARCHITECT CERTIFICATION

____ CONCEPTUAL G & D PLAN
____ GRADING PLAN
____ DRAINAGE MASTER PLAN
____ DRAINAGE REPORT
____ CLOMR/LOMR

____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ EROSION & SEDIMENT CONTROL PLAN (ESC)

____ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ BUILDING PERMIT APPROVAL
X CERTIFICATE OF OCCUPANCY

____ PRELIMINARY PLAT APPROVAL
____ SITE PLAN FOR SUB'D APPROVAL
____ SITE PLAN FOR BLDG. PERMIT APPROVAL
____ FINAL PLAT APPROVAL
____ SIA/ RELEASE OF FINANCIAL GUARANTEE
____ FOUNDATION PERMIT APPROVAL
____ GRADING PERMIT APPROVAL
____ SO-19 APPROVAL
____ PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR

____ PRE-DESIGN MEETING
____ OTHER (SPECIFY) _____

RECEIVED
JUL 22 2016
LAND DEVELOPMENT SECTION

$50.00

IS THIS A RESUBMITTAL?: X Yes ____ No

DATE SUBMITTED: 7-22-16 By: Graeme Means

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

CITY OF ALBUQUERQUE

Planning Department
Suzanne Lubar, Director

Mayor Richard J. Berry

May 17, 2016

Graeme Means, P.E.
High Mesa Consulting Group
6010-B Midway Park Blvd NE
Albuquerque, New Mexico 87109

RE: **West Mesa High School New Classroom Building**
6701 Fortuna Rd NW
Grading and Drainage Plan
Engineers Stamp Date 5/12/16 (J10D005)

Dear Mr. Means,

Based upon the information provided in your submittal received 5/12/15, this plan is approved for Grading Permit and Paving Permit. This will now be the plan used for building permit and CO.

PO Box 1293

Please have the owner/contractor attach a copy of this approved plan dated 5/12/16 to the construction sets in the permitting process prior to sign-off by Hydrology. If this plan is not in the construction sets at permitting the project will be rejected.

Albuquerque

Once the project is complete, provide our department with a copy of the as-build survey for our records.

New Mexico 87103

If you have any questions, please contact me at 924-3986 or Rudy Rael at 924-3977.

www.cabq.gov

Sincerely,

Abiel Carrillo, P.E.
Principal Engineer, Hydrology
Planning Department

RR/AC
C: File

2014.006.2

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: West Mesa High School New Classroom Building Building Permit #: City Drainage #: J-10/D005

DRB#: EPC#: Work Order#:

Legal Description: Tracts 166 Through 172, Town of Atrisco Grant, Airport Unit

City Address: 6701 Fortuna RD NW

Engineering Firm: High Mesa Consulting Group Contact: J. Graeme Means

Address: 6010-B Midway Park Blvd NE, Albuquerque, NM 87109

Phone#: 505-345-4250 Fax#: 505-345-4254 E-mail: Gmeans@highmesacg.com

Owner: Albuquerque Public Schools Contact: David Ritchey

Address: 915 Oak Street SE, Albuquerque, NM 87106

Phone#: 505-848-8876 Fax#: 505-246-9020 E-mail: ritchey_d@aps edu

Architect: NCA Architects Contact: Tom Wilber

Address: 1306 Rio Grande Blvd NW, Albuquerque NM 87104

Phone#: 505-255-6400 Fax#: E-mail: twilber@nca-architects com

Other Contact: N/A Contact:

Address:

Phone#: Fax#: E-mail:

Check all that Apply:

DEPARTMENT:

x HYDROLOGY/ DRAINAGE
____ TRAFFIC/ TRANSPORTATION
____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

____ ENGINEER/ ARCHITECT CERTIFICATION

____ CONCEPTUAL G & D PLAN
x GRADING PLAN
____ DRAINAGE MASTER PLAN
____ DRAINAGE REPORT
____ CLOMR/LOMR

____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ EROSION & SEDIMENT CONTROL PLAN (ESC)

____ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY

____ PRELIMINARY PLAT APPROVAL
____ SITE PLAN FOR SUB'D APPROVAL
____ SITE PLAN FOR BLDG. PERMIT APPROVAL
____ FINAL PLAT APPROVAL
____ SIA/ RELEASE OF FINANCIAL GUARANTEE
____ FOUNDATION PERMIT APPROVAL
x GRADING PERMIT APPROVAL
____ SO-19 APPROVAL
____ PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR

____ PRE-DESIGN MEETING
____ OTHER (SPECIFY) _____

RECEIVED MAY 12 2016 LAND DEVELOPMENT SECTION

IS THIS A RESUBMITTAL?: x Yes ____ No

DATE SUBMITTED: 5-12-16 By: Graeme Means

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

Ryan Curley

From: Ryan Curley
Sent: Thursday, May 12, 2016 1:58 PM
To: 'plndrs@cabq.gov'
Subject: WMHS Submittal
Attachments: CG-001-R5.pdf; CG-101-R5.pdf; CG-102_R5.pdf; Drainage_Update_InfoSheet-5-11-16.pdf

Hello,
Attached is a pdf copy of the WMHS grading plan submittal that will be turned in later today.
Thanks,
Ryan

HIGH MESA Consulting Group

Ryan J. Curley, E.I.

6010-B Midway Park Blvd. NE
Albuquerque, NM 87109
www.highmesacg.com

Phone: 505.345.4250
Fax: 505.345.4254
rcurley@highmesacg.com

We invite you to visit our updated website at www.highmesacg.com

RECEIVED
MAY 12 2016
LAND DEVELOPMENT SECTION

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services

Richard J. Berry, Mayor

January 26, 2015

Graeme Means, P.E.
High Mesa Consulting Group
6010-B Midway Park Blvd NE
Albuquerque, NM 87109

RE: **West Mesa High School Storm Drain Connection**
Classroom Wing "M" Replacement and Courtyard Improvements
Drainage Management Plan for Work Order
Engineer's Stamp Date 12-31-2014 (File: J10D005)

Dear Mr. Means:

Based upon the information provided in your submittal received 12-31-14, the above referenced Plan is approved for Work Order.

The Drainage Management Plan for this project has shown that

- The peak flow into the 72" storm drain has a net decrease of 2.5 cfs compared to the planned peak flow from the "West Mesa Diversion Project Analysis" prepared by Smith's Engineering dated 1997.
- Smith's analysis shows 241 cfs in the 72" SD in Fortuna, but the As-built shows 253 cfs, CPN 5780.91, and it is unknown where the discrepancy arises. Nonetheless, the Work Order used the more conservative 253 cfs in the HGL profile.
- There is no net increase or decrease from this site, only changes to the discharge location or outfall
- This submittal will suffice as the Drainage Management Plan for the project. However, address the following comments prior to Building Permit approval:
    - Provide a graphic showing existing basins A & B overlaying the new basins using a colored marker. (tabloid is preferred)
    - If there is an increase in the discharge to the existing private storm drain, show that there is capacity.
    - In the narrative describe how the First Flush will be managed. Describe how you will not be collecting the first flush for A-2, A-3, and B, but will be collecting the First Flush for some existing areas – in essence swapping some areas.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file
c.pdf: via Email: Recipient, Monica Ortiz

J10D005_WO_DMP_Appr.doc

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

Albuquerque - Making History 1706-2006

2014.006.1

City of Albuquerque

Planning Department
Development & Building Services Division
DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(REV 02/2013)

Project Title: West Mesa High School New Classroom Building Building Permit #: _____ City Drainage #: J-10/D005
DRB#: _____ EPC#: _____ Work Order#: 749982
Legal Description: Tracts 166 Through 172, Town of Atrisco Grant, Airport Unit
City Address: 6701 Fortuna RD NW

Engineering Firm: High Mesa Consulting Group Contact: Graeme Means #13676
Address: 6010-B Midway Park Blvd NE, Albuquerque, NM 87109
Phone#: 345-4250 Fax#: _____ E-mail: gmeans@highmesacg.com

Owner: Albuquerque Public Schools Contact: David Ritchey
Address: 915 Oak Street SE, Albuquerque, NM 87106
Phone#: 848-8876 Fax#: _____ E-mail: ritchey_d@aps.edu

Architect: Mahlman Studio Architecture Contact: David Mahlman
Address: 206 Broadway SE, Albuquerque, NM 87102
Phone#: 243-0101 Fax#: _____ E-mail: dmahlman@mahlmanstudio.com

Surveyor: High Mesa Consulting Group Contact: Chuck Cala #11184
Address: 6010-B Midway Park Blvd NE, Albuquerque, NM 87109
Phone#: 345-4250 Fax#: _____ E-mail: ccala@highmesacg.com

Contractor: NOT YET SELECTED Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
X DRAINAGE PLAN 1st SUBMITTAL
____ DRAINAGE PLAN RESUBMITTAL
____ CONCEPTUAL G & D PLAN
X GRADING PLAN
____ EROSION & SEDIMENT CONTROL PLAN (ESC)
____ ENGINEER'S CERT (HYDROLOGY)
____ CLOMR/LOMR
____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ ENGINEER'S CERT (TCL)
____ ENGINEER'S CERT (DRB SITE PLAN)
____ ENGINEER'S CERT (ESC)
____ SO-19
____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ SIA/FINANCIAL GUARANTEE RELEASE
____ PRELIMINARY PLAT APPROVAL
____ S. DEV. PLAN FOR SUB'D APPROVAL
____ S. DEV. FOR BLDG. PERMIT APPROVAL
____ SECTOR PLAN APPROVAL
____ FINAL PLAT APPROVAL
____ CERTIFICATE OF OCCUPANCY (PERM)
____ CERTIFICATE OF OCCUPANCY (TCL TEMP)
____ FOUNDATION PERMIT APPROVAL
X BUILDING PERMIT APPROVAL
____ GRADING PERMIT APPROVAL
____ SO-19 APPROVAL
____ PAVING PERMIT APPROVAL
____ WORK ORDER APPROVAL
____ GRADING CERTIFICATION
____ ESC PERMIT APPROVAL
____ ESC CERT. ACCEPTANCE
____ OTHER (SPECIFY)

As varified Paid ✓$50.00

RECEIVED
APR 14 2015
LAND DEVELOPMENT SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED: X Yes ____ No X Copy Provided
DATE SUBMITTED: 4/14/2015 By: J. Graeme Means

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, anc scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the followin

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

CITY OF ALBUQUERQUE

January 29, 2010

Jennifer Flor, PE
Wilson & Company
2600 American Rd, SE, Ste. 100
Rio Rancho, NM 87124

Re: West Mesa HS Bus Lane Improvement Plan
Engineer Stamp 1-13-10 (J10/D5)

Dear Ms. Flor,

Based upon information provided in your submittal dated 1-13-10, the above referenced plan is approved for SO#19 Permit. A separate permit is required for construction within City R/W. A copy of this approval letter must be on hand when applying for the excavation permit.

Also, upon completion of the project, please submit an Engineer Certification of the grading plan for our files.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Principal Engineer, Planning Dept.
Development and Building Services

C: Duane Schmitz, DMD
Antoinette Baldonado, DMD
file

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 12/05 - AP)

PROJECT TITLE: West Mesa High School ZONE MAP/DRG. FILE#: J-10-Z/ D056

DRB#: _____ EPC#: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Tracts 166 Thru 174 Airport Unit, Town of Atrisco Grant. Plat Filed: December 5, 1944.

CITY ADDRESS: 1505 Candelaria Rd, Albuquerque, NM 87107

ENGINEERING FIRM:	Wilson & Company	CONTACT:	Jennifer Flor, PE
ADDRESS:	2600 The American Road SE, Ste 100	PHONE:	505-948-5129
CITY, STATE:	Rio Rancho, NM	ZIP CODE:	87109
OWNER:	APS	CONTACT:	David Ritchey
ADDRESS:	915 Oak Street	PHONE:	505-977-5829
CITY, STATE:	Albuquerque New Mexico	ZIP CODE:	87106
ARCHITECT:	Wilson & Company	CONTACT:	See Engineer Above
ADDRESS:	4900 Lang Ave. NE	PHONE:	505-235-7250
CITY, STATE:	Albuquerque, NM	ZIP CODE:	
SURVEYING FIRM:	Wilson & Company	LICENSED SURVEYOR:	Ben Aragon
ADDRESS:	4900 Lang Ave. NE	PHONE:	505-348-4067
CITY, STATE:	Albuquerque, NM	ZIP CODE:	87109
CONTRACTOR:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	

CHECK TYPE OF SUBMITTAL:

- ___ DRAINAGE REPORT - RESUBMITTAL
- X DRAINAGE PLAN 1st SUBMITTAL
- X DRAINAGE PLAN RESUBMITTAL
- ___ CONCEPTUAL GRADING & DRAINAGE PLAN
- ___ GRADING PLAN
- ___ EROSION CONTROL PLAN
- ___ ENGINEER'S CERT (HYDROLOGY)
- ___ CLOMR\LOMR
- ___ TRAFFIC CIRCULTAION LAYOUT
- ___ ENGINEER/ARCHITECT CERT (TCL)
- ___ ENGINEER/ARCHITECT CERT (DRB S. P.)
- ___ ENGINEER/ARCHITECT CERT (AA)
- ___ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL SOUGHT:

- ___ SIA / FINANCIAL GUARANTEE RELEASE
- ___ PRELIMINARY PLAT APPROVAL
- ___ S. DEV. PLAN FOR SUB'D. APPROVAL
- ___ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ___ SECTOR PLAN APPROVAL
- ___ FINAL PLAT APPROVAL
- ___ FOUNDATION PERMIT APPROVAL
- ___ BUILDING PERMIT APPROVAL
- ___ CERTIFICATE OF OCCUPANCY (PERM.)
- ___ CERTIFICATE OF OCCUPANCY (TEMP)
- X GRADING PERMIT APPROVAL
- X PAVING PERMIT APPROVAL
- ___ WORK ORDER APPROVAL
- X OTHER (SPECIFY) Drainage Master Plan Approval

So 19

RECEIVED
JAN 13 2010
HYDROLOGY SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- X YES
- ___ NO
- ___ COPY PROVIDED

Submitted By: Jennifer Flor JMF DATE: 01/13/10

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development define the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5)
3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

9101
High Assets

CITY OF ALBUQUERQUE

February 2, 2010

Jennifer Flor, PE
Wilson & Company
2600 American Rd, SE, Ste. 100
Rio Rancho, NM 87124

Re: West Mesa HS Drainage Master Plan
Engineer Stamp 1-13-09 (J10/D5)

Dear Ms. Flor,

Based upon information provided in your submittal dated 1-13-10, the above referenced plan is approved as a master plan for the above mentioned site. All projects should adhere to this plan or this plan must be amended accordingly.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham, PE
Principal Engineer, Planning Dept.
Development and Building Services

C: file

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

WILSON & COMPANY

2600 The American Rd. SE, Ste. 100
Rio Rancho, NM 87124
505-898-8021 phone
505-898-8501 fax

Albuquerque
Aztec
Colorado Springs
Cuba
Denver
Fort Worth
Houston
Kansas City
Lawrence
Monterey Park
Omaha
Overland Park
Phoenix
Rio Rancho
Salina
Salt Lake City
San Bernardino
San Diego
Santa Fe

January 13, 2010

Brad Bingham, P.E.
City of Albuquerque
Planning Department
600 2nd Street NW
Albuquerque, NM 87103

Re: West Mesa HS Drainage Master Plan Comments Dated December 10, 2009

Dear Mr. Bingham,

This letter is in response to the comments dated December 10, 2009 for the West Mesa High School Drainage Master Plan stamped 12-07-09. The comments and the responses are shown below:

Comment 1: **"Please provide calculations for all proposed 18" pipe. I cannot find the proposed 24" storm drain."**

Response: A hydraulic model using Hydraflow Storm Sewers was developed and is submitted with this response to show that the proposed storm drain is able to convey the flows from the site. Also, 24", 30" and 36" pipe is needed and is identified on the revised Grading and Drainage Master Plan.

Comment 2: **"There should be no Land Treatment 'A' analyzed since this site is developed. Sports areas should be a 'B' and the area with bare dirt should be a 'C' since it has probably been compacted by human use over the years."**

Response: All land treatments have been revised incorporating Comment 2. Land treatments were also updated using the latest aerial imagery which resulted in some increase in impervious area. The original and revised land treatments are shown in the following table:

Land Treatment	Basin 100		Basin 101		Basin 102		Basin 103		Basin 104	
	Original	Revised	Original	Revised	Original	Revised	Original	Revised	Original	Revised
A	0	0	5	0	5	0	5	0	0	0
B	0	0	0	0	10	0	10	10	45	5
C	5	5	0	0	0	0	0	0	10	45
D	95	95	95	100	85	100	85	90	55	50

Land Treatment	Basin 105		Basin 106		Basin 107		Basin 108		Basin 109	
	Original	Revised	Original	Revised	Original	Revised	Original	Revised	Original	Revised
A	15	0	35	0	35	0	70	0	75	0
B	0	0	15	5	15	5	25	65	15	35
C	0	15	5	10	5	10	0	15	5	40
D	85	85	45	85	45	85	5	20	5	25

Land Treatment	Basin 110		Basin 111		Basin 112		Basin 113	
	Original	Revised	Original	Revised	Original	Revised	Original	Revised
A	90	0	75	0	95	0	95	0
B	0	15	15	45	0	80	0	75
C	5	80	5	50	0	0	0	0
D	5	5	5	5	5	20	5	25

Due to the increase in flows, an analysis of the outflow pipes to the West Mesa Diversion was performed to determined if the outflow pipes could convey the flow. Culvertmaster was used to determine the maximum capacity of the 24" connections to the storm drain. The flows were then routed through the pipe in AHYMO. The 24" pipes are unable to convey the entire flow from the site and ponding will occur. A stage-storage-discharge curve was developed using the elevation and volume of the onsite ponds and the allowable discharge for the 24" pipes. AHYMO results show that ponding will occur, but is contained within the existing ponds.

Comment 3: **"I do not find evidence of the 4 foot deep ditch routing basin 102 to the inlet in basin 108 nor the 3 foot ditch routing basin 104 thru basin 105."**

Response: The ditches do not exist on the site and were removed from the model. Also, all routing of the basins was removed from the model because the small travel times did not reduce the peak flows noticeably. The flows from the AHYMO model were then input into the Hydraflow hydraulic model as described in Comment 1.

Comment 4: **"In the AHYMO run, you have basin 104 routed thru 105 in a 3 foot channel twice yet you propose an 18" pipe? Please explain."**

Response: The 3 foot channel was removed from the model and the flows were input into the Hydraflow hydraulic model to determine pipe size. All proposed pipe sizes are shown on the revised Grading and Drainage Master Plan.

Comment 5: **"Does basin 106 go through basin 109 or basin 108? The AHYMO run says 109 but the basin map doesn't agree."**

Response: A proposed pipe was added to the master plan to capture flows in from basins 101, 102 and 106. The flows are then piped through basin 108 as shown on the revised Grading and Drainage Master Plan.

Comment 6: **"Please label all storm drain, inlets, etc., and provide all important information regarding slope, inverts or other design or capacity factors. Are any of these items needing maintenance or upsizing?"**

Response: The Master Plan has been updated with all requested information. The text of the report has also been updated to reflect the revised conditions and results. Since all the storm drain is proposed, no upsizing of the pipes is needed at this time.

A revised Grading and Drainage Master Plan has been submitted in addition to the revised AHYMO model input, output and summary. Hydraulic model results are included to show that the proposed storm drain is able to convey the calculated flows from the site.

If you have any questions or need any more information for your review, please contact me at 505-948-5129.

Sincerely,

Jennifer Flor, P.E.
Project Manager
Wilson & Company

CC: Project File

WILSON & COMPANY

2600 The American Rd. SE, Ste. 100
Rio Rancho, NM 87124
505-898-8021 phone
505-898-8501 fax

Albuquerque
Aztec
Colorado Springs
Cuba
Denver
Fort Worth
Houston
Kansas City
Lawrence
Monterey Park
Omaha
Overland Park
Phoenix
Rio Rancho
Salina
Salt Lake City
San Bernardino
San Diego
Santa Fe

April 14, 2010

Curtis Cherne, P.E.
City of Albuquerque
Planning Department
600 2nd Street NW
Albuquerque, NM 87103

Re: West Mesa HS Parking Lot Traffic Circulation Layout

Dear Mr. Cherne,

This letter is in response to the comments dated March 25, 2010 for the West Mesa High School Parking Lot Grading and Drainage Plan with the engineer's stamp dated 03-03-10 (J10-D005). The comments and the responses are shown below:

Comment 1: **"Provide inverts for the connections to the existing storm drain."**

Response: Inverts are shown on C-107 and C-108.

Comment 2: **"Provide flow line elevation in Fortuna at the drive entrances."**

Response: The flow line elevations are shown on C-107 and C-108.

Comment 3: **"Provide existing elevation data (contours or spots)."**

Response: The contour elevations are shown on C-107 and C-108.

Comment 4: **"It appears the proposed median curb on the west end of the project may block flows from the west. Provide elevation data west of this curb and a top of curb elevation."**

Response: The curb was blocking the flows from heading west. The median curb was removed and a proposed cut off wall is shown that matches existing grades to let the flows pass east into the parking lot.

Comment 5: **"Keyed Note 14 proposes to build a Type "C" inlet in median curb. A typical COA Type "C" inlet is built into an 8" curb, while median curb is 6"."**

Response: Please see attached detail for transition (a COA standard transition but modified to 6" curb).

Comment 6: **"What does a raised cross walk culvert look like? Sheet C-502 was not provided."**

Response: Please see sheet C-502 attached.

RECEIVED
APR 14 2010
HYDROLOGY SECTION

The revised grading and drainage plan sheets C-106, C-107 and C-107 are attached for your review.

If you have any questions or need any more information for your review, please contact me at 505-948-5129.

Sincerely,

Jennifer Flor, P.E.
Project Manager
Wilson & Company

CC: Project File

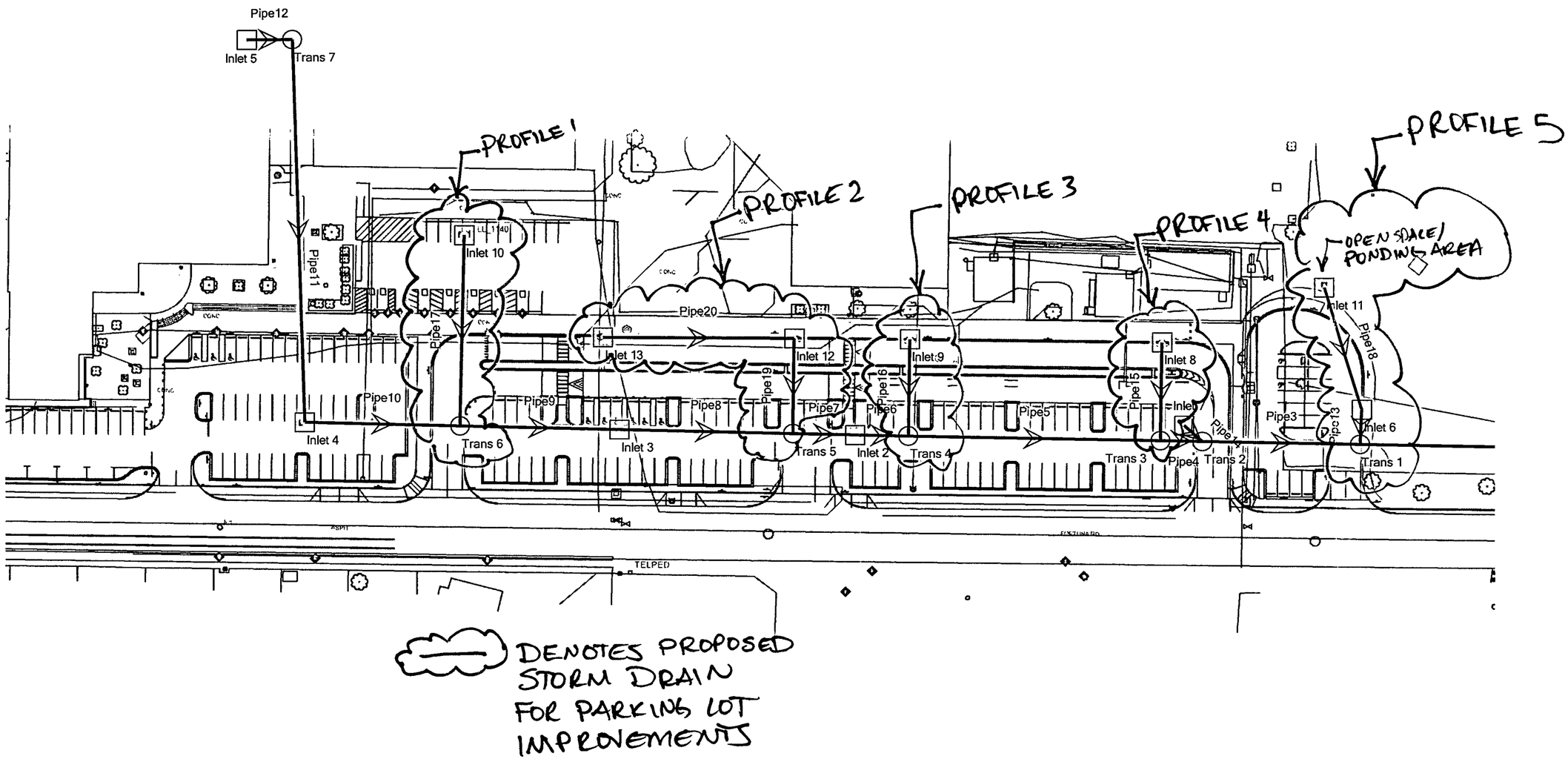
Appendix B
StormCAD Data

STORMCAD RESULTS FOR
WEST MESA HIGH SCHOOL
PARKING LOT IMPROVEMENTS

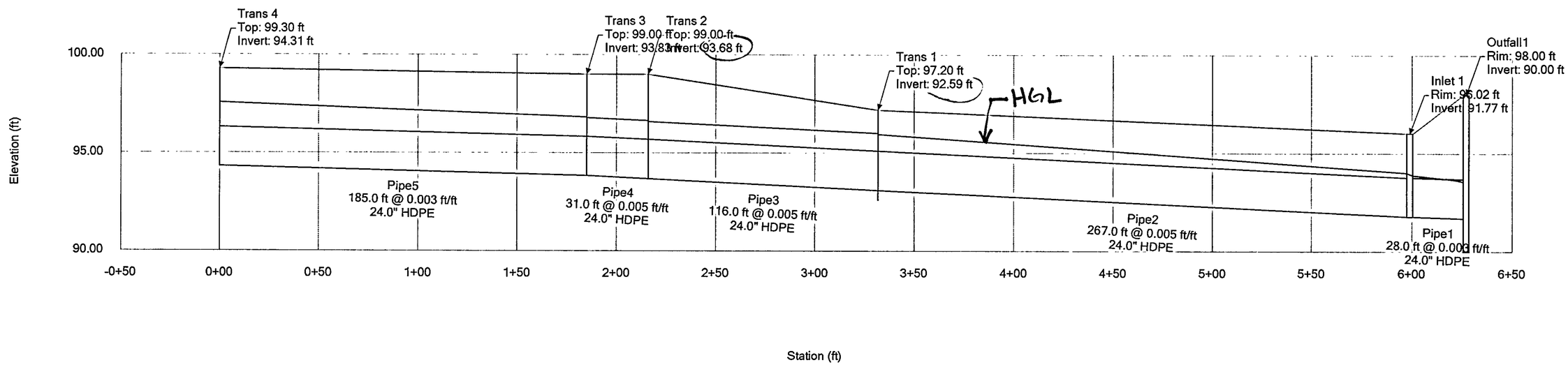
MARCH 2010

Label	Slope (Calculated) (ft/ft)	Length (Unified) (ft)	Diameter (in)	Manning's n	Flow (ft³/s)	Velocity (Average) (ft/s)	Invert (Upstream) (ft)	Invert (Downstream) (ft)	Elevation Ground (Start) (ft)	Elevation Ground (Stop) (ft)	Cover (Start) (ft)	Cover (Stop) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
Pipe1	0.003	28	24	0.01	28.85	9.18	91.77	91.69	96.02	98	2.25	4.31	93.89	93.53
Pipe2	0.005	267	24	0.01	24.98	7.95	93.1	91.77	97.2	96.02	2.1	2.25	95.95	94.02
Pipe3	0.005	116	24	0.01	20.88	6.65	93.68	93.1	99	97.2	3.32	2.1	96.6	96.01
Pipe4	0.005	31	24	0.01	20.08	6.39	93.83	93.68	99	99	3.17	3.32	96.78	96.64
Pipe5	0.003	185	24	0.01	18.76	5.97	94.31	93.83	99.3	99	2.99	3.17	97.58	96.82
Pipe6	0.005	39	24	0.01	17.76	5.65	94.5	94.31	99.7	99.3	3.2	2.99	97.76	97.61
Pipe7	0.005	46	24	0.01	17.76	5.65	95.81	95.6	99.3	99.7	1.49	2.1	97.98	97.81
Pipe8	0.005	127	24	0.01	16.34	5.2	96.4	95.81	100.4	99.3	2	1.49	98.4	98.01
Pipe9	0.006	117	24	0.01	15.24	7.58	97.66	97	101.5	100.4	1.84	1.4	99.07	98.44
Pipe10	0.006	114	24	0.01	10.53	6.93	98.3	97.66	101.3	101.5	1	1.84	99.46	99.11
Pipe11	0.005	285	18	0.01	3.4	4.98	100.12	98.7	104.14	101.3	2.52	1.1	100.82	99.72
Pipe12	0.005	33	18	0.01	3.4	5.04	100.29	100.12	104.06	104.14	2.27	2.52	100.99	100.94
Pipe13	0.005	26	24	0.01	4.1	1.31	92.72	92.59	96.87	97.2	2.15	2.61	96.8	96.8
Pipe14	0.005	18	18	0.01	0.8	3.31	95.96	95.87	98.96	99	1.5	1.63	96.98	96.98
Pipe15	0.005	73	12	0.01	1.32	1.68	95.55	95.19	98.55	99	2	2.81	97.35	97.29
Pipe16	0.005	72	12	0.01	1	1.27	95.83	95.47	98.83	99.3	2	2.83	98.08	98.05
Pipe17	0.005	142	18	0.01	4.71	5.43	98.4	97.69	100.9	101.5	1	2.31	99.23	99.15
Pipe18	0.005	95	24	0.01	2.7	0.86	93.3	92.82	96.3	96.87	1	2.05	96.83	96.82
Pipe19	0.005	71	12	0.01	1.42	1.81	96.31	95.96	99.26	99.3	1.95	2.34	98.07	98
Pipe20	0.005	140	12	0.01	0.88	1.12	97.11	96.41	99.61	99.26	1.5	1.85	98.18	98.13

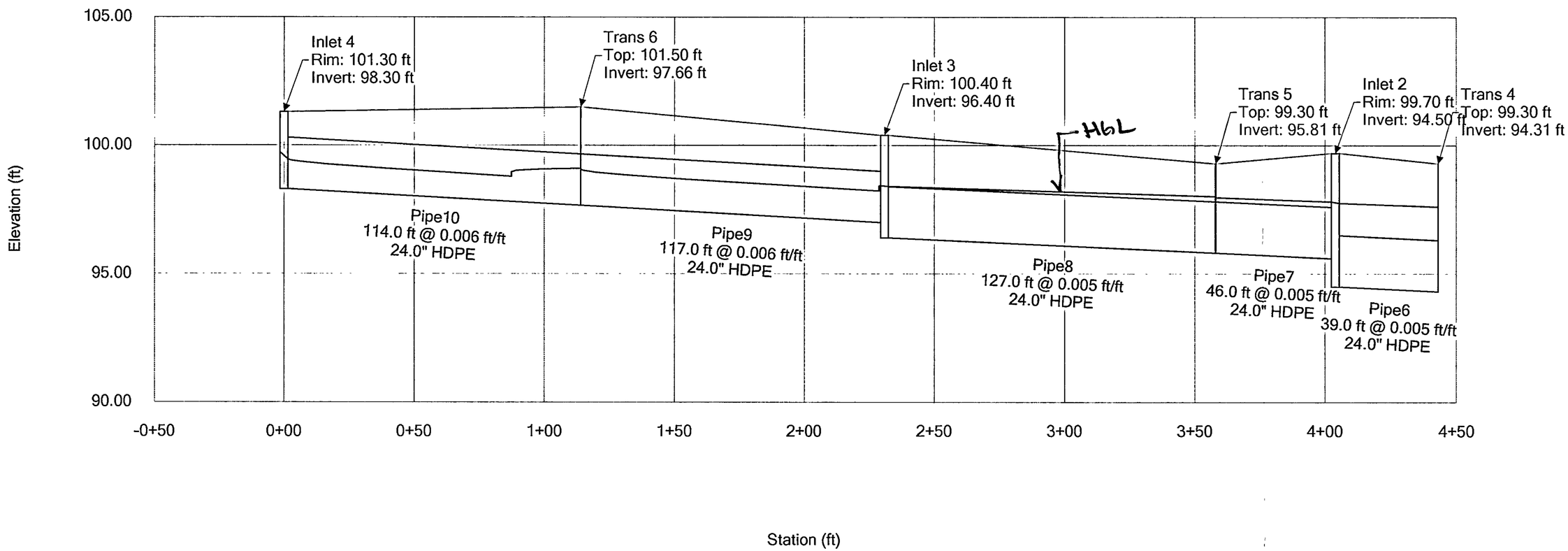
Scenario: Base



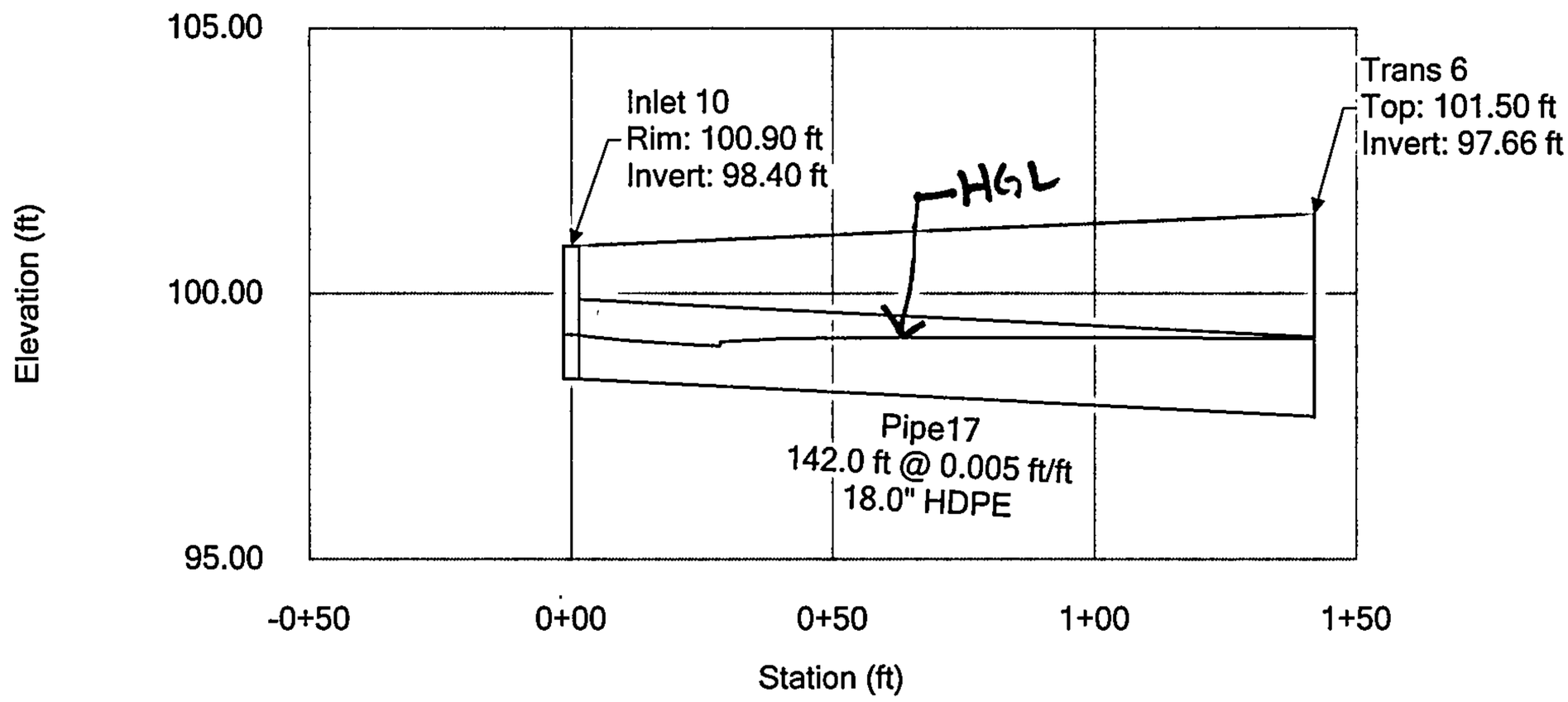
Profile Report
Engineering Profile - MAIN LINE 1 (stormcad parking lot.stc)



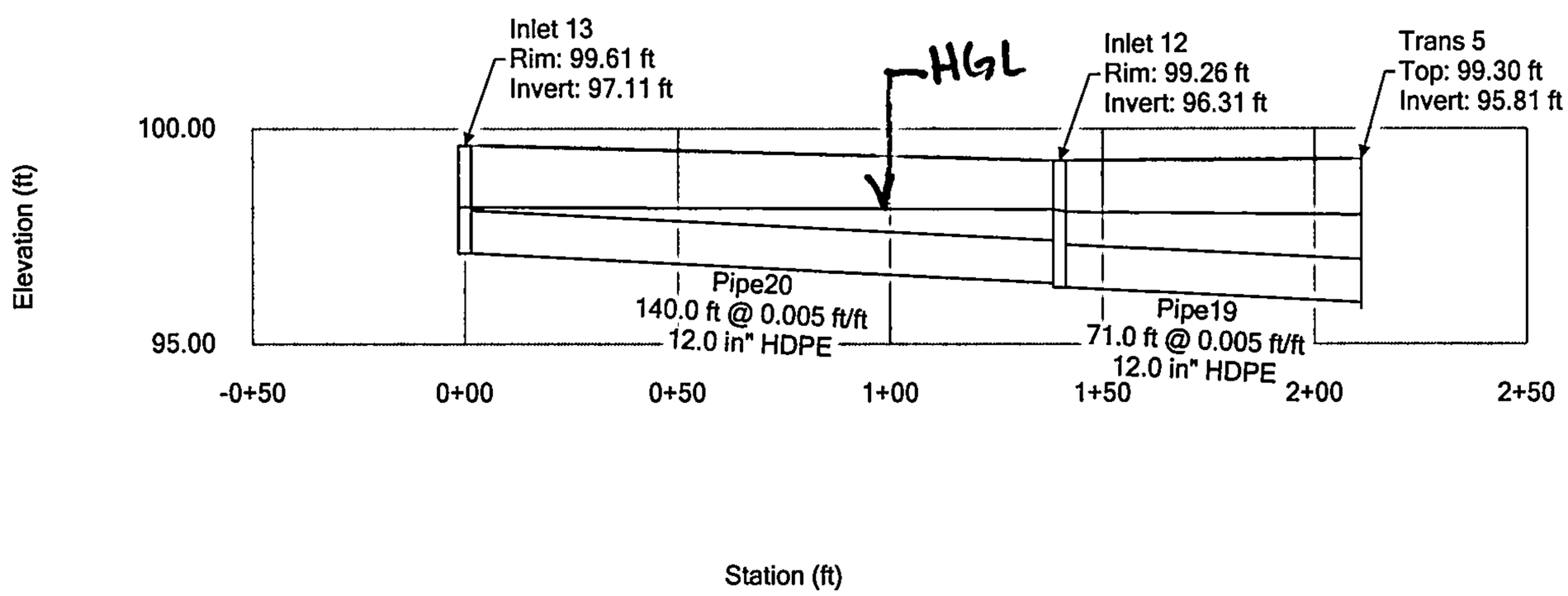
Profile Report
Engineering Profile - MAIN LINE 2 (stormcad parking lot.stc)



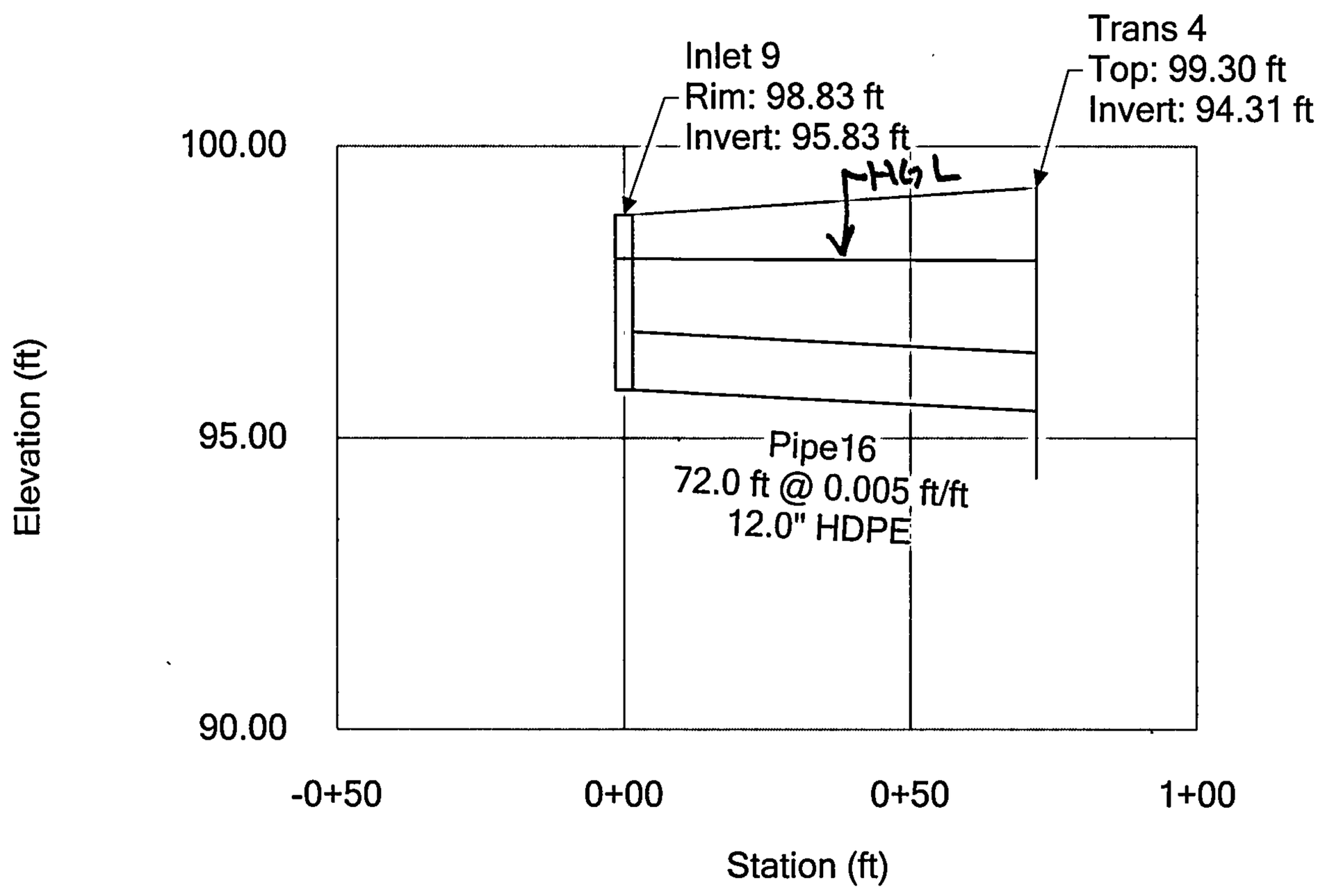
Profile Report
Engineering Profile - PROFILE 1 (stormcad parking lot.stc)



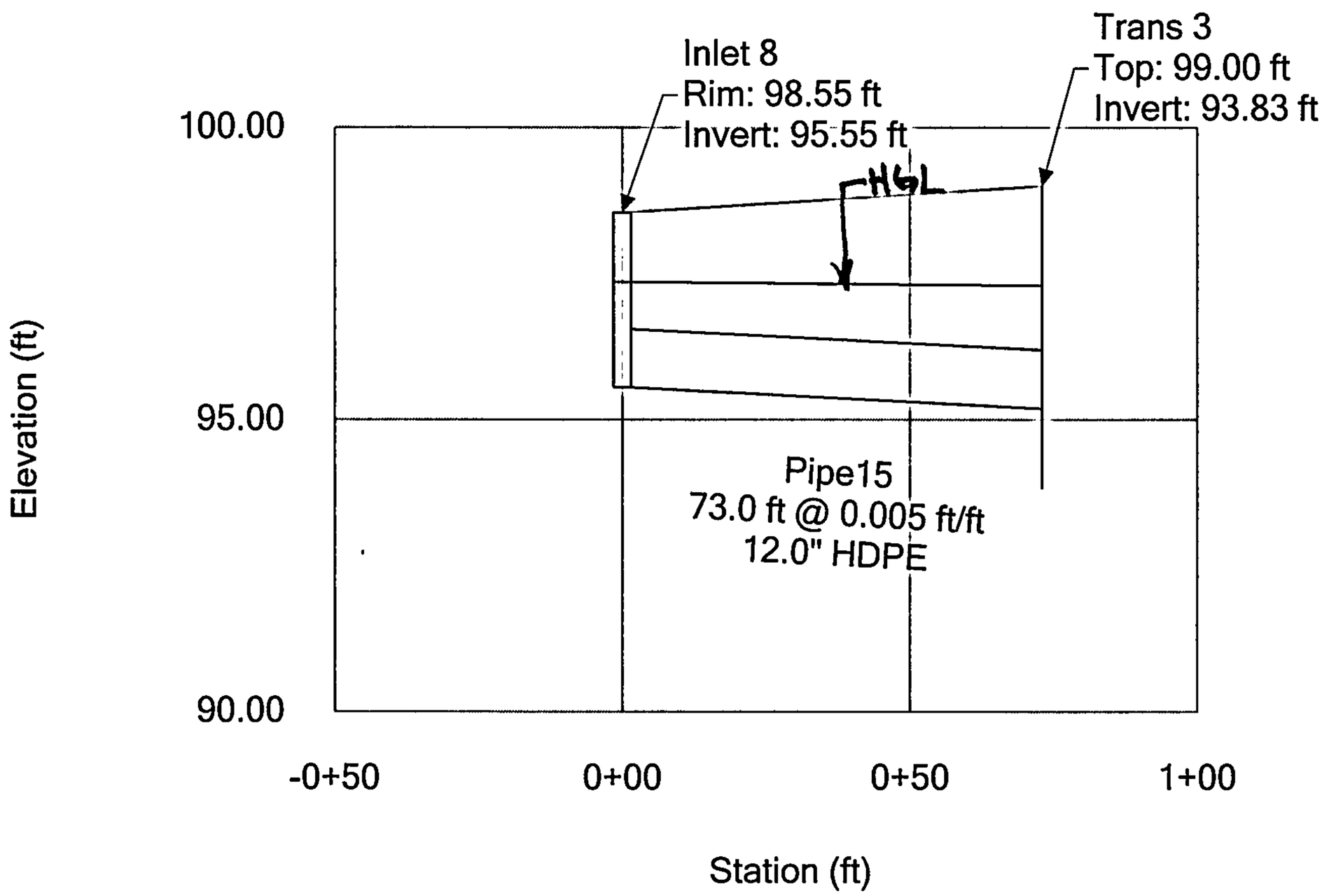
Profile Report
Engineering Profile - PROFILE 2 (stormcad parking lot.stc)



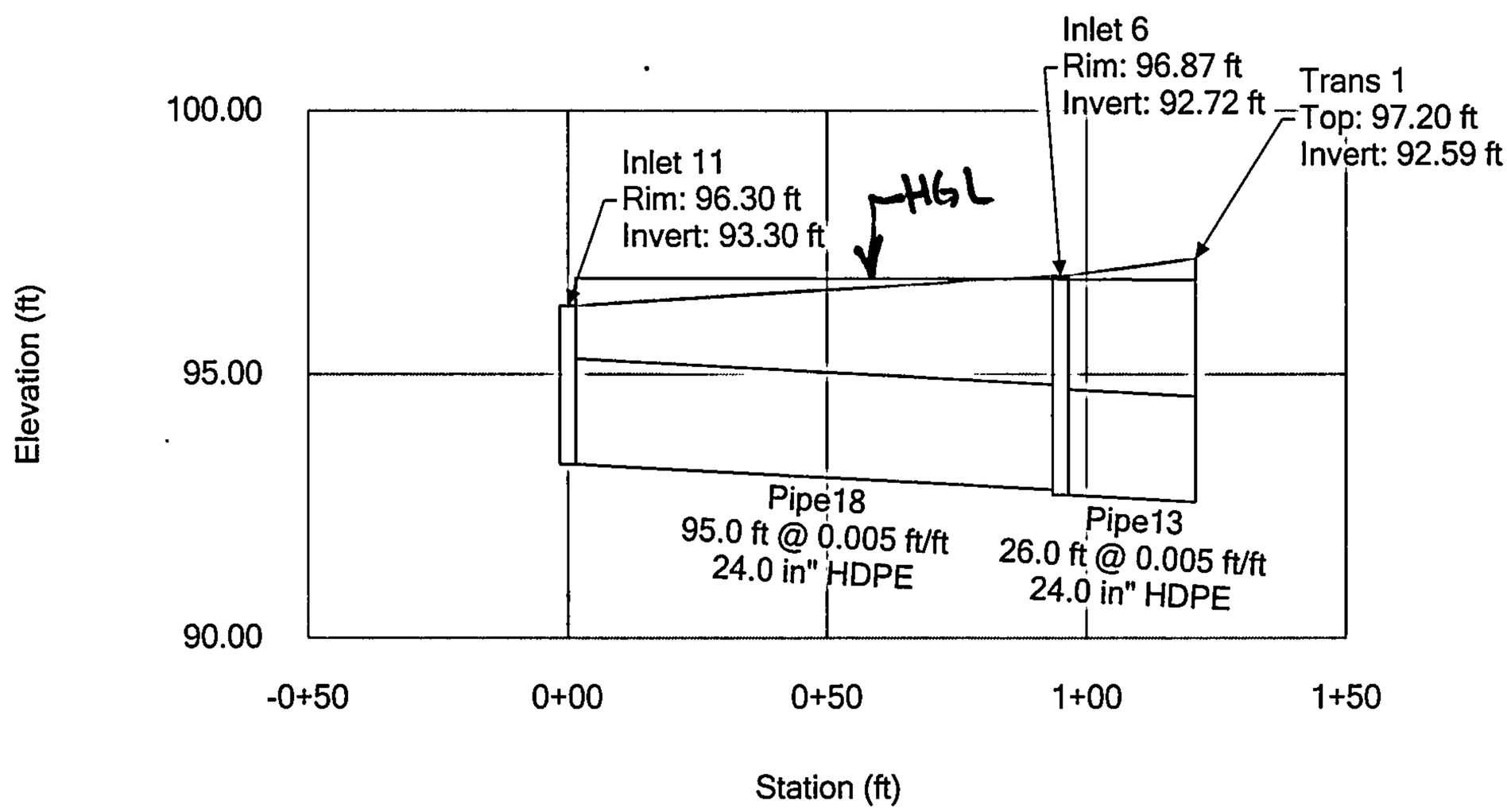
Profile Report
Engineering Profile - PROFILE 3 (stormcad parking lot.stc)



Profile Report
Engineering Profile - PROFILE 4 (stormcad parking lot.stc)



Profile Report
Engineering Profile - PROFILE 5 (stormcad parking lot.stc)



CITY OF ALBUQUERQUE

April 30, 2010

Jennifer M. Flor, P.E.
Wilson & Company, Inc.
2600 The American Road SE, Suite 100
Rio Rancho, NM 87124

Re: West Mesa High School Parking Lot Grading and Drainage Plan

Engineer's Stamp dated 4-13-10 (J10/D005)

Dear Ms. Flor,

Based upon the information provided in your submittal received 4-14-10, the above referenced plan is approved for Grading Permit and Paving Permit.

