DRAINAGE REPORT

FOR

WATERFRONT COMMERCIAL, WATERFRONT RESIDENTIAL AND GREENWICH OFFICE PARK

Wichita, Kansas

APRIL 2007

CITY OF WICHITA

Public Works, Engineering Division
Final Drainage Plan Submittal Checklist

Reviewer: City of Wichita Date: April 16, 2007

Subdivision Name: Waterfront Commercial, Waterfront Residential & Greenwich Office Park Location: Wichita, Kansas

Total Land Area Of Ownership: 254 Acres

Type: ✔ Residential ✔ Commercial ☐ Industrial ☐ Recreation ☐ Municipal ☐ Other

Applicant: Ritchie Associates, Laham, & J. Stevens Contact: Rob Ramseyer Phone #: 684-7300

Engineer: MKEC Engineering Consultants, Inc. Contact: Kara Anderson, P.E. Phone # 684-9600

Please check the appropriate box: I = Included; NA = Non-Applicable; R= Required prior to development
(If "NA" is checked, an explanation must be entered)

	Applicant			Engr	
Tab 1. Project Narrative	**I**	**NA**	**Explanation / Location in Plan**	**I**	**NA**
A. Site Location Map, using USGS Map	✔	☐	Figure 1.1	☐	☐
B. Discussion of development, existing conditions, and proposed impacts on stormwater, wetland, riparian, and flood plain	✔	☐	Tab 1.B	☐	☐
C. Discussion of offsite conditions	✔	☐	Tab 1.C	☐	☐
D. Summary of runoff calculations (pre/post development) No increase in peak discharge for all storm series	✔	☐	Tab 1.D	☐	☐
E. Narrative description of the type and function of the permanent best management practices that are incorporated into the site design	✔	☐	Tab 1.E	☐	☐
F. Copy of the plat	✔	☐	Figure 1.3	☐	☐
G. Preliminary grading plan (The final grading plan shall be sealed, signed and dated prior to Engineering receiving the final sanitary sewer plans. One plan sheet and PDF shall be submitted to the Subdivision Engineer.)	✔	☐	Figure 1.4	☐	☐
H. Professional Engineer seal, signature and date on cover of report	✔	☐	Cover	☐	☐
I. CD of drainage plan in PDF format (one file) and one paper copy bound with this checklist included behind the cover	✔	☐	Tab 1.I	☐	☐

	Applicant			Engr	
Tab 2. Existing Conditions Runoff Calculations	**I**	**NA**	**Explanation / Location in Plan**	**I**	**NA**
A. Copy of applicable orthophoto showing proposed project boundaries (preferable in color)	✔	☐	Figure 2.1	☐	☐
B. Runoff Method (Rational, Hydrograph Method, or other approved methods by Engineering)	✔	☐	Tab 2.B	☐	☐
C. Existing topography (no greater than 2-foot contours, 1-foot recommend)	✔	☐	Figure 2.2	☐	☐
D. Total Site Area and Total Impervious Area (acres)	✔	☐	Tab 2.D	☐	☐
E. Benchmarks used for site control	✔	☐	Figure 2.2	☐	☐
F. Streams, creeks, and waterway labeled	✔	☐	Figure 2.2	☐	☐
G. Predominant soils from USDA soil surveys, and/or on site soil borings	✔	☐	Figure 2.4	☐	☐
H. Location and boundaries of natural features such as wetlands, lakes, and ponds with the normal water elevation noted	✔	☐	Tab 2.H	☐	☐
I. Location of existing roads, buildings, parking lots and other impervious areas.	✔	☐	Tab 2.I	☐	☐

Consulting Engineer Initials _____

J. Location of existing utilities (e.g., water, sewer, gas, electric) and easements	✔	☐	Tab 2.J	☐	☐
K. Location of existing conveyance systems such as storm drains, inlets, catch basins, channels, swales, and areas of overland flow	✔	☐	Tab 2.K	☐	☐
L. Flow paths	✔	☐	Figure 2.2	☐	☐
M. Location and dimensions of existing channels, bridges or culvert crossings	✔	☐	Tab 2.M	☐	☐
N. Existing conditions hydrologic analysis for runoff rates, volumes and velocities showing methodologies used and supporting calculations (2, 5, 10, 25 & 100 year, 24-hour storm events) or Critical Duration	✔	☐	Tab 2.N	☐	☐
O. Assumed pre-developed runoff curve numbers	✔	☐	Tab 2.O	☐	☐
P. Existing time of concentrations used in calculations	✔	☐	Tab 2.P	☐	☐
Q. Evaluate immediate downstream drainage capacity, not to exceed more than 0.25 miles downstream of site	✔	☐	Tab 2.Q	☐	☐
R. Existing structural elevations (e.g., invert of pipes, manholes, etc.)	✔	☐	Tab 2.R	☐	☐
S. Cross-section data for open channels	✔	☐	Tab 2.S	☐	☐
T. Ground water elevations, if applicable	✔	☐	Tab 2.T	☐	☐

	Applicant			Engr	
Tab 3. Post-Development Hydrologic Analysis	**I**	**NA**	**Explanation / Location in Plan**	**I**	**NA**
A. Proposed (post-development) conditions hydrologic and hydraulic analysis for runoff rates, volumes, HGL, and velocities showing the methodologies used and supporting calculations for all applicable design storms (2, 5, 10, 25 & 100 year, 24-hour storm events)	✔	☐	Tab 3.A Figure 3.1, 3.2, 3.3	☐	☐
B. Proposed time of concentrations used in calculations	✔	☐	Tab 3.B	☐	☐
C. Assumed post-developed runoff curve numbers	✔	☐	Tab 3.C	☐	☐
D. Proposed contours for detention facilities (to equal area used in outlet rating curves)	✔	☐	Figure 3.6	☐	☐
E. Preliminary sizing calculations for stormwater controls including contributing drainage area, storage, and outlet configuration	✔	☐	Tab 3.E	☐	☐
F. Stage-storage-discharge or outlet rating curves and inflow and outflow hydrographs for storage facilities	✔	☐	Tab 3.F	☐	☐
G. Final analysis of potential upstream/downstream impact/effects of project, where necessary	✔	☐	Tab 3.G	☐	☐
H. Existing and proposed structural elevations (e.g., invert of pipes, manholes, etc.)	✔	☐	Tab 3.H	☐	☐
I. Design water surface elevations and normal pool elevation for ponds.	✔	☐	Tab 3.I	☐	☐
J. Typical detail for outlet structures, embankments, spillways, grade control structures, conveyance channels, etc. To include height, width, elevation, and/or diameter.	✔	☐	Tab 3.J	☐	☐
K. Proposed limits of clearing and grading	✔	☐	Tab 3.K	☐	☐
L. Location of existing and proposed roads, buildings, parking lots and other impervious areas.	✔	☐	Figure 3.6	☐	☐
M. Location of existing and proposed utilities (e.g., water, sewer) and easements	✔	☐	Figure 3.6	☐	☐
N. Location of existing and proposed conveyance systems such as storm drains, inlets, catch basins, channels, swales, and areas of overland flow	✔	☐	Figure 3.6	☐	☐
O. Preliminary location and dimensions of proposed channel modifications, such as bridge or culvert crossings	✔	☐	Tab 3.O	☐	☐

Consulting Engineer Initials _____

P. Preliminary selection and location of stormwater controls	✔		Tab 3.P		
Q. Emergency overflow structure's flow path	✔		Tab 3.Q		
R. Detention facility provides one-foot of freeboard above the HWL and emergency outfall shown (top of berm elevation shown)	✔		Tab 3.R		
S. The 100-year 24-hour HWL delineated on the plan for detention pond	✔		Tab 3.S		
T. Lowest opening elevations table on the plat for structures located adjacent to channels or ponds	✔		Tab 3.T		
U. Stormwater Management Facilities located within a Reserve	✔		Tab 3.U		
V. Maintenance responsibility of stormwater management facility shall be specified in the platters text. (e.g. HOA, Lot Owners Association, or lot)	✔		Tab 3.V		
W. Off-site drainage easements or agreements required, where necessary	✔		Tab 3.W		

	Applicant			Engr	
Tab 4. Floodplain Submittal	**I**	**NA**	**Explanation / Location in Plan**	**I**	**NA**
A. Provide source of flood profile		✔	Tab 4		
B. Nearest base flood elevations		✔	Tab 4		
C. Delineation of pre-developed regulatory floodplain/floodway limits		✔	Tab 4		
D. Delineation of post-developed regulatory floodplain and floodway limits		✔	Tab 4		
E. Floodplain boundary determination per elevation (project limits shown)		✔	Tab 4		
F. Provide source of floodway data table and discharges		✔	Tab 4		
G. Provide all hydrologic and hydraulic study information for site-specific floodplain studies, unnumbered Zone A area elevation determinations and flood plain map revisions or required permits		✔	Tab 4		
H. Provide regulatory floodway and four natural profile models (10,50,100, and 500-yr) for existing and future watershed conditions		✔	Tab 4		
I. Location of floodplain/floodway limits and relationship of site to upstream/downstream properties (floodplain limits to be per elevation and scaled location)		✔	Tab 4		
J. Flood plains and floodways located within a Reserve, where necessary		✔	Tab 4		

	Applicant			Engr	
Tab 5. Federal, State and Local Permits (to be provided prior to construction unless otherwise specified)	**I/R**	**NA**	**Explanation / Location in Plan**	**I/R**	**NA**
A. US Army Corps of Engineers - Regulatory program permits (404 water quality certification)		✔	Tab 5.A		
B. Kansas Department of Agriculture - Division of Water Resources Permits (Stream Obstruction, Channel Change, Flood Plain Fill, Levee, Water Appropriations, Dam safety permit, etc.)		✔	Tab 5.B		
C. Federal Emergency Management Agency (FEMA) Letter of Map Changes (LOMA, LOMR, LOMR-f, CLOMR, etc.) Shall be included and approved when project modifies the limits of the floodway.		✔	Tab 5.C		
D. Kansas Department of Transportation		✔	Tab 5.D		
E. Sedgwick County Right-of-way Permit		✔	Tab 5.E		

Consulting Engineer Initials _____

Tab 1. Project Narrative

A. Location

The site is located in Wichita, Sedgwick County, Kansas, on the northeast corner of Webb Road and 13th Street North. The site is bounded by Webb Road to the west, 13th Street to the south, and undeveloped meadow area to the east. The Burlington Northern Railroad abuts the property to the north, with the Eastminster Addition to the north of the railroad. It lies in the Southwest Quarter, Section 9, Township 27 South, Range 2 East. Currently, the total site area accounted for in this report is approximately 254 acres:

- 156 acres of the Waterfront Addition, including existing and future development area,
- 60 acres of the platted Waterfront Residential
- 20.8 acres of the Greenwich Office Park, including 14 acres currently platted and 6.8 acres of unplatted area.
- 17.5 acres of the Foliage Addition.

The site is shown on the Andover, Kansas Quadrangle, Figure 1.1.

B. Discussion of Development

The Waterfront is planning to expand commercial development east of the current development and the Foliage Addition will develop as commercial. Current and future development in Basins 045, 053, 055, 061, 065, 070, 080 and 166 has been modeled for commercial and residential use. Approximately, 60 acres will be developed into 75 residential lots as Waterfront Residential. Approximately, 14 acres will be developed commercially as the Greenwich Office Park. Future development is shown on the Future TR-20 key map, Figure 1.2.

C. Discussion of Offsite

Approximately 794 acres drained into the existing lake. Approximately 225 acres drained from the north to the Eastminster Addition, directly north of the site. This runoff passed through an existing detention facility east of the Eastminster Presbyterian Church, north of the railroad. An additional 105 acres drained to the existing 11'x9' reinforced concrete box (RCB) which passed under the railroad tracks. The runoff then passed through an existing channel and into the silt pond on the site. An additional 28 acres drained to the silt pond. An existing earthen dam separated the silt pond from the lake. The runoff must pass around the dam to the west and into the lake. An additional 196 acres drained to the existing lake. This includes approximately 48 acres from the west side of Webb Road. This area drains through an existing RCB under Webb Road and into the lake. Most of the developable area upstream of the site is already developed, with the exception of the area just west of Webb Road, which is currently undeveloped pasture land. An area of approximately 17 acres on the northeast corner of 13th Street and Webb Road drains into the pond. This land is platted as the Foliage Addition, but is currently undeveloped. This land has been modeled as undeveloped in the pre-project condition.

D. Summary of Runoff

The pre-project lakes provided 167 acre-feet of storage in the 100-year design event. Storage calculations are shown in Table 1.

Table 1. Pre-Project Storage Calculations.

Current Conditions Total Storage=167ac-ft		
Main Pond Storage = 167ac-ft	100-Year=1372.0	
Stage	**Discharge (cfs)**	**Storage (ac-ft)**
1368.7	0	0
1369	100	13.6
1370	180	60.4
1371	490	109.58
1372	1160	167.28

The Waterfront is planning to expand commercial development east of the current development and the Foliage Addition will develop as commercial. Approximately, 60 acres will be developed into 75 residential lots as Waterfront Residential. Approximately, 14 acres will be developed commercially as the Greenwich Office Park.

The current detention ponds do not provide adequate detention for future development

The size of the detention will need to be increased to decrease peak flow rates from the property. The outlet structure of the hotel pond will be modified to provide more detention and the area of the pond will be increased. Additional detention will also be constructed in the residential and commercial areas.

A comparison of pre-project and post-project flows is in Table 2

Table 2. Flow rates to 13th Street.

Description	Design Storm Flows (cfs)			
	2-Yr	5-Yr	10-Yr	100-Yr
Pre-Project to 13th Street	78.3	116.8	142.8	238.5
Post-Project to 13th Street	98.1	125.9	143.1	204.8
Pre-Project to Webb Road	224	396	527	1167
Post-Project to Webb Road	245	407	529	1133

The proposed detention in this project provides detention for future Waterfront Commercial, Waterfront Residential, Greenwich Business Park and Foliage Addition development.

E. Best Management Practices

The site will be seeded or sodded after construction of grading and utilities are complete. The outlet structures of the detention ponds will be protected against erosion.

F. Plat

The plats are included, Figure 1.3.

G. Preliminary Grading Plan

The preliminary lot grading plan is included for Waterfront Residential, Figure 1.4. Grades on commercial sites will be determined with site development.

H. Professional Engineer Seal

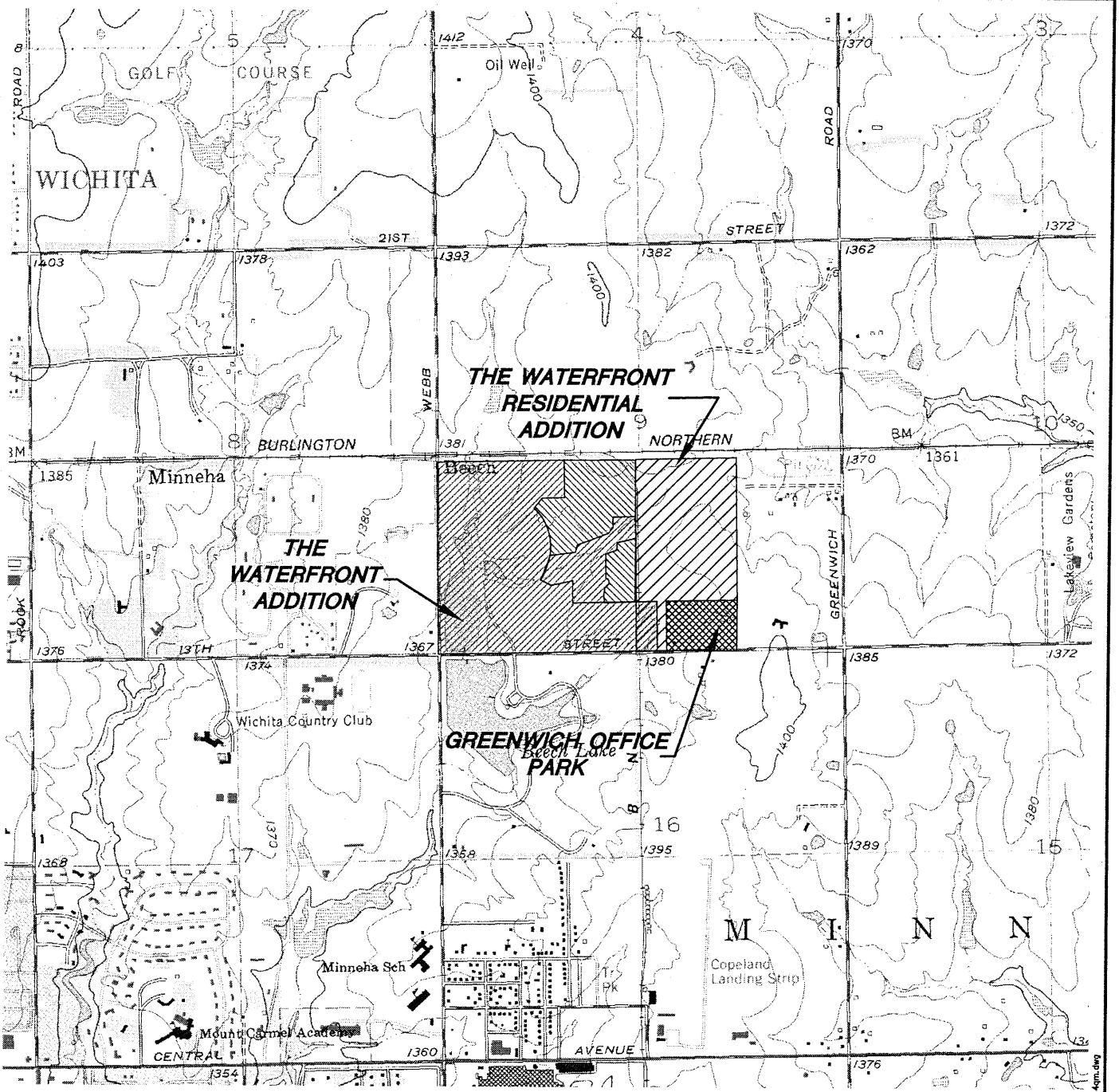
The cover of the report will be signed and dated.

I. CD

A CD of the drainage report in PDF format is attached to the inside front cover of the bound report. The checklist is included at the front of the report.

Figure 1.1

USGS Quadrangle Map



6559 II SW

SCALE 1:24 000

1 0 1/2 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

H:\CIVIL\02014\DWG\Dmg\Joint Submittal\02014gm.dwg

MKEC ENGINEERING CONSULTANTS, INC.

411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

THE WATERFRONT ADDITION
PROJECT NAME

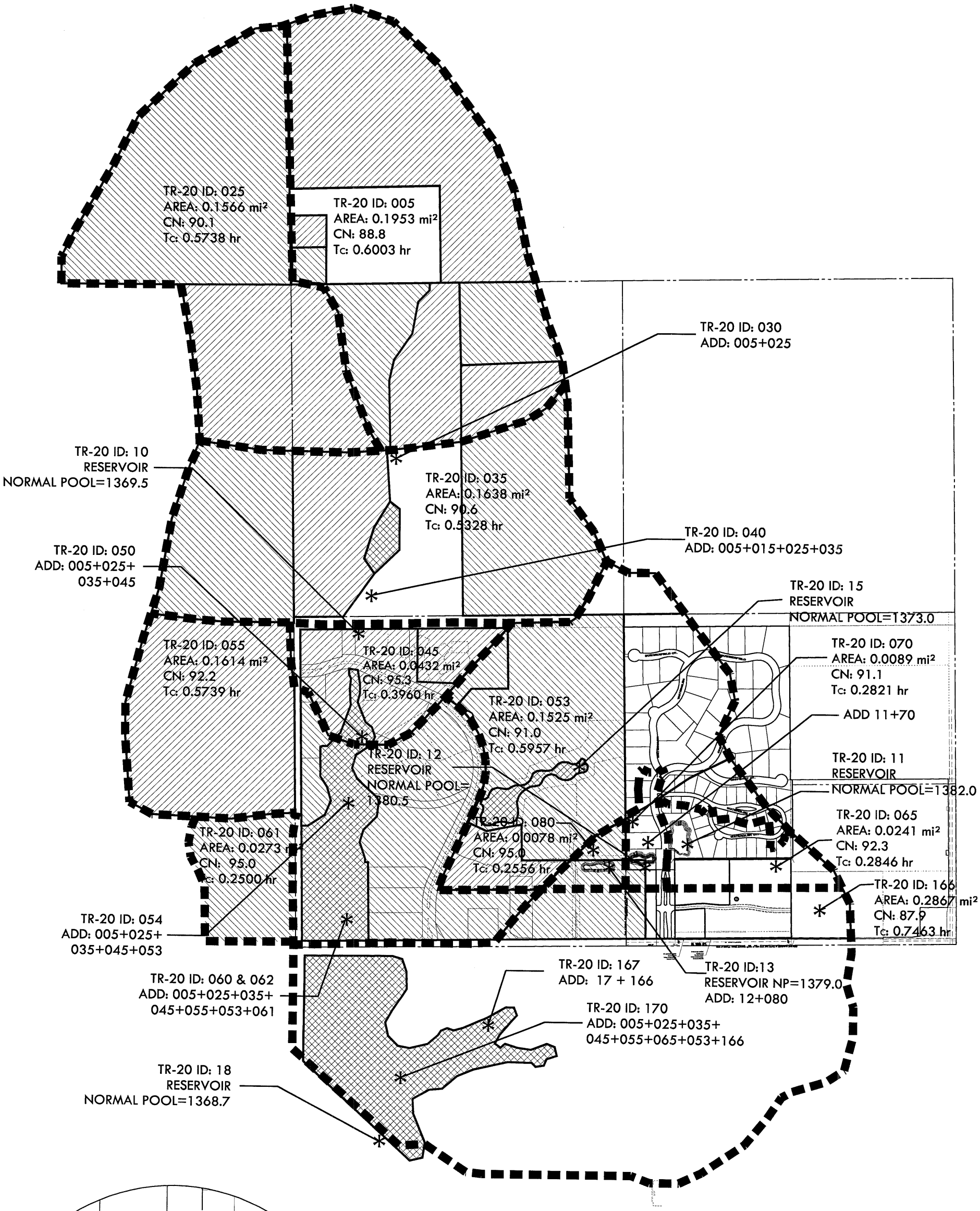
ANDOVER, KANSAS QUADRANGLE
SHEET TITLE

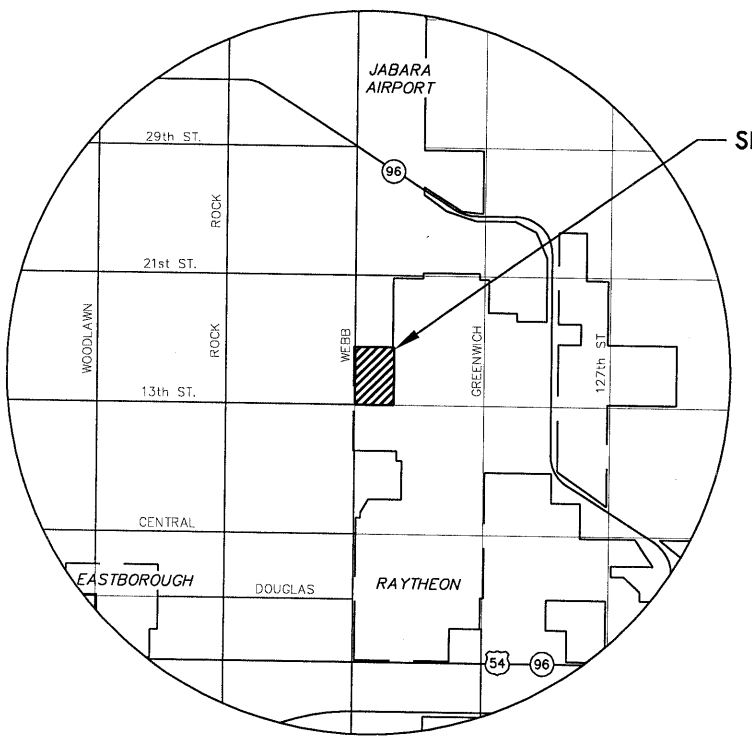
KLA	CMJ	GJA
DESIGN BY:	DRAWN BY:	CHECKED BY:

APRIL 2007	02014	1 / 1
DATE	JOB NO.	SHEET/OF

Figure 1.2

Future TR-20 Key Map





VICINITY MAP

LEGEND

- POLE - POLE
- HLP - HIGH LINE POLE
- WATERSHED BOUNDARIES
- PP - POWER POLE AND GUY ANCHOR
- TR - TELEPHONE RISER
- INLET
- BM - BENCHMARK

BENCHMARKS

BM#1 Square cut SE. corner headwall 44' N. and 42' E. of W. ¼ cor., Sec. 9, T27S, R2E
ELEV. = 192.73'(City Datum)
1380.13 NGVD

BM#2 Square cut SW. corner signal light pole base NE. corner Webb and 13th.
ELEV. = 185.945'(City Datum)
1373.345' NGVD

SCALE: 1"=400'

400 0 400 800

WATERFRONT ADDITION
PROJECT NAME

FUTURE CONDITIONS TR-20 KEY MAP
DESIGN TITLE

KLA	CMJ
DESIGN	DRAWN BY:
KLA	APRIL 2007
CHECKED BY:	DATE
02014	1 / 1
JOB NO.	SHEET/OF

H:\CIVIL\02014\DWG\Dwg\Joint Submittal\TR-20_KEY_Future.dwg

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600
www.mkec.com

Figure 1.3

Plat

FINAL PLAT

THE WATERFRONT ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

I, Gregory J. Allison, a Registered Land Surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "THE WATERFRONT ADDITION," an addition to Wichita, Sedgwick County, Kansas, into Lots, Blocks, Streets, and Reserves, the same being accurately set forth in the accompanying plat and described herein:

A tract of land lying in the Southwest Quarter, Section 9, Township 27 South, Range 2 East, of the 6th Principal Meridian, Wichita, Sedgwick County, Kansas; said tract being more particularly described as follows:

COMMENCING at the Northwest corner of said Southwest Quarter, thence along the West line of said Southwest Quarter on a Kansas South Zone Grid Bearing of S00°53'35"E, 100.00 feet; thence parallel with and 100.00 feet South of the North line of said Southwest Quarter, N88°56'04"E, 40.00 feet to the POINT OF BEGINNING said point lying on the South line of the St. Louis and San Francisco Railroad right-of-way as condemned in Condemnation Deed Book "T", Page 191; thence continuing N88°56'04"E, 883.52 feet; thence S00°53'35"E, 289.69 feet; thence S24°54'21"W, 113.12 feet; thence S65°37'40"E, 308.53 feet to a point on a curve to the right; thence along the said curve 1022.85 feet, said curve having a central angle of 90°09'40", a radius of 650.00 feet, and a long chord distance of 920.53 feet, bearing S20°32'50"E; thence S24°32'00"W, 664.11 feet to a point on a curve to the left; thence along the said curve 266.26 feet, said curve having a central angle of 25°25'35", a radius of 600.00 feet, and a long chord distance of 264.08 feet, bearing S11°49'12"W; thence S00°53'35"E, 125.00 feet; thence S30°32'19"E, 168.18 feet to point 40.00 feet North of the South line of said Southwest Quarter; thence parallel with and 40.00 feet North of said South line, S89°00'49"W, 837.82 feet; thence N00°59'11"W, 10.00 feet; thence S89°00'49"W, 200.00 feet; thence S00°59'11"E, 10.00 feet; thence S89°00'49"W, 104.93 feet to a point lying 40.00 feet North of said South line; thence N46°04'58"W, 28.33 feet to a point lying 40.00 feet East of the said West line of said Southwest Quarter; thence parallel with and 40.00 feet East of said West line N00°53'35"W, 2497.92 feet to the POINT OF BEGINNING.

Contingent street dedication Film 378, Page 142, Road-Right-Of-Way Film 594, Page 1561, within the above described property are hereby vacated and replatted by virtue of K.S.A. 12-512(b).

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this 4th day of November 2002.

GREGORY J. ALLISON LS-1257 STATE OF KANSAS LAND SURVEYOR

Gregory J. Allison, PE, LS #1257
MKEC Engineering Consultants, Inc.
411 North Webb Road
Wichita, Kansas 67206

Know all men by these presents that we the undersigned property owners of the land above set forth in the Registered Land Surveyor's Certificate, have caused the same to be surveyed and platted into Lots, Blocks, Streets, and Reserves, the same to be known as "THE WATERFRONT ADDITION," an addition to Wichita, Sedgwick County, Kansas.

Easements for the construction and maintenance of public utilities and drainage, as indicated on the accompanying plat are hereby granted to the public.

Reserves "A", "C", "D", "E", "F", "G", and "H" are platted for monuments, landscaping, irrigation, and open space. Reserve "B" is platted for drainage, a floodway, sidewalks, landscaping, irrigation, monuments, and open space. Reserve "C" is also platted for lakes, a floodway, drainage, sidewalks, and berming. Reserve "E" shall allow for public access across Reserve "E", at various locations for driveways, as approved by the City Engineer. The reserves shall be owned and maintained by the lot owners or homeowners association. The streets are hereby dedicated to and for the use of the public.

A drainage plan has been developed for this plat and all drainage easements, right-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of storm water.

All abutters right of access to or from Webb Road over and across the West line of "THE WATERFRONT ADDITION," are hereby granted to the appropriate governing body, provided however, there shall be two access points for Lots 9, Block I and one access point for Lot 2, Block I. Such access points shall be placed accordingly: The minimum distance between full turning movement drives shall be 400'. The minimum distance between a right-in/right-out drive and either another right-in/right-out drive or a full movement drive shall be 200', as referenced in the Access Control Note on sheet one of the plat. All abutters right of access to or from 13th Street over and across the South line of "THE WATERFRONT ADDITION," are hereby granted to the appropriate governing body, provided however, Lot 8 shall have access at one location, 60' in width, and shall allow right turning movements only, as indicated on the face of the plat.

The floodway, as indicated, shall be the responsibility of the owners until such time as the appropriate governing body exercising jurisdiction elects to assume the responsibility for the maintenance and improvements of the drainage, provided further, that no structure shall be constructed on or within said floodway, nor shall any fill, change of grade, creation of a channel or any other work on be carried out without the permission of the City Engineer.

BEECH LAKE DEVELOPMENT, LLC, A KANSAS LIMITED LIABILITY COMPANY

Johnny Stevens, Manager

Stephen L. Clark, Manager

STATE OF KANSAS)
) ss:
SEDGWICK COUNTY)

BE IT REMEMBERED, that on this 4th day of November, 2002, before me the undersigned, a Notary Public in and for the County and State aforesaid, came Johnny Stevens and Stephen L. Clark, Managers, Beech Lake Development, LLC, a Kansas Limited Liability Company, to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

Notary Public, Sandra M. Stevens

Notary Public, Sandra M. Stevens
My appointment expires: 9-20-2006

SANDRA M. STEVENS
Notary Public - State of Kansas
My Appt. Expires Sept. 20, 2006

We COMMERCE BANK, N.A. holders of mortgages on the above described property, do hereby consent to the plat of "THE WATERFRONT ADDITION."

SVP
David W. Harris

STATE OF KANSAS)
) ss:
SEDGWICK COUNTY)

BE IT REMEMBERED, that on this 5th day of November, 2002, before me the undersigned, a Notary Public in and for the County and State aforesaid, came SVP Commerce Bank, N.A., to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

Notary Public

Notary Public, Shannon L. Lathrop
My appointment expires: 4-18-04

SHANNON L. LATHROP
Notary Public - State of Kansas
My Appt. Expires Sept. 18 2004

This plat of "THE WATERFRONT ADDITION," has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.
Dated this 3rd day of October, 2002.

WICHITA-SEDGWICK COUNTY METROPOLITAN PLANNING COMMISSION

Bernard A. Hentzen, Chair

Dale Miller, Secretary

This plat approved and all dedications shown thereon, if any, accepted by the City Council of the City of Wichita, Kansas, this 10th day of January, 2003.

At the direction of the City Council.

Chris Cherches, City Manager

Pat Graves, City Clerk

Entered on transfer record this 24th day of January, 2003.

Don Brace, County Clerk

STATE OF KANSAS)
)ss:
SEDGWICK COUNTY)

This is to certify that this instrument was filed for record in the Register of Deeds office this 24th day of January, 2003 at 10:30 o'clock A.M; and is duly recorded.

Bill Meek, Register of Deeds

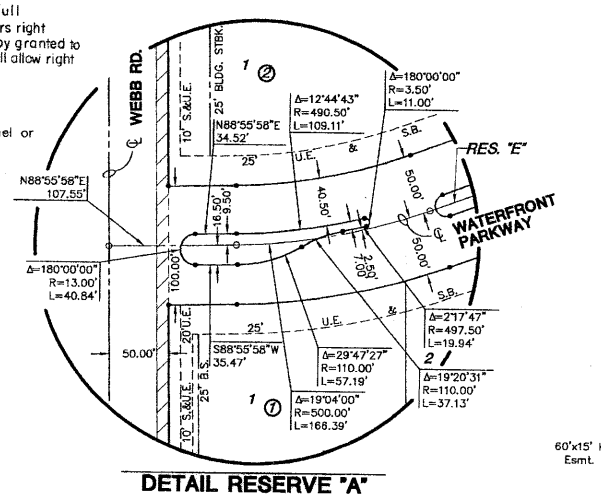
Linda Kizzire, Deputy

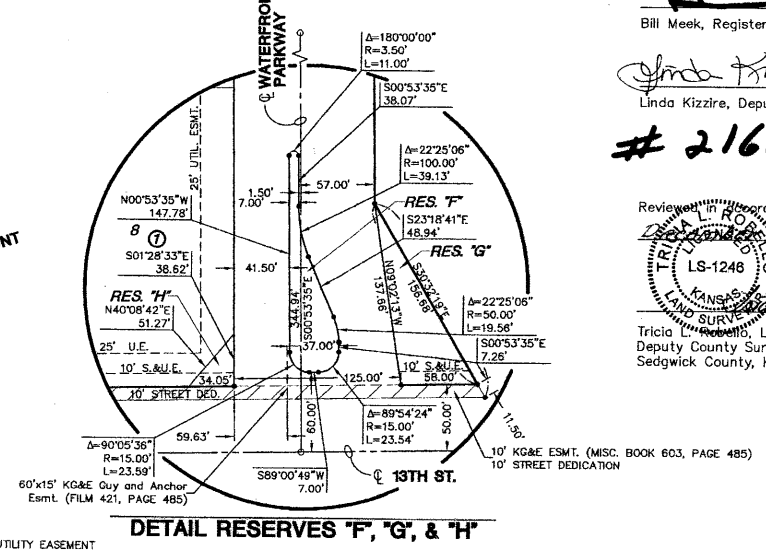
2166160

Reviewed in accordance with K.S.A. 58-2005 on this 9th day of December, 2002.

LS-1246

Tricia L. Robello, LS #1246
Deputy County Surveyor
Sedgwick County, Kansas





S.&U.E. = SIDEWALK & UTILITY EASEMENT

2/2

FINAL PLAT

THE WATERFRONT ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

SW. Cor., SW. ¼, Sec. 9, T27S, R2E, 6th P.M. Fnd. chiseled "X"

Road Right of Way Film 594, Page 1559

N. WEBB RD.

BASIS OF BEARING: KANSAS SOUTH ZONE GRID BEARING OF N00°53'35"W(M) 2657.86'

P.O.B. Fnd. 5/8" bar w/ MKEC CLS #39 cap

NW. Cor., SW. ¼, Sec. 9, T27S, R2E, 6th P.M. Fnd. ¾" pipe in thimble

13TH ST. N.

RESERVE "C" FLOODWAY EASEMENT

RESERVE "D" DRNG. EASEMENT

RESERVE "E"

RES. "A" SEE DETAIL SHT 2/2

RES. "B"

RES. "F" SEE DETAIL SHT 2/2

RES. "G" SEE DETAIL SHT 2/2

RES. "H" SEE DETAIL SHT 2/2

WATERFRONT PARKWAY

ST. LOUIS AND SAN FRANCISCO RAILROAD R/W

100.00' RAILROAD R/W BY CONDEMNATION DEED BOOK "I" PAGE 191

SCALE: 1" = 100'

100 0 100 200

LEGEND

- △ = SECTION CORNER MONUMENT FOUND
- ◉ = FOUND PROPERTY CORNER REBAR
- ● = SET 5/8" REBAR W/ MKEC CLS #39 CAP
- B.S. = BUILDING SETBACK
- U.E. = UTILITY EASEMENT
- (M) = MEASURED DIMENSION
- = STREET DEDICATION
- = STREET VACATION

BENCHMARKS

BM#1 Square cut SE. corner headwall 44' N. and 42' E. of W. ¼ cor., Sec. 9, T27S, R2E ELEV. = 192.73'(City Datum) 1380.13 NGVD

BM#2 Square cut SW. corner signal light pole base NE. corner Webb and 13th. ELEV. = 185.945'(City Datum) 1373.345' NGVD

ACCESS CONTROL NOTE

Webb Road – Two access points for Lots 9, Block 1 and One access point for Lot 2, Block 1 shall be placed accordingly: The minimum distance between full turning movement drives shall be 400'. The minimum distance between a right–in/right–out drive and either another right–in/right–out drive or a full movement drive shall be 200'.

MINIMUM PAD ELEVATIONS (LOWEST OPENINGS)

LOT	BLOCK	ELEVATION (CITY DATUM)	ELEVATION (NGVD)
2	1	188.1	1375.5
3	1	188.1	1375.5
4	1	187.6	1375.0
5	1	187.6	1375.0
6	1	187.0	1374.4
7	1	187.0	1374.4
8	1	187.0	1374.4
9	1	187.0	1374.4
1	2	189.1	1376.5
2	2	189.1	1376.5

GREGORY J. ALLEN LICENSED LAND SURVEYOR LS-1257 KANSAS 11/4/02

SE. Cor., SW. ¼, Sec 9, T27S, R2E, 6th P.M. Fnd. ⅝" bar w/ Garber id. cap

S01°00'39"E(M) 2661.49'(M)

Fnd. ⅝" bar w/ MKEC CLS #39 cap

Fnd. ¾" pipe 50' South of ℄ Track, 91.6' From Ctr. Section

NE. Cor., SW. ¼, Sec. 9, T27W, R2E, 6th P.M. Fnd. ½" pipe

NE. Cor., SE. ¼, Sec. 9, T27W, R2E, 6th P.M. Fnd. RR Spike

H:\DWG\02014\DWG\Prop\02014A1.DWG

1/2

PC144-10A

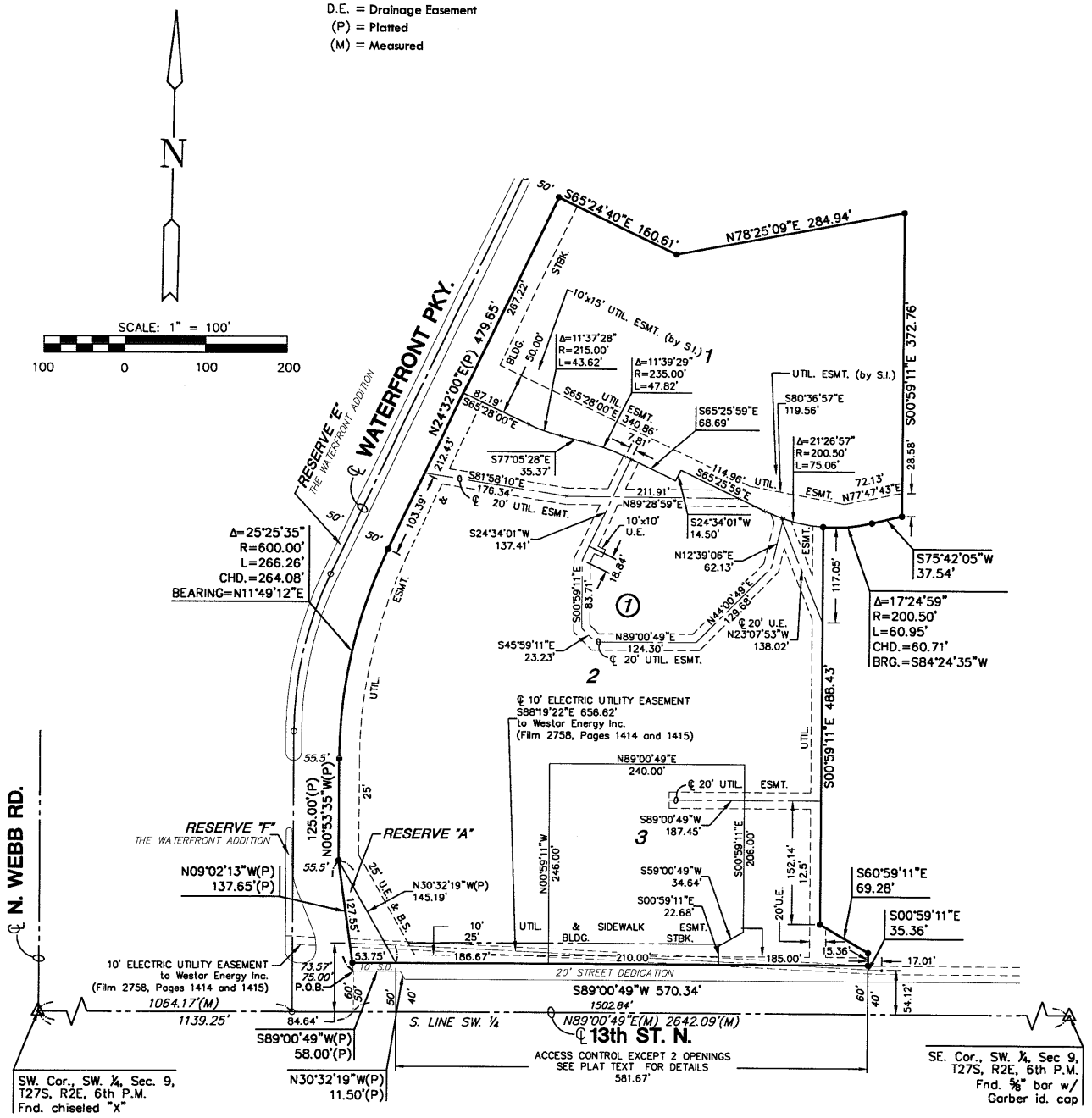
FINAL PLAT

THE WATERFRONT SECOND ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

LEGEND

- △ = Section Corner Monument Found
- ● = Set 5/8" Rebar W/ MKEC CLS 39 id. Cap
- S.D. = Street Dedication
- U.E. = Utility Easement
- D.E. = Drainage Easement
- (P) = Platted
- (M) = Measured



I, Gregory J. Allison, a Registered Land Surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "THE WATERFRONT SECOND ADDITION" an addition to Wichita, Sedgwick County, Kansas, into Lots, a Block, Reserve, and a Street, the same being accurately set forth in the accompanying plat and described herein:

A tract of land lying in the Southwest Quarter, Section 9, Township 27 South, Range 2 East, of the 6th Principal Meridian, Wichita, Sedgwick County, Kansas; said tract being more particularly described as follows:

COMMENCING at the Southwest corner of said Southwest Quarter; thence along the South line of said Southwest Quarter, on a Kansas South Zone Grid Bearing of N89°00'49"E, 1139.25 feet; thence N00°59'11"W, 50.00 feet to the Southwest corner of Reserve "G", The Waterfront Addition, an addition to Wichita, Sedgwick County, Kansas; said corner being the POINT OF BEGINNING; thence N09°02'13"W, 137.65 feet along the West line of said Reserve; thence N00°53'35"W, 125.00 feet along the East line of said Addition to a point on a curve to the right; thence along said curve and along said East line of said Addition 266.26 feet, said curve having a central angle of 25°25'35", a radius of 600.00 feet, and a long chord distance of 264.08 feet, bearing N11°49'12"E; thence N24°32'00"E, 479.65 feet along said East line of said Addition; thence S65°24'40"E, 160.61 feet; thence N78°25'09"E, 284.94 feet; thence S00°59'11"E, 372.76 feet; thence S75°42'05"W, 37.54 feet to a point on a curve to the right; thence along said curve 60.95 feet, said curve having a central angle of 17°24'59", a radius of 200.50 feet, and a long chord distance of 60.71 feet, bearing S84°24'35"W; thence S00°59'11"E, 488.43 feet; thence S60°59'11"E, 69.28 feet; thence S00°59'11"E, 35.36 feet to a point lying 40 feet North of the South line of said Southwest Quarter; thence parallel with and 40 feet North of said South line S89°00'49"W, 570.34 feet; thence N30°32'19"W, 11.50 feet to the Southeast corner of said Reserve "G", lying 50 feet North of the South line of said Southwest Quarter; thence along the South line of said Reserve "G", S89°00'49"W, 58.00 feet to the POINT OF BEGINNING.

Contingent street dedication recorded on Film 378, Page 142; and all reserves, streets, utility easements, building setbacks, and access control within the above described property is hereby vacated and replatted by virtue of K.S.A. 12-512(b).

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this___day of 2003.

Gregory J. Allison, PE, LS #1257
MKEC Engineering Consultants, Inc.
411 North Webb Road
Wichita, Kansas 67206

Know all men by these presents that we the undersigned property owners of the land above set forth in the Registered Land Surveyor's Certificate, have caused the same to be surveyed and platted into Lots, a Block, a Reserve, and a Street the same to be known as "THE WATERFRONT SECOND ADDITION," an addition to Wichita, Sedgwick County, Kansas. Easements for the construction and maintenance of public utilities and drainage, as indicated on the accompanying plat are hereby granted to the public. Reserve "A" is platted for sidewalks, monuments, landscaping, irrigation, berming, and open space. The reserve shall be owned and maintained by the lot owners or homeowners association. The street is hereby dedicated to and for the use of the public. A drainage plan has been developed for this plat and all drainage easements, right-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of storm water. All abutters right of access to or from 13th Street over and across the South line of "THE WATERFRONT SECOND ADDITION," are hereby granted to the appropriate governing body, provided however Lots 2, and 3 shall have access at two locations, each access point shall be placed accordingly: The minimum distance between full turning movement drives shall be 400'. The minimum distance between a right-in/right-out drive and either another right-in/right-out drive or a full movement drive shall be 200'; as indicated on the face of the plat.

BEECH LAKE INVESTMENT, LLC, A KANSAS LIMITED LIABILITY COMPANY

_____, Manager
Johnny Stevens, Manager

_____, Manager
Stephen L. Clark, Manager

STATE OF KANSAS, SEDGWICK COUNTY} ss:

This instrument was acknowledged before me on ____ day of _____, 2003, by Johnny Stevens, and Stephen L Clark, Managers, Beech Lake Investment, LLC, a Kansas Limited Liability Company.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_____, Notary Public
Notary Public:

My Term Expires:

The Waterfomt Holding Co., LLC, A KANSAS LIMITED LIABILITY COMPANY

_____, Manager
Johnny Stevens, Manager

_____, Manager
Stephen L. Clark, Manager

STATE OF KANSAS, SEDGWICK COUNTY} ss:

This instrument was acknowledged before me on ____ day of _____, 2003, by Johnny Stevens, and Stephen L Clark, Managers, The Waterfront Holding Co., LLC, a Kansas Limited Liability Company.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_____, Notary Public
Notary Public:

My Term Expires:

We Commerce Bank, N.A., holders of a mortgage on the above described property, do hereby consent to the plat of "THE WATERFRONT SECOND ADDITION."

COMMERCE BANK, N.A.

_____, Senior Vice President
David W. Harris

This instrument was acknowledged before me on ____ day of _____, 2003, by David W. Harris, Senior Vice President, Commerce Bank, N.A..

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_____, Notary Public
Notary Public

My Term Expires:

This plat of "THE WATERFRONT SECOND ADDITION" has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this ____ day of _____, 2003

WICHITA-SEDGWICK COUNTY METROPOLITAN PLANNING COMMISSION

_____, Chair
Ronald L. Marnell, Chair

_____, Secretary
John L. Schlegel, Secretary

At the direction of the City Council.

_____, Mayor
Carlos Mayans, Mayor

_____, City Clerk
Karen Schofield, City Clerk

Entered on transfer record this ____ day of _____, 2003

_____, County Clerk
Don Brace, County Clerk

STATE OF KANSAS, SEDGWICK COUNTY} ss:

This is to certify that this instrument was filed for record in the Register of Deeds office this ____ day of _____, 2003, at _____ o'clock _M; and is duly recorded.

_____, Register of Deeds
Bill Meek, Register of Deeds

_____, Deputy
Linda Kizzire, Deputy

Reviewed in accordance with K.S.A. 58-2005 on this ____ day of _____, 2003.

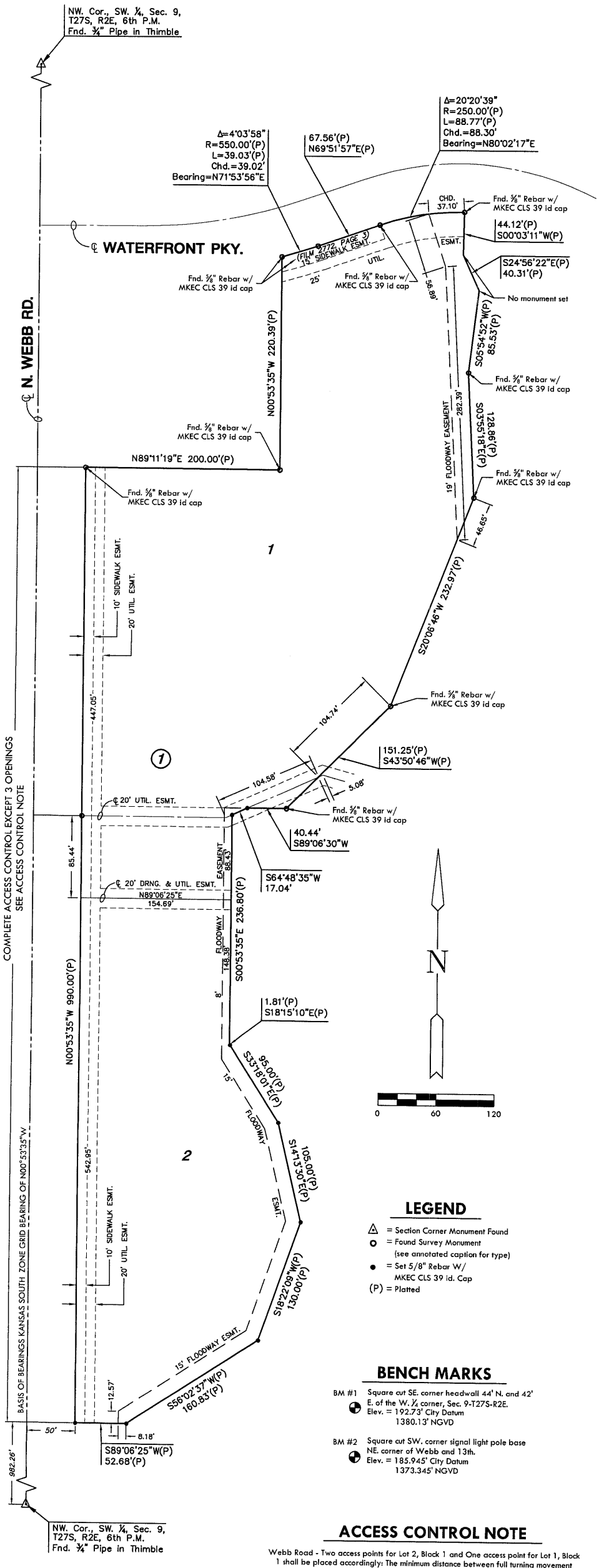
_____, Deputy County Surveyor
Tricia L. Robello, LS #1246
Deputy County Surveyor
Sedgwick County, Kansas

H:\CIVIL\02014\ZND_ADD\DWG\PROP\02014_2a.dwg 9/11/2003 1:21:59 PM CDT

FINAL PLAT

THE WATERFRONT THIRD ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



LEGEND

- △ = Section Corner Monument Found
- o = Found Survey Monument (see annotated caption for type)
- ● = Set 5/8" Rebar W/ MKEC CLS 39 id. Cap
- (P) = Platted

BENCH MARKS

BM #1 Square cut SE. corner headwall 44' N. and 42' E. of the W. ¼ corner, Sec. 9-T27S-R2E.
Elev. = 192.73' City Datum
1380.13' NGVD

BM #2 Square cut SW. corner signal light pole base NE. corner of Webb and 13th.
Elev. = 185.945' City Datum
1373.345' NGVD

ACCESS CONTROL NOTE

Webb Road - Two access points for Lot 2, Block 1 and One access point for Lot 1, Block 1 shall be placed accordingly: The minimum distance between full turning movement drives shall be 400'. The minimum distance between a right-in/right-out drive and either another right-in/right-out drive or a full movement drive shall be 200'.

