DATE 04/24/2007

Columbia County Building Permit

This Permit Expires One Year From the Date of Issue

PERMIT
000025739

APPLICANT KEVIN KELLY PHONE 352 374-8177

ADDRESS P.O. BOX 5215 GAINESVILLE FL 32627

OWNER CHARLES RUIZ PHONE 305 613-2868

ADDRESS 1200 SW BLUFF DRIVE FT. WHITE FL 32038

CONTRACTOR ROBERT KELLY CONSTRUCTION PHONE 352 374-8177

LOCATION OF PROPERTY 47S, TR ON HOLLINGSWORTH ST, TR ON BLUFF DR., TO 1200, ON TH SIDE (RIVER SIDE)

TYPE DEVELOPMENT SFD,UTILITY ESTIMATED COST OF CONSTRUCTION 68400.00

HEATED FLOOR AREA 1368.00 TOTAL AREA 1890.00 HEIGHT STORIES 1

FOUNDATION FRAME WALLS FRAMED ROOF PITCH 3/12 FLOOR FRAME

LAND USE & ZONING ESA-2 MAX. HEIGHT 24

Minimum Set Back Requirments: STREET-FRONT 30.00 REAR 25.00 SIDE 25.00

NO. EX.D.U. 0 FLOOD ZONE AE DEVELOPMENT PERMIT NO. 07-008

PARCEL ID 18-7S-16-04236-042 SUBDIVISION CEDAR SPRINGS SHORES

LOT 6 BLOCK PHASE UNIT TOTAL ACRES

000001372		CGC007330		
Culvert Permit No.	Culvert Waiver	Contractor's License Number		Applicant/Owner/Contractor
WAIVER	07-0051-E	BK	JH	Y
Driveway Connection	Septic Tank Number	LU & Zoning checked by	Approved for Issuance	New Resident

COMMENTS: ZERO FT RISE LETTER ON FILE, ELEVATION CERTIFICATE REQUIRED BEFORE POWER, NOC ON FILE

Check # or Cash 1765

FOR BUILDING & ZONING DEPARTMENT ONLY

(footer/Slab)

Temporary Power _____ date/app. by | Foundation _____ date/app. by | Monolithic _____ date/app. by

Under slab rough-in plumbing _____ date/app. by | Slab _____ date/app. by | Sheathing/Nailing _____ date/app. by

Framing _____ date/app. by | Rough-in plumbing above slab and below wood floor _____ date/app. by

Electrical rough-in _____ date/app. by | Heat & Air Duct _____ date/app. by | Peri. beam (Lintel) _____ date/app. by

Permanent power _____ date/app. by | C.O. Final _____ date/app. by | Culvert _____ date/app. by

M/H tie downs, blocking, electricity and plumbing _____ date/app. by | Pool _____ date/app. by

Reconnection _____ date/app. by | Pump pole _____ date/app. by | Utility Pole _____ date/app. by

M/H Pole _____ date/app. by | Travel Trailer _____ date/app. by | Re-roof _____ date/app. by

BUILDING PERMIT FEE $ 345.00 CERTIFICATION FEE $ 9.45 SURCHARGE FEE $ 9.45

MISC. FEES $ 0.00 ZONING CERT. FEE $ 50.00 FIRE FEE $ 0.00 WASTE FEE $

FLOOD DEVELOPMENT FEE $ 50.00 FLOOD ZONE FEE $ 25.00 CULVERT FEE $ **TOTAL FEE** 488.90

INSPECTORS OFFICE _____ CLERKS OFFICE CH

NOTICE: IN ADDITION TO THE REQUIREMENTS OF THIS PERMIT, THERE MAY BE ADDITIONAL RESTRICTIONS APPLICABLE TO THIS PROPERTY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY. AND THERE MAY BE ADDITIONAL PERMITS REQUIRED FROM OTHER GOVERNMENTAL ENTITIES SUCH AS WATER MANAGEMENT DISTRICTS, STATE AGENCIES, OR FEDERAL AGENCIES.

"WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT."

This Permit Must Be Prominently Posted on Premises During Construction

PLEASE NOTIFY THE COLUMBIA COUNTY BUILDING DEPARTMENT AT LEAST 24 HOURS IN ADVANCE OF EACH INSPECTION, IN ORDER THAT IT MAY BE MADE WITHOUT DELAY OR INCONVIENCE, PHONE 758-1008. THIS PERMIT IS NOT VALID UNLESS THE WORK AUTHORIZED BY IT IS COMMENCED WITHIN 6 MONTHS AFTER ISSUANCE.

The Issuance of this Permit Does Not Waive Compliance by Permittee with Deed Restrictions.

Columbia County Building Permit Application

CG#1764 Revised 9-23-04

For Office Use Only Application # 0702-03 Date Received 2/1 By JW Permit # 1372 / 25739

Application Approved by - Zoning Official BLK Date 24.04.07 Plans Examiner JKJH Date 7-24-07

Flood Zone AE Floodway Development Permit YES Zoning ESA-2 Land Use Plan Map Category ESA

Comments "SRWMD" PERMIT ENCLOSED

CT-008

Applicants Nam KEVIN C. KELLY KELLY CONSTRUCTION, INC Phone 352-374-8177-Office FAX: 352: 373: 5741.

Address PO BOX 5215 GAINESVILLE, FL 32627

Owners Name CHARLES RUIZ Phone 305-613-2868

911 Address 1200 SW BLUFF DR FT WHITE, FL 32038

Contractors Name ROBERT L. KELLY CONSTRUCTION, INC Phone 352-374-8177

Address PO BOX 5215 GAINESVILLE, FL 32627

Fee Simple Owner Name & Address CHARLES RUIZ 1351 SW 40 AVE MIAMI, FL 33134

Bonding Co. Name & Address N/A

Architect/Engineer Name & Address ROBERT J WOLFE MAYO, FL 386-294-3939

Mortgage Lenders Name & Address N/A

Circle the correct power company – FL Power & Light – (Clay Elec.) – Suwannee Valley Elec. – Progressive Energy

Property ID Number 18-7S-16-04236-042 Estimated Cost of Construction 150,000.

Subdivision Name CEDAR SPRINGS SHORES Lot 6 Block ___ Unit 5 Phase ___

Driving Directions SR 47 SOUTH OUT OF FT. WHITE TO S.W. HOLLINGSWORTH ST. RIGHT ON HOLLINGSWORTH ST. TO S.W. BLUFF DR. RIGHT ON BLUFF DRIVE TO 1200. IT WILL BE ON LEFT SIDE OF ROAD (RIVER SIDE) MAP ATTACHED

Type of Construction NEW HOME Number of Existing Dwellings on 0

Total Acreage ~1.5 Lot Size 170 X 100 Do you need a - Culvert Permit or (Culvert Waiver) or Have an Existing Drive

Actual Distance of Structure from Property Lines - Front ~473 Side ~25.17 Side ~38.83 Rear ~295

Total Building Height ~24 FT. Number of Stories 1 Heated Floor Area 1368 / 1890 Roof Pitch 3/12

Application is hereby made to obtain a permit to do work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work be performed to meet the standards of all laws regulating construction in this jurisdiction.

DIRT DRIVE. NO CULVERTS ON ROAD

OWNERS AFFIDAVIT: I hereby certify that all the foregoing information is accurate and all work will be done in compliance with all applicable laws and regulating construction and zoning.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

Owner Builder or Agent (Including Contractor)

Contractor Signature

Contractors License Number CGC007330

Competency Card Number ___

NOTARY STAMP/SEAL

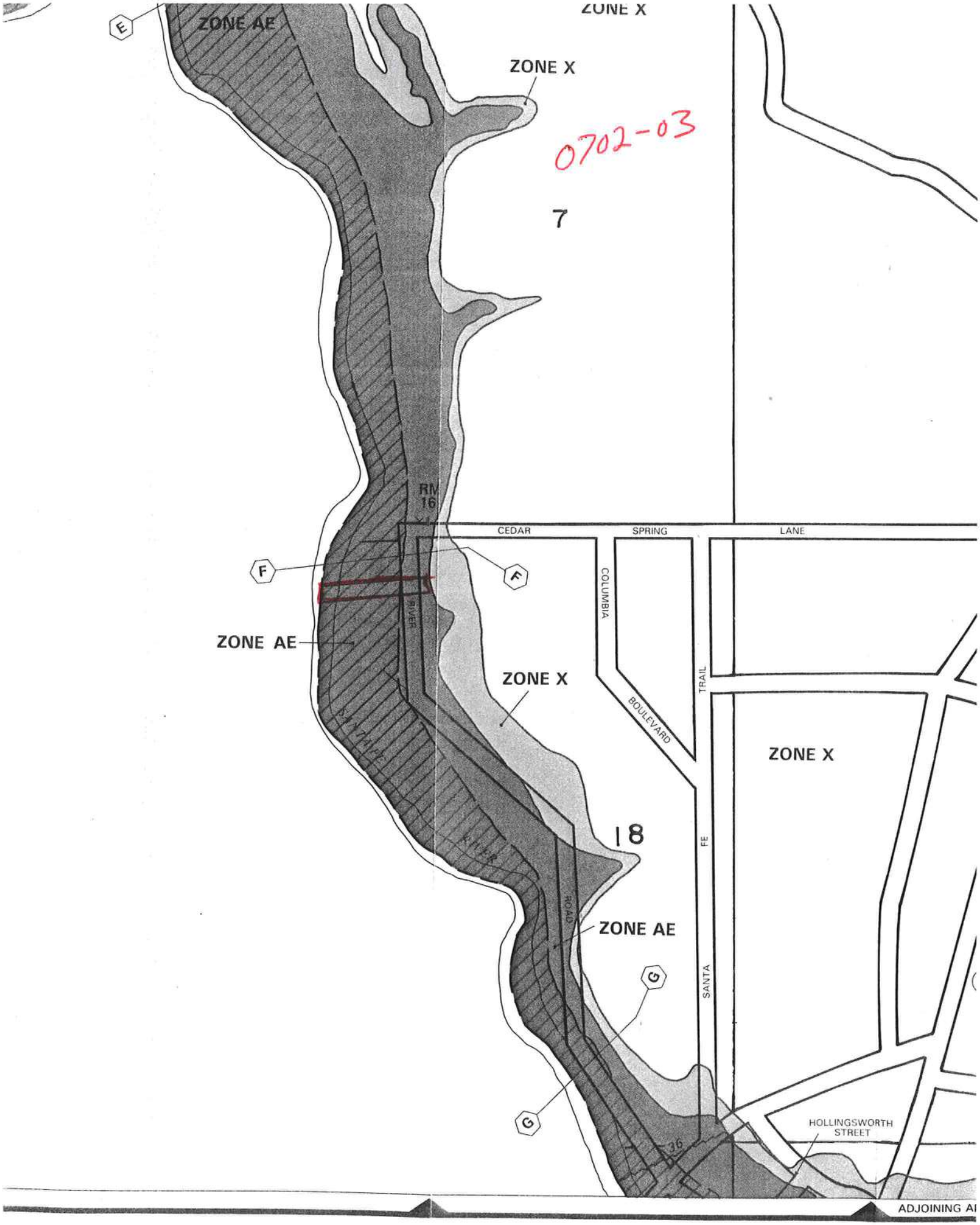
STATE OF FLORIDA
COUNTY OF COLUMBIA

Sworn to (or affirmed) and subscribed before me this 8th day of January 20 07.

Personally known ✓ or Produced Identification ___

Notary Signature

Dena Powers
My Commission DD341961
Expires September 19, 2008


ZONE X
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ZONE AE
ZONE X
0702-03
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CEDAR
SPRING
LANE
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COLUMBIA
RIVER
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ZONE X
TRAIL
BOULEVARD
ZONE X
18
FE
ROAD
ZONE AE
G
SANTA
G
HOLLINGSWORTH STREET
36
ADJOINING AI

NOTICE OF COMMENCEMENT

Return to: **Robert L. Kelly Construction, Inc.**
P.O. Box 5215
Gainesville, FL 32627

This instrument prepared by:
Robert L. Kelly Construction, Inc.

Property Appraisers Parcel Identification No.:
18-75-16-04236-042

Inst:2007009229 Date:04/24/2007 Time:15:34
DC,P.DeWitt Cason,Columbia County B:1117 P:1004

Permit No.: 25739

STATE OF FLORIDA, County of: **Columbia**
THE UNDERSIGNED hereby gives notice that improvements will be made to certain real property, and in accordance with section 713 of the Florida Statutes, the following information is provided in this NOTICE of COMMENCEMENT.

Legal Description of property: **1200 SW Bluff Dr.**

Lot 6, Units 5 Cedar Springs Shores, ORB 360-380, 686-533, 890-1172

Street Address of property: **1200 SW Bluff Dr.**

Description of improvements: **New single family home**

Property Owner Name: **Charles J. Ruiz**

Property Owners Address: **1351 SW 40th Ave, Miami, FL 33134**

Owner's Interest in Property: **Owner**

Fee Simple Title Holder Name: **N/A**

Title Holder Address:

Contractor Name: **Robert L. Kelly Construction, Inc.**

Contractor Mailing Address: **P.O. Box 5215, Gainesville, FL 32627**

Surety Name: **N/A**

Surety Mailing Address:

Lender Name: **N/A**

Lender Mailing Address:

Person within the State of Florida designated by Owner upon which notices and other documents may be serviced as provided by Section 713.13(1) (a) 7; Florida Statutes:

Name: **N/A**

Address:

In addition to himself, the Owner designates the following person to receive a copy of the Lienor's Notice as provided in Section 713.13(1) (b) 7.; Florida Statutes:

Name: **N/A**

Address:

Expiration date of Notice of Commencement (the expiration date is 1 (one) year from the date of recording).

Signature of Owner

CHARLES J. RUIZ
Printed Signature of Owner

Sworn and subscribed before me this 7th day of Febru

DIANA L. MEDARES
MY COMMISSION # DD 347857
EXPIRES: August 17, 2008
Bonded Thru Notary Public Underwriters

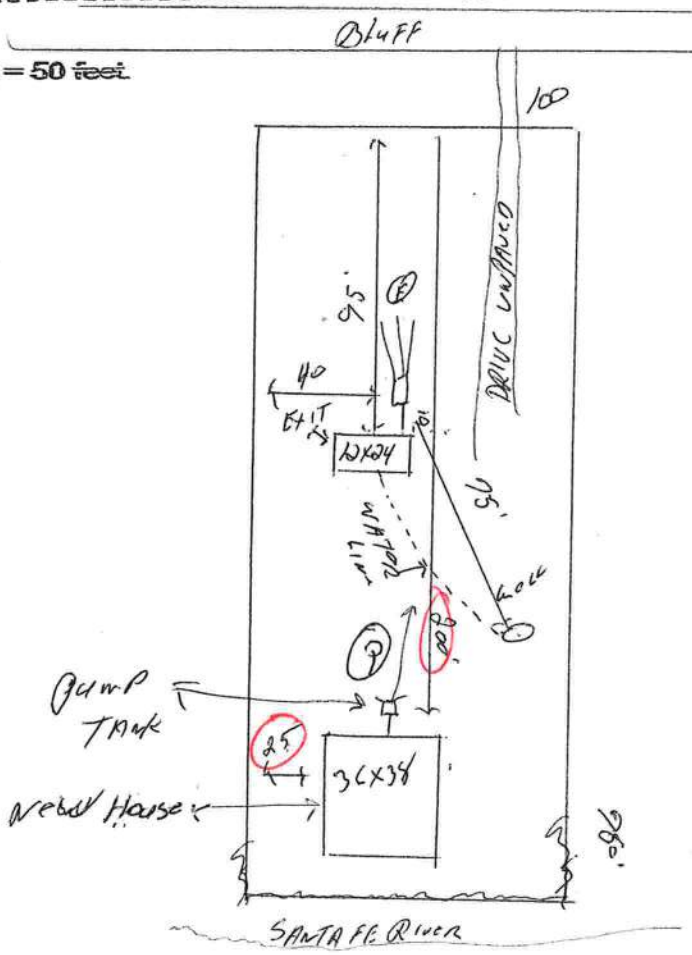
Notary Public:

My commission expires:

STATE OF FLORIDA
DEPARTMENT OF HEALTH
APPLICATION FOR ONSITE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permit Application Number 07-0005IE

PART II - SITEPLAN



Scale: 1 inch = 50 feet

Notes: Pump Tank To be Installed And Pumped To Existing System

Plan submitted by: A C Ford

Approved X Not Approved

Sabe Mraddy ES11

MASTER CONTRACTOR

Date 1-30-07

Columbia CHD County Health Department

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT

DH 4015, 10/96 (Replaces HRS-H Form 4016 which may be used)
Number: 5744-002-4015-5)

ROBERT L. KELLY CONSTRUCTION, INC.

P.O. Box 5215 Gainesville, FL 32627 (352) 374-8177 □fax: (352) 373-5741

LETTER OF AUTHORIZATION

To Whom It May Concern:

I hereby authorize the following persons to sign for permits:

Kevin C. Kelly
Name

Signature

Name

Signature

On behalf of:

Robert L. Kelly
Contractor's Name

Robert L. Kelly Construction, Inc.
Firm Name

P.O. Box 5215
Address

Gainesville, FL 32627
City State Zip

CGC 007330
Contractor's License Number

Contractor's Signature

Witness my hand and official seal, this 31st day of August, 20 06.

Notary Public - State of Florida
My Commission Expires:

Dena Powers
My Commission DD341961
Expires September 19, 2008

Faxed 1:36 PM

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 01/08/2007

PRODUCER
King Insurance Agency
2321 NW 41st Street
Gainesville FL 32606

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED
Robert L. Kelly Construction, Inc.
P. O. Box 5215
Gainesville FL 32627

INSURERS AFFORDING COVERAGE	NAIC #
INSURER A: WESTFIELD INSURANCE COMPANY	
INSURER B:	
INSURER C:	
INSURER D:	
INSURER E:	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A		GENERAL LIABILITY [X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS MADE [X] OCCUR [X] PD DED $500 GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC	CWP3758716	12/31/2006	12/31/2007	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
A		AUTOMOBILE LIABILITY [ ] ANY AUTO [ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS [X] HIRED AUTOS [X] NON-OWNED AUTOS	CWP3758716	12/31/2006	12/31/2007	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
		GARAGE LIABILITY [ ] ANY AUTO				AUTO ONLY - EA ACCIDENT OTHER THAN AUTO ONLY: EA ACC AGG	$ $ $
A		EXCESS/UMBRELLA LIABILITY [X] OCCUR [ ] CLAIMS MADE [ ] DEDUCTIBLE [X] RETENTION $ 0	CWP3758716	12/31/2006	12/31/2007	EACH OCCURRENCE AGGREGATE PROD/COMP OP	$ 2,000,000 $ 2,000,000 $ 2,000,000
		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below				WC STATU-TORY LIMITS [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $
		OTHER					

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

FAX: 386-758-2160

CERTIFICATE HOLDER

COLUMBIA COUNTY BUILDING DEPT.
P.O. BOX 1529

LAKE CITY, FL 32056-1629

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 10 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE <MLB>

ACORD 25 (2001/08)

© ACORD CORPORATION 1988

RECEIVED JAN 0 8 2007

ACORD CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 08/29/2006

PRODUCER
PARTNERS INSURANCE AGENCY
PMB 522 PO BOX 147050
GAINESVILLE, FL 32614
352-332-0180

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED
ROBERT L KELLY CONSTRUCTION, INC.
P O BOX 5215
GAINESVILLE, FL 32627

INSURERS AFFORDING COVERAGE	NAIC #
INSURER A: FLORIDA WORKERS COMP JUA	
INSURER B:	
INSURER C:	
INSURER D:	
INSURER E:	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
		GENERAL LIABILITY				EACH OCCURRENCE	$
		COMMERCIAL GENERAL LIABILITY				DAMAGE TO RENTED PREMISES (Ea occurrence)	$
		CLAIMS MADE OCCUR				MED EXP (Any one person)	$
						PERSONAL & ADV INJURY	$
		GEN'L AGGREGATE LIMIT APPLIES PER:				GENERAL AGGREGATE	$
		POLICY PRO-JECT LOC				PRODUCTS - COMP/OP AGG	$
		AUTOMOBILE LIABILITY					
		ANY AUTO				COMBINED SINGLE LIMIT (Ea accident)	$
		ALL OWNED AUTOS				BODILY INJURY (Per person)	$
		SCHEDULED AUTOS				BODILY INJURY (Per accident)	$
		HIRED AUTOS				PROPERTY DAMAGE (Per accident)	$
		NON-OWNED AUTOS					
		GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$
		ANY AUTO				OTHER THAN AUTO ONLY: EA ACC	$
						AGG	$
		EXCESS/UMBRELLA LIABILITY				EACH OCCURRENCE	$
		OCCUR CLAIMS MADE				AGGREGATE	$
							$
		DEDUCTIBLE					$
		RETENTION $					$
A		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	6FR13UB1360C665-05	02/28/2006	02/28/2007	X WC STATU-TORY LIMITS OTH-ER	
		ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?				E.L. EACH ACCIDENT	$500,000
		If yes, describe under SPECIAL PROVISIONS below				E.L. DISEASE - EA EMPLOYEE	$500,000
						E.L. DISEASE - POLICY LIMIT	$500,000
		OTHER					

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

CERTIFICATE HOLDER

COLUMBIA COUNTY BUILDING & ZONING DEPARTMENT
P.O. BOX 1529
LAKE CITY, FL 32056

FAX: 386-758-2160

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 10 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

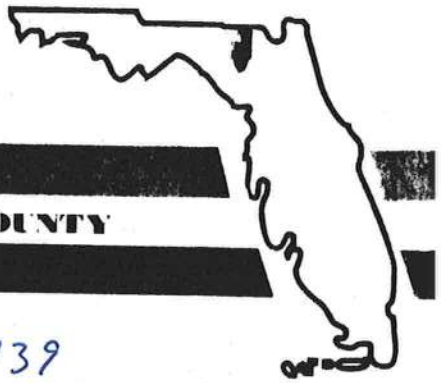
AUTHORIZED REPRESENTATIVE

ACORD 25 (2001/08)

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RECEIVED AUG 2 8 2006

District No. 1 - Ronald Williams
District No. 2 - Dewey Weaver
District No. 3 - Jody DuPree
District No. 4 - Stephen E. Bailey
District No. 5 - Scarlet P. Frisina



BOARD OF COUNTY COMMISSIONERS • COLUMBIA COUNTY

25739

MEMO OF REVIEW FOR CORRECTNESS AND COMPLETION

In accordance with participation in the NFIP/CRS program, all elevation certificates are required to be reviewed for correctness and completion prior to acceptance by the community. This completed form shall be attached to all elevation certificates maintained on file and provided with requested copies of elevation certificates.

____ The attached elevation certificate requires corrections by the surveyor of section(s) _____ prior to acceptance by the community.
____ The attached elevation certificated is complete and correct.
X Minor corrections have been made in the below marked sections by the authorized Community Official.

SECTION A - PROPERTY INFORMATION

A1. Building Owner's Name Charles Ruiz	For Insurance Company Use:
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.	Policy Number
City State ZIP Code	Company NAIC Number

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) 18-7S-16-04236-042

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) _____
A5. Latitude/Longitude: Lat. _____ Long. _____ Horizontal Datum: ☐ NAD 1927 ☐ NAD 1983
A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.
A7. Building Diagram Number_____
A8. For a building with a crawl space or enclosure(s), provide:
a) Square footage of crawl space or enclosure(s) _____ sq ft
b) No. of permanent flood openings in the crawl space or enclosure(s) walls within 1.0 foot above adjacent grade _____
c) Total net area of flood openings in A8.b _____ sq in

A9. For a building with an attached garage, provide:
a) Square footage of attached garage _____ sq ft
b) No. of permanent flood openings in the attached garage walls within 1.0 foot above adjacent grade _____
c) Total net area of flood openings in A9.b _____ sq in

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number	B2. County Name	B3. State

B4. Map/Panel Number	B5. Suffix	B6. FIRM Index Date	B7. FIRM Panel Effective/Revised Date	B8. Flood Zone(s)	B9. Base Flood Elevation(s) (Zone AO, use base flood depth)

B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9.
☐ FIS Profile ☐ FIRM ☐ Community Determined ☐ Other (Describe) _____
B11. Indicate elevation datum used for BFE in Item B9: ☐ NGVD 1929 ☐ NAVD 1988 ☐ Other (Describe) _____
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? ☐ Yes ☐ No
Designation Date_____ ☐ CBRS ☐ OPA

COMMENTS: C2. a) e) A/C Elevated to 36.00' per site visit.

Date of Review: 3-24-08 BOARD MEETS FIRST THURSDAY AT 7:00 P.M. AND THIRD THURSDAY AT 9:00 A.M. **Community Official:** L. Hodson

All elevation certificates shall be maintained by the community and copies with the attached memo made available upon request.

CS 137

U.S. DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
National Flood Insurance Program

ELEVATION CERTIFICATE

OMB No. 1660-0008
Expires February 28, 2009

Important: Read the instructions on pages 1-8.

SECTION A - PROPERTY INFORMATION

For Insurance Company Use:
Policy Number
Company NAIC Number

A1. Building Owner's Name Charles J. Ruiz

A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.
1200 SW Bluff Drive
City Ft. White State FL ZIP Code 32038

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)
Lot 6 in Unit 5 of Cedar Springs Shores

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) Residential

A5. Latitude/Longitude: Lat. 29*53.024'N Long. 082*45.070'W Horizontal Datum: ☐ NAD 1927 ☒ NAD 1983

A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.

A7. Building Diagram Number 5

A8. For a building with a crawl space or enclosure(s), provide
a) Square footage of crawl space or enclosure(s) _____ sq ft
b) No. of permanent flood openings in the crawl space or enclosure(s) walls within 1.0 foot above adjacent grade _____
c) Total net area of flood openings in A8.b _____ sq in

A9. For a building with an attached garage, provide:
a) Square footage of attached garage _____ sq ft
b) No. of permanent flood openings in the attached garage walls within 1.0 foot above adjacent grade _____
c) Total net area of flood openings in A9.b _____ sq in

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number	B2. County Name	B3. State
Columbia 120070	Columbia	FL

B4. Map/Panel Number	B5. Suffix	B6. FIRM Index Date	B7. FIRM Panel Effective/Revised Date	B8. Flood Zone(s)	B9. Base Flood Elevation(s) (Zone AO, use base flood depth)
120070 0255	B	6 Jan 1988	6 Jan 1988	AE	36.00

B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9.
☐ FIS Profile ☒ FIRM ☐ Community Determined ☐ Other (Describe) _____

B11. Indicate elevation datum used for BFE in Item B9: ☒ NGVD 1929 ☐ NAVD 1988 ☐ Other (Describe) _____

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? ☐ Yes ☒ No
Designation Date _____ ☐ CBRS ☐ OPA

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: ☐ Construction Drawings* ☐ Building Under Construction* ☒ Finished Construction
*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations – Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO. Complete Items C2.a-g below according to the building diagram specified in Item A7.
Benchmark Utilized Spike in 18" oak Vertical Datum NAVD 88
Conversion/Comments None

			Check the measurement used.
a)	Top of bottom floor (including basement, crawl space, or enclosure floor)	44.55	☒ feet ☐ meters (Puerto Rico only)
b)	Top of the next higher floor	N.A	☐ feet ☐ meters (Puerto Rico only)
c)	Bottom of the lowest horizontal structural member (V Zones only)	N.A	☐ feet ☐ meters (Puerto Rico only)
d)	Attached garage (top of slab)	N.A	☐ feet ☐ meters (Puerto Rico only)
e)	Lowest elevation of machinery or equipment servicing the building (Describe type of equipment in Comments)	35.58	☒ feet ☐ meters (Puerto Rico only)
f)	Lowest adjacent (finished) grade (LAG)	31.96	☒ feet ☐ meters (Puerto Rico only)
g)	Highest adjacent (finished) grade (HAG)	34.66	☒ feet ☐ meters (Puerto Rico only)

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. *I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.*

☒ Check here if comments are provided on back of form.

PLACE SEAL HERE

Certifier's Name L. Scott Britt License Number PLS #5757

Title Chief Surveyor Company Name Britt Surveying

Address 830 W Duval St. City Lake City State FL ZIP Code 32055

Signature L Scott Britt Date 01/24/08 Telephone 386-752-7163

IMPORTANT: In these spaces, copy the corresponding information from Section A.	For Insurance Company Use:
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 1200 SW Bluff Drive	Policy Number
City Ft. White State FL ZIP Code 32038	Company NAIC Number

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION (CONTINUED)

Copy both sides of this Elevation Certificate for (1) community official, (2) insurance agent/company, and (3) building owner.

Comments L-19043
See comment sheet

Signature Date

☐ Check here if attachments

SECTION E - BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO AND ZONE A (WITHOUT BFE)

For Zones AO and A (without BFE), complete Items E1-E5. If the Certificate is intended to support a LOMA or LOMR-F request, complete Sections A, B, and C. For Items E1-E4, use natural grade, if available. Check the measurement used. In Puerto Rico only, enter meters.

E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG).
a) Top of bottom floor (including basement, crawl space, or enclosure) is _____._____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.
b) Top of bottom floor (including basement, crawl space, or enclosure) is _____._____ ☐ feet ☐ meters ☐ above or ☐ below the LAG.

E2. For Building Diagrams 6-8 with permanent flood openings provided in Section A Items 8 and/or 9 (see page 8 of Instructions), the next higher floor (elevation C2.b in the diagrams) of the building is _____._____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E3. Attached garage (top of slab) is _____._____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E4. Top of platform of machinery and/or equipment servicing the building is _____._____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community's floodplain management ordinance? ☐ Yes ☐ No ☐ Unknown. The local official must certify this information in Section G.

SECTION F - PROPERTY OWNER (OR OWNER'S REPRESENTATIVE) CERTIFICATION

The property owner or owner's authorized representative who completes Sections A, B, and E for Zone A (without a FEMA-issued or community-issued BFE) or Zone AO must sign here. *The statements in Sections A, B, and E are correct to the best of my knowledge.*

Property Owner's or Owner's Authorized Representative's Name

Address City State ZIP Code

Signature Date Telephone

Comments

☐ Check here if attachments

SECTION G - COMMUNITY INFORMATION (OPTIONAL)

The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8. and G9.

G1. ☐ The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who is authorized by law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)

G2. ☐ A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.

G3. ☐ The following information (Items G4.-G9.) is provided for community floodplain management purposes.

G4. Permit Number	G5. Date Permit Issued	G6. Date Certificate Of Compliance/Occupancy Issued

G7. This permit has been issued for: ☐ New Construction ☐ Substantial Improvement

G8. Elevation of as-built lowest floor (including basement) of the building: _____._____ ☐ feet ☐ meters (PR) Datum _____

G9. BFE or (in Zone AO) depth of flooding at the building site: _____._____ ☐ feet ☐ meters (PR) Datum _____

Local Official's Name Title

Community Name Telephone

Signature Date

Comments

☐ Check here if attachments

Building Photographs

See Instructions for Item A6.

	For Insurance Company Use:
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 1200 SW Bluff Drive	Policy Number
City Ft. White State FL ZIP Code 32038	Company NAIC Number

If using the Elevation Certificate to obtain NFIP flood insurance, affix at least two building photographs below according to the instructions for Item A6. Identify all photographs with: date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." If submitting more photographs than will fit on this page, use the Continuation Page, following.

Front



Building Photographs

Continuation Page

	For Insurance Company Use:
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 1200 SW Bluff Drive	Policy Number
City Ft. White State FL ZIP Code 32038	Company NAIC Number

If submitting more photographs than will fit on the preceding page, affix the additional photographs below. Identify all photographs with: date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View."

Rear



BRITT SURVEYING
Land Surveyors and Mappers
LAKE CITY • VENICE • SARASOTA

Comments: (revised 01/03/08)

Section A
A1 – A4 No additional comment
A5 Hand Held GPS coordinate at the front door
A6 – A7 No additional comment
A8 – A9 No additional comment

Section B
B1 – B8 No additional comment
B9 Base flood elevation is as per the FIRM.
B10 – B12 No additional comment

Section C
C1 No additional comment
C2 6" spike in an 18" oak tree on lot 5 elevation = 37.89 feet.
C2 a-d No additional comment
C2 e Air Conditioner unit
C2 f-g No additional comment

Section D
No additional comment

Section E
No additional comment

Section F
No additional comment

Section G
No additional comment

Photographs
The entrance to the residence is from the river side of the parcel being considered the rear of the lot. This is the purpose for showing the side with no entry as the front of the residence as it faces the front of the lot.

Permit # 501372 25739

BAILEY BISHOP & LANE, INC.

Engineers *Surveyors* *Planners*

November 21, 2006

ZERO RISE CERTIFICATION

PROPERTY DESCRIPTION: ***Lot 6 - Cedar Springs Shores - Unit No. 5***

OWNER: ***Charles Ruiz***

BASE FLOOD ELEVATION (WITHOUT FLOODWAY): ***35.5***

BASE FLOOD ELEVATION (WITH FLOODWAY): ***36.5***

COMMUNITY-PANEL NUMBER: ***120070 0255 B***

PROJECT REQUIREMENTS: Minimum Finish Floor Elevation ***37.0***
Minimum Flooring Support (i.e. Girders, Joists) Elevation ***35.5***
All footers to be below grade.

I hereby certify that construction of the proposed residence will not increase flood elevations of the Suwannee River at the project location.

Gregory G. Bailey, P.E.
Date: November 21, 2006
P.E. Number 43858

P. O. Box 3717 Lake City, FL 32056-3717 Ph. (386) 752-5640 FAX (386) 755-7771

RECEIVED APR 27 2007

Attn: Wesley

Columbia County Building Department
Culvert Waiver

Culvert Waiver No. 000001372

DATE: 04/24/2007 BUILDING PERMIT NO. 25739

APPLICANT KEVIN KELLY PHONE 352 374-8177

ADDRESS P.O. BOX 5215 GAINESVILLE FL 32627

OWNER CHARLES RUIZ PHONE 305 613-2868

ADDRESS 1200 SW BLUFF DRIVE FT. WHITE FL 32038

CONTRACTOR ROBERT KELLY CONSTRUCTION PHONE 352 374-8177

LOCATION OF PROPERTY 47S, TR ON HOLLINGSWORTH ST, TR ON BLUFF DR., TO 1200, ON THE LEFT SIDE (RIVER SIDE)

SUBDIVISION/LOT/BLOCK/PHASE/UNIT CEDAR SPRINGS SHORES 6

PARCEL ID # 18-7S-16-04236-042

I HEREBY CERTIFY THAT I UNDERSTAND AND WILL FULLY COMPLY WITH THE DECISION OF THE COLUMBIA COUNTY PUBLIC WORKS DEPARTMENT IN CONNECTION WITH THE HEREIN PROPOSED APPLICATION.

SIGNATURE: [signature]

A SEPARATE CHECK IS REQUIRED
MAKE CHECKS PAYABLE TO BCC

Amount Paid 50.00

PUBLIC WORKS DEPARTMENT USE ONLY

I HEREBY CERTIFY THAT I HAVE EXAMINED THIS APPLICATION AND DETERMINED THAT THE CULVERT WAIVER IS:

✓ APPROVED _____ NOT APPROVED - NEEDS A CULVERT PERMIT

COMMENTS: _____

SIGNED: [signature] DATE: 5-3-07

ANY QUESTIONS PLEASE CONTACT THE PUBLIC WORKS DEPARTMENT AT 386-752-5955.

135 NE Hernando Ave., Suite B-21
Lake City, FL 32055
Phone: 386-758-1008 Fax: 386-758-2160

RECEIVED
MAY 01 2007
By _____

COLUMBIA COUNTY FLORIDA GATEWAY TO FLORIDA

AC# 2801631

STATE OF FLORIDA

DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
CONSTRUCTION INDUSTRY LICENSING BOARD

SEQ# L06091304539

DATE	BATCH NUMBER	LICENSE NBR
09/13/2006	060175601	CGC007330

The GENERAL CONTRACTOR
Named below IS CERTIFIED
Under the provisions of Chapter 489 FS.
Expiration date: AUG 31, 2008

KELLY, ROBERT L
ROBERT L KELLY CONSTRUCTION INC
6911 NW 22 ST STE G
GAINESVILLE FL 32653

RECEIVED SEP 2 4 2006

JEB BUSH
GOVERNOR

SIMONE MARSTILLER
SECRETARY

DISPLAY AS REQUIRED BY LAW

AC# 2803234

STATE OF FLORIDA

DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
CONSTRUCTION INDUSTRY LICENSING BOARD

SEQ# L06091300142

DATE	BATCH NUMBER	LICENSE NBR
09/13/2006	060175604	QB50212

The BUSINESS ORGANIZATION
Named below IS QUALIFIED
Under the provisions of Chapter 489 FS.
Expiration date: AUG 31, 2007
(THIS IS NOT A LICENSE TO PERFORM WORK. THIS ALLOWS COMPANY TO DO BUSINESS ONLY IF IT HAS A QUALIFIER.)

ROBERT L KELLY CONSTRUCTION INC
6911 NW 22 ST SUITE G
GAINESVILLE FL 32653

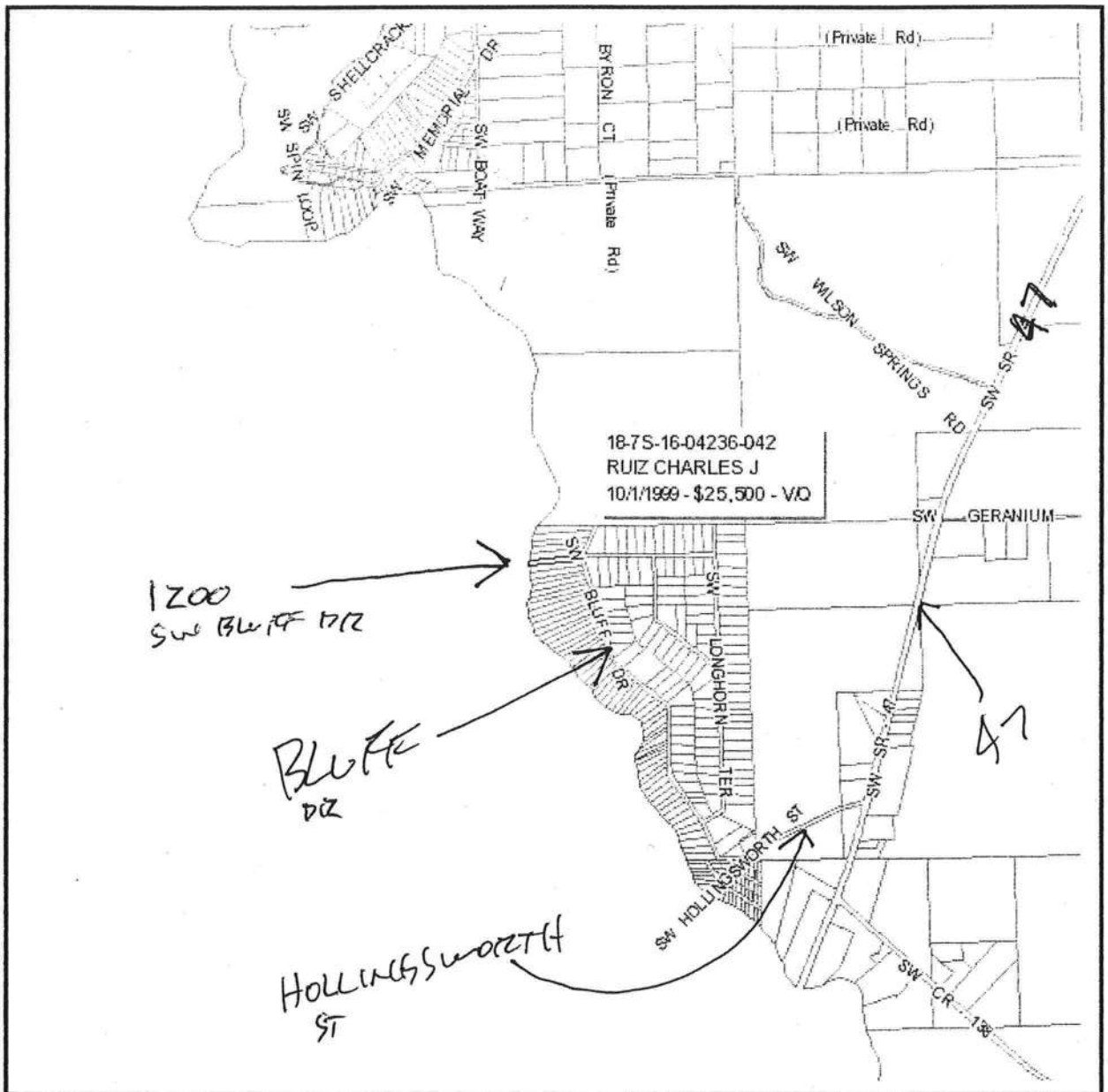
RECEIVED SEP 2 6 2006

JEB BUSH
GOVERNOR

SIMONE MARSTILLER
SECRETARY

DISPLAY AS REQUIRED BY LAW

MAP TO SITE



Columbia County Property Appraiser

J. Doyle Crews, CFA - Lake City, Florida - 386-758-1083

0 0.2 0.4 0.6 mi

N W E S

PARCEL: 18-7S-16-04236-042 - MISC RES (000700)

Name:	RUIZ CHARLES J		LandVal		$42,000.00
Site:	LOT 6 UNIT 5		BldgVal		$0.00
Mail:	1351 SW 40TH AVE MIAMI, FL 33134		ApprVal		$42,500.00
			JustVal		$42,500.00
Sales	10/1/1999	$25,500.00 V / Q	Assd		$42,500.00
Info	3/31/1989	$22,500.00 V / U	Exmpt		$0.00
			Taxable		$42,500.00

This information, GIS Map Updated: 11/20/2006, was derived from data which was compiled by the Columbia County Property Appraiser Office solely for the governmental purpose of property assessment. This information should not be relied upon by anyone as a determination of the ownership of property or market value. No warranties, expressed or implied, are provided for the accuracy of the data herein, it's use, or it's interpretation. Although it is periodically updated, this information may not reflect the data currently on file in the Property Appraiser's office. The assessed values are NOT certified values and therefore are subject to change before being finalized for ad valorem assessment purposes.

DEED

Recording Fees: $_____
Documentary Stamps: +_____
Total: $

OR 0890 PG 1172

Prepared By And Return To:
SOUTHEAST TITLE GROUP, LLP
Address: 2015 So. First Street
Lake City, Fl 32056
SE File #99Y-09051BAF/BARBARA A. FRADDOSIO

OFFICIAL RECORDS
99-17966

FILED AND RECORDED IN PUBLIC RECORDS OF COLUMBIA COUNTY, FL
1999 OCT 22 PM 12:21
RECORD VERIFIED
P. DeWitt Cason
Clerk of Court
By _____ D.C.
Loretta Foster

Property Appraisers Parcel I.D. Number(s):
18-7S-16-04236-042
Grantee(s) S.S.#(s): 265-78-7942

Documentary Stamp 17.50
Intangible Tax 0

WARRANTY DEED

THIS WARRANTY DEED made and executed the 1st day of October, 1999 by SUZANNE CAROL HILEMAN, A single PERSON, hereinafter called the Grantor, to CHARLES J. RUIZ, A MARRIED PERSON, whose post office address is: 1351 SW 40TH AVE, MIAMI, FL 33134, hereinafter called the Grantee:

**NKA SUZANNE CAROL MORRISON

(Wherever used herein the terms "Grantor" and "Grantee" shall include singular and plural, heirs, legal representatives, and assigns of individuals, and the successors and assigns of corporations, wherever the context so admits or requires.)

WITNESSETH: That the Grantor, for and in consideration of the sum of TEN DOLLARS ($10.00) and other valuable considerations, receipt whereof is hereby acknowledged, by these presents does grant, bargain, sell, alien, remise, release, convey and confirm unto the Grantee all that certain land situate, lying and being in COLUMBIA County, State of Florida, viz:

LOT 6, CEDAR SPRING SHORES, UNIT 5, A SUBDIVISION ACCORDING TO THE MAP OR PLAT THEREOF AS RECORDED IN PLAT BOOK 4, PAGE 5, PUBLIC RECORDS OF COLUMBIA COUNTY, FLORIDA COUNTY, FLORIDA.

SUBJECT TO RESTRICTIVE COVENANTS(S) AS RECORDED IN OFFICIAL RECORDS BOOK 309, PAGE 574.

SUBJECT TO MINERAL RIGHT AND ROYALTY TRANSFER RECORDED IN DEED BOOK 78, PAGE 339.

____**If this box is checked, the Grantor warrants that the above described property is not his/her constitutional homestead as defined by the laws of the State of Florida. He/she resides at** _____.

TOGETHER with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

TO HAVE AND TO HOLD the same in fee simple forever.

AND the Grantor hereby covenants with said Grantee that the Grantor is lawfully seized of said land in fee simple; that the Grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except easements, restrictions and reservations of record, if any, and taxes accruing subsequent to December 31, 1998.

IN WITNESS WHEREOF, the said Grantor has signed and sealed these presents the day and year first above written.

Signed, sealed and delivered
in the presence of:

X Yvonne Eaton
Witness:

X Yvonne Eaton
Witness:

Jamie Kile
Witness:

Jamie Kile
Witness:

Suzanne Carol Morrison
SUZANNE CAROL HILEMAN N/K/A MORRISON
Address: ROUTE 1, BOX 19N-2
SALADO, TX 76571

Address: ROUTE 1, BOX 19N-2
SALADO, TX 76571

STATE OF ~~FLORIDA~~ Texas
COUNTY OF Dallas

I hereby certify that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgements, personally appeared SUZANNE CAROL HILEMAN* who produced the identification described below, and who acknowledged before me that they executed the foregoing instrument.
Witness my hand and official seal in the county and state aforesaid this 19 day of October, 1999. * N/K/A MORRISON

Jamie L. Kile
Notary Public:
Identification Examined: TXDL

JAMIE L. KILE NOTARY PUBLIC STATE OF TEXAS EXPIRES 5-10-2003

STATE OF FLORIDA, COUNTY OF COLUMBIA
I HEREBY CERTIFY, that the above and foregoing is a true copy of the original filed in this office.
P. DeWITT CASON, CLERK OF COURTS
By _____ Deputy Clerk
10/30/99

\SWDIND.DEE

SOUTHEAST TITLE Group, LLP

PERFORMANCE - Each Day, Everyday...

November 4, 1999
Date

CHARLES J. RUIZ
1351 SW 40TH AVE
MIAMI, FL 33134

Re: Our File No.: 99Y-09051BAF

Dear Client:

Enclosed please find the following documents:

X Owner's Policy O-2125-094893
___Survey
X Warranty Deed- dated 10/01/99 and filed of record 10/22/99 in Official Records Book 0890, Page 1172 of the Public Records of COLUMBIA, Florida.
___Quit Claim Deed
___Satisfaction of Mortgage(s)
___Death Certificate
___Other: _____

___HOMESTEAD:

If you are residing at the above property address on December 31st, please remember to apply for Homestead Exemption in January or February . You must visit the Property Appraiser's office to apply. If you have any questions, regarding Homestead Exemption, please call the Property Appraiser's office.

PLEASE STORE ALL ENCLOSED DOCUMENT(S) IN A SAFE PLACE.

We have appreciated this opportunity to be of service. Should you have any questions, please feel free to contact us

Sincerely,
SOUTHEAST TITLE GROUP, LLP

NEVADA KELLY

ENCL.

995 State Road 434 North • Suite 514 • Altamonte Springs, Florida • 32714
Phone (407) 786-1987 • Fax (407) 786-1330
www.southeast-title.com

STEWART TITLE GUARANTY COMPANY
SCHEDULE B

AGENT'S
FILE NO: **99Y-09051BAF** POLICY NO. **O-2125-094893**

This policy does not insure against loss or damage by reason of the following exceptions:

1. Rights or claims of parties in possession not shown by the public records.
2. Easements, or claims of easements, not shown by the public records.
3. Encroachments, or overlaps, boundary lines disputes, or other matters which would be disclosed by an accurate survey or inspection of the premises.
4. Any lien, or right to a lien, for services, labor, or, material heretofore or hereafter furnished, imposed by law and not shown by the public records.
5. Any adverse claim to any portion of said land which has been created by artificial means or has accreted to any such portion so created and riparian rights, if any.
6. Taxes or special assessments which are not shown as existing liens by the public records.
7. Anything to the contrary notwithstanding, this policy does not attempt to set out the manner in which all the minerals in, on or under the property described in schedule "A" are now vested, nor any right or easements in connection therewith.
8. The premises herein described possibly being artificially filled land in what was formerly navigable waters, it is subject to any and all rights of the United States Government and of the State of Florida arising by reason of the United States Government control over Navigation and Commerce and the rights of the State of Florida in lands and/or waters of such character.
9. Taxes for 1999 and all subsequent years, which are not yet due and payable.
10. Recording references herein refer to the records in the Office of the Clerk of COLUMBIA County, Florida unless otherwise indicated.

THE ABOVE EXCEPTIONS OF 1-8 ARE HEREBY DELETED

Special Exceptions:

11. RESTRICTIONS, CONDITIONS, RESERVATIONS, EASEMENTS, AND OTHER MATTERS COMMON TO THE SUBDIVISION OR SHOWN ON THE MAP OR PLAT THEREOF RECORDED IN PLAT BOOK 4, PAGE 5, BUT OMITTING ANY COVENANT OR RESTRICTION BASED ON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS OR NATIONAL ORIGIN.

12. SUBJECT TO RESTRICTIVE COVENANTS(S) AS RECORDED IN OFFICIAL RECORDS BOOK 309, PAGE 574.

13. MINERAL RIGHT AND ROYALTY TRANSFER RECORDED IN DEED BOOK 78, PAGE 339.

14. RIPARIAN AND/OR LITTORAL RIGHTS ARE NOT INSURED.

THE RIGHT OR INTEREST OF THE PUBLIC, IF ANY, TO USE ANY PART OF THE LANDS SEAWARD AND/OR LAKEWARD OF THE MOST INLAND OF EITHER THE NATURAL LINE OF VEGETATION, THE MOST EXTREME HIGH WATER MARK OR THE BULKHEAD LINE.

NO PART OF THE DESCRIBED LANDS LYING BELOW THE EXTREME HIGH WATER MARK ARE INSURED.

Assessed Value **$10,000.00** TAX ID #: **18-7S-16-04236-042**



\F\ST.OP

911

COLUMBIA COUNTY 9-1-1 ADDRESSING

P. O. Box 1787, Lake City, Fl. 32056-1787
PHONE: (386) 758-1125 * FAX: (386) 758-1365 * Email: ron_croft@columbiacountyfla.com

Addressing Maintenance

To maintain the Countywide Addressing Policy you must make application for a 9-1-1 Address at the time you apply for a building permit. The established standards for assigning and posting numbers to all principal buildings, dwellings, businesses and industries are contained in Columbia County Ordinance 2001-9. The addressing system is to enable Emergency Service Agencies to locate you in an emergency, and to assist the United States Postal Service and the public in the timely and efficient provision of services to residents and businesses of Columbia County.

DATE REQUESTED: 1/9/2007 **DATE ISSUED:** 1/9/2007

ENHANCED 9-1-1 ADDRESS:

1200 SW BLUFF DR

FORT WHITE FL 32038

PROPERTY APPRAISER PARCEL NUMBER:

18-7S-16-04236-042

Remarks:

LOT 6 UNIT 5 CEDAR SPRING SHORES.

Address Issued By: _____

Columbia County 9-1-1 Addressing / GIS Department

NOTICE: THIS ADDRESS WAS ISSUED BASED ON LOCATION INFORMATION RECEIVED FROM THE REQUESTER. SHOULD, AT A LATER DATE, THE LOCATION INFORMATION BE FOUND TO BE IN ERROR, THIS ADDRESS IS SUBJECT TO CHANGE.

578

Approved Address

JAN 0 9 2007

911Addressing/GIS Dept

RECEIVED JAN 0 9 2007

SRWMD

SUWANNEE
RIVER
WATER
MANAGEMENT
DISTRICT
9225 CR 49
LIVE OAK, FLORIDA 32060
TELEPHONE: (386) 362-1001
TELEPHONE: 800-226-1066
FAX (386) 362-1056

GENERAL PERMIT

PERMITTEE:
CHARLES JOHN RUIZ
1351 SW 40TH AVENUE
MIAMI, FL 33134

PERMIT NUMBER: ERP00-0553M
DATE ISSUED: 12/29/2006
DATE EXPIRES: 12/29/2009
COUNTY: COLUMBIA
TRS: S18/T7S/R16E

PROJECT: RUIZ WOD RESIDENCE MODIFICATION

Approved entity to whom operation and maintenance may be transferred pursuant to rule 40B-4.1130, Florida Administrative Code (F.A.C.):

CHARLES JOHN RUIZ
1351 SW 40TH AVENUE
MIAMI, FL 33134

Based on information provided, the Suwannee River Water Management District's (District) rules have been adhered to and an environmental resource general permit is in effect for the permitted activity description below:

Construction of a single family residence on 1.5 acres adjacent to the Santa Fe River. Project shall be developed in accordance with the application package submitted to the District by Charles Ruiz on December 1, 2006.

It is your responsibility to ensure that adverse off-site impacts do not occur either during or after construction. Any additional construction or alterations not authorized by this permit may result in flood control or water quality problems both on and off site and will be a violation of District rule.

You or any other substantially affected persons are entitled to request an administrative hearing or mediation. Please refer to enclosed notice of rights.

This permit is issued under the provisions of chapter 373, F.S., chapter 40B-4, and chapter 40B-400, F.A.C. A general permit authorizes the construction, operation, maintenance, alteration, abandonment, or removal of certain minor surface water management systems. This permit

authorizes the permittee to perform the work necessary to construct, operate, and maintain the surface water management system shown on the application and other documents included in the application. This is to notify you of District's agency action concerning Notice Of Intent. This action is taken pursuant to rule 40B-4 and 40B-400, F.A.C.

Standard Conditions for All General Permits:

1. The permittee shall perform all construction authorized in a manner so as to minimize adverse impacts to fish, wildlife, natural environmental values, and water quality. The permittee shall institute necessary measures during construction including riprap, reinforcement, or compaction of any fill materials placed around newly installed structures, to minimize erosion, turbidity, nutrient loading, and sedimentation in the receiving waters.

2. Water quality data representative of the water discharged from the permitted system, including, but not limited to, the parameters in chapter 62-302, F.A.C., shall be submitted to the District as required. If water quality data are required, the permittee shall provide data as required on the volume and rate of discharge including the total volume discharged during the sampling period. All water quality data shall be in accordance with and reference the specific method of analysis in "Standard Methods for the Examination of Water and Wastewater" by the American Public Health Association or "Methods for Chemical Analysis of Water and Wastes" by the U.S. Environmental Protection Agency.

3. The operational and maintenance phase of an environmental resource permit will not become effective until the owner or his authorized agent certifies that all facilities have been constructed in accordance with the design permitted by the District. If required by the District, such as-built certification shall be made by an engineer or surveyor. Within 30 days after the completion of construction of the system, the permittee shall notify the District that the facilities are complete. If appropriate, the permittee shall request transfer of the permit to the responsible entity approved by the District for operation and maintenance. The District may inspect the system and, as necessary, require remedial measures as a condition of transfer of the permit or release for operation and maintenance of the system.

4. Off-site discharges during and after construction shall be made only through the facilities authorized by the permit. Water discharged from the project shall be through structures suitable for regulating upstream stage if so required by the District. Such discharges may be subject to operating schedules established by the District.

5. The permit does not convey to the permittee any property right nor any rights or privileges other than those specified in the permit and chapter 40B-1, F.A.C.

6. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, operation, maintenance, alteration, abandonment, or development in a Works of the District which is authorized by the permit.

7. The permit is issued based on the information submitted by the applicant which reasonably demonstrates that adverse off-site water resource impacts will not be caused by the permitted activity. It is the responsibility of the permittee to insure that such adverse impacts do not in fact occur either during or after construction.

8. It is the responsibility of the permittee to obtain all other clearances, permits, or authorizations required by any unit of local, state, or federal government.

9. The surfacewater management system shall be constructed prior to or concurrent with the development that the system is intended to serve and the system shall be completed within 30 days of substantial completion of the development which the system is intended to serve.

10. Except for General Permits After Notice or permits issued to a unit of government, or unless a different schedule is specified in the permit, the system shall be inspected at least once every third year after transfer of a permit to operation and maintenance by the permittee or his agent to ascertain that the system is being operated and maintained in a manner consistent with the permit. A report of inspection is to be sent to the District within 30 days of the inspection date. If required by chapter 471, F.S., such inspection and report shall be made by an engineer.

11. The permittee shall allow reasonable access to District personnel or agents for the purpose of inspecting the system to insure compliance with the permit. The permittee shall allow the District, at its expense, to install equipment or devices to monitor performance of the system authorized by their permit.

12. The surfacewater management system shall be operated and maintained in a manner which is consistent with the conditions of the permit and chapter 40B-4.2040, F.A.C.

13. The permittee is responsible for the perpetual operation and maintenance of the system unless the operation and maintenance is transferred pursuant to chapter 40B-4.1130, F.A.C., or the permit is modified to authorize a new operation and maintenance entity pursuant to chapter 40B-4.1110, F.A.C.

14. All activities shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit.

15. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications, shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

16. Activities approved by this permit shall be conducted in a manner which do not cause violations of state water quality standards.

17. Prior to and during construction, the permittee shall implement and maintain all erosion and sediment control measures (best management practices) required to retain sediment on-site and to prevent violations of state water quality standards. All practices must be in accordance with the guidelines and specifications in the Florida Stormwater, Erosion, and Sedimentation Control Inspector's Manual unless a project specific erosion and sediment control plan is approved as part of the permit, in which case the practices must be in accordance with the plan. If site-specific conditions require additional measures during any phase of construction or operation to prevent erosion or control sediment, beyond those specified in the erosion and sediment control plan, the permittee shall implement additional best management practices as necessary, in accordance with the Florida Stormwater, Erosion, and Sedimentation Control Inspector's Manual. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.

18. Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than seven days after the construction activity in that portion of the site has temporarily or permanently ceased.

19. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District a Construction Commencement Notice Form No. 40B-1.901(14) indicating the actual start date and the expected completion date.

20. When the duration of construction will exceed one year, the permittee shall submit construction status reports to the District on an annual basis utilizing an Annual Status Report Form No. 40B-1.901(15). These forms shall be submitted during June of each following year.

21. For those systems which will be operated or maintained by an entity requiring an easement or deed restriction in order to provide that entity with the authority necessary to operate or maintain the system, such easement or deed restriction, together with any other final operation or maintenance documents as are required by Paragraph 40B-4.2030(2)(g), F.A.C., and Rule 40B-4.2035, F.A.C., must be submitted to the District for approval. Documents meeting the requirements set forth in these subsections of District rules will be approved. Deed restrictions,

easements and other operation and maintenance documents which require recordation either with the Secretary of State or Clerk of the Circuit Court must be so recorded prior to lot or unit sales within the project served by the system, or upon completion of construction of the system, whichever occurs first. For those systems which are proposed to be maintained by county or municipal entities, final operation and maintenance documents must be received by the District when maintenance and operation of the system is accepted by the local governmental entity. Failure to submit the appropriate final documents referenced in this paragraph will result in the permittee remaining liable for carrying out maintenance and operation of the permitted system.

22. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the initiation of the permitted use of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of that phase or portion of the system to a local government or other responsible entity.

23. Within 30 days after completion of construction of the permitted system, or independent portion of the system, the permittee shall submit a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, using the supplied As-Built Certification Form No. 40B-1.901(16) incorporated by reference in Subsection 40B-1.901(16), F.A.C. When the completed system differs substantially from the permitted plans, any substantial deviations shall be noted and explained and two copies of as-built drawings submitted to the District. Submittal of the completed form shall serve to notify the District that the system is ready for inspection. The statement of completion and certification shall be based on on-site observation of construction (conducted by the registered professional engineer, or other appropriate individual as authorized by law, or under his or her direct supervision) or review of as-built drawings for the purpose of determining if the work was completed in compliance with approved plans and specifications. As-built drawings shall be the permitted drawings revised to reflect any changes made during construction. Both the original and any revised specifications must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawing. All surveyed dimensions and elevations shall be certified by a registered surveyor. The following information, at a minimum, shall be verified on the as-built drawings:

a. Dimensions and elevations of all discharge structures including all weirs, slots, gates, pumps, pipes, and oil and grease skimmers;

b. Locations, dimensions, and elevations of all filter, exfiltration, or underdrain systems including cleanouts, pipes, connections to control structures, and points of discharge to the receiving waters;

c. Dimensions, elevations, contours, or cross-sections of all treatment storage areas sufficient to

determine stage-storage relationships of the storage area and the permanent pool depth and volume below the control elevation for normally wet systems, when appropriate;

d. Dimensions, elevations, contours, final grades, or cross-sections of the system to determine flow directions and conveyance of runoff to the treatment system;

e. Dimensions, elevations, contours, final grades, or cross-sections of all conveyance systems utilized to convey off-site runoff around the system;

f. Existing water elevation(s) and the date determined; and

g. Elevation and location of benchmark(s) for the survey.

24. The operation phase of this permit shall not become effective until the permittee has complied with the requirements of the condition in paragraph 23 above, the District determines the system to be in compliance with the permitted plans, and the entity approved by the District in accordance with Rule 40B-4.2035, F.A.C., accepts responsibility for operation and maintenance of the system. The permit may not be transferred to such approved operation and maintenance entity until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District, the permittee shall request transfer of the permit to the approved responsible operation and maintenance operating entity if different from the permittee. Until the permit is transferred pursuant to Rule 40B-4.1130, F.A.C., the permittee shall be liable for compliance with the terms of the permit.

25. Should any other regulatory agency require changes to the permitted system, the permittee shall provide written notification to the District of the changes prior to implementation so that a determination can be made whether a permit modification is required.

26. This permit does not eliminate the necessity to obtain any required federal, state, local and special District authorizations prior to the start of any activity approved by this permit. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and in this chapter and Chapter 40B-4, F.A.C.

27. The permittee is hereby advised that Section 253.77, F.S., states that a person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the state, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary

authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.

28. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered specifically approved unless a specific condition of this permit or a formal determination under 40B-400.046, F.A.C., provides otherwise.

29. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of the permitted system or the real property at which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rule 40B-4.1130, F.A.C. The permittee transferring the permit shall remain liable for any corrective actions that may be required as a result of any permit violations prior to such sale, conveyance or other transfer.

30. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the District.

31. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

WITHIN 30 DAYS AFTER COMPLETION OF THE PROJECT, THE PERMITTEE SHALL NOTIFY THE DISTRICT, IN WRITING, THAT THE FACILITIES ARE COMPLETE.

Approved by Jerry Bowden Date Approved 12/29/06
District Staff

Timothy Hagerd
Clerk

Executive Director

NOTICE OF RIGHTS

1. A person whose substantial interests are or may be determined has the right to request an administrative hearing by filing a written petition with the Suwannee River Water Management District (District), or may choose to pursue mediation as an alternative remedy under Section 120.569 and 120.573, Florida Statutes, before the deadline for filing a petition. Choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement. The procedures for pursuing mediation are set forth in Sections 120.569 and 120.57 Florida Statutes. Pursuant to Rule 28-106.111, Florida Administrative Code, the petition must be filed at the office of the District Clerk at District Headquarters, 9225 C.R. 49, Live Oak, Florida 32060 within twenty-one (21) days of receipt of written notice of the decision or within twenty-one (21) days of newspaper publication of the notice of District decision (for those persons to whom the District does not mail actual notice). A petition must comply with Chapter 28-106, Florida Administrative Code.

2. If the Governing Board takes action which substantially differs from the notice of District decision to grant or deny the permit application, a person whose substantial interests are or may be determined has the right to request an administrative hearing or may chose to pursue mediation as an alternative remedy as described above. Pursuant to Rule 28-106.111, Florida Administrative Code, the petition must be filed at the office of the District Clerk at District Headquarters, 9225 C.R. 49, Live Oak, Florida 32060 within twenty-one (21) days of receipt of written notice of the decision or within twenty-one (21) days of newspaper publication of the notice of District decision (for those persons to whom the District does not mail actual notice). Such a petition must comply with Chapter 28-106, Florida Administrative Code.

3. A substantially interested person has the right to a formal administrative hearing pursuant to Section 120.569 and 120.57(1), Florida Statutes, where there is a dispute between the District and the party regarding an issue of material fact. A petition for formal hearing must comply with the requirements set forth in Rule 28-106.201, Florida Administrative Code.

4. A substantially interested person has the right to an informal hearing pursuant to Section 120.569 and 120.57(2), Florida Statutes, where no material facts are in dispute. A petition for an informal hearing must comply with the requirements set forth in Rule 28-106.301, Florida Administrative Code.

5. A petition for an administrative hearing is deemed filed upon receipt of the petition by the Office of the District Clerk at the District Headquarters in Live Oak, Florida.

6. Failure to file a petition for an administrative hearing within the requisite time frame shall constitute a waiver of the right to an administrative hearing pursuant to Rule 28-106.111, Florida Administrative Code.

7. The right to an administrative hearing and the relevant procedures to be followed is governed by Chapter 120, Florida Statutes, and Chapter 28-106, Florida Administrative Code.

8. Pursuant to Section 120.68, Florida Statutes, a person who is adversely affected by final District action may seek review of the action in the District Court of Appeal by filing a notice of appeal pursuant to the Florida Rules of Appellate Procedure, within 30 days of the rendering of the final District action.

9. A party to the proceeding before the District who claims that a District order is inconsistent with the provisions and purposes of Chapter 373, Florida Statutes, may seek review of the order pursuant to Section 373.114, Florida Statutes, by the Florida Land and Water Adjudicatory Commission, by filing a request for review with the Commission and serving a copy of the Department of Environmental Protection and any person named in the order within 20 days of adoption of a rule or the rendering of the District order.

10. For appeals to the District Courts of Appeal, a District action is considered rendered after it is signed on behalf of the District, and is filed by the District Clerk.

11. Failure to observe the relevant time frames for filing a petition for judicial review, or for Commission review, will result in waiver of the right to review.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Notice of Rights has been sent by U.S. Mail to:

CHARLES JOHN RUIZ
1351 SW 40TH AVENUE
MIAMI, FL 33134

At 4:00 p.m. this 2nd day of Jan, 2007.