Please verify the inverts for the existing and proposed storm drain. There may be an inconsistency between the StormCad data and the Grading Plan.

Upon completion of the project, please submit an Engineer's Certification for our files.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: file

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 12/05 - AP)

PROJECT TITLE: West Mesa High School Parking Lot ZONE MAP/DRG. FILE#: J-10-Z/D005

DRB#: _____ EPC#: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Tracts 166 Thru 174 Airport Unit, Town of Atrisco Grant. Plat Filed: December 5, 1944.

CITY ADDRESS: 6701 Fortuna Road NW, Albuquerque, NM 87121

ENGINEERING FIRM:	Wilson & Company	CONTACT:	Jennifer Flor, PE
ADDRESS:	2600 The American Road SE, Ste 100	PHONE:	505-948-5129
CITY, STATE:	Rio Rancho, NM	ZIP CODE:	87109
OWNER:	APS	CONTACT:	David Ritchey
ADDRESS:	915 Oak Street	PHONE:	505-977-5829
CITY, STATE:	Albuquerque New Mexico	ZIP CODE:	87106
ARCHITECT:			
ADDRESS:			
CITY, STATE:			
SURVEYING FIRM:	Wilson & Company	LICENSED SURVEYOR:	Ben Aragon
ADDRESS:	4900 Lang Ave. NE	PHONE:	505-348-4067
CITY, STATE:	Albuquerque, NM	ZIP CODE:	87109
CONTRACTOR:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	

CHECK TYPE OF SUBMITTAL:

____ DRAINAGE REPORT - RESUBMITTAL
____ DRAINAGE PLAN 1st SUBMITTAL
_X_ DRAINAGE PLAN RESUBMITTAL
____ CONCEPTUAL GRADING & DRAINAGE PLAN
____ GRADING PLAN
____ EROSION CONTROL PLAN
____ ENGINEER'S CERT (HYDROLOGY)
____ CLOMR\LOMR
____ TRAFFIC CIRCULTAION LAYOUT
____ ENGINEER/ARCHITECT CERT (TCL)
____ ENGINEER/ARCHITECT CERT (DRB S. P.)
____ ENGINEER/ARCHITECT CERT (AA)
____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL SOUGHT:

____ SIA / FINANCIAL GUARANTEE RELEASE
____ PRELIMINARY PLAT APPROVAL
____ S. DEV. PLAN FOR SUB'D. APPROVAL
____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
____ SECTOR PLAN APPROVAL
____ FINAL PLAT APPROVAL
____ FOUNDATION PERMIT APPROVAL
____ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY (PERM.)
____ CERTIFICATE OF OCCUPANCY (TEMP)
_✓_ GRADING PERMIT APPROVAL
____ PAVING PERMIT APPROVAL
____ WORK ORDER APPROVAL
_X_ OTHER (SPECIFY) Grading/drainage plan approval

WAS A PRE-DESIGN CONFERENCE ATTENDED:

_____ YES
_X_ NO
_____ COPY PROVIDED

RECEIVED
APR 14 2010
HYDROLOGY SECTION

Submitted By: Jennifer Flor DATE: 04/14/2010

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development define the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5)
3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

WILSON & COMPANY

Memo

Albuquerque
Colorado Springs
Colton
Commerce
Denver
Durango
Houston
Kansas City
Lenexa
Oklahoma City
Phoenix
Salina
Wichita

From: John Tellez, PE

Date: March 03, 2006

To: Bradley L. Bingham, PE

Copies To: File

Subject: West Mesa High School Grading and Drainage Plan

Based on your letter dated January 4, 2006 we have the following response:

1. Please address all streets surrounding West Mesa HS. How and where are these streets draining? Do any inlets exist in these streets, etc.?

   Response: Surrounding streets are: 64th St., Glenrio Rd., 72nd. St., and Fortuna Rd. There are no exiting inlets on Fortuna Rd. or 72 nd. St. There are existing inlets on 64th and Glenrio Rd. These inlets connect to the existing West Mesa Diversion COA storm drain system. Please see attachments.

FIG 1

CITY OF ALBUQUERQUE, NEW MEXICO

WEST MESA DIVERSION PROJECT
DRAINAGE ANALYSIS

DRAFT COPY

CITY OF
Albuquerque

CIA PROJECT NO. 5381-01
PUBLIC WORKS DEPARTMENT
HYDROLOGY DIVISION

SEE WMDP REVISION NOTE BOOK FOR ALL REVISION INFORMATION

DLA

CHANGES WITHIN THIS DOCUMENT SHOULD ALSO BE IMPLEMENTED INTO FINAL REPORT

Prepared by

Smith Engineering Company
A Full Service Engineering Company

DRAFT REPORT: MAY, 1997

FIG.2

42MOD1.SUM

□(s16.67h8.5v0T□&18D

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =06/24/2002

INPUT FILE = 42mod1.in USER NO.= C_ANDRSN.I01

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1 NOTATION
START										TIME= .00
RAINFALL TYPE= 2										RAIN24= 2.660
SEDIMENT BULK										PK BF = 1.02
COMPUTE NM HYD	A1-D&AP-1	-	1	.06440	87.83	7.319	2.13089	1.800	2.131	PER IMP= 80.00
ROUTE MCUNGE	AP-1.R	1	2	.06440	85.93	7.296	2.12420	1.850	2.085	CCODE = .2
COMPUTE NM HYD	B3-D&AP-2	-	88	.01900	41.13	2.341	2.30977	1.550	3.382	PER IMP= 90.00
COMPUTE NM HYD	B1-D&AP-3	-	1	.02930	74.98	3.330	2.13089	1.500	3.999	PER IMP= 80.00
ROUTE MCUNGE	AP-3.R	1	3	.02930	69.31	3.304	2.11441	1.550	3.696	CCODE = .2
COMPUTE NM HYD	B2-D	-	1	.01850	30.94	2.102	2.13089	1.650	2.613	PER IMP= 80.00
ADD HYD	AP-4	1& 3	70	.04780	92.51	5.407	2.12077	1.550	3.024	
ADD HYD	PART_AP-5	70&88	5	.06680	133.63	7.747	2.17452	1.550	3.126	
ADD HYD	AP-5	5& 2	89	.13120	173.23	15.043	2.14981	1.650	2.063	
ROUTE MCUNGE	AP-5.R	89	2	.13120	171.72	15.023	2.14690	1.650	2.045	CCODE = .2
COMPUTE NM HYD	C3-D	-	90	.01750	30.03	1.989	2.13089	1.650	2.681	PER IMP= 80.00
ADD HYD	PART_AP-7	2&90	3	.14870	201.75	17.011	2.14500	1.650	2.120	
COMPUTE NM HYD	C1-D&AP-6	-	1	.04860	88.78	5.060	1.95202	1.600	2.854	PER IMP= 70.00
ADD HYD	AP-7	3& 1	3	.19730	285.34	22.071	2.09746	1.650	2.260	
COMPUTE NM HYD	I40D-1	-	1	.12600	81.46	6.514	.96940	1.800	1.010	PER IMP= 25.00
ROUTE RESERVOIR	AP-11	1	2	.12600	4.84	5.613	.83529	3.400	.060	AC-FT= 4.688
ROUTE	AP-11.R	2	4	.12600	4.81	5.581	.83056	3.650	.060	
COMPUTE NM HYD	I40D-2	-	1	.04840	60.20	2.502	.96940	1.500	1.943	PER IMP= 25.00
ADD HYD	AP-12	1& 4	5	.17440	60.21	8.084	.86909	1.500	.539	
ROUTE	AP-12.R	5	6	.17440	55.62	8.068	.86745	1.600	.498	
COMPUTE NM HYD	C4-D	-	1	.03820	91.98	3.977	1.95201	1.500	3.762	PER IMP= 70.00
ADD HYD	AP-13	1& 6	4	.21260	136.62	12.045	1.06232	1.550	1.004	
ROUTE MCUNGE	AP-13.R	4	6	.21260	135.07	12.034	1.06132	1.550	.993	CCODE = .1
COMPUTE NM HYD	C5-D	-	1	.03950	74.99	3.622	1.71947	1.550	2.966	PER IMP= 57.00
ADD HYD	AP-14	1& 6	7	.25210	210.06	15.656	1.16444	1.550	1.302	
ROUTE MCUNGE	AP-14.R	7	8	.25210	201.88	15.624	1.16204	1.550	1.251	CCODE = .2
COMPUTE NM HYD	C6-D	-	1	.02530	50.91	2.851	2.11301	1.600	3.144	PER IMP= 79.00
ADD HYD	AP-15	1& 8	9	.27740	252.76	18.475	1.24877	1.550	1.424	
ROUTE MCUNGE	AP-15.R	9	10	.27740	249.83	18.426	1.24548	1.600	1.407	CCODE = .2
COMPUTE NM HYD	C2-D	-	1	.00970	23.37	1.010	1.95202	1.500	3.764	PER IMP= 70.00
ADD HYD	AP-15A	10& 1	9	.28710	265.94	19.436	1.26935	1.600	1.447	
ROUTE MCUNGE	AP-15A.R	9	10	.28710	261.63	19.390	1.26634	1.600	1.424	CCODE = .2
COMPUTE NM HYD	C7-D	-	1	.00560	10.61	.583	1.95201	1.600	2.960	PER IMP= 70.00
ADD HYD	AP-16	1&10	30	.29270	272.24	19.973	1.27945	1.600	1.453	
ADD HYD	PART_AP-16A	3&30	21	.49000	555.45	42.044	1.60883	1.600	1.771	
COMPUTE NM HYD	CRDP-1	-	30	.00466	4.04	.115	.46298	1.500	1.355	PER IMP= .00
ADD HYD	AP-16A	21&30	30	.49466	558.71	42.159	1.59803	1.600	1.765	
ROUTE RESERVOIR	AP-17	30	33	.49466	95.97	41.839	1.58590	2.400	.303	AC-FT= 20.309
ROUTE MCUNGE	AP-17.R	33	12	.49466	95.98	41.835	1.58575	2.400	.303	CCODE = .2
COMPUTE NM HYD	D1-D&AP-18	-	1	.03270	39.52	2.780	1.59426	1.700	1.889	PER IMP= 50.00
ADD HYD	PART_AP-19	1&12	40	.52736	114.56	44.616	1.58628	1.850	.339	
COMPUTE NM HYD	D3-D&AP-22	-	1	.02640	62.67	3.252	2.30977	1.550	3.709	PER IMP= 90.00
ADD HYD	AP-19	1&40	34	.55376	143.47	47.868	1.62077	1.700	.405	
ROUTE MCUNGE	AP-19.R	34	41	.55376	143.43	47.852	1.62026	1.750	.405	CCODE = .2
COMPUTE NM HYD	D2-D&AP-20	-	42	.02950	34.94	2.508	1.59426	1.750	1.850	PER IMP= 50.00
ADD HYD	AP-21	41&42	43	.58326	178.37	50.361	1.61894	1.750	.478	
ROUTE MCUNGE	AP-21.R	43	44	.58326	178.36	50.352	1.61867	1.750	.478	CCODE = .2
COMPUTE NM HYD	I40D-3&AP-23	-	45	.00897	16.17	.842	1.75941	1.550	2.816	PER IMP= 64.00
ROUTE MCUNGE	AP-23.R	45	46	.00897	16.15	.842	1.76007	1.600	2.814	CCODE = .2
COMPUTE NM HYD	D4-D	-	47	.01500	36.12	1.562	1.95201	1.500	3.763	PER IMP= 70.00
ADD HYD	AP-24	47&46	48	.02397	45.38	2.404	1.88015	1.550	2.958	
ROUTE MCUNGE	AP-24.R	48	49	.02397	43.82	2.391	1.87044	1.650	2.857	CCODE = .1
COMPUTE NM HYD	D5-D	-	50	.04230	94.42	4.081	1.80891	1.500	3.488	PER IMP= 62.00
ADD HYD	AP-25	50&49	51	.06627	120.60	6.472	1.83116	1.550	2.844	
ROUTE MCUNGE	AP-25.R	51	52	.06627	113.10	6.427	1.81843	1.600	2.667	CCODE = .2
COMPUTE NM HYD	D6-D	-	53	.02330	45.70	2.426	1.95201	1.550	3.065	PER IMP= 70.00
ADD HYD	AP-26	53&52	54	.08957	157.69	8.853	1.85317	1.550	2.751	
ADD HYD	AP-27	44&54	56	.67283	315.23	59.205	1.64988	1.650	.732	
ROUTE MCUNGE	AP-27.R	56	58	.67283	310.86	59.167	1.64884	1.650	.722	CCODE = .2
COMPUTE NM HYD	E1-D&AP-28	-	94	.03430	61.53	4.225	2.30977	1.650	2.803	PER IMP= 90.00
ROUTE MCUNGE	AP-28.R	94	95	.03430	60.48	4.212	2.30250	1.700	2.755	CCODE = .2
ADD HYD	PART_AP-31	95&58	96	.70713	368.75	63.379	1.68054	1.650	.815	
COMPUTE NM HYD	I40D-4&AP-29	-	59	.01360	20.03	1.276	1.75941	1.650	2.301	PER IMP= 64.00
ROUTE MCUNGE	AP-29.R	59	60	.01360	18.89	1.269	1.74918	1.850	2.170	CCODE = .1
COMPUTE NM HYD	E2-D	-	61	.05010	119.12	5.933	2.22033	1.500	3.715	PER IMP= 85.00
ADD HYD	AP-30	61&60	62	.06370	119.39	7.201	2.11973	1.550	2.928	

□

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 2 NOTATION
ADD HYD	AP-31	96&62	97	.77083	456.46	70.581	1.71684	1.650	.925	
ROUTE MCUNGE	AP-31.R	97	67	.77083	449.76	70.501	1.71490	1.650	.912	CCODE = .2
COMPUTE NM HYD	F1-D&AP-32	-	68	.03155	76.14	3.887	2.30978	1.550	3.771	PER IMP= 90.00
ADD HYD	AP-33	68&67	69	.80238	503.83	74.388	1.73829	1.650	.981	
ROUTE MCUNGE	AP-33.R	69	70	.80238	496.65	74.308	1.73643	1.650	.967	CCODE = .2
COMPUTE NM HYD	I40D-5&AP-34	-	74	.01470	19.85	1.379	1.75941	1.700	2.110	PER IMP= 64.00

ADD HYD	AP-35 70&74	99	.	.81708	516.28	75.687	1.73684	1.650	.987
FINISH									
□(s0p10h4099T□&16D									

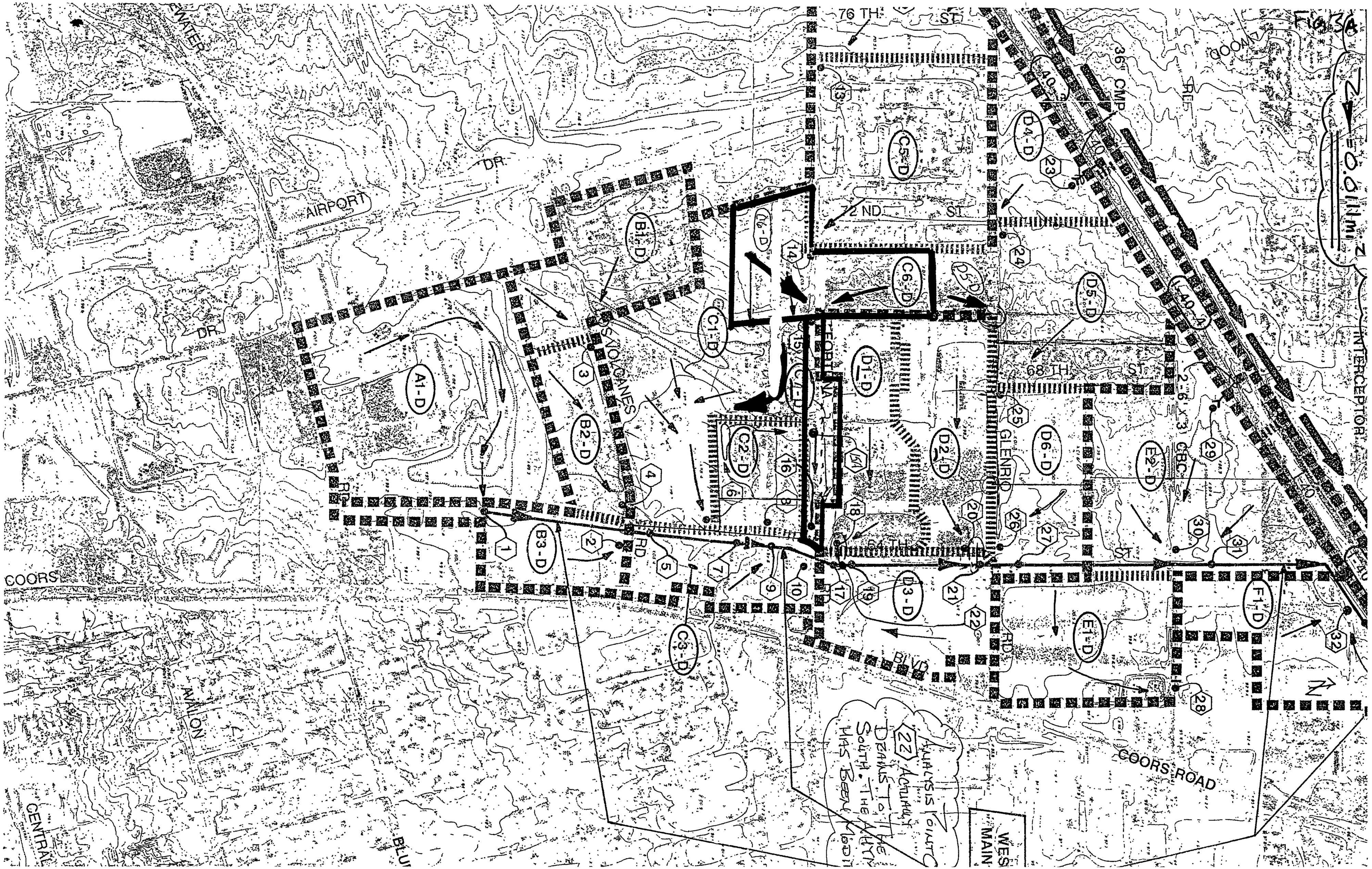
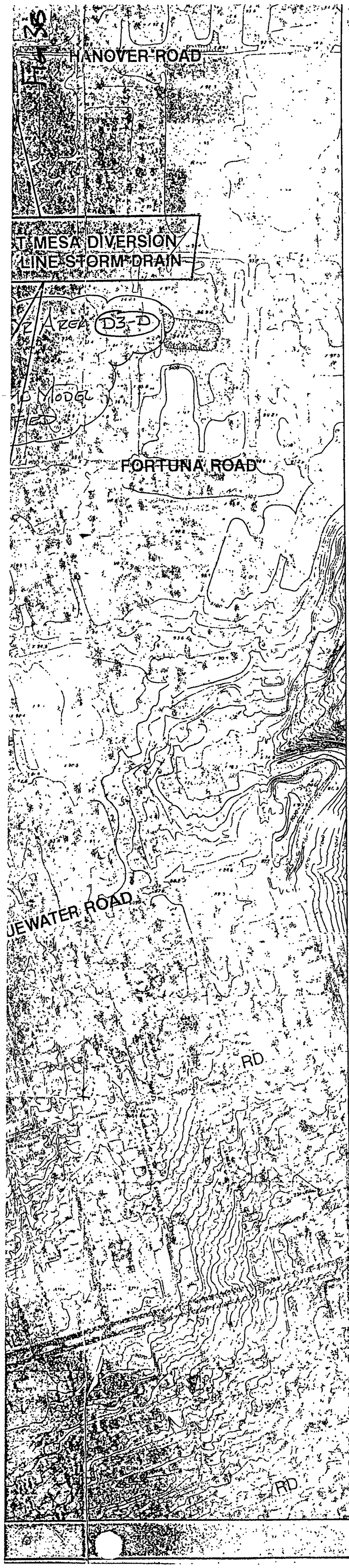


Fig 3A
N
= 0.01 IN MI
76 TH ST
72 ND ST
68 TH ST
64 TH ST
AIRPORT
DR
SAVIO LANES
FORT NA
GLENRIO
BLVD
COORS
COORS ROAD
AVALON
CENTRAL
BLU
INTERCEPTOR
36" CMP
2-6' x 3'
CBC
A1-D
B1-D
B2-D
B3-D
C1-D
C2-D
C3-D
C5-D
C6-D
D1-D
D2-D
D3-D
D4-D
D5-D
D6-D
E1-D
E2-D
F1-D
ANALYSIS POINT 22 ACTUALLY DRAINS TO THE SOUTH. THE ANALYSIS HAS BEEN MODIFIED
WEST MAIN



SUMMARY OF PEAK DISCHARGES AND PEAK VOLUMES

ALTERNATIVE 1A

DEVELOPED CONDITIONS

(ALL FLOWS INCLUDE A 2.5% BULKING FACTOR)

ANALYSIS POINT	Q(10) (6hr.) (cfs)	V(10) (24hr.) (ac.ft.)	Q(100) (6hr.) (cfs)	V(100) (24hr.) (ac.ft.)
1	55	4.3	88	7.1
2	27	1.4	42	2.3
3	48	2.0	76	3.2
4	60	3.2	94	5.2
5	107	8.9	173	14.5
6	57	3.1	93	5.1
7	162	12.0	261	19.6
8	26	1.1	43	1.8
9	175	13.1	282	21.4
10	19	1.2	30	1.9
11	2	2.1	5	4.6
12	27	3.2	62	7.0
13	75	5.5	141	10.8
14	118	7.6	215	14.3
15	121	7.8	220	15.0
16	137	8.9	241	16.8
17	327	23.1	547	40.0
18	23	1.5	40	2.7
19	346	24.7	577	42.6
20	20	1.4	35	2.4
21	360	26.0	595	44.9
22	31	2.0	49	3.1
23	10	0.5	16	0.8
24	28	1.4	47	2.3
25	64	3.6	128	6.1
26	90	5.0	161	8.3
27	472	33.0	781	56.3
28	40	2.6	62	4.1
29	12	0.7	20	1.2
30	79	4.3	124	7.0
31	559	39.7	903	67.0
32	50	2.3	78	3.8
33	583	42.0	933	70.5
34	12	0.8	20	1.3
35	589	43.0	940	71.6

DRAFT COPY

0 250 500 1000

SCALE: 1"=500'

N

Smith Engineering Company

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
HYDROLOGY DIVISION

WEST MESA DIVERSION PROJECT
DRAINAGE ANALYSIS

DEVELOPED CONDITIONS DRAINAGE AREA MAP

PROJECT NO.	DRAWN BY	CHECKED BY	DATE	MAP NO.
538	RFH	DLA	1-97	3

CITY OF ALBUQUERQUE

March 28, 2006

John Tellez, P.E.
Wilson & Company
2600 The American Rd. SE, Suite 100
Rio Rancho, NM 87124

Re: West Mesa High School Drainage Improvements, 6701 Fortuna Rd NW, Grading and Drainage Plan

Engineer's Stamp dated 12-19-05 (J10-D5)

Dear Mr. Tellez,

Based upon the information provided in your submittal received 3-08-06, the above referenced plan cannot be approved for Paving Permit or Grading Permit until the following comments are addressed:

1. Our records indicate no curb and gutter along Glenrio Road, 64th Street, or Fortuna Road. Therefore, half of each of these streets drains to the project site. Address this and any other offsite flow on your plan. Please revise your basin map.
2. Provide calculations to determine the appropriate pipe size to accept the proposed flow.
3. Label all streets.
4. Please be aware that a separate work order will be required for the connection to the storm drain within 64th Street.

If you have any questions, you can contact me at 924-3981.

Sincerely,

Kristal D. Metro, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: File

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

CITY OF ALBUQUERQUE

THREE HUNDRED YEARS 1706 * 2006
ALBUQUERQUE
Making History

January 4, 2006

John A. Tellez, P.E.
Wilson & Company
2600 The American Rd. SE Suite 100
Rio Rancho, NM 87124

Re: West Mesa HS Drainage Improvements
Grading and Drainage Plan
Engineer's Stamp dated 12-19-05 (J10-D5)

Dear Mr. Tellez,

Based upon the information provided in your submittal received 12-20-05, the above referenced plan cannot be approved for Grading Permit until the following comments are addressed:

1. Please address all streets surrounding West Mesa HS. How and where are these streets draining? Do any inlets exist in these streets, etc.?

If you have any questions, you can contact me at 924-3986.

Sincerely,

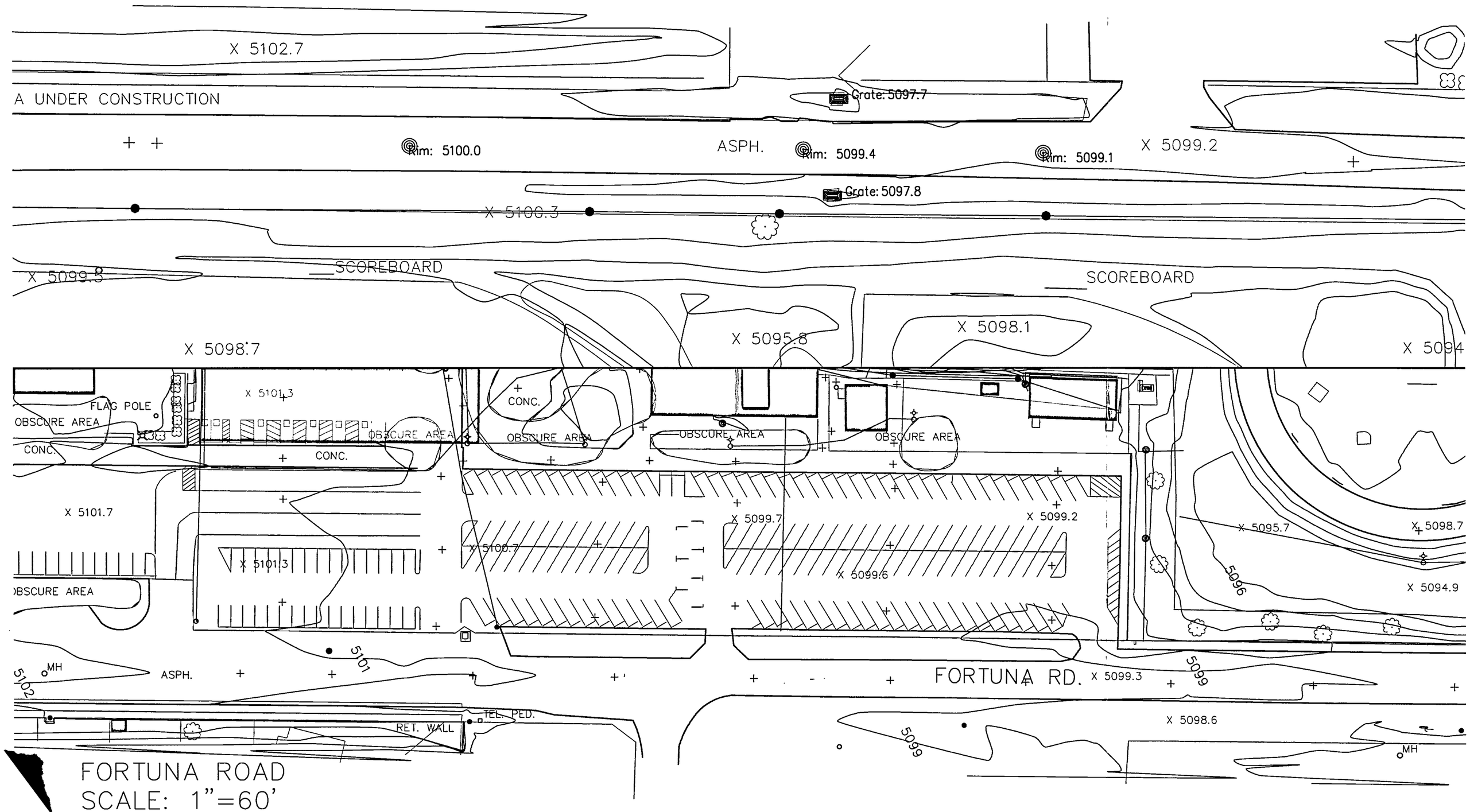
Bradley L. Bingham, PE
Principal Engineer, Planning Dept.
Development and Building Services

C: file

P.O. Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

GLENRIO ROAD
SCALE: 1"=40'

Used to illustrate the existing swales along the property



FORTUNA ROAD
SCALE: 1"=60'

CITY OF ALBUQUERQUE

March 25, 2010

Jennifer M. Flor, P.E.
Wilson & Company, Inc.
2600 The American Road SE, Suite 100
Rio Rancho, NM 87124

Re: West Mesa High School Parking Lot Grading and Drainage Plan

Engineer's Stamp dated 3-3-10 (J10/D005)

Dear Ms. Flor,

Based upon the information provided in your submittal received 3-5-10, the above referenced plan cannot be approved for Grading Permit and Paving Permit until the following comments are addressed:

- Provide inverts for the connections to the existing storm drain.
- Provide flow line elevations in Fortuna at the drive entrances.
- Provide existing elevation data (contours or spots).
- It appears the proposed median curb on the west end of the project may block flows from the west. Provide elevation data west of this curb and a top of curb elevation.
- Keyed Note 14 proposes to build a Type "C" inlet in median curb. A typical COA Type "C" inlet is built into an 8' curb, while median curb is 6 ".
- What does a raised crosswalk culvert look like? Sheet C-502 was not provided.

The AHYMO and StormCad outputs do not need to be resubmitted.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: file

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

CITY OF ALBUQUERQUE

March 8, 2010

Jennifer Flor, P.E.
Wilson & Company
4900 Lang Ave. NE
Albuquerque, NM 87109

Re: West Mesa High School Parking Lot, 6701 Fortuna Road NW,
Traffic Circulation Layout
Engineer's Stamp dated 03-03-10 (J10-D005)

Dear Ms. Flor,

Based upon the information provided in your submittal received 03-05-10, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

1. Call out all radii; for passenger vehicles, the minimum end island radius is 15 feet.
2. Parallel parking spaces have a minimum length of 22 feet for interior spaces. See the *Development Process Manual*, Figure 23.7.1.
3. Call out the width of all crosswalks.
4. The handicapped spaces must include an 8-foot wide van access aisle; all other aisles should be 5 feet in width.
5. Define width of the all sidewalk, existing and proposed.
6. Clearly define the ADA accessible, 6-foot wide pathway from the handicapped parking spaces to the building. Provide details as necessary.
7. Provide a copy of all details referenced within the plan.

If you have any questions, you can contact me at 924-3991.

Sincerely,

Kristal D. Metro, P.E.
Traffic Engineer, Planning Dept.
Development and Building Services

C: File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

CITY OF ALBUQUERQUE

April 23, 2010

Jennifer Flor, P.E.
Wilson & Company
4900 Lang Ave. NE
Albuquerque, NM 87109

Re: West Mesa High School Parking Lot, 6701 Fortuna Road NW,
Traffic Circulation Layout
Engineer's Stamp dated 04-13-10 (J10-D005)

Dear Ms. Flor,

Based upon the information provided in your submittal received 04-14-10, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

1. The handicapped parking spaces must have an ADA accessible, 6-foot wide pathway from the parking spaces to the building.
2. A 24-foot wide drive aisle must be provided for all two-directional traffic.

If you have any questions, you can contact me at 924-3991.

Sincerely,

Kristal D. Metro, P.E.
Traffic Engineer, Planning Dept.
Development and Building Services

C: File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

CITY OF ALBUQUERQUE

December 10, 2009

Jennifer Flor, PE
Wilson & Company
2600 American Rd, SE, Ste. 100
Rio Rancho, NM 87124

Re: West Mesa HS Drainage Master Plan
Engineer Stamp 12-7-09 (J10/D5)

Dear Ms. Flor,

Based upon information provided in your submittal dated 12-7-09, the above referenced plan cannot be approved as a master plan until the following comments are addressed.

- Please provide calculations for all proposed 18" pipe. I cannot find the proposed 24" storm drain.
- There should be no Land Treatment 'A' analyzed since this site is developed. Sports areas should be a 'B' and the area with bare dirt should be a 'C' since it has probably been compacted by human use over the years.
- I do not find evidence of the 4 foot deep ditch routing basin 102 to the inlet in basin 108 nor the 3 foot ditch routing basin 104 thru basin 105.
- In the AHYMO run, you have basin 104 routed thru 105 in a 3 foot channel <u>twice</u> yet you propose an 18" pipe? Please explain.
- Does basin 106 go through basin 109 or basin 108? The AHYMO run says 109 but the basin map doesn't agree.
- Please label all storm drain, inlets, etc., and provide all important information regarding slope, inverts or other design or capacity factors. Are any of these items needing maintenance or upsizing?

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Principal Engineer, Planning Dept.
Development and Building Services

C: file

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) - - VERSION: 1997.02c RUN DATE (MON/DAY/YR) =01/04/2010
INPUT FILE = M:\IDS\09932F~1\AE_DATA\CALCS\AHYMO\WMHS20~1.DAT USER NO.= AHYMO-C-9803c01UNMLIB-AH

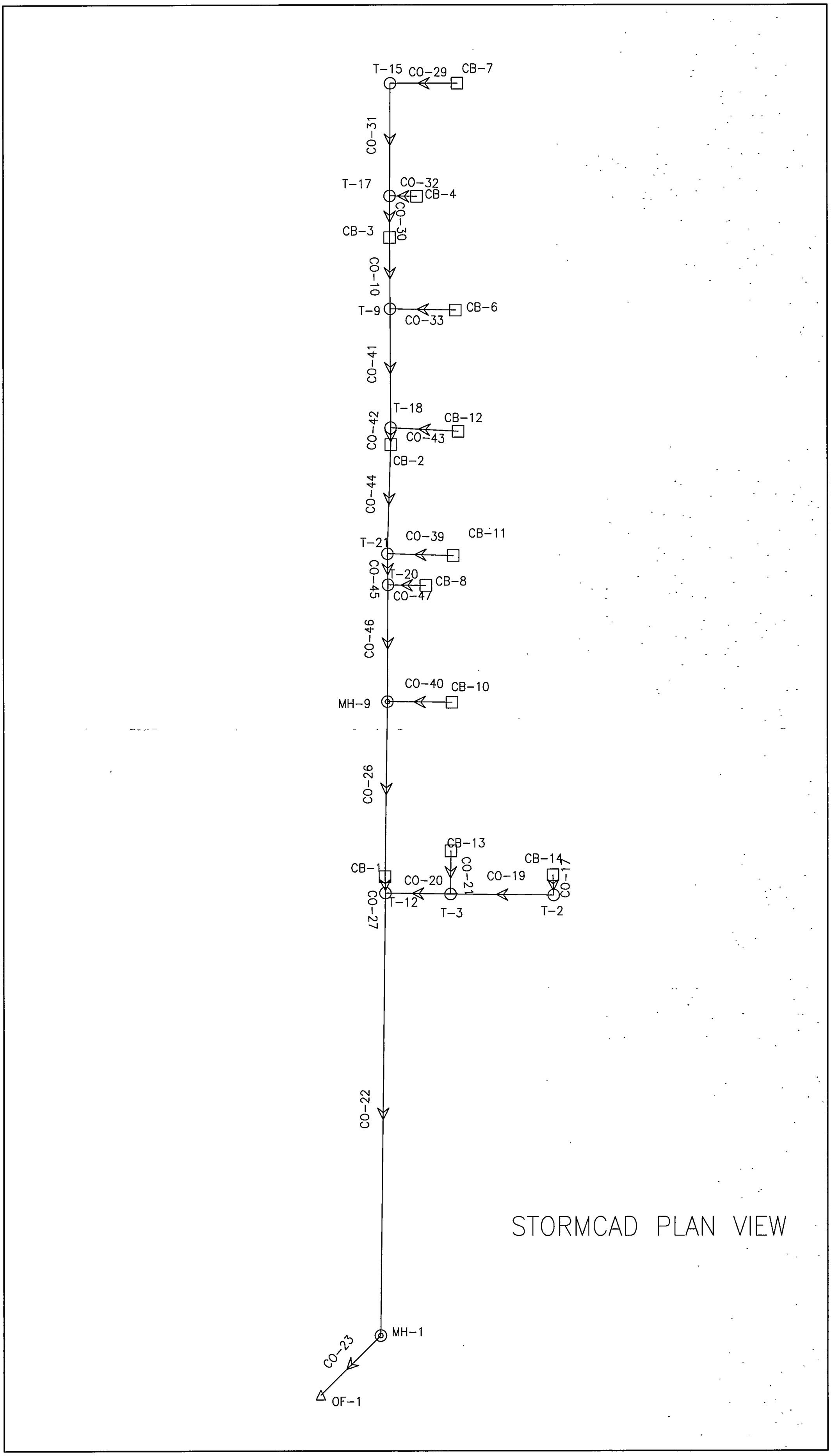
COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
*S EXISTING & PROPOSED CONDITION MODELS FOR WMHS DRAINAGE IMPROVEMENTS										
*S BASINS AREAS DO NOT CHANGE FROM THE EXISTING TO PROPOSED CONDITION										
*S PONDS ARE NAMED FOR THE BASINS IN WHICH THEY ARE LOCATED										
START										TIME= .00
LOCATION		DEFAULT								
*S**********										
*S 100 YEAR 24HR STORM										
*S 100 YEAR 6HR STORM										
RAINFALL TYPE= 1										RAIN6= 2.200
*S										
*S BASINS CONTRIBUTING TO NORTH CONNECTION OF 84" SD IN 64TH										
COMPUTE NM HYD	101.00	-	1	.00110	3.03	.115	1.96760	1.500	4.307	PER IMP= 100.00
COMPUTE NM HYD	102.00	-	2	.00900	24.34	.921	1.91887	1.500	4.226	PER IMP= 95.00
ADD HYD	102.10	1& 2	3	.01010	27.38	1.036	1.92413	1.500	4.235	
COMPUTE NM HYD	106.00	-	4	.00670	17.32	.644	1.80301	1.500	4.040	PER IMP= 85.00
ADD HYD	106.10	3& 4	5	.01680	44.70	1.681	1.87581	1.500	4.157	
COMPUTE NM HYD	109.00	-	6	.00580	10.85	.344	1.11129	1.500	2.922	PER IMP= 25.00
ADD HYD	109.10	6& 5	7	.02260	55.55	2.024	1.67959	1.500	3.840	
COMPUTE NM HYD	108.00	-	8	.00350	5.82	.181	.96892	1.500	2.600	PER IMP= 20.00
ADD HYD	108.10	8& 7	9	.02610	61.37	2.205	1.58428	1.500	3.674	
COMPUTE NM HYD	111.00	-	10	.00340	5.55	.160	.88084	1.500	2.552	PER IMP= 5.00
ADD HYD	NORTH.PIPE	10& 9	11	.02950	66.92	2.365	1.50320	1.500	3.545	
*S BASINS CONTRIBUTING TO POND 107										
COMPUTE NM HYD	107.00	-	12	.00400	10.35	.385	1.80301	1.500	4.042	PER IMP= 85.00
*S BASINS CONTRIBUTING TO SOUTH CONNECTION TO 84" SD IN 64TH										
COMPUTE NM HYD	103.00	-	13	.00780	15.22	.764	1.83748	1.600	3.049	PER IMP= 90.00
COMPUTE NM HYD	104.00	-	14	.00150	3.40	.117	1.46081	1.500	3.543	PER IMP= 50.00
ADD HYD	103.10	13&14	15	.00930	17.59	.881	1.77664	1.600	2.955	
COMPUTE NM HYD	105.00	-	16	.00180	4.71	.175	1.82142	1.500	4.092	PER IMP= 85.00
ADD HYD	103.20	15&16	17	.01110	21.08	1.056	1.78387	1.550	2.968	
COMPUTE NM HYD	110.00	-	18	.00500	8.94	.263	.98439	1.500	2.793	PER IMP= 5.00
ADD HYD	110.10	18&17	19	.01610	29.25	1.319	1.53557	1.550	2.839	
COMPUTE NM HYD	112.00	-	20	.00200	3.18	.099	.92661	1.500	2.481	PER IMP= 20.00
ADD HYD	112.10	19&20	21	.01810	32.17	1.417	1.46826	1.550	2.777	
COMPUTE NM HYD	113.00	-	22	.00230	3.82	.122	.99167	1.500	2.595	PER IMP= 25.00
ADD HYD	SOUTH.PIPE	21&22	23	.02040	35.67	1.539	1.41452	1.550	2.732	
*S BASINS CONTRIBUTING TO FORTUNA ROAD RUNOFF										
COMPUTE NM HYD	100.00	-	24	.00200	5.42	.205	1.91887	1.500	4.235	PER IMP= 95.00
FINISH										

```
* WMHS.DAT
*S EXISTING & PROPOSED CONDITION MODELS FOR WMHS DRAINAGE IMPROVEMENTS
*S BASINS AREAS DO NOT CHANGE FROM THE EXISTING TO PROPOSED CONDITION
*S PONDS ARE NAMED FOR THE BASINS IN WHICH THEY ARE LOCATED
START                   TIME=0.0 PUNCH CODE=0 PRINT CODE=0
LOCATION                BERNALILLO COUNTY
*
* RAINFALL FROM NOAA COA DEVELOPMENT PROCESS MANUAL
*
*S*********************************************************************
*S 100 YEAR 24HR STORM
*RAINFALL        TYPE=2 ONE DAY RAINFALL, NOAA ATLAS TWO
                 QUARTER=0.00 IN
                 HOUR= 1.87 IN
                 SIX HR= 2.20 IN
                 DAY= 2.66 IN DT=0.05*S 100 YEAR 24HR STORM
*S 100 YEAR 6HR STORM
RAINFALL         TYPE=1 ONE DAY RAINFALL, NOAA ATLAS TWO
                 QUARTER=0.00 IN
                 HOUR= 1.87 IN
                 SIX HR= 2.20 IN
                 DAY= 2.66 IN DT=0.05
* *S 10 YEAR 24HR STORM EXISTING CONDITION
*RAINFALL        TYPE=2 0.0 1.08 1.41 1.78 DT=0.1
*S
*S BASINS CONTRIBUTING TO NORTH CONNECTION OF 84" SD IN 64TH
* **** SUB-BASIN 101 ****
* NW CORNER OF PARKING LOT @ NW CORNER OF SITE
COMPUTE LT TP            LCODE=1 UPLAND/LAG TIME METHOD
                         NK=1 ISLOPE=0
                         LENGTH=381 FT SLOPE=0.003 K=2.0
                         KN=0.021 CENTROID DIST=153 FT
COMPUTE NM HYD           ID=1 HYD NO=101 DA=0.0011 SQ MI
                         PER A=0 PER B=0 PER C=0 PER D=100
                         TP=0.0 MASSRAIN=-1
PRINT HYD                ID=1 CODE=1
*
* **** SUB-BASIN 102 ****
* PARKING LOT @ NW CORNER OF SITE
COMPUTE LT TP            LCODE=1 UPLAND/LAG TIME METHOD
                         NK=1 ISLOPE=0
                         LENGTH=955 FT SLOPE=0.005 K=2.0
                         KN=0.021 CENTROID DIST=377 FT
COMPUTE NM HYD           ID=2 HYD NO=102 DA=0.009 SQ MI
                         PER A=0 PER B=0 PER C=5 PER D=95
                         TP=0.0 MASSRAIN=-1
PRINT HYD                ID=2 CODE=1
*
* ADD 101 TO 102 TO GET 102.1
ADD HYD                  ID=3 HYD NO=102.1 ID I=1 ID II=2
PRINT HYD                ID=3 CODE=1
*
* **** SUB-BASIN 106 ****
* TENNIS & BASKETBALL COURTS
COMPUTE LT TP            LCODE=1 UPLAND/LAG TIME METHOD
                         NK=1 ISLOPE=0
                         LENGTH=863 FT SLOPE=0.005 K=2.0
                         KN=0.021 CENTROID DIST=492 FT
COMPUTE NM HYD           ID=4 HYD NO=106 DA=0.0067 SQ MI
                         PER A=0 PER B=5 PER C=10 PER D=85
                         TP=0.0 MASSRAIN=-1
PRINT HYD                ID=4 CODE=1
*
* ADD 106 TO 102.1 TO GET 106.1
ADD HYD                  ID=5 HYD NO=106.1 ID I=3 ID II=4
PRINT HYD                ID=5 CODE=1
*
* **** SUB-BASIN 109 ****
* NORTH HALF OF SOCCER FIELD
COMPUTE LT TP            LCODE=1 UPLAND/LAG TIME METHOD
                         NK=1 ISLOPE=0
                         LENGTH=689 FT SLOPE=0.006 K=2.0
                         KN=0.021 CENTROID DIST=321 FT
COMPUTE NM HYD           ID=6 HYD NO=109 DA=0.0058 SQ MI
                         PER A=0 PER B=35 PER C=40 PER D=25
                         TP=0.0 MASSRAIN=-1
PRINT HYD                ID=6 CODE=1
*
* ADD 109 TO 106.1 TO GET 109.1
ADD HYD                  ID=7 HYD NO=109.1 ID I=6 ID II=5
PRINT HYD                ID=7 CODE=1
*
* **** SUB-BASIN 108 ****
* WEST BASEBALL FIELD
```