MINIMUM PAD ELEVATIONS (LOWEST OPENINGS)			
LOT	BLOCK	ELEVATION (CITY DATUM)	ELEVATION (NGVD)
1	1	188.1	1375.5
2	1	187.0	1374.4

We, MKEC Engineering Consultants, Inc., a Registered Corporate Land Surveyor in Kansas, do hereby certify that we have been in responsible charge of surveying and platting of "THE WATERFRONT THIRD ADDITION" an addition to Wichita, Sedgwick County, Kansas, into Lots, and a Block, the same being accurately set forth in the accompanying plat and described herein:

A replat of a portion of land lying in "The Waterfront Addition", an addition to Wichita, Sedgwick County, Kansas;
A portion of Reserve "C", of said addition,
TOGETHER WITH;
A replat of Lots 2 and 9, Block 1, of said addition, said replat being more particularly described as follows:

BEGINNING at a the Southwest corner of said Lot 9, thence along the West line of said addition on a platted Kansas South Zone Grid Bearing of N00°53'35"W, 990.00 feet to the Southwest corner of Lot 1, said Block and addition; thence along the South line of said Lot 1, N89°11'19"E, 200.00 feet to the Southeast corner of said Lot 1; thence along the East line of said Lot 1, N00°53'35"W, 220.39 feet to a point on a curve to the left said curve being coincident with the South right-of-way line of Waterfront Parkway; thence along said South line and along said curve 39.03 feet, said curve having a central angle of 04°03'58", a radius of 550.000 feet, and a long chord distance of 39.02 feet, bearing N71°53'56"E; thence along said South line N69°51'57"E, 67.56 feet to a point on a curve to the right being coincident with the said South line; thence along said curve and said South line 88.77 feet to the Northeast most corner of said Lot 2, said curve having a central angle of 20°20'39", a radius of 250.00 feet, and a long chord distance of 88.30 feet, bearing N80°02'17"E; thence along the East line of said Lot 2, S00°03'11"W, 44.12 feet; thence continuing along said East line S24°56'22"E, 40.31 feet; thence continuing along said East line S05°54'52"W, 85.53 feet; thence continuing along said East line S03°55'18"E, 128.86 feet; thence continuing along said East line S20°06'46"W, 232.97 feet; thence continuing along said East line S43°50'46"W, 151.25 feet; thence S89°06'30"W, 40.44 feet; thence S64°48'35"W, 17.04 feet; thence S00°53'35"E, 236.80 feet to the East line of said Lot 9; thence along the East line of said Lot 9 S18°15'10"E, 1.81 feet; thence along said East line S33°18'01"E, 95.00 feet; thence along said East line S14°13'30"E, 105.00 feet; thence along said East line S18°22'09"W, 130.00 feet; thence along said East line S56°02'37"W, 160.83 feet to the Southeast corner of said Lot 9; thence along the South line of said Lot 9, S89°06'25"W, 52.68 feet to the **POINT OF BEGINNING**.

All reserves, streets, utility easements, building setbacks, access control, together with that portion of a 20 foot utility easement recorded on Film 2515, Page 2202; together with any and all established public rights-of-way within the above described property is hereby vacated and replatted by virtue of K.S.A. 12-512(b).

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this___day of_____2004.

Gregory J. Allison, PE, LS #1257
MKEC Engineering Consultants, Inc.
411 North Webb Road
Wichita, Kansas 67206

Know all men by these presents that we the undersigned property owners of the land above set forth in the Registered Land Surveyor's Certificate, have caused the same to be surveyed and platted into Lots, and a Block the same to be known as "THE WATERFRONT THIRD ADDITION," an addition to Wichita, Sedgwick County, Kansas. Easements for the construction and maintenance of public utilities and drainage, as indicated on the accompanying plat are hereby granted to the public. A drainage plan has been developed for this plat and all drainage easements, right-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of storm water.

The flood way, as indicated, shall be the responsibility of the owners until such time as the appropriate governing body exercising jurisdiction elects to assume the responsibility for the maintenance and improvements of the drainage, provided further, that no structure shall be constructed on or within said flood way, nor shall any fill, change of grade, creation of a channel or any other work on be carried out without the permission of the City Engineer.

Lots 1 and 2, Block 1, are required to adhere to the minimum pad elevation as shown on the "Minimum Pad Elevations" table.

BEECH LAKE INVESTMENT, LLC, A KANSAS LIMITED LIABILITY COMPANY

_____, Manager
Johnny Stevens, Manager

_____, Manager
Stephen L. Clark, Manager

STATE OF KANSAS, SEDGWICK COUNTY} ss:

This instrument was acknowledged before me on ____ day of _____, 2004, by Johnny Stevens, and Stephen L. Clark, Managers, Beech Lake Investment, LLC, a Kansas Limited Liability Company.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_____, Notary Public
Notary Public:

My Term Expires: _____

We Commerce Bank, N.A., holders of a mortgage on the above described property, do hereby consent to the plat of "THE WATERFRONT THIRD ADDITION."

COMMERCE BANK, N.A.

_____, Senior Vice President
David W. Harris

This instrument was acknowledged before me on ____ day of _____, 2004, by David W. Harris, Senior Vice President, Commerce Bank, N.A..

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_____, Notary Public
Notary Public:

My Term Expires: _____

This plat of "THE WATERFRONT THIRD ADDITION" has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this ____ day of _____, 2004

WICHITA-SEDGWICK COUNTY METROPOLITAN PLANNING COMMISSION

_____, Chair
Ronald L. Marnell, Chair

_____, Secretary
John L. Schlegel, Secretary

At the direction of the City Council.

_____, Mayor
Carlos Mayans, Mayor

_____, City Clerk
Karen Schofield, City Clerk

Entered on transfer record this ____ day of _____, 2004

_____, County Clerk
Don Brace, County Clerk

STATE OF KANSAS, SEDGWICK COUNTY} ss:

This is to certify that this instrument was filed for record in the Register of Deeds office this ____ day of _____, 2004, at _____ o'clock _M; and is duly recorded.

_____, Register of Deeds
Bill Meek, Register of Deeds

_____, Deputy
Linda Kizzire, Deputy

Reviewed in accordance with K.S.A. 58-2005 on this ____ day of _____, 2004.

_____, Deputy County Surveyor
Tricia L. Robello, LS #1246
Deputy County Surveyor
Sedgwick County, Kansas

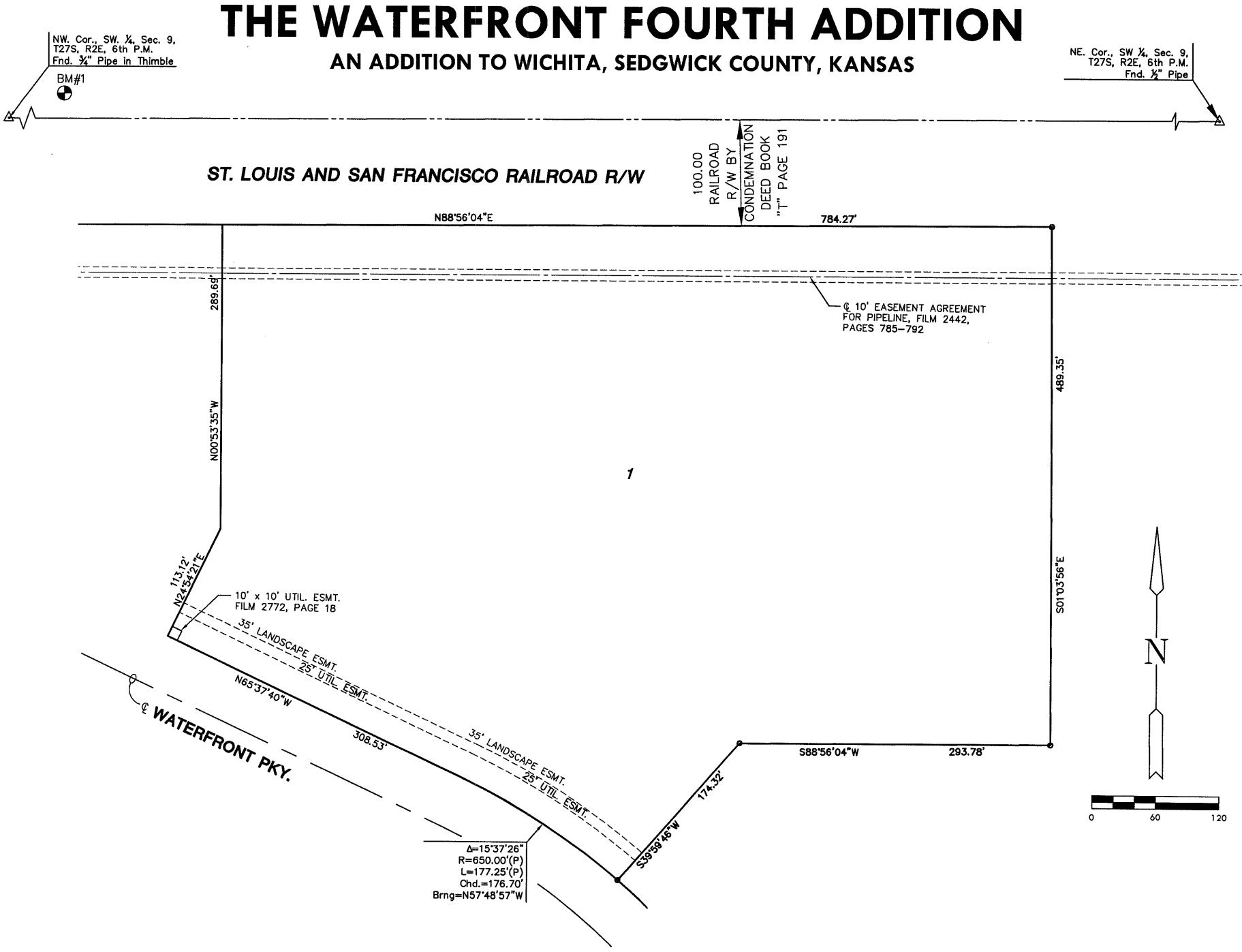
MKEC ENGINEERING CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

H:\CIVIL\03120\DWG\Prop\03120a.dwg 10/24/2004 12:38:38 PM CDT

FINAL PLAT

THE WATERFRONT FOURTH ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



LEGEND

△ = Section Corner Monument Found
o = Found Survey Monument
(see annotated caption for type)
● = Set 5/8" Rebar W/
MKEC CLS 39 id. Cap
(P) = Platted

BENCH MARKS

BM #1 Square cut SE. corner headwall 44' N. and 42' E. of the W. ¼ corner, Sec. 9-T27S-R2E.
Elev. = 192.73' City Datum
1380.13' NGVD

We, MKEC Engineering Consultants, Inc., a Registered Corporate Land Surveyor in Kansas, do hereby certify that we have been in responsible charge of surveying and platting of "THE WATERFRONT FOURTH ADDITION" an addition to Wichita, Sedgwick County, Kansas, into a Lot, the same being accurately set forth in the accompanying plat and described herein:

A tract of land lying in the Southwest Quarter, Section 9, Township 27 South, Range 2 East of the 6th Principal Meridian, Wichita, Sedgwick County, Kansas; said tract being more particularly described as follows:

COMMENCING at the Northwest corner of said Southwest Quarter, thence along the West line of said Southwest Quarter on a Kansas South Zone Grid Bearing of S00°53'35"E, 100.00 feet thence parallel with and 100.00 feet South of the North line of said Southwest Quarter, N88°56'04"E, 923.52 feet to the **POINT OF BEGINNING**, said point lying on the South line of the St. Louis and San Francisco Railroad right-of-way as condemned in Condemnation Deed Book "T", Page 191; thence continuing N88°56'04"E 784.27 feet; thence S01°03'56"E 489.35 feet; thence S88°56'04"W 293.78 feet; thence S39°59'46"W 174.32 feet to a point on a curve to the left; thence along said curve 177.25 feet, said curve having a central angle of 15°37'26", a radius of 600.00 feet, and a long chord distance of 176.70 feet, bearing N57°48'57"W; thence N65°37'40"W 308.53 feet; thence N24°54'21"E 113.12 feet; thence N00°53'35"W 289.69 feet to the **POINT OF BEGINNING.**

Utility easement recorded on Film 2772, Page 18, within the above described property is hereby vacated and replatted by virtue of K.S.A. 12-512(b).

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this___day of_____2004.

Gregory J. Allison, PE, LS #1257
MKEC Engineering Consultants, Inc.
411 North Webb Road
Wichita, Kansas 67206

Know all men by these presents that we the undersigned property owners of the land above set forth in the Registered Land Surveyor's Certificate, have caused the same to be surveyed and platted into a Lot, the same to be known as "THE WATERFRONT FOURTH ADDITION," an addition to Wichita, Sedgwick County, Kansas. Easements for the construction and maintenance of public utilities and drainage, as indicated on the accompanying plat are hereby granted to the public. A drainage plan has been developed for this plat and all drainage easements, right-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of storm water.

BEECH LAKE INVESTMENT, LLC, A KANSAS LIMITED LIABILITY COMPANY

_____, Manager
Johnny Stevens, Manager

_____, Manager
Stephen L. Clark, Manager

STATE OF KANSAS, SEDGWICK COUNTY} ss:

This instrument was acknowledged before me on ____ day of _____, 2004, by Johnny Stevens, and Stephen L. Clark, Managers, Beech Lake Investment, LLC, a Kansas Limited Liability Company.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_____, Notary Public
Notary Public:

My Term Expires: _____

We Commerce Bank, N.A., holders of a mortgage on the above described property, do hereby consent to the plat of "THE WATERFRONT FOURTH ADDITION."

COMMERCE BANK, N.A.

_____, Senior Vice President
David W. Harris

This instrument was acknowledged before me on ____ day of _____, 2004, by David W. Harris, Senior Vice President, Commerce Bank, N.A..

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_____, Notary Public
Notary Public:

My Term Expires: _____

This plat of "THE WATERFRONT FOURTH ADDITION" has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this ____ day of _____, 2004

WICHITA-SEDGWICK COUNTY METROPOLITAN PLANNING COMMISSION

_____, Chair
Ronald L. Marnell, Chair

_____, Secretary
John L. Schlegel, Secretary

At the direction of the City Council.

_____, Mayor
Carlos Mayans, Mayor

_____, City Clerk
Karen Schofield, City Clerk

Entered on transfer record this ____ day of _____, 2004

_____, County Clerk
Don Brace, County Clerk

STATE OF KANSAS, SEDGWICK COUNTY} ss:

This is to certify that this instrument was filed for record in the Register of Deeds office this ____ day of _____, 2004, at _____ o'clock _M; and is duly recorded.

_____, Register of Deeds
Bill Meek, Register of Deeds

_____, Deputy
Linda Kizzire, Deputy

Reviewed in accordance with K.S.A. 58-2005 on this ____ day of _____, 2004.

_____, Deputy County Surveyor
Tricia L. Robello, LS #1246
Deputy County Surveyor
Sedgwick County, Kansas

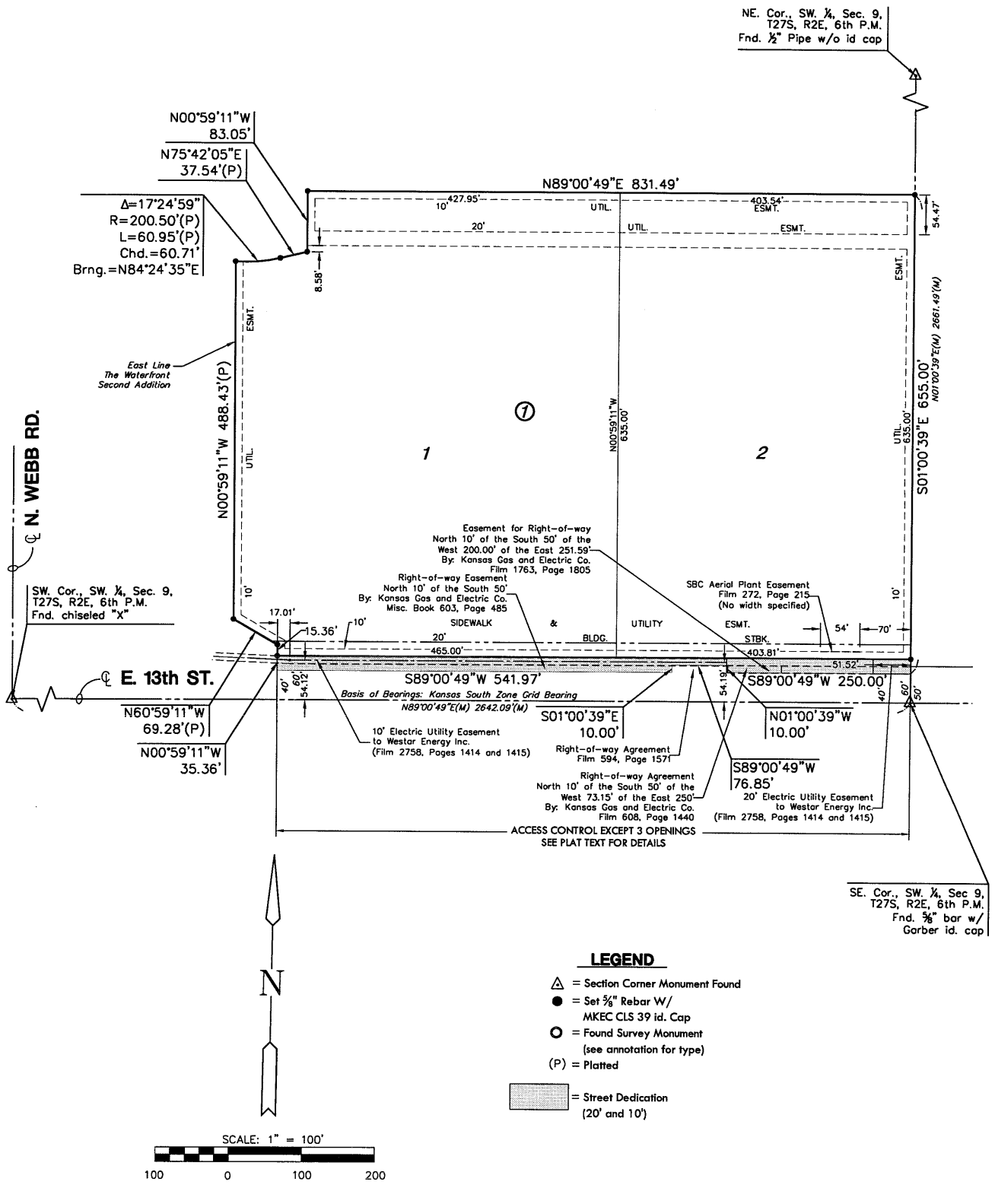
MKEC ENGINEERING CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

H:\CIVIL\02014\4th ADD\prop\02014_4a.dwg

FINAL PLAT

THE WATERFRONT FIFTH ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



LEGEND

- △ = Section Corner Monument Found
- ● = Set ⅝" Rebar W/ MKEC CLS 39 id. Cap
- O = Found Survey Monument (see annotation for type)
- (P) = Platted
- = Street Dedication (20' and 10')

I, Gregory J. Allison, a Registered Land Surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "THE WATERFRONT FIFTH ADDITION" an addition to Wichita, Sedgwick County, Kansas, into Lots, a Block, a Street, the same being accurately set forth in the accompanying plat and described herein:

A tract of land lying in the Southwest Quarter, Section 9, Township 27 South, Range 2 East, of the 6th Principal Meridian, Wichita, Sedgwick County, Kansas; said tract being more particularly described as follows:

COMMENCING at the Southeast corner of said Southwest Quarter, thence along the East line of said Southwest Quarter on a Kansas South Zone Grid Bearing of N01°00'39"W, 40.00 feet to the POINT OF BEGINNING; thence parallel with and 40 feet North of the South line of said Southwest Quarter, S89°00'49"W, 250.00 feet; thence N00°59'11"W, 10.00 feet; thence S89°00'49"W, 76.85 feet; thence S01°00'39"E, 10.00 feet; thence parallel with and 40 feet North of said South line, S89°00'49"W, 541.97 feet; thence N00°59'11"W, 20.00 feet to the Southeast corner of The Waterfront Second Addition, an addition to Wichita, Sedgwick County, Kansas; thence along said East line of said The Waterfront Second Addition for the next six courses, N00°59'11"W, 15.36 feet; thence N60°59'11"W, 69.28 feet; thence N00°59'11"W, 488.43 feet to a point on a non-tangent curve to the left; thence along said curve 60.95 feet, said curve having a central angle of 17°24'59", a radius of 200.50 feet, and a long chord distance of 60.71 feet, bearing N84°24'35"E; thence N75°42'05"E, 37.54 feet; thence N00°59'11" W, 83.05 feet; thence N89°00'49"E, 831.49 feet to the East line of said Southwest Quarter; thence along said East line S01°00'39" E, 655.00 feet to the POINT OF BEGINNING.

Contingent street dedication recorded on Film 378, Page 142; together with a Utility Easement recorded on Film 2834, Page 1216 and all reserves, streets, public utility easements, building setbacks, and access control within the above described property is hereby vacated and replatted by virtue of K.S.A. 12-512(b).

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this___day of_____, 2004.

Gregory J. Allison, PE, LS #1257
MKEC Engineering Consultants, Inc.
411 North Webb Road
Wichita, Kansas 67206

Know all men by these presents that we the undersigned property owners of the land above set forth in the Registered Land Surveyor's Certificate, have caused the same to be surveyed and platted into Lots, a Block, and a Street the same to be known as "THE WATERFRONT FIFTH ADDITION," an addition to Wichita, Sedgwick County, Kansas. Easements for the construction and maintenance of public utilities, as indicated on the accompanying plat are hereby granted to the public. The street is hereby dedicated to and for the use of the public. A drainage plan has been developed for this plat and all drainage easements, right-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of storm water. All abutters rights of access to or from 13th Street over and across the South line of "THE WATERFRONT FIFTH ADDITION," are hereby granted to the appropriate governing body, provided however Lots 1 and 2, shall have access at three locations, each access point shall be placed accordingly: The minimum distance between a full movement drive and another full movement drive 400'; The minimum distance between a right-in/right-out drive and either another right-in/right-out drive or a full movement drive shall be 200' as set fourth in the MAPD Access Management Regulations.

BEECH LAKE INVESTMENT, LLC, A KANSAS LIMITED LIABILITY COMPANY
and also;
THE WATERFRONT HOLDING CO., LLC, A KANSAS LIMITED LIABILITY COMPANY

_____, Manager
Johnny Stevens, Manager

_____, Manager
Stephen L. Clark, Manager

STATE OF KANSAS, SEDGWICK COUNTY} ss:

This instrument was acknowledged before me on ____ day of _____, 2004, by Johnny Stevens, and Stephen L Clark, Managers, Beech Lake Investment, LLC, a Kansas Limited Liability Company, and also, The Waterfront Holding Co., LLC, a Kansas Limited Liability Company .

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_____, Notary Public
Notary Public: Sandra M. Stevens

My Term Expires:

We Commerce Bank, N.A., holders of a mortgage on the above described property, do hereby consent to the plat of "THE WATERFRONT FIFTH ADDITION."

COMMERCE BANK, N.A.

_____, Senior Vice President
David W. Harris

This instrument was acknowledged before me on ____ day of _____, 2004, by David W. Harris, Senior Vice President, Commerce Bank, N.A..

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_____, Notary Public
Notary Public: Shannon L Lathrop

My Term Expires:

This plat of "THE WATERFRONT FIFTH ADDITION" has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this ____ day of _____, 2004

WICHITA-SEDGWICK COUNTY METROPOLITAN PLANNING COMMISSION

_____, Chair
Ronald L Marnell, Chair

_____, Secretary
John L Schlegel, Secretary

At the direction of the City Council.

_____, Mayor
Carlos Mayans, Mayor

_____, City Clerk
Karen Sublett, City Clerk

Entered on transfer record this ____ day of _____, 2004

_____, County Clerk
Don Brace, County Clerk

STATE OF KANSAS, SEDGWICK COUNTY} ss:

This is to certify that this instrument was filed for record in the Register of Deeds office this ____ day of _____, 2004, at _____ o'clock _M; and is duly recorded.

_____, Register of Deeds
Bill Meek, Register of Deeds

_____, Deputy
Linda Kizzire, Deputy

Reviewed in accordance with K.S.A. 58-2005 on this ____ day of _____, 2004.

_____, Deputy County Surveyor
Tricia L. Robello, LS #1246
Deputy County Surveyor
Sedgwick County, Kansas

H:\CIVIL\02014\5th Add\Prop\02014_3sc.dwg 6/28/2004 8:58:06 AM CDT

FINAL PLAT

THE WATERFRONT SIXTH ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

CERTIFICATE OF SURVEY

I, Gregory J. Allison, a registered land surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "THE WATERFRONT SIXTH ADDITION", an addition to Wichita, Sedgwick County, Kansas, into Lots, Blocks, Reserves, and Streets, the same being accurately set forth in the accompanying plat and described herein:

A contiguous tract of land lying within all of The Waterfront Fifth Addition to Wichita, Sedgwick County, Kansas, AND ALSO, a portion of the Southwest Quarter of Section 9, Township 27 South, Range 2 East of the Sixth Principal Meridian, Wichita, Sedgwick County, Kansas, AND ALSO, a southerly portion of the East 272.31 feet of the Southeast Quarter of said Section 9, said contiguous tract of land being more particularly described as follows:
COMMENCING at the South Quarter corner of said Section 9; thence along the west line of said Southwest Quarter, N01°00'39"W, 60.00 feet to the southeast corner of said The Waterfront Fifth Addition, said point being the POINT OF BEGINNING; thence along the south line of said addition on a Kansas state plane coordinate system 1983 south zone grid bearing S89°00'49"W, 868.81 feet; thence along the westerly lines of said addition for the next six (6) courses, said westerly lines, being coincident with the easterly lines of The Waterfront Second Addition, an addition to Wichita, Sedgwick County, Kansas, N00°59'11"W, 15.36 feet; thence N60°59'11"W, 69.28 feet; thence N00°59'11"W, 488.43 feet to a point on a non-tangent curve to the left; thence along said curve 60.95 feet, said curve having a central angle of 17°24'59", a radius of 200.50 feet, and a long chord distance of 60.71 feet, bearing N84°24'35"E; thence N75°42'05"E, 37.54 feet; thence N00°59'11"W, 83.05 feet to the northwest corner of said Waterfront Fifth Addition; thence along an easterly line of said Waterfront Second Addition, N00°59'11"W, 289.72 feet to the northeast most corner of said Waterfront Second Addition; thence along the north lines of said Waterfront Second Addition for the next two (2) courses; thence S78°25'09"W, 284.94 feet; thence N65°24'40"W, 160.61 feet to an east line of The Waterfront Addition, an addition to Wichita, Sedgwick County, Kansas; thence along said east line for the next two (2) courses N24°31'59.6"E, 184.46 feet to a point on a curve to the left; thence along said curve 163.81 feet, said curve having a central angle of 14°26'21", a radius of 650.00 feet, and a long chord distance of 163.37 feet, bearing N17°18'49"E; thence N83°23'02"E, 335.47 feet; thence N14°46'46"E, 100.00 feet; thence N69°10'27"E, 435.00 feet; thence N36°09'06"E, 104.41 feet; thence N01°00'39"W, 130.00 feet; thence N88°59'21"E, 292.00 feet to the east line of said Southwest Quarter; thence along said east line S01°00'48"E, 284.89 feet; thence S77°04'54"W, 251.74 feet; thence S00°59'50"E, 96.78 feet; thence S69°45'25"W, 152.16 feet; thence S01°00'39"E, 316.45 feet; to a point on a non-tangent curve to the right; thence along said curve to the right 135.70 feet to a reverse curve, said curve to the right having a central angle of 150°58'34", a radius of 51.50 feet, and a long chord distance of 99.71 feet, bearing S05°30'22"E; thence along said reverse curve 31.53 feet to a compound curve, said reverse curve having a central angle of 54°45'03", a radius of 33.00 feet, and a long chord distance of 30.35 feet, bearing S42°36'23"W; thence along said compound curve 198.93 feet, said curve having a central angle of 29°40'53", a radius of 384.00 feet, and a long chord distance of 196.71 feet, bearing S00°23'25"W; thence N89°00'49"E, 407.93 feet to a point on said east line of said Southwest Quarter; thence N89°00'49"E, 272.31 feet; thence S01°00'39"E, 634.44 feet; thence S88°53'46"W, 272.31 feet to the POINT OF BEGINNING.

All reserves, streets, utility easements, building setbacks, and access controls, together with, a utility easement recorded in Doc.#/Flm-PG 28793627, a drainage easement recorded in Doc.#/Flm-PG 28649425, together with, a right-of-way easement recorded in Doc#/Flm 594 PG 1573, within the above described property are hereby vacated and replatted by virtue of K.S.A. 12-512(b).

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this ___day of _____________2007.

Gregory J. Allison, PE, LS #1257
MKEC Engineering Consultants, Inc.
411 North Webb Road
Wichita, Kansas 67206

Know all men by these presents that we the undersigned property owners of the land above set forth in the Registered Land Surveyor's Certificate, have caused the same to be surveyed and platted into Lots, Blocks, Reserves and Streets the same to be known as "THE WATERFRONT SIXTH ADDITION," an addition to Wichita, Sedgwick County, Kansas.

Easements for the construction and maintenance of public utilities and public sidewalks, as indicated on the accompanying plat are hereby granted to the public.

The streets are hereby dedicated to and for the use of the public.

Reserves "A", "B", "C", "E" and "F" are platted for utilities confined by easements, drainage, sidewalks, berms, monuments, landscaping, irrigation, and open space. Reserve "D" is platted for a private street. Reserve "E" is also platted for parking. The Reserves shall be owned and maintained by a lot owner's association and are reserved for uses stated.

A drainage plan has been developed for this plat and all drainage easements, right-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of storm water.

Lot 1, Block 3, is required to adhere to the minimum pad elevation table on sheet 1/2 (Minimum Pad Elevation).

All abutters rights of access to or from 13th Street over and across the south line of "THE WATERFRONT SIXTH ADDITION," are hereby granted to the appropriate governing body, provided however Blocks 1 and 2, shall have access accordingly: The minimum distance between a full movement drive and another full movement drive shall be 400'; The minimum distance between a right-in/right-out drive and either another right-in/right-out drive or a full movement drive shall be 200' as set fourth in the MAPD Access Management Regulations.

OWNER'S CERTIFICATES

BEECH LAKE INVESTMENT, LLC, a Kansas limited liability company
and also;
THE WATERFRONT HOLDING CO., LLC, a Kansas limited liability company
and also;
THE WATERFRONT COMMERCIAL PROPERTIES, LLC, a Kansas limited liability company

_______________________, Manager
Johnny Stevens, Manager

_______________________, Manager
Stephen L. Clark, Manager

STATE OF KANSAS, SEDGWICK COUNTY} ss:

This instrument was acknowledged before me on ____ day of ___________, 2007, by Johnny Stevens, and Stephen L. Clark, Managers, Beech Lake Investment, LLC, a Kansas Limited Liability Company, and also, The Waterfront Holding Co., LLC, a Kansas Limited Liability Company, and also The Waterfront Commercial Properties, LLC, a Kansas limited liability company.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_______________________, Notary Public
Notary Public Sandra M. Stevens

SEAL
My Term Expires: __________.

VIEGA, LLC, a Kansas limited liability company

_______________________, CFO
Nathan L. Spearman, CFO

STATE OF KANSAS, SEDGWICK COUNTY} ss:

This instrument was acknowledged before me on ____ day of ___________, 2007, by Nathan L. Spearman, CFO, Viega, LLC, a Kansas limited liability company.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_______________________, Notary Public
Notary Public

SEAL
My Term Expires: __________.

PLANNING COMMISSION CERTIFICATE

This plat of "THE WATERFRONT SIXTH ADDITION" has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this ____ day of __________, 2007

WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION

_______________________, Chair
Darrell A. Downing, Chair

Attest:

_______________________, Secretary
John L. Schlegel, Secretary

Affix MAPC Seal

GOVERNING BODY CERTIFICATE

The dedications shown on this plat are hereby accepted and this plat is hereby approved by the governing body of the City of Wichita, Kansas.

Dated this ____ day of __________, 2007

At the direction of the City Council.

_______________________, Mayor
Carlos Mayans, Mayor

Attest:

_______________________, City Clerk
Karen Sublett, City Clerk

Affix City Seal

TRANSFER RECORD

STATE OF KANSAS, SEDGWICK COUNTY} ss:

Entered on transfer record this ____ day of __________, 2007

_______________________, County Clerk
Don Brace, County Clerk

Affix County Clerk Seal

REGISTER OF DEEDS CERTIFICATE

This is to certify that this instrument was filed for record in the Register of Deeds office this day
of __________, 2007, at ________ o'clock _M; and is duly recorded.

_______________________, Register of Deeds
Bill Meek, Register of Deeds

Attest:

_______________________, Deputy
Tonya E. Buckingham, Deputy

Affix Register of Deeds Seal

COUNTY SURVEYOR

Reviewed in accordance with K.S.A. 58-2005 on this ____ day of __________, 2007.

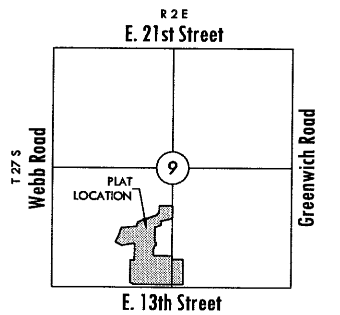
_______________________, Deputy County Surveyor
Tricia L. Robello, LS #1246
Deputy County Surveyor
Sedgwick County, Kansas

MKEC
ENGINEERING
CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

FINAL PLAT

THE WATERFRONT SIXTH ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



VICINITY MAP

1"=100' / 1 : 1200

100 0 100

Basis of Bearing: Kansas coordinate system 1983 south zone bearing of S89°00'49"W along the W. Line of SW. 1/4, Sec. 9, T27S, R2E, 6th P.M.

STREET CENTERLINE TABLE		
LINE	LENGTH	BEARING
L1	526.69'	N00°59'11"W
L2	67.65'	N15°25'33"E
L3	141.50'	S89°00'49"W
L4	45.00'	S75°42'05"W

STREET CENTERLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	156.40'	600.00'	14°56'06"
C2	218.84'	400.00'	31°20'50"
C3	193.87'	300.00'	37°01'32"
C4	82.78'	200.00'	23°42'48"
C5	64.31'	215.00'	17°08'21"

LEGEND

Date of Survey: July, 2006

- △ = Section corner Monument Found
- ◎ = Found 5/8" Rebar w/ MKEC CLS 39 Id. cap
- ● = Set 5/8" Rebar w/ MKEC CLS 39 Id. cap
- (M) = Measured
- (CM) = Calculated from measured
- (P) = Platted

MINIMUM PAD ELEVATION LOWEST BUILDING OPENING		
LOT	BLOCK	ELEVATION NGVD 29
1	3	1380.0

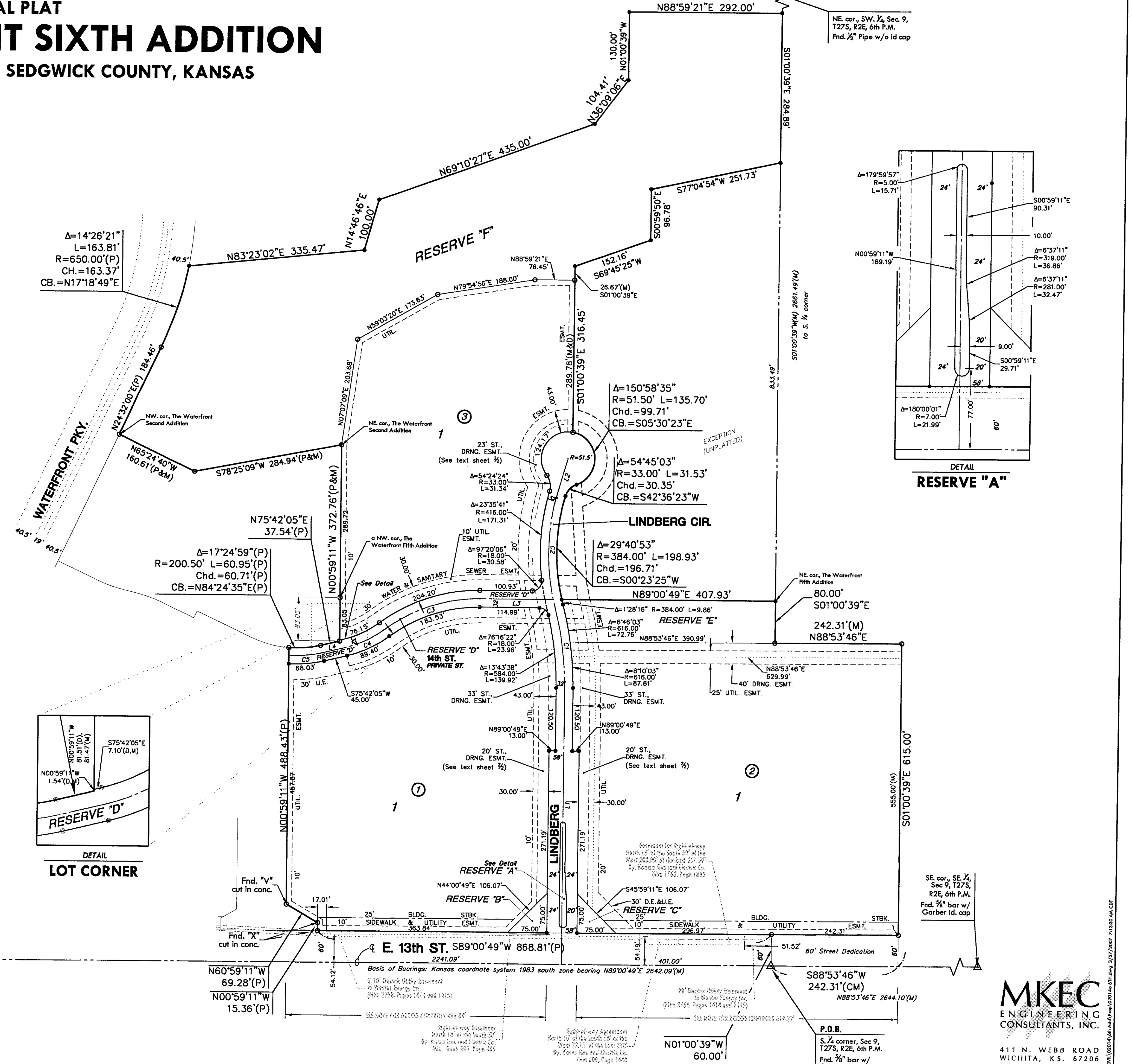
BENCH MARK

Datum BM — Square cut on SW. corner of signal light pole base at NE. corner of Webb Rd. and 13th St. Elev.=1373.345 (NGVD 29)

NOTES

1. Access Controls:
13th Street: Access points for Blocks, 1 and 2 shall be placed accordingly: The minimum distance between full turning movement drives shall be 400'. The minimum distance between a right-in/right-out drive and either another right-in/right-out drive or a full movement drive shall be 200'.

2. Street Drainage Easements:
Along Lindberg Street and Lindberg Circle where there is 32' of right-of-way a 15' street drainage easement is provided abutting and adjoining the 32' right-of-way as indicated.



MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

FINAL PLAT
GREENWICH OFFICE PARK ADDITION
AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

CERTIFICATE OF SURVEY

I, Gregory J. Allison, a registered land surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "GREENWICH OFFICE PARK ADDITION", an addition to Wichita, Sedgwick County, Kansas, into Lots, a Block, and a Street, the same being accurately set forth in the accompanying plat and described herein:

A tract of land lying in a portion of the West Half of the Southeast Quarter of Section 9, Township 27 South, Range 2 East of the Sixth Principal Meridian, Wichita, Sedgwick County, Kansas, said tract of land being more particularly described as follows:
COMMENCING at the southwest corner of said Quarter; thence along the south line of said Southeast Quarter on a Kansas coordinate system of 1983 south zone grid bearing of N88°53'46"E, 392.31 feet to the POINT OF BEGINNING; thence parallel with the west line of said Southeast Quarter N01°00'39"W, 705.00 feet; thence parallel with the south line of said Southeast Quarter N88°53'46"E, 931.15 feet to the east line of said West Half; thence along said east line S00°54'24"E, 705.00 feet to the south line of said Southeast Quarter; thence along said south line S88°53'46"W, 929.87 feet to the POINT OF BEGINNING.

All reserves, streets, utility easements, building setbacks, and access controls, together with, an easement for right-of-way recorded in Film 594, Page 1573; a contingent street dedicaiton recorded in Film 378, Page 142, together with all other public dedications within the above described property are hereby vacated and replatted by virtue of K.S.A. 12-512(b).

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this___day of _____2007.

Gregory J. Allison, PE, LS #1257
MKEC Engineering Consultants, Inc.
411 North Webb Road
Wichita, Kansas 67206

Know all men by these presents that we the undersigned property owners of the land above set forth in the Registered Land Surveyor's Certificate, have caused the same to be surveyed and platted into Lots, a Block, a Street the same to be known as "GREENWICH OFFICE PARK ADDITION," an addition to Wichita, Sedgwick County, Kansas.

Easements for the construction and maintenance of public utilities and drainage, as indicated on the accompanying plat are hereby granted to the public.

The streets are hereby dedicated to and for the use of the public.

All abutters rights of access to or from 13th Street over and across the south line of "GREENWICH OFFICE PARK ADDITION," are hereby granted to the appropriate governing body, as indicated hereon, Lot 2 have access locations per the access control notes as stated hereon.

A drainage plan has been developed for this plat. All drainage easements, right-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of storm water.

OWNER'S CERTIFICATE

Greenwich 13, L.L.C., a Kansas limited liability company

_____, Manager
George Laham, Manager

STATE OF KANSAS, SEDGWICK COUNTY} ss:

This instrument was acknowledged before me on ____ day of _____, 2007, by George Laham, Manager, Greenwich 13, L.L.C., a Kansas limited liability company.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_____, Notary Public
Notary Public:
Sign and print below

SEAL
My Term Expires: _____.

MORTGAGE CERTIFICATE

We INTRUST Bank, N.A. holders of a mortgage on the above described property, do hereby consent to the plat of "MONARCH LANDING ADDITION."

INTRUST Bank, N.A.

_____, Executive Vice President
Gary D. Schmitt, Executive Vice President

This instrument was acknowledged before me on this ____ day of _____, 2007, by Gary D. Schmitt, Executive Vice President, INTRUST Bank, N.A..

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_____, Notary Public
Notary Public:
Sign and print below

SEAL
My Term Expires: _____.

PLANNING COMMISSION CERTIFICATE

This plat of "GREENWICH OFFICE PARK ADDITION" has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this ____ day of _____, 2007

WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION

_____, Chair
Darrell A. Downing, Chair

Attest:

_____, Secretary
John L. Schlegel, Secretary

Affix MAPC Seal

GOVERNING BODY CERTIFICATE

The dedications shown on this plat are hereby accepted and this plat is hereby approved by the governing body of the City of Wichita, Kansas.

Dated this ____ day of _____, 2007

At the direction of the City Council.

_____, Mayor
Carl Brewer, Mayor

Attest:

_____, City Clerk
Karen Sublett, City Clerk

Affix City Seal

TRANSFER RECORD

STATE OF KANSAS, SEDGWICK COUNTY} ss:

Entered on transfer record this ____ day of _____, 2007

_____, County Clerk
Don Brace, County Clerk

Affix County Clerk Seal

REGISTER OF DEEDS CERTIFICATE

This is to certify that this instrument was filed for record in the Register of Deeds office this day of _____, 2007, at _____ o'clock _M; and is duly recorded.

_____, Register of Deeds
Bill Meek, Register of Deeds

Attest:

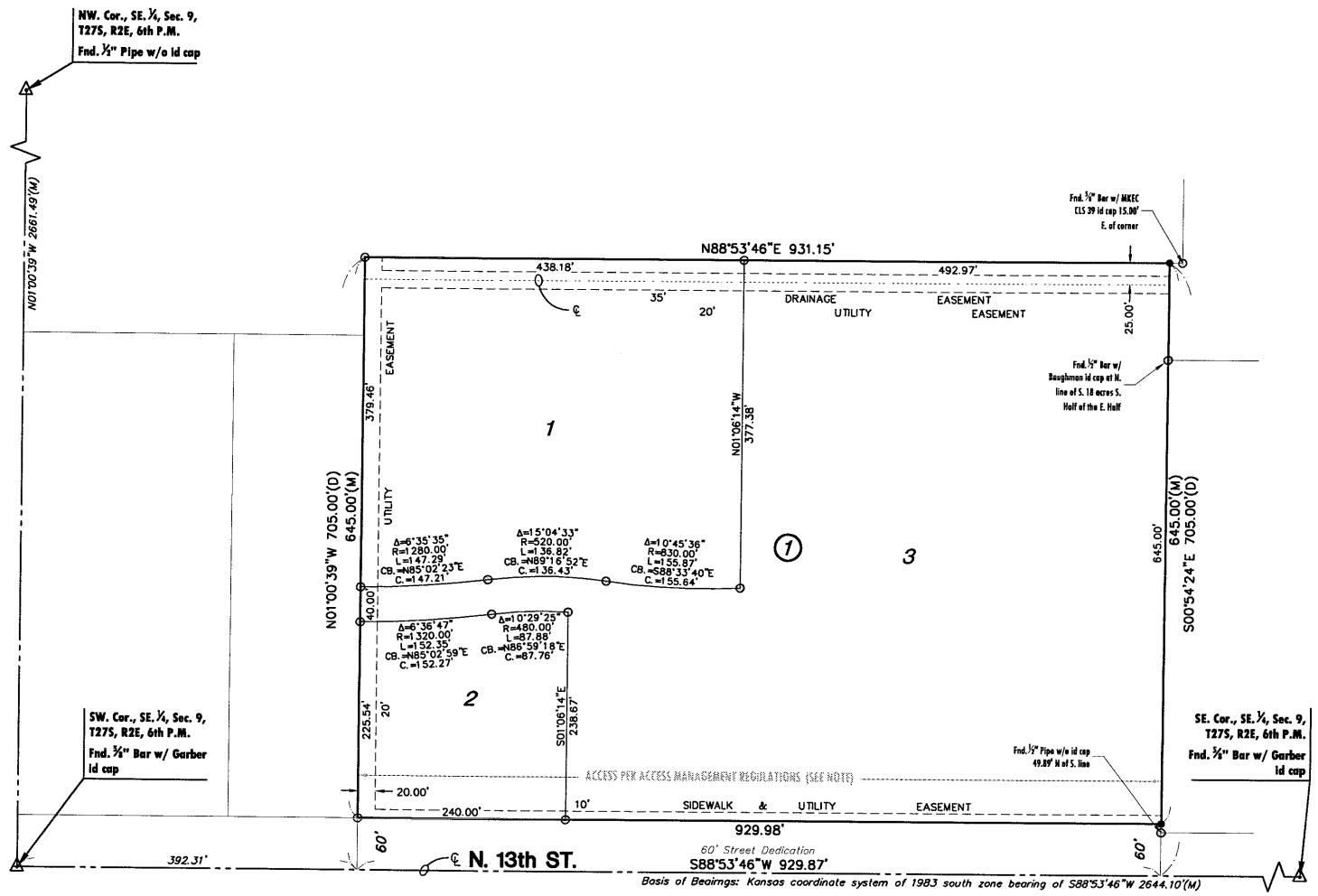
_____, Deputy
Tonya E. Buckingham, Deputy

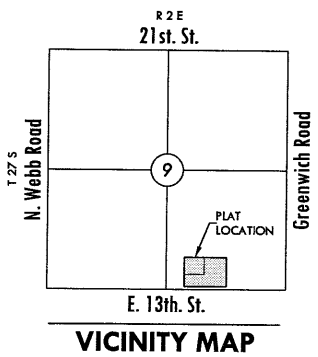
Affix Register of Deeds Seal

COUNTY SURVEYOR

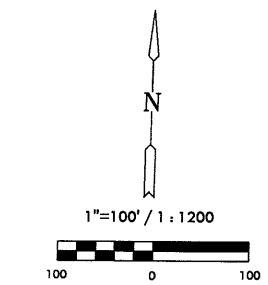
Reviewed in accordance with K.S.A. 58-2005 on this ____ day of _____, 2007.

_____, Deputy County Surveyor
Tricia L. Robello, LS #1246
Deputy County Surveyor
Sedgwick County, Kansas





VICINITY MAP



Basis of Bearing: Kansas coordinate system of 1983 south zone grid bearing of S88°53'45"E along the S. line of SE. ¼, Sec. 9, T27S, R2E, 6th P.M.

LEGEND

Date of Survey: March, 2007

- △ = Section Corner Monument Found
- O = Found ⅝" Rebar w/ MKEC CLS 39 id. cap unless otherwise annotated
- ● = Set ⅝" Rebar w/ MKEC CLS 39 id. cap
- (M) = Measured
- (CM) = Calculated from measured
- (D) = Deeded / described

ACCESS CONTROLS NOTE

13th Street - Access points for Lot, 2 shall be placed accordingly: The minimum distance between full turning movement drives shall be 400'. The minimum distance between a right-in/right-out drive and either another right-in/right-out drive or a full movement drive shall be 200'.