Jon M. Dinges
Deputy Clerk
Suwannee River Water Management District
9225 C.R. 49

Live Oak, Florida 32060
386.362.1001 or 800.226.1066 (Florida only)

cc: File Number: ERP00-0553M

Columbia County, Florida
Planning & Zoning Department

Review of Building Permit for compliance with County's Comprehensive Plan and Land Development Regulations

To: Kevin C. Kelly **Fax:** 352.373.5741

From: Brian L. Kepner, County Planner **Fax:** 386.758.2160

Number of pages: 1

Date: 8 February 2007

RE: Building Permit Application 0702-03, Charles Ruiz

Dear Kevin:

As you are probably aware, the property for the above referenced Building Permit Application is located within an Environmentally Sensitive Area-2 (ESA-2) zoning district and the regulatory floodway. A copy of the permit from Suwannee River Water Management District was submitted with the application for a building permit. The County's regulations require that a zero foot rise letter be provided from an engineer, stating that once the residence is placed on the property it will not cause the flood waters to rise. In order to issue the building permit, the zero foot rise letter needs to be submitted. The County's also requires the at first floor elevation be one foot above the determined flood elevation of 36 feet and once the first floor is constructed an elevation certificate from a registered surveyor has to be submitted.

If you have any questions concerning this matter, please do not hesitate to contact me at 386.758.1007.

Sincerely,

Brian L. Kepner
Land Development Regulation Administrator,
County Planner

Confidentiality Notice: This facsimile transmission is confidential and is intended only for the review of the party to whom it is addressed. It may contain proprietary and/or privileged information protected by law. If you are not the intended recipient, you may not use, copy or distribute this facsimile message or its attachments. If you have received this transmission in error, please immediately telephone the sender above to arrange for its return.

FORM 600A-2004 EnergyGauge® 4.0

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

ENERGY

Florida Department of Community Affairs

Residential Whole Building Performance Method A

Project Name:	**Robert Kelly Const - Ruiz Res.**	Builder:	Robert Kelly
Address:		Permitting Office:	Columbia
City, State:	,	Permit Number:	25739
Owner:		Jurisdiction Number:	221000
Climate Zone:	**North**		

1.	New construction or existing	New	
2.	Single family or multi-family	Single family	
3.	Number of units, if multi-family	1	
4.	Number of Bedrooms	2	
5.	Is this a worst case?	Yes	
6.	Conditioned floor area (ft²)	1368 ft²	
7.	Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)		
a.	U-factor: (or Single or Double DEFAULT)	7a. Description Area: (Dble Default) 211.0 ft²	
b.	SHGC: (or Clear or Tint DEFAULT)	7b. (Clear) 211.0 ft²	
8.	Floor types		
a.	Raised Wood, Post or Pier	R=19.0, 1368.0ft²	
b.	N/A		
c.	N/A		
9.	Wall types		
a.	Frame, Wood, Exterior	R=19.0, 1332.0 ft²	
b.	N/A		
c.	N/A		
d.	N/A		
e.	N/A		
10.	Ceiling types		
a.	Under Attic	R=30.0, 1368.0 ft²	
b.	N/A		
c.	N/A		
11.	Ducts		
a.	Sup: Unc. Ret: Unc. AH: Garage	Sup. R=6.0, 160.0 ft	
b.	N/A		

12.	Cooling systems		
a.	Central Unit	Cap: 36.0 kBtu/hr	
		SEER: 14.00	
b.	N/A		
c.	N/A		
13.	Heating systems		
a.	Electric Heat Pump	Cap: 36.0 kBtu/hr	
		HSPF: 8.60	
b.	N/A		
c.	N/A		
14.	Hot water systems		
a.	Electric Resistance	Cap: 50.0 gallons	
		EF: 0.90	
b.	N/A		
c.	Conservation credits (HR-Heat recovery, Solar DHP-Dedicated heat pump)		
15.	HVAC credits (CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)		

Glass/Floor Area: 0.15

Total as-built points: 18421

Total base points: 20118

PASS

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

PREPARED BY: _____

DATE: 8-30-06

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER/AGENT: _____

DATE: _____

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.

BUILDING OFFICIAL: _____

DATE: _____

1 Predominant glass type. For actual glass type and areas, see Summer & Winter Glass output on pages 2&4.

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

BASE				AS-BUILT								
GLASS TYPES .18 X Conditioned Floor Area	X BSPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	SPM X	SOF	= Points	
.18	1368.0	20.04	4934.6	Double, Clear	N	0.0	0.0	40.0	19.20	1.00	768.0	
				Double, Clear	E	0.0	0.0	95.0	42.06	1.00	3996.1	
				Double, Clear	S	0.0	0.0	36.0	35.87	1.00	1291.2	
				Double, Clear	W	0.0	0.0	40.0	38.52	1.00	1541.0	
				As-Built Total:				**211.0**			**7596.2**	
WALL TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM =		Points	
Adjacent	0.0	0.00	0.0	Frame, Wood, Exterior			19.0	1332.0	0.90		1198.8	
Exterior	1332.0	1.70	2264.4									
Base Total:	**1332.0**		**2264.4**	**As-Built Total:**				**1332.0**			**1198.8**	
DOOR TYPES	Area X	BSPM =	Points	Type				Area X	SPM =		Points	
Adjacent	0.0	0.00	0.0									
Exterior	0.0	0.00	0.0									
Base Total:	**0.0**		**0.0**	**As-Built Total:**				**0.0**			**0.0**	
CEILING TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM X SCM =		Points	
Under Attic	1368.0	1.73	2366.6	Under Attic			30.0	1368.0	1.73 X 1.00		2366.6	
Base Total:	**1368.0**		**2366.6**	**As-Built Total:**				**1368.0**			**2366.6**	
FLOOR TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM =		Points	
Slab	0.0(p)	0.0	0.0	Raised Wood, Post or Pier			19.0	1368.0	0.77		1047.9	
Raised	1368.0	-3.99	-5458.3									
Base Total:			**-5458.3**	**As-Built Total:**				**1368.0**			**1047.9**	
INFILTRATION	Area X	BSPM =	Points					Area X	SPM =		Points	
	1368.0	10.21	13967.3					1368.0	10.21		13967.3	

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,	PERMIT #:

BASE			AS-BUILT					
Summer Base Points: 18074.7			**Summer As-Built Points:**					**26176.8**
Total Summer Points	X System Multiplier	= Cooling Points	Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Cooling Points
			(sys 1: Central Unit 36000 btuh ,SEER/EFF(14.0) Ducts:Unc(S),Unc(R),Gar(AH),R6.0(INS)					
			26177	1.00	(1.09 x 1.147 x 1.00)	0.244	1.000	7978.4
18074.7	**0.4266**	**7710.6**	**26176.8**	**1.00**	**1.250**	**0.244**	**1.000**	**7978.4**

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

BASE				AS-BUILT								
GLASS TYPES .18 X Conditioned Floor Area	X BWPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	WPM X	WOF	= Points	
.18	1368.0	12.74	3137.1	Double, Clear	N	0.0	0.0	40.0	24.58	1.00	983.1	
				Double, Clear	E	0.0	0.0	95.0	18.79	1.00	1785.4	
				Double, Clear	S	0.0	0.0	36.0	13.30	1.00	478.6	
				Double, Clear	W	0.0	0.0	40.0	20.73	1.00	829.1	
				As-Built Total:				**211.0**			**4076.2**	
WALL TYPES	Area X	BWPM	= Points	Type			R-Value	Area X	WPM	=	Points	
Adjacent	0.0	0.00	0.0	Frame, Wood, Exterior			19.0	1332.0	2.20		2930.4	
Exterior	1332.0	3.70	4928.4									
Base Total:	**1332.0**		**4928.4**	**As-Built Total:**				**1332.0**			**2930.4**	
DOOR TYPES	Area X	BWPM	= Points	Type				Area X	WPM	=	Points	
Adjacent	0.0	0.00	0.0									
Exterior	0.0	0.00	0.0									
Base Total:	**0.0**		**0.0**	**As-Built Total:**				**0.0**			**0.0**	
CEILING TYPES	Area X	BWPM	= Points	Type			R-Value	Area X	WPM X	WCM =	Points	
Under Attic	1368.0	2.05	2804.4	Under Attic			30.0	1368.0	2.05 X 1.00		2804.4	
Base Total:	**1368.0**		**2804.4**	**As-Built Total:**				**1368.0**			**2804.4**	
FLOOR TYPES	Area X	BWPM	= Points	Type			R-Value	Area X	WPM	=	Points	
Slab	0.0(p)	0.0	0.0	Raised Wood, Post or Pier			19.0	1368.0	0.88		1198.4	
Raised	1368.0	0.96	1313.3									
Base Total:			**1313.3**	**As-Built Total:**				**1368.0**			**1198.4**	
INFILTRATION	Area X	BWPM	= Points					Area X	WPM	=	Points	
	1368.0	-0.59	-807.1					1368.0	-0.59		-807.1	

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,	PERMIT #:

BASE			AS-BUILT					
Winter Base Points:		**11376.1**	**Winter As-Built Points:**					**10202.3**
Total Winter Points	X System Multiplier	= Heating Points	Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Heating Points
			(sys 1: Electric Heat Pump 36000 btuh ,EFF(8.6) Ducts:Unc(S),Unc(R),Gar(AH),R6.0					
			10202.3	1.000	(1.069 x 1.169 x 1.00)	0.397	1.000	5055.3
11376.1	**0.6274**	**7137.3**	**10202.3**	**1.00**	**1.250**	**0.397**	**1.000**	**5055.3**

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,	PERMIT #:

BASE				AS-BUILT							
WATER HEATING											
Number of Bedrooms	X Multiplier	= Total		Tank Volume	EF	Number of Bedrooms	X Tank Ratio	X Multiplier	X Credit Multiplier	= Total	
2	2635.00	5270.0		50.0	0.90	2	1.00	2693.56	1.00	5387.1	
				As-Built Total:							**5387.1**

CODE COMPLIANCE STATUS

BASE				AS-BUILT			
Cooling Points +	Heating Points +	Hot Water Points =	Total Points	Cooling Points +	Heating Points +	Hot Water Points =	Total Points
7711	**7137**	**5270**	**20118**	**7978**	**5055**	**5387**	**18421**

PASS

Code Compliance Checklist

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

6A-21 INFILTRATION REDUCTION COMPLIANCE CHECKLIST

COMPONENTS	SECTION	REQUIREMENTS FOR EACH PRACTICE	CHECK
Exterior Windows & Doors	606.1.ABC.1.1	Maximum:.3 cfm/sq.ft. window area; .5 cfm/sq.ft. door area.	
Exterior & Adjacent Walls	606.1.ABC.1.2.1	Caulk, gasket, weatherstrip or seal between: windows/doors & frames, surrounding wall; foundation & wall sole or sill plate; joints between exterior wall panels at corners; utility penetrations; between wall panels & top/bottom plates; between walls and floor. EXCEPTION: Frame walls where a continuous infiltration barrier is installed that extends from, and is sealed to, the foundation to the top plate.	
Floors	606.1.ABC.1.2.2	Penetrations/openings >1/8" sealed unless backed by truss or joint members. EXCEPTION: Frame floors where a continuous infiltration barrier is installed that is sealed to the perimeter, penetrations and seams.	
Ceilings	606.1.ABC.1.2.3	Between walls & ceilings; penetrations of ceiling plane of top floor; around shafts, chases, soffits, chimneys, cabinets sealed to continuous air barrier; gaps in gyp board & top plate; attic access. EXCEPTION: Frame ceilings where a continuous infiltration barrier is installed that is sealed at the perimeter, at penetrations and seams.	
Recessed Lighting Fixtures	606.1.ABC.1.2.4	Type IC rated with no penetrations, sealed; or Type IC or non-IC rated, installed inside a sealed box with 1/2" clearance & 3" from insulation; or Type IC rated with < 2.0 cfm from conditioned space, tested.	
Multi-story Houses	606.1.ABC.1.2.5	Air barrier on perimeter of floor cavity between floors.	
Additional Infiltration reqts	606.1.ABC.1.3	Exhaust fans vented to outdoors, dampers; combustion space heaters comply with NFPA, have combustion air.	

6A-22 OTHER PRESCRIPTIVE MEASURES (must be met or exceeded by all residences.)

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Water Heaters	612.1	Comply with efficiency requirements in Table 612.1.ABC.3.2. Switch or clearly marked cir breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required.	
Swimming Pools & Spas	612.1	Spas & heated pools must have covers (except solar heated). Non-commercial pools must have a pump timer. Gas spa & pool heaters must have a minimum thermal efficiency of 78%.	
Shower heads	612.1	Water flow must be restricted to no more than 2.5 gallons per minute at 80 PSIG.	
Air Distribution Systems	610.1	All ducts, fittings, mechanical equipment and plenum chambers shall be mechanically attached, sealed, insulated, and installed in accordance with the criteria of Section 610. Ducts in unconditioned attics: R-6 min. insulation.	
HVAC Controls	607.1	Separate readily accessible manual or automatic thermostat for each system.	
Insulation	604.1, 602.1	Ceilings-Min. R-19. Common walls-Frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE SCORE* = 84.7

The higher the score, the more efficient the home.

1.	New construction or existing	New		12. Cooling systems	
2.	Single family or multi-family	Single family		a. Central Unit	Cap: 36.0 kBtu/hr
3.	Number of units, if multi-family	1			SEER: 14.00
4.	Number of Bedrooms	2		b. N/A	
5.	Is this a worst case?	Yes			
6.	Conditioned floor area (ft²)	1368 ft²		c. N/A	
7.	Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)				
	a. U-factor:	Description Area		13. Heating systems	
	(or Single or Double DEFAULT)	7a. (Dble Default) 211.0 ft²		a. Electric Heat Pump	Cap: 36.0 kBtu/hr
	b. SHGC:				HSPF: 8.60
	(or Clear or Tint DEFAULT)	7b. (Clear) 211.0 ft²		b. N/A	
8.	Floor types				
	a. Raised Wood, Post or Pier	R=19.0, 1368.0ft²		c. N/A	
	b. N/A				
	c. N/A			14. Hot water systems	
9.	Wall types			a. Electric Resistance	Cap: 50.0 gallons
	a. Frame, Wood, Exterior	R=19.0, 1332.0 ft²			EF: 0.90
	b. N/A			b. N/A	
	c. N/A				
	d. N/A			c. Conservation credits	
	e. N/A			(HR-Heat recovery, Solar	
10.	Ceiling types			DHP-Dedicated heat pump)	
	a. Under Attic	R=30.0, 1368.0 ft²		15. HVAC credits	
	b. N/A			(CF-Ceiling fan, CV-Cross ventilation,	
	c. N/A			HF-Whole house fan,	
11.	Ducts			PT-Programmable Thermostat,	
	a. Sup: Unc. Ret: Unc. AH: Garage	Sup. R=6.0, 160.0 ft		MZ-C-Multizone cooling,	
	b. N/A			MZ-H-Multizone heating)	

I certify that this home has complied with the Florida Energy Efficiency Code For Building Construction through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed Code compliant features.

Builder Signature: _____ Date: _____

Address of New Home: _____ City/FL Zip: _____



**NOTE: The home's estimated energy performance score is only available through the FLA/RES computer program. This is not a Building Energy Rating. If your score is 80 or greater (or 86 for a US EPA/DOE EnergyStar™ designation), your home may qualify for energy efficiency mortgage (EEM) incentives if you obtain a Florida Energy Gauge Rating. Contact the Energy Gauge Hotline at 321/638-1492 or see the Energy Gauge web site at www.fsec.ucf.edu for information and a list of certified Raters. For information about Florida's Energy Efficiency Code For Building Construction, contact the Department of Community Affairs at 850/487-1824.*

1 Predominant glass type. For actual glass type and areas, see Summer & Winter Glass output on pages 2&4.

Columbia County Building Department
Flood Development Permit

Development Permit
F 023- 07-008

DATE 04/24/2007 BUILDING PERMIT NUMBER 000025739

APPLICANT KEVIN KELLY PHONE 352 374-8177

ADDRESS P.O. BOX 5215 GAINESVILLE FL 32627

OWNER CHARLES RUIZ PHONE 305 613-2868

ADDRESS 1200 SW BLUFF DRIVE FT. WHITE FL 32038

CONTRACTOR ROBERT KELLY CONSTRUCTION PHONE 352 374-8177

ADDRESS P.O. BOX 5215 GAINESVILLE FL 32627

SUBDIVISION CEDAR SPRINGS SHORES Lot 6 Block ____ Unit ____ Phase ____

TYPE OF DEVELOPMENT SFD,UTILITY PARCEL ID NO. 18-7S-16-04236-042

FLOOD ZONE AE BY BK 1-6-88 FIRM COMMUNITY #. 120070 - PANEL #. 0255 B

FIRM 100 YEAR ELEVATION 36 PLAN INCLUDED (YES) or NO ?

REQUIRED LOWEST HABITABLE FLOOR ELEVATION 37

IN THE REGULATORY FLOODWAY (YES) or NO RIVER Santa Fe

SURVEYOR / ENGINEER NAME ____ LICENSE NUMBER ____

____ ONE FOOT RISE CERTIFICATION INCLUDED

____ ZERO RISE CERTIFICATION INCLUDED

____ SRWMD PERMIT NUMBER ____
(INCLUDING THE ONE FOOT RISE CERTIFICATION)

DATE THE FINISHED FLOOR ELEVATION CERTIFICATE WAS PROVIDED ____

INSPECTED DATE ____ BY ____

COMMENTS ____

135 NE Hernando Ave., Suite B-21
Lake City, Florida 32055
Phone: 386-758-1008
Fax: 386-758-2160

PERMIT EXPIRES ONE YEAR FROM THE DATE OF ISSUANCE

BAILEY BISHOP & LANE, INC.
Engineers *Surveyors* *Planners*

November 21, 2006

ZERO RISE CERTIFICATION

PROPERTY DESCRIPTION: ***Lot 6 - Cedar Springs Shores - Unit No. 5***

OWNER: ***Charles Ruiz***

BASE FLOOD ELEVATION (WITHOUT FLOODWAY): ***35.5***

BASE FLOOD ELEVATION (WITH FLOODWAY): ***36.5***

COMMUNITY-PANEL NUMBER: ***120070 0255 B***

PROJECT REQUIREMENTS: Minimum Finish Floor Elevation ***37.0***
Minimum Flooring Support (i.e. Girders, Joists) Elevation ***35.5***
All footers to be below grade.

I hereby certify that construction of the proposed residence will not increase flood elevations of the Suwannee River at the project location.

Gregory G. Bailey, P.E.
Date: November 21, 2006
P.E. Number 43858

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P. O. Box 3717 Lake City, FL 32056-3717 Ph. (386) 752-5640 FAX (386) 755-7771

HEC-RAS Version 1.2 April 1996
U.S. Army Corp of Engineers
Hydrologic Engineering Center
609 Second Street, Suite D
Davis, California 95616-4687
(916) 756-1104

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X       X   X     X  X    X
X     X  X        X            X   X    X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X            X  X     X    X        X
X     X  X        X    X       X   X    X    X        X
X     X  XXXXXX    XXXX        X    X   X    X   XXXXX
```

****

PROJECT DATA
Project Title: Santa Fe River - Ruiz
Project File : ruiz.prj
Run Date and Time: 11/21/2006 5:20:30 PM

Project in English units

****

PLAN DATA

Plan Title: Ruiz Residence Existing
Plan File : c:\hec\ras\bbldat~1\ruiz.p05

Geometry Title: Ruiz Residence Existing
Geometry File : c:\hec\ras\bbldat~1\ruiz.p05

Flow Title : Ruiz Residence Existing
Flow File : c:\hec\ras\bbldat~1\ruiz.p05

Plan Summary Information:
Number of: Cross Sections = 143 Mulitple Openings = 0
Culverts = 0 Inline Weirs = 0
Bridges = 17

Computational Information
Water surface calculation tolerance = .01
Critical depth calculaton tolerance = .01
Maximum number of interations = 20
Maximum difference tolerance = .3
Flow tolerance factor = .001

Computational Flow Regime: Subcritical Flow

Encroachment Data: None

Flow Distribution Locations: None

****

FLOW DATA

Flow Title: 10,50,100, & 500 Year
Flow File : c:\hec\ras\bbldat~1\ruiz.f01

Flow Data (cfs)

Reach	Riv Sta	PF#1	PF#2	PF#3	PF#4
1	79.85	90	275	374	686
1	73.36	1344	2310	2965	4380
1	67.11	2690	3881	4665	6830
1	57.21	3103	6404	8767	12834
1	49.61	12824	20748	25162	36400
1	44.02	12268	19399	23767	35515
1	39.81	17113	26905	32800	46533
1	37.25	16995	26655	32569	46251
1	33.85	12746	19991	24427	34688
1	28.94	12109	18991	23206	32954

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* 1          27.79   *    9705   16793   20910   32030 *
* 1          25.19   *    9264   15766   19587   29700 *
* 1          19.62   *    9192   13791   16717   22200 *
* 1          15.66   *    8457   13409   16359   22200 *
*********************************************************
Boundary Conditions
*************************************************************************
* Reach        Profile *            Upstream                Downstream    *
*************************************************************************
* 1                  1 *                                Known WS =  29.38 *
* 1                  2 *                                Known WS =  31.25 *
* 1                  3 *                                Known WS =  32.27 *
* 1                  4 *                                Known WS =  35.23 *
*************************************************************************

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

GEOMETRY DATA

Geometry Title: Existing Conditions
Geometry File : c:\hec\ras\bbldat~1\ruiz.g01

CROSS SECTION INPUT    Reach: 1             River Station: 79.85
Description:  79.85

Station Elevation Data,  num = 32
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   150.1   10083   148.5   10201   146.4   10331   145.2   10440   143.8
   10521   143.2   10561   141.8   10629    .140   11143   140.4   11295   140.2
   11457   144.4   11557   148.5   11627   148.4   11748     147   11769     140
   11850   131.1   12550   128.2   13150   127.5   13650   130.4   13892   139.9
   13914   145.9   14126   143.3   14320     143   14541   142.7   14768   142.4
   14881   139.8   15045   141.1   15178   144.7   15500   144.9   15600     145
   16050     146   16200     150

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11748    .089   13914     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11748   13914             4150    3960    3900             .1       .3

CROSS SECTION INPUT    Reach: 1             River Station: 79.1
Description:  79.1

Station Elevation Data,  num = 56
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   150.2   10079   148.3   10144   146.4   10214   145.1   10295   144.3
   10356   143.2   10459   142.5   10517   141.6   10634   141.6   10758   141.6
   10905     142   10995   142.2   11083     143   11152   144.2   11215   144.4
   11248   144.5   11288   143.5   11721   142.2   11751   141.1   11760     137
   11780   141.1   17280   141.1   21548   143.9   21579   143.9   21648     144
   21748   144.5   21848   144.2   21948   144.3   22048   143.6   22148   144.3
   22248   143.9   22348     143   22448   142.6   22548   144.1   22648   144.3
   22748   145.2   22848     145   22934   145.5   22948   145.4   23048   145.6
   23148   145.3   23248   145.3   23311   145.7   23319   144.5   23330   146.2
   23348   146.7   23448   146.9   23548     147   23648   147.1   23748   147.2
   23848   147.3   23948   147.7   24048   148.1   24148   148.8   24248   149.7
   24348   150.8

Manning's n Values,  num = 4
    Sta.   Value    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11751    .089   11780     .42   17280      99

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11751   11780             4800    4963    5500             .1       .3

CROSS SECTION INPUT    Reach: 1             River Station: 78.16
Description:  78.16

Station Elevation Data,  num = 40
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000     150   10108   148.2   10183   147.3   10296     146   10386   145.1
   10455     146   10536   146.2   10620   146.2   10681   146.1   10765   146.1
   10862   145.9   10940   145.4   11000     145   11073   144.3   11128   143.7
   11174     143   11175   142.1   11180   138.5   11200   142.1   18200   142.1
   26782   142.2   26998   141.6   27074   142.7   27170   143.9   27266   143.9
   27439   143.9   27482   144.2   27635   143.5   27769   143.2   27866   143.2
   27951   143.2   28031   144.2   28094   145.9   28165   146.8   28191   147.1
   28267   148.5   28318     149   28364   149.3   28400   149.6   28413   150.2
```

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Manning's n Values, num = 4

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11175	.089	11200	.42	18200	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11175	11200	7300	7867	8200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 76.67
Description: 76.67

Station Elevation Data, num = 28

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	150.1	10052	149	10119	148	10178	147.5	10203	146.9
10294	146.3	10377	145.8	10453	145	10542	144.3	10628	143.4
10727	142.8	10811	142.8	10840	142.1	10879	142.4	11077	142.4
11077	142.4	11090	138	11110	142.4	16100	142.4	16200	142.4
24749	142.8	24826	142.9	24898	144.2	24953	145.9	25015	147
25060	149	25102	150.5	25133	151.1				

Manning's n Values, num = 4

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11077	.089	11110	.42	16200	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11077	11110	4500	5914	7000	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 75.55
Description: 75.55

Station Elevation Data, num = 71

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	150.1	10073	149.7	10197	148.9	10343	147.9	10373	147.8
10442	147.8	10535	147	10645	146.4	10753	145.3	10842	143.9
10907	142.2	10997	142.2	11081	142.8	11176	142.7	11329	143.2
11453	143.2	11647	143.2	11767	142.3	11818	142.1	11865	142.9
11986	143.9	12095	143.9	12147	143.7	12226	143	12299	142
12344	140.7	12451	140.1	12539	139.5	12633	138.9	12721	139.3
12824	139.2	12960	139.1	13117	139.1	13180	137.1	13250	139.1
13769	140.5	13916	140.4	14044	140.4	14182	140.8	14262	140.4
14352	140.8	14414	141.4	14517	142.7	14639	143.6	14683	143.8
14787	143.8	14903	144.1	15021	144	15090	143.9	15133	144.6
15190	144.4	15270	144.3	15397	143.1	15514	141.1	15615	140.5
15714	139.7	15850	140.3	16041	140.3	16248	140.5	16260	141
16392	141.3	16491	141.9	16579	143.2	16709	144.3	16837	145.1
16962	145.8	17076	147	17184	147.4	17243	147.6	17320	149.1
17427	150.1								

Manning's n Values, num = 5

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	99	11176	.42	13117	.089	13485	.42	15397	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13117	13250	1950	2080	2250	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 75.15
Description: 75.15

Station Elevation Data, num = 60

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	150.4	10086	150	10179	149.5	10310	148.8	10421	148.6
10514	148.3	10664	149	10760	147.6	10853	147	10955	145.9
10977	146	11096	145.1	11189	143.9	11275	142.6	11358	141.5
11477	141.3	11596	141.8	11711	143.5	11826	142	11939	142
12104	142.8	12232	142.5	12345	142.2	12404	142.6	12519	142.5
12641	142.6	12721	143.8	12815	144.2	12937	143.6	13035	142.7
13153	142.8	13270	142.7	13346	143.1	13519	139.2	13590	133.7
13691	138.8	13924	141.8	14179	142.1	14385	139.1	14515	139.1
14536	139	14556	143.8	14581	140.7	14614	138.1	14640	138.8
14685	141.7	14817	142.3	14959	143	15121	143.9	15305	145.3
15474	147.3	15623	148.2	15758	149.2	15920	149.6	15997	149.8
16049	150.3	16098	150	16175	149.9	16224	149.9	16298	150

Manning's n Values, num = 5

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	99	12519	.42	12519	.089	13691	.42	14685	99

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Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13519	13691	692	792	840	.1	.3

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CROSS SECTION INPUT Reach: 1 River Station: 75
Description: 75

Station Elevation Data, num = 60

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	150.4	10086	150	10179	149.5	10310	148.8	10421	148.6
10514	148.3	10664	149	10760	147.6	10853	147	10955	145.9
10977	146	11096	145.1	11189	143.9	11275	142.6	11358	141.5
11477	141.3	11596	141.8	11711	143.5	11826	142	11939	142
12104	142.8	12232	142.5	12345	142.2	12404	142.6	12519	142.5
12641	142.6	12721	143.8	12815	144.2	12937	143.6	13035	142.7
13153	142.8	13270	142.7	13346	143.1	13519	139.2	13590	133.7
13691	138.8	13924	141.8	14179	142.1	14385	139.1	14515	139.1
14536	139	14556	143.8	14581	140.7	14614	138.1	14640	138.8
14685	141.7	14817	142.3	14959	143	15121	143.9	15305	145.3
15474	147.3	15623	148.2	15758	149.2	15920	149.6	15997	149.8
16049	150.3	16098	150	16175	149.9	16224	149.9	16298	150

Manning's n Values, num = 5

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	99	12519	.42	13519	.089	13691	.42	14685	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13519	13691	125	125	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 74.98
Description: 74.98

Station Elevation Data, num = 98

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	147.5	10163	147.5	10347	148.1	10510	148.5	10692	148.4
10867	148.3	11000	148.5	11091	148.5	11173	148.5	11264	148.4
11354	148.3	11457	148.1	11537	147.5	11563	147.9	11627	147.4
11700	146.9	11767	146.3	11841	145.3	11902	145.1	11964	144.7
12029	144.5	12092	144.2	12149	144.1	12199	144.1	12226	144.1
12316	144.1	12411	144.3	12581	144.7	12746	144.4	12891	144.1
13048	143.7	13241	143.2	13387	142.8	13522	142.6	13698	142.5
13730	143.4	13733	141.4	13748	138.9	13749	138.91	13750	138.92
13751	138.9	13759	135.5	13760	135.5	13761	135.5	13762	135.5
13764	132.3	13769	135.5	13770	135.5	13771	135.51	13772	135.5
13780	138.9	13781	138.91	13782	138.92	13783	138.9	13796	141.4
13798	143.4	13877	142.5	13986	142.6	14091	143.2	14181	143.5
14270	143.7	14348	143.2	14436	143.2	14524	143	14616	143
14722	143.5	14769	143.5	14821	143.5	14872	143.5	14924	143.5
14971	143.4	15036	143.5	15082	143.6	15113	143.8	15169	143.6
15238	143.6	15308	143.6	15376	143.6	15461	143.5	15538	143.3
15606	143.5	15674	143.8	15728	144.2	15794	144	15880	143.9
15963	143.6	16047	143.3	16135	143.4	16261	143.3	16416	143.7
16549	143.6	16702	143.6	16842	143.9	16967	143.6	17566	144.8
18173	144.8	18992	143.9	19412	145				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	13730	.089	13798	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13730	13798	32	32	.3	.5

Ineffective Flow Areas, num = 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
10000	13730	143.4	13798	19412	143.4

BRIDGE INPUT Reach: 1 River Station: 74.9750
Description: SR-325 Bridge
Distance from Upstream XS = 0
Deck/Roadway Width = 32
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates, num = 8

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
13730	143.4	143.4	13733	143.4	141.4	13748	143.4	141.4
13759	143.4	141.4	13769	143.4	141.4	13780	143.4	141.4
13796	143.4	141.4	13798	143.4	143.4			

Downstream Deck/Roadway Coordinates, num = 8

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
13730	143.4	143.4	13733	143.4	141.4	13748	143.4	141.4
13759	143.4	141.4	13769	143.4	141.4	13780	143.4	141.4
13796	143.4	141.4	13798	143.4	143.4			

```
Elevation at which weir flow begins          =   143.4
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Piers =  1

Pier Station     Upstream=   13764    Downstream=   13764
Upstream Pier Data,  num = 2
   Elev.   Width   Elev.   Width
*******************************
   132.3     1.3   141.4     1.3
Downstream Pier Data,  num = 2
   Elev.   Width   Elev.   Width
*******************************
   132.3     1.3   141.4     1.3

Number of Bridge Coefficient Sets =  1

Low Flow Methods
Selected Low Flow Methods = Yarnell

High Flow Method
       Pressure and Weir flow
           Submerged Inlet Cd          =
           Submerged Inlet + Outlet Cd =.7905694
           Max Low Cord                =   141.4

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1             River Station: 74.97
Description:  74.97

Station Elevation Data,  num = 98
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   147.5   10163   147.5   10347   148.1   10510   148.5   10692   148.4
   10867   148.3   11000   148.5   11091   148.5   11173   148.5   11264   148.4
   11354   148.3   11457   148.1   11537   147.5   11563   147.9   11627   147.4
   11700   146.9   11767   146.3   11841   145.3   11902   145.1   11964   144.7
   12029   144.5   12092   144.2   12149   144.1   12199   144.1   12226   144.1
   12316   144.1   12411   144.3   12581   144.7   12746   144.4   12891   144.1
   13048   143.7   13241   143.2   13387   142.8   13522   142.6   13698   142.5
   13730   143.4   13733   141.4   13748   138.9   13749  138.91   13750  138.92
   13751   138.9   13759   135.5   13760   135.5   13761   135.5   13762   135.5
   13764   132.3   13769   135.5   13770   135.5   13771  135.51   13772   135.5
   13780   138.9   13781  138.91   13782  138.92   13783   138.9   13796   141.4
   13798   143.4   13877   142.5   13986   142.6   14091   143.2   14181   143.5
   14270   143.7   14348   143.2   14436   143.2   14524     143   14616     143
   14722   143.5   14769   143.5   14821   143.5   14872   143.5   14924   143.5
   14971   143.4   15036   143.5   15082   143.6   15113   143.8   15169   143.6
   15238   143.6   15308   143.6   15376   143.6   15461   143.5   15538   143.3
   15606   143.5   15674   143.8   15728   144.2   15794     144   15880   143.9
   15963   143.6   16047   143.3   16135   143.4   16261   143.3   16416   143.7
   16549   143.6   16702   143.6   16842   143.9   16967   143.6   17566   144.8
   18173   144.8   18992   143.9   19412     145

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   13730    .089   13798     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         13730   13798              300     250     250             .3      .5
Ineffective Flow Areas,  num = 2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
*********************************************
   10000   13730   143.4   13798   19412   143.4

CROSS SECTION INPUT    Reach: 1             River Station: 74.92
Description:  74.92

Station Elevation Data,  num = 62
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   145.6   10002   145.6   10012     144   10016     144   10030   139.7
   10062   139.6   10143   139.6   10204   139.6   10371   139.7   10450   139.6
   10501   139.8   10610   139.6   10770   139.6   10798   139.8   10915   140.9
   11031   141.6   11153   142.4   11289   142.4   11397     142   11432   141.2
```

11467	139.2	11516	139.1	11914	139.2	12403	138.9	12870	139
12930	139	12942	137.2	12951	133.5	12961	137.2	12980	138.4
13024	139.4	13028	139.2	13076	139.1	13343	138.9	13572	139.1
13627	139.1	13743	139.1	13843	139.1	13944	139.1	14066	139.2
14171	139.3	14278	139.5	14385	139.7	14484	139.8	14593	139.8
14690	140	14795	140	14893	140.2	14997	140.5	15096	141.2
15152	141.5	15240	141.9	15422	141.6	15598	140.9	15873	140.9
16377	140.9	16773	140.9	17241	140.9	17615	139.8	17755	140.5
18062	140.5	18234	145						

Manning's n Values, num = 5

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	99	11914	.42	12942	.089	12961	.42	13944	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12942	12961	3350	3009	2450	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 74.35
Description: 74.35

Station Elevation Data, num = 26

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	145	10133	139.9	10416	139.7	10868	136.9	11402	135.5
11619	139.7	11826	139.7	11971	138.9	12042	139	12271	139.2
12457	139.1	12619	139.3	12795	139.4	12980	138.2	13184	138.1
13311	137.5	13335	137.1	13535	137.1	13700	133.4	13811	137.1
14108	137.1	14261	137.4	14411	137.7	14547	138.5	16500	139.3
18000	145								

Manning's n Values, num = 5

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	99	12795	.42	13535	.089	13811	.42	14547	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13535	13811	265	265	265	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 74.3
Description: 74.3

Station Elevation Data, num = 12

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	140.5	13277	137.2	13364	137.1	13572	137	13778	135.3
13900	132.9	14066	135.3	14134	136.7	14308	136.8	14430	137.2
15486	138.6	15592	140						

Manning's n Values, num = 5

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	99	13277	.42	13778	.089	14066	.42	14430	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13778	14066	136	136	136	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 74.28
Description: 74.28

Station Elevation Data, num = 64

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	144.7	10313	144.5	10726	144	11107	143.8	11112	144.2
11122	144.2	11123	143.8	11410	143.6	11696	143.4	11923	143.3
12259	143.2	12634	143.1	12900	143.1	12910	140.4	12963	138.1
12964	138.1	12965	138	12966	138	12981	136.4	12982	136.38
12983	136.3	12984	136.2	12989	133.5	12993	136.2	12994	136.25
12995	136.3	12996	136.2	13014	136	13015	136.01	13017	136.02
13018	136	13026	137.9	13027	137.91	13028	137.92	13029	137.93
13075	140.4	13078	143	13088	143.05	13101	143.1	13313	143.1
13568	142.8	13910	143	14148	143	14371	143.2	14582	143
14852	142.8	15031	142.8	15199	142.8	15380	143	15528	143.2
15706	143.3	15800	143.3	15967	143.3	16095	143.8	16248	143.8
16384	144.1	16569	144.1	16843	144.3	17071	144.3	17282	144.7
17491	144.9	17678	145.1	17793	144.9	18085	144.6		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	12900	.089	13101	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12900	13101	13.5	13.5	13.5	.3	.5

Ineffective Flow Areas, num = 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev

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   10000   12900     143   13101   18085     143

BRIDGE INPUT           Reach: 1              River Station: 74.2749
Description: Railroad Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =    13.5
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 9
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   12900   143.1   143.1   12910   143.1   140.4   12963   143.1   140.4
   12981   143.1   140.4   12993   143.1   140.4   13014   143.1   140.4
   13026   143.1   140.4   13075   143.1   140.4   13078   143.1   143.1
Downstream Deck/Roadway Coordinates,  num = 9
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   12900   143.1   143.1   12910   143.1   140.4   12963   143.1   140.4
   12981   143.1   140.4   12993   143.1   140.4   13014   143.1   140.4
   13026   143.1   140.4   13075   143.1   140.4   13078   143.1   143.1
Elevation at which weir flow begins         =     143
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Piers =  1

Pier Station     Upstream= 13000.5    Downstream= 13000.5
Upstream Pier Data,  num = 2
   Elev.   Width   Elev.   Width
********************************
   133.5       8   140.4       8
Downstream Pier Data,  num = 2
   Elev.   Width   Elev.   Width
********************************
   133.5       8   140.4       8

Number of Bridge Coefficient Sets =  1

Low Flow Methods
Selected Low Flow Methods = Yarnell

High Flow Method
       Pressure and Weir flow
           Submerged Inlet Cd          =
           Submerged Inlet + Outlet Cd =.7905694
           Max Low Cord                =   140.4

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1              River Station: 74.27
Description:  74.27

Station Elevation Data,  num = 64
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   144.7   10313   144.5   10726     144   11107   143.8   11112   144.2
   11122   144.2   11123   143.8   11410   143.6   11696   143.4   11923   143.3
   12259   143.2   12634   143.1   12900   143.1   12910   140.4   12963   138.1
   12964   138.1   12965     138   12966     138   12981   136.4   12982  136.38
   12983   136.3   12984   136.2   12989   133.5   12993   136.2   12994  136.25
   12995   136.3   12996   136.2   13014     136   13015  136.01   13017  136.02
   13018     136   13026   137.9   13027  137.91   13028  137.92   13029  137.93
   13075   140.4   13078     143   13088  143.05   13101   143.1   13313   143.1
   13568   142.8   13910     143   14148     143   14371   143.2   14582     143
   14852   142.8   15031   142.8   15199   142.8   15380     143   15528   143.2
   15706   143.3   15800   143.3   15967   143.3   16095   143.8   16248   143.8
   16384   144.1   16569   144.1   16843   144.3   17071   144.3   17282   144.7
   17491   144.9   17678   145.1   17793   144.9   18085   144.6

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   12900    .089   13101     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         12900   13101              200     200     200            .3      .5
Ineffective Flow Areas,  num = 2
```

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   Sta L   Sta R    Elev   Sta L   Sta R    Elev
*********************************************
   10000   12900     143   13101   18085     143

CROSS SECTION INPUT    Reach: 1             River Station: 74.23
Description:  74.23

Station Elevation Data,  num = 12
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   140.5   12278     140   13364   137.1   13572     137   13778   135.3
   13900   132.9   14066   135.3   14134   136.7   14308   136.8   14430   137.2
   18000   138.6   18566     140

Manning's n Values,  num = 5
    Sta.   Value    Sta.   Value    Sta.   Value    Sta.   Value    Sta.   Value
   10000      99   12278     .42   13778    .089   14066     .42   14430      99

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
        13778   14066             1000    1000    1000             .1      .3

CROSS SECTION INPUT    Reach: 1             River Station: 74.04
Description:  74.04

Station Elevation Data,  num = 12
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   140.5   12278     140   13364   137.1   13572     137   13778   135.3
   13900   132.9   14066   135.3   14134   136.7   14308   136.8   14430   137.2
   18000   138.6   18566     140

Manning's n Values,  num = 5
    Sta.   Value    Sta.   Value    Sta.   Value    Sta.   Value    Sta.   Value
   10000      99   12278     .42   13778    .089   14066     .42   14430      99

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
        13778   14066              550     528     525             .1      .3

CROSS SECTION INPUT    Reach: 1             River Station: 73.94
Description:  73.94

Station Elevation Data,  num = 37
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   140.7   10059     139   10214   138.2   10295   137.3   10328   136.3
   10343   135.6   10453   135.3   10658   135.3   10905   135.3   11206   135.3
   11496   135.3   11747   135.3   11938   135.3   12035   135.1   12110   135.3
   12252   135.4   12367   135.5   12501     136   12665   137.7   12840     138
   13145   137.2   13277   137.2   13364   137.1   13572     137   13778   135.3
   13900   132.9   14066   135.3   14134   136.7   14308   136.8   14430   137.2
   14516   138.1   14624   138.3   14714   135.8   15170   135.8   15324   138.3
   15486   138.6   15592     140

Manning's n Values,  num = 5
    Sta.   Value    Sta.   Value    Sta.   Value    Sta.   Value    Sta.   Value
   10000      99   12840     .42   13778    .089   14066     .42   15170      99

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
        13778   14066             2062    3062    2000             .1      .3

CROSS SECTION INPUT    Reach: 1             River Station: 73.36
Description:  73.36

Station Elevation Data,  num = 57
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   140.1   10107   138.8   10252   137.6   10409   138.3   10575   139.2
   10747   139.7   10875   138.9   11001   138.2   11180   137.2   11239     137
   11376   136.7   11487   136.3   11493   133.2   11568   133.2   11656   136.1
   11756   135.9   11813   136.4   11847   137.4   11876   134.2   11995   134.2
   12017   137.9   12027   137.8   12049   133.6   12150   133.6   12163   137.7
   12177   137.6   12191   133.4   12225   129.5   12304   133.4   12330   137.5
   12343   137.4   12352   133.8   12451   133.8   12469   135.3   12480   135.7
   12492   132.5   12569   132.5   12595   135.6   12606   135.9   12612   132.7
   12696   133.5   12822   134.2   12968   134.3   13056   134.2   13178   133.7
   13296     134   13418     134   13515   133.9   13636   133.9   13772   134.8
   13927   134.2   14076   134.3   14235   135.3   14411   135.9   14551   137.6
   14694   137.7   14791   140.4

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   12177    .089   12330     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
```

```
        12177   12330              211     211     211              .1       .3

CROSS SECTION INPUT    Reach: 1             River Station: 73.32
Description:  73.32

Station Elevation Data,  num = 57
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   140.1   10107   138.8   10252   137.6   10409   138.3   10575   139.2
   10747   139.7   10875   138.9   11001   138.2   11180   137.2   11239     137
   11376   136.7   11487   136.3   11493   133.2   11568   133.2   11656   136.1
   11756   135.9   11813   136.4   11847   137.4   11876   134.2   11995   134.2
   12017   137.9   12027   137.8   12049   133.6   12150   133.6   12163   137.7
   12177   137.6   12191   133.4   12225   129.5   12304   133.4   12330   137.5
   12343   137.4   12352   133.8   12451   133.8   12469   135.3   12480   135.7
   12492   132.5   12569   132.5   12595   135.6   12606   135.9   12612   132.7
   12696   133.5   12822   134.2   12968   134.3   13056   134.2   13178   133.7
   13296     134   13418     134   13515   133.9   13636   133.9   13772   134.8
   13927   134.2   14076   134.3   14235   135.3   14411   135.9   14551   137.6
   14694   137.7   14791   140.4

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   12177    .089   12330     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         12177   12330               50      50      50              .1       .3

CROSS SECTION INPUT    Reach: 1             River Station: 73.31
Description:  73.31

Station Elevation Data,  num = 45
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   139.1   10079   138.9   10196   139.3   10338   139.6   10498     139
   10645   139.6   10754   139.5   10838   139.3   10872   139.1   10899   139.1
   10976     139   11053     139   11060  139.14   11116   139.7   11120   138.3
   11146   135.9   11146   138.3   11148   138.3   11148   135.6   11174   127.3
   11228   134.7   11228   138.3   11234   138.3   11234   134.7   11288     135
   11288   138.3   11291   138.3   11291   135.1   11344     136   11344   138.3
   11348   138.3   11348   136.3   11361   138.3   11363   139.7   11410   139.3
   11524   139.1   11683   139.1   11810   139.3   11926   139.1   12070   139.6
   12202   139.5   12340   139.4   12518   139.5   12677   139.6   12848     140

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11116    .089   11363     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11116   11363               75      75      75              .3       .5

BRIDGE INPUT           Reach: 1             River Station: 73.305
Description: US-301 Bridges
Distance from Upstream XS =       0
Deck/Roadway Width        =      75
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 8
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   11116   139.7   139.7   11120   139.7   138.3   11146   139.7   138.3
   11228   139.7   138.3   11288   139.7   138.3   11344   139.7   138.3
   11361   139.7   138.3   11363   139.7   139.7
Downstream Deck/Roadway Coordinates,  num = 8
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   11116   139.7   139.7   11120   139.7   138.3   11146   139.7   138.3
   11228   139.7   138.3   11288   139.7   138.3   11344   139.7   138.3
   11361   139.7   138.3   11363   139.7   139.7
Elevation at which weir flow begins         =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy
```

```
High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT     Reach: 1              River Station: 73.3
Description:  73.3

Station Elevation Data,  num = 45
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   139.1   10079   138.9   10196   139.3   10338   139.6   10498    139
   10645   139.6   10754   139.5   10838   139.3   10872   139.1   10899   139.1
   10976     139   11053     139   11060  139.14   11116   139.7   11120   138.3
   11146   135.9   11146   138.3   11148   138.3   11148   135.6   11174   127.3
   11228   134.7   11228   138.3   11234   138.3   11234   134.7   11288     135
   11288   138.3   11291   138.3   11291   135.1   11344     136   11344   138.3
   11348   138.3   11348   136.3   11361   138.3   11363   139.7   11410   139.3
   11524   139.1   11683   139.1   11810   139.3   11926   139.1   12070   139.6
   12202   139.5   12340   139.4   12518   139.5   12677   139.6   12848     140

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11116    .089   11363     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11116   11363              150     150     150            .3       .5

CROSS SECTION INPUT     Reach: 1              River Station: 73.27
Description:  73.27

Station Elevation Data,  num = 73
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   139.4   10092   137.1   10160   137.4   10255   136.8   10344   136.3
   10413   136.1   10507   135.4   10585     134   10661   133.6   10775   133.3
   10832     134   10929   133.8   11012     132   11029     132   11076   132.3
   11137   132.5   11222   132.4   11293     133   11367   132.8   11374   132.8
   11470   132.4   11575   131.3   11682   131.5   11718   131.9   11723     131
   11730   124.1   11739     131   11778   131.2   11851   131.4   11873   132.1
   11928   132.7   12009     134   12135   134.1   12316   134.3   12450   134.7
   12564   135.4   12566   134.3   12568   134.3   12570   136.1   12574   136.2
   12582   136.6   12592   136.3   12595   134.8   12597   134.7   12606   135.4
   12627   136.2   12697   136.1   12778   136.1   12860   135.4   12907   135.1
   12950   134.8   13030   134.6   13107   134.8   13210   135.3   13326   135.6
   13429   135.7   13529   136.3   13615   137.4   13630   137.8   13641   136.4
   13644   136.4   13648     138   13653   138.9   13660   138.9   13671   138.6
   13683   137.8   13724   137.8   13780   137.9   13841     138   13883   138.2
   14007   138.9   14132   139.6   14265     140

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11723    .089   11739     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11723   11739             3300    3590    3550            .1       .3

CROSS SECTION INPUT     Reach: 1              River Station: 72.59
Description:  72.59

Station Elevation Data,  num = 22
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   138.2   10010   138.2   10031   132.8   10033   132.8   10044     135
   10052   134.8   10054   134.6   10090     134   10323   129.9   10506   129.8
   10630   129.7   10778   129.5   10788   129.1   10800   119.1   10824   129.1
   10855   129.2   10896   129.3   10972   129.4   11073   129.5   11190   129.9
   11367   134.8   11512   136.1

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   10788    .089   10824     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         10788   10824             5850    5966    5650            .1       .3

CROSS SECTION INPUT     Reach: 1              River Station: 71.46
Description:  71.46
```

Station Elevation Data, num = 42

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	131.7	10089	129.9	10171	129.1	10193	127.2	10224	126.9
10322	127	10341	127.2	10362	128.4	10392	129.1	10407	128.7
10426	128	10502	127.6	10587	127.3	10670	127.6	10781	128.2
10871	127.6	10975	127.4	11090	127.1	11192	126.9	11357	124.6
11534	124.5	11596	123.6	11768	122.7	11802	120.3	11850	120.2
11948	119.7	12135	119.7	12217	119.4	12220	119.7	12250	114.4
12311	119.4	12397	119.8	12421	121.1	12502	122	12589	123
12655	122.9	12765	123.5	12917	123.5	13030	124.4	13136	126
13204	128.8	13234	131						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	12217	.089	12311	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12217	12311	6350	6758	6700	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 70.18
Description: 70.18

Station Elevation Data, num = 38

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	125.2	10015	125.2	10017	124.3	10019	124.3	10024	125.7
10027	125.8	10043	124.3	10094	124.1	10134	124.2	10155	124.5
10172	124.6	10207	123.3	10262	122.6	10352	121.3	10444	119.9
10534	118.5	10578	117.9	10595	115.9	10625	114.4	10669	114.2
10706	114.7	10725	115.5	10746	115.6	10756	112.7	10770	110.7
10783	112.7	10803	116.3	10832	116.5	10878	115.8	10913	116.1
10945	116.7	11006	117.5	11071	118.4	11128	119.7	11213	120.8
11320	121.7	11500	123.6	11572	126.2				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	10746	.089	10803	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10746	10803	3400	3854	3200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 69.45
Description: 69.45

Station Elevation Data, num = 38

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	125.2	10015	125.2	10017	124.3	10019	124.3	10024	125.7
10027	125.8	10043	124.3	10094	124.1	10134	124.2	10155	124.5
10172	124.6	10207	123.3	10262	122.6	10352	121.3	10444	119.9
10534	118.5	10578	117.9	10595	115.9	10625	114.4	10669	114.2
10706	114.7	10725	115.5	10746	115.6	10756	112.7	10770	108.7
10783	112.7	10803	116.3	10832	116.5	10878	115.8	10913	116.1
10945	116.7	11006	117.5	11071	118.4	11128	119.7	11213	120.8
11320	121.7	11500	123.6	11572	126.2				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	10746	.089	10803	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10746	10803	370	370	370	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 69.38
Description: 69.38

Station Elevation Data, num = 53

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	130.3	10088	129.7	10123	129.5	10126	130.4	10128	130.4
10129	129.3	10130	129.3	10132	130.2	10133	130.2	10135	129.5
10161	128.6	10227	128.1	10320	127.3	10411	126.4	10475	125.2
10508	124.9	10514	124.9	10527	126	10533	126	10596	124
10625	121.8	10629	121.8	10649	122.5	10674	122.7	10738	119.6
10765	119.4	10847	121.3	10942	121.5	10964	122	11047	121.7
11155	122	11278	122.5	11399	123.2	11477	122.8	11500	122.5
11550	123.4	11551	122.2	11582	112.8	11582	121.4	11585	121.4
11585	112.5	11600	106	11616	110.1	11616	121.4	11619	121.4
11619	110.5	11650	121.4	11652	123.4	11750	123.3	11829	125
11927	127.5	12022	130.2	12208	135.4				

Manning's n Values, num = 3

```
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11550    .089   11652     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11550   11652               30      30      30             .3      .5

BRIDGE INPUT           Reach: 1              River Station: 69.375
Description: SR-200A Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =      30
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   11550   123.4   123.4   11551   123.4   122.2   11582   123.4   121.4
   11616   123.4   121.4   11650   123.4   121.4   11652   123.4   123.4
Downstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   11550   123.4   123.4   11551   123.4   122.2   11582   123.4   121.4
   11616   123.4   121.4   11650   123.4   121.4   11652   123.4   123.4
Elevation at which weir flow begins          =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1              River Station: 69.37
Description:  69.37

Station Elevation Data,  num = 53
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   130.3   10088   129.7   10123   129.5   10126   130.4   10128   130.4
   10129   129.3   10130   129.3   10132   130.2   10133   130.2   10135   129.5
   10161   128.6   10227   128.1   10320   127.3   10411   126.4   10475   125.2
   10508   124.9   10514   124.9   10527     126   10533     126   10596     124
   10625   121.8   10629   121.8   10649   122.5   10674   122.7   10738   119.6
   10765   119.4   10847   121.3   10942   121.5   10964     122   11047   121.7
   11155     122   11278   122.5   11399   123.2   11477   122.8   11500   122.5
   11550   123.4   11551   122.2   11582   112.8   11582   121.4   11585   121.4
   11585   112.5   11600     106   11616   110.1   11616   121.4   11619   121.4
   11619   110.5   11650   121.4   11652   123.4   11750   123.3   11829     125
   11927   127.5   12022   130.2   12208   135.4

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11550    .089   11652     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11550   11652               792     792     792             .3      .5

CROSS SECTION INPUT    Reach: 1              River Station: 69.22
Description:  69.22

Station Elevation Data,  num = 25
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   127.4   10093   122.8   10176   120.5   10324   118.5   10419   115.8
   10578   114.9   10669   114.7   10791   112.8   10889   110.1   10972     107
   11007   107.1   11016     105   11030     104   11053     105   11076   107.2
   11106   108.5   11200   109.3   11323   110.4   11385   112.7   11460   114.9
   11500   116.6   11563   118.7   11667   119.2   11771   119.5   11849   121.2
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Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11016	.089	11053	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11016	11053	2000	2640	2200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 68.72
Description: 68.72

Station Elevation Data, num = 25

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	127.4	10093	122.8	10176	120.5	10324	118.5	10419	115.8
10578	114.9	10669	114.7	10791	112.8	10889	110.1	10972	103.8
11007	103.9	11016	102	11030	100	11053	102	11076	107.2
11106	108.5	11200	109.3	11323	110.4	11385	112.7	11460	114.9
11500	116.6	11563	118.7	11667	119.2	11771	119.5	11849	121.2

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11016	.089	11053	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11016	11053	4150	4699	4300	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 67.83
Description: 67.83

Station Elevation Data, num = 47

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	120.7	10131	118.8	10257	118.3	10407	116.7	10555	115.4
10784	114.8	11077	112	11420	111.6	11528	110.9	11730	109.2
11842	107.8	11886	106.1	11991	102.7	12096	100.8	12154	100.7
12189	100.8	12217	100.4	12226	98.4	12242	96.4	12262	98.4
12270	104.7	12276	105.6	12293	104.6	12319	103.7	12349	101.6
12380	101.1	12415	100.8	12429	100.8	12454	101.6	12489	102.4
12524	103.9	12622	105.2	12704	106.8	12789	108.7	12893	108.1
12966	107.8	13021	107.7	13104	107.7	13164	108.3	13202	109.3
13227	112.6	13240	114.1	13252	115	13263	115	13307	116
13374	118.1	13437	120.2						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	12226	.089	12262	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12226	12262	3600	3802	3550	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 67.11
Description: 67.11

Station Elevation Data, num = 29

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	118.5	10079	116.2	10215	115.4	10300	113.7	10408	112.4
10458	106.7	10572	104.9	10706	103.1	10765	99.3	10817	99.3
10832	99.1	10853	99.8	10882	99.2	10887	95.7	10910	93.7
10942	95.6	10948	98.5	10992	98.2	11022	97.8	11027	99.5
11089	102.4	11154	103	11231	104.1	11497	105	11614	107.1
11754	108.8	11876	112.6	11988	116.5	12148	120.5		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	10887	.089	10942	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10887	10942	4500	5914	4800	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 65.99
Description: 65.99

Station Elevation Data, num = 50

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	111.7	10040	110.9	10052	110	10056	109.8	10057	110.9
10105	110.6	10227	108.1	10361	106.3	10467	105.2	10506	104.7
10524	104.4	10638	102.7	10764	100.8	10875	100.5	10930	100.4
11046	97.6	11124	97.9	11173	98.9	11236	99.7	11292	100.5
11332	100.9	11364	99.6	11383	98.8	11407	97	11462	97.2
11485	98.5	11503	98.5	11519	96	11536	93.7	11558	93.1
11576	95.7	11596	99.7	11622	100	11634	101.2	11679	100.1
11699	99.7	11716	98.1	11719	89.5	11740	88	11765	89.5

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   11785    94.9   11802    96.6   11856    98.9   11906   101.7   11995   102.4
   12077   104.3   12136   105.9   12222   107.7   12329   109.2   12433     111

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11719    .089   11765     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11719   11765              130     130     130            .1       .3

CROSS SECTION INPUT    Reach: 1             River Station: 65.97
Description:  65.97

Station Elevation Data,  num = 19
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000     106   11500   103.7   11550   106.2   11565    94.7   11565   104.9
   11566   104.9   11566    94.5   11581      88   11581     105   11582     105
   11582    88.5   11598      92   11598   104.9   11599   104.9   11599    92.2
   11615   104.9   11617   106.2   11667   104.6   12000     106

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11550    .089   11617     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11550   11617               25      25      25            .3       .5

BRIDGE INPUT           Reach: 1             River Station: 65.965
Description: County Road Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =      25
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   11550   106.2   106.2   11565   106.2   104.9   11581   106.3     105
   11598   106.2   104.9   11615   106.2   104.9   11617   106.2   106.2
Downstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   11550   106.2   106.2   11565   106.2   104.9   11581   106.3     105
   11598   106.2   104.9   11615   106.2   104.9   11617   106.2   106.2
Elevation at which weir flow begins         =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1             River Station: 65.96
Description:  65.96

Station Elevation Data,  num = 19
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000     106   11500   103.7   11550   106.2   11565    94.7   11565   104.9
   11566   104.9   11566    94.5   11581      88   11581     105   11582     105
   11582    88.5   11598      92   11598   104.9   11599   104.9   11599    92.2
   11615   104.9   11617   106.2   11667   104.6   12000   106.7

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11550    .089   11617     .42
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Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
11550 11617 370 370 370 .3 .5

CROSS SECTION INPUT Reach: 1 River Station: 65.89
Description: 65.89

Station Elevation Data, num = 50

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	111.7	10040	110.9	10052	110	10056	109.8	10057	110.9
10105	110.6	10227	108.1	10361	106.3	10467	105.2	10506	104.7
10524	104.4	10638	102.7	10764	100.8	10875	100.5	10930	100.4
11046	97.6	11124	97.9	11173	98.9	11236	99.7	11292	100.5
11332	100.9	11364	99.6	11383	98.8	11407	97	11462	97.2
11485	98.5	11503	98.5	11519	96	11536	93.7	11558	93.1
11576	95.7	11596	99.7	11622	100	11634	101.2	11679	100.1
11699	99.7	11716	98.1	11719	89.5	11740	88	11765	89.5
11785	94.9	11802	96.6	11856	98.9	11906	101.7	11995	102.4
12077	104.3	12136	105.9	12222	107.7	12329	109.2	12433	111

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11719	.089	11765	.42

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
11719 11765 100 158 90 .1 .3

CROSS SECTION INPUT Reach: 1 River Station: 65.86
Description: 65.86

Station Elevation Data, num = 50

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	111.7	10040	110.9	10052	110	10056	109.8	10057	110.9
10105	110.6	10227	108.1	10361	106.3	10467	105.2	10506	104.7
10524	104.4	10638	102.7	10764	100.8	10875	100.5	10930	100.4
11046	97.6	11124	97.9	11173	98.9	11236	99.7	11292	100.5
11332	100.9	11364	99.6	11383	98.8	11407	97	11462	97.2
11485	98.5	11503	98.5	11519	96	11536	93.7	11558	93.1
11576	95.7	11596	99.7	11622	100	11634	101.2	11679	100.1
11699	99.7	11716	98.1	11719	89.5	11740	88	11765	89.5
11785	94.9	11802	96.6	11856	98.9	11906	101.7	11995	102.4
12077	104.3	12136	105.9	12222	107.7	12329	109.2	12433	111

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11719	.089	11765	.42

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
11719 11765 5500 6811 4600 .1 .3

CROSS SECTION INPUT Reach: 1 River Station: 64.57
Description: 64.57

Station Elevation Data, num = 20

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	102.8	10127	101.9	10239	101	10374	97.8	10571	97.7
10829	97.7	11061	95	11068	88	11100	86	11151	88
11166	95.2	11565	95.2	11599	96.6	11654	97.3	11710	97.2
11778	97.9	11866	98.2	11941	99	12018	99.1	12063	100.9

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11068	.089	11151	.42

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
11068 11151 4400 5122 3900 .1 .3

CROSS SECTION INPUT Reach: 1 River Station: 63.6
Description: 63.6

Station Elevation Data, num = 33

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	101.6	10044	100.8	10183	90	10313	88.9	10483	88.8
10506	88.8	10608	88.7	10768	88.7	10830	88.6	11048	88.1
11205	88.4	11306	88.8	11422	88.1	11443	85.5	11460	83.5
11481	85.5	11490	88.1	11519	88.2	11635	89	11793	89.5
12193	92	12531	92.2	12584	92.5	12639	92.7	12[illegible]	[illegible]
12753	93	12839	93.1	13000	93.2	13200	93.3	13[illegible]	[illegible]
13685	95.7	13745	98.1	13833	100				

Manning's n Values, num = 3

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Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11443	.089	11481	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11443	11481	5500	7180	5900	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 62.24
Description: 62.24

Station Elevation Data, num = 38

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	103.7	10066	100.2	10139	95.3	10172	94.4	10225	91.1
10256	89.9	10288	86.7	10353	85.4	10769	85.1	11012	84.8
11127	84.5	11385	84.4	11510	84.6	11603	85.4	11651	85.2
11698	86.4	11738	86.5	11758	85.3	11770	84.4	11771	82.2
11790	80.5	11806	82.2	11812	84.4	11871	84.3	12099	84.6
12288	84.5	12541	84.2	12803	84.3	13121	83.8	13343	83.9
13511	83.8	13661	83.9	13731	84.2	13775	84.9	13819	85.4
13880	89.8	14009	95	14125	102.1				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11771	.089	11806	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11771	11806	5400	6442	5000	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 61.02
Description: 61.02

Station Elevation Data, num = 77

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	113.2	10101	111.2	10208	107.6	10305	105.2	10393	102.1
10461	85	10559	84	10659	83	10699	82	10733	80.5
11409	80	11437	80.5	11482	79.7	11508	79.7	11539	80
11564	80.3	11607	80.7	11654	81.2	11703	81.1	11776	80
11829	80	11878	79.5	11917	79.6	11933	79.7	11941	77.3
11950	75.3	11958	77.3	11964	78.9	11995	78.7	12019	78.4
12067	78	12074	78.1	12080	77.3	12103	77.1	12110	77.9
12154	78.3	12287	78.1	12300	77.3	12367	77.3	12382	77.6
12481	77.5	12613	78.7	12677	80.1	12747	79.8	12907	79.7
12978	79.8	12991	79.2	13050	79.2	13089	80.1	13138	83.2
13169	83.7	13231	84.3	13311	84.4	13404	84.1	13460	81.9
13468	82.1	13505	82.7	13513	81.6	13533	81.4	13543	82.7
13590	83.6	13659	84.3	13744	85.9	13853	86.3	13924	85.6
13979	85.9	14031	88.7	14138	89.9	14231	91.3	14267	91
14381	89.4	14507	87.8	14600	87.6	14759	89.8	14906	92.9
15026	96.6	15146	100.6						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11941	.089	11958	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11941	11958	6000	7075	6700	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 59.68
Description: 59.68

Station Elevation Data, num = 90

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	102.1	10084	99.4	10164	98.1	10217	97.4	10253	98.1
10303	98.8	10351	99	10416	98.5	10498	97.8	10578	96.8
10647	96	10720	94.7	10802	94.4	10884	94.1	10976	93.2
11071	91.7	11131	90.5	11183	88.4	11231	88.9	11274	90.3
11330	90.3	11440	88.9	11501	88.6	11540	88.5	11645	86.4
11689	85.7	11695	85.5	11704	83.9	11732	83.2	11749	82.5
11798	80.7	11840	79.2	11882	79	11905	78.5	11931	75.8
11943	74.3	11960	73.8	11980	71.1	12021	73.7	12031	76
12046	75.9	12060	74.7	12073	73.8	12099	73.8	12106	75.6
12125	76	12153	75.8	12186	75.7	12249	76.2	12328	76.1
12400	76.9	12476	79.1	12526	80	12585	79.6	12658	80.4
12728	80.4	12810	81.4	12849	81.8	12854	82.5	12858	81.5
12867	81.5	12876	81.5	12892	82	12899	80.1	12911	80.1
12915	82.4	12923	82.7	12932	83.1	12941	81.6	12955	81.4
12968	82.7	12983	84.8	12992	84.5	13002	83.7	13020	82.2
13058	82.4	13106	82.4	13138	83.4	13169	85	13202	87.7
13224	88.8	13243	88.3	13263	88.2	13288	88.2	13314	89.1
13357	89.6	13438	92.6	13539	96.2	13621	98.3	13720	100.1

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Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11960    .089   12021     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11960   12021              100     100     100            .1       .3

CROSS SECTION INPUT    Reach: 1             River Station: 59.66
Description:  59.66

Station Elevation Data,  num = 40
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   102.3   10059   102.2   10117   101.7   10198   101.7   10282   101.3
   10350   101.1   10425   100.2   10476    99.9   10569    98.7   10645    98.1
   10729    97.6   10782      97   10831      97   10865    97.9   10867    96.5
   10916    76.8   10916    94.6   10919    94.6   10919    76.8   10967    72.6
   10967    72.6   10968    72.6   10968    94.4   10971    94.4   10971    72.7
   11020    78.1   11020    94.1   11023    94.1   11023    78.2   11063    93.8
   11065    96.8   11149    96.8   11248    96.4   11359      96   11459    95.4
   11563    94.6   11686    95.2   11791    96.9   11900    98.8   12007   102.5

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   10865    .089   11065     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         10865   11065               50      50      50            .3       .5

BRIDGE INPUT           Reach: 1             River Station: 59.655
Description: SR-231/235 Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =      50
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 7
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   10865    97.9    97.9   10867    97.9    96.5   10916    97.7    94.6
   10968    97.5    94.4   11020    97.2    94.1   11063    96.9    93.8
   11065    96.8    96.8
Downstream Deck/Roadway Coordinates,  num = 7
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   10865    97.9    97.9   10867    97.9    96.5   10916    97.7    94.6
   10968    97.5    94.4   11020    97.2    94.1   11063    96.9    93.8
   11065    96.8    96.8
Elevation at which weir flow begins         =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1             River Station: 59.65
Description:  59.65

Station Elevation Data,  num = 40
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   102.3   10059   102.2   10117   101.7   10198   101.7   10282   101.3
   10350   101.1   10425   100.2   10476    99.9   10569    98.7   10645    98.1
   10729    97.6   10782      97   10831      97   10865    97.9   10867    96.5
   10916    76.8   10916    94.6   10919    94.6   10919    76.8   10967    72.6
   10967    72.6   10968    72.6   10968    94.4   10971    94.4   10971    72.7
   11020    78.1   11020    94.1   11023    94.1   11023    78.2   11063    93.8
```