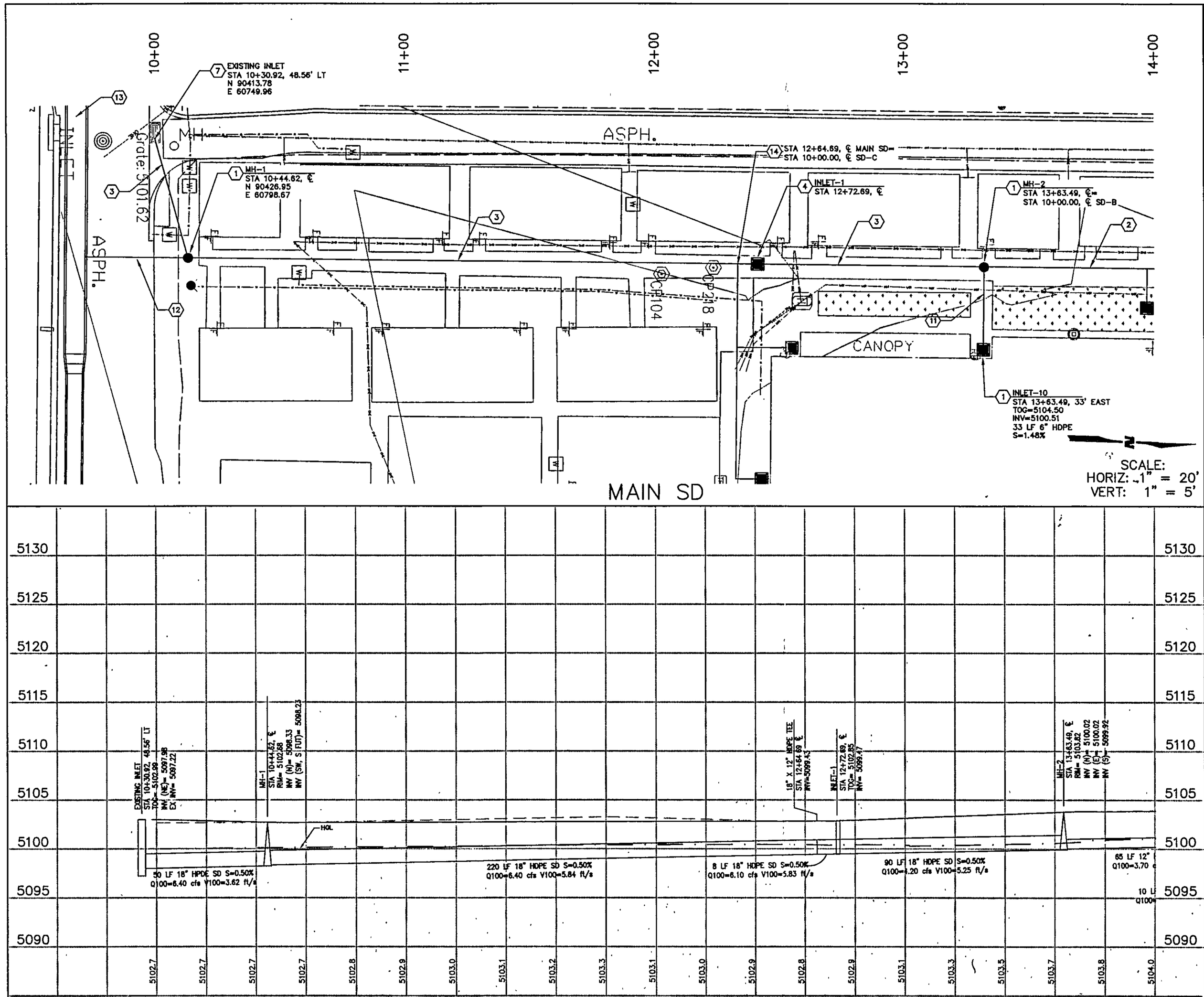
```
COMPUTE LT TP          LCODE=1 UPLAND/LAG TIME METHOD
                       NK=1 ISLOPE=0
                       LENGTH=423 FT SLOPE=0.004 K=2.0
                       KN=0.021 CENTROID DIST=220 FT
COMPUTE NM HYD         ID=8 HYD NO=108 DA=0.0035 SQ MI
                       PER A=0 PER B=65 PER C=15 PER D=20
                       TP=0.0 MASSRAIN=-1
PRINT HYD              ID=8 CODE=1
*
* ADD 108 TO 109.1 TO GET 108.1
ADD HYD                ID=9 HYD NO=108.1 ID I=8 ID II=7
PRINT HYD              ID=9 CODE=1
*
* **** SUB-BASIN 111 ****
* EAST BASEBALL FIELD
COMPUTE LT TP          LCODE=1 UPLAND/LAG TIME METHOD
                       NK=1 ISLOPE=0
                       LENGTH=382 FT SLOPE=0.012 K=2.0
                       KN=0.021 CENTROID DIST=209 FT
COMPUTE NM HYD         ID=10 HYD NO=111 DA=.0034 SQ MI
                       PER A=0 PER B=45 PER C=50 PER D=5
                       TP=0.0 MASSRAIN=-1
PRINT HYD              ID=10 CODE=1
*
* ADD 111 TO 108.1 TO GET NORTH.PIPE
ADD HYD                ID=11 HYD NO=NORTH.PIPE ID I=10 ID II=9
PRINT HYD              ID=11 CODE=1
*
*
*S BASINS CONTRIBUTING TO POND 107
* **** SUB-BASIN 107 ****
* MAIN BLDG
COMPUTE LT TP          LCODE=1 UPLAND/LAG TIME METHOD
                       NK=1 ISLOPE=0
                       LENGTH=373 FT SLOPE=0.01 K=2.0
                       KN=0.021 CENTROID DIST=237 FT
COMPUTE NM HYD         ID=12 HYD NO=107 DA=.004 SQ MI
                       PER A=0 PER B=5 PER C=10 PER D=85
                       TP=0.0 MASSRAIN=-1
PRINT HYD              ID=12 CODE=1
*
*
*
*
*S BASINS CONTRIBUTING TO SOUTH CONNECTION TO 84" SD IN 64TH
* **** SUB-BASIN 103 ****
* SW CORNER OF SITE
COMPUTE LT TP          LCODE=1 UPLAND/LAG TIME METHOD
                       NK=1 ISLOPE=0
                       LENGTH=1667 FT SLOPE=0.004 K=2.0
                       KN=0.021 CENTROID DIST=337 FT
COMPUTE NM HYD         ID=13 HYD NO=103 DA=0.0078 SQ MI
                       PER A=0 PER B=10 PER C=0 PER D=90
                       TP=0.0 MASSRAIN=-1
PRINT HYD              ID=13 CODE=1
*
* **** SUB-BASIN 104 ****
* COURTYARD AREA
COMPUTE LT TP          LCODE=1 UPLAND/LAG TIME METHOD
                       NK=1 ISLOPE=0
                       LENGTH=282 FT SLOPE=0.007 K=2.0
                       KN=0.021 CENTROID DIST=146 FT
COMPUTE NM HYD         ID=14 HYD NO=104 DA=0.0015 SQ MI
                       PER A=0 PER B=5 PER C=45 PER D=50
                       TP=0.0 MASSRAIN=-1
PRINT HYD              ID=14 CODE=1
*
* ADD 103 TO 104 TO GET 103.1
ADD HYD                ID=15 HYD NO=103.1 ID I=13 ID II=14
PRINT HYD              ID=15 CODE=1
*
* **** SUB-BASIN 105 ****
* FRONT YARD AND PARKING AREA
COMPUTE LT TP          LCODE=1 UPLAND/LAG TIME METHOD
                       NK=1 ISLOPE=0
                       LENGTH=430 FT SLOPE=0.007 K=2.0
                       KN=0.021 CENTROID DIST=220 FT
COMPUTE NM HYD         ID=16 HYD NO=105 DA=0.0018 SQ MI
                       PER A=0 PER B=0 PER C=15 PER D=85
                       TP=0.0 MASSRAIN=-1
PRINT HYD              ID=16 CODE=1
*
* ADD 105 TO 103.1 TO GET 103.2
ADD HYD                ID=17 HYD NO=103.2 ID I=15 ID II=16
```

```
PRINT HYD                ID=17 CODE=1
*
* **** SUB-BASIN 110 ****
* SOUTH HALF OF SOCCER FIELD
COMPUTE LT TP            LCODE=1 UPLAND/LAG TIME METHOD
                         NK=1 ISLOPE=0
                         LENGTH=497 FT SLOPE=0.005 K=2.0
                         KN=0.021 CENTROID DIST=301 FT
COMPUTE NM HYD           ID=18 HYD NO=110 DA=0.005 SQ MI
                         PER A=0 PER B=15 PER C=80 PER D=5
                         TP=0.0 MASSRAIN=-1
PRINT HYD                ID=18 CODE=1
*
* ADD 110 TO 103.2 TO GET 110.1
ADD HYD                  ID=19 HYD NO=110.1 ID I=18 ID II=17
PRINT HYD                ID=19 CODE=1
*
* **** SUB-BASIN 112 ****
* WEST SIDE OF TRACK & FIELD
COMPUTE LT TP            LCODE=1 UPLAND/LAG TIME METHOD
                         NK=1 ISLOPE=0
                         LENGTH=318 FT SLOPE=0.006 K=2.0
                         KN=0.021 CENTROID DIST=266 FT
COMPUTE NM HYD           ID=20 HYD NO=112 DA=0.002 SQ MI
                         PER A=0 PER B=80 PER C=0 PER D=20
                         TP=0.0 MASSRAIN=-1
PRINT HYD                ID=20 CODE=1
*
* ADD 112 TO 110.1 TO GET 112.1
ADD HYD                  ID=21 HYD NO=112.1 ID I=19 ID II=20
PRINT HYD                ID=21 CODE=1
*
* **** SUB-BASIN 113 ****
* EAST SIDE OF TRACK & FIELD
COMPUTE LT TP            LCODE=1 UPLAND/LAG TIME METHOD
                         NK=1 ISLOPE=0
                         LENGTH=315 FT SLOPE=0.006 K=2.0
                         KN=0.021 CENTROID DIST=273 FT
COMPUTE NM HYD           ID=22 HYD NO=113 DA=0.0023 SQ MI
                         PER A=0 PER B=75 PER C=0 PER D=25
                         TP=0.0 MASSRAIN=-1
PRINT HYD                ID=22 CODE=1
*
* ADD 113 TO 112.1 TO GET SOUTH.PIPE
ADD HYD                  ID=23 HYD NO=SOUTH.PIPE ID I=21 ID II=22
PRINT HYD                ID=23 CODE=1
*
*S BASINS CONTRIBUTING TO FORTUNA ROAD RUNOFF
* **** SUB-BASIN 100****
* WEST OF Y-HALL
COMPUTE LT TP            LCODE=1 UPLAND/LAG TIME METHOD
                         NK=1 ISLOPE=0
                         LENGTH=540 FT SLOPE=0.003 K=2.0
                         KN=0.021 CENTROID DIST=269 FT
COMPUTE NM HYD           ID=24 HYD NO=100 DA=0.002 SQ MI
                         PER A=0 PER B=0 PER C=5 PER D=95
                         TP=0.0 MASSRAIN=-1
PRINT HYD                ID=24 CODE=1
*

FINISH
```

Label	Slope (%)	Length (ft)	Diameter (in)	Manning's n	Flow (ft^3/s)	Invert (Upstream) (ft)	Invert (Downstream) (ft)	Cover (Start) (ft)	Cover (Stop) (ft)	Elevation Ground (Start) (ft)	Elevation Ground (Stop) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CO-10	0.49	37	12	0.01	1.3	5101.21	5101.03	1.79	2.06	5104	5104.09	5101.69	5101.61	3.47	2.74
CO-17	2.03	10	6	0.01	0.15	5101.4	5101.19	2.40	2.24	5104.3	5103.93	5101.59	5101.32	2.15	3.61
CO-19	2.01	54	12	0.01	0.15	5101.19	5100.11	1.74	2.3	5103.93	5103.41	5101.35	5100.38	1.88	0.88
CO-20	1.99	34	12	0.01	0.3	5100.11	5099.43	2.30	2.42	5103.41	5102.85	5100.38	5100.42	1.77	0.38
CO-21	2.00	22	12	0.01	0.15	5100.55	5100.11	2.21	2.30	5103.76	5103.41	5100.71	5100.38	1.88	0.86
CO-22	0.50	220	18	0.01	6.4	5099.43	5098.33	1.92	2.85	5102.85	5102.68	5100.41	5100.13	5.24	3.62
CO-23	0.69	50	18	0.01	6.4	5098.33	5097.98	2.85	3.51	5102.68	5102.99	5100.11	5100.00	3.62	3.62
CO-26	0.49	90	18	0.01	4.1	5099.92	5099.47	2.40	1.88	5103.82	5102.85	5100.70	5100.44	4.45	3.39
CO-27	0.51	8	18	0.01	6.1	5099.47	5099.43	1.88	1.92	5102.85	5102.85	5100.43	5100.43	5.14	4.89
CO-29	3.27	33	6	0.01	0.5	5102.70	5101.61	1.36	2.28	5104.56	5104.39	5103.06	5101.82	3.30	6.26
CO-30	0.50	20	12	0.01	0.8	5101.31	5101.21	1.73	1.79	5104.04	5104.00	5101.68	5101.70	2.99	2.10
CO-31	0.49	62	12	0.01	0.5	5101.61	5101.31	1.78	1.73	5104.39	5104.04	5101.90	5101.69	2.61	1.83
CO-32	0.98	16	6	0.01	0.3	5101.47	5101.31	2.03	2.23	5104.00	5104.04	5101.75	5101.70	2.69	1.83
CO-33	1.53	33	6	0.01	0.5	5101.53	5101.03	2.49	2.56	5104.52	5104.09	5101.89	5101.62	3.30	2.55
CO-39	2.98	33	6	0.01	0.4	5101.38	5100.4	2.60	3.05	5104.48	5103.96	5101.70	5101.38	2.99	2.04
CO-40	1.48	33	6	0.01	0.4	5100.51	5100.02	3.49	3.30	5104.50	5103.82	5100.83	5100.71	2.99	2.04
CO-41	0.50	76	12	0.01	1.8	5101.03	5100.65	2.06	2.40	5104.09	5104.05	5101.60	5101.56	3.88	2.39
CO-42	0.44	5	12	0.01	2.2	5100.65	5100.63	2.40	2.42	5104.05	5104.05	5101.55	5101.55	2.94	2.91
CO-43	3.73	33	6	0.01	0.4	5101.87	5100.65	2.06	2.90	5104.43	5104.05	5102.19	5101.57	2.99	2.04
CO-44	0.50	45	12	0.01	3.1	5100.63	5100.40	2.42	2.55	5104.05	5103.96	5101.54	5101.38	4.14	3.97
CO-45	0.54	10	12	0.01	3.5	5100.40	5100.35	2.55	2.58	5103.96	5103.93	5101.36	5101.31	4.52	4.51
CO-46	0.51	65	12	0.01	3.7	5100.35	5100.02	2.58	2.80	5103.93	5103.82	5101.29	5100.84	4.82	5.37
CO-47	0.99	16	6	0.01	0.2	5100.51	5100.35	2.99	3.08	5104.00	5103.93	5101.31	5101.30	1.02	1.02



STORMCAD PLAN VIEW



SHEET KEYNOTES

1. INSTALL 4' DIA TYPE "C" MANHOLE. SEE DETAIL D5/C-501.
2. INSTALL 12" HDPE STORM DRAIN.
3. INSTALL 18" HDPE STORM DRAIN.
4. INSTALL 12" INLINE DRAIN BASIN. SEE DETAIL A1/C-501.
5. INSTALL 4" HDPE STORM DRAIN.
6. NOT USED
7. CONNECT TO EXISTING INLET.
8. INSTALL 6" X 12" HDPE REDUCER.
9. INSTALL 12" 90° HDPE BEND.
10. INSTALL 6" X 12" HDPE TEE.
11. INSTALL 6" HDPE STORM DRAIN.
12. FUTURE 18" CONNECTION TO FORTUNA ROAD STORM DRAIN.
13. FUTURE 58" X 9" RCEHP.
14. INSTALL 18" X 12" HDPE TEE.
15. INSTALL 18" HDPE TEE.
16. INSTALL OVERFLOW DRAIN. SEE DETAIL D1/C-501.
17. INSTALL 12" HDPE TEE.

RECEIVED
JAN 13 2010
HYDROLOGY SECTION

WILSON & COMPANY
2500 THE AMERICAN RD. SE SUITE 100
RIO RANCHO, NM 87124
PHONE: 505-898-8021
FAX: 505-898-8501
www.wilsonco.com

CONSULTANTS

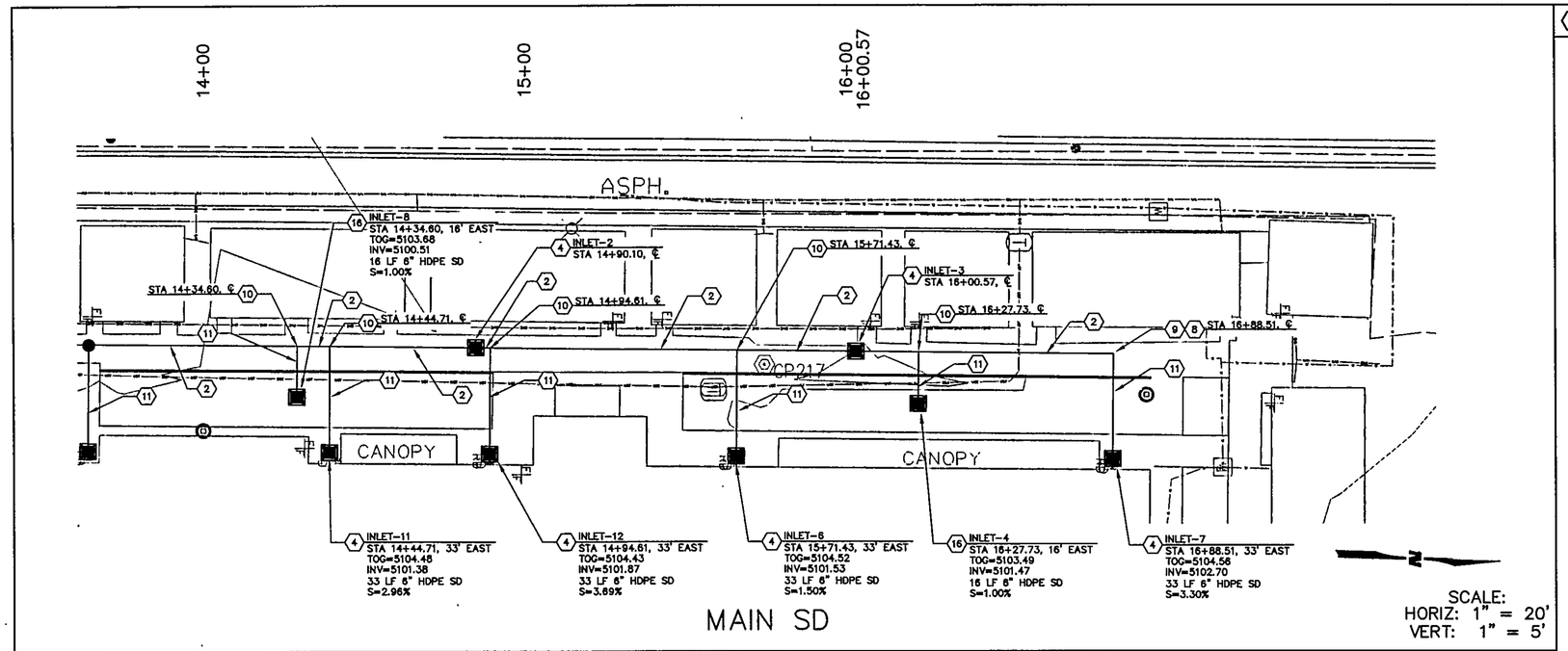
SEAL

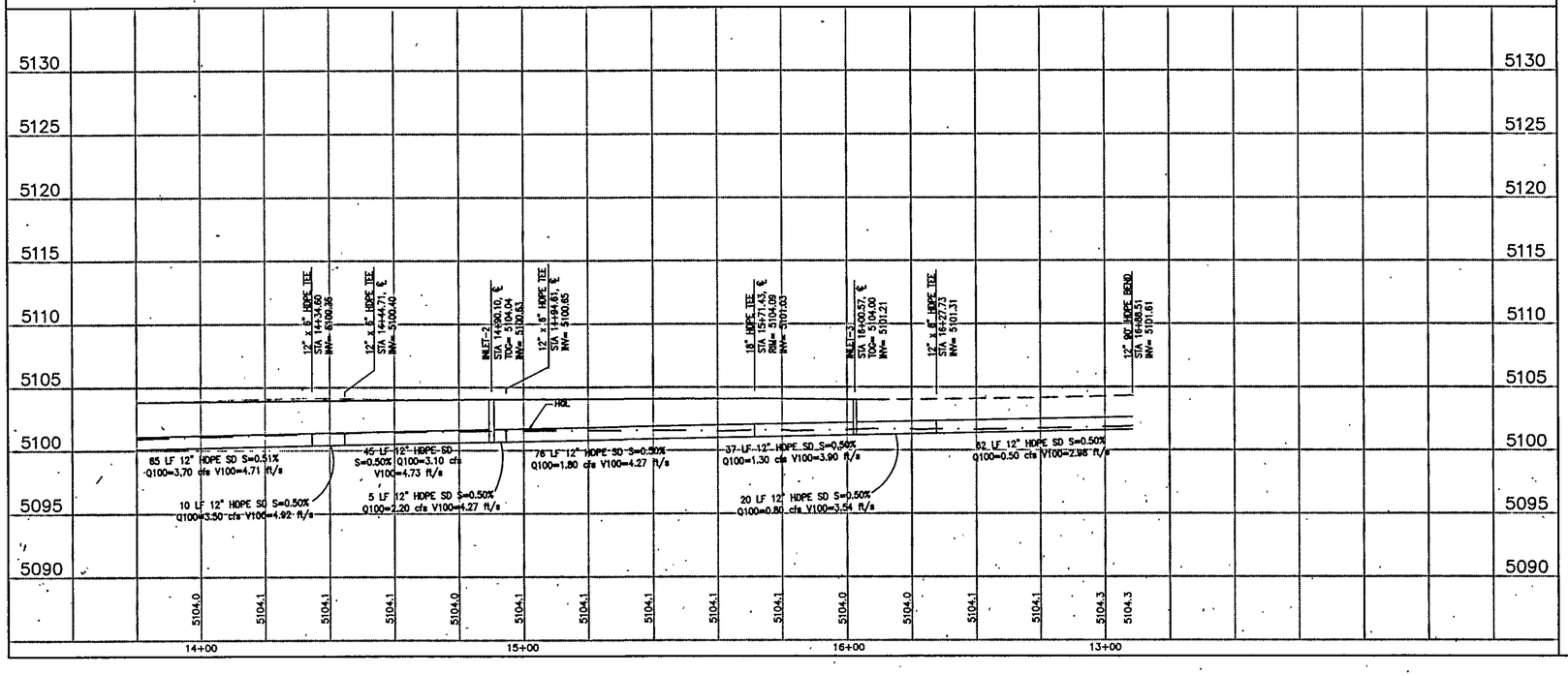
PROJECT NAME
ALBUQUERQUE PUBLIC SCHOOLS
WEST MESA HIGH SCHOOL
STORM DRAIN IMPROVEMENTS
6701 FORTUNA RD NW
ALBUQUERQUE, NM 87121

MARK	DATE	DESCRIPTION

PROJECT NO:	
DESIGNED BY:	JMF
DRAWN BY:	AJM
CHECKED BY:	MJI
DATE:	
SHEET TITLE	PLAN & PROFILE MAIN SD
SHEET NO:	C-401

M:\IDS\09-600-038-00\CADD\SHEETS\08_PNP\96038_PNP01.dwg 12/15/2009 10:00:50 AM MST





SHEET KEYNOTES

1. INSTALL 4' DIA TYPE "C" MANHOLE. SEE DETAIL D5/C-501.
2. INSTALL 12" HDPE STORM DRAIN.
3. INSTALL 18" HDPE STORM DRAIN.
4. INSTALL 12" INLINE DRAIN BASIN. SEE DETAIL A1/C-501.
5. INSTALL 4" HDPE STORM DRAIN.
6. NOT USED
7. CONNECT TO EXISTING INLET.
8. INSTALL 6" X 12" HDPE REDUCER.
9. INSTALL 12" 90° HDPE BEND.
10. INSTALL 6" X 12" HDPE TEE.
11. INSTALL 6" HDPE STORM DRAIN.
12. FUTURE 18" CONNECTION TO FORTUNA ROAD STORM DRAIN.
13. FUTURE 58" X 9" RCEHP.
14. INSTALL 18" X 12" HDPE TEE.
15. INSTALL 18" HDPE TEE.
16. INSTALL OVERFLOW DRAIN. SEE DETAIL D1/C-501.
17. INSTALL 12" HDPE TEE.

WILSON & COMPANY
2600 THE AMERICAN RD. SE SUITE 100
RIO RANCHO, NM 87124
PHONE: 505-898-8021
FAX: 505-898-8501
www.wilsonco.com

CONSULTANTS

SEAL

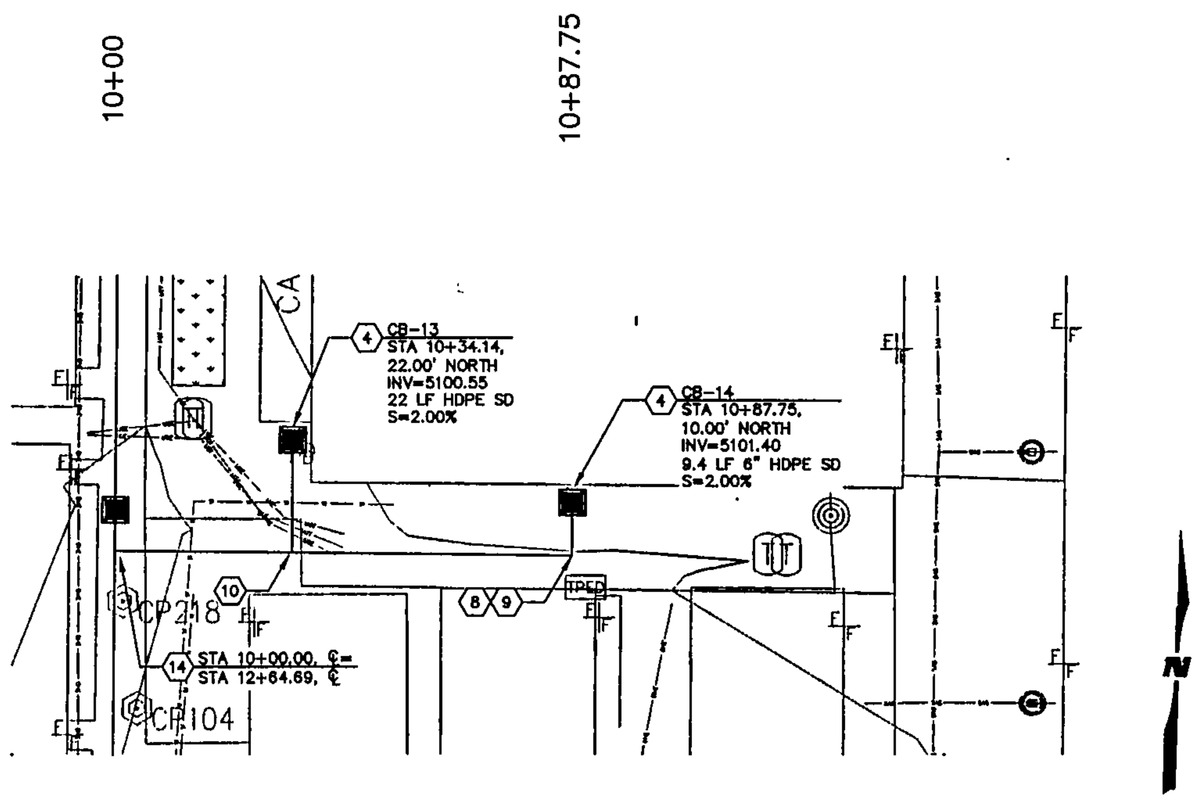
PROJECT NAME
ALBUQUERQUE PUBLIC SCHOOLS
WEST MESA HIGH SCHOOL
STORM DRAIN IMPROVEMENTS
6701 FORTUNA RD NW
ALBUQUERQUE, NM 87121

MARK	DATE	DESCRIPTION

PROJECT NO:	
DESIGNED BY:	JMF
DRAWN BY:	AJM
CHECKED BY:	MJR
DATE:	
SHEET TITLE	PLAN & PROFILE MAIN SD
SHEET NO:	C-402

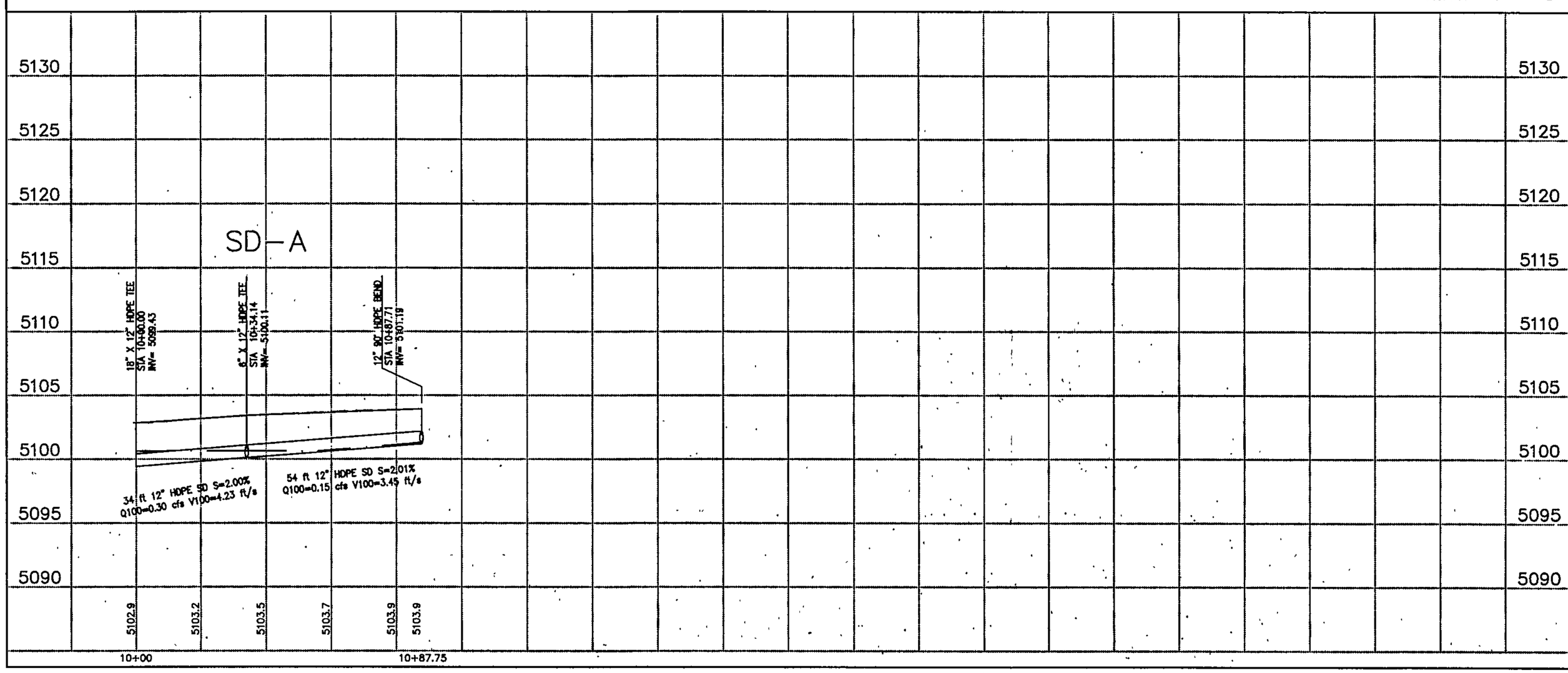
RECEIVED
JAN 13 2010
HYDROLOGY SECTION

M:\IDS\09-600-038-00\CADD\SHEETS\08_PNP\96038_PNP02.dwg 12/15/2009 10:01:25 AM MST



SD-A

SCALE:
HORIZ: 1" = 20'
VERT: 1" = 5'



SHEET KEYNOTES

1. INSTALL 4' DIA TYPE "C" MANHOLE. SEE DETAIL D5/C-501.
2. INSTALL 12" HDPE STORM DRAIN.
3. INSTALL 18" HDPE STORM DRAIN.
4. INSTALL 12" INLINE DRAIN BASIN. SEE DETAIL A1/C-501.
5. INSTALL 4" HDPE STORM DRAIN.
6. NOT USED
7. CONNECT TO EXISTING INLET.
8. INSTALL 6" X 12" HDPE REDUCER.
9. INSTALL 12" 90° HDPE BEND.
10. INSTALL 6" X 12" HDPE TEE.
11. INSTALL 6" HDPE STORM DRAIN.
12. FUTURE 18" CONNECTION TO FORTUNA ROAD STORM DRAIN.
13. FUTURE 58" X 9" RCEHP.
14. INSTALL 18" X 12" HDPE TEE.
15. INSTALL 18" HDPE TEE.
16. INSTALL OVERFLOW DRAIN. SEE DETAIL D1/C-501.
17. INSTALL 12" HDPE TEE.

WILSON & COMPANY
2600 THE AMERICAN RD. SE SUITE 100
RIO RANCHO, NM 87124
PHONE: 505-898-8021
FAX: 505-898-8501
www.wilsonco.com

CONSULTANTS

SEAL

PROJECT NAME
ALBUQUERQUE PUBLIC SCHOOLS
WEST MESA HIGH SCHOOL
STORM DRAIN IMPROVEMENTS
6701 FORTUNA RD NW
ALBUQUERQUE, NM 87121

MARK	DATE	DESCRIPTION

PROJECT NO:	
DESIGNED BY:	JMF
DRAWN BY:	AJM
CHECKED BY:	MJI
DATE:	

SHEET TITLE
PLAN & PROFILE SD-A

SHEET NO:
C-403

M:\IDS\09-600-038-00\CADD\SHEETS\08_PNP\96038_PNP03.dwg 12/15/2009 10:04:28 AM MST

Appendix A
AHYMO

AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) - - VERSION: 1997.02c RUN DATE (MON/DAY/YR) =01/12/2010
INPUT FILE = M:\IDS\09932F~1\AE_DATA\CALCS\AHYMO\WMHS20~1.DAT USER NO.= AHYMO-C-9803c01UNMLIB-AH