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

J:\Civil\07063\Dwg\07063dwg 4/17/2007 10:06A PM CDT

0 60 120

LEGAL DESCRIPTION

A tract of land lying in the Southeast Quarter, Section 8, Township 27 South, Range 2 East, of the 6th Principal Meridian, Wichita, Sedgwick County, Kansas; said tract being more particularly described as follows:

COMMENCING at the Southeast corner of said Southeast Quarter, thence along the South line of said Southeast Quarter, S89°04'47"W, 74.96 feet; thence N00°55'13"W, 75.00 feet to the **POINT OF BEGINNING,** thence parallel with and 75 feet North of said South line, S89°04'47"W, 175.00 feet; thence S75°00'59"W, 102.88 feet to a point lying 50 feet North of said South line; thence parallel with and 50 feet North of said South line, S89°04'47"W, 270.21 feet; thence N00°55'13"W, 366.89 feet; thence N89°04'47"E, 20.17 feet; thence N43°08'458"E, 90.57 feet; thence N89°04'47"E, 99.83 feet; thence N26°32'56"E, 133.03 feet; thence N89°04'47"E, 48.13 feet; thence N00°53'35"W, 32.10 feet; thence S89°04'46"W, 10.64 feet; thence N00°53'35"W, 128.04 feet; thence N89°06'25"E, 288.42 feet to a point lying 50 feet West of the East line of said Southeast Quarter; thence parallel with and 50 feet West of said East line, S00°53'35"E, 317.22 feet; thence S89°06'25"W, 10.00 feet; thence S00°53'35"E, 92.78 feet; thence S00°53'35"E, 54.75 feet; thence S88°58'14"W, 15.00 feet; thence S00°53'35"E, 220.21 feet to the **POINT OF BEGINNING.**

TOGETHER WITH;

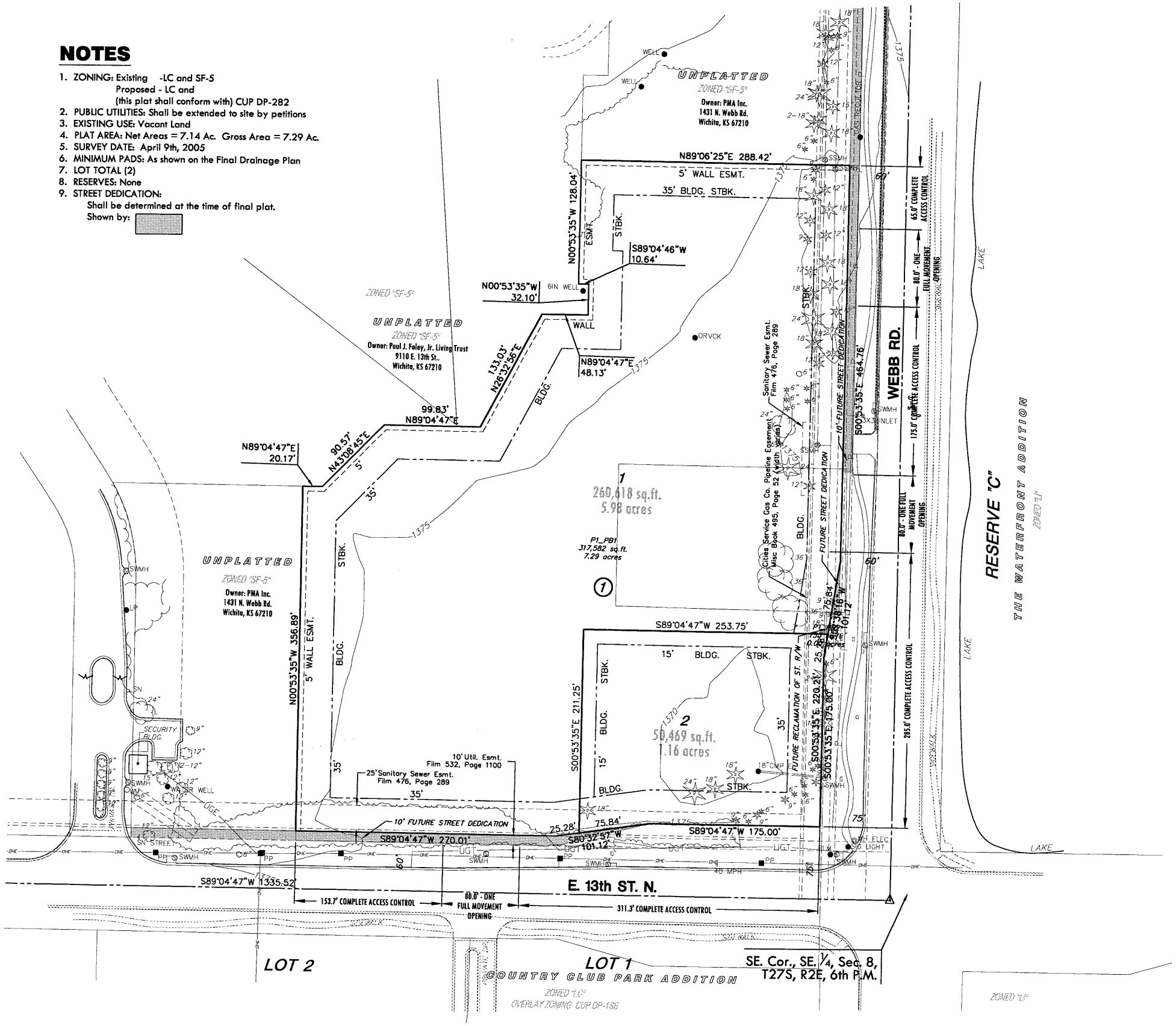
That portion of Webb Road Right-of-Way described as follows: **COMMENCING** at the Southeast corner of said Southeast Quarter, thence along the East line of said Southeast Quarter, N00°53'35"W, 249.95 feet; thence S89°06'25"W, 75.00 feet to the **POINT OF BEGINNING;** thence N00°53'35"W, 45.22 feet; thence N88°58'14"E, 6.79 feet; thence S07°38'16"W, 45.74 feet to the **POINT OF BEGINNING.** Said tract **CONTAINS:** 7.294 acres of land, more or less.

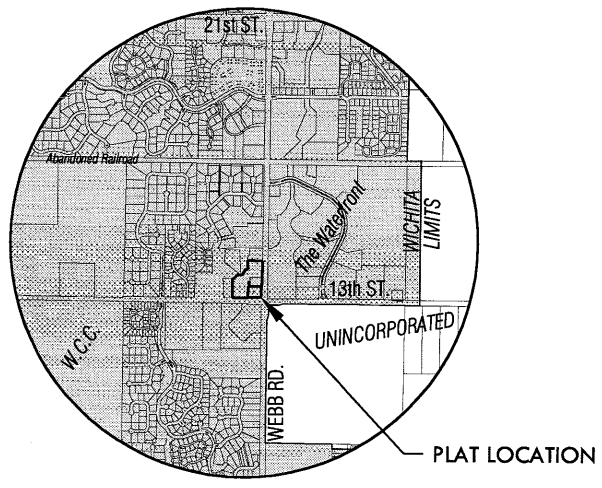
LEGEND

- SN - SIGN
- GM - GAS METER
- SSMH - SANITARY SEWER MANHOLE
- TREES
- EDGE OF TREES
- FENCE
- GATE
- PP - POWER POLE/GUY ANCHOR
- KGE - ELECTRIC BOX
- POLE - POLE
- FH - FIRE HYDRANT
- WV - WATER VALVE
- WM - WATER METER
- TR - TELEPHONE RISER
- STORM SEWER PIPE
- W - WATER LINE
- SANITARY SEWER LINE
- G - GAS LINE
- UGT - TELEPHONE LINE
- OHE - OVERHEAD ELECTRIC
- ZONE CHANGES

NOTES

1. ZONING: Existing -LC and SF-5
   Proposed - LC and
   (this plat shall conform with) CUP DP-282
2. PUBLIC UTILITIES: Shall be extended to site by petitions
3. EXISTING USE: Vacant Land
4. PLAT AREA: Net Areas = 7.14 Ac. Gross Area = 7.29 Ac.
5. SURVEY DATE: April 9th, 2005
6. MINIMUM PADS: As shown on the Final Drainage Plan
7. LOT TOTAL (2)
8. RESERVES: None
9. STREET DEDICATION:
   Shall be determined at the time of final plat.
   Shown by:





VICINITY MAP

PRELIMINARY PLAT

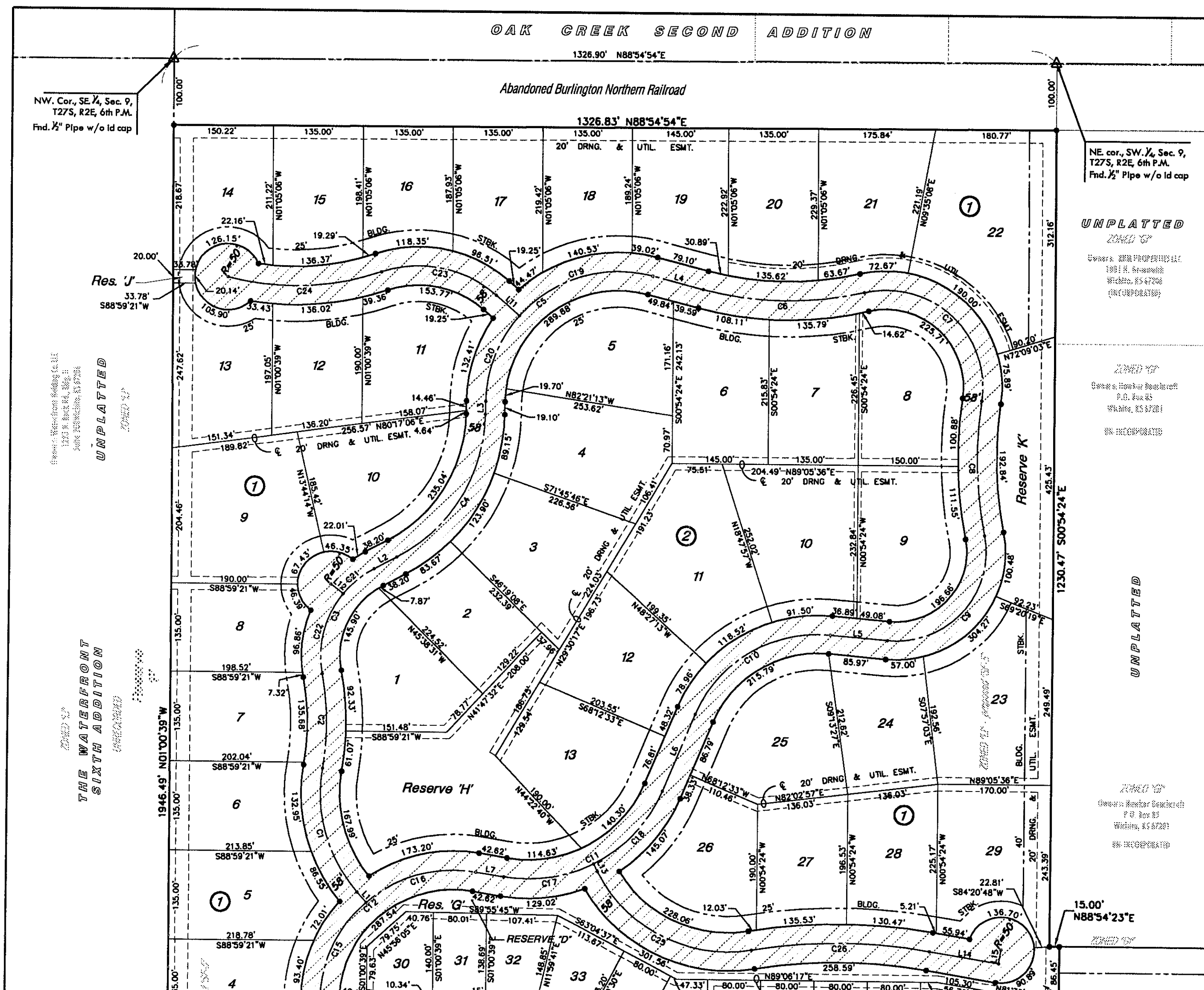
FOLIAGE CENTER ADDITION

OWNER: PMA, Inc. c/o Foley Equipment Co. - Paul J. Foley, Jr., President 1550 S. West St. Wichita, KS 67213-1638 (316) 943-4211

DEVELOPER: Beech Lake Investments LLC 1223 N. Rock Rd. Bldg H, Suite 200 Wichita, KS 67206 (316) 636-2100

Date: MAY 16th, 2005

MKEC ENGINEERING CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600



NOTES

1. GEOGRAPHY: Located in the northeast Wichita in an commercial corridor. The property has access to K-96 Expressway via 13th Street. Existing adjoining land uses include: airplane manufacturing, concrete manufacturing, high-end commercial, retail, offices, and residential.
2. LOT TOTAL - 74 single family residential lots
3. ANNEXATION: Presently un-incorporated; annexation has been requested. *First reading is scheduled for May 1st and second reading May 8th*
4. EXISTING/PROPOSED USES: existing - vacant field
   proposed - single family
5. ZONING: Existing - "LI" Limited Industrial
   Proposed - "SF-5" w/ conditional use for accessory apartment
6. PLAT AREA: Gross = 59.61 acres
7. SURVEY DATE: April 2007 (by MKEC)
8. PUBLIC UTILITIES: Municipal sanitary sewer shall be extended to the lots from the west and northeast. Municipal water shall be extended from the west to serve the lots.
9. ACCESS / ACCESS CONTROLS: Access to 13th Street shall be via private street (Reserve "L") and also public right-of-way south of the private street (Reserve "L"). Further access restrictions are established per private development agreement.
10. PRIVATE STREET RESERVES: Reserve "L", hatched area, is platted for private streets, public and private utilities, access and shall be owned and maintained by the Homeowners Association.
11. RESERVES: Reserves "A", "B", and "H" are platted for drainage, landscaping, irrigation, open space, and a pitch and put golf area, all other reserves are platted for landscaping, irrigation, open space, monuments, utilities confined by easement, drainage, private parking, and berming; and shall be owned and maintained by the Homeowners Association.
12. FLOOD: According to FEMA FIRM Community Unit Panel 20173C0379E, effective date February 7th, 2007; this property lies within flood zone "X", *"Areas determined to be outside the 0.2% annual chance floodplain."*
13. DRAINAGE: A drainage report shall accompany this plat and submitted to the Engineering Department on Thursday, April 12th.
14. BUILDING SETBACK: As per Wichita-Sedgwick County Unified Zoning Code ("SF-5" Front Setback of 25', Side 6', Rear 20'). Further setback regulations are effective by private instrument.
15. PIPELINE CONFINEMENT: A blanket right-of-way contract in favor of Cooperative Refinery Associations now Coffeyville Resources Pipeline LLC is on the subject property (recorded Misc. Record 239, Page 551 dated Oct. 11, 1948), however the pipeline does not affect the subject property. This pipeline right-of-way is be confined in conjunction with the platting of this land.
16. DEED RESTRICTIONS: All present and existing deed restrictions shall be enforced by the Homeowners Association.

LEGEND

- EDGE OF TREES
- CONIFEROUS TREE
- DECIDUOUS TREE
- SIGN
- POWER POLE
- ELECTRIC BOX
- LIGHT POLE
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- STORM WATER MANHOLE
- SANITARY SEWER MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE RISER
- INLET
- GRATE INLET
- GAS METER
- BENCHMARK
- EASEMENT
- BUILDING SETBACK
- FENCE
- STORM SEWER PIPE
- WATER LINE
- SANITARY SEWER LINE
- GAS LINE
- TELEPHONE LINE
- UNDERGROUND ELECTRIC LINE
- OVERHEAD TELEPHONE
- OVERHEAD ELECTRIC
- UNDERGROUND FIBER OPTIC CABLE
- PIPELINE
- ⅝" REBAR/MKEC CLS 39
- PROPERY CORNER FOUND
- SECTION CORNER
- Reserve "L" (Private Street)

PRIVATE STREET CENTERLINE TABLE

LINE	LENGTH	BEARING
L1	21.00	N42°22'09"W
L2	38.20	N60°51'46"E
L3	19.10	N00°04'18"W
L4	79.10	S76°20'33"E
L5	85.97	N85°54'24"W
L6	125.13	S21°47'27"W
L7	42.62	N81°44'09"W
L8	59.58	S01°00'39"E
L9	766.62	S01°00'39"E
L10	19.91	N01°00'39"W
L11	46.40	N49°40'01"W
L12	23.43	N52°23'40"W
L13	12.94	S28°00'56"E
L14	105.30	N81°30'23"W
L15	21.00	S08°29'37"W
L16	251.56	S88°59'21"W
L17	67.35	S61°37'59"E
L18	180.60	N75°54'59"W
L19	60.54	N66°52'11"E
L20	30.18	S03°59'33"E
L21	24.92	S21°14'12"W
L22	16.00	N32°02'54"E

PRIVATE STREET CENTERLINE CURVE TABLE

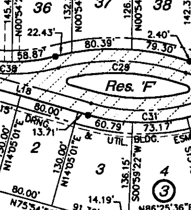
CURVE	LENGTH	RADIUS	DELTA
C1	199.90	225.00	50°54'13"
C2	143.03	400.00	20°29'14"
C3	190.63	150.00	72°48'56"
C4	265.88	250.00	60°56'04"
C5	362.08	200.00	103°43'45"
C6	244.35	500.00	28°00'00"
C7	282.14	145.00	111°29'03"
C8	202.63	600.00	19°20'59"
C9	250.47	135.00	106°18'05"
C10	252.38	200.00	72°18'08"
C11	293.64	220.00	76°28'23"
C12	346.53	200.00	99°16'30"
C13	196.07	400.00	28°05'05"
C14	171.56	350.00	28°05'05"
C15	169.79	200.00	48°38'30"
C16	176.74	200.00	50°38'00"
C17	139.30	220.00	36°16'46"
C18	154.33	220.00	40°11'37"
C19	221.04	200.00	63°19'29"
C20	141.04	200.00	40°24'17"
C21	60.89	150.00	23°15'27"
C22	129.74	150.00	49°33'29"
C23	184.31	175.00	60°20'41"
C24	234.04	400.00	33°31'25"
C25	279.18	220.00	72°42'27"
C26	268.31	800.00	19°12'59"
C27	153.82	300.00	29°22'40"
C28	193.76	250.00	44°24'21"
C29	172.90	300.00	33°01'16"
C30	106.62	200.00	30°32'36"
C31	162.38	250.00	37°12'50"
C32	190.48	100.00	109°08'16"
C33	207.58	114.00	104°19'46"
C34	255.58	700.00	19°46'15"
C35	372.08	175.00	120°40'15"
C36	31.11	250.00	7°07'49"
C37	31.21	250.00	7°09'11"
C38	131.43	250.00	30°07'21"
C39	16.70	100.00	9°34'09"
C40	130.21	175.00	45°32'55"
C41	241.87	175.00	75°07'20"

BENCHMARK

BM #1 Square cut on wing wall at west end south HDWL south side 13th Street 310' west 41' south of south ¼ corner.
Elev.=1377.32 (NGVD 29)

LEGAL DESCRIPTION

A tract of land lying in the Southeast Quarter of Section 9, Township 27 South, Range 2 East of the Sixth Principal Meridian, Wichita, Sedgwick County, Kansas, said tract being more particularly described as follows:
COMMENCING at the southwest corner of said Quarter; thence along the south line of said Quarter on a Kansas coordinate system of 1983 south zone grid bearing of N88°53'46"E, 272.31 feet to the POINT OF BEGINNING; thence parallel with the west line of said Quarter N01°00'39"W, 2561.40 feet to a point lying 100.00 feet south of the north line of said Quarter, said point being on the south right-of-way line of the Burlington Northern San Francisco Railroad right-of-way as recorded on Deed Book "U", Page 260; thence along said right-of-way and parallel with said north line N88°54'54"E, 1054.41 feet to the northeast corner of the West Half of said Southeast Quarter; thence along the east line of said West Half S00°54'44"E, 1230.47 feet to the northwest corner of the Southeast Quarter of said Southeast Quarter; thence along the north line of said Southeast Quarter of said Southeast Quarter N88°54'23"E, 15.00 feet; thence parallel with and 15.00 feet east of the west line of said Southeast Quarter of said Southeast Quarter S00°54'24"E, 625.59 feet to a point lying 705.00 feet north of the south line of said Southeast Quarter; thence parallel with and 705.00 feet north of said south line S88°53'46"W, 946.15 feet to a point lying 392.31 feet east of the west line of said Southeast Quarter; thence parallel with and 392.31 feet east of said west line, S01°00'39"E, 705.00 feet to the south line of said Southeast Quarter; thence along said south line S88°53'46"W, 120.00 feet to the POINT OF BEGINNING.
TOGETHER WITH,
A tract of land lying within a portion of the west 272.31 feet of the Southeast Quarter of Section 9, Township 27 South, Range 2 East of the Sixth Principal Meridian, Wichita, Sedgwick County, Kansas, said tract of land being more particularly described as follows:
COMMENCING at the southwest corner of said Quarter; thence along the south line of said Southeast Quarter on a Kansas coordinate system of 1983 south zone grid bearing of N88°53'46"E, 242.31 feet to the POINT OF BEGINNING; thence parallel with the west line of said Southeast Quarter N01°00'39"W 615.00 feet; thence parallel with said south line S88°53'46"W, 242.31 feet to said west line; thence along said west line N01°00'39"W, 1946.49 feet to a point lying 100.00 feet south of the north line of said Southeast Quarter, said point being on the south right-of-way line of the Burlington Northern San Francisco Rail Road right-of-way as recorded on Deed Book "U", Page 260; thence along said right-of-way and parallel with said north line N88°54'54"E, 272.31 feet; thence parallel with said west line S01°00'39"E, 2561.40 feet to the POINT OF BEGINNING.



VICINITY MAP

NORTH
1"=100' / 1:1200
100 0 100

PRELIMINARY PLAT

A portion of the SE. ¼, Sec. 9, T27S, R2E, 6th P.M.

THE WATERFRONT RESIDENTIAL ADDITION

OWNER/DEVELOPER: The Waterfront Residential Co., LLC 8100 E. 22nd Street Bldg. #1000, Wichita, KS, 67226 316-684-7300

Date submitted: April 9th, 2007
Subdivision Hearing: April 26th, 2007
MAPC Hearing: May 5th, 2007

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

Figure 1.4

Preliminary Grading Plan

LEGEND

- 6IN - CONIFEROUS TREE
- 3IN - DECIDUOUS TREE
- SN - SIGN
- PP - POWER POLE
- ELEC BOX - ELECTRIC BOX
- LP - LIGHT POLE
- FH - FIRE HYDRANT
- WV - WATER VALVE
- WM - WATER METER
- - SECTION CORNER
- BM - BENCHMARK
- - EASEMENT
- - BUILDING SETBACK
- - FENCE
- - STORM SEWER PIPE
- - WATER LINE
- - SANITARY SEWER LINE
- - GAS LINE
- - GAS PIPELINE
- - TELEPHONE LINE
- - UNDERGROUND ELEC.
- - OVERHEAD ELECTRIC
- - FIBER OPTIC CABLE I
- - DRAINAGE SUB BASIN
- - DRAINAGE BASIN
- - FLOW ARROW
- A17 - AREA FOR SWS SIZING
- 1391 - SPOT ELEVATIONS

N

SCALE: 1" = 100'

100 0 100 200

J:\CIVIL\06279\DWG\DRMG\06279DUP.DWG

MKEC ENGINEERING CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

WATERFRONT RESIDENTIAL ADDITION
PROJECT NAME

LOT GRADING PLAN
SHEET TITLE

TMH	CMJ	KLA
DESIGN BY:	DRAWN BY:	CHECKED BY:
APRIL 2007	02014	1 / 1
DATE	JOB NO.	SHEET/OF

Tab 2. Existing Conditions Runoff Calculations

A. Orthophotograph

The aerial photograph includes Waterfront Commercial, Waterfront Residential, Greenwich Office Park and Foliage Addition, Figure 2.1.

B. Runoff Method

The pre-project watershed has been divided into watersheds to correspond with the future conditions model. Additional watershed boundaries have been added at locations where ponds have been or will be constructed. These areas, their time of concentration, and curve number are shown on the Pre-Project TR-20 Key Map, Figure 2.2

The SCS TR-20 software model was used to calculate peak flows using the SCS 24-hour Type II design storm. A peaking factor of 484 was used for these calculations.

C. Existing Topography

Slopes across the site ranged from 1-4% from east to west. An existing lake covered approximately 14 acres of the site, with a 1.5 acre silt pond to the north of the lake. Elevations on the site ranged from 1395 ft. in the southwest portion of the proposed residential area to 1369 ft. at the lake water surface. The lake exits the property to the south through a bridge under 13th St. North. The bridge opening was 27' wide. On the south side of 13th Street, the lake is still used by the Beech Employees Club. The lake flowed to the southwest through a concrete weir structure. This structure controlled flow from both the north and south portions of the lake.

The existing site is shown on the Pre-Project TR-20 Key Map, Figure 2.2.

D. Site Areas

The total site area is 254 acres, specifically:

- 156 acres of the Waterfront Addition, including existing and future development area,
- 60 acres of the platted Waterfront Residential
- 20.8 acres of the Greenwich Office Park, including 14 acres currently platted and 6.8 acres of unplatted area.
- 17.5 acres of the Foliage Addition.

E. Benchmarks

Benchmarks used for site control are included on the Existing Conditions Drawing, Figure 2.2.

F. Streams, Creeks, and Waterways

An area surrounding the existing lake was designated as Zone A (FIRM Panel 150, Sedgwick County, June 3, 1986), Figure 2.3. The remainder of the site is in Zone C.

CLOMR case number 04-07-031R has been approved by FEMA to revise the Zone A floodplain to match current conditions.

G. Soils

According to the NRCS (SCS) Sedgwick County Soil Survey, most of the site is in the Irwin Series (Ia: Irwin silty clay loam, with 1 to 3 percent slopes) and the Rose Hill Series (Rd: silty clay, 1 to 3 percent slopes). A small portion in the northwest corner of the site is in the Vanoss Series

(Va: Vanoss silt loam, with 1 to 3 percent slopes). The Hydrological Soil Group (HSG) for the Irwin and Rose Hill series soils is D. The HSG for the Vanoss series soil is B. The Vanoss series comprises a very small portion of the area, therefore the drainage calculations were based on soil group D. The site is shown on the Soil Survey, Figure 2.4.

H. Natural Features

The site was undeveloped open space prior to the Waterfront Addition. The site was used as a recreational area for an employee's club. An existing lake covered approximately 14 acres of the site, with a 1.5 acre silt pond to the north of the lake.

I. Location of Existing Impervious Areas

An existing street and gravel parking areas were located on site before any development began. Portions of the Waterfront Addition consist of buildings, parking facilities and access streets.

J. Location of Existing Utilities

Water, sewer, and electric has been installed in various locations throughout the Waterfront Addition. The Coffeyville Pipeline transects the northeastern corner of the residential site.

K. Location of Existing Conveyance Systems

The pre-project site sheet flowed to the existing pond.

L. Flow Paths

There is a ridge that bisects the proposed Waterfront Residential. Area to the west of this ridge drains south and west. Area east of the ridge drains to the east.

M. Location and Sizes of Existing Structures

Runoff from the north passed through an existing detention facility east of the Eastminster Presbyterian Church, north of the railroad. An additional 105 acres drained to the existing 11'x9' reinforced concrete box (RCB) which passed under the railroad tracks. The runoff then passed through an existing channel and into the silt pond on the site. An additional 28 acres drained to the silt pond. An existing earthen dam separated the silt pond from the lake. The runoff must pass around the dam to the west and into the lake. An additional 196 acres drained to the existing lake. This includes approximately 48 acres from the west side of Webb Road. This area drains through an existing RCB under Webb Road and into the lake.

In addition, there is an existing 5'x4' RCB under 13th Street. The RCB was analyzed using HY-8 software, Figure 2.5. The RCB has a capacity of 157 cfs before overtopping 13th Street.

N. Existing Conditions Hydrologic Analysis

The pre-project watershed has been divided into watersheds to correspond with the future conditions model. Additional watershed boundaries have been added at locations where ponds have been or will be constructed

The SCS TR-20 software model was used to calculate peak flows using the SCS 24-hour Type II design storm. A peaking factor of 484 was used for these calculations. The modeling output is in Figure 2.6.

Due to the complexity of modeling the lakes north and south of Webb Road as separate reservoirs, the lakes were combined and modeled as one reservoir. Since the lakes are at the same normal pool elevation, the north lake and silt pond elevations are controlled by the elevation of the lake downstream. The lakes were modeled based on an existing control structure and spillway at the south end of the south lake. The existing weir is a concrete structure with a 12'

low flow crest at elevation 1368.7', and an additional 70' high flow crest at elevation 1369.7'. Rating curves for the weir were developed using the HY-8 computer software program. The pre-project lakes provided 164 acre-feet of storage in the 100-year design event.

A summary of pre-project flows from the TR-20 output is in Table 3.

Table 3. Pre-Project Flowrates.

TR-20 ID	Description	Design Storm Flows (cfs)					
		2-Yr	5-Yr	10-Yr	50-Yr	100-Yr	500-Yr
070	Flow into lakes	1046	1446	1710	2319	2596	2927
018	Flow from lake at Webb Rd	224	396	527	970	1167	1520

O. Pre-Developed Runoff Curve Numbers

The curve numbers used for the sub-watersheds were calculated based on percentage of development within each sub-watershed, Figure 2.7.

P. Existing Time of Concentration

The Time of Concentration for each watershed was calculated using the FAA method, Figure 2.8.

Q. Downstream Drainage Capacity

There is an existing 5'x4' RCB under 13th Street. The RCB has a capacity of 157 cfs before overtopping 13th Street. This RCB will handle the smaller design storms, but will overtop in large storm events.

R. Existing Structural Elevations

There were no existing structures on the pre-project site.

S. Open Channels

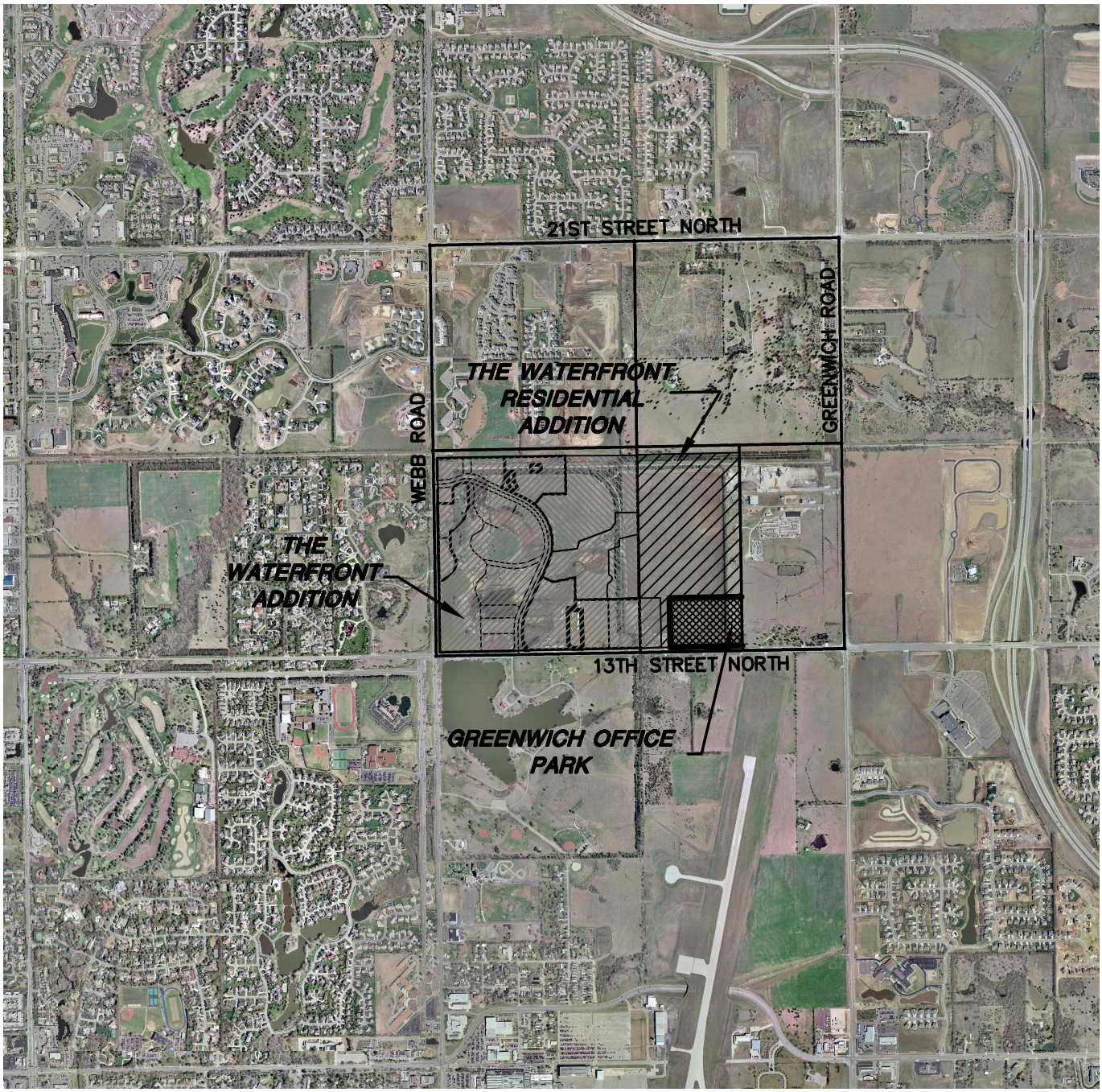
The existing channel crosses the site from north to south through the existing pond and exits the property to the south through a bridge under 13th St. North.

T. Groundwater Elevations

Groundwater elevations are unknown.

Figure 2.1

Orthophotograph



6559 II SW

SCALE 1:24 000

1 0 1/2 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

H:\CIVIL\02014\DWG\Dmg\Joint Submittal\02014aerial.dwg

MKEC ENGINEERING CONSULTANTS, INC.

411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

THE WATERFRONT ADDITION
PROJECT NAME

AERIAL MAP
SHEET TITLE

KLA	CMJ	GJA
DESIGN BY:	DRAWN BY:	CHECKED BY:
APRIL 2007	02014	1 / 1
DATE	JOB NO.	SHEET/OF

Figure 2.2

Pre-Project TR-20 Key Map

RESIDENTIAL AREA
=55.32 AC

COMMERCIAL
=1.65 AC

RESIDENTIAL AREA
=60.86 AC

TR-20 ID: 025
AREA: 0.1566 mi²
CN: 90.1
Tc: 0.5738 hr

TR-20 ID: 005
AREA: 0.1953 mi²
CN: 88.8
Tc: 0.6003 hr

COMMERCIAL
=1.77 AC

COMMERCIAL
=10.43 AC

RESIDENTIAL AREA
=8.91 AC

TR-20 ID: 030
ADD: 005+025

COMMERCIAL AREA
=39.3 AC

MULTI-FAMILY
=14.12 AC

TR-20 ID: 10
RESERVOIR
NORMAL POOL=1369.5

TR-20 ID: 035
AREA: 0.1638 mi²
CN: 90.6
Tc: 0.5328 hr

RESIDENTIAL AREA
=34.16 AC

CHURCH
=19.66 AC

COMMERCIAL AREA
=30.87 AC

LAKE AREA
=2.22 AC

TR-20 ID: 040
ADD: 005+025+035

TR-20 ID: 050
ADD: 005+025+
035+045

TR-20 ID: 055
AREA: 0.1614 mi²
CN: 86.5
Tc: 0.8034 hr

TR-20 ID: 045
AREA: 0.0432 mi²
CN: 84.5
Tc: 0.5544 hr

TR-20 ID: 053
AREA: 0.1455 mi²
CN: 84.0
Tc: 0.8340 hr

TR-20 ID: 054
ADD: 051+052

RESIDENTIAL AREA
=46.56 AC

LAKE AREA
=0.93 AC

TR-20 ID: 061
AREA: 0.0273 mi²
CN: 84.0
Tc: 0.3166 hr

LAKE AREA
=15.92 AC

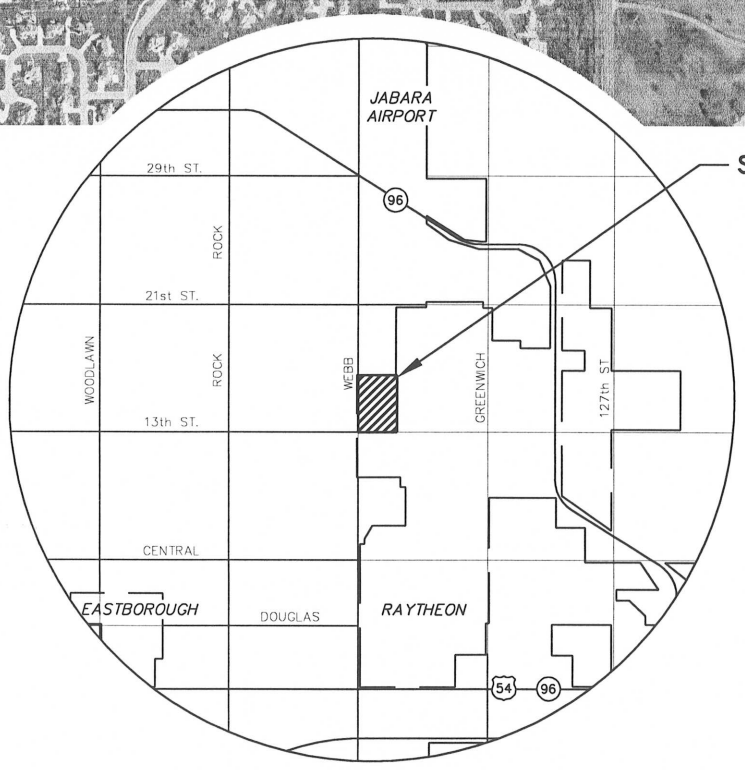
TR-20 ID: 065
AREA: 0.3483 mi²
CN: 86.3
Tc: 1.0448 hr

TR-20 ID: 062
ADD: 005+025+035+
045+051+052+055

LAKE AREA
=31.53 AC

TR-20 ID: 070
ADD: 005+025+035+
045+055+065

TR-20 ID: T8
RESERVOIR
NORMAL POOL=1368.7



VICINITY MAP

LEGEND

- POLE - POLE
- HLP - HIGH LINE POLE
- WATERSHED BOUNDARIES
- PR - POWER POLE AND GUY ANCHOR
- TR - TELEPHONE RISER
- INLET
- BM - BENCHMARK

BENCHMARKS

BM#1 Square cut SE. corner headwall 44' N. and 42' E. of W. ¼ cor., Sec. 9, T27S, R2E
ELEV. = 192.73'(City Datum)
1380.13 NGVD

BM#2 Square cut SW. corner signal light pole base NE. corner Webb and 13th.
ELEV. = 185.945'(City Datum)
1373.345' NGVD

SCALE: 1"=400'

400 0 400 800

REVISED: 1/8/07
REVISED: 10/20/06

2000 AERIAL

WATERFRONT ADDITION
PROJECT NAME

PRE-PROJECT TR-20 KEY MAP
DESIGN TITLE

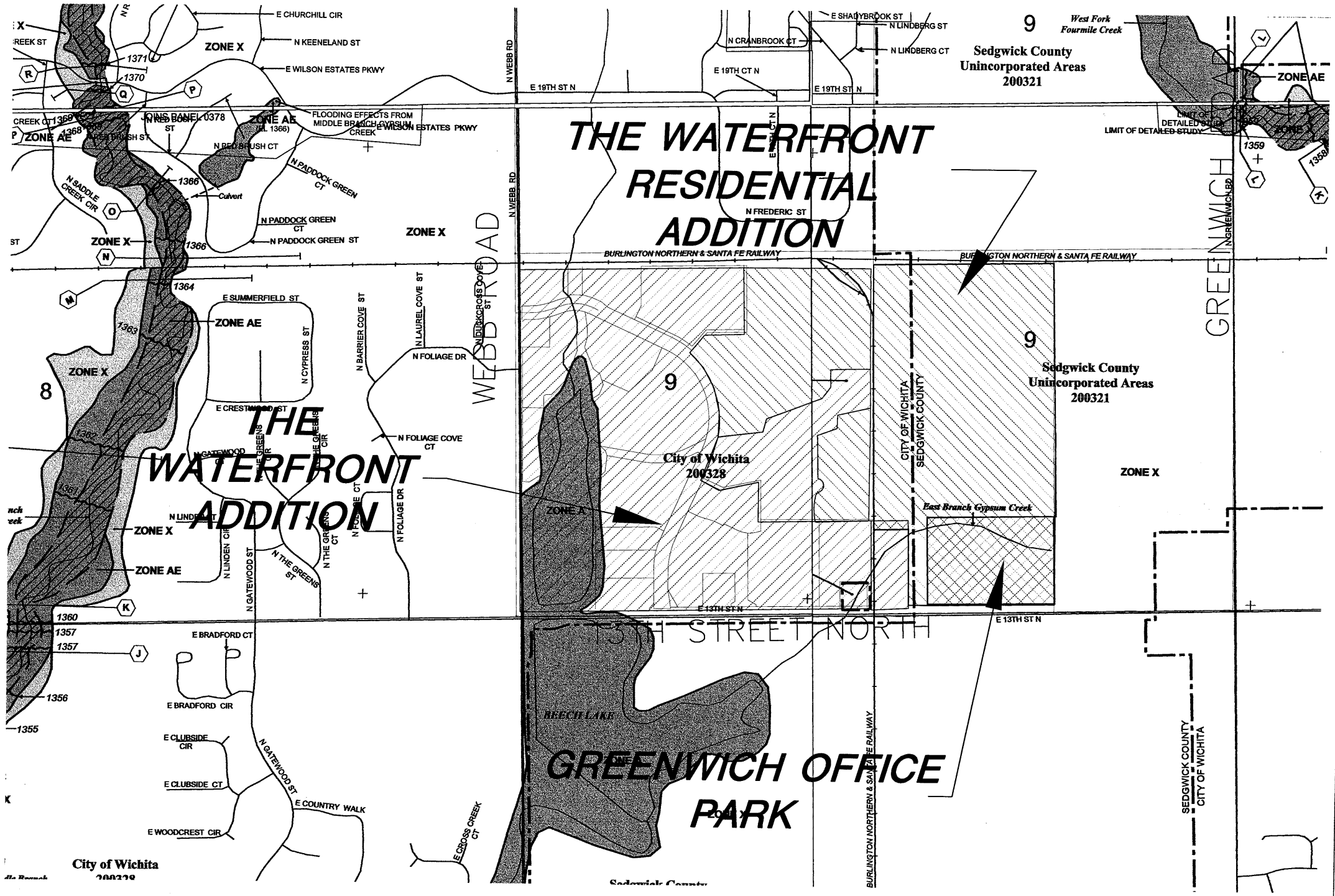
KLA	JFL
DESIGN	DRAWN BY:
GJA	FEB. 2006
CHECKED BY:	DATE
02014	1 / 1
JOB NO.	SHEET/OF

H:\Civil\02014\dwg\Dmg\TR-20\TR-20_KEY_PRE.dwg 2/14/2006 11:21:09 AM CST

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600
www.mkec.com

Figure 2.3

FIRM



MAP SCALE 1" = 500'

250 0 500 1000 FEET

150 0 150 300 METERS

H:\CIVIL\02014\DWG\Drng\Joint Submittal\02014fm_1.dwg

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0378E

FIRM

FLOOD INSURANCE RATE MAP

SEDGWICK COUNTY, KANSAS AND INCORPORATED AREAS

PANEL 378 OF 700

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SEDGWICK COUNTY	200321	0378	E
WICHITA, CITY OF	200328	0378	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 20173C0378E

EFFECTIVE DATE FEBRUARY 2, 2007

Federal Emergency Management Agency

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0379E

FIRM

FLOOD INSURANCE RATE MAP

SEDGWICK COUNTY, KANSAS AND INCORPORATED AREAS

PANEL 379 OF 700

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SEDGWICK COUNTY	200321	0379	E
WICHITA, CITY OF	200328	0379	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 20173C0379E

EFFECTIVE DATE FEBRUARY 2, 2007

Federal Emergency Management Agency

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0377E

FIRM

FLOOD INSURANCE RATE MAP

SEDGWICK COUNTY, KANSAS AND INCORPORATED AREAS

PANEL 377 OF 700

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SEDGWICK COUNTY	200321	0377	E
WICHITA, CITY OF	200328	0377	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 20173C0377E

EFFECTIVE DATE FEBRUARY 2, 2007

Federal Emergency Management Agency

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0376E

FIRM

FLOOD INSURANCE RATE MAP

SEDGWICK COUNTY, KANSAS AND INCORPORATED AREAS

PANEL 376 OF 700

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
WICHITA, CITY OF	200328	0376	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 20173C0376E

EFFECTIVE DATE FEBRUARY 2, 2007

Federal Emergency Management Agency

MKEC ENGINEERING CONSULTANTS, INC.

411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

THE WATERFRONT ADDITION
PROJECT NAME

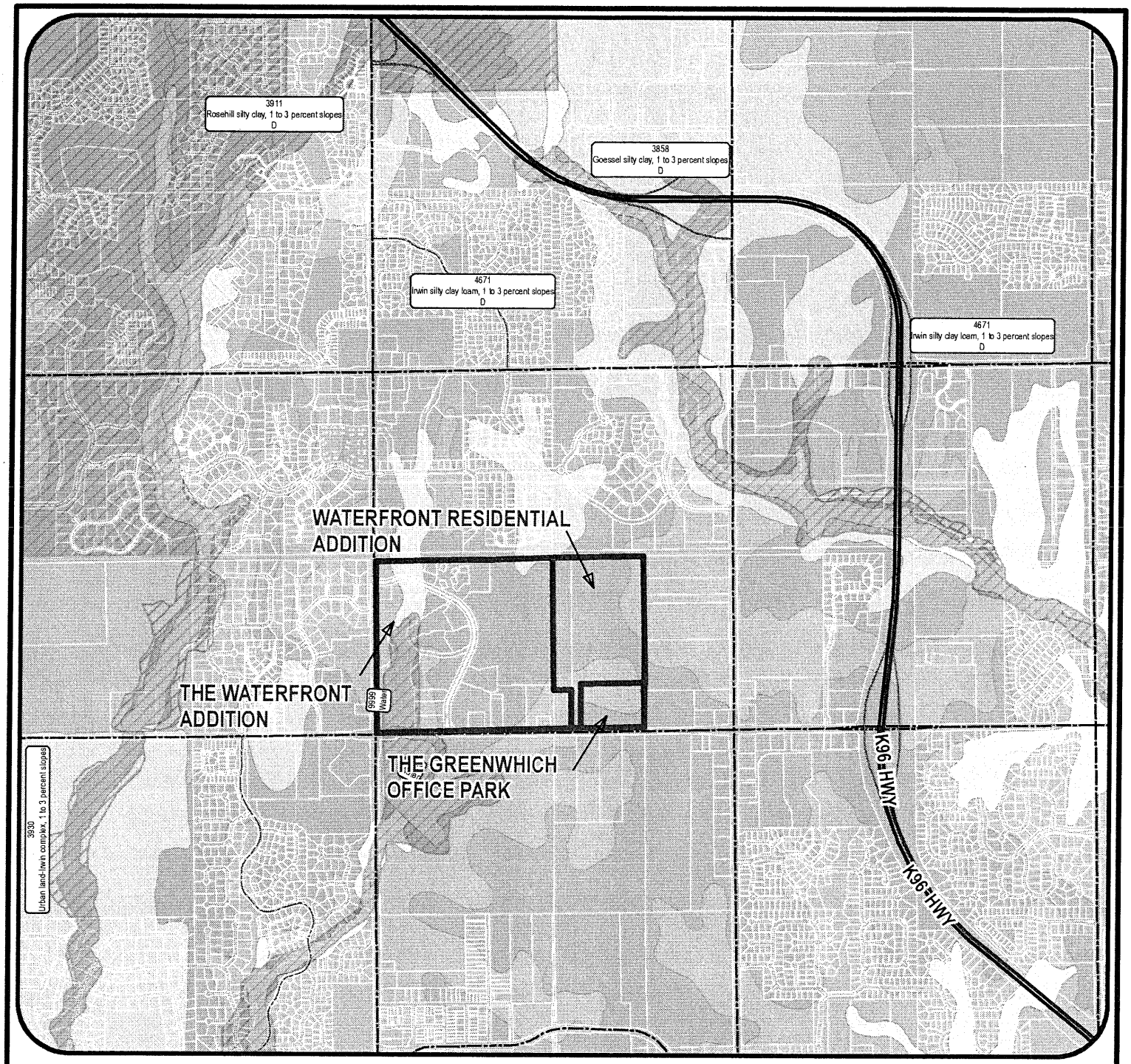
FIRM MAP
SHEET TITLE

KLA	CMJ	GJA
DESIGN BY:	DRAWN BY:	CHECKED BY:

APRIL 2007	02014	1 / 1
DATE	JOB NO.	SHEET/OF

Figure 2.4

Soil Survey



1 0.5 0 1 Miles

1,000 500 0 1,000 2,000 3,000 4,000 5,000 6,000 Feet

1 0.5 0 1 Kilometers

N
W E
S

H:\Civil\02014\dwg\DRNG\jointsubmittal\nrcs-soil.mxd

THE WATERFRONT ADDITION

Project Name:

Soil Survey -Sedgwick County, KS

Sheet Title:

MKEC ENGINEERING CONSULTANTS, INC.