11065	96.8	11149	96.8	11248	96.4	11359	96	11459	95.4
11563	94.6	11686	95.2	11791	96.9	11900	98.8	12007	102.5

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	10865	.089	11065	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10865	11065	400	400	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 59.57
Description: 59.57

Station Elevation Data, num = 90

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	102.1	10084	99.4	10164	98.1	10217	97.4	10253	98.1
10303	98.8	10351	99	10416	98.5	10498	97.8	10578	96.8
10647	96	10720	94.7	10802	94.4	10884	94.1	10976	93.2
11071	91.7	11131	90.5	11183	88.4	11231	88.9	11274	90.3
11330	90.3	11440	88.9	11501	88.6	11540	88.5	11645	86.4
11689	85.7	11695	85.5	11704	83.9	11732	83.2	11749	82.5
11798	80.7	11840	79.2	11882	79	11905	78.5	11931	75.8
11943	74.3	11960	73.8	11980	71.1	12021	73.7	12031	76
12046	75.9	12060	74.7	12073	73.8	12099	73.8	12106	75.6
12125	76	12153	75.8	12186	75.7	12249	76.2	12328	76.1
12400	76.9	12476	79.1	12526	80	12585	79.6	12658	80.4
12728	80.4	12810	81.4	12849	81.8	12854	82.5	12858	81.5
12867	81.5	12876	81.5	12892	82	12899	80.1	12911	80.1
12915	82.4	12923	82.7	12932	83.1	12941	81.6	12955	81.4
12968	82.7	12983	84.8	12992	84.5	13002	83.7	13020	82.2
13058	82.4	13106	82.4	13138	83.4	13169	85	13202	87.7
13224	88.8	13243	88.3	13263	88.2	13288	88.2	13314	89.1
13357	89.6	13438	92.6	13539	96.2	13621	98.3	13720	100.1

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11960	.089	12021	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11960	12021	1500	1637	1400	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 59.26
Description: 59.26

Station Elevation Data, num = 90

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	102.1	10084	99.4	10164	98.1	10217	97.4	10253	98.1
10303	98.8	10351	99	10416	98.5	10498	97.8	10578	96.8
10647	96	10720	94.7	10802	94.4	10884	94.1	10976	93.2
11071	91.7	11131	90.5	11183	88.4	11231	88.9	11274	90.3
11330	90.3	11440	88.9	11501	88.6	11540	88.5	11645	86.4
11689	85.7	11695	85.5	11704	83.9	11732	83.2	11749	82.5
11798	80.7	11840	79.2	11882	79	11905	78.5	11931	75.8
11943	74.3	11960	73.8	11980	71.1	12021	73.7	12031	76
12046	75.9	12060	74.7	12073	73.8	12099	73.8	12106	75.6
12125	76	12153	75.8	12186	75.7	12249	76.2	12328	76.1
12400	76.9	12476	79.1	12526	80	12585	79.6	12658	80.4
12728	80.4	12810	81.4	12849	81.8	12854	82.5	12858	81.5
12867	81.5	12876	81.5	12892	82	12899	80.1	12911	80.1
12915	82.4	12923	82.7	12932	83.1	12941	81.6	12955	81.4
12968	82.7	12983	84.8	12992	84.5	13002	83.7	13020	82.2
13058	82.4	13106	82.4	13138	83.4	13169	85	13202	87.7
13224	88.8	13243	88.3	13263	88.2	13288	88.2	13314	89.1
13357	89.6	13438	92.6	13539	96.2	13621	98.3	13720	100.1

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11960	.089	12021	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11960	12021	2100	2376	2000	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 58.81
Description: 58.81

Station Elevation Data, num = 78

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	102.7	10061	102.4	10133	101.5	10234	101.5	10306	100.3
10402	100.1	10473	99.4	10539	98.5	10631	97.3	10703	97.3
10787	96.4	10878	95.1	11002	93.6	11058	91.8	11150	89.7

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   11224    85.9   11271    80.6   11321    78.7   11391    77.8   11463    77.9
   11524      76   11572    73.6   11619    73.8   11641    73.7   11660    69.5
   11675    66.8   11691    69.6   11710    71.5   11732    74.5   11744    74.9
   11767    74.7   11791    73.8   11803    72.5   11813    71.2   11823    71.2
   11834    72.6   11847    73.1   11864    72.5   11883    70.6   11903      70
   11933    69.9   11941    75.4   11952    75.4   11994    75.3   12025    75.5
   12071      76   12139    77.3   12207    77.8   12277    77.8   12337    77.8
   12365    78.8   12386    78.8   12420    78.2   12447    78.1   12529    78.1
   12559    79.1   12614    80.7   12664    81.6   12730    82.9   12806    83.6
   12876    84.6   12932    85.6   12977    85.8   13035      87   13111    87.7
   13134    87.4   13160    87.4   13182    88.5   13217    88.9   13261    89.6
   13306    90.3   13362    90.9   13436    91.9   13504    93.3   13585    94.1
   13693    96.2   13798    98.2   13917   100.1

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11660    .089   11691     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11660   11691              106     106     106             .1      .3

CROSS SECTION INPUT    Reach: 1             River Station: 58.79
Description:  58.79

Station Elevation Data,  num = 26
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000      88   10315    87.1   10340    73.9   10340    83.9   10343    83.9
   10343    73.8   10367    74.1   10367    84.1   10370    84.1   10370    74.1
   10394      69   10394    84.3   10397    84.3   10397      69   10421    73.5
   10421    84.5   10424    84.5   10424    73.5   10448    79.7   10448    84.7
   10451    84.7   10451    79.7   10476    84.8   10479      88   10516    88.3
   12000      89

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   10315    .089   10479     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         10315   10479               50      50      50             .3      .5

BRIDGE INPUT           Reach: 1             River Station: 58.785
Description: Railroad Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =      50
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 8
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   10315    87.1    87.1   10340    87.1    83.9   10367    87.3    84.1
   10394    87.5    84.3   10421    87.7    84.5   10448    87.9    84.7
   10476      88    84.8   10479      88      88
Downstream Deck/Roadway Coordinates,  num = 8
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   10315    87.1    87.1   10340    87.1    83.9   10367    87.3    84.1
   10394    87.5    84.3   10421    87.7    84.5   10448    87.9    84.7
   10476      88    84.8   10479      88      88
Elevation at which weir flow begins         =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface
```

CROSS SECTION INPUT Reach: 1 River Station: 58.78
Description: 58.78

Station Elevation Data, num = 26

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	88	10315	87.1	10340	73.9	10340	83.9	10343	83.9
10343	73.8	10367	74.1	10367	84.1	10370	84.1	10370	74.1
10394	69	10394	84.3	10397	84.3	10397	69	10421	73.5
10421	84.5	10424	84.5	10424	73.5	10448	79.7	10448	84.7
10451	84.7	10451	79.7	10476	84.8	10479	88	10516	88.3
12000	89								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	10315	.089	10479	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10315	10479	422	422	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 58.7
Description: 58.7

Station Elevation Data, num = 78

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	102.7	10061	102.4	10133	101.5	10234	101.5	10306	100.3
10402	100.1	10473	99.4	10539	98.5	10631	97.3	10703	97.3
10787	96.4	10878	95.1	11002	93.6	11058	91.8	11150	89.7
11224	85.9	11271	80.6	11321	78.7	11391	77.8	11463	77.9
11524	76	11572	73.6	11619	73.8	11641	73.7	11660	69.5
11675	66.8	11691	69.6	11710	71.5	11732	74.5	11744	74.9
11767	74.7	11791	73.8	11803	72.5	11813	71.2	11823	71.2
11834	72.6	11847	73.1	11864	72.5	11883	70.6	11903	70
11933	69.9	11941	75.4	11952	75.4	11994	75.3	12025	75.5
12071	76	12139	77.3	12207	77.8	12277	77.8	12337	77.8
12365	78.8	12386	78.8	12420	78.2	12447	78.1	12529	78.1
12559	79.1	12614	80.7	12664	81.6	12730	82.9	12806	83.6
12876	84.6	12932	85.6	12977	85.8	13035	87	13111	87.7
13134	87.4	13160	87.4	13182	88.5	13217	88.9	13261	89.6
13306	90.3	13362	90.9	13436	91.9	13504	93.3	13585	94.1
13693	96.2	13798	98.2	13917	100.1				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11660	.089	11691	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11660	11691	2500	2904	2600	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 58.15
Description: 58.15

Station Elevation Data, num = 78

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	102.7	10061	102.4	10133	101.5	10234	101.5	10306	100.3
10402	100.1	10473	99.4	10539	98.5	10631	97.3	10703	97.3
10787	96.4	10878	95.1	11002	93.6	11058	91.8	11150	89.7
11224	85.9	11271	80.6	11321	78.7	11391	77.8	11463	77.9
11524	76	11572	73.6	11619	73.8	11641	73.7	11660	69.5
11675	66.8	11691	69.6	11710	71.5	11732	74.5	11744	74.9
11767	74.7	11791	73.8	11803	72.5	11813	71.2	11823	71.2
11834	72.6	11847	73.1	11864	72.5	11883	70.6	11903	70
11933	69.9	11941	75.4	11952	75.4	11994	75.3	12025	75.5
12071	76	12139	77.3	12207	77.8	12277	77.8	12337	77.8
12365	78.8	12386	78.8	12420	78.2	12447	78.1	12529	78.1
12559	79.1	12614	80.7	12664	81.6	12730	82.9	12806	83.6
12876	84.6	12932	85.6	12977	85.8	13035	87	13111	87.7
13134	87.4	13160	87.4	13182	88.5	13217	88.9	13261	89.6
13306	90.3	13362	90.9	13436	91.9	13504	93.3	13585	94.1
13693	96.2	13798	98.2	13917	100.1				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11660	.089	11691	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11660	11691	4100	4963	4200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 57.21
Description: 57.21

Station Elevation Data, num = 67

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	94.7	10087	94.5	10177	94.8	10259	94.4	10333	93.4
10388	93.3	10445	92.9	10509	92.5	10572	91.8	10643	90.6
10727	88.8	10791	83.7	10845	81.7	10908	79.2	10922	79.3
10950	78.9	10970	78.7	10997	76.8	11005	76.3	11035	76.6
11052	75.8	11058	75.9	11072	76.8	11098	76.6	11112	75.9
11132	76.1	11163	76.7	11184	76.6	11205	76.9	11218	77.2
11228	77	11249	76.2	11255	75.9	11266	76.3	11292	76.5
11316	75.9	11335	75.5	11354	74.2	11367	74.1	11382	73.9
11396	71.6	11402	68	11418	63.1	11437	68	11441	70.3
11460	70.8	11492	70.3	11529	72.1	11574	73.2	11607	73.7
11629	75.3	11655	76.8	11686	78.6	11715	79.9	11733	80.7
11760	81.9	11810	82.9	11877	85	11939	87.9	11999	90.4
12032	92.1	12045	92.1	12060	92.9	12090	93.9	12129	96.7
12189	99.4	12280	102.9						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11402	.089	11437	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11402	11437	3600	5227	3550	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 56.22
Description: 56.22

Station Elevation Data, num = 54

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	99.3	10071	99.7	10142	99.9	10155	100	10158	99.5
10172	99.5	10178	100.2	10181	100.2	10185	99.7	10193	99.7
10264	99.6	10352	98.4	10455	97.2	10547	95.4	10654	90.2
10768	85.3	10868	78.7	10940	74.1	11055	72.5	11155	73.3
11242	71.4	11294	69.8	11341	70.9	11367	71.2	11396	65.8
11410	59.3	11445	65.8	11467	68.1	11494	71	11600	74.9
11612	74	11636	72.7	11685	72.1	11737	73.2	11808	74
11885	74.6	11947	76.6	12041	78	12098	78.4	12144	78
12187	78.8	12227	79.5	12284	83.4	12337	87.2	12398	92.2
12488	97.4	12566	98.4	12596	99.2	12613	99.2	12626	97.9
12639	97.9	12649	99.6	12672	100	12736	100.8		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.4	11367	.06	11494	.4

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11367	11494	800	1214	890	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 55.99
Description: 55.99

Station Elevation Data, num = 54

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	99.3	10071	99.7	10142	99.9	10155	100	10158	99.5
10172	99.5	10178	100.2	10181	100.2	10185	99.7	10193	99.7
10264	99.6	10352	98.4	10455	97.2	10547	95.4	10654	90.2
10768	85.3	10868	78.7	10940	74.1	11055	72.5	11155	73.3
11242	71.4	11294	69.8	11341	70.9	11367	71.2	11396	65.8
11410	59.3	11445	65.8	11467	68.1	11494	71	11600	74.9
11612	74	11636	72.7	11685	72.1	11737	73.2	11808	74
11885	74.6	11947	76.6	12041	78	12098	78.4	12144	78
12187	78.8	12227	79.5	12284	83.4	12337	87.2	12398	92.2
12488	97.4	12566	98.4	12596	99.2	12613	99.2	12626	97.9
12639	97.9	12649	99.6	12672	100	12736	100.8		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.4	11367	.06	11494	.4

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11367	11494	100	150	110	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 55.96
Description: 55.96

Station Elevation Data, num = 54

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	97.2	10249	96.3	10467	95.1	10671	94.7	10898	94.5
11119	95.4	11365	96.1	11700	96.4	11780	96.2	11863	95.2

```
   11922    94.3   12091    90.4   12264      86   12356    84.1   12460      83
   12479    83.6   12493   74.89   12509   69.64   12509    81.9   12512    81.9
   12512    69.6   12542      61   12542    81.9   12545    81.9   12545    60.9
   12550    58.2   12576      61   12576    81.9   12579    81.9   12579    61.1
   12610    69.5   12610    81.9   12613    81.9   12613      70   12639    83.2
   12762    82.7   12857    81.3   12935    79.4   13007    77.6   13075    76.4
   13185    75.7   13303    75.6   13525    77.2   13691    77.7   13905    78.8
   14133    79.7   14351    80.5   14575    82.1   14729    84.3   14997    89.2
   15188    91.8   15385    93.5   15647    94.3   15878    95.6

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000      .4   12460     .06   12639      .4

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         12460   12639               50      50      50            .3       .5

BRIDGE INPUT           Reach: 1             River Station: 55.955
Description: SR-237 Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =      50
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   12479    83.6    83.6   12509    83.6    81.9   12542    83.6    81.9
   12576    83.6    81.9   12610    83.6    81.9   12639    83.2    83.2
Downstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   12479    83.6    83.6   12509    83.6    81.9   12542    83.6    81.9
   12576    83.6    81.9   12610    83.6    81.9   12639    83.2    83.2
Elevation at which weir flow begins         =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1             River Station: 55.95
Description:  55.95

Station Elevation Data,  num = 54
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    97.2   10249    96.3   10467    95.1   10671    94.7   10898    94.5
   11119    95.4   11365    96.1   11700    96.4   11780    96.2   11863    95.2
   11922    94.3   12091    90.4   12264      86   12356    84.1   12460      83
   12479    83.6   12493   74.89   12509   69.64   12509    81.9   12512    81.9
   12512    69.6   12542      61   12542    81.9   12545    81.9   12545    60.9
   12550    58.2   12576      61   12576    81.9   12579    81.9   12579    61.1
   12610    69.5   12610    81.9   12613    81.9   12613      70   12639    83.2
   12762    82.7   12857    81.3   12935    79.4   13007    77.6   13075    76.4
   13185    75.7   13303    75.6   13525    77.2   13691    77.7   13905    78.8
   14133    79.7   14351    80.5   14575    82.1   14729    84.3   14997    89.2
   15188    91.8   15385    93.5   15647    94.3   15878    95.6

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000      .4   12460     .06   12639      .4

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         12460   12639               650     634     600            .3       .5
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CROSS SECTION INPUT Reach: 1 River Station: 55.83
Description: 55.83

Station Elevation Data, num = 61

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	91.8	10051	91.5	10104	91.9	10160	93.2	10212	92.8
10268	92.4	10330	91.8	10383	90.2	10468	86.5	10548	82.8
10617	80.7	10675	78.6	10711	75.9	10762	72.7	10815	72.4
10846	73.2	10867	74.4	10877	74.9	10880	73.4	10894	73.9
10906	75.8	10918	75.6	10942	72	10970	71.7	11013	70.4
11018	65.3	11040	57.9	11089	65.2	11106	73	11121	73.3
11147	72.7	11194	71.4	11277	71.7	11353	71.8	11442	70.9
11576	71.3	11758	70.6	11973	71.2	12147	71.9	12264	73.7
12353	75.3	12529	76.5	12573	74.3	12688	74	12783	74.3
12837	75.2	12904	75.7	12960	76.3	13071	77.1	13231	79.7
13372	82	13535	84.1	13688	85.9	13814	87.9	13853	87.5
13894	89	13912	89.3	13928	88.1	13949	88	14027	89.5
14110	90.4								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.4	11013	.06	11106	.4

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11013	11106	5800	8237	4600	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 54.27
Description: 54.27

Station Elevation Data, num = 63

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	87.2	10010	87.6	10015	87.7	10020	87.3	10093	85.2
10113	84.8	10152	84.2	10179	81.7	10215	79.9	10292	76.2
10374	74	10554	74.3	10860	73.5	10908	73.9	10925	73.2
10932	71.5	10950	71.4	10961	73.2	11022	73.6	11284	74.2
11321	70.9	11502	68.9	11560	68.9	11587	68.2	11603	70.2
11680	69.4	11690	64.2	11708	64.2	11728	68	11737	67.9
11749	65.5	11780	65.2	11801	68.2	11820	66.6	11831	63.1
11868	63.1	11883	64.7	11902	67.9	11945	67.7	11980	66.9
12006	64.6	12027	63.3	12029	61.6	12040	54.8	12055	61.6
12067	68.9	12108	69.5	12134	68.7	12144	66.8	12161	68
12243	68.9	12326	68.5	12380	68.2	12442	68.4	12469	69.8
12537	72.5	12603	74.9	12646	76.6	12697	77.4	12784	80
12861	83.8	12923	87	12965	90				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.4	12006	.06	12067	.4

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12006	12067	2900	4382	2700	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 53.44
Description: 53.44

Station Elevation Data, num = 64

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	90.1	10035	88.9	10063	88	10085	87.7	10102	87.4
10112	86.5	10125	85.7	10153	83.1	10188	80.1	10270	75.1
10346	66.4	10420	67.3	10532	67.4	10645	67.4	10746	65.6
10771	65.6	10780	65.9	10786	65.6	10828	65.2	10855	64.4
10883	62.3	10897	58.3	10920	53.1	10943	58.3	10962	61.5
10983	63.6	11022	64	11066	64.7	11101	64.3	11150	64.7
11203	64.4	11257	64.1	11303	64.1	11357	64.1	11428	64.9
11477	65.5	11540	67.5	11629	69.3	11705	69.3	11781	71.7
11826	71.2	11874	71.1	11910	71.1	11960	71.3	12007	73.3
12038	74.5	12079	75.9	12132	77.3	12189	77.9	12259	80
12283	79.9	12293	79.4	12308	79.3	12388	79.9	12443	80
12462	80.9	12501	82.3	12566	83	12584	83.5	12617	84.4
12680	86.3	12779	87.7	12896	89.7	13025	90.1		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.4	10883	.06	10962	.4

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10883	10962	5900	8290	6200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 51.87
Description: 51.87

Station Elevation Data, num = 78

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	90	10078	88	10140	86.5	10179	85.6	10194	85.5
10269	83.4	10354	81.5	10441	80.7	10514	79.8	10570	78.8
10588	78.7	10641	77.4	10715	75.5	10798	73.6	10873	72.1
11002	69.3	11106	68.1	11181	66.5	11235	66.2	11362	66.2
11375	67	11407	66.9	11427	68.6	11443	67.5	11491	66.4
11560	65.9	11641	65.5	11714	65.1	11731	65.1	11748	64.6
11981	64.6	12026	65.2	12112	64.3	12190	63.8	12281	63.8
12369	62.8	12435	62.6	12442	60.8	12455	60.9	12464	64.9
12505	63.4	12663	62.4	12706	62.3	12735	61	12765	61
12796	61.1	12825	59.5	12837	59.5	12851	62.2	12865	61.3
12878	62.8	12892	63.6	12909	62.2	12914	59.1	12928	60
12943	64.2	12966	63.6	12995	62.3	13025	58.9	13068	57.1
13086	56.2	13098	55.8	13100	55.6	13114	49.8	13125	55.6
13138	65.4	13176	66.7	13212	68.9	13257	70.5	13307	71.8
13424	72.7	13499	73.2	13573	73.8	13646	74.4	13752	74.4
13834	74.6	13900	74.9	13978	75.1				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.4	13100	.06	13125	.4

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13100	13125	6000	11933	7100	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 49.61
Description: 49.61

Station Elevation Data, num = 83

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	93.2	10209	89.1	10402	84.9	10492	82.3	10513	81.2
10531	80.3	10608	79.5	10634	79.9	10661	80.6	10735	79.7
10814	78.9	10877	78.6	10904	78.3	10909	76.6	10922	76.4
10931	78.2	10962	78.4	11024	78.2	11119	78.5	11148	77.8
11154	76.7	11160	77.1	11185	80.6	11195	80.4	11209	81
11225	80.5	11252	78.1	11260	76.9	11265	76.9	11269	78.3
11311	78.8	11331	77.9	11412	78.2	11521	78.5	11661	78.3
11805	78.3	11976	76.1	12089	73.9	12109	71.4	12140	70.7
12173	70.4	12285	70.2	12435	69.8	12478	69.7	12560	69.6
12663	69.5	12760	69.49	12874	69.48	13006	69.45	13109	69.4
13203	67.9	13287	65.5	13308	63.9	13310	55.8	13314	50.6
13351	45.2	13388	50.6	13392	52.2	13398	52.2	13422	55.8
13457	57.6	13504	57.1	13602	56.5	13736	57.6	13863	58.8
14036	60.7	14153	61	14252	62	14385	63	14520	75
14651	75.5	14851	75.9	15026	75.99	15200	77	15341	77.3
15578	78	15735	79	15862	80	15940	81	16027	82
16107	85.3	16191	90.2	16254	92.3				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	13310	.059	13422	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13310	13422	725	745	525	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 49.48
Description: 49.48

Station Elevation Data, num = 62

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	100.9	10212	100.5	10283	99.3	10453	96.7	10598	93.8
10729	91	10837	89.5	10993	87.3	11140	84	11270	81.6
11415	78.6	11618	76.6	11753	77.6	11947	79.1	12078	79.5
12303	79.7	12469	79.6	12520	78.9	12551	79	12566	78.1
12571	77	12583	76.4	12616	76.5	12650	77	12804	76.4
12983	76	13196	74.8	13371	72.2	13477	71.2	13511	67
13551	65.4	13629	64.7	13758	63.5	13812	65	13842	66
13871	65	13882	63.4	13899	60	13920	60	13956	61.4
14053	61.2	14160	61.7	14258	62.1	14317	61.4	14334	51.4
14384	44.5	14434	51.3	14459	57.7	14489	57.4	14539	56.7
14696	56.2	14878	56.9	15062	57.3	15333	56.7	15583	55.9
15677	58.3	15763	63.1	15896	73	15957	90.3	16030	101.4
16071	104.7	16137	105.2						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	14317	.059	14459	.31

```
Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         14317   14459              100     100     100            .1       .3

CROSS SECTION INPUT    Reach: 1             River Station: 49.46
Description:  49.46

Station Elevation Data,  num = 52
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
    8000      77   10000      72   14000   72.2   14050   73.3   14051   69.1
   14060      67   14060    71.2   14062   71.2   14062     67   14071   64.7
   14071    71.2   14072    71.2   14072   64.7   14090   59.2   14090   71.2
   14092    71.2   14092    59.2   14110     51   14119   48.5   14119   71.2
   14123    71.2   14123    48.4   14150     45   14159   48.7   14159   71.2
   14164    71.2   14164    48.7   14200     49   14200   71.2   14205   71.2
   14205      49   14210      51   14268   56.2   14268   71.2   14276   71.2
   14276    56.2   14300    57.1   14384   55.2   14384   71.2   14398   71.2
   14398      56   14400    61.5   14410   62.2   14410   71.2   14422   71.2
   14422    62.3   14430    65.8   14499   69.2   14500   73.3   14550   72.5
   16000    72.2   18000      77

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
    8000     .31   14051    .059   14499     .31

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         14051   14499               25      25      25            .3       .5

BRIDGE INPUT           Reach: 1             River Station: 49.455
Description: Railroad Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =      25
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 7
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   14050    73.3    73.3   14051    73.3    71.2   14062    73.3    71.2
   14164    73.3    71.2   14422    73.3    71.2   14499    73.3    71.2
   14500    73.3    73.3
Downstream Deck/Roadway Coordinates,  num = 7
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   14050    73.3    73.3   14051    73.3    71.2   14062    73.3    71.2
   14164    73.3    71.2   14422    73.3    71.2   14499    73.3    71.2
   14500    73.3    73.3
Elevation at which weir flow begins         =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1             River Station: 49.45
Description:  49.45

Station Elevation Data,  num = 52
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
    8000      77   10000      72   14000   72.2   14050   73.3   14051   69.1
   14060      67   14060    71.2   14062   71.2   14062     67   14071   64.7
   14071    71.2   14072    71.2   14072   64.7   14090   59.2   14090   71.2
   14092    71.2   14092    59.2   14110     51   14119   48.5   14119   71.2
   14123    71.2   14123    48.4   14150     45   14159   48.7   14159   71.2
   14164    71.2   14164    48.7   14200     49   14200   71.2   14205   71.2
   14205      49   14210      51   14268   56.2   14268   71.2   14276   71.2
```

14276	56.2	14300	57.1	14384	55.2	14384	71.2	14398	71.2
14398	56	14400	61.5	14410	62.2	14410	71.2	14422	71.2
14422	62.3	14430	65.8	14499	69.2	14500	73.3	14550	72.5
16000	72.2	18000	77						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
8000	.31	14051	.059	14499	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14051	14499	250	350	450	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 49.38
Description: 49.38

Station Elevation Data, num = 62

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	100.9	10212	100.5	10283	99.3	10453	96.7	10598	93.8
10729	91	10837	89.5	10993	87.3	11140	84	11270	81.6
11415	78.6	11618	76.6	11753	77.6	11947	79.1	12078	79.5
12303	79.7	12469	79.6	12520	78.9	12551	79	12566	78.1
12571	77	12583	76.4	12616	76.5	12650	77	12804	76.4
12983	76	13196	74.8	13371	72.2	13477	71.2	13511	67
13551	65.4	13629	64.7	13758	63.5	13812	65	13842	66
13871	65	13882	63.4	13899	60	13920	60	13956	61.4
14053	61.2	14160	61.7	14258	62.1	14317	61.4	14334	51.4
14384	44.5	14434	51.3	14459	57.7	14489	57.4	14539	56.7
14696	56.2	14878	56.9	15062	57.3	15333	56.7	15583	55.9
15677	58.3	15763	63.1	15896	73	15957	90.3	16030	101.4
16071	104.7	16137	105.2						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	14317	.059	14459	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14317	14459	325	375	425	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 49.31
Description: 49.31

Station Elevation Data, num = 62

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	100.9	10212	100.5	10283	99.3	10453	96.7	10598	93.8
10729	91	10837	89.5	10993	87.3	11140	84	11270	81.6
11415	78.6	11618	76.6	11753	77.6	11947	79.1	12078	79.5
12303	79.7	12469	79.6	12520	78.9	12551	79	12566	78.1
12571	77	12583	76.4	12616	76.5	12650	77	12804	76.4
12983	76	13196	74.8	13371	72.2	13477	71.2	13511	67
13551	65.4	13629	64.7	13758	63.5	13812	65	13842	66
13871	65	13882	63.4	13899	60	13920	60	13956	61.4
14053	61.2	14160	61.7	14258	62.1	14317	61.4	14334	51.4
14384	44.5	14434	51.3	14459	57.7	14489	57.4	14539	56.7
14696	56.2	14878	56.9	15062	57.3	15333	56.7	15583	55.9
15677	58.3	15763	63.1	15896	73	15957	90.3	16030	101.4
16071	104.7	16137	105.2						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	14317	.059	14459	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14317	14459	100	100	100	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 49.29
Description: 49.29

Station Elevation Data, num = 91

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	101.1	10230	99.9	10339	98.3	10391	96.9	10451	96.3
10575	97.8	10691	97	10796	95.6	10964	93.9	11137	91
11329	89.3	11593	85.1	11675	82.9	11771	78.6	11799	77.8
11828	75.1	11867	73.5	11960	72.7	11969	71	12032	71.1
12055	73.7	12141	74.4	12326	73.3	12544	72.4	12630	72.1
12634	70.7	12642	70.7	12648	72	12652	72	12659	71.3
12771	71.4	12940	72.1	12950	71.1	12961	71.1	12973	71.8
13038	71.9	13079	74.2	13172	75.4	13338	75.9	13449	76
13595	75.2	13606	75.1	13626	76	13639	76	13653	74.9
13696	74.4	13778	74.4	13915	73.7	13997	68.7	14020	68.7
14117	72.9	14212	72.9	14331	71.4	14514	71.6	14673	72.3

```
   14871    74.5   14993    75.6   15025    59.5   15060      57   15060    72.7
   15064    72.7   15064    56.5   15075    50.8   15155    46.3   15155    72.9
   15158    72.9   15158    46.2   15192    44.1   15228    46.2   15228    72.9
   15231    72.9   15231    46.3   15250    50.8   15300    56.6   15321    56.7
   15321    72.7   15325    72.7   15325    56.8   15370    57.2   15370    72.2
   15376    72.2   15376    57.2   15393    75.5   15468    74.2   15671    72.8
   15907    72.6   16143    73.3   16357    76.4   16566    82.9   16798    94.3
   16984   103.9

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .31   14993    .059   15393     .31

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
        14993   15393                25      25      25             .3      .5

BRIDGE INPUT           Reach: 1             River Station: 49.285
Description: SR-121 Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =      25
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 9
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
*****************************************************************************
   14212    72.9    72.9   14993    75.6    75.6   15064      76    72.7
   15188    76.2    72.9   15231    76.2    72.9   15325      76    72.7
   15376    75.5    72.2   15393    75.5    75.5   16143    73.3    73.3
Downstream Deck/Roadway Coordinates,  num = 9
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
*****************************************************************************
   14212    72.9    72.9   14993    75.6    75.6   15064      76    72.7
   15188    76.2    72.9   15231    76.2    72.9   15325      76    72.7
   15376    75.5    72.2   15393    75.5    75.5   16143    73.3    73.3
Elevation at which weir flow begins          =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1             River Station: 49.28
Description:  49.28

Station Elevation Data,  num = 91
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   101.1   10230    99.9   10339    98.3   10391    96.9   10451    96.3
   10575    97.8   10691      97   10796    95.6   10964    93.9   11137      91
   11329    89.3   11593    85.1   11675    82.9   11771    78.6   11799    77.8
   11828    75.1   11867    73.5   11960    72.7   11969      71   12032    71.1
   12055    73.7   12141    74.4   12326    73.3   12544    72.4   12630    72.1
   12634    70.7   12642    70.7   12648      72   12652      72   12659    71.3
   12771    71.4   12940    72.1   12950    71.1   12961    71.1   12973    71.8
   13038    71.9   13079    74.2   13172    75.4   13338    75.9   13449      76
   13595    75.2   13606    75.1   13626      76   13639      76   13653    74.9
   13696    74.4   13778    74.4   13915    73.7   13997    68.7   14020    68.7
   14117    72.9   14212    72.9   14331    71.4   14514    71.6   14673    72.3
   14871    74.5   14993    75.6   15025    59.5   15060      57   15060    72.7
   15064    72.7   15064    56.5   15075    50.8   15155    46.3   15155    72.9
   15158    72.9   15158    46.2   15192    44.1   15228    46.2   15228    72.9
   15231    72.9   15231    46.3   15250    50.8   15300    56.6   15321    56.7
   15321    72.7   15325    72.7   15325    56.8   15370    57.2   15370    72.2
   15376    72.2   15376    57.2   15393    75.5   15468    74.2   15671    72.8
   15907    72.6   16143    73.3   16357    76.4   16566    82.9   16798    94.3
```

```
   16984   103.9

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .31   14993    .059   15393     .31

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         14993   15393              500     450     350            .3       .5

CROSS SECTION INPUT    Reach: 1             River Station: 49.19
Description:  49.19

Station Elevation Data,  num = 95
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   100.1   10232    95.7   10277    95.2   10533    92.3   10862    87.6
   10976    85.1   11062    83.5   11143    82.7   11527    75.2   11555    72.6
   11809    72.6   11939    72.2   11952      70   11966      70   11982    71.2
   12135    71.8   12250    71.9   12256    69.2   12257    69.2   12265    69.2
   12283    72.5   12309      73   12366    72.3   12475    72.2   12551    73.4
   12684    73.6   12817    75.3   12974    75.9   13066    75.7   13116    75.1
   13151    74.7   13182    75.5   13379      75   13514    75.9   13557    75.7
   13627      75   13650    73.7   13667    73.6   13692    74.9   13702    74.5
   13721    73.8   13737    72.9   13803    73.2   13831    72.4   13925    70.7
   13984      69   14105    68.7   14174    70.8   14213    72.3   14259      73
   14271    73.2   14277      74   14288      74   14294    72.8   14298    72.8
   14303    73.8   14450    75.8   14610    74.7   14710    63.7   14764    58.9
   14788      60   14837    59.1   14861    57.7   14869    57.6   14907    58.6
   14997      58   15055    59.4   15141    60.9   15171    62.2   15204    61.8
   15229    60.6   15239    58.1   15261    50.3   15327      44   15394    50.2
   15423    56.4   15441    56.1   15477    54.4   15598    54.5   15636    52.6
   15652    50.3   15693    50.2   15714    55.6   15753    57.4   16181    60.5
   16312    56.7   16345    50.2   16409    50.2   16438    58.2   16479      57
   16542    53.5   16583    52.6   16627    54.1   16695    59.8   17033   100.9

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .31   15239    .059   15423     .31

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         15239   15423              4450    6072    4250            .1       .3

CROSS SECTION INPUT    Reach: 1             River Station: 48.04
Description:  48.04

Station Elevation Data,  num = 92
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    89.5   10803    75.6   10837    74.5   11002    73.5   11340    71.2
   12182    71.4   12197    72.4   12219    72.5   12328      70   12429      70
   12652    74.2   12787    74.3   12958    75.6   13054    75.3   13474    75.9
   13478    74.6   13481    74.6   13485    76.2   13498    76.2   13507    74.6
   13517    74.7   13527    76.4   13530    76.4   13543    75.2   13621    74.9
   13721    76.1   13836    75.3   13947      74   13978    73.6   14187    73.7
   14227    74.3   14346      75   14394    75.7   14486    76.1   14549    76.1
   14593      76   14607    75.9   14633    76.4   14646      77   14669    76.4
   14726    75.9   14771    75.6   14802    76.2   15082    75.8   15109    75.8
   15318    74.9   15614    73.1   15783    71.9   16062    66.2   16148    61.7
   16161    61.7   16197    61.4   16203    61.8   16235    61.3   16242    60.7
   16252    60.5   16298    58.6   16344    54.3   16408    52.2   16517    52.2
   16681    52.9   16796    53.8   16945    55.6   17038    54.7   17057    49.6
   17080    43.5   17102    49.6   17111    53.9   17119    54.4   17127    54.5
   17135    51.9   17145      52   17157    53.9   17185    54.2   17221    54.3
   17242    53.3   17245    52.5   17254    49.6   17258    49.6   17268    51.9
   17280    52.8   17306    53.7   17352    54.3   17441    55.4   17523      56
   17602    56.4   17675    56.5   17717    56.6   17755    57.2   17782    59.7
   17912    71.7   18357    92.1

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .31   17038    .059   17111     .31

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         17038   17111              5800    7656    6200            .1       .3

CROSS SECTION INPUT    Reach: 1             River Station: 46.59
Description:  46.59

Station Elevation Data,  num = 57
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    92.2   10132    83.7   10261    76.1   10430    71.9   10597    69.2
   10785    66.7   10969    65.4   11244    65.3   11331    64.4   11394    64.3
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11495	65.1	11654	66.2	11797	65	11892	64.3	12012	64.3
12156	64.7	12322	64.6	12331	62.7	12336	62.9	12344	64.4
12346	64.4	12360	64.7	12394	65.1	12474	64.5	12597	64.5
12826	60	12955	57.3	13039	55.6	13124	54.9	13164	52.6
13190	51.2	13220	49.7	13231	48	13238	47.2	13303	42.9
13367	47.2	13391	53.7	13403	53.9	13413	53.1	13418	51.5
13424	51.5	13452	55.3	13483	56.7	13520	57.9	13543	57.9
13572	57	13630	55.7	13765	54.9	13865	54.5	13976	54.1
14113	53.7	14186	53	14261	53.2	14318	56.2	14434	83.9
14477	92.9	14503	97.9						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	13190	.059	13391	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13190	13391	4200	5861	4550	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 45.48
Description: 45.48

Station Elevation Data, num = 70

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	109.5	10088	107.3	10183	98.5	10255	87.9	10357	61.2
10417	51.3	10441	49.4	10544	48.1	10636	49.8	10790	50.8
10852	50.2	10893	48.7	10909	48.7	10927	49.1	11044	49.8
11358	53.3	11454	53.5	11565	53.5	11641	52.1	11642	50.6
11675	51.2	11686	53.5	11706	53	11724	50.7	11770	49.6
11799	46.5	11854	42	11910	46.5	11919	52.2	11951	52.9
12000	52.4	12034	49.6	12049	49.4	12080	50.1	12117	51.8
12155	54	12236	59.4	12355	65.9	12441	71.7	12511	73.9
12595	75.9	12687	78.7	12764	80.4	12848	80	12944	78.3
13034	78	13161	79.1	13276	83.4	13287	82.5	13405	86.1
13557	87.6	13613	88.2	13673	87.3	13739	86.7	13821	85.5
13909	85.2	13978	84.5	14054	84.5	14147	84.6	14177	85.1
14185	83.8	14186	83.4	14188	85.2	14196	84.6	14232	84.4
14294	85.1	14394	85.6	14516	87.4	14690	88.3	14863	90.6

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	11770	.059	11919	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11770	11919	5150	7709	5100	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 44.02
Description: 44.02

Station Elevation Data, num = 60

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	94.3	10102	88.3	10235	84.8	10359	83	10478	81.7
10581	78.8	10746	74	10880	71.3	11033	69.7	11126	69
11224	66.7	11300	63.7	11390	59.5	11489	56.5	11610	55.3
11680	55.1	11717	52.8	11801	51.5	11886	50.8	11977	49.3
12011	48.6	12090	48.6	12126	50	12266	51.6	12330	52.2
12383	51.1	12446	50.6	12489	52.1	12545	52	12611	51.4
12693	51.1	12750	50	12861	49.7	12955	49.3	13030	48.9
13051	49	13068	48.2	13074	45	13092	40	13111	45
13129	47.6	13167	48.3	13194	47.9	13235	47.8	13306	48.7
13371	51.5	13455	53.5	13499	55.3	13524	57.3	13575	63.1
13652	69.3	13772	76	13860	80.7	13878	80.9	13939	83.7
14071	87.4	14159	89.1	14219	89.7	14314	90	14444	90.7

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	13068	.059	13129	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13068	13129	5300	7814	5600	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 42.54
Description: 42.54

Station Elevation Data, num = 96

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	75	10020	73.4	10041	71.3	10062	69.1	10093	65.2
10115	62.5	10135	60.1	10159	58.5	10181	56.9	10211	55.2
10240	52.7	10259	51.9	10282	51.9	10317	51.9	10394	49.2
10466	49	10565	47.1	10632	47.5	10714	47.9	10818	48.4
10918	47.8	11066	48.6	11221	48.6	11349	48.9	11440	50

11575	50.1	11707	50.4	11844	48.6	12017	49.1	12214	49.6
12340	46.7	12541	47.2	12635	48.8	12673	49.3	12683	48.5
12686	43.3	12708	39.1	12731	43.3	12739	45.4	12758	46.8
12781	47.2	12792	47.1	12797	48.9	12807	49.3	12827	48.1
12864	47.9	12892	47.5	12913	48.5	12923	48.7	12937	46.4
12952	49	13002	49	13061	49.4	13127	49.1	13233	49
13326	49.1	13357	49.8	13421	49.9	13552	50	13575	50.6
13602	51.2	13622	51.2	13651	50.3	13676	50.9	13690	50.7
13696	48.8	13714	48.3	13727	48.5	13761	49.3	13805	49.2
13842	48.4	13879	48.8	13920	48.3	13966	48.3	14001	48.5
14107	48.1	14192	47.7	14273	48.1	14379	47.6	14458	47.5
14543	47.2	14618	47.4	14659	47.9	14671	48.9	14710	51.5
14757	54.5	14820	57.3	14903	59.1	14999	59.7	15168	60.6
15323	60.8	15443	63	15609	64	15763	64.3	15888	65.2
16500	66								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	12683	.059	12781	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12683	12781	3400	4594	3400	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 41.67
Description: 41.67

Station Elevation Data, num = 95

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	72.3	10130	75	10244	73.6	10314	73.6	10564	67.5
10698	68.1	10784	67.1	11071	62.9	11462	53	11619	49.4
11803	49.4	11896	48.9	12053	48.2	12088	46.7	12164	46.7
12199	47.7	12274	47.9	12286	46.3	12298	46.3	12311	48
12411	48.1	12505	48.5	12543	48.2	12559	46.5	12569	46.3
12577	47.7	12622	48.2	12703	49	12936	47.8	13130	47.6
13161	47.5	13184	45	13204	44.8	13227	46.4	13251	47
13298	46.3	13339	46.9	13578	47.1	13655	46.9	13695	44
13906	42.8	13964	44	13976	41	14001	40.1	14010	36
14038	40.1	14058	41	14080	42.2	14101	42.1	14120	41
14131	40.5	14167	40.4	14182	40.8	14214	42.8	14226	42
14238	42	14369	58.1	14395	58.4	14405	60.6	14411	60.8
14416	60.7	14422	58.8	14424	58.1	14427	57.5	14451	58.6
14487	58.3	14523	59.1	14546	59	14549	59.6	14556	59.6
14574	59	14698	62.2	14849	64.1	15000	64.9	15029	64.6
15109	65.4	15224	65	15470	56	15546	53	15781	49.1
15838	49.3	15905	50.1	15927	50	15948	48.8	16004	50.2
16045	50.4	16065	50	16083	47.7	16089	47.7	16102	49.6
16143	50.1	16196	51.1	16239	51.9	16275	53.9	16532	75

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	13964	.059	14080	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13964	14080	200	242	200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 41.63
Description: 41.63

Station Elevation Data, num = 95

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	72.3	10130	75	10244	73.6	10314	73.6	10564	67.5
10698	68.1	10784	67.1	11071	62.9	11462	53	11619	49.4
11803	49.4	11896	48.9	12053	48.2	12088	46.7	12164	46.7
12199	47.7	12274	47.9	12286	46.3	12298	46.3	12311	48
12411	48.1	12505	48.5	12543	48.2	12559	46.5	12569	46.3
12577	47.7	12622	48.2	12703	49	12936	47.8	13130	47.6
13161	47.5	13184	45	13204	44.8	13227	46.4	13251	47
13298	46.3	13339	46.9	13578	47.1	13655	46.9	13695	44
13906	42.8	13964	44	13976	41	14001	40.1	14010	36
14038	40.1	14058	41	14080	42.2	14101	42.1	14120	41
14131	40.5	14167	40.4	14182	40.8	14214	42.8	14226	42
14238	42	14369	58.1	14395	58.4	14405	60.6	14411	60.8
14416	60.7	14422	58.8	14424	58.1	14427	57.5	14451	58.6
14487	58.3	14523	59.1	14546	59	14549	59.6	14556	59.6
14574	59	14698	62.2	14849	64.1	15000	64.9	15029	64.6
15109	65.4	15224	65	15470	56	15546	53	15781	49.1
15838	49.3	15905	50.1	15927	50	15948	48.8	16004	50.2
16045	50.4	16065	50	16083	47.7	16089	47.7	16102	49.6
16143	50.1	16196	51.1	16239	51.9	16275	53.9	16532	75

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Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .31   13964    .059   14080     .31

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         13964   14080               50      50      50            .1       .3

CROSS SECTION INPUT     Reach: 1             River Station: 41.62
Description:  41.62

Station Elevation Data,  num = 62
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    76.2   10183    75.3   10387    74.5   10602    71.8   10935    68.4
   11205      65   11425    64.4   11620    64.1   11654    64.1   11796    64.3
   12071    64.2   12185    64.1   12328    64.1   12652    64.1   12953    64.1
   13196    64.1   13512    64.2   13769    63.9   13977    65.4   14110      67
   14171    67.7   14205    51.3   14205    65.6   14207    65.6   14207    51.2
   14241    46.7   14277    39.1   14277    65.8   14281    65.8   14281      39
   14311      36   14351    36.4   14351      66   14355      66   14355    36.5
   14381    36.7   14425    42.4   14425    65.8   14429    65.8   14429    42.5
   14451    45.4   14483    48.5   14483    65.6   14487    65.6   14487    48.6
   14521    67.6   14657      66   14778    64.4   14905    63.9   15027    63.8
   15146    63.7   15266    63.6   15392    63.5   15539    63.3   15663    63.2
   15836    63.3   16046    63.2   16265    63.2   16465    64.2   16622    68.2
   16768    74.6   16781      75

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .31   14171    .059   14521     .31

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         14171   14521               25      25      25            .3       .5

BRIDGE INPUT            Reach: 1             River Station: 41.615
Description: SR-241 Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =      25
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 7
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   14171    67.7    67.7   14207    68.4    65.6   14281    68.6    65.8
   14355    68.8      66   14429    68.6    65.8   14487    68.4    65.6
   14521    67.6    67.6
Downstream Deck/Roadway Coordinates,  num = 7
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   14171    67.7    67.7   14207    68.4    65.6   14281    68.6    65.8
   14355    68.8      66   14429    68.6    65.8   14487    68.4    65.6
   14521    67.6    67.6
Elevation at which weir flow begins          =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT     Reach: 1             River Station: 41.61
Description:  41.61

Station Elevation Data,  num = 62
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    76.2   10183    75.3   10387    74.5   10602    71.8   10935    68.4
```

11205	65	11425	64.4	11620	64.1	11654	64.1	11796	64.3
12071	64.2	12185	64.1	12328	64.1	12652	64.1	12953	64.1
13196	64.1	13512	64.2	13769	63.9	13977	65.4	14110	67
14171	67.7	14205	51.3	14205	65.6	14207	65.6	14207	51.2
14241	46.7	14277	39.1	14277	65.8	14281	65.8	14281	39
14311	36	14351	36.4	14351	66	14355	66	14355	36.5
14381	36.7	14425	42.4	14425	65.8	14429	65.8	14429	42.5
14451	45.4	14483	48.5	14483	65.6	14487	65.6	14487	48.6
14521	67.6	14657	66	14778	64.4	14905	63.9	15027	63.8
15146	63.7	15266	63.6	15392	63.5	15539	63.3	15663	63.2
15836	63.3	16046	63.2	16265	63.2	16465	64.2	16622	68.2
16768	74.6	16781	75						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	14171	.059	14521	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14171	14521	250	264	250	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 41.56
Description: 41.56

Station Elevation Data, num = 97

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	76.4	10140	74.1	10571	60.8	10767	56.8	10855	53.2
10931	52	10986	49.8	11057	49.3	11123	49.1	11325	49.9
11762	46.9	11877	48	12383	48.2	12611	47.5	12847	47.3
13111	47	13305	45.6	13396	46.2	13416	46.1	13424	47.7
13463	47.7	13475	41.7	13487	41.8	13503	42.4	13529	42.5
13545	39.8	13594	39.8	13605	42.4	13622	42.8	13646	42.2
13664	40.8	13674	40.8	13689	41.6	13703	43.2	13710	46.4
13714	47.4	13724	47.2	13752	46	13775	45.2	13801	45.3
13828	45.3	13853	45.1	13863	47.5	13893	47.5	13909	45.9
13929	44.7	13940	46.7	13947	47.3	13952	46.3	13962	39.1
13995	36	14028	39.1	14037	47.7	14067	47.9	14125	48
14182	48.6	14214	48.2	14271	48.4	14318	48.6	14369	49.8
14424	50.1	14486	50.4	14536	50.1	14595	50.5	14644	50.8
14671	51.6	14680	52	14687	51.5	14705	51.6	14714	52
14719	52.1	14730	51.9	14752	51	14773	49.5	14795	48.3
14824	47.9	14845	48.1	14872	48.3	14901	48.3	14945	47.7
14959	48.5	14969	48.6	14985	45.5	15012	45.6	15024	48.9
15071	48.6	15102	47.6	15175	44	15234	44.4	15270	47.8
15330	49.3	15417	50	15481	51.6	15783	65.9	15832	68.7
15882	71.8	15920	75						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	13947	.059	14037	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13947	14037	3250	3432	3000	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 40.91
Description: 40.91

Station Elevation Data, num = 48

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	75	10070	70.1	10120	66.3	10157	63.6	10190	61.6
10224	60.5	10243	60.1	10256	60	10295	60.1	10354	57.9
10402	56.5	10483	53.5	10570	49.1	10642	45.4	10678	44.2
10723	44	10791	43.5	10814	43.8	10874	42.9	10951	42.8
11029	42.8	11110	42.9	11149	38.3	11186	38.3	11231	39.8
11277	41.2	11342	42.1	11372	41.2	11397	37	11422	35
11448	37	11469	39.3	11475	37.8	11492	39.3	11518	44.7
11546	45.6	11656	45.3	11697	45.2	11871	45.4	12022	45.4
12170	45.4	12314	47	12379	62.2	12411	69.2	12446	71.3
12486	73.1	12518	74.2	12540	75.1				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	11372	.059	11469	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11372	11469	3500	5808	5000	

CROSS SECTION INPUT Reach: 1 River Station: 39.81
Description: 39.81

Station Elevation Data, num = 64

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Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	88.7	10147	84.5	10287	77	10309	75.7	10343	69.2
10348	68.6	10352	68.9	10371	72.9	10375	73.4	10440	74.9
10535	75.5	10596	75.3	10677	73.6	10758	71.1	10864	66.6
10948	61.5	10997	59	11068	49.7	11111	48.1	11213	46.9
11295	44.4	11359	42.8	11430	43.8	11634	43.5	11920	44.2
12088	44.3	12355	42.1	12498	42.3	12547	43.9	12582	42.6
12628	42.9	12669	43.5	12702	37	12752	32.2	12823	31.5
12868	32.5	12916	36.7	12936	37	12953	39.4	13009	41
13085	49.1	13157	53.5	13211	55.9	13266	57.4	13346	60
13438	61.8	13519	63.2	13590	64.3	13674	65.2	13736	65.8
13786	65.7	13812	68	13834	68	13868	66.9	13931	68.3
13994	70.8	14054	72.5	14090	73.5	14145	73.8	14223	72.6
14350	71.5	14383	71	14452	74.2	14480	75		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	12669	.035	12953	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12669	12953	3900	4171	3500	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 39.02
Description: 39.02

Station Elevation Data, num = 61

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	75.1	10020	73	10049	69.2	10081	64	10099	60.2
10108	44.2	10116	36.3	10155	31.7	10204	31	10227	32
10253	36.2	10262	36.3	10274	40.6	10284	47.5	10295	52.4
10312	55.6	10327	57.2	10341	57.4	10357	54.3	10380	50.1
10399	47	10422	45.3	10451	44.9	10475	43.6	10503	42
10521	40.1	10549	39.6	10572	38.7	10600	39	10622	38.7
10645	40.4	10665	42.4	10687	44.1	10710	46	10738	47.3
10768	47.4	10793	47.1	10827	46.2	10851	46.6	10880	48.1
10894	50.5	10904	51.9	10937	51.4	10960	52.9	10989	54.3
11022	55.5	11057	57.5	11090	59.6	11128	62	11161	63.9
11174	64.7	11212	65.9	11261	67.2	11286	66.3	11315	68.1
11372	69	11422	69.8	11467	71	11521	72.5	11574	74.1
11606	75.1								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10108	.035	10274	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10108	10274	5600	5491	4200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 37.98
Description: 37.98

Station Elevation Data, num = 92

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	64.3	10034	64.2	10268	59.4	10341	57.5	10385	55.7
10425	53.4	10456	50.9	10487	47.3	10520	43.9	10544	42.9
10569	43.6	10599	42.2	10626	42.4	10672	41.9	10737	42.8
10780	42.8	10826	42.7	10889	43	10982	42.7	11060	37.2
11173	30.7	11238	37.2	11272	44.5	11310	44.8	11367	44.4
11435	45	11474	44.3	11534	43.9	11583	44	11638	44.4
11713	43.5	11782	42.9	11850	43.2	11916	43.5	11974	43.9
12021	43.7	12092	41.7	12170	41.2	12256	41.7	12284	42.6
12320	43.3	12393	42.8	12454	40.9	12525	40.6	12585	42
12637	42.8	12648	43.4	12708	43.2	12757	43.2	12817	43.2
12863	42.3	12890	40.4	12927	39.9	12970	40.1	13026	40.6
13051	43.6	13085	43.6	13114	43.8	13158	43.6	13189	43.7
13233	44.1	13287	43.8	13316	43.9	13361	43.7	13397	42.8
13581	42.6	13623	42.9	13650	43.4	13681	45.5	13762	51.1
13788	51.2	13811	51.4	13843	52.1	13882	52.3	13914	53.2
13944	53.8	13977	54.4	14023	54.5	14060	54.9	14092	54.9
14134	54.9	14183	54.7	14214	55.2	14254	55.1	14302	55.9
14325	56.5	14350	57.2	14405	58.1	14446	59.9	14613	63.8
14688	64.8	14937	75						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10982	.035	11272	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10982	11272	3175	3854	3900	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 37.25
Description: 37.25

Station Elevation Data, num = 93

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	70.1	10040	70.9	10089	71.3	10137	71.8	10198	70.3
10236	69.5	10274	67.6	10311	66	10350	63.8	10367	62.3
10396	58.9	10408	36.4	10500	34	10615	36.4	10625	37.8
10641	38.7	10659	39.1	10686	38.4	10714	38.2	10730	38.4
10757	39.1	10784	40	10816	40.7	10853	41.1	10897	41.9
10941	41.4	10978	40.9	11008	40.8	11030	39.9	11062	36.2
11110	32.8	11147	34.2	11205	31.6	11292	33.8	11300	36.2
11316	41.9	11331	47.4	11350	52.7	11364	54.2	11399	50.8
11426	42.3	11457	41.5	11906	41.6	11920	42.2	11935	43.1
11952	43.7	11976	43.7	11999	43.6	12016	43.1	12030	43.4
12046	43.3	12059	41.6	12075	40.8	12265	41	12276	43
12316	44.3	12376	41.6	12755	41.4	12770	41.4	12790	41.4
12810	42.2	12822	43.8	12837	45	12865	45.3	12897	45
12916	45.9	12932	44.4	12945	43.2	12963	41.2	12987	42
13007	44.1	13045	44.7	13085	45.3	13132	45.7	13163	45.7
13176	45.7	13217	46.4	13267	46.4	13312	47.1	13374	48.2
13427	48.2	13495	49.5	13554	50.7	13591	48.1	13678	45.3
13847	49.6	13921	50.7	13942	55	14062	62.5	14117	63
14130	63.2	14151	64.8	14293	70.1				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11008	.035	11316	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11008	11316	300	300	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 37.19
Description: 37.19

Station Elevation Data, num = 93

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	70.1	10040	70.9	10089	71.3	10137	71.8	10198	70.3
10236	69.5	10274	67.6	10311	66	10350	63.8	10367	62.3
10396	58.9	10408	36.4	10500	34	10615	36.4	10625	37.8
10641	38.7	10659	39.1	10686	38.4	10714	38.2	10730	38.4
10757	39.1	10784	40	10816	40.7	10853	41.1	10897	41.9
10941	41.4	10978	40.9	11008	40.8	11030	39.9	11062	36.2
11110	32.8	11147	34.2	11205	31.6	11292	33.8	11300	36.2
11316	41.9	11331	47.4	11350	52.7	11364	54.2	11399	50.8
11426	42.3	11457	41.5	11906	41.6	11920	42.2	11935	43.1
11952	43.7	11976	43.7	11999	43.6	12016	43.1	12030	43.4
12046	43.3	12059	41.6	12075	40.8	12265	41	12276	43
12316	44.3	12376	41.6	12755	41.4	12770	41.4	12790	41.4
12810	42.2	12822	43.8	12837	45	12865	45.3	12897	45
12916	45.9	12932	44.4	12945	43.2	12963	41.2	12987	42
13007	44.1	13045	44.7	13085	45.3	13132	45.7	13163	45.7
13176	45.7	13217	46.4	13267	46.4	13312	47.1	13374	48.2
13427	48.2	13495	49.5	13554	50.7	13591	48.1	13678	45.3
13847	49.6	13921	50.7	13942	55	14062	62.5	14117	63
14130	63.2	14151	64.8	14293	70.1				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11008	.035	11316	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11008	11316	105	105	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 37.17
Description: 37.17

Station Elevation Data, num = 30

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	60.6	11000	60.56	11100	62.76	11142	61.08	11166	46.7
11219	38	11240	35.6	11270	32.8	11283	33.2	11283	60.2
11291	60.2	11291	33.4	11308	34.2	11333	32.5	11373	31.6
11375	31.6	11375	60.2	11383	60.2	11383	31.4	11413	31
11438	32.5	11453	33.8	11463	38	11472	44.2	11482	46.4
11510	59.7	11515	62.7	11559	60.5	11600	60.56	15000	60.56

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11100	.035	11515	.2

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	88.7	10147	84.5	10287	77	10309	75.7	10343	69.2
10348	68.6	10352	68.9	10371	72.9	10375	73.4	10440	74.9
10535	75.5	10596	75.3	10677	73.6	10758	71.1	10864	66.6
10948	61.5	10997	59	11068	49.7	11111	48.1	11213	46.9
11295	44.4	11359	42.8	11430	43.8	11634	43.5	11920	44.2
12088	44.3	12355	42.1	12498	42.3	12547	43.9	12582	42.6
12628	42.9	12669	43.5	12702	37	12752	32.2	12823	31.5
12868	32.5	12916	36.7	12936	37	12953	39.4	13009	41
13085	49.1	13157	53.5	13211	55.9	13266	57.4	13346	60
13438	61.8	13519	63.2	13590	64.3	13674	65.2	13736	65.8
13786	65.7	13812	68	13834	68	13868	66.9	13931	68.3
13994	70.8	14054	72.5	14090	73.5	14145	73.8	14223	72.6
14350	71.5	14383	71	14452	74.2	14480	75		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	12669	.035	12953	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12669	12953	3900	4171	3500	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 39.02
Description: 39.02

Station Elevation Data, num = 61

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	75.1	10020	73	10049	69.2	10081	64	10099	60.2
10108	44.2	10116	36.3	10155	31.7	10204	31	10227	32
10253	36.2	10262	36.3	10274	40.6	10284	47.5	10295	52.4
10312	55.6	10327	57.2	10341	57.4	10357	54.3	10380	50.1
10399	47	10422	45.3	10451	44.9	10475	43.6	10503	42
10521	40.1	10549	39.6	10572	38.7	10600	39	10622	38.7
10645	40.4	10665	42.4	10687	44.1	10710	46	10738	47.3
10768	47.4	10793	47.1	10827	46.2	10851	46.6	10880	48.1
10894	50.5	10904	51.9	10937	51.4	10960	52.9	10989	54.3
11022	55.5	11057	57.5	11090	59.6	11128	62	11161	63.9
11174	64.7	11212	65.9	11261	67.2	11286	66.3	11315	68.1
11372	69	11422	69.8	11467	71	11521	72.5	11574	74.1
11606	75.1								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10108	.035	10274	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10108	10274	5600	5491	4200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 37.98
Description: 37.98

Station Elevation Data, num = 92

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	64.3	10034	64.2	10268	59.4	10341	57.5	10385	55.7
10425	53.4	10456	50.9	10487	47.3	10520	43.9	10544	42.9
10569	43.6	10599	42.2	10626	42.4	10672	41.9	10737	42.8
10780	42.8	10826	42.7	10889	43	10982	42.7	11060	37.2
11173	30.7	11238	37.2	11272	44.5	11310	44.8	11367	44.4
11435	45	11474	44.3	11534	43.9	11583	44	11638	44.4
11713	43.5	11782	42.9	11850	43.2	11916	43.5	11974	43.9
12021	43.7	12092	41.7	12170	41.2	12256	41.7	12284	42.6
12320	43.3	12393	42.8	12454	40.9	12525	40.6	12585	42
12637	42.8	12648	43.4	12708	43.2	12757	43.2	12817	43.2
12863	42.3	12890	40.4	12927	39.9	12970	40.1	13026	40.6
13051	43.6	13085	43.6	13114	43.8	13158	43.6	13189	43.7
13233	44.1	13287	43.8	13316	43.9	13361	43.7	13397	42.8
13581	42.6	13623	42.9	13650	43.4	13681	45.5	13762	51.1
13788	51.2	13811	51.4	13843	52.1	13882	52.3	13914	53.2
13944	53.8	13977	54.4	14023	54.5	14060	54.9	14092	54.9
14134	54.9	14183	54.7	14214	55.2	14254	55.1	14302	55.9
14325	56.5	14350	57.2	14405	58.1	14446	59.9	14613	63.8
14688	64.8	14937	75						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10982	.035	11272	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10982	11272	3175	3854	3900	.1	.3

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CROSS SECTION INPUT Reach: 1 River Station: 37.25
Description: 37.25

Station Elevation Data, num = 93

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	70.1	10040	70.9	10089	71.3	10137	71.8	10198	70.3
10236	69.5	10274	67.6	10311	66	10350	63.8	10367	62.3
10396	58.9	10408	36.4	10500	34	10615	36.4	10625	37.8
10641	38.7	10659	39.1	10686	38.4	10714	38.2	10730	38.4
10757	39.1	10784	40	10816	40.7	10853	41.1	10897	41.9
10941	41.4	10978	40.9	11008	40.8	11030	39.9	11062	36.2
11110	32.8	11147	34.2	11205	31.6	11292	33.8	11300	36.2
11316	41.9	11331	47.4	11350	52.7	11364	54.2	11399	50.8
11426	42.3	11457	41.5	11906	41.6	11920	42.2	11935	43.1
11952	43.7	11976	43.7	11999	43.6	12016	43.1	12030	43.4
12046	43.3	12059	41.6	12075	40.8	12265	41	12276	43
12316	44.3	12376	41.6	12755	41.4	12770	41.4	12790	41.4
12810	42.2	12822	43.8	12837	45	12865	45.3	12897	45
12916	45.9	12932	44.4	12945	43.2	12963	41.2	12987	42
13007	44.1	13045	44.7	13085	45.3	13132	45.7	13163	45.7
13176	45.7	13217	46.4	13267	46.4	13312	47.1	13374	48.2
13427	48.2	13495	49.5	13554	50.7	13591	48.1	13678	45.3
13847	49.6	13921	50.7	13942	55	14062	62.5	14117	63
14130	63.2	14151	64.8	14293	70.1				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11008	.035	11316	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11008	11316	300	300	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 37.19
Description: 37.19

Station Elevation Data, num = 93

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	70.1	10040	70.9	10089	71.3	10137	71.8	10198	70.3
10236	69.5	10274	67.6	10311	66	10350	63.8	10367	62.3
10396	58.9	10408	36.4	10500	34	10615	36.4	10625	37.8
10641	38.7	10659	39.1	10686	38.4	10714	38.2	10730	38.4
10757	39.1	10784	40	10816	40.7	10853	41.1	10897	41.9
10941	41.4	10978	40.9	11008	40.8	11030	39.9	11062	36.2
11110	32.8	11147	34.2	11205	31.6	11292	33.8	11300	36.2
11316	41.9	11331	47.4	11350	52.7	11364	54.2	11399	50.8
11426	42.3	11457	41.5	11906	41.6	11920	42.2	11935	43.1
11952	43.7	11976	43.7	11999	43.6	12016	43.1	12030	43.4
12046	43.3	12059	41.6	12075	40.8	12265	41	12276	43
12316	44.3	12376	41.6	12755	41.4	12770	41.4	12790	41.4
12810	42.2	12822	43.8	12837	45	12865	45.3	12897	45
12916	45.9	12932	44.4	12945	43.2	12963	41.2	12987	42
13007	44.1	13045	44.7	13085	45.3	13132	45.7	13163	45.7
13176	45.7	13217	46.4	13267	46.4	13312	47.1	13374	48.2
13427	48.2	13495	49.5	13554	50.7	13591	48.1	13678	45.3
13847	49.6	13921	50.7	13942	55	14062	62.5	14117	63
14130	63.2	14151	64.8	14293	70.1				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11008	.035	11316	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11008	11316	105	105	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 37.17
Description: 37.17