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
*S EXISTING & PROPOSED CONDITION MODELS FOR WMHS DRAINAGE IMPROVEMENTS										
*S BASINS AREAS DO NOT CHANGE FROM THE EXISTING TO PROPOSED CONDITION										
*S PONDS ARE NAMED FOR THE BASINS IN WHICH THEY ARE LOCATED										
START										TIME= .00
LOCATION		DEFAULT								
*S**********										
*S 100 YEAR 24HR STORM										
RAINFALL TYPE= 2										RAIN24= 2.660
*S 100 YEAR 6HR STORM										
*S										
*S BASINS CONTRIBUTING TO NORTH CONNECTION OF 84" SD IN 64TH										
COMPUTE NM HYD	101.00	-	1	.00110	3.03	.142	2.42724	1.500	4.307	PER IMP= 100.00
COMPUTE NM HYD	102.00	-	2	.00900	24.34	1.131	2.35553	1.500	4.226	PER IMP= 95.00
ADD HYD	102.10	1& 2	3	.01010	27.38	1.273	2.36328	1.500	4.235	
COMPUTE NM HYD	106.00	-	4	.00670	17.32	.784	2.19371	1.500	4.040	PER IMP= 85.00
ADD HYD	106.10	3& 4	5	.01680	44.70	2.057	2.29564	1.500	4.157	
COMPUTE NM HYD	108.00	-	6	.00350	5.82	.198	1.06084	1.500	2.600	PER IMP= 20.00
ADD HYD	108.10	6& 5	7	.02030	50.52	2.255	2.08272	1.500	3.889	
COMPUTE NM HYD	109.00	-	8	.00580	10.85	.379	1.22620	1.500	2.922	PER IMP= 25.00
COMPUTE NM HYD	111.00	-	9	.00340	5.55	.164	.90383	1.500	2.552	PER IMP= 5.00
ADD HYD	111.10	9& 8	10	.00920	16.40	.543	1.10701	1.500	2.785	
ADD HYD	NORTH.PIPE	7&10	11	.02950	66.92	2.798	1.77843	1.500	3.545	
ROUTE RESERVOIR	POND.NTH	11	50	.02950	37.51	2.811	1.78695	1.650	1.987	AC-FT= .400
*S BASINS CONTRIBUTING TO POND 107										
COMPUTE NM HYD	107.00	-	12	.00400	10.35	.468	2.19371	1.500	4.042	PER IMP= 85.00
*S BASINS CONTRIBUTING TO SOUTH CONNECTION TO 84" SD IN 64TH										
COMPUTE NM HYD	103.00	-	13	.00780	15.22	.936	2.25115	1.600	3.049	PER IMP= 90.00
COMPUTE NM HYD	104.00	-	14	.00150	3.40	.135	1.69063	1.500	3.543	PER IMP= 50.00
ADD HYD	103.10	13&14	15	.00930	17.59	1.072	2.16066	1.600	2.955	
COMPUTE NM HYD	105.00	-	16	.00180	4.71	.212	2.21212	1.500	4.092	PER IMP= 85.00
ADD HYD	103.20	15&16	17	.01110	21.08	1.284	2.16898	1.550	2.968	
COMPUTE NM HYD	110.00	-	18	.00500	8.94	.269	1.00737	1.500	2.793	PER IMP= 5.00
ADD HYD	110.10	18&17	19	.01610	29.25	1.553	1.80822	1.550	2.839	
ROUTE RESERVOIR	POND.STH	19	60	.01610	23.73	1.553	1.80822	1.650	2.303	AC-FT= .066
COMPUTE NM HYD	112.00	-	20	.00200	3.18	.109	1.01853	1.500	2.481	PER IMP= 20.00
ADD HYD	112.10	60&20	21	.01810	25.97	1.661	1.72095	1.550	2.242	
COMPUTE NM HYD	113.00	-	22	.00230	3.82	.136	1.10658	1.500	2.595	PER IMP= 25.00
ADD HYD	SOUTH.PIPE	21&22	23	.02040	29.48	1.797	1.65167	1.500	2.258	
*S BASINS CONTRIBUTING TO FORTUNA ROAD RUNOFF										
COMPUTE NM HYD	100.00	-	24	.00200	5.42	.251	2.35553	1.500	4.235	PER IMP= 95.00
FINISH										

```
* WMHS.DAT
*S EXISTING & PROPOSED CONDITION MODELS FOR WMHS DRAINAGE IMPROVEMENTS
*S BASINS AREAS DO NOT CHANGE FROM THE EXISTING TO PROPOSED CONDITION
*S PONDS ARE NAMED FOR THE BASINS IN WHICH THEY ARE LOCATED
START                   TIME=0.0 PUNCH CODE=0 PRINT CODE=0
LOCATION                BERNALILLO COUNTY
*
* RAINFALL FROM NOAA COA DEVELOPMENT PROCESS MANUAL
*
*S*********************************************************************
*S 100 YEAR 24HR STORM
RAINFALL        TYPE=2 ONE DAY RAINFALL, NOAA ATLAS TWO
                QUARTER=0.00 IN
                HOUR= 1.87 IN
                SIX HR= 2.20 IN
                DAY= 2.66 IN DT=0.05*S 100 YEAR 24HR STORM
*S 100 YEAR 6HR STORM
*RAINFALL       TYPE=1 ONE DAY RAINFALL, NOAA ATLAS TWO
                QUARTER=0.00 IN
                HOUR= 1.87 IN
                SIX HR= 2.20 IN
                DAY= 2.66 IN DT=0.05
* *S 10 YEAR 24HR STORM EXISTING CONDITION
*RAINFALL       TYPE=2 0.0 1.08 1.41 1.78 DT=0.1
*S
*S BASINS CONTRIBUTING TO NORTH CONNECTION OF 84" SD IN 64TH
* **** SUB-BASIN 101 ****
* NW CORNER OF PARKING LOT @ NW CORNER OF SITE
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
                        NK=1 ISLOPE=0
                        LENGTH=381 FT SLOPE=0.003 K=2.0
                        KN=0.021 CENTROID DIST=153 FT
COMPUTE NM HYD          ID=1 HYD NO=101 DA=0.0011 SQ MI
                        PER A=0 PER B=0 PER C=0 PER D=100
                        TP=0.0 MASSRAIN=-1
PRINT HYD               ID=1 CODE=1
*
* **** SUB-BASIN 102 ****
* PARKING LOT @ NW CORNER OF SITE
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
                        NK=1 ISLOPE=0
                        LENGTH=955 FT SLOPE=0.005 K=2.0
                        KN=0.021 CENTROID DIST=377 FT
COMPUTE NM HYD          ID=2 HYD NO=102 DA=0.009 SQ MI
                        PER A=0 PER B=0 PER C=5 PER D=95
                        TP=0.0 MASSRAIN=-1
PRINT HYD               ID=2 CODE=1
*
* ADD 101 TO 102 TO GET 102.1
ADD HYD                 ID=3 HYD NO=102.1 ID I=1 ID II=2
PRINT HYD               ID=3 CODE=1
*
* **** SUB-BASIN 106 ****
* TENNIS & BASKETBALL COURTS
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
                        NK=1 ISLOPE=0
                        LENGTH=863 FT SLOPE=0.005 K=2.0
                        KN=0.021 CENTROID DIST=492 FT
COMPUTE NM HYD          ID=4 HYD NO=106 DA=0.0067 SQ MI
                        PER A=0 PER B=5 PER C=10 PER D=85
                        TP=0.0 MASSRAIN=-1
PRINT HYD               ID=4 CODE=1
* ADD 106 TO 102.1 TO GET 106.1
ADD HYD                 ID=5 HYD NO=106.1 ID I=3 ID II=4
PRINT HYD               ID=5 CODE=1

** **** SUB-BASIN 108 ****
* WEST BASEBALL FIELD
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
                        NK=1 ISLOPE=0
                        LENGTH=423 FT SLOPE=0.004 K=2.0
                        KN=0.021 CENTROID DIST=220 FT
COMPUTE NM HYD          ID=6 HYD NO=108 DA=0.0035 SQ MI
                        PER A=0 PER B=65 PER C=15 PER D=20
                        TP=0.0 MASSRAIN=-1
PRINT HYD               ID=6 CODE=1
*
* ADD 108 TO 106.1 TO GET 108.1
ADD HYD                 ID=7 HYD NO=108.1 ID I=6 ID II=5
PRINT HYD               ID=7 CODE=1

* **** SUB-BASIN 109 ****
* NORTH HALF OF SOCCER FIELD
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
```

```
                          NK=1 ISLOPE=0
                          LENGTH=689 FT SLOPE=0.006 K=2.0
                          KN=0.021 CENTROID DIST=321 FT
COMPUTE NM HYD            ID=8 HYD NO=109 DA=0.0058 SQ MI
                          PER A=0 PER B=35 PER C=40 PER D=25
                          TP=0.0 MASSRAIN=-1
PRINT HYD                 ID=8 CODE=1
*
* **** SUB-BASIN 111 ****
* EAST BASEBALL FIELD
COMPUTE LT TP             LCODE=1 UPLAND/LAG TIME METHOD
                          NK=1 ISLOPE=0
                          LENGTH=382 FT SLOPE=0.012 K=2.0
                          KN=0.021 CENTROID DIST=209 FT
COMPUTE NM HYD            ID=9 HYD NO=111 DA=.0034 SQ MI
                          PER A=0 PER B=45 PER C=50 PER D=5
                          TP=0.0 MASSRAIN=-1
PRINT HYD                 ID=9 CODE=1
*
* ADD 111 TO 109.1 TO GET 111.1
ADD HYD                   ID=10 HYD NO=111.1 ID I=9 ID II=8
PRINT HYD                 ID=10 CODE=1
* ADD 111.1 TO 108.1 TO GET NORTH.PIPE
ADD HYD                   ID=11 HYD NO=NORTH.PIPE ID I=7 ID II=10
PRINT HYD                 ID=11 CODE=1
*
*  ROUTE FLOWS THROUGH ALL PONDS TO DETERMINE POND AREA/VOLUME
ROUTE RESERVOIR           ID=50  HYD NO=POND.NTH  INFLOW ID=11 CODE=5
                          OUTFLOW     STORAGE     ELEV
                          0.00        0.0000      90
                          1.89        0.0001      91
                          9.14        0.0002      92
                          18.60       0.0003      93
                          24.44       0.0004      94
                          29.07       0.0005      95
                          33.06       0.0712      96
                          36.62       0.3161      97
                          38.24       0.4691      97.5

PRINT HYD                 ID=50 CODE=0
*
*
*S BASINS CONTRIBUTING TO POND 107
* **** SUB-BASIN 107 ****
* MAIN BLDG
COMPUTE LT TP             LCODE=1 UPLAND/LAG TIME METHOD
                          NK=1 ISLOPE=0
                          LENGTH=373 FT SLOPE=0.01 K=2.0
                          KN=0.021 CENTROID DIST=237 FT
COMPUTE NM HYD            ID=12 HYD NO=107 DA=.004 SQ MI
                          PER A=0 PER B=5 PER C=10 PER D=85
                          TP=0.0 MASSRAIN=-1
PRINT HYD                 ID=12 CODE=1
*
*
*
*
*S BASINS CONTRIBUTING TO SOUTH CONNECTION TO 84" SD IN 64TH
* **** SUB-BASIN 103 ****
* SW CORNER OF SITE
COMPUTE LT TP             LCODE=1 UPLAND/LAG TIME METHOD
                          NK=1 ISLOPE=0
                          LENGTH=1667 FT SLOPE=0.004 K=2.0
                          KN=0.021 CENTROID DIST=337 FT
COMPUTE NM HYD            ID=13 HYD NO=103 DA=0.0078 SQ MI
                          PER A=0 PER B=10 PER C=0 PER D=90
                          TP=0.0 MASSRAIN=-1
PRINT HYD                 ID=13 CODE=1
*
* **** SUB-BASIN 104 ****
* COURTYARD AREA
COMPUTE LT TP             LCODE=1 UPLAND/LAG TIME METHOD
                          NK=1 ISLOPE=0
                          LENGTH=282 FT SLOPE=0.007 K=2.0
                          KN=0.021 CENTROID DIST=146 FT
COMPUTE NM HYD            ID=14 HYD NO=104 DA=0.0015 SQ MI
                          PER A=0 PER B=5 PER C=45 PER D=50
                          TP=0.0 MASSRAIN=-1
PRINT HYD                 ID=14 CODE=1
*
* ADD 103 TO 104 TO GET 103.1
ADD HYD                   ID=15 HYD NO=103.1 ID I=13 ID II=14
PRINT HYD                 ID=15 CODE=1
*
```

```
* **** SUB-BASIN 105 ****
* FRONT YARD AND PARKING AREA
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
                        NK=1 ISLOPE=0
                        LENGTH=430 FT SLOPE=0.007 K=2.0
                        KN=0.021 CENTROID DIST=220 FT
COMPUTE NM HYD          ID=16 HYD NO=105 DA=0.0018 SQ MI
                        PER A=0 PER B=0 PER C=15 PER D=85
                        TP=0.0 MASSRAIN=-1
PRINT HYD               ID=16 CODE=1
*
* ADD 105 TO 103.1 TO GET 103.2
ADD HYD                 ID=17 HYD NO=103.2 ID I=15 ID II=16
PRINT HYD               ID=17 CODE=1
*
* **** SUB-BASIN 110 ****
* SOUTH HALF OF SOCCER FIELD
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
                        NK=1 ISLOPE=0
                        LENGTH=497 FT SLOPE=0.005 K=2.0
                        KN=0.021 CENTROID DIST=301 FT
COMPUTE NM HYD          ID=18 HYD NO=110 DA=0.005 SQ MI
                        PER A=0 PER B=15 PER C=80 PER D=5
                        TP=0.0 MASSRAIN=-1
PRINT HYD               ID=18 CODE=1
*
* ADD 110 TO 103.2 TO GET 110.1
ADD HYD                 ID=19 HYD NO=110.1 ID I=18 ID II=17
PRINT HYD               ID=19 CODE=1
*
*  ROUTE FLOWS from basins 110,105,104,103 THROUGH POND
ROUTE RESERVOIR         ID=60  HYD NO=POND.STH  INFLOW ID=19 CODE=5
                        OUTFLOW     STORAGE     ELEV
                        0.00        0.0000      91
                        0.38        0.0001      92
                        5.69        0.0002      93
                        14.69       0.0003      94
                        22.22       0.0004      95
                        27.23       0.2159      96
                        30.63       0.8691      97

PRINT HYD               ID=60 CODE=0
* **** SUB-BASIN 112 ****
* WEST SIDE OF TRACK & FIELD
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
                        NK=1 ISLOPE=0
                        LENGTH=318 FT SLOPE=0.006 K=2.0
                        KN=0.021 CENTROID DIST=266 FT
COMPUTE NM HYD          ID=20 HYD NO=112 DA=0.002 SQ MI
                        PER A=0 PER B=80 PER C=0 PER D=20
                        TP=0.0 MASSRAIN=-1
PRINT HYD               ID=20 CODE=1
*
* ADD 112 TO 110.1 TO GET 112.1
ADD HYD                 ID=21 HYD NO=112.1 ID I=60 ID II=20
PRINT HYD               ID=21 CODE=1
*
* **** SUB-BASIN 113 ****
* EAST SIDE OF TRACK & FIELD
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
                        NK=1 ISLOPE=0
                        LENGTH=315 FT SLOPE=0.006 K=2.0
                        KN=0.021 CENTROID DIST=273 FT
COMPUTE NM HYD          ID=22 HYD NO=113 DA=0.0023 SQ MI
                        PER A=0 PER B=75 PER C=0 PER D=25
                        TP=0.0 MASSRAIN=-1
PRINT HYD               ID=22 CODE=1
*
* ADD 113 TO 112.1 TO GET SOUTH.PIPE
ADD HYD                 ID=23 HYD NO=SOUTH.PIPE ID I=21 ID II=22
PRINT HYD               ID=23 CODE=1
*

*S BASINS CONTRIBUTING TO FORTUNA ROAD RUNOFF
* **** SUB-BASIN 100****
* WEST OF Y-HALL
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
                        NK=1 ISLOPE=0
                        LENGTH=540 FT SLOPE=0.003 K=2.0
                        KN=0.021 CENTROID DIST=269 FT
COMPUTE NM HYD          ID=24 HYD NO=100 DA=0.002 SQ MI
                        PER A=0 PER B=0 PER C=5 PER D=95
                        TP=0.0 MASSRAIN=-1
PRINT HYD               ID=24 CODE=1
```

```
*
FINISH
```

```
AHYMO PROGRAM (AHYMO_97) -                          - Version:  1997.02c
     RUN DATE (MON/DAY/YR) = 01/12/2010
     START TIME (HR:MIN:SEC) = 18:28:31     USER NO.= AHYMO-C-9803c01UNMLIB-AH
     INPUT FILE = M:\IDS\09932F~1\AE_DATA\CALCS\AHYMO\WMHS20~1.DAT


* WMHS.DAT
*S EXISTING & PROPOSED CONDITION MODELS FOR WMHS DRAINAGE IMPROVEMENTS
*S BASINS AREAS DO NOT CHANGE FROM THE EXISTING TO PROPOSED CONDITION
*S PONDS ARE NAMED FOR THE BASINS IN WHICH THEY ARE LOCATED
START                                TIME=0.0 PUNCH CODE=0 PRINT CODE=0

LOCATION                    BERNALILLO COUNTY
     Soil infiltration values (LAND FACTORS) for this location are not available.
     The following default values were used.
     Land Treatment     Initial Abstr.(in)    Unif. Infilt.(in/hour)
          A                0.65                  1.67
          B                0.50                  1.25
          C                0.35                  0.83
          D                0.10                  0.04

*
* RAINFALL FROM NOAA COA DEVELOPMENT PROCESS MANUAL
*
*S*****************************************************************
*S 100 YEAR 24HR STORM
RAINFALL            TYPE=2 ONE DAY RAINFALL, NOAA ATLAS TWO
                           QUARTER=0.00 IN
                           HOUR= 1.87 IN
                           SIX HR= 2.20 IN
                           DAY= 2.66 IN DT=0.05*S 100 YEAR 24HR STORM

                  COMPUTED 24-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40
HR.
                  DT =     .050000 HOURS       END TIME =    24.000000 HOURS
                     .0000   .0025   .0050   .0076   .0103   .0131   .0160
                     .0190   .0222   .0254   .0289   .0324   .0362   .0401
                     .0443   .0487   .0534   .0584   .0637   .0695   .0758
                     .0837   .0924   .1176   .1773   .2798   .4384   .6668
                     .9790  1.2253  1.3366  1.4295  1.5109  1.5836  1.6495
                    1.7096  1.7648  1.8156  1.8624  1.9057  1.9458  1.9548
                    1.9631  1.9708  1.9780  1.9848  1.9912  1.9973  2.0031
                    2.0087  2.0140  2.0191  2.0240  2.0287  2.0333  2.0377
                    2.0420  2.0462  2.0502  2.0542  2.0580  2.0617  2.0653
                    2.0689  2.0724  2.0757  2.0791  2.0823  2.0855  2.0886
                    2.0916  2.0946  2.0976  2.1005  2.1033  2.1061  2.1088
                    2.1115  2.1142  2.1168  2.1193  2.1219  2.1244  2.1268
                    2.1293  2.1316  2.1340  2.1363  2.1386  2.1409  2.1431
                    2.1453  2.1475  2.1497  2.1518  2.1539  2.1560  2.1580
                    2.1601  2.1621  2.1641  2.1660  2.1680  2.1699  2.1718
                    2.1737  2.1756  2.1774  2.1793  2.1811  2.1829  2.1847
                    2.1864  2.1882  2.1899  2.1916  2.1933  2.1950  2.1967
                    2.1984  2.2000  2.2020  2.2039  2.2059  2.2078  2.2097
                    2.2117  2.2136  2.2155  2.2174  2.2193  2.2212  2.2231
                    2.2249  2.2268  2.2287  2.2305  2.2324  2.2342  2.2361
                    2.2379  2.2398  2.2416  2.2434  2.2452  2.2470  2.2488
                    2.2506  2.2524  2.2542  2.2559  2.2577  2.2595  2.2612
                    2.2630  2.2647  2.2665  2.2682  2.2700  2.2717  2.2734
                    2.2751  2.2768  2.2785  2.2802  2.2819  2.2836  2.2853
                    2.2870  2.2887  2.2903  2.2920  2.2937  2.2953  2.2970
                    2.2986  2.3002  2.3019  2.3035  2.3051  2.3068  2.3084
                    2.3100  2.3116  2.3132  2.3148  2.3164  2.3180  2.3196
                    2.3212  2.3227  2.3243  2.3259  2.3274  2.3290  2.3305
                    2.3321  2.3336  2.3352  2.3367  2.3383  2.3398  2.3413
                    2.3428  2.3444  2.3459  2.3474  2.3489  2.3504  2.3519
                    2.3534  2.3549  2.3563  2.3578  2.3593  2.3608  2.3622
                    2.3637  2.3652  2.3666  2.3681  2.3695  2.3710  2.3724
                    2.3739  2.3753  2.3767  2.3782  2.3796  2.3810  2.3824
                    2.3839  2.3853  2.3867  2.3881  2.3895  2.3909  2.3923
                    2.3937  2.3951  2.3965  2.3978  2.3992  2.4006  2.4020
                    2.4033  2.4047  2.4061  2.4074  2.4088  2.4101  2.4115
                    2.4128  2.4142  2.4155  2.4168  2.4182  2.4195  2.4208
                    2.4222  2.4235  2.4248  2.4261  2.4274  2.4287  2.4300
                    2.4314  2.4327  2.4340  2.4352  2.4365  2.4378  2.4391
                    2.4404  2.4417  2.4430  2.4442  2.4455  2.4468  2.4480
                    2.4493  2.4506  2.4518  2.4531  2.4543  2.4556  2.4568
                    2.4581  2.4593  2.4606  2.4618  2.4630  2.4643  2.4655
                    2.4667  2.4680  2.4692  2.4704  2.4716  2.4728  2.4740
                    2.4753  2.4765  2.4777  2.4789  2.4801  2.4813  2.4825
                    2.4837  2.4849  2.4860  2.4872  2.4884  2.4896  2.4908
                    2.4919  2.4931  2.4943  2.4955  2.4966  2.4978  2.4990
                    2.5001  2.5013  2.5024  2.5036  2.5047  2.5059  2.5070
                    2.5082  2.5093  2.5105  2.5116  2.5127  2.5139  2.5150
```

```
2.5161  2.5172  2.5184  2.5195  2.5206  2.5217  2.5229
2.5240  2.5251  2.5262  2.5273  2.5284  2.5295  2.5306
2.5317  2.5328  2.5339  2.5350  2.5361  2.5372  2.5383
2.5394  2.5404  2.5415  2.5426  2.5437  2.5448  2.5458
2.5469  2.5480  2.5490  2.5501  2.5512  2.5522  2.5533
2.5544  2.5554  2.5565  2.5575  2.5586  2.5596  2.5607
2.5617  2.5628  2.5638  2.5649  2.5659  2.5669  2.5680
2.5690  2.5700  2.5711  2.5721  2.5731  2.5741  2.5752
2.5762  2.5772  2.5782  2.5792  2.5803  2.5813  2.5823
2.5833  2.5843  2.5853  2.5863  2.5873  2.5883  2.5893
2.5903  2.5913  2.5923  2.5933  2.5943  2.5953  2.5963
2.5973  2.5982  2.5992  2.6002  2.6012  2.6022  2.6031
2.6041  2.6051  2.6061  2.6070  2.6080  2.6090  2.6099
2.6109  2.6119  2.6128  2.6138  2.6148  2.6157  2.6167
2.6176  2.6186  2.6195  2.6205  2.6214  2.6224  2.6233
2.6243  2.6252  2.6261  2.6271  2.6280  2.6290  2.6299
2.6308  2.6318  2.6327  2.6336  2.6346  2.6355  2.6364
2.6373  2.6383  2.6392  2.6401  2.6410  2.6419  2.6428
2.6438  2.6447  2.6456  2.6465  2.6474  2.6483  2.6492
2.6501  2.6510  2.6519  2.6528  2.6537  2.6546  2.6555
2.6564  2.6573  2.6582  2.6591  2.6600

*S 100 YEAR 6HR STORM
*RAINFALL           TYPE=1 ONE DAY RAINFALL, NOAA ATLAS TWO
                           QUARTER=0.00 IN
                           HOUR= 1.87 IN
                           SIX HR= 2.20 IN
                           DAY= 2.66 IN DT=0.05
* *S 10 YEAR 24HR STORM EXISTING CONDITION
*RAINFALL           TYPE=2 0.0 1.08 1.41 1.78 DT=0.1
*S
*S BASINS CONTRIBUTING TO NORTH CONNECTION OF 84" SD IN 64TH
* **** SUB-BASIN 101 ****
* NW CORNER OF PARKING LOT @ NW CORNER OF SITE
COMPUTE LT TP               LCODE=1 UPLAND/LAG TIME METHOD
                                    NK=1 ISLOPE=0

                                    LENGTH=381 FT SLOPE=0.003 K=2.0

                                    KN=0.021 CENTROID DIST=153 FT


          Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

          SCS UPLAND METHOD FACTORS
                                  LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
          SHEET FLOW PORTION            .0           .000000             .0000
          SHALLOW FLOW PORTION        381.0          .003000            2.0000
          CHANNEL FLOW PORTION          .0           .000000             .0000
          TOTAL BASIN                 381.0          .003000            2.0000


          TIME OF CONCENTRATION (HRS)=   .0966     TIME TO PEAK (HRS)=   .0644     LAG TIME
(HRS)=   .0725


          TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
          REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333
 LAG TIME (HRS)=   .1500

     COMPUTE NM HYD             ID=1 HYD NO=101 DA=0.0011 SQ MI
                                     PER A=0 PER B=0 PER C=0 PER D=100

                                     TP=0.0 MASSRAIN=-1

          TIME TO PEAK (hrs)=   .1333

          K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =
7.106420
          UNIT PEAK =   4.3418    CFS   UNIT VOLUME =    .9966       B =   526.28      P60 =
1.8700
          AREA =      .001100 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

     PRINT HYD                  ID=1 CODE=1

                                     PARTIAL HYDROGRAPH   101.00


     RUNOFF VOLUME =     2.42724 INCHES     =        .1424 ACRE-FEET
     PEAK DISCHARGE RATE =       3.03 CFS  AT   1.500 HOURS   BASIN AREA =   .0011 SQ. MI.
```

```
*
* **** SUB-BASIN 102 ****
* PARKING LOT @ NW CORNER OF SITE
COMPUTE LT TP                LCODE=1 UPLAND/LAG TIME METHOD
                                     NK=1 ISLOPE=0

                                     LENGTH=955 FT SLOPE=0.005 K=2.0

                                     KN=0.021 CENTROID DIST=377 FT


     Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

     SCS UPLAND METHOD FACTORS
                                LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
     SHEET FLOW PORTION              .0           .000000             .0000
     SHALLOW FLOW PORTION          955.0          .005000            2.0000
     CHANNEL FLOW PORTION            .0           .000000             .0000
     TOTAL BASIN                   955.0          .005000            2.0000


     TIME OF CONCENTRATION (HRS)=   .1876     TIME TO PEAK (HRS)=   .1251     LAG TIME
(HRS)=   .1407


     TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
     REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333
 LAG TIME (HRS)=   .1500

    COMPUTE NM HYD               ID=2 HYD NO=102 DA=0.009 SQ MI
                                      PER A=0 PER B=0 PER C=5 PER D=95

                                      TP=0.0 MASSRAIN=-1

     TIME TO PEAK (hrs)=   .1333

     K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =
7.106420
     UNIT PEAK =   33.748    CFS   UNIT VOLUME =    .9988       B =   526.28      P60 =
1.8700
     AREA =      .008550 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


     K =   .105893HR    TP =   .133333HR    K/TP RATIO =   .794199     SHAPE CONSTANT, N =
4.514851
     UNIT PEAK =   1.3100    CFS   UNIT VOLUME =    .9928       B =   388.14      P60 =
1.8700
     AREA =      .000450 SQ MI    IA =    .35000 INCHES    INF =    .83000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    PRINT HYD                    ID=2 CODE=1

                                      PARTIAL HYDROGRAPH   102.00


    RUNOFF VOLUME =     2.35553 INCHES     =       1.1306 ACRE-FEET
    PEAK DISCHARGE RATE =      24.34 CFS  AT   1.500 HOURS   BASIN AREA =   .0090 SQ. MI.


*
* ADD 101 TO 102 TO GET 102.1
ADD HYD                      ID=3 HYD NO=102.1 ID I=1 ID II=2
PRINT HYD                    ID=3 CODE=1

                                      PARTIAL HYDROGRAPH   102.10


    RUNOFF VOLUME =     2.36328 INCHES     =       1.2730 ACRE-FEET
    PEAK DISCHARGE RATE =      27.38 CFS  AT   1.500 HOURS   BASIN AREA =   .0101 SQ. MI.


*
* **** SUB-BASIN 106 ****
* TENNIS & BASKETBALL COURTS
COMPUTE LT TP                LCODE=1 UPLAND/LAG TIME METHOD
                                     NK=1 ISLOPE=0

                                     LENGTH=863 FT SLOPE=0.005 K=2.0
```

```
                                        KN=0.021 CENTROID DIST=492 FT

        Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

        SCS UPLAND METHOD FACTORS
                                  LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
        SHEET FLOW PORTION              .0           .000000             .0000
        SHALLOW FLOW PORTION          863.0          .005000            2.0000
        CHANNEL FLOW PORTION            .0           .000000             .0000
        TOTAL BASIN                   863.0          .005000            2.0000

        TIME OF CONCENTRATION (HRS)=   .1695     TIME TO PEAK (HRS)=   .1130     LAG TIME
(HRS)=   .1271

        TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
        REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333
 LAG TIME (HRS)=   .1500

    COMPUTE NM HYD              ID=4 HYD NO=106 DA=0.0067 SQ MI
                                         PER A=0 PER B=5 PER C=10 PER D=85

                                         TP=0.0 MASSRAIN=-1

        TIME TO PEAK (hrs)=   .1333

        K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =
7.106420
        UNIT PEAK =   22.479    CFS   UNIT VOLUME =    .9986       B =   526.28      P60 =
1.8700
        AREA =      .005695 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
        RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

        K =   .114270HR    TP =   .133333HR    K/TP RATIO =   .857028     SHAPE CONSTANT, N =
4.150447
        UNIT PEAK =   2.7518    CFS   UNIT VOLUME =    .9974       B =   365.08      P60 =
1.8700
        AREA =      .001005 SQ MI    IA =    .40000 INCHES    INF =    .97000 INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    PRINT HYD                   ID=4 CODE=1

                                         PARTIAL HYDROGRAPH   106.00

        RUNOFF VOLUME =     2.19371 INCHES     =        .7839 ACRE-FEET
        PEAK DISCHARGE RATE =      17.32 CFS  AT   1.500 HOURS   BASIN AREA =   .0067 SQ. MI.


    * ADD 106 TO 102.1 TO GET 106.1
    ADD HYD                     ID=5 HYD NO=106.1 ID I=3 ID II=4
    PRINT HYD                   ID=5 CODE=1

                                         PARTIAL HYDROGRAPH   106.10

        RUNOFF VOLUME =     2.29564 INCHES     =       2.0569 ACRE-FEET
        PEAK DISCHARGE RATE =      44.70 CFS  AT   1.500 HOURS   BASIN AREA =   .0168 SQ. MI.


    ** **** SUB-BASIN 108 ****
    * WEST BASEBALL FIELD
    COMPUTE LT TP               LCODE=1 UPLAND/LAG TIME METHOD
                                         NK=1 ISLOPE=0

                                         LENGTH=423 FT SLOPE=0.004 K=2.0

                                         KN=0.021 CENTROID DIST=220 FT

        Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

        SCS UPLAND METHOD FACTORS
                                  LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
        SHEET FLOW PORTION              .0           .000000             .0000
        SHALLOW FLOW PORTION          423.0          .004000            2.0000
        CHANNEL FLOW PORTION            .0           .000000             .0000
```

```
TOTAL BASIN                    423.0          .004000          2.0000

TIME OF CONCENTRATION (HRS)=   .0929    TIME TO PEAK (HRS)=   .0619    LAG TIME
(HRS)=   .0697


TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000    TIME TO PEAK (HRS)=   .1333
LAG TIME (HRS)=   .1500

COMPUTE NM HYD             ID=6 HYD NO=108 DA=0.0035 SQ MI
                                PER A=0 PER B=65 PER C=15 PER D=20

                                TP=0.0 MASSRAIN=-1

TIME TO PEAK (hrs)=   .1333

K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000    SHAPE CONSTANT, N =
7.106420
UNIT PEAK =   2.7630    CFS   UNIT VOLUME =    .9951      B =   526.28      P60 =
1.8700
AREA =      .000700 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

K =   .126312HR    TP =   .133333HR    K/TP RATIO =   .947344    SHAPE CONSTANT, N =
3.731408
UNIT PEAK =   7.0738    CFS   UNIT VOLUME =    .9996      B =   336.85      P60 =
1.8700
AREA =      .002800 SQ MI    IA =    .47188 INCHES    INF =   1.17125 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                  ID=6 CODE=1

                                PARTIAL HYDROGRAPH   108.00


RUNOFF VOLUME =     1.06084 INCHES     =        .1980 ACRE-FEET
PEAK DISCHARGE RATE =       5.82 CFS  AT   1.500 HOURS   BASIN AREA =   .0035 SQ. MI.


*
* ADD 108 TO 106.1 TO GET 108.1
ADD HYD                    ID=7 HYD NO=108.1 ID I=6 ID II=5
PRINT HYD                  ID=7 CODE=1

                                PARTIAL HYDROGRAPH   108.10


RUNOFF VOLUME =     2.08272 INCHES     =       2.2549 ACRE-FEET
PEAK DISCHARGE RATE =      50.52 CFS  AT   1.500 HOURS   BASIN AREA =   .0203 SQ. MI.



* **** SUB-BASIN 109 ****
* NORTH HALF OF SOCCER FIELD
COMPUTE LT TP              LCODE=1 UPLAND/LAG TIME METHOD
                                NK=1 ISLOPE=0

                                LENGTH=689 FT SLOPE=0.006 K=2.0

                                KN=0.021 CENTROID DIST=321 FT


Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS
                           LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
SHEET FLOW PORTION              .0           .000000             .0000
SHALLOW FLOW PORTION          689.0          .006000            2.0000
CHANNEL FLOW PORTION            .0           .000000             .0000
TOTAL BASIN                   689.0          .006000            2.0000


TIME OF CONCENTRATION (HRS)=   .1235    TIME TO PEAK (HRS)=   .0824    LAG TIME
(HRS)=   .0927


TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
```

```
        REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333
 LAG TIME (HRS)=   .1500

    COMPUTE NM HYD              ID=8 HYD NO=109 DA=0.0058 SQ MI
                                         PER A=0 PER B=35 PER C=40 PER D=25

                                         TP=0.0 MASSRAIN=-1

        TIME TO PEAK (hrs)=   .1333

        K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =
7.106420
        UNIT PEAK =   5.7233    CFS   UNIT VOLUME =    .9971      B =   526.28      P60 =
1.8700
        AREA =      .001450 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
        RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

        K =   .117621HR    TP =   .133333HR    K/TP RATIO =   .882159     SHAPE CONSTANT, N =
4.022934
        UNIT PEAK =   11.637    CFS   UNIT VOLUME =    1.000      B =   356.70      P60 =
1.8700
        AREA =      .004350 SQ MI    IA =    .42000 INCHES    INF =   1.02600 INCHES PER HOUR
        RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    PRINT HYD                   ID=8 CODE=1

                                         PARTIAL HYDROGRAPH   109.00


       RUNOFF VOLUME =     1.22620 INCHES     =        .3793 ACRE-FEET
       PEAK DISCHARGE RATE =      10.85 CFS  AT   1.500 HOURS   BASIN AREA =   .0058 SQ. MI.


    *
    * **** SUB-BASIN 111 ****
    * EAST BASEBALL FIELD
    COMPUTE LT TP               LCODE=1 UPLAND/LAG TIME METHOD
                                         NK=1 ISLOPE=0

                                         LENGTH=382 FT SLOPE=0.012 K=2.0

                                         KN=0.021 CENTROID DIST=209 FT


        Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

        SCS UPLAND METHOD FACTORS
                                   LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
        SHEET FLOW PORTION              .0           .000000             .0000
        SHALLOW FLOW PORTION          382.0          .012000            2.0000
        CHANNEL FLOW PORTION            .0           .000000             .0000
        TOTAL BASIN                   382.0          .012000            2.0000


        TIME OF CONCENTRATION (HRS)=   .0484     TIME TO PEAK (HRS)=   .0323     LAG TIME
(HRS)=   .0363


        TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
        REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333
 LAG TIME (HRS)=   .1500

    COMPUTE NM HYD              ID=9 HYD NO=111 DA=.0034 SQ MI
                                         PER A=0 PER B=45 PER C=50 PER D=5

                                         TP=0.0 MASSRAIN=-1

        TIME TO PEAK (hrs)=   .1333

        K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =
7.106420
        UNIT PEAK =   .67100    CFS   UNIT VOLUME =    .9832      B =   526.28      P60 =
1.8700
        AREA =      .000170 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
        RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

        K =   .117797HR    TP =   .133333HR    K/TP RATIO =   .883482     SHAPE CONSTANT, N =
4.016482
        UNIT PEAK =   8.6306    CFS   UNIT VOLUME =    .9997      B =   356.27      P60 =
1.8700
```

```
     AREA =       .003230 SQ MI    IA =     .42105 INCHES    INF =   1.02895 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                    ID=9 CODE=1

                                     PARTIAL HYDROGRAPH   111.00


    RUNOFF VOLUME =       .90383 INCHES     =        .1639 ACRE-FEET
    PEAK DISCHARGE RATE =       5.55 CFS  AT   1.500 HOURS   BASIN AREA =   .0034 SQ. MI.


*
* ADD 111 TO 109.1 TO GET 111.1
ADD HYD                      ID=10 HYD NO=111.1 ID I=9 ID II=8
PRINT HYD                    ID=10 CODE=1

                                     PARTIAL HYDROGRAPH   111.10

    RUNOFF VOLUME =      1.10701 INCHES     =        .5432 ACRE-FEET
    PEAK DISCHARGE RATE =      16.40 CFS  AT   1.500 HOURS   BASIN AREA =   .0092 SQ. MI.


* ADD 111.1 TO 108.1 TO GET NORTH.PIPE
ADD HYD                      ID=11 HYD NO=NORTH.PIPE ID I=7 ID II=10
PRINT HYD                    ID=11 CODE=1

                                         HYDROGRAPH FROM AREA NORTH.PIPE


    RUNOFF VOLUME =      1.77843 INCHES     =       2.7981 ACRE-FEET
    PEAK DISCHARGE RATE =      66.92 CFS  AT   1.500 HOURS   BASIN AREA =   .0295 SQ. MI.


*
*  ROUTE FLOWS THROUGH ALL PONDS TO DETERMINE POND AREA/VOLUME
ROUTE RESERVOIR              ID=50  HYD NO=POND.NTH  INFLOW ID=11 CODE=5
                                     OUTFLOW     STORAGE     ELEV
                                     0.00        0.0000      90
                                     1.89        0.0001      91
                                     9.14        0.0002      92
                                     18.60       0.0003      93
                                     24.44       0.0004      94
                                     29.07       0.0005      95
                                     33.06       0.0712      96
                                     36.62       0.3161      97
                                     38.24       0.4691      97.5


*  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *

   TIME       INFLOW     ELEV       VOLUME     OUTFLOW
   (HRS)      (CFS)      (FEET)     (AC-FT)    (CFS)

    .00         .00      90.00       .000        .00
    .25         .00      90.00       .000        .00
    .50         .00      90.00       .000        .00
    .75         .00      90.00       .000        .00
   1.00         .00      90.00       .000        .00
   1.25        5.08      91.44       .000       5.08
   1.50       66.92      96.55       .205      35.00
   1.75       25.33      97.09       .343      36.91
   2.00       13.85      95.22       .016      29.95
   2.25        4.12      90.00       .000        .00
   2.50        1.93      91.30       .000       4.08
   2.75        1.05      90.00       .000        .00
   3.00         .64      90.70       .000       1.31
   3.25         .46      90.00       .000        .00
   3.50         .36      90.38       .000        .72
   3.75         .32      90.02       .000        .04
```

4.00	.30	90.27	.000	.51
4.25	.29	90.07	.000	.12
4.50	.29	90.22	.000	.42
4.75	.29	90.10	.000	.20
5.00	.30	90.20	.000	.38
5.25	.31	90.13	.000	.25
5.50	.33	90.20	.000	.38
5.75	.35	90.17	.000	.31
6.00	.37	90.21	.000	.40
6.25	.43	90.22	.000	.41
6.50	.43	90.24	.000	.45
6.75	.43	90.22	.000	.41
7.00	.42	90.23	.000	.43
7.25	.41	90.22	.000	.41
7.50	.41	90.22	.000	.42
7.75	.40	90.21	.000	.40
8.00	.40	90.21	.000	.40
8.25	.39	90.20	.000	.39
8.50	.39	90.21	.000	.39
8.75	.38	90.20	.000	.38
9.00	.37	90.20	.000	.37
9.25	.37	90.19	.000	.37
9.50	.36	90.19	.000	.37
9.75	.36	90.19	.000	.36
10.00	.35	90.19	.000	.35
10.25	.35	90.18	.000	.35
10.50	.34	90.18	.000	.34
10.75	.34	90.18	.000	.34
11.00	.33	90.18	.000	.33
11.25	.33	90.18	.000	.33
11.50	.32	90.17	.000	.32
11.75	.32	90.17	.000	.32
12.00	.32	90.17	.000	.32
12.25	.32	90.17	.000	.32
12.50	.31	90.16	.000	.31
12.75	.31	90.16	.000	.31
13.00	.31	90.16	.000	.31
13.25	.30	90.16	.000	.30
13.50	.29	90.16	.000	.29
13.75	.30	90.16	.000	.30

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
14.00	.29	90.15	.000	.29
14.25	.29	90.15	.000	.29
14.50	.29	90.15	.000	.29
14.75	.28	90.15	.000	.28
15.00	.28	90.15	.000	.28
15.25	.28	90.15	.000	.28
15.50	.27	90.14	.000	.27
15.75	.27	90.14	.000	.27
16.00	.27	90.14	.000	.27
16.25	.26	90.14	.000	.26
16.50	.26	90.14	.000	.26
16.75	.26	90.14	.000	.26
17.00	.26	90.14	.000	.26
17.25	.26	90.14	.000	.26
17.50	.25	90.13	.000	.25
17.75	.25	90.13	.000	.25
18.00	.24	90.13	.000	.24
18.25	.24	90.13	.000	.24
18.50	.24	90.13	.000	.24
18.75	.24	90.13	.000	.24
19.00	.24	90.13	.000	.24
19.25	.24	90.13	.000	.24
19.50	.23	90.12	.000	.23
19.75	.23	90.12	.000	.23
20.00	.23	90.12	.000	.23
20.25	.23	90.12	.000	.23
20.50	.23	90.12	.000	.23
20.75	.22	90.12	.000	.22
21.00	.22	90.12	.000	.22
21.25	.22	90.12	.000	.22
21.50	.22	90.12	.000	.22
21.75	.22	90.11	.000	.22
22.00	.22	90.11	.000	.22
22.25	.21	90.11	.000	.21
22.50	.21	90.11	.000	.21
22.75	.21	90.11	.000	.21
23.00	.21	90.11	.000	.21
23.25	.21	90.11	.000	.21
23.50	.21	90.11	.000	.21
23.75	.21	90.11	.000	.21

24.00	.21	90.11	.000	.21
24.25	.03	90.02	.000	.03
24.50	.01	90.00	.000	.01
24.75	.00	90.00	.000	.00

PEAK DISCHARGE = 37.509 CFS - PEAK OCCURS AT HOUR 1.65
MAXIMUM WATER SURFACE ELEVATION = 97.274
MAXIMUM STORAGE = .4000 AC-FT INCREMENTAL TIME= .050000HRS

PRINT HYD ID=50 CODE=0

HYDROGRAPH FROM AREA POND.NTH

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.4	10.000	.4	15.000	.3
20.000	.2						
.050	.0	5.050	.2	10.050	.4	15.050	.3
20.050	.2						
.100	.0	5.100	.4	10.100	.4	15.100	.3
20.100	.2						
.150	.0	5.150	.2	10.150	.3	15.150	.3
20.150	.2						
.200	.0	5.200	.4	10.200	.3	15.200	.3
20.200	.2						
.250	.0	5.250	.3	10.250	.3	15.250	.3
20.250	.2						
.300	.0	5.300	.4	10.300	.4	15.300	.3
20.300	.2						
.350	.0	5.350	.3	10.350	.3	15.350	.3
20.350	.2						
.400	.0	5.400	.4	10.400	.3	15.400	.3
20.400	.2						
.450	.0	5.450	.3	10.450	.3	15.450	.3
20.450	.2						
.500	.0	5.500	.4	10.500	.3	15.500	.3
20.500	.2						
.550	.0	5.550	.3	10.550	.3	15.550	.3
20.550	.2						
.600	.0	5.600	.4	10.600	.3	15.600	.3
20.600	.2						
.650	.0	5.650	.3	10.650	.3	15.650	.3
20.650	.2						
.700	.0	5.700	.4	10.700	.3	15.700	.3
20.700	.2						
.750	.0	5.750	.3	10.750	.3	15.750	.3
20.750	.2						
.800	.0	5.800	.4	10.800	.3	15.800	.3
20.800	.2						
.850	.0	5.850	.3	10.850	.3	15.850	.3
20.850	.2						
.900	.0	5.900	.4	10.900	.3	15.900	.3
20.900	.2						
.950	.0	5.950	.3	10.950	.3	15.950	.3
20.950	.2						
1.000	.0	6.000	.4	11.000	.3	16.000	.3
21.000	.2						
1.050	.0	6.050	.3	11.050	.3	16.050	.3
21.050	.2						
1.100	.0	6.100	.4	11.100	.3	16.100	.3
21.100	.2						
1.150	.1	6.150	.4	11.150	.3	16.150	.3
21.150	.2						
1.200	1.3	6.200	.4	11.200	.3	16.200	.3
21.200	.2						
1.250	5.1	6.250	.4	11.250	.3	16.250	.3
21.250	.2						
1.300	11.4	6.300	.5	11.300	.3	16.300	.3
21.300	.2						
1.350	22.0	6.350	.4	11.350	.3	16.350	.3
21.350	.2						
1.400	30.1	6.400	.5	11.400	.3	16.400	.3
21.400	.2						
1.450	33.3	6.450	.4	11.450	.3	16.450	.3
21.450	.2						
1.500	35.0	6.500	.4	11.500	.3	16.500	.3
21.500	.2						
1.550	36.6	6.550	.4	11.550	.3	16.550	.3
21.550	.2						
1.600	37.3	6.600	.4	11.600	.3	16.600	.3
21.600	.2						
1.650	37.5	6.650	.4	11.650	.3	16.650	.3
21.650	.2						

	1.700	37.3		6.700		.4		11.700		.3	16.700
.3	21.700		.2								
	1.750	36.9		6.750		.4		11.750		.3	16.750
.3	21.750		.2								
	1.800	36.2		6.800		.4		11.800		.3	16.800
.3	21.800		.2								
	1.850	35.3		6.850		.4		11.850		.3	16.850
.3	21.850		.2								
	1.900	34.3		6.900		.4		11.900		.3	16.900
.3	21.900		.2								
	1.950	33.3		6.950		.4		11.950		.3	16.950
.3	21.950		.2								
	2.000	29.9		7.000		.4		12.000		.3	17.000
.3	22.000		.2								
	2.050	3.9		7.050		.4		12.050		.3	17.050
.3	22.050		.2								
	2.100	18.0		7.100		.4		12.100		.3	17.100
.3	22.100		.2								
	2.150	.0		7.150		.4		12.150		.3	17.150
.3	22.150		.2								
	2.200	12.0		7.200		.4		12.200		.3	17.200
.3	22.200		.2								
	2.250	.0		7.250		.4		12.250		.3	17.250
.3	22.250		.2								
	2.300	7.5		7.300		.4		12.300		.3	17.300
.3	22.300		.2								
	2.350	.0		7.350		.4		12.350		.3	17.350
.3	22.350		.2								
	2.400	5.4		7.400		.4		12.400		.3	17.400
.3	22.400		.2								
	2.450	.0		7.450		.4		12.450		.3	17.450
.3	22.450		.2								
	2.500	4.1		7.500		.4		12.500		.3	17.500
.3	22.500		.2								
	2.550	.0		7.550		.4		12.550		.3	17.550
.3	22.550		.2								
	2.600	3.1		7.600		.4		12.600		.3	17.600
.3	22.600		.2								
	2.650	.0		7.650		.4		12.650		.3	17.650
.3	22.650		.2								
	2.700	2.4		7.700		.4		12.700		.3	17.700
.3	22.700		.2								
	2.750	.0		7.750		.4		12.750		.3	17.750
.3	22.750		.2								
	2.800	1.9		7.800		.4		12.800		.3	17.800
.3	22.800		.2								
	2.850	.0		7.850		.4		12.850		.3	17.850
.3	22.850		.2								
	2.900	1.6		7.900		.4		12.900		.3	17.900
.2	22.900		.2								
	2.950	.0		7.950		.4		12.950		.3	17.950
.2	22.950		.2								
	3.000	1.3		8.000		.4		13.000		.3	18.000
.2	23.000		.2								
	3.050	.0		8.050		.4		13.050		.3	18.050
.2	23.050		.2								
	3.100	1.1		8.100		.4		13.100		.3	18.100
.2	23.100		.2								
	3.150	.0		8.150		.4		13.150		.3	18.150
.2	23.150		.2								
	3.200	1.0		8.200		.4		13.200		.3	18.200
.2	23.200		.2								
	3.250	.0		8.250		.4		13.250		.3	18.250
.2	23.250		.2								
	3.300	.9		8.300		.4		13.300		.3	18.300
.2	23.300		.2								
	3.350	.0		8.350		.4		13.350		.3	18.350
.2	23.350		.2								
	3.400	.8		8.400		.4		13.400		.3	18.400
.2	23.400		.2								
	3.450	.0		8.450		.4		13.450		.3	18.450
.2	23.450		.2								
	3.500	.7		8.500		.4		13.500		.3	18.500
.2	23.500		.2								
	3.550	.0		8.550		.4		13.550		.3	18.550
.2	23.550		.2								
	3.600	.7		8.600		.4		13.600		.3	18.600
.2	23.600		.2								
	3.650	.0		8.650		.4		13.650		.3	18.650
.2	23.650		.2								
	3.700	.6		8.700		.4		13.700		.3	18.700
.2	23.700		.2								
	3.750	.0		8.750		.4		13.750		.3	18.750
.2	23.750		.2								

```
        3.800        .6        8.800        .4        13.800        .3        18.800
.2       23.800       .2
        3.850        .1        8.850        .4        13.850        .3        18.850
.2       23.850       .2
        3.900        .5        8.900        .4        13.900        .3        18.900
.2       23.900       .2
        3.950        .1        8.950        .4        13.950        .3        18.950
.2       23.950       .2
        4.000        .5        9.000        .4        14.000        .3        19.000
.2       24.000       .2
        4.050        .1        9.050        .4        14.050        .3        19.050
.2       24.050       .2
        4.100        .5        9.100        .4        14.100        .3        19.100
.2       24.100       .1
        4.150        .1        9.150        .4        14.150        .3        19.150
.2       24.150       .1
        4.200        .5        9.200        .4        14.200        .3        19.200
.2       24.200       .1
        4.250        .1        9.250        .4        14.250        .3        19.250
.2       24.250       .0
        4.300        .4        9.300        .4        14.300        .3        19.300
.2       24.300       .0
        4.350        .1        9.350        .4        14.350        .3        19.350
.2       24.350       .0
        4.400        .4        9.400        .4        14.400        .3        19.400
.2       24.400       .0
        4.450        .2        9.450        .4        14.450        .3        19.450
.2       24.450       .0
        4.500        .4        9.500        .4        14.500        .3        19.500
.2       24.500       .0
        4.550        .2        9.550        .4        14.550        .3        19.550
.2       24.550       .0
        4.600        .4        9.600        .4        14.600        .3        19.600
.2       24.600       .0
        4.650        .2        9.650        .4        14.650        .3        19.650
.2       24.650       .0
        4.700        .4        9.700        .4        14.700        .3        19.700
.2       24.700       .0
        4.750        .2        9.750        .4        14.750        .3        19.750
.2       24.750       .0
        4.800        .4        9.800        .4        14.800        .3        19.800
.2       24.800       .0
        4.850        .2        9.850        .4        14.850        .3        19.850
.2
        4.900        .4        9.900        .4        14.900        .3        19.900
.2
        4.950        .2        9.950        .4        14.950        .3        19.950
.2

    RUNOFF VOLUME =     1.78695 INCHES     =       2.8115 ACRE-FEET
    PEAK DISCHARGE RATE =      37.51 CFS  AT   1.650 HOURS   BASIN AREA =   .0295 SQ. MI.


*
*
*S BASINS CONTRIBUTING TO POND 107
* **** SUB-BASIN 107 ****
* MAIN BLDG
COMPUTE LT TP              LCODE=1 UPLAND/LAG TIME METHOD
                                   NK=1 ISLOPE=0

                                   LENGTH=373 FT SLOPE=0.01 K=2.0

                                   KN=0.021 CENTROID DIST=237 FT


    Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

    SCS UPLAND METHOD FACTORS
                                LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
    SHEET FLOW PORTION               .0           .000000             .0000
    SHALLOW FLOW PORTION           373.0          .010000            2.0000
    CHANNEL FLOW PORTION             .0           .000000             .0000
    TOTAL BASIN                    373.0          .010000            2.0000


    TIME OF CONCENTRATION (HRS)=   .0518     TIME TO PEAK (HRS)=   .0345     LAG TIME
(HRS)=   .0389


    TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
    REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333
```

```
LAG TIME (HRS)=   .1500

    COMPUTE NM HYD              ID=12 HYD NO=107 DA=.004 SQ MI
                                        PER A=0 PER B=5 PER C=10 PER D=85

                                        TP=0.0 MASSRAIN=-1

          TIME TO PEAK (hrs)=   .1333

          K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =
7.106420
          UNIT PEAK =   13.420    CFS   UNIT VOLUME =    .9983       B =   526.28      P60 =
1.8700
          AREA =      .003400 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

          K =   .114270HR    TP =   .133333HR    K/TP RATIO =   .857028     SHAPE CONSTANT, N =
4.150447
          UNIT PEAK =   1.6429    CFS   UNIT VOLUME =    .9941       B =   365.08      P60 =
1.8700
          AREA =      .000600 SQ MI    IA =    .40000 INCHES    INF =    .97000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    PRINT HYD                   ID=12 CODE=1

                                        PARTIAL HYDROGRAPH   107.00


        RUNOFF VOLUME =     2.19371 INCHES     =        .4680 ACRE-FEET
        PEAK DISCHARGE RATE =      10.35 CFS  AT   1.500 HOURS   BASIN AREA =   .0040 SQ. MI.


    *
    *
    *
    *
    *S BASINS CONTRIBUTING TO SOUTH CONNECTION TO 84" SD IN 64TH
    * **** SUB-BASIN 103 ****
    * SW CORNER OF SITE
    COMPUTE LT TP               LCODE=1 UPLAND/LAG TIME METHOD
                                        NK=1 ISLOPE=0

                                        LENGTH=1667 FT SLOPE=0.004 K=2.0

                                        KN=0.021 CENTROID DIST=337 FT


          Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

          SCS UPLAND METHOD FACTORS
                                   LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
          SHEET FLOW PORTION            .0           .000000             .0000
          SHALLOW FLOW PORTION       1667.0           .004000            2.0000
          CHANNEL FLOW PORTION          .0           .000000             .0000
          TOTAL BASIN                1667.0           .004000            2.0000


          TIME OF CONCENTRATION (HRS)=   .3661     TIME TO PEAK (HRS)=   .2441     LAG TIME
(HRS)=   .2746

    COMPUTE NM HYD              ID=13 HYD NO=103 DA=0.0078 SQ MI
                                        PER A=0 PER B=10 PER C=0 PER D=90

                                        TP=0.0 MASSRAIN=-1

          TIME TO PEAK (hrs)=   .2441

          K =   .133008HR    TP =   .244052HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =
7.106420
          UNIT PEAK =   15.138    CFS   UNIT VOLUME =    .9991       B =   526.28      P60 =
1.8700
          AREA =      .007020 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

          K =   .239826HR    TP =   .244052HR    K/TP RATIO =   .982685     SHAPE CONSTANT, N =
3.593454
          UNIT PEAK =   1.0454    CFS   UNIT VOLUME =    .9869       B =   327.09      P60 =
1.8700
          AREA =      .000780 SQ MI    IA =    .50000 INCHES    INF =   1.25000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000
```

```
PRINT HYD                    ID=13 CODE=1

                                  PARTIAL HYDROGRAPH   103.00

    RUNOFF VOLUME =     2.25115 INCHES     =        .9365 ACRE-FEET
    PEAK DISCHARGE RATE =      15.22 CFS  AT   1.600 HOURS   BASIN AREA =   .0078 SQ. MI.


*
* **** SUB-BASIN 104 ****
* COURTYARD AREA
COMPUTE LT TP                LCODE=1 UPLAND/LAG TIME METHOD
                                     NK=1 ISLOPE=0

                                     LENGTH=282 FT SLOPE=0.007 K=2.0

                                     KN=0.021 CENTROID DIST=146 FT

         Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

         SCS UPLAND METHOD FACTORS
                                  LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
         SHEET FLOW PORTION              .0           .000000            .0000
         SHALLOW FLOW PORTION          282.0           .007000           2.0000
         CHANNEL FLOW PORTION            .0           .000000            .0000
         TOTAL BASIN                   282.0           .007000           2.0000

         TIME OF CONCENTRATION (HRS)=   .0468     TIME TO PEAK (HRS)=   .0312     LAG TIME
(HRS)=   .0351


         TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
         REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333
 LAG TIME (HRS)=   .1500

    COMPUTE NM HYD               ID=14 HYD NO=104 DA=0.0015 SQ MI
                                     PER A=0 PER B=5 PER C=45 PER D=50

                                     TP=0.0 MASSRAIN=-1

         TIME TO PEAK (hrs)=   .1333

         K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =
7.106420
         UNIT PEAK =   2.9603    CFS   UNIT VOLUME =    .9959       B =   526.28      P60 =
1.8700
         AREA =      .000750 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

         K =   .108406HR    TP =   .133333HR    K/TP RATIO =   .813048     SHAPE CONSTANT, N =
4.397846
         UNIT PEAK =   2.1424    CFS   UNIT VOLUME =    .9957       B =   380.88      P60 =
1.8700
         AREA =      .000750 SQ MI    IA =    .36500 INCHES    INF =    .87200 INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    PRINT HYD                    ID=14 CODE=1

                                  PARTIAL HYDROGRAPH   104.00

    RUNOFF VOLUME =     1.69063 INCHES     =        .1352 ACRE-FEET
    PEAK DISCHARGE RATE =       3.40 CFS  AT   1.500 HOURS   BASIN AREA =   .0015 SQ. MI.


*
* ADD 103 TO 104 TO GET 103.1
ADD HYD                      ID=15 HYD NO=103.1 ID I=13 ID II=14
PRINT HYD                    ID=15 CODE=1

                                  PARTIAL HYDROGRAPH   103.10

    RUNOFF VOLUME =     2.16066 INCHES     =       1.0717 ACRE-FEET
    PEAK DISCHARGE RATE =      17.59 CFS  AT   1.600 HOURS   BASIN AREA =   .0093 SQ. MI.
```

```
*
* **** SUB-BASIN 105 ****
* FRONT YARD AND PARKING AREA
COMPUTE LT TP              LCODE=1 UPLAND/LAG TIME METHOD
                                   NK=1 ISLOPE=0

                                   LENGTH=430 FT SLOPE=0.007 K=2.0

                                   KN=0.021 CENTROID DIST=220 FT

     Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

     SCS UPLAND METHOD FACTORS
                                LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
     SHEET FLOW PORTION              .0           .000000              .0000
     SHALLOW FLOW PORTION          430.0          .007000             2.0000
     CHANNEL FLOW PORTION            .0           .000000              .0000
     TOTAL BASIN                   430.0          .007000             2.0000

     TIME OF CONCENTRATION (HRS)=   .0714     TIME TO PEAK (HRS)=   .0476     LAG TIME
(HRS)=   .0535


     TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
     REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333
 LAG TIME (HRS)=   .1500

    COMPUTE NM HYD             ID=16 HYD NO=105 DA=0.0018 SQ MI
                                     PER A=0 PER B=0 PER C=15 PER D=85

                                     TP=0.0 MASSRAIN=-1

     TIME TO PEAK (hrs)=   .1333

     K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =
7.106420
     UNIT PEAK =   6.0390    CFS   UNIT VOLUME =    .9975       B =   526.28      P60 =
1.8700
     AREA =      .001530 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


     K =   .105893HR    TP =   .133333HR    K/TP RATIO =   .794199     SHAPE CONSTANT, N =
4.514851
     UNIT PEAK =   .78599    CFS   UNIT VOLUME =    .9849       B =   388.14      P60 =
1.8700
     AREA =      .000270 SQ MI    IA =    .35000 INCHES    INF =    .83000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    PRINT HYD                  ID=16 CODE=1

                                     PARTIAL HYDROGRAPH   105.00


    RUNOFF VOLUME =     2.21212 INCHES     =        .2124 ACRE-FEET
    PEAK DISCHARGE RATE =       4.71 CFS  AT   1.500 HOURS   BASIN AREA =   .0018 SQ. MI.


*
* ADD 105 TO 103.1 TO GET 103.2
ADD HYD                    ID=17 HYD NO=103.2 ID I=15 ID II=16
PRINT HYD                  ID=17 CODE=1

                                     PARTIAL HYDROGRAPH   103.20


    RUNOFF VOLUME =     2.16898 INCHES     =       1.2840 ACRE-FEET
    PEAK DISCHARGE RATE =      21.08 CFS  AT   1.550 HOURS   BASIN AREA =   .0111 SQ. MI.


*
* **** SUB-BASIN 110 ****
* SOUTH HALF OF SOCCER FIELD
COMPUTE LT TP              LCODE=1 UPLAND/LAG TIME METHOD
                                   NK=1 ISLOPE=0

                                   LENGTH=497 FT SLOPE=0.005 K=2.0
```

```
Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS
                              LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
SHEET FLOW PORTION                  .0           .000000             .0000
SHALLOW FLOW PORTION              497.0          .005000            2.0000
CHANNEL FLOW PORTION                .0           .000000             .0000
TOTAL BASIN                       497.0          .005000            2.0000

TIME OF CONCENTRATION (HRS)=   .0976     TIME TO PEAK (HRS)=   .0651    LAG TIME
(HRS)=   .0732

TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333
LAG TIME (HRS)=   .1500

COMPUTE NM HYD              ID=18 HYD NO=110 DA=0.005 SQ MI
                                   PER A=0 PER B=15 PER C=80 PER D=5

                                   TP=0.0 MASSRAIN=-1

TIME TO PEAK (hrs)=   .1333

K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =
7.106420
UNIT PEAK =   .98677    CFS   UNIT VOLUME =    .9890       B =   526.28      P60 =
1.8700
AREA =      .000250 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

K =   .109861HR    TP =   .133333HR    K/TP RATIO =   .823960     SHAPE CONSTANT, N =
4.333335
UNIT PEAK =   13.424    CFS   UNIT VOLUME =    1.001       B =   376.81      P60 =
1.8700
AREA =      .004750 SQ MI    IA =    .37368 INCHES    INF =    .89632 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                   ID=18 CODE=1

                                   PARTIAL HYDROGRAPH   110.00

RUNOFF VOLUME =     1.00737 INCHES     =        .2686 ACRE-FEET
PEAK DISCHARGE RATE =       8.94 CFS  AT   1.500 HOURS   BASIN AREA =   .0050 SQ. MI.


*
* ADD 110 TO 103.2 TO GET 110.1
ADD HYD                     ID=19 HYD NO=110.1 ID I=18 ID II=17
PRINT HYD                   ID=19 CODE=1

                                   PARTIAL HYDROGRAPH   110.10

RUNOFF VOLUME =     1.80822 INCHES     =       1.5526 ACRE-FEET
PEAK DISCHARGE RATE =      29.25 CFS  AT   1.550 HOURS   BASIN AREA =   .0161 SQ. MI.


*
*  ROUTE FLOWS from basins 110,105,104,103 THROUGH POND
ROUTE RESERVOIR             ID=60  HYD NO=POND.STH  INFLOW ID=19 CODE=5
                                   OUTFLOW     STORAGE     ELEV

                                   0.00       0.0000       91

                                   0.38       0.0001       92

                                   5.69       0.0002       93

                                   14.69      0.0003       94

                                   22.22      0.0004       95

                                   27.23      0.2159       96
```

* * * * * * * * * * * * * * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	91.00	.000	.00
.25	.00	91.00	.000	.00
.50	.00	91.00	.000	.00
.75	.00	91.00	.000	.00
1.00	.00	91.00	.000	.00
1.25	1.01	92.12	.000	1.01
1.50	28.02	95.05	.012	22.49
1.75	17.59	95.20	.043	23.21
2.00	9.00	93.38	.000	9.07
2.25	4.06	92.68	.000	4.00
2.50	1.77	92.27	.000	1.83
2.75	1.02	92.11	.000	.97
3.00	.63	92.06	.000	.68
3.25	.42	91.99	.000	.38
3.50	.30	91.83	.000	.32
3.75	.23	91.60	.000	.23
4.00	.19	91.49	.000	.19
4.25	.17	91.44	.000	.17
4.50	.16	91.42	.000	.16
4.75	.16	91.42	.000	.16
5.00	.16	91.43	.000	.16
5.25	.17	91.44	.000	.17
5.50	.18	91.46	.000	.18
5.75	.18	91.48	.000	.18
6.00	.20	91.51	.000	.19
6.25	.22	91.58	.000	.22
6.50	.23	91.61	.000	.23
6.75	.23	91.61	.000	.23
7.00	.23	91.60	.000	.23
7.25	.23	91.59	.000	.23
7.50	.22	91.59	.000	.22
7.75	.22	91.58	.000	.22
8.00	.22	91.57	.000	.22
8.25	.21	91.56	.000	.21
8.50	.21	91.55	.000	.21
8.75	.21	91.54	.000	.21
9.00	.20	91.53	.000	.20
9.25	.20	91.53	.000	.20
9.50	.20	91.52	.000	.20
9.75	.19	91.51	.000	.19
10.00	.19	91.51	.000	.19
10.25	.19	91.50	.000	.19
10.50	.19	91.49	.000	.19
10.75	.18	91.48	.000	.18
11.00	.18	91.48	.000	.18
11.25	.18	91.47	.000	.18
11.50	.18	91.47	.000	.18
11.75	.18	91.46	.000	.18
12.00	.17	91.46	.000	.17
12.25	.17	91.45	.000	.17
12.50	.17	91.44	.000	.17
12.75	.17	91.44	.000	.17
13.00	.17	91.43	.000	.17
13.25	.16	91.43	.000	.16
13.50	.16	91.43	.000	.16
13.75	.16	91.42	.000	.16