CMJ	April 2007
Drawn By:	Date:
TMH\KLA	02014
Design / Review:	Job No.:

Figure 2.5

HY-8 Analysis

CURRENT DATE: 12-13-2006 FILE DATE: 12-13-2006
CURRENT TIME: 11:44:10 FILE NAME: 5X4WATER

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CULV NO.	SITE DATA: INLET ELEV. (ft)	SITE DATA: OUTLET ELEV. (ft)	SITE DATA: CULVERT LENGTH (ft)	CULVERT SHAPE, MATERIAL, INLET: BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	1372.90	1372.50	79.50	1 RCB	5.00	4.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs) FILE: 5X4WATER DATE: 12-13-2006

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
1372.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1374.11	20.0	20.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1374.82	40.0	40.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1375.44	60.0	60.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1375.98	80.0	80.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1376.48	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1376.86	115.0	115.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1377.51	140.0	140.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1378.05	160.0	158.8	0.0	0.0	0.0	0.0	0.0	0.76	5
1378.33	180.0	167.9	0.0	0.0	0.0	0.0	0.0	11.84	4
1378.54	200.0	174.6	0.0	0.0	0.0	0.0	0.0	24.78	3
1377.99	156.8	156.8	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: 5X4WATER DATE: 12-13-2006

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
1372.90	0.000	0.00	0.00	0.00
1374.11	0.000	20.00	0.00	0.00
1374.82	0.000	40.00	0.00	0.00
1375.44	0.000	60.00	0.00	0.00
1375.98	0.000	80.00	0.00	0.00
1376.48	0.000	100.00	0.00	0.00
1376.86	0.000	115.00	0.00	0.00
1377.51	0.000	140.00	0.00	0.00
1378.05	-0.006	160.00	0.49	0.31
1378.33	-0.003	180.00	0.27	0.15
1378.54	-0.005	200.00	0.59	0.29

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 12-13-2006 FILE DATE: 12-13-2006
CURRENT TIME: 11:44:10 FILE NAME: 5X4WATER

PERFORMANCE CURVE FOR CULVERT 1 - 1(5.00 (ft) BY 4.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	1372.90	0.00	0.00	0-NF	0.00	0.00	0.00	-0.10	0.00	0.00
20.00	1374.11	1.21	1.21	1-S2n	0.68	0.79	0.59	0.80	6.74	1.44
40.00	1374.82	1.92	1.92	1-S2n	1.09	1.26	1.10	1.19	7.25	1.75
60.00	1375.44	2.54	2.54	1-S2n	1.44	1.65	1.45	1.47	8.27	1.96
80.00	1375.98	3.08	3.08	1-S2n	1.77	2.00	1.70	1.71	9.41	2.12
100.00	1376.48	3.58	3.58	1-S2n	2.09	2.32	2.02	1.91	9.90	2.25
115.00	1376.86	3.96	3.96	1-S2n	2.32	2.55	2.25	2.05	10.23	2.33
140.00	1377.51	4.61	4.61	5-S2n	2.68	2.90	2.60	2.26	10.75	2.46
158.75	1378.04	5.14	5.14	5-S2n	2.95	3.16	2.96	2.41	10.73	2.55
167.89	1378.32	5.42	5.42	5-S2n	3.08	3.28	3.10	2.55	10.83	2.62
174.63	1378.53	5.63	5.63	5-S2n	3.18	3.37	3.19	2.68	10.93	2.70

El. inlet face invert 1372.90 ft El. outlet invert 1372.50 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

***** SITE DATA ***** CULVERT INVERT **********

INLET STATION	0.00 ft
INLET ELEVATION	1372.90 ft
OUTLET STATION	79.50 ft
OUTLET ELEVATION	1372.50 ft
NUMBER OF BARRELS	1
SLOPE (V/H)	0.0050
CULVERT LENGTH ALONG SLOPE	79.50 ft

***** CULVERT DATA SUMMARY **********

BARREL SHAPE	BOX
BARREL SPAN	5.00 ft
BARREL RISE	4.00 ft
BARREL MATERIAL	CONCRETE
BARREL MANNING'S n	0.012
INLET TYPE	CONVENTIONAL
INLET EDGE AND WALL	SQUARE EDGE (30-75 DEG. FLARE)
INLET DEPRESSION	NONE

CURRENT DATE: 12-13-2006 FILE DATE: 12-13-2006
CURRENT TIME: 11:44:10 FILE NAME: 5X4WATER

TAILWATER

******* REGULAR CHANNEL CROSS SECTION ****************

BOTTOM WIDTH	10.00 ft
SIDE SLOPE H/V (X:1)	6.0
CHANNEL SLOPE V/H (ft/ft)	0.002
MANNING'S n (.01-0.1)	0.035
CHANNEL INVERT ELEVATION	1372.40 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	1372.50 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
0.00	1372.40	0.000	0.00	0.00	0.00
20.00	1373.30	0.268	0.90	1.44	0.11
40.00	1373.69	0.273	1.29	1.75	0.16
60.00	1373.97	0.276	1.57	1.96	0.20
80.00	1374.21	0.278	1.81	2.12	0.23
100.00	1374.41	0.279	2.01	2.25	0.25
115.00	1374.55	0.280	2.15	2.33	0.27
140.00	1374.76	0.282	2.36	2.46	0.29
160.00	1374.91	0.283	2.51	2.55	0.31
180.00	1375.05	0.284	2.65	2.62	0.33
200.00	1375.18	0.285	2.78	2.70	0.35

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	60.00 ft
CREST LENGTH	20.00 ft
OVERTOPPING CREST ELEVATION	1377.99 ft

Figure 2.6

Pre-Developed TR-20 Modeling

```
 *****************80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY*****************

 JOB TR-20                    FULLPRINT          SUMMARY   NOPLOTS
 TITLE 001 PRE-PROJECT - EAST BRANCH GYPSUM CREEK 2/14/06  ADD BASIN 052 & 051
 TITLE WTRFTPP5.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL CHANCE
  4 DIMHYD               0.02                                          484 SCS
  8          .000        .030        .100        .190        .310       UNIT HYD
  8          .470        .660        .820        .930        .990
  8         1.000        .990        .930        .860        .780
  8          .680        .560        .460        .390        .330
  8          .280        .241        .207        .174        .147
  8          .126        .107        .091        .077        .066
  8          .055        .047        .040        .034        .029
  8          .025        .021        .018        .015        .013
  8          .011        .009        .008        .007        .006
  8          .005        .004        .003        .002        .001
  8          .000        .000        .000        .000        .000
  9 ENDTBL
  3 STRUCT      10                                                        R-EB-BN
  8                      1369.4      0.0         0.0                     RAILROAD
  8                      1370.4      6.0         0.279                   ESTMNSTR
  8                      1371.4      14.0        1.093
  8                      1372.4      30.0        2.269
  8                      1373.4      60.0        3.606
  8                      1374.4      320.0       7.212
  8                      1375.4      580.0       11.361
  8                      1376.4      760.0       16.450
  8                      1377.4      925.0       23.036
  8                      1378.4      1085.0      31.035
  8                      1379.4      1240.0      40.834
  9 ENDTBL
  3 STRUCT      18                                                        NORTH &
  8                      1368.7      0.0         0.0                     SOUTH
  8                      1369.0      100.0       13.60                   BEECH
  8                      1370.0      180.0       60.40                   LAKE
  8                      1371.0      490.0       109.58
  8                      1372.0      1160.0      167.28
  9 ENDTBL
  6 RUNOFF 1 005       3 0.1953      88.8        0.6003              1 N&S21EWB
  6 RUNOFF 1 025       1 0.1566      90.1        0.5738              1 WWEBB
  6 ADDHYD 4 030   1 3 2                                            1
  6 RUNOFF 1 035       1 0.1638      90.6        0.5328              1
  6 ADDHYD 4 040   1 2 3                                            1
  6 RESVOR 2    10 3   1 1369.4                                     1 EM/RR
  6 RUNOFF 1 045       2 0.0432      84.5        0.5544              1 NWTRFT
  6 ADDHYD 4 050   1 2 3                                            1
  6 RUNOFF 1 053       4 0.1455      84.0        0.8340              1
  6 RUNOFF 1 055       2 0.1614      86.5        0.8034              1
  6 ADDHYD 4 059   4 2 5                                            1
  6 ADDHYD 4 060   5 3 1                                            1
  6 RUNOFF 1 061       2 0.0273      84.0        0.3166              1
  6 ADDHYD 4 062   2 1 4                                            1
```

```
 *********************80-80 LIST OF INPUT DATA (CONTINUED)*********************

  6 RUNOFF 1 065       3 0.3483      86.3        1.0448               1
  6 ADDHYD 4 070   4 3 2                                              1
  6 RESVOR 2    18 2   1 1368.7                                       1 BEECHLKE
    ENDATA
  7 INCREM 6             0.10
  7 COMPUT 7 005      18 0.0         3.50        1.0         2 2  11  01
    ENDCMP 1
  7 COMPUT 7 005      18 0.0         4.55        1.0         2 2  12  02
    ENDCMP 1
  7 COMPUT 7 005      18 0.0         5.25        1.0         2 2  13  03
    ENDCMP 1
  7 COMPUT 7 005      18 0.0         6.98        1.0         2 2  13  04
    ENDCMP 1
  7 COMPUT 7 005      18 0.0         7.80        1.0         2 2  14  05
    ENDCMP 1
  7 COMPUT 7 005      18 0.0         9.35        1.0         2 2  15  06
    ENDCMP 1
    ENDJOB 2

 *****************************END OF 80-80 LIST*****************************
1
```

DIMENSIONLESS HYDROGRAPH TABLE ENTERED

8	.0000	.0300	.1000	.1900	.3100
8	.4700	.6600	.8200	.9300	.9900
8	1.0000	.9900	.9300	.8600	.7800
8	.6800	.5600	.4600	.3900	.3300
8	.2800	.2410	.2070	.1740	.1470
8	.1260	.1070	.0910	.0770	.0660
8	.0550	.0470	.0400	.0340	.0290
8	.0250	.0210	.0180	.0150	.0130
8	.0110	.0090	.0080	.0070	.0060
8	.0050	.0040	.0030	.0020	.0010
8	.0000	.0000	.0000	.0000	.0000

9 ENDTBL

COMPUTED TIME INCREMENT = .0200

COMPUTED PEAK RATE FACTOR = 484.000

1

EXECUTIVE CONTROL INCREM MAIN TIME INCREMENT = .100 HOURS

EXECUTIVE CONTROL COMPUT FROM XSECTION 5 TO STRUCTURE 18
STARTING TIME = .00 RAIN DEPTH = 3.50 RAIN DURATION = 1.00
ANT. RUNOFF COND. = 2 MAIN TIME INCREMENT = .100 HOURS
ALTERNATE NO. =11 STORM NO. = 1 RAIN TABLE NO. = 2

OPERATION RUNOFF XSECTION 5
OUTPUT HYDROGRAPH = 3 AREA = .20 SQ MI
INPUT RUNOFF CURVE = 89. TIME OF CONCENTRATION = .60 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0800 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.24	219.1	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.34 WATERSHED INCHES; 295 CFS-HRS; 24.3 ACRE-FEET.

OPERATION RUNOFF XSECTION 25
OUTPUT HYDROGRAPH = 1 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 90. TIME OF CONCENTRATION = .57 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0765 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.22	188.9	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.46 WATERSHED INCHES; 248 CFS-HRS; 20.5 ACRE-FEET.

OPERATION ADDHYD XSECTION 30
INPUT HYDROGRAPHS 1,3 OUTPUT HYDROGRAPH 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.23	407.8	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.39 WATERSHED INCHES; 543 CFS-HRS; 44.8 ACRE-FEET.

OPERATION RUNOFF XSECTION 35
OUTPUT HYDROGRAPH = 1 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 91. TIME OF CONCENTRATION = .53 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0710 HOURS
1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.20	210.1	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.50 WATERSHED INCHES; 264 CFS-HRS; 21.8 ACRE-FEET.

OPERATION ADDHYD XSECTION 40
INPUT HYDROGRAPHS 1,2 OUTPUT HYDROGRAPH 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.22	616.7	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.42 WATERSHED INCHES; 807 CFS-HRS; 66.7 ACRE-FEET.

OPERATION RESVOR STRUCTURE 10
INPUT HYDROGRAPH 3 OUTPUT HYDROGRAPH 1
SURFACE ELEVATION = 1369.40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.38	515.1	1375.15

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.42 WATERSHED INCHES; 807 CFS-HRS; 66.7 ACRE-FEET.

OPERATION RUNOFF XSECTION 45
OUTPUT HYDROGRAPH = 2 AREA = .04 SQ MI
INPUT RUNOFF CURVE = 85. TIME OF CONCENTRATION = .55 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0739 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.22	43.3	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
1.97 WATERSHED INCHES; 55 CFS-HRS; 4.6 ACRE-FEET.

OPERATION ADDHYD XSECTION 50
INPUT HYDROGRAPHS 1,2 OUTPUT HYDROGRAPH 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.36	550.8	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.39 WATERSHED INCHES; 862 CFS-HRS; 71.2 ACRE-FEET.

OPERATION RUNOFF XSECTION 53
OUTPUT HYDROGRAPH = 4 AREA = .15 SQ MI
INPUT RUNOFF CURVE = 84. TIME OF CONCENTRATION = .83 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0910 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.40	110.0	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
1.94 WATERSHED INCHES; 182 CFS-HRS; 15.0 ACRE-FEET.

OPERATION RUNOFF XSECTION 55
OUTPUT HYDROGRAPH = 2 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 87. TIME OF CONCENTRATION = .80 HOURS
COMPUTED INTERNAL TIME INCREMENT = .1071 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.37	136.7	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.14 WATERSHED INCHES; 223 CFS-HRS; 18.4 ACRE-FEET.

OPERATION ADDHYD XSECTION 59
INPUT HYDROGRAPHS 4,2 OUTPUT HYDROGRAPH 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.38	246.4	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.04 WATERSHED INCHES; 405 CFS-HRS; 33.5 ACRE-FEET.

OPERATION ADDHYD XSECTION 60
INPUT HYDROGRAPHS 5,3 OUTPUT HYDROGRAPH 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.37	797.1	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.27 WATERSHED INCHES; 1267 CFS-HRS; 104.7 ACRE-FEET.
1

OPERATION RUNOFF XSECTION 61
OUTPUT HYDROGRAPH = 2 AREA = .03 SQ MI
INPUT RUNOFF CURVE = 84. TIME OF CONCENTRATION = .32 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0422 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.08	36.7	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
1.94 WATERSHED INCHES; 34 CFS-HRS; 2.8 ACRE-FEET.

OPERATION ADDHYD XSECTION 62
INPUT HYDROGRAPHS 2,1 OUTPUT HYDROGRAPH 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.36	810.6	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.26 WATERSHED INCHES; 1301 CFS-HRS; 107.5 ACRE-FEET.

OPERATION RUNOFF XSECTION 65
OUTPUT HYDROGRAPH = 3 AREA = .35 SQ MI
INPUT RUNOFF CURVE = 86. TIME OF CONCENTRATION = 1.04 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0964 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.52	249.6	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.12 WATERSHED INCHES; 477 CFS-HRS; 39.4 ACRE-FEET.

OPERATION ADDHYD XSECTION 70
INPUT HYDROGRAPHS 4,3 OUTPUT HYDROGRAPH 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.39	1045.6	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.22 WATERSHED INCHES; 1778 CFS-HRS; 146.9 ACRE-FEET.

OPERATION RESVOR STRUCTURE 18
INPUT HYDROGRAPH 2 OUTPUT HYDROGRAPH 1
SURFACE ELEVATION = 1368.70

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
13.49	224.1	1370.14

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.21 WATERSHED INCHES; 1772 CFS-HRS; 146.4 ACRE-FEET.

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 1
1

EXECUTIVE CONTROL COMPUT FROM XSECTION 5 TO STRUCTURE 18
STARTING TIME = .00 RAIN DEPTH = 4.55 RAIN DURATION = 1.00
ANT. RUNOFF COND. = 2 MAIN TIME INCREMENT = .100 HOURS
ALTERNATE NO. =12 STORM NO. = 2 RAIN TABLE NO. = 2

OPERATION RUNOFF XSECTION 5
OUTPUT HYDROGRAPH = 3 AREA = .20 SQ MI
INPUT RUNOFF CURVE = 89. TIME OF CONCENTRATION = .60 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0800 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.23	309.0	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.32 WATERSHED INCHES; 419 CFS-HRS; 34.6 ACRE-FEET.

OPERATION RUNOFF XSECTION 25
OUTPUT HYDROGRAPH = 1 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 90. TIME OF CONCENTRATION = .57 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0765 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.22	263.4	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.45 WATERSHED INCHES; 349 CFS-HRS; 28.8 ACRE-FEET.

OPERATION ADDHYD XSECTION 30
INPUT HYDROGRAPHS 1,3 OUTPUT HYDROGRAPH 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.22	572.1	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.38 WATERSHED INCHES; 767 CFS-HRS; 63.4 ACRE-FEET.

OPERATION RUNOFF XSECTION 35
OUTPUT HYDROGRAPH = 1 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 91. TIME OF CONCENTRATION = .53 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0710 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.19	291.0	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.50 WATERSHED INCHES; 370 CFS-HRS; 30.6 ACRE-FEET.

OPERATION ADDHYD XSECTION 40
INPUT HYDROGRAPHS 1,2 OUTPUT HYDROGRAPH 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.21	861.4	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.42 WATERSHED INCHES; 1137 CFS-HRS; 94.0 ACRE-FEET.

OPERATION RESVOR STRUCTURE 10
INPUT HYDROGRAPH 3 OUTPUT HYDROGRAPH 1
SURFACE ELEVATION = 1369.40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.40	677.3	1375.94

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.42 WATERSHED INCHES; 1138 CFS-HRS; 94.0 ACRE-FEET.

OPERATION RUNOFF XSECTION 45
OUTPUT HYDROGRAPH = 2 AREA = .04 SQ MI
INPUT RUNOFF CURVE = 85. TIME OF CONCENTRATION = .55 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0739 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.21	63.8	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.91 WATERSHED INCHES; 81 CFS-HRS; 6.7 ACRE-FEET.

OPERATION ADDHYD XSECTION 50
INPUT HYDROGRAPHS 1,2 OUTPUT HYDROGRAPH 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.37	727.3	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.38 WATERSHED INCHES; 1219 CFS-HRS; 100.7 ACRE-FEET.

OPERATION RUNOFF XSECTION 53
OUTPUT HYDROGRAPH = 4 AREA = .15 SQ MI
INPUT RUNOFF CURVE = 84. TIME OF CONCENTRATION = .83 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0910 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.38	162.7	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.86 WATERSHED INCHES; 269 CFS-HRS; 22.2 ACRE-FEET.

OPERATION RUNOFF XSECTION 55
OUTPUT HYDROGRAPH = 2 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 87. TIME OF CONCENTRATION = .80 HOURS
COMPUTED INTERNAL TIME INCREMENT = .1071 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.37	195.7	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.09 WATERSHED INCHES; 322 CFS-HRS; 26.6 ACRE-FEET.

OPERATION ADDHYD XSECTION 59
INPUT HYDROGRAPHS 4,2 OUTPUT HYDROGRAPH 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.37	358.4	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.98 WATERSHED INCHES; 591 CFS-HRS; 48.8 ACRE-FEET.

OPERATION ADDHYD XSECTION 60
INPUT HYDROGRAPHS 5,3 OUTPUT HYDROGRAPH 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.37	1085.6	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.24 WATERSHED INCHES; 1810 CFS-HRS; 149.6 ACRE-FEET.

OPERATION RUNOFF XSECTION 61
OUTPUT HYDROGRAPH = 2 AREA = .03 SQ MI
INPUT RUNOFF CURVE = 84. TIME OF CONCENTRATION = .32 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0422 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.08	53.7	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
2.86 WATERSHED INCHES; 50 CFS-HRS; 4.2 ACRE-FEET.

OPERATION ADDHYD XSECTION 62
INPUT HYDROGRAPHS 2,1 OUTPUT HYDROGRAPH 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.36	1105.0	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.23 WATERSHED INCHES; 1860 CFS-HRS; 153.7 ACRE-FEET.

OPERATION RUNOFF XSECTION 65
OUTPUT HYDROGRAPH = 3 AREA = .35 SQ MI
INPUT RUNOFF CURVE = 86. TIME OF CONCENTRATION = 1.04 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0964 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.51	359.2	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.07 WATERSHED INCHES; 691 CFS-HRS; 57.1 ACRE-FEET.

OPERATION ADDHYD XSECTION 70
INPUT HYDROGRAPHS 4,3 OUTPUT HYDROGRAPH 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.40	1445.9	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.18 WATERSHED INCHES; 2551 CFS-HRS; 210.8 ACRE-FEET.

OPERATION RESVOR STRUCTURE 18
INPUT HYDROGRAPH 2 OUTPUT HYDROGRAPH 1
SURFACE ELEVATION = 1368.70

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
13.31	396.4	1370.70

1

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.17 WATERSHED INCHES; 2543 CFS-HRS; 210.1 ACRE-FEET.

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 2
1

EXECUTIVE CONTROL COMPUT FROM XSECTION 5 TO STRUCTURE 18
STARTING TIME = .00 RAIN DEPTH = 5.25 RAIN DURATION = 1.00
ANT. RUNOFF COND. = 2 MAIN TIME INCREMENT = .100 HOURS
ALTERNATE NO. =13 STORM NO. = 3 RAIN TABLE NO. = 2

OPERATION RUNOFF XSECTION 5
OUTPUT HYDROGRAPH = 3 AREA = .20 SQ MI
INPUT RUNOFF CURVE = 89. TIME OF CONCENTRATION = .60 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0800 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.23	368.9	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.99 WATERSHED INCHES; 502 CFS-HRS; 41.5 ACRE-FEET.

OPERATION RUNOFF XSECTION 25
OUTPUT HYDROGRAPH = 1 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 90. TIME OF CONCENTRATION = .57 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0765 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.22	313.0	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
4.12 WATERSHED INCHES; 417 CFS-HRS; 34.5 ACRE-FEET.

OPERATION ADDHYD XSECTION 30
INPUT HYDROGRAPHS 1,3 OUTPUT HYDROGRAPH 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.22	681.7	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
4.05 WATERSHED INCHES; 919 CFS-HRS; 76.0 ACRE-FEET.

OPERATION RUNOFF XSECTION 35
OUTPUT HYDROGRAPH = 1 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 91. TIME OF CONCENTRATION = .53 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0710 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.19	344.3	(RUNOFF)

1

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
4.18 WATERSHED INCHES; 442 CFS-HRS; 36.5 ACRE-FEET.

OPERATION ADDHYD XSECTION 40
INPUT HYDROGRAPHS 1,2 OUTPUT HYDROGRAPH 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.21	1023.8	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
4.09 WATERSHED INCHES; 1361 CFS-HRS; 112.5 ACRE-FEET.

OPERATION RESVOR STRUCTURE 10
INPUT HYDROGRAPH 3 OUTPUT HYDROGRAPH 1
SURFACE ELEVATION = 1369.40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.42	776.9	1376.50

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
4.09 WATERSHED INCHES; 1361 CFS-HRS; 112.5 ACRE-FEET.

OPERATION RUNOFF XSECTION 45
OUTPUT HYDROGRAPH = 2 AREA = .04 SQ MI
INPUT RUNOFF CURVE = 85. TIME OF CONCENTRATION = .55 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0739 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.21	77.9	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.55 WATERSHED INCHES; 99 CFS-HRS; 8.2 ACRE-FEET.

OPERATION ADDHYD XSECTION 50
INPUT HYDROGRAPHS 1,2 OUTPUT HYDROGRAPH 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.38	835.8	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
4.05 WATERSHED INCHES; 1460 CFS-HRS; 120.7 ACRE-FEET.
1

OPERATION RUNOFF XSECTION 53
OUTPUT HYDROGRAPH = 4 AREA = .15 SQ MI
INPUT RUNOFF CURVE = 84. TIME OF CONCENTRATION = .83 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0910 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.39	198.5	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.50 WATERSHED INCHES; 328 CFS-HRS; 27.1 ACRE-FEET.

OPERATION RUNOFF XSECTION 55
OUTPUT HYDROGRAPH = 2 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 87. TIME OF CONCENTRATION = .80 HOURS
COMPUTED INTERNAL TIME INCREMENT = .1071 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.35	238.9	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.75 WATERSHED INCHES; 391 CFS-HRS; 32.3 ACRE-FEET.

OPERATION ADDHYD XSECTION 59
INPUT HYDROGRAPHS 4,2 OUTPUT HYDROGRAPH 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.37	435.9	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.63 WATERSHED INCHES; 719 CFS-HRS; 59.5 ACRE-FEET.

OPERATION ADDHYD XSECTION 60
INPUT HYDROGRAPHS 5,3 OUTPUT HYDROGRAPH 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.38	1271.5	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.90 WATERSHED INCHES; 2180 CFS-HRS; 180.1 ACRE-FEET.

OPERATION RUNOFF XSECTION 61
OUTPUT HYDROGRAPH = 2 AREA = .03 SQ MI
INPUT RUNOFF CURVE = 84. TIME OF CONCENTRATION = .32 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0422 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.08	65.8	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.50 WATERSHED INCHES; 62 CFS-HRS; 5.1 ACRE-FEET.

OPERATION ADDHYD XSECTION 62
INPUT HYDROGRAPHS 2,1 OUTPUT HYDROGRAPH 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.36	1294.6	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.89 WATERSHED INCHES; 2241 CFS-HRS; 185.2 ACRE-FEET.

OPERATION RUNOFF XSECTION 65
OUTPUT HYDROGRAPH = 3 AREA = .35 SQ MI
INPUT RUNOFF CURVE = 86. TIME OF CONCENTRATION = 1.04 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0964 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.51	435.3	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.73 WATERSHED INCHES; 839 CFS-HRS; 69.3 ACRE-FEET.

OPERATION ADDHYD XSECTION 70
INPUT HYDROGRAPHS 4,3 OUTPUT HYDROGRAPH 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.40	1709.9	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.84 WATERSHED INCHES; 3080 CFS-HRS; 254.5 ACRE-FEET.

OPERATION RESVOR STRUCTURE 18
INPUT HYDROGRAPH 2 OUTPUT HYDROGRAPH 1
SURFACE ELEVATION = 1368.70

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
13.24	526.9	1371.06

1

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
3.83 WATERSHED INCHES; 3070 CFS-HRS; 253.7 ACRE-FEET.

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 3
1

EXECUTIVE CONTROL COMPUT FROM XSECTION 5 TO STRUCTURE 18
STARTING TIME = .00 RAIN DEPTH = 6.98 RAIN DURATION = 1.00
ANT. RUNOFF COND. = 2 MAIN TIME INCREMENT = .100 HOURS
ALTERNATE NO. =13 STORM NO. = 4 RAIN TABLE NO. = 2

OPERATION RUNOFF XSECTION 5
OUTPUT HYDROGRAPH = 3 AREA = .20 SQ MI
INPUT RUNOFF CURVE = 89. TIME OF CONCENTRATION = .60 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0800 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.23	515.6	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.66 WATERSHED INCHES; 713 CFS-HRS; 58.9 ACRE-FEET.

OPERATION RUNOFF XSECTION 25
OUTPUT HYDROGRAPH = 1 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 90. TIME OF CONCENTRATION = .57 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0765 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.21	433.7	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.81 WATERSHED INCHES; 587 CFS-HRS; 48.5 ACRE-FEET.

OPERATION ADDHYD XSECTION 30
INPUT HYDROGRAPHS 1,3 OUTPUT HYDROGRAPH 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.22	948.8	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.73 WATERSHED INCHES; 1300 CFS-HRS; 107.5 ACRE-FEET.

OPERATION RUNOFF XSECTION 35
OUTPUT HYDROGRAPH = 1 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 91. TIME OF CONCENTRATION = .53 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0710 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.19	478.2	(RUNOFF)

1

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.87 WATERSHED INCHES; 620 CFS-HRS; 51.2 ACRE-FEET.

OPERATION ADDHYD XSECTION 40
INPUT HYDROGRAPHS 1,2 OUTPUT HYDROGRAPH 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.21	1424.2	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.77 WATERSHED INCHES; 1921 CFS-HRS; 158.7 ACRE-FEET.

OPERATION RESVOR STRUCTURE 10
INPUT HYDROGRAPH 3 OUTPUT HYDROGRAPH 1
SURFACE ELEVATION = 1369.40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.45	981.5	1377.75

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.77 WATERSHED INCHES; 1920 CFS-HRS; 158.7 ACRE-FEET.

OPERATION RUNOFF XSECTION 45
OUTPUT HYDROGRAPH = 2 AREA = .04 SQ MI
INPUT RUNOFF CURVE = 85. TIME OF CONCENTRATION = .55 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0739 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.21	112.1	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.17 WATERSHED INCHES; 144 CFS-HRS; 11.9 ACRE-FEET.

OPERATION ADDHYD XSECTION 50
INPUT HYDROGRAPHS 1,2 OUTPUT HYDROGRAPH 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.40	1060.5	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.72 WATERSHED INCHES; 2064 CFS-HRS; 170.6 ACRE-FEET.

1

OPERATION RUNOFF XSECTION 53
OUTPUT HYDROGRAPH = 4 AREA = .15 SQ MI
INPUT RUNOFF CURVE = 84. TIME OF CONCENTRATION = .83 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0910 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.38	288.8	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.12 WATERSHED INCHES; 481 CFS-HRS; 39.7 ACRE-FEET.

OPERATION RUNOFF XSECTION 55
OUTPUT HYDROGRAPH = 2 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 87. TIME OF CONCENTRATION = .80 HOURS
COMPUTED INTERNAL TIME INCREMENT = .1071 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.36	336.6	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.40 WATERSHED INCHES; 562 CFS-HRS; 46.5 ACRE-FEET.

OPERATION ADDHYD XSECTION 59
INPUT HYDROGRAPHS 4,2 OUTPUT HYDROGRAPH 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.37	625.1	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.27 WATERSHED INCHES; 1043 CFS-HRS; 86.2 ACRE-FEET.

OPERATION ADDHYD XSECTION 60
INPUT HYDROGRAPHS 5,3 OUTPUT HYDROGRAPH 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.38	1684.2	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.56 WATERSHED INCHES; 3108 CFS-HRS; 256.8 ACRE-FEET.

OPERATION RUNOFF XSECTION 61
OUTPUT HYDROGRAPH = 2 AREA = .03 SQ MI
INPUT RUNOFF CURVE = 84. TIME OF CONCENTRATION = .32 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0422 HOURS
1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.07	94.8	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.12 WATERSHED INCHES; 90 CFS-HRS; 7.4 ACRE-FEET.

OPERATION ADDHYD XSECTION 62
INPUT HYDROGRAPHS 2,1 OUTPUT HYDROGRAPH 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.37	1715.9	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.55 WATERSHED INCHES; 3198 CFS-HRS; 264.3 ACRE-FEET.

OPERATION RUNOFF XSECTION 65
OUTPUT HYDROGRAPH = 3 AREA = .35 SQ MI
INPUT RUNOFF CURVE = 86. TIME OF CONCENTRATION = 1.04 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0964 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.50	623.9	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.38 WATERSHED INCHES; 1208 CFS-HRS; 99.9 ACRE-FEET.

OPERATION ADDHYD XSECTION 70
INPUT HYDROGRAPHS 4,3 OUTPUT HYDROGRAPH 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.41	2318.8	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.50 WATERSHED INCHES; 4406 CFS-HRS; 364.1 ACRE-FEET.

OPERATION RESVOR STRUCTURE 18
INPUT HYDROGRAPH 2 OUTPUT HYDROGRAPH 1
SURFACE ELEVATION = 1368.70

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
13.13	970.3	1371.72

1

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.48 WATERSHED INCHES; 4389 CFS-HRS; 362.7 ACRE-FEET.

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 4
1

EXECUTIVE CONTROL COMPUT FROM XSECTION 5 TO STRUCTURE 18
STARTING TIME = .00 RAIN DEPTH = 7.80 RAIN DURATION = 1.00
ANT. RUNOFF COND. = 2 MAIN TIME INCREMENT = .100 HOURS
ALTERNATE NO. =14 STORM NO. = 5 RAIN TABLE NO. = 2

OPERATION RUNOFF XSECTION 5
OUTPUT HYDROGRAPH = 3 AREA = .20 SQ MI
INPUT RUNOFF CURVE = 89. TIME OF CONCENTRATION = .60 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0800 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.23	585.7	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
6.46 WATERSHED INCHES; 814 CFS-HRS; 67.3 ACRE-FEET.

OPERATION RUNOFF XSECTION 25
OUTPUT HYDROGRAPH = 1 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 90. TIME OF CONCENTRATION = .57 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0765 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.21	491.4	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
6.61 WATERSHED INCHES; 668 CFS-HRS; 55.2 ACRE-FEET.

OPERATION ADDHYD XSECTION 30
INPUT HYDROGRAPHS 1,3 OUTPUT HYDROGRAPH 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.22	1076.7	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
6.53 WATERSHED INCHES; 1483 CFS-HRS; 122.5 ACRE-FEET.

OPERATION RUNOFF XSECTION 35
OUTPUT HYDROGRAPH = 1 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 91. TIME OF CONCENTRATION = .53 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0710 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.19	537.2	(RUNOFF)

1

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
6.68 WATERSHED INCHES; 706 CFS-HRS; 58.3 ACRE-FEET.

OPERATION ADDHYD XSECTION 40
INPUT HYDROGRAPHS 1,2 OUTPUT HYDROGRAPH 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.21	1610.7	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
6.58 WATERSHED INCHES; 2188 CFS-HRS; 180.9 ACRE-FEET.

OPERATION RESVOR STRUCTURE 10
INPUT HYDROGRAPH 3 OUTPUT HYDROGRAPH 1
SURFACE ELEVATION = 1369.40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.46	1071.4	1378.31

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
6.57 WATERSHED INCHES; 2188 CFS-HRS; 180.8 ACRE-FEET.

OPERATION RUNOFF XSECTION 45
OUTPUT HYDROGRAPH = 2 AREA = .04 SQ MI
INPUT RUNOFF CURVE = 85. TIME OF CONCENTRATION = .55 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0739 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.21	127.6	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.96 WATERSHED INCHES; 166 CFS-HRS; 13.7 ACRE-FEET.

OPERATION ADDHYD XSECTION 50
INPUT HYDROGRAPHS 1,2 OUTPUT HYDROGRAPH 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.42	1160.5	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
6.53 WATERSHED INCHES; 2354 CFS-HRS; 194.6 ACRE-FEET.
1

OPERATION RUNOFF XSECTION 53
OUTPUT HYDROGRAPH = 4 AREA = .15 SQ MI
INPUT RUNOFF CURVE = 84. TIME OF CONCENTRATION = .83 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0910 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.37	330.8	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.90 WATERSHED INCHES; 554 CFS-HRS; 45.8 ACRE-FEET.

OPERATION RUNOFF XSECTION 55
OUTPUT HYDROGRAPH = 2 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 87. TIME OF CONCENTRATION = .80 HOURS
COMPUTED INTERNAL TIME INCREMENT = .1071 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.35	386.8	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
6.20 WATERSHED INCHES; 646 CFS-HRS; 53.4 ACRE-FEET.

OPERATION ADDHYD XSECTION 59
INPUT HYDROGRAPHS 4,2 OUTPUT HYDROGRAPH 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.36	717.3	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
6.06 WATERSHED INCHES; 1200 CFS-HRS; 99.1 ACRE-FEET.

OPERATION ADDHYD XSECTION 60
INPUT HYDROGRAPHS 5,3 OUTPUT HYDROGRAPH 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.39	1873.6	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
6.36 WATERSHED INCHES; 3554 CFS-HRS; 293.7 ACRE-FEET.

OPERATION RUNOFF XSECTION 61
OUTPUT HYDROGRAPH = 2 AREA = .03 SQ MI
INPUT RUNOFF CURVE = 84. TIME OF CONCENTRATION = .32 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0422 HOURS
1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.07	108.5	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
5.90 WATERSHED INCHES; 104 CFS-HRS; 8.6 ACRE-FEET.

OPERATION ADDHYD XSECTION 62
INPUT HYDROGRAPHS 2,1 OUTPUT HYDROGRAPH 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.37	1909.4	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
6.35 WATERSHED INCHES; 3658 CFS-HRS; 302.3 ACRE-FEET.

OPERATION RUNOFF XSECTION 65
OUTPUT HYDROGRAPH = 3 AREA = .35 SQ MI
INPUT RUNOFF CURVE = 86. TIME OF CONCENTRATION = 1.04 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0964 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.50	710.3	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
6.17 WATERSHED INCHES; 1386 CFS-HRS; 114.5 ACRE-FEET.

OPERATION ADDHYD XSECTION 70
INPUT HYDROGRAPHS 4,3 OUTPUT HYDROGRAPH 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.41	2596.1	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
6.30 WATERSHED INCHES; 5044 CFS-HRS; 416.8 ACRE-FEET.

OPERATION RESVOR STRUCTURE 18
INPUT HYDROGRAPH 2 OUTPUT HYDROGRAPH 1
SURFACE ELEVATION = 1368.70

*** WARNING - DISCHARGE EXCEEDS HIGHEST RATING POINT FOR STRUCTURE 18,
VALUE EXTRAPOLATED. ***

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
13.12	1166.5	1372.01

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
6.27 WATERSHED INCHES; 5023 CFS-HRS; 415.1 ACRE-FEET.

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 5
1

EXECUTIVE CONTROL COMPUT FROM XSECTION 5 TO STRUCTURE 18
STARTING TIME = .00 RAIN DEPTH = 9.35 RAIN DURATION = 1.00
ANT. RUNOFF COND. = 2 MAIN TIME INCREMENT = .100 HOURS
ALTERNATE NO. =15 STORM NO. = 6 RAIN TABLE NO. = 2

OPERATION RUNOFF XSECTION 5
OUTPUT HYDROGRAPH = 3 AREA = .20 SQ MI
INPUT RUNOFF CURVE = 89. TIME OF CONCENTRATION = .60 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0800 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.23	716.4	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
7.98 WATERSHED INCHES; 1006 CFS-HRS; 83.1 ACRE-FEET.

OPERATION RUNOFF XSECTION 25
OUTPUT HYDROGRAPH = 1 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 90. TIME OF CONCENTRATION = .57 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0765 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.21	601.5	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
8.15 WATERSHED INCHES; 823 CFS-HRS; 68.0 ACRE-FEET.

OPERATION ADDHYD XSECTION 30
INPUT HYDROGRAPHS 1,3 OUTPUT HYDROGRAPH 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.22	1317.2	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
8.05 WATERSHED INCHES; 1829 CFS-HRS; 151.2 ACRE-FEET.

OPERATION RUNOFF XSECTION 35
OUTPUT HYDROGRAPH = 1 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 91. TIME OF CONCENTRATION = .53 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0710 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.19	654.2	(RUNOFF)

1

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
8.20 WATERSHED INCHES; 867 CFS-HRS; 71.6 ACRE-FEET.

OPERATION ADDHYD XSECTION 40
INPUT HYDROGRAPHS 1,2 OUTPUT HYDROGRAPH 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.21	1968.6	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
8.10 WATERSHED INCHES; 2696 CFS-HRS; 222.8 ACRE-FEET.

OPERATION RESVOR STRUCTURE 10
INPUT HYDROGRAPH 3 OUTPUT HYDROGRAPH 1
SURFACE ELEVATION = 1369.40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.49	1224.3	1379.30

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
8.10 WATERSHED INCHES; 2696 CFS-HRS; 222.8 ACRE-FEET.

OPERATION RUNOFF XSECTION 45
OUTPUT HYDROGRAPH = 2 AREA = .04 SQ MI
INPUT RUNOFF CURVE = 85. TIME OF CONCENTRATION = .55 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0739 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.20	158.1	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
7.46 WATERSHED INCHES; 208 CFS-HRS; 17.2 ACRE-FEET.

OPERATION ADDHYD XSECTION 50
INPUT HYDROGRAPHS 1,2 OUTPUT HYDROGRAPH 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.43	1329.2	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
8.05 WATERSHED INCHES; 2904 CFS-HRS; 240.0 ACRE-FEET.

1

OPERATION RUNOFF XSECTION 53
OUTPUT HYDROGRAPH = 4 AREA = .15 SQ MI
INPUT RUNOFF CURVE = 84. TIME OF CONCENTRATION = .83 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0910 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.37	412.0	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
7.40 WATERSHED INCHES; 695 CFS-HRS; 57.4 ACRE-FEET.

OPERATION RUNOFF XSECTION 55
OUTPUT HYDROGRAPH = 2 AREA = .16 SQ MI
INPUT RUNOFF CURVE = 87. TIME OF CONCENTRATION = .80 HOURS
COMPUTED INTERNAL TIME INCREMENT = .1071 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.34	477.7	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
7.70 WATERSHED INCHES; 802 CFS-HRS; 66.2 ACRE-FEET.

OPERATION ADDHYD XSECTION 59
INPUT HYDROGRAPHS 4,2 OUTPUT HYDROGRAPH 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.36	887.3	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
7.55 WATERSHED INCHES; 1496 CFS-HRS; 123.6 ACRE-FEET.

OPERATION ADDHYD XSECTION 60
INPUT HYDROGRAPHS 5,3 OUTPUT HYDROGRAPH 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.39	2210.1	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
7.87 WATERSHED INCHES; 4400 CFS-HRS; 363.6 ACRE-FEET.

OPERATION RUNOFF XSECTION 61
OUTPUT HYDROGRAPH = 2 AREA = .03 SQ MI
INPUT RUNOFF CURVE = 84. TIME OF CONCENTRATION = .32 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0422 HOURS
1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.07	135.0	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
7.39 WATERSHED INCHES; 130 CFS-HRS; 10.8 ACRE-FEET.

OPERATION ADDHYD XSECTION 62
INPUT HYDROGRAPHS 2,1 OUTPUT HYDROGRAPH 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.37	2254.4	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
7.86 WATERSHED INCHES; 4530 CFS-HRS; 374.4 ACRE-FEET.

OPERATION RUNOFF XSECTION 65
OUTPUT HYDROGRAPH = 3 AREA = .35 SQ MI
INPUT RUNOFF CURVE = 86. TIME OF CONCENTRATION = 1.04 HOURS
COMPUTED INTERNAL TIME INCREMENT = .0964 HOURS

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.50	873.6	(RUNOFF)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
7.67 WATERSHED INCHES; 1725 CFS-HRS; 142.5 ACRE-FEET.

OPERATION ADDHYD XSECTION 70
INPUT HYDROGRAPHS 4,3 OUTPUT HYDROGRAPH 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.41	3099.6	(NULL)

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
7.81 WATERSHED INCHES; 6255 CFS-HRS; 516.9 ACRE-FEET.

OPERATION RESVOR STRUCTURE 18
INPUT HYDROGRAPH 2 OUTPUT HYDROGRAPH 1
SURFACE ELEVATION = 1368.70

*** WARNING - DISCHARGE EXCEEDS HIGHEST RATING POINT FOR STRUCTURE 18,
VALUE EXTRAPOLATED. ***

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
13.12	1520.5	1372.54

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
7.77 WATERSHED INCHES; 6226 CFS-HRS; 514.5 ACRE-FEET.

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 6
1

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 3.50 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
RAINTABLE NUMBER 2, ARC 2							
MAIN TIME INCREMENT .100 HOURS							
ALTERNATE 11 STORM 1							
XSECTION 5	RUNOFF	.20	2.34	---	12.24	219	1095.0
XSECTION 25	RUNOFF	.16	2.46	---	12.22	189	1181.3
XSECTION 30	ADDHYD	.35	2.39	---	12.23	408	1165.7
XSECTION 35	RUNOFF	.16	2.50	---	12.20	210	1312.5
XSECTION 40	ADDHYD	.52	2.42	---	12.22	617	1186.5
STRUCTURE 10	RESVOR	.52	2.42	1375.15	12.38	515	990.4
XSECTION 45	RUNOFF	.04	1.97	---	12.22	43	1075.0
XSECTION 50	ADDHYD	.56	2.39	---	12.36	551	983.9
XSECTION 53	RUNOFF	.15	1.94	---	12.40	110	733.3
XSECTION 55	RUNOFF	.16	2.14	---	12.37	137	856.3
XSECTION 59	ADDHYD	.31	2.04	---	12.38	246	793.5
XSECTION 60	ADDHYD	.87	2.27	---	12.37	797	916.1
XSECTION 61	RUNOFF	.03	1.94	---	12.08	37	1233.3
XSECTION 62	ADDHYD	.89	2.26	---	12.36	811	911.2
XSECTION 65	RUNOFF	.35	2.12	---	12.52	250	714.3
XSECTION 70	ADDHYD	1.24	2.22	---	12.39	1046	843.5
STRUCTURE 18	RESVOR	1.24	2.21	1370.14	13.49	224	180.6
RAINFALL OF 4.55 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 12 STORM 2							
XSECTION 5	RUNOFF	.20	3.32	---	12.23	309	1545.0
XSECTION 25	RUNOFF	.16	3.45	---	12.22	263	1643.8
XSECTION 30	ADDHYD	.35	3.38	---	12.22	572	1634.3
XSECTION 35	RUNOFF	.16	3.50	---	12.19	291	1818.8
XSECTION 40	ADDHYD	.52	3.42	---	12.21	861	1655.8
STRUCTURE 10	RESVOR	.52	3.42	1375.94	12.40	677	1301.9

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 12 STORM 2							
XSECTION 45	RUNOFF	.04	2.91	---	12.21	64	1600.0
XSECTION 50	ADDHYD	.56	3.38	---	12.37	727	1298.2
XSECTION 53	RUNOFF	.15	2.86	---	12.38	163	1086.7
XSECTION 55	RUNOFF	.16	3.09	---	12.37	196	1225.0
XSECTION 59	ADDHYD	.31	2.98	---	12.37	358	1154.8
XSECTION 60	ADDHYD	.87	3.24	---	12.37	1086	1248.3
XSECTION 61	RUNOFF	.03	2.86	---	12.08	54	1800.0
XSECTION 62	ADDHYD	.89	3.23	---	12.36	1105	1241.6
XSECTION 65	RUNOFF	.35	3.07	---	12.51	359	1025.7
XSECTION 70	ADDHYD	1.24	3.18	---	12.40	1446	1166.1
STRUCTURE 18	RESVOR	1.24	3.17	1370.70	13.31	396	319.4
RAINFALL OF 5.25 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 13 STORM 3							
XSECTION 5	RUNOFF	.20	3.99	---	12.23	369	1845.0
XSECTION 25	RUNOFF	.16	4.12	---	12.22	313	1956.3
XSECTION 30	ADDHYD	.35	4.05	---	12.22	682	1948.6
XSECTION 35	RUNOFF	.16	4.18	---	12.19	344	2150.0
XSECTION 40	ADDHYD	.52	4.09	---	12.21	1024	1969.2
STRUCTURE 10	RESVOR	.52	4.09	1376.50	12.42	777	1494.2
XSECTION 45	RUNOFF	.04	3.55	---	12.21	78	1950.0
XSECTION 50	ADDHYD	.56	4.05	---	12.38	836	1492.9
XSECTION 53	RUNOFF	.15	3.50	---	12.39	199	1326.7
XSECTION 55	RUNOFF	.16	3.75	---	12.35	239	1493.8
XSECTION 59	ADDHYD	.31	3.63	---	12.37	436	1406.5
XSECTION 60	ADDHYD	.87	3.90	---	12.38	1272	1462.1
XSECTION 61	RUNOFF	.03	3.50	---	12.08	66	2200.0
XSECTION 62	ADDHYD	.89	3.89	---	12.36	1295	1455.1
XSECTION 65	RUNOFF	.35	3.73	---	12.51	435	1242.9

1

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 13 STORM 3							
XSECTION 70	ADDHYD	1.24	3.84	---	12.40	1710	1379.0
STRUCTURE 18	RESVOR	1.24	3.83	1371.06	13.24	527	425.0
RAINFALL OF 6.98 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 13 STORM 4							
XSECTION 5	RUNOFF	.20	5.66	---	12.23	516	2580.0
XSECTION 25	RUNOFF	.16	5.81	---	12.21	434	2712.5
XSECTION 30	ADDHYD	.35	5.73	---	12.22	949	2711.4
XSECTION 35	RUNOFF	.16	5.87	---	12.19	478	2987.5
XSECTION 40	ADDHYD	.52	5.77	---	12.21	1424	2738.5
STRUCTURE 10	RESVOR	.52	5.77	1377.75	12.45	981	1886.5
XSECTION 45	RUNOFF	.04	5.17	---	12.21	112	2800.0
XSECTION 50	ADDHYD	.56	5.72	---	12.40	1061	1894.6
XSECTION 53	RUNOFF	.15	5.12	---	12.38	289	1926.7
XSECTION 55	RUNOFF	.16	5.40	---	12.36	337	2106.3
XSECTION 59	ADDHYD	.31	5.27	---	12.37	625	2016.1
XSECTION 60	ADDHYD	.87	5.56	---	12.38	1684	1935.6
XSECTION 61	RUNOFF	.03	5.12	---	12.07	95	3166.7
XSECTION 62	ADDHYD	.89	5.55	---	12.37	1716	1928.1
XSECTION 65	RUNOFF	.35	5.38	---	12.50	624	1782.9
XSECTION 70	ADDHYD	1.24	5.50	---	12.41	2319	1870.2
STRUCTURE 18	RESVOR	1.24	5.48	1371.72	13.13	970	782.3
RAINFALL OF 7.80 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 14 STORM 5							
XSECTION 5	RUNOFF	.20	6.46	---	12.23	586	2930.0
XSECTION 25	RUNOFF	.16	6.61	---	12.21	491	3068.8

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 14 STORM 5							
XSECTION 30	ADDHYD	.35	6.53	---	12.22	1077	3077.1
XSECTION 35	RUNOFF	.16	6.68	---	12.19	537	3356.3
XSECTION 40	ADDHYD	.52	6.58	---	12.21	1611	3098.1
STRUCTURE 10	RESVOR	.52	6.57	1378.31	12.46	1071	2059.6
XSECTION 45	RUNOFF	.04	5.96	---	12.21	128	3200.0
XSECTION 50	ADDHYD	.56	6.53	---	12.42	1161	2073.2
XSECTION 53	RUNOFF	.15	5.90	---	12.37	331	2206.7
XSECTION 55	RUNOFF	.16	6.20	---	12.35	387	2418.8
XSECTION 59	ADDHYD	.31	6.06	---	12.36	717	2312.9
XSECTION 60	ADDHYD	.87	6.36	---	12.39	1874	2154.0
XSECTION 61	RUNOFF	.03	5.90	---	12.07	108	3600.0
XSECTION 62	ADDHYD	.89	6.35	---	12.37	1909	2144.9
XSECTION 65	RUNOFF	.35	6.17	---	12.50	710	2028.6
XSECTION 70	ADDHYD	1.24	6.30	---	12.41	2596	2093.5
STRUCTURE 18	RESVOR	1.24	6.27	1372.01	13.12	1167	941.1

RAINFALL OF 9.35 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 15 STORM 6							
XSECTION 5	RUNOFF	.20	7.98	---	12.23	716	3580.0
XSECTION 25	RUNOFF	.16	8.15	---	12.21	601	3756.3
XSECTION 30	ADDHYD	.35	8.05	---	12.22	1317	3762.9
XSECTION 35	RUNOFF	.16	8.20	---	12.19	654	4087.5
XSECTION 40	ADDHYD	.52	8.10	---	12.21	1969	3786.5
STRUCTURE 10	RESVOR	.52	8.10	1379.30	12.49	1224	2353.8
XSECTION 45	RUNOFF	.04	7.46	---	12.20	158	3950.0
XSECTION 50	ADDHYD	.56	8.05	---	12.43	1329	2373.2
XSECTION 53	RUNOFF	.15	7.40	---	12.37	412	2746.7
XSECTION 55	RUNOFF	.16	7.70	---	12.34	478	2987.5
XSECTION 59	ADDHYD	.31	7.55	---	12.36	887	2861.3

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

ALTERNATE 15 STORM 6

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION		DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
XSECTION	60	ADDHYD	.87	7.87	---	12.39	2210	2540.2
XSECTION	61	RUNOFF	.03	7.39	---	12.07	135	4500.0
XSECTION	62	ADDHYD	.89	7.86	---	12.37	2254	2532.6
XSECTION	65	RUNOFF	.35	7.67	---	12.50	874	2497.1
XSECTION	70	ADDHYD	1.24	7.81	---	12.41	3100	2500.0
STRUCTURE	18	RESVOR	1.24	7.77	1372.54	13.12	1520	1225.8

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2	3	4	5
STRUCTURE 18	1.24					
ALTERNATE 11		224	*********	*********	*********	*********
ALTERNATE 12		*********	396	*********	*********	*********
ALTERNATE 13		*********	*********	527	970	*********
ALTERNATE 14		*********	*********	*********	*********	1167
STRUCTURE 10	.52					
ALTERNATE 11		515	*********	*********	*********	*********
ALTERNATE 12		*********	677	*********	*********	*********
ALTERNATE 13		*********	*********	777	981	*********
ALTERNATE 14		*********	*********	*********	*********	1071
XSECTION 5	.20					
ALTERNATE 11		219	*********	*********	*********	*********
ALTERNATE 12		*********	309	*********	*********	*********
ALTERNATE 13		*********	*********	369	516	*********
ALTERNATE 14		*********	*********	*********	*********	586
XSECTION 25	.16					
ALTERNATE 11		189	*********	*********	*********	*********
ALTERNATE 12		*********	263	*********	*********	*********
ALTERNATE 13		*********	*********	313	434	*********
ALTERNATE 14		*********	*********	*********	*********	491
XSECTION 30	.35					
ALTERNATE 11		408	*********	*********	*********	*********
ALTERNATE 12		*********	572	*********	*********	*********
ALTERNATE 13		*********	*********	682	949	*********
ALTERNATE 14		*********	*********	*********	*********	1077
XSECTION 35	.16					
ALTERNATE 11		210	*********	*********	*********	*********
ALTERNATE 12		*********	291	*********	*********	*********
ALTERNATE 13		*********	*********	344	478	*********
ALTERNATE 14		*********	*********	*********	*********	537
XSECTION 40	.52					
ALTERNATE 11		617	*********	*********	*********	*********
ALTERNATE 12		*********	861	*********	*********	*********
ALTERNATE 13		*********	*********	1024	1424	*********

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2	3	4	5
XSECTION 40	.52					
ALTERNATE 14		*********	*********	*********	*********	1611
XSECTION 45	.04					
ALTERNATE 11		43	*********	*********	*********	*********
ALTERNATE 12		*********	64	*********	*********	*********
ALTERNATE 13		*********	*********	78	112	*********
ALTERNATE 14		*********	*********	*********	*********	128
XSECTION 50	.56					
ALTERNATE 11		551	*********	*********	*********	*********
ALTERNATE 12		*********	727	*********	*********	*********
ALTERNATE 13		*********	*********	836	1061	*********
ALTERNATE 14		*********	*********	*********	*********	1161
XSECTION 53	.15					
ALTERNATE 11		110	*********	*********	*********	*********
ALTERNATE 12		*********	163	*********	*********	*********
ALTERNATE 13		*********	*********	199	289	*********
ALTERNATE 14		*********	*********	*********	*********	331
XSECTION 55	.16					
ALTERNATE 11		137	*********	*********	*********	*********
ALTERNATE 12		*********	196	*********	*********	*********
ALTERNATE 13		*********	*********	239	337	*********
ALTERNATE 14		*********	*********	*********	*********	387
XSECTION 59	.31					
ALTERNATE 11		246	*********	*********	*********	*********
ALTERNATE 12		*********	358	*********	*********	*********
ALTERNATE 13		*********	*********	436	625	*********
ALTERNATE 14		*********	*********	*********	*********	717
XSECTION 60	.87					
ALTERNATE 11		797	*********	*********	*********	*********
ALTERNATE 12		*********	1086	*********	*********	*********
ALTERNATE 13		*********	*********	1272	1684	*********
ALTERNATE 14		*********	*********	*********	*********	1874
XSECTION 61	.03					
ALTERNATE 11		37	*********	*********	*********	*********

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID		DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2	3	4	5
XSECTION 61		.03					
ALTERNATE	12		*********	54	********	********	*********
ALTERNATE	13		*********	*********	66	95	*********
ALTERNATE	14		*********	*********	*********	*********	108
XSECTION 62		.89					
ALTERNATE	11		811	*********	*********	*********	*********
ALTERNATE	12		*********	1105	*********	*********	*********
ALTERNATE	13		*********	*********	1295	1716	*********
ALTERNATE	14		*********	*********	*********	*********	1909
XSECTION 65		.35					
ALTERNATE	11		250	*********	*********	*********	*********
ALTERNATE	12		*********	359	*********	*********	*********
ALTERNATE	13		*********	*********	435	624	*********
ALTERNATE	14		*********	*********	*********	*********	710
XSECTION 70		1.24					
ALTERNATE	11		1046	*********	*********	*********	*********
ALTERNATE	12		*********	1446	*********	*********	*********
ALTERNATE	13		*********	*********	1710	2319	*********
ALTERNATE	14		*********	*********	*********	*********	2596

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID		DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 6
STRUCTURE 18		1.24	
ALTERNATE	15		1520
STRUCTURE 10		.52	
ALTERNATE	15		1224
XSECTION 5		.20	
ALTERNATE	15		716
XSECTION 25		.16	
ALTERNATE	15		601
XSECTION 30		.35	

```
   ALTERNATE   15                1317

 XSECTION   35          .16
 ---------------------------
   ALTERNATE   15                 654
1
```

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 6
XSECTION 40	.52	
ALTERNATE 15		1969
XSECTION 45	.04	
ALTERNATE 15		158
XSECTION 50	.56	
ALTERNATE 15		1329
XSECTION 53	.15	
ALTERNATE 15		412
XSECTION 55	.16	
ALTERNATE 15		478
XSECTION 59	.31	
ALTERNATE 15		887
XSECTION 60	.87	
ALTERNATE 15		2210
XSECTION 61	.03	
ALTERNATE 15		135
XSECTION 62	.89	
ALTERNATE 15		2254
XSECTION 65	.35	
ALTERNATE 15		874
XSECTION 70	1.24	
ALTERNATE 15		3100

```
TR20 ------------------------------------------------------------------- SCS -
         PRE-PROJECT - EAST BRANCH GYPSUM CREEK 2/14/06  ADD BASIN 052  VERSION
01/05/** TPP5.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUA2.04TEST



END OF  1 JOBS IN THIS RUN
```

SCS TR-20, VERSION 2.04TEST

FILES

INPUT = wtrftpp5.t20	, GIVEN DATA FILE	
OUTPUT = wtrftpp5.OUT	, DATED 01/05/**,11:55:45	

FILES GENERATED - DATED 01/05/**,11:55:45

NONE!