Station Elevation Data, num = 30

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	60.6	11000	60.56	11100	62.76	11142	61.08	11166	46.7
11219	38	11240	35.6	11270	32.8	11283	33.2	11283	60.2
11291	60.2	11291	33.4	11308	34.2	11333	32.5	11373	31.6
11375	31.6	11375	60.2	11383	60.2	11383	31.4	11413	31
11438	32.5	11453	33.8	11463	38	11472	44.2	11482	46.4
11510	59.7	11515	62.7	11559	60.5	11600	60.56	15000	60.56

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11100	.035	11515	.2

```
Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11100   11515               70      70      70            .3       .5

BRIDGE INPUT           Reach: 1              River Station: 37.165
Description: I-75 Bridges
Distance from Upstream XS =       0
Deck/Roadway Width        =      70
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   11100   62.76   62.76   11142   62.76   61.08   11283    63.2    60.2
   11383    63.2    60.2   11510    62.7    59.7   11515    62.7    62.7
Downstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   11100   62.76   62.76   11142   62.76   61.08   11283    63.2    60.2
   11383    63.2    60.2   11510    62.7    59.7   11515    62.7    62.7
Elevation at which weir flow begins          =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1              River Station: 37.16
Description:  37.16

Station Elevation Data,  num = 30
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    60.6   11000   60.56   11100   62.76   11142   61.08   11166    46.7
   11219      38   11240    35.6   11270    32.8   11283    33.2   11283    60.2
   11291    60.2   11291    33.4   11308    34.2   11333    32.5   11373    31.6
   11375    31.6   11375    60.2   11383    60.2   11383    31.4   11413      31
   11438    32.5   11453    33.8   11463      38   11472    44.2   11482    46.4
   11510    59.7   11515    62.7   11559    60.5   11600   60.56   15000   60.56

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000      .2   11100    .035   11515      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11100   11515               450     475     450            .3       .5

CROSS SECTION INPUT    Reach: 1              River Station: 37.07
Description:  37.07

Station Elevation Data,  num = 93
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    60.2   10024    57.6   10072    44.3   10106    42.5   10150    41.6
   10204    41.2   10290    41.5   10320    42.6   10390    42.8   10425    42.5
   10470    42.6   10499    44.6   10524      45   10567    43.6   10584    36.1
   10650      35   10714    36.1   10728    42.7   10756    42.7   10829    40.5
   10861    40.3   10938    41.9   10981    44.2   11028    42.2   11050    36.1
   11141    34.2   11166    32.5   11202    31.6   11268    32.5   11304    36.1
   11319    43.7   11339    43.2   11363    42.8   11391    42.6   11406    42.8
   11438    43.2   11463    42.6   11509    42.9   11553    42.8   11583    42.7
   11631    42.4   11694    42.6   11714      43   11741    43.1   11764    43.2
   11798    43.7   11823    43.9   11860      44   11892    44.2   11[illegible]
   12018      44   12061    44.8   12096    45.3   12170    46.1   12[illegible]
   12296    46.6   12351    45.8   12429    43.5   12482    44.2   12525    43.9
   12587    42.4   12633    41.3   12744    40.8   12787    41.1   12834    41.7
   12877    42.1   12933    41.9   12991      42   13045    41.4   13[illegible]
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13197	41.1	13256	41	13291	41.1	13355	41.4	13417	41.3
13509	42.3	13551	42.7	13605	42.3	13822	41.2	13898	41.1
13960	43.2	14049	44.2	14109	44.1	14181	43.8	14226	45
14294	45.7	14323	49	14350	52.6	14449	56	14475	57.8
14485	59.8	14503	59.8	14540	60				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11028	.035	11319	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11028	11319	4700	7867	5400	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 35.58
Description: 35.58

Station Elevation Data, num = 94

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	60	10057	59.2	10162	57.2	10295	47.2	10444	52.2
10479	51.5	10637	44.8	10909	43.5	11122	43.8	11230	46.5
11343	47.5	11401	46.4	11461	44.1	11582	43.6	11727	44.1
11879	44.1	12000	47.1	12115	47.3	12168	46.9	12444	47.5
12688	50.5	12933	51.5	13206	46.3	13275	48	13442	46.4
13728	46.5	13728	49.9	13732	49.9	13733	51	13824	51.2
13930	54.2	14005	55	14084	54.6	14159	52.8	14220	50.8
14242	50.4	14285	51.8	14342	52.7	14427	53.5	14505	54.6
14594	55.3	14683	57.8	14763	60.4	14801	62	14840	62.1
14864	62.8	14882	64.4	14901	63.1	14935	61.5	14972	60.5
15010	59.2	15049	56.3	15075	54.5	15105	52.6	15145	50.7
15169	48.7	15201	46.5	15236	43.4	15267	43.4	15342	43.3
15368	42.6	15413	42.9	15469	44	15527	45.2	15586	48
15665	48.2	15748	47.8	15828	47	15891	39.6	15922	42.9
15932	44	15950	35.2	15983	31.2	16020	30.5	16035	33.2
16048	35.2	16061	37.4	16072	38.1	16089	38.1	16109	35.9
16136	36	16182	38.2	16235	37.9	16271	45.3	16415	45.6
16563	47.5	16689	46.6	16855	50.8	16977	54.1	17137	57.9
17141	57.9	17147	57.9	17223	59.6	17247	60		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	15932	.035	16271	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
15932	16271	20	20	20	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 35.57
Description: 35.57

Station Elevation Data, num = 94

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	60	10057	59.2	10162	57.2	10295	47.2	10444	52.2
10479	51.5	10637	44.8	10909	43.5	11122	43.8	11230	46.5
11343	47.5	11401	46.4	11461	44.1	11582	43.6	11727	44.1
11879	44.1	12000	47.1	12115	47.3	12168	46.9	12444	47.5
12688	50.5	12933	51.5	13206	46.3	13275	48	13442	46.4
13728	46.5	13728	49.9	13732	49.9	13733	51	13824	51.2
13930	54.2	14005	55	14084	54.6	14159	52.8	14220	50.8
14242	50.4	14285	51.8	14342	52.7	14427	53.5	14505	54.6
14594	55.3	14683	57.8	14763	60.4	14801	62	14840	62.1
14864	62.8	14882	64.4	14901	63.1	14935	61.5	14972	60.5
15010	59.2	15049	56.3	15075	54.5	15105	52.6	15145	50.7
15169	48.7	15201	46.5	15236	43.4	15267	43.4	15342	43.3
15368	42.6	15413	42.9	15469	44	15527	45.2	15586	48
15665	48.2	15748	47.8	15828	47	15891	39.6	15922	42.9
15932	44	15950	35.2	15983	31.2	16020	30.5	16035	33.2
16048	35.2	16061	37.4	16072	38.1	16089	38.1	16109	35.9
16136	36	16182	38.2	16235	37.9	16271	45.3	16415	45.6
16563	47.5	16689	46.6	16855	50.8	16977	54.1	17137	57.9
17141	57.9	17147	57.9	17223	59.6	17247	60		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	15932	.035	16271	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
15932	16271	6500	9134	7700	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 33.85
Description: 33.85

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Station Elevation Data, num = 36

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	60	10072	58.4	10154	55.9	10283	52.8	10374	51
10499	49.5	10722	46.4	10787	45.2	10865	45.2	11053	45.6
11216	45.6	11491	45.2	11546	45.2	11747	45.4	11846	44.6
11973	43.7	12036	42.7	12120	41.8	12204	41.6	12244	42
12391	43.7	12506	43.3	12672	44.2	12754	44.3	12801	39.9
12928	40	13082	40.5	13503	40.3	13644	43	13746	42.3
13895	42	14050	40	14350	40	15100	45	15320	50
15750	55								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	12801	.1	13503	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12801	13503	4000	4013	3200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 33.09
Description: 33.09

Station Elevation Data, num = 49

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
9200	60	9630	55	10000	50	10111	49.6	10233	49.5
10322	48.6	10458	44.8	10544	41.6	10622	41.2	10688	39.9
10837	40.5	10909	41.5	10948	40	11047	36.4	11131	39.2
11238	39.1	11327	38.4	11480	36.7	11591	35.9	11750	35.1
11901	36.9	12132	37	12203	35.3	12235	34.3	12250	31
12284	36.7	12458	37	12554	38.7	12627	41.5	12731	43.7
12820	46.8	12897	49.4	12952	50.9	12976	51.2	13001	52.6
13007	52.3	13012	52.2	13028	52.3	13041	52.5	13083	52.6
13142	52.7	13200	52.8	13276	52.9	13338	52.95	13351	54
13417	57.2	13482	57.8	13655	58.4	13733	58.4		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
9200	.2	12132	.1	12284	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12132	12284	3700	4805	4700	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 32.18
Description: 32.18

Station Elevation Data, num = 23

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
8170	60	8745	53	10000	54.5	10227	54.5	10450	54.5
10687	54.5	10916	45.9	11264	42	11450	40.5	11674	40.8
11863	40.1	12165	43	12413	38.4	12467	31.2	12545	30.5
12654	35.7	12678	38.4	12995	40.2	13096	40.2	13800	45
13900	50	14000	55	14065	60				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
8170	.2	12413	.1	12678	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12413	12678	5500	9293	3000	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 30.42
Description: 30.42

Station Elevation Data, num = 28

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
9800	55	10000	50	10400	45	10500	40	10600	38
11100	40	12100	42	12900	40	13000	35	13050	33
13100	35	13200	40	13250	45	13350	50	13750	52
14150	52	15050	55	15350	56	15650	55	16150	50
16950	45	17200	40	17250	35	17350	35	17375	40
17400	45	17450	50	17550	55				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
9800	.2	12900	.1	13200	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12900	13200	6000	7814	5800	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 28.94
Description: 28.94

Station Elevation Data, num = 53

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
7910	55	8000	50	8350	49.7	8740	50	10000	50.5
10189	49.3	10332	48.5	10375	46	10453	40.6	10486	40.6
10507	32.8	10511	31.8	10541	29.3	10579	29.2	10600	30.3
10611	28.7	10614	27.4	10620	27.7	10625	32.8	10651	37
10733	37.7	10807	40	10876	40.2	10953	40.2	11071	37.8
11123	40.1	11188	38	11253	38.1	11297	39.8	11349	40.4
11400	40.4	11495	41.2	11644	42.4	11804	45	12035	46.6
12095	46.7	12227	46.2	12379	44.9	12532	49.7	12558	50.1
13250	52	13610	50	13675	45	13710	43.8	13800	45
14010	45	14160	40	14800	35	14875	35	14900	40
14955	45	15000	50	15320	55				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
7910	.2	10486	.035	10651	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10486	10651	5300	5914	3900	.1 .3

CROSS SECTION INPUT Reach: 1 River Station: 27.82
Description: 27.82

Station Elevation Data, num = 99

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
9800	55	10000	50.6	10011	48.4	10014	49.2	10027	49.6
10041	48.9	10045	50.4	10053	49.5	10073	50.3	10133	49.1
10255	46.8	10365	44.9	10412	43.9	10465	45.2	10512	46.1
10610	46.9	10656	46.5	10660	45	10670	45.1	10771	45.1
10780	44.8	10806	45.4	10823	45.7	10844	44.4	10853	42.8
10866	42.8	10878	43.8	10927	41.9	10962	40.2	11017	37.8
11059	35.4	11117	35.5	11195	36	11274	36	11316	34
11347	31.9	11402	29.3	11492	30.3	11519	28.7	11548	27.4
11580	31.9	11593	34.3	11695	32.8	11798	34.8	11891	37.6
11992	40.8	12078	39.9	12149	39.1	12215	39.5	12245	40.4
12310	39.3	12348	38.8	12407	39.8	12435	40	12473	39.6
12504	40.6	12535	38.9	12565	37.8	12582	37.6	12592	37.6
12595	38.7	12639	37.6	12690	36.3	12744	35.2	12778	33.6
12803	33	12829	33.3	12860	35.1	12899	35.9	12941	37.1
12987	37.1	13054	37.2	13104	37.7	13134	38.4	13148	41.5
13161	43.7	13174	44.8	13189	45.2	13203	44	13231	43.5
13256	43.8	13273	43.7	13283	43.6	13307	43.2	13341	41
13465	37.6	13527	37.7	13604	39.2	13714	38.1	13808	41.9
13879	42.7	14013	41.8	14225	43.5	14323	46.7	14402	48.5
14420	50.1	14438	50.3	14449	50.3	14970	55		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
9800	.2	11347	.035	11580	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11347	11580	186	186	186 .1	.3

CROSS SECTION INPUT Reach: 1 River Station: 27.79
Description: 27.79

Station Elevation Data, num = 99

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
9545	55	10000	50.6	10011	48.4	10014	49.2	10027	49.6
10041	48.9	10045	50.4	10053	49.5	10073	50.3	10133	49.1
10255	46.8	10365	44.9	10412	43.9	10465	45.2	10512	46.1
10610	46.9	10656	46.5	10660	45	10670	45.1	10771	45.1
10780	44.8	10806	45.4	10823	45.7	10844	44.4	10853	42.8
10866	42.8	10878	43.8	10927	41.9	10962	40.2	11017	37.8
11059	35.4	11117	35.5	11195	36	11274	36	11316	34
11347	31.9	11402	29.3	11492	30.3	11519	28.7	11548	27.4
11580	31.9	11593	34.3	11695	32.8	11798	34.8	11891	37.6
11992	40.8	12078	39.9	12149	39.1	12215	39.5	12245	40.4
12310	39.3	12348	38.8	12407	39.8	12435	40	12473	39.6
12504	40.6	12535	38.9	12565	37.8	12582	37.6	12592	37.6
12595	38.7	12639	37.6	12690	36.3	12744	35.2	12778	33.6
12803	33	12829	33.3	12860	35.1	12899	35.9	12941	37.1
12987	37.1	13054	37.2	13104	37.7	13134	38.4	13148	41.5
13161	43.7	13174	44.8	13189	45.2	13203	44	13231	43.5
13256	43.8	13273	43.7	13283	43.6	13307	43.2	13341	41
13465	37.6	13527	37.7	13604	39.2	13714	38.1	13808	41.9
13879	42.7	14013	41.8	14225	43.5	14323	46.7	14402	48.5
14420	50.1	14438	50.3	14449	50.3	15065	55		

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Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
    9545      .2   11347    .035   11580      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11347   11580              106     106     106            .1       .3

CROSS SECTION INPUT    Reach: 1             River Station: 27.77
Description:  27.77

Station Elevation Data,  num = 36
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
    9575      55   10000    50.8   10169    49.7   10372    48.4   10654    48.2
   10897    48.1   11139    48.5   11246    48.5   11247    48.5   11310    28.6
   11310    45.6   11313    45.6   11313    28.6   11371    30.2   11394    26.2
   11394    45.6   11397    45.6   11397    26.2   11446    26.5   11481    33.2
   11484    48.5   11716    48.5   11995    47.4   12205    47.6   12352    47.3
   12500    47.1   12687    47.4   12880    47.8   13086      48   13248    48.5
   13387    48.4   13539    48.4   13711    48.4   13975      49   14072      50
   15050      55

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
    9575      .2   11247    .035   11484      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11247   11484               25      25      25            .3       .5

BRIDGE INPUT           Reach: 1             River Station: 27.765
Description: US-441 Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =      25
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   11247    48.5    48.5   11310    48.5    45.6   11313    48.5    45.6
   11394    48.5    45.6   11397    48.5    45.6   11484    48.5    48.5
Downstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   11247    48.5    48.5   11310    48.5    45.6   11313    48.5    45.6
   11394    48.5    45.6   11397    48.5    45.6   11484    48.5    48.5
Elevation at which weir flow begins         =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1             River Station: 27.76
Description:  27.76

Station Elevation Data,  num = 36
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
    9600      55   10000    50.8   10169    49.7   10372    48.4   10654    48.2
   10897    48.1   11139    48.5   11246    48.5   11247    48.5   11310    28.6
   11310    45.6   11313    45.6   11313    28.6   11371    30.2   11394    26.2
   11394    45.6   11397    45.6   11397    26.2   11446    26.5   11481    33.2
   11484    48.5   11716    48.5   11995    47.4   12205    47.6   12352    47.3
   12500    47.1   12687    47.4   12880    47.8   13086      48   13248    48.5
   13387    48.4   13539    48.4   13711    48.4   13975      49   14072      50
```

15050 55

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
9600	.2	11247	.035	11484	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11247	11484	325	325	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 27.68
Description: 27.68

Station Elevation Data, num = 60

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
9750	54	10000	50.2	10030	49.6	10069	48.1	10093	47.6
10123	45.6	10139	44.3	10188	41.3	10261	36.2	10314	33.6
10417	32.5	10487	33.1	10521	33.9	10531	31.9	10544	30.2
10565	28.9	10588	28.3	10646	28.8	10683	28.3	10706	29
10737	30.3	10750	31.9	10771	33.5	10814	35	10843	39.8
10872	43.2	10914	43.5	10984	43.8	11043	43.7	11093	43.9
11106	44	11117	44.8	11133	44.8	11171	42.7	11217	41.6
11291	40.3	11379	39.5	11493	38.3	11571	37.8	11640	37.4
11837	33.3	11858	32.7	11887	32.7	11923	33.8	11977	34.1
12072	34.8	12182	35	12421	37.7	12549	39.7	12699	45.9
12829	46.1	12975	43.9	13148	42.2	13310	42.2	13540	42.2
13679	47.9	13694	47.9	13720	49.7	13744	50	14075	55

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
9750	.2	10521	.035	10771	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10521	10771	4000	6125	5500	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 26.52
Description: 26.52

Station Elevation Data, num = 67

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
8800	52	10000	45	10050	44.5	10114	43.8	10172	42.7
10249	42.4	10324	44.1	10370	45.3	10412	43.4	10478	42.8
10552	43.1	10604	44	10701	44	10756	44.4	10812	44.4
10836	43.3	10841	40.3	10847	40.3	10854	43.5	10931	43.8
11029	43.5	11083	42.8	11155	41.6	11251	40.2	11338	36.8
11416	34.5	11456	33.3	11519	33	11595	32.7	11710	33.7
11813	35.1	11889	35.3	12055	33.2	12153	32.7	12221	29.8
12312	34.5	12416	35.5	12539	35.7	12637	34.8	12655	34.8
12662	35.7	12676	35.7	12690	35.8	12713	30.1	12716	28.3
12729	24.5	12767	23.4	12787	23.2	12797	23.6	12816	25.3
12823	27.9	12827	30.1	12831	35.1	12841	36.2	12858	37.3
12866	43.3	12883	47	12903	48.4	12940	50.7	12985	52.2
13041	54	13097	54	13150	53.7	13213	54	13292	54.4
13375	54.6	13458	53.7						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
8800	.2	12690	.035	12831	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12690	12831	5800	7022	2730	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 25.19
Description: 25.19

Station Elevation Data, num = 55

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	52.1	10111	52.6	10227	53.1	10329	52.4	10408	51.4
10472	49.5	10510	49.2	10554	49.2	10621	48.9	10695	47.5
10829	45.7	10988	42.4	11095	41.5	11175	40.8	11269	42.3
11326	42.6	11367	41.5	11409	39.2	11440	35	11454	33.3
11476	32.6	11492	32	11512	30.5	11527	28.5	11600	25.43
11677	28.5	11688	30.8	11704	31.4	11726	32.3	11751	32.2
11775	34.9	11797	34.7	11841	34.2	11873	32.7	11893	30.9
11919	30.7	11945	31.1	11984	31.2	12012	34.5	12050	34.5
12102	35.2	12207	37.1	12302	37.7	12430	39.1	12538	42.8
12686	44.2	12755	47	12874	48.4	12911	48.2	12948	48.2
13003	49.2	13059	49.3	13141	50.1	13212	52.2	13292	52.9

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value

```
   10000      .2   11476    .035   11726      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11476   11726             1700    3432    3500            .1      .3

CROSS SECTION INPUT    Reach: 1             River Station: 24.54
Description:  24.54

Station Elevation Data,  num = 58
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    58.1   10009    58.1   10015      59   10021      59   10040    58.3
   10078    58.6   10114    58.1   10153    57.9   10190    56.8   10216      56
   10243    54.6   10253    54.3   10269    53.8   10284    53.9   10316    54.1
   10350    54.9   10399    55.5   10446    55.9   10501    55.5   10559      55
   10600    54.6   10635    54.6   10654    53.5   10680    53.5   10719    52.9
   10775    51.2   10859    43.9   10906    36.6   10942    32.6   10960    30.7
   10993    30.9   11006    28.6   11100   16.26   11178    28.5   11201    35.3
   11213    36.5   11233      37   11293    38.6   11338    40.1   11392    40.3
   11477    41.7   11543    41.6   11609    40.2   11665    39.6   11737    39.4
   11836    38.4   11933    38.1   12057    38.1   12161    37.7   12252    38.6
   12296    39.7   12349    42.4   12392    45.3   12434    48.2   12456    49.6
   12509      51   12597    54.7   12670      56

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000      .2   10906    .035   11201      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         10906   11201              145     145     145            .1      .3

CROSS SECTION INPUT    Reach: 1             River Station: 24.52
Description:  24.52

Station Elevation Data,  num = 58
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    58.1   10009    58.1   10015      59   10021      59   10040    58.3
   10078    58.6   10114    58.1   10153    57.9   10190    56.8   10216      56
   10243    54.6   10253    54.3   10269    53.8   10284    53.9   10316    54.1
   10350    54.9   10399    55.5   10446    55.9   10501    55.5   10559      55
   10600    54.6   10635    54.6   10654    53.5   10680    53.5   10719    52.9
   10775    51.2   10859    43.9   10906    36.6   10942    32.6   10960    30.7
   10993    30.9   11006    28.6   11100   16.26   11178    28.5   11201    35.3
   11213    36.5   11233      37   11293    38.6   11338    40.1   11392    40.3
   11477    41.7   11543    41.6   11609    40.2   11665    39.6   11737    39.4
   11836    38.4   11933    38.1   12057    38.1   12161    37.7   12252    38.6
   12296    39.7   12349    42.4   12392    45.3   12434    48.2   12456    49.6
   12509      51   12597    54.7   12670      56

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000      .2   10906    .035   11201      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         10906   11201               25      25      25            .3      .5

CROSS SECTION INPUT    Reach: 1             River Station: 24.51
Description:  24.51

Station Elevation Data,  num = 33
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    58.8   10125    58.8   10233    58.8   10397    57.4   10561    54.4
   10694    51.9   10817    49.4   10908    48.2   10977    47.5   11030    47.1
   11075    46.8   11125    46.2   11189      25   11189    43.9   11192    43.9
   11192      25   11233    16.3   11274    27.2   11274    43.9   11277    43.9
   11277    27.2   11314    31.6   11345    46.8   11407    46.6   11805    46.1
   11990      46   12120    45.7   12280    45.8   12459    46.9   12603    48.5
   12779    50.7   12973    53.1   13145      55

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000      .2   11125    .035   11345      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11125   11345               30      30      30            .3      .5

BRIDGE INPUT           Reach: 1             River Station: 24.505
Description: US-27 Bridge
Distance from Upstream XS =        0
Deck/Roadway Width        =       30
Weir Coefficient          =      2.6
```

```
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   11075    46.8    46.8   11125    46.8    46.2   11189    46.8    43.9
   11277    46.8    43.9   11314    46.8    43.9   11345    46.8    46.8
Downstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   11075    46.8    46.8   11125    46.8    46.2   11189    46.8    43.9
   11277    46.8    43.9   11314    46.8    43.9   11345    46.8    46.8
Elevation at which weir flow begins          =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1              River Station: 24.5
Description:  24.5

Station Elevation Data,  num = 33
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    58.8   10125    58.8   10233    58.8   10397    57.4   10561    54.4
   10694    51.9   10817    49.4   10908    48.2   10977    47.5   11030    47.1
   11075    46.8   11125    46.2   11189      25   11189    43.9   11192    43.9
   11192      25   11233    16.3   11274    27.2   11274    43.9   11277    43.9
   11277    27.2   11314    31.6   11345    46.8   11407    46.6   11805    46.1
   11990      46   12120    45.7   12280    45.8   12459    46.9   12603    48.5
   12779    50.7   12973    53.1   13145      55

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000      .2   11125    .035   11345      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11125   11345               90      90      90             .3      .5

CROSS SECTION INPUT    Reach: 1              River Station: 24.49
Description:  24.49

Station Elevation Data,  num = 58
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    58.1   10009    58.1   10015      59   10021      59   10040    58.3
   10078    58.6   10114    58.1   10153    57.9   10190    56.8   10216      56
   10243    54.6   10253    54.3   10269    53.8   10284    53.9   10316    54.1
   10350    54.9   10399    55.5   10446    55.9   10501    55.5   10559      55
   10600    54.6   10635    54.6   10654    53.5   10680    53.5   10719    52.9
   10775    51.2   10859    43.9   10906    36.6   10942    32.6   10960    30.7
   10993    30.9   11006    28.6   11100   16.26   11178    28.5   11201    35.3
   11213    36.5   11233      37   11293    38.6   11338    40.1   11392    40.3
   11477    41.7   11543    41.6   11609    40.2   11665    39.6   11737    39.4
   11836    38.4   11933    38.1   12057    38.1   12161    37.7   12252    38.6
   12296    39.7   12349    42.4   12392    45.3   12434    48.2   12456    49.6
   12509      51   12597    54.7   12670      56

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000      .2   10906    .035   11201      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         10906   11201               40      40      40             .3      .5

CROSS SECTION INPUT    Reach: 1              River Station: 24.48
```

```
Description:  24.48

Station Elevation Data,  num = 59
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000      56   10159    55.9   10358    55.9   10571    55.7   10709    55.7
   10850      56   10974    56.2   11116    55.9   11266    55.8   11384    55.2
   11468    55.1   11480    55.6   11500    55.4   11508    54.6   11579    54.9
   11630    54.8   11678    54.4   11680    52.5   11715      41   11715    51.3
   11719    51.3   11719      41   11736      31   11736    47.1   11744    47.1
   11744      31   11745      31   11775      23   11810      26   11811      26
   11811    49.1   11820    49.1   11820    26.5   11825    27.3   11845    22.6
   11860      31   11864      31   11864    49.1   11873    49.1   11873    31.5
   11890      42   11890    50.6   11894    50.6   11894      43   11920      52
   11922    53.6   12062    53.4   12266    53.3   12531      53   12716    52.8
   12890    52.8   13053    53.5   13221    54.3   13319      55   13323    55.9
   13336    55.9   13338    55.3   13456    55.9   13648    56.7

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000      .2   11678    .035   11922      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11678   11922               20      20      20             .3      .5

BRIDGE INPUT      Reach: 1             River Station: 24.475
Description: Seaboard Coastline RR Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =      20
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 13
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   11678    54.4    54.4   11680    54.4    52.5   11715    54.3    51.3
   11736    54.1    47.1   11744    54.1    47.1   11811    54.1    49.1
   11820    54.1    49.1   11864    54.1    49.1   11873    54.1    49.1
   11890    53.6    50.6   11894    53.6    50.6   11920    53.6      52
   11922    53.6    53.6
Downstream Deck/Roadway Coordinates,  num = 13
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**************************************************************************
   11678    54.4    54.4   11680    54.4    52.5   11715    54.3    51.3
   11736    54.1    47.1   11744    54.1    47.1   11811    54.1    49.1
   11820    54.1    49.1   11864    54.1    49.1   11873    54.1    49.1
   11890    53.6    50.6   11894    53.6    50.6   11920    53.6      52
   11922    53.6    53.6
Elevation at which weir flow begins         =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1             River Station: 24.47
Description:  24.47

Station Elevation Data,  num = 59
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000      56   10159    55.9   10358    55.9   10571    55.7   10709    55.7
   10850      56   10974    56.2   11116    55.9   11266    55.8   11384    55.2
   11468    55.1   11480    55.6   11500    55.4   11508    54.6   11579    54.9
   11630    54.8   11678    54.4   11680    52.5   11715      41   11715    51.3
   11719    51.3   11719      41   11736      31   11736    47.1   11744    47.1
   11744      31   11745      31   11775      23   11810      26   11811      26
```

11811	49.1	11820	49.1	11820	26.5	11825	27.3	11845	22.6
11860	31	11864	31	11864	49.1	11873	49.1	11873	31.5
11890	42	11890	50.6	11894	50.6	11894	43	11920	52
11922	53.6	12062	53.4	12266	53.3	12531	53	12716	52.8
12890	52.8	13053	53.5	13221	54.3	13319	55	13323	55.9
13336	55.9	13338	55.3	13456	55.9	13648	56.7		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11678	.035	11922	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11678	11922	150	150	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 24.44
Description: 24.44

Station Elevation Data, num = 73

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	57.6	10076	57.3	10139	58.3	10189	58.3	10237	58.5
10292	58.4	10350	58.1	10419	57.2	10471	56.8	10490	56.2
10499	55.8	10503	55.9	10509	57.8	10519	57.8	10531	56.4
10536	56.1	10561	56.3	10574	55.2	10582	55.4	10601	55.8
10644	55.8	10688	55.4	10739	53.9	10763	52.9	10812	51.2
10841	50.1	10870	47.7	10894	43.3	10942	38.3	10975	28.4
11030	16.3	11076	28.4	11084	37	11092	39.3	11108	39.5
11129	38.3	11150	36.2	11174	36	11201	35.8	11228	35.9
11265	36.3	11313	36.6	11359	36.5	11411	35.2	11460	34.7
11504	35.3	11554	36.6	11623	38	11688	38.9	11757	39.3
11815	39.2	11881	37.7	11948	35.7	11987	33.9	12017	34.5
12069	35.5	12107	37.1	12168	39.1	12236	40.4	12307	41.8
12371	43.8	12424	45.4	12448	46.1	12489	47.8	12514	49
12542	50.8	12553	51.5	12558	52.1	12581	52.3	12587	54.1
12600	55.1	12641	57.3	12700	60.6				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10942	.035	11084	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10942	11084	1100	1531	1700	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 24.15
Description: 24.15

Station Elevation Data, num = 39

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	58.5	10069	57.2	10146	54.5	10201	52.3	10235	51.5
10289	50.3	10381	45.5	10448	39.4	10483	36.4	10540	37.1
10571	37.9	10628	38.1	10664	38.5	10685	39	10715	39.5
10739	37.8	10746	37.6	10766	28	10800	24.87	10850	22.45
10900	24.1	10904	28	10910	32.2	10928	32.8	10958	33.4
10973	35.1	10998	41.5	11024	48.7	11053	52.9	11095	57
11133	57.7	11171	59.2	11220	60.7	11248	61.5	11259	60.7
11271	60.8	11318	61.6	11387	62	11440	63.1		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10746	.035	10910	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10746	10910	1900	1742	1500	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 23.82
Description: 23.82

Station Elevation Data, num = 34

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	47	10083	31.9	10155	38.5	10204	39.6	10250	39.7
10304	40.2	10340	39.1	10429	30.2	10494	30.8	10607	32.4
10668	31.3	10717	31.5	10761	32.3	10783	30.8	10798	27.9
10800	26.5	10850	17.36	10900	27.05	10949	27.9	10988	33.4
11030	36.9	11079	39.5	11137	42.5	11199	44	11259	44.8
11304	44.1	11346	46	11426	47.3	11465	46.1	11479	40.8
11498	40.8	11519	45.6	11545	48.8	11575	50.1		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10783	.035	10949	.2

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
10783 10949 4700 3600 2300 .1 .3

CROSS SECTION INPUT Reach: 1 River Station: 23.14
Description: 23.14

Station Elevation Data, num = 44

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	50	10050	48.1	10108	46.1	10174	45.1	10265	43.2
10394	41.3	10532	41.8	10644	41.3	10704	41.6	10720	39.3
10748	27.5	10775	21.56	10800	17.29	10825	21.46	10845	27.5
10861	35.9	10876	35.4	10904	33.3	10923	31.5	10952	31.1
10975	32.8	11015	33.5	11087	35.7	11141	35.5	11236	34
11362	33.5	11456	35.1	11531	36.1	11600	36.2	11780	35.5
11858	37.1	11987	37.3	12042	39.3	12189	39.6	12282	41.5
12482	42.8	12599	44.4	12728	44.6	12796	44.3	12850	45.7
12924	45.7	13005	47.2	13079	48	13160	50.1		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10720	.035	10861	.2

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
10720 10861 4900 4752 3400 .1 .3

CROSS SECTION INPUT Reach: 1 River Station: 22.24
Description: 22.24

Station Elevation Data, num = 41

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	50	10045	49	10072	47.9	10123	46.6	10170	46
10212	45.6	10274	43	10309	41.6	10336	38.9	10376	35.1
10392	33.2	10414	27.9	10436	28.6	10464	31.9	10508	33.7
10550	32.5	10612	33.5	10634	34	10649	27.2	10700	22.79
10750	21.1	10800	23.19	10869	27.2	10908	30	10952	31.3
11000	32.7	11055	36	11105	35.9	11156	36.6	11204	37.6
11260	38.1	11329	37.7	11395	37.1	11469	38	11559	42.4
11625	44.2	11704	42.9	11768	43.5	11831	45.7	11916	49.1
11967	53.4								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10634	.035	10908	.2

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
10634 10908 2900 3432 4000 .1 .3

CROSS SECTION INPUT Reach: 1 River Station: 21.59
Description: 21.59

Station Elevation Data, num = 80

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	50.3	10032	48.7	10060	48.3	10097	48.3	10150	47.5
10200	46.6	10252	46.4	10293	45.8	10332	46	10372	46
10419	46.8	10469	47.7	10522	48.6	10553	49	10590	49.4
10638	49.4	10691	49.6	10732	49.7	10777	49.8	10822	50.1
10865	49.9	10901	49.5	10929	49.2	10952	48.3	10974	48.7
10992	47.3	11007	47.1	11069	47	11129	46.1	11180	46.1
11260	45.7	11317	45	11379	44.5	11453	43.9	11505	44
11555	42.7	11589	43.8	11645	44.1	11689	44.1	11727	43.8
11770	42.5	11831	41.5	11907	38.8	11989	34.4	12074	33.3
12152	34.8	12184	24.6	12225	22	12275	15.87	12300	23.5
12332	24.6	12350	26.8	12414	27.3	12473	27.4	12560	26.9
12617	26.9	12679	29.2	12774	30.5	12860	31.8	12926	36.2
12994	38.1	13088	38.8	13191	40	13285	41.6	13355	43.2
13401	44.6	13465	47.3	13545	48.7	13610	49.8	13684	50.2
13722	50.4	13789	49.8	13836	49.7	13893	48.5	13971	48.4
14068	48.1	14143	47.9	14236	48.5	14299	49.4	14350	50.1

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	12184	.035	12350	.2

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
12184 12350 5600 6072 5900 .1 .3

CROSS SECTION INPUT Reach: 1 River Station: 20.44
Description: 20.44

Station Elevation Data, num = 78

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	50	10037	48.2	10086	47.7	10132	47.2	10194	46.8
10241	46	10274	45.2	10295	43.8	10320	42.3	10351	40.7
10399	37.9	10446	34.1	10493	29.8	10533	27.6	10579	26.8
10627	26.8	10670	26.2	10717	25.6	10775	26	10865	27.2
10941	26.1	11018	24.8	11099	23.9	11186	23.8	11268	26.6
11319	27.6	11379	26	11440	27.7	11485	27.4	11512	26.7
11520	21.2	11550	19.17	11600	16.14	11630	18.97	11681	21.2
11705	27.3	11774	27.5	11854	28.7	11936	31.4	12026	41.9
12239	41.3	12298	38.4	12364	38.2	12432	37.3	12530	33.7
12624	33.3	12710	36.2	12855	40.2	12953	40.7	13093	40.7
13144	42.2	13176	43.2	13226	44.6	13269	44.8	13306	45.5
13331	45.9	13366	46.6	13402	46.8	13441	46.8	13472	46.6
13507	46.7	13544	46.6	13569	46.8	13583	46.9	13591	46.9
13595	46.2	13598	46.2	13606	47.6	13621	47.5	13646	47.4
13670	47.5	13698	47.4	13754	47.8	13802	48.2	13845	49.1
13882	49.8	13923	50.6	13934	50.7				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11512	.035	11705	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11512	11705	4400	4330	3500	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 19.62
Description: 19.62

Station Elevation Data, num = 73

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	44.2	10059	44.7	10133	46	10205	46	10292	44.4
10409	43.1	10462	42	10586	40.4	10604	41	10659	36.6
10697	35	10743	32.6	10865	28.6	10929	26.3	11011	27
11046	25.4	11099	25.7	11142	25.6	11233	25	11311	25.2
11396	24.7	11477	24.4	11562	25	11615	24.6	11623	21.4
11650	18.6	11725	17.74	11800	20.04	11839	21.4	11864	24.3
11930	25	12044	26	12186	28.9	12516	35.2	12730	37.1
12918	38.1	12985	39.9	13065	41.1	13122	40.1	13164	40.5
13246	41.1	13251	41.3	13253	40.6	13254	40.6	13257	41.5
13258	41.5	13260	41	13285	40.7	13312	41.2	13319	40.6
13321	40.5	13332	40.9	13372	40.8	13421	41.1	13490	41.6
13572	41.2	13632	41.1	13709	41.9	13782	42.7	13863	43
13938	42.4	13970	40.9	13975	40.9	14003	41.7	14074	41.4
14142	41.4	14222	40.6	14270	41.7	14330	42.7	14429	44
14505	45	14571	46.2	14633	48				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11615	.035	11864	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11615	11864	4900	5970	4950	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 18.49
Description: 18.49

Station Elevation Data, num = 50

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	45.7	10062	44.5	10104	44.1	10121	42.6	10123	42
10125	42	10131	42.6	10162	42.5	10171	40.9	10175	40.9
10184	41.2	10245	40.4	10373	36.4	10382	35	10423	32.4
10556	29.2	10718	27.7	10838	28	10925	28	10946	29.2
10990	29.8	11017	29.8	11021	24.2	11075	21.44	11100	8.89
11125	20.2	11153	24.3	11191	25.3	11306	26	11632	26.5
11916	27.9	12175	30.5	12480	31.9	12732	33.5	12962	33.9
13000	35.2	13092	35.6	13165	34.8	13215	34.5	13269	35
13321	36.6	13380	39.4	13399	39.9	13441	40.7	13484	41
13535	42.3	13586	43.9	13671	45.7	13746	46.5	13841	48

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11021	.035	11153	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11021	11153	3000	3750	2400	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 17.78
Description: 17.78

Station Elevation Data, num = 52

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	41	10113	38.4	10203	36.6	10254	36.5	10295	34.9
10305	35	10419	34.2	10565	33.5	10686	33.9	10745	36.2
10772	36.6	10807	32.6	10811	32.6	10842	35.9	10896	33.7
11005	34.2	11028	33	11041	33.5	11069	33.5	11080	33.5
11134	33.5	11349	31.9	11566	32.2	11682	29.7	11732	26.7
11760	25.5	11780	22.9	11800	18.69	11850	15.15	11900	17.19
11949	22.9	11959	22.8	12003	26.6	12112	28.2	12221	29
12310	25.7	12441	21.8	12607	23.4	12697	21.1	12731	25.5
12813	24.5	12924	24.8	13041	23.6	13128	24.4	13219	24.5
13310	29.6	13415	31.6	13559	33.3	13692	34.3	13866	33.4
14015	38.6	14119	41.5						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	11760	.045	12003	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11760	12003	2000	2650	3500	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 17.28
Description: 17.28

Station Elevation Data, num = 44

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	40	10198	39.1	10394	34.9	10555	31.2	10627	25.9
10700	22.6	10783	22.3	10889	23.3	10946	24.3	11046	23.8
11163	21.5	11175	19.2	11200	16.56	11250	13.26	11300	15.71
11376	19.2	11398	21.3	11531	21.3	11634	21.4	11697	24.3
11825	24.6	11973	26	12080	26.7	12143	27.2	12197	27.4
12211	26.6	12264	28.9	12310	32.5	12371	34.1	12451	34
12574	33.7	12636	33.9	12703	33.3	12755	32.5	12825	31.6
12859	32.6	12968	32.8	13028	32.6	13192	32.3	13348	33.1
13491	35.2	13619	36.7	13725	37.4	13951	40		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	11163	.045	11398	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11163	11398	4300	3960	3400	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 16.53
Description: 16.53

Station Elevation Data, num = 51

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	41	10199	39	10243	39.2	10349	37.7	10420	37.2
10510	36.9	10593	36.5	10663	38	10767	38.6	10856	38.7
10895	38.4	10966	37.8	11109	35	11195	32.4	11267	32
11425	29.1	11631	28.6	11718	28	11831	22.6	11955	20.6
12146	20.4	12223	20.3	12330	19.4	12337	19.2	12350	18.24
12390	19.2	12401	20.5	12465	20.5	12475	19.2	12500	15.24
12550	13.6	12600	15.66	12649	19.2	12657	19.8	12675	21.5
12717	21.5	12773	20.4	12853	21.5	12951	23.9	13073	24.5
13155	23	13235	24.9	13347	27.2	13431	28.6	13750	30
14354	34	14516	34.7	14738	34.3	14821	33.6	14895	32.5
14930	41								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	12465	.045	12657	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12465	12657	3400	4120	3350	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 15.75
Description: 15.75

Station Elevation Data, num = 74

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	40	10079	39.2	10161	39.4	10206	40.4	10263	40.2
10337	39.9	10412	39.5	10484	39.1	10541	38.7	10593	39.1
10658	38.9	10732	38	10806	37.6	10876	37.3	10974	38.7
11028	38.6	11097	36.2	11218	31.4	11312	32.8	11372	33.2
11459	32.4	11565	31.6	11614	32.5	11682	33.1	11761	32.2
11837	31.6	11911	32.5	12002	34.2	12191	37	12330	37.6
12490	37	12668	36.3	12754	34.7	12829	33.4	12935	33.4
13049	32.8	13183	32.1	13324	31.2	13417	31	13545	31.5
13688	31.1	13862	28	14128	24.5	14438	24.5	14660	24.5

14830	24.1	14878	25.6	15002	20.5	15056	17.2	15100	13.51
15150	11.9	15200	13.31	15231	17.2	15255	26.7	15341	27
15517	25.1	15722	25.1	15899	26.8	16065	31	16252	37.8
16421	36.2	16474	35.4	16553	33.6	16580	35.7	16612	34.1
16640	34.9	16730	35.9	16802	37.1	16868	37.7	16903	37.9
16935	37	17012	37.5	17112	39.1	17205	40		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	14878	.045	15255	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14878	15255	175	175	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 15.72
Description: 15.72

Station Elevation Data, num = 74

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	40	10079	39.2	10161	39.4	10206	40.4	10263	40.2
10337	39.9	10412	39.5	10484	39.1	10541	38.7	10593	39.1
10658	38.9	10732	38	10806	37.6	10876	37.3	10974	38.7
11028	38.6	11097	36.2	11218	31.4	11312	32.8	11372	33.2
11459	32.4	11565	31.6	11614	32.5	11682	33.1	11761	32.2
11837	31.6	11911	32.5	12002	34.2	12191	37	12330	37.6
12490	37	12668	36.3	12754	34.7	12829	33.4	12935	33.4
13049	32.8	13183	32.1	13324	31.2	13417	31	13545	31.5
13688	31.1	13862	28	14128	24.5	14438	24.5	14660	24.5
14830	24.1	14878	25.6	15002	20.5	15056	17.2	15100	13.51
15150	11.9	15200	13.31	15231	17.2	15255	26.7	15341	27
15517	25.1	15722	25.1	15899	26.8	16065	31	16252	37.8
16421	36.2	16474	35.4	16553	33.6	16580	35.7	16612	34.1
16640	34.9	16730	35.9	16802	37.1	16868	37.7	16903	37.9
16935	37	17012	37.5	17112	39.1	17205	40		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	14878	.045	15255	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14878	15255	50	50	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 15.71
Description: 15.71

Station Elevation Data, num = 63

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	40	10190	39	10363	38	10556	36.4	10697	34.7
10877	34.8	11024	34.6	11210	34.7	11313	34.7	11479	35.2
11635	36.1	11824	37.5	12029	37.9	12157	37.9	12257	37.6
12351	37.2	12494	36.5	12645	35.5	12770	35	12934	34
13056	34.4	13161	34.2	13256	34.3	13402	33.9	13524	33.9
13649	33.9	13750	33.9	13926	34	14097	34.2	14248	34.2
14423	34.4	14522	35.9	14678	37.6	14820	38.3	14823	34.6
14843	20.1	14924	9.5	14924	37.5	14930	37.5	14930	9.5
14937	9.4	14987	10.2	14992	13.9	14992	38.4	14996	38.4
14996	13.9	15052	18.4	15060	21.4	15060	37.44	15066	37.44
15066	21.4	15135	37.44	15140	38.1	15312	37	15455	34.4
15754	34	15920	33.8	16103	34.2	16250	35.1	16405	36
16573	37.5	16736	38.9	16882	40				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	14820	.045	15140	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14820	15140	25	25	.3	.5

BRIDGE INPUT Reach: 1 River Station: 15.705
Description: SR-47 Bridge
Distance from Upstream XS = 0
Deck/Roadway Width = 25
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates, num = 8

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
14820	38.3	38.3	14823	39.15	37.5	14924	39.15	37.5
14992	40.1	38.4	15052	40.1	38.4	15066	39.1	37.44
15135	39.11	37.44	15140	38.1	38.1			

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Downstream Deck/Roadway Coordinates,  num = 8
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   14820    38.3    38.3   14823   39.15    37.5   14924   39.15    37.5
   14992    40.1    38.4   15052    40.1    38.4   15066    39.1   37.44
   15135   39.11   37.44   15140    38.1    38.1
Elevation at which weir flow begins          =
Maximum allowable submergence for weir flow =      .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1              River Station: 15.7
Description:  15.7

Station Elevation Data,  num = 63
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000      40   10190      39   10363      38   10556    36.4   10697    34.7
   10877    34.8   11024    34.6   11210    34.7   11313    34.7   11479    35.2
   11635    36.1   11824    37.5   12029    37.9   12157    37.9   12257    37.6
   12351    37.2   12494    36.5   12645    35.5   12770      35   12934      34
   13056    34.4   13161    34.2   13256    34.3   13402    33.9   13524    33.9
   13649    33.9   13750    33.9   13926      34   14097    34.2   14248    34.2
   14423    34.4   14522    35.9   14678    37.6   14820    38.3   14823    34.6
   14843    20.1   14924     9.5   14924    37.5   14930    37.5   14930     9.5
   14937     9.4   14987    10.2   14992    13.9   14992    38.4   14996    38.4
   14996    13.9   15052    18.4   15060    21.4   15060   37.44   15066   37.44
   15066    21.4   15135   37.44   15140    38.1   15312      37   15455    34.4
   15754      34   15920    33.8   16103    34.2   16250    35.1   16405      36
   16573    37.5   16736    38.9   16882      40

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .28   14820    .045   15140     .28

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         14820   15140              200     200     200            .3      .5

CROSS SECTION INPUT    Reach: 1              River Station: 15.66
Description:  15.66

Station Elevation Data,  num = 92
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000      40   10065    39.6   10193    39.5   10195    37.5   10222    38.9
   10232    39.3   10243    38.9   10253    37.3   10274    39.3   10363    38.8
   10432    39.7   10490    39.9   10524    39.9   10601    39.7   10659    38.4
   10755    37.1   10844    36.3   10987    35.5   11080    34.8   11186    33.8
   11296    31.3   11395    32.6   11468      34   11610    36.6   11677    37.9
   11769      39   11832    38.5   11914      38   12064      38   12177    38.6
   12291    38.9   12353    39.2   12453    38.4   12568    36.3   12638    34.6
   12760    30.3   12848    30.3   12903    30.2   13021    31.6   13076    32.9
   13172    32.8   13264    32.1   13337    30.7   13424    29.6   13545    29.2
   13667    28.1   13773    28.1   13868    28.4   13986      30   14100    31.7
   14124    31.7   14224    32.5   14358    29.6   14424    28.6   14504    27.4
   14624      27   14663    27.5   14701    28.2   14805    25.7   14841    24.6
   14934    26.5   14999    27.2   15071    26.6   15111    25.2   15145    17.3
   15200    13.2   15250   10.22   15300   13.52   15343    17.3   15361    17.5
   15467    17.9   15513    20.2   15629    25.2   15849    25.2   16088    27.4
   16293      29   16439    32.3   16623    35.1   16814    39.2   16857    39.2
   16904    40.3   16927    37.1   16955    37.1   16968    35.8   16988    35.4
   16998    36.5   17053    37.9   17121      39   17147    38.1   17162    38.1
   17179    40.2   17212    41.3
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Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .28   15145    .045   15361     .28

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         15145   15361             3400    3060    2500            .1       .3

CROSS SECTION INPUT    Reach: 1            River Station: 15.08
Description:  Section G (Columbia)

Station Elevation Data,  num = 31
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    39.5   10238    33.3   10462    31.8   10619    27.4   10703    25.7
   10883    26.4   10963    26.8   10976    26.3   10994    26.3   11039    25.4
   11178      26   11416    23.9   11547    24.1   11589    21.4   11632    23.9
   11777    25.3   11863    23.3   12004    22.7   12118    24.8   12147    17.1
   12200    10.2   12250    6.52   12280   10.82   12305    17.1   12318    18.1
   12361    24.5   12489    27.6   12702    38.1   12726    38.9   12811    39.2
   12915      40

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .28   12118    .045   12361     .28

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         12118   12361             5700    5280    4000            .1       .3

CROSS SECTION INPUT    Reach: 1            River Station: 14.08
Description: Section F (Columbia)

Station Elevation Data,  num = 38
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000      40   10089    37.9   10283    35.7   10472    32.3   10610    31.9
   10770    33.9   11030      34   11183      30   11374      26   11475    21.9
   11508    20.5   11699    20.7   11981    21.5   12090    23.1   12353    25.3
   12443    20.4   12471      16   12500    12.8   12550    10.6   12575    10.5
   12600    13.7   12624      16   12650    19.7   12734    23.6   12782    23.6
   12838    16.6   12878    23.6   12930    24.6   12985    24.2   13064    30.9
   13172    33.4   13298    34.5   13507    36.4   13550    36.6   13572    35.4
   13612      37   13835    39.2   13910      40

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .28   12443    .045   12650     .28

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         12443   12650             4700    5540    5500            .1       .3

CROSS SECTION INPUT    Reach: 1            River Station: 13.03
Description: Section E (Columbia)

Station Elevation Data,  num = 31
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000      40   10118    38.4   10251      39   10333    39.3   10366    38.1
   10479      34   10562    31.5   10858    29.9   11233    29.5   11574    30.7
   11746    27.4   11961    26.8   12415    32.3   12535    30.4   12667    23.3
   12868    19.7   12920    13.3   12950     8.5   12975   -5.45   13025    7.45
   13085    13.3   13185    16.6   13381    16.9   13544    19.1   13733    18.5
   13810      20   13901    22.2   14050    22.8   14187    24.2   14265    24.9
   14369      40

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .28   12920    .045   13085     .28

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         12920   13085             6100    9130    5400            .1       .3

CROSS SECTION INPUT    Reach: 1            River Station: 11.3
Description: Section D (Columbia)

Station Elevation Data,  num = 28
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000      40   10116    35.9   10270    31.3   10433    35.8   10605    38.9
   10755    40.5   10968    34.9   11118    28.7   11379    22.9   11645    26.4
   11856      20   11938    18.2   12080    14.2   12100    10.6   12200     7.1
   12250       7   12300     9.9   12345    14.2   12376    20.2   12427    20.7
   12548    19.5   12597    17.3   12861    16.2   13001      17   13088    20.1
   13173    30.2   13249      40   13294    41.7
```

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	12080	.045	12345	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12080	12345	5900	6550	4400	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 10.06
Description: Section C (Columbia)

Station Elevation Data, num = 36

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	38	10243	31.2	10362	28.3	10472	26.4	10548	24.3
10608	12.7	10650	11.31	10689	12.7	10751	16.5	10828	19.7
10926	20.9	10972	19.3	10989	12.7	11000	4.31	11050	1.81
11100	4.8	11133	12.7	11175	16.3	11255	27.9	11288	31.5
11415	30.7	11478	29.3	11498	27.8	11570	28.5	11646	28.6
11859	30.4	12154	31.3	12428	32	12570	35	12697	36.8
12751	35.7	12769	37.3	12846	38.4	13166	35.8	13344	33.1
13443	38								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	10972	.045	11175	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10972	11175	5500	8600	6200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 8.43
Description: Section B (Columbia)

Station Elevation Data, num = 74

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	38	10181	36.2	10431	36	10664	36	10849	33.8
11010	33.9	11014	32.7	11041	32.7	11046	33.2	11193	34
11328	32.2	11429	31.3	11538	31.1	11623	31.1	11707	30.3
11781	31.5	11819	32.7	11835	33.2	11855	32.2	11863	31.9
11891	31.8	12019	31	12206	30.8	12304	29	12359	28.2
12362	26.9	12369	27.1	12375	27	12378	27.3	12415	26
12472	25	12515	23.4	12537	21.1	12559	17.4	12579	14.2
12592	12.1	12610	10.73	12638	12.1	12647	15.7	12677	15.7
12702	15.8	12710	15.8	12714	15.2	12720	12.1	12730	4.67
12800	-1	12830	2.77	12884	12.1	12896	18.6	12942	17.7
13004	17.7	13180	17.6	13277	24.7	13305	28.3	13322	27.3
13330	26.4	13333	25.3	13335	26.5	13355	27.7	13541	29
13705	26.7	13891	27	14100	27.3	14310	27.6	14510	28.4
14856	30.2	15078	31.3	15386	30.2	15582	30.7	15779	31.2
16054	30.7	16257	30.3	16376	31.3	16639	38		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	12714	.045	12896	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12714	12896	2600	4170	4600	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 7.64
Description: 7.64

Station Elevation Data, num = 59

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	38	10083	34.9	10106	34.9	10112	34.3	10114	33.4
10127	33.4	10130	34.9	10135	34.7	10139	33.8	10207	34.6
10267	34.5	10282	34.1	10310	34.2	10329	34.3	10394	33.7
10561	33.6	10875	33.4	11000	31.9	11330	31.9	11668	31.1
11785	31.1	11999	30.3	12182	30.3	12527	16.4	12750	16.4
12958	18.4	13084	18.4	13100	12.3	13166	2.75	13236	10.05
13252	12.4	13266	15.6	13305	16.6	13336	17.7	13359	20.7
13380	23.3	13414	24.6	13458	25	13472	24.8	13481	24.4
13497	24.6	13511	24	13516	23	13521	23.6	13542	24.5
13630	22.3	13858	23	14088	22.8	14397	29.2	14848	31.3
15206	31.9	15230	31.6	15240	31.6	15294	32	15347	33.1
15390	33.2	15405	33.2	15461	33.5	15720	38		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	13084	.045	13266	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13084	13266	4950	6230	4900	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 6.46
Description: 6.46

Station Elevation Data, num = 99

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	40.3	10049	40.2	10052	39.9	10063	39.8	10080	39.9
10108	40	10130	39.9	10167	39.6	10232	38.7	10302	35.9
10379	35	10422	35.1	10496	35.3	10544	38.1	10588	38
10627	37.6	10659	35.4	10671	34.4	10678	34.4	10708	36.1
10744	37.6	10824	37.9	10848	37.2	10877	36.8	10940	36.9
11029	36.7	11120	37.2	11217	36.6	11346	36.1	11451	36.7
11572	37.2	11660	37.8	11807	38.8	11835	38.7	11879	37.9
11910	37.7	11983	37.5	12048	37.3	12139	36.1	12228	34.7
12480	33.4	12675	33.1	12704	33	12836	33.2	12943	33.1
12970	32.3	12980	32.2	12989	33.1	12995	33.1	13007	31.3
13133	31.3	13215	30.7	13321	28.7	13410	25.1	13477	20.7
13596	19.8	13692	16.2	14143	15.9	14263	15	14360	14
14497	14	14538	14	14544	11.2	14619	2.53	14744	11
14754	12.8	14794	13.9	14825	15.3	14866	19.6	14895	22.1
14928	21.9	14956	21.1	15044	21.1	15205	24.2	15252	28
15276	26.3	15286	26.4	15296	27.5	15306	27.5	15318	27.1
15322	27.1	15372	28.7	15456	29.1	15659	28.3	15733	27.4
15791	27.4	15860	27.1	15924	27.9	15989	29.2	16077	32.5
16172	34.9	16285	36.4	16497	34.1	16615	32	16704	33.8
16828	35.7	16934	38.3	17048	40.4	17123	40.9		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	14538	.045	14754	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14538	14754	8200	9150	9900	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 4.73
Description: 4.73

Station Elevation Data, num = 53

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	40.7	10052	38.2	10114	37.6	10172	35.6	10232	34.5
10299	33.4	10368	33.5	10431	32.3	10482	31.9	10540	31.7
10604	31.3	10668	30.5	10720	29.3	10771	24.8	10833	21.2
10901	19.7	10969	19.3	11043	18.7	11139	18	11214	15.9
11283	12.2	11367	12.1	11388	13.9	11436	14.8	11473	14.7
11482	11.7	11492	9.65	11552	1.55	11615	9.65	11646	11.7
11675	21.2	11707	21.6	11753	19.1	11813	19.1	11860	19.2
11907	19.2	11997	15.7	12084	15.9	12157	19.1	12265	22.8
12358	26	12453	28.4	12522	28.7	12587	29.7	12677	32.3
12814	34.3	12931	34.3	13040	34.7	13176	33.8	13309	33.5
13457	35.9	13559	37.1	13654	40.2				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	11473	.045	11646	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11473	11646	5600	5960	4400	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 3.6
Description: 3.6

Station Elevation Data, num = 50

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	36	10093	33.1	10172	31.3	10218	30.6	10254	31.1
10289	31.3	10322	30.1	10366	29.7	10407	28.7	10447	26.3
10486	22.7	10522	19.5	10552	17.3	10579	16.1	10614	15
10640	14.1	10656	11.7	10665	9.35	10770	.75	10831	9.35
11136	11.7	11154	16.9	11198	15.3	11261	13.1	11328	13.2
11382	13.5	11435	14.8	11496	14.8	11548	18.2	11622	19.7
11718	20.5	11791	19.4	11880	22	11967	20.8	12069	20.4
12169	20.4	12264	20.4	12323	23.5	12354	25.4	12403	26.1
12438	26.6	12476	28.3	12576	32.2	12640	33.7	12711	33.6
12793	33	12887	33.7	12942	33.7	13025	34.7	13115	36.4

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	10656	.045	10831	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10656	10831	3750	3800	3800	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 2.88
Description: 2.88

Station Elevation Data, num = 49

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	36.5	10037	33.8	10101	32.1	10140	32	10197	31.1
10263	30.3	10334	29.4	10408	29.4	10486	30	10558	29.2
10623	27.6	10700	26	10788	23.4	10912	20.5	10972	18.5
11070	18.2	11222	18.2	11307	19.1	11353	19	11487	21.7
11592	23.2	11703	25.4	11775	20.6	11857	19	11970	16
12074	15.9	12170	15.9	12197	11.6	12210	9.19	12274	.89
12294	.2	12344	3.99	12363	9.19	12377	11.6	12427	13.3
12527	14.2	12649	13.8	12722	16.6	12818	20.9	12924	20
13036	21.2	13134	22.6	13291	27.4	13464	30	13657	31.8
13741	32.8	13810	34	13846	34.8	13877	36.5		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	12170	.045	12377	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12170	12377	2000	2006	1900	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 2.5
Description: 2.5

Station Elevation Data, num = 67

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	35.9	10066	29.4	10127	30.4	10193	31	10262	30.9
10336	33.3	10413	33.8	10480	32.6	10545	31.9	10617	31.7
10674	31.6	10764	30.8	10839	30.1	10922	29.1	10999	27.6
11098	28.8	11175	30.1	11222	30.1	11294	30.2	11335	27.8
11375	25.6	11416	24.3	11438	23.9	11487	23.4	11562	23.3
11643	22.5	11663	24.8	11697	23.6	11730	21.7	11769	20.5
11860	18.3	11963	18	12060	18.5	12145	18.5	12224	17.7
12295	17.9	12373	18.9	12448	19	12488	16.8	12547	16.4
12575	18.3	12599	18.9	12612	16.5	12632	9.42	12757	-2.58
12792	16.5	12860	16.6	13039	16.6	13214	17.3	13250	19.1
13298	22	13375	23.7	13470	25.1	13557	26.5	13667	29.2
13747	28.9	13846	28.5	13920	27.4	13999	28.4	14088	29.3
14173	31.7	14275	33	14339	33.1	14371	33.8	14417	34.5
14452	34.5	14491	35.6						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	12612	.045	12792	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12612	12792	205	205	205	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 2.46
Description: 2.46

Station Elevation Data, num = 67

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	35.9	10066	29.4	10127	30.4	10193	31	10262	30.9
10336	33.3	10413	33.8	10480	32.6	10545	31.9	10617	31.7
10674	31.6	10764	30.8	10839	30.1	10922	29.1	10999	27.6
11098	28.8	11175	30.1	11222	30.1	11294	30.2	11335	27.8
11375	25.6	11416	24.3	11438	23.9	11487	23.4	11562	23.3
11643	22.5	11663	24.8	11697	23.6	11730	21.7	11769	20.5
11860	18.3	11963	18	12060	18.5	12145	18.5	12224	17.7
12295	17.9	12373	18.9	12448	19	12488	16.8	12547	16.4
12575	18.3	12599	18.9	12612	16.5	12632	9.42	12757	-2.58
12792	16.5	12860	16.6	13039	16.6	13214	17.3	13250	19.1
13298	22	13375	23.7	13470	25.1	13557	26.5	13667	29.2
13747	28.9	13846	28.5	13920	27.4	13999	28.4	14088	29.3
14173	31.7	14275	33	14339	33.1	14371	33.8	14417	34.5
14452	34.5	14491	35.6						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	12612	.045	12792	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12612	12792	70	70	70	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 2.45
Description: 2.45

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Station Elevation Data,  num = 66
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    35.7   10095    32.5   10168    32.5   10264    32.5   10374    32.6
   10455    32.6   10550    32.7   10659    32.7   10782    32.8   10926    32.9
   11074      33   11156    33.1   11226      33   11310      33   11389    32.9
   11459    32.9   11550    33.1   11576   15.44   11670   13.63   11670   31.33
   11675    31.3   11675   13.12   11680   13.12   11698    9.58   11700    7.33
   11700    31.3   11705   31.33   11705    7.33   11765    -2.6   11765   29.89
   11771    29.9   11771   -6.51   11773    -7.5   11854    6.53   11860    9.54
   11870    11.3   11870   31.33   11875   31.33   11875   11.35   11885   14.33
   11885    31.3   11890   31.33   11890   15.33   12000    33.3   12044    33.4
   12150    33.4   12217    33.5   12320    33.5   12398    33.5   12468    33.4
   12558    33.3   12680    33.2   12792    33.2   12911    33.3   13016    33.3
   13092    33.3   13195    33.4   13291    33.4   13435    33.3   13583    33.4
   13725    33.3   13878    33.3   14023    33.4   14157    33.7   14217    34.1
   14356    35.9

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .28   11550    .045   12000     .28

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11550   12000               25      25      25             .3      .5

BRIDGE INPUT           Reach: 1              River Station: 2.445
Description: US-129 Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =      25
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 8
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   11550    33.1    33.1   11675    33.1    31.3   11705    33.1    31.3
   11765    33.1    29.9   11860    33.1    29.9   11870    33.1    31.3
   11890    33.1    31.3   12000    33.3    33.3
Downstream Deck/Roadway Coordinates,  num = 8
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   11550    33.1    33.1   11675    33.1    31.3   11705    33.1    31.3
   11765    33.1    29.9   11860    33.1    29.9   11870    33.1    31.3
   11890    33.1    31.3   12000    33.3    33.3
Elevation at which weir flow begins          =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1              River Station: 2.44
Description:  2.44

Station Elevation Data,  num = 66
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    35.7   10095    32.5   10168    32.5   10264    32.5   10374    32.6
   10455    32.6   10550    32.7   10659    32.7   10782    32.8   10926    32.9
   11074      33   11156    33.1   11226      33   11310      33   11389    32.9
   11459    32.9   11550    33.1   11576   15.44   11670   13.63   11670   31.33
   11675    31.3   11675   13.12   11680   13.12   11698    9.58   11700    7.33
   11700    31.3   11705   31.33   11705    7.33   11765    -2.6   11765   29.89
   11771    29.9   11771   -6.51   11773    -7.5   11854    6.53   11860    9.54
   11870    11.3   11870   31.33   11875   31.33   11875   11.35   11885   14.33
   11885    31.3   11890   31.33   11890   15.33   12000    33.3   12044    33.4
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   12150    33.4   12217    33.5   12320    33.5   12398    33.5   12468    33.4
   12558    33.3   12680    33.2   12792    33.2   12911    33.3   13016    33.3
   13092    33.3   13195    33.4   13291    33.4   13435    33.3   13583    33.4
   13725    33.3   13878    33.3   14023    33.4   14157    33.7   14217    34.1
   14356    35.9

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .28   11550    .045   12000     .28

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11550   12000              275     275     275            .3       .5

CROSS SECTION INPUT    Reach: 1             River Station: 2.39
Description:  2.39

Station Elevation Data,  num = 41
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    35.5   10081    30.3   10178      27   10304    28.9   10401    27.9
   10484    27.4   10594      24   10711    26.6   10793    24.5   10868    26.2
   10947    25.1   11042    21.4   11135    18.7   11207    19.1   11374    17.3
   11447    14.9   11866    16.7   11896    17.3   11922    18.6   11933    16.4
   11946    13.4   11956    8.79   12041   -5.21   12111    8.79   12123    16.4
   12156    16.6   12192    16.2   12267    16.4   12325    16.4   12371    16.2
   12394    16.3   12434    21.5   12470    25.2   12488    25.8   12522    26.4
   12569    26.9   12610    27.7   12671    28.5   12742    29.2   12814    30.2
   12862    35.5

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .28   11933    .045   12123     .28

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11933   12123             3000    4118    4300            .1       .3

CROSS SECTION INPUT    Reach: 1             River Station: 1.61
Description:  1.61

Station Elevation Data,  num = 30
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    35.5   10071    29.6   10159    29.6   10250    27.4   10331    23.7
   10382    20.9   10451    18.9   10520    18.1   10585    16.7   10640    17.9
   10697    19.3   10762    19.4   10820    19.1   10867    18.2   10931    19.1
   10979    20.9   11119    16.2   11147    9.24   11222   -3.46   11282  -10.46
   11317     9.2   11389    16.2   11507    19.1   11561    20.1   11607    25.4
   11666    27.9   11731    30.9   11783    32.1   11846    31.8   11894   35.59

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .28   11119    .045   11389     .28

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11119   11389                0       0       0            .1       .3
```