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
14.00	.16	91.41	.000	.16
14.25	.16	91.41	.000	.16
14.50	.15	91.41	.000	.15
14.75	.15	91.40	.000	.15
15.00	.15	91.40	.000	.15
15.25	.15	91.40	.000	.15
15.50	.15	91.39	.000	.15
15.75	.15	91.39	.000	.15
16.00	.15	91.38	.000	.15
16.25	.14	91.38	.000	.14
16.50	.14	91.37	.000	.14
16.75	.14	91.37	.000	.14
17.00	.14	91.37	.000	.14
17.25	.14	91.37	.000	.14
17.50	.14	91.36	.000	.14

17.75	.14	91.36	.000	.14
18.00	.13	91.35	.000	.13
18.25	.13	91.35	.000	.13
18.50	.13	91.35	.000	.13
18.75	.13	91.34	.000	.13
19.00	.13	91.34	.000	.13
19.25	.13	91.34	.000	.13
19.50	.13	91.34	.000	.13
19.75	.13	91.33	.000	.13
20.00	.13	91.33	.000	.13
20.25	.12	91.33	.000	.12
20.50	.12	91.32	.000	.12
20.75	.12	91.32	.000	.12
21.00	.12	91.32	.000	.12
21.25	.12	91.32	.000	.12
21.50	.12	91.31	.000	.12
21.75	.12	91.31	.000	.12
22.00	.12	91.31	.000	.12
22.25	.12	91.31	.000	.12
22.50	.12	91.30	.000	.12
22.75	.11	91.30	.000	.11
23.00	.11	91.30	.000	.11
23.25	.11	91.30	.000	.11
23.50	.11	91.29	.000	.11
23.75	.11	91.29	.000	.11
24.00	.11	91.29	.000	.11
24.25	.05	91.14	.000	.05
24.50	.01	91.03	.000	.01
24.75	.01	91.02	.000	.01
25.00	.00	91.01	.000	.00

PEAK DISCHARGE = 23.734 CFS - PEAK OCCURS AT HOUR 1.65
MAXIMUM WATER SURFACE ELEVATION = 95.302
MAXIMUM STORAGE = .0655 AC-FT INCREMENTAL TIME= .050000HRS

PRINT HYD ID=60 CODE=0

HYDROGRAPH FROM AREA POND.STH

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.100	.2	10.200	.2	15.300	.1	20.400	.1
.050	.0	5.150	.2	10.250	.2	15.350	.1	20.450	.1
.100	.0	5.200	.2	10.300	.2	15.400	.1	20.500	.1
.150	.0	5.250	.2	10.350	.2	15.450	.1	20.550	.1
.200	.0	5.300	.2	10.400	.2	15.500	.1	20.600	.1
.250	.0	5.350	.2	10.450	.2	15.550	.1	20.650	.1
.300	.0	5.400	.2	10.500	.2	15.600	.1	20.700	.1
.350	.0	5.450	.2	10.550	.2	15.650	.1	20.750	.1
.400	.0	5.500	.2	10.600	.2	15.700	.1	20.800	.1
.450	.0	5.550	.2	10.650	.2	15.750	.1	20.850	.1
.500	.0	5.600	.2	10.700	.2	15.800	.1	20.900	.1
.550	.0	5.650	.2	10.750	.2	15.850	.1	20.950	.1
.600	.0	5.700	.2	10.800	.2	15.900	.1	21.000	.1
.650	.0	5.750	.2	10.850	.2	15.950	.1	21.050	.1
.700	.0	5.800	.2	10.900	.2	16.000	.1	21.100	.1
.750	.0	5.850	.2	10.950	.2	16.050	.1	21.150	.1
.800	.0	5.900	.2	11.000	.2	16.100	.1	21.200	.1
.850	.0	5.950	.2	11.050	.2	16.150	.1	21.250	.1
.900	.0	6.000	.2	11.100	.2	16.200	.1	21.300	.1
.950	.0	6.050	.2	11.150	.2	16.250	.1	21.350	.1
1.000	.0	6.100	.2	11.200	.2	16.300	.1	21.400	.1

	1.050	.0		6.150	.2		11.250	.2	16.350
.1	21.450	.1							
	1.100	.0		6.200	.2		11.300	.2	16.400
.1	21.500	.1							
	1.150	.0		6.250	.2		11.350	.2	16.450
.1	21.550	.1							
	1.200	.2		6.300	.2		11.400	.2	16.500
.1	21.600	.1							
	1.250	1.0		6.350	.2		11.450	.2	16.550
.1	21.650	.1							
	1.300	2.8		6.400	.2		11.500	.2	16.600
.1	21.700	.1							
	1.350	6.7		6.450	.2		11.550	.2	16.650
.1	21.750	.1							
	1.400	13.5		6.500	.2		11.600	.2	16.700
.1	21.800	.1							
	1.450	22.0		6.550	.2		11.650	.2	16.750
.1	21.850	.1							
	1.500	22.5		6.600	.2		11.700	.2	16.800
.1	21.900	.1							
	1.550	23.1		6.650	.2		11.750	.2	16.850
.1	21.950	.1							
	1.600	23.5		6.700	.2		11.800	.2	16.900
.1	22.000	.1							
	1.650	23.7		6.750	.2		11.850	.2	16.950
.1	22.050	.1							
	1.700	23.6		6.800	.2		11.900	.2	17.000
.1	22.100	.1							
	1.750	23.2		6.850	.2		11.950	.2	17.050
.1	22.150	.1							
	1.800	22.6		6.900	.2		12.000	.2	17.100
.1	22.200	.1							
	1.850	13.0		6.950	.2		12.050	.2	17.150
.1	22.250	.1							
	1.900	11.5		7.000	.2		12.100	.2	17.200
.1	22.300	.1							
	1.950	10.0		7.050	.2		12.150	.2	17.250
.1	22.350	.1							
	2.000	9.1		7.100	.2		12.200	.2	17.300
.1	22.400	.1							
	2.050	8.0		7.150	.2		12.250	.2	17.350
.1	22.450	.1							
	2.100	7.2		7.200	.2		12.300	.2	17.400
.1	22.500	.1							
	2.150	5.9		7.250	.2		12.350	.2	17.450
.1	22.550	.1							
	2.200	5.0		7.300	.2		12.400	.2	17.500
.1	22.600	.1							
	2.250	4.0		7.350	.2		12.450	.2	17.550
.1	22.650	.1							
	2.300	3.4		7.400	.2		12.500	.2	17.600
.1	22.700	.1							
	2.350	2.7		7.450	.2		12.550	.2	17.650
.1	22.750	.1							
	2.400	2.4		7.500	.2		12.600	.2	17.700
.1	22.800	.1							
	2.450	2.0		7.550	.2		12.650	.2	17.750
.1	22.850	.1							
	2.500	1.8		7.600	.2		12.700	.2	17.800
.1	22.900	.1							
	2.550	1.5		7.650	.2		12.750	.2	17.850
.1	22.950	.1							
	2.600	1.5		7.700	.2		12.800	.2	17.900
.1	23.000	.1							
	2.650	1.2		7.750	.2		12.850	.2	17.950
.1	23.050	.1							
	2.700	1.2		7.800	.2		12.900	.2	18.000
.1	23.100	.1							
	2.750	1.0		7.850	.2		12.950	.2	18.050
.1	23.150	.1							
	2.800	1.0		7.900	.2		13.000	.2	18.100
.1	23.200	.1							
	2.850	.8		7.950	.2		13.050	.2	18.150
.1	23.250	.1							
	2.900	.8		8.000	.2		13.100	.2	18.200
.1	23.300	.1							
	2.950	.6		8.050	.2		13.150	.2	18.250
.1	23.350	.1							
	3.000	.7		8.100	.2		13.200	.2	18.300
.1	23.400	.1							
	3.050	.5		8.150	.2		13.250	.2	18.350
.1	23.450	.1							
	3.100	.6		8.200	.2		13.300	.2	18.400
.1	23.500	.1							

	3.150	.4	8.250	.2	13.350	.2	18.450	.1	23.550
	3.200	.5	8.300	.2	13.400	.2	18.500	.1	23.600
	3.250	.4	8.350	.2	13.450	.2	18.550	.1	23.650
	3.300	.4	8.400	.2	13.500	.2	18.600	.1	23.700
	3.350	.3	8.450	.2	13.550	.2	18.650	.1	23.750
	3.400	.4	8.500	.2	13.600	.2	18.700	.1	23.800
	3.450	.3	8.550	.2	13.650	.2	18.750	.1	23.850
	3.500	.3	8.600	.2	13.700	.2	18.800	.1	23.900
	3.550	.3	8.650	.2	13.750	.2	18.850	.1	23.950
	3.600	.3	8.700	.2	13.800	.2	18.900	.1	24.000
	3.650	.2	8.750	.2	13.850	.2	18.950	.1	24.050
	3.700	.2	8.800	.2	13.900	.2	19.000	.1	24.100
	3.750	.2	8.850	.2	13.950	.2	19.050	.1	24.150
	3.800	.2	8.900	.2	14.000	.2	19.100	.1	24.200
	3.850	.2	8.950	.2	14.050	.2	19.150	.1	24.250
	3.900	.2	9.000	.2	14.100	.2	19.200	.1	24.300
	3.950	.2	9.050	.2	14.150	.2	19.250	.1	24.350
	4.000	.2	9.100	.2	14.200	.2	19.300	.1	24.400
	4.050	.2	9.150	.2	14.250	.2	19.350	.1	24.450
	4.100	.2	9.200	.2	14.300	.2	19.400	.1	24.500
	4.150	.2	9.250	.2	14.350	.2	19.450	.1	24.550
	4.200	.2	9.300	.2	14.400	.2	19.500	.1	24.600
	4.250	.2	9.350	.2	14.450	.2	19.550	.1	24.650
	4.300	.2	9.400	.2	14.500	.2	19.600	.1	24.700
	4.350	.2	9.450	.2	14.550	.2	19.650	.1	24.750
	4.400	.2	9.500	.2	14.600	.2	19.700	.1	24.800
	4.450	.2	9.550	.2	14.650	.2	19.750	.1	24.850
	4.500	.2	9.600	.2	14.700	.2	19.800	.1	24.900
	4.550	.2	9.650	.2	14.750	.2	19.850	.1	24.950
	4.600	.2	9.700	.2	14.800	.2	19.900	.1	25.000
	4.650	.2	9.750	.2	14.850	.2	19.950	.1	25.050
	4.700	.2	9.800	.2	14.900	.2	20.000	.1	25.100
	4.750	.2	9.850	.2	14.950	.2	20.050	.1	25.150
	4.800	.2	9.900	.2	15.000	.2	20.100	.1	25.200
	4.850	.2	9.950	.2	15.050	.2	20.150	.1	25.250
	4.900	.2	10.000	.2	15.100	.2	20.200	.1	25.300
	4.950	.2	10.050	.2	15.150	.2	20.250	.1	25.350
	5.000	.2	10.100	.2	15.200	.2	20.300	.1	25.400
	5.050	.2	10.150	.2	15.250	.2	20.350	.1	25.450

RUNOFF VOLUME = 1.80822 INCHES = 1.5526 ACRE-FEET
PEAK DISCHARGE RATE = 23.73 CFS AT 1.650 HOURS BASIN AREA = .0161 SQ. MI.

```
* **** SUB-BASIN 112 ****
* WEST SIDE OF TRACK & FIELD
COMPUTE LT TP              LCODE=1 UPLAND/LAG TIME METHOD
                                   NK=1 ISLOPE=0

                                   LENGTH=318 FT SLOPE=0.006 K=2.0

                                   KN=0.021 CENTROID DIST=266 FT


     Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

     SCS UPLAND METHOD FACTORS
                                LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
     SHEET FLOW PORTION              .0           .000000             .0000
     SHALLOW FLOW PORTION          318.0          .006000            2.0000
     CHANNEL FLOW PORTION            .0           .000000             .0000
     TOTAL BASIN                   318.0          .006000            2.0000

     TIME OF CONCENTRATION (HRS)=   .0570     TIME TO PEAK (HRS)=   .0380     LAG TIME
(HRS)=   .0428


     TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
     REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333
 LAG TIME (HRS)=   .1500

    COMPUTE NM HYD             ID=20 HYD NO=112 DA=0.002 SQ MI
                                     PER A=0 PER B=80 PER C=0 PER D=20

                                     TP=0.0 MASSRAIN=-1

     TIME TO PEAK (hrs)=   .1333

     K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =
7.106420
     UNIT PEAK =   1.5788    CFS   UNIT VOLUME =    .9927       B =   526.28      P60 =
1.8700
     AREA =      .000400 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

     K =   .131024HR    TP =   .133333HR    K/TP RATIO =   .982685     SHAPE CONSTANT, N =
3.593454
     UNIT PEAK =   3.9251    CFS   UNIT VOLUME =    .9976       B =   327.09      P60 =
1.8700
     AREA =      .001600 SQ MI    IA =    .50000 INCHES    INF =   1.25000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    PRINT HYD                  ID=20 CODE=1

                                     PARTIAL HYDROGRAPH   112.00


    RUNOFF VOLUME =     1.01853 INCHES     =        .1086 ACRE-FEET
    PEAK DISCHARGE RATE =       3.18 CFS  AT   1.500 HOURS   BASIN AREA =   .0020 SQ. MI.


    *
    * ADD 112 TO 110.1 TO GET 112.1
    ADD HYD                    ID=21 HYD NO=112.1 ID I=60 ID II=20
    PRINT HYD                  ID=21 CODE=1

                                     PARTIAL HYDROGRAPH   112.10

    RUNOFF VOLUME =     1.72095 INCHES     =       1.6613 ACRE-FEET
    PEAK DISCHARGE RATE =      25.97 CFS  AT   1.550 HOURS   BASIN AREA =   .0181 SQ. MI.


*
* **** SUB-BASIN 113 ****
* EAST SIDE OF TRACK & FIELD
COMPUTE LT TP              LCODE=1 UPLAND/LAG TIME METHOD
                                   NK=1 ISLOPE=0

                                   LENGTH=315 FT SLOPE=0.006 K=2.0

                                   KN=0.021 CENTROID DIST=273 FT
```

```
Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS
                          LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
SHEET FLOW PORTION              .0          .000000              .0000
SHALLOW FLOW PORTION          315.0          .006000             2.0000
CHANNEL FLOW PORTION            .0          .000000              .0000
TOTAL BASIN                   315.0          .006000             2.0000

TIME OF CONCENTRATION (HRS)=   .0565    TIME TO PEAK (HRS)=   .0377     LAG TIME
(HRS)=   .0424

TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
REVISED VALUES: TIME OF CONCENTRATION (HRS)=  .2000     TIME TO PEAK (HRS)=   .1333
LAG TIME (HRS)=   .1500

COMPUTE NM HYD              ID=22 HYD NO=113 DA=0.0023 SQ MI
                                  PER A=0 PER B=75 PER C=0 PER D=25

                                  TP=0.0 MASSRAIN=-1

TIME TO PEAK (hrs)=   .1333

K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =
7.106420
UNIT PEAK =   2.2696    CFS   UNIT VOLUME =    .9941       B =   526.28      P60 =
1.8700
AREA =       .000575 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

K =   .131024HR    TP =   .133333HR    K/TP RATIO =   .982685     SHAPE CONSTANT, N =
3.593454
UNIT PEAK =   4.2317    CFS   UNIT VOLUME =    .9980       B =   327.09      P60 =
1.8700
AREA =       .001725 SQ MI    IA =    .50000 INCHES    INF =   1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                   ID=22 CODE=1

                                  PARTIAL HYDROGRAPH   113.00

    RUNOFF VOLUME =     1.10658 INCHES     =        .1357 ACRE-FEET
    PEAK DISCHARGE RATE =       3.82 CFS  AT   1.500 HOURS   BASIN AREA =   .0023 SQ. MI.


*
* ADD 113 TO 112.1 TO GET SOUTH.PIPE
ADD HYD                     ID=23 HYD NO=SOUTH.PIPE ID I=21 ID II=22
PRINT HYD                   ID=23 CODE=1

                                  HYDROGRAPH FROM AREA SOUTH.PIPE

    RUNOFF VOLUME =     1.65167 INCHES     =       1.7970 ACRE-FEET
    PEAK DISCHARGE RATE =      29.48 CFS  AT   1.500 HOURS   BASIN AREA =   .0204 SQ. MI.


*

*S BASINS CONTRIBUTING TO FORTUNA ROAD RUNOFF
* **** SUB-BASIN 100****
* WEST OF Y-HALL
COMPUTE LT TP               LCODE=1 UPLAND/LAG TIME METHOD
                                    NK=1 ISLOPE=0

                                    LENGTH=540 FT SLOPE=0.003 K=2.0

                                    KN=0.021 CENTROID DIST=269 FT

     Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

     SCS UPLAND METHOD FACTORS
                          LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
     SHEET FLOW PORTION              .0          .000000              .0000
     SHALLOW FLOW PORTION          540.0          .003000             2.0000
```

```
CHANNEL FLOW PORTION                .0          .000000          .0000
TOTAL BASIN                       540.0          .003000         2.0000

TIME OF CONCENTRATION (HRS)=   .1369     TIME TO PEAK (HRS)=   .0913     LAG TIME
(HRS)=   .1027

TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333
LAG TIME (HRS)=   .1500

COMPUTE NM HYD              ID=24 HYD NO=100 DA=0.002 SQ MI
                                  PER A=0 PER B=0 PER C=5 PER D=95

                                  TP=0.0 MASSRAIN=-1

TIME TO PEAK (hrs)=   .1333

K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =
7.106420
UNIT PEAK =   7.4994    CFS   UNIT VOLUME =    .9978       B =   526.28      P60 =
1.8700
AREA =      .001900 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

K =   .105893HR    TP =   .133333HR    K/TP RATIO =   .794199     SHAPE CONSTANT, N =
4.514851
UNIT PEAK =   .29111    CFS   UNIT VOLUME =    .9586       B =   388.14      P60 =
1.8700
AREA =      .000100 SQ MI    IA =    .35000 INCHES    INF =    .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                   ID=24 CODE=1

                                  PARTIAL HYDROGRAPH   100.00

RUNOFF VOLUME =     2.35553 INCHES     =        .2513 ACRE-FEET
PEAK DISCHARGE RATE =       5.42 CFS  AT   1.500 HOURS   BASIN AREA =   .0020 SQ. MI.

*

FINISH

NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 18:28:31
```

Appendix B
CulvertMaster

Rating Table Report
24" RCP SOUTH

Range Data:

	Minimum	Maximum	Increment	
Allowable HW E	91.00	100.00	1.00	ft

HW Elev. (ft)	Discharge (cfs)
91.00	0.00
92.00	0.38
93.00	5.69
94.00	14.69
95.00	22.22
96.00	27.23
97.00	30.63
98.00	33.47
99.00	36.11
100.00	38.57

Rating Table Report
24" RCP SOUTH

Range Data:

	Minimum	Maximum	Increment	
Allowable HW E	90.00	100.00	1.00	ft

HW Elev. (ft)	Discharge (cfs)
90.00	0.00
91.00	0.00
92.00	0.38
93.00	5.69
94.00	14.69
95.00	22.22
96.00	27.23
97.00	30.63
98.00	33.47
99.00	36.11
100.00	38.57

Culvert Calculator Report
24" RCP NORTH

Solve For: Discharge

Culvert Summary					
Allowable HW Elevation	96.50	ft	Headwater Depth/Height	3.12	
Computed Headwater Elev	96.50	ft	Discharge	34.89	cfs
Inlet Control HW Elev.	96.50	ft	Tailwater Elevation	0.00	ft
Outlet Control HW Elev.	95.32	ft	Control Type	Inlet Control	

Grades					
Upstream Invert	90.27	ft	Downstream Invert	89.54	ft
Length	40.00	ft	Constructed Slope	0.018250	ft/ft

Hydraulic Profile					
Profile	CompositeM2PressureProfile		Depth, Downstream	1.92	ft
Slope Type	Mild		Normal Depth	N/A	ft
Flow Regime	Subcritical		Critical Depth	1.92	ft
Velocity Downstream	11.26	ft/s	Critical Slope	0.020717	ft/ft

Section					
Section Shape	Circular		Mannings Coefficient	0.013	
Section Material	Concrete		Span	2.00	ft
Section Size	24 inch		Rise	2.00	ft
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	95.32	ft	Upstream Velocity Head	1.92	ft
Ke	0.50		Entrance Loss	0.96	ft

Inlet Control Properties					
Inlet Control HW Elev.	96.50	ft	Flow Control	N/A	
Inlet Type	Square edge w/headwall		Area Full	3.1	ft^2
K	0.00980		HDS 5 Chart	1	
M	2.00000		HDS 5 Scale	1	
C	0.03980		Equation Form	1	
Y	0.67000				

Rating Table Report
24" RCP NORTH

Range Data:

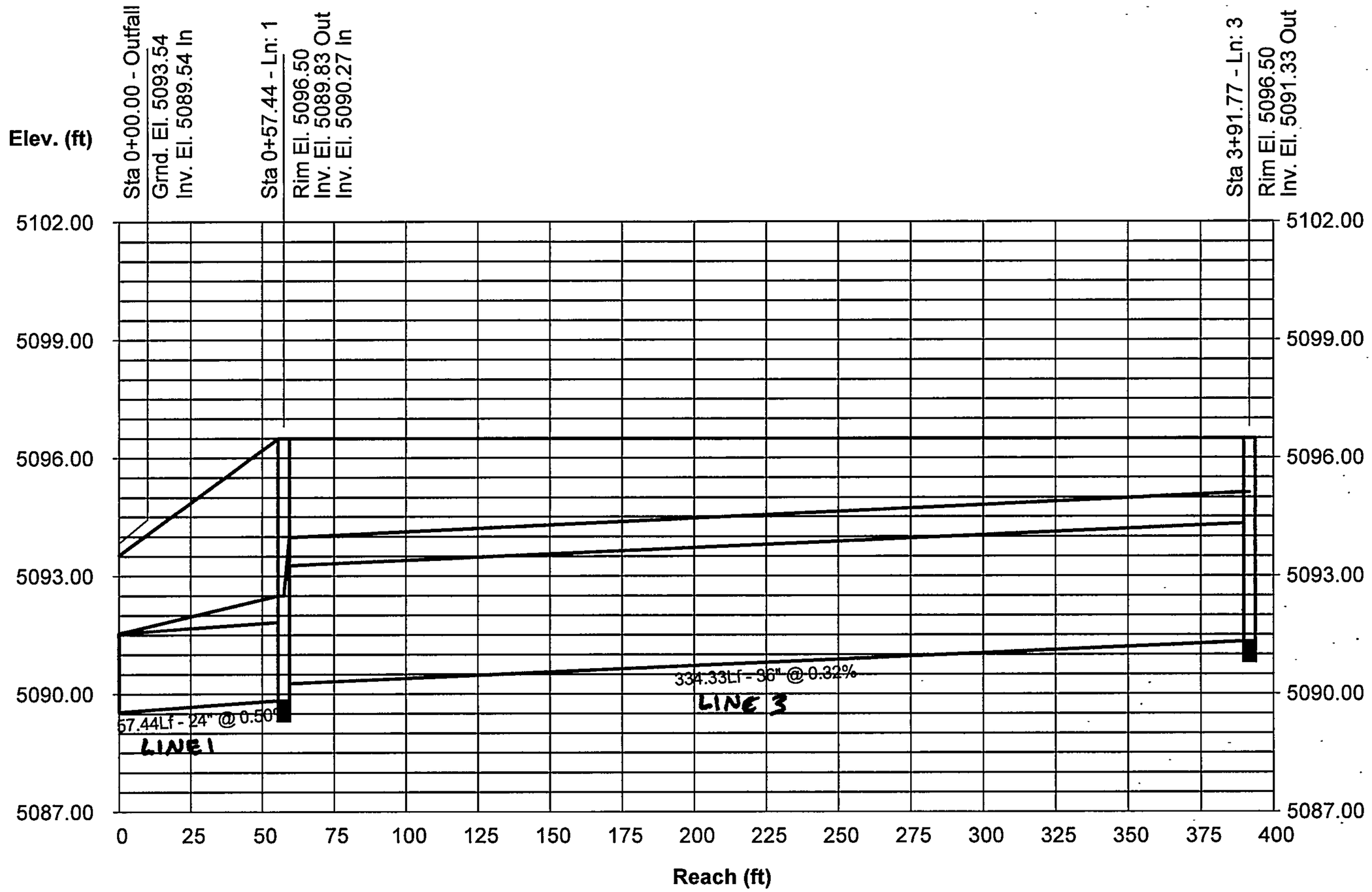
	Minimum	Maximum	Increment	
Allowable HW E	90.00	100.00	1.00	ft

HW Elev. (ft)	Discharge (cfs)
90.00	0.00
91.00	1.89
92.00	9.14
93.00	18.60
94.00	24.44
95.00	29.07
96.00	33.06
97.00	36.62
98.00	39.86
99.00	42.86
100.00	45.66

Appendix C
Hydraflow

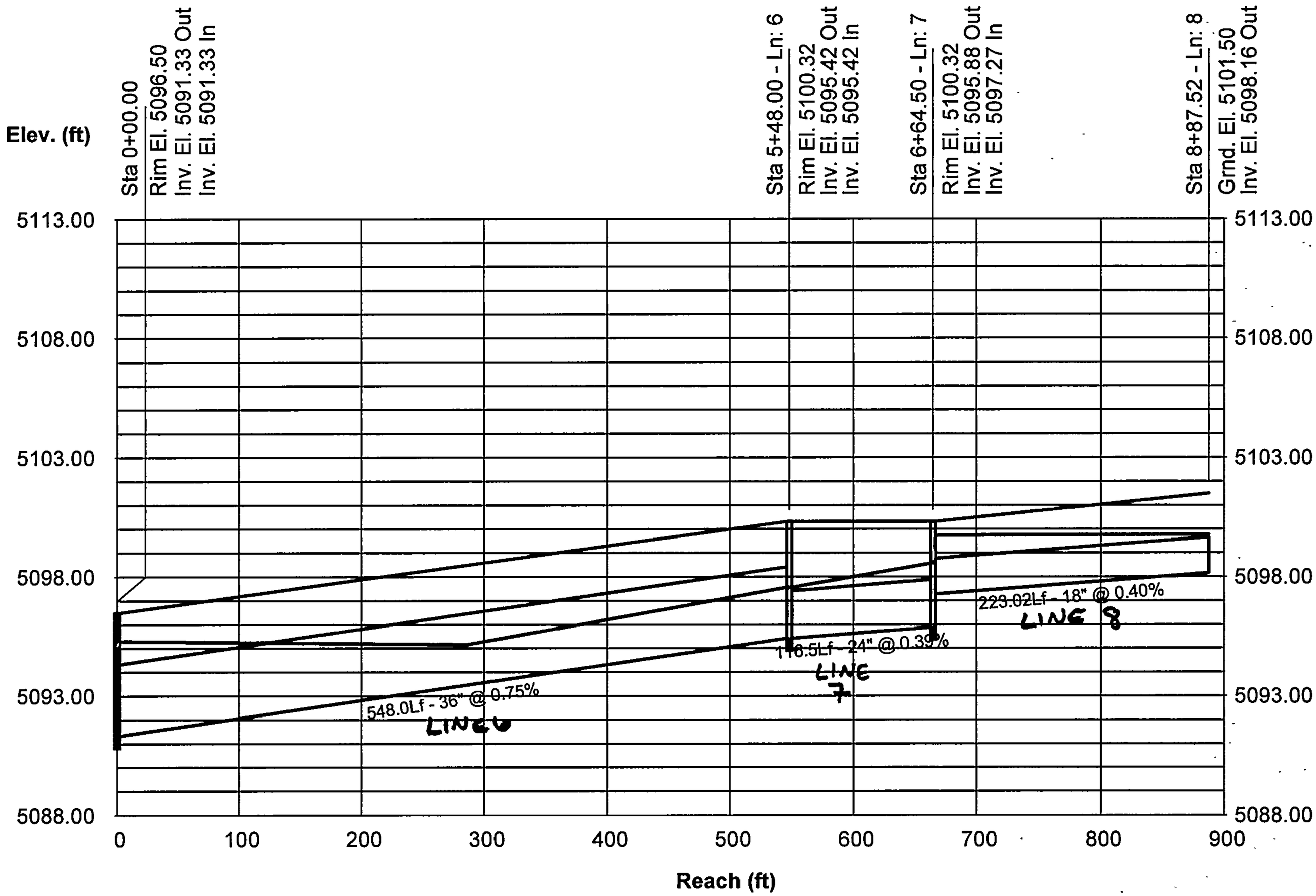
Storm Sewer Profile

Proj. file: Master Plan.stm



Storm Sewer Profile

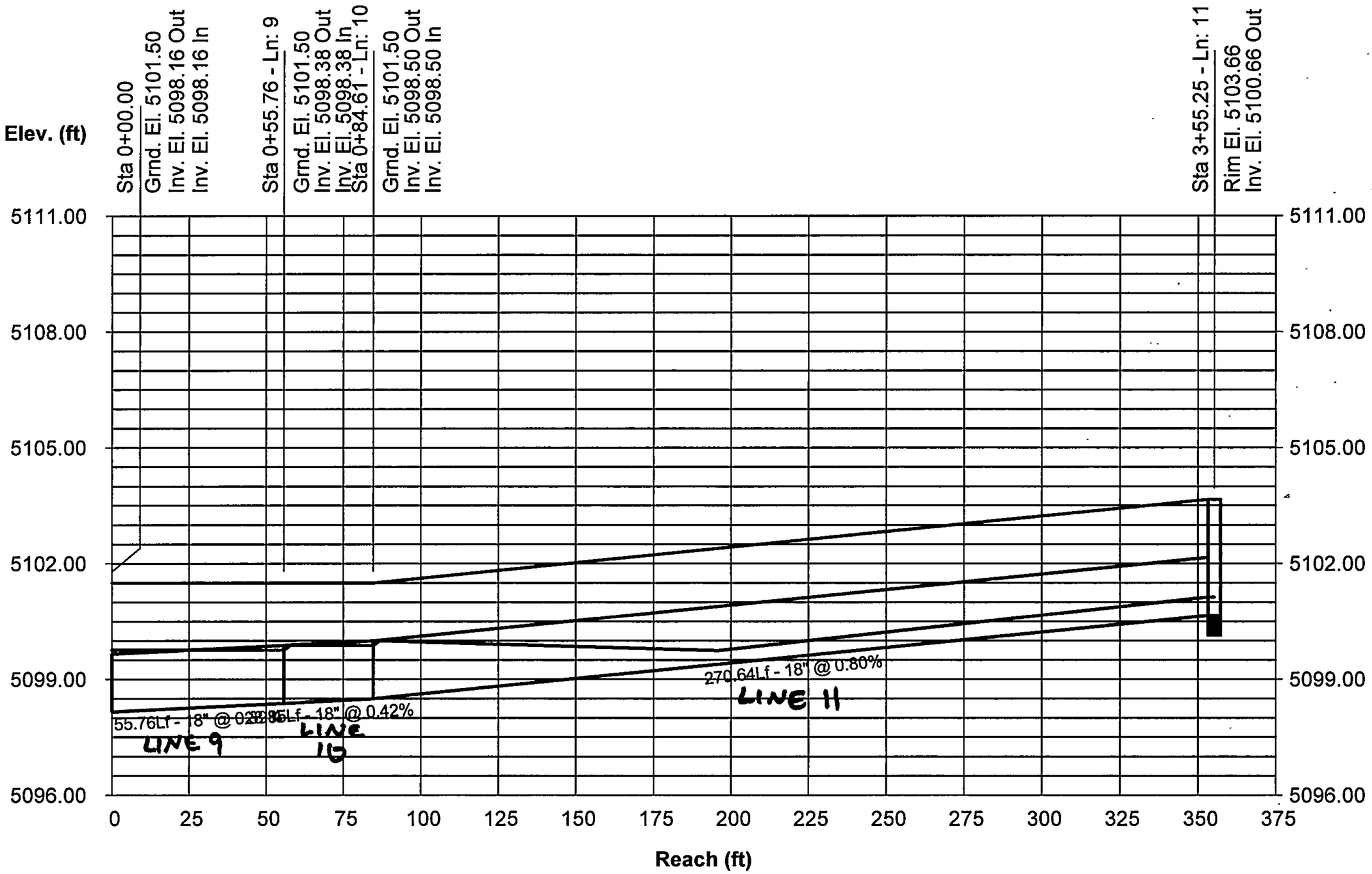
Proj. file: Master Plan.stm



Hydraflow Storm Sewers 2005

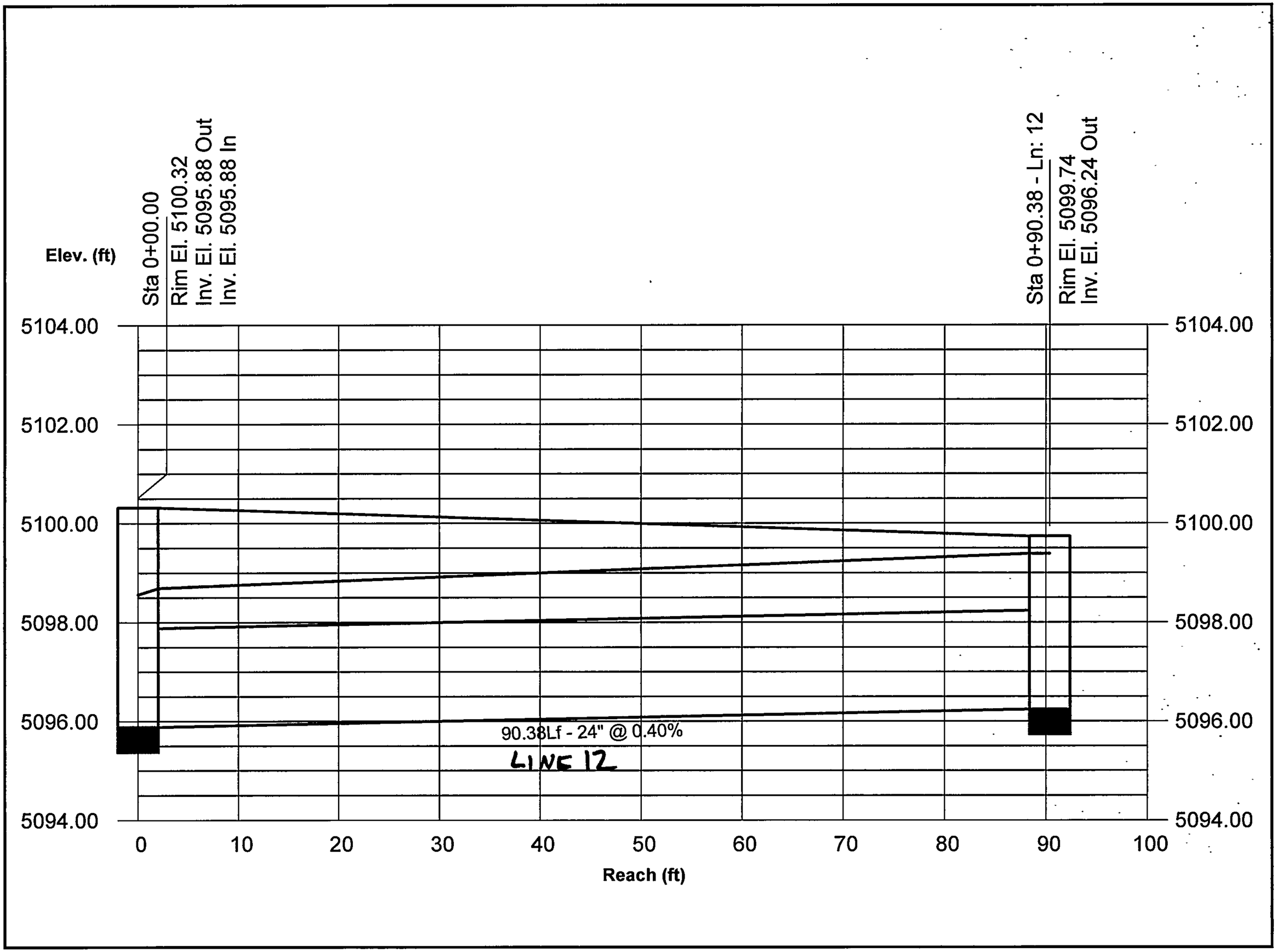
Storm Sewer Profile

Proj. file: Master Plan.stm



Storm Sewer Profile

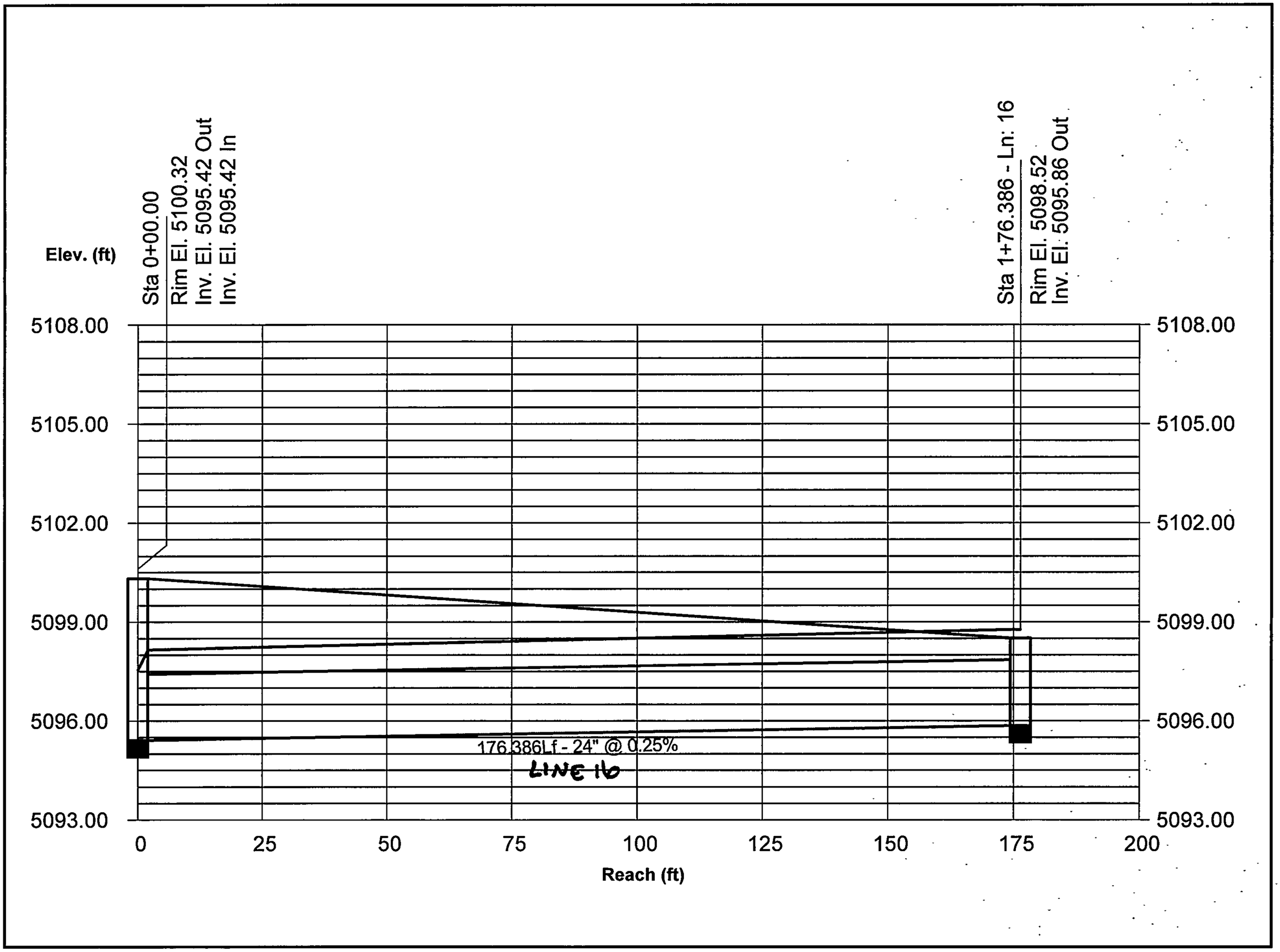
Proj. file: Master Plan.stm



Hydraflow Storm Sewers 2005

Storm Sewer Profile

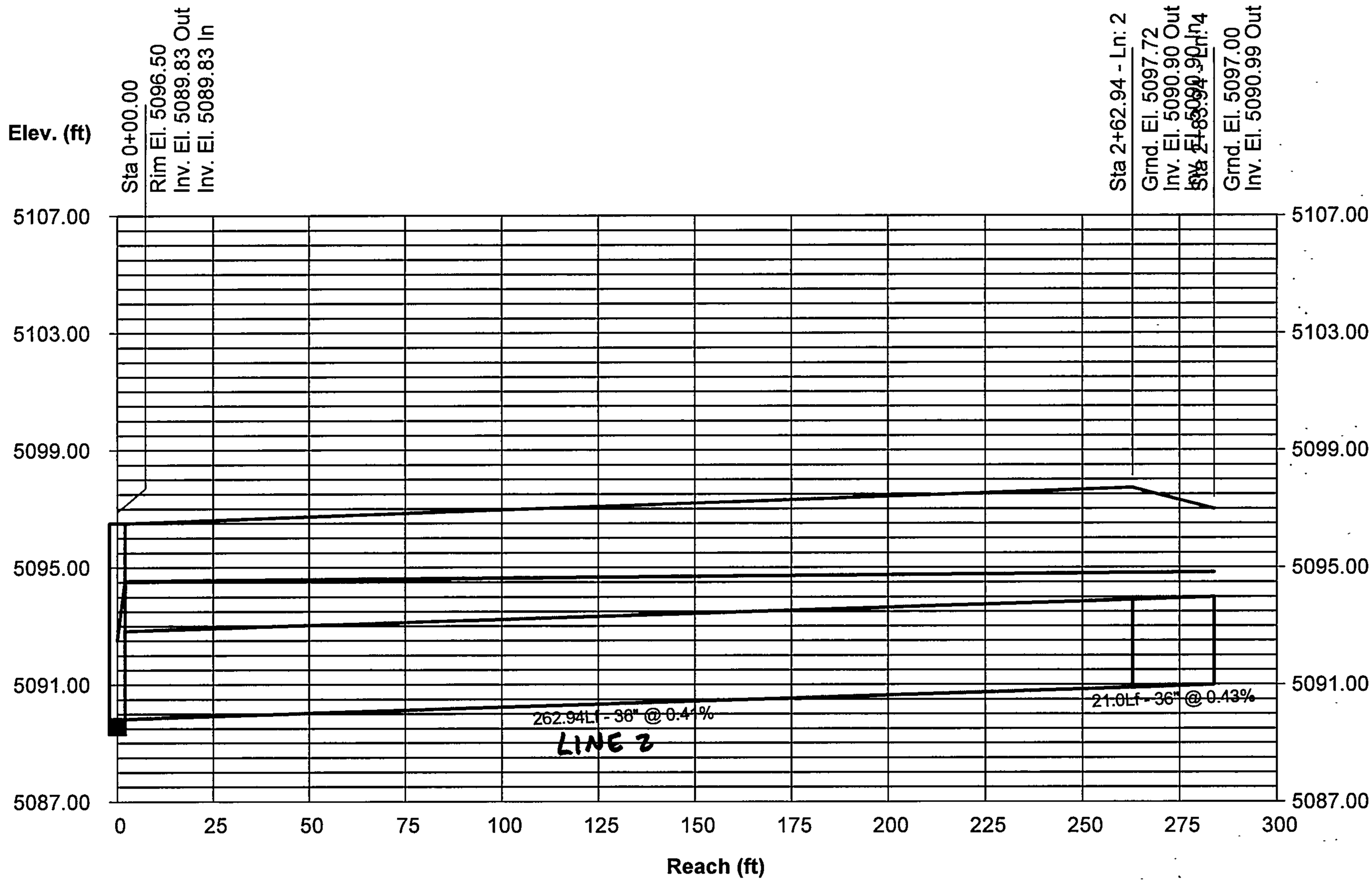
Proj. file: Master Plan.stm



Hydraflow Storm Sewers 2005

Storm Sewer Profile

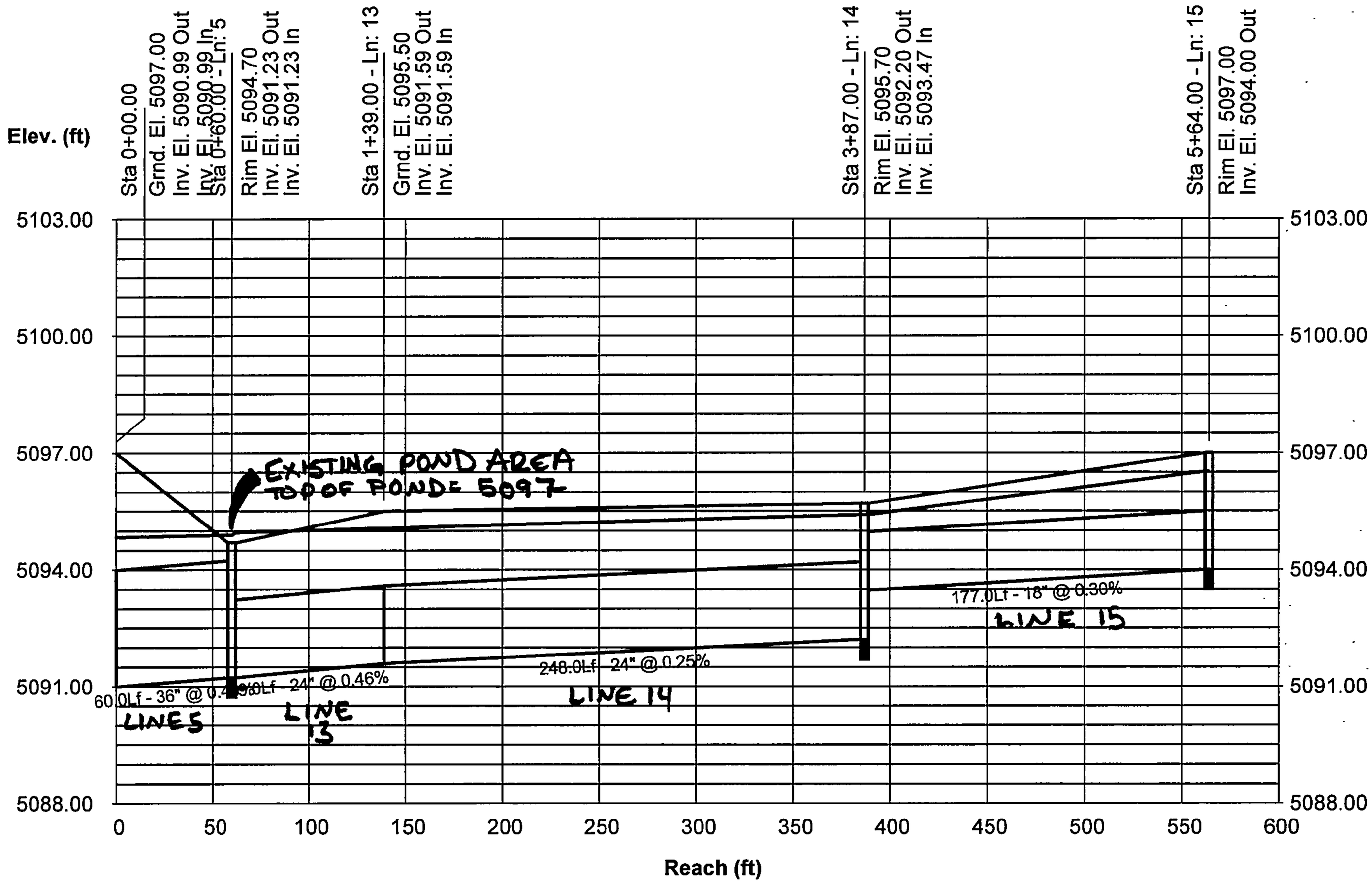
Proj. file: Master Plan.stm



Hydraflow Storm Sewers 2005

Storm Sewer Profile

Proj. file: Master Plan.stm



Hydraflow Storm Sewers 2005

CITY OF ALBUQUERQUE

August 7, 2006

John Tellez, P.E.
Wilson & Company
4900 Lang Ave. NE
Albuquerque, NM 87109

Re: West Mesa High School Drainage Improvements, 6701 Fortuna Rd NW, Grading and Drainage Plan

Engineer's Stamp dated 7-3-06 (J10-D5)

Dear Mr. Tellez,

Based upon the information provided in your submittal received 7-03-06, the above referenced plan cannot be approved for Paving Permit or Grading Permit until the following comments are addressed:

1. Per the letter sent with your current submittal, a bound and stamped copy of the AHYMO input and output files was included with your submittal. However, I do not have a copy of this data. Please provide a bound, stamped, signed, and dated copy of the AHYMO input and output files with your next submittal.
2. My previous letter questioned the capacity of the proposed on-site storm drain and inlets to handle the 100-year flow. You state within your submittal letter that "brief ponding will occur within the project limits," but you do not provide any quantification. Please provide calculations for this and show the ponding limits for the 100-year flow. Will this ponding flood the existing buildings?

If you have any questions, you can contact me at 924-3981.

Sincerely,

Kristal D. Metro, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: File

P.O. Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

CITY OF ALBUQUERQUE

June 6, 2006

John Tellez, P.E.
Wilson & Company
2600 The American Rd. SE, Suite 100
Rio Rancho, NM 87124

Re: West Mesa High School Drainage Improvements, 6701 Fortuna Rd NW, Grading and Drainage Plan

Plan Undated (J10-D5)

Dear Mr. Tellez,

Based upon the information provided in your submittal received 5-19-06, the above referenced plan cannot be approved for Paving Permit or Grading Permit until the following comments are addressed:

1. Based on the data provided for Fortuna Road, half of the roadway drains to the project site. Please revise your calculations and basin map.
2. The AHYMO output provided on the grading and drainage plan is defined as the existing conditions. However, these conditions are not shown on the plan provided. For example, five ponds are defined on the AHYMO output sheet, but I do not see their location on the map. Please provide additional information regarding the location of, and proposed removal of, the existing ponds. Also, the hydrograph identification used does not match to the basins shown on the plan.
3. Based on the data provided in the West Mesa Diversion Project Drainage Analysis (referred to as Reference 1 within your report), there are two outfall points in this area: point 18 and 20. Point 18 has a defined Q_{100} value of 40 cfs, while point 20 has a defined Q_{100} value of 35 cfs. Why do you define the maximum flow as 85 cfs within your Hydrologic Analysis? Based on this data, I would define the maximum flow as 75 cfs, including any offsite flow.
4. Your plan appears to comply with the drainage scheme defined within Reference 1; however, more information must be provided.
   - How much flow is guided to each outfall point?
   - Define the final drainage outfall for each Basin.