TOTAL NUMBER OF WARNINGS = 2, MESSAGES = 0

*** TR-20 RUN COMPLETED ***

Figure 2.7

Pre-Developed Curve Numbers

Project Name: The Waterfront Addition - Pre-Project
Project Number: 02014
Basin: TR-20 005

Total Area = 124.9 Acres
Total Area = 0.1952 sq. mi.
Composite Curve Number = 88.77

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	20.2 84
Commercial and business	85	89	92	94	26.4 95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	14.1 92
Residential - 1/4 acre	38	61	75	83	64.2 87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	100

Project Name: The Waterfront Addition - Pre-Project
Project Number: 02014
Basin: TR-20 025

Total Area = 100.2 Acres
Total Area = 0.1566 sq. mi.
Composite Curve Number = 90.14

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	84
Commercial and business	85	89	92	94	39.3 95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	92
Residential - 1/4 acre	38	61	75	83	60.9 87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	100

Project Name: The Waterfront Addition - Pre-Project
Project Number: 02014
Basin: TR-20 035

Total Area = 104.8 Acres
Total Area = 0.1638 sq. mi.
Composite Curve Number = 90.62

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0				
		72	81	88	91
Cultivated land with conservation treatement	0				
		62	71	78	81
Pasture or range land - poor condition	0				
		68	79	86	89
Pasture or range land - good condition	0				
		39	61	74	80
Meadow - good condition	0				
		30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0				
		45	66	77	83
Wood or Forest land - good cover	0				
		25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0				
		39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0				17.9
		49	69	79	84
Commercial and business	85				50.5
		89	92	94	95
Industrial	72				
		81	88	91	93
Residential - 1/8 acre or less	65				
		77	85	90	92
Residential - 1/4 acre	38				34.2
		61	75	83	87
Residentail - 1/3 acre	30				
		57	72	81	86
Residential - 1/2 acre	25				
		54	70	80	85
Residentail - 1 acre	20				
		51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-				
		98	98	98	98
Streets and roads - paved with curbs and storm sewers	-				
		98	98	98	98
Streets and roads - gravel	-				
		76	85	89	91
Streets and roads - dirt	-				
		72	82	87	89
Lake/Pond	100				2.2
		100	100	100	100

Project Name: The Waterfront Addition - Pre-Project
Project Number: 02014
Basin: TR-20 045

Total Area = 27.6 Acres
Total Area = 0.0431 sq. mi.
Composite Curve Number = 84.52

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	26.7 84
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	92
Residential - 1/4 acre	38	61	75	83	87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	0.9 100

Project Name: The Waterfront Addition - Pre-Project
Project Number: 02014
Basin: TR-20 053

Total Area = 93.1 Acres
Total Area = 0.1455 sq. mi.
Composite Curve Number = 84.00

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	93.1 84
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	92
Residential - 1/4 acre	38	61	75	83	87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	100

Project Name: The Waterfront Addition - Pre-Project
Project Number: 02014
Basin: TR-20 055

Total Area = 103.3 Acres
Total Area = 0.1614 sq. mi.
Composite Curve Number = 86.46

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	87.4 84
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	92
Residential - 1/4 acre	38	61	75	83	87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	15.9 100

Project Name: The Waterfront Addition - Pre-Project
Project Number: 02014
Basin: TR-20 065

Total Area = 222.9 Acres
Total Area = 0.3483 sq. mi.
Composite Curve Number = 86.26

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	191.4 84
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	92
Residential - 1/4 acre	38	61	75	83	87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	31.5 100

Figure 2.8

Pre-Developed Time of Concentration

Time of Concentration Calculations by the FAA method

The Waterfront Addition - Pre-Project Calculations

$$T_c = \frac{(1.1-C)L^{1/2}}{100\ S^{1/3}}$$

Area Name	Land Use	Soil Group	Maximum Elevation	Minimum Elevation	Length (L)	Rational Runoff Coefficient, C				Time of Concentration (min), T_c				Time of Concentration (hr), T_c				CN
						2-Year	5-Year	10-Year	100-Year	2-Year	5-Year	10-Year	100-Year	2-Year	5-Year	10-Year	100-Year	
005	*Business - Neighborhood*	*D*	*1405.0*	*1375.0*	*3800*	0.68	0.69	0.73	0.80	50.4	49.2	44.4	36.0	0.8404	0.8204	0.7403	0.6003	88.8
025	*Business - Neighborhood*	*D*	*1405.0*	*1375.0*	*3600*	0.68	0.69	0.73	0.80	48.2	47.1	42.5	34.4	0.8034	0.7842	0.7077	0.5738	90.1
035	*Business - Neighborhood*	*D*	*1390.0*	*1370.0*	*2800*	0.68	0.69	0.73	0.80	44.8	43.7	39.4	32.0	0.7459	0.7281	0.6571	0.5328	90.6
045	*Undeveloped Urban*	*D*	*1390.0*	*1369.0*	*2000*	0.52	0.54	0.59	0.68	45.9	44.4	40.4	33.3	0.7656	0.7392	0.6732	0.5544	84.5
053	*Undeveloped Urban*	*D*	*1390.0*	*1373.0*	*3000*	0.52	0.54	0.59	0.68	69.1	66.7	60.8	50.0	1.1517	1.1120	1.0127	0.8340	84.0
055	*Undeveloped Urban*	*D*	*1385.0*	*1369.0*	*2800*	0.52	0.54	0.59	0.68	66.6	64.3	58.5	48.2	1.1095	1.0713	0.9756	0.8034	86.5
065	*Undeveloped Urban*	*D*	*1400.0*	*1369.0*	*5000*	0.52	0.54	0.59	0.68	86.6	83.6	76.1	62.7	1.4429	1.3931	1.2687	1.0448	86.3

Tab 3. Post-Development Hydrologic Analysis

A. Proposed Conditions Hydrologic and Hydraulic Analysis

Portions of the Waterfront have already developed. The Waterfront is planning to expand commercial development east of the current development. In addition, the Foliage Addition will develop commercially. Approximately, 60 acres will be developed into 75 residential lots as Waterfront Residential. Approximately, 14 acres will be developed commercially as the Greenwich Office Park.

The current detention ponds do not provide adequate detention for future development Table 4 shows the detention characteristics of the main lake and the hotel pond.

Table 4. Current Storage Calculations.

Current Conditions Total Storage=176 ac-ft		
Main Pond Storage = 167c-ft		**100-Year=1372.0**
Stage	**Discharge (cfs)**	**Storage (ac-ft)**
1368.7	0	0
1369	100	14.4
1370	180	63.09
1371	490	113.69
1372	1160	167
Hotel Pond = 11 ac-ft		**100-Year=1376.08**
Stage	**Discharge (cfs)**	**Storage (ac-ft)**
1373	0	0
1374	9.46	1.98
1375	158.5	4.44
1376	256.63	7.73
1377	331.69	11.24

The size of the detention will need to be increased to decrease peak flow rates from the property. The outlet structure of the hotel pond will be modified to provide more detention and the area of the pond will be increased. This pond expansion provides an additional 10 acre-feet of storage.

In addition, water will flow into the putting green and then be routed to a wet pond in the residential area and a dry pond in the commercial area before exiting the site. Runoff will be directed, from the dry pond, south to the storm sewer along 13th Street. An additional 4.7 ac-ft of detention is provided.

The northeast corner of Waterfront Residential naturally drains to the northeast. Approximately, 1.7 ac-ft of detention will be provided just east of the northeast corner of Waterfront Residential. The SCS Runoff Hydrograph method was used to calculate runoff flow rates to the northeast pond. The watershed was modeled using Hydraflow Hydrographs 2004 by Intelisolve Figure 3.1.

The post-project site was modeled using SCS TR-20 software with the Waterfront Commercial, Greenwich Business Park and Foliage Addition developed as commercial and Waterfront Residential developed as residential, Figure 3.2.

Flow rates to 13th Street were modeled using the SCS runoff method in Hydraflow Hydrographs 2004 by Intellisolve, Figure 3.3.

Post-Project flow rates are summarized in Tables 5 and 6.

Table 5. Post-Project Flow rates.

TR-20 ID	Description	Design Storm Flows (cfs)					
		2-Yr	5-Yr	10-Yr	50-Yr	100-Yr	500-Yr
070	Flow into lakes	1147	1541	1789	2390	2608	3069
018	Flow from lake at Webb Rd	245	407	529	978	1133	1456

Table 6. Flow rates to 13th Street.

Description	Design Storm Flows (cfs)			
	2-Yr	5-Yr	10-Yr	100-Yr
Pre-Project	78.3	116.8	142.8	238.5
Post-Project	98.1	125.9	143.1	204.8

The post-project flows to 13th Street are higher that the pre-project rates for the smaller design storms. However, the RCB under 13th is sized sufficiently to handle these smaller storm flows without the threat of overtopping 13th Street. In addition, once the flows pass through the RCB, detention occurs within Beech Lake. The proposed detention in this project provides detention for future Waterfront Commercial, Waterfront Residential, Greenwich Business Park and Foliage Addition development.

B. Proposed Time of Concentration

Time of concentration calculations were done by the FAA method Figure 3.4

C. Assumed Post-Developed Curve Numbers

Post- developed curve numbers are in Figure 3.5.

D. Proposed Contours for Detention

The proposed contours are shown on the drainage and utility plan, Figure 3.6.

E. Preliminary SWS Sizing Calculations

Pipe sizes will be determined during final design.

F. Stage-Storage-Discharge

Table 7 shows the stage-storage-discharge for the proposed detention

Table 7. Post-Project Storage Calculations.

Post-Project Conditions Total Storage=193.9 ac-ft		
Main Pond Storage = 167 ac-ft	**100-Year=1372.0**	
Stage	**Discharge (cfs)**	**Storage (ac-ft)**
1368.7	0	0
1369	100	14.4
1370	180	63.09
1371	490	113.69
1372	1160	167
Hotel Pond = 21.4 ac-ft	**100-Year=1377.9**	
Stage	**Discharge (cfs)**	**Storage (ac-ft)**
1373	0	0
1374	3.239	1.965
1375	71.910	5.264
1376	104.758	10.073
1377	129.355	15.353
1378	150.069	21.397
Putting Green = 1.9 ac-ft	**Flow in=87.4 cfs Flow out=46.9**	
Stage	**Discharge (cfs)**	**Storage (ac-ft)**
1382	0	0
1383	26.614	0.585
1384	40.729	1.252
1385	47.965	2.012
Combined (Residential/Commercial) = 2.8	**100-Year = 1383.9**	
Stage	**Discharge (cfs)**	**Storage (ac-ft)**
1379	0	0
1380	33.442	0.206
1381	37.212	0.633
1382	40.162	1.321
1383	42.911	2.140
1384	45.512	2.828
1385	47.958	3.336
Northeast Detention = 1.7ac-ft	**100-Year = TBD**	
1	14.331	0.538
2	40.535	1.14
3	69.213	1.7

G. Analysis of upstream/downstream impact

The developments of this site are designed to maintain the 100-year water surface elevation at the North property line of the site for the main channel. There will not be an increase in water surface elevation upstream of the site.

The peak outflow at the outlet of Beech Lake will not increase from pre-project conditions with the development of Waterfront Commercial, Waterfront Residential, Greenwich Business Park and the Foliage Addition.

H. Existing and Proposed Structural Elevations

There are no existing structures on the proposed Waterfront Commercial, Waterfront Residential or Greenwich Business Park site. Where applicable, minimum pad elevations will be set 3 feet above the 100-year water surface elevation. When feasible, current grade will dictate structural elevations.

I. Pond Design Elevations

The northeast detention area will provide a total 1.7 ac-ft of detention. The outlet structure for the pond is a rectangular weir with a crest length of 4 feet. The hotel pond will be modified to provide additional storage, which is reflected in Table 8. The residential and commercial detention areas will have a normal pool of 1379.0 and a 100-year elevation of 1383.9.

J. Structure Details

Single family homes will be built in the Waterfront Residential area, while commercial buildings will be constructed on the Waterfront Commercial and Greenwich Business Park site.

K. Limits of Clearing and Grading

Most of the site will be cleared and graded. Some existing trees will be left undisturbed.

L. Location of Impervious Areas

The Roads will be located as shown on the drainage and utility plan, Figure 3.6. In the Waterfront Residential area, houses will be constructed on each lot, while Greenwich Business Park and Waterfront Commercial will develop commercially

M. Location of Utilities

Proposed utilities are shown on the drainage and utility plan, Figure 3.6.

N. Location of Conveyance Systems

Proposed utilities are shown on the drainage and utility plan, Figure 3.6.

O. Location of Channel Modifications

A Conditional Letter of Map Revision, (CLOMR) was approved June 2006 case number 04-07-031RA. Letter of Map Revision (LOMR) will be completed once all construction around the Waterfront lake is complete. As-built survey will be done of the area and the hydraulic model will be updated to match the existing conditions. Channel modifications are not proposed for the Waterfront Commercial, Waterfront Residential or Greenwich Business Park site.

P. Selection and Location of Stormwater Controls

Stormwater controls consist of curb and area inlets, located throughout the site, storm sewer sized to handle the 2-year flows for residential and 5-year flows for commercial, detention ponds and several outlet structures to control flow.

Q. Emergency Overflow

Emergency overflows will be designed to flow overland

R. Freeboard

Pond design will include 1-foot of freeboard for added safety.

S. 100-Year High Water Line

The 100-year water surface elevations are shown on the drainage and utility plan, Figure 3.5.

T. Lowest Openings

Where applicable, minimum pad elevations will be set 3 feet above the 100-year water surface elevation. When feasible, current grade will dictate structural elevations.

U. Stormwater Management Facilities

All detention ponds onsite are located within reserves.

V. Maintenance Responsibility

For Waterfront Residential, the maintenance of the reserve will be the responsibility of the owner until it is turned over to the homeowners association. The commercial areas will be maintained by the owner.

W. Offsite-Drainage Easements

Off-site drainage easements will be determined.

Figure 3.1

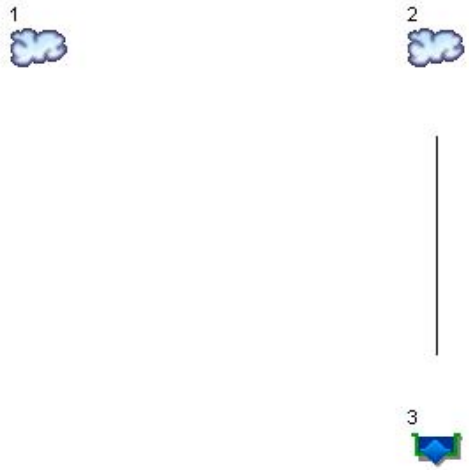
Northeast Detention Time of Concentration and Hydraflow Hydrographs

Time of Concentration Calculations by the FAA method

Waterfront- Cornejo Detention

$$T_c = \frac{(1.1-C)L^{1/2}}{100\ S^{1/3}}$$

Area Name	Land Use	Soil Group	Maximum Elevation	Minimum Elevation	Flow Length (L)	Rational Runoff Coefficient, C				Time of Concentration (min), T_c				CN	Area
						2-Year	5-Year	10-Year	100-Year	2-Year	5-Year	10-Year	100-Year		acres
Post-Developed	*Residential - 1/4 Acre*	*D*	*1394.0*	*1385.0*	*1700*	0.50	0.54	0.62	0.76	55.0	51.4	44.0	31.2	85	21.5
Pre-Developed	*Agricultural - Pasture - Slopes 1-4%*	*D*	*1394.0*	*1383.0*	*1600*	0.32	0.37	0.47	0.67	63.6	59.6	51.4	35.1	84	21.5



Legend

Hyd.	Origin	Description
1	SCS Runoff	Pre Developed WF Res
2	SCS Runoff	Post Developed WF Res
3	Reservoir	Cornejo Detention

Hydrograph Return Period Recap

Hyd. No.	Hydrograph type (origin)	Inflow Hyd(s)	Peak Outflow (cfs)								Hydrograph description
			1-Yr	2-Yr	3-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr	
1	SCS Runoff	-------	-------	23.02	-------	34.36	41.94	53.53	-------	70.13	Pre Developed WF Res
2	SCS Runoff	-------	-------	27.03	-------	40.08	48.75	61.84	-------	80.56	Post Developed WF Res
3	Reservoir	2	-------	21.09	-------	32.33	39.81	51.08	-------	67.19	Cornejo Detention

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (acft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (acft)	Hydrograph description
1	SCS Runoff	23.02	6	750	3.439	----	------	------	Pre Developed WF Res
2	SCS Runoff	27.03	6	744	3.492	----	------	------	Post Developed WF Res
3	Reservoir	21.09	6	756	3.492	2	1.36	0.708	Cornejo Detention

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (acft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (acft)	Hydrograph description
1	SCS Runoff	34.36	6	750	5.127	----	------	------	Pre Developed WF Res
2	SCS Runoff	40.08	6	738	5.162	----	------	------	Post Developed WF Res
3	Reservoir	32.33	6	756	5.161	2	1.81	0.965	Cornejo Detention

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (acft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (acft)	Hydrograph description
1	SCS Runoff	41.94	6	744	6.271	----	------	------	Pre Developed WF Res
2	SCS Runoff	48.75	6	738	6.288	----	------	------	Post Developed WF Res
3	Reservoir	39.81	6	756	6.288	2	2.07	1.125	Cornejo Detention

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (acft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (acft)	Hydrograph description
1	SCS Runoff	53.53	6	744	8.023	----	------	------	Pre Developed WF Res
2	SCS Runoff	61.84	6	738	8.011	----	------	------	Post Developed WF Res
3	Reservoir	51.08	6	756	8.011	2	2.45	1.357	Cornejo Detention

Table of Contents

100 - Year

Summary Report **1**

Hydrograph Reports **2**

Hydrograph No. 1, SCS Runoff, Pre Developed WF Res 2

Hydrograph No. 2, SCS Runoff, Post Developed WF Res 3

Hydrograph No. 3, Reservoir, Cornejo Detention 4

Pond Report 5

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (acft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (acft)	Hydrograph description
1	SCS Runoff	70.13	6	744	10.577	----	------	------	Pre Developed WF Res
2	SCS Runoff	80.56	6	738	10.517	----	------	------	Post Developed WF Res
3	Reservoir	67.19	6	750	10.517	2	2.94	1.673	Cornejo Detention

Hydrograph Plot

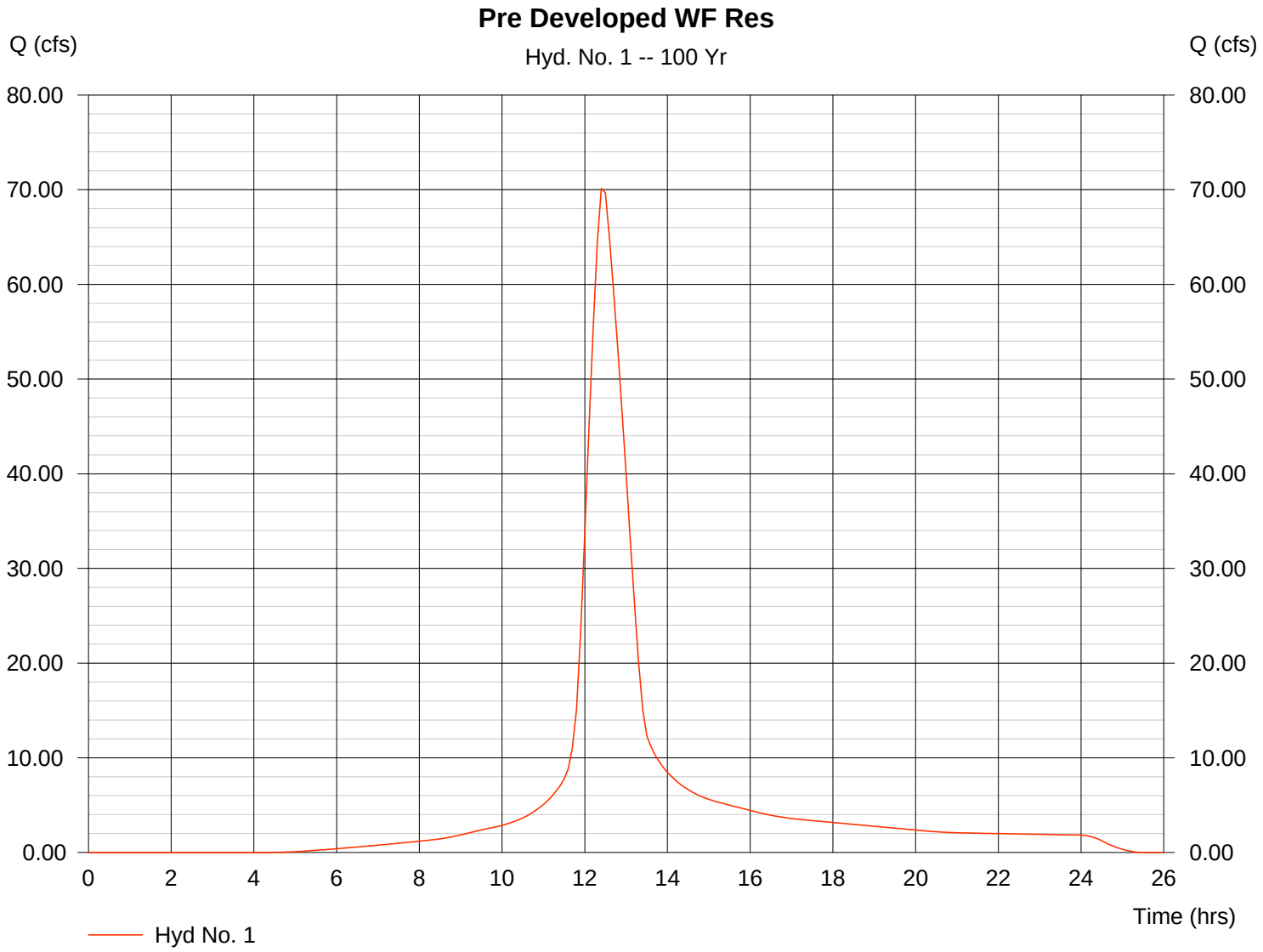
Hydraflow Hydrographs by Intelisolve | Wednesday, Apr 11 2007, 10:22 AM

Hyd. No. 1

Pre Developed WF Res

Hydrograph type	= SCS Runoff	Peak discharge	= 70.13 cfs
Storm frequency	= 100 yrs	Time interval	= 6 min
Drainage area	= 21.500 ac	Curve number	= 84
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 51.40 min
Total precip.	= 7.80 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Hydrograph Volume = 10.577 acft



Hydrograph Plot

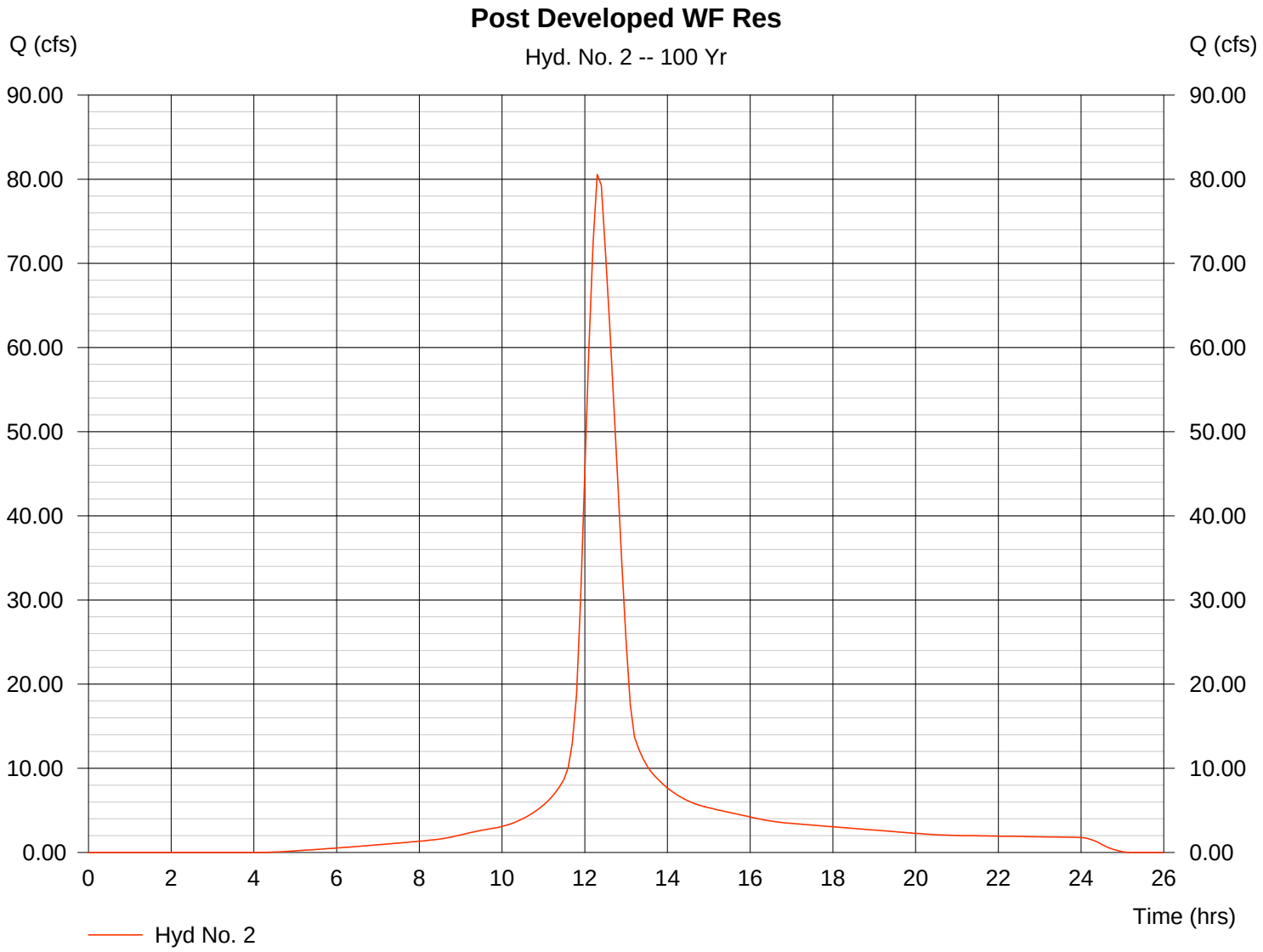
Hydraflow Hydrographs by Intelisolve | Wednesday, Apr 11 2007, 10:22 AM

Hyd. No. 2

Post Developed WF Res

Hydrograph type	= SCS Runoff	Peak discharge	= 80.56 cfs
Storm frequency	= 100 yrs	Time interval	= 6 min
Drainage area	= 21.500 ac	Curve number	= 85
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 44.00 min
Total precip.	= 7.80 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Hydrograph Volume = 10.517 acft



Hydrograph Plot

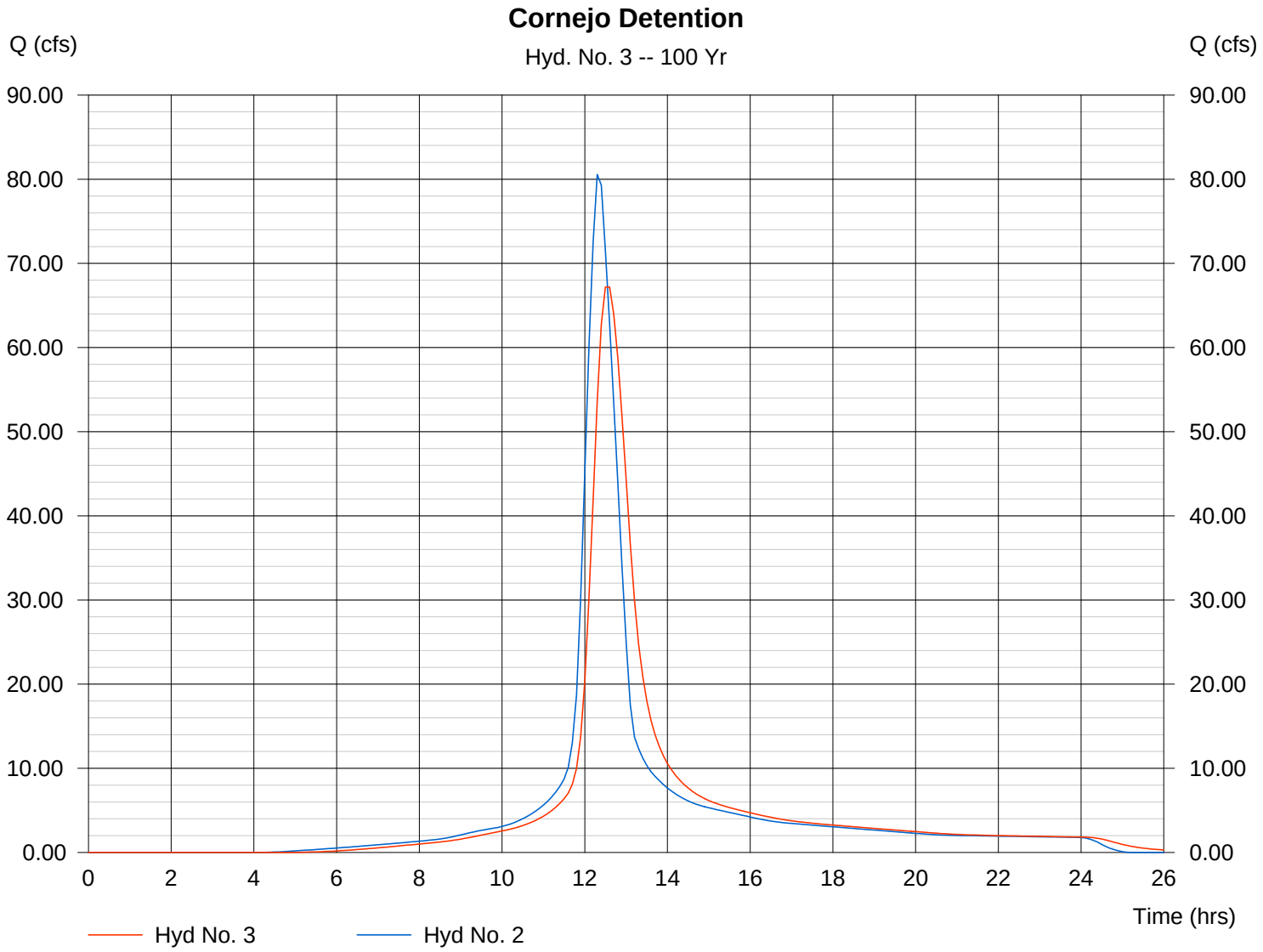
Hydraflow Hydrographs by Intelisolve | Wednesday, Apr 11 2007, 10:22 AM

Hyd. No. 3

Cornejo Detention

Hydrograph type	=	Reservoir	Peak discharge	=	67.19 cfs
Storm frequency	=	100 yrs	Time interval	=	6 min
Inflow hyd. No.	=	2	Max. Elevation	=	2.94 ft
Reservoir name	=	Cornejo Detention	Max. Storage	=	1.673 acft

Storage Indication method used. | Hydrograph Volume = 10.517 acft



Pond Report

Pond No. 1 - Cornejo Detention

Pond Data

Bottom LxW = 200.0 x 105.0 ft Side slope = 4.0:1 Bottom elev. = 0.00 ft Depth = 3.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (acft)	Total storage (acft)
0.00	0.00	21,000	0.000	0.000
0.15	0.15	21,367	0.073	0.073
0.30	0.30	21,738	0.074	0.147
0.45	0.45	22,111	0.075	0.223
0.60	0.60	22,487	0.077	0.299
0.75	0.75	22,866	0.078	0.378
0.90	0.90	23,248	0.079	0.457
1.05	1.05	23,633	0.081	0.538
1.20	1.20	24,020	0.082	0.620
1.35	1.35	24,411	0.083	0.703
1.50	1.50	24,804	0.085	0.788
1.65	1.65	25,200	0.086	0.874
1.80	1.80	25,599	0.087	0.961
1.95	1.95	26,001	0.089	1.050
2.10	2.10	26,406	0.090	1.140
2.25	2.25	26,814	0.092	1.232
2.40	2.40	27,225	0.093	1.325
2.55	2.55	27,638	0.094	1.420
2.70	2.70	28,055	0.096	1.515
2.85	2.85	28,474	0.097	1.613
3.00	3.00	28,896	0.099	1.712

Culvert / Orifice Structures

	[A]	[B]	[C]	[D]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	0.00
N-Value	= .013	.013	.013	.013
Orif. Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 4.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfiltration = 0.000 in/hr (Wet area) Tailwater Elev. = 0.00 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control.

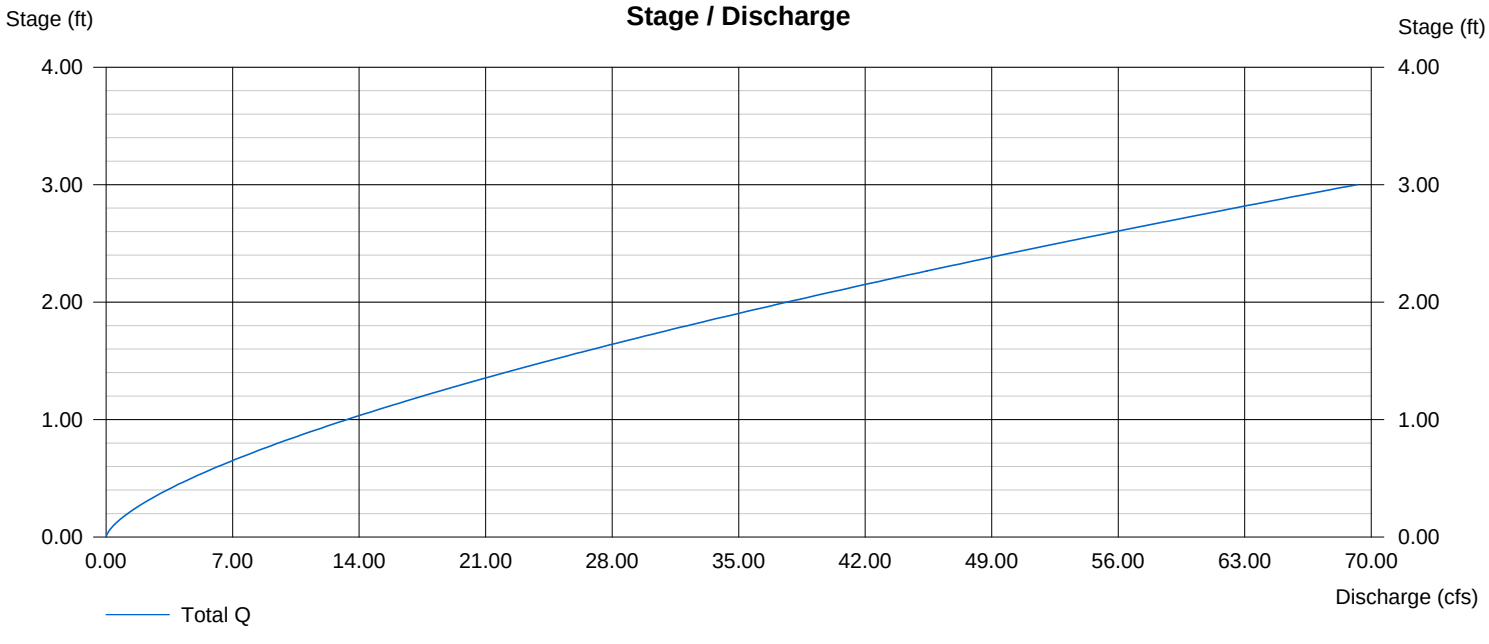


Figure 3.2

Post-Project TR-20 Modeling

```
 *****************80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY*****************

 JOB TR-20                      FULLPRINT           SUMMARY   NOPLOTS
 TITLE 001 WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07
 TITLE WTRFTC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL CHANCE
  4 DIMHYD               0.02                                              484 SCS
  8          .000        .030        .100        .190        .310        UNIT
HYD
  8          .470        .660        .820        .930        .990
  8         1.000        .990        .930        .860        .780
  8          .680        .560        .460        .390        .330
  8          .280        .241        .207        .174        .147
  8          .126        .107        .091        .077        .066
  8          .055        .047        .040        .034        .029
  8          .025        .021        .018        .015        .013
  8          .011        .009        .008        .007        .006
  8          .005        .004        .003        .002        .001
  8          .000        .000        .000        .000        .000
  9 ENDTBL
  3 STRUCT      10                                                          R-EB-
BN
  8                     1369.4      0.0         0.0
RAILROAD
  8                     1370.4      6.0         0.279
ESTMNSTR
  8                     1371.4      14.0        1.093
  8                     1372.4      30.0        2.269
  8                     1373.4      60.0        3.606
  8                     1374.4      320.0       7.212
  8                     1375.4      580.0       11.361
  8                     1376.4      760.0       16.450
  8                     1377.4      925.0       23.036
  8                     1378.4      1085.0      31.035
  8                     1379.4      1240.0      40.834
  9 ENDTBL
  3 STRUCT      11                                                          GREENS
  8                     1382.0      0.0         0.0
  8                     1383.0      10.7        0.585
  8                     1384.0      65.4        1.252
  8                     1385.0      82.2        2.012
  8                     1386.0      93.0        2.817
  9 ENDTBL
  3 STRUCT      13
COMBINED
  8                     1379.0      0.0         0.0
  8                     1380.0      33.442      0.206
  8                     1381.0      37.212      0.633
  8                     1382.0      40.162      1.321
  8                     1383.0      42.911      2.140
  8                     1384.0      45.512      2.828
  8                     1385.0      47.958      3.336
  9 ENDTBL
  3 STRUCT      15
```

```
  8                     1373.0      0.0         0.0                     HOTEL
  8                     1374.0      3.239       1.965                   POND
  8                     1375.0      71.910      5.264                   LOWER &
  8                     1376.0      104.758     10.073                  MIDDLE
1


 **********80-80 LIST OF INPUT DATA (CONTINUED)**********

  8                     1377.0      129.355     15.353
Expanded
  8                     1378.0      150.069     21.397
  9 ENDTBL
  3 STRUCT      18                                                      NORTH &
  8                     1368.7      0.0         0.0                     SOUTH
  8                     1369.0      100.0       14.40                   BEECH
  8                     1370.0      180.0       63.13                   LAKE
  8                     1371.0      490.0       113.94
  8                     1372.0      1160.0      167.75
  9 ENDTBL
  6 RUNOFF 1 005       3 0.1953     88.8        0.6003                1
N&S21EWB
  6 RUNOFF 1 025       1 0.1566     90.1        0.5738                1 WWEBB
  6 ADDHYD 4 030   1 3 2                                              1
  6 RUNOFF 1 035       1 0.1638     90.6        0.5328                1
  6 ADDHYD 4 040   1 2 3                                              1
  6 RESVOR 2    10 3   1 1369.4                                       1 EM/RR
  6 RUNOFF 1 045       2 0.0432     95.3        0.3960                1 NWTRFT
  6 ADDHYD 4 050   1 2 4                                              1
  6 RUNOFF 1 053       6 0.1558     90.9        0.5957                1 EWTRFT
  6 RESVOR 2    15 6   2 1373.0                                       1
HOTELPND
  6 ADDHYD 4 054   2 4 3                                              1
  6 RUNOFF 1 055       2 0.1614     92.2        0.5739                1
  6 ADDHYD 4 060   2 3 1                                              1
  6 RUNOFF 1 061       2 0.0273     95.0        0.2500                1
  6 ADDHYD 4 062   2 1 4                                              1
  6 RUNOFF 1 065       1 0.0220     92.0        0.2846                1
  6 RESVOR 2    11 1   2 1382.0                                       1 GREENS
  6 RUNOFF 1 070       1 0.0150     92.7        0.2821                1
  6 ADDHYD 4 075   1 2 3                                              1
  6 RUNOFF 1 080       2 0.0105     95.0        0.2556                1
  6 ADDHYD 4 085   3 2 1                                              1
  6 RESVOR 2    13 1   2  1379.0                                      1
COMBINED
  6 RUNOFF 1 166       3 0.2813     87.8        0.7463                1
  6 ADDHYD 4 167   3 2 1                                              1
  6 ADDHYD 4 170   4 1 2                                              1
  6 RESVOR 2    18 2   1 1368.7                                       1
BEECHLKE
    ENDATA
  7 INCREM 6            0.10
  7 COMPUT 7 005      18 0.0        3.50        1.0         2 2  11  01     2YR
    ENDCMP 1
  7 COMPUT 7 005      18 0.0        4.55        1.0         2 2  12  02     5
YR
```

```
    ENDCMP 1
  7 COMPUT 7 005      18 0.0         5.25        1.0         2 2  13  03    10
YR
    ENDCMP 1
  7 COMPUT 7 005      18 0.0         6.30        1.0         2 2  14  04    25
YR
    ENDCMP 1
  7 COMPUT 7 005      18 0.0         7.10        1.0         2 2  15  05    50
YR
    ENDCMP 1
  7 COMPUT 7 005      18 0.0         7.80        1.0         2 2  16  06   100
YR
    ENDCMP 1
1


 **********80-80 LIST OF INPUT DATA (CONTINUED)**********

  7 COMPUT 7 005      18 0.0         9.35        1.0         2 2  17  07   500
YR
    ENDCMP 1
    ENDJOB 2

 **********END OF 80-80 LIST**********
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   1   JOB NO.   1                     PAGE   1


        COMPUTER PROGRAM FOR PROJECT FORMULATION - HYDROLOGY  USER NOTES

 The Users' Manual for this program is SCS Technical Release 20 (TR-20), dated
 April 1990.  The TR-20 program is no longer supported on the mainframe since
all
 post 1986 program changes have only been in the IBM compatable microcomputer
 environnment.

 Compatable input and data check programs are TR20INPT.EXE, version III, dated
 01/30/90 and TR20CK.EXE, version II, which is forthcoming.

 Major changes from the 1986 TR-20  microcomputer version are:

 HYDROGRAPH GENERATION: program procedure to develop runoff hydrographs
 revised to preserve total hydrograph volume as well as the peak discharge.
 Hydrographs can contain up to four hundred main time increment points from
 the beginning of runoff.

 ATTKIN ROUTING: seperate channel and floodplain lengths can be entered to
 define additional storage in meandering channels below the representative low
 ground elevation. Program changes have been made to better handle multiple
 peaked hydrographs.

 FLOW DURATION: can be obtained if requested.
```

OUTPUT 80 COLUMNS: Output fits 80 column paper. Hydrograph coordinates over 100 cfs are rounded and shown as whole numbers.

ERRORS, WARNINGS, AND MESSAGES: expanded and updated.

LIST OPTIONS: can print all or selected parts of input data.