Profile Output Table - Standard Table 1

River Sta.	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
79.85	374.00	127.50	143.9		143.9	0.000000	0.01	34645.11	4225.53	0.00
79.1	374.00	137.00	143.9		143.9	0.000009	0.14	23620.46	11459.12	0.01
78.16	374.00	138.50	143.8		143.8	0.000034	0.22	27308.99	16601.50	0.02
76.67	374.00	138.00	143.0		143.0	0.001060	1.06	6954.20	14140.53	0.11
75.55	374.00	137.10	141.1		141.1	0.000145	0.42	3224.29	2818.42	0.04
75.15	374.00	133.70	140.8		140.8	0.000096	0.44	1498.35	768.87	0.04
75	374.00	133.70	140.7		140.7	0.000103	0.45	1438.09	751.55	0.04
74.98	374.00	132.30	140.6	137.5	140.7	0.005266	2.36	158.76	54.15	0.24
74.9750	Bridge									
74.97	374.00	132.30	140.6	137.5	140.7	0.005329	2.37	158.02	54.00	0.24
74.92	374.00	133.50	139.7		139.7	0.002737	2.21	1821.65	3462.85	0.19
74.35	374.00	133.40	139.3		139.3	0.000037	0.26	7141.12	5629.45	0.02
74.3	374.00	132.90	139.3		139.3	0.000017	0.21	7582.52	4383.03	0.02
74.28	374.00	133.50	139.3	137.2	139.3	0.004747	1.71	218.27	118.16	0.22
74.2749	Bridge									
74.27	374.00	133.50	139.3	137.3	139.3	0.004798	1.72	217.33	117.83	0.22
74.23	374.00	132.90	139.3		139.3	0.000017	0.20	9444.35	5726.27	0.02
74.04	374.00	132.90	139.3		139.3	0.000017	0.20	9348.96	5713.29	0.02
73.94	374.00	132.90	139.3		139.3	0.000012	0.17	16431.25	5485.41	0.01
73.36	2965.00	129.50	139.0		139.0	0.000241	0.89	15375.45	4308.48	0.06
73.32	2965.00	129.50	138.9		138.9	0.000251	0.91	15151.96	4284.41	0.06
73.31	2965.00	127.30	138.7	134.6	138.9	0.004566	2.81	1054.91	242.88	0.24
73.305	Bridge									
73.3	2965.00	127.30	137.8		138.0	0.008150	3.50	847.38	218.10	0.31
73.27	2965.00	124.10	137.7		137.7	0.000621	1.62	12137.10	3575.44	0.09
72.59	2965.00	119.10	132.2		132.5	0.007733	5.39	2729.94	1084.44	0.33
71.46	2965.00	114.40	127.2		127.2	0.000322	1.40	9414.06	2254.84	0.08
70.18	2965.00	110.70	124.6		124.7	0.000469	1.82	7341.63	1493.08	0.09
69.45	2965.00	108.70	121.5		121.6	0.002043	3.16	3564.86	959.02	0.19
69.38	2965.00	106.00	119.4	115.1	119.9	0.015510	5.71	519.68	81.24	0.39
69.375	Bridge									
69.37	2965.00	106.00	118.3		119.0	0.024153	6.81	435.67	71.28	0.49
69.22	2965.00	104.00	116.7		116.7	0.000874	2.61	5471.52	1114.14	0.13
68.72	2965.00	100.00	113.9		114.1	0.001501	3.55	3344.73	709.37	0.17
67.83	2965.00	96.40	111.4		111.4	0.000315	1.71	9622.53	1764.16	0.08
67.11	4665.00	93.70	109.5		109.6	0.000700	2.67	8124.97	1344.26	0.12
65.99	4665.00	88.00	107.1		107.2	0.000335	2.12	12308.94	1895.52	0.09
65.97	4665.00	88.00	106.9	99.4	107.0	0.007169	3.97	4465.26	2000.00	0.21
65.965	Bridge									
65.96	4665.00	88.00	105.8		106.3	0.017557	5.83	2300.47	1712.82	0.32
65.89	4665.00	88.00	105.3		105.4	0.000649	2.76	9098.26	1660.05	0.12
65.86	4665.00	88.00	105.2		105.3	0.000671	2.80	8958.20	1648.77	0.12
64.57	4665.00	86.00	99.8		99.9	0.001220	3.18	5726.40	1742.95	0.16
63.6	4665.00	83.50	93.8		93.8	0.001407	2.75	10863.24	3370.73	0.16
62.24	4665.00	80.50	91.1		91.1	0.000220	1.13	23633.30	3687.70	0.06
61.02	4665.00	75.30	90.5		90.5	0.000064	0.77	34915.22	4236.87	0.04

59.68	4665.00	71.10	89.9		89.9	0.000144	1.35	16979.74	2124.17	0.06
59.66	4665.00	72.60	89.8	79.2	89.9	0.001632	2.55	1829.26	160.05	0.13
59.655	Bridge									
59.65	4665.00	72.60	89.7		89.8	0.001678	2.58	1810.17	159.44	0.13
59.57	4665.00	71.10	89.6		89.6	0.000160	1.40	16230.49	2064.88	0.06
59.26	4665.00	71.10	89.3		89.3	0.000172	1.44	15726.45	2010.45	0.06
58.81	4665.00	66.80	89.0		89.0	0.000113	1.33	20153.86	2062.68	0.05
58.79	4665.00	69.00	88.9	77.2	89.0	0.001433	2.34	2821.36	1834.83	0.12
58.785	Bridge									
58.78	4665.00	69.00	88.3		88.4	0.001791	2.52	2069.19	510.96	0.13
58.7	4665.00	66.80	88.2		88.2	0.000143	1.45	18376.11	1995.13	0.06
58.15	4665.00	66.80	87.8		87.8	0.000160	1.52	17583.01	1979.38	0.06
57.21	8767.00	63.10	85.3		85.4	0.001654	4.83	9133.88	1111.82	0.19
56.22	8767.00	59.30	82.6		82.7	0.000314	2.80	12520.21	1463.95	0.12
55.99	8767.00	59.30	82.3		82.3	0.000346	2.89	11985.27	1453.03	0.13
55.96	8767.00	58.20	82.1	70.0	82.3	0.001209	3.15	8465.19	1933.56	0.15
55.955	Bridge									
55.95	8767.00	58.20	82.0		82.2	0.001254	3.19	8275.13	1915.59	0.15
55.83	8767.00	57.90	81.8		81.9	0.000201	2.37	22625.13	2781.40	0.10
54.27	8767.00	54.80	80.4		80.5	0.000242	2.55	23043.79	2588.24	0.10
53.44	8767.00	53.10	79.9		79.9	0.000124	2.15	23847.91	2160.33	0.08
51.87	8767.00	49.80	79.2		79.2	0.000083	1.88	39918.09	3430.60	0.06
49.61	25162.00	45.20	77.5		77.6	0.000279	3.77	33060.98	3572.80	0.13
49.48	25162.00	44.50	77.4		77.4	0.000130	2.55	45797.68	3530.09	0.09
49.46	25162.00	45.00	77.4	59.5	77.4	0.000246	2.03	48493.23	10000.00	0.08
49.455	Bridge									
49.45	25162.00	45.00	77.3		77.4	0.000249	2.04	48193.17	10000.00	0.08
49.38	25162.00	44.50	77.3		77.3	0.000133	2.57	45402.67	3502.62	0.09
49.31	25162.00	44.50	77.2		77.3	0.000134	2.58	45220.27	3489.86	0.09
49.29	25162.00	44.10	77.2	56.0	77.3	0.000252	2.41	25192.81	4576.06	0.09
49.285	Bridge									
49.28	25162.00	44.10	72.6		72.8	0.000650	3.43	8581.24	1653.60	0.14
49.19	25162.00	44.00	72.5		72.6	0.000209	2.96	34178.27	3152.68	0.11
48.04	25162.00	43.50	70.9		71.0	0.000521	4.42	28399.37	2259.43	0.17
46.59	25162.00	42.90	68.0		68.1	0.000354	3.61	27884.81	3679.43	0.14
45.48	25162.00	42.00	66.2		66.3	0.000357	3.57	28986.73	2021.35	0.14
44.02	23767.00	40.00	63.0		63.1	0.000857	5.12	25468.27	2259.89	0.21
42.54	23767.00	39.10	60.9		60.9	0.000212	2.35	56207.97	5197.38	0.10
41.67	23767.00	36.00	60.0		60.0	0.000239	2.83	46842.57	4401.16	0.11
41.63	23767.00	36.00	60.0		60.0	0.000242	2.84	46616.92	4394.73	0.11
41.62	23767.00	36.00	59.6	47.1	59.9	0.001548	4.79	4965.96	300.82	0.21
41.615	Bridge									
41.61	23767.00	36.00	59.5		59.9	0.001558	4.80	4953.59	300.66	0.21
41.56	23767.00	36.00	59.6		59.6	0.000198	2.53	56472.67	5020.04	0.10
40.91	23767.00	35.00	58.6		58.7	0.000456	4.12	27362.90	2027.82	0.16
39.81	32800.00	31.50	57.7		57.9	0.000097	3.39	31570.98	2270.23	0.12
39.02	32800.00	31.00	56.4		57.1	0.000448	7.10	10996.06	911.41	0.26
37.98	32800.00	30.70	55.9		56.0	0.000097	3.02	45437.23	3923.02	0.12
37.25	32569.00	31.60	55.6		55.7	0.000075	2.79	46527.21	3553.86	0.11
37.19	32569.00	31.60	55.6		55.6	0.000075	2.79	46446.32	3553.48	0.11
37.17	32569.00	31.00	55.1	41.9	55.6	0.000477	5.39	6047.50	332.49	0.22

37.165	Bridge									
37.16	32569.00	31.00	55.1		55.6	0.000480	5.40	6035.61	332.36	0.22
37.07	32569.00	31.60	55.2		55.3	0.000066	2.60	56649.09	4394.34	0.10
35.58	32569.00	30.50	54.6		54.7	0.000116	3.14	46809.27	6132.65	0.13
35.57	32569.00	30.50	54.6		54.7	0.000116	3.14	46795.09	6131.52	0.13
33.85	24427.00	39.90	53.8		53.8	0.000115	0.90	52077.06	5401.42	0.04
33.09	24427.00	31.00	53.2		53.2	0.000187	1.40	38095.45	3579.37	0.06
32.18	24427.00	30.50	52.3		52.3	0.000236	1.63	34343.79	3201.63	0.07
30.42	24427.00	33.00	50.9		50.9	0.000241	1.37	40179.97	4970.32	0.06
28.94	23206.00	27.40	49.3		49.5	0.000192	3.96	28710.78	3713.85	0.16
27.82	23206.00	27.40	48.8		48.8	0.000084	2.77	38682.34	4258.17	0.11
27.79	20910.00	27.40	48.8		48.8	0.000068	2.49	38658.16	4257.75	0.10
27.77	20910.00	26.20	48.3	36.2	48.8	0.000553	5.26	5067.33	2265.96	0.23
27.765	Bridge									
27.76	20910.00	26.20	48.0		48.5	0.000594	5.39	4452.27	1479.44	0.23
27.68	20910.00	28.30	48.1		48.2	0.000079	2.64	32579.24	3629.48	0.11
26.52	20910.00	23.20	47.6		47.7	0.000123	3.54	28314.73	3331.85	0.14
25.19	19587.00	25.43	46.8		46.9	0.000124	3.26	17350.41	1999.77	0.13
24.54	19587.00	16.26	46.4		46.5	0.000090	2.93	14634.74	1578.14	0.12
24.52	19587.00	16.26	46.4		46.5	0.000090	2.94	14613.92	1577.79	0.12
24.51	19587.00	16.30	45.9	33.0	46.4	0.000637	5.56	3563.24	497.42	0.24
24.505	Bridge									
24.5	19587.00	16.30	45.5		46.0	0.000689	5.71	3428.69	215.22	0.25
24.49	19587.00	16.26	45.7		45.8	0.000105	3.09	13455.35	1558.59	0.12
24.48	19587.00	22.60	44.4	35.9	45.5	0.002186	8.37	2339.44	159.46	0.39
24.475	Bridge									
24.47	19587.00	22.60	44.3		45.4	0.002208	8.41	2328.63	159.06	0.39
24.44	19587.00	16.30	44.6		45.0	0.000342	5.41	12005.65	1511.21	0.22
24.15	19587.00	22.45	43.8		44.3	0.000437	6.03	5673.19	606.97	0.25
23.82	19587.00	17.36	43.4		43.7	0.000260	4.83	11165.52	1192.13	0.20
23.14	19587.00	17.29	42.0		42.4	0.000521	6.14	11023.52	2009.61	0.26
22.24	19587.00	21.10	40.6		40.8	0.000232	4.05	9335.21	1203.57	0.18
21.59	19587.00	15.87	39.6		39.9	0.000313	5.07	10809.49	1271.74	0.21
20.44	19587.00	16.14	38.6		38.7	0.000132	3.42	20549.85	2111.34	0.14
19.62	16717.00	17.74	38.2		38.3	0.000070	2.48	21853.90	2282.46	0.10
18.49	16717.00	8.89	37.6		37.7	0.000160	3.57	23414.00	3007.22	0.15
17.78	16717.00	15.15	37.2		37.2	0.000124	2.44	28970.85	3800.11	0.10
17.28	16717.00	13.26	36.9		36.9	0.000089	2.30	28938.55	3345.96	0.09
16.53	16717.00	13.60	36.6		36.6	0.000085	2.28	35559.91	3895.76	0.09
15.75	16717.00	11.90	36.3		36.3	0.000058	1.73	35687.18	4933.65	0.07
15.72	16717.00	11.90	36.3		36.3	0.000058	1.73	35636.76	4930.14	0.07
15.71	16717.00	9.40	36.1	19.7	36.3	0.000296	3.02	11809.71	4415.82	0.13
15.705	Bridge									
15.7	16717.00	9.40	36.1		36.3	0.000297	3.02	11776.98	4411.13	0.13
15.66	16359.00	10.22	36.2		36.2	0.000071	2.21	35340.41	4844.70	0.08
15.08	16359.00	6.52	35.9		36.0	0.000080	2.26	25680.35	2520.03	0.09
14.08	**16359.00**	**10.50**	**35.5**		**35.5**	**0.000088**	**2.38**	**27647.80**	**3111.94**	**0.09**
13.03	16359.00	-5.45	35.1		35.2	0.000047	2.07	39322.95	3888.19	0.07
11.3	16359.00	7.00	34.8		34.9	0.000036	1.71	32640.31	2485.38	0.06
10.06	16359.00	1.81	34.5		34.6	0.000069	2.40	21015.61	2539.86	0.08
8.43	16359.00	-1.00	34.0		34.1	0.000053	2.23	34241.57	5652.46	0.07

7.64	16359.00	2.75	33.8		33.8	0.000063	2.23	35082.47	5108.93		0.08
6.46	16359.00	2.53	33.5		33.6	0.000039	1.82	37273.10	3822.68		0.06
4.73	16359.00	1.55	33.0		33.1	0.000067	2.35	27472.24	2335.94		0.08
3.6	16359.00	0.75	32.7		32.8	0.000047	2.04	33685.95	2490.91		0.07
2.88	16359.00	0.20	32.6		32.6	0.000039	1.84	39572.85	3640.80		0.06
2.5	16359.00	-2.58	32.5		32.5	0.000053	2.12	35456.80	4020.53		0.07
2.46	16359.00	-2.58	32.5		32.5	0.000053	2.12	35413.20	4018.22		0.07
2.45	16359.00	-7.50	32.5	8.0	32.5	0.000119	1.93	8472.71	443.87		0.08
2.445	Bridge										
2.44	16359.00	-7.50	32.4		32.5	0.000119	1.93	8467.26	443.77		0.08
2.39	16359.00	-5.21	32.4		32.5	0.000047	2.07	31703.86	2786.33		0.07
1.61	16359.00	-10.46	32.3	4.1	32.3	0.000036	1.80	22755.23	1813.08		0.06

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Davis, California 95616-4687
(916) 756-1104

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X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X       X   X     X  X    X
                      HEC-RAS Version 1.2 April 1996
X     X  X        X           X   X     X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X           X  X      X    X        X
X     X  X        X    X      X   X     X    X        X
X     X  XXXXXX    XXXX       X    X    X    X   XXXXX
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****

PROJECT DATA
Project Title: Santa Fe River - Ruiz
Project File : ruiz.prj
Run Date and Time: 11/21/2006 7:28:52 PM

Project in English units

****

PLAN DATA

Plan Title: Ruiz Residence Proposed
Plan File : c:\hec\ras\bbldat~1\ruiz.p05

Geometry Title: Ruiz Residence Proposed
Geometry File : c:\hec\ras\bbldat~1\ruiz.p05

Flow Title : Ruiz Residence Proposed
Flow File : c:\hec\ras\bbldat~1\ruiz.p05

Plan Summary Information:
Number of: Cross Sections = 144 Mulitple Openings = 0
Culverts = 0 Inline Weirs = 0
Bridges = 17

Computational Information
Water surface calculation tolerance = .01
Critical depth calculaton tolerance = .01
Maximum number of interations = 20
Maximum difference tolerance = .3
Flow tolerance factor = .001

Computational Flow Regime: Subcritical Flow

Encroachment Data: None

Flow Distribution Locations: None

****

FLOW DATA

Flow Title: 10,50,100, & 500 Year
Flow File : c:\hec\ras\bbldat~1\ruiz.f01

Flow Data (cfs)

Reach	Riv Sta	PF#1	PF#2	PF#3	PF#4
1	79.85	90	275	374	686
1	73.36	1344	2310	2965	4380
1	67.11	2690	3881	4665	6830
1	57.21	3103	6404	8767	12834
1	49.61	12824	20748	25162	36500
1	44.02	12268	19399	23767	35515
1	39.81	17113	26905	32800	46533
1	37.25	16995	26655	32569	46251
1	33.85	12746	19991	24427	34688
1	28.94	12109	18991	23206	32954
1	27.79	9705	16793	20910	32030
1	25.19	9264	15766	19587	29700
1	19.62	9192	13791	16717	22200
1	15.66	8457	13409	16359	22200

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**************************  **************************
Boundary Conditions
*****************************************************************************
* Reach        Profile *            Upstream                 Downstream    *
*****************************************************************************
* 1                 1 *                                  Known WS =  29.38 *
* 1                 2 *                                  Known WS =  31.25 *
* 1                 3 *                                  Known WS =  32.27 *
* 1                 4 *                                  Known WS =  35.23 *
*****************************************************************************

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

GEOMETRY DATA

Geometry Title: Ruiz Residence Proposed
Geometry File : c:\hec\ras\bbldat~1\ruiz.g04

CROSS SECTION INPUT    Reach: 1             River Station: 79.85
Description:  79.85

Station Elevation Data,  num = 32
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   150.1   10083   148.5   10201   146.4   10331   145.2   10440   143.8
   10521   143.2   10561   141.8   10629     140   11143   140.4   11295   140.2
   11457   144.4   11557   148.5   11627   148.4   11748     147   11769     140
   11850   131.1   12550   128.2   13150   127.5   13650   130.4   13892   139.9
   13914   145.9   14126   143.3   14320     143   14541   142.7   14768   142.4
   14881   139.8   15045   141.1   15178   144.7   15500   144.9   15600     145
   16050     146   16200     150

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11748    .089   13914     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
          11748   13914             4150    3960    3900            .1      .3

CROSS SECTION INPUT    Reach: 1             River Station: 79.1
Description:  79.1

Station Elevation Data,  num = 56
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   150.2   10079   148.3   10144   146.4   10214   145.1   10295   144.3
   10356   143.2   10459   142.5   10517   141.6   10634   141.6   10758   141.6
   10905     142   10995   142.2   11083     143   11152   144.2   11215   144.4
   11248   144.5   11288   143.5   11721   142.2   11751   141.1   11760     137
   11780   141.1   17280   141.1   21548   143.9   21579   143.9   21648     144
   21748   144.5   21848   144.2   21948   144.3   22048   143.6   22148   144.3
   22248   143.9   22348     143   22448   142.6   22548   144.1   22648   144.3
   22748   145.2   22848     145   22934   145.5   22948   145.4   23048   145.6
   23148   145.3   23248   145.3   23311   145.7   23319   144.5   23330   146.2
   23348   146.7   23448   146.9   23548     147   23648   147.1   23748   147.2
   23848   147.3   23948   147.7   24048   148.1   24148   148.8   24248   149.7
   24348   150.8

Manning's n Values,  num = 4
    Sta.   Value    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11751    .089   11780     .42   17280      99

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
          11751   11780             4800    4963    5500            .1      .3

CROSS SECTION INPUT    Reach: 1             River Station: 78.16
Description:  78.16

Station Elevation Data,  num = 40
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000     150   10108   148.2   10183   147.3   10296     146   10386   145.1
   10455     146   10536   146.2   10620   146.2   10681   146.1   10765   146.1
   10862   145.9   10940   145.4   11000     145   11073   144.3   11128   143.7
   11174     143   11175   142.1   11180   138.5   11200   142.1   18200   142.1
   26782   142.2   26998   141.6   27074   142.7   27170   143.9   27266   143.9
   27439   143.9   27534     142   27635   143.5   27769   143.2   27866   143.2
   27951   143.2   28031   144.2   28094   145.9   28165   146.8   28191   147.1
   28267   148.5   28318     149   28364   149.3   28400   149.6   28413   150.2

Manning's n Values,  num = 4
    Sta.   Value    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11175    .089   11200     .42   18200      99

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
          11175   11200             7300    7867    8200            .1      .3
```

CROSS SECTION INPUT Reach: 1 River Station: 76.67
Description: 76.67

Station Elevation Data, num = 28

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	150.1	10052	149	10119	148	10178	147.5	10203	146.9
10294	146.3	10377	145.8	10453	145	10542	144.3	10628	143.4
10727	142.8	10811	142.8	10840	142.1	10879	142.4	11077	142.4
11077	142.4	11090	138	11110	142.4	16100	142.4	16200	142.4
24749	142.8	24826	142.9	24898	144.2	24953	145.9	25015	147
25060	149	25102	150.5	25133	151.1				

Manning's n Values, num = 4

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11077	.089	11110	.42	16200	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11077	11110	4500	5914	7000	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 75.55
Description: 75.55

Station Elevation Data, num = 71

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	150.1	10073	149.7	10197	148.9	10343	147.9	10373	147.8
10442	147.8	10535	147	10645	146.4	10753	145.3	10842	143.9
10907	142.2	10997	142.2	11081	142.8	11176	142.7	11329	143.2
11453	143.2	11647	143.2	11767	142.3	11818	142.1	11865	142.9
11986	143.9	12095	143.9	12147	143.7	12226	143	12299	142
12344	140.7	12451	140.1	12539	139.5	12633	138.9	12721	139.3
12824	139.2	12960	139.1	13117	139.1	13180	137.1	13250	139.1
13769	140.5	13916	140.4	14044	140.4	14182	140.8	14262	140.4
14352	140.8	14414	141.4	14517	142.7	14639	143.6	14683	143.8
14787	143.8	14903	144.1	15021	144	15090	143.9	15133	144.6
15190	144.4	15270	144.3	15397	143.1	15514	141.1	15615	140.5
15714	139.7	15850	140.3	16041	140.3	16248	140.5	16260	141
16392	141.3	16491	141.9	16579	143.2	16709	144.3	16837	145.1
16962	145.8	17076	147	17184	147.4	17243	147.6	17320	149.1
17427	150.1								

Manning's n Values, num = 5

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	99	11176	.42	13117	.089	13485	.42	15397	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13117	13250	1950	2080	2250	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 75.15
Description: 75.15

Station Elevation Data, num = 60

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	150.4	10086	150	10179	149.5	10310	148.8	10421	148.6
10514	148.3	10664	149	10760	147.6	10853	147	10955	145.9
10977	146	11096	145.1	11189	143.9	11275	142.6	11358	141.5
11477	141.3	11596	141.8	11711	143.5	11826	142	11939	142
12104	142.8	12232	142.5	12345	142.2	12404	142.6	12519	142.5
12641	142.6	12721	143.8	12815	144.2	12937	143.6	13035	142.7
13153	142.8	13270	142.7	13346	143.1	13519	139.2	13590	133.7
13691	138.8	13924	141.8	14179	142.1	14385	139.1	14515	139.1
14536	139	14556	143.8	14581	140.7	14614	138.1	14640	138.8
14685	141.7	14817	142.3	14959	143	15121	143.9	15305	145.3
15474	147.3	15623	148.2	15758	149.2	15920	149.6	15997	149.8
16049	150.3	16098	150	16175	149.9	16224	149.9	16298	150

Manning's n Values, num = 5

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	99	12519	.42	13519	.089	13691	.42	14685	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13519	13691	692	792	840	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 75
Description: 75

Station Elevation Data, num = 60

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	150.4	10086	150	10179	149.5	10310	148.8	10421	148.6
10514	148.3	10664	149	10760	147.6	10853	147	10955	145.9
10977	146	11096	145.1	11189	143.9	11275	142.6	11358	141.5
11477	141.3	11596	141.8	11711	143.5	11826	142	11939	142
12104	142.8	12232	142.5	12345	142.2	12404	142.6	12519	142.5
12641	142.6	12721	143.8	12815	144.2	12937	143.6	13035	142.7
13153	142.8	13270	142.7	13346	143.1	13519	139.2	13590	133.7

13691	138.8	13924	[illegible]	14179	142.1	14385	139.1	14515	139.1
14536	139	14556	143.8	14581	140.7	14614	138.1	14640	138.8
14685	141.7	14817	142.3	14959	143	15121	143.9	15305	145.3
15474	147.3	15623	148.2	15758	149.2	15920	149.6	15997	149.8
16049	150.3	16098	150	16175	149.9	16224	149.9	16298	150

Manning's n Values, num = 5

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	99	12519	.42	13519	.089	13691	.42	14685	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13519	13691	125	125	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 74.98
Description: 74.98

Station Elevation Data, num = 98

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	147.5	10163	147.5	10347	148.1	10510	148.5	10692	148.4
10867	148.3	11000	148.5	11091	148.5	11173	148.5	11264	148.4
11354	148.3	11457	148.1	11537	147.5	11563	147.9	11627	147.4
11700	146.9	11767	146.3	11841	145.3	11902	145.1	11964	144.7
12029	144.5	12092	144.2	12149	144.1	12199	144.1	12226	144.1
12316	144.1	12411	144.3	12581	144.7	12746	144.4	12891	144.1
13048	143.7	13241	143.2	13387	142.8	13522	142.6	13698	142.5
13730	143.4	13733	141.4	13748	138.9	13749	138.91	13750	138.92
13751	138.9	13759	135.5	13760	135.5	13761	135.5	13762	135.5
13764	132.3	13769	135.5	13770	135.5	13771	135.51	13772	135.5
13780	138.9	13781	138.91	13782	138.92	13783	138.9	13796	141.4
13798	143.4	13877	142.5	13986	142.6	14091	143.2	14181	143.5
14270	143.7	14348	143.2	14436	143.2	14524	143	14616	143
14722	143.5	14769	143.5	14821	143.5	14872	143.5	14924	143.5
14971	143.4	15036	143.5	15082	143.6	15113	143.8	15169	143.6
15238	143.6	15308	143.6	15376	143.6	15461	143.5	15538	143.3
15606	143.5	15674	143.8	15728	144.2	15794	144	15880	143.9
15963	143.6	16047	143.3	16135	143.4	16261	143.3	16416	143.7
16549	143.6	16702	143.6	16842	143.9	16967	143.6	17566	144.8
18173	144.8	18992	143.9	19412	145				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	13730	.089	13798	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13730	13798	32	32	.3	.5

Ineffective Flow Areas, num = 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
10000	13730	143.4	13798	19412	143.4

BRIDGE INPUT Reach: 1 River Station: 74.9750
Description: SR-325 Bridge
Distance from Upstream XS = 0
Deck/Roadway Width = 32
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates, num = 8

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
13730	143.4	143.4	13733	143.4	141.4	13748	143.4	141.4
13759	143.4	141.4	13769	143.4	141.4	13780	143.4	141.4
13796	143.4	141.4	13798	143.4	143.4			

Downstream Deck/Roadway Coordinates, num = 8

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
13730	143.4	143.4	13733	143.4	141.4	13748	143.4	141.4
13759	143.4	141.4	13769	143.4	141.4	13780	143.4	141.4
13796	143.4	141.4	13798	143.4	143.4			

Elevation at which weir flow begins = 143.4
Maximum allowable submergence for weir flow = .95
Submergence criteria :Broad Crested

Number of Piers = 1

Pier Station Upstream= 13764 Downstream= 13764
Upstream Pier Data, num = 2

Elev.	Width	Elev.	Width
132.3	1.3	141.4	1.3

Downstream Pier Data, num = 2

Elev.	Width	Elev.	Width
132.3	1.3	141.4	1.3

Number of Bridge Coefficient Sets = 1

Low Flow Methods
Selected Low Flow Methods = Yarnell

High Flow Method
Pressure and Weir flow
Submerged Inlet Cd =
Submerged Inlet + Outlet Cd =.7905694
Max Low Cord = 141.4

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth
inside the bridge at the downstream end
Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT Reach: 1 River Station: 74.97
Description: 74.97

Station Elevation Data, num = 98

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	147.5	10163	147.5	10347	148.1	10510	148.5	10692	148.4
10867	148.3	11000	148.5	11091	148.5	11173	148.5	11264	148.4
11354	148.3	11457	148.1	11537	147.5	11563	147.9	11627	147.4
11700	146.9	11767	146.3	11841	145.3	11902	145.1	11964	144.7
12029	144.5	12092	144.2	12149	144.1	12199	144.1	12226	144.1
12316	144.1	12411	144.3	12581	144.7	12746	144.4	12891	144.1
13048	143.7	13241	143.2	13387	142.8	13522	142.6	13698	142.5
13730	143.4	13733	141.4	13748	138.9	13749	138.91	13750	138.92
13751	138.9	13759	135.5	13760	135.5	13761	135.5	13762	135.5
13764	132.3	13769	135.5	13770	135.5	13771	135.51	13772	135.5
13780	138.9	13781	138.91	13782	138.92	13783	138.9	13796	141.4
13798	143.4	13877	142.5	13986	142.6	14091	143.2	14181	143.5
14270	143.7	14348	143.2	14436	143.2	14524	143	14616	143
14722	143.5	14769	143.5	14821	143.5	14872	143.5	14924	143.5
14971	143.4	15036	143.5	15082	143.6	15113	143.8	15169	143.6
15238	143.6	15308	143.6	15376	143.6	15461	143.5	15538	143.3
15606	143.5	15674	143.8	15728	144.2	15794	144	15880	143.9
15963	143.6	16047	143.3	16135	143.4	16261	143.3	16416	143.7
16549	143.6	16702	143.6	16842	143.9	16967	143.6	17566	144.8
18173	144.8	18992	143.9	19412	145				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	13730	.089	13798	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13730	13798	300	250	.3	.5

Ineffective Flow Areas, num = 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
10000	13730	143.4	13798	19412	143.4

CROSS SECTION INPUT Reach: 1 River Station: 74.92
Description: 74.92

Station Elevation Data, num = 62

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	145.6	10002	145.6	10012	144	10016	144	10030	139.7
10062	139.6	10143	139.6	10204	139.6	10371	139.7	10450	139.6
10501	139.8	10610	139.6	10770	139.6	10798	139.8	10915	140.9
11031	141.6	11153	142.4	11289	142.4	11397	142	11432	141.2
11467	139.2	11516	139.1	11914	139.2	12403	138.9	12870	139
12930	139	12942	137.2	12951	133.5	12961	137.2	12980	138.4
13024	139.4	13028	139.2	13076	139.1	13343	138.9	13572	139.1
13627	139.1	13743	139.1	13843	139.1	13944	139.1	14066	139.2
14171	139.3	14278	139.5	14385	139.7	14484	139.8	14593	139.8
14690	140	14795	140	14893	140.2	14997	140.5	15096	141.2
15152	141.5	15240	141.9	15422	141.6	15598	140.9	15873	140.9
16377	140.9	16773	140.9	17241	140.9	17615	139.8	17755	140.5
18062	140.5	18234	145.5						

Manning's n Values, num = 5

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	99	11914	.42	12942	.089	12961	.42	13944	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12942	12961	3350	3009	2450	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 74.35
Description: 74.35

Station Elevation Data, num = 26

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	145	10133	139.9	10416	139.7	10868	136.9	11402	135.5
11619	139.7	11826	139.7	11971	138.9	12042	139	12271	139.2
12457	139.1	12619	139.3	12795	139.4	12980	138.2	13184	138.1
13311	137.5	13335	137.1	13535	137.1	13700	133.4	13811	137.1
14108	137.1	14261	137.4	14411	137.7	14547	138.5	16500	139.3
18000	145								

Manning's n Values, num = 5

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	99	12795	.42	13535	.089	13811	.42	14547	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13535	13811	265	265	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 74.3
Description: 74.3

Station Elevation Data, num = 12

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	140.5	13277	137.2	13364	137.1	13572	137	13778	135.3
13900	132.9	14066	135.3	14134	136.7	14308	136.8	14430	137.2
15486	138.6	15592	140						

Manning's n Values, num = 5

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	99	13277	.42	13778	.089	14066	.42	14430	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13778	14066	136	136	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 74.28
Description: 74.28

Station Elevation Data, num = 64

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	144.7	10313	144.5	10726	144	11107	143.8	11112	144.2
11122	144.2	11123	143.8	11410	143.6	11696	143.4	11923	143.3
12259	143.2	12634	143.1	12900	143.1	12910	140.4	12963	138.1
12964	138.1	12965	138	12966	138	12981	136.4	12982	136.38
12983	136.3	12984	136.2	12989	133.5	12993	136.2	12994	136.25
12995	136.3	12996	136.2	13014	136	13015	136.01	13017	136.02
13018	136	13026	137.9	13027	137.91	13028	137.92	13029	137.93
13075	140.4	13078	143	13088	143.05	13101	143.1	13313	143.1
13568	142.8	13910	143	14148	143	14371	143.2	14582	143
14852	142.8	15031	142.8	15199	142.8	15380	143	15528	143.2
15706	143.3	15800	143.3	15967	143.3	16095	143.8	16248	143.8
16384	144.1	16569	144.1	16843	144.3	17071	144.3	17282	144.7
17491	144.9	17678	145.1	17793	144.9	18085	144.6		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	12900	.089	13101	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12900	13101	13.5	13.5	.3	.5

Ineffective Flow Areas, num = 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
10000	12900	143	13101	18085	143

BRIDGE INPUT Reach: 1 River Station: 74.2749
Description: Railroad Bridge
Distance from Upstream XS = 0
Deck/Roadway Width = 13.5
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates, num = 9

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
12900	143.1	143.1	12910	143.1	140.4	12963	143.1	140.4
12981	143.1	140.4	12993	143.1	140.4	13014	143.1	140.4
13026	143.1	140.4	13075	143.1	140.4	13078	143.1	143.1

Downstream Deck/Roadway Coordinates, num = 9

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
12900	143.1	143.1	12910	143.1	140.4	12963	143.1	140.4
12981	143.1	140.4	12993	143.1	140.4	13014	143.1	140.4
13026	143.1	140.4	13075	143.1	140.4	13078	143.1	143.1

Elevation at which weir flow begins = 143
Maximum allowable submergence for weir flow = .95
Submergence criteria :Broad Crested

```
Number of Piers =  1

Pier Station     Upstream= 13000.5    Downstream= 13000.5
Upstream Pier Data,  num = 2
   Elev.   Width   Elev.   Width
*******************************
   133.5       8   140.4       8
Downstream Pier Data,  num = 2
   Elev.   Width   Elev.   Width
*******************************
   133.5       8   140.4       8

Number of Bridge Coefficient Sets =  1

Low Flow Methods
Selected Low Flow Methods = Yarnell

High Flow Method
       Pressure and Weir flow
           Submerged Inlet Cd          =
           Submerged Inlet + Outlet Cd =.7905694
           Max Low Cord                =   140.4

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1             River Station: 74.27
Description:  74.27

Station Elevation Data,  num = 64
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   144.7   10313   144.5   10726     144   11107   143.8   11112   144.2
   11122   144.2   11123   143.8   11410   143.6   11696   143.4   11923   143.3
   12259   143.2   12634   143.1   12900   143.1   12910   140.4   12963   138.1
   12964   138.1   12965     138   12966     138   12981   136.4   12982  136.38
   12983   136.3   12984   136.2   12989   133.5   12993   136.2   12994  136.25
   12995   136.3   12996   136.2   13014     136   13015  136.01   13017  136.02
   13018     136   13026   137.9   13027  137.91   13028  137.92   13029  137.93
   13075   140.4   13078     143   13088  143.05   13101   143.1   13313   143.1
   13568   142.8   13910     143   14148     143   14371   143.2   14582     143
   14852   142.8   15031   142.8   15199   142.8   15380     143   15528   143.2
   15706   143.3   15800   143.3   15967   143.3   16095   143.8   16248   143.8
   16384   144.1   16569   144.1   16843   144.3   17071   144.3   17282   144.7
   17491   144.9   17678   145.1   17793   144.9   18085   144.6

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   12900    .089   13101     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         12900   13101              200     200     200            .3      .5
Ineffective Flow Areas,  num = 2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
*********************************************
   10000   12900     143   13101   18085     143

CROSS SECTION INPUT    Reach: 1             River Station: 74.23
Description:  74.23

Station Elevation Data,  num = 12
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   140.5   12278     140   13364   137.1   13572     137   13778   135.3
   13900   132.9   14066   135.3   14134   136.7   14308   136.8   14430   137.2
   18000   138.6   18566     140

Manning's n Values,  num = 5
    Sta.   Value    Sta.   Value    Sta.   Value    Sta.   Value    Sta.   Value
   10000      99   12278     .42   13778    .089   14066     .42   14430      99

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         13778   14066             1000    1000    1000            .1      .3

CROSS SECTION INPUT    Reach: 1             River Station: 74.04
Description:  74.04

Station Elevation Data,  num = 12
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   140.5   12278     140   13364   137.1   13572     137   13778   135.3
   13900   132.9   14066   135.3   14134   136.7   14308   136.8   14430   137.2
   18000   138.6   18566     140
```

Manning's n Values, num = 5

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	99	12278	.42	13778	.089	14066	.42	14430	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13778	14066	550	528	525	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 73.94
Description: 73.94

Station Elevation Data, num = 37

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	140.7	10059	139	10214	138.2	10295	137.3	10328	136.3
10343	135.6	10453	135.3	10658	135.3	10905	135.3	11206	135.3
11496	135.3	11747	135.3	11938	135.3	12035	135.1	12110	135.3
12252	135.4	12367	135.5	12501	136	12665	137.7	12840	138
13145	137.2	13277	137.2	13364	137.1	13572	137	13778	135.3
13900	132.9	14066	135.3	14134	136.7	14308	136.8	14430	137.2
14516	138.1	14624	138.3	14714	135.8	15170	135.8	15324	138.3
15486	138.6	15592	140						

Manning's n Values, num = 5

Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value	Sta.	Value
10000	99	12840	.42	13778	.089	14066	.42	15170	99

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13778	14066	2062	3062	2000	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 73.36
Description: 73.36

Station Elevation Data, num = 57

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	140.1	10107	138.8	10252	137.6	10409	138.3	10575	139.2
10747	139.7	10875	138.9	11001	138.2	11180	137.2	11239	137
11376	136.7	11487	136.3	11493	133.2	11568	133.2	11656	136.1
11756	135.9	11813	136.4	11847	137.4	11876	134.2	11995	134.2
12017	137.9	12027	137.8	12049	133.6	12150	133.6	12163	137.7
12177	137.6	12191	133.4	12225	129.5	12304	133.4	12330	137.5
12343	137.4	12352	133.8	12451	133.8	12469	135.3	12480	135.7
12492	132.5	12569	132.5	12595	135.6	12606	135.9	12612	132.7
12696	133.5	12822	134.2	12968	134.3	13056	134.2	13178	133.7
13296	134	13418	134	13515	133.9	13636	133.9	13772	134.8
13927	134.2	14076	134.3	14235	135.3	14411	135.9	14551	137.6
14694	137.7	14791	140.4						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	12177	.089	12330	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12177	12330	211	211	211	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 73.32
Description: 73.32

Station Elevation Data, num = 57

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	140.1	10107	138.8	10252	137.6	10409	138.3	10575	139.2
10747	139.7	10875	138.9	11001	138.2	11180	137.2	11239	137
11376	136.7	11487	136.3	11493	133.2	11568	133.2	11656	136.1
11756	135.9	11813	136.4	11847	137.4	11876	134.2	11995	134.2
12017	137.9	12027	137.8	12049	133.6	12150	133.6	12163	137.7
12177	137.6	12191	133.4	12225	129.5	12304	133.4	12330	137.5
12343	137.4	12352	133.8	12451	133.8	12469	135.3	12480	135.7
12492	132.5	12569	132.5	12595	135.6	12606	135.9	12612	132.7
12696	133.5	12822	134.2	12968	134.3	13056	134.2	13178	133.7
13296	134	13418	134	13515	133.9	13636	133.9	13772	134.8
13927	134.2	14076	134.3	14235	135.3	14411	135.9	14551	137.6
14694	137.7	14791	140.4						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	12177	.089	12330	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12177	12330	50	50	50	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 73.31
Description: 73.31

Station Elevation Data, num = 45

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.

10000	139.1	10079	138.9	10196	139.3	10338	139.6	10498	139
10645	139.6	10754	139.5	10838	139.3	10872	139.1	10899	139.1
10976	139	11053	139	11060	139.14	11116	139.7	11120	138.3
11146	135.9	11146	138.3	11148	138.3	11148	135.6	11174	127.3
11228	134.7	11228	138.3	11234	138.3	11234	134.7	11288	135
11288	138.3	11291	138.3	11291	135.1	11344	136	11344	138.3
11348	138.3	11348	136.3	11361	138.3	11363	139.7	11410	139.3
11524	139.1	11683	139.1	11810	139.3	11926	139.1	12070	139.6
12202	139.5	12340	139.4	12518	139.5	12677	139.6	12848	140

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11116	.089	11363	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11116	11363	75	75	.3	.5

BRIDGE INPUT Reach: 1 River Station: 73.305
Description: US-301 Bridges
Distance from Upstream XS = 0
Deck/Roadway Width = 75
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates, num = 8

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
11116	139.7	139.7	11120	139.7	138.3	11146	139.7	138.3
11228	139.7	138.3	11288	139.7	138.3	11344	139.7	138.3
11361	139.7	138.3	11363	139.7	139.7			

Downstream Deck/Roadway Coordinates, num = 8

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
11116	139.7	139.7	11120	139.7	138.3	11146	139.7	138.3
11228	139.7	138.3	11288	139.7	138.3	11344	139.7	138.3
11361	139.7	138.3	11363	139.7	139.7			

Elevation at which weir flow begins =
Maximum allowable submergence for weir flow = .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods
Energy
Momentum Cd = 0
Yarnell KVal =
W.S. Pro Method CVal =
Selected Low Flow Methods = Energy

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth
inside the bridge at the downstream end
Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT Reach: 1 River Station: 73.3
Description: 73.3

Station Elevation Data, num = 45

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	139.1	10079	138.9	10196	139.3	10338	139.6	10498	139
10645	139.6	10754	139.5	10838	139.3	10872	139.1	10899	139.1
10976	139	11053	139	11060	139.14	11116	139.7	11120	138.3
11146	135.9	11146	138.3	11148	138.3	11148	135.6	11174	127.3
11228	134.7	11228	138.3	11234	138.3	11234	134.7	11288	135
11288	138.3	11291	138.3	11291	135.1	11344	136	11344	138.3
11348	138.3	11348	136.3	11361	138.3	11363	139.7	11410	139.3
11524	139.1	11683	139.1	11810	139.3	11926	139.1	12070	139.6
12202	139.5	12340	139.4	12518	139.5	12677	139.6	12848	140

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11116	.089	11363	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11116	11363	150	150	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 73.27
Description: 73.27

Station Elevation Data, num = 73

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	139.4	10092	137.1	10160	137.4	10255	136.8	10344	136.3
10413	136.1	10507	135.4	10585	134	10661	133.6	10775	133.3
10832	134	10929	133.8	11012	132	11029	132	11076	132.3
11137	132.5	11222	132.4	11293	133	11367	132.8	11374	132.8
11470	132.4	11575	131.3	11682	131.5	11718	131.9	11723	131
11730	124.1	11739	131	11778	131.2	11851	131.4	11873	132.1
11928	132.7	12009	134	12135	134.1	12316	134.3	12450	134.7
12564	135.4	12566	134.3	12568	134.3	12570	136.1	12574	136.2
12582	136.6	12592	136.3	12595	134.8	12597	134.7	12606	135.4
12627	136.2	12697	136.1	12778	136.1	12860	135.4	12907	135.1
12950	134.8	13030	134.6	13107	134.8	13210	135.3	13326	135.6
13429	135.7	13529	136.3	13615	137.4	13630	137.8	13641	136.4
13644	136.4	13648	138	13653	138.9	13660	138.9	13671	138.6
13683	137.8	13724	137.8	13780	137.9	13841	138	13883	138.2
14007	138.9	14132	139.6	14265	140				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11723	.089	11739	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11723	11739	3300	3590	3550	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 72.59
Description: 72.59

Station Elevation Data, num = 22

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	138.2	10010	138.2	10031	132.8	10033	132.8	10044	135
10052	134.8	10054	134.6	10090	134	10323	129.9	10506	129.8
10630	129.7	10778	129.5	10788	129.1	10800	119.1	10824	129.1
10855	129.2	10896	129.3	10972	129.4	11073	129.5	11190	129.9
11367	134.8	11512	136.1						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	10788	.089	10824	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10788	10824	5850	5966	5650	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 71.46
Description: 71.46

Station Elevation Data, num = 42

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	131.7	10089	129.9	10171	129.1	10193	127.2	10224	126.9
10322	127	10341	127.2	10362	128.4	10392	129.1	10407	128.7
10426	128	10502	127.6	10587	127.3	10670	127.6	10781	128.2
10871	127.6	10975	127.4	11090	127.1	11192	126.9	11357	124.6
11534	124.5	11596	123.6	11768	122.7	11802	120.3	11850	120.2
11948	119.7	12135	119.7	12217	119.4	12220	119.7	12250	114.4
12311	119.4	12397	119.8	12421	121.1	12502	122	12589	123
12655	122.9	12765	123.5	12917	123.5	13030	124.4	13136	126
13204	128.8	13234	131						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	12217	.089	12311	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12217	12311	6350	6758	6700	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 70.18
Description: 70.18

Station Elevation Data, num = 38

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	125.2	10015	125.2	10017	124.3	10019	124.3	10024	125.7
10027	125.8	10043	124.3	10094	124.1	10134	124.2	10155	124.5
10172	124.6	10207	123.3	10262	122.6	10352	121.3	10444	119.9
10534	118.5	10578	117.9	10595	115.9	10625	114.4	10669	114.2
10706	114.7	10725	115.5	10746	115.6	10756	112.7	10770	110.7
10783	112.7	10803	116.3	10832	116.5	10878	115.8	10913	116.1
10945	116.7	11006	117.5	11071	118.4	11128	119.7	11213	120.8
11320	121.7	11500	123.6	11572	126.2				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	10746	.089	10803	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10746	10803	3400	3854	3200	.1	.3

```
CROSS SECTION INPUT    Reach: 1              River Station: 69.45
Description:  69.45

Station Elevation Data,  num = 38
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   125.2   10015   125.2   10017   124.3   10019   124.3   10024   125.7
   10027   125.8   10043   124.3   10094   124.1   10134   124.2   10155   124.5
   10172   124.6   10207   123.3   10262   122.6   10352   121.3   10444   119.9
   10534   118.5   10578   117.9   10595   115.9   10625   114.4   10669   114.2
   10706   114.7   10725   115.5   10746   115.6   10756   112.7   10770   108.7
   10783   112.7   10803   116.3   10832   116.5   10878   115.8   10913   116.1
   10945   116.7   11006   117.5   11071   118.4   11128   119.7   11213   120.8
   11320   121.7   11500   123.6   11572   126.2

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   10746    .089   10803     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         10746   10803              370     370     370            .1       .3

CROSS SECTION INPUT    Reach: 1              River Station: 69.38
Description:  69.38

Station Elevation Data,  num = 53
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   130.3   10088   129.7   10123   129.5   10126   130.4   10128   130.4
   10129   129.3   10130   129.3   10132   130.2   10133   130.2   10135   129.5
   10161   128.6   10227   128.1   10320   127.3   10411   126.4   10475   125.2
   10508   124.9   10514   124.9   10527     126   10533     126   10596     124
   10625   121.8   10629   121.8   10649   122.5   10674   122.7   10738   119.6
   10765   119.4   10847   121.3   10942   121.5   10964     122   11047   121.7
   11155     122   11278   122.5   11399   123.2   11477   122.8   11500   122.5
   11550   123.4   11551   122.2   11582   112.8   11582   121.4   11585   121.4
   11585   112.5   11600     106   11616   110.1   11616   121.4   11619   121.4
   11619   110.5   11650   121.4   11652   123.4   11750   123.3   11829     125
   11927   127.5   12022   130.2   12208   135.4

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11550    .089   11652     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11550   11652               30      30      30            .3       .5

BRIDGE INPUT           Reach: 1              River Station: 69.375
Description: SR-200A Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =      30
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   11550   123.4   123.4   11551   123.4   122.2   11582   123.4   121.4
   11616   123.4   121.4   11650   123.4   121.4   11652   123.4   123.4
Downstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   11550   123.4   123.4   11551   123.4   122.2   11582   123.4   121.4
   11616   123.4   121.4   11650   123.4   121.4   11652   123.4   123.4
Elevation at which weir flow begins          =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface
```

CROSS SECTION INPUT Reach: 1 River Station: 69.37
Description: 69.37

Station Elevation Data, num = 53

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	130.3	10088	129.7	10123	129.5	10126	130.4	10128	130.4
10129	129.3	10130	129.3	10132	130.2	10133	130.2	10135	129.5
10161	128.6	10227	128.1	10320	127.3	10411	126.4	10475	125.2
10508	124.9	10514	124.9	10527	126	10533	126	10596	124
10625	121.8	10629	121.8	10649	122.5	10674	122.7	10738	119.6
10765	119.4	10847	121.3	10942	121.5	10964	122	11047	121.7
11155	122	11278	122.5	11399	123.2	11477	122.8	11500	122.5
11550	123.4	11551	122.2	11582	112.8	11582	121.4	11585	121.4
11585	112.5	11600	106	11616	110.1	11616	121.4	11619	121.4
11619	110.5	11650	121.4	11652	123.4	11750	123.3	11829	125
11927	127.5	12022	130.2	12208	135.4				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11550	.089	11652	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11550	11652	792	792	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 69.22
Description: 69.22

Station Elevation Data, num = 25

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	127.4	10093	122.8	10176	120.5	10324	118.5	10419	115.8
10578	114.9	10669	114.7	10791	112.8	10889	110.1	10972	107
11007	107.1	11016	105	11030	104	11053	105	11076	107.2
11106	108.5	11200	109.3	11323	110.4	11385	112.7	11460	114.9
11500	116.6	11563	118.7	11667	119.2	11771	119.5	11849	121.2

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11016	.089	11053	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11016	11053	2000	2640	2200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 68.72
Description: 68.72

Station Elevation Data, num = 25

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	127.4	10093	122.8	10176	120.5	10324	118.5	10419	115.8
10578	114.9	10669	114.7	10791	112.8	10889	110.1	10972	103.8
11007	103.9	11016	102	11030	100	11053	102	11076	107.2
11106	108.5	11200	109.3	11323	110.4	11385	112.7	11460	114.9
11500	116.6	11563	118.7	11667	119.2	11771	119.5	11849	121.2

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11016	.089	11053	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11016	11053	4150	4699	4300	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 67.83
Description: 67.83

Station Elevation Data, num = 47

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	120.7	10131	118.8	10257	118.3	10407	116.7	10555	115.4
10784	114.8	11077	112	11420	111.6	11528	110.9	11730	109.2
11842	107.8	11886	106.1	11991	102.7	12096	100.8	12154	100.7
12189	100.8	12217	100.4	12226	98.4	12242	96.4	12262	98.4
12270	104.7	12276	105.6	12293	104.6	12319	103.7	12349	101.6
12380	101.1	12415	100.8	12429	100.8	12454	101.6	12489	102.4
12524	103.9	12622	105.2	12704	106.8	12789	108.7	12893	108.1
12966	107.8	13021	107.7	13104	107.7	13164	108.3	13202	109.3
13227	112.6	13240	114.1	13252	115	13263	115	13307	116
13374	118.1	13437	120.2						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	12226	.089	12262	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12226	12262	3600	3802	3550	.1	.3

```
CROSS SECTION INPUT    Reach: 1              River Station: 67.11
Description:  67.11

Station Elevation Data,  num = 29
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   118.5   10079   116.2   10215   115.4   10300   113.7   10408   112.4
   10458   106.7   10572   104.9   10706   103.1   10765    99.3   10817    99.3
   10832    99.1   10853    99.8   10882    99.2   10887    95.7   10910    93.7
   10942    95.6   10948    98.5   10992    98.2   11022    97.8   11027    99.5
   11089   102.4   11154     103   11231   104.1   11497     105   11614   107.1
   11754   108.8   11876   112.6   11988   116.5   12148   120.5

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   10887    .089   10942     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         10887   10942             4500    5914    4800            .1       .3

CROSS SECTION INPUT    Reach: 1              River Station: 65.99
Description:  65.99

Station Elevation Data,  num = 50
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   111.7   10040   110.9   10052     110   10056   109.8   10057   110.9
   10105   110.6   10227   108.1   10361   106.3   10467   105.2   10506   104.7
   10524   104.4   10638   102.7   10764   100.8   10875   100.5   10930   100.4
   11046    97.6   11124    97.9   11173    98.9   11236    99.7   11292   100.5
   11332   100.9   11364    99.6   11383    98.8   11407      97   11462    97.2
   11485    98.5   11503    98.5   11519      96   11536    93.7   11558    93.1
   11576    95.7   11596    99.7   11622     100   11634   101.2   11679   100.1
   11699    99.7   11716    98.1   11719    89.5   11740      88   11765    89.5
   11785    94.9   11802    96.6   11856    98.9   11906   101.7   11995   102.4
   12077   104.3   12136   105.9   12222   107.7   12329   109.2   12433     111

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11719    .089   11765     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11719   11765              130     130     130            .1       .3

CROSS SECTION INPUT    Reach: 1              River Station: 65.97
Description:  65.97

Station Elevation Data,  num = 19
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000     106   11500   103.7   11550   106.2   11565    94.7   11565   104.9
   11566   104.9   11566    94.5   11581      88   11581     105   11582     105
   11582    88.5   11598      92   11598   104.9   11599   104.9   11599    92.2
   11615   104.9   11617   106.2   11667   104.6   12000     106

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11550    .089   11617     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11550   11617               25      25      25            .3       .5

BRIDGE INPUT           Reach: 1              River Station: 65.965
Description: County Road Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =      25
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   11550   106.2   106.2   11565   106.2   104.9   11581   106.3     105
   11598   106.2   104.9   11615   106.2   104.9   11617   106.2   106.2
Downstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   11550   106.2   106.2   11565   106.2   104.9   11581   106.3     105
   11598   106.2   104.9   11615   106.2   104.9   11617   106.2   106.2
Elevation at which weir flow begins          =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
```

```
      Yarnell                KVal =
      W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
      Energy Only

Additional Bridge Parameters
      Add Friction component to Momentum
      Do not add Weight component to Momentum
      Class B flow critical depth computations use critical depth
          inside the bridge at the downstream end
      Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1              River Station: 65.96
Description:  65.96

Station Elevation Data,  num = 19
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000     106   11500   103.7   11550   106.2   11565    94.7   11565   104.9
   11566   104.9   11566    94.5   11581      88   11581     105   11582     105
   11582    88.5   11598      92   11598   104.9   11599   104.9   11599    92.2
   11615   104.9   11617   106.2   11667   104.6   12000   106.7

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11550    .089   11617     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11550   11617              370     370     370             .3      .5

CROSS SECTION INPUT    Reach: 1              River Station: 65.89
Description:  65.89

Station Elevation Data,  num = 50
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   111.7   10040   110.9   10052     110   10056   109.8   10057   110.9
   10105   110.6   10227   108.1   10361   106.3   10467   105.2   10506   104.7
   10524   104.4   10638   102.7   10764   100.8   10875   100.5   10930   100.4
   11046    97.6   11124    97.9   11173    98.9   11236    99.7   11292   100.5
   11332   100.9   11364    99.6   11383    98.8   11407      97   11462    97.2
   11485    98.5   11503    98.5   11519      96   11536    93.7   11558    93.1
   11576    95.7   11596    99.7   11622     100   11634   101.2   11679   100.1
   11699    99.7   11716    98.1   11719    89.5   11740      88   11765    89.5
   11785    94.9   11802    96.6   11856    98.9   11906   101.7   11995   102.4
   12077   104.3   12136   105.9   12222   107.7   12329   109.2   12433     111

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11719    .089   11765     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11719   11765              100     158      90             .1      .3

CROSS SECTION INPUT    Reach: 1              River Station: 65.86
Description:  65.86

Station Elevation Data,  num = 50
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   111.7   10040   110.9   10052     110   10056   109.8   10057   110.9
   10105   110.6   10227   108.1   10361   106.3   10467   105.2   10506   104.7
   10524   104.4   10638   102.7   10764   100.8   10875   100.5   10930   100.4
   11046    97.6   11124    97.9   11173    98.9   11236    99.7   11292   100.5
   11332   100.9   11364    99.6   11383    98.8   11407      97   11462    97.2
   11485    98.5   11503    98.5   11519      96   11536    93.7   11558    93.1
   11576    95.7   11596    99.7   11622     100   11634   101.2   11679   100.1
   11699    99.7   11716    98.1   11719    89.5   11740      88   11765    89.5
   11785    94.9   11802    96.6   11856    98.9   11906   101.7   11995   102.4
   12077   104.3   12136   105.9   12222   107.7   12329   109.2   12433     111

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11719    .089   11765     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11719   11765             5500    6811    4600             .1      .3

CROSS SECTION INPUT    Reach: 1              River Station: 64.57
Description:  64.57

Station Elevation Data,  num = 20
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   102.8   10127   101.9   10239     101   10374    97.8   10571    97.7
   10829    97.7   11061      95   11068      88   11100      86   11151      88
```

11166	95.2	11565	95.2	11599	96.6	11654	97.3	11710	97.2
11778	97.9	11866	98.2	11941	99	12018	99.1	12063	100.9

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11068	.089	11151	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11068	11151	4400	5122	3900	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 63.6
Description: 63.6

Station Elevation Data, num = 33

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	101.6	10044	100.8	10183	90	10313	88.9	10483	88.8
10506	88.8	10608	88.7	10768	88.7	10830	88.6	11048	88.1
11205	88.4	11306	88.8	11422	88.1	11443	85.5	11460	83.5
11481	85.5	11490	88.1	11519	88.2	11635	89	11793	89.5
12193	92	12531	92.2	12584	92.5	12639	92.7	12696	92.9
12753	93	12839	93.1	13000	93.2	13200	93.3	13471	93.4
13685	95.7	13745	98.1	13833	100				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11443	.089	11481	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11443	11481	5500	7180	5900	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 62.24
Description: 62.24

Station Elevation Data, num = 38

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	103.7	10066	100.2	10139	95.3	10172	94.4	10225	91.1
10256	89.9	10288	86.7	10353	85.4	10769	85.1	11012	84.8
11127	84.5	11385	84.4	11510	84.6	11603	85.4	11651	85.2
11698	86.4	11738	86.5	11758	85.3	11770	84.4	11771	82.2
11790	80.5	11806	82.2	11812	84.4	11871	84.3	12099	84.6
12288	84.5	12541	84.2	12803	84.3	13121	83.8	13343	83.9
13511	83.8	13661	83.9	13731	84.2	13775	84.9	13819	85.4
13880	89.8	14009	95	14125	102.1				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11771	.089	11806	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11771	11806	5400	6442	5000	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 61.02
Description: 61.02

Station Elevation Data, num = 77

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	113.2	10101	111.2	10208	107.6	10305	105.2	10393	102.1
10461	85	10559	84	10659	83	10699	82	10733	80.5
11409	80	11437	80.5	11482	79.7	11508	79.7	11539	80
11564	80.3	11607	80.7	11654	81.2	11703	81.1	11776	80
11829	80	11878	79.5	11917	79.6	11933	79.7	11941	77.3
11950	75.3	11958	77.3	11964	78.9	11995	78.7	12019	78.4
12067	78	12074	78.1	12080	77.3	12103	77.1	12110	77.9
12154	78.3	12287	78.1	12300	77.3	12367	77.3	12382	77.6
12481	77.5	12613	78.7	12677	80.1	12747	79.8	12907	79.7
12978	79.8	12991	79.2	13050	79.2	13089	80.1	13138	83.2
13169	83.7	13231	84.3	13311	84.4	13404	84.1	13460	81.9
13468	82.1	13505	82.7	13513	81.6	13533	81.4	13543	82.7
13590	83.6	13659	84.3	13744	85.9	13853	86.3	13924	85.6
13979	85.9	14031	88.7	14138	89.9	14231	91.3	14267	91
14381	89.4	14507	87.8	14600	87.6	14759	89.8	14906	92.9
15026	96.6	15146	100.6						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11941	.089	11958	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11941	11958	6000	7075	6700	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 59.68
Description: 59.68

Station Elevation Data, num = 90

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	102.1	10084	99.4	10164	98.1	10217	97.4	10253	98.1
10303	98.8	10351	99	10416	98.5	10498	97.8	10578	96.8
10647	96	10720	94.7	10802	94.4	10884	94.1	10976	93.2
11071	91.7	11131	90.5	11183	88.4	11231	88.9	11274	90.3
11330	90.3	11440	88.9	11501	88.6	11540	88.5	11645	86.4
11689	85.7	11695	85.5	11704	83.9	11732	83.2	11749	82.5
11798	80.7	11840	79.2	11882	79	11905	78.5	11931	75.8
11943	74.3	11960	73.8	11980	71.1	12021	73.7	12031	76
12046	75.9	12060	74.7	12073	73.8	12099	73.8	12106	75.6
12125	76	12153	75.8	12186	75.7	12249	76.2	12328	76.1
12400	76.9	12476	79.1	12526	80	12585	79.6	12658	80.4
12728	80.4	12810	81.4	12849	81.8	12854	82.5	12858	81.5
12867	81.5	12876	81.5	12892	82	12899	80.1	12911	80.1
12915	82.4	12923	82.7	12932	83.1	12941	81.6	12955	81.4
12968	82.7	12983	84.8	12992	84.5	13002	83.7	13020	82.2
13058	82.4	13106	82.4	13138	83.4	13169	85	13202	87.7
13224	88.8	13243	88.3	13263	88.2	13288	88.2	13314	89.1
13357	89.6	13438	92.6	13539	96.2	13621	98.3	13720	100.1

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11960	.089	12021	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11960	12021	100	100	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 59.66
Description: 59.66

Station Elevation Data, num = 40

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	102.3	10059	102.2	10117	101.7	10198	101.7	10282	101.3
10350	101.1	10425	100.2	10476	99.9	10569	98.7	10645	98.1
10729	97.6	10782	97	10831	97	10865	97.9	10867	96.5
10916	76.8	10916	94.6	10919	94.6	10919	76.8	10967	72.6
10967	72.6	10968	72.6	10968	94.4	10971	94.4	10971	72.7
11020	78.1	11020	94.1	11023	94.1	11023	78.2	11063	93.8
11065	96.8	11149	96.8	11248	96.4	11359	96	11459	95.4
11563	94.6	11686	95.2	11791	96.9	11900	98.8	12007	102.5

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	10865	.089	11065	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10865	11065	50	50	.3	.5

BRIDGE INPUT Reach: 1 River Station: 59.655
Description: SR-231/235 Bridge
Distance from Upstream XS = 0
Deck/Roadway Width = 50
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates, num = 7

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
10865	97.9	97.9	10867	97.9	96.5	10916	97.7	94.6
10968	97.5	94.4	11020	97.2	94.1	11063	96.9	93.8
11065	96.8	96.8						

Downstream Deck/Roadway Coordinates, num = 7

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
10865	97.9	97.9	10867	97.9	96.5	10916	97.7	94.6
10968	97.5	94.4	11020	97.2	94.1	11063	96.9	93.8
11065	96.8	96.8						

Elevation at which weir flow begins =
Maximum allowable submergence for weir flow = .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods
Energy
Momentum Cd = 0
Yarnell KVal =
W.S. Pro Method CVal =
Selected Low Flow Methods = Energy

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum

```
      Do not add Weight component to Momentum
      Class B flow critical depth computations use critical depth
          inside the bridge at the downstream end
      Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1              River Station: 59.65
Description:  59.65

Station Elevation Data,  num = 40
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   102.3   10059   102.2   10117   101.7   10198   101.7   10282   101.3
   10350   101.1   10425   100.2   10476    99.9   10569    98.7   10645    98.1
   10729    97.6   10782      97   10831      97   10865    97.9   10867    96.5
   10916    76.8   10916    94.6   10919    94.6   10919    76.8   10967    72.6
   10967    72.6   10968    72.6   10968    94.4   10971    94.4   10971    72.7
   11020    78.1   11020    94.1   11023    94.1   11023    78.2   11063    93.8
   11065    96.8   11149    96.8   11248    96.4   11359      96   11459    95.4
   11563    94.6   11686    95.2   11791    96.9   11900    98.8   12007   102.5