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

- Will the proposed on-site inlets and storm drain be able to handle the 100 year flow? Please remember to use a 50% clogging factor in your inlet calculations.
- Provide the AHYMO output for proposed conditions on the grading and drainage plan (or, you may include a separate, bound, stamped, dated, and signed set of calculations).

5. Please stamp, sign, and date the grading and drainage plan.

If you have any questions, you can contact me at 924-3981.

Sincerely,

Kristal D. Metro, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: File

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                0346
CONNECTION TEL                    9p3484055
SUBADDRESS
CONNECTION ID           WILSON CO
ST. TIME                06/06 16:46
USAGE T                 00'54
PGS.                      2
RESULT                  OK
```

CITY OF ALBUQUERQUE

June 6, 2006

John Tellez, P.E.
Wilson & Company
2600 The American Rd. SE, Suite 100
Rio Rancho, NM 87124

Re: West Mesa High School Drainage Improvements, 6701 Fortuna Rd NW, Grading and Drainage Plan

Plan Undated (J10-D5)

Dear Mr. Tellez,

Based upon the information provided in your submittal received 5-19-06, the above referenced plan cannot be approved for Paving Permit or Grading Permit until the following comments are addressed:

1. Based on the data provided for Fortuna Road, half of the roadway drains to the project site. Please revise your calculations and basin map.
2. The AHYMO output provided on the grading and drainage plan is defined as the existing conditions. However, these conditions are not shown on the plan provided. For example, five ponds are defined on the AHYMO output sheet, but I do not see their location on the map. Please provide additional information regarding the location of, and proposed removal of, the existing ponds. Also, the hydrograph identification used does not match to the basins shown on the plan.
3. Based on the data provided in the West Mesa Diversion Project

P.O. Box 1293

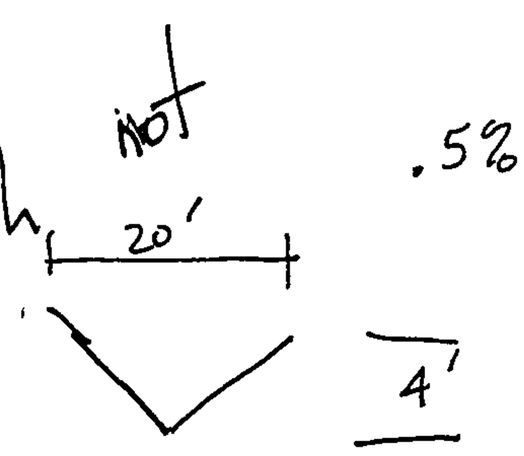
Albuquerque

New Mexico 87103

www.cabq.gov

```
* WMHS.DAT
*S EXISTING & PROPOSED CONDITION MODELS FOR WMHS DRAINAGE IMPROVEMENTS
*S BASINS AREAS DO NOT CHANGE FROM THE EXISTING TO PROPOSED CONDITION
*S PONDS ARE NAMED FOR THE BASINS IN WHICH THEY ARE LOCATED
START                    TIME=0.0 PUNCH CODE=0 PRINT CODE=0
LOCATION                 BERNALILLO COUNTY
*
* RAINFALL FROM NOAA COA DEVELOPMENT PROCESS MANUAL
*
*S*************************************************************************
*S 100 YEAR 24HR STORM
RAINFALL          TYPE=2 ONE DAY RAINFALL, NOAA ATLAS TWO
                  QUARTER=0.00 IN
                  HOUR= 1.87 IN
                  SIX HR= 2.20 IN
                  DAY= 2.66 IN DT=0.05
* *S 10 YEAR 24HR STORM EXISTING CONDITION
*RAINFALL         TYPE=2 0.0 1.08 1.41 1.78 DT=0.1
*S
*S BASINS CONTRIBUTING TO NORTH CONNECTION OF 84" SD IN 64TH
* **** SUB-BASIN 101 ****
* NW CORNER OF PARKING LOT @ NW CORNER OF SITE
COMPUTE LT TP             LCODE=1 UPLAND/LAG TIME METHOD
                          NK=1 ISLOPE=0
                          LENGTH=381 FT SLOPE=0.003 K=2.0
                          KN=0.021 CENTROID DIST=153 FT
COMPUTE NM HYD            ID=1 HYD NO=101 DA=0.0011 SQ MI
                          PER A=5 PER B=0 PER C=0 PER D=95
                          TP=0.0 MASSRAIN=-1
PRINT HYD                 ID=1 CODE=1
*
* **** SUB-BASIN 102 ****
* PARKING LOT @ NW CORNER OF SITE
COMPUTE LT TP             LCODE=1 UPLAND/LAG TIME METHOD
                          NK=1 ISLOPE=0
                          LENGTH=955 FT SLOPE=0.005 K=2.0
                          KN=0.021 CENTROID DIST=377 FT
COMPUTE NM HYD            ID=2 HYD NO=102 DA=0.009 SQ MI
                          PER A=5 PER B=10 PER C=0 PER D=85
                          TP=0.0 MASSRAIN=-1
PRINT HYD                 ID=2 CODE=1
*
* ADD 101 TO 102 TO GET 102.1
ADD HYD                   ID=3 HYD NO=102.1 ID I=1 ID II=2
PRINT HYD                 ID=3 CODE=1
*
* ROUTE 102.1 THRU 108 IN V-DITCH TO 108.1
COMPUTE RATING CURVE      CID=1 VS NO=1 NO SEGS=1
                          MIN ELEV=5096 MAX ELEV=5100
                          CH SLOPE=0.005 FP SLOPE=0.005
                          N=0.030 DIST=20
                          DIST ELEV DIST ELEV
                          0 5100 10 5096
                          20 5100
ROUTE MCUNGE              ID=4 HYD NO=108.1 INFLOW ID=3
                          DT=0.0 L=570 FT NS=0 SLOPE=0.005
                          MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
PRINT HYD                 ID=4 CODE=1
*
* **** SUB-BASIN 108 ****
* WEST BASEBALL FIELD
COMPUTE LT TP             LCODE=1 UPLAND/LAG TIME METHOD
                          NK=1 ISLOPE=0
                          LENGTH=423 FT SLOPE=0.004 K=2.0
                          KN=0.021 CENTROID DIST=220 FT
COMPUTE NM HYD            ID=1 HYD NO=108 DA=0.0035 SQ MI
                          PER A=70 PER B=25 PER C=0 PER D=5
                          TP=0.0 MASSRAIN=-1
PRINT HYD                 ID=1 CODE=1
*
* ADD 108.1 TO 108 TO GET 108.2
ADD HYD                   ID=2 HYD NO=108.2 ID I=1 ID II=4
PRINT HYD                 ID=2 CODE=1
*
* **** SUB-BASIN 111 ****
* EAST BASEBALL FIELD
COMPUTE LT TP             LCODE=1 UPLAND/LAG TIME METHOD
                          NK=1 ISLOPE=0
                          LENGTH=382 FT SLOPE=0.012 K=2.0
                          KN=0.021 CENTROID DIST=209 FT
COMPUTE NM HYD            ID=1 HYD NO=111 DA=.0034 SQ MI
                          PER A=75 PER B=15 PER C=5 PER D=5
                          TP=0.0 MASSRAIN=-1
PRINT HYD                 ID=1 CODE=1
```

4'? ditch not .5%



Not

```
*
* ADD 111 TO 108.2 TO GET 108.3
ADD HYD                 ID=3 HYD NO=108.3 ID I=1 ID II=2
PRINT HYD               ID=3 CODE=1
**
* **** SUB-BASIN 106 ****
* TENNIS & BASKETBALL COURTS
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
                        NK=1 ISLOPE=0
                        LENGTH=863 FT SLOPE=0.005 K=2.0
                        KN=0.021 CENTROID DIST=492 FT
COMPUTE NM HYD          ID=1 HYD NO=106 DA=0.0076 SQ MI
                        PER A=35 PER B=15 PER C=5 PER D=45
                        TP=0.0 MASSRAIN=-1
PRINT HYD               ID=1 CODE=1
*
* ROUTE 106 THRU 109 IN OPEN CHANNEL TO 109.1
COMPUTE RATING CURVE    CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=5096 MAX ELEV=5100
                        CH SLOPE=0.005 FP SLOPE=0.005
                        N=0.035 DIST=20
                        DIST ELEV DIST ELEV
                        0 5100 10 5096
                        20 5100
ROUTE MCUNGE            ID=2 HYD NO=109.1 INFLOW ID=1
                        DT=0.0 L=680 FT NS=0 SLOPE=0.005
                        MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
PRINT HYD               ID=2 CODE=1
*
* **** SUB-BASIN 109 ****
* NORTH HALF OF SOCCER FIELD
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
                        NK=1 ISLOPE=0
                        LENGTH=689 FT SLOPE=0.006 K=2.0
                        KN=0.021 CENTROID DIST=321 FT
COMPUTE NM HYD          ID=4 HYD NO=109 DA=0.0058 SQ MI
                        PER A=75 PER B=15 PER C=5 PER D=5
                        TP=0.0 MASSRAIN=-1
PRINT HYD               ID=4 CODE=1
*
* ADD 109.1 TO 109 TO GET 109.2
ADD HYD                 ID=1 HYD NO=109.2 ID I=2 ID II=4
PRINT HYD               ID=1 CODE=1
*
* ADD 109.2 TO 108.3 TO GET 108.4
ADD HYD                 ID=5 HYD NO=108.4 ID I=1 ID II=3
PRINT HYD               ID=5 CODE=1
*
*
*S BASINS CONTRIBUTING TO POND 107
* **** SUB-BASIN 107 ****
* MAIN BLDG
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
                        NK=1 ISLOPE=0
                        LENGTH=373 FT SLOPE=0.01 K=2.0
                        KN=0.021 CENTROID DIST=237 FT
COMPUTE NM HYD          ID=1 HYD NO=107 DA=.004 SQ MI
                        PER A=35 PER B=15 PER C=5 PER D=45
                        TP=0.0 MASSRAIN=-1
PRINT HYD               ID=1 CODE=1
*
*
*
*
*S BASINS CONTRIBUTING TO SOUTH CONNECTION TO 84" SD IN 64TH
* **** SUB-BASIN 103 ****
* SW CORNER OF SITE
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
                        NK=1 ISLOPE=0
                        LENGTH=1667 FT SLOPE=0.004 K=2.0
                        KN=0.021 CENTROID DIST=337 FT
COMPUTE NM HYD          ID=3 HYD NO=103 DA=0.0078 SQ MI
                        PER A=5 PER B=10 PER C=0 PER D=85
                        TP=0.0 MASSRAIN=-1
PRINT HYD               ID=3 CODE=1
*
* **** SUB-BASIN 104 ****
* COURTYARD AREA
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
                        NK=1 ISLOPE=0
                        LENGTH=282 FT SLOPE=0.007 K=2.0
                        KN=0.021 CENTROID DIST=146 FT
COMPUTE NM HYD          ID=1 HYD NO=104 DA=0.0015 SQ MI
                        PER A=0 PER B=45 PER C=10 PER D=55
```

```
                                TP=0.0 MASSRAIN=-1
PRINT HYD                       ID=1 CODE=1
*
* ROUTE 104 THRU 105 IN OPEN CHANNEL TO 105.1
COMPUTE RATING CURVE            CID=1 VS NO=1 NO SEGS=1
                                MIN ELEV=5097 MAX ELEV=5100
                                CH SLOPE=0.005 FP SLOPE=0.005
                                N=0.015 DIST=20
                                DIST ELEV DIST ELEV
                                0    5100 0    5099
                                10   5097 20   5099
                                20   5100
ROUTE MCUNGE                    ID=2 HYD NO=105.1 INFLOW ID=1
                                DT=0.0 L=270 FT NS=0 SLOPE=0.005
                                MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
PRINT HYD                       ID=2 CODE=1
*
* **** SUB-BASIN 105 ****
* FRONT YARD AND PARKING AREA
COMPUTE LT TP                   LCODE=1 UPLAND/LAG TIME METHOD
                                NK=1 ISLOPE=0
                                LENGTH=430 FT SLOPE=0.007 K=2.0
                                KN=0.021 CENTROID DIST=220 FT
COMPUTE NM HYD                  ID=4 HYD NO=105 DA=0.0018 SQ MI
                                PER A=15 PER B=0 PER C=0 PER D=85
                                TP=0.0 MASSRAIN=-1
PRINT HYD                       ID=4 CODE=1
*
* ADD 103 TO 105 TO GET 105.2
ADD HYD                         ID=1 HYD NO=105.2 ID I=3 ID II=4
PRINT HYD                       ID=1 CODE=1
*
* ADD 105.1 TO 105.2 TO GET 105.3
ADD HYD                         ID=3 HYD NO=105.3 ID I=1 ID II=2
PRINT HYD                       ID=3 CODE=1
*
* ROUTE 104 THRU 105 IN OPEN CHANNEL TO 105.1
COMPUTE RATING CURVE            CID=1 VS NO=1 NO SEGS=1
                                MIN ELEV=5097 MAX ELEV=5100
                                CH SLOPE=0.005 FP SLOPE=0.005
                                N=0.015 DIST=20
                                DIST ELEV DIST ELEV
                                0 5100 0 5099
                                10 5097 20 5099
                                20 5100
ROUTE MCUNGE                    ID=4 HYD NO=110.1 INFLOW ID=3
                                DT=0.0 L=500 FT NS=0 SLOPE=0.005
                                MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
PRINT HYD                       ID=4 CODE=1
*
* **** SUB-BASIN 110 ****
* SOUTH HALF OF SOCCER FIELD
COMPUTE LT TP                   LCODE=1 UPLAND/LAG TIME METHOD
                                NK=1 ISLOPE=0
                                LENGTH=497 FT SLOPE=0.005 K=2.0
                                KN=0.021 CENTROID DIST=301 FT
COMPUTE NM HYD                  ID=5 HYD NO=110 DA=0.005 SQ MI
                                PER A=90 PER B=0 PER C=5 PER D=5
                                TP=0.0 MASSRAIN=-1
PRINT HYD                       ID=5 CODE=1
*
* **** SUB-BASIN 112 ****
* WEST SIDE OF TRACK & FIELD
COMPUTE LT TP                   LCODE=1 UPLAND/LAG TIME METHOD
                                NK=1 ISLOPE=0
                                LENGTH=318 FT SLOPE=0.006 K=2.0
                                KN=0.021 CENTROID DIST=266 FT
COMPUTE NM HYD                  ID=1 HYD NO=112 DA=0.002 SQ MI
                                PER A=95 PER B=0 PER C=0 PER D=5
                                TP=0.0 MASSRAIN=-1
PRINT HYD                       ID=1 CODE=1
*
* **** SUB-BASIN 113 ****
* EAST SIDE OF TRACK & FIELD
COMPUTE LT TP                   LCODE=1 UPLAND/LAG TIME METHOD
                                NK=1 ISLOPE=0
                                LENGTH=315 FT SLOPE=0.006 K=2.0
                                KN=0.021 CENTROID DIST=273 FT
COMPUTE NM HYD                  ID=2 HYD NO=113 DA=0.0023 SQ MI
                                PER A=95 PER B=0 PER C=0 PER D=5
                                TP=0.0 MASSRAIN=-1
PRINT HYD                       ID=2 CODE=1
*
* ADD 112 TO 113 TO GET 110.2
```

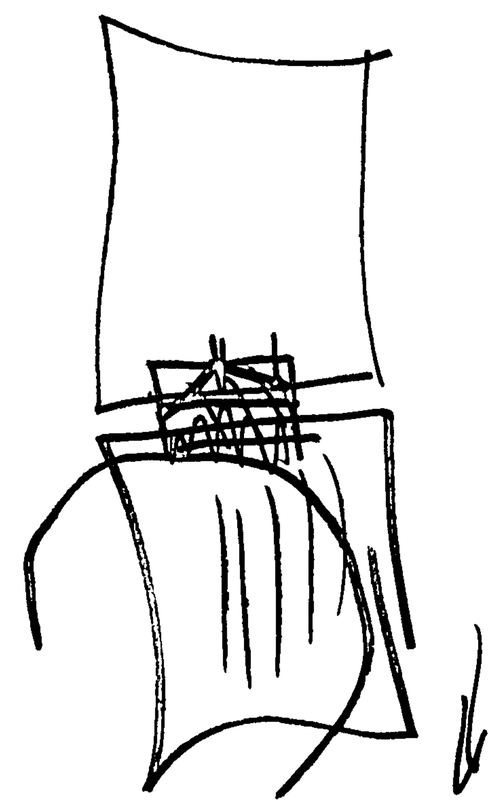
3' ditch ? where

Messed up

twice ?

```
ADD HYD                 ID=3 HYD NO=113.1 ID I=1 ID II=2
PRINT HYD               ID=3 CODE=1
*
* ADD 110.1 TO 110.2 TO GET 110.3
ADD HYD                 ID=1 HYD NO=110.3 ID I=3 ID II=4
PRINT HYD               ID=1 CODE=1
*
* ADD 110 TO 110.3 TO GET 110.4
ADD HYD                 ID=2 HYD NO=110.4 ID I=1 ID II=5
PRINT HYD               ID=2 CODE=1
*
*
*S BASINS CONTRIBUTING TO FORTUNA ROAD RUNOFF
* **** SUB-BASIN 100****
* WEST OF Y-HALL
COMPUTE LT TP           LCODE=1 UPLAND/LAG TIME METHOD
                        NK=1 ISLOPE=0
                        LENGTH=540 FT SLOPE=0.003 K=2.0
                        KN=0.021 CENTROID DIST=269 FT
COMPUTE NM HYD          ID=5 HYD NO=100 DA=0.002 SQ MI
                        PER A=0 PER B=0 PER C=5 PER D=95
                        TP=0.0 MASSRAIN=-1
PRINT HYD               ID=5 CODE=1
*

FINISH
```

```
AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) -                    - VERSION:  1997.02c      RUN DATE (MON/DAY/YR) =12/07/2009
INPUT FILE = M:\IDS\09932F~1\AE_DATA\CALCS\AHYMO\WMHS2009.DAT                        USER NO.= AHYMO-C-9803c01UNMLIB-AH

                            FROM  TO                  PEAK        RUNOFF            TIME TO    CFS      PAGE =   1
                HYDROGRAPH   ID   ID        AREA    DISCHARGE     VOLUME     RUNOFF    PEAK     PER
COMMAND       IDENTIFICATION  NO.  NO.     (SQ MI)    (CFS)       (AC-FT)   (INCHES)  (HOURS)   ACRE     NOTATION

*S EXISTING & PROPOSED CONDITION MODELS FOR WMHS DRAINAGE IMPROVEMENTS
*S BASINS AREAS DO NOT CHANGE FROM THE EXISTING TO PROPOSED CONDITION
*S PONDS ARE NAMED FOR THE BASINS IN WHICH THEY ARE LOCATED
START                                                                                                  TIME=       .00
LOCATION                        DEFAULT
*S*************************************************************************
*S 100 YEAR 24HR STORM
RAINFALL  TYPE= 2                                                                                      RAIN24=   2.660
*S
*S BASINS CONTRIBUTING TO NORTH CONNECTION OF 84" SD IN 64TH
COMPUTE NM HYD        101.00   -     1        .00110        2.93        .137      2.32785    1.500    4.166 PER IMP=  95.00
COMPUTE NM HYD        102.00   -     2        .00900       22.55       1.032      2.15031    1.500    3.915 PER IMP=  85.00
ADD HYD               102.10  1& 2   3        .01010       25.48       1.169      2.16959    1.500    3.943
ROUTE MCUNGE          108.10    3    4        .01010       24.90       1.168      2.16916    1.550    3.853 CCODE =      .2
COMPUTE NM HYD        108.00   -     1        .00350        3.58        .110       .58809    1.500    1.600 PER IMP=   5.00
ADD HYD               108.20  1& 4   2        .01360       28.33       1.278      1.76220    1.550    3.254
COMPUTE NM HYD        111.00   -     1        .00340        3.48        .107       .58809    1.500    1.598 PER IMP=   5.00
ADD HYD               108.30  1& 2   3        .01700       31.65       1.385      1.52736    1.550    2.909
COMPUTE NM HYD        106.00   -     1        .00760       13.64        .561      1.38474    1.500    2.804 PER IMP=  45.00
ROUTE MCUNGE          109.10    1    2        .00760       13.04        .561      1.38383    1.550    2.680 CCODE =      .2
COMPUTE NM HYD        109.00   -     4        .00580        5.92        .182       .58809    1.500    1.595 PER IMP=   5.00
ADD HYD               109.20  2& 4   1        .01340       18.69        .743      1.03933    1.550    2.180
ADD HYD               108.40  1& 3   5        .03040       50.34       2.128      1.31225    1.550    2.587
*S BASINS CONTRIBUTING TO POND 107
COMPUTE NM HYD        107.00   -     1        .00400        7.19        .295      1.38474    1.500    2.807 PER IMP=  45.00
*S BASINS CONTRIBUTING TO SOUTH CONNECTION TO 84" SD IN 64TH
COMPUTE NM HYD        103.00   -     3        .00780       14.58        .895      2.15031    1.600    2.920 PER IMP=  85.00
COMPUTE NM HYD        104.00   -     1        .00150        3.11        .126      1.57240    1.500    3.244 PER IMP=  50.00
ROUTE MCUNGE          105.10    1    2        .00150        3.02        .126      1.57267    1.500    3.141 CCODE =      .2
COMPUTE NM HYD        105.00   -     4        .00180        4.44        .204      2.12906    1.500    3.856 PER IMP=  85.00
ADD HYD               105.20  3& 4   1        .00960       17.59       1.099      2.14625    1.600    2.863
ADD HYD               105.30  1& 2   3        .01110       20.24       1.225      2.06867    1.550    2.849
ROUTE MCUNGE          110.10    3    4        .01110       19.85       1.221      2.06323    1.650    2.794 CCODE =      .1
COMPUTE NM HYD        110.00   -     5        .00500        4.80        .149       .55707    1.500    1.499 PER IMP=   5.00
COMPUTE NM HYD        112.00   -     1        .00200        1.85        .057       .53875    1.500    1.446 PER IMP=   5.00
COMPUTE NM HYD        113.00   -     2        .00230        2.13        .066       .53875    1.500    1.445 PER IMP=   5.00
ADD HYD               113.10  1& 2   3        .00430        3.98        .124       .53867    1.500    1.445
ADD HYD               110.30  3& 4   1        .01540       22.51       1.345      1.63749    1.600    2.284
ADD HYD               110.40  1& 5   2        .02040       26.26       1.493      1.37268    1.600    2.011
*S BASINS CONTRIBUTING TO FORTUNA ROAD RUNOFF
COMPUTE NM HYD        100.00   -     5        .00200        5.42        .251      2.35553    1.500    4.235 PER IMP=  95.00
FINISH
```



```
AHYMO PROGRAM (AHYMO_97) -                                  - Version:  1997.02c
     RUN DATE (MON/DAY/YR) = 12/07/2009
     START TIME (HR:MIN:SEC) = 09:03:48     USER NO.= AHYMO-C-9803c01UNMLIB-AH
     INPUT FILE = M:\IDS\09932F~1\AE_DATA\CALCS\AHYMO\WMHS2009.DAT


* WMHS.DAT
*S EXISTING & PROPOSED CONDITION MODELS FOR WMHS DRAINAGE IMPROVEMENTS
*S BASINS AREAS DO NOT CHANGE FROM THE EXISTING TO PROPOSED CONDITION
*S PONDS ARE NAMED FOR THE BASINS IN WHICH THEY ARE LOCATED
START                                TIME=0.0 PUNCH CODE=0 PRINT CODE=0
LOCATION                     BERNALILLO COUNTY
     Soil infiltration values (LAND FACTORS) for this location are not available.
     The following default values were used.
     Land Treatment     Initial Abstr.(in)    Unif. Infilt.(in/hour)
          A                0.65                  1.67
          B                0.50                  1.25
          C                0.35                  0.83
          D                0.10                  0.04

*
* RAINFALL FROM NOAA COA DEVELOPMENT PROCESS MANUAL
*
*S*********************************************************************
*S 100 YEAR 24HR STORM
RAINFALL             TYPE=2 ONE DAY RAINFALL, NOAA ATLAS TWO
                            QUARTER=0.00 IN
                            HOUR= 1.87 IN
                            SIX HR= 2.20 IN
                            DAY= 2.66 IN DT=0.05

                COMPUTED 24-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
                DT =    .050000 HOURS        END TIME =    24.000000 HOURS
                   .0000   .0025   .0050   .0076   .0103   .0131   .0160
                   .0190   .0222   .0254   .0289   .0324   .0362   .0401
                   .0443   .0487   .0534   .0584   .0637   .0695   .0758
                   .0837   .0924   .1176   .1773   .2798   .4384   .6668
                   .9790  1.2253  1.3366  1.4295  1.5109  1.5836  1.6495
                  1.7096  1.7648  1.8156  1.8624  1.9057  1.9458  1.9548
                  1.9631  1.9708  1.9780  1.9848  1.9912  1.9973  2.0031
                  2.0087  2.0140  2.0191  2.0240  2.0287  2.0333  2.0377
                  2.0420  2.0462  2.0502  2.0542  2.0580  2.0617  2.0653
                  2.0689  2.0724  2.0757  2.0791  2.0823  2.0855  2.0886
                  2.0916  2.0946  2.0976  2.1005  2.1033  2.1061  2.1088
                  2.1115  2.1142  2.1168  2.1193  2.1219  2.1244  2.1268
                  2.1293  2.1316  2.1340  2.1363  2.1386  2.1409  2.1431
                  2.1453  2.1475  2.1497  2.1518  2.1539  2.1560  2.1580
                  2.1601  2.1621  2.1641  2.1660  2.1680  2.1699  2.1718
                  2.1737  2.1756  2.1774  2.1793  2.1811  2.1829  2.1847
                  2.1864  2.1882  2.1899  2.1916  2.1933  2.1950  2.1967
                  2.1984  2.2000  2.2020  2.2039  2.2059  2.2078  2.2097
                  2.2117  2.2136  2.2155  2.2174  2.2193  2.2212  2.2231
                  2.2249  2.2268  2.2287  2.2305  2.2324  2.2342  2.2361
                  2.2379  2.2398  2.2416  2.2434  2.2452  2.2470  2.2488
                  2.2506  2.2524  2.2542  2.2559  2.2577  2.2595  2.2612
                  2.2630  2.2647  2.2665  2.2682  2.2700  2.2717  2.2734
                  2.2751  2.2768  2.2785  2.2802  2.2819  2.2836  2.2853
                  2.2870  2.2887  2.2903  2.2920  2.2937  2.2953  2.2970
                  2.2986  2.3002  2.3019  2.3035  2.3051  2.3068  2.3084
                  2.3100  2.3116  2.3132  2.3148  2.3164  2.3180  2.3196
                  2.3212  2.3227  2.3243  2.3259  2.3274  2.3290  2.3305
                  2.3321  2.3336  2.3352  2.3367  2.3383  2.3398  2.3413
                  2.3428  2.3444  2.3459  2.3474  2.3489  2.3504  2.3519
                  2.3534  2.3549  2.3563  2.3578  2.3593  2.3608  2.3622
                  2.3637  2.3652  2.3666  2.3681  2.3695  2.3710  2.3724
                  2.3739  2.3753  2.3767  2.3782  2.3796  2.3810  2.3824
                  2.3839  2.3853  2.3867  2.3881  2.3895  2.3909  2.3923
                  2.3937  2.3951  2.3965  2.3978  2.3992  2.4006  2.4020
                  2.4033  2.4047  2.4061  2.4074  2.4088  2.4101  2.4115
                  2.4128  2.4142  2.4155  2.4168  2.4182  2.4195  2.4208
                  2.4222  2.4235  2.4248  2.4261  2.4274  2.4287  2.4300
                  2.4314  2.4327  2.4340  2.4352  2.4365  2.4378  2.4391
                  2.4404  2.4417  2.4430  2.4442  2.4455  2.4468  2.4480
                  2.4493  2.4506  2.4518  2.4531  2.4543  2.4556  2.4568
                  2.4581  2.4593  2.4606  2.4618  2.4630  2.4643  2.4655
                  2.4667  2.4680  2.4692  2.4704  2.4716  2.4728  2.4740
                  2.4753  2.4765  2.4777  2.4789  2.4801  2.4813  2.4825
                  2.4837  2.4849  2.4860  2.4872  2.4884  2.4896  2.4908
```

```
2.4919  2.4931  2.4943  2.4955  2.4966  2.4978  2.4990
2.5001  2.5013  2.5024  2.5036  2.5047  2.5059  2.5070
2.5082  2.5093  2.5105  2.5116  2.5127  2.5139  2.5150
2.5161  2.5172  2.5184  2.5195  2.5206  2.5217  2.5229
2.5240  2.5251  2.5262  2.5273  2.5284  2.5295  2.5306
2.5317  2.5328  2.5339  2.5350  2.5361  2.5372  2.5383
2.5394  2.5404  2.5415  2.5426  2.5437  2.5448  2.5458
2.5469  2.5480  2.5490  2.5501  2.5512  2.5522  2.5533
2.5544  2.5554  2.5565  2.5575  2.5586  2.5596  2.5607
2.5617  2.5628  2.5638  2.5649  2.5659  2.5669  2.5680
2.5690  2.5700  2.5711  2.5721  2.5731  2.5741  2.5752
2.5762  2.5772  2.5782  2.5792  2.5803  2.5813  2.5823
2.5833  2.5843  2.5853  2.5863  2.5873  2.5883  2.5893
2.5903  2.5913  2.5923  2.5933  2.5943  2.5953  2.5963
2.5973  2.5982  2.5992  2.6002  2.6012  2.6022  2.6031
2.6041  2.6051  2.6061  2.6070  2.6080  2.6090  2.6099
2.6109  2.6119  2.6128  2.6138  2.6148  2.6157  2.6167
2.6176  2.6186  2.6195  2.6205  2.6214  2.6224  2.6233
2.6243  2.6252  2.6261  2.6271  2.6280  2.6290  2.6299
2.6308  2.6318  2.6327  2.6336  2.6346  2.6355  2.6364
2.6373  2.6383  2.6392  2.6401  2.6410  2.6419  2.6428
2.6438  2.6447  2.6456  2.6465  2.6474  2.6483  2.6492
2.6501  2.6510  2.6519  2.6528  2.6537  2.6546  2.6555
2.6564  2.6573  2.6582  2.6591  2.6600

* *S 10 YEAR 24HR STORM EXISTING CONDITION
*RAINFALL           TYPE=2 0.0 1.08 1.41 1.78 DT=0.1
*S
*S BASINS CONTRIBUTING TO NORTH CONNECTION OF 84" SD IN 64TH
* **** SUB-BASIN 101 ****
* NW CORNER OF PARKING LOT @ NW CORNER OF SITE
COMPUTE LT TP               LCODE=1 UPLAND/LAG TIME METHOD
                                    NK=1 ISLOPE=0
                                    LENGTH=381 FT SLOPE=0.003 K=2.0
                                    KN=0.021 CENTROID DIST=153 FT

     Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

     SCS UPLAND METHOD FACTORS
                                LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
     SHEET FLOW PORTION              .0           .000000             .0000
     SHALLOW FLOW PORTION          381.0          .003000            2.0000
     CHANNEL FLOW PORTION            .0           .000000             .0000
     TOTAL BASIN                   381.0          .003000            2.0000

     TIME OF CONCENTRATION (HRS)=   .0966     TIME TO PEAK (HRS)=   .0644     LAG TIME (HRS)=
.0725

     TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
     REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333     LAG
TIME (HRS)=   .1500

COMPUTE NM HYD              ID=1 HYD NO=101 DA=0.0011 SQ MI
                                    PER A=5 PER B=0 PER C=0 PER D=95
                                    TP=0.0 MASSRAIN=-1
     TIME TO PEAK (hrs)=   .1333

     K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   4.1247    CFS   UNIT VOLUME =    .9966       B =   526.28      P60 = 1.8700
     AREA =      .001045 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

     K =   .163724HR    TP =   .133333HR    K/TP RATIO =  1.227936     SHAPE CONSTANT, N =  2.899764
     UNIT PEAK =   .11284    CFS   UNIT VOLUME =    .8676       B =   273.54      P60 = 1.8700
     AREA =      .000055 SQ MI    IA =    .65000 INCHES    INF =   1.67000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                   ID=1 CODE=1

                                    PARTIAL HYDROGRAPH   101.00

    RUNOFF VOLUME =     2.32785 INCHES     =        .1366 ACRE-FEET
    PEAK DISCHARGE RATE =       2.93 CFS  AT   1.500 HOURS   BASIN AREA =   .0011 SQ. MI.
```

```
*
* **** SUB-BASIN 102 ****
* PARKING LOT @ NW CORNER OF SITE
COMPUTE LT TP              LCODE=1 UPLAND/LAG TIME METHOD
                                   NK=1 ISLOPE=0
                                   LENGTH=955 FT SLOPE=0.005 K=2.0
                                   KN=0.021 CENTROID DIST=377 FT

     Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

     SCS UPLAND METHOD FACTORS
                                LENGTH (FT)     SLOPE (FT/FT)       COMPOSITE K
     SHEET FLOW PORTION              .0          .000000              .0000
     SHALLOW FLOW PORTION          955.0         .005000             2.0000
     CHANNEL FLOW PORTION            .0          .000000              .0000
     TOTAL BASIN                   955.0         .005000             2.0000

     TIME OF CONCENTRATION (HRS)=   .1876    TIME TO PEAK (HRS)=   .1251     LAG TIME (HRS)=
.1407

     TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
     REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333     LAG
TIME (HRS)=   .1500

COMPUTE NM HYD             ID=2 HYD NO=102 DA=0.009 SQ MI
                                   PER A=5 PER B=10 PER C=0 PER D=85
                                   TP=0.0 MASSRAIN=-1
     TIME TO PEAK (hrs)=   .1333

     K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   30.195    CFS   UNIT VOLUME =    .9988       B =   526.28      P60 = 1.8700
     AREA =      .007650 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

     K =   .141924HR    TP =   .133333HR    K/TP RATIO =  1.064435     SHAPE CONSTANT, N =  3.317659
     UNIT PEAK =   3.1061    CFS   UNIT VOLUME =    .9955       B =   306.77      P60 = 1.8700
     AREA =      .001350 SQ MI    IA =    .55000 INCHES    INF =   1.39000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                  ID=2 CODE=1

                                   PARTIAL HYDROGRAPH   102.00

    RUNOFF VOLUME =     2.15031 INCHES     =       1.0321 ACRE-FEET
    PEAK DISCHARGE RATE =      22.55 CFS  AT   1.500 HOURS   BASIN AREA =   .0090 SQ. MI.


*
* ADD 101 TO 102 TO GET 102.1
ADD HYD                    ID=3 HYD NO=102.1 ID I=1 ID II=2
PRINT HYD                  ID=3 CODE=1

                                   PARTIAL HYDROGRAPH   102.10

    RUNOFF VOLUME =     2.16959 INCHES     =       1.1687 ACRE-FEET
    PEAK DISCHARGE RATE =      25.48 CFS  AT   1.500 HOURS   BASIN AREA =   .0101 SQ. MI.

*
* ROUTE 102.1 THRU 108 IN V-DITCH TO 108.1
COMPUTE RATING CURVE       CID=1 VS NO=1 NO SEGS=1
                                   MIN ELEV=5096 MAX ELEV=5100
                                   CH SLOPE=0.005 FP SLOPE=0.005
                                   N=0.030 DIST=20
                                   DIST ELEV DIST ELEV
                                   0 5100 10 5096
                                   20 5100

                                    RATING CURVE VALLEY SECTION  1.0
```

WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5096.00	.00	.00	.00
5096.21	.11	.08	1.05
5096.42	.44	.52	2.10
5096.63	1.00	1.54	3.16
5096.84	1.77	3.32	4.21
5097.05	2.77	6.01	5.26
5097.26	3.99	9.78	6.31
5097.47	5.43	14.75	7.37
5097.68	7.09	21.06	8.42
5097.89	8.97	28.83	9.47
5098.10	11.07	38.18	10.52
5098.31	13.40	49.23	11.57
5098.53	15.94	62.09	12.63
5098.74	18.71	76.86	13.68
5098.95	21.70	93.66	14.73
5099.16	24.91	112.58	15.78
5099.37	28.34	133.72	16.84
5099.58	32.00	157.18	17.89
5099.79	35.87	183.06	18.94
5100.00	39.97	211.46	19.99

```
ROUTE MCUNGE                ID=4 HYD NO=108.1 INFLOW ID=3
                                DT=0.0 L=570 FT NS=0 SLOPE=0.005
                                MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

     INFLOW END= 497            TABLE PTS= 20
     DT=  .050000               QMED=       12.74  CKMED=      3.4541
     WIDTH MED=        6.94     NREACH=  2         DX=      285.00

      DEPTH   AREA      Q    TRAVEL  WIDTH     ck      VEL      C       D      C1      C2      C3     Q-M
  C1-M   C2-M   C3-M
       (FT)  (SQ FT)  (CFS)  TIME(HR) (FT)     (FPS)   (FPS)                                          (CFS)
        .00      .0       .0     .292     .0     1.58     .34    1.000    .000   1.000    .000    .000
.0   1.000    .000    .000
        .21      .1       .1     .213    1.1     1.53     .74     .964    .036    .964    .000    .036
.0    .994    .000    .006
        .42      .4       .5     .134    2.1     1.64    1.18    1.036    .106    .901    .066    .033
.2    .941    .025    .035
        .63     1.0      1.5     .102    3.2     2.11    1.55    1.330    .163    .870    .198   -.067
1.0    .877    .126   -.003
        .84     1.8      3.3     .085    4.2     2.53    1.87    1.597    .219    .845    .290   -.134
2.3    .851    .241   -.092
       1.05     2.8      6.0     .073    5.3     2.92    2.17    1.846    .274    .824    .359   -.183
4.6    .830    .323   -.153
       1.26     4.0      9.8     .065    6.3     3.29    2.45    2.079    .330    .806    .413   -.220
7.8    .811    .385   -.197
       1.47     5.4     14.8     .058    7.4     3.64    2.72    2.301    .386    .791    .457   -.248
12.2    .795    .435   -.230
       1.68     7.1     21.1     .053    8.4     3.98    2.97    2.512    .441    .777    .494   -.271
17.8    .781    .475   -.257
       1.89     9.0     28.8     .049    9.5     4.30    3.21    2.716    .497    .764    .525   -.289
24.8    .768    .509   -.278
       2.10    11.1     38.2     .046   10.5     4.61    3.45    2.912    .552    .753    .552   -.305
33.4    .756    .538   -.295
       2.31    13.4     49.2     .043   11.6     4.91    3.67    3.101    .608    .742    .575   -.317
43.6    .745    .563   -.309
       2.53    15.9     62.1     .041   12.6     5.20    3.89    3.286    .663    .732    .596   -.328
55.5    .735    .585   -.321
       2.74    18.7     76.9     .039   13.7     5.49    4.11    3.465    .719    .723    .614   -.337
69.3    .726    .605   -.331
       2.95    21.7     93.7     .037   14.7     5.76    4.32    3.640    .774    .714    .631   -.345
85.1    .717    .622   -.339
       3.16    24.9    112.6     .035   15.8     6.03    4.52    3.810    .830    .706    .645   -.351
103.0    .709    .638   -.347
       3.37    28.3    133.7     .034   16.8     6.30    4.72    3.977    .885    .698    .659   -.357
123.0    .701    .652   -.353
       3.58    32.0    157.2     .032   17.9     6.56    4.91    4.141    .941    .691    .671   -.362
145.3    .693    .665   -.358
       3.79    35.9    183.1     .031   18.9     6.81    5.10    4.301    .996    .684    .682   -.366
170.0    .686    .677   -.363
       4.00    40.0    211.5     .030   20.0     6.91    5.29    4.364   1.074    .666    .689   -.356
197.1    .680    .688   -.367
     MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) =   3 OCCURRED      13 TIMES.  AVERAGE NUMBER ITERATIONS
=  1.0607
     Equations solved using the Ponce correction to C2
     PRINT HYD                  ID=4 CODE=1
```

```
                                    PARTIAL HYDROGRAPH   108.10

    RUNOFF VOLUME =     2.16916 INCHES     =       1.1684 ACRE-FEET
    PEAK DISCHARGE RATE =      24.90 CFS  AT   1.550 HOURS   BASIN AREA =   .0101 SQ. MI.


*
* **** SUB-BASIN 108 ****
* WEST BASEBALL FIELD
COMPUTE LT TP              LCODE=1 UPLAND/LAG TIME METHOD
                                   NK=1 ISLOPE=0
                                   LENGTH=423 FT SLOPE=0.004 K=2.0
                                   KN=0.021 CENTROID DIST=220 FT

         Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

         SCS UPLAND METHOD FACTORS
                                LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
         SHEET FLOW PORTION          .0           .000000             .0000
         SHALLOW FLOW PORTION      423.0          .004000            2.0000
         CHANNEL FLOW PORTION        .0           .000000             .0000
         TOTAL BASIN               423.0          .004000            2.0000


         TIME OF CONCENTRATION (HRS)=   .0929     TIME TO PEAK (HRS)=   .0619     LAG TIME (HRS)=
.0697


         TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
         REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333     LAG
TIME (HRS)=   .1500

     COMPUTE NM HYD            ID=1 HYD NO=108 DA=0.0035 SQ MI
                                   PER A=70 PER B=25 PER C=0 PER D=5
                                   TP=0.0 MASSRAIN=-1
         TIME TO PEAK (hrs)=   .1333

         K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
         UNIT PEAK =   .69074    CFS   UNIT VOLUME =    .9832       B =   526.28      P60 = 1.8700
         AREA =      .000175 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


         K =   .155119HR    TP =   .133333HR    K/TP RATIO =  1.163396     SHAPE CONSTANT, N =  3.047301
         UNIT PEAK =   7.1236    CFS   UNIT VOLUME =    .9974       B =   285.66      P60 = 1.8700
         AREA =      .003325 SQ MI    IA =    .61053 INCHES    INF =   1.55947 INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                  ID=1 CODE=1

                                    PARTIAL HYDROGRAPH   108.00


    RUNOFF VOLUME =      .58809 INCHES     =        .1098 ACRE-FEET
    PEAK DISCHARGE RATE =       3.58 CFS  AT   1.500 HOURS   BASIN AREA =   .0035 SQ. MI.


*
* ADD 108.1 TO 108 TO GET 108.2
ADD HYD                    ID=2 HYD NO=108.2 ID I=1 ID II=4
PRINT HYD                  ID=2 CODE=1

                                    PARTIAL HYDROGRAPH   108.20

    RUNOFF VOLUME =     1.76220 INCHES     =       1.2782 ACRE-FEET
    PEAK DISCHARGE RATE =      28.33 CFS  AT   1.550 HOURS   BASIN AREA =   .0136 SQ. MI.


*
* **** SUB-BASIN 111 ****
* EAST BASEBALL FIELD
COMPUTE LT TP              LCODE=1 UPLAND/LAG TIME METHOD
                                   NK=1 ISLOPE=0
```

```
                                   LENGTH=382 FT SLOPE=0.012 K=2.0
                                   KN=0.021 CENTROID DIST=209 FT

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS
                          LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
SHEET FLOW PORTION              .0           .000000             .0000
SHALLOW FLOW PORTION          382.0          .012000            2.0000
CHANNEL FLOW PORTION            .0           .000000             .0000
TOTAL BASIN                   382.0          .012000            2.0000


TIME OF CONCENTRATION (HRS)=   .0484     TIME TO PEAK (HRS)=   .0323     LAG TIME (HRS)=
.0363


     TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
     REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333     LAG
TIME (HRS)=   .1500

COMPUTE NM HYD              ID=1 HYD NO=111 DA=.0034 SQ MI
                                 PER A=75 PER B=15 PER C=5 PER D=5
                                 TP=0.0 MASSRAIN=-1
     TIME TO PEAK (hrs)=   .1333

     K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   .67100    CFS   UNIT VOLUME =    .9832       B =   526.28      P60 = 1.8700
     AREA =      .000170 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


     K =   .155517HR    TP =   .133333HR    K/TP RATIO =  1.166384     SHAPE CONSTANT, N =  3.040026
     UNIT PEAK =   6.9058    CFS   UNIT VOLUME =    .9971       B =   285.07      P60 = 1.8700
     AREA =      .003230 SQ MI    IA =    .61053 INCHES    INF =   1.55947 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                   ID=1 CODE=1

                                 PARTIAL HYDROGRAPH   111.00


    RUNOFF VOLUME =      .58809 INCHES     =        .1066 ACRE-FEET
    PEAK DISCHARGE RATE =       3.48 CFS  AT   1.500 HOURS   BASIN AREA =   .0034 SQ. MI.


*
* ADD 111 TO 108.2 TO GET 108.3
ADD HYD                     ID=3 HYD NO=108.3 ID I=1 ID II=2
PRINT HYD                   ID=3 CODE=1

                                 PARTIAL HYDROGRAPH   108.30


    RUNOFF VOLUME =     1.52736 INCHES     =       1.3848 ACRE-FEET
    PEAK DISCHARGE RATE =      31.65 CFS  AT   1.550 HOURS   BASIN AREA =   .0170 SQ. MI.


**
* **** SUB-BASIN 106 ****
* TENNIS & BASKETBALL COURTS
COMPUTE LT TP               LCODE=1 UPLAND/LAG TIME METHOD
                                 NK=1 ISLOPE=0
                                 LENGTH=863 FT SLOPE=0.005 K=2.0
                                 KN=0.021 CENTROID DIST=492 FT

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS
                          LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
SHEET FLOW PORTION              .0           .000000             .0000
SHALLOW FLOW PORTION          863.0          .005000            2.0000
CHANNEL FLOW PORTION            .0           .000000             .0000
TOTAL BASIN                   863.0          .005000            2.0000
```

```
TIME OF CONCENTRATION (HRS)=   .1695     TIME TO PEAK (HRS)=   .1130     LAG TIME (HRS)=
.1271


TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333     LAG
TIME (HRS)=   .1500

COMPUTE NM HYD              ID=1 HYD NO=106 DA=0.0076 SQ MI
                                    PER A=35 PER B=15 PER C=5 PER D=45
                                    TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)=   .1333

K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
UNIT PEAK =   13.499    CFS   UNIT VOLUME =    .9983       B =   526.28      P60 = 1.8700
AREA =      .003420 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


K =   .149549HR    TP =   .133333HR    K/TP RATIO =  1.121619     SHAPE CONSTANT, N =  3.154190
UNIT PEAK =   9.2220    CFS   UNIT VOLUME =    .9983       B =   294.16      P60 = 1.8700
AREA =      .004180 SQ MI    IA =    .58182 INCHES    INF =   1.47909 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                   ID=1 CODE=1

                                PARTIAL HYDROGRAPH   106.00


RUNOFF VOLUME =     1.38474 INCHES     =        .5613 ACRE-FEET
PEAK DISCHARGE RATE =      13.64 CFS  AT   1.500 HOURS   BASIN AREA =   .0076 SQ. MI.