INTERMEDIATE PEAKS: requires new IPEAKS record.


```
  DIMENSIONLESS HYDROGRAPH TABLE ENTERED
8                .0000       .0300       .1000       .1900       .3100
8                .4700       .6600       .8200       .9300       .9900
8               1.0000       .9900       .9300       .8600       .7800
8                .6800       .5600       .4600       .3900       .3300
8                .2800       .2410       .2070       .1740       .1470
8                .1260       .1070       .0910       .0770       .0660
8                .0550       .0470       .0400       .0340       .0290
8                .0250       .0210       .0180       .0150       .0130
8                .0110       .0090       .0080       .0070       .0060
8                .0050       .0040       .0030       .0020       .0010
8                .0000       .0000       .0000       .0000       .0000
9 ENDTBL

            COMPUTED TIME INCREMENT   =     .0200

            COMPUTED PEAK RATE FACTOR =  484.000
```



```
EXECUTIVE CONTROL INCREM    MAIN TIME INCREMENT =   .100 HOURS

EXECUTIVE CONTROL COMPUT    FROM XSECTION   5  TO STRUCTURE 18            2YR
   STARTING TIME =   .00       RAIN DEPTH =  3.50       RAIN DURATION =  1.00
   ANT. RUNOFF COND. = 2       MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. =11           STORM NO. = 1            RAIN TABLE NO. = 2
```

```
 OPERATION RUNOFF   XSECTION   5
         OUTPUT HYDROGRAPH =  3      AREA =    .20 SQ MI
         INPUT RUNOFF CURVE = 89.    TIME OF CONCENTRATION =   .60 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0800 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.24                        219.1                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  2.34 WATERSHED INCHES;     295 CFS-HRS;      24.3 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  25
         OUTPUT HYDROGRAPH =  1      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 90.    TIME OF CONCENTRATION =   .57 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0765 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.22                        188.9                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  2.46 WATERSHED INCHES;     248 CFS-HRS;      20.5 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  30
         INPUT HYDROGRAPHS 1,3     OUTPUT HYDROGRAPH 2

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.23                        407.8                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  2.39 WATERSHED INCHES;     543 CFS-HRS;      44.8 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  35
         OUTPUT HYDROGRAPH =  1      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 91.    TIME OF CONCENTRATION =   .53 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0710 HOURS
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   1   JOB NO.   1                     PAGE   4


    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.20                        210.1                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  2.50 WATERSHED INCHES;     264 CFS-HRS;      21.8 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  40
         INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 3

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
```

```
      12.22                        616.7                         (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                2.42 WATERSHED INCHES;     807 CFS-HRS;      66.7 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 10
        INPUT HYDROGRAPH 3        OUTPUT HYDROGRAPH 1
        SURFACE ELEVATION =  1369.40

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.38                        515.1                        1375.15

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                2.42 WATERSHED INCHES;     807 CFS-HRS;      66.7 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  45
        OUTPUT HYDROGRAPH =  2      AREA =    .04 SQ MI
        INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .40 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0528 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.11                         75.6                         (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                2.97 WATERSHED INCHES;      83 CFS-HRS;       6.8 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  50
        INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 4

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.35                        554.0                         (NULL)
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                   PASS   1   JOB NO.   1                      PAGE   5


   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                2.47 WATERSHED INCHES;     890 CFS-HRS;      73.6 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  53
        OUTPUT HYDROGRAPH =  6      AREA =    .16 SQ MI
        INPUT RUNOFF CURVE = 91.    TIME OF CONCENTRATION =   .60 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0794 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.23                        188.8                         (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                2.53 WATERSHED INCHES;     254 CFS-HRS;      21.0 ACRE-FEET.
```

```
 OPERATION RESVOR   STRUCTURE 15
         INPUT HYDROGRAPH 6        OUTPUT HYDROGRAPH 2
         SURFACE ELEVATION =  1373.00

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.64                        86.3                        1375.44

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  2.51 WATERSHED INCHES;     253 CFS-HRS;      20.9 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  54
         INPUT HYDROGRAPHS 2,4     OUTPUT HYDROGRAPH 3

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.36                        632.4                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  2.48 WATERSHED INCHES;    1142 CFS-HRS;      94.4 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  55
         OUTPUT HYDROGRAPH =  2      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 92.    TIME OF CONCENTRATION =   .57 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0765 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.22                        208.8                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  2.65 WATERSHED INCHES;     276 CFS-HRS;      22.8 ACRE-FEET.
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   1   JOB NO.   1                     PAGE   6


 OPERATION ADDHYD   XSECTION  60
         INPUT HYDROGRAPHS 2,3     OUTPUT HYDROGRAPH 1

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.31                        821.9                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  2.51 WATERSHED INCHES;    1419 CFS-HRS;     117.2 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  61
         OUTPUT HYDROGRAPH =  2      AREA =    .03 SQ MI
         INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .25 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0333 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.03                         58.1                       (RUNOFF)
```

```
   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                2.94 WATERSHED INCHES;      52 CFS-HRS;       4.3 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  62
        INPUT HYDROGRAPHS 2,1     OUTPUT HYDROGRAPH 4

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.30                        838.6                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                2.52 WATERSHED INCHES;    1470 CFS-HRS;     121.5 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  65
        OUTPUT HYDROGRAPH =  1      AREA =    .02 SQ MI
        INPUT RUNOFF CURVE = 92.    TIME OF CONCENTRATION =   .28 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0379 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.05                         40.6                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                2.63 WATERSHED INCHES;      37 CFS-HRS;       3.1 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 11
        INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
        SURFACE ELEVATION =  1382.00
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                   PASS   1   JOB NO.   1                     PAGE   7


   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.21                         27.7                        1383.31

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                2.64 WATERSHED INCHES;      37 CFS-HRS;       3.1 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  70
        OUTPUT HYDROGRAPH =  1      AREA =    .01 SQ MI
        INPUT RUNOFF CURVE = 93.    TIME OF CONCENTRATION =   .28 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0376 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.05                         28.3                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                2.70 WATERSHED INCHES;      26 CFS-HRS;       2.2 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  75
        INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 3
```

```
   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.13                        50.1                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                2.67 WATERSHED INCHES;      64 CFS-HRS;       5.3 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  80
        OUTPUT HYDROGRAPH =  2      AREA =    .01 SQ MI
        INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .26 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0341 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.03                        22.0                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                2.94 WATERSHED INCHES;      20 CFS-HRS;       1.6 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  85
        INPUT HYDROGRAPHS 3,2     OUTPUT HYDROGRAPH 1

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.10                        69.4                       (NULL)
1
 TR20 ------------------------------------------------------------------------ SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   1   JOB NO.   1                      PAGE   8


   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                2.72 WATERSHED INCHES;      84 CFS-HRS;       6.9 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 13
        INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
        SURFACE ELEVATION =  1379.00

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.34                        38.3                       1381.36

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                2.72 WATERSHED INCHES;      83 CFS-HRS;       6.9 ACRE-FEET.


 OPERATION RUNOFF   XSECTION 166
        OUTPUT HYDROGRAPH =  3      AREA =    .28 SQ MI
        INPUT RUNOFF CURVE = 88.    TIME OF CONCENTRATION =   .75 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0995 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.33                       262.0                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                2.25 WATERSHED INCHES;     408 CFS-HRS;      33.7 ACRE-FEET.
```

```
 OPERATION ADDHYD   XSECTION 167
         INPUT HYDROGRAPHS 3,2     OUTPUT HYDROGRAPH 1

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.33                        300.3                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  2.32 WATERSHED INCHES;     492 CFS-HRS;      40.6 ACRE-FEET.


 OPERATION ADDHYD   XSECTION 170
         INPUT HYDROGRAPHS 4,1     OUTPUT HYDROGRAPH 2

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.31                        1138.1                      (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  2.47 WATERSHED INCHES;    1962 CFS-HRS;     162.1 ACRE-FEET.
1
 TR20 ---------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   1   JOB NO.   1                      PAGE   9



 OPERATION RESVOR   STRUCTURE 18
         INPUT HYDROGRAPH 2        OUTPUT HYDROGRAPH 1
         SURFACE ELEVATION =  1368.70

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       13.45                        244.7                       1370.21

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  2.47 WATERSHED INCHES;    1961 CFS-HRS;     162.1 ACRE-FEET.


 EXECUTIVE CONTROL ENDCMP    COMPUTATIONS COMPLETED FOR PASS   1
1
 TR20 ---------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   2   JOB NO.   1                      PAGE  10



 EXECUTIVE CONTROL COMPUT    FROM XSECTION   5  TO STRUCTURE 18            5 YR
    STARTING TIME =   .00       RAIN DEPTH =  4.55       RAIN DURATION =  1.00
    ANT. RUNOFF COND. = 2       MAIN TIME INCREMENT =   .100 HOURS
    ALTERNATE NO. =12           STORM NO. = 2            RAIN TABLE NO. = 2


 OPERATION RUNOFF   XSECTION   5
         OUTPUT HYDROGRAPH =  3      AREA =    .20 SQ MI
         INPUT RUNOFF CURVE = 89.    TIME OF CONCENTRATION =   .60 HOURS
```

```
        COMPUTED INTERNAL TIME INCREMENT =  .0800 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.23                        309.0                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                3.32 WATERSHED INCHES;     419 CFS-HRS;      34.6 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  25
        OUTPUT HYDROGRAPH =  1      AREA =    .16 SQ MI
        INPUT RUNOFF CURVE = 90.    TIME OF CONCENTRATION =   .57 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0765 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.22                        263.4                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                3.45 WATERSHED INCHES;     349 CFS-HRS;      28.8 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  30
        INPUT HYDROGRAPHS 1,3     OUTPUT HYDROGRAPH 2

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.22                        572.1                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                3.38 WATERSHED INCHES;     767 CFS-HRS;      63.4 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  35
        OUTPUT HYDROGRAPH =  1      AREA =    .16 SQ MI
        INPUT RUNOFF CURVE = 91.    TIME OF CONCENTRATION =   .53 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0710 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.19                        291.0                       (RUNOFF)
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                   PASS   2   JOB NO.   1                     PAGE  11


   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                3.50 WATERSHED INCHES;     370 CFS-HRS;      30.6 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  40
        INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 3

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.21                        861.4                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                3.42 WATERSHED INCHES;    1137 CFS-HRS;      94.0 ACRE-FEET.
```

```
 OPERATION RESVOR   STRUCTURE 10
         INPUT HYDROGRAPH 3        OUTPUT HYDROGRAPH 1
         SURFACE ELEVATION =  1369.40

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.40                        677.3                        1375.94

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  3.42 WATERSHED INCHES;    1138 CFS-HRS;      94.0 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  45
         OUTPUT HYDROGRAPH =  2      AREA =    .04 SQ MI
         INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .40 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0528 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.11                         99.9                        (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  4.01 WATERSHED INCHES;     112 CFS-HRS;       9.2 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  50
         INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 4

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.35                        724.6                        (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  3.46 WATERSHED INCHES;    1249 CFS-HRS;     103.2 ACRE-FEET.
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   2   JOB NO.   1                      PAGE  12



 OPERATION RUNOFF   XSECTION  53
         OUTPUT HYDROGRAPH =  6      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 91.    TIME OF CONCENTRATION =   .60 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0794 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.23                        262.5                        (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  3.53 WATERSHED INCHES;     355 CFS-HRS;      29.4 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 15
         INPUT HYDROGRAPH 6        OUTPUT HYDROGRAPH 2
         SURFACE ELEVATION =  1373.00
```

```
   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.69                        106.2                       1376.06

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  3.52 WATERSHED INCHES;     354 CFS-HRS;      29.2 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  54
        INPUT HYDROGRAPHS 2,4     OUTPUT HYDROGRAPH 3

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.37                        820.8                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  3.47 WATERSHED INCHES;    1602 CFS-HRS;     132.4 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  55
        OUTPUT HYDROGRAPH =  2      AREA =    .16 SQ MI
        INPUT RUNOFF CURVE = 92.    TIME OF CONCENTRATION =   .57 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0765 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.22                        285.4                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  3.67 WATERSHED INCHES;     382 CFS-HRS;      31.6 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  60
        INPUT HYDROGRAPHS 2,3     OUTPUT HYDROGRAPH 1
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                   PASS   2   JOB NO.   1                     PAGE  13


   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.29                       1079.9                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  3.51 WATERSHED INCHES;    1984 CFS-HRS;     163.9 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  61
        OUTPUT HYDROGRAPH =  2      AREA =    .03 SQ MI
        INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .25 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0333 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.03                         77.3                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  3.97 WATERSHED INCHES;      70 CFS-HRS;       5.8 ACRE-FEET.
```

```
 OPERATION ADDHYD   XSECTION  62
         INPUT HYDROGRAPHS 2,1     OUTPUT HYDROGRAPH 4

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.27                        1105.2                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   3.52 WATERSHED INCHES;    2054 CFS-HRS;     169.7 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  65
         OUTPUT HYDROGRAPH =  1      AREA =    .02 SQ MI
         INPUT RUNOFF CURVE = 92.    TIME OF CONCENTRATION =   .28 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0379 HOURS

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.05                          55.4                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   3.65 WATERSHED INCHES;      52 CFS-HRS;       4.3 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 11
         INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
         SURFACE ELEVATION =  1382.00

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.18                          41.2                        1383.56
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   2   JOB NO.   1                      PAGE  14


    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   3.65 WATERSHED INCHES;      52 CFS-HRS;       4.3 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  70
         OUTPUT HYDROGRAPH =  1      AREA =    .01 SQ MI
         INPUT RUNOFF CURVE = 93.    TIME OF CONCENTRATION =   .28 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0376 HOURS

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.05                          38.4                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   3.72 WATERSHED INCHES;      36 CFS-HRS;       3.0 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  75
         INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 3

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.11                          74.8                       (NULL)
```

```
   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                3.68 WATERSHED INCHES;      88 CFS-HRS;       7.3 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  80
        OUTPUT HYDROGRAPH =  2      AREA =    .01 SQ MI
        INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .26 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0341 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.03                        29.1                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                3.97 WATERSHED INCHES;      27 CFS-HRS;       2.2 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  85
        INPUT HYDROGRAPHS 3,2     OUTPUT HYDROGRAPH 1

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.09                        100.9                      (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                3.74 WATERSHED INCHES;     115 CFS-HRS;       9.5 ACRE-FEET.
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   2   JOB NO.   1                      PAGE  15



 OPERATION RESVOR   STRUCTURE 13
        INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
        SURFACE ELEVATION =  1379.00

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.41                        41.6                       1382.53

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                3.74 WATERSHED INCHES;     115 CFS-HRS;       9.5 ACRE-FEET.


 OPERATION RUNOFF   XSECTION 166
        OUTPUT HYDROGRAPH =  3      AREA =    .28 SQ MI
        INPUT RUNOFF CURVE = 88.    TIME OF CONCENTRATION =   .75 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0995 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.33                        372.4                      (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                3.22 WATERSHED INCHES;     585 CFS-HRS;      48.3 ACRE-FEET.


 OPERATION ADDHYD   XSECTION 167
        INPUT HYDROGRAPHS 3,2     OUTPUT HYDROGRAPH 1
```

```
   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.33                        413.9                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  3.30 WATERSHED INCHES;     699 CFS-HRS;      57.8 ACRE-FEET.


 OPERATION ADDHYD   XSECTION 170
         INPUT HYDROGRAPHS 4,1     OUTPUT HYDROGRAPH 2

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.29                        1515.5                      (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  3.46 WATERSHED INCHES;    2753 CFS-HRS;     227.5 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 18
         INPUT HYDROGRAPH 2        OUTPUT HYDROGRAPH 1
         SURFACE ELEVATION =  1368.70
1
 TR20 ------------------------------------------------------------------------ SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   2   JOB NO.   1                      PAGE  16


   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      13.30                        407.1                        1370.73

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  3.46 WATERSHED INCHES;    2753 CFS-HRS;     227.5 ACRE-FEET.


 EXECUTIVE CONTROL ENDCMP    COMPUTATIONS COMPLETED FOR PASS   2
1
 TR20 ------------------------------------------------------------------------ SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   3   JOB NO.   1                      PAGE  17



 EXECUTIVE CONTROL COMPUT    FROM XSECTION   5  TO STRUCTURE 18           10 YR
   STARTING TIME =   .00       RAIN DEPTH =  5.25       RAIN DURATION =  1.00
   ANT. RUNOFF COND. = 2       MAIN TIME INCREMENT =   .100 HOURS
   ALTERNATE NO. =13           STORM NO. = 3            RAIN TABLE NO. = 2


 OPERATION RUNOFF   XSECTION   5
         OUTPUT HYDROGRAPH =  3      AREA =    .20 SQ MI
         INPUT RUNOFF CURVE = 89.    TIME OF CONCENTRATION =   .60 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0800 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.23                        368.9                       (RUNOFF)
```

```
   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                3.99 WATERSHED INCHES;     502 CFS-HRS;      41.5 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  25
        OUTPUT HYDROGRAPH =  1      AREA =    .16 SQ MI
        INPUT RUNOFF CURVE = 90.    TIME OF CONCENTRATION =   .57 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0765 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.22                        313.0                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.12 WATERSHED INCHES;     417 CFS-HRS;      34.5 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  30
        INPUT HYDROGRAPHS 1,3     OUTPUT HYDROGRAPH 2

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.22                        681.7                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.05 WATERSHED INCHES;     919 CFS-HRS;      76.0 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  35
        OUTPUT HYDROGRAPH =  1      AREA =    .16 SQ MI
        INPUT RUNOFF CURVE = 91.    TIME OF CONCENTRATION =   .53 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0710 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.19                        344.3                       (RUNOFF)
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                   PASS   3   JOB NO.   1                      PAGE  18


   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.18 WATERSHED INCHES;     442 CFS-HRS;      36.5 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  40
        INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 3

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.21                       1023.8                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.09 WATERSHED INCHES;    1361 CFS-HRS;     112.5 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 10
        INPUT HYDROGRAPH 3        OUTPUT HYDROGRAPH 1
```

```
        SURFACE ELEVATION =  1369.40

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.42                        776.9                        1376.50

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.09 WATERSHED INCHES;    1361 CFS-HRS;     112.5 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  45
        OUTPUT HYDROGRAPH =  2      AREA =    .04 SQ MI
        INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .40 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0528 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.11                        117.3                        (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.70 WATERSHED INCHES;     131 CFS-HRS;      10.8 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  50
        INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 4

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.36                        829.4                        (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.14 WATERSHED INCHES;    1492 CFS-HRS;     123.3 ACRE-FEET.
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                   PASS   3   JOB NO.   1                     PAGE  19



 OPERATION RUNOFF   XSECTION  53
        OUTPUT HYDROGRAPH =  6      AREA =    .16 SQ MI
        INPUT RUNOFF CURVE = 91.    TIME OF CONCENTRATION =   .60 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0794 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.23                        308.4                        (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.21 WATERSHED INCHES;     423 CFS-HRS;      35.0 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 15
        INPUT HYDROGRAPH 6        OUTPUT HYDROGRAPH 2
        SURFACE ELEVATION =  1373.00

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.72                        116.1                        1376.46

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
```

```
                4.19 WATERSHED INCHES;     421 CFS-HRS;      34.8 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  54
         INPUT HYDROGRAPHS 2,4     OUTPUT HYDROGRAPH 3

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.38                        936.0                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.15 WATERSHED INCHES;    1913 CFS-HRS;     158.1 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  55
         OUTPUT HYDROGRAPH =  2      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 92.    TIME OF CONCENTRATION =   .57 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0765 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.21                        336.0                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.35 WATERSHED INCHES;     453 CFS-HRS;      37.5 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  60
         INPUT HYDROGRAPHS 2,3     OUTPUT HYDROGRAPH 1
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   3   JOB NO.   1                     PAGE  20


    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.30                       1239.5                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.18 WATERSHED INCHES;    2366 CFS-HRS;     195.5 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  61
         OUTPUT HYDROGRAPH =  2      AREA =    .03 SQ MI
         INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .25 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0333 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.02                         90.0                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.66 WATERSHED INCHES;      82 CFS-HRS;       6.8 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  62
         INPUT HYDROGRAPHS 2,1     OUTPUT HYDROGRAPH 4

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
```

```
      12.28                        1267.6                         (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.20 WATERSHED INCHES;    2448 CFS-HRS;     202.3 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  65
        OUTPUT HYDROGRAPH =  1      AREA =    .02 SQ MI
        INPUT RUNOFF CURVE = 92.    TIME OF CONCENTRATION =   .28 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0379 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.05                         65.1                         (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.33 WATERSHED INCHES;      61 CFS-HRS;       5.1 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 11
        INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
        SURFACE ELEVATION =  1382.00

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.17                         50.0                          1383.72
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   3   JOB NO.   1                      PAGE  21


   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.34 WATERSHED INCHES;      62 CFS-HRS;       5.1 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  70
        OUTPUT HYDROGRAPH =  1      AREA =    .01 SQ MI
        INPUT RUNOFF CURVE = 93.    TIME OF CONCENTRATION =   .28 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0376 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.05                         45.1                         (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.41 WATERSHED INCHES;      43 CFS-HRS;       3.5 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  75
        INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 3

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.11                         90.1                         (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.36 WATERSHED INCHES;     104 CFS-HRS;       8.6 ACRE-FEET.
```

```
 OPERATION RUNOFF   XSECTION  80
         OUTPUT HYDROGRAPH =  2      AREA =    .01 SQ MI
         INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .26 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0341 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.03                        33.9                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  4.66 WATERSHED INCHES;      32 CFS-HRS;       2.6 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  85
         INPUT HYDROGRAPHS 3,2     OUTPUT HYDROGRAPH 1

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.08                        121.1                      (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  4.42 WATERSHED INCHES;     136 CFS-HRS;      11.2 ACRE-FEET.
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   3   JOB NO.   1                      PAGE  22



 OPERATION RESVOR   STRUCTURE 13
         INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
         SURFACE ELEVATION =  1379.00

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.44                        43.9                       1383.36

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  4.42 WATERSHED INCHES;     136 CFS-HRS;      11.2 ACRE-FEET.


 OPERATION RUNOFF   XSECTION 166
         OUTPUT HYDROGRAPH =  3      AREA =    .28 SQ MI
         INPUT RUNOFF CURVE = 88.    TIME OF CONCENTRATION =   .75 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0995 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.32                        446.5                      (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  3.88 WATERSHED INCHES;     705 CFS-HRS;      58.2 ACRE-FEET.


 OPERATION ADDHYD   XSECTION 167
         INPUT HYDROGRAPHS 3,2     OUTPUT HYDROGRAPH 1

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.32                        490.0                      (NULL)
```

```
   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                3.96 WATERSHED INCHES;     840 CFS-HRS;      69.5 ACRE-FEET.


 OPERATION ADDHYD   XSECTION 170
        INPUT HYDROGRAPHS 4,1     OUTPUT HYDROGRAPH 2

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.30                       1754.8                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.14 WATERSHED INCHES;    3289 CFS-HRS;     271.8 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 18
        INPUT HYDROGRAPH 2        OUTPUT HYDROGRAPH 1
        SURFACE ELEVATION =  1368.70
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                   PASS   3   JOB NO.   1                     PAGE  23


   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      13.22                       529.0                        1371.06

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                4.14 WATERSHED INCHES;    3289 CFS-HRS;     271.8 ACRE-FEET.


 EXECUTIVE CONTROL ENDCMP    COMPUTATIONS COMPLETED FOR PASS   3
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                   PASS   4   JOB NO.   1                     PAGE  24



 EXECUTIVE CONTROL COMPUT    FROM XSECTION   5  TO STRUCTURE 18           25 YR
    STARTING TIME =   .00       RAIN DEPTH =  6.30       RAIN DURATION =  1.00
    ANT. RUNOFF COND. = 2       MAIN TIME INCREMENT =   .100 HOURS
    ALTERNATE NO. =14           STORM NO. = 4            RAIN TABLE NO. = 2


 OPERATION RUNOFF   XSECTION   5
        OUTPUT HYDROGRAPH =  3      AREA =    .20 SQ MI
        INPUT RUNOFF CURVE = 89.    TIME OF CONCENTRATION =   .60 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0800 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.23                       460.4                        (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                5.00 WATERSHED INCHES;     630 CFS-HRS;      52.1 ACRE-FEET.
```

```
 OPERATION RUNOFF   XSECTION  25
         OUTPUT HYDROGRAPH =  1      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 90.    TIME OF CONCENTRATION =   .57 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0765 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.21                        385.7                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.14 WATERSHED INCHES;     520 CFS-HRS;      43.0 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  30
         INPUT HYDROGRAPHS 1,3     OUTPUT HYDROGRAPH 2

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.22                        845.7                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.06 WATERSHED INCHES;    1150 CFS-HRS;      95.1 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  35
         OUTPUT HYDROGRAPH =  1      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 91.    TIME OF CONCENTRATION =   .53 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0710 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.19                        424.0                       (RUNOFF)
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   4   JOB NO.   1                      PAGE  25


    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.20 WATERSHED INCHES;     550 CFS-HRS;      45.4 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  40
         INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 3

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.21                       1267.0                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.11 WATERSHED INCHES;    1700 CFS-HRS;     140.5 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 10
         INPUT HYDROGRAPH 3        OUTPUT HYDROGRAPH 1
         SURFACE ELEVATION =  1369.40

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.44                        905.6                        1377.28
```

```
   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                5.11 WATERSHED INCHES;    1700 CFS-HRS;     140.5 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  45
        OUTPUT HYDROGRAPH =  2      AREA =    .04 SQ MI
        INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .40 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0528 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.11                        140.7                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                5.74 WATERSHED INCHES;     160 CFS-HRS;      13.2 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  50
        INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 4

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.39                        963.8                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                5.16 WATERSHED INCHES;    1860 CFS-HRS;     153.7 ACRE-FEET.
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   4   JOB NO.   1                     PAGE  26



 OPERATION RUNOFF   XSECTION  53
        OUTPUT HYDROGRAPH =  6      AREA =    .16 SQ MI
        INPUT RUNOFF CURVE = 91.    TIME OF CONCENTRATION =   .60 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0794 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.23                        379.9                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                5.23 WATERSHED INCHES;     526 CFS-HRS;      43.5 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 15
        INPUT HYDROGRAPH 6        OUTPUT HYDROGRAPH 2
        SURFACE ELEVATION =  1373.00

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.75                        130.6                        1377.06

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                5.21 WATERSHED INCHES;     524 CFS-HRS;      43.3 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  54
```

```
        INPUT HYDROGRAPHS 2,4     OUTPUT HYDROGRAPH 3

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.40                       1083.8                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                 5.17 WATERSHED INCHES;    2384 CFS-HRS;     197.0 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  55
        OUTPUT HYDROGRAPH =  2      AREA =    .16 SQ MI
        INPUT RUNOFF CURVE = 92.    TIME OF CONCENTRATION =   .57 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0765 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.21                       409.3                        (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                 5.38 WATERSHED INCHES;     561 CFS-HRS;      46.3 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  60
        INPUT HYDROGRAPHS 2,3     OUTPUT HYDROGRAPH 1
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                   PASS   4   JOB NO.   1                     PAGE  27


   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.30                       1447.3                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                 5.21 WATERSHED INCHES;    2944 CFS-HRS;     243.3 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  61
        OUTPUT HYDROGRAPH =  2      AREA =    .03 SQ MI
        INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .25 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0333 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.02                       108.9                        (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                 5.70 WATERSHED INCHES;     100 CFS-HRS;       8.3 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  62
        INPUT HYDROGRAPHS 2,1     OUTPUT HYDROGRAPH 4

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.27                       1482.8                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                 5.22 WATERSHED INCHES;    3045 CFS-HRS;     251.6 ACRE-FEET.
```

```
 OPERATION RUNOFF   XSECTION  65
         OUTPUT HYDROGRAPH =  1      AREA =    .02 SQ MI
         INPUT RUNOFF CURVE = 92.    TIME OF CONCENTRATION =   .28 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0379 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.05                        80.0                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.36 WATERSHED INCHES;      76 CFS-HRS;       6.3 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 11
         INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
         SURFACE ELEVATION =  1382.00

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.17                        62.5                       1383.95
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   4   JOB NO.   1                      PAGE  28


    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.36 WATERSHED INCHES;      76 CFS-HRS;       6.3 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  70
         OUTPUT HYDROGRAPH =  1      AREA =    .01 SQ MI
         INPUT RUNOFF CURVE = 93.    TIME OF CONCENTRATION =   .28 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0376 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.05                        54.9                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.44 WATERSHED INCHES;      53 CFS-HRS;       4.4 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  75
         INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 3

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.10                       112.0                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.39 WATERSHED INCHES;     129 CFS-HRS;      10.6 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  80
         OUTPUT HYDROGRAPH =  2      AREA =    .01 SQ MI
         INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .26 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0341 HOURS
```

```
   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.03                        41.3                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.71 WATERSHED INCHES;      39 CFS-HRS;       3.2 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  85
        INPUT HYDROGRAPHS 3,2     OUTPUT HYDROGRAPH 1

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.08                        150.0                      (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.46 WATERSHED INCHES;     167 CFS-HRS;      13.8 ACRE-FEET.
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   4   JOB NO.   1                     PAGE  29



 OPERATION RESVOR   STRUCTURE 13
        INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
        SURFACE ELEVATION =  1379.00

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.48                        48.0                       1385.03

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.45 WATERSHED INCHES;     167 CFS-HRS;      13.8 ACRE-FEET.


 OPERATION RUNOFF   XSECTION 166
        OUTPUT HYDROGRAPH =  3      AREA =    .28 SQ MI
        INPUT RUNOFF CURVE = 88.    TIME OF CONCENTRATION =   .75 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0995 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.32                        557.5                      (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  4.89 WATERSHED INCHES;     888 CFS-HRS;      73.3 ACRE-FEET.


 OPERATION ADDHYD   XSECTION 167
        INPUT HYDROGRAPHS 3,2     OUTPUT HYDROGRAPH 1

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.32                        604.7                      (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  4.97 WATERSHED INCHES;    1055 CFS-HRS;      87.2 ACRE-FEET.
```

```
 OPERATION ADDHYD   XSECTION 170
         INPUT HYDROGRAPHS 4,1     OUTPUT HYDROGRAPH 2

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.29                        2082.8                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   5.16 WATERSHED INCHES;    4100 CFS-HRS;     338.8 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 18
         INPUT HYDROGRAPH 2        OUTPUT HYDROGRAPH 1
         SURFACE ELEVATION =  1368.70
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   4   JOB NO.   1                     PAGE  30


    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       13.11                         791.9                        1371.45

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   5.15 WATERSHED INCHES;    4098 CFS-HRS;     338.7 ACRE-FEET.


 EXECUTIVE CONTROL ENDCMP    COMPUTATIONS COMPLETED FOR PASS   4
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   5   JOB NO.   1                     PAGE  31



 EXECUTIVE CONTROL COMPUT    FROM XSECTION   5  TO STRUCTURE 18           50 YR
    STARTING TIME =   .00       RAIN DEPTH =  7.10       RAIN DURATION =  1.00
    ANT. RUNOFF COND. = 2       MAIN TIME INCREMENT =   .100 HOURS
    ALTERNATE NO. =15           STORM NO. = 5            RAIN TABLE NO. = 2


 OPERATION RUNOFF   XSECTION   5
         OUTPUT HYDROGRAPH =  3      AREA =    .20 SQ MI
         INPUT RUNOFF CURVE = 89.    TIME OF CONCENTRATION =   .60 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0800 HOURS

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.23                         528.6                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   5.78 WATERSHED INCHES;     728 CFS-HRS;      60.2 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  25
         OUTPUT HYDROGRAPH =  1      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 90.    TIME OF CONCENTRATION =   .57 HOURS
```

```
         COMPUTED INTERNAL TIME INCREMENT =  .0765 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.21                        442.1                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.93 WATERSHED INCHES;     599 CFS-HRS;      49.5 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  30
         INPUT HYDROGRAPHS 1,3     OUTPUT HYDROGRAPH 2

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.22                        970.2                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.84 WATERSHED INCHES;    1327 CFS-HRS;     109.7 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  35
         OUTPUT HYDROGRAPH =  1      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 91.    TIME OF CONCENTRATION =   .53 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0710 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.19                        484.5                       (RUNOFF)
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   5   JOB NO.   1                      PAGE  32


    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.99 WATERSHED INCHES;     633 CFS-HRS;      52.3 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  40
         INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 3

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.21                       1452.3                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.89 WATERSHED INCHES;    1960 CFS-HRS;     162.0 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 10
         INPUT HYDROGRAPH 3        OUTPUT HYDROGRAPH 1
         SURFACE ELEVATION =  1369.40

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.45                        994.0                        1377.83

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.89 WATERSHED INCHES;    1960 CFS-HRS;     162.0 ACRE-FEET.
```

```
 OPERATION RUNOFF   XSECTION  45
         OUTPUT HYDROGRAPH =  2      AREA =    .04 SQ MI
         INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .40 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0528 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.11                        158.9                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  6.53 WATERSHED INCHES;     182 CFS-HRS;      15.0 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  50
         INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 4

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.39                       1058.4                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.94 WATERSHED INCHES;    2142 CFS-HRS;     177.0 ACRE-FEET.
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   5   JOB NO.   1                      PAGE  33



 OPERATION RUNOFF   XSECTION  53
         OUTPUT HYDROGRAPH =  6      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 91.    TIME OF CONCENTRATION =   .60 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0794 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.22                        434.9                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  6.02 WATERSHED INCHES;     605 CFS-HRS;      50.0 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 15
         INPUT HYDROGRAPH 6        OUTPUT HYDROGRAPH 2
         SURFACE ELEVATION =  1373.00

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.78                        139.5                        1377.49

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  6.00 WATERSHED INCHES;     603 CFS-HRS;      49.8 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  54
         INPUT HYDROGRAPHS 2,4     OUTPUT HYDROGRAPH 3

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.41                       1188.0                       (NULL)
```

```
   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                5.95 WATERSHED INCHES;    2745 CFS-HRS;     226.9 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  55
        OUTPUT HYDROGRAPH =  2      AREA =    .16 SQ MI
        INPUT RUNOFF CURVE = 92.    TIME OF CONCENTRATION =   .57 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0765 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.21                        470.4                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.17 WATERSHED INCHES;     643 CFS-HRS;      53.1 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  60
        INPUT HYDROGRAPHS 2,3     OUTPUT HYDROGRAPH 1
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   5   JOB NO.   1                     PAGE  34


   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.29                       1602.2                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                5.99 WATERSHED INCHES;    3388 CFS-HRS;     280.0 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  61
        OUTPUT HYDROGRAPH =  2      AREA =    .03 SQ MI
        INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .25 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0333 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.02                        123.3                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.50 WATERSHED INCHES;     115 CFS-HRS;       9.5 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  62
        INPUT HYDROGRAPHS 2,1     OUTPUT HYDROGRAPH 4

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.27                       1642.8                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.01 WATERSHED INCHES;    3503 CFS-HRS;     289.5 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  65
        OUTPUT HYDROGRAPH =  1      AREA =    .02 SQ MI
```

```
        INPUT RUNOFF CURVE = 92.    TIME OF CONCENTRATION =   .28 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0379 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.05                        90.8                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.15 WATERSHED INCHES;      87 CFS-HRS;       7.2 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 11
        INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
        SURFACE ELEVATION =  1382.00

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.16                        68.0                        1384.16
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                   PASS   5   JOB NO.   1                     PAGE  35


   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.16 WATERSHED INCHES;      87 CFS-HRS;       7.2 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  70
        OUTPUT HYDROGRAPH =  1      AREA =    .01 SQ MI
        INPUT RUNOFF CURVE = 93.    TIME OF CONCENTRATION =   .28 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0376 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.04                        62.6                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.23 WATERSHED INCHES;      60 CFS-HRS;       5.0 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  75
        INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 3

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.09                       126.0                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.18 WATERSHED INCHES;     147 CFS-HRS;      12.2 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  80
        OUTPUT HYDROGRAPH =  2      AREA =    .01 SQ MI
        INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .26 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0341 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.03                        46.9                       (RUNOFF)
```

```
   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.50 WATERSHED INCHES;      44 CFS-HRS;       3.6 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  85
        INPUT HYDROGRAPHS 3,2     OUTPUT HYDROGRAPH 1

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.07                       169.6                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.25 WATERSHED INCHES;     192 CFS-HRS;      15.8 ACRE-FEET.
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   5   JOB NO.   1                      PAGE  36



 OPERATION RESVOR   STRUCTURE 13
        INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
        SURFACE ELEVATION =  1379.00

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.50                        51.6                        1386.49

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.25 WATERSHED INCHES;     192 CFS-HRS;      15.8 ACRE-FEET.


 OPERATION RUNOFF   XSECTION 166
        OUTPUT HYDROGRAPH =  3      AREA =    .28 SQ MI
        INPUT RUNOFF CURVE = 88.    TIME OF CONCENTRATION =   .75 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0995 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.32                       641.9                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                5.66 WATERSHED INCHES;    1028 CFS-HRS;      85.0 ACRE-FEET.


 OPERATION ADDHYD   XSECTION 167
        INPUT HYDROGRAPHS 3,2     OUTPUT HYDROGRAPH 1

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.32                       692.2                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                5.75 WATERSHED INCHES;    1220 CFS-HRS;     100.8 ACRE-FEET.


 OPERATION ADDHYD   XSECTION 170
        INPUT HYDROGRAPHS 4,1     OUTPUT HYDROGRAPH 2

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
```

```
      12.29                        2329.4                         (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                5.94 WATERSHED INCHES;    4722 CFS-HRS;     390.3 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 18
         INPUT HYDROGRAPH 2        OUTPUT HYDROGRAPH 1
         SURFACE ELEVATION =  1368.70
1
 TR20 ------------------------------------------------------------------------ SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   5   JOB NO.   1                      PAGE  37


   PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      13.09                         978.1                         1371.73

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                5.94 WATERSHED INCHES;    4721 CFS-HRS;     390.2 ACRE-FEET.


 EXECUTIVE CONTROL ENDCMP    COMPUTATIONS COMPLETED FOR PASS   5
1
 TR20 ------------------------------------------------------------------------ SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   6   JOB NO.   1                      PAGE  38



 EXECUTIVE CONTROL COMPUT    FROM XSECTION   5  TO STRUCTURE 18          100 YR
    STARTING TIME =   .00       RAIN DEPTH =  7.80       RAIN DURATION =  1.00
    ANT. RUNOFF COND. = 2       MAIN TIME INCREMENT =   .100 HOURS
    ALTERNATE NO. =16           STORM NO. = 6            RAIN TABLE NO. = 2


 OPERATION RUNOFF   XSECTION   5
         OUTPUT HYDROGRAPH =  3      AREA =    .20 SQ MI
         INPUT RUNOFF CURVE = 89.    TIME OF CONCENTRATION =   .60 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0800 HOURS

   PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.23                         585.7                         (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.46 WATERSHED INCHES;     814 CFS-HRS;      67.3 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  25
         OUTPUT HYDROGRAPH =  1      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 90.    TIME OF CONCENTRATION =   .57 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0765 HOURS

   PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.21                         491.4                         (RUNOFF)
```

```
   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.61 WATERSHED INCHES;     668 CFS-HRS;      55.2 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  30
         INPUT HYDROGRAPHS 1,3     OUTPUT HYDROGRAPH 2

   PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.22                        1076.7                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.53 WATERSHED INCHES;    1483 CFS-HRS;     122.5 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  35
         OUTPUT HYDROGRAPH =  1      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 91.    TIME OF CONCENTRATION =   .53 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0710 HOURS

   PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.19                        537.2                        (RUNOFF)
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   6   JOB NO.   1                      PAGE  39


   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.68 WATERSHED INCHES;     706 CFS-HRS;      58.3 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  40
         INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 3

   PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.21                        1610.7                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.58 WATERSHED INCHES;    2188 CFS-HRS;     180.9 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 10
         INPUT HYDROGRAPH 3        OUTPUT HYDROGRAPH 1
         SURFACE ELEVATION =  1369.40

   PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.46                        1071.4                        1378.31

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.57 WATERSHED INCHES;    2188 CFS-HRS;     180.8 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  45
         OUTPUT HYDROGRAPH =  2      AREA =    .04 SQ MI
         INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .40 HOURS
```

```
         COMPUTED INTERNAL TIME INCREMENT =  .0528 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.11                       174.8                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  7.23 WATERSHED INCHES;     202 CFS-HRS;      16.7 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  50
         INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 4

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.40                       1139.1                      (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  6.63 WATERSHED INCHES;    2390 CFS-HRS;     197.5 ACRE-FEET.
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   6   JOB NO.   1                      PAGE  40



 OPERATION RUNOFF   XSECTION  53
         OUTPUT HYDROGRAPH =  6      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 91.    TIME OF CONCENTRATION =   .60 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0794 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.22                       480.9                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  6.71 WATERSHED INCHES;     674 CFS-HRS;      55.7 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 15
         INPUT HYDROGRAPH 6        OUTPUT HYDROGRAPH 2
         SURFACE ELEVATION =  1373.00

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.80                       147.3                        1377.86

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  6.69 WATERSHED INCHES;     672 CFS-HRS;      55.6 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  54
         INPUT HYDROGRAPHS 2,4     OUTPUT HYDROGRAPH 3

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.42                       1275.6                      (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  6.64 WATERSHED INCHES;    3062 CFS-HRS;     253.0 ACRE-FEET.
```

```
 OPERATION RUNOFF   XSECTION  55
         OUTPUT HYDROGRAPH =  2      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 92.    TIME OF CONCENTRATION =   .57 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0765 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.21                        518.0                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  6.86 WATERSHED INCHES;     715 CFS-HRS;      59.1 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  60
         INPUT HYDROGRAPHS 2,3     OUTPUT HYDROGRAPH 1
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   6   JOB NO.   1                     PAGE  41


    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.29                       1731.9                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  6.68 WATERSHED INCHES;    3776 CFS-HRS;     312.1 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  61
         OUTPUT HYDROGRAPH =  2      AREA =    .03 SQ MI
         INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .25 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0333 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.02                        135.9                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  7.19 WATERSHED INCHES;     127 CFS-HRS;      10.5 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  62
         INPUT HYDROGRAPHS 2,1     OUTPUT HYDROGRAPH 4

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.26                       1777.1                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  6.69 WATERSHED INCHES;    3903 CFS-HRS;     322.6 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  65
         OUTPUT HYDROGRAPH =  1      AREA =    .02 SQ MI
         INPUT RUNOFF CURVE = 92.    TIME OF CONCENTRATION =   .28 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0379 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
```

```
      12.05                         100.2                         (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.84 WATERSHED INCHES;      97 CFS-HRS;       8.0 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 11
        INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
        SURFACE ELEVATION =  1382.00

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.19                         71.0                         1384.34
1
 TR20 ------------------------------------------------------------------------ SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   6   JOB NO.   1                      PAGE  42


   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.83 WATERSHED INCHES;      97 CFS-HRS;       8.0 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  70
        OUTPUT HYDROGRAPH =  1      AREA =    .01 SQ MI
        INPUT RUNOFF CURVE = 93.    TIME OF CONCENTRATION =   .28 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0376 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.05                         69.2                         (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.92 WATERSHED INCHES;      67 CFS-HRS;       5.5 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  75
        INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 3

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.09                         135.4                        (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                6.87 WATERSHED INCHES;     164 CFS-HRS;      13.6 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  80
        OUTPUT HYDROGRAPH =  2      AREA =    .01 SQ MI
        INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .26 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0341 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.03                         51.6                         (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                7.20 WATERSHED INCHES;      49 CFS-HRS;       4.0 ACRE-FEET.
```

```
 OPERATION ADDHYD   XSECTION  85
         INPUT HYDROGRAPHS 3,2     OUTPUT HYDROGRAPH 1

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.06                         184.1                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   6.95 WATERSHED INCHES;     213 CFS-HRS;      17.6 ACRE-FEET.
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   6   JOB NO.   1                       PAGE  43



 OPERATION RESVOR   STRUCTURE 13
         INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
         SURFACE ELEVATION =  1379.00

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.53                          54.7                        1387.76

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   6.94 WATERSHED INCHES;     213 CFS-HRS;      17.6 ACRE-FEET.


 OPERATION RUNOFF   XSECTION 166
         OUTPUT HYDROGRAPH =  3      AREA =    .28 SQ MI
         INPUT RUNOFF CURVE = 88.    TIME OF CONCENTRATION =   .75 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0995 HOURS

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.32                         715.5                       (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   6.34 WATERSHED INCHES;    1152 CFS-HRS;      95.2 ACRE-FEET.


 OPERATION ADDHYD   XSECTION 167
         INPUT HYDROGRAPHS 3,2     OUTPUT HYDROGRAPH 1

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.32                         768.4                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   6.43 WATERSHED INCHES;    1364 CFS-HRS;     112.8 ACRE-FEET.


 OPERATION ADDHYD   XSECTION 170
         INPUT HYDROGRAPHS 4,1     OUTPUT HYDROGRAPH 2

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.29                        2539.0                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   6.62 WATERSHED INCHES;    5268 CFS-HRS;     435.3 ACRE-FEET.
```

```
 OPERATION RESVOR   STRUCTURE 18
         INPUT HYDROGRAPH 2        OUTPUT HYDROGRAPH 1
         SURFACE ELEVATION =  1368.70
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   6   JOB NO.   1                     PAGE  44


    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       13.08                        1132.6                       1371.96

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   6.62 WATERSHED INCHES;    5267 CFS-HRS;     435.2 ACRE-FEET.


 EXECUTIVE CONTROL ENDCMP    COMPUTATIONS COMPLETED FOR PASS   6
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   7   JOB NO.   1                     PAGE  45



 EXECUTIVE CONTROL COMPUT    FROM XSECTION   5  TO STRUCTURE 18          500 YR
    STARTING TIME =   .00       RAIN DEPTH =  9.35       RAIN DURATION =  1.00
    ANT. RUNOFF COND. = 2       MAIN TIME INCREMENT =   .100 HOURS
    ALTERNATE NO. =17           STORM NO. = 7            RAIN TABLE NO. = 2


 OPERATION RUNOFF   XSECTION   5
         OUTPUT HYDROGRAPH =  3      AREA =    .20 SQ MI
         INPUT RUNOFF CURVE = 89.    TIME OF CONCENTRATION =   .60 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0800 HOURS

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.23                        716.4                        (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   7.98 WATERSHED INCHES;    1006 CFS-HRS;      83.1 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  25
         OUTPUT HYDROGRAPH =  1      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 90.    TIME OF CONCENTRATION =   .57 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0765 HOURS

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.21                        601.5                        (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   8.15 WATERSHED INCHES;     823 CFS-HRS;      68.0 ACRE-FEET.
```

```
 OPERATION ADDHYD   XSECTION  30
         INPUT HYDROGRAPHS 1,3     OUTPUT HYDROGRAPH 2

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.22                        1317.2                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   8.05 WATERSHED INCHES;    1829 CFS-HRS;     151.2 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  35
         OUTPUT HYDROGRAPH =  1      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 91.    TIME OF CONCENTRATION =   .53 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0710 HOURS

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.19                        654.2                        (RUNOFF)
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   7   JOB NO.   1                      PAGE  46


    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   8.20 WATERSHED INCHES;     867 CFS-HRS;      71.6 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  40
         INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 3

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.21                        1968.6                       (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   8.10 WATERSHED INCHES;    2696 CFS-HRS;     222.8 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 10
         INPUT HYDROGRAPH 3        OUTPUT HYDROGRAPH 1
         SURFACE ELEVATION =  1369.40

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.49                        1224.3                        1379.30

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   8.10 WATERSHED INCHES;    2696 CFS-HRS;     222.8 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  45
         OUTPUT HYDROGRAPH =  2      AREA =    .04 SQ MI
         INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .40 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0528 HOURS

    PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       12.11                        210.9                        (RUNOFF)
```

```
   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                8.78 WATERSHED INCHES;     245 CFS-HRS;      20.2 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  50
         INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 4

   PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.42                        1300.0                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                8.15 WATERSHED INCHES;    2941 CFS-HRS;     243.0 ACRE-FEET.
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   7   JOB NO.   1                     PAGE  47



 OPERATION RUNOFF   XSECTION  53
         OUTPUT HYDROGRAPH =  6      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 91.    TIME OF CONCENTRATION =   .60 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0794 HOURS

   PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.22                        584.7                        (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                8.24 WATERSHED INCHES;     828 CFS-HRS;      68.5 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 15
         INPUT HYDROGRAPH 6        OUTPUT HYDROGRAPH 2
         SURFACE ELEVATION =  1373.00

   PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.84                        165.0                       1378.72

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                8.21 WATERSHED INCHES;     826 CFS-HRS;      68.2 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  54
         INPUT HYDROGRAPHS 2,4     OUTPUT HYDROGRAPH 3

   PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.44                        1451.6                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                8.17 WATERSHED INCHES;    3766 CFS-HRS;     311.2 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  55
         OUTPUT HYDROGRAPH =  2      AREA =    .16 SQ MI
         INPUT RUNOFF CURVE = 92.    TIME OF CONCENTRATION =   .57 HOURS
```

```
        COMPUTED INTERNAL TIME INCREMENT =  .0765 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.21                        626.5                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                8.40 WATERSHED INCHES;     875 CFS-HRS;      72.3 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  60
        INPUT HYDROGRAPHS 2,3     OUTPUT HYDROGRAPH 1
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   7   JOB NO.   1                      PAGE  48


   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.29                       2004.3                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                8.21 WATERSHED INCHES;    4641 CFS-HRS;     383.5 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  61
        OUTPUT HYDROGRAPH =  2      AREA =    .03 SQ MI
        INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .25 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0333 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.02                        163.6                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                8.74 WATERSHED INCHES;     154 CFS-HRS;      12.7 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  62
        INPUT HYDROGRAPHS 2,1     OUTPUT HYDROGRAPH 4

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.26                       2060.5                       (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                8.22 WATERSHED INCHES;    4795 CFS-HRS;     396.3 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  65
        OUTPUT HYDROGRAPH =  1      AREA =    .02 SQ MI
        INPUT RUNOFF CURVE = 92.    TIME OF CONCENTRATION =   .28 HOURS
        COMPUTED INTERNAL TIME INCREMENT =  .0379 HOURS

   PEAK TIME(HRS)            PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.05                        121.5                       (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                8.37 WATERSHED INCHES;     119 CFS-HRS;       9.8 ACRE-FEET.
```

```
 OPERATION RESVOR   STRUCTURE 11
         INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
         SURFACE ELEVATION =  1382.00

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)         PEAK ELEVATION(FEET)
       12.21                        79.1                        1384.81
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   7   JOB NO.   1                      PAGE  49


    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  8.38 WATERSHED INCHES;     119 CFS-HRS;       9.8 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  70
         OUTPUT HYDROGRAPH =  1      AREA =    .01 SQ MI
         INPUT RUNOFF CURVE = 93.    TIME OF CONCENTRATION =   .28 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0376 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)         PEAK ELEVATION(FEET)
       12.04                        83.7                        (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  8.46 WATERSHED INCHES;      82 CFS-HRS;       6.8 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  75
         INPUT HYDROGRAPHS 1,2     OUTPUT HYDROGRAPH 3

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)         PEAK ELEVATION(FEET)
       12.07                       156.1                        (NULL)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  8.40 WATERSHED INCHES;     201 CFS-HRS;      16.6 ACRE-FEET.


 OPERATION RUNOFF   XSECTION  80
         OUTPUT HYDROGRAPH =  2      AREA =    .01 SQ MI
         INPUT RUNOFF CURVE = 95.    TIME OF CONCENTRATION =   .26 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0341 HOURS

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)         PEAK ELEVATION(FEET)
       12.03                        61.9                        (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  8.74 WATERSHED INCHES;      59 CFS-HRS;       4.9 ACRE-FEET.


 OPERATION ADDHYD   XSECTION  85
         INPUT HYDROGRAPHS 3,2     OUTPUT HYDROGRAPH 1

    PEAK TIME(HRS)            PEAK DISCHARGE(CFS)         PEAK ELEVATION(FEET)
```

```
      12.05                         215.7                          (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                8.49 WATERSHED INCHES;     260 CFS-HRS;      21.5 ACRE-FEET.
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    PASS   7   JOB NO.   1                      PAGE  50



 OPERATION RESVOR   STRUCTURE 13
         INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
         SURFACE ELEVATION =  1379.00

   PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.59                          61.4                         1390.51

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                8.48 WATERSHED INCHES;     260 CFS-HRS;      21.5 ACRE-FEET.


 OPERATION RUNOFF   XSECTION 166
         OUTPUT HYDROGRAPH =  3      AREA =    .28 SQ MI
         INPUT RUNOFF CURVE = 88.    TIME OF CONCENTRATION =   .75 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0995 HOURS

   PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.32                          878.0                        (RUNOFF)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                7.86 WATERSHED INCHES;    1427 CFS-HRS;     117.9 ACRE-FEET.


 OPERATION ADDHYD   XSECTION 167
         INPUT HYDROGRAPHS 3,2     OUTPUT HYDROGRAPH 1

   PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.32                          936.2                        (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                7.95 WATERSHED INCHES;    1687 CFS-HRS;     139.4 ACRE-FEET.


 OPERATION ADDHYD   XSECTION 170
         INPUT HYDROGRAPHS 4,1     OUTPUT HYDROGRAPH 2

   PEAK TIME(HRS)             PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      12.29                         2987.3                        (NULL)

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                8.15 WATERSHED INCHES;    6482 CFS-HRS;     535.7 ACRE-FEET.


 OPERATION RESVOR   STRUCTURE 18
         INPUT HYDROGRAPH 2        OUTPUT HYDROGRAPH 1
```

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
13.06	1456.5	1372.44

RUNOFF ABOVE BASEFLOW (BASEFLOW = .00 CFS)
8.15 WATERSHED INCHES; 6481 CFS-HRS; 535.6 ACRE-FEET.