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   10865    .089   11065     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         10865   11065              400     400     400             .3       .5

CROSS SECTION INPUT    Reach: 1              River Station: 59.57
Description:  59.57

Station Elevation Data,  num = 90
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   102.1   10084    99.4   10164    98.1   10217    97.4   10253    98.1
   10303    98.8   10351      99   10416    98.5   10498    97.8   10578    96.8
   10647      96   10720    94.7   10802    94.4   10884    94.1   10976    93.2
   11071    91.7   11131    90.5   11183    88.4   11231    88.9   11274    90.3
   11330    90.3   11440    88.9   11501    88.6   11540    88.5   11645    86.4
   11689    85.7   11695    85.5   11704    83.9   11732    83.2   11749    82.5
   11798    80.7   11840    79.2   11882      79   11905    78.5   11931    75.8
   11943    74.3   11960    73.8   11980    71.1   12021    73.7   12031      76
   12046    75.9   12060    74.7   12073    73.8   12099    73.8   12106    75.6
   12125      76   12153    75.8   12186    75.7   12249    76.2   12328    76.1
   12400    76.9   12476    79.1   12526      80   12585    79.6   12658    80.4
   12728    80.4   12810    81.4   12849    81.8   12854    82.5   12858    81.5
   12867    81.5   12876    81.5   12892      82   12899    80.1   12911    80.1
   12915    82.4   12923    82.7   12932    83.1   12941    81.6   12955    81.4
   12968    82.7   12983    84.8   12992    84.5   13002    83.7   13020    82.2
   13058    82.4   13106    82.4   13138    83.4   13169      85   13202    87.7
   13224    88.8   13243    88.3   13263    88.2   13288    88.2   13314    89.1
   13357    89.6   13438    92.6   13539    96.2   13621    98.3   13720   100.1

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11960    .089   12021     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11960   12021             1500    1637    1400             .1       .3

CROSS SECTION INPUT    Reach: 1              River Station: 59.26
Description:  59.26

Station Elevation Data,  num = 90
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   102.1   10084    99.4   10164    98.1   10217    97.4   10253    98.1
   10303    98.8   10351      99   10416    98.5   10498    97.8   10578    96.8
   10647      96   10720    94.7   10802    94.4   10884    94.1   10976    93.2
   11071    91.7   11131    90.5   11183    88.4   11231    88.9   11274    90.3
   11330    90.3   11440    88.9   11501    88.6   11540    88.5   11645    86.4
   11689    85.7   11695    85.5   11704    83.9   11732    83.2   11749    82.5
   11798    80.7   11840    79.2   11882      79   11905    78.5   11931    75.8
   11943    74.3   11960    73.8   11980    71.1   12021    73.7   12031      76
   12046    75.9   12060    74.7   12073    73.8   12099    73.8   12106    75.6
   12125      76   12153    75.8   12186    75.7   12249    76.2   12328    76.1
   12400    76.9   12476    79.1   12526      80   12585    79.6   12658    80.4
   12728    80.4   12810    81.4   12849    81.8   12854    82.5   12858    81.5
   12867    81.5   12876    81.5   12892      82   12899    80.1   12911    80.1
   12915    82.4   12923    82.7   12932    83.1   12941    81.6   12955    81.4
   12968    82.7   12983    84.8   12992    84.5   13002    83.7   13020    82.2
   13058    82.4   13106    82.4   13138    83.4   13169      85   13202    87.7
   13224    88.8   13243    88.3   13263    88.2   13288    88.2   13314    89.1
   13357    89.6   13438    92.6   13539    96.2   13621    98.3   13720   100.1

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11960    .089   12021     .42
```

```
Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11960   12021             2100    2376    2000            .1      .3

CROSS SECTION INPUT    Reach: 1             River Station: 58.81
Description:  58.81

Station Elevation Data,  num = 78
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   102.7   10061   102.4   10133   101.5   10234   101.5   10306   100.3
   10402   100.1   10473    99.4   10539    98.5   10631    97.3   10703    97.3
   10787    96.4   10878    95.1   11002    93.6   11058    91.8   11150    89.7
   11224    85.9   11271    80.6   11321    78.7   11391    77.8   11463    77.9
   11524      76   11572    73.6   11619    73.8   11641    73.7   11660    69.5
   11675    66.8   11691    69.6   11710    71.5   11732    74.5   11744    74.9
   11767    74.7   11791    73.8   11803    72.5   11813    71.2   11823    71.2
   11834    72.6   11847    73.1   11864    72.5   11883    70.6   11903      70
   11933    69.9   11941    75.4   11952    75.4   11994    75.3   12025    75.5
   12071      76   12139    77.3   12207    77.8   12277    77.8   12337    77.8
   12365    78.8   12386    78.8   12420    78.2   12447    78.1   12529    78.1
   12559    79.1   12614    80.7   12664    81.6   12730    82.9   12806    83.6
   12876    84.6   12932    85.6   12977    85.8   13035      87   13111    87.7
   13134    87.4   13160    87.4   13182    88.5   13217    88.9   13261    89.6
   13306    90.3   13362    90.9   13436    91.9   13504    93.3   13585    94.1
   13693    96.2   13798    98.2   13917   100.1

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   11660    .089   11691     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11660   11691              106     106     106            .1      .3

CROSS SECTION INPUT    Reach: 1             River Station: 58.79
Description:  58.79

Station Elevation Data,  num = 26
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000      88   10315    87.1   10340    73.9   10340    83.9   10343    83.9
   10343    73.8   10367    74.1   10367    84.1   10370    84.1   10370    74.1
   10394      69   10394    84.3   10397    84.3   10397      69   10421    73.5
   10421    84.5   10424    84.5   10424    73.5   10448    79.7   10448    84.7
   10451    84.7   10451    79.7   10476    84.8   10479      88   10516    88.3
   12000      89

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .42   10315    .089   10479     .42

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         10315   10479               50      50      50            .3      .5

BRIDGE INPUT           Reach: 1             River Station: 58.785
Description: Railroad Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =      50
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 8
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   10315    87.1    87.1   10340    87.1    83.9   10367    87.3    84.1
   10394    87.5    84.3   10421    87.7    84.5   10448    87.9    84.7
   10476      88    84.8   10479      88      88
Downstream Deck/Roadway Coordinates,  num = 8
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   10315    87.1    87.1   10340    87.1    83.9   10367    87.3    84.1
   10394    87.5    84.3   10421    87.7    84.5   10448    87.9    84.7
   10476      88    84.8   10479      88      88
Elevation at which weir flow begins          =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
```

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Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth inside the bridge at the downstream end
Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT Reach: 1 River Station: 58.78
Description: 58.78

Station Elevation Data, num = 26

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	88	10315	87.1	10340	73.9	10340	83.9	10343	83.9
10343	73.8	10367	74.1	10367	84.1	10370	84.1	10370	74.1
10394	69	10394	84.3	10397	84.3	10397	69	10421	73.5
10421	84.5	10424	84.5	10424	73.5	10448	79.7	10448	84.7
10451	84.7	10451	79.7	10476	84.8	10479	88	10516	88.3
12000	89								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	10315	.089	10479	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10315	10479	422	422	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 58.7
Description: 58.7

Station Elevation Data, num = 78

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	102.7	10061	102.4	10133	101.5	10234	101.5	10306	100.3
10402	100.1	10473	99.4	10539	98.5	10631	97.3	10703	97.3
10787	96.4	10878	95.1	11002	93.6	11058	91.8	11150	89.7
11224	85.9	11271	80.6	11321	78.7	11391	77.8	11463	77.9
11524	76	11572	73.6	11619	73.8	11641	73.7	11660	69.5
11675	66.8	11691	69.6	11710	71.5	11732	74.5	11744	74.9
11767	74.7	11791	73.8	11803	72.5	11813	71.2	11823	71.2
11834	72.6	11847	73.1	11864	72.5	11883	70.6	11903	70
11933	69.9	11941	75.4	11952	75.4	11994	75.3	12025	75.5
12071	76	12139	77.3	12207	77.8	12277	77.8	12337	77.8
12365	78.8	12386	78.8	12420	78.2	12447	78.1	12529	78.1
12559	79.1	12614	80.7	12664	81.6	12730	82.9	12806	83.6
12876	84.6	12932	85.6	12977	85.8	13035	87	13111	87.7
13134	87.4	13160	87.4	13182	88.5	13217	88.9	13261	89.6
13306	90.3	13362	90.9	13436	91.9	13504	93.3	13585	94.1
13693	96.2	13798	98.2	13917	100.1				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11660	.089	11691	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11660	11691	2500	2904	2600	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 58.15
Description: 58.15

Station Elevation Data, num = 78

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	102.7	10061	102.4	10133	101.5	10234	101.5	10306	100.3
10402	100.1	10473	99.4	10539	98.5	10631	97.3	10703	97.3
10787	96.4	10878	95.1	11002	93.6	11058	91.8	11150	89.7
11224	85.9	11271	80.6	11321	78.7	11391	77.8	11463	77.9
11524	76	11572	73.6	11619	73.8	11641	73.7	11660	69.5
11675	66.8	11691	69.6	11710	71.5	11732	74.5	11744	74.9
11767	74.7	11791	73.8	11803	72.5	11813	71.2	11823	71.2
11834	72.6	11847	73.1	11864	72.5	11883	70.6	11903	70
11933	69.9	11941	75.4	11952	75.4	11994	75.3	12025	75.5
12071	76	12139	77.3	12207	77.8	12277	77.8	12337	77.8
12365	78.8	12386	78.8	12420	78.2	12447	78.1	12529	78.1
12559	79.1	12614	80.7	12664	81.6	12730	82.9	12806	83.6
12876	84.6	12932	85.6	12977	85.8	13035	87	13111	87.7
13134	87.4	13160	87.4	13182	88.5	13217	88.9	13261	89.6
13306	90.3	13362	90.9	13436	91.9	13504	93.3	13585	94.1
13693	96.2	13798	98.2	13917	100.1				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11660	.089	11691	.42

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

11660	11691	4100	4963	4200	.1 .3

CROSS SECTION INPUT Reach: 1 River Station: 57.21
Description: 57.21

Station Elevation Data, num = 67

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	94.7	10087	94.5	10177	94.8	10259	94.4	10333	93.4
10388	93.3	10445	92.9	10509	92.5	10572	91.8	10643	90.6
10727	88.8	10791	83.7	10845	81.7	10908	79.2	10922	79.3
10950	78.9	10970	78.7	10997	76.8	11005	76.3	11035	76.6
11052	75.8	11058	75.9	11072	76.8	11098	76.6	11112	75.9
11132	76.1	11163	76.7	11184	76.6	11205	76.9	11218	77.2
11228	77	11249	76.2	11255	75.9	11266	76.3	11292	76.5
11316	75.9	11335	75.5	11354	74.2	11367	74.1	11382	73.9
11396	71.6	11402	68	11418	63.1	11437	68	11441	70.3
11460	70.8	11492	70.3	11529	72.1	11574	73.2	11607	73.7
11629	75.3	11655	76.8	11686	78.6	11715	79.9	11733	80.7
11760	81.9	11810	82.9	11877	85	11939	87.9	11999	90.4
12032	92.1	12045	92.1	12060	92.9	12090	93.9	12129	96.7
12189	99.4	12280	102.9						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.42	11402	.089	11437	.42

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11402	11437	3600	5227	3550	.1 .3

CROSS SECTION INPUT Reach: 1 River Station: 56.22
Description: 56.22

Station Elevation Data, num = 54

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	99.3	10071	99.7	10142	99.9	10155	100	10158	99.5
10172	99.5	10178	100.2	10181	100.2	10185	99.7	10193	99.7
10264	99.6	10352	98.4	10455	97.2	10547	95.4	10654	90.2
10768	85.3	10868	78.7	10940	74.1	11055	72.5	11155	73.3
11242	71.4	11294	69.8	11341	70.9	11367	71.2	11396	65.8
11410	59.3	11445	65.8	11467	68.1	11494	71	11600	74.9
11612	74	11636	72.7	11685	72.1	11737	73.2	11808	74
11885	74.6	11947	76.6	12041	78	12098	78.4	12144	78
12187	78.8	12227	79.5	12284	83.4	12337	87.2	12398	92.2
12488	97.4	12566	98.4	12596	99.2	12613	99.2	12626	97.9
12639	97.9	12649	99.6	12672	100	12736	100.8		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.4	11367	.06	11494	.4

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11367	11494	800	1214	890	.1 .3

CROSS SECTION INPUT Reach: 1 River Station: 55.99
Description: 55.99

Station Elevation Data, num = 54

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	99.3	10071	99.7	10142	99.9	10155	100	10158	99.5
10172	99.5	10178	100.2	10181	100.2	10185	99.7	10193	99.7
10264	99.6	10352	98.4	10455	97.2	10547	95.4	10654	90.2
10768	85.3	10868	78.7	10940	74.1	11055	72.5	11155	73.3
11242	71.4	11294	69.8	11341	70.9	11367	71.2	11396	65.8
11410	59.3	11445	65.8	11467	68.1	11494	71	11600	74.9
11612	74	11636	72.7	11685	72.1	11737	73.2	11808	74
11885	74.6	11947	76.6	12041	78	12098	78.4	12144	78
12187	78.8	12227	79.5	12284	83.4	12337	87.2	12398	92.2
12488	97.4	12566	98.4	12596	99.2	12613	99.2	12626	97.9
12639	97.9	12649	99.6	12672	100	12736	100.8		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.4	11367	.06	11494	.4

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11367	11494	100	150	110	.1 .3

CROSS SECTION INPUT Reach: 1 River Station: 55.96
Description: 55.96

Station Elevation Data, num = 54

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	97.2	10249	96.3	10467	95.1	10671	94.7	10898	94.5
11119	95.4	11365	96.1	11700	96.4	11780	96.2	11863	95.2

11922	94.3	12091	90.4	12264	86	12356	84.1	12460	83
12479	83.6	12493	74.89	12509	69.64	12509	81.9	12512	81.9
12512	69.6	12542	61	12542	81.9	12545	81.9	12545	60.9
12550	58.2	12576	61	12576	81.9	12579	81.9	12579	61.1
12610	69.5	12610	81.9	12613	81.9	12613	70	12639	83.2
12762	82.7	12857	81.3	12935	79.4	13007	77.6	13075	76.4
13185	75.7	13303	75.6	13525	77.2	13691	77.7	13905	78.8
14133	79.7	14351	80.5	14575	82.1	14729	84.3	14997	89.2
15188	91.8	15385	93.5	15647	94.3	15878	95.6		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.4	12460	.06	12639	.4

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12460	12639	50	50	.3	.5

BRIDGE INPUT Reach: 1 River Station: 55.955
Description: SR-237 Bridge
Distance from Upstream XS = 0
Deck/Roadway Width = 50
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates, num = 6

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
12479	83.6	83.6	12509	83.6	81.9	12542	83.6	81.9
12576	83.6	81.9	12610	83.6	81.9	12639	83.2	83.2

Downstream Deck/Roadway Coordinates, num = 6

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
12479	83.6	83.6	12509	83.6	81.9	12542	83.6	81.9
12576	83.6	81.9	12610	83.6	81.9	12639	83.2	83.2

Elevation at which weir flow begins =
Maximum allowable submergence for weir flow = .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods
Energy
Momentum Cd = 0
Yarnell KVal =
W.S. Pro Method CVal =
Selected Low Flow Methods = Energy

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth
inside the bridge at the downstream end
Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT Reach: 1 River Station: 55.95
Description: 55.95

Station Elevation Data, num = 54

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	97.2	10249	96.3	10467	95.1	10671	94.7	10898	94.5
11119	95.4	11365	96.1	11700	96.4	11780	96.2	11863	95.2
11922	94.3	12091	90.4	12264	86	12356	84.1	12460	83
12479	83.6	12493	74.89	12509	69.64	12509	81.9	12512	81.9
12512	69.6	12542	61	12542	81.9	12545	81.9	12545	60.9
12550	58.2	12576	61	12576	81.9	12579	81.9	12579	61.1
12610	69.5	12610	81.9	12613	81.9	12613	70	12639	83.2
12762	82.7	12857	81.3	12935	79.4	13007	77.6	13075	76.4
13185	75.7	13303	75.6	13525	77.2	13691	77.7	13905	78.8
14133	79.7	14351	80.5	14575	82.1	14729	84.3	14997	89.2
15188	91.8	15385	93.5	15647	94.3	15878	95.6		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.4	12460	.06	12639	.4

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12460	12639	650	634	600 .3	.5

CROSS SECTION INPUT Reach: 1 River Station: 55.83
Description: 55.83

Station Elevation Data, num = 61

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	91.8	10051	91.5	10104	91.9	10160	93.2	10212	92.8
10268	92.4	10330	91.8	10383	90.2	10468	86.5	10548	82.8
10617	80.7	10675	78.6	10711	75.9	10762	72.7	10815	72.4
10846	73.2	10867	74.4	10877	74.9	10880	73.4	10894	73.9
10906	75.8	10918	75.6	10942	72	10970	71.7	11013	70.4
11018	65.3	11040	57.9	11089	65.2	11106	73	11121	73.3
11147	72.7	11194	71.4	11277	71.7	11353	71.8	11442	70.9
11576	71.3	11758	70.6	11973	71.2	12147	71.9	12264	73.7
12353	75.3	12529	76.5	12573	74.3	12688	74	12783	74.3
12837	75.2	12904	75.7	12960	76.3	13071	77.1	13231	79.7
13372	82	13535	84.1	13688	85.9	13814	87.9	13853	87.5
13894	89	13912	89.3	13928	88.1	13949	88	14027	89.5
14110	90.4								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.4	11013	.06	11106	.4

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11013	11106	5800	8237	4600	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 54.27
Description: 54.27

Station Elevation Data, num = 63

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	87.2	10010	87.6	10015	87.7	10020	87.3	10093	85.2
10113	84.8	10152	84.2	10179	81.7	10215	79.9	10292	76.2
10374	74	10554	74.3	10860	73.5	10908	73.9	10925	73.2
10932	71.5	10950	71.4	10961	73.2	11022	73.6	11284	74.2
11321	70.9	11502	68.9	11560	68.9	11587	68.2	11603	70.2
11680	69.4	11690	64.2	11708	64.2	11728	68	11737	67.9
11749	65.5	11780	65.2	11801	68.2	11820	66.6	11831	63.1
11868	63.1	11883	64.7	11902	67.9	11945	67.7	11980	66.9
12006	64.6	12027	63.3	12029	61.6	12040	54.8	12055	61.6
12067	68.9	12108	69.5	12134	68.7	12144	66.8	12161	68
12243	68.9	12326	68.5	12380	68.2	12442	68.4	12469	69.8
12537	72.5	12603	74.9	12646	76.6	12697	77.4	12784	80
12861	83.8	12923	87	12965	90				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.4	12006	.06	12067	.4

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12006	12067	2900	4382	2700	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 53.44
Description: 53.44

Station Elevation Data, num = 64

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	90.1	10035	88.9	10063	88	10085	87.7	10102	87.4
10112	86.5	10125	85.7	10153	83.1	10188	80.1	10270	75.1
10346	66.4	10420	67.3	10532	67.4	10645	67.4	10746	65.6
10771	65.6	10780	65.9	10786	65.6	10828	65.2	10855	64.4
10883	62.3	10897	58.3	10920	53.1	10943	58.3	10962	61.5
10983	63.6	11022	64	11066	64.7	11101	64.3	11150	64.7
11203	64.4	11257	64.1	11303	64.1	11357	64.1	11428	64.9
11477	65.5	11540	67.5	11629	69.3	11705	69.3	11781	71.7
11826	71.2	11874	71.1	11910	71.1	11960	71.3	12007	73.3
12038	74.5	12079	75.9	12132	77.3	12189	77.9	12259	80
12283	79.9	12293	79.4	12308	79.3	12388	79.9	12443	80
12462	80.9	12501	82.3	12566	83	12584	83.5	12617	84.4
12680	86.3	12779	87.7	12896	89.7	13025	90.1		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.4	10883	.06	10962	.4

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10883	10962	5900	8290	6200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 51.87
Description: 51.87

Station Elevation Data, num = 78

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	90	10078	88	10140	86.5	10179	85.6	10194	85.5
10269	83.4	10354	81.5	10441	80.7	10514	79.8	10570	78.8
10588	78.7	10641	77.4	10715	75.5	10798	73.6	10873	72.1
11002	69.3	11106	68.1	11181	66.5	11235	66.2	11362	66.2
11375	67	11407	66.9	11427	68.6	11443	67.5	11491	66.4

11560	65.9	11641	65.5	11714	65.1	11731	65.1	11746	64.6
11981	64.6	12026	65.2	12112	64.3	12190	63.8	12281	63.8
12369	62.8	12435	62.6	12442	60.8	12455	60.9	12464	64.9
12505	63.4	12663	62.4	12706	62.3	12735	61	12765	61
12796	61.1	12825	59.5	12837	59.5	12851	62.2	12865	61.3
12878	62.8	12892	63.6	12909	62.2	12914	59.1	12928	60
12943	64.2	12966	63.6	12995	62.3	13025	58.9	13068	57.1
13086	56.2	13098	55.8	13100	55.6	13114	49.8	13125	55.6
13138	65.4	13176	66.7	13212	68.9	13257	70.5	13307	71.8
13424	72.7	13499	73.2	13573	73.8	13646	74.4	13752	74.4
13834	74.6	13900	74.9	13978	75.1				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.4	13100	.06	13125	.4

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13100	13125	6000	11933	7100	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 49.61
Description: 49.61

Station Elevation Data, num = 83

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	93.2	10209	89.1	10402	84.9	10492	82.3	10513	81.2
10531	80.3	10608	79.5	10634	79.9	10661	80.6	10735	79.7
10814	78.9	10877	78.6	10904	78.3	10909	76.6	10922	76.4
10931	78.2	10962	78.4	11024	78.2	11119	78.5	11148	77.8
11154	76.7	11160	77.1	11185	80.6	11195	80.4	11209	81
11225	80.5	11252	78.1	11260	76.9	11265	76.9	11269	78.3
11311	78.8	11331	77.9	11412	78.2	11521	78.5	11661	78.3
11805	78.3	11976	76.1	12089	73.9	12109	71.4	12140	70.7
12173	70.4	12285	70.2	12435	69.8	12478	69.7	12560	69.6
12663	69.5	12760	69.49	12874	69.48	13006	69.45	13109	69.4
13203	67.9	13287	65.5	13308	63.9	13310	55.8	13314	50.6
13351	45.2	13388	50.6	13392	52.2	13398	52.2	13422	55.8
13457	57.6	13504	57.1	13602	56.5	13736	57.6	13863	58.8
14036	60.7	14153	61	14252	62	14385	63	14520	75
14651	75.5	14851	75.9	15026	75.99	15200	77	15341	77.3
15578	78	15735	79	15862	80	15940	81	16027	82
16107	85.3	16191	90.2	16254	92.3				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	13310	.059	13422	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13310	13422	725	745	525	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 49.48
Description: 49.48

Station Elevation Data, num = 62

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	100.9	10212	100.5	10283	99.3	10453	96.7	10598	93.8
10729	91	10837	89.5	10993	87.3	11140	84	11270	81.6
11415	78.6	11618	76.6	11753	77.6	11947	79.1	12078	79.5
12303	79.7	12469	79.6	12520	78.9	12551	79	12566	78.1
12571	77	12583	76.4	12616	76.5	12650	77	12804	76.4
12983	76	13196	74.8	13371	72.2	13477	71.2	13511	67
13551	65.4	13629	64.7	13758	63.5	13812	65	13842	66
13871	65	13882	63.4	13899	60	13920	60	13956	61.4
14053	61.2	14160	61.7	14258	62.1	14317	61.4	14334	51.4
14384	44.5	14434	51.3	14459	57.7	14489	57.4	14539	56.7
14696	56.2	14878	56.9	15062	57.3	15333	56.7	15583	55.9
15677	58.3	15763	63.1	15896	73	15957	90.3	16030	101.4
16071	104.7	16137	105.2						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	14317	.059	14459	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14317	14459	100	100	100	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 49.46
Description: 49.46

Station Elevation Data, num = 52

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
8000	77	10000	72	14000	72.2	14050	73.3	14051	69.1
14060	67	14060	71.2	14062	71.2	14062	67	14071	64.7
14071	71.2	14072	71.2	14072	64.7	14090	59.2	14090	71.2
14092	71.2	14092	59.2	14110	51	14119	48.5	14119	71.2

14123	71.2	14123	48.4	14150	45	14159	48.7	14159	71.2
14164	71.2	14164	48.7	14200	49	14200	71.2	14205	71.2
14205	49	14210	51	14268	56.2	14268	71.2	14276	71.2
14276	56.2	14300	57.1	14384	55.2	14384	71.2	14398	71.2
14398	56	14400	61.5	14410	62.2	14410	71.2	14422	71.2
14422	62.3	14430	65.8	14499	69.2	14500	73.3	14550	72.5
16000	72.2	18000	77						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
8000	.31	14051	.059	14499	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14051	14499	25	25	.3	.5

BRIDGE INPUT Reach: 1 River Station: 49.455
Description: Railroad Bridge
Distance from Upstream XS = 0
Deck/Roadway Width = 25
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates, num = 7

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
14050	73.3	73.3	14051	73.3	71.2	14062	73.3	71.2
14164	73.3	71.2	14422	73.3	71.2	14499	73.3	71.2
14500	73.3	73.3						

Downstream Deck/Roadway Coordinates, num = 7

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
14050	73.3	73.3	14051	73.3	71.2	14062	73.3	71.2
14164	73.3	71.2	14422	73.3	71.2	14499	73.3	71.2
14500	73.3	73.3						

Elevation at which weir flow begins =
Maximum allowable submergence for weir flow = .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods
Energy
Momentum Cd = 0
Yarnell KVal =
W.S. Pro Method CVal =
Selected Low Flow Methods = Energy

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth inside the bridge at the downstream end
Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT Reach: 1 River Station: 49.45
Description: 49.45

Station Elevation Data, num = 52

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
8000	77	10000	72	14000	72.2	14050	73.3	14051	69.1
14060	67	14060	71.2	14062	71.2	14062	67	14071	64.7
14071	71.2	14072	71.2	14072	64.7	14090	59.2	14090	71.2
14092	71.2	14092	59.2	14110	51	14119	48.5	14119	71.2
14123	71.2	14123	48.4	14150	45	14159	48.7	14159	71.2
14164	71.2	14164	48.7	14200	49	14200	71.2	14205	71.2
14205	49	14210	51	14268	56.2	14268	71.2	14276	71.2
14276	56.2	14300	57.1	14384	55.2	14384	71.2	14398	71.2
14398	56	14400	61.5	14410	62.2	14410	71.2	14422	71.2
14422	62.3	14430	65.8	14499	69.2	14500	73.3	14550	72.5
16000	72.2	18000	77						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
8000	.31	14051	.059	14499	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14051	14499	250	350	450	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 49.38
Description: 49.38

Station Elevation Data, num = 62

Sta.	Elev.	Sta.	Ele..	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	100.9	10212	100.5	10283	99.3	10453	96.7	10598	93.8
10729	91	10837	89.5	10993	87.3	11140	84	11270	81.6
11415	78.6	11618	76.6	11753	77.6	11947	79.1	12078	79.5
12303	79.7	12469	79.6	12520	78.9	12551	79	12566	78.1
12571	77	12583	76.4	12616	76.5	12650	77	12804	76.4
12983	76	13196	74.8	13371	72.2	13477	71.2	13511	67
13551	65.4	13629	64.7	13758	63.5	13812	65	13842	66
13871	65	13882	63.4	13899	60	13920	60	13956	61.4
14053	61.2	14160	61.7	14258	62.1	14317	61.4	14334	51.4
14384	44.5	14434	51.3	14459	57.7	14489	57.4	14539	56.7
14696	56.2	14878	56.9	15062	57.3	15333	56.7	15583	55.9
15677	58.3	15763	63.1	15896	73	15957	90.3	16030	101.4
16071	104.7	16137	105.2						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	14317	.059	14459	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14317	14459	325	375	425	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 49.31
Description: 49.31

Station Elevation Data, num = 62

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	100.9	10212	100.5	10283	99.3	10453	96.7	10598	93.8
10729	91	10837	89.5	10993	87.3	11140	84	11270	81.6
11415	78.6	11618	76.6	11753	77.6	11947	79.1	12078	79.5
12303	79.7	12469	79.6	12520	78.9	12551	79	12566	78.1
12571	77	12583	76.4	12616	76.5	12650	77	12804	76.4
12983	76	13196	74.8	13371	72.2	13477	71.2	13511	67
13551	65.4	13629	64.7	13758	63.5	13812	65	13842	66
13871	65	13882	63.4	13899	60	13920	60	13956	61.4
14053	61.2	14160	61.7	14258	62.1	14317	61.4	14334	51.4
14384	44.5	14434	51.3	14459	57.7	14489	57.4	14539	56.7
14696	56.2	14878	56.9	15062	57.3	15333	56.7	15583	55.9
15677	58.3	15763	63.1	15896	73	15957	90.3	16030	101.4
16071	104.7	16137	105.2						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	14317	.059	14459	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14317	14459	100	100	100	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 49.29
Description: 49.29

Station Elevation Data, num = 91

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	101.1	10230	99.9	10339	98.3	10391	96.9	10451	96.3
10575	97.8	10691	97	10796	95.6	10964	93.9	11137	91
11329	89.3	11593	85.1	11675	82.9	11771	78.6	11799	77.8
11828	75.1	11867	73.5	11960	72.7	11969	71	12032	71.1
12055	73.7	12141	74.4	12326	73.3	12544	72.4	12630	72.1
12634	70.7	12642	70.7	12648	72	12652	72	12659	71.3
12771	71.4	12940	72.1	12950	71.1	12961	71.1	12973	71.8
13038	71.9	13079	74.2	13172	75.4	13338	75.9	13449	76
13595	75.2	13606	75.1	13626	76	13639	76	13653	74.9
13696	74.4	13778	74.4	13915	73.7	13997	68.7	14020	68.7
14117	72.9	14212	72.9	14331	71.4	14514	71.6	14673	72.3
14871	74.5	14993	75.6	15025	59.5	15060	57	15060	72.7
15064	72.7	15064	56.5	15075	50.8	15155	46.3	15155	72.9
15158	72.9	15158	46.2	15192	44.1	15228	46.2	15228	72.9
15231	72.9	15231	46.3	15250	50.8	15300	56.6	15321	56.7
15321	72.7	15325	72.7	15325	56.8	15370	57.2	15370	72.2
15376	72.2	15376	57.2	15393	75.5	15468	74.2	15671	72.8
15907	72.6	16143	73.3	16357	76.4	16566	82.9	16798	94.3
16984	103.9								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	14993	.059	15393	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14993	15393	25	25	25	.3	.5

BRIDGE INPUT Reach: 1 River Station: 49.285
Description: SR-121 Bridge
Distance from Upstream XS = 0
Deck/Roadway Width = 25

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Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 9
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
*********************************************************************
   14212    72.9    72.9   14993    75.6    75.6   15064      76    72.7
   15188    76.2    72.9   15231    76.2    72.9   15325      76    72.7
   15376    75.5    72.2   15393    75.5    75.5   16143    73.3    73.3
Downstream Deck/Roadway Coordinates,  num = 9
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
*********************************************************************
   14212    72.9    72.9   14993    75.6    75.6   15064      76    72.7
   15188    76.2    72.9   15231    76.2    72.9   15325      76    72.7
   15376    75.5    72.2   15393    75.5    75.5   16143    73.3    73.3
Elevation at which weir flow begins          =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1             River Station: 49.28
Description:  49.28

Station Elevation Data,  num = 91
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   101.1   10230    99.9   10339    98.3   10391    96.9   10451    96.3
   10575    97.8   10691      97   10796    95.6   10964    93.9   11137      91
   11329    89.3   11593    85.1   11675    82.9   11771    78.6   11799    77.8
   11828    75.1   11867    73.5   11960    72.7   11969      71   12032    71.1
   12055    73.7   12141    74.4   12326    73.3   12544    72.4   12630    72.1
   12634    70.7   12642    70.7   12648      72   12652      72   12659    71.3
   12771    71.4   12940    72.1   12950    71.1   12961    71.1   12973    71.8
   13038    71.9   13079    74.2   13172    75.4   13338    75.9   13449      76
   13595    75.2   13606    75.1   13626      76   13639      76   13653    74.9
   13696    74.4   13778    74.4   13915    73.7   13997    68.7   14020    68.7
   14117    72.9   14212    72.9   14331    71.4   14514    71.6   14673    72.3
   14871    74.5   14993    75.6   15025    59.5   15060      57   15060    72.7
   15064    72.7   15064    56.5   15075    50.8   15155    46.3   15155    72.9
   15158    72.9   15158    46.2   15192    44.1   15228    46.2   15228    72.9
   15231    72.9   15231    46.3   15250    50.8   15300    56.6   15321    56.7
   15321    72.7   15325    72.7   15325    56.8   15370    57.2   15370    72.2
   15376    72.2   15376    57.2   15393    75.5   15468    74.2   15671    72.8
   15907    72.6   16143    73.3   16357    76.4   16566    82.9   16798    94.3
   16984   103.9

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .31   14993    .059   15393     .31

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         14993   15393              500     450     350            .3       .5

CROSS SECTION INPUT    Reach: 1             River Station: 49.19
Description:  49.19

Station Elevation Data,  num = 95
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000   100.1   10232    95.7   10277    95.2   10533    92.3   10862    87.6
   10976    85.1   11062    83.5   11143    82.7   11527    75.2   11555    72.6
   11809    72.6   11939    72.2   11952      70   11966      70   11982    71.2
   12135    71.8   12250    71.9   12256    69.2   12257    69.2   12265    69.2
   12283    72.5   12309      73   12366    72.3   12475    72.2   12551    73.4
   12684    73.6   12817    75.3   12974    75.9   13066    75.7   13116    75.1
   13151    74.7   13182    75.5   13379      75   13514    75.9   13557    75.7
   13627      75   13650    73.7   13667    73.6   13692    74.9   13702    74.5
   13721    73.8   13737    72.9   13803    73.2   13831    72.4   13925    70.7
   13984      69   14105    68.7   14174    70.8   14213    72.3   14259      73
```

14271	73.2	14277	[illegible]	14288	74	14294	72.8	1429[illegible]	72.8
14303	73.8	14450	75.8	14610	74.7	14710	63.7	14764	58.9
14788	60	14837	59.1	14861	57.7	14869	57.6	14907	58.6
14997	58	15055	59.4	15141	60.9	15171	62.2	15204	61.8
15229	60.6	15239	58.1	15261	50.3	15327	44	15394	50.2
15423	56.4	15441	56.1	15477	54.4	15598	54.5	15636	52.6
15652	50.3	15693	50.2	15714	55.6	15753	57.4	16181	60.5
16312	56.7	16345	50.2	16409	50.2	16438	58.2	16479	57
16542	53.5	16583	52.6	16627	54.1	16695	59.8	17033	100.9

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	15239	.059	15423	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
15239	15423	4450	6072	4250	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 48.04
Description: 48.04

Station Elevation Data, num = 92

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	89.5	10803	75.6	10837	74.5	11002	73.5	11340	71.2
12182	71.4	12197	72.4	12219	72.5	12328	70	12429	70
12652	74.2	12787	74.3	12958	75.6	13054	75.3	13474	75.9
13478	74.6	13481	74.6	13485	76.2	13498	76.2	13507	74.6
13517	74.7	13527	76.4	13530	76.4	13543	75.2	13621	74.9
13721	76.1	13836	75.3	13947	74	13978	73.6	14187	73.7
14227	74.3	14346	75	14394	75.7	14486	76.1	14549	76.1
14593	76	14607	75.9	14633	76.4	14646	77	14669	76.4
14726	75.9	14771	75.6	14802	76.2	15082	75.8	15109	75.8
15318	74.9	15614	73.1	15783	71.9	16062	66.2	16148	61.7
16161	61.7	16197	61.4	16203	61.8	16235	61.3	16242	60.7
16252	60.5	16298	58.6	16344	54.3	16408	52.2	16517	52.2
16681	52.9	16796	53.8	16945	55.6	17038	54.7	17057	49.6
17080	43.5	17102	49.6	17111	53.9	17119	54.4	17127	54.5
17135	51.9	17145	52	17157	53.9	17185	54.2	17221	54.3
17242	53.3	17245	52.5	17254	49.6	17258	49.6	17268	51.9
17280	52.8	17306	53.7	17352	54.3	17441	55.4	17523	56
17602	56.4	17675	56.5	17717	56.6	17755	57.2	17782	59.7
17912	71.7	18357	92.1						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	17038	.059	17111	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
17038	17111	5800	7656	6200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 46.59
Description: 46.59

Station Elevation Data, num = 57

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	92.2	10132	83.7	10261	76.1	10430	71.9	10597	69.2
10785	66.7	10969	65.4	11244	65.3	11331	64.4	11394	64.3
11495	65.1	11654	66.2	11797	65	11892	64.3	12012	64.3
12156	64.7	12322	64.6	12331	62.7	12336	62.9	12344	64.4
12346	64.4	12360	64.7	12394	65.1	12474	64.5	12597	64.5
12826	60	12955	57.3	13039	55.6	13124	54.9	13164	52.6
13190	51.2	13220	49.7	13231	48	13238	47.2	13303	42.9
13367	47.2	13391	53.7	13403	53.9	13413	53.1	13418	51.5
13424	51.5	13452	55.3	13483	56.7	13520	57.9	13543	57.9
13572	57	13630	55.7	13765	54.9	13865	54.5	13976	54.1
14113	53.7	14186	53	14261	53.2	14318	56.2	14434	83.9
14477	92.9	14503	97.9						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	13190	.059	13391	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13190	13391	4200	5861	4550	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 45.48
Description: 45.48

Station Elevation Data, num = 70

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	109.5	10088	107.3	10183	98.5	10255	87.9	10357	61.2
10417	51.3	10441	49.4	10544	48.1	10636	49.8	10790	50.8
10852	50.2	10893	48.7	10909	48.7	10927	49.1	11044	49.8
11358	53.3	11454	53.5	11565	53.5	11641	52.1	11642	50.6
11675	51.2	11686	53.5	11706	53	11724	50.7	11770	49.6

11799	46.5	11854	[illegible]	11910	46.5	11919	52.2	1195[illegible]	52.9
12000	52.4	12034	49.6	12049	49.4	12080	50.1	12117	51.8
12155	54	12236	59.4	12355	65.9	12441	71.7	12511	73.9
12595	75.9	12687	78.7	12764	80.4	12848	80	12944	78.3
13034	78	13161	79.1	13276	83.4	13287	82.5	13405	86.1
13557	87.6	13613	88.2	13673	87.3	13739	86.7	13821	85.5
13909	85.2	13978	84.5	14054	84.5	14147	84.6	14177	85.1
14185	83.8	14186	83.4	14188	85.2	14196	84.6	14232	84.4
14294	85.1	14394	85.6	14516	87.4	14690	88.3	14863	90.6

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	11770	.059	11919	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11770	11919	5150	7709	5100	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 44.02
Description: 44.02

Station Elevation Data, num = 60

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	94.3	10102	88.3	10235	84.8	10359	83	10478	81.7
10581	78.8	10746	74	10880	71.3	11033	69.7	11126	69
11224	66.7	11300	63.7	11390	59.5	11489	56.5	11610	55.3
11680	55.1	11717	52.8	11801	51.5	11886	50.8	11977	49.3
12011	48.6	12090	48.6	12126	50	12266	51.6	12330	52.2
12383	51.1	12446	50.6	12489	52.1	12545	52	12611	51.4
12693	51.1	12750	50	12861	49.7	12955	49.3	13030	48.9
13051	49	13068	48.2	13074	45	13092	40	13111	45
13129	47.6	13167	48.3	13194	47.9	13235	47.8	13306	48.7
13371	51.5	13455	53.5	13499	55.3	13524	57.3	13575	63.1
13652	69.3	13772	76	13860	80.7	13878	80.9	13939	83.7
14071	87.4	14159	89.1	14219	89.7	14314	90	14444	90.7

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	13068	.059	13129	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13068	13129	5300	7814	5600	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 42.54
Description: 42.54

Station Elevation Data, num = 96

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	75	10020	73.4	10041	71.3	10062	69.1	10093	65.2
10115	62.5	10135	60.1	10159	58.5	10181	56.9	10211	55.2
10240	52.7	10259	51.9	10282	51.9	10317	51.9	10394	49.2
10466	49	10565	47.1	10632	47.5	10714	47.9	10818	48.4
10918	47.8	11066	48.6	11221	48.6	11349	48.9	11440	50
11575	50.1	11707	50.4	11844	48.6	12017	49.1	12214	49.6
12340	46.7	12541	47.2	12635	48.8	12673	49.3	12683	48.5
12686	43.3	12708	39.1	12731	43.3	12739	45.4	12758	46.8
12781	47.2	12792	47.1	12797	48.9	12807	49.3	12827	48.1
12864	47.9	12892	47.5	12913	48.5	12923	48.7	12937	46.4
12952	49	13002	49	13061	49.4	13127	49.1	13233	49
13326	49.1	13357	49.8	13421	49.9	13552	50	13575	50.6
13602	51.2	13622	51.2	13651	50.3	13676	50.9	13690	50.7
13696	48.8	13714	48.3	13727	48.5	13761	49.3	13805	49.2
13842	48.4	13879	48.8	13920	48.3	13966	48.3	14001	48.5
14107	48.1	14192	47.7	14273	48.1	14379	47.6	14458	47.5
14543	47.2	14618	47.4	14659	47.9	14671	48.9	14710	51.5
14757	54.5	14820	57.3	14903	59.1	14999	59.7	15168	60.6
15323	60.8	15443	63	15609	64	15763	64.3	15888	65.2
16500	66								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	12683	.059	12781	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12683	12781	3400	4594	3400	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 41.67
Description: 41.67

Station Elevation Data, num = 95

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	72.3	10130	75	10244	73.6	10314	73.6	10564	67.5
10698	68.1	10784	67.1	11071	62.9	11462	53	11619	49.4
11803	49.4	11896	48.9	12053	48.2	12088	46.7	12164	46.7
12199	47.7	12274	47.9	12286	46.3	12298	46.3	12311	48

12411	48.1	12505	48.3	12543	48.2	12559	46.5	12569	46.3
12577	47.7	12622	48.2	12703	49	12936	47.8	13130	47.6
13161	47.5	13184	45	13204	44.8	13227	46.4	13251	47
13298	46.3	13339	46.9	13578	47.1	13655	46.9	13695	44
13906	42.8	13964	44	13976	41	14001	40.1	14010	36
14038	40.1	14058	41	14080	42.2	14101	42.1	14120	41
14131	40.5	14167	40.4	14182	40.8	14214	42.8	14226	42
14238	42	14369	58.1	14395	58.4	14405	60.6	14411	60.8
14416	60.7	14422	58.8	14424	58.1	14427	57.5	14451	58.6
14487	58.3	14523	59.1	14546	59	14549	59.6	14556	59.6
14574	59	14698	62.2	14849	64.1	15000	64.9	15029	64.6
15109	65.4	15224	65	15470	56	15546	53	15781	49.1
15838	49.3	15905	50.1	15927	50	15948	48.8	16004	50.2
16045	50.4	16065	50	16083	47.7	16089	47.7	16102	49.6
16143	50.1	16196	51.1	16239	51.9	16275	53.9	16532	75

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	13964	.059	14080	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13964	14080	200	242	200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 41.63
Description: 41.63

Station Elevation Data, num = 95

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	72.3	10130	75	10244	73.6	10314	73.6	10564	67.5
10698	68.1	10784	67.1	11071	62.9	11462	53	11619	49.4
11803	49.4	11896	48.9	12053	48.2	12088	46.7	12164	46.7
12199	47.7	12274	47.9	12286	46.3	12298	46.3	12311	48
12411	48.1	12505	48.5	12543	48.2	12559	46.5	12569	46.3
12577	47.7	12622	48.2	12703	49	12936	47.8	13130	47.6
13161	47.5	13184	45	13204	44.8	13227	46.4	13251	47
13298	46.3	13339	46.9	13578	47.1	13655	46.9	13695	44
13906	42.8	13964	44	13976	41	14001	40.1	14010	36
14038	40.1	14058	41	14080	42.2	14101	42.1	14120	41
14131	40.5	14167	40.4	14182	40.8	14214	42.8	14226	42
14238	42	14369	58.1	14395	58.4	14405	60.6	14411	60.8
14416	60.7	14422	58.8	14424	58.1	14427	57.5	14451	58.6
14487	58.3	14523	59.1	14546	59	14549	59.6	14556	59.6
14574	59	14698	62.2	14849	64.1	15000	64.9	15029	64.6
15109	65.4	15224	65	15470	56	15546	53	15781	49.1
15838	49.3	15905	50.1	15927	50	15948	48.8	16004	50.2
16045	50.4	16065	50	16083	47.7	16089	47.7	16102	49.6
16143	50.1	16196	51.1	16239	51.9	16275	53.9	16532	75

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	13964	.059	14080	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13964	14080	50	50	50	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 41.62
Description: 41.62

Station Elevation Data, num = 62

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	76.2	10183	75.3	10387	74.5	10602	71.8	10935	68.4
11205	65	11425	64.4	11620	64.1	11654	64.1	11796	64.3
12071	64.2	12185	64.1	12328	64.1	12652	64.1	12953	64.1
13196	64.1	13512	64.2	13769	63.9	13977	65.4	14110	67
14171	67.7	14205	51.3	14205	65.6	14207	65.6	14207	51.2
14241	46.7	14277	39.1	14277	65.8	14281	65.8	14281	39
14311	36	14351	36.4	14351	66	14355	66	14355	36.5
14381	36.7	14425	42.4	14425	65.8	14429	65.8	14429	42.5
14451	45.4	14483	48.5	14483	65.6	14487	65.6	14487	48.6
14521	67.6	14657	66	14778	64.4	14905	63.9	15027	63.8
15146	63.7	15266	63.6	15392	63.5	15539	63.3	15663	63.2
15836	63.3	16046	63.2	16265	63.2	16465	64.2	16622	68.2
16768	74.6	16781	75						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	14171	.059	14521	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14171	14521	25	25	25	.3	.5

BRIDGE INPUT Reach: 1 River Station: 41.615
Description: SR-241 Bridge
Distance from Upstream XS = 0

```
Deck/Roadway Width        =      25
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 7
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
*****************************************************************************
   14171    67.7    67.7   14207    68.4    65.6   14281    68.6    65.8
   14355    68.8      66   14429    68.6    65.8   14487    68.4    65.6
   14521    67.6    67.6
Downstream Deck/Roadway Coordinates,  num = 7
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
*****************************************************************************
   14171    67.7    67.7   14207    68.4    65.6   14281    68.6    65.8
   14355    68.8      66   14429    68.6    65.8   14487    68.4    65.6
   14521    67.6    67.6
Elevation at which weir flow begins         =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1             River Station: 41.61
Description:  41.61

Station Elevation Data,  num = 62
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    76.2   10183    75.3   10387    74.5   10602    71.8   10935    68.4
   11205      65   11425    64.4   11620    64.1   11654    64.1   11796    64.3
   12071    64.2   12185    64.1   12328    64.1   12652    64.1   12953    64.1
   13196    64.1   13512    64.2   13769    63.9   13977    65.4   14110      67
   14171    67.7   14205    51.3   14205    65.6   14207    65.6   14207    51.2
   14241    46.7   14277    39.1   14277    65.8   14281    65.8   14281      39
   14311      36   14351    36.4   14351      66   14355      66   14355    36.5
   14381    36.7   14425    42.4   14425    65.8   14429    65.8   14429    42.5
   14451    45.4   14483    48.5   14483    65.6   14487    65.6   14487    48.6
   14521    67.6   14657      66   14778    64.4   14905    63.9   15027    63.8
   15146    63.7   15266    63.6   15392    63.5   15539    63.3   15663    63.2
   15836    63.3   16046    63.2   16265    63.2   16465    64.2   16622    68.2
   16768    74.6   16781      75

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .31   14171    .059   14521     .31

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         14171   14521              250     264     250             .3      .5

CROSS SECTION INPUT    Reach: 1             River Station: 41.56
Description:  41.56

Station Elevation Data,  num = 97
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    76.4   10140    74.1   10571    60.8   10767    56.8   10855    53.2
   10931      52   10986    49.8   11057    49.3   11123    49.1   11325    49.9
   11762    46.9   11877      48   12383    48.2   12611    47.5   12847    47.3
   13111      47   13305    45.6   13396    46.2   13416    46.1   13424    47.7
   13463    47.7   13475    41.7   13487    41.8   13503    42.4   13529    42.5
   13545    39.8   13594    39.8   13605    42.4   13622    42.8   13646    42.2
   13664    40.8   13674    40.8   13689    41.6   13703    43.2   13710    46.4
   13714    47.4   13724    47.2   13752      46   13775    45.2   13801    45.3
   13828    45.3   13853    45.1   13863    47.5   13893    47.5   13909    45.9
   13929    44.7   13940    46.7   13947    47.3   13952    46.3   13962    39.1
   13995      36   14028    39.1   14037    47.7   14067    47.9   14125      48
   14182    48.6   14214    48.2   14271    48.4   14318    48.6   14369    49.8
   14424    50.1   14486    50.4   14536    50.1   14595    50.5   14644    50.8
   14671    51.6   14680      52   14687    51.5   14705    51.6   14714      52
   14719    52.1   14730    51.9   14752      51   14773    49.5   14795    48.3
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14824	47.9	14845	48.1	14872	48.3	14901	48.3	14945	47.7
14959	48.5	14969	48.6	14985	45.5	15012	45.6	15024	48.9
15071	48.6	15102	47.6	15175	44	15234	44.4	15270	47.8
15330	49.3	15417	50	15481	51.6	15783	65.9	15832	68.7
15882	71.8	15920	75						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	13947	.059	14037	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13947	14037	3250	3432	3000	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 40.91
Description: 40.91

Station Elevation Data, num = 48

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	75	10070	70.1	10120	66.3	10157	63.6	10190	61.6
10224	60.5	10243	60.1	10256	60	10295	60.1	10354	57.9
10402	56.5	10483	53.5	10570	49.1	10642	45.4	10678	44.2
10723	44	10791	43.5	10814	43.8	10874	42.9	10951	42.8
11029	42.8	11110	42.9	11149	38.3	11186	38.3	11231	39.8
11277	41.2	11342	42.1	11372	41.2	11397	37	11422	35
11448	37	11469	39.3	11475	37.8	11492	39.3	11518	44.7
11546	45.6	11656	45.3	11697	45.2	11871	45.4	12022	45.4
12170	45.4	12314	47	12379	62.2	12411	69.2	12446	71.3
12486	73.1	12518	74.2	12540	75.1				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.31	11372	.059	11469	.31

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11372	11469	3500	5808	5000	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 39.81
Description: 39.81

Station Elevation Data, num = 64

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	88.7	10147	84.5	10287	77	10309	75.7	10343	69.2
10348	68.6	10352	68.9	10371	72.9	10375	73.4	10440	74.9
10535	75.5	10596	75.3	10677	73.6	10758	71.1	10864	66.6
10948	61.5	10997	59	11068	49.7	11111	48.1	11213	46.9
11295	44.4	11359	42.8	11430	43.8	11634	43.5	11920	44.2
12088	44.3	12355	42.1	12498	42.3	12547	43.9	12582	42.6
12628	42.9	12669	43.5	12702	37	12752	32.2	12823	31.5
12868	32.5	12916	36.7	12936	37	12953	39.4	13009	41
13085	49.1	13157	53.5	13211	55.9	13266	57.4	13346	60
13438	61.8	13519	63.2	13590	64.3	13674	65.2	13736	65.8
13786	65.7	13812	68	13834	68	13868	66.9	13931	68.3
13994	70.8	14054	72.5	14090	73.5	14145	73.8	14223	72.6
14350	71.5	14383	71	14452	74.2	14480	75		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	12669	.035	12953	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12669	12953	3900	4171	3500	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 39.02
Description: 39.02

Station Elevation Data, num = 61

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	75.1	10020	73	10049	69.2	10081	64	10099	60.2
10108	44.2	10116	36.3	10155	31.7	10204	31	10227	32
10253	36.2	10262	36.3	10274	40.6	10284	47.5	10295	52.4
10312	55.6	10327	57.2	10341	57.4	10357	54.3	10380	50.1
10399	47	10422	45.3	10451	44.9	10475	43.6	10503	42
10521	40.1	10549	39.6	10572	38.7	10600	39	10622	38.7
10645	40.4	10665	42.4	10687	44.1	10710	46	10738	47.3
10768	47.4	10793	47.1	10827	46.2	10851	46.6	10880	48.1
10894	50.5	10904	51.9	10937	51.4	10960	52.9	10989	54.3
11022	55.5	11057	57.5	11090	59.6	11128	62	11161	63.9
11174	64.7	11212	65.9	11261	67.2	11286	66.3	11315	68.1
11372	69	11422	69.8	11467	71	11521	72.5	11574	74.1
11606	75.1								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10108	.035	10274	.2

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
10108 10274 5600 5491 4200 .1 .3

CROSS SECTION INPUT Reach: 1 River Station: 37.98
Description: 37.98

Station Elevation Data, num = 92

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	64.3	10034	64.2	10268	59.4	10341	57.5	10385	55.7
10425	53.4	10456	50.9	10487	47.3	10520	43.9	10544	42.9
10569	43.6	10599	42.2	10626	42.4	10672	41.9	10737	42.8
10780	42.8	10826	42.7	10889	43	10982	42.7	11060	37.2
11173	30.7	11238	37.2	11272	44.5	11310	44.8	11367	44.4
11435	45	11474	44.3	11534	43.9	11583	44	11638	44.4
11713	43.5	11782	42.9	11850	43.2	11916	43.5	11974	43.9
12021	43.7	12092	41.7	12170	41.2	12256	41.7	12284	42.6
12320	43.3	12393	42.8	12454	40.9	12525	40.6	12585	42
12637	42.8	12648	43.4	12708	43.2	12757	43.2	12817	43.2
12863	42.3	12890	40.4	12927	39.9	12970	40.1	13026	40.6
13051	43.6	13085	43.6	13114	43.8	13158	43.6	13189	43.7
13233	44.1	13287	43.8	13316	43.9	13361	43.7	13397	42.8
13581	42.6	13623	42.9	13650	43.4	13681	45.5	13762	51.1
13788	51.2	13811	51.4	13843	52.1	13882	52.3	13914	53.2
13944	53.8	13977	54.4	14023	54.5	14060	54.9	14092	54.9
14134	54.9	14183	54.7	14214	55.2	14254	55.1	14302	55.9
14325	56.5	14350	57.2	14405	58.1	14446	59.9	14613	63.8
14688	64.8	14937	75						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10982	.035	11272	.2

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
10982 11272 3175 3854 3900 .1 .3

CROSS SECTION INPUT Reach: 1 River Station: 37.25
Description: 37.25

Station Elevation Data, num = 93

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	70.1	10040	70.9	10089	71.3	10137	71.8	10198	70.3
10236	69.5	10274	67.6	10311	66	10350	63.8	10367	62.3
10396	58.9	10408	36.4	10500	34	10615	36.4	10625	37.8
10641	38.7	10659	39.1	10686	38.4	10714	38.2	10730	38.4
10757	39.1	10784	40	10816	40.7	10853	41.1	10897	41.9
10941	41.4	10978	40.9	11008	40.8	11030	39.9	11062	36.2
11110	32.8	11147	34.2	11205	31.6	11292	33.8	11300	36.2
11316	41.9	11331	47.4	11350	52.7	11364	54.2	11399	50.8
11426	42.3	11457	41.5	11906	41.6	11920	42.2	11935	43.1
11952	43.7	11976	43.7	11999	43.6	12016	43.1	12030	43.4
12046	43.3	12059	41.6	12075	40.8	12265	41	12276	43
12316	44.3	12376	41.6	12755	41.4	12770	41.4	12790	41.4
12810	42.2	12822	43.8	12837	45	12865	45.3	12897	45
12916	45.9	12932	44.4	12945	43.2	12963	41.2	12987	42
13007	44.1	13045	44.7	13085	45.3	13132	45.7	13163	45.7
13176	45.7	13217	46.4	13267	46.4	13312	47.1	13374	48.2
13427	48.2	13495	49.5	13554	50.7	13591	48.1	13678	45.3
13847	49.6	13921	50.7	13942	55	14062	62.5	14117	63
14130	63.2	14151	64.8	14293	70.1				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11008	.035	11316	.2

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
11008 11316 300 300 300 .1 .3

CROSS SECTION INPUT Reach: 1 River Station: 37.19
Description: 37.19

Station Elevation Data, num = 93

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	70.1	10040	70.9	10089	71.3	10137	71.8	10198	70.3
10236	69.5	10274	67.6	10311	66	10350	63.8	10367	62.3
10396	58.9	10408	36.4	10500	34	10615	36.4	10625	37.8
10641	38.7	10659	39.1	10686	38.4	10714	38.2	10730	38.4
10757	39.1	10784	40	10816	40.7	10853	41.1	10897	41.9
10941	41.4	10978	40.9	11008	40.8	11030	39.9	11062	36.2
11110	32.8	11147	34.2	11205	31.6	11292	33.8	11300	36.2
11316	41.9	11331	47.4	11350	52.7	11364	54.2	11399	50.8
11426	42.3	11457	41.5	11906	41.6	11920	42.2	11935	43.1
11952	43.7	11976	43.7	11999	43.6	12016	43.1	12030	43.4
12046	43.3	12059	41.6	12075	40.8	12265	41	12276	43

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   12316    44.3   12376    41.3   12755    41.4   12770    41.4   12790    41.4
   12810    42.2   12822    43.8   12837      45   12865    45.3   12897      45
   12916    45.9   12932    44.4   12945    43.2   12963    41.2   12987      42
   13007    44.1   13045    44.7   13085    45.3   13132    45.7   13163    45.7
   13176    45.7   13217    46.4   13267    46.4   13312    47.1   13374    48.2
   13427    48.2   13495    49.5   13554    50.7   13591    48.1   13678    45.3
   13847    49.6   13921    50.7   13942      55   14062    62.5   14117      63
   14130    63.2   14151    64.8   14293    70.1

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000      .2   11008    .035   11316      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11008   11316               105     105     105            .1      .3

CROSS SECTION INPUT    Reach: 1             River Station: 37.17
Description:  37.17

Station Elevation Data,  num = 30
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    60.6   11000   60.56   11100   62.76   11142   61.08   11166    46.7
   11219      38   11240    35.6   11270    32.8   11283    33.2   11283    60.2
   11291    60.2   11291    33.4   11308    34.2   11333    32.5   11373    31.6
   11375    31.6   11375    60.2   11383    60.2   11383    31.4   11413      31
   11438    32.5   11453    33.8   11463      38   11472    44.2   11482    46.4
   11510    59.7   11515    62.7   11559    60.5   11600   60.56   15000   60.56

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000      .2   11100    .035   11515      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11100   11515                70      70      70            .3      .5

BRIDGE INPUT           Reach: 1             River Station: 37.165
Description: I-75 Bridges
Distance from Upstream XS =       0
Deck/Roadway Width        =      70
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   11100   62.76   62.76   11142   62.76   61.08   11283    63.2    60.2
   11383    63.2    60.2   11510    62.7    59.7   11515    62.7    62.7
Downstream Deck/Roadway Coordinates,  num = 6
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   11100   62.76   62.76   11142   62.76   61.08   11283    63.2    60.2
   11383    63.2    60.2   11510    62.7    59.7   11515    62.7    62.7
Elevation at which weir flow begins        =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum              Cd   =       0
       Yarnell               KVal =
       W.S. Pro Method       CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1             River Station: 37.16
Description:  37.16

Station Elevation Data,  num = 30
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    60.6   11000   60.56   11100   62.76   11142   61.08   11166    46.7
   11219      38   11240    35.6   11270    32.8   11283    33.2   11283    60.2
   11291    60.2   11291    33.4   11308    34.2   11333    32.5   11373    31.6
   11375    31.6   11375    60.2   11383    60.2   11383    31.4   11413      31
   11438    32.5   11453    33.8   11463      38   11472    44.2   11482    46.4
```

11510	59.7	11515	62.7	11559	60.5	11600	60.56	15000	60.56

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11100	.035	11515	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11100	11515	450	475	450	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 37.07
Description: 37.07

Station Elevation Data, num = 93

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	60.2	10024	57.6	10072	44.3	10106	42.5	10150	41.6
10204	41.2	10290	41.5	10320	42.6	10390	42.8	10425	42.5
10470	42.6	10499	44.6	10524	45	10567	43.6	10584	36.1
10650	35	10714	36.1	10728	42.7	10756	42.7	10829	40.5
10861	40.3	10938	41.9	10981	44.2	11028	42.2	11050	36.1
11141	34.2	11166	32.5	11202	31.6	11268	32.5	11304	36.1
11319	43.7	11339	43.2	11363	42.8	11391	42.6	11406	42.8
11438	43.2	11463	42.6	11509	42.9	11553	42.8	11583	42.7
11631	42.4	11694	42.6	11714	43	11741	43.1	11764	43.2
11798	43.7	11823	43.9	11860	44	11892	44.2	11990	44.4
12018	44	12061	44.8	12096	45.3	12170	46.1	12234	47.2
12296	46.6	12351	45.8	12429	43.5	12482	44.2	12525	43.9
12587	42.4	12633	41.3	12744	40.8	12787	41.1	12834	41.7
12877	42.1	12933	41.9	12991	42	13045	41.4	13139	40.8
13197	41.1	13256	41	13291	41.1	13355	41.4	13417	41.3
13509	42.3	13551	42.7	13605	42.3	13822	41.2	13898	41.1
13960	43.2	14049	44.2	14109	44.1	14181	43.8	14226	45
14294	45.7	14323	49	14350	52.6	14449	56	14475	57.8
14485	59.8	14503	59.8	14540	60				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11028	.035	11319	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11028	11319	4700	7867	5400	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 35.58
Description: 35.58

Station Elevation Data, num = 94

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	60	10057	59.2	10162	57.2	10295	47.2	10444	52.2
10479	51.5	10637	44.8	10909	43.5	11122	43.8	11230	46.5
11343	47.5	11401	46.4	11461	44.1	11582	43.6	11727	44.1
11879	44.1	12000	47.1	12115	47.3	12168	46.9	12444	47.5
12688	50.5	12933	51.5	13206	46.3	13275	48	13442	46.4
13728	46.5	13728	49.9	13732	49.9	13733	51	13824	51.2
13930	54.2	14005	55	14084	54.6	14159	52.8	14220	50.8
14242	50.4	14285	51.8	14342	52.7	14427	53.5	14505	54.6
14594	55.3	14683	57.8	14763	60.4	14801	62	14840	62.1
14864	62.8	14882	64.4	14901	63.1	14935	61.5	14972	60.5
15010	59.2	15049	56.3	15075	54.5	15105	52.6	15145	50.7
15169	48.7	15201	46.5	15236	43.4	15267	43.4	15342	43.3
15368	42.6	15413	42.9	15469	44	15527	45.2	15586	48
15665	48.2	15748	47.8	15828	47	15891	39.6	15922	42.9
15932	44	15950	35.2	15983	31.2	16020	30.5	16035	33.2
16048	35.2	16061	37.4	16072	38.1	16089	38.1	16109	35.9
16136	36	16182	38.2	16235	37.9	16271	45.3	16415	45.6
16563	47.5	16689	46.6	16855	50.8	16977	54.1	17137	57.9
17141	57.9	17147	57.9	17223	59.6	17247	60		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	15932	.035	16271	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
15932	16271	20	20	20	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 35.57
Description: 35.57

Station Elevation Data, num = 94

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	60	10057	59.2	10162	57.2	10295	47.2	10444	52.2
10479	51.5	10637	44.8	10909	43.5	11122	43.8	11230	46.5
11343	47.5	11401	46.4	11461	44.1	11582	43.6	11727	44.1
11879	44.1	12000	47.1	12115	47.3	12168	46.9	12444	47.5
12688	50.5	12933	51.5	13206	46.3	13275	48	13442	46.4
13728	46.5	13728	49.9	13732	49.9	13733	51	13824	51.2

13930	54.2	14005	[illegible]	14084	54.6	14159	52.8	1422[illegible]	50.8
14242	50.4	14285	51.8	14342	52.7	14427	53.5	14505	54.6
14594	55.3	14683	57.8	14763	60.4	14801	62	14840	62.1
14864	62.8	14882	64.4	14901	63.1	14935	61.5	14972	60.5
15010	59.2	15049	56.3	15075	54.5	15105	52.6	15145	50.7
15169	48.7	15201	46.5	15236	43.4	15267	43.4	15342	43.3
15368	42.6	15413	42.9	15469	44	15527	45.2	15586	48
15665	48.2	15748	47.8	15828	47	15891	39.6	15922	42.9
15932	44	15950	35.2	15983	31.2	16020	30.5	16035	33.2
16048	35.2	16061	37.4	16072	38.1	16089	38.1	16109	35.9
16136	36	16182	38.2	16235	37.9	16271	45.3	16415	45.6
16563	47.5	16689	46.6	16855	50.8	16977	54.1	17137	57.9
17141	57.9	17147	57.9	17223	59.6	17247	60		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	15932	.035	16271	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
15932	16271	6500	9134	7700 .1	.3

CROSS SECTION INPUT Reach: 1 River Station: 33.85
Description: 33.85

Station Elevation Data, num = 36

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	60	10072	58.4	10154	55.9	10283	52.8	10374	51
10499	49.5	10722	46.4	10787	45.2	10865	45.2	11053	45.6
11216	45.6	11491	45.2	11546	45.2	11747	45.4	11846	44.6
11973	43.7	12036	42.7	12120	41.8	12204	41.6	12244	42
12391	43.7	12506	43.3	12672	44.2	12754	44.3	12801	39.9
12928	40	13082	40.5	13503	40.3	13644	43	13746	42.3
13895	42	14050	40	14350	40	15100	45	15320	50
15750	55								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	12801	.1	13503	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12801	13503	4000	4013	3200 .1	.3