*
* ROUTE 106 THRU 109 IN OPEN CHANNEL TO 109.1
COMPUTE RATING CURVE        CID=1 VS NO=1 NO SEGS=1
                                    MIN ELEV=5096 MAX ELEV=5100
                                    CH SLOPE=0.005 FP SLOPE=0.005
                                    N=0.035 DIST=20
                                    DIST ELEV DIST ELEV
                                    0 5100 10 5096
                                    20 5100

                                     RATING CURVE VALLEY SECTION  1.0
                                        WATER       FLOW       FLOW       TOP
                                       SURFACE      AREA       RATE      WIDTH
                                        ELEV        SQ FT      CFS       FT
                                      5096.00        .00        .00        .00
                                      5096.21        .11        .07       1.05
                                      5096.42        .44        .45       2.10
                                      5096.63       1.00       1.32       3.16
                                      5096.84       1.77       2.84       4.21
                                      5097.05       2.77       5.15       5.26
                                      5097.26       3.99       8.38       6.31
                                      5097.47       5.43      12.64       7.37
                                      5097.68       7.09      18.05       8.42
                                      5097.89       8.97      24.71       9.47
                                      5098.10      11.07      32.73      10.52
                                      5098.31      13.40      42.20      11.57
                                      5098.53      15.94      53.22      12.63
                                      5098.74      18.71      65.88      13.68
                                      5098.95      21.70      80.28      14.73
                                      5099.16      24.91      96.50      15.78
                                      5099.37      28.34     114.62      16.84
                                      5099.58      32.00     134.73      17.89
                                      5099.79      35.87     156.91      18.94
                                      5100.00      39.97     181.25      19.99
ROUTE MCUNGE                ID=2 HYD NO=109.1 INFLOW ID=1
                                    DT=0.0 L=680 FT NS=0 SLOPE=0.005
                                    MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 493             TABLE PTS= 20
DT=  .050000                QMED=        6.82  CKMED=      2.6498
WIDTH MED=        5.80      NREACH=  3         DX=      226.67

  DEPTH   AREA      Q    TRAVEL  WIDTH     ck      VEL      C       D      C1     C2     C3     Q-M
C1-M   C2-M   C3-M
```

```
          (FT)  (SQ FT)  (CFS)  TIME(HR) (FT)     (FPS)   (FPS)                                                  (CFS)
           .00      .0      .0     .406    .0      1.26     .29    1.000    .000   1.000    .000    .000
 .0   1.000   .000   .000
           .21      .1      .1     .297   1.1      1.20     .64     .951    .049    .951    .000    .049
 .0    .992   .000   .008
           .42      .4      .4     .187   2.1      1.41    1.01    1.117    .134    .881    .111    .008
 .2    .925   .041   .034
           .63     1.0     1.3     .143   3.2      1.80    1.32    1.433    .204    .845    .242   -.087
 .8    .853   .172  -.025
           .84     1.8     2.8     .118   4.2      2.17    1.60    1.721    .275    .817    .333   -.149
 2.0   .823   .285  -.109
          1.05     2.8     5.2     .101   5.3      2.50    1.86    1.989    .345    .793    .400   -.193
 3.9   .799   .365  -.165
          1.26     4.0     8.4     .090   6.3      2.82    2.10    2.241    .415    .773    .453   -.226
 6.7   .779   .426  -.205
          1.47     5.4    12.6     .081   7.4      3.12    2.33    2.480    .485    .755    .496   -.251
 10.4  .761   .474  -.234
          1.68     7.1    18.1     .074   8.4      3.41    2.55    2.708    .555    .740    .531   -.270
 15.3  .744   .513  -.257
          1.89     9.0    24.7     .069   9.5      3.69    2.76    2.927    .625    .725    .561   -.286
 21.3  .730   .546  -.276
          2.10    11.1    32.7     .064  10.5      3.95    2.96    3.138    .695    .713    .586   -.299
 28.6  .717   .573  -.290
          2.31    13.4    42.2     .060  11.6      4.21    3.15    3.343    .764    .701    .608   -.309
 37.4  .705   .597  -.302
          2.53    15.9    53.2     .057  12.6      4.46    3.34    3.541    .834    .690    .628   -.318
 47.6  .693   .618  -.312
          2.74    18.7    65.9     .054  13.7      4.70    3.52    3.734    .904    .679    .645   -.325
 59.4  .683   .637  -.320
          2.95    21.7    80.3     .051  14.7      4.94    3.70    3.923    .973    .670    .661   -.331
 73.0  .673   .653  -.326
          3.16    24.9    96.5     .049  15.8      5.17    3.87    4.107   1.043    .661    .675   -.336
 88.3  .664   .668  -.332
          3.37    28.3   114.6     .047  16.8      5.40    4.04    4.287   1.113    .652    .687   -.340
 105.4  .655   .681  -.336
          3.58    32.0   134.7     .045  17.9      5.62    4.21    4.463   1.183    .644    .699   -.343
 124.5  .647   .693  -.340
          3.79    35.9   156.9     .043  18.9      5.84    4.37    4.636   1.252    .636    .710   -.346
 145.7  .639   .704  -.344
          4.00    40.0   181.2     .042  20.0      5.92    4.53    4.703   1.351    .617    .716   -.334
 168.9  .632   .714  -.346
     MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) =   3 OCCURRED      10 TIMES.  AVERAGE NUMBER ITERATIONS
 =  1.0491
     Equations solved using the Ponce correction to C2
     PRINT HYD                    ID=2 CODE=1

                                        PARTIAL HYDROGRAPH   109.10


         RUNOFF VOLUME =      1.38383 INCHES      =         .5609 ACRE-FEET
         PEAK DISCHARGE RATE =      13.04 CFS  AT   1.550 HOURS   BASIN AREA =   .0076 SQ. MI.


     *
     * **** SUB-BASIN 109 ****
     * NORTH HALF OF SOCCER FIELD
     COMPUTE LT TP                LCODE=1 UPLAND/LAG TIME METHOD
                                          NK=1 ISLOPE=0
                                          LENGTH=689 FT SLOPE=0.006 K=2.0
                                          KN=0.021 CENTROID DIST=321 FT

          Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

          SCS UPLAND METHOD FACTORS
                                   LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
          SHEET FLOW PORTION            .0           .000000             .0000
          SHALLOW FLOW PORTION        689.0          .006000            2.0000
          CHANNEL FLOW PORTION          .0           .000000             .0000
          TOTAL BASIN                 689.0          .006000            2.0000


          TIME OF CONCENTRATION (HRS)=   .1235     TIME TO PEAK (HRS)=   .0824     LAG TIME (HRS)=
 .0927


          TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
          REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333     LAG
```

```
TIME (HRS)=   .1500

     COMPUTE NM HYD              ID=4 HYD NO=109 DA=0.0058 SQ MI
                                         PER A=75 PER B=15 PER C=5 PER D=5
                                         TP=0.0 MASSRAIN=-1
          TIME TO PEAK (hrs)=   .1333

          K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000    SHAPE CONSTANT, N =  7.106420
          UNIT PEAK =   1.1447    CFS   UNIT VOLUME =    .9890       B =   526.28      P60 = 1.8700
          AREA =      .000290 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

          K =   .155517HR    TP =   .133333HR    K/TP RATIO =  1.166384    SHAPE CONSTANT, N =  3.040026
          UNIT PEAK =   11.781    CFS   UNIT VOLUME =    .9980       B =   285.07      P60 = 1.8700
          AREA =      .005510 SQ MI    IA =    .61053 INCHES    INF =   1.55947 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

     PRINT HYD                   ID=4 CODE=1

                                         PARTIAL HYDROGRAPH   109.00

         RUNOFF VOLUME =      .58809 INCHES     =        .1819 ACRE-FEET
         PEAK DISCHARGE RATE =       5.92 CFS  AT   1.500 HOURS   BASIN AREA =   .0058 SQ. MI.


     *
     * ADD 109.1 TO 109 TO GET 109.2
     ADD HYD                     ID=1 HYD NO=109.2 ID I=2 ID II=4
     PRINT HYD                   ID=1 CODE=1

                                         PARTIAL HYDROGRAPH   109.20

         RUNOFF VOLUME =     1.03933 INCHES     =        .7428 ACRE-FEET
         PEAK DISCHARGE RATE =      18.69 CFS  AT   1.550 HOURS   BASIN AREA =   .0134 SQ. MI.


     *
     * ADD 109.2 TO 108.3 TO GET 108.4
     ADD HYD                     ID=5 HYD NO=108.4 ID I=1 ID II=3
     PRINT HYD                   ID=5 CODE=1

                                         PARTIAL HYDROGRAPH   108.40

         RUNOFF VOLUME =     1.31225 INCHES     =       2.1276 ACRE-FEET
         PEAK DISCHARGE RATE =      50.34 CFS  AT   1.550 HOURS   BASIN AREA =   .0304 SQ. MI.


     *
     *
     *S BASINS CONTRIBUTING TO POND 107
     * **** SUB-BASIN 107 ****
     * MAIN BLDG
     COMPUTE LT TP               LCODE=1 UPLAND/LAG TIME METHOD
                                         NK=1 ISLOPE=0
                                         LENGTH=373 FT SLOPE=0.01 K=2.0
                                         KN=0.021 CENTROID DIST=237 FT

          Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

          SCS UPLAND METHOD FACTORS
                                   LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
          SHEET FLOW PORTION              .0          .000000             .0000
          SHALLOW FLOW PORTION          373.0         .010000            2.0000
          CHANNEL FLOW PORTION            .0          .000000             .0000
          TOTAL BASIN                   373.0         .010000            2.0000

          TIME OF CONCENTRATION (HRS)=   .0518     TIME TO PEAK (HRS)=   .0345     LAG TIME (HRS)=
.0389
```

```
TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333     LAG
TIME (HRS)=   .1500

COMPUTE NM HYD              ID=1 HYD NO=107 DA=.004 SQ MI
                                   PER A=35 PER B=15 PER C=5 PER D=45
                                   TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)=   .1333

K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
UNIT PEAK =   7.1047    CFS   UNIT VOLUME =    .9975       B =   526.28      P60 = 1.8700
AREA =      .001800 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

K =   .149549HR    TP =   .133333HR    K/TP RATIO =  1.121619     SHAPE CONSTANT, N =  3.154190
UNIT PEAK =   4.8537    CFS   UNIT VOLUME =    .9968       B =   294.16      P60 = 1.8700
AREA =      .002200 SQ MI    IA =    .58182 INCHES    INF =   1.47909 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                   ID=1 CODE=1

                                   PARTIAL HYDROGRAPH   107.00

RUNOFF VOLUME =     1.38474 INCHES     =        .2954 ACRE-FEET
PEAK DISCHARGE RATE =       7.19 CFS  AT   1.500 HOURS   BASIN AREA =   .0040 SQ. MI.


*
*
*
*
*S BASINS CONTRIBUTING TO SOUTH CONNECTION TO 84" SD IN 64TH
* **** SUB-BASIN 103 ****
* SW CORNER OF SITE
COMPUTE LT TP               LCODE=1 UPLAND/LAG TIME METHOD
                                   NK=1 ISLOPE=0
                                   LENGTH=1667 FT SLOPE=0.004 K=2.0
                                   KN=0.021 CENTROID DIST=337 FT

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS
                            LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
SHEET FLOW PORTION               .0           .000000             .0000
SHALLOW FLOW PORTION          1667.0           .004000            2.0000
CHANNEL FLOW PORTION             .0           .000000             .0000
TOTAL BASIN                   1667.0           .004000            2.0000


TIME OF CONCENTRATION (HRS)=   .3661     TIME TO PEAK (HRS)=   .2441     LAG TIME (HRS)=
.2746

COMPUTE NM HYD              ID=3 HYD NO=103 DA=0.0078 SQ MI
                                   PER A=5 PER B=10 PER C=0 PER D=85
                                   TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)=   .2441

K =   .133008HR    TP =   .244052HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
UNIT PEAK =   14.297    CFS   UNIT VOLUME =    .9991       B =   526.28      P60 = 1.8700
AREA =      .006630 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

K =   .259777HR    TP =   .244052HR    K/TP RATIO =  1.064435     SHAPE CONSTANT, N =  3.317659
UNIT PEAK =   1.4707    CFS   UNIT VOLUME =    .9904       B =   306.77      P60 = 1.8700
AREA =      .001170 SQ MI    IA =    .55000 INCHES    INF =   1.39000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                   ID=3 CODE=1

                                   PARTIAL HYDROGRAPH   103.00

RUNOFF VOLUME =     2.15031 INCHES     =        .8945 ACRE-FEET
PEAK DISCHARGE RATE =      14.58 CFS  AT   1.600 HOURS   BASIN AREA =   .0078 SQ. MI.
```

```
*
* **** SUB-BASIN 104 ****
* COURTYARD AREA
COMPUTE LT TP              LCODE=1 UPLAND/LAG TIME METHOD
                                   NK=1 ISLOPE=0
                                   LENGTH=282 FT SLOPE=0.007 K=2.0
                                   KN=0.021 CENTROID DIST=146 FT

     Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

     SCS UPLAND METHOD FACTORS
                                LENGTH (FT)      SLOPE (FT/FT)      COMPOSITE K
     SHEET FLOW PORTION              .0           .000000            .0000
     SHALLOW FLOW PORTION          282.0          .007000           2.0000
     CHANNEL FLOW PORTION            .0           .000000            .0000
     TOTAL BASIN                   282.0          .007000           2.0000

     TIME OF CONCENTRATION (HRS)=   .0468     TIME TO PEAK (HRS)=   .0312     LAG TIME (HRS)=
.0351

     TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
     REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333     LAG
TIME (HRS)=   .1500

COMPUTE NM HYD             ID=1 HYD NO=104 DA=0.0015 SQ MI
                                   PER A=0 PER B=45 PER C=10 PER D=55
                                   TP=0.0 MASSRAIN=-1
     TIME TO PEAK (hrs)=   .1333
     *****WARNING*****  SUM OF TREATMENT TYPES DOES NOT EQUAL 100 PERCENT OR TOTAL AREA

     K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   2.9603    CFS   UNIT VOLUME =    .9959       B =   526.28      P60 = 1.8700
     AREA =      .000750 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

     K =   .126455HR    TP =   .133333HR    K/TP RATIO =   .948415     SHAPE CONSTANT, N =  3.727038
     UNIT PEAK =   1.8930    CFS   UNIT VOLUME =    .9947       B =   336.54      P60 = 1.8700
     AREA =      .000750 SQ MI    IA =    .47273 INCHES    INF =   1.17364 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                  ID=1 CODE=1

                                   PARTIAL HYDROGRAPH   104.00

    RUNOFF VOLUME =     1.57240 INCHES     =        .1258 ACRE-FEET
    PEAK DISCHARGE RATE =       3.11 CFS  AT   1.500 HOURS   BASIN AREA =   .0015 SQ. MI.


*
* ROUTE 104 THRU 105 IN OPEN CHANNEL TO 105.1
COMPUTE RATING CURVE       CID=1 VS NO=1 NO SEGS=1
                                   MIN ELEV=5097 MAX ELEV=5100
                                   CH SLOPE=0.005 FP SLOPE=0.005
                                   N=0.015 DIST=20
                                   DIST ELEV DIST ELEV
                                   0    5100 0    5099
                                   10   5097 20   5099
                                   20   5100

                                   RATING CURVE VALLEY SECTION  1.0
                                       WATER       FLOW        FLOW        TOP
                                     SURFACE       AREA        RATE       WIDTH
                                       ELEV        SQ FT       CFS        FT
                                    5097.00         .00         .00         .00
                                    5097.16         .12         .16        1.58
                                    5097.32         .50        1.00        3.15
                                    5097.47        1.12        2.96        4.73
                                    5097.63        1.99        6.38        6.31
                                    5097.79        3.11       11.56        7.89
                                    5097.95        4.48       18.80        9.46
```

```
                    5098.10        6.09       28.35       11.04
                    5098.26        7.96       40.48       12.62
                    5098.42       10.07       55.42       14.19
                    5098.58       12.44       73.40       15.77
                    5098.73       15.05       94.64       17.35
                    5098.89       17.91      119.35       18.93
                    5099.05       21.01      149.82       20.00
                    5099.21       24.16      188.20       20.00
                    5099.37       27.31      229.73       20.00
                    5099.52       30.47      274.24       20.00
                    5099.68       33.62      321.56       20.00
                    5099.84       36.78      371.55       20.00
                    5100.00       39.93      424.06       20.00
ROUTE MCUNGE                ID=2 HYD NO=105.1 INFLOW ID=1
                         DT=0.0 L=270 FT NS=0 SLOPE=0.005
                         MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

      INFLOW END= 487              TABLE PTS= 20
      DT=  .050000                 QMED=        1.56  CKMED=      3.1458
      WIDTH MED=        3.60       NREACH=  1         DX=      270.00

      DEPTH   AREA      Q    TRAVEL  WIDTH     ck      VEL      C      D      C1     C2     C3     Q-M
  C1-M   C2-M   C3-M
       (FT)  (SQ FT)  (CFS)  TIME(HR) (FT)    (FPS)   (FPS)                                        (CFS)
        .00     .0       .0     .081     .0     1.50    .58   1.000   .000  1.000   .000   .000
.0   1.000   .000   .000
        .16     .1       .2     .059    1.6     1.77   1.27   1.182   .042   .962   .101  -.063
.0    .994   .016  -.010
        .32     .5      1.0     .037    3.2     2.81   2.02   1.872   .084   .943   .323  -.266
.5    .947   .210  -.157
        .47    1.1      3.0     .028    4.7     3.60   2.64   2.402   .129   .927   .434  -.361
1.8    .930   .372  -.302
        .63    2.0      6.4     .023    6.3     4.33   3.20   2.885   .173   .915   .507  -.422
4.5    .917   .467  -.385
        .79    3.1     11.6     .020    7.9     5.00   3.72   3.334   .217   .905   .561  -.465
8.8    .907   .532  -.439
        .95    4.5     18.8     .018    9.5     5.63   4.20   3.756   .261   .896   .601  -.497
15.0    .898   .580  -.478
       1.10    6.1     28.4     .016   11.0     6.23   4.65   4.156   .305   .888   .634  -.522
23.4    .890   .617  -.507
       1.26    8.0     40.5     .015   12.6     6.81   5.09   4.538   .349   .881   .660  -.542
34.2    .883   .646  -.530
       1.42   10.1     55.4     .014   14.2     7.36   5.50   4.905   .393   .875   .682  -.558
47.7    .877   .671  -.548
       1.58   12.4     73.4     .013   15.8     7.89   5.90   5.260   .437   .869   .701  -.571
64.2    .871   .692  -.563
       1.73   15.0     94.6     .012   17.3     8.40   6.29   5.602   .481   .864   .718  -.582
83.8    .866   .709  -.575
       1.89   17.9    119.4     .011   18.9     9.21   6.66   6.143   .507   .867   .739  -.606
106.7    .861   .725  -.585
       2.05   21.0    149.8     .011   20.0    10.85   7.13   7.232   .512   .883   .771  -.654
134.3    .873   .754  -.627
       2.21   24.2    188.2     .010   20.0    12.68   7.79   8.452   .550   .890   .800  -.690
168.6    .893   .792  -.686
       2.37   27.3    229.7     .009   20.0    13.65   8.41   9.100   .623   .884   .813  -.697
208.6    .887   .807  -.694
       2.52   30.5    274.2     .008   20.0    14.56   9.00   9.710   .697   .878   .825  -.702
251.6    .881   .819  -.700
       2.68   33.6    321.6     .008   20.0    15.43   9.56  10.288   .772   .872   .834  -.706
297.5    .875   .830  -.704
       2.84   36.8    371.5     .007   20.0    16.25  10.10  10.836   .847   .867   .842  -.709
346.2    .869   .838  -.708
       3.00   39.9    424.1     .007   20.0    17.04  10.62  11.362   .922   .861   .849  -.711
397.5    .864   .846  -.710
      MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) =   2 OCCURRED      21 TIMES.  AVERAGE NUMBER ITERATIONS
=  1.0364
      Equations solved using the Ponce correction to C2
      PRINT HYD                   ID=2 CODE=1

                                   PARTIAL HYDROGRAPH   105.10


          RUNOFF VOLUME =     1.57267 INCHES     =        .1258 ACRE-FEET
          PEAK DISCHARGE RATE =       3.02 CFS  AT   1.500 HOURS   BASIN AREA =   .0015 SQ. MI.


      *
      * **** SUB-BASIN 105 ****
```

```
* FRONT YARD AND PARKING AREA
COMPUTE LT TP              LCODE=1 UPLAND/LAG TIME METHOD
                                   NK=1 ISLOPE=0
                                   LENGTH=430 FT SLOPE=0.007 K=2.0
                                   KN=0.021 CENTROID DIST=220 FT

     Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

     SCS UPLAND METHOD FACTORS
                                LENGTH (FT)      SLOPE (FT/FT)      COMPOSITE K
     SHEET FLOW PORTION              .0           .000000            .0000
     SHALLOW FLOW PORTION          430.0           .007000           2.0000
     CHANNEL FLOW PORTION            .0           .000000            .0000
     TOTAL BASIN                   430.0           .007000           2.0000

     TIME OF CONCENTRATION (HRS)=   .0714     TIME TO PEAK (HRS)=   .0476     LAG TIME (HRS)=
.0535


     TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
     REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333     LAG
TIME (HRS)=   .1500

COMPUTE NM HYD             ID=4 HYD NO=105 DA=0.0018 SQ MI
                                   PER A=15 PER B=0 PER C=0 PER D=85
                                   TP=0.0 MASSRAIN=-1
     TIME TO PEAK (hrs)=   .1333

     K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   6.0390    CFS   UNIT VOLUME =    .9975       B =   526.28      P60 = 1.8700
     AREA =      .001530 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


     K =   .163724HR    TP =   .133333HR    K/TP RATIO =  1.227936     SHAPE CONSTANT, N =  2.899764
     UNIT PEAK =   .55393    CFS   UNIT VOLUME =    .9727       B =   273.54      P60 = 1.8700
     AREA =      .000270 SQ MI    IA =    .65000 INCHES    INF =   1.67000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                  ID=4 CODE=1

                                   PARTIAL HYDROGRAPH   105.00

    RUNOFF VOLUME =     2.12906 INCHES     =        .2044 ACRE-FEET
    PEAK DISCHARGE RATE =       4.44 CFS  AT   1.500 HOURS   BASIN AREA =   .0018 SQ. MI.


*
* ADD 103 TO 105 TO GET 105.2
ADD HYD                    ID=1 HYD NO=105.2 ID I=3 ID II=4
PRINT HYD                  ID=1 CODE=1

                                   PARTIAL HYDROGRAPH   105.20

    RUNOFF VOLUME =     2.14625 INCHES     =       1.0989 ACRE-FEET
    PEAK DISCHARGE RATE =      17.59 CFS  AT   1.600 HOURS   BASIN AREA =   .0096 SQ. MI.


*
* ADD 105.1 TO 105.2 TO GET 105.3
ADD HYD                    ID=3 HYD NO=105.3 ID I=1 ID II=2
PRINT HYD                  ID=3 CODE=1

                                   PARTIAL HYDROGRAPH   105.30

    RUNOFF VOLUME =     2.06867 INCHES     =       1.2246 ACRE-FEET
    PEAK DISCHARGE RATE =      20.24 CFS  AT   1.550 HOURS   BASIN AREA =   .0111 SQ. MI.


*
* ROUTE 104 THRU 105 IN OPEN CHANNEL TO 105.1
```

```
COMPUTE RATING CURVE        CID=1 VS NO=1 NO SEGS=1
                                MIN ELEV=5097 MAX ELEV=5100
                                CH SLOPE=0.005 FP SLOPE=0.005
                                N=0.015 DIST=20
                                DIST ELEV DIST ELEV
                                0 5100 0 5099
                                10 5097 20 5099
                                20 5100
```

RATING CURVE VALLEY SECTION 1.0

WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5097.00	.00	.00	.00
5097.16	.12	.16	1.58
5097.32	.50	1.00	3.15
5097.47	1.12	2.96	4.73
5097.63	1.99	6.38	6.31
5097.79	3.11	11.56	7.89
5097.95	4.48	18.80	9.46
5098.10	6.09	28.35	11.04
5098.26	7.96	40.48	12.62
5098.42	10.07	55.42	14.19
5098.58	12.44	73.40	15.77
5098.73	15.05	94.64	17.35
5098.89	17.91	119.35	18.93
5099.05	21.01	149.82	20.00
5099.21	24.16	188.20	20.00
5099.37	27.31	229.73	20.00
5099.52	30.47	274.24	20.00
5099.68	33.62	321.56	20.00
5099.84	36.78	371.55	20.00
5100.00	39.93	424.06	20.00

```
ROUTE MCUNGE                ID=4 HYD NO=110.1 INFLOW ID=3
                                DT=0.0 L=500 FT NS=0 SLOPE=0.005
                                MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

     INFLOW END= 510            TABLE PTS= 20
     DT=  .050000               QMED=       10.12  CKMED=      4.6313
     WIDTH MED=        7.45     NREACH=  2         DX=      250.00

       DEPTH   AREA      Q    TRAVEL  WIDTH     ck      VEL      C      D      C1     C2     C3     Q-M
   C1-M   C2-M   C3-M
        (FT)  (SQ FT)  (CFS)  TIME(HR) (FT)     (FPS)   (FPS)                                        (CFS)
          .00     .0       .0    .150     .0     1.39    .58   1.000   .000  1.000   .000   .000
.0   1.000   .000   .000
          .16     .1       .2    .109    1.6     1.77   1.27   1.277   .045   .961   .139  -.100
.0    .994   .022  -.016
          .32     .5      1.0    .069    3.2     2.81   2.02   2.021   .091   .942   .357  -.299
.5    .945   .247  -.192
          .47     1.1      3.0    .053    4.7     3.60   2.64   2.594   .139   .926   .464  -.390
1.8    .928   .405  -.333
          .63     2.0      6.4    .043    6.3     4.33   3.20   3.116   .187   .913   .535  -.448
4.5    .916   .497  -.412
          .79     3.1     11.6    .037    7.9     5.00   3.72   3.601   .234   .903   .586  -.489
8.8    .905   .559  -.464
          .95     4.5     18.8    .033    9.5     5.63   4.20   4.056   .282   .894   .625  -.520
15.0    .896   .605  -.501
         1.10     6.1     28.4    .030   11.0     6.23   4.65   4.488   .330   .887   .656  -.543
23.4    .889   .640  -.529
         1.26     8.0     40.5    .027   12.6     6.81   5.09   4.901   .377   .880   .681  -.561
34.2    .882   .668  -.550
         1.42    10.1     55.4    .025   14.2     7.36   5.50   5.298   .424   .874   .702  -.576
47.7    .875   .692  -.567
         1.58    12.4     73.4    .024   15.8     7.89   5.90   5.680   .472   .868   .720  -.588
64.2    .870   .711  -.581
         1.73    15.0     94.6    .022   17.3     8.40   6.29   6.051   .519   .863   .736  -.599
83.8    .864   .728  -.592
         1.89    17.9    119.4    .021   18.9     9.21   6.66   6.634   .548   .866   .756  -.622
106.7    .859   .742  -.602
         2.05    21.0    149.8    .019   20.0    10.85   7.13   7.810   .552   .882   .786  -.668
134.3    .872   .770  -.642
         2.21    24.2    188.2    .018   20.0    12.68   7.79   9.128   .594   .889   .813  -.703
168.6    .893   .806  -.699
         2.37    27.3    229.7    .017   20.0    13.65   8.41   9.828   .673   .883   .826  -.709
208.6    .886   .820  -.706
         2.52    30.5    274.2    .015   20.0    14.56   9.00  10.487   .753   .877   .837  -.714
251.6    .880   .832  -.711
         2.68    33.6    321.6    .015   20.0    15.43   9.56  11.111   .834   .871   .845  -.717
```

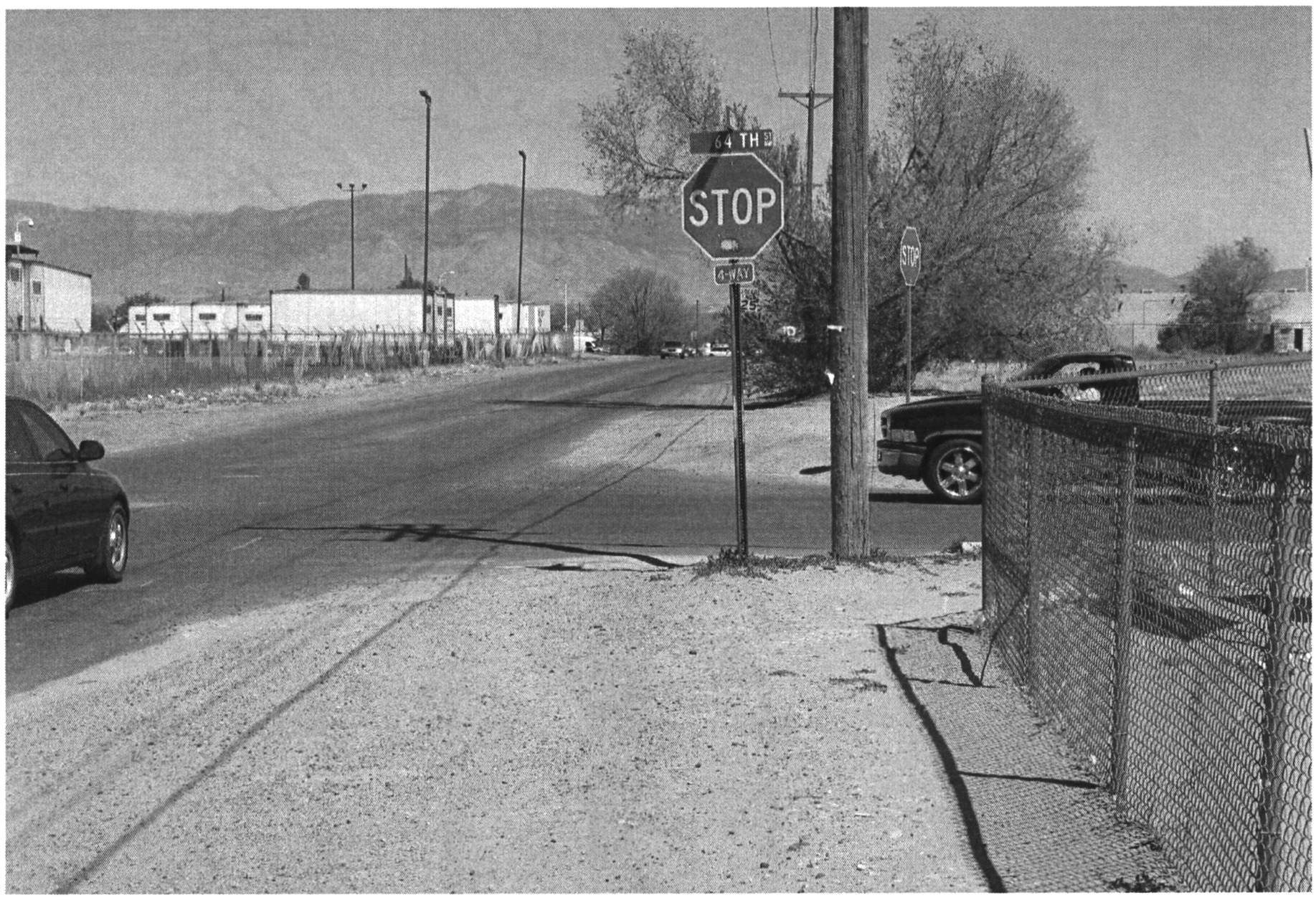
```
297.5    .874   .841  -.715
         2.84   36.8    371.5    .014   20.0    16.25  10.10   11.703   .914   .866   .853  -.719
346.2    .868   .849  -.718
         3.00   39.9    424.1    .013   20.0    17.04  10.62   12.271   .995   .860   .860  -.720
397.5    .863   .857  -.720
     MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) =   3 OCCURRED       9 TIMES.  AVERAGE NUMBER ITERATIONS
=  1.0763
       DEPTH   AREA      Q    TRAVEL  WIDTH     ck      VEL      C      D      C1     C2     C3     Q-M
   C1-M   C2-M   C3-M
        (FT)  (SQ FT)  (CFS)  TIME(HR) (FT)     (FPS)   (FPS)                                      (CFS)
         .00     .0      .0    .150     .0     1.39     .58   1.000   .000  1.000   .000   .000
.0   1.000   .000   .000
         .16     .1      .2    .109    1.6     1.46    1.27   1.055   .055   .948   .052   .000
.0    .982   .018   .000
         .32     .5     1.0    .069    3.2     1.61    2.02   1.158   .158   .863   .137   .000
.5    .906   .094   .000
         .47    1.1     3.0    .053    4.7     1.78    2.64   1.281   .281   .780   .220   .000
1.8   .819   .181   .000
         .63    2.0     6.4    .043    6.3     1.96    3.20   1.412   .412   .708   .292   .000
4.5   .741   .259   .000
         .79    3.1    11.6    .037    7.9     2.15    3.72   1.546   .546   .647   .353   .000
8.8   .675   .325   .000
         .95    4.5    18.8    .033    9.5     2.33    4.20   1.681   .681   .595   .405   .000
15.0  .619   .381   .000
        1.10    6.1    28.4    .030   11.0     2.52    4.65   1.815   .815   .551   .449   .000
23.4  .571   .429   .000
        1.26    8.0    40.5    .027   12.6     2.71    5.09   1.948   .948   .513   .487   .000
34.2  .531   .469   .000
        1.42   10.1    55.4    .025   14.2     2.89    5.50   2.081  1.081   .481   .519   .000
47.7  .496   .504   .000
        1.58   12.4    73.4    .024   15.8     3.07    5.90   2.212  1.212   .452   .548   .000
64.2  .465   .535   .000
        1.73   15.0    94.6    .022   17.3     3.25    6.29   2.342  1.342   .427   .573   .000
83.8  .439   .561   .000
        1.89   17.9   119.4    .021   18.9     3.43    6.66   2.470  1.470   .405   .595   .000
106.7 .415   .585   .000
        2.05   21.0   149.8    .019   20.0     3.66    7.13   2.637  1.637   .379   .621   .000
134.3 .391   .609   .000
        2.21   24.2   188.2    .018   20.0     4.00    7.79   2.881  1.881   .347   .653   .000
168.6 .362   .638   .000
        2.37   27.3   229.7    .017   20.0     4.33    8.41   3.120  2.120   .320   .680   .000
208.6 .333   .667   .000
        2.52   30.5   274.2    .015   20.0     4.66    9.00   3.355  2.355   .298   .702   .000
251.6 .309   .691   .000
        2.68   33.6   321.6    .015   20.0     4.98    9.56   3.584  2.584   .279   .721   .000
297.5 .288   .712   .000
        2.84   36.8   371.5    .014   20.0     5.29   10.10   3.809  2.809   .263   .737   .000
346.2 .270   .730   .000
        3.00   39.9   424.1    .013   20.0     5.60   10.62   4.030  3.030   .248   .752   .000
397.5 .255   .745   .000
     MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) =   3 OCCURRED       3 TIMES.  AVERAGE NUMBER ITERATIONS
=  1.0581
     Equations solved with two passes: first using the Ponce correction to C1, second using the Fread
correction to C1, C2 and C3
     PRINT HYD                    ID=4 CODE=1

                                   PARTIAL HYDROGRAPH   110.10

         RUNOFF VOLUME =     2.06323 INCHES     =       1.2214 ACRE-FEET
         PEAK DISCHARGE RATE =      19.85 CFS  AT   1.650 HOURS   BASIN AREA =   .0111 SQ. MI.


     *
     * **** SUB-BASIN 110 ****
     * SOUTH HALF OF SOCCER FIELD
     COMPUTE LT TP                LCODE=1 UPLAND/LAG TIME METHOD
                                          NK=1 ISLOPE=0
                                          LENGTH=497 FT SLOPE=0.005 K=2.0
                                          KN=0.021 CENTROID DIST=301 FT

         Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

         SCS UPLAND METHOD FACTORS
                                   LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
         SHEET FLOW PORTION              .0           .000000             .0000
         SHALLOW FLOW PORTION          497.0           .005000            2.0000
         CHANNEL FLOW PORTION            .0           .000000             .0000
```

```
TOTAL BASIN                    497.0          .005000          2.0000

TIME OF CONCENTRATION (HRS)=   .0976     TIME TO PEAK (HRS)=   .0651     LAG TIME (HRS)=
.0732

TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333     LAG
TIME (HRS)=   .1500

COMPUTE NM HYD              ID=5 HYD NO=110 DA=0.005 SQ MI
                                 PER A=90 PER B=0 PER C=5 PER D=5
                                 TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)=   .1333

K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
UNIT PEAK =   .98677    CFS   UNIT VOLUME =    .9890       B =   526.28      P60 = 1.8700
AREA =      .000250 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

K =   .160681HR    TP =   .133333HR    K/TP RATIO =  1.205107     SHAPE CONSTANT, N =  2.949709
UNIT PEAK =   9.8929    CFS   UNIT VOLUME =    .9970       B =   277.70      P60 = 1.8700
AREA =      .004750 SQ MI    IA =    .63421 INCHES    INF =   1.62579 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                   ID=5 CODE=1

                                 PARTIAL HYDROGRAPH   110.00

RUNOFF VOLUME =      .55707 INCHES     =        .1486 ACRE-FEET
PEAK DISCHARGE RATE =       4.80 CFS  AT   1.500 HOURS   BASIN AREA =   .0050 SQ. MI.


*
* **** SUB-BASIN 112 ****
* WEST SIDE OF TRACK & FIELD
COMPUTE LT TP               LCODE=1 UPLAND/LAG TIME METHOD
                                 NK=1 ISLOPE=0
                                 LENGTH=318 FT SLOPE=0.006 K=2.0
                                 KN=0.021 CENTROID DIST=266 FT

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS
                            LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
SHEET FLOW PORTION               .0           .000000             .0000
SHALLOW FLOW PORTION           318.0          .006000            2.0000
CHANNEL FLOW PORTION             .0           .000000             .0000
TOTAL BASIN                    318.0          .006000            2.0000

TIME OF CONCENTRATION (HRS)=   .0570     TIME TO PEAK (HRS)=   .0380     LAG TIME (HRS)=
.0428

TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333     LAG
TIME (HRS)=   .1500

COMPUTE NM HYD              ID=1 HYD NO=112 DA=0.002 SQ MI
                                 PER A=95 PER B=0 PER C=0 PER D=5
                                 TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)=   .1333

K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
UNIT PEAK =   .39471    CFS   UNIT VOLUME =    .9739       B =   526.28      P60 = 1.8700
AREA =      .000100 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

K =   .163724HR    TP =   .133333HR    K/TP RATIO =  1.227936     SHAPE CONSTANT, N =  2.899764
UNIT PEAK =   3.8980    CFS   UNIT VOLUME =    .9947       B =   273.54      P60 = 1.8700
AREA =      .001900 SQ MI    IA =    .65000 INCHES    INF =   1.67000 INCHES PER HOUR
```

```
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                    ID=1 CODE=1

                                   PARTIAL HYDROGRAPH   112.00


    RUNOFF VOLUME =       .53875 INCHES     =        .0575 ACRE-FEET
    PEAK DISCHARGE RATE =       1.85 CFS  AT   1.500 HOURS   BASIN AREA =   .0020 SQ. MI.


*
* **** SUB-BASIN 113 ****
* EAST SIDE OF TRACK & FIELD
COMPUTE LT TP                LCODE=1 UPLAND/LAG TIME METHOD
                                     NK=1 ISLOPE=0
                                     LENGTH=315 FT SLOPE=0.006 K=2.0
                                     KN=0.021 CENTROID DIST=273 FT

          Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

          SCS UPLAND METHOD FACTORS
                                 LENGTH (FT)      SLOPE (FT/FT)      COMPOSITE K
          SHEET FLOW PORTION          .0           .000000            .0000
          SHALLOW FLOW PORTION      315.0          .006000           2.0000
          CHANNEL FLOW PORTION        .0           .000000            .0000
          TOTAL BASIN               315.0          .006000           2.0000


          TIME OF CONCENTRATION (HRS)=   .0565     TIME TO PEAK (HRS)=   .0377     LAG TIME (HRS)=
.0424


          TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
          REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333     LAG
TIME (HRS)=   .1500

     COMPUTE NM HYD              ID=2 HYD NO=113 DA=0.0023 SQ MI
                                     PER A=95 PER B=0 PER C=0 PER D=5
                                     TP=0.0 MASSRAIN=-1
      TIME TO PEAK (hrs)=   .1333

      K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
      UNIT PEAK =   .45391    CFS   UNIT VOLUME =    .9739       B =   526.28      P60 = 1.8700
      AREA =      .000115 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


      K =   .163724HR    TP =   .133333HR    K/TP RATIO =  1.227936     SHAPE CONSTANT, N =  2.899764
      UNIT PEAK =   4.4827    CFS   UNIT VOLUME =    .9953       B =   273.54      P60 = 1.8700
      AREA =      .002185 SQ MI    IA =    .65000 INCHES    INF =   1.67000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                    ID=2 CODE=1

                                   PARTIAL HYDROGRAPH   113.00


    RUNOFF VOLUME =       .53875 INCHES     =        .0661 ACRE-FEET
    PEAK DISCHARGE RATE =       2.13 CFS  AT   1.500 HOURS   BASIN AREA =   .0023 SQ. MI.


*
* ADD 112 TO 113 TO GET 110.2
ADD HYD                      ID=3 HYD NO=113.1 ID I=1 ID II=2
PRINT HYD                    ID=3 CODE=1

                                   PARTIAL HYDROGRAPH   113.10


    RUNOFF VOLUME =       .53867 INCHES     =        .1235 ACRE-FEET
    PEAK DISCHARGE RATE =       3.98 CFS  AT   1.500 HOURS   BASIN AREA =   .0043 SQ. MI.


*
```

```
* ADD 110.1 TO 110.2 TO GET 110.3
ADD HYD                    ID=1 HYD NO=110.3 ID I=3 ID II=4
PRINT HYD                  ID=1 CODE=1

                                PARTIAL HYDROGRAPH   110.30


    RUNOFF VOLUME =     1.63749 INCHES     =       1.3449 ACRE-FEET
    PEAK DISCHARGE RATE =      22.51 CFS  AT   1.600 HOURS   BASIN AREA =   .0154 SQ. MI.


*
* ADD 110 TO 110.3 TO GET 110.4
ADD HYD                    ID=2 HYD NO=110.4 ID I=1 ID II=5
PRINT HYD                  ID=2 CODE=1

                                PARTIAL HYDROGRAPH   110.40


    RUNOFF VOLUME =     1.37268 INCHES     =       1.4935 ACRE-FEET
    PEAK DISCHARGE RATE =      26.26 CFS  AT   1.600 HOURS   BASIN AREA =   .0204 SQ. MI.


*
*
*S BASINS CONTRIBUTING TO FORTUNA ROAD RUNOFF
* **** SUB-BASIN 100****
* WEST OF Y-HALL
COMPUTE LT TP              LCODE=1 UPLAND/LAG TIME METHOD
                                   NK=1 ISLOPE=0
                                   LENGTH=540 FT SLOPE=0.003 K=2.0
                                   KN=0.021 CENTROID DIST=269 FT

     Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

     SCS UPLAND METHOD FACTORS
                                LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
     SHEET FLOW PORTION              .0           .000000             .0000
     SHALLOW FLOW PORTION          540.0          .003000            2.0000
     CHANNEL FLOW PORTION            .0           .000000             .0000
     TOTAL BASIN                   540.0          .003000            2.0000


     TIME OF CONCENTRATION (HRS)=   .1369     TIME TO PEAK (HRS)=   .0913     LAG TIME (HRS)=
.1027


     TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
     REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333     LAG
TIME (HRS)=   .1500

COMPUTE NM HYD             ID=5 HYD NO=100 DA=0.002 SQ MI
                                   PER A=0 PER B=0 PER C=5 PER D=95
                                   TP=0.0 MASSRAIN=-1
     TIME TO PEAK (hrs)=   .1333

     K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   7.4994    CFS   UNIT VOLUME =    .9978       B =   526.28      P60 = 1.8700
     AREA =      .001900 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


     K =   .105893HR    TP =   .133333HR    K/TP RATIO =   .794199     SHAPE CONSTANT, N =  4.514851
     UNIT PEAK =   .29111    CFS   UNIT VOLUME =    .9586       B =   388.14      P60 = 1.8700
     AREA =      .000100 SQ MI    IA =    .35000 INCHES    INF =    .83000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD                  ID=5 CODE=1

                                PARTIAL HYDROGRAPH   100.00


    RUNOFF VOLUME =     2.35553 INCHES     =        .2513 ACRE-FEET
    PEAK DISCHARGE RATE =       5.42 CFS  AT   1.500 HOURS   BASIN AREA =   .0020 SQ. MI.
```