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 7

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
RAINFALL OF 3.50 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
RAINTABLE NUMBER 2, ARC 2							
MAIN TIME INCREMENT .100 HOURS							
ALTERNATE 11 STORM 1							
XSECTION 5	RUNOFF	.20	2.34	---	12.24	219	1095.0
XSECTION 25	RUNOFF	.16	2.46	---	12.22	189	1181.3
XSECTION 30	ADDHYD	.35	2.39	---	12.23	408	1165.7
XSECTION 35	RUNOFF	.16	2.50	---	12.20	210	1312.5
XSECTION 40	ADDHYD	.52	2.42	---	12.22	617	1186.5
STRUCTURE 10	RESVOR	.52	2.42	1375.15	12.38	515	990.4
XSECTION 45	RUNOFF	.04	2.97	---	12.11	76	1900.0
XSECTION 50	ADDHYD	.56	2.47	---	12.35	554	989.3
XSECTION 53	RUNOFF	.16	2.53	---	12.23	189	1181.3
STRUCTURE 15	RESVOR	.16	2.51	1375.44	12.64	86	537.5
XSECTION 54	ADDHYD	.71	2.48	---	12.36	632	890.1
XSECTION 55	RUNOFF	.16	2.65	---	12.22	209	1306.3
XSECTION 60	ADDHYD	.88	2.51	---	12.31	822	934.1
XSECTION 61	RUNOFF	.03	2.94	---	12.03	58	1933.3
XSECTION 62	ADDHYD	.90	2.52	---	12.30	839	932.2

XSECTION	65	RUNOFF	.02	2.63	---	12.05	41	2050.0
STRUCTURE	11	RESVOR	.02	2.64	1383.31	12.21	28	1400.0
XSECTION	70	RUNOFF	.01	2.70	---	12.05	28	2800.0
XSECTION	75	ADDHYD	.04	2.67	---	12.13	50	1250.0
XSECTION	80	RUNOFF	.01	2.94	---	12.03	22	2200.0
XSECTION	85	ADDHYD	.05	2.72	---	12.10	69	1380.0
STRUCTURE	13	RESVOR	.05	2.72	1381.36	12.34	38	760.0
XSECTION	166	RUNOFF	.28	2.25	---	12.33	262	935.7
XSECTION	167	ADDHYD	.33	2.32	---	12.33	300	909.1
XSECTION	170	ADDHYD	1.23	2.47	---	12.31	1138	925.2
STRUCTURE	18	RESVOR	1.23	2.47	1370.21	13.45	245	199.2

1

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 4.55 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 12 STORM 2

XSECTION	5	RUNOFF	.20	3.32	---	12.23	309	1545.0
XSECTION	25	RUNOFF	.16	3.45	---	12.22	263	1643.8
XSECTION	30	ADDHYD	.35	3.38	---	12.22	572	1634.3
XSECTION	35	RUNOFF	.16	3.50	---	12.19	291	1818.8
XSECTION	40	ADDHYD	.52	3.42	---	12.21	861	1655.8
STRUCTURE	10	RESVOR	.52	3.42	1375.94	12.40	677	1301.9
XSECTION	45	RUNOFF	.04	4.01	---	12.11	100	2500.0
XSECTION	50	ADDHYD	.56	3.46	---	12.35	725	1294.6
XSECTION	53	RUNOFF	.16	3.53	---	12.23	263	1643.8
STRUCTURE	15	RESVOR	.16	3.52	1376.06	12.69	106	662.5
XSECTION	54	ADDHYD	.71	3.47	---	12.37	821	1156.3
XSECTION	55	RUNOFF	.16	3.67	---	12.22	285	1781.3
XSECTION	60	ADDHYD	.88	3.51	---	12.29	1080	1227.3
XSECTION	61	RUNOFF	.03	3.97	---	12.03	77	2566.7
XSECTION	62	ADDHYD	.90	3.52	---	12.27	1105	1227.8
XSECTION	65	RUNOFF	.02	3.65	---	12.05	55	2750.0
STRUCTURE	11	RESVOR	.02	3.65	1383.56	12.18	41	2050.0

XSECTION	70	RUNOFF	.01	3.72	---	12.05	38	3800.0
XSECTION	75	ADDHYD	.04	3.68	---	12.11	75	1875.0
XSECTION	80	RUNOFF	.01	3.97	---	12.03	29	2900.0
XSECTION	85	ADDHYD	.05	3.74	---	12.09	101	2020.0
STRUCTURE	13	RESVOR	.05	3.74	1382.53	12.41	42	840.0
XSECTION	166	RUNOFF	.28	3.22	---	12.33	372	1328.6
XSECTION	167	ADDHYD	.33	3.30	---	12.33	414	1254.5

1

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 12 STORM 2							
XSECTION 170	ADDHYD	1.23	3.46	---	12.29	1516	1232.5
STRUCTURE 18	RESVOR	1.23	3.46	1370.73	13.30	407	330.9

RAINFALL OF 5.25 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE	13	STORM	3					
XSECTION	5	RUNOFF	.20	3.99	---	12.23	369	1845.0
XSECTION	25	RUNOFF	.16	4.12	---	12.22	313	1956.3
XSECTION	30	ADDHYD	.35	4.05	---	12.22	682	1948.6
XSECTION	35	RUNOFF	.16	4.18	---	12.19	344	2150.0
XSECTION	40	ADDHYD	.52	4.09	---	12.21	1024	1969.2
STRUCTURE	10	RESVOR	.52	4.09	1376.50	12.42	777	1494.2
XSECTION	45	RUNOFF	.04	4.70	---	12.11	117	2925.0
XSECTION	50	ADDHYD	.56	4.14	---	12.36	829	1480.4
XSECTION	53	RUNOFF	.16	4.21	---	12.23	308	1925.0
STRUCTURE	15	RESVOR	.16	4.19	1376.46	12.72	116	725.0
XSECTION	54	ADDHYD	.71	4.15	---	12.38	936	1318.3
XSECTION	55	RUNOFF	.16	4.35	---	12.21	336	2100.0
XSECTION	60	ADDHYD	.88	4.18	---	12.30	1239	1408.0
XSECTION	61	RUNOFF	.03	4.66	---	12.02	90	3000.0
XSECTION	62	ADDHYD	.90	4.20	---	12.28	1268	1408.9
XSECTION	65	RUNOFF	.02	4.33	---	12.05	65	3250.0
STRUCTURE	11	RESVOR	.02	4.34	1383.72	12.17	50	2500.0

XSECTION	70	RUNOFF	.01	4.41	---	12.05	45	4500.0
XSECTION	75	ADDHYD	.04	4.36	---	12.11	90	2250.0
XSECTION	80	RUNOFF	.01	4.66	---	12.03	34	3400.0
XSECTION	85	ADDHYD	.05	4.42	---	12.08	121	2420.0
STRUCTURE	13	RESVOR	.05	4.42	1383.36	12.44	44	880.0
XSECTION	166	RUNOFF	.28	3.88	---	12.32	446	1592.9
XSECTION	167	ADDHYD	.33	3.96	---	12.32	490	1484.8

1

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 13 STORM 3							
XSECTION 170	ADDHYD	1.23	4.14	---	12.30	1755	1426.8
STRUCTURE 18	RESVOR	1.23	4.14	1371.06	13.22	529	430.1

RAINFALL OF 6.30 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE	14	STORM	4					
XSECTION	5	RUNOFF	.20	5.00	---	12.23	460	2300.0
XSECTION	25	RUNOFF	.16	5.14	---	12.21	386	2412.5
XSECTION	30	ADDHYD	.35	5.06	---	12.22	846	2417.1
XSECTION	35	RUNOFF	.16	5.20	---	12.19	424	2650.0
XSECTION	40	ADDHYD	.52	5.11	---	12.21	1267	2436.5
STRUCTURE	10	RESVOR	.52	5.11	1377.28	12.44	906	1742.3
XSECTION	45	RUNOFF	.04	5.74	---	12.11	141	3525.0
XSECTION	50	ADDHYD	.56	5.16	---	12.39	964	1721.4
XSECTION	53	RUNOFF	.16	5.23	---	12.23	380	2375.0
STRUCTURE	15	RESVOR	.16	5.21	1377.06	12.75	131	818.8
XSECTION	54	ADDHYD	.71	5.17	---	12.40	1084	1526.8
XSECTION	55	RUNOFF	.16	5.38	---	12.21	409	2556.3
XSECTION	60	ADDHYD	.88	5.21	---	12.30	1447	1644.3
XSECTION	61	RUNOFF	.03	5.70	---	12.02	109	3633.3
XSECTION	62	ADDHYD	.90	5.22	---	12.27	1483	1647.8
XSECTION	65	RUNOFF	.02	5.36	---	12.05	80	4000.0
STRUCTURE	11	RESVOR	.02	5.36	1383.95	12.17	62	3100.0

XSECTION	70	RUNOFF	.01	5.44	---	12.05	55	5500.0
XSECTION	75	ADDHYD	.04	5.39	---	12.10	112	2800.0
XSECTION	80	RUNOFF	.01	5.71	---	12.03	41	4100.0
XSECTION	85	ADDHYD	.05	5.46	---	12.08	150	3000.0
STRUCTURE	13	RESVOR	.05	5.45	1385.03	12.48	48	960.0
XSECTION	166	RUNOFF	.28	4.89	---	12.32	558	1992.9
XSECTION	167	ADDHYD	.33	4.97	---	12.32	605	1833.3

1

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 14 STORM 4							
XSECTION 170	ADDHYD	1.23	5.16	---	12.29	2083	1693.5
STRUCTURE 18	RESVOR	1.23	5.15	1371.45	13.11	792	643.9
RAINFALL OF 7.10 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 15 STORM 5							
XSECTION 5	RUNOFF	.20	5.78	---	12.23	529	2645.0
XSECTION 25	RUNOFF	.16	5.93	---	12.21	442	2762.5
XSECTION 30	ADDHYD	.35	5.84	---	12.22	970	2771.4
XSECTION 35	RUNOFF	.16	5.99	---	12.19	485	3031.3
XSECTION 40	ADDHYD	.52	5.89	---	12.21	1452	2792.3
STRUCTURE 10	RESVOR	.52	5.89	1377.83	12.45	994	1911.5
XSECTION 45	RUNOFF	.04	6.53	---	12.11	159	3975.0
XSECTION 50	ADDHYD	.56	5.94	---	12.39	1058	1889.3
XSECTION 53	RUNOFF	.16	6.02	---	12.22	435	2718.8
STRUCTURE 15	RESVOR	.16	6.00	1377.49	12.78	139	868.8
XSECTION 54	ADDHYD	.71	5.95	---	12.41	1188	1673.2
XSECTION 55	RUNOFF	.16	6.17	---	12.21	470	2937.5
XSECTION 60	ADDHYD	.88	5.99	---	12.29	1602	1820.5
XSECTION 61	RUNOFF	.03	6.50	---	12.02	123	4100.0
XSECTION 62	ADDHYD	.90	6.01	---	12.27	1643	1825.6
XSECTION 65	RUNOFF	.02	6.15	---	12.05	91	4550.0
STRUCTURE 11	RESVOR	.02	6.16	1384.16	12.16	68	3400.0

XSECTION	70	RUNOFF	.01	6.23	---	12.04	63	6300.0
XSECTION	75	ADDHYD	.04	6.18	---	12.09	126	3150.0
XSECTION	80	RUNOFF	.01	6.50	---	12.03	47	4700.0
XSECTION	85	ADDHYD	.05	6.25	---	12.07	170	3400.0
STRUCTURE	13	RESVOR	.05	6.25	1386.49	12.50	52	1040.0
XSECTION	166	RUNOFF	.28	5.66	---	12.32	642	2292.9
XSECTION	167	ADDHYD	.33	5.75	---	12.32	692	2097.0

1
TR20 ---------- SCS -
WATERFRONT CURRENT/Future EAST BRANCH GYPSUM CREEK 1/07 VERSION
04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
10:29:51 SUMMARY, JOB NO. 1 PAGE 57

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 15 STORM 5							
XSECTION 170	ADDHYD	1.23	5.94	---	12.29	2329	1893.5
STRUCTURE 18	RESVOR	1.23	5.94	1371.73	13.09	978	795.1
RAINFALL OF 7.80 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 16 STORM 6							
XSECTION 5	RUNOFF	.20	6.46	---	12.23	586	2930.0
XSECTION 25	RUNOFF	.16	6.61	---	12.21	491	3068.8
XSECTION 30	ADDHYD	.35	6.53	---	12.22	1077	3077.1
XSECTION 35	RUNOFF	.16	6.68	---	12.19	537	3356.3
XSECTION 40	ADDHYD	.52	6.58	---	12.21	1611	3098.1
STRUCTURE 10	RESVOR	.52	6.57	1378.31	12.46	1071	2059.6
XSECTION 45	RUNOFF	.04	7.23	---	12.11	175	4375.0
XSECTION 50	ADDHYD	.56	6.63	---	12.40	1139	2033.9
XSECTION 53	RUNOFF	.16	6.71	---	12.22	481	3006.3
STRUCTURE 15	RESVOR	.16	6.69	1377.86	12.80	147	918.8
XSECTION 54	ADDHYD	.71	6.64	---	12.42	1276	1797.2
XSECTION 55	RUNOFF	.16	6.86	---	12.21	518	3237.5
XSECTION 60	ADDHYD	.88	6.68	---	12.29	1732	1968.2
XSECTION 61	RUNOFF	.03	7.19	---	12.02	136	4533.3
XSECTION 62	ADDHYD	.90	6.69	---	12.26	1777	1974.4
XSECTION 65	RUNOFF	.02	6.84	---	12.05	100	5000.0
STRUCTURE 11	RESVOR	.02	6.83	1384.34	12.19	71	3550.0

XSECTION	70	RUNOFF	.01	6.92	---	12.05	69	6900.0
XSECTION	75	ADDHYD	.04	6.87	---	12.09	135	3375.0
XSECTION	80	RUNOFF	.01	7.20	---	12.03	52	5200.0
XSECTION	85	ADDHYD	.05	6.95	---	12.06	184	3680.0
STRUCTURE	13	RESVOR	.05	6.94	1387.76	12.53	55	1100.0
XSECTION	166	RUNOFF	.28	6.34	---	12.32	716	2557.1
XSECTION	167	ADDHYD	.33	6.43	---	12.32	768	2327.3

1

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)

ALTERNATE 16 STORM 6

XSECTION	170	ADDHYD	1.23	6.62	---	12.29	2539	2064.2
STRUCTURE	18	RESVOR	1.23	6.62	1371.96	13.08	1133	921.1

RAINFALL OF 9.35 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 17 STORM 7

XSECTION	5	RUNOFF	.20	7.98	---	12.23	716	3580.0
XSECTION	25	RUNOFF	.16	8.15	---	12.21	601	3756.3
XSECTION	30	ADDHYD	.35	8.05	---	12.22	1317	3762.9
XSECTION	35	RUNOFF	.16	8.20	---	12.19	654	4087.5
XSECTION	40	ADDHYD	.52	8.10	---	12.21	1969	3786.5
STRUCTURE	10	RESVOR	.52	8.10	1379.30	12.49	1224	2353.8
XSECTION	45	RUNOFF	.04	8.78	---	12.11	211	5275.0
XSECTION	50	ADDHYD	.56	8.15	---	12.42	1300	2321.4
XSECTION	53	RUNOFF	.16	8.24	---	12.22	585	3656.3
STRUCTURE	15	RESVOR	.16	8.21	1378.72	12.84	165	1031.3
XSECTION	54	ADDHYD	.71	8.17	---	12.44	1452	2045.1
XSECTION	55	RUNOFF	.16	8.40	---	12.21	626	3912.5
XSECTION	60	ADDHYD	.88	8.21	---	12.29	2004	2277.3
XSECTION	61	RUNOFF	.03	8.74	---	12.02	164	5466.7
XSECTION	62	ADDHYD	.90	8.22	---	12.26	2061	2290.0
XSECTION	65	RUNOFF	.02	8.37	---	12.05	121	6050.0
STRUCTURE	11	RESVOR	.02	8.38	1384.81	12.21	79	3950.0

```
 XSECTION  70  RUNOFF      .01     8.46        ---     12.04       84   8400.0
 XSECTION  75  ADDHYD      .04     8.40        ---     12.07      156   3900.0
 XSECTION  80  RUNOFF      .01     8.74        ---     12.03       62   6200.0

 XSECTION  85  ADDHYD      .05     8.49        ---     12.05      216   4320.0
 STRUCTURE 13  RESVOR      .05     8.48    1390.51     12.59       61   1220.0
 XSECTION 166  RUNOFF      .28     7.86        ---     12.32      878   3135.7
 XSECTION 167  ADDHYD      .33     7.95        ---     12.32      936   2836.4
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                     SUMMARY, JOB NO.   1                      PAGE  59


                              SUMMARY TABLE 1
                              ---------------
    SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
    A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH   T-TRUNCATED HYDROGRAPH   R-RISING TRUNCATED HYDROGRAPH

 XSECTION/  STANDARD                                      PEAK DISCHARGE
 STRUCTURE   CONTROL    DRAINAGE   RUNOFF   ------------------------------------
    ID      OPERATION     AREA     AMOUNT   ELEVATION   TIME     RATE     RATE
                        (SQ MI)    (IN)      (FT)      (HR)     (CFS)   (CSM)



    ALTERNATE   17   STORM    7
    ---------------------------
 XSECTION 170  ADDHYD     1.23     8.15        ---     12.29     2987   2428.5
 STRUCTURE 18  RESVOR     1.23     8.15    1372.44     13.06     1456   1183.7
1
 TR20 ------------------------------------------------------------------- SCS -
           WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                     SUMMARY, JOB NO.   1                      PAGE  60


                              SUMMARY TABLE 3
                              ---------------
      STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
      QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

 XSECTION/          DRAINAGE
 STRUCTURE            AREA       STORM NUMBERS.....
   ID                (SQ MI)         1         2         3         4         5


 STRUCTURE  18         1.23
 ---------------------------
    ALTERNATE   11                245 ********* ********* ********* *********
    ALTERNATE   12           ********       407 ********* ********* *********
    ALTERNATE   13           ********* ********       529 ********* *********
    ALTERNATE   14           ********* ********* *********       792 *********
    ALTERNATE   15           ********* ********* ********* *********       978
```

```
STRUCTURE  15          .16
---------------------------
   ALTERNATE   11              86 ********* ********* ********* *********
   ALTERNATE   12           ********      106 ********* ********* *********
   ALTERNATE   13           ********* ********      116 ********* *********
   ALTERNATE   14           ********* ********* *********      131 *********
   ALTERNATE   15           ********* ********* ********* *********      139

STRUCTURE  13          .05
---------------------------
   ALTERNATE   11              38 ********* ********* ********* *********
   ALTERNATE   12           ********       42 ********* ********* *********
   ALTERNATE   13           ********* ********       44 ********* *********
   ALTERNATE   14           ********* ********* *********       48 *********
   ALTERNATE   15           ********* ********* ********* *********       52

STRUCTURE  11          .02
---------------------------
   ALTERNATE   11              28 ********* ********* ********* *********
   ALTERNATE   12           ********       41 ********* ********* *********
   ALTERNATE   13           ********* ********       50 ********* *********
   ALTERNATE   14           ********* ********* *********       62 *********
   ALTERNATE   15           ********* ********* ********* *********       68

STRUCTURE  10          .52
---------------------------
   ALTERNATE   11             515 ********* ********* ********* *********
   ALTERNATE   12           ********      677 ********* ********* *********
   ALTERNATE   13           ********* ********      777 ********* *********
   ALTERNATE   14           ********* ********* *********      906 *********
   ALTERNATE   15           ********* ********* ********* *********      994

XSECTION    5          .20
---------------------------
   ALTERNATE   11             219 ********* ********* ********* *********
   ALTERNATE   12           ********      309 ********* ********* *********
   ALTERNATE   13           ********* ********      369 ********* *********
   ALTERNATE   14           ********* ********* *********      460 *********
1
TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
10:29:51                    SUMMARY, JOB NO.   1                      PAGE  61


                           SUMMARY TABLE 3
                           ---------------
     STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
     QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/          DRAINAGE
STRUCTURE            AREA       STORM NUMBERS.....
  ID                (SQ MI)          1         2         3         4         5


XSECTION    5          .20
---------------------------
```

ALTERNATE	15	*********	*********	*********	*********	529

XSECTION 25 .16

ALTERNATE	11	189	*********	*********	*********	*********
ALTERNATE	12	*********	263	*********	*********	*********
ALTERNATE	13	*********	*********	313	*********	*********
ALTERNATE	14	*********	*********	*********	386	*********
ALTERNATE	15	*********	*********	*********	*********	442

XSECTION 30 .35

ALTERNATE	11	408	*********	*********	*********	*********
ALTERNATE	12	*********	572	*********	*********	*********
ALTERNATE	13	*********	*********	682	*********	*********
ALTERNATE	14	*********	*********	*********	846	*********
ALTERNATE	15	*********	*********	*********	*********	970

XSECTION 35 .16

ALTERNATE	11	210	*********	*********	*********	*********
ALTERNATE	12	*********	291	*********	*********	*********
ALTERNATE	13	*********	*********	344	*********	*********
ALTERNATE	14	*********	*********	*********	424	*********
ALTERNATE	15	*********	*********	*********	*********	485

XSECTION 40 .52

ALTERNATE	11	617	*********	*********	*********	*********
ALTERNATE	12	*********	861	*********	*********	*********
ALTERNATE	13	*********	*********	1024	*********	*********
ALTERNATE	14	*********	*********	*********	1267	*********
ALTERNATE	15	*********	*********	*********	*********	1452

XSECTION 45 .04

ALTERNATE	11	76	*********	*********	*********	*********
ALTERNATE	12	*********	100	*********	*********	*********
ALTERNATE	13	*********	*********	117	*********	*********
ALTERNATE	14	*********	*********	*********	141	*********
ALTERNATE	15	*********	*********	*********	*********	159

XSECTION 50 .56

ALTERNATE	11	554	*********	*********	*********	*********
ALTERNATE	12	*********	725	*********	*********	*********

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID		DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2	3	4	5
XSECTION 50		.56					
ALTERNATE	13		*********	*********	829	*********	*********
ALTERNATE	14		*********	*********	*********	964	*********
ALTERNATE	15		*********	*********	*********	*********	1058
XSECTION 53		.16					
ALTERNATE	11		189	*********	*********	*********	*********
ALTERNATE	12		*********	263	*********	*********	*********
ALTERNATE	13		*********	*********	308	*********	*********
ALTERNATE	14		*********	*********	*********	380	*********
ALTERNATE	15		*********	*********	*********	*********	435
XSECTION 54		.71					
ALTERNATE	11		632	*********	*********	*********	*********
ALTERNATE	12		*********	821	*********	*********	*********
ALTERNATE	13		*********	*********	936	*********	*********
ALTERNATE	14		*********	*********	*********	1084	*********
ALTERNATE	15		*********	*********	*********	*********	1188
XSECTION 55		.16					
ALTERNATE	11		209	*********	*********	*********	*********
ALTERNATE	12		*********	285	*********	*********	*********
ALTERNATE	13		*********	*********	336	*********	*********
ALTERNATE	14		*********	*********	*********	409	*********
ALTERNATE	15		*********	*********	*********	*********	470
XSECTION 60		.88					
ALTERNATE	11		822	*********	*********	*********	*********
ALTERNATE	12		*********	1080	*********	*********	*********
ALTERNATE	13		*********	*********	1239	*********	*********
ALTERNATE	14		*********	*********	*********	1447	*********
ALTERNATE	15		*********	*********	*********	*********	1602
XSECTION 61		.03					
ALTERNATE	11		58	*********	*********	*********	*********
ALTERNATE	12		*********	77	*********	*********	*********
ALTERNATE	13		*********	*********	90	*********	*********
ALTERNATE	14		*********	*********	*********	109	*********
ALTERNATE	15		*********	*********	*********	*********	123
XSECTION 62		.90					

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2	3	4	5
XSECTION 62	.90					
ALTERNATE 11		839	*********	*********	*********	*********
ALTERNATE 12		*********	1105	*********	*********	*********
ALTERNATE 13		*********	*********	1268	*********	*********
ALTERNATE 14		*********	*********	*********	1483	*********
ALTERNATE 15		*********	*********	*********	*********	1643
XSECTION 65	.02					
ALTERNATE 11		41	*********	*********	*********	*********
ALTERNATE 12		*********	55	*********	*********	*********
ALTERNATE 13		*********	*********	65	*********	*********
ALTERNATE 14		*********	*********	*********	80	*********
ALTERNATE 15		*********	*********	*********	*********	91
XSECTION 70	.01					
ALTERNATE 11		28	*********	*********	*********	*********
ALTERNATE 12		*********	38	*********	*********	*********
ALTERNATE 13		*********	*********	45	*********	*********
ALTERNATE 14		*********	*********	*********	55	*********
ALTERNATE 15		*********	*********	*********	*********	63
XSECTION 75	.04					
ALTERNATE 11		50	*********	*********	*********	*********
ALTERNATE 12		*********	75	*********	*********	*********
ALTERNATE 13		*********	*********	90	*********	*********
ALTERNATE 14		*********	*********	*********	112	*********
ALTERNATE 15		*********	*********	*********	*********	126
XSECTION 80	.01					
ALTERNATE 11		22	*********	*********	*********	*********
ALTERNATE 12		*********	29	*********	*********	*********
ALTERNATE 13		*********	*********	34	*********	*********
ALTERNATE 14		*********	*********	*********	41	*********
ALTERNATE 15		*********	*********	*********	*********	47
XSECTION 85	.05					
ALTERNATE 11		69	*********	*********	*********	*********

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2	3	4	5
XSECTION 166	.28					
ALTERNATE 11		262	*********	*********	*********	*********
ALTERNATE 12		*********	372	*********	*********	*********
ALTERNATE 13		*********	*********	446	*********	*********
ALTERNATE 14		*********	*********	*********	558	*********
ALTERNATE 15		*********	*********	*********	*********	642
XSECTION 167	.33					
ALTERNATE 11		300	*********	*********	*********	*********
ALTERNATE 12		*********	414	*********	*********	*********
ALTERNATE 13		*********	*********	490	*********	*********
ALTERNATE 14		*********	*********	*********	605	*********
ALTERNATE 15		*********	*********	*********	*********	692
XSECTION 170	1.23					
ALTERNATE 11		1138	*********	*********	*********	*********
ALTERNATE 12		*********	1516	*********	*********	*********
ALTERNATE 13		*********	*********	1755	*********	*********
ALTERNATE 14		*********	*********	*********	2083	*********
ALTERNATE 15		*********	*********	*********	*********	2329

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 6	7
STRUCTURE 18	1.23		

```
   ALTERNATE   16                1133 *********
   ALTERNATE   17            *********       1456

 STRUCTURE  15          .16
 ---------------------------
   ALTERNATE   16                 147 *********
   ALTERNATE   17            *********        165

 STRUCTURE  13          .05
 ---------------------------
   ALTERNATE   16                  55 *********
   ALTERNATE   17            *********         61

 STRUCTURE  11          .02
 ---------------------------
   ALTERNATE   16                  71 *********
   ALTERNATE   17            *********         79

 STRUCTURE  10          .52
 ---------------------------
   ALTERNATE   16                1071 *********
1
 TR20 ------------------------------------------------------------------------ SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    SUMMARY, JOB NO.   1                       PAGE  65


                            SUMMARY TABLE 3
                            ---------------
      STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
      QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

 XSECTION/          DRAINAGE
 STRUCTURE            AREA       STORM NUMBERS.........
   ID               (SQ MI)          6         7


 STRUCTURE  10          .52
 ---------------------------
   ALTERNATE   17            *********      1224

 XSECTION    5          .20
 ---------------------------
   ALTERNATE   16                 586 *********
   ALTERNATE   17            *********        716

 XSECTION   25          .16
 ---------------------------
   ALTERNATE   16                 491 *********
   ALTERNATE   17            *********        601

 XSECTION   30          .35
 ---------------------------
   ALTERNATE   16                1077 *********
   ALTERNATE   17            *********      1317
```

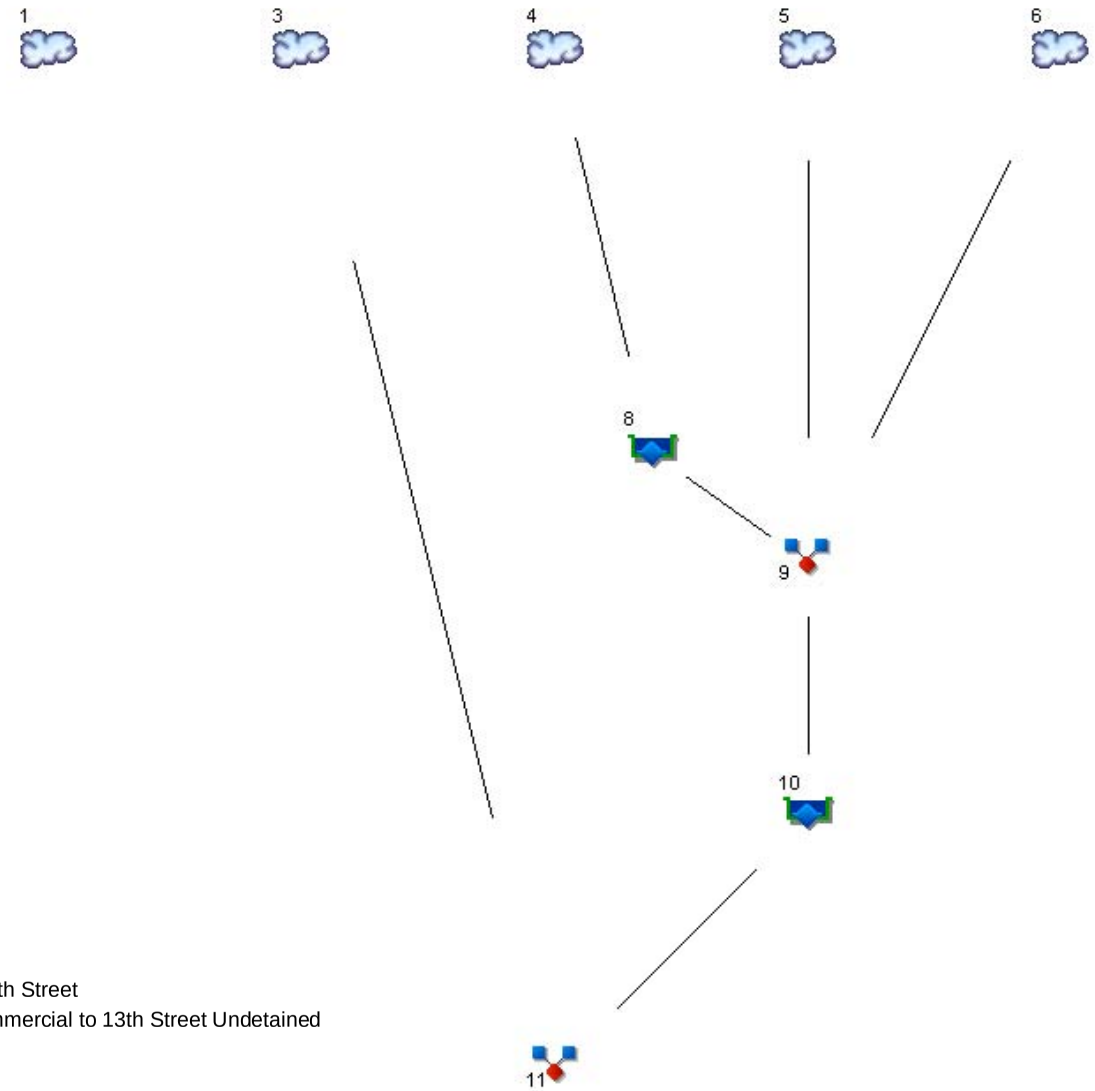
```
XSECTION   35          .16
---------------------------
   ALTERNATE   16                537 *********
   ALTERNATE   17            *********       654

XSECTION   40          .52
---------------------------
   ALTERNATE   16               1611 *********
   ALTERNATE   17            *********      1969

XSECTION   45          .04
---------------------------
   ALTERNATE   16                175 *********
   ALTERNATE   17            *********       211

XSECTION   50          .56
---------------------------
   ALTERNATE   16               1139 *********
   ALTERNATE   17            *********      1300

XSECTION   53          .16
---------------------------
   ALTERNATE   16                481 *********
   ALTERNATE   17            *********       585

XSECTION   54          .71
---------------------------
   ALTERNATE   16               1276 *********
   ALTERNATE   17            *********      1452

XSECTION   55          .16
---------------------------
   ALTERNATE   16                518 *********
1
TR20 ------------------------------------------------------------------------ SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
10:29:51                     SUMMARY, JOB NO.   1                      PAGE  66


                            SUMMARY TABLE 3
                            ---------------
     STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
     QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

XSECTION/          DRAINAGE
STRUCTURE            AREA       STORM NUMBERS.....
  ID                (SQ MI)          6         7


XSECTION   55          .16
---------------------------
   ALTERNATE   17            *********       626

XSECTION   60          .88
---------------------------
   ALTERNATE   16                1732 *********
```

```
   ALTERNATE   17            *********      2004

 XSECTION   61          .03
 ---------------------------
   ALTERNATE   16                 136 *********
   ALTERNATE   17            *********       164

 XSECTION   62          .90
 ---------------------------
   ALTERNATE   16                1777 *********
   ALTERNATE   17            *********      2061

 XSECTION   65          .02
 ---------------------------
   ALTERNATE   16                 100 *********
   ALTERNATE   17            *********       121

 XSECTION   70          .01
 ---------------------------
   ALTERNATE   16                  69 *********
   ALTERNATE   17            *********        84

 XSECTION   75          .04
 ---------------------------
   ALTERNATE   16                 135 *********
   ALTERNATE   17            *********       156

 XSECTION   80          .01
 ---------------------------
   ALTERNATE   16                  52 *********
   ALTERNATE   17            *********        62

 XSECTION   85          .05
 ---------------------------
   ALTERNATE   16                 184 *********
   ALTERNATE   17            *********       216

 XSECTION  166          .28
 ---------------------------
   ALTERNATE   16                 716 *********
   ALTERNATE   17            *********       878

 XSECTION  167          .33
 ---------------------------
   ALTERNATE   16                 768 *********
1
 TR20 ------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST
 10:29:51                    SUMMARY, JOB NO.   1                      PAGE  67


                            SUMMARY TABLE 3
                            ---------------
      STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
      QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.
```

```
 XSECTION/          DRAINAGE
 STRUCTURE            AREA       STORM NUMBERS.........
   ID               (SQ MI)          6         7


 XSECTION  167          .33
 --------------------------
    ALTERNATE   17            *********       936

 XSECTION  170         1.23
 --------------------------
    ALTERNATE   16                 2539 *********
    ALTERNATE   17            *********      2987
1
 TR20 ---------------------------------------------------------------------- SCS -
          WATERFRONT CURRENT/Future    EAST BRANCH GYPSUM CREEK 1/07    VERSION
 04/13/** TC6.T20 50%(2) 20%(5) 10%(10) 5%(50) 1%(100) & .2%(500) ANNUAL2.04TEST



 END OF  1 JOBS IN THIS RUN




                     SCS  TR-20,  VERSION 2.04TEST
                                  FILES

     INPUT  = WTRFTC6.T20                              , GIVEN DATA FILE
     OUTPUT = WTRFTC6.OUT                              , DATED 04/13/**,10:29:51

              FILES GENERATED - DATED 04/13/**,10:29:51

    FILE WTRFTC6.TMG CONTAINS MESSAGE + WARNING INFORMATION


            TOTAL NUMBER OF WARNINGS =   6,  MESSAGES =   0

                      *** TR-20 RUN COMPLETED ***
```

Figure 3.3

Hydraflow Hydrographs - 13th Street



Legend

Hyd.	Origin	Description
1	SCS Runoff	Pre-Project to 13th Street
3	SCS Runoff	Post-Project Commercial to 13th Street Undetained
4	SCS Runoff	TR20- 065
5	SCS Runoff	TR-20 070
6	SCS Runoff	TR-20 080
8	Reservoir	Greens
9	Combine	To Combined Pond
10	Reservoir	Combined Pond
11	Combine	Post-Project to 13th Street

Hydrograph Return Period Recap

Hyd. No.	Hydrograph type (origin)	Inflow Hyd(s)	Peak Outflow (cfs)								Hydrograph description
			1-Yr	2-Yr	3-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr	
1	SCS Runoff	-------	-------	78.30	-------	116.81	142.82	182.16	-------	238.52	Pre-Project to 13th Street
3	SCS Runoff	-------	-------	66.98	-------	92.08	108.40	132.74	-------	167.25	Post-Project Commercial to 13th Street
4	SCS Runoff	-------	-------	33.23	-------	46.72	55.53	68.69	-------	87.37	TR20- 065
5	SCS Runoff	-------	-------	12.08	-------	17.07	20.34	25.22	-------	32.14	TR-20 070
6	SCS Runoff	-------	-------	15.45	-------	20.70	24.12	29.21	-------	36.45	TR-20 080
8	Reservoir	4	-------	26.53	-------	33.51	37.10	41.72	-------	46.85	Greens
9	Combine	5, 6, 8	-------	44.83	-------	63.33	73.05	86.24	-------	103.93	To Combined Pond
10	Reservoir	9	-------	35.28	-------	38.56	40.17	42.24	-------	45.33	Combined Pond
11	Combine	3, 10	-------	98.10	-------	125.94	143.12	168.78	-------	204.84	Post-Project to 13th Street

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (acft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (acft)	Hydrograph description
1	SCS Runoff	78.30	6	738	9.039	----	------	------	Pre-Project to 13th Street
3	SCS Runoff	66.98	6	720	4.806	----	------	------	Post-Project Commercial to 13th Street
4	SCS Runoff	33.23	6	726	3.106	----	------	------	TR20- 065
5	SCS Runoff	12.08	6	726	1.128	----	------	------	TR-20 070
6	SCS Runoff	15.45	6	720	1.140	----	------	------	TR-20 080
8	Reservoir	26.53	6	738	3.106	4	1383.00	0.584	Greens
9	Combine	44.83	6	732	5.374	5, 6, 8	------	------	To Combined Pond
10	Reservoir	35.28	6	744	5.374	9	1380.43	0.389	Combined Pond
11	Combine	98.10	6	720	10.180	3, 10	------	------	Post-Project to 13th Street

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (acft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (acft)	Hydrograph description
1	SCS Runoff	116.81	6	732	13.476	----	------	------	Pre-Project to 13th Street
3	SCS Runoff	92.08	6	720	6.702	----	------	------	Post-Project Commercial to 13th Street
4	SCS Runoff	46.72	6	726	4.406	----	------	------	TR20- 065
5	SCS Runoff	17.07	6	726	1.607	----	------	------	TR-20 070
6	SCS Runoff	20.70	6	720	1.552	----	------	------	TR-20 080
8	Reservoir	33.51	6	738	4.406	4	1383.35	0.816	Greens
9	Combine	63.33	6	726	7.565	5, 6, 8	------	------	To Combined Pond
10	Reservoir	38.56	6	750	7.565	9	1381.44	0.933	Combined Pond
11	Combine	125.94	6	720	14.268	3, 10	------	------	Post-Project to 13th Street

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (acft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (acft)	Hydrograph description
1	SCS Runoff	142.82	6	732	16.482	----	------	------	Pre-Project to 13th Street
3	SCS Runoff	108.40	6	720	7.956	----	------	------	Post-Project Commercial to 13th Street
4	SCS Runoff	55.53	6	726	5.271	----	------	------	TR20- 065
5	SCS Runoff	20.34	6	726	1.926	----	------	------	TR-20 070
6	SCS Runoff	24.12	6	720	1.823	----	------	------	TR-20 080
8	Reservoir	37.10	6	744	5.271	4	1383.63	1.004	Greens
9	Combine	73.05	6	726	9.020	5, 6, 8	------	------	To Combined Pond
10	Reservoir	40.17	6	756	9.019	9	1382.00	1.323	Combined Pond
11	Combine	143.12	6	720	16.976	3, 10	------	------	Post-Project to 13th Street

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (acft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (acft)	Hydrograph description
1	SCS Runoff	182.16	6	732	21.089	----	------	------	Pre-Project to 13th Street
3	SCS Runoff	132.74	6	720	9.849	----	------	------	Post-Project Commercial to 13th Street
4	SCS Runoff	68.69	6	726	6.580	----	------	------	TR20- 065
5	SCS Runoff	25.22	6	726	2.409	----	------	------	TR-20 070
6	SCS Runoff	29.21	6	720	2.230	----	------	------	TR-20 080
8	Reservoir	41.72	6	744	6.580	4	1384.12	1.341	Greens
9	Combine	86.24	6	726	11.219	5, 6, 8	------	------	To Combined Pond
10	Reservoir	42.24	6	762	11.219	9	1382.74	1.928	Combined Pond
11	Combine	168.78	6	720	21.068	3, 10	------	------	Post-Project to 13th Street

Table of Contents

100 - Year

Summary Report **1**
Hydrograph Reports **2**
Hydrograph No. 1, SCS Runoff, Pre-Project to 13th Street 2
Hydrograph No. 3, SCS Runoff, Post-Project Commercial to 13th Street Undetained 3
Hydrograph No. 4, SCS Runoff, TR20- 065 4
Hydrograph No. 5, SCS Runoff, TR-20 070 5
Hydrograph No. 6, SCS Runoff, TR-20 080 6
Hydrograph No. 8, Reservoir, Greens 7
Pond Report 8
Hydrograph No. 9, Combine, To Combined Pond 9
Hydrograph No. 10, Reservoir, Combined Pond 10
Pond Report 11
Hydrograph No. 11, Combine, Post-Project to 13th Street 12

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (acft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (acft)	Hydrograph description
1	SCS Runoff	238.52	6	732	27.801	----	------	------	Pre-Project to 13th Street
3	SCS Runoff	167.25	6	720	12.568	----	------	------	Post-Project Commercial to 13th Street
4	SCS Runoff	87.37	6	726	8.466	----	------	------	TR20- 065
5	SCS Runoff	32.14	6	726	3.105	----	------	------	TR-20 070
6	SCS Runoff	36.45	6	720	2.813	----	------	------	TR-20 080
8	Reservoir	46.85	6	744	8.466	4	1384.83	1.880	Greens
9	Combine	103.93	6	726	14.385	5, 6, 8	------	------	To Combined Pond
10	Reservoir	45.33	6	774	14.385	9	1383.93	2.777	Combined Pond
11	Combine	204.84	6	720	26.953	3, 10	------	------	Post-Project to 13th Street

Hydrograph Plot

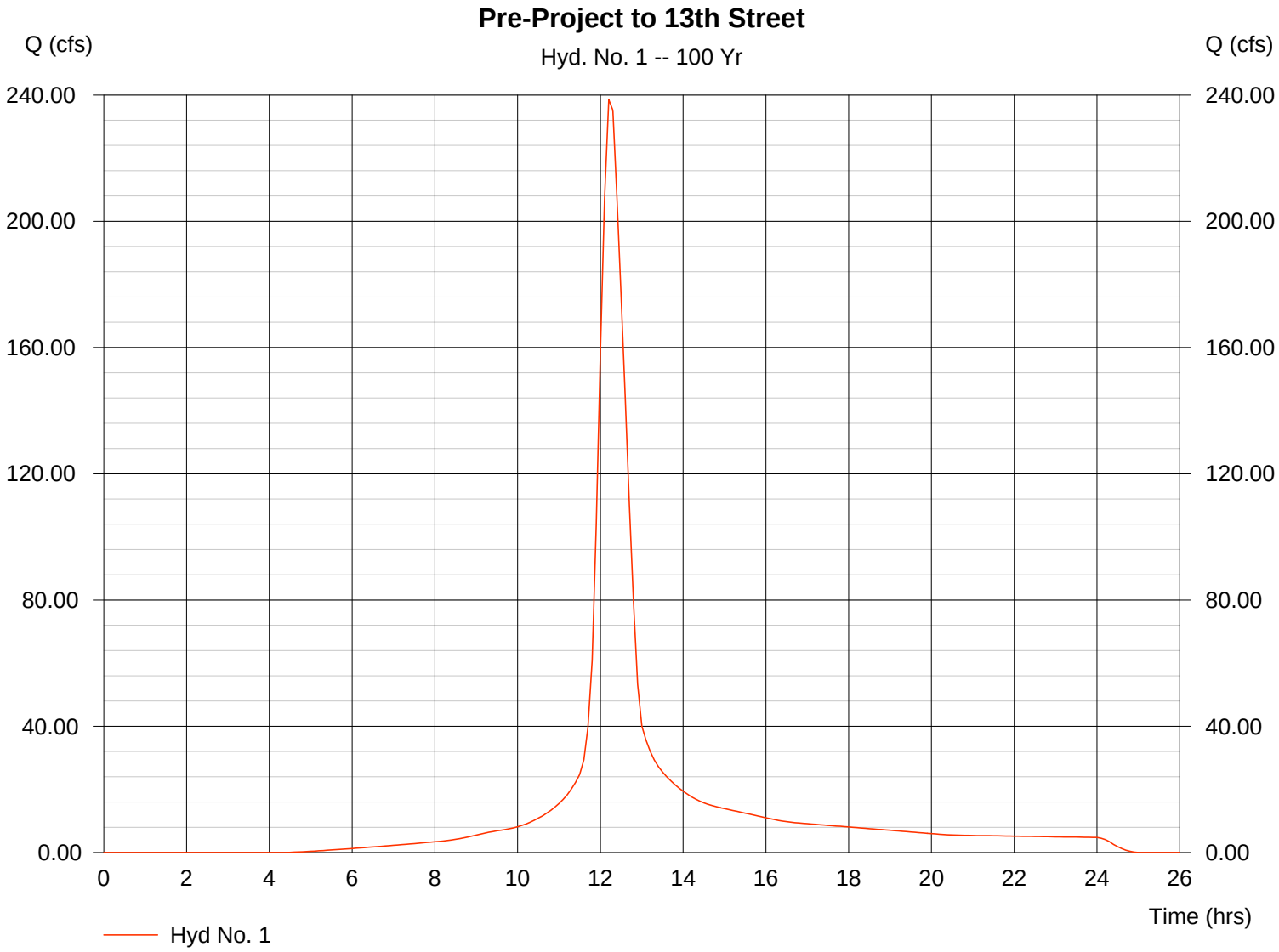
Hydraflow Hydrographs by Intelisolve | Friday, Apr 13 2007, 11:10 AM

Hyd. No. 1

Pre-Project to 13th Street

Hydrograph type	= SCS Runoff	Peak discharge	= 238.52 cfs
Storm frequency	= 100 yrs	Time interval	= 6 min
Drainage area	= 54.800 ac	Curve number	= 84
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 30.60 min
Total precip.	= 7.80 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Hydrograph Volume = 27.801 acft



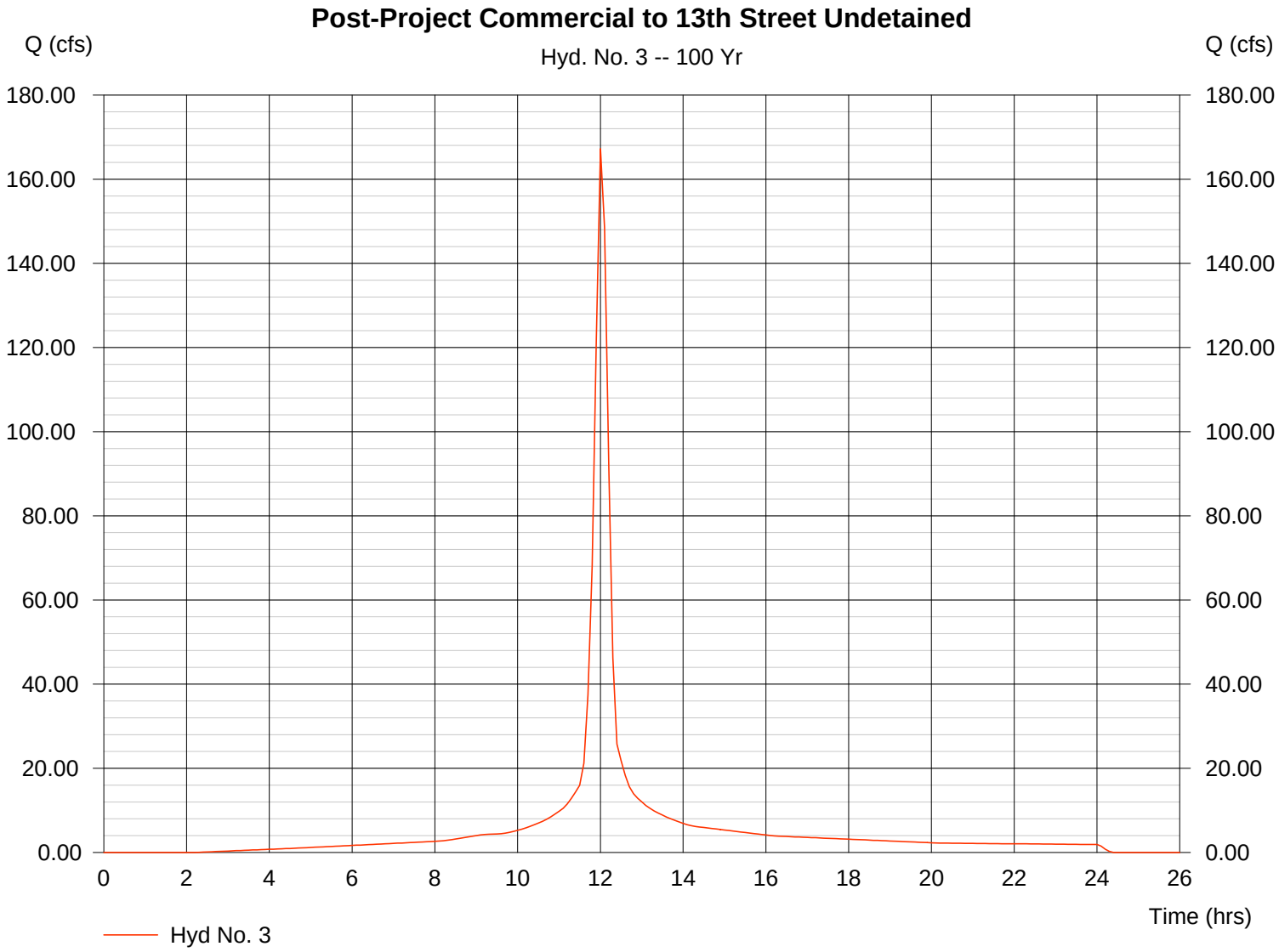
Hydrograph Plot

Hyd. No. 3

Post-Project Commercial to 13th Street Undetained

Hydrograph type	= SCS Runoff	Peak discharge	= 167.25 cfs
Storm frequency	= 100 yrs	Time interval	= 6 min
Drainage area	= 23.500 ac	Curve number	= 92
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 15.00 min
Total precip.	= 7.80 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Hydrograph Volume = 12.568 acft