CROSS SECTION INPUT Reach: 1 River Station: 33.09
Description: 33.09

Station Elevation Data, num = 49

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
9200	60	9630	55	10000	50	10111	49.6	10233	49.5
10322	48.6	10458	44.8	10544	41.6	10622	41.2	10688	39.9
10837	40.5	10909	41.5	10948	40	11047	36.4	11131	39.2
11238	39.1	11327	38.4	11480	36.7	11591	35.9	11750	35.1
11901	36.9	12132	37	12203	35.3	12235	34.3	12250	31
12284	36.7	12458	37	12554	38.7	12627	41.5	12731	43.7
12820	46.8	12897	49.4	12952	50.9	12976	51.2	13001	52.6
13007	52.3	13012	52.2	13028	52.3	13041	52.5	13083	52.6
13142	52.7	13200	52.8	13276	52.9	13338	52.95	13351	54
13417	57.2	13482	57.8	13655	58.4	13733	58.4		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
9200	.2	12132	.1	12284	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12132	12284	3700	4805	4700 .1	.3

CROSS SECTION INPUT Reach: 1 River Station: 32.18
Description: 32.18

Station Elevation Data, num = 23

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
8170	60	8745	53	10000	54.5	10227	54.5	10450	54.5
10687	54.5	10916	45.9	11264	42	11450	40.5	11674	40.8
11863	40.1	12165	43	12413	38.4	12467	31.2	12545	30.5
12654	35.7	12678	38.4	12995	40.2	13096	40.2	13800	45
13900	50	14000	55	14065	60				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
8170	.2	12413	.1	12678	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12413	12678	5500	9293	3000 .1	.3

CROSS SECTION INPUT Reach: 1 River Station: 30.42

Description: 30.42

Station Elevation Data, num = 28

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
9800	55	10000	50	10400	45	10500	40	10600	38
11100	40	12100	42	12900	40	13000	35	13050	33
13100	35	13200	40	13250	45	13350	50	13750	52
14150	52	15050	55	15350	56	15650	55	16150	50
16950	45	17200	40	17250	35	17350	35	17375	40
17400	45	17450	50	17550	55				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
9800	.2	12900	.1	13200	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12900	13200	6000	7814	5800	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 28.94
Description: 28.94

Station Elevation Data, num = 53

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
7910	55	8000	50	8350	49.7	8740	50	10000	50.5
10189	49.3	10332	48.5	10375	46	10453	40.6	10486	40.6
10507	32.8	10511	31.8	10541	29.3	10579	29.2	10600	30.3
10611	28.7	10614	27.4	10620	27.7	10625	32.8	10651	37
10733	37.7	10807	40	10876	40.2	10953	40.2	11071	37.8
11123	40.1	11188	38	11253	38.1	11297	39.8	11349	40.4
11400	40.4	11495	41.2	11644	42.4	11804	45	12035	46.6
12095	46.7	12227	46.2	12379	44.9	12532	49.7	12558	50.1
13250	52	13610	50	13675	45	13710	43.8	13800	45
14010	45	14160	40	14800	35	14875	35	14900	40
14955	45	15000	50	15320	55				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
7910	.2	10486	.035	10651	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10486	10651	5300	5914	3900	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 27.82
Description: 27.82

Station Elevation Data, num = 99

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
9800	55	10000	50.6	10011	48.4	10014	49.2	10027	49.6
10041	48.9	10045	50.4	10053	49.5	10073	50.3	10133	49.1
10255	46.8	10365	44.9	10412	43.9	10465	45.2	10512	46.1
10610	46.9	10656	46.5	10660	45	10670	45.1	10771	45.1
10780	44.8	10806	45.4	10823	45.7	10844	44.4	10853	42.8
10866	42.8	10878	43.8	10927	41.9	10962	40.2	11017	37.8
11059	35.4	11117	35.5	11195	36	11274	36	11316	34
11347	31.9	11402	29.3	11492	30.3	11519	28.7	11548	27.4
11580	31.9	11593	34.3	11695	32.8	11798	34.8	11891	37.6
11992	40.8	12078	39.9	12149	39.1	12215	39.5	12245	40.4
12310	39.3	12348	38.8	12407	39.8	12435	40	12473	39.6
12504	40.6	12535	38.9	12565	37.8	12582	37.6	12592	37.6
12595	38.7	12639	37.6	12690	36.3	12744	35.2	12778	33.6
12803	33	12829	33.3	12860	35.1	12899	35.9	12941	37.1
12987	37.1	13054	37.2	13104	37.7	13134	38.4	13148	41.5
13161	43.7	13174	44.8	13189	45.2	13203	44	13231	43.5
13256	43.8	13273	43.7	13283	43.6	13307	43.2	13341	41
13465	37.6	13527	37.7	13604	39.2	13714	38.1	13808	41.9
13879	42.7	14013	41.8	14225	43.5	14323	46.7	14402	48.5
14420	50.1	14438	50.3	14449	50.3	14970	55		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
9800	.2	11347	.035	11580	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11347	11580	186	186	186	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 27.79
Description: 27.79

Station Elevation Data, num = 99

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
9545	55	10000	50.6	10011	48.4	10014	49.2	10027	49.6
10041	48.9	10045	50.4	10053	49.5	10073	50.3	10133	49.1
10255	46.8	10365	44.9	10412	43.9	10465	45.2	10512	46.1
10610	46.9	10656	46.5	10660	45	10670	45.1	10771	45.1

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10780	44.8	10806	45.4	10823	45.7	10844	44.4	10853	42.8
10866	42.8	10878	43.8	10927	41.9	10962	40.2	11017	37.8
11059	35.4	11117	35.5	11195	36	11274	36	11316	34
11347	31.9	11402	29.3	11492	30.3	11519	28.7	11548	27.4
11580	31.9	11593	34.3	11695	32.8	11798	34.8	11891	37.6
11992	40.8	12078	39.9	12149	39.1	12215	39.5	12245	40.4
12310	39.3	12348	38.8	12407	39.8	12435	40	12473	39.6
12504	40.6	12535	38.9	12565	37.8	12582	37.6	12592	37.6
12595	38.7	12639	37.6	12690	36.3	12744	35.2	12778	33.6
12803	33	12829	33.3	12860	35.1	12899	35.9	12941	37.1
12987	37.1	13054	37.2	13104	37.7	13134	38.4	13148	41.5
13161	43.7	13174	44.8	13189	45.2	13203	44	13231	43.5
13256	43.8	13273	43.7	13283	43.6	13307	43.2	13341	41
13465	37.6	13527	37.7	13604	39.2	13714	38.1	13808	41.9
13879	42.7	14013	41.8	14225	43.5	14323	46.7	14402	48.5
14420	50.1	14438	50.3	14449	50.3	15065	55		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
9545	.2	11347	.035	11580	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11347	11580	106	106	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 27.77
Description: 27.77

Station Elevation Data, num = 36

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
9575	55	10000	50.8	10169	49.7	10372	48.4	10654	48.2
10897	48.1	11139	48.5	11246	48.5	11247	48.5	11310	28.6
11310	45.6	11313	45.6	11313	28.6	11371	30.2	11394	26.2
11394	45.6	11397	45.6	11397	26.2	11446	26.5	11481	33.2
11484	48.5	11716	48.5	11995	47.4	12205	47.6	12352	47.3
12500	47.1	12687	47.4	12880	47.8	13086	48	13248	48.5
13387	48.4	13539	48.4	13711	48.4	13975	49	14072	50
15050	55								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
9575	.2	11247	.035	11484	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11247	11484	25	25	.3	.5

BRIDGE INPUT Reach: 1 River Station: 27.765
Description: US-441 Bridge
Distance from Upstream XS = 0
Deck/Roadway Width = 25
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates, num = 6

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
11247	48.5	48.5	11310	48.5	45.6	11313	48.5	45.6
11394	48.5	45.6	11397	48.5	45.6	11484	48.5	48.5

Downstream Deck/Roadway Coordinates, num = 6

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
11247	48.5	48.5	11310	48.5	45.6	11313	48.5	45.6
11394	48.5	45.6	11397	48.5	45.6	11484	48.5	48.5

Elevation at which weir flow begins =
Maximum allowable submergence for weir flow = .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods
Energy
Momentum Cd = 0
Yarnell KVal =
W.S. Pro Method CVal =
Selected Low Flow Methods = Energy

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth
inside the bridge at the downstream end
Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT Reach: 1 River Station: 27.76
Description: 27.76

Station Elevation Data, num = 36

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
9600	55	10000	50.8	10169	49.7	10372	48.4	10654	48.2
10897	48.1	11139	48.5	11246	48.5	11247	48.5	11310	28.6
11310	45.6	11313	45.6	11313	28.6	11371	30.2	11394	26.2
11394	45.6	11397	45.6	11397	26.2	11446	26.5	11481	33.2
11484	48.5	11716	48.5	11995	47.4	12205	47.6	12352	47.3
12500	47.1	12687	47.4	12880	47.8	13086	48	13248	48.5
13387	48.4	13539	48.4	13711	48.4	13975	49	14072	50
15050	55								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
9600	.2	11247	.035	11484	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11247	11484	325	325	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 27.68
Description: 27.68

Station Elevation Data, num = 60

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
9750	54	10000	50.2	10030	49.6	10069	48.1	10093	47.6
10123	45.6	10139	44.3	10188	41.3	10261	36.2	10314	33.6
10417	32.5	10487	33.1	10521	33.9	10531	31.9	10544	30.2
10565	28.9	10588	28.3	10646	28.8	10683	28.3	10706	29
10737	30.3	10750	31.9	10771	33.5	10814	35	10843	39.8
10872	43.2	10914	43.5	10984	43.8	11043	43.7	11093	43.9
11106	44	11117	44.8	11133	44.8	11171	42.7	11217	41.6
11291	40.3	11379	39.5	11493	38.3	11571	37.8	11640	37.4
11837	33.3	11858	32.7	11887	32.7	11923	33.8	11977	34.1
12072	34.8	12182	35	12421	37.7	12549	39.7	12699	45.9
12829	46.1	12975	43.9	13148	42.2	13310	42.2	13540	42.2
13679	47.9	13694	47.9	13720	49.7	13744	50	14075	55

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
9750	.2	10521	.035	10771	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10521	10771	4000	6125	5500	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 26.52
Description: 26.52

Station Elevation Data, num = 67

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
8800	52	10000	45	10050	44.5	10114	43.8	10172	42.7
10249	42.4	10324	44.1	10370	45.3	10412	43.4	10478	42.8
10552	43.1	10604	44	10701	44	10756	44.4	10812	44.4
10836	43.3	10841	40.3	10847	40.3	10854	43.5	10931	43.8
11029	43.5	11083	42.8	11155	41.6	11251	40.2	11338	36.8
11416	34.5	11456	33.3	11519	33	11595	32.7	11710	33.7
11813	35.1	11889	35.3	12055	33.2	12153	32.7	12221	29.8
12312	34.5	12416	35.5	12539	35.7	12637	34.8	12655	34.8
12662	35.7	12676	35.7	12690	35.8	12713	30.1	12716	28.3
12729	24.5	12767	23.4	12787	23.2	12797	23.6	12816	25.3
12823	27.9	12827	30.1	12831	35.1	12841	36.2	12858	37.3
12866	43.3	12883	47	12903	48.4	12940	50.7	12985	52.2
13041	54	13097	54	13150	53.7	13213	54	13292	54.4
13375	54.6	13458	53.7						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
8800	.2	12690	.035	12831	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12690	12831	5800	7022	2730	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 25.19
Description: 25.19

Station Elevation Data, num = 55

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	52.1	10111	52.6	10227	53.1	10329	52.4	10408	51.4
10472	49.5	10510	49.2	10554	49.2	10621	48.9	10695	47.5
10829	45.7	10988	42.4	11095	41.5	11175	40.8	11269	42.3
11326	42.6	11367	41.5	11409	39.2	11440	35	11454	33.3
11476	32.6	11492	32	11512	30.5	11527	28.5	11600	25.43
11677	28.5	11688	30.8	11704	31.4	11726	32.3	11751	32.2

11775	34.9	11797	34..	11841	34.2	11873	32.7	1189[illegible]	30.9
11919	30.7	11945	31.1	11984	31.2	12012	34.5	12050	34.5
12102	35.2	12207	37.1	12302	37.7	12430	39.1	12538	42.8
12686	44.2	12755	47	12874	48.4	12911	48.2	12948	48.2
13003	49.2	13059	49.3	13141	50.1	13212	52.2	13292	52.9

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11476	.035	11726	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11476	11726	1700	3432	3500	.1 .3

CROSS SECTION INPUT Reach: 1 River Station: 24.54
Description: 24.54

Station Elevation Data, num = 58

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	58.1	10009	58.1	10015	59	10021	59	10040	58.3
10078	58.6	10114	58.1	10153	57.9	10190	56.8	10216	56
10243	54.6	10253	54.3	10269	53.8	10284	53.9	10316	54.1
10350	54.9	10399	55.5	10446	55.9	10501	55.5	10559	55
10600	54.6	10635	54.6	10654	53.5	10680	53.5	10719	52.9
10775	51.2	10859	43.9	10906	36.6	10942	32.6	10960	30.7
10993	30.9	11006	28.6	11100	16.26	11178	28.5	11201	35.3
11213	36.5	11233	37	11293	38.6	11338	40.1	11392	40.3
11477	41.7	11543	41.6	11609	40.2	11665	39.6	11737	39.4
11836	38.4	11933	38.1	12057	38.1	12161	37.7	12252	38.6
12296	39.7	12349	42.4	12392	45.3	12434	48.2	12456	49.6
12509	51	12597	54.7	12670	56				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10906	.035	11201	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10906	11201	145	145	145 .1	.3

CROSS SECTION INPUT Reach: 1 River Station: 24.52
Description: 24.52

Station Elevation Data, num = 58

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	58.1	10009	58.1	10015	59	10021	59	10040	58.3
10078	58.6	10114	58.1	10153	57.9	10190	56.8	10216	56
10243	54.6	10253	54.3	10269	53.8	10284	53.9	10316	54.1
10350	54.9	10399	55.5	10446	55.9	10501	55.5	10559	55
10600	54.6	10635	54.6	10654	53.5	10680	53.5	10719	52.9
10775	51.2	10859	43.9	10906	36.6	10942	32.6	10960	30.7
10993	30.9	11006	28.6	11100	16.26	11178	28.5	11201	35.3
11213	36.5	11233	37	11293	38.6	11338	40.1	11392	40.3
11477	41.7	11543	41.6	11609	40.2	11665	39.6	11737	39.4
11836	38.4	11933	38.1	12057	38.1	12161	37.7	12252	38.6
12296	39.7	12349	42.4	12392	45.3	12434	48.2	12456	49.6
12509	51	12597	54.7	12670	56				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10906	.035	11201	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10906	11201	25	25	25 .3	.5

CROSS SECTION INPUT Reach: 1 River Station: 24.51
Description: 24.51

Station Elevation Data, num = 33

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	58.8	10125	58.8	10233	58.8	10397	57.4	10561	54.4
10694	51.9	10817	49.4	10908	48.2	10977	47.5	11030	47.1
11075	46.8	11125	46.2	11189	25	11189	43.9	11192	43.9
11192	25	11233	16.3	11274	27.2	11274	43.9	11277	43.9
11277	27.2	11314	31.6	11345	46.8	11407	46.6	11805	46.1
11990	46	12120	45.7	12280	45.8	12459	46.9	12603	48.5
12779	50.7	12973	53.1	13145	55				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11125	.035	11345	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11125	11345	30	30	30 .3	.5

BRIDGE INPUT Reach: 1 River Station: 24.505

Description: US-27 Bridge
Distance from Upstream XS = 0
Deck/Roadway Width = 30
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates, num = 6

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
11075	46.8	46.8	11125	46.8	46.2	11189	46.8	43.9
11277	46.8	43.9	11314	46.8	43.9	11345	46.8	46.8

Downstream Deck/Roadway Coordinates, num = 6

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
11075	46.8	46.8	11125	46.8	46.2	11189	46.8	43.9
11277	46.8	43.9	11314	46.8	43.9	11345	46.8	46.8

Elevation at which weir flow begins =
Maximum allowable submergence for weir flow = .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods
Energy
Momentum Cd = 0
Yarnell KVal =
W.S. Pro Method CVal =
Selected Low Flow Methods = Energy

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth inside the bridge at the downstream end
Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT Reach: 1 River Station: 24.5
Description: 24.5

Station Elevation Data, num = 33

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	58.8	10125	58.8	10233	58.8	10397	57.4	10561	54.4
10694	51.9	10817	49.4	10908	48.2	10977	47.5	11030	47.1
11075	46.8	11125	46.2	11189	25	11189	43.9	11192	43.9
11192	25	11233	16.3	11274	27.2	11274	43.9	11277	43.9
11277	27.2	11314	31.6	11345	46.8	11407	46.6	11805	46.1
11990	46	12120	45.7	12280	45.8	12459	46.9	12603	48.5
12779	50.7	12973	53.1	13145	55				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11125	.035	11345	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11125	11345	90	90	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 24.49
Description: 24.49

Station Elevation Data, num = 58

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	58.1	10009	58.1	10015	59	10021	59	10040	58.3
10078	58.6	10114	58.1	10153	57.9	10190	56.8	10216	56
10243	54.6	10253	54.3	10269	53.8	10284	53.9	10316	54.1
10350	54.9	10399	55.5	10446	55.9	10501	55.5	10559	55
10600	54.6	10635	54.6	10654	53.5	10680	53.5	10719	52.9
10775	51.2	10859	43.9	10906	36.6	10942	32.6	10960	30.7
10993	30.9	11006	28.6	11100	16.26	11178	28.5	11201	35.3
11213	36.5	11233	37	11293	38.6	11338	40.1	11392	40.3
11477	41.7	11543	41.6	11609	40.2	11665	39.6	11737	39.4
11836	38.4	11933	38.1	12057	38.1	12161	37.7	12252	38.6
12296	39.7	12349	42.4	12392	45.3	12434	48.2	12456	49.6
12509	51	12597	54.7	12670	56				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10906	.035	11201	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10906	11201	40	40	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 24.48

Description: 24.48

Station Elevation Data, num = 59

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	56	10159	55.9	10358	55.9	10571	55.7	10709	55.7
10850	56	10974	56.2	11116	55.9	11266	55.8	11384	55.2
11468	55.1	11480	55.6	11500	55.4	11508	54.6	11579	54.9
11630	54.8	11678	54.4	11680	52.5	11715	41	11715	51.3
11719	51.3	11719	41	11736	31	11736	47.1	11744	47.1
11744	31	11745	31	11775	23	11810	26	11811	26
11811	49.1	11820	49.1	11820	26.5	11825	27.3	11845	22.6
11860	31	11864	31	11864	49.1	11873	49.1	11873	31.5
11890	42	11890	50.6	11894	50.6	11894	43	11920	52
11922	53.6	12062	53.4	12266	53.3	12531	53	12716	52.8
12890	52.8	13053	53.5	13221	54.3	13319	55	13323	55.9
13336	55.9	13338	55.3	13456	55.9	13648	56.7		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11678	.035	11922	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11678	11922	20	20	.3	.5

BRIDGE INPUT Reach: 1 River Station: 24.475
Description: Seaboard Coastline RR Bridge
Distance from Upstream XS = 0
Deck/Roadway Width = 20
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates, num = 13

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
11678	54.4	54.4	11680	54.4	52.5	11715	54.3	51.3
11736	54.1	47.1	11744	54.1	47.1	11811	54.1	49.1
11820	54.1	49.1	11864	54.1	49.1	11873	54.1	49.1
11890	53.6	50.6	11894	53.6	50.6	11920	53.6	52
11922	53.6	53.6						

Downstream Deck/Roadway Coordinates, num = 13

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
11678	54.4	54.4	11680	54.4	52.5	11715	54.3	51.3
11736	54.1	47.1	11744	54.1	47.1	11811	54.1	49.1
11820	54.1	49.1	11864	54.1	49.1	11873	54.1	49.1
11890	53.6	50.6	11894	53.6	50.6	11920	53.6	52
11922	53.6	53.6						

Elevation at which weir flow begins =
Maximum allowable submergence for weir flow = .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods
Energy
Momentum Cd = 0
Yarnell KVal =
W.S. Pro Method CVal =
Selected Low Flow Methods = Energy

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth
inside the bridge at the downstream end
Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT Reach: 1 River Station: 24.47
Description: 24.47

Station Elevation Data, num = 59

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	56	10159	55.9	10358	55.9	10571	55.7	10709	55.7
10850	56	10974	56.2	11116	55.9	11266	55.8	11384	55.2
11468	55.1	11480	55.6	11500	55.4	11508	54.6	11579	54.9
11630	54.8	11678	54.4	11680	52.5	11715	41	11715	51.3
11719	51.3	11719	41	11736	31	11736	47.1	11744	47.1
11744	31	11745	31	11775	23	11810	26	11811	26
11811	49.1	11820	49.1	11820	26.5	11825	27.3	11845	22.6
11860	31	11864	31	11864	49.1	11873	49.1	11873	31.5
11890	42	11890	50.6	11894	50.6	11894	43	11920	52
11922	53.6	12062	53.4	12266	53.3	12531	53	12716	52.8

12890	52.8	13053	53.3	13221	54.3	13319	55	13325	55.9
13336	55.9	13338	55.3	13456	55.9	13648	56.7		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11678	.035	11922	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11678	11922	150	150	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 24.44
Description: 24.44

Station Elevation Data, num = 73

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	57.6	10076	57.3	10139	58.3	10189	58.3	10237	58.5
10292	58.4	10350	58.1	10419	57.2	10471	56.8	10490	56.2
10499	55.8	10503	55.9	10509	57.8	10519	57.8	10531	56.4
10536	56.1	10561	56.3	10574	55.2	10582	55.4	10601	55.8
10644	55.8	10688	55.4	10739	53.9	10763	52.9	10812	51.2
10841	50.1	10870	47.7	10894	43.3	10942	38.3	10975	28.4
11030	16.3	11076	28.4	11084	37	11092	39.3	11108	39.5
11129	38.3	11150	36.2	11174	36	11201	35.8	11228	35.9
11265	36.3	11313	36.6	11359	36.5	11411	35.2	11460	34.7
11504	35.3	11554	36.6	11623	38	11688	38.9	11757	39.3
11815	39.2	11881	37.7	11948	35.7	11987	33.9	12017	34.5
12069	35.5	12107	37.1	12168	39.1	12236	40.4	12307	41.8
12371	43.8	12424	45.4	12448	46.1	12489	47.8	12514	49
12542	50.8	12553	51.5	12558	52.1	12581	52.3	12587	54.1
12600	55.1	12641	57.3	12700	60.6				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10942	.035	11084	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10942	11084	1100	1531	1700	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 24.15
Description: 24.15

Station Elevation Data, num = 39

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	58.5	10069	57.2	10146	54.5	10201	52.3	10235	51.5
10289	50.3	10381	45.5	10448	39.4	10483	36.4	10540	37.1
10571	37.9	10628	38.1	10664	38.5	10685	39	10715	39.5
10739	37.8	10746	37.6	10766	28	10800	24.87	10850	22.45
10900	24.1	10904	28	10910	32.2	10928	32.8	10958	33.4
10973	35.1	10998	41.5	11024	48.7	11053	52.9	11095	57
11133	57.7	11171	59.2	11220	60.7	11248	61.5	11259	60.7
11271	60.8	11318	61.6	11387	62	11440	63.1		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10746	.035	10910	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10746	10910	1900	1742	1500	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 23.82
Description: 23.82

Station Elevation Data, num = 34

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	47	10083	31.9	10155	38.5	10204	39.6	10250	39.7
10304	40.2	10340	39.1	10429	30.2	10494	30.8	10607	32.4
10668	31.3	10717	31.5	10761	32.3	10783	30.8	10798	27.9
10800	26.5	10850	17.36	10900	27.05	10949	27.9	10988	33.4
11030	36.9	11079	39.5	11137	42.5	11199	44	11259	44.8
11304	44.1	11346	46	11426	47.3	11465	46.1	11479	40.8
11498	40.8	11519	45.6	11545	48.8	11575	50.1		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10783	.035	10949	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10783	10949	4700	3600	2300	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 23.14
Description: 23.14

Station Elevation Data, num = 44

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.

10000	50	10050	46.1	10108	46.1	10174	45.1	102[illegible]	43.2
10394	41.3	10532	41.8	10644	41.3	10704	41.6	10720	39.3
10748	27.5	10775	21.56	10800	17.29	10825	21.46	10845	27.5
10861	35.9	10876	35.4	10904	33.3	10923	31.5	10952	31.1
10975	32.8	11015	33.5	11087	35.7	11141	35.5	11236	34
11362	33.5	11456	35.1	11531	36.1	11600	36.2	11780	35.5
11858	37.1	11987	37.3	12042	39.3	12189	39.6	12282	41.5
12482	42.8	12599	44.4	12728	44.6	12796	44.3	12850	45.7
12924	45.7	13005	47.2	13079	48	13160	50.1		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10720	.035	10861	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10720	10861	4900	4752	3400	.1 .3

CROSS SECTION INPUT Reach: 1 River Station: 22.24
Description: 22.24

Station Elevation Data, num = 41

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	50	10045	49	10072	47.9	10123	46.6	10170	46
10212	45.6	10274	43	10309	41.6	10336	38.9	10376	35.1
10392	33.2	10414	27.9	10436	28.6	10464	31.9	10508	33.7
10550	32.5	10612	33.5	10634	34	10649	27.2	10700	22.79
10750	21.1	10800	23.19	10869	27.2	10908	30	10952	31.3
11000	32.7	11055	36	11105	35.9	11156	36.6	11204	37.6
11260	38.1	11329	37.7	11395	37.1	11469	38	11559	42.4
11625	44.2	11704	42.9	11768	43.5	11831	45.7	11916	49.1
11967	53.4								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	10634	.035	10908	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10634	10908	2900	3432	4000	.1 .3

CROSS SECTION INPUT Reach: 1 River Station: 21.59
Description: 21.59

Station Elevation Data, num = 80

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	50.3	10032	48.7	10060	48.3	10097	48.3	10150	47.5
10200	46.6	10252	46.4	10293	45.8	10332	46	10372	46
10419	46.8	10469	47.7	10522	48.6	10553	49	10590	49.4
10638	49.4	10691	49.6	10732	49.7	10777	49.8	10822	50.1
10865	49.9	10901	49.5	10929	49.2	10952	48.3	10974	48.7
10992	47.3	11007	47.1	11069	47	11129	46.1	11180	46.1
11260	45.7	11317	45	11379	44.5	11453	43.9	11505	44
11555	42.7	11589	43.8	11645	44.1	11689	44.1	11727	43.8
11770	42.5	11831	41.5	11907	38.8	11989	34.4	12074	33.3
12152	34.8	12184	24.6	12225	22	12275	15.87	12300	23.5
12332	24.6	12350	26.8	12414	27.3	12473	27.4	12560	26.9
12617	26.9	12679	29.2	12774	30.5	12860	31.8	12926	36.2
12994	38.1	13088	38.8	13191	40	13285	41.6	13355	43.2
13401	44.6	13465	47.3	13545	48.7	13610	49.8	13684	50.2
13722	50.4	13789	49.8	13836	49.7	13893	48.5	13971	48.4
14068	48.1	14143	47.9	14236	48.5	14299	49.4	14350	50.1

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	12184	.035	12350	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12184	12350	5600	6072	5900	.1 .3

CROSS SECTION INPUT Reach: 1 River Station: 20.44
Description: 20.44

Station Elevation Data, num = 78

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	50	10037	48.2	10086	47.7	10132	47.2	10194	46.8
10241	46	10274	45.2	10295	43.8	10320	42.3	10351	40.7
10399	37.9	10446	34.1	10493	29.8	10533	27.6	10579	26.8
10627	26.8	10670	26.2	10717	25.6	10775	26	10865	27.2
10941	26.1	11018	24.8	11099	23.9	11186	23.8	11268	26.6
11319	27.6	11379	26	11440	27.7	11485	27.4	11512	26.7
11520	21.2	11550	19.17	11600	16.14	11630	18.97	11681	21.2
11705	27.3	11774	27.5	11854	28.7	11936	31.4	12026	41.9
12239	41.3	12298	38.4	12364	38.2	12432	37.3	12530	33.7
12624	33.3	12710	36.2	12855	40.2	12953	40.7	13093	40.7
13144	42.2	13176	43.2	13226	44.6	13269	44.8	13306	45.5

13331	45.9	13366	46.6	13402	46.8	13441	46.8	134[illegible]	46.6
13507	46.7	13544	46.6	13569	46.8	13583	46.9	13591	46.9
13595	46.2	13598	46.2	13606	47.6	13621	47.5	13646	47.4
13670	47.5	13698	47.4	13754	47.8	13802	48.2	13845	49.1
13882	49.8	13923	50.6	13934	50.7				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11512	.035	11705	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11512	11705	4400	4330	3500	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 19.62
Description: 19.62

Station Elevation Data, num = 73

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	44.2	10059	44.7	10133	46	10205	46	10292	44.4
10409	43.1	10462	42	10586	40.4	10604	41	10659	36.6
10697	35	10743	32.6	10865	28.6	10929	26.3	11011	27
11046	25.4	11099	25.7	11142	25.6	11233	25	11311	25.2
11396	24.7	11477	24.4	11562	25	11615	24.6	11623	21.4
11650	18.6	11725	17.74	11800	20.04	11839	21.4	11864	24.3
11930	25	12044	26	12186	28.9	12516	35.2	12730	37.1
12918	38.1	12985	39.9	13065	41.1	13122	40.1	13164	40.5
13246	41.1	13251	41.3	13253	40.6	13254	40.6	13257	41.5
13258	41.5	13260	41	13285	40.7	13312	41.2	13319	40.6
13321	40.5	13332	40.9	13372	40.8	13421	41.1	13490	41.6
13572	41.2	13632	41.1	13709	41.9	13782	42.7	13863	43
13938	42.4	13970	40.9	13975	40.9	14003	41.7	14074	41.4
14142	41.4	14222	40.6	14270	41.7	14330	42.7	14429	44
14505	45	14571	46.2	14633	48				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11615	.035	11864	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11615	11864	4900	5970	4950	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 18.49
Description: 18.49

Station Elevation Data, num = 50

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	45.7	10062	44.5	10104	44.1	10121	42.6	10123	42
10125	42	10131	42.6	10162	42.5	10171	40.9	10175	40.9
10184	41.2	10245	40.4	10373	36.4	10382	35	10423	32.4
10556	29.2	10718	27.7	10838	28	10925	28	10946	29.2
10990	29.8	11017	29.8	11021	24.2	11075	21.44	11100	8.89
11125	20.2	11153	24.3	11191	25.3	11306	26	11632	26.5
11916	27.9	12175	30.5	12480	31.9	12732	33.5	12962	33.9
13000	35.2	13092	35.6	13165	34.8	13215	34.5	13269	35
13321	36.6	13380	39.4	13399	39.9	13441	40.7	13484	41
13535	42.3	13586	43.9	13671	45.7	13746	46.5	13841	48

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.2	11021	.035	11153	.2

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11021	11153	3000	3750	2400	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 17.78
Description: 17.78

Station Elevation Data, num = 52

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	41	10113	38.4	10203	36.6	10254	36.5	10295	34.9
10305	35	10419	34.2	10565	33.5	10686	33.9	10745	36.2
10772	36.6	10807	32.6	10811	32.6	10842	35.9	10896	33.7
11005	34.2	11028	33	11041	33.5	11069	33.5	11080	33.5
11134	33.5	11349	31.9	11566	32.2	11682	29.7	11732	26.7
11760	25.5	11780	22.9	11800	18.69	11850	15.15	11900	17.19
11949	22.9	11959	22.8	12003	26.6	12112	28.2	12221	29
12310	25.7	12441	21.8	12607	23.4	12697	21.1	12731	25.5
12813	24.5	12924	24.8	13041	23.6	13128	24.4	13219	24.5
13310	29.6	13415	31.6	13559	33.3	13692	34.3	13866	33.4
14015	38.6	14119	41.5						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	11760	.045	12003	.28

```
Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11760   12003             2000    2650    3500            .1       .3

CROSS SECTION INPUT    Reach: 1             River Station: 17.28
Description:  17.28

Station Elevation Data,  num = 44
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000     40   10198    39.1   10394    34.9   10555    31.2   10627    25.9
   10700   22.6   10783    22.3   10889    23.3   10946    24.3   11046    23.8
   11163   21.5   11175    19.2   11200   16.56   11250   13.26   11300   15.71
   11376   19.2   11398    21.3   11531    21.3   11634    21.4   11697    24.3
   11825   24.6   11973      26   12080    26.7   12143    27.2   12197    27.4
   12211   26.6   12264    28.9   12310    32.5   12371    34.1   12451      34
   12574   33.7   12636    33.9   12703    33.3   12755    32.5   12825    31.6
   12859   32.6   12968    32.8   13028    32.6   13192    32.3   13348    33.1
   13491   35.2   13619    36.7   13725    37.4   13951      40

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .28   11163    .045   11398     .28

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11163   11398             4300    3960    3400            .1       .3

CROSS SECTION INPUT    Reach: 1             River Station: 16.53
Description:  16.53

Station Elevation Data,  num = 51
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000     41   10199     39   10243    39.2   10349    37.7   10420    37.2
   10510   36.9   10593   36.5   10663      38   10767    38.6   10856    38.7
   10895   38.4   10966   37.8   11109      35   11195    32.4   11267      32
   11425   29.1   11631   28.6   11718      28   11831    22.6   11955    20.6
   12146   20.4   12223   20.3   12330    19.4   12337    19.2   12350   18.24
   12390   19.2   12401   20.5   12465    20.5   12475    19.2   12500   15.24
   12550   13.6   12600  15.66   12649    19.2   12657    19.8   12675    21.5
   12717   21.5   12773   20.4   12853    21.5   12951    23.9   13073    24.5
   13155     23   13235   24.9   13347    27.2   13431    28.6   13750      30
   14354     34   14516   34.7   14738    34.3   14821    33.6   14895    32.5
   14930     41

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .28   12465    .045   12657     .28

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         12465   12657             3400    4120    3350            .1       .3

CROSS SECTION INPUT    Reach: 1             River Station: 15.75
Description:  15.75

Station Elevation Data,  num = 74
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000     40   10079    39.2   10161    39.4   10206    40.4   10263    40.2
   10337   39.9   10412    39.5   10484    39.1   10541    38.7   10593    39.1
   10658   38.9   10732      38   10806    37.6   10876    37.3   10974    38.7
   11028   38.6   11097    36.2   11218    31.4   11312    32.8   11372    33.2
   11459   32.4   11565    31.6   11614    32.5   11682    33.1   11761    32.2
   11837   31.6   11911    32.5   12002    34.2   12191      37   12330    37.6
   12490     37   12668    36.3   12754    34.7   12829    33.4   12935    33.4
   13049   32.8   13183    32.1   13324    31.2   13417      31   13545    31.5
   13688   31.1   13862      28   14128    24.5   14438    24.5   14660    24.5
   14830   24.1   14878    25.6   15002    20.5   15056    17.2   15100   13.51
   15150   11.9   15200   13.31   15231    17.2   15255    26.7   15341      27
   15517   25.1   15722    25.1   15899    26.8   16065      31   16252    37.8
   16421   36.2   16474    35.4   16553    33.6   16580    35.7   16612    34.1
   16640   34.9   16730    35.9   16802    37.1   16868    37.7   16903    37.9
   16935     37   17012    37.5   17112    39.1   17205      40

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .28   14878    .045   15255     .28

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         14878   15255              175     175     175            .1       .3

CROSS SECTION INPUT    Reach: 1             River Station: 15.72
Description:  15.72

Station Elevation Data,  num = 74
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000     40   10079    39.2   10161    39.4   10206    40.4   10263    40.2
```

10337	39.9	10412	3..3	10484	39.1	10541	38.7	105..	39.1
10658	38.9	10732	38	10806	37.6	10876	37.3	10974	38.7
11028	38.6	11097	36.2	11218	31.4	11312	32.8	11372	33.2
11459	32.4	11565	31.6	11614	32.5	11682	33.1	11761	32.2
11837	31.6	11911	32.5	12002	34.2	12191	37	12330	37.6
12490	37	12668	36.3	12754	34.7	12829	33.4	12935	33.4
13049	32.8	13183	32.1	13324	31.2	13417	31	13545	31.5
13688	31.1	13862	28	14128	24.5	14438	24.5	14660	24.5
14830	24.1	14878	25.6	15002	20.5	15056	17.2	15100	13.51
15150	11.9	15200	13.31	15231	17.2	15255	26.7	15341	27
15517	25.1	15722	25.1	15899	26.8	16065	31	16252	37.8
16421	36.2	16474	35.4	16553	33.6	16580	35.7	16612	34.1
16640	34.9	16730	35.9	16802	37.1	16868	37.7	16903	37.9
16935	37	17012	37.5	17112	39.1	17205	40		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	14878	.045	15255	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14878	15255	50	50	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 15.71
Description: 15.71

Station Elevation Data, num = 63

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	40	10190	39	10363	38	10556	36.4	10697	34.7
10877	34.8	11024	34.6	11210	34.7	11313	34.7	11479	35.2
11635	36.1	11824	37.5	12029	37.9	12157	37.9	12257	37.6
12351	37.2	12494	36.5	12645	35.5	12770	35	12934	34
13056	34.4	13161	34.2	13256	34.3	13402	33.9	13524	33.9
13649	33.9	13750	33.9	13926	34	14097	34.2	14248	34.2
14423	34.4	14522	35.9	14678	37.6	14820	38.3	14823	34.6
14843	20.1	14924	9.5	14924	37.5	14930	37.5	14930	9.5
14937	9.4	14987	10.2	14992	13.9	14992	38.4	14996	38.4
14996	13.9	15052	18.4	15060	21.4	15060	37.44	15066	37.44
15066	21.4	15135	37.44	15140	38.1	15312	37	15455	34.4
15754	34	15920	33.8	16103	34.2	16250	35.1	16405	36
16573	37.5	16736	38.9	16882	40				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	14820	.045	15140	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14820	15140	25	25	.3	.5

BRIDGE INPUT Reach: 1 River Station: 15.705
Description: SR-47 Bridge
Distance from Upstream XS = 0
Deck/Roadway Width = 25
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates, num = 8

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
14820	38.3	38.3	14823	39.15	37.5	14924	39.15	37.5
14992	40.1	38.4	15052	40.1	38.4	15066	39.1	37.44
15135	39.11	37.44	15140	38.1	38.1			

Downstream Deck/Roadway Coordinates, num = 8

Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord	Sta.	Hi Cord	Lo Cord
14820	38.3	38.3	14823	39.15	37.5	14924	39.15	37.5
14992	40.1	38.4	15052	40.1	38.4	15066	39.1	37.44
15135	39.11	37.44	15140	38.1	38.1			

Elevation at which weir flow begins =
Maximum allowable submergence for weir flow = .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods
Energy
Momentum Cd = 0
Yarnell KVal =
W.S. Pro Method CVal =
Selected Low Flow Methods = Energy

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum

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Do not add Weight compo..ent to Momentum
Class B flow critical depth computations use critical depth
inside the bridge at the downstream end
Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT Reach: 1 River Station: 15.7
Description: 15.7

Station Elevation Data, num = 63

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	40	10190	39	10363	38	10556	36.4	10697	34.7
10877	34.8	11024	34.6	11210	34.7	11313	34.7	11479	35.2
11635	36.1	11824	37.5	12029	37.9	12157	37.9	12257	37.6
12351	37.2	12494	36.5	12645	35.5	12770	35	12934	34
13056	34.4	13161	34.2	13256	34.3	13402	33.9	13524	33.9
13649	33.9	13750	33.9	13926	34	14097	34.2	14248	34.2
14423	34.4	14522	35.9	14678	37.6	14820	38.3	14823	34.6
14843	20.1	14924	9.5	14924	37.5	14930	37.5	14930	9.5
14937	9.4	14987	10.2	14992	13.9	14992	38.4	14996	38.4
14996	13.9	15052	18.4	15060	21.4	15060	37.44	15066	37.44
15066	21.4	15135	37.44	15140	38.1	15312	37	15455	34.4
15754	34	15920	33.8	16103	34.2	16250	35.1	16405	36
16573	37.5	16736	38.9	16882	40				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	14820	.045	15140	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14820	15140	200	200	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 15.66
Description: 15.66

Station Elevation Data, num = 92

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	40	10065	39.6	10193	39.5	10195	37.5	10222	38.9
10232	39.3	10243	38.9	10253	37.3	10274	39.3	10363	38.8
10432	39.7	10490	39.9	10524	39.9	10601	39.7	10659	38.4
10755	37.1	10844	36.3	10987	35.5	11080	34.8	11186	33.8
11296	31.3	11395	32.6	11468	34	11610	36.6	11677	37.9
11769	39	11832	38.5	11914	38	12064	38	12177	38.6
12291	38.9	12353	39.2	12453	38.4	12568	36.3	12638	34.6
12760	30.3	12848	30.3	12903	30.2	13021	31.6	13076	32.9
13172	32.8	13264	32.1	13337	30.7	13424	29.6	13545	29.2
13667	28.1	13773	28.1	13868	28.4	13986	30	14100	31.7
14124	31.7	14224	32.5	14358	29.6	14424	28.6	14504	27.4
14624	27	14663	27.5	14701	28.2	14805	25.7	14841	24.6
14934	26.5	14999	27.2	15071	26.6	15111	25.2	15145	17.3
15200	13.2	15250	10.22	15300	13.52	15343	17.3	15361	17.5
15467	17.9	15513	20.2	15629	25.2	15849	25.2	16088	27.4
16293	29	16439	32.3	16623	35.1	16814	39.2	16857	39.2
16904	40.3	16927	37.1	16955	37.1	16968	35.8	16988	35.4
16998	36.5	17053	37.9	17121	39	17147	38.1	17162	38.1
17179	40.2	17212	41.3						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	15145	.045	15361	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
15145	15361	3400	3060	2500	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 15.08
Description: Section G (Columbia)

Station Elevation Data, num = 31

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	39.5	10238	33.3	10462	31.8	10619	27.4	10703	25.7
10883	26.4	10963	26.8	10976	26.3	10994	26.3	11039	25.4
11178	26	11416	23.9	11547	24.1	11589	21.4	11632	23.9
11777	25.3	11863	23.3	12004	22.7	12118	24.8	12147	17.1
12200	10.2	12250	6.52	12280	10.82	12305	17.1	12318	18.1
12361	24.5	12489	27.6	12702	38.1	12726	38.9	12811	39.2
12915	40								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	12118	.045	12361	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12118	12361	5700	5280	4000	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 14.08

Description: Section F (Columbia)

Station Elevation Data, num = 38

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	40	10089	37.9	10283	35.7	10472	32.3	10610	31.9
10770	33.9	11030	34	11183	30	11374	26	11475	21.9
11508	20.5	11699	20.7	11981	21.5	12090	23.1	12353	25.3
12443	20.4	12471	16	12500	12.8	12550	10.6	12575	10.5
12600	13.7	12624	16	12650	19.7	12734	23.6	12782	23.6
12838	16.6	12878	23.6	12930	24.6	12985	24.2	13064	30.9
13172	33.4	13298	34.5	13507	36.4	13550	36.6	13572	35.4
13612	37	13835	39.2	13910	40				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	12443	.045	12650	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12443	12650	300	300	300	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 14.00
Description: Ruiz Residence

Station Elevation Data, num = 41

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	40	10089	37.9	10283	35.7	10472	32.3	10610	31.9
10770	33.9	11030	34	11183	30	11374	26	11475	21.9
11508	20.5	11699	20.7	11981	21.5	12090	23.1	12353	25.3
12443	20.4	12471	16	12500	12.8	12550	10.6	12575	10.5
12600	13.7	12624	16	12650	19.7	12734	23.6	12782	23.6
12838	16.6	12878	23.6	12930	24.6	12985	24.2	13064	30.9
13149	32.3	13150	36	13202	36	13203	34.5	13298	34.5
13507	36.4	13550	36.6	13572	35.4	13612	37	13835	39.2
13910	40								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	12443	.045	12650	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12443	12650	4400	5240	5200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 13.03
Description: Section E (Columbia)

Station Elevation Data, num = 31

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	40	10118	38.4	10251	39	10333	39.3	10366	38.1
10479	34	10562	31.5	10858	29.9	11233	29.5	11574	30.7
11746	27.4	11961	26.8	12415	32.3	12535	30.4	12667	23.3
12868	19.7	12920	13.3	12950	8.5	12975	-5.45	13025	7.45
13085	13.3	13185	16.6	13381	16.9	13544	19.1	13733	18.5
13810	20	13901	22.2	14050	22.8	14187	24.2	14265	24.9
14369	40								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	12920	.045	13085	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12920	13085	6100	9130	5400	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 11.3
Description: Section D (Columbia)

Station Elevation Data, num = 28

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	40	10116	35.9	10270	31.3	10433	35.8	10605	38.9
10755	40.5	10968	34.9	11118	28.7	11379	22.9	11645	26.4
11856	20	11938	18.2	12080	14.2	12100	10.6	12200	7.1
12250	7	12300	9.9	12345	14.2	12376	20.2	12427	20.7
12548	19.5	12597	17.3	12861	16.2	13001	17	13088	20.1
13173	30.2	13249	40	13294	41.7				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	12080	.045	12345	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12080	12345	5900	6550	4400	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 10.06
Description: Section C (Columbia)

Station Elevation Data, num = 36

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	38	10243	31.2	10362	28.3	10472	26.4	10548	24.3
10608	12.7	10650	11.31	10689	12.7	10751	16.5	10828	19.7
10926	20.9	10972	19.3	10989	12.7	11000	4.31	11050	1.81
11100	4.8	11133	12.7	11175	16.3	11255	27.9	11288	31.5
11415	30.7	11478	29.3	11498	27.8	11570	28.5	11646	28.6
11859	30.4	12154	31.3	12428	32	12570	35	12697	36.8
12751	35.7	12769	37.3	12846	38.4	13166	35.8	13344	33.1
13443	38								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	10972	.045	11175	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10972	11175	5500	8600	6200	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 8.43
Description: Section B (Columbia)

Station Elevation Data, num = 74

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	38	10181	36.2	10431	36	10664	36	10849	33.8
11010	33.9	11014	32.7	11041	32.7	11046	33.2	11193	34
11328	32.2	11429	31.3	11538	31.1	11623	31.1	11707	30.3
11781	31.5	11819	32.7	11835	33.2	11855	32.2	11863	31.9
11891	31.8	12019	31	12206	30.8	12304	29	12359	28.2
12362	26.9	12369	27.1	12375	27	12378	27.3	12415	26
12472	25	12515	23.4	12537	21.1	12559	17.4	12579	14.2
12592	12.1	12610	10.73	12638	12.1	12647	15.7	12677	15.7
12702	15.8	12710	15.8	12714	15.2	12720	12.1	12730	4.67
12800	-1	12830	2.77	12884	12.1	12896	18.6	12942	17.7
13004	17.7	13180	17.6	13277	24.7	13305	28.3	13322	27.3
13330	26.4	13333	25.3	13335	26.5	13355	27.7	13541	29
13705	26.7	13891	27	14100	27.3	14310	27.6	14510	28.4
14856	30.2	15078	31.3	15386	30.2	15582	30.7	15779	31.2
16054	30.7	16257	30.3	16376	31.3	16639	38		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	12714	.045	12896	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12714	12896	2600	4170	4600	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 7.64
Description: 7.64

Station Elevation Data, num = 59

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	38	10083	34.9	10106	34.9	10112	34.3	10114	33.4
10127	33.4	10130	34.9	10135	34.7	10139	33.8	10207	34.6
10267	34.5	10282	34.1	10310	34.2	10329	34.3	10394	33.7
10561	33.6	10875	33.4	11000	31.9	11330	31.9	11668	31.1
11785	31.1	11999	30.3	12182	30.3	12527	16.4	12750	16.4
12958	18.4	13084	18.4	13100	12.3	13166	2.75	13236	10.05
13252	12.4	13266	15.6	13305	16.6	13336	17.7	13359	20.7
13380	23.3	13414	24.6	13458	25	13472	24.8	13481	24.4
13497	24.6	13511	24	13516	23	13521	23.6	13542	24.5
13630	22.3	13858	23	14088	22.8	14397	29.2	14848	31.3
15206	31.9	15230	31.6	15240	31.6	15294	32	15347	33.1
15390	33.2	15405	33.2	15461	33.5	15720	38		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	13084	.045	13266	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
13084	13266	4950	6230	4900	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 6.46
Description: 6.46

Station Elevation Data, num = 99

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	40.3	10049	40.2	10052	39.9	10063	39.8	10080	39.9
10108	40	10130	39.9	10167	39.6	10232	38.7	10302	35.9
10379	35	10422	35.1	10496	35.3	10544	38.1	10588	38
10627	37.6	10659	35.4	10671	34.4	10678	34.4	10708	36.1
10744	37.6	10824	37.9	10848	37.2	10877	36.8	10940	36.9
11029	36.7	11120	37.2	11217	36.6	11346	36.1	11451	36.7
11572	37.2	11660	37.8	11807	38.8	11835	38.7	11879	37.9
11910	37.7	11983	37.5	12048	37.3	12139	36.1	12228	34.7

12480	33.4	12675	33.1	12704	33	12836	33.2	12945	33.1
12970	32.3	12980	32.2	12989	33.1	12995	33.1	13007	31.3
13133	31.3	13215	30.7	13321	28.7	13410	25.1	13477	20.7
13596	19.8	13692	16.2	14143	15.9	14263	15	14360	14
14497	14	14538	14	14544	11.2	14619	2.53	14744	11
14754	12.8	14794	13.9	14825	15.3	14866	19.6	14895	22.1
14928	21.9	14956	21.1	15044	21.1	15205	24.2	15252	28
15276	26.3	15286	26.4	15296	27.5	15306	27.5	15318	27.1
15322	27.1	15372	28.7	15456	29.1	15659	28.3	15733	27.4
15791	27.4	15860	27.1	15924	27.9	15989	29.2	16077	32.5
16172	34.9	16285	36.4	16497	34.1	16615	32	16704	33.8
16828	35.7	16934	38.3	17048	40.4	17123	40.9		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	14538	.045	14754	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
14538	14754	8200	9150	9900	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 4.73
Description: 4.73

Station Elevation Data, num = 53

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	40.7	10052	38.2	10114	37.6	10172	35.6	10232	34.5
10299	33.4	10368	33.5	10431	32.3	10482	31.9	10540	31.7
10604	31.3	10668	30.5	10720	29.3	10771	24.8	10833	21.2
10901	19.7	10969	19.3	11043	18.7	11139	18	11214	15.9
11283	12.2	11367	12.1	11388	13.9	11436	14.8	11473	14.7
11482	11.7	11492	9.65	11552	1.55	11615	9.65	11646	11.7
11675	21.2	11707	21.6	11753	19.1	11813	19.1	11860	19.2
11907	19.2	11997	15.7	12084	15.9	12157	19.1	12265	22.8
12358	26	12453	28.4	12522	28.7	12587	29.7	12677	32.3
12814	34.3	12931	34.3	13040	34.7	13176	33.8	13309	33.5
13457	35.9	13559	37.1	13654	40.2				

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	11473	.045	11646	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
11473	11646	5600	5960	4400	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 3.6
Description: 3.6

Station Elevation Data, num = 50

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	36	10093	33.1	10172	31.3	10218	30.6	10254	31.1
10289	31.3	10322	30.1	10366	29.7	10407	28.7	10447	26.3
10486	22.7	10522	19.5	10552	17.3	10579	16.1	10614	15
10640	14.1	10656	11.7	10665	9.35	10770	.75	10831	9.35
11136	11.7	11154	16.9	11198	15.3	11261	13.1	11328	13.2
11382	13.5	11435	14.8	11496	14.8	11548	18.2	11622	19.7
11718	20.5	11791	19.4	11880	22	11967	20.8	12069	20.4
12169	20.4	12264	20.4	12323	23.5	12354	25.4	12403	26.1
12438	26.6	12476	28.3	12576	32.2	12640	33.7	12711	33.6
12793	33	12887	33.7	12942	33.7	13025	34.7	13115	36.4

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	10656	.045	10831	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
10656	10831	3750	3800	3800	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 2.88
Description: 2.88

Station Elevation Data, num = 49

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	36.5	10037	33.8	10101	32.1	10140	32	10197	31.1
10263	30.3	10334	29.4	10408	29.4	10486	30	10558	29.2
10623	27.6	10700	26	10788	23.4	10912	20.5	10972	18.5
11070	18.2	11222	18.2	11307	19.1	11353	19	11487	21.7
11592	23.2	11703	25.4	11775	20.6	11857	19	11970	16
12074	15.9	12170	15.9	12197	11.6	12210	9.19	12274	.89
12294	.2	12344	3.99	12363	9.19	12377	11.6	12427	13.3
12527	14.2	12649	13.8	12722	16.6	12818	20.9	12924	20
13036	21.2	13134	22.6	13291	27.4	13464	30	13657	31.8
13741	32.8	13810	34	13846	34.8	13877	36.5		

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	12170	.045	12377	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12170	12377	2000	2006	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 2.5
Description: 2.5

Station Elevation Data, num = 67

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	35.9	10066	29.4	10127	30.4	10193	31	10262	30.9
10336	33.3	10413	33.8	10480	32.6	10545	31.9	10617	31.7
10674	31.6	10764	30.8	10839	30.1	10922	29.1	10999	27.6
11098	28.8	11175	30.1	11222	30.1	11294	30.2	11335	27.8
11375	25.6	11416	24.3	11438	23.9	11487	23.4	11562	23.3
11643	22.5	11663	24.8	11697	23.6	11730	21.7	11769	20.5
11860	18.3	11963	18	12060	18.5	12145	18.5	12224	17.7
12295	17.9	12373	18.9	12448	19	12488	16.8	12547	16.4
12575	18.3	12599	18.9	12612	16.5	12632	9.42	12757	-2.58
12792	16.5	12860	16.6	13039	16.6	13214	17.3	13250	19.1
13298	22	13375	23.7	13470	25.1	13557	26.5	13667	29.2
13747	28.9	13846	28.5	13920	27.4	13999	28.4	14088	29.3
14173	31.7	14275	33	14339	33.1	14371	33.8	14417	34.5
14452	34.5	14491	35.6						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	12612	.045	12792	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12612	12792	205	205	.1	.3

CROSS SECTION INPUT Reach: 1 River Station: 2.46
Description: 2.46

Station Elevation Data, num = 67

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	35.9	10066	29.4	10127	30.4	10193	31	10262	30.9
10336	33.3	10413	33.8	10480	32.6	10545	31.9	10617	31.7
10674	31.6	10764	30.8	10839	30.1	10922	29.1	10999	27.6
11098	28.8	11175	30.1	11222	30.1	11294	30.2	11335	27.8
11375	25.6	11416	24.3	11438	23.9	11487	23.4	11562	23.3
11643	22.5	11663	24.8	11697	23.6	11730	21.7	11769	20.5
11860	18.3	11963	18	12060	18.5	12145	18.5	12224	17.7
12295	17.9	12373	18.9	12448	19	12488	16.8	12547	16.4
12575	18.3	12599	18.9	12612	16.5	12632	9.42	12757	-2.58
12792	16.5	12860	16.6	13039	16.6	13214	17.3	13250	19.1
13298	22	13375	23.7	13470	25.1	13557	26.5	13667	29.2
13747	28.9	13846	28.5	13920	27.4	13999	28.4	14088	29.3
14173	31.7	14275	33	14339	33.1	14371	33.8	14417	34.5
14452	34.5	14491	35.6						

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	12612	.045	12792	.28

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
12612	12792	70	70	.3	.5

CROSS SECTION INPUT Reach: 1 River Station: 2.45
Description: 2.45

Station Elevation Data, num = 66

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
10000	35.7	10095	32.5	10168	32.5	10264	32.5	10374	32.6
10455	32.6	10550	32.7	10659	32.7	10782	32.8	10926	32.9
11074	33	11156	33.1	11226	33	11310	33	11389	32.9
11459	32.9	11550	33.1	11576	15.44	11670	13.63	11670	31.33
11675	31.3	11675	13.12	11680	13.12	11698	9.58	11700	7.33
11700	31.3	11705	31.33	11705	7.33	11765	-2.6	11765	29.89
11771	29.9	11771	-6.51	11773	-7.5	11854	6.53	11860	9.54
11870	11.3	11870	31.33	11875	31.33	11875	11.35	11885	14.33
11885	31.3	11890	31.33	11890	15.33	12000	33.3	12044	33.4
12150	33.4	12217	33.5	12320	33.5	12398	33.5	12468	33.4
12558	33.3	12680	33.2	12792	33.2	12911	33.3	13016	33.3
13092	33.3	13195	33.4	13291	33.4	13435	33.3	13583	33.4
13725	33.3	13878	33.3	14023	33.4	14157	33.7	14217	34.1
14356	35.9								

Manning's n Values, num = 3

Sta.	Value	Sta.	Value	Sta.	Value
10000	.28	11550	.045	12000	.28

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Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11550   12000               25      25      25            .3       .5

BRIDGE INPUT            Reach: 1              River Station: 2.445
Description: US-129 Bridge
Distance from Upstream XS =       0
Deck/Roadway Width        =      25
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream Deck/Roadway Coordinates,  num = 8
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   11550    33.1    33.1   11675    33.1    31.3   11705    33.1    31.3
   11765    33.1    29.9   11860    33.1    29.9   11870    33.1    31.3
   11890    33.1    31.3   12000    33.3    33.3
Downstream Deck/Roadway Coordinates,  num = 8
    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord    Sta. Hi Cord Lo Cord
**********************************************************************
   11550    33.1    33.1   11675    33.1    31.3   11705    33.1    31.3
   11765    33.1    29.9   11860    33.1    29.9   11870    33.1    31.3
   11890    33.1    31.3   12000    33.3    33.3
Elevation at which weir flow begins         =
Maximum allowable submergence for weir flow =     .95
Submergence criteria :Broad Crested

Number of Bridge Coefficient Sets =  1

Low Flow Methods
       Energy
       Momentum               Cd   =       0
       Yarnell                KVal =
       W.S. Pro Method        CVal =
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the downstream end
       Criteria to check for pressure flow = Upstream water surface

CROSS SECTION INPUT    Reach: 1              River Station: 2.44
Description:  2.44

Station Elevation Data,  num = 66
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    35.7   10095    32.5   10168    32.5   10264    32.5   10374    32.6
   10455    32.6   10550    32.7   10659    32.7   10782    32.8   10926    32.9
   11074      33   11156    33.1   11226      33   11310      33   11389    32.9
   11459    32.9   11550    33.1   11576   15.44   11670   13.63   11670   31.33
   11675    31.3   11675   13.12   11680   13.12   11698    9.58   11700    7.33
   11700    31.3   11705   31.33   11705    7.33   11765    -2.6   11765   29.89
   11771    29.9   11771   -6.51   11773    -7.5   11854    6.53   11860    9.54
   11870    11.3   11870   31.33   11875   31.33   11875   11.35   11885   14.33
   11885    31.3   11890   31.33   11890   15.33   12000    33.3   12044    33.4
   12150    33.4   12217    33.5   12320    33.5   12398    33.5   12468    33.4
   12558    33.3   12680    33.2   12792    33.2   12911    33.3   13016    33.3
   13092    33.3   13195    33.4   13291    33.4   13435    33.3   13583    33.4
   13725    33.3   13878    33.3   14023    33.4   14157    33.7   14217    34.1
   14356    35.9

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .28   11550    .045   12000     .28

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11550   12000              275     275     275            .3       .5

CROSS SECTION INPUT    Reach: 1              River Station: 2.39
Description:  2.39

Station Elevation Data,  num = 41
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    35.5   10081    30.3   10178      27   10304    28.9   10401    27.9
   10484    27.4   10594      24   10711    26.6   10793    24.5   10868    26.2
   10947    25.1   11042    21.4   11135    18.7   11207    19.1   11374    17.3
   11447    14.9   11866    16.7   11896    17.3   11922    18.6   11933    16.4
   11946    13.4   11956    8.79   12041   -5.21   12111    8.79   12123    16.4
   12156    16.6   12192    16.2   12267    16.4   12325    16.4   12371    16.2
   12394    16.3   12434    21.5   12470    25.2   12488    25.8   12522    26.4
   12569    26.9   12610    27.7   12671    28.5   12742    29.2   12814    30.2
```

```
   12862    35.5

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .28   11933    .045   12123     .28

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11933   12123             3000    4118    4300            .1      .3

CROSS SECTION INPUT    Reach: 1             River Station: 1.61
Description:  1.61

Station Elevation Data,  num = 30
    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.    Sta.   Elev.
   10000    35.5   10071    29.6   10159    29.6   10250    27.4   10331    23.7
   10382    20.9   10451    18.9   10520    18.1   10585    16.7   10640    17.9
   10697    19.3   10762    19.4   10820    19.1   10867    18.2   10931    19.1
   10979    20.9   11119    16.2   11147    9.24   11222   -3.46   11282  -10.46
   11317     9.2   11389    16.2   11507    19.1   11561    20.1   11607    25.4
   11666    27.9   11731    30.9   11783    32.1   11846    31.8   11894   35.59

Manning's n Values,  num = 3
    Sta.   Value    Sta.   Value    Sta.   Value
   10000     .28   11119    .045   11389     .28