```
*
FINISH
    NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 09:03:49
```

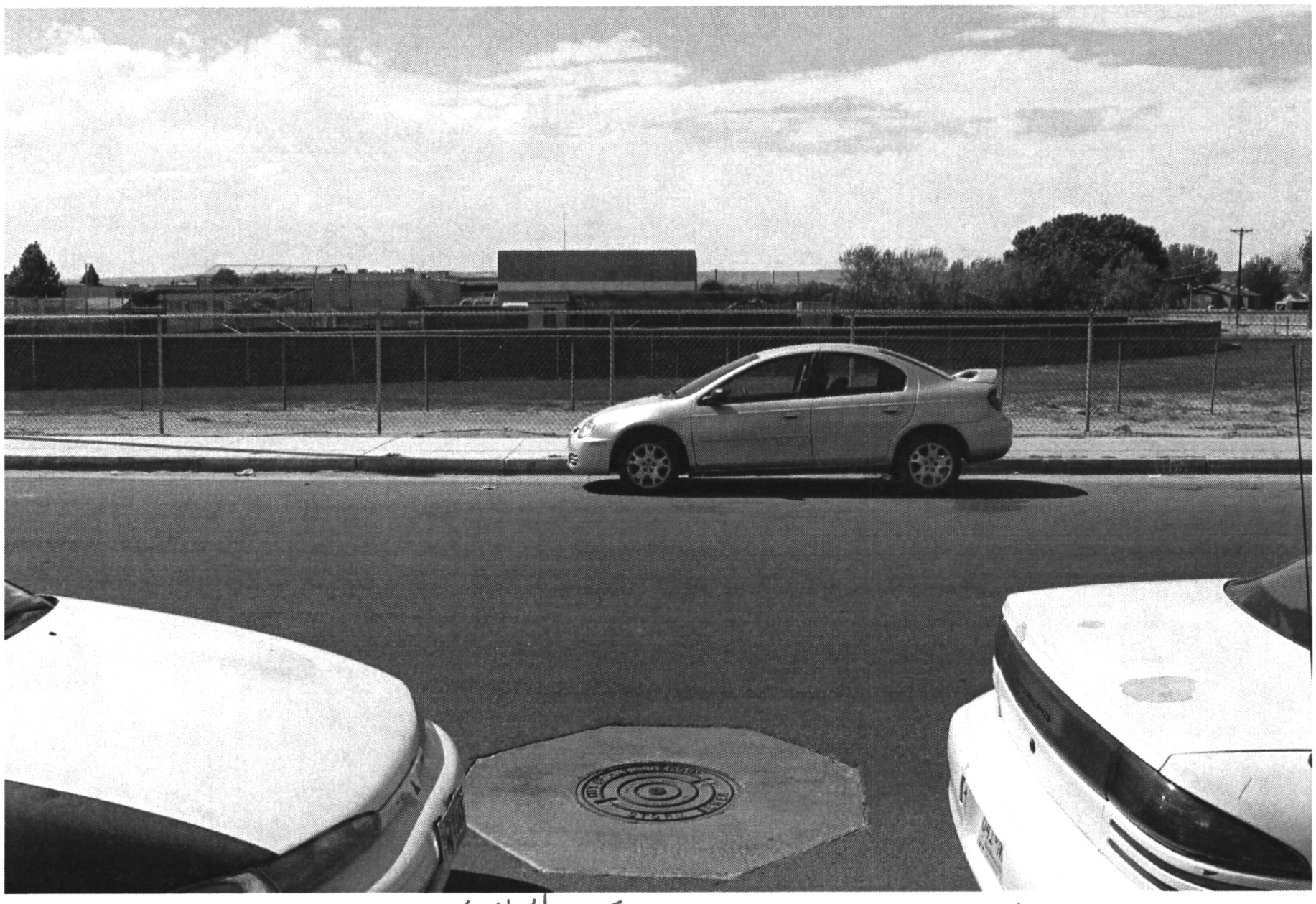


INTERSECTION, 64th & GLENRIO

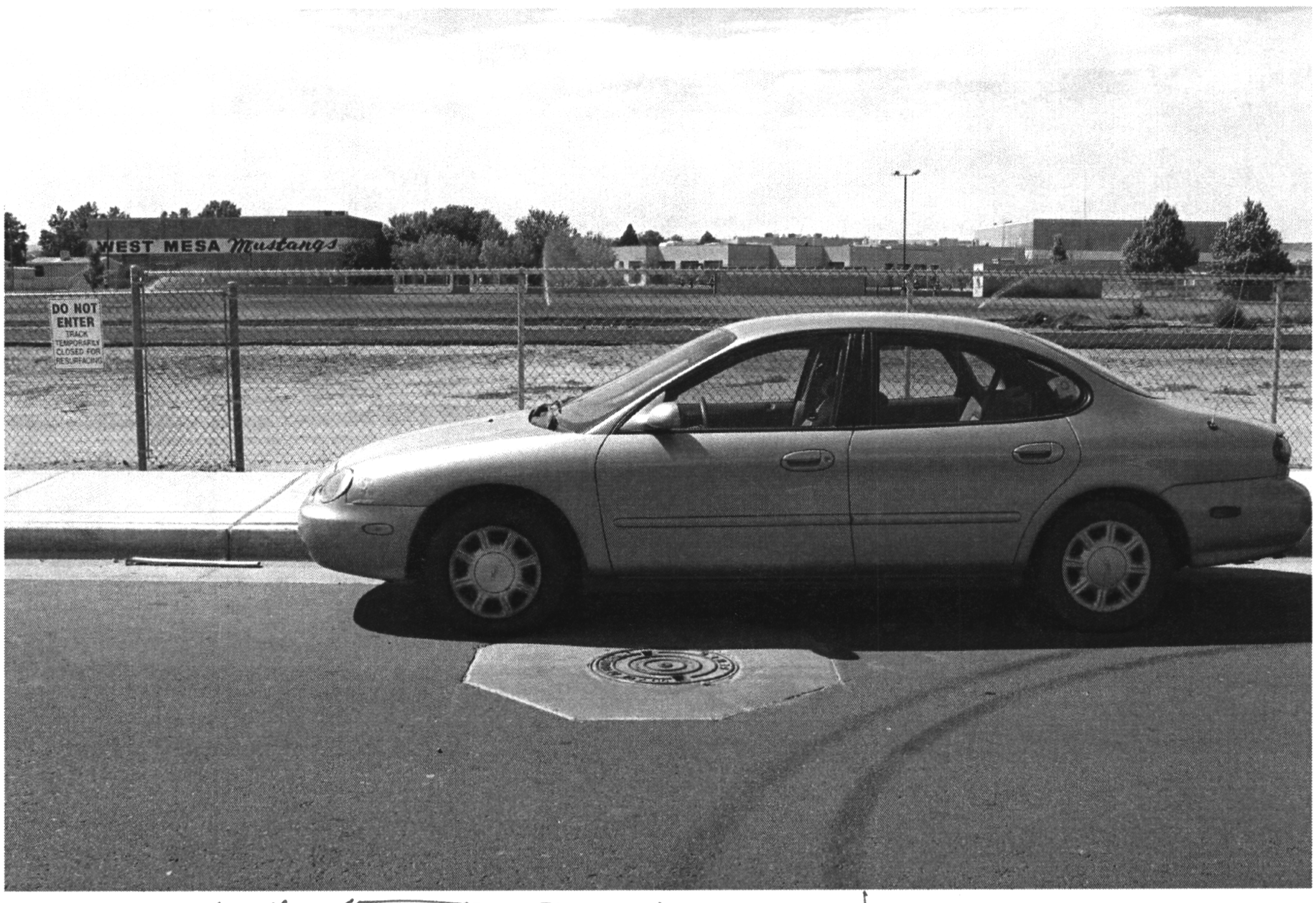
Fortuna? No pictures,

but portion of flows from
Fortuna needs to
be included in the
basin analysis

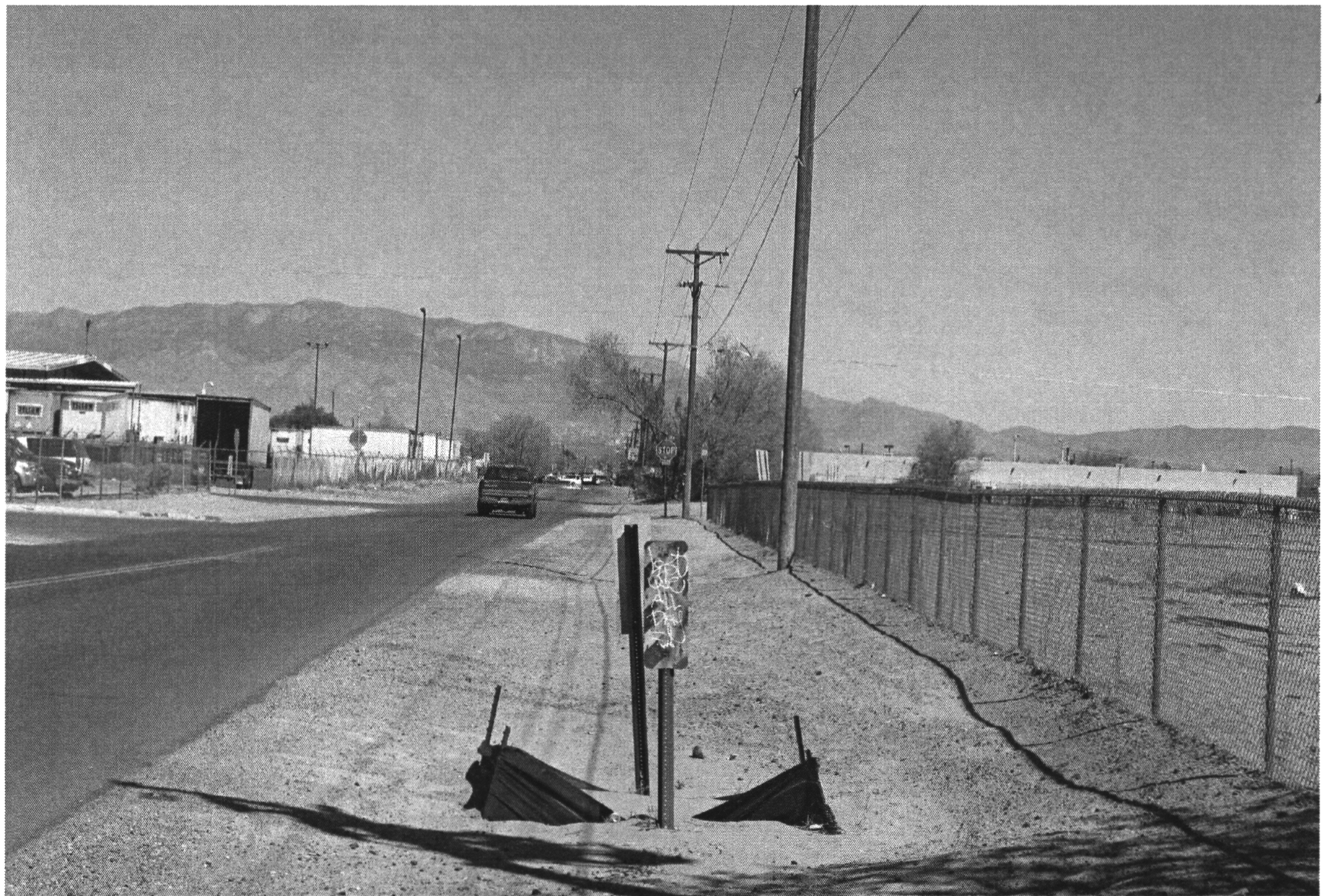
- the proposed SD -
is it adequate?



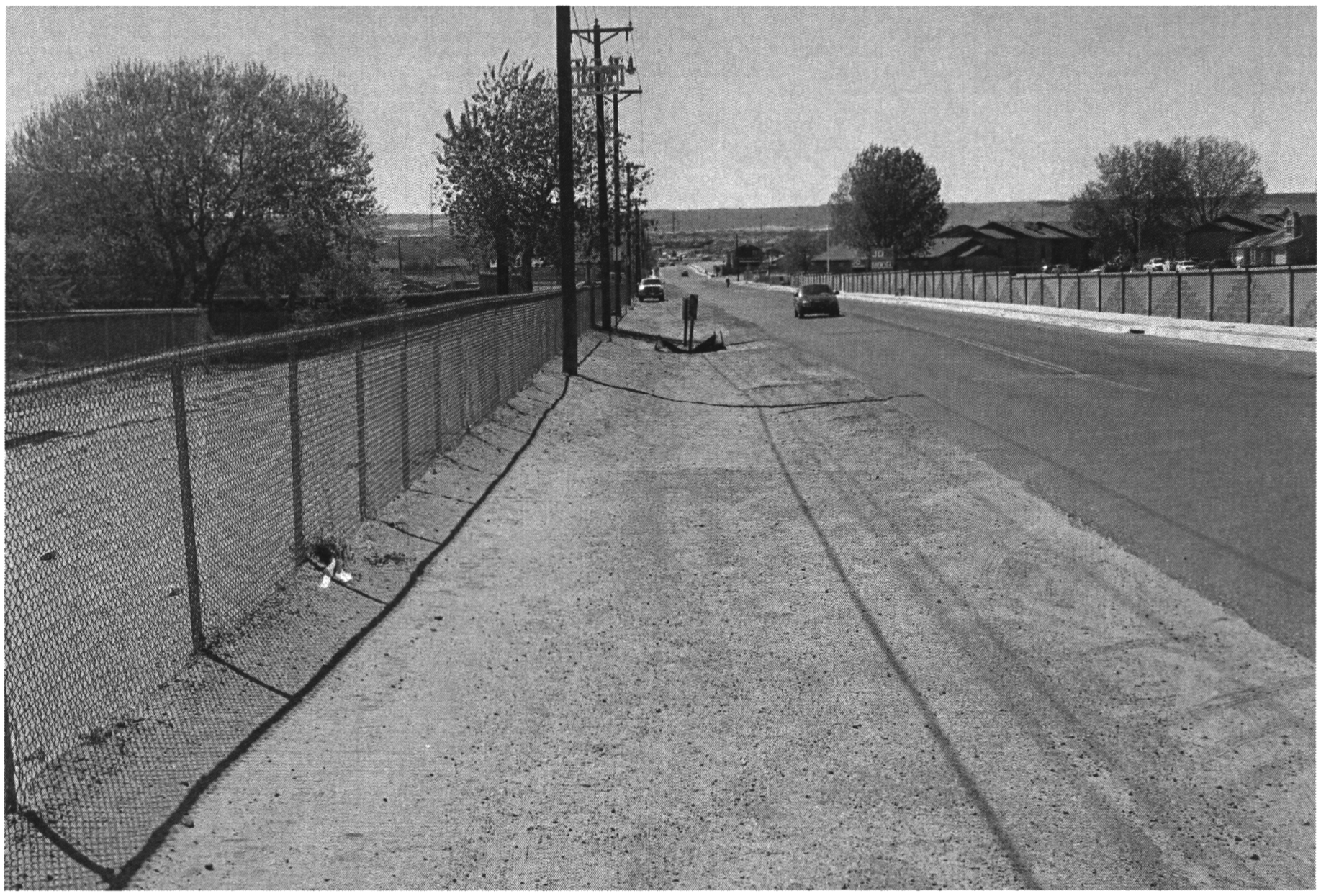
64th STREET, LOOKING WEST



64th ~~GUONRIO RD.~~ LOOKING WEST



GLENRIO RD, LOOKING EAST



GLENRIO RD, LOOKING WEST

CITY OF ALBUQUERQUE
PLANNING DEPARTMENT
Hydrology Section
Predesign Meeting Conference Notes
DATE: 9-10-14

ZONE ATLAS PAGE: J16 ADDRESS:
DRAINAGE FILE: J16D060S
PROJECT SCOPE:

ATTENDANCE: Graeme Means

FINDINGS:

1. It is acceptable to drain Basins 104 and 105 from the 2000 Wilson & Company Study to the Fortuna Storm drain. Explain justification on narrative

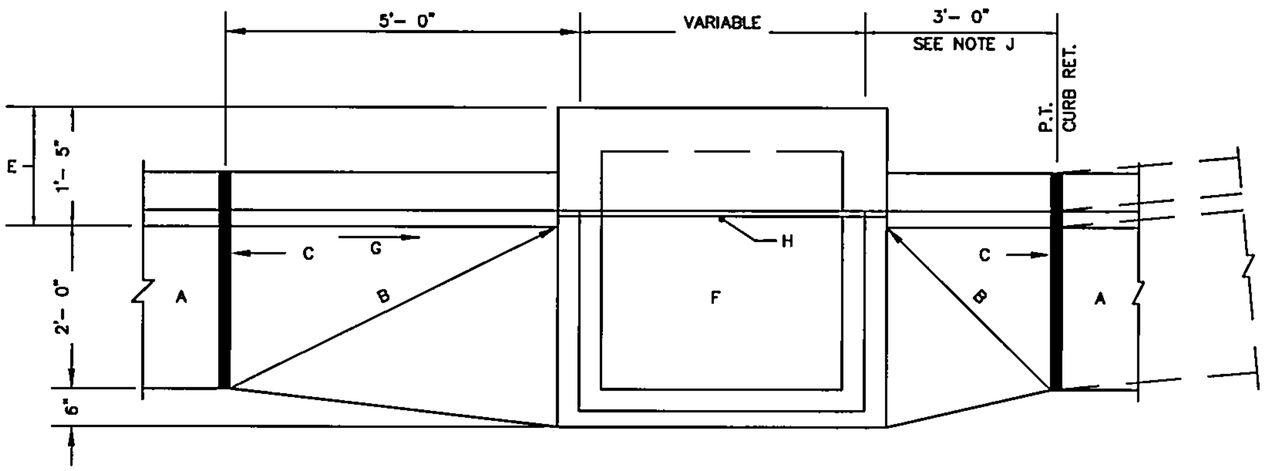
The undersigned agrees that the above findings are summarized accurately and are subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: Curtis A. Cherne
NAME (PRINT): Curtis A. Cherne

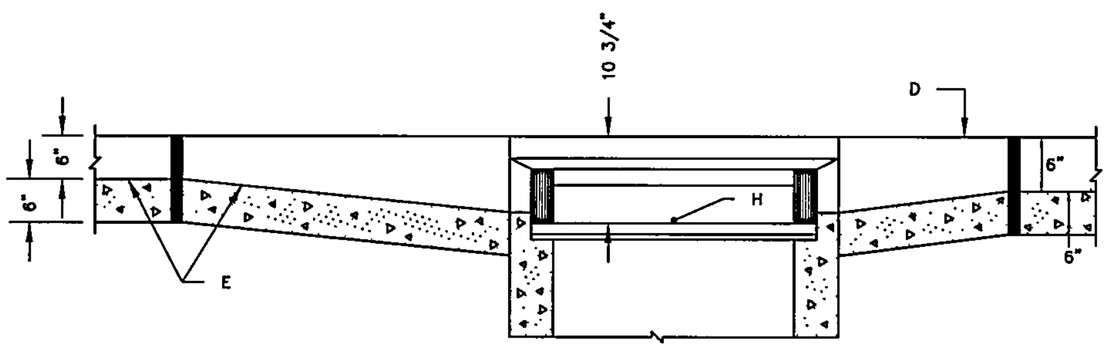
SIGNED: Graeme Means
NAME (PRINT):

NOTE: PLEASE INCLUDE A CCOPY OF THIS SHEET WITH YOIUR DRAINAGE SUBMITTAL

RECEIVED
LAND DEVELOPMENT SECTION



PLAN



LONGITUDINAL SECTION
ALONG FLOWLINE

GENERAL NOTES:

1. DETAILS FOR PLACING CATCH BASINS. MEDIAN CURB AND GUTTER.

CONSTRUCTION NOTES:

A. MEDIAN CURB AND GUTTER.
B. STRAIGHT GRADE.
C. EXPANSION JOINT.
D. TOP OF CURB.
E. FLOWLINE.
F. FOR FRAME & GRATE SEE DWG. 2216, 2220 & 2221.
G. DIRECTION OF FLOW.
H. POINT OF MEASUREMENT FOR TOP OF GRATE ELEVATION.
J. PROVIDE 5 FEET TRANSITION EACH SIDE OF CATCH BASIN, WHEN INSTALLING AT SAG POINT IN INSTALLATIONS OTHER THAN AT CURB RETURN.

WILSON & COMPANY
4900 LANG AVENUE N.E.
ALBUQUERQUE, NEW MEXICO
87109
(505) 348-4000
FAX (505) 348-4072
www.wilsonco.com

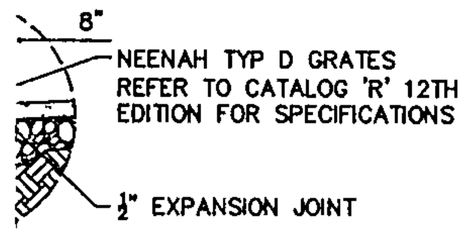
DRAINAGE STORM INLET
GUTTER TRANSITION

DWG. 33-MOD

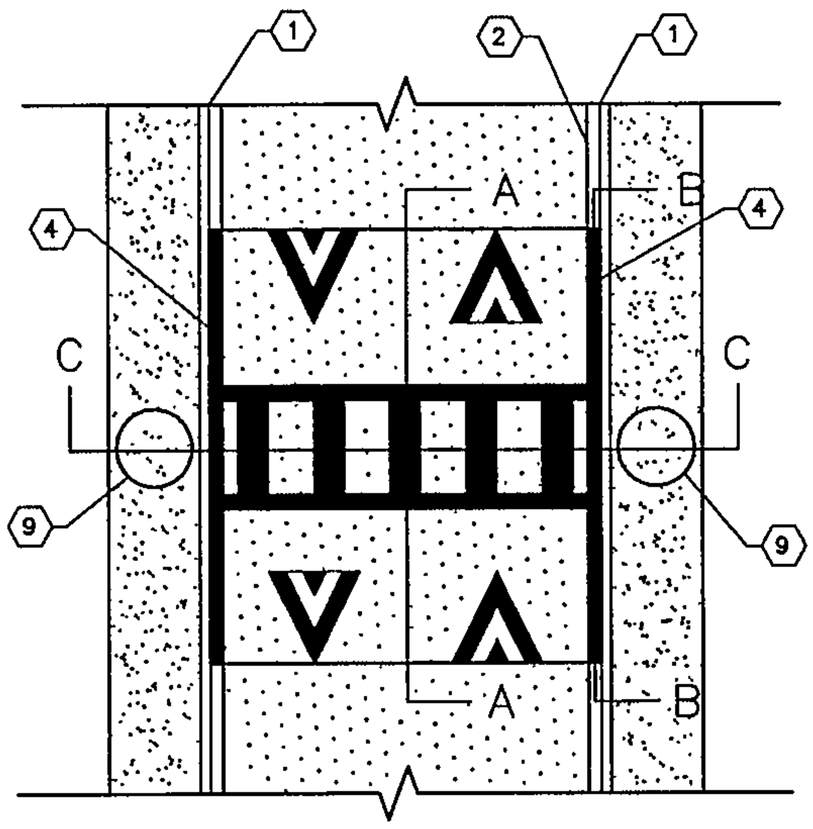
DESIGN	MJ	WCEA NO.	XXXXXXXX	DATE	DEC 2007
DRAWN	ELB	PROJECT NO.	N/A	SHEET NO.	1 OF 1
CHECK	MJ				

T:\Library\CADD\APS STD DWG -a,jn work in progress\2207 DRAINAGE STORM INLT GUTTER TRANSITION.dwg 1/7/2008 11:12:15 AM MST

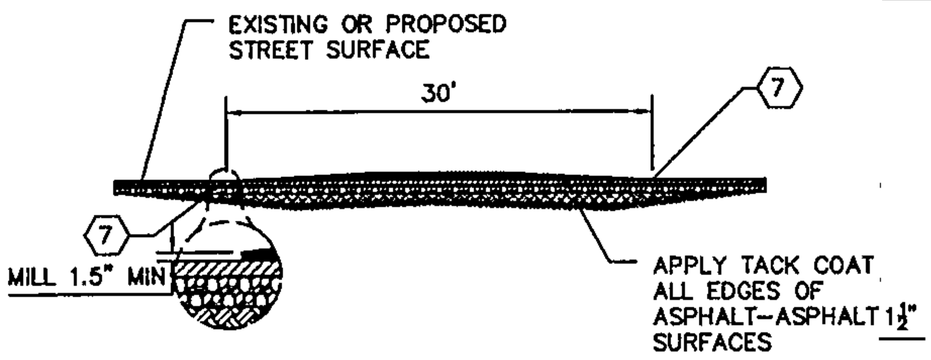
MATCH GUTTER WIDTH



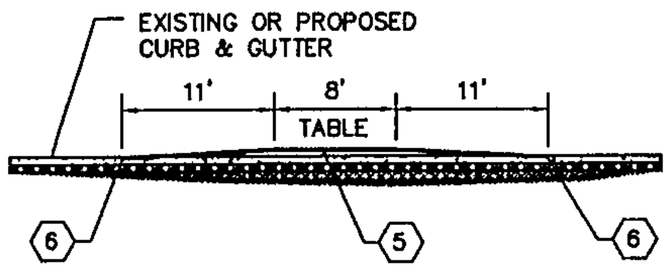
CROSSWALK CULVERT



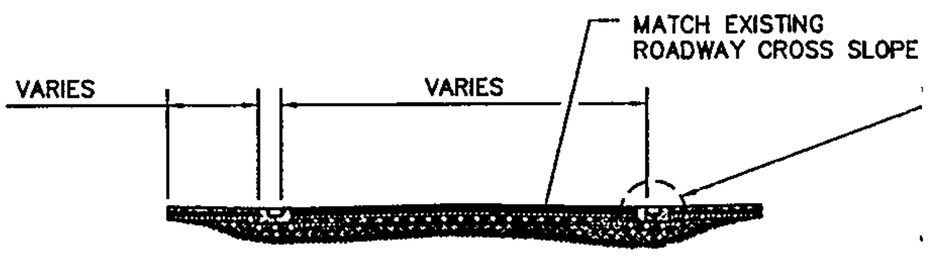
PLAN



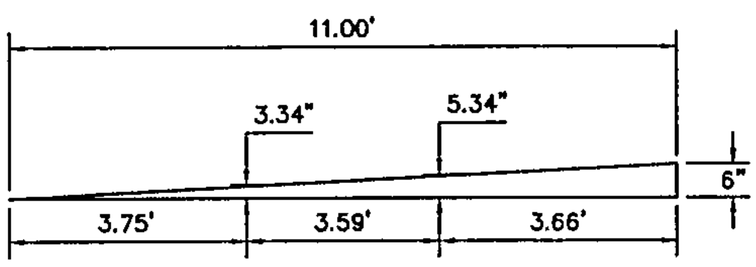
SECTION A-A



SECTION B-B



SECTION C-C



APPROACH

A1 6" RAISED CROSSWALK

SCALE: NTS

GENERAL NOTES:

1. FOR SINGLE GRATE TYPE STORM INLET, DELETE CENTER SUPPORT AND MOVE ONE END WALL TO FORM NEW SINGLE GRATE INLET.
2. STORM INLET GUTTER TRANSITION WILL BE SHOWN ON THE CONSTRUCTION PLANS.
3. OUTLET PIPE SIZE, PER DESIGN REQUIREMENT.
4. FOR FRAME & GRATING, SEE COA STD DWG 2216, 2220 & 2221.
5. FOR CENTER SUPPORT ASSEMBLY, SEE COA STD DWG 2215.

CONSTRUCTION NOTES:

A. FRAME & GRATE.
B. CENTER SUPPORT ASSEMBLY.
C. CUT ONE HORIZONTAL & ONE VERTICAL BAR MAX AT PIPE OPENING.
D. NO 4 BARS AT 6" OC EW
E. USE STANDARD STEPS, SEE DWG 2229.
F. CONC FILL, SEE NOTE C, DWG 2201.
G. INVERT PER DESIGN.
H. INSTALL STIPS ON DOWNSTREAM FACE.

RECEIVED
APR 14 2010
HYDROLOGY SECTION

WILSON & COMPANY
2600 THE AMERICAN RD. SE SUITE 100
RIO RANCHO, NM 87124
PHONE: 505-898-8021
FAX: 505-898-8501
www.wilsonco.com

CONSULTANTS

SEAL

PROJECT NAME
ALBUQUERQUE PUBLIC SCHOOLS
WEST MESA HIGH SCHOOL
PARKING LOT IMPROVEMENTS
6701 FORTUNA RD NW
ALBUQUERQUE, NM 87121

MARK	DATE	DESCRIPTION

PROJECT NO:	
DESIGNED BY:	JMF
DRAWN BY:	AJM
CHECKED BY:	MJI
DATE:	
SHEET TITLE	SITE DETAILS
SHEET NO:	C-502

M:\IDS\09-600-038-00\CADD\SHEETS\PARKING LOT\06_DTLS\96038-PARKING LOT_DETAIL-02.dwg 4/13/2010 11:44:03 AM MDT

CITY OF ALBUQUERQUE
PLANNING DEPARTMENT
Hydrology Section
Predesign Meeting Conference Notes
DATE: 9-10-14

ZONE ATLAS PAGE: J10 ADDRESS:
DRAINAGE FILE: J10D060S
PROJECT SCOPE:

ATTENDANCE: Graeme Means

FINDINGS:

1. It is acceptable to drain Basins 104 and 105 from the 2000 Wilson & Company Study to the Fortuna Storm drain. Explain justification on narrative

The undersigned agrees that the above findings are summarized accurately and are subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: Curtis A. Cherne
NAME (PRINT): Curtis A. Cherne

SIGNED: Graeme Means
NAME (PRINT):

NOTE: PLEASE INCLUDE A CCOPY OF THIS SHEET WITH YOIUR DRAINAGE SUBMITTAL

CITY OF ALBUQUERQUE
DEVELOPMENT & BUILDING SERVICES CENTER
PLANNING DEPARTMENT/HYDROLOGY SECTION

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NUMBER: J10/D005 DATE: 02-13-2014
CROSS REFERENCE NUMBERS: EPC_____ DRB_____ DRC_____
SUBJECT: M HALL ADDITION AND COURTYARD RECONSTRUCTION, WEST MESA HIGH SCHOOL
STREET ADDRESS: 6701 FORTUNA ROAD NW
SUBDIVISION NAME: TRACTS 168 THROUGH 172, INCLUSIVE, TOWN OF ATRISCO GRANT AIRPORT UNIT, PLUS A PORTION OF 68TH STREET

TYPE OF APPROVAL

_____ PRELIMINARY PLAT
_____ SITE DEVELOPMENT PLAN
_____ OTHER _____
_____ FINAL PLAT
__X___ BUILDING PERMIT
_____ ROUGH GRADING

ATTENDEE:	ORGANIZATION:	PHONE:
CURTIS CHERNE	HYDROLOGY	924-3986
JEFF MORTENSEN	HMCG	345-4250

FINDINGS:

1. GRADING AND DRAINAGE PLAN REQUIRED FOR BUILDING PERMIT APPROVAL
2. REFERENCE DRAINAGE MASTER PLAN FOR SITE PREPARED BY WILSON & COMPANY 01-14-2010. ADDRESS HOW PROPOSED PLAN COMPLIES WITH DRAINAGE MASTER PLAN ON A BASIN BY BASIN BASIS.
3. REFERENCE PARKING LOT IMPROVEMENTS DRAINAGE SUBMITTAL BY WILSON & COMPANY 01-14-2010 WITH RESPECT TO DOWNSTREAM CAPACITY. CERTIFICATION OF THIS PRIOR PLAN REQUIRED/NOT REQUIRED AS A CONDITION OF BUILDING PERMIT APPROVAL
4. VERIFICATION OF DOWNSTREAM CAPACITY NOT REQUIRED HOWEVER SHOULD BE ADDRESSED QUALITATIVELY (I.E. SUMP CONDITIONS AT INLETS IN PARKING LOT PROVIDE FOR OVERFLOW CAPACITY)
5. PROPERTY SERVED BY WEST MESA DIVERSION PROJECT (CPN 538103) THAT DISCHARGES TO WEST MESA POND IMMEDIATELY ADJACENT TO AND DOWNSTREAM FROM SCHOOL SITE
6. FREE DISCHARGE TO ONSITE PRIVATE STORM DRAIN PERMISSIBLE DUE TO PROXIMITY TO WEST MESA POND
7. IF THE PROJECT DISTURBS GREATER THAN ONE ACRE OF LAND, AN EROSION AND SEDIMENT CONTROL PLAN IS REQUIRED AS A CONDITION FOR BUILDING PERMIT APPROVAL. THIS IS A SEPARATE SUBMITTAL IN ADDITION TO THE GRADING AND DRAINAGE PLAN FOR BUILDING PERMIT.

THE UNDERSIGNED AGREE THAT THE ABOVE FINDINGS ARE SUMMARIZED ACCURATELY AND ARE ONLY SUBJECT TO CHANGE IF FURTHER INVESTIGATION

REVEALS THAT THE FINDINGS ARE NOT REASONABLE OR THAT THEY ARE BASED UPON INACCURATE INFORMATION.

SIGNED: _____
TITLE: HYDROLOGY (COA)
DATE: 2-28-14

SIGNED: _____
TITLE: CONSULTANT
DATE: 02-28-2014

NOTE: PROVIDE A COPY OF THIS RECAP WITH DRAINAGE SUBMITTAL

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 24, 1990

Jeff Mortensen, P.E.
Jeff Mortensen & Associates, Inc.
6010-B Midway Park Boulevard, NE
Albuquerque, New Mexico 87109

RE: ENGINEER'S CERTIFICATION FOR WEST MESA HIGH SCHOOL SCIENCE BUILDING & PONDS (J-10/D5) CERTIFICATION STATEMENT DATED AUGUST 17, 1990

Dear Mr. Mortensen:

Based on the information provided on your submittal of August 20, 1990, Engineer's Certification for the referenced site is acceptable.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya
for Fred J. Aguirre, P.E.
Hydrologist

xc: Alan Martinez

BJM:FJA/bsj
(WP+897)

01338

DRAINAGE INFORMATION SHEET

WEST MESA HS

PROJECT TITLE: SCIENCE BUILDING ZONE ATLAS/DRNG. FILE #: J10/D5

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: TRACTS 166-172, TOWN OF ATRISCO GRANT

CITY ADDRESS: 6701 FORTUNA NW

ENGINEERING FIRM: JEFF MORTENSEN & ASSOC. CONTACT: JEFF MORTENSEN

ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250

OWNER: APS CONTACT: GERARD BROWN

ADDRESS: PO BOX 25704 - 87125 PHONE: 242-5865

ARCHITECT: FMBSM CONTACT: JERRY FRANCIS

ADDRESS: PO BOX 8266 87198 PHONE: 887-0777

SURVEYOR: JEFF MORTENSEN & ASSOC CONTACT: JEFF MORTENSEN

ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250

CONTRACTOR: JAYNES CORP CONTACT: KEVIN CLARK

ADDRESS: PO BOX 26841 - 87125 PHONE: 345-8591

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
____ DRAINAGE PLAN
____ CONCEPTUAL GRADING & DRAINAGE PLAN
____ GRADING PLAN
____ EROSION CONTROL PLAN
X ENGINEER'S CERTIFICATION
____ OTHER

PRE-DESIGN MEETING:

X YES
____ NO
____ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL
____ PRELIMINARY PLAT APPROVAL
____ S. DEV. PLAN FOR SUB'D. APPROVAL
____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
____ SECTOR PLAN APPROVAL
____ FINAL PLAT APPROVAL
____ FOUNDATION PERMIT APPROVAL
____ BUILDING PERMIT APPROVAL
X CERTIFICATE OF OCCUPANCY APPROVAL
____ GRADING PERMIT APPROVAL
____ PAVING PERMIT APPROVAL
____ S.A.D. DRAINAGE REPORT
____ DRAINAGE REQUIREMENTS
____ OTHER _____ (SPECIFY)

RECEIVED
AUG 20 1990
HYDROLOGY DIVISION

DATE SUBMITTED: 08-20-90

BY: JEFF MORTENSEN

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 7, 1990

Jeff Mortensen
Jeff Mortensen & Associates
811 Dallas NE
Albuquerque, New Mexico 87110

RE: ENGINEER CERTIFICATION FOR WEST MESA HIGH SCHOOL SCIENCE BUILDING (J-10/D5) RECEIVED JUNE 4, 1990

Dear Mr. Mortensen:

Based on the information provided on your June 4, 1990 submittal, only a temporary Certificate of Occupancy will be issued until such time as all the minor field corrections have met your approval.

Once the corrections are taken care of, then resubmit Certification for review and approval.

If I can be of further assistance, please feel free to contact me at 768-2650.

Sincerely,

for Bernie J. Montoya
Fred Aguirre
Hydrology Division

cc: Gerald Brown
APS
P.O. Box 25704-87125

BJM:FJA:jc
WP+897

DRAINAGE INFORMATION SHEET 01338

PROJECT TITLE: WEST MESA H.S. SCIENCE BUILDING ZONE ATLAS/DRNG. FILE #: J10/D5

LEGAL DESCRIPTION: TRACTS 166 - 172, TOWN OF ATRISCO GRANT

CITY ADDRESS: 6701 FORTUNA NW

ENGINEERING FIRM: JEFF MORTENSEN & ASSOC CONTACT: J. G. MORTENSEN

ADDRESS: 811 DALLAS NE PHONE: 265-5611

OWNER: APS CONTACT: GERARD BROWN

ADDRESS: PO BOX 25704 - 87125 PHONE: 242-5865

ARCHITECT: FMBSM CONTACT: GERRY FRANCIS

ADDRESS: 2155 LOUISIANA NE PO BOX 8266 87198 PHONE: 889-0777

SURVEYOR: JMA CONTACT: ENGINEER

ADDRESS: PHONE:

CONTRACTOR: JAYNES CORP CONTACT: VIRGIL HIGGINS

ADDRESS: PO BOX 26841 - 87125 PHONE: 345-8591

RECEIVED JUN - 4 1990 HYDROLOGY DIVISION

PRE-DESIGN MEETING:

X YES

____ NO

____ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. _____

EPC NO. _____

PROJ. NO. _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT

____ DRAINAGE PLAN

____ CONCEPTUAL GRADING & DRAINAGE PLAN

____ GRADING PLAN

____ EROSION CONTROL PLAN

X ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL

____ PRELIMINARY PLAT APPROVAL

____ SITE DEVELOPMENT PLAN APPROVAL

____ FINAL PLAT APPROVAL

____ BUILDING PERMIT APPROVAL

____ FOUNDATION PERMIT APPROVAL

X CERTIFICATE OF OCCUPANCY APPROVAL

____ ROUGH GRADING PERMIT APPROVAL

____ GRADING/PAVING PERMIT APPROVAL

____ OTHER _____ (SPECIFY)

DATE SUBMITTED: 06-05-90

BY: J. G. MORTENSEN

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

ALBUQUERQUE NEW MEXICO 1706

KEN SCHULTZ
MAYOR

April 3, 1989

Jeff Mortensen, P.E.
Jeff Mortensen & Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: REVISED DRAINAGE PLAN FOR WEST MESA HIGH SCHOOL SCIENCE BUILDING (J-10/D5) ENGINEER'S STAMP DATED MARCH 23, 1989

Dear Mr. Mortensen:

Based on the information provided on your resubmittal of March 23, 1989, revisions as indicated are acceptable.

Please provide the contractor with a copy of this approved drainage plan if the building permit has already been issued.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj
(WP+897)

01337

DRAINAGE INFORMATION SHEET

PROJECT TITLE: WEST MESA HIGH SCHOOL SCIENCE BUILDING ZONE ATLAS/DRNG. FILE #: J-10

LEGAL DESCRIPTION: TRACTS 166-174, TOWN OF ATRISCO GRANT

CITY ADDRESS: WEST MESA HIGH SCHOOL

ENGINEERING FIRM: JEFF MORTENSEN & ASSOC. CONTACT: PETER LUJAN

ADDRESS: 811 DALLAS NE PHONE: 265-5611

OWNER: ALBUQUERQUE PUBLIC SCHOOLS CONTACT: GERRY BROWN

ADDRESS: PO BOX 25704 PHONE:

ARCHITECT: FMBSM ARCHITECTS CONTACT: GEORGE GEE

ADDRESS: 2155 LOUISIANA BLVD PHONE:

SURVEYOR: JEFF MORTENSEN & ASSOC CONTACT: ENGINEER

ADDRESS: PHONE:

CONTRACTOR: UNKNOWN CONTACT:

ADDRESS: PHONE:

RECEIVED MAR 23 1989 HYDROLOGY SECTION

PRE-DESIGN MEETING:

____ YES

X NO

____ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. ____

EPC NO. ____

PROJ. NO. J-10/D5

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT

X DRAINAGE PLAN

____ CONCEPTUAL GRADING & DRAINAGE PLAN

X GRADING PLAN

____ EROSION CONTROL PLAN

____ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL

____ PRELIMINARY PLAT APPROVAL

____ SITE DEVELOPMENT PLAN APPROVAL

____ FINAL PLAT APPROVAL

X BUILDING PERMIT APPROVAL

____ FOUNDATION PERMIT APPROVAL

____ CERTIFICATE OF OCCUPANCY APPROVAL

____ ROUGH GRADING PERMIT APPROVAL

____ GRADING/PAVING PERMIT APPROVAL

X OTHER Resubmittal (MINOR REVISION) (SPECIFY)

DATE SUBMITTED: 3/23/89

BY: Peter M LUJAN

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

ALBUQUERQUE NEW MEXICO 1706

KEN SCHULTZ
MAYOR

October 26, 1988

Jeff Mortensen, P.E.
Jeff Mortensen & Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: CONCEPTUAL DRAINAGE PLAN FOR UPDATE TO MASTER PLAN OF WEST MESA HIGH SCHOOL (J-10/D5) RECEIVED OCTOBER 11, 1988

Dear Mr. Mortensen:

Based on the information provided on your submittal of October 11, 1988, listed you will find certain concerns that will need to be addressed prior to approval.

1. New drainage criteria does not allow for ponding of the difference between developed and undeveloped volumes. Full 100% retention is required.

2. Field inspection has revealed that the majority of the ponding areas shown on your submittal are not in place or are much smaller than identified.

3. We will need additional information for the ponding areas.

   - As-built grades
   - As-built pond volumes

Concept wise we have no problem with your proposal but prior to building Permit release we will need the above concerns addressed.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj
(WP+897)

DRAINAGE INFORMATION SHEET

PROJECT TITLE: West Mesa Science Building ZONE ATLAS/DRNG. FILE #: J10/D5

LEGAL DESCRIPTION: Tracts 166-174, Town OF Atrisco Grant

CITY ADDRESS: West Mesa High School

ENGINEERING FIRM: Jeff Mortensen & Assoc. CONTACT: Peter Lujan

ADDRESS: 811 Dallas NE PHONE: 265-5611

OWNER: Albuquerque Public Schools CONTACT: Gerry Brown

ADDRESS: P.O. Box 25704 PHONE:

ARCHITECT: FMBSM Architects CONTACT: George Gee

ADDRESS: 2155 Louisiana Blvd PHONE:

SURVEYOR: Jeff Mortensen & Assoc CONTACT: Engineer

ADDRESS: PHONE:

CONTRACTOR: UNKNOWN CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

____ YES

X NO

____ COPY OF CONFERENCE SHEET PROVIDED

RECEIVED
OCT 11 1988
HYDROLOGY SECTION

DRB NO. ____

EPC NO. ____

PROJ. NO. ____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT

____ DRAINAGE PLAN

X CONCEPTUAL GRADING & DRAINAGE PLAN

____ GRADING PLAN

____ EROSION CONTROL PLAN

____ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL

____ PRELIMINARY PLAT APPROVAL

____ SITE DEVELOPMENT PLAN APPROVAL

____ FINAL PLAT APPROVAL

____ BUILDING PERMIT APPROVAL

____ FOUNDATION PERMIT APPROVAL

____ CERTIFICATE OF OCCUPANCY APPROVAL

____ ROUGH GRADING PERMIT APPROVAL

____ GRADING/PAVING PERMIT APPROVAL

X OTHER UPDATE (Conceptual) MASTER PLAN (SPECIFY)

DATE SUBMITTED: 10/11/88

BY: Peter M. Lujan

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

KEN SCHULTZ
MAYOR

December 6, 1988

Jeff Mortensen, P.E.
Jeff Mortensen & Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: REVISED CONCEPTUAL DRAINAGE PLAN FOR UPDATE TO MASTER PLAN OF WEST MESA HIGH SCHOOL (J-10/D5)
ENGINEER'S STAMP DATED NOVEMBER 29, 1988

Dear Mr. Mortensen:

Based on the information provided on your resubmittal of November 29, 1988, the above referenced master plan revisions are acceptable.

Please be advised that prior to any site specific development, we will need a separate submittal for review prior to building permit release.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj
(WP+897)

01337

DRAINAGE INFORMATION SHEET

PROJECT TITLE: WEST MESA HIGH SCHOOL SCIENCE BUILDING ZONE ATLAS/DRNG. FILE #: J-10/D5

LEGAL DESCRIPTION: TRACTS 166-174, TOWN OF ATRISCO GRANT

CITY ADDRESS: WEST MESA HIGH SCHOOL

ENGINEERING FIRM: JEFF MORTENSEN & ASSOC. CONTACT: PETER LUJAN

ADDRESS: 811 DALLAS NE PHONE: 265-5611

OWNER: ALBUQUERQUE PUBLIC SCHOOLS CONTACT: GERRY BROWN.

ADDRESS: PO BOX 25704 PHONE:

ARCHITECT: FMBSM ARCHITECTS CONTACT: GEORGE GEE

ADDRESS: 2155 LOUISIANA BLVD PHONE:

SURVEYOR: JEFF MORTENSEN & ASSOC CONTACT: ENGINEER

ADDRESS: PHONE:

CONTRACTOR: UNKNOWN CONTACT:

ADDRESS: PHONE:

RECEIVED
NOV 29 1988
HYDROLOGY SECTION

PRE-DESIGN MEETING:

____ YES

X NO

____ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. _____

EPC NO. _____

PROJ. NO. J-10/D5

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT

____ DRAINAGE PLAN

X CONCEPTUAL GRADING & DRAINAGE PLAN

____ GRADING PLAN

____ EROSION CONTROL PLAN

____ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL

____ PRELIMINARY PLAT APPROVAL

____ SITE DEVELOPMENT PLAN APPROVAL

____ FINAL PLAT APPROVAL

____ BUILDING PERMIT APPROVAL

____ FOUNDATION PERMIT APPROVAL

____ CERTIFICATE OF OCCUPANCY APPROVAL

____ ROUGH GRADING PERMIT APPROVAL

____ GRADING/PAVING PERMIT APPROVAL

X OTHER UPDATE MASTER PLAN (SPECIFY)

DATE SUBMITTED: 11/30/88

BY: Peter M LUJAN

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

KEN SCHULTZ
MAYOR

CLARENCE V. LITHGOW
CHIEF
ADMINISTRATIVE OFFICER

DAN WEAKS
DEPUTY CAO
PUBLIC SERVICES

FRED E. MONDRAGON
DEPUTY CAO
DEVELOPMENT & ENTERPRISE SERVICES

March 2, 1989

Jeff Mortensen, P.E.
Jeff Mortensen & Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR WEST MESA HIGH SCHOOL SCIENCE BUILDING
ENGINEER'S STAMP DATED FEBRUARY 21, 1989 (J-10/D5)

Dear Mr. Mortensen:

Based on the information provided on your submittal of February 21, 1989, the above referenced drainage plan is approved for building permit. Please advise your clients that because of the fact that we are allowing full retention without a positive outfall, and because of the size of the development, Engineer's Certification will be required prior to Certificate of Occupancy.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

xc: Gerry Brown, APS

BJM/bsj
(WP+897)

DRAINAGE INFORMATION SHEET

PROJECT TITLE: WEST MESA HIGH SCHOOL SCIENCE BUILDING ZONE ATLAS/DRNG. FILE #: J-10

LEGAL DESCRIPTION: TRACTS 166-174, TOWN OF ATRISCO GRANT

CITY ADDRESS: WEST MESA HIGH SCHOOL

ENGINEERING FIRM: JEFF MORTENSEN & ASSOC. CONTACT: PETER LUJAN

ADDRESS: 811 DALLAS NE PHONE: 265-5611

OWNER: ALBUQUERQUE PUBLIC SCHOOLS CONTACT: GERRY BROWN

ADDRESS: PO BOX 25704 PHONE:

ARCHITECT: FMBSM ARCHITECTS CONTACT: GEORGE GEE

ADDRESS: 2155 LOUISIANA BLVD PHONE:

SURVEYOR: JEFF MORTENSEN & ASSOC CONTACT: ENGINEER

ADDRESS: PHONE:

CONTRACTOR: UNKNOWN CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

___ YES

X NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

RECEIVED FEB 21 1989 HYDROLOGY SECTION

DRB NO. ___

EPC NO. ___

PROJ. NO. J-10/05

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

X GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

X BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER ___ (SPECIFY)

DATE SUBMITTED: 2/21/89

BY: Peter M LUJAN

CITY OF ALBUQUERQUE

Planning Department
Transportation Development Services

June 4, 2015

David Mahlman
Mahlman Studio Architecture
206 Broadway SE
Albuquerque, NM 87102

Re: West Mesa High School New Classroom Buildings
6701 Fortuna Rd., NW
Traffic Circulation Layout
Engineer's/Architect's Stamp dated 4-24-15 (J10-D005)

Dear Mahlman,

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Based upon the information provided in your submittal received 6-1-15, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

on Notes

1. Please identify and dimension all existing sidewalks, pathways and curbs to the proposed new building.
2. The ADA van accessible sign must have the required language per 66-7-352.4C NMSA 1978 **"Violators Are Subject to a Fine and/or Towing."** Please show a detail of signage.
3. Per the DPM, a 6 ft. wide ADA accessible pedestrian pathway is required from the public sidewalk to the building entrances. Please clearly show this pathway and provide details of the transitions into the existing pedestrian walkway.
4. Please provide detail of the proposed ADA ramp into the new building.
5. Provide a min 6" or max 8" high concrete barrier curb or other acceptable barrier between landscaping and parking areas and/or drive aisles. Please detail and dimension all proposed curb barriers.
6. Please include two copies of the traffic circulation layout at the next submittal.

CITY OF ALBUQUERQUE

Resubmit acceptable package along with fully completed Drainage Transportation Information Sheet to front counter personnel for log in and evaluation by Transportation. If you have any questions, please contact me at (505) 924-3630.

Sincerely,

Racquel M. Michel, P.E.
Senior Engineer, Planning Dept.
Development Review Services

c: File
CO Clerk

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

RECEIVED
JUN 01 2015
LAND DEVELOPMENT SECTION

Project Title: West Mesa High School New Classroom Buildings Building Permit #: _____ City Drainage #: J10D005

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: Tracts 166 Through 172, Town of Atrisco Grant, Airport Unit

City Address: 6701 Fortuna RD NW

Engineering Firm: High Mesa Consulting Group Contact: Graeme Means #13676

Address: 6010-B Midway Park Blvd NE, Albuquerque, NM 87109

Phone#: 345-4250 Fax#: _____ E-mail: gmeans@highmesacg.com

Owner: Albuquerque Public Schools Contact: David Ritchey

Address: 915 Oak Street SE, Albuquerque, NM 87106

Phone#: 848-8876 Fax#: _____ E-mail: ritchey_d@aps.edu

Architect: Mahlman Studio Architecture Contact: David Mahlman

Address: 206 Broadway SE, Albuquerque, NM 87102

Phone#: 243-0101 Fax#: _____ E-mail: dmahlman@mahlmanstudio.com

Surveyor: High Mesa Consulting Group Contact: Chuck Cala #11184

Address: 6010-B Midway Park Blvd NE, Albuquerque, NM 87109

Phone#: 345-4250 Fax#: _____ E-mail: ccala@highmesacg.com

Contractor: N/A Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
____ DRAINAGE PLAN 1st SUBMITTAL
____ DRAINAGE PLAN RESUBMITTAL
____ CONCEPTUAL G & D PLAN
____ GRADING PLAN
____ EROSION & SEDIMENT CONTROL PLAN (ESC)
____ ENGINEER'S CERT (HYDROLOGY)
____ CLOMR/LOMR
X TRAFFIC CIRCULATION LAYOUT (TCL)
____ ENGINEER'S CERT (TCL)
____ ENGINEER'S CERT (DRB SITE PLAN)
____ ENGINEER'S CERT (ESC)
____ SO-19
____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ SIA/FINANCIAL GUARANTEE RELEASE
____ PRELIMINARY PLAT APPROVAL
____ S. DEV. PLAN FOR SUB'D APPROVAL
____ S. DEV. FOR BLDG. PERMIT APPROVAL
____ SECTOR PLAN APPROVAL
____ FINAL PLAT APPROVAL
____ CERTIFICATE OF OCCUPANCY (PERM)
____ CERTIFICATE OF OCCUPANCY (TCL TEMP)
____ FOUNDATION PERMIT APPROVAL
X BUILDING PERMIT APPROVAL
____ GRADING PERMIT APPROVAL
____ PAVING PERMIT APPROVAL
____ WORK ORDER APPROVAL
____ GRADING CERTIFICATION
____ SO-19 APPROVAL
____ ESC PERMIT APPROVAL
____ ESC CERT. ACCEPTANCE
____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED: ____ Yes ____ No X Copy Provided

DATE SUBMITTED: 5/20/2015 By: David Mahlman

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report**: Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

CITY OF ALBUQUERQUE

May 20, 2010

Jennifer Flor, P.E.
Wilson & Company
4900 Lang Ave. NE
Albuquerque, NM 87109

Re: West Mesa High School Parking Lot, 6701 Fortuna Road NW,
Traffic Circulation Layout
Engineer's Stamp dated 05-18-10 (J10-D005)

Dear Ms. Flor,

The TCL submittal received 05-18-10 is approved for Building Permit. The plan is stamped and signed as approved. A copy of this plan will be needed for each of the building permit plans. Please keep the original to be used for certification of the site for final C.O. for Transportation. **Public infrastructure or work done within City Right-of-Way shown on these plans is for information only and is not part of approval. A separate DRC and/or other appropriate permits are required to construct these items.**

If a temporary CO is needed, a copy of the original TCL that was stamped as approved by the City will be needed. This plan must include a statement that identifies the outstanding items that need to be constructed or the items that have not been built in "substantial compliance," as well as the signed and dated stamp of a NM registered architect or engineer. Submit this TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

When the site is completed and a final C.O. is requested, use the original City stamped approved TCL for certification. A NM registered architect or engineer must stamp, sign, and date the certification TCL along with indicating that the development was built in "substantial compliance" with the TCL. Submit this certification TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

Once verification of certification is completed and approved, notification will be made to Building Safety to issue Final C.O. To confirm that a final C.O. has been issued, call Building Safety at 924-3306.

Sincerely,

Kristal D. Metro, P.E.
Traffic Engineer, Planning Dept.
Development and Building Services

C: File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 12/05 - AP)

PROJECT TITLE: West Mesa High School Parking Lot ZONE MAP/DRG. FILE#: J-10-~~Z~~ D 005

DRB#: _____ EPC#: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Tracts 166 Thru 174 Airport Unit, Town of Atrisco Grant. Plat Filed: December 5, 1944.

CITY ADDRESS: 6701 Fortuna Road NW, Albuquerque, NM 87121

ENGINEERING FIRM: Wilson & Company CONTACT: Jennifer Flor, PE
ADDRESS: 2600 The American Road SE, Ste 100 PHONE: 505-948-5129
CITY, STATE: Rio Rancho, NM ZIP CODE: 87109

OWNER: APS CONTACT: David Ritchey
ADDRESS: 915 Oak Street PHONE: 505-977-5829
CITY, STATE: Albuquerque New Mexico ZIP CODE: 87106

ARCHITECT: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

SURVEYING FIRM: Wilson & Company LICENSED SURVEYOR: Ben Aragon
ADDRESS: 4900 Lang Ave. NE PHONE: 505-348-4067
CITY, STATE: Albuquerque, NM ZIP CODE: 87109

CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

____ DRAINAGE REPORT - RESUBMITTAL
____ DRAINAGE PLAN 1st SUBMITTAL
____ DRAINAGE PLAN RESUBMITTAL
____ CONCEPTUAL GRADING & DRAINAGE PLAN
____ GRADING PLAN
____ EROSION CONTROL PLAN
____ ENGINEER'S CERT (HYDROLOGY)
____ CLOMR\LOMR
_X_ TRAFFIC CIRCULATION LAYOUT 3rd submittal
____ ENGINEER/ARCHITECT CERT (TCL)
____ ENGINEER/ARCHITECT CERT (DRB S. P.)
____ ENGINEER/ARCHITECT CERT (AA)
____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL SOUGHT:

____ SIA / FINANCIAL GUARANTEE RELEASE
____ PRELIMINARY PLAT APPROVAL
____ S. DEV. PLAN FOR SUB'D. APPROVAL
____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
____ SECTOR PLAN APPROVAL
____ FINAL PLAT APPROVAL
____ FOUNDATION PERMIT APPROVAL
_X_ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY (PERM.)
____ CERTIFICATE OF OCCUPANCY (TEMP)
____ GRADING PERMIT APPROVAL
____ PAVING PERMIT APPROVAL
____ WORK ORDER APPROVAL
_X_ OTHER (SPECIFY) TCL approval.

RECEIVED
MAY 18 2010
HYDROLOGY SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED:

_____ YES
_X_ NO
_____ COPY PROVIDED

Submitted By: Jennifer Flor JMF DATE: 05/18/2010

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development define the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5)
3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.