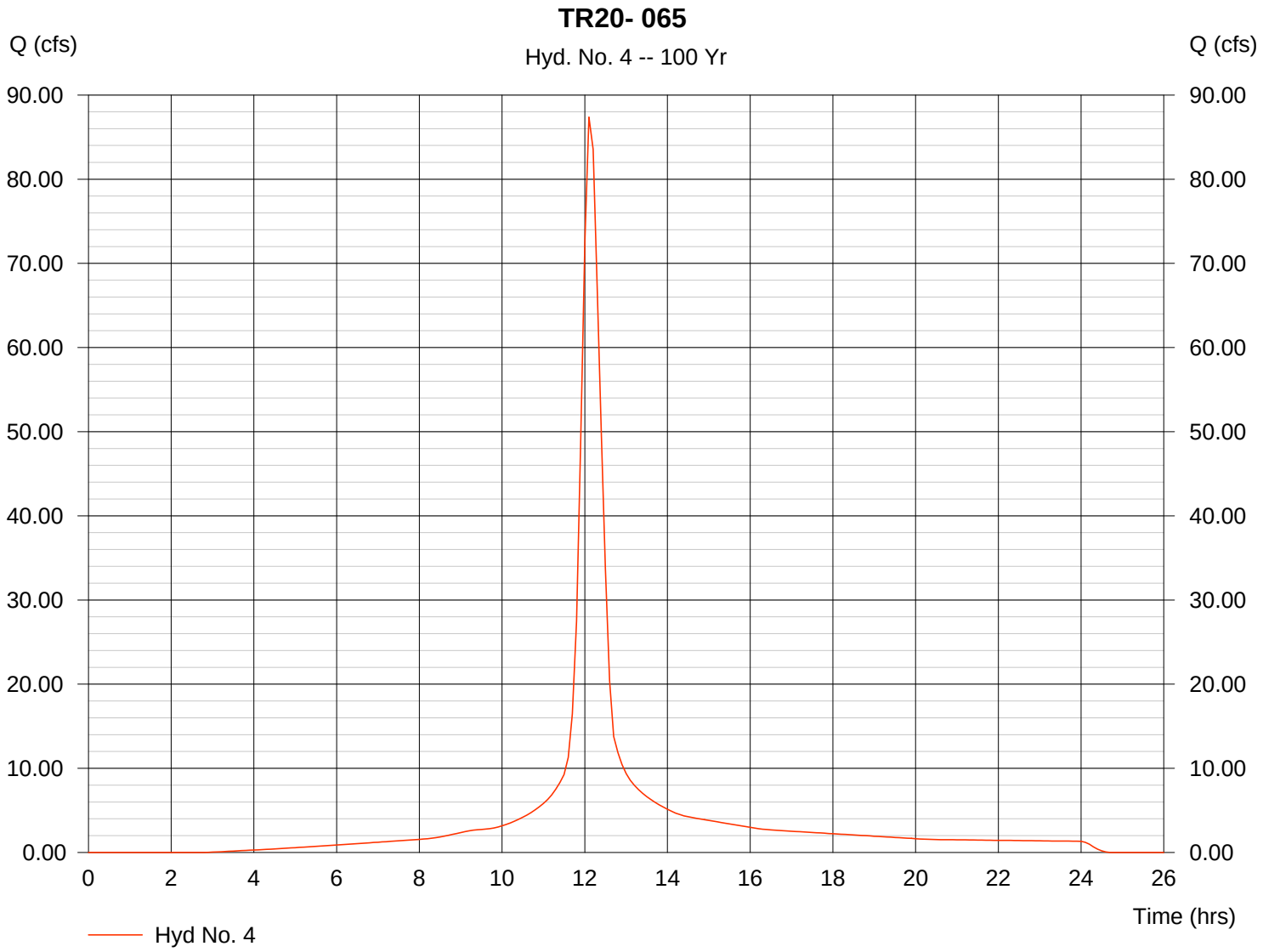
Hydrograph Plot

Hyd. No. 4

TR20- 065

Hydrograph type	= SCS Runoff	Peak discharge	= 87.37 cfs
Storm frequency	= 100 yrs	Time interval	= 6 min
Drainage area	= 15.400 ac	Curve number	= 89.9
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 21.10 min
Total precip.	= 7.80 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Hydrograph Volume = 8.466 acft



Hydrograph Plot

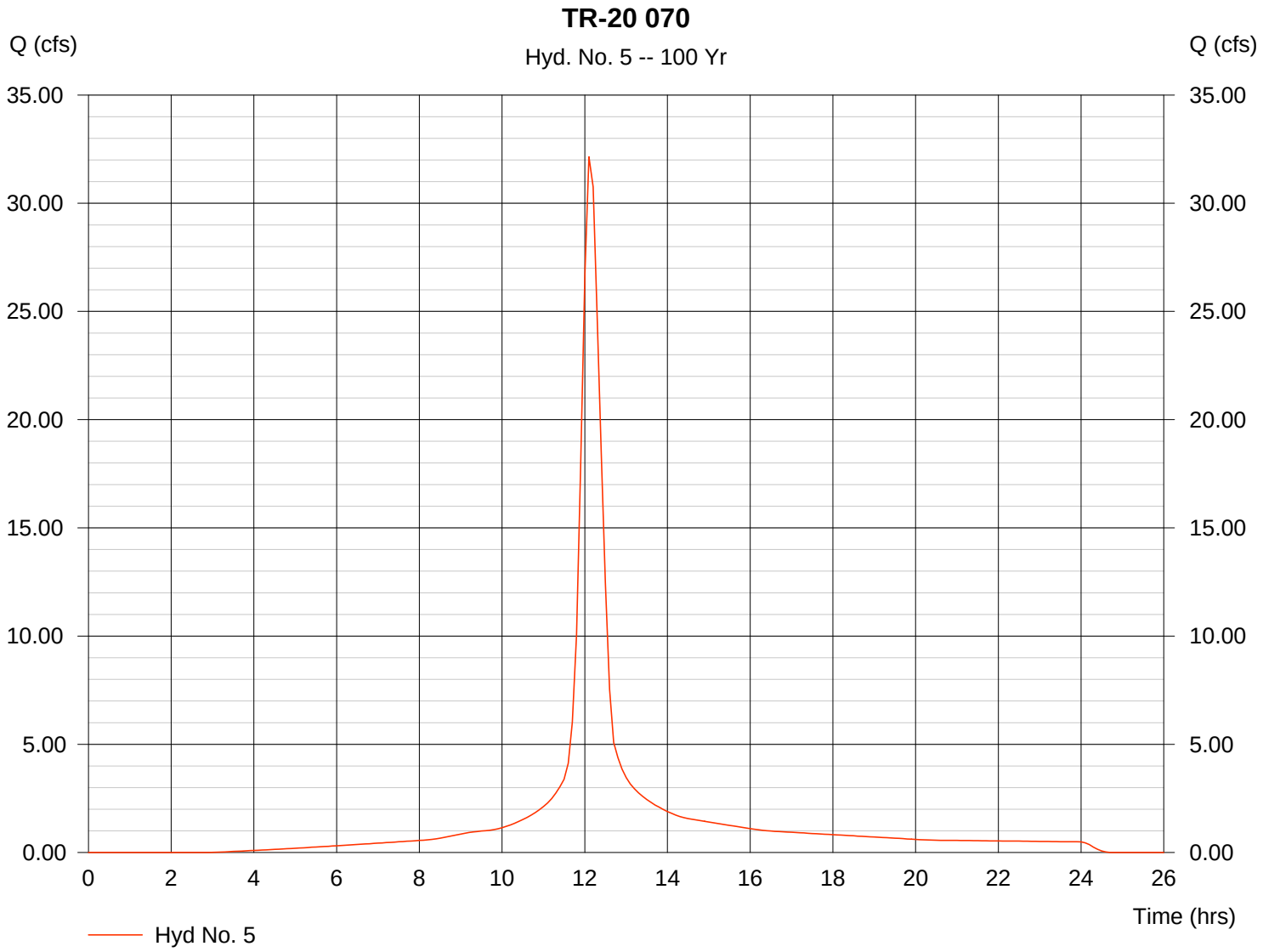
Hydraflow Hydrographs by Intelisolve | Friday, Apr 13 2007, 11:10 AM

Hyd. No. 5

TR-20 070

Hydrograph type	= SCS Runoff	Peak discharge	= 32.14 cfs
Storm frequency	= 100 yrs	Time interval	= 6 min
Drainage area	= 5.700 ac	Curve number	= 89.4
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 20.90 min
Total precip.	= 7.80 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Hydrograph Volume = 3.105 acft



Hydrograph Plot

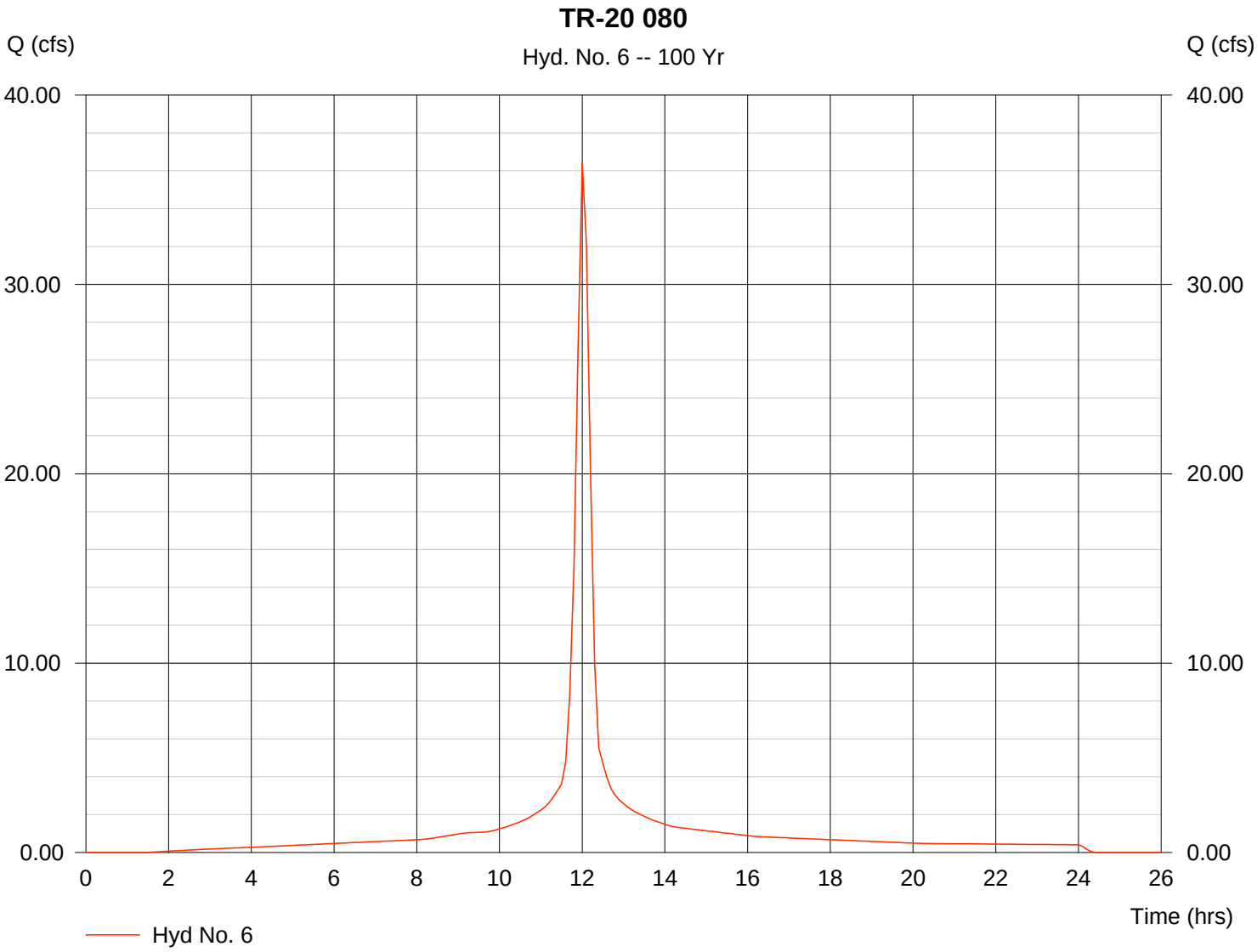
Hydraflow Hydrographs by Intelisolve | Friday, Apr 13 2007, 11:10 AM

Hyd. No. 6

TR-20 080

Hydrograph type	= SCS Runoff	Peak discharge	= 36.45 cfs
Storm frequency	= 100 yrs	Time interval	= 6 min
Drainage area	= 5.000 ac	Curve number	= 95
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 18.90 min
Total precip.	= 7.80 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Hydrograph Volume = 2.813 acft



Hydrograph Plot

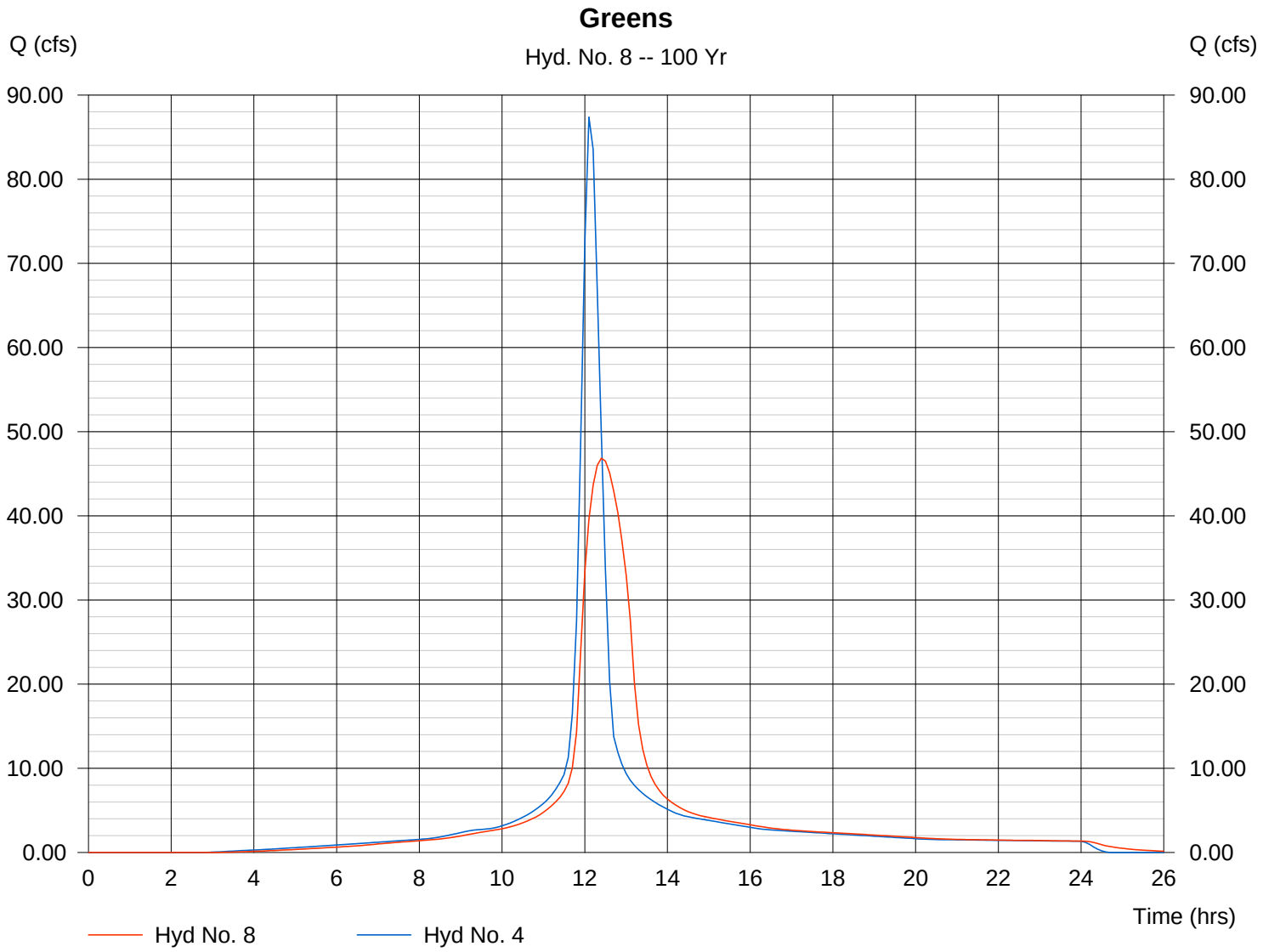
Hydraflow Hydrographs by Intelisolve | Friday, Apr 13 2007, 11:10 AM

Hyd. No. 8

Greens

Hydrograph type	=	Reservoir	Peak discharge	=	46.85 cfs
Storm frequency	=	100 yrs	Time interval	=	6 min
Inflow hyd. No.	=	4	Max. Elevation	=	1384.83 ft
Reservoir name	=	Greens (RES 11)	Max. Storage	=	1.880 acft

Storage Indication method used. | Hydrograph Volume = 8.466 acft



Pond Report

Hydraflow Hydrographs by Intelisolve | Friday, Apr 13 2007, 11:10 AM

Pond No. 1 - Greens (RES 11)

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (acft)	Total storage (acft)
0.00	1382.00	24,110	0.000	0.000
1.00	1383.00	26,875	0.585	0.585
2.00	1384.00	31,190	0.666	1.252
3.00	1385.00	35,058	0.760	2.012

Culvert / Orifice Structures

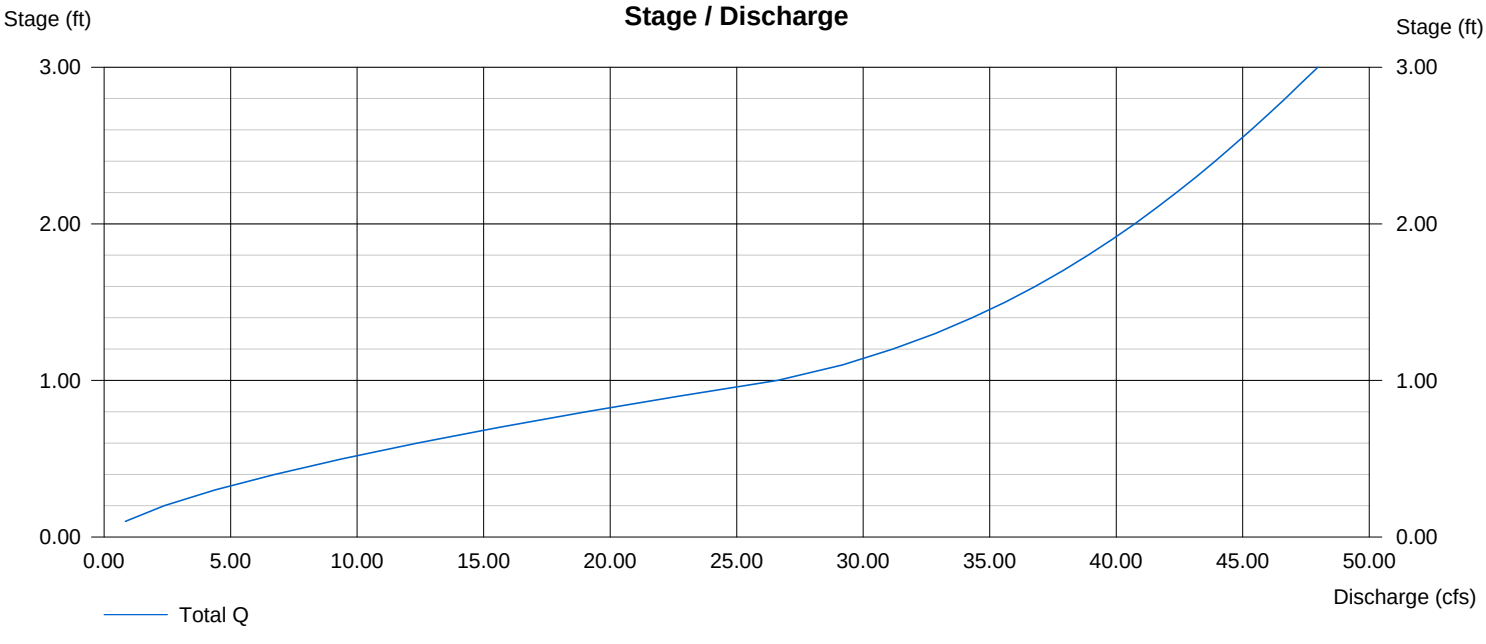
	[A]	[B]	[C]	[D]
Rise (in)	= 30.00	0.00	0.00	0.00
Span (in)	= 30.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 1379.50	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	0.00
N-Value	= .013	.013	.000	.000
Orif. Coeff.	= 0.60	0.60	0.00	0.00
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 8.00	0.00	0.00	0.00
Crest El. (ft)	= 1382.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Riser	---	---	---
Multi-Stage	= Yes	No	No	No

Exfiltration = 0.000 in/hr (Contour) Tailwater Elev. = 0.00 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control.



Hydrograph Plot

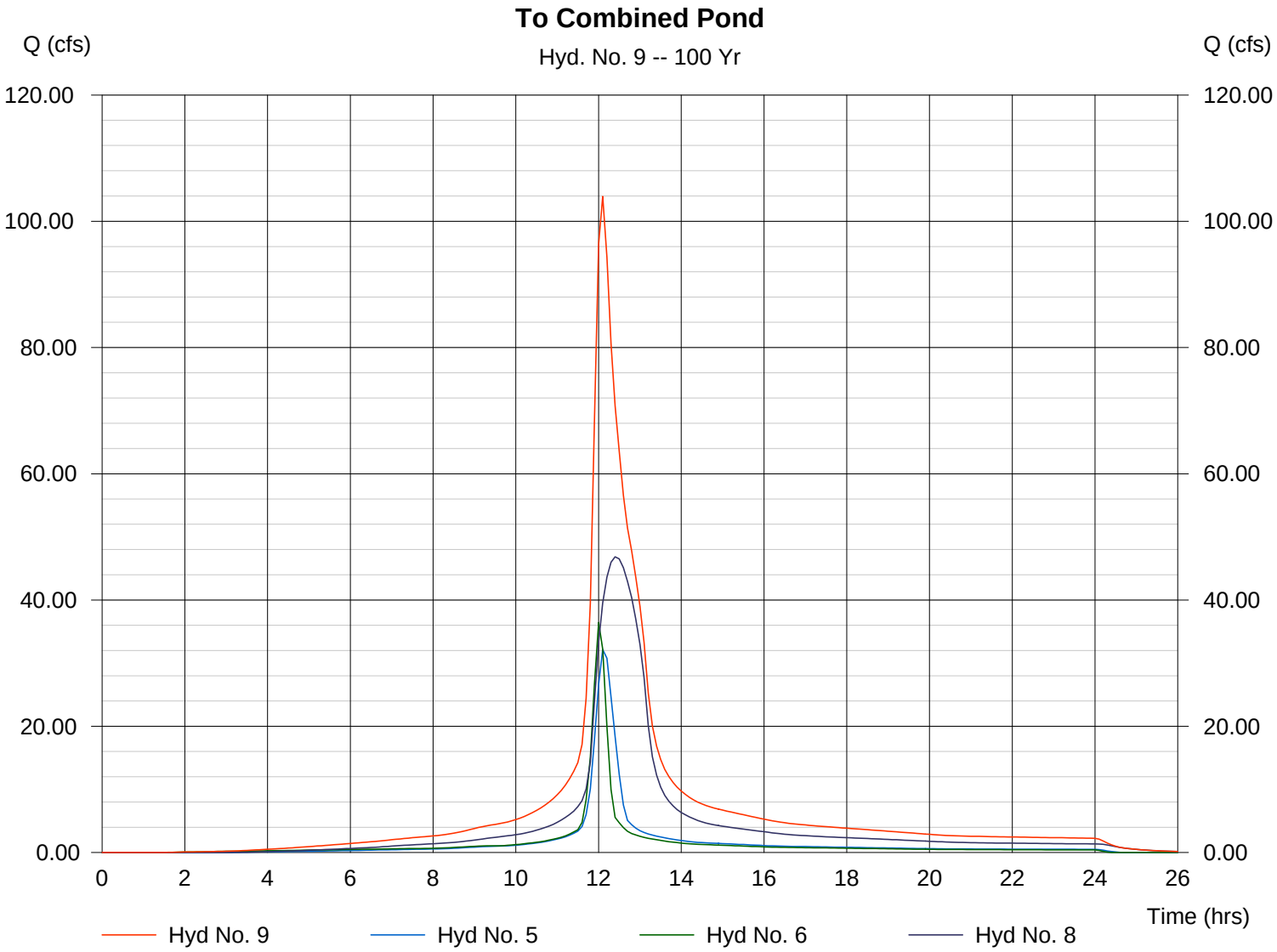
Hydraflow Hydrographs by Intelisolve | Friday, Apr 13 2007, 11:10 AM

Hyd. No. 9

To Combined Pond

Hydrograph type	= Combine	Peak discharge	= 103.93 cfs
Storm frequency	= 100 yrs	Time interval	= 6 min
Inflow hyds.	= 5, 6, 8		

Hydrograph Volume = 14.385 acft



Hydrograph Plot

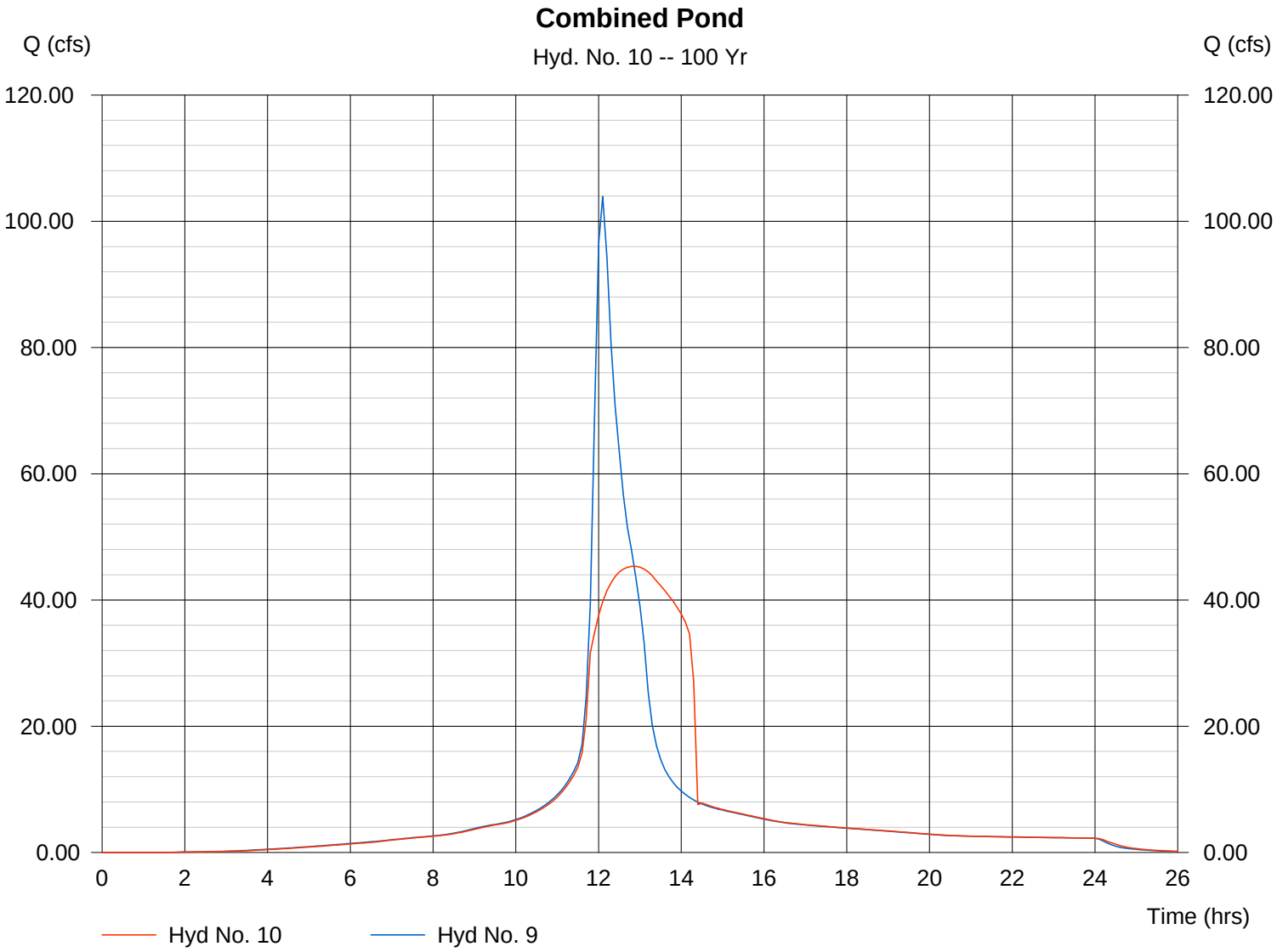
Hydraflow Hydrographs by Intelisolve | Friday, Apr 13 2007, 11:10 AM

Hyd. No. 10

Combined Pond

Hydrograph type	=	Reservoir	Peak discharge	=	45.33 cfs
Storm frequency	=	100 yrs	Time interval	=	6 min
Inflow hyd. No.	=	9	Max. Elevation	=	1383.93 ft
Reservoir name	=	Combined Pond	Max. Storage	=	2.777 acft

Storage Indication method used. | Hydrograph Volume = 14.385 acft



Pond Report

Hydraflow Hydrographs by Intelisolve — Friday, Apr 13 2007, 11:10 AM

Pond No. 4 - Combined Pond

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (acft)	Total storage (acft)
0.00	1379.00	7,948	0.000	0.000
1.00	1380.00	10,024	0.206	0.206
2.00	1381.00	27,184	0.427	0.633
3.00	1382.00	32,728	0.688	1.321
4.00	1383.00	38,609	0.819	2.140
5.00	1384.00	21,299	0.688	2.828
6.00	1385.00	23,000	0.508	3.336

Culvert / Orifice Structures

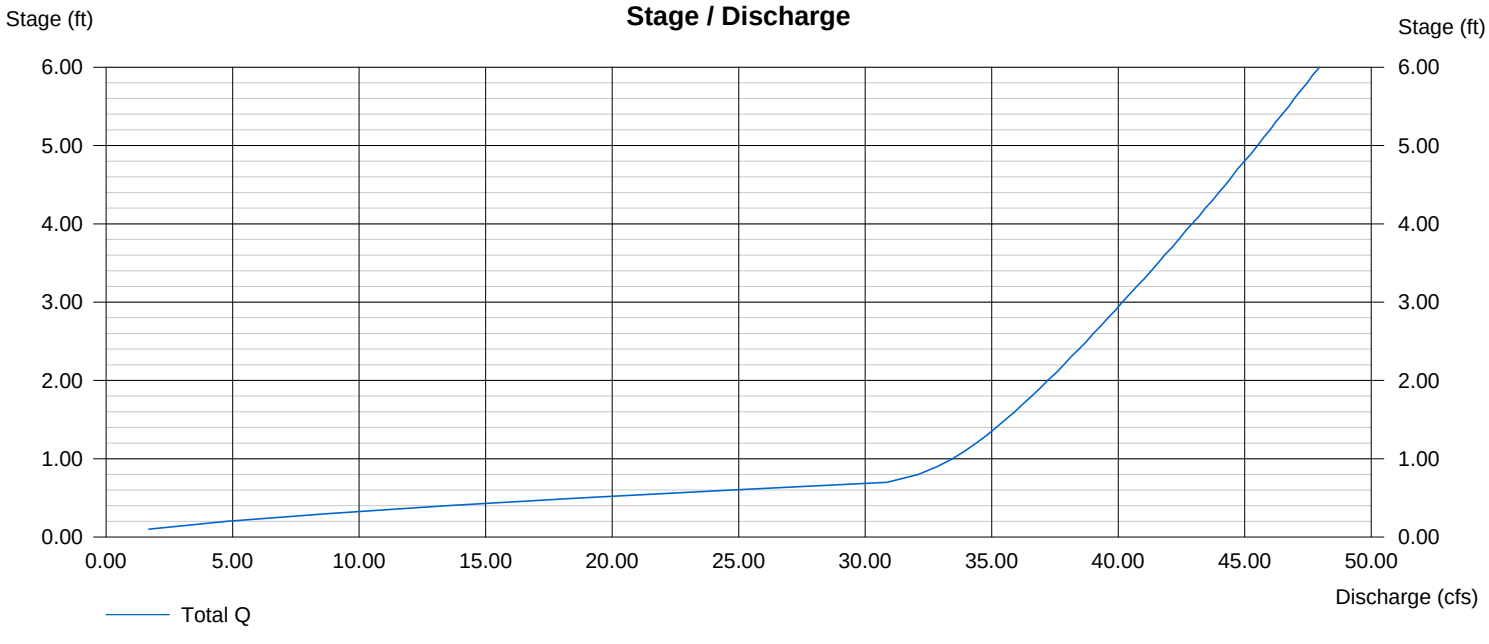
	[A]	[B]	[C]	[D]
Rise (in)	= 24.00	0.00	0.00	0.00
Span (in)	= 24.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 1373.90	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	0.00
N-Value	= .013	.013	.000	.000
Orif. Coeff.	= 0.60	0.60	0.00	0.00
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 16.00	0.00	0.00	0.00
Crest El. (ft)	= 1379.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Riser	---	---	---
Multi-Stage	= Yes	No	No	No

Exfiltration = 0.000 in/hr (Contour) Tailwater Elev. = 0.00 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control. Weir riser checked for orifice conditions.



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve | Friday, Apr 13 2007, 11:10 AM

Hyd. No. 11

Post-Project to 13th Street

Hydrograph type	= Combine	Peak discharge	= 204.84 cfs
Storm frequency	= 100 yrs	Time interval	= 6 min
Inflow hyds.	= 3, 10		

Hydrograph Volume = 26.953 acft

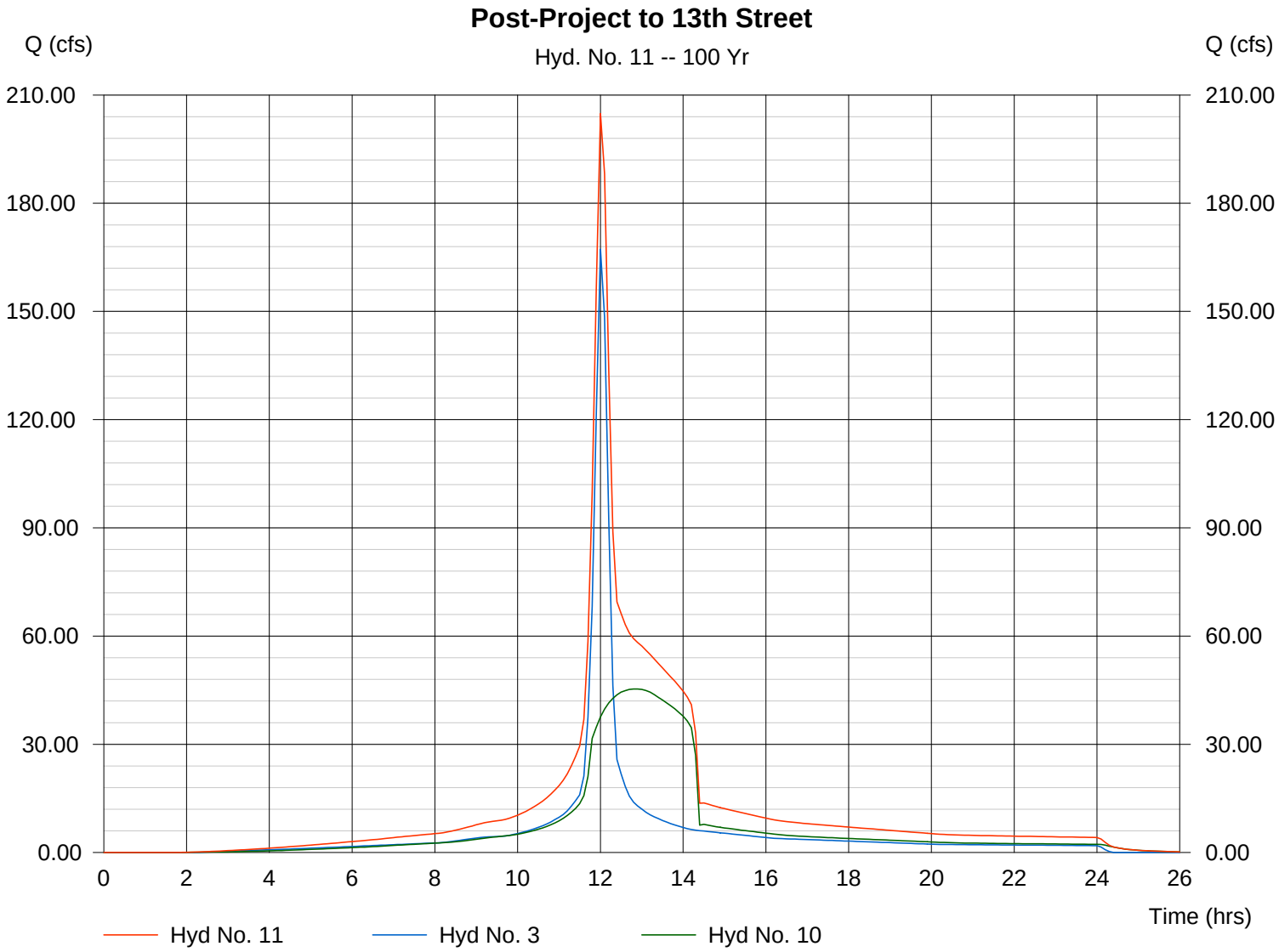


Figure 3.4

Post-Project Time of Concentration

Time of Concentration Calculations by the FAA method

The Waterfront Addition - Post-Project Conditions Calcuations

$$T_c = \frac{(1.1-C)L^{1/2}}{100\ S^{1/3}}$$

Area Name	Land Use	Soil Group	Maximum Elevation	Minimum Elevation	Length (L)	Rational Runoff Coefficient, C				Time of Concentration (min), T_c				Time of Concentration (hr), T_c				CN
						2-Year	5-Year	10-Year	100-Year	2-Year	5-Year	10-Year	100-Year	2-Year	5-Year	10-Year	100-Year	
005	*Business - Neighborhood*	*D*	*1405.0*	*1375.0*	*3800*	0.68	0.69	0.73	0.80	50.4	49.2	44.4	36.0	0.8404	0.8204	0.7403	0.6003	88.8
025	*Business - Neighborhood*	*D*	*1405.0*	*1375.0*	*3600*	0.68	0.69	0.73	0.80	48.2	47.1	42.5	34.4	0.8034	0.7842	0.7077	0.5738	90.1
035	*Business - Neighborhood*	*D*	*1390.0*	*1370.0*	*2800*	0.68	0.69	0.73	0.80	44.8	43.7	39.4	32.0	0.7459	0.7281	0.6571	0.5328	90.6
045	*Business - Neighborhood*	*D*	*1390.0*	*1369.0*	*2000*	0.68	0.69	0.73	0.80	33.3	32.5	29.3	23.8	0.5544	0.5412	0.4884	0.3960	95.3
053	*Business - Neighborhood*	*D*	*1390.0*	*1373.0*	*3000*	0.68	0.69	0.73	0.80	50.0	48.8	44.1	35.7	0.8340	0.8141	0.7347	0.5957	91.0
055	*Business - Neighborhood*	*D*	*1385.0*	*1369.0*	*2800*	0.68	0.69	0.73	0.80	48.2	47.1	42.5	34.4	0.8034	0.7843	0.7078	0.5739	92.2
061	*Business - Neighborhood*	*D*	*1379.0*	*1370.0*	*600*	0.68	0.69	0.73	0.80	16.2	15.8	15.0	15.0	0.2696	0.2632	0.2500	0.2500	95.0
065	*Business - Neighborhood*	*D*	*1395.0*	*1385.0*	*1000*	0.68	0.69	0.73	0.80	23.9	23.3	21.1	17.1	0.3984	0.3890	0.3510	0.2846	92.3
166	*Business - Neighborhood*	*D*	*1400.0*	*1369.0*	*5000*	0.68	0.69	0.73	0.80	62.7	61.2	55.2	44.8	1.0448	1.0200	0.9205	0.7463	87.9
070	*Business - Neighborhood*	*D*	*1390.0*	*1385.0*	*750*	0.68	0.69	0.73	0.80	23.7	23.1	20.9	16.9	0.3950	0.3856	0.3480	0.2821	91.1
080	*Business - Neighborhood*	*D*	*1385.0*	*1384.0*	*350*	0.68	0.69	0.73	0.80	21.5	21.0	18.9	15.3	0.3579	0.3494	0.3153	0.2556	95.0

Figure 3.5

Post-Project Curve Numbers

Project Name: The Waterfront Addition - Post-Project
Project Number: 02014
Basin: TR-20 005

Total Area = 125.0 Acres
Total Area = 0.1953 sq. mi.
Composite Curve Number = 88.77

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	20.2 84
Commercial and business	85	89	92	94	26.4 95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	14.1 92
Residential - 1/4 acre	38	61	75	83	64.2 87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	100

Project Name: The Waterfront Addition - Post-Project
Project Number: 02014
Basin: TR-20 025

Total Area = 100.2 Acres
Total Area = 0.1566 sq. mi.
Composite Curve Number = 90.14

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	84
Commercial and business	85	89	92	94	39.3 95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	92
Residential - 1/4 acre	38	61	75	83	60.9 87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	100

Project Name: The Waterfront Addition - Post-Project
Project Number: 02014
Basin: TR-20 035

Total Area = 104.8 Acres
Total Area = 0.1638 sq. mi.
Composite Curve Number = 90.62

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	17.9 84
Commercial and business	85	89	92	94	50.5 95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	92
Residential - 1/4 acre	38	61	75	83	34.2 87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	2.2 100

Project Name: The Waterfront Addition - Post-Project
Project Number: 02014
Basin: TR-20 045

Total Area = 27.6 Acres
Total Area = 0.0431 sq. mi.
Composite Curve Number = 95.33

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	84
Commercial and business	85	89	92	94	25.8 95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	92
Residential - 1/4 acre	38	61	75	83	87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	1.8 100

Project Name: The Waterfront Addition - Post-Project
Project Number: 02014
Basin: TR-20 053

Total Area = 97.6 Acres
Total Area = 0.1525 sq. mi.
Composite Curve Number = 90.97

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	84
Commercial and business	85	89	92	94	54.1 95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	92
Residential - 1/4 acre	38	61	75	83	87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	40.7 85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	2.8 100

Project Name: The Waterfront Addition - Post-Project
Project Number: 02014
Basin: TR-20 055

Total Area = 103.3 Acres
Total Area = 0.1614 sq. mi.
Composite Curve Number = 92.19

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	84
Commercial and business	85	89	92	94	40.5 95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	92
Residential - 1/4 acre	38	61	75	83	46.5 87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	16.3 100

Project Name: The Waterfront Addition - Post-Project
Project Number: 02014
Basin: TR-20 061

Total Area = 17.5 Acres
Total Area = 0.0273 sq. mi.
Composite Curve Number = 95.00

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	84
Commercial and business	85	89	92	94	17.5 95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	92
Residential - 1/4 acre	38	61	75	83	87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	100

Project Name: The Waterfront Addition - Post-Project
Project Number: 02014
Basin: TR-20 065

Total Area = 15.4 Acres
Total Area = 0.0241 sq. mi.
Composite Curve Number = 92.27

Land Use	Percent Impervious	Area/CN Hydrological Soil Group A	B	C	D	Calculation
Cultivated land without conservation treatment	0	72	81	88	91	0
Cultivated land with conservation treatement	0	62	71	78	81	0
Pasture or range land - poor condition	0	68	79	86	89	0
Pasture or range land - good condition	0	39	61	74	80	0
Meadow - good condition	0	30	58	71	78	0
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83	0
Wood or Forest land - good cover	0	25	55	70	77	0
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80	0
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	84	0
Commercial and business	85	89	92	94	11.2 95	1064
Industrial	72	81	88	91	93	0
Residential - 1/8 acre or less	65	77	85	90	92	0
Residential - 1/4 acre	38	61	75	83	87	0
Residentail - 1/3 acre	30	57	72	81	86	0
Residential - 1/2 acre	25	54	70	80	4.2 85	357
Residentail - 1 acre	20	51	68	79	84	0
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98	0
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98	0
Streets and roads - gravel	-	76	85	89	91	0
Streets and roads - dirt	-	72	82	87	89	0
Lake/Pond	100	100	100	100	100	0

Project Name: The Waterfront Addition - Post-Project
Project Number: 02014
Basin: TR-20 166

Total Area = 183.5 Acres
Total Area = 0.2867 sq. mi.
Composite Curve Number = 87.90

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	132.7 84
Commercial and business	85	89	92	94	19.3 95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	92
Residential - 1/4 acre	38	61	75	83	87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	31.5 100

Project Name: The Waterfront Addition - Post-Project
Project Number: 02014
Basin: TR-20 070

Total Area = 5.7 Acres
Total Area = 0.0089 sq. mi.
Composite Curve Number = 91.14

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	84
Commercial and business	85	89	92	94	3.5 95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	92
Residential - 1/4 acre	38	61	75	83	87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	2.2 85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	100

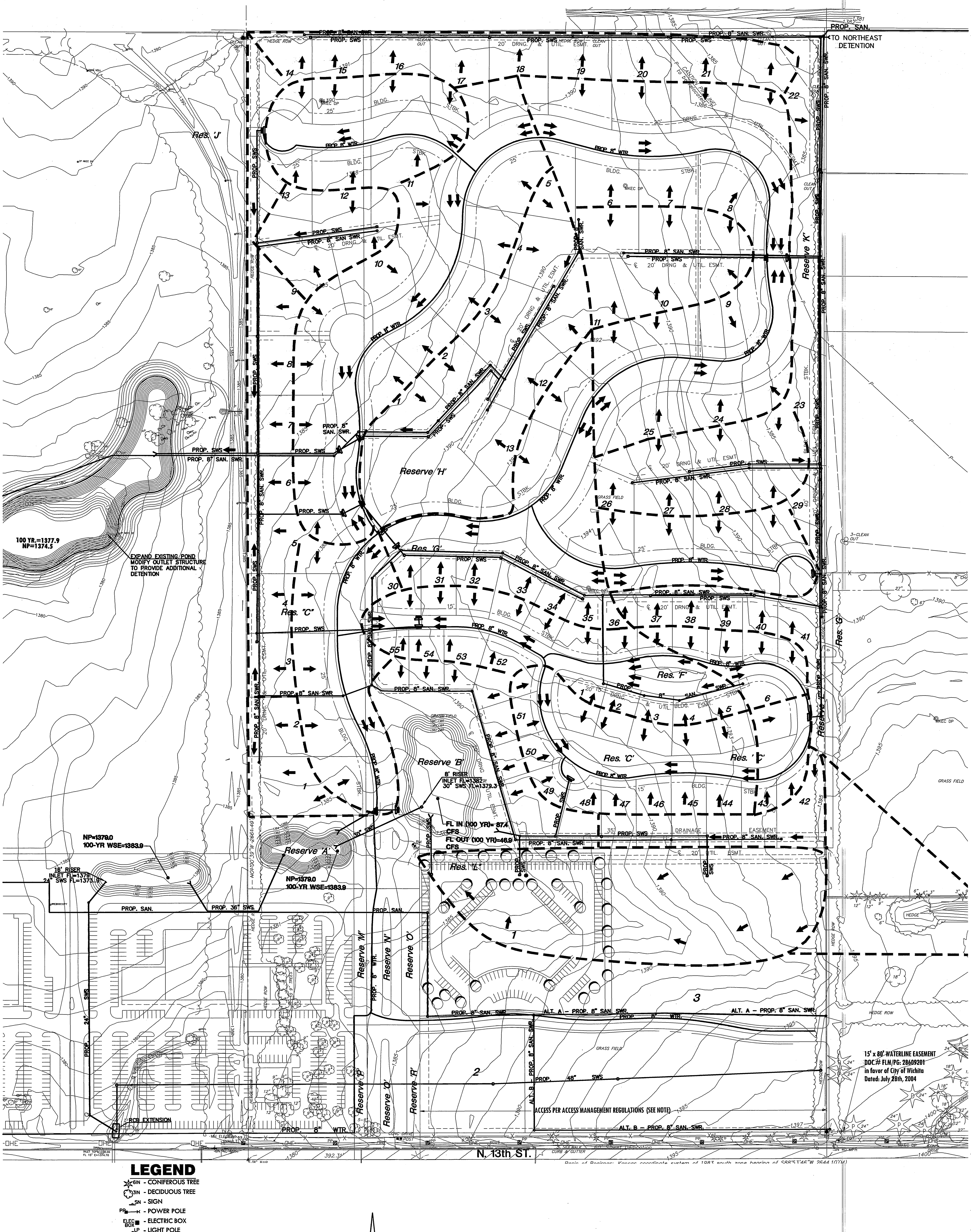
Project Name: The Waterfront Addition - Post-Project
Project Number: 02014
Basin: TR-20 080

Total Area = 5.0 Acres
Total Area = 0.0078 sq. mi.
Composite Curve Number = 95.00

Land Use	Percent Impervious	Area/CN Hydrological Soil Group			
		A	B	C	D
Cultivated land without conservation treatment	0	72	81	88	91
Cultivated land with conservation treatement	0	62	71	78	81
Pasture or range land - poor condition	0	68	79	86	89
Pasture or range land - good condition	0	39	61	74	80
Meadow - good condition	0	30	58	71	78
Wood or Forest land - thin stand, poor cover, no mulch	0	45	66	77	83
Wood or Forest land - good cover	0	25	55	70	77
Open spaces - good condition - grass cover on 75% or more of area	0	39	61	74	80
Open spaces - fair condition - grass cover on 50-75% of area	0	49	69	79	84
Commercial and business	85	89	92	94	5.0 95
Industrial	72	81	88	91	93
Residential - 1/8 acre or less	65	77	85	90	92
Residential - 1/4 acre	38	61	75	83	87
Residentail - 1/3 acre	30	57	72	81	86
Residential - 1/2 acre	25	54	70	80	85
Residentail - 1 acre	20	51	68	79	84
Paved Parking lots, roofs, driveways, etc.	-	98	98	98	98
Streets and roads - paved with curbs and storm sewers	-	98	98	98	98
Streets and roads - gravel	-	76	85	89	91
Streets and roads - dirt	-	72	82	87	89
Lake/Pond	100	100	100	100	100

Figure 3.6

Drainage and Utility Plan



LEGEND

- CONIFEROUS TREE
- DECIDUOUS TREE
- SIGN
- POWER POLE
- ELECTRIC BOX
- LIGHT POLE
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- SECTION CORNER
- BENCHMARK
- EASEMENT
- BUILDING SETBACK
- FENCE
- STORM SEWER PIPE
- WATER LINE
- SANITARY SEWER LINE
- GAS LINE
- GAS PIPELINE
- TELEPHONE LINE
- UNDERGROUND ELEC.
- OVERHEAD ELECTRIC
- FIBER OPTIC CABLE !
- DRAINAGE SUB BASIN
- DRAINAGE BASIN
- FLOW ARROW
- A17 - AREA FOR SWS SIZING

N

SCALE: 1" = 100'

100 0 100 200

H:\CIVIL\02014\DWG\Drng\Joint Submittal\02014DUP.dwg

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

WATERFRONT COMMERCIAL, WATERFRONT RESIDENTIAL, & GREENWICH OFFICE PARK ADDITIONS
PROJECT NAME

DRAINAGE AND UTILITY PLAN
SHEET TITLE

TMH	CMJ/DDG	GJA
DESIGN BY:	DRAWN BY:	CHECKED BY:
APRIL 2007	02014	1 / 1
DATE	JOB NO.	SHEET/OF

Tab 4. Floodplain Submittal

A Conditional Letter of Map Revision, (CLOMR) was approved June 2006 case number 04-07-031RA. Letter of Map Revision (LOMR) will be completed once all construction around the Waterfront lake is complete. As-built survey will be done of the area and the hydraulic model will be updated to match the existing conditions. Channel modifications are not proposed for the Waterfront Commercial, Waterfront Residential or Greenwich Business Park site.

Tab 5. Permits

A. US Army Corps of Engineers

N/A

B. Kansas Department of Agriculture

Permits were obtained for structures in the Waterfront Addition, but will not be required for the proposed ponds due to the drainage area size.

C. Federal Emergency Agency (FEMA)

A Conditional Letter of Map Revision, (CLOMR) was approved June 2006 case number 04-07-031RA. Letter of Map Revision (LOMR) will be completed once all construction around the Waterfront lake is complete.

D. Kansas Department of Transportation

N/A

E. Sedgwick County Right-of-way Permit

N/A