Bank Sta: Left   Right    Lengths: Left Channel   Right    Coeff Contr.   Expan.
         11119   11389               0       0       0            .1      .3
```

Profile Output Table - Standard Table 1
HEC-RAS Plan: Ruiz Residen Reach: 1 11/21/2006

Hydraulic Reaches = 1
River Stations = 161
Plans = 1
Profiles = 1

River Sta.	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
79.85	374.00	127.50	143.9		143.9	0.000000	0.01	34645.11	4225.53	0.00
79.1	374.00	137.00	143.9		143.9	0.000009	0.14	23620.46	11459.12	0.01
78.16	374.00	138.50	143.8		143.8	0.000034	0.22	27308.99	16601.50	0.02
76.67	374.00	138.00	143.0		143.0	0.001060	1.06	6954.20	14140.53	0.11
75.55	374.00	137.10	141.1		141.1	0.000145	0.42	3224.29	2818.42	0.04
75.15	374.00	133.70	140.8		140.8	0.000096	0.44	1498.35	768.87	0.04
75	374.00	133.70	140.7		140.7	0.000103	0.45	1438.09	751.55	0.04
74.98	374.00	132.30	140.6	137.5	140.7	0.005266	2.36	158.76	54.15	0.24
74.9750	Bridge									
74.97	374.00	132.30	140.6	137.5	140.7	0.005329	2.37	158.02	54.00	0.24
74.92	374.00	133.50	139.7		139.7	0.002737	2.21	1821.65	3462.85	0.19
74.35	374.00	133.40	139.3		139.3	0.000037	0.26	7141.12	5629.45	0.02
74.3	374.00	132.90	139.3		139.3	0.000017	0.21	7582.52	4383.03	0.02
74.28	374.00	133.50	139.3	137.2	139.3	0.004747	1.71	218.27	118.16	0.22
74.2749	Bridge									
74.27	374.00	133.50	139.3	137.3	139.3	0.004798	1.72	217.33	117.83	0.22
74.23	374.00	132.90	139.3		139.3	0.000017	0.20	9444.35	5726.27	0.02
74.04	374.00	132.90	139.3		139.3	0.000017	0.20	9348.96	5713.29	0.02
73.94	374.00	132.90	139.3		139.3	0.000012	0.17	16431.25	5485.41	0.01
73.36	2965.00	129.50	139.0		139.0	0.000241	0.89	15375.45	4308.48	0.06
73.32	2965.00	129.50	138.9		138.9	0.000251	0.91	15151.96	4284.41	0.06
73.31	2965.00	127.30	138.7	134.6	138.9	0.004566	2.81	1054.91	242.88	0.24
73.305	Bridge									
73.3	2965.00	127.30	137.8		138.0	0.008150	3.50	847.38	218.10	0.31
73.27	2965.00	124.10	137.7		137.7	0.000621	1.62	12137.10	3575.44	0.09
72.59	2965.00	119.10	132.2		132.5	0.007733	5.39	2729.94	1084.44	0.33
71.46	2965.00	114.40	127.2		127.2	0.000322	1.40	9414.06	2254.84	0.08
70.18	2965.00	110.70	124.6		124.7	0.000469	1.82	7341.63	1493.08	0.09
69.45	2965.00	108.70	121.5		121.6	0.002043	3.16	3564.86	959.02	0.19
69.38	2965.00	106.00	119.4	115.1	119.9	0.015510	5.71	519.68	81.24	0.39
69.375	Bridge									
69.37	2965.00	106.00	118.3		119.0	0.024153	6.81	435.67	71.28	0.49
69.22	2965.00	104.00	116.7		116.7	0.000874	2.61	5471.52	1114.14	0.13
68.72	2965.00	100.00	113.9		114.1	0.001501	3.55	3344.73	709.37	0.17
67.83	2965.00	96.40	111.4		111.4	0.000315	1.71	9622.53	1764.16	0.08
67.11	4665.00	93.70	109.5		109.6	0.000700	2.67	8124.97	1344.26	0.12

65.99	4665.00	88.00	107.1		107.2	0.000335	2.12	12308.94	1895.52	0.09
65.97	4665.00	88.00	106.9	99.4	107.0	0.007169	3.97	4465.26	2000.00	0.21
65.965	Bridge									
65.96	4665.00	88.00	105.8		106.3	0.017557	5.83	2300.47	1712.82	0.32
65.89	4665.00	88.00	105.3		105.4	0.000649	2.76	9098.26	1660.05	0.12
65.86	4665.00	88.00	105.2		105.3	0.000671	2.80	8958.20	1648.77	0.12
64.57	4665.00	86.00	99.8		99.9	0.001220	3.18	5726.40	1742.95	0.16
63.6	4665.00	83.50	93.8		93.8	0.001407	2.75	10863.24	3370.73	0.16
62.24	4665.00	80.50	91.1		91.1	0.000220	1.13	23633.74	3687.71	0.06
61.02	4665.00	75.30	90.5		90.5	0.000064	0.77	34915.90	4236.90	0.04
59.68	4665.00	71.10	89.9		89.9	0.000144	1.35	16980.15	2124.20	0.06
59.66	4665.00	72.60	89.8	79.2	89.9	0.001632	2.55	1829.29	160.05	0.13
59.655	Bridge									
59.65	4665.00	72.60	89.7		89.8	0.001677	2.58	1810.20	159.44	0.13
59.57	4665.00	71.10	89.6		89.6	0.000160	1.40	16230.88	2064.92	0.06
59.26	4665.00	71.10	89.3		89.3	0.000172	1.44	15726.86	2010.50	0.06
58.81	4665.00	66.80	89.0		89.0	0.000113	1.33	20154.31	2062.70	0.05
58.79	4665.00	69.00	88.9	77.2	89.0	0.001433	2.34	2821.79	1835.33	0.12
58.785	Bridge									
58.78	4665.00	69.00	88.3		88.4	0.001790	2.52	2069.35	511.00	0.13
58.7	4665.00	66.80	88.2		88.2	0.000143	1.45	18376.78	1995.15	0.06
58.15	4665.00	66.80	87.8		87.8	0.000160	1.52	17583.75	1979.39	0.06
57.21	8767.00	63.10	85.3		85.4	0.001653	4.83	9134.72	1111.84	0.19
56.22	8767.00	59.30	82.6		82.7	0.000314	2.80	12523.01	1464.01	0.12
55.99	8767.00	59.30	82.3		82.3	0.000346	2.89	11988.35	1453.09	0.13
55.96	8767.00	58.20	82.1	70.0	82.3	0.001208	3.15	8469.51	1933.88	0.15
55.955	Bridge									
55.95	8767.00	58.20	82.0		82.2	0.001253	3.19	8279.49	1916.07	0.15
55.83	8767.00	57.90	81.8		81.9	0.000201	2.36	22631.88	2781.63	0.10
54.27	8767.00	54.80	80.4		80.5	0.000242	2.55	23053.37	2588.39	0.10
53.44	8767.00	53.10	79.9		79.9	0.000124	2.15	23857.16	2161.20	0.08
51.87	8767.00	49.80	79.2		79.2	0.000083	1.88	39935.19	3430.88	0.06
49.61	25162.00	45.20	77.5		77.6	0.000279	3.76	33087.68	3576.13	0.13
49.48	25162.00	44.50	77.4		77.4	0.000130	2.55	45824.38	3531.94	0.09
49.46	25162.00	45.00	77.4	59.5	77.4	0.000246	2.03	48570.06	10000.00	0.08
49.455	Bridge									
49.45	25162.00	45.00	77.4		77.4	0.000248	2.04	48270.91	10000.00	0.08
49.38	25162.00	44.50	77.3		77.3	0.000132	2.57	45430.18	3504.54	0.09
49.31	25162.00	44.50	77.2		77.3	0.000134	2.58	45247.92	3491.79	0.09
49.29	25162.00	44.10	77.2	56.0	77.3	0.000251	2.41	25229.64	4576.41	0.09
49.285	Bridge									
49.28	25162.00	44.10	72.6		72.8	0.000650	3.43	8581.24	1653.60	0.14
49.19	25162.00	44.00	72.5		72.6	0.000209	2.96	34178.27	3152.68	0.11
48.04	25162.00	43.50	70.9		71.0	0.000521	4.42	28399.37	2259.43	0.17
46.59	25162.00	42.90	68.0		68.1	0.000354	3.61	27884.84	3679.44	0.14
45.48	25162.00	42.00	66.2		66.3	0.000357	3.57	28986.75	2021.35	0.14
44.02	23767.00	40.00	63.0		63.1	0.000857	5.12	25468.29	2259.89	0.21

42.54	23767.00	39.10	60.9		60.9	0.000212	2.35	56208.07	5197.39	0.10
41.67	23767.00	36.00	60.0		60.0	0.000239	2.83	46842.70	4401.17	0.11
41.63	23767.00	36.00	60.0		60.0	0.000242	2.84	46617.07	4394.73	0.11
41.62	23767.00	36.00	59.6	47.1	59.9	0.001548	4.79	4965.97	300.82	0.21
41.615	Bridge									
41.61	23767.00	36.00	59.5		59.9	0.001558	4.80	4953.60	300.67	0.21
41.56	23767.00	36.00	59.6		59.6	0.000198	2.53	56472.84	5020.04	0.10
40.91	23767.00	35.00	58.6		58.7	0.000456	4.12	27362.97	2027.82	0.16
39.81	32800.00	31.50	57.8		57.9	0.000097	3.39	31571.07	2270.23	0.12
39.02	32800.00	31.00	56.4		57.1	0.000448	7.10	10996.10	911.41	0.26
37.98	32800.00	30.70	55.9		56.0	0.000097	3.02	45437.46	3923.03	0.12
37.25	32569.00	31.60	55.6		55.7	0.000075	2.79	46527.44	3553.86	0.11
37.19	32569.00	31.60	55.6		55.6	0.000075	2.79	46446.53	3553.48	0.11
37.17	32569.00	31.00	55.1	41.9	55.6	0.000477	5.39	6047.52	332.49	0.22
37.165	Bridge									
37.16	32569.00	31.00	55.1		55.6	0.000480	5.40	6035.63	332.36	0.22
37.07	32569.00	31.60	55.2		55.3	0.000066	2.60	56649.37	4394.34	0.10
35.58	32569.00	30.50	54.6		54.7	0.000116	3.14	46809.73	6132.68	0.13
35.57	32569.00	30.50	54.6		54.7	0.000116	3.14	46795.56	6131.55	0.13
33.85	24427.00	39.90	53.8		53.8	0.000115	0.90	52077.61	5401.44	0.04
33.09	24427.00	31.00	53.2		53.2	0.000187	1.40	38095.88	3579.38	0.06
32.18	24427.00	30.50	52.3		52.3	0.000236	1.63	34344.27	3201.64	0.07
30.42	24427.00	33.00	50.9		50.9	0.000241	1.37	40181.15	4970.41	0.06
28.94	23206.00	27.40	49.3		49.5	0.000192	3.96	28712.21	3713.93	0.16
27.82	23206.00	27.40	48.8		48.8	0.000084	2.77	38684.26	4258.20	0.11
27.79	20910.00	27.40	48.8		48.8	0.000068	2.49	38660.08	4257.79	0.10
27.77	20910.00	26.20	48.3	36.2	48.8	0.000553	5.26	5068.41	2267.20	0.23
27.765	Bridge									
27.76	20910.00	26.20	48.0		48.5	0.000594	5.39	4452.96	1479.71	0.23
27.68	20910.00	28.30	48.1		48.2	0.000079	2.64	32580.92	3629.50	0.11
26.52	20910.00	23.20	47.6		47.7	0.000123	3.54	28316.48	3331.94	0.14
25.19	19587.00	25.43	46.8		46.9	0.000124	3.26	17351.69	1999.84	0.13
24.54	19587.00	16.26	46.4		46.5	0.000090	2.93	14635.82	1578.15	0.12
24.52	19587.00	16.26	46.4		46.5	0.000090	2.94	14615.00	1577.81	0.12
24.51	19587.00	16.30	45.9	33.0	46.4	0.000637	5.56	3563.61	497.86	0.24
24.505	Bridge									
24.5	19587.00	16.30	45.5		46.0	0.000689	5.71	3428.84	215.23	0.25
24.49	19587.00	16.26	45.7		45.8	0.000105	3.09	13456.41	1558.61	0.12
24.48	19587.00	22.60	44.4	35.9	45.5	0.002185	8.37	2339.57	159.46	0.39
24.475	Bridge									
24.47	19587.00	22.60	44.3		45.4	0.002207	8.41	2328.76	159.06	0.39
24.44	19587.00	16.30	44.6		45.0	0.000341	5.41	12006.88	1511.24	0.22
24.15	19587.00	22.45	43.8		44.3	0.000437	6.03	5673.77	606.99	0.25
23.82	19587.00	17.36	43.4		43.7	0.000260	4.83	11166.77	1192.18	0.20
23.14	19587.00	17.29	42.0		42.4	0.000521	6.14	11026.75	2009.97	0.26
22.24	19587.00	21.10	40.6		40.8	0.000232	4.05	9338.06	1203.65	0.18
21.59	19587.00	15.87	39.6		39.9	0.000313	5.07	10813.33	1272.08	0.21

20.44	19587.00	16.14	38.6		38.7	0.000132	3.42	20558.08	2111.67	0.14
19.62	16717.00	17.74	38.2		38.3	0.000070	2.48	21863.62	2282.67	0.10
18.49	16717.00	8.89	37.6		37.7	0.000159	3.57	23429.05	3007.49	0.15
17.78	16717.00	15.15	37.2		37.2	0.000123	2.44	28992.27	3800.55	0.10
17.28	16717.00	13.26	36.9		36.9	0.000089	2.30	28958.78	3347.16	0.09
16.53	16717.00	13.60	36.6		36.6	0.000085	2.27	35585.34	3897.78	0.09
15.75	16717.00	11.90	36.3		36.3	0.000058	1.73	35721.55	4936.10	0.07
15.72	16717.00	11.90	36.3		36.3	0.000058	1.73	35671.20	4932.54	0.07
15.71	16717.00	9.40	36.2	19.7	36.3	0.000296	3.02	11841.74	4420.41	0.13
15.705	Bridge									
15.7	16717.00	9.40	36.1		36.3	0.000296	3.02	11809.04	4415.72	0.13
15.66	16359.00	10.22	36.2		36.2	0.000071	2.20	35375.43	4847.16	0.08
15.08	16359.00	6.52	35.9		36.0	0.000080	2.26	25699.49	2520.48	0.09
14.08	16359.00	10.50	35.5		35.5	0.000087	2.38	27673.73	3113.68	0.09
14.00	**16359.00**	**10.50**	**35.5**		**35.5**	**0.000088**	**2.38**	**27477.99**	**3055.64**	**0.09**
13.03	16359.00	-5.45	35.1		35.2	0.000047	2.07	39322.95	3888.19	0.07
11.3	16359.00	7.00	34.8		34.9	0.000036	1.71	32640.31	2485.38	0.06
10.06	16359.00	1.81	34.5		34.6	0.000069	2.40	21015.61	2539.86	0.08
8.43	16359.00	-1.00	34.0		34.1	0.000053	2.23	34241.57	5652.46	0.07
7.64	16359.00	2.75	33.8		33.8	0.000063	2.23	35082.47	5108.93	0.08
6.46	16359.00	2.53	33.5		33.6	0.000039	1.82	37273.10	3822.68	0.06
4.73	16359.00	1.55	33.0		33.1	0.000067	2.35	27472.24	2335.94	0.08
3.6	16359.00	0.75	32.7		32.8	0.000047	2.04	33685.95	2490.91	0.07
2.88	16359.00	0.20	32.6		32.6	0.000039	1.84	39572.85	3640.80	0.06
2.5	16359.00	-2.58	32.5		32.5	0.000053	2.12	35456.80	4020.53	0.07
2.46	16359.00	-2.58	32.5		32.5	0.000053	2.12	35413.20	4018.22	0.07
2.45	16359.00	-7.50	32.5	8.0	32.5	0.000119	1.93	8472.71	443.87	0.08
2.445	Bridge									
2.44	16359.00	-7.50	32.4		32.5	0.000119	1.93	8467.26	443.77	0.08
2.39	16359.00	-5.21	32.4		32.5	0.000047	2.07	31703.86	2786.33	0.07
1.61	16359.00	-10.46	32.3	4.1	32.3	0.000036	1.80	22755.23	1813.08	0.06

ROBERT J. WOLFE
ARCHITECT
255 NW SEA BREEZE LANE
MAYO, FLORIDA, 32066
386-294-3939

DATE: April 19, 2007

TO: Robert L. Kelly Construction, Inc.
Attn: Kevin C. Kelly
P.O. Box 5215
Gainesville, FL 32627

RE: The Ruiz Residence
Columbia County, Florida
Project #0531
Modification to Contract Documents No. 1

Item No. 1: Drawings No. 7 and 9 - Framing Notes.
The beam framing at the floor and roof is revised as follows:
Floor Beams: 12' span - 3 ½" x 14" LVL.
14' span - 5 1/4" x 14" LVL.

Roof Beams: 12' and 14' spans - 3 ½" x 9 1/4" LVL.

Item No. 2: Drawing No. 8 - Wall Section - Add note:
Handrail attachment: 4x4 support posts at 6'-0" on center (maximum) should be attached with ½" carriage bolts at top and bottom. 2x2 balusters on 5" center (maximum) should be attached with #10 - 2 ½" S.S. wood screws. Attachment shall be at top handrail and follow floor beam with 2 screws at each location.

Item No. 3: Drawing No. 8 - Wall Section - Add note:
Provide an inspection opening at the base of CMU columns. Location and size of openings shall be as mutually agreed upon by the general contractor and the building official. Repair openings to match adjacent surfaces.

Item No. 4: Drawing No. 3 and 5 - Floor Plan and Elevations.
Change size of window in Master Bedroom and Bedroom #2 from 4040 D.H. to 4040 H.S. Windows provided shall meet all requirements for second story egress. Verify compliance with egress requirements with the window manufacturer. Windows shall head at 7'-0" above floor.

Robert J. Wolfe
4-19-07

3-26-07

WIND FORCE AND WIND RESISTANCE CALCULATIONS

THE RUIZ RESIDENCE
COLUMBIA COUNTY, FLORIDA

3-26-07

ROBERT J. WOLFE, ARCHITECT
255 NW SEA BREEZE LANE
MAYO, FLORIDA 32066
386-294-3939

REC 4-2-07

WIND FORCE AND WIND RESISTANCE CALCULATIONS

THE RUIZ RESIDENCE
COLUMBIA COUNTY, FLORIDA

ROBERT J. WOLFE, ARCHITECT
255 NW SEA BREEZE LANE
MAYO, FLORIDA 32066
386-294-3939

Robert J. Wolfe
3-26-07

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INCLUDING SHEAR AND UPLIFT LOADS

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THE RUIZ RESIDENCE - PROJECT #0531
LOCATION - COLUMBIA COUNTY, FLORIDA
APP. CODE – FLORIDA BUILDING CODE 2004
APP. WIND VELOCITY – 110 MPH – FIGURE 1609 AND COUNTY BUILDING DEPARTMENT

DESIGN METHOD – FLORIDA BUILDING CODE 2004

CHAPTER 16 - STRUCTURAL LOADS
SECTION 1606 – DEAD LOADS
SECTION 1607 – LIVE LOADS
DWELLING – 40#/SQUARE FOOT (FLOOR)
ROOF – 16#/SQUARE FOOT (MIN.)
SECTION 1609 – WIND LOADS

DETERMINATION OF WIND FORCES (1609.1.1)

1. EXCEPTION – PROVISIONS OF 1609.6
   MAXIMUM BUILDING HEIGHT = 24'-5 3/4"

   MEAN BUILDING HEIGHT = 20'-8 1/8"

   CONSERVATIVE TO USE SINGLE VALUE FOR VELOCITY PRESSURE (q) FOR ENTIRE BUILDING

   ROOF ANGLE - 3/12 = 14 -02'-10"

   USE FACTOR (TABLE 1604.5) = II

SECTION 1609.2
ENCLOSED BUILDING WITH VERTICALLY SPANNING WALL RESISTING SYSTEM – FLOOR AND ROOF DIAPHRAGMS LATERALLY SUPPORTED BY SHEAR WALLS

END ZONE WIDTH
1-STORY = x = 2a, a = 3.6': x = 7.2' USE 7.5'

CONSTRUCTION SUMMARY SHEET

ROOF:

1. TRUSSES – ENGINEERED WOOD (SYP) AT 24" ON CENTER.
2. ANCHORS TO BEARING PLATE. REFER TO TRUSS UPLIFT REQUIREMENTS IN TRUSS ANALYSIS.
3. ROOF SHEATHING - 1/2" CDX PLYWOOD, ATTACH TO TRUSS WITH 10d COMMON NAILS ON 3" CENTERS AT PANEL EDGES AND 12" CENTERS ON INTERIOR.

WALLS:

1. 2x6 SPF TYPICAL ON 1'-4" CENTERS WITH SINGLE BOTTOM PLATE AND DOUBLE TOP PLATE.
2. ANCHOR BOTTOM PLATE TO 2x12 BEAMS AND FLITCH PLATE WITH ½" ANCHOR BOLT WITH 2" WASHERS AND NUT ON 4'-0" CENTERS. ANCHOR BEAM TO CMU COLUMNS WITH EMBEDDED STRAP TIE HOLDDOWN AT EACH COLUMN.
3. SHEATHING OF ½" CDX PLYWOOD OR 7/16" OSB SHALL BE ATTACHED TO FRAME WALL WITH 10d COMMON NAILS ON 4" CENTERS AT PANEL EDGES AND 12" CENTERS ON INTERIOR BEARING.

FOUNDATION:

1. 4" CONCRETE SLAB – 3000 PSI WITH FIBERMESH REINFORCING.
2. 16"x16"x8" CMU COLUMN WITH (4) #5 VERTICAL BARS FROM FOOTING TO TOP OF CMU. FILL COLUMN WITH CONCRETE.
3. 30"x30"x12" CONCRETE (3000 PSI) COLUMN PAD WITH (3) #5 BARS EACH WAY.
4. 12"x16" CONCRETE GRADE BEAM WITH (2) #5 BARS CONTINUOUS.

WIND LOAD CALCULATIONS

(SIDE 1 - SIMILAR TO SIDE 3)

SIDE 3: TRANSVERSE LOAD DIRECTION

HORIZONTAL LOADS – WIND LOAD x AREA (WL x A)

END ZONE: (2 REQUIRED)

COLUMN AND WALL	=	WL x A
	=	26.6 x (1.3' x 8.7') + 26.6 x (7.5' x 10.2')
	=	301 + 2035 = 2336 x 2 = 4672#
ROOF	=	WL x A
	=	-7 x A
	=	0

INTERIOR ZONE:

COLUMN AND WALL	=	WL x A
	=	17.7 x 2(1.3' x 8.7') + 17.7 x (21.0' x 10.2')
	=	400 + 3791 = 4191#
ROOF	=	WL x A
	=	-3.9 x A
	=	0

VERTICAL LOADS - WIND LOAD x AREA (WL x A)

END ZONE: (2 REQUIRED)

WINDWARD ROOF	=	WL x A
	=	-23.1 x (7.5' x 26.0')
	=	-4505 x 2 = -9010#
LEEWARD ROOF	=	WL x A
	=	-16.0 x (7.5' x 26.0')
	=	–3120 x 2 = -6240#
WINDWARD OVERHANG	=	WL x A
	=	-32.3 x 3.0'
	=	-97#/LINEAL FT.

INTERIOR ZONE:

WINDWARD ROOF	=	WL x A
	=	-16.0 x (21.0' x 26.0')
	=	-8736#
LEEWARD ROOF	=	WL x A
	=	-12.2 x (21.0' x 26.0')
	=	- 6661#
WINDWARD OVERHANG	=	WL x A
	=	-25.3 x3.0'
	=	-76#/LINEAL FT.

SIDE 2: TRANSVERSE LOAD DIRECTION

(SIDE 4 - SIMILAR)

HORIZONTAL LOADS – WIND LOAD x AREA

END ZONE (2 REQUIRED):

COLUMN AND WALL	=	WL x A
	=	26.6 x (1.3' x 8.7') + 26.6 x (7.5' x 10.2')
	=	301 + 2035 = 2336 x 2 = 4672#
ROOF	=	WL x A
	=	-7.0 x A
	=	0

END ZONE: (ENTIRE DECK)

COLUMN AND FRAMING	=	WL x A
	=	26.6(1.3' x 8.7') + 26.6(.5' x 8.5') + 26.6(14.0' x 1.5')
	=	301 + 113 + 559 = 973#
ROOF	=	WL x A
	=	-7.0 x A
	=	0

INTERIOR ZONE:

COLUMN AND WALL	=	WL x A
	=	17.7 x (23.0' x 10.2')
	=	4152#
ROOF	=	WL x A
	=	-3.9 x A
	=	0

VERTICAL LOADS - WIND LOAD x AREA

END ZONE: (2 REQUIRED)

WINDWARD ROOF	=	WL x A
	=	-23.1 x (7.5' x 18.0')
	=	-3119 x 2 = -6238#
LEEWARD ROOF	=	WL x A
	=	-16.0 x (7.5' x 18.0')
	=	-2160#
WINDWARD OVERHANG	=	WL x A
	=	-32.3 x 3.0'
	=	-97#/LINEAL FT.

END ZONE: (ENTIRE DECK)

WINDWARD ROOF	=	WL x A
	=	-23.1 x (14.0' x 18.0')
	=	-5821#
LEEWARD ROOF	=	WL x A
	=	-16.0 x (14.0' x 18.0')
	=	-4032#
WINDWARD OVERHANG	=	WL x A
	=	-32.3 x 3.0'
	=	-97#/LINEAL FT.

SIDE 3: SHEAR WALL LOAD SUMMARY
SIDE 1: SIMILAR

ENTIRE SIDE:

LOAD TO DIAPHRAGM = 4370 + 3991 = 8361#
LOAD TO EACH SHEAR WALL = 8361/2 = 4181#
PLYWOOD SHEAR CAPACITY = 590#/FT.
LENGTH OF SHEAR WALL REQUIRED = 4181/590 = 7.0'

SIDE 2: SHEAR WALL LOAD SUMMARY
SIDE 4: SIMILAR

ENTIRE SIDE:

LOAD TO DIAPHRAGM = 4369 + 263 + 4152 = 8785#
LOAD TO EACH SHEAR WALL = 8785/2 = 4393#
PLYWOOD SHEAR CAPACITY = 590#/FT.
LENGTH OF SHEAR WALL REQUIRED = 4393/590 = 7.4', USE 8.0' MIN.

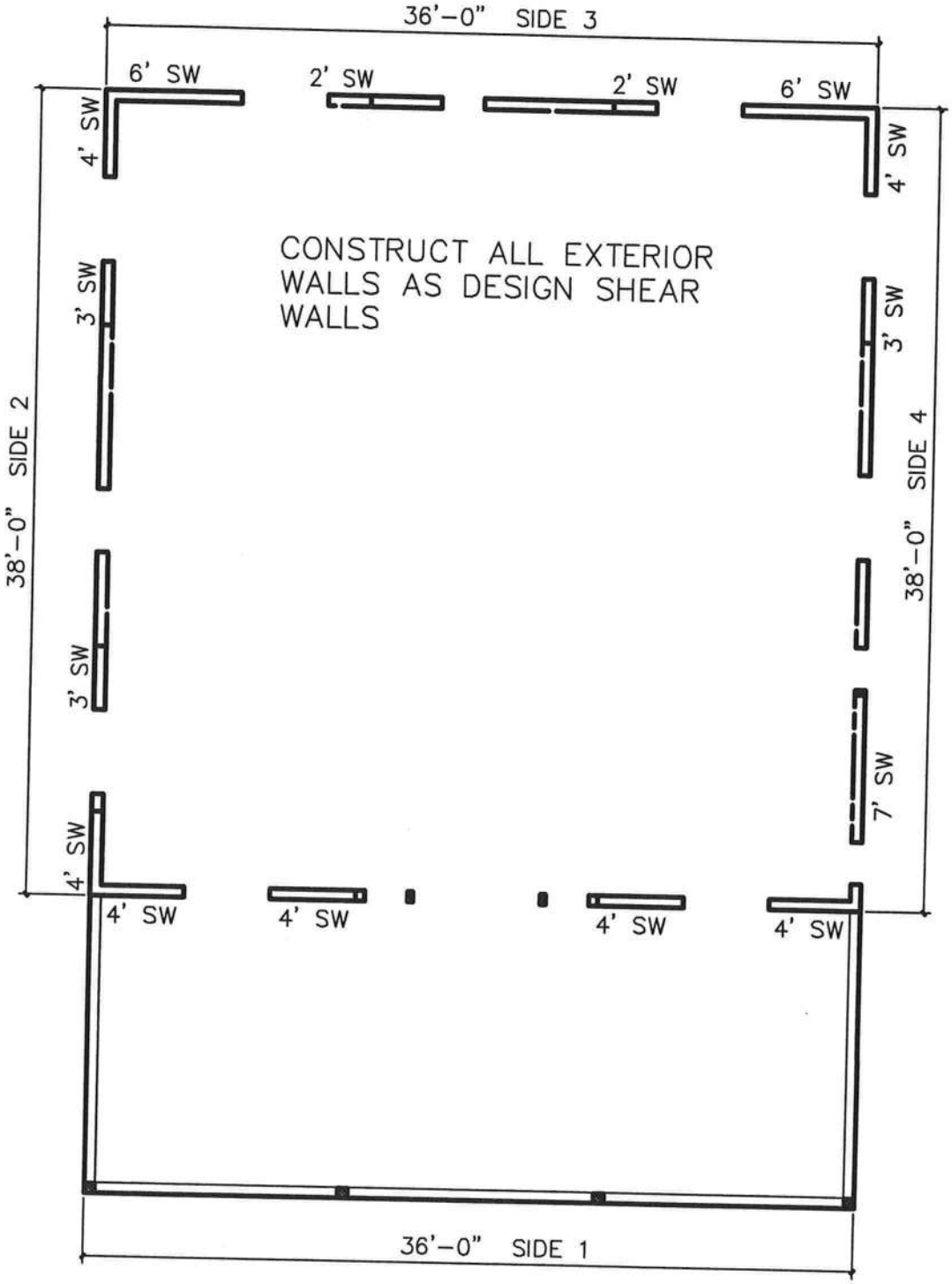
COMPONENT AND CLADDING WIND LOAD:

ZONE 1, 50 S.F. - 10.0 - -18.6
ZONE 2, 50 S.F - 10.0 - -33.0
ZONE 3, 50 S.F. - 10.0 - -33.0
ZONE 4, 50 S.F. - 19.5 - -21.3
ZONE 5, 50 S.F. - 19.5 - -24.6

INTERNAL PRESSURE COEFFICIENT = + 0.18
= - 0.18

ROOF FRAMING
UPLIFT AND HORIZONTAL FORCE CONNECTORS

PROVIDE CONNECTORS AT EACH END OF ROOF TRUSSES TO RESIST THE UPLIFT FORCE DETERMINED BY THE TRUSS MANUFACTURERS ENGINEER. THE TRUSS TO WALL PLATE CONNECTION SHALL RESIST THE HORIZONTAL FORCES PERPENDICULAR AND PARALLEL TO THE PLANE OF THE WALL BASED ON THE TRUSS SPACING.



SHEAR WALL DIAGRAM

Ridgway Roof Truss Company

(Trusses and Prefabricated Building Components)

Mailing: P.O. Box 1309 – Gainesville, Florida 32602
Physical: 235 SW 11th Place – Gainesville, Florida 32601

Telephone: (352) 376-4436
FAX: (352) 371-3316

Email: Sales@RidgwayTruss.com
www.RidgwayTruss.com

WARNING

THESE TRUSSES MUST BE HANDLED ACCORDING TO BCSI-B1 SUMMARY SHEETS

SEE TABLE OF CONTENTS

SEALED

DESIGN MANUAL

PROJECT NAME: Ruiz Residence
JOB NUMBER: 06-1065
CONTRACTOR: Robert L. Kelly Construction
DATE: 03/21/2007 jrt
REVISIONS:
COMMENTS:

Permit Number: _____ Lot Number: _____

Miscellaneous: _____ Address: ___Columbia County_____

The information in this box if for administrative purposes only and is not part of this engineering review.

Truss Fabricator: RIDGWAY ROOF TRUSS

Job Reference: Ruiz Residence

Gary Dounson- (PE35054) (truss designer)	GARY DOUNSON AND ASSOC., INC., 2830 NW 41st STREET SUITE D GAINESVILLE, FL 32606 (352) 375-8593, CA 5201	Engineering Index Sheet Index Page 1 of 1

Job Number	Date	FBC - 2004 Chapter 16 and 23	Specification Quantity
061065	03/21/2007		21

A Professional Engineer's Seal affixed to this Index Sheet indicates the acceptance of professional Engineering responsibilities for individual truss components fabricated in accordance with the listed and attached Truss Specification Sheets. Determination as to the suitability of these individual truss components for any structure is the responsibilty of the Building Designer, as defined in ANSI/TPI 1-95, Section 2.2.
Questions regarding this Index Sheet and/or the attached Specification Sheets may be directed to the truss fabricator listed above or Gary Dounson- (PE35054) (truss designer), (Software - Online Plus)

	Date	Mark		Date	Mark		Date	Mark		Date	Mark
1	03/20/07	R1	2	03/20/07	R2	3	03/06/07	R2A	4	03/20/07	R3
5	03/06/07	R3A	6	08/11/06	R5	7	08/11/06	R6	8	03/20/07	R7
9	03/20/07	R8	10	03/20/07	R9	11	03/20/07	R10	12	08/11/06	R11
13	08/11/06	R12	14	08/23/06	R13	15	03/06/07	R14	16	03/06/07	R15
17	03/06/07	R16	18	03/06/07	R17	19	03/06/07	R18	20	03/06/07	R19
21	03/06/07	R20									

Standard Loading:

T.C. Live	20 psf
T.C. Dead	7 psf
B.C. Live	0 psf
B.C. Dead	10 psf
Total	37 psf

ANSI / ASCE 7-02
Components and Claddings*
Exterior
Wind Speed: 110
Mean Roof Ht.: 25
Exposure Category: B
Occupancy Factor : 1.00
Building Type: Enclosed
TC Dead Load : 4.0
BC Dead Load : 6.0

Notes: Refer to individual truss design drawings for special loading conditions.

3/21/07

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1. GENERAL NOTES

2. WTCA 1-1995 (STANDARD RESPONSIBILITIES IN THE DESIGN PROCESS INVOLVING METAL PLATE CONNECTED WOOD TRUSSES)

ENGINEERING (INSERT)

BLUEPRINT OF TRUSS PLACEMENT PLAN (INSERT)

6. **BCSI-B1 SUMMARY SHEET**
HANDLING, INSTALLING & BRACING INFORMATION

8. STANDARD CHORD & WEB REPAIRS

11. EXAMPLES OF PERMANENT WEB BRACING

Wood Truss Council of America
5937 Meadowood Dr., Ste. 14 • Madison, WI 53711-4125 • 608/274-3329 (fax)

Standard Responsibilities in the Design Process Involving Metal Plate Connected Wood Trusses

WTCA 1-1995

Developed by the WTCA Engineering Review Committee
in cooperation with the Truss Plate Institute

2.0 OWNER RESPONSIBILITIES

2.1 Directly or through its representatives, which may include the Contractor and/or Building Designer; (a) review and approve each Truss Design Drawing; (b) review and approve the Truss Placement Plan; (c) resolve and approve all design issues arising out of the preparation of each Truss Design Drawing and Truss Placement Plan; and (d) coordinate the return of each approved Truss Design Drawing and Truss Placement Plan to the Truss Manufacturer prior to truss manufacturing.

3.0 BUILDING DESIGNER RESPONSIBILITIES

3.1 Design a structure suitable to ensure that the intended function of each Truss is not affected by adverse influences including, but not limited to, moisture, temperature, corrosive chemicals and gases;

3.2 Prepare the Construction Design Documents, showing all trussed areas, which must provide as a minimum the following:

3.2.1 All truss orientations and locations;

3.2.2 Information to fully determine all truss profiles;

3.2.3 Adequate support of the Truss and all truss bearing conditions;

3.2.4 Permanent bracing design for the structure including the Trusses, except as provided in 3.4 and 6.2.12.

3.2.5 The location, direction and magnitude of all dead and live loads applicable to each Truss including, but not limited to, loads attributable to: roof, floor, partition, mechanical, fire sprinkler, attic, storage, wind, snow drift and seismic;

3.2.6 All Truss anchorage designs required to resist uplift, gravity, and lateral loads;

3.2.7 Allowable vertical and horizontal deflection criteria;

3.2.8 Proper transfer of design loads affecting the Truss; and

3.2.9 Adequate connections between Truss and non-Truss components, except as noted in Section 6.2.9.

3.3 Review and approve the Truss Placement Plan and each Truss Design Drawing for conformance with the requirements and intent of the Construction Design Documents, the effect of each Truss Design Drawing and Truss Placement Plan on other parts of the structure, and the effect of the structure on each Truss.

3.4 Specify permanent lateral bracing where indicated by the Truss Designer on the Truss Design Drawings, to prevent buckling of the individual truss members due to design loads. The Building Designer shall specify how the permanent lateral bracing is to be anchored or restrained to prevent lateral movement if all truss members, so braced, buckle together. This shall be accomplished by: (a) anchorage to solid end walls; (b) permanent diagonal bracing in the plane of the web members; or (c) other means when demonstrated by the Building Designer to provide equivalent bracing.

4.0 CONTRACTOR RESPONSIBILITIES

4.1 Provide to the Truss Manufacturer the Construction Design Documents and all revisions and supplements thereto.

4.2 Review and approve the Truss Placement Plan and each Truss Design Drawing for conformance with the requirements and intent of the Construction Design Documents, and the effect of the Truss Placement Plan and each Truss Design Drawing on other trades involved in the construction of the structure and the effect of the other trades on the Trusses.

4.3 Coordinate the review, approval and return of each Truss Design Drawing and the Truss Placement Plan by the Owner and Building Designer.

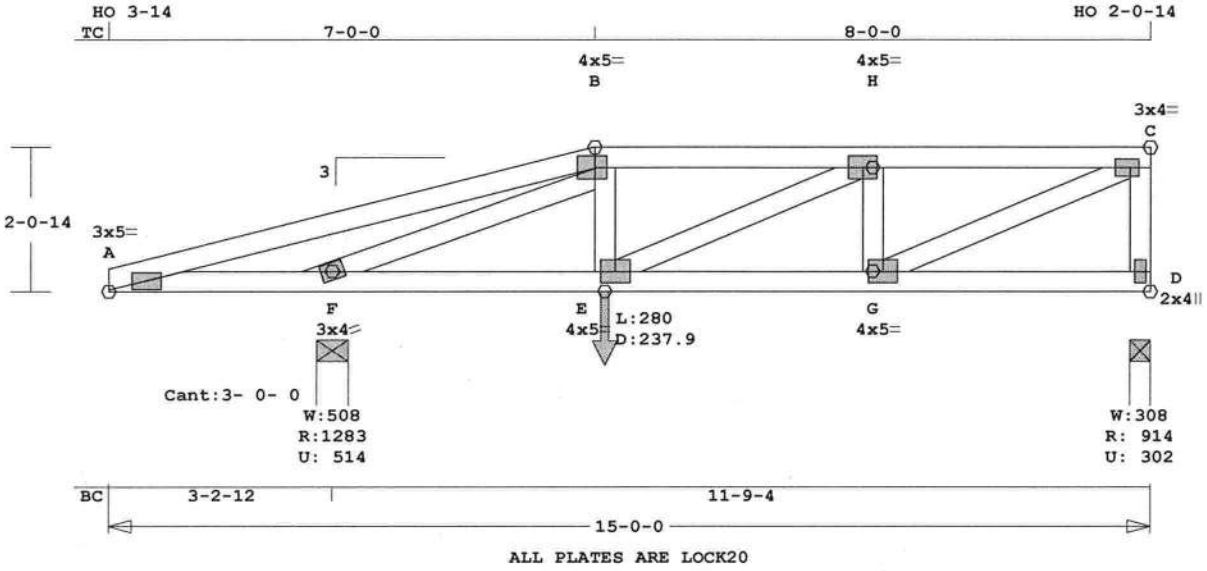
4.4 Provide the approved Truss Design Drawings, approved Truss Placement Plans, and any supplemental information provided by the Truss Manufacturer to the individual or organization responsible for the installation of the Trusses.

4.5 Comply with the field storage, handling, installation, permanent bracing, anchorage, connections and field assembly requirements of the Construction Design Documents.

4.6 Determine and install the temporary bracing for the structure, including the Trusses.

Job	Mark	Quan	Type	Span	P1-H1	Left OH	Right OH	*Engineering*
061065	*R1*	2	HHIP	150000	3	0	0	

Ruiz Residence



Scale: 0.375" = 1'

Robbins Engineering, Inc./Online Plus™ APPROX. TRUSS WEIGHT: 88.7 LBS

```
Online Plus -- Version 20.0.025
RUN DATE: 20-MAR-07

     CSI -Size- ----Lumber----
TC  0.66  2x 4  SP-#2
BC  0.95  2x 4  SP-#2
WB  0.69  2x 4  SP-#3

Brace truss as follows:
      O.C.      From       To
 TC Cont.      0- 0- 0 15- 0- 0
 BC Cont.      0- 0- 0 15- 0- 0

Loading   Live   Dead  (psf)
TC         20.0    7.0
BC          0.0   10.0
Total      20.0   17.0   37.0
Spacing                 24.0"
Lumber Duration Factor  1.25
Plate  Duration Factor  1.25
TC Fb=1.00  Fc=1.00  Ft=1.00
BC Fb=1.00  Fc=1.00  Ft=1.00

Load Case # 1 Girder Loading
Lumber Duration Factor   1.25
Plate  Duration Factor   1.25
plf - Live  Dead  From    To
TC V    40    14   0.0'  15.0'
BC V     0    20   0.0'  15.0'
TC V    50    18   7.0'  14.0'
TC V   -40   -14  14.0'  15.0'
BC V     0    25   7.1'  14.0'
BC V     0   -20  14.0'  15.0'
BC V   280   238   7.1'  CL-LB


Plus  9 Wind Load Case(s)
Plus  1 UBC LL Load Case(s)

Jt  React Uplft  Size Req'd
      Lbs   Lbs In-Sx In-Sx
F    1283   515  5- 8  1- 8
                    Hz =    35
D     914   303  3- 8  1- 8
                    Hz =    72

Membr  CSI  P Lbs  Axl-CSI-Bnd
----------Top Chords----------
A -B  0.64   298 C  0.02  0.62
B -H  0.66  1885 C  0.02  0.64
H -C  0.36  1650 C  0.02  0.34
--------Bottom Chords---------
A -F  0.67   350 T  0.00  0.67
F -E  0.95  1867 T  0.34  0.61
E -G  0.55  1650 T  0.30  0.25
G -D  0.23    56 T  0.00  0.23
------------Webs-------------
F -B  0.69  2243 C
E -B  0.12   453 T
E -H  0.08   259 T
G -H  0.11   530 C
G -C  0.58  1817 T
D -C  0.14   879 C WindLd

TL Defl  -0.15" in E -G  L/908
LL Defl  -0.08" in E -G  L/999
LL Cant  -0.07" in A -F  L/551
Shear // Grain  in A -F   0.39

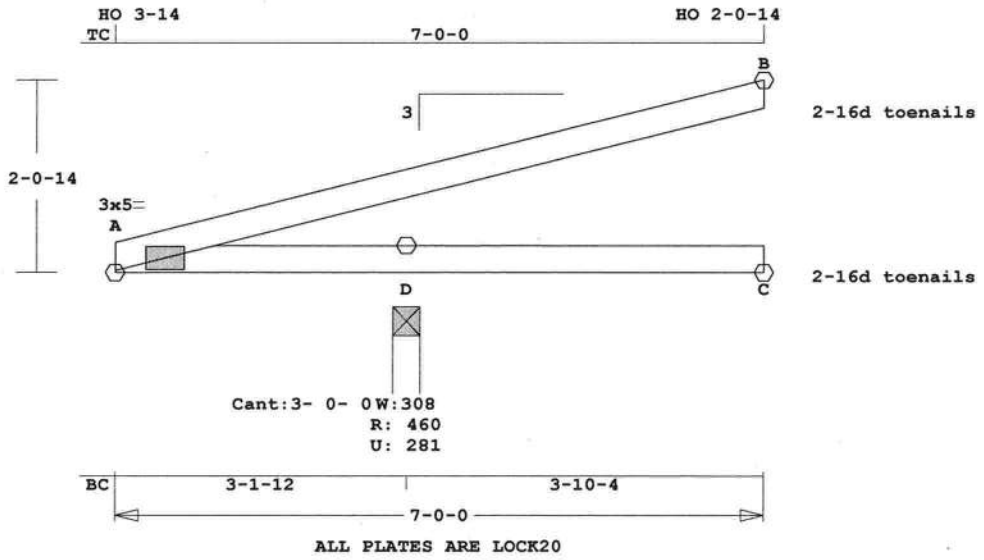
Plates for each ply each face.
ALL CONNECTOR PLATES
TO BE MANUFACTURED BY
ROBBINS ENGINEERING, INC.
Plate - LOCK 20 Ga, Gross Area
Plate - RHS  20 Ga, Gross Area
Jt Type  Plt Size  X   Y   JSI
A  LOCK  3.0x 5.0 Ctr Ctr 0.74
B  LOCK  4.0x 5.0-0.5 Ctr 0.89
H  LOCK  4.0x 5.0 Ctr Ctr 0.60
C  LOCK  3.0x 4.0-0.5 Ctr 0.87
F  LOCK  3.0x 4.0 Ctr Ctr 0.74
E  LOCK  4.0x 5.0 Ctr Ctr 0.60
G  LOCK  4.0x 5.0 Ctr Ctr 0.75
D  LOCK  2.0x 4.0 Ctr Ctr 0.39

NOTES:
Trusses Manufactured by:
   RIDGWAY ROOF TRUSS
Analysis Conforms To:
  FBC2004
Girder    Half Hip
  Framing King Jacks
  Jack    Open Faced
  Setback  7- 0- 0
Design checked for 10 psf non-
  concurrent LL on BC.
Wind Loads - ANSI / ASCE 7-02
Truss is designed as
  Components and Claddings*
  for Exterior zone location.
  Wind Speed:          110 mph
  Mean Roof Height:  25-0
  Exposure Category:     B
  Occupancy Factor  : 1.00
  Building Type: Enclosed
  TC Dead Load:          4.0 psf
  BC Dead Load:          6.0 psf
Max comp. force      2243 Lbs
Quality Control Factor 1.25

FABRICATOR NOTES:
 1. Delegated Engineer (Truss
    Designer)
    Gary Dounson, PE 35054
    Gary Dounson & Associates,
    Inc.
    2830 NW 41st Street Suite D
    Gainesville, FL 32606
    (352)375-8593
    CA 5201
```

Job	Mark	Quan	Type	Span	P1-H1	Left OH	Right OH	*Engineering*
061065	*R2A*	12	JACK	70000	3	0	0	

Ruiz Residence



Scale: 0.500" = 1'

Robbins Engineering, Inc./Online Plus™ APPROX. TRUSS WEIGHT: 27.0 LBS

Online Plus -- Version 20.0.025
RUN DATE: 06-MAR-07

	CSI	-Size-	----Lumber----
TC	0.61	2x 4	SP-#2
BC	0.81	2x 4	SP-#2

Brace truss as follows:

O.C.	From	To
TC Cont.	0- 0- 0	7- 0- 0
BC Cont.	0- 0- 0	7- 0- 0

Loading	Live	Dead	(psf)
TC	20.0	7.0	
BC	0.0	10.0	
Total	20.0	17.0	37.0
Spacing			24.0"

Lumber Duration Factor 1.25
Plate Duration Factor 1.25
TC Fb=1.15 Fc=1.10 Ft=1.10
BC Fb=1.10 Fc=1.10 Ft=1.10

Plus 8 Wind Load Case(s)
Plus 1 UBC LL Load Case(s)

Jt	React Lbs	Uplft Lbs	Size Req'd In-Sx	In-Sx
D	460	281	3- 8	1- 8
			Hz =	78
C	67	55G	1- 8	1- 8
B	111	88	1- 8	1- 8
			Hz =	42

G = Gravity Uplift

Membr	CSI	P Lbs	Axl-CSI-Bnd
----------Top Chords----------			
A -B	0.61	57 C	0.00 0.61
--------Bottom Chords---------			
A -D	0.81	143 T	0.01 0.80
D -C	0.80	0 T	0.00 0.80

TL Defl	0.06"	in D -C	L/745
LL Defl	0.04"	in D -C	L/999
LL Cant	-0.16"	in A -D	L/228
Shear // Grain		in A -D	0.53

Plates for each ply each face.
ALL CONNECTOR PLATES
TO BE MANUFACTURED BY
ROBBINS ENGINEERING, INC.
Plate - LOCK 20 Ga, Gross Area
Plate - RHS 20 Ga, Gross Area

Jt	Type	Plt Size	X	Y	JSI
A	LOCK	3.0x 5.0	Ctr	Ctr	0.60

For proper installation of toe-nails, refer to the 2001 National Design Specification (NDS) for Wood Construction

NOTES:
Trusses Manufactured by:
RIDGWAY ROOF TRUSS
Analysis Conforms To:
FBC2004
Design checked for 10 psf non-concurrent LL on BC.
Wind Loads - ANSI / ASCE 7-02
Truss is designed as
Components and Claddings* for Exterior zone location.
Wind Speed: 110 mph
Mean Roof Height: 25-0

Exposure Category: B
Occupancy Factor : 1.00
Building Type: Enclosed
TC Dead Load: 4.0 psf
BC Dead Load: 6.0 psf
User-defined wind-exposed BC regions

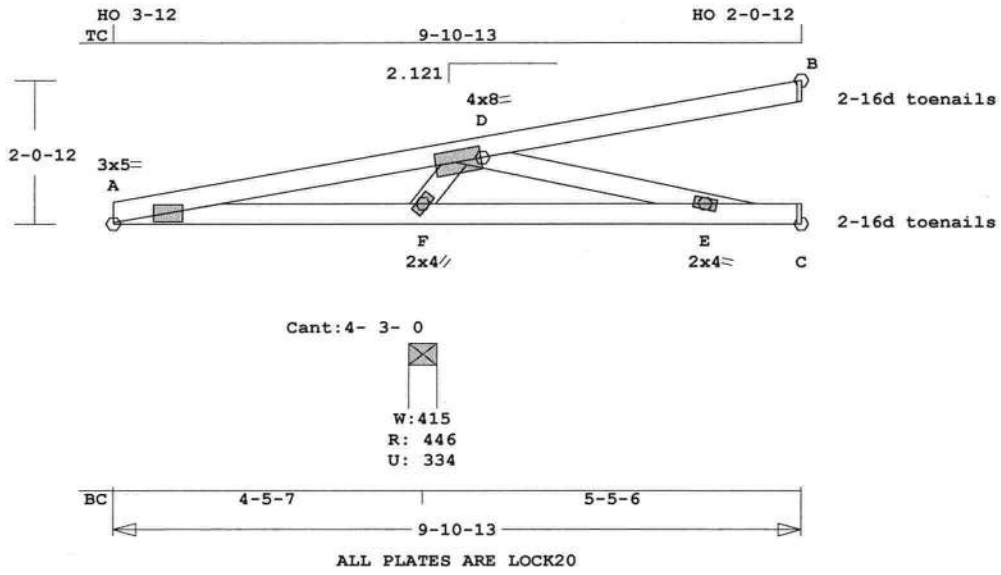
--From--	---To---
3- 1-12	7- 0- 0

Max comp. force 57 Lbs
Quality Control Factor 1.25

FABRICATOR NOTES:
1. Delegated Engineer (Truss Designer)
Gary Dounson, PE 35054
Gary Dounson & Associates, Inc.
2830 NW 41st Street Suite D
Gainesville, FL 32606
(352)375-8593
CA 5201

Job	Mark	Quan	Type	Span	P1-H1	Left OH	Right OH	*Engineering*
061065	*R3A*	2	KING	91013	2.121	0	0	

Ruiz Residence



Scale: 0.375" = 1'

Robbins Engineering, Inc./Online Plus™ APPROX. TRUSS WEIGHT: 47.8 LBS

Online Plus -- Version 20.0.025
RUN DATE: 06-MAR-07

	CSI	-Size-	----Lumber----
TC	0.36	2x 4	SP-#2
BC	0.33	2x 4	SP-#2
WB	0.15	2x 4	SP-#3

Brace truss as follows:

O.C.	From	To
TC Cont.	0- 0- 0	9-10-13
BC Cont.	0- 0- 0	9-10-13

Loading	Live	Dead	(psf)
TC	20.0	7.0	
BC	0.0	10.0	
Total	20.0	17.0	37.0
Spacing			24.0"

Lumber Duration Factor 1.25
Plate Duration Factor 1.25
TC Fb=1.00 Fc=1.00 Ft=1.00
BC Fb=1.00 Fc=1.00 Ft=1.00

Load Case # 1 Girder Loading
Lumber Duration Factor 1.25
Plate Duration Factor 1.25

plf -	Live	Dead	From	To
TC V	40	14	0.0'	9.9'
BC V	0	20	0.0'	9.9'
TC V	-40	-14	0.0'	
	45	16		9.9'
BC V	0	-20	0.0'	
	0	22		9.9'

Plus 8 Wind Load Case(s)
Plus 1 UBC LL Load Case(s)

Jt	React Lbs	Uplft Lbs	Size In-Sx	Req'd In-Sx
F	447	335	4-15	1- 8
		Hz =	85	
C	178	30	3- 8	1- 8
		Hz =	50	
B	220	152	3- 8	1- 8

Membr	CSI	P Lbs	Axl-CSI-Bnd	
		Top Chords		
A -D	0.31	632 C	0.00	0.31
D -B	0.36	59 C	0.00	0.36
		Bottom Chords		
A -F	0.33	628 T	0.09	0.24
F -E	0.29	483 T	0.06	0.23
E -C	0.13	50 T	0.00	0.13
		Webs		
F -D	0.14	577 T		
D -E	0.15	493 C		

TL Defl -0.09" in F -C L/686
LL Defl -0.04" in F -C L/999
LL Cant 0.01" in A -F L/999
Shear // Grain in D -B 0.26

Plates for each ply each face.
ALL CONNECTOR PLATES
TO BE MANUFACTURED BY
ROBBINS ENGINEERING, INC.
Plate - LOCK 20 Ga, Gross Area
Plate - RHS 20 Ga, Gross Area

Jt	Type	Plt Size	X	Y	JSI
A	LOCK	3.0x 5.0	Ctr	Ctr	0.70
D	LOCK	4.0x 8.0	0.5	0.1	0.90
F	LOCK	2.0x 4.0	Ctr	Ctr	0.37
E	LOCK	2.0x 4.0	Ctr	Ctr	0.53

For proper installation of toe-nails, refer to the 2001 National Design Specification (NDS) for Wood Construction

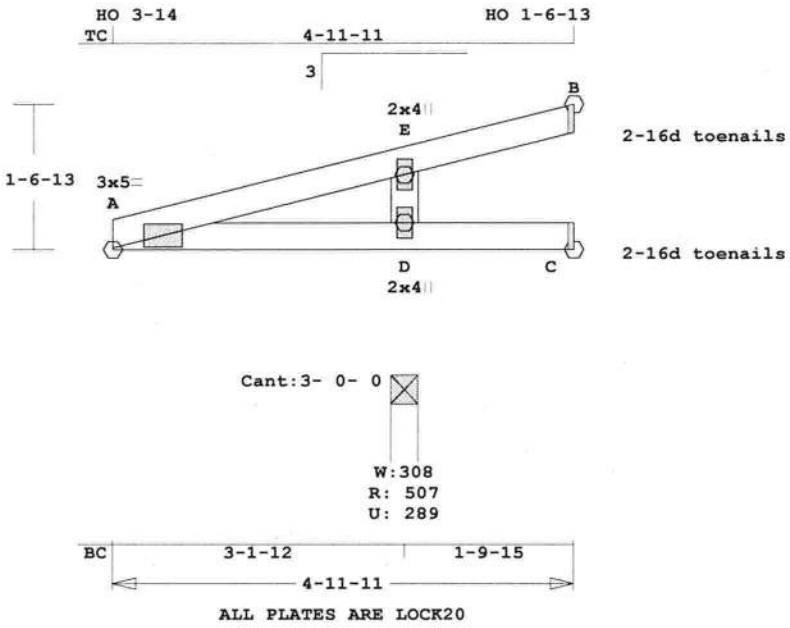
NOTES:
Trusses Manufactured by:

RIDGWAY ROOF TRUSS
Analysis Conforms To:
FBC2004
Girder King Jack
Loading TC and BC
Setback 7- 0- 0
Design checked for 10 psf non-concurrent LL on BC.
Use properly rated hangers for loads framing into girder truss.
Wind Loads - ANSI / ASCE 7-02
Truss is designed as Components and Claddings* for Exterior zone location.
Wind Speed: 110 mph
Mean Roof Height: 25-0
Exposure Category: B
Occupancy Factor : 1.00
Building Type: Enclosed
TC Dead Load: 4.0 psf
BC Dead Load: 6.0 psf
User-defined wind-exposed BC regions --From-- ---To---
4- 5- 7 9-10-13
Max comp. force 632 Lbs
Quality Control Factor 1.25

FABRICATOR NOTES:
1. Delegated Engineer (Truss Designer)
Gary Dounson, PE 35054
Gary Dounson & Associates, Inc.
2830 NW 41st Street Suite D
Gainesville, FL 32606
(352)375-8593
CA 5201

Job	Mark	Quan	Type	Span	P1-H1	Left OH	Right OH	*Engineering*
061065	*R6*	8	SP	41111	3	0	0	

Ruiz Residence



Scale: 0.500" = 1'

Robbins Engineering, Inc./Online Plus™ APPROX. TRUSS WEIGHT: 20.3 LBS

Online Plus -- Version 19.0.028
RUN DATE: 11-AUG-06

	CSI	-Size-	----Lumber----
TC	0.50	2x 4	SP-#2
BC	0.52	2x 4	SP-#2
WB	0.14	2x 4	SP-#3

Brace truss as follows:

	O.C.	From	To
TC	Cont.	0- 0- 0	4-11-11
BC	Cont.	0- 0- 0	4-11-11

Loading	Live	Dead	(psf)
TC	20.0	7.0	
BC	0.0	10.0	
Total	20.0	17.0	37.0
Spacing			24.0"
Lumber Duration Factor			1.25
Plate Duration Factor			1.25

TC Fb=1.15 Fc=1.10 Ft=1.10
BC Fb=1.10 Fc=1.10 Ft=1.10

Plus 8 Wind Load Case(s)
Plus 1 UBC LL Load Case(s)

Jt	React Lbs	Uplft Lbs	Size Req'd In-Sx	In-Sx
D	508	289	3- 8	1- 8
			Hz =	55
C	67	84G	1- 8	1- 8
B	26	61G	1- 8	1- 8
			Hz =	30

G = Gravity Uplift

Membr	CSI	P Lbs	Axl-CSI-Bnd

----------Top Chords----------

A -E	0.50	120	C	0.00	0.50
E -B	0.50	32	T	0.00	0.50

--------Bottom Chords---------

A -D	0.52	119	T	0.01	0.51
D -C	0.51	0	T	0.00	0.51

-------------Webs-------------

D -E	0.14	571	T	WindLd	

TL Defl 0.01" in D -C L/999
LL Defl 0.00" in D -C L/999
LL Cant -0.06" in A -D L/626

Hz Disp	LL	DL	TL
Jt B	0.09"	0.01"	0.08"

Shear // Grain in E -B 0.30

Plates for each ply each face.
ALL CONNECTOR PLATES
TO BE MANUFACTURED BY
ROBBINS ENGINEERING, INC.
Plate - LOCK 20 Ga, Gross Area
Plate - RHS 20 Ga, Gross Area

Jt	Type	Plt Size	X	Y	JSI
A	LOCK	3.0x 5.0	Ctr	Ctr	0.56
E	LOCK	2.0x 4.0	Ctr	Ctr	0.38
D	LOCK	2.0x 4.0	Ctr	Ctr	0.46

For proper installation of toe-nails, refer to the 2001 National Design Specification (NDS) for Wood Construction

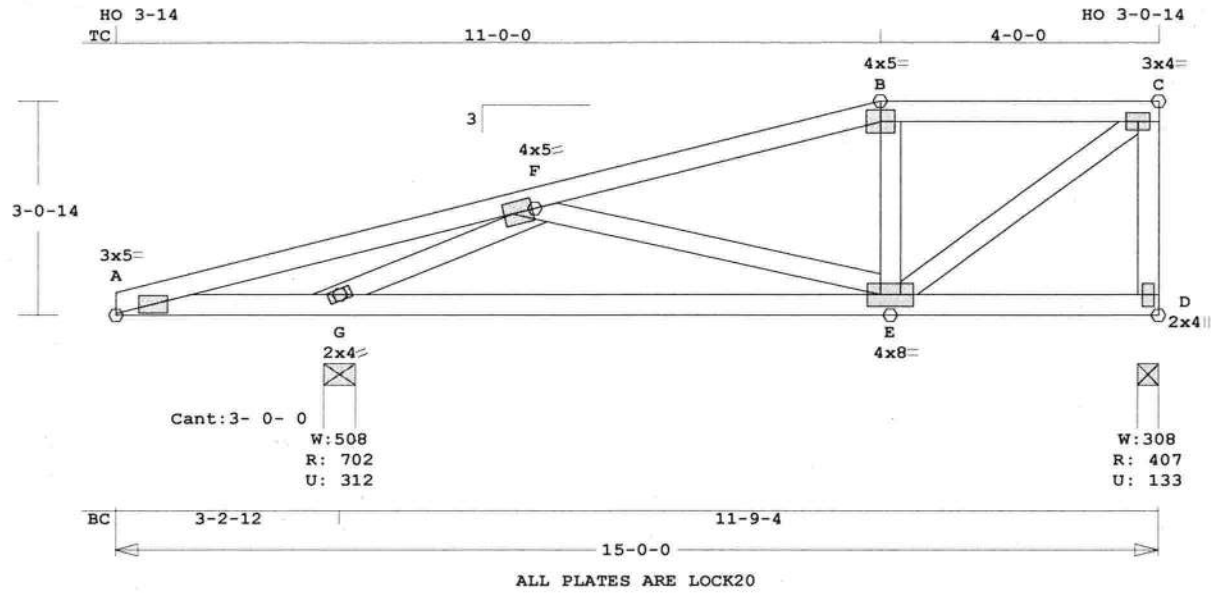
NOTES:
Trusses Manufactured by:
RIDGWAY ROOF TRUSS
Analysis Conforms To:
FBC2004

Design checked for 10 psf non-concurrent LL on BC.
Wind Loads - ANSI / ASCE 7-02
Truss is designed as
Components and Claddings*
for Exterior zone location.
Wind Speed: 110 mph
Mean Roof Height: 25-0
Exposure Category: B
Occupancy Factor : 1.00
Building Type: Enclosed
TC Dead Load: 4.0 psf
BC Dead Load: 6.0 psf
Max comp. force 290 Lbs
Quality Control Factor 1.25

FABRICATOR NOTES:
1. Delegated Engineer (Truss Designer)
Gary Dounson, PE 35054
Gary Dounson & Associates, Inc.
2830 NW 41st Street Suite D
Gainesville, FL 32606
(352)375-8593
CA 5201

Job	Mark	Quan	Type	Span	P1-H1	Left OH	Right OH	*Engineering*
061065	*R8*	2	HHIP	150000	3	0	0	

Ruiz Residence



Scale: 0.375" = 1'

Robbins Engineering, Inc./Online Plus™ APPROX. TRUSS WEIGHT: 91.7 LBS

Online Plus -- Version 20.0.025
RUN DATE: 20-MAR-07

	CSI	-Size-	----Lumber----
TC	0.32	2x 4	SP-#2
BC	0.33	2x 4	SP-#2
WB	0.22	2x 4	SP-#3

Brace truss as follows:

O.C.	From	To
TC Cont.	0- 0- 0	15- 0- 0
BC Cont.	0- 0- 0	15- 0- 0

Loading	Live	Dead	(psf)
TC	20.0	7.0	
BC	0.0	10.0	
Total	20.0	17.0	37.0
Spacing			24.0"

Lumber Duration Factor 1.25
Plate Duration Factor 1.25
TC Fb=1.15 Fc=1.10 Ft=1.10
BC Fb=1.10 Fc=1.10 Ft=1.10

Plus 9 Wind Load Case(s)
Plus 1 UBC LL Load Case(s)

Jt	React Lbs	Uplft Lbs	Size Req'd In-Sx	In-Sx
G	702	312	5- 8	1- 8
			Hz =	51
D	408	134	3- 8	1- 8
			Hz =	114

Membr	CSI	P Lbs	Axl-CSI-Bnd	
----------Top Chords----------				
A -F	0.32	525 C	0.07	0.25
F -B	0.25	405 C	0.00	0.25
B -C	0.12	388 C	0.00	0.12
--------Bottom Chords---------				
A -G	0.30	550 T	0.00	0.30
G -E	0.33	472 T	0.03	0.30
E -D	0.25	89 T	0.00	0.25
------------Webs------------				
G -F	0.22	981 C		
F -E	0.05	160 T		
E -B	0.05	209 T		
E -C	0.15	485 T		
D -C	0.07	385 C	WindLd	

TL Defl -0.14" in G -E L/973
LL Defl -0.07" in G -E L/999
LL Cant -0.02" in A -G L/999
Shear // Grain in F -B 0.19

Plates for each ply each face.
ALL CONNECTOR PLATES
TO BE MANUFACTURED BY
ROBBINS ENGINEERING, INC.
Plate - LOCK 20 Ga, Gross Area
Plate - RHS 20 Ga, Gross Area

Jt	Type	Plt Size	X	Y	JSI
A	LOCK	3.0x 5.0	Ctr	Ctr	0.74
F	LOCK	4.0x 5.0	1.0	0.2	0.96
B	LOCK	4.0x 5.0	Ctr	Ctr	0.76
C	LOCK	3.0x 4.0	Ctr	Ctr	0.61
G	LOCK	2.0x 4.0	Ctr	Ctr	0.46
E	LOCK	4.0x 8.0	Ctr	Ctr	0.77
D	LOCK	2.0x 4.0	Ctr	Ctr	0.38

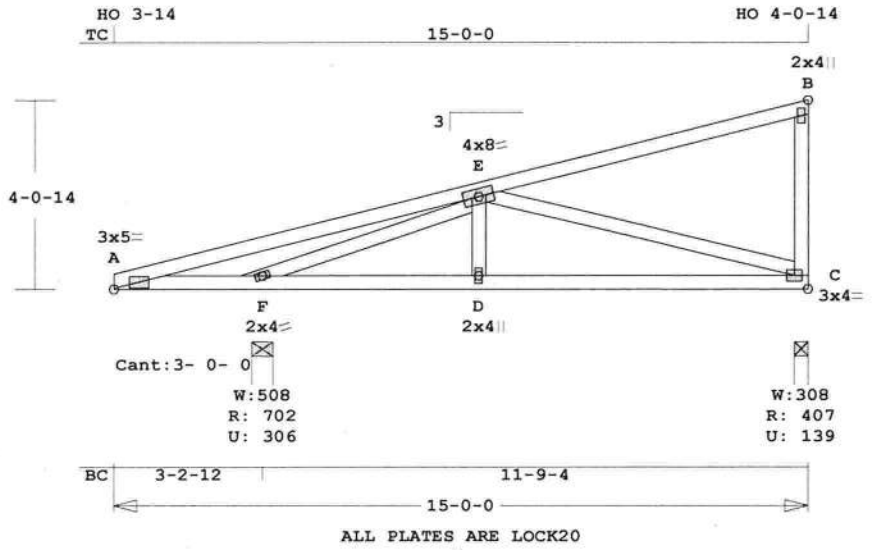
NOTES:
Trusses Manufactured by:
RIDGWAY ROOF TRUSS
Analysis Conforms To:
FBC2004

Design checked for 10 psf non-concurrent LL on BC.
Wind Loads - ANSI / ASCE 7-02
Truss is designed as Components and Claddings* for Exterior zone location.
Wind Speed: 110 mph
Mean Roof Height: 25-0
Exposure Category: B
Occupancy Factor : 1.00
Building Type: Enclosed
TC Dead Load: 4.0 psf
BC Dead Load: 6.0 psf
Max comp. force 981 Lbs
Quality Control Factor 1.25

FABRICATOR NOTES:
1. Delegated Engineer (Truss Designer)
Gary Dounson, PE 35054
Gary Dounson & Associates, Inc.
2830 NW 41st Street Suite D
Gainesville, FL 32606
(352)375-8593
CA 5201

Job	Mark	Quan	Type	Span	P1-H1	Left OH	Right OH	*Engineering*
061065	*R10*	7	MONO	150000	3	0	0	

Ruiz Residence



Scale: 0.250" = 1'

Robbins Engineering, Inc./Online Plus™ APPROX. TRUSS WEIGHT: 90.5 LBS

Online Plus -- Version 20.0.025
RUN DATE: 20-MAR-07

	CSI	-Size-	----Lumber----
TC	0.59	2x 4	SP-#2
BC	0.41	2x 4	SP-#2
WB	0.51	2x 4	SP-#3

Brace truss as follows:

	O.C.	From	To
TC	Cont.	0- 0- 0	15- 0- 0
BC	Cont.	0- 0- 0	15- 0- 0

Loading	Live	Dead	(psf)
TC	20.0	7.0	
BC	0.0	10.0	
Total	20.0	17.0	37.0
Spacing			24.0"
Lumber Duration Factor			1.25
Plate Duration Factor			1.25

TC Fb=1.15 Fc=1.10 Ft=1.10
BC Fb=1.10 Fc=1.10 Ft=1.10

Plus 8 Wind Load Case(s)
Plus 1 UBC LL Load Case(s)

Jt	React Lbs	Uplft Lbs	Size Req'd In-Sx	In-Sx
F	702	307	5- 8	1- 8
			Hz =	70
C	408	140	3- 8	1- 8
			Hz =	154

Membr	CSI	P Lbs	Axl-CSI-Bnd
Top Chords			
A -E	0.59	449 T	0.08 0.51
E -B	0.51	55 C	0.00 0.51
Bottom Chords			
A -F	0.41	463 T	0.00 0.41
F -D	0.32	651 T	0.10 0.22
D -C	0.32	651 T	0.06 0.26
Webs			
F -E	0.50	1178 C	
D -E	0.07	271 T	
E -C	0.51	678 C	
C -B	0.10	193 T	WindLd

TL Defl -0.17" in D -C L/812
LL Defl -0.08" in D -C L/999
LL Cant -0.03" in A -F L/999
Shear // Grain in E -B 0.28

Plates for each ply each face.
ALL CONNECTOR PLATES
TO BE MANUFACTURED BY
ROBBINS ENGINEERING, INC.
Plate - LOCK 20 Ga, Gross Area
Plate - RHS 20 Ga, Gross Area

Jt	Type	Plt Size	X	Y	JSI
A	LOCK	3.0x 5.0	Ctr	Ctr	0.74
E	LOCK	4.0x 8.0	Ctr	Ctr	0.77
B	LOCK	2.0x 4.0	Ctr	Ctr	0.38
F	LOCK	2.0x 4.0	Ctr	Ctr	0.57
D	LOCK	2.0x 4.0	Ctr	Ctr	0.38
C	LOCK	3.0x 4.0	Ctr	Ctr	0.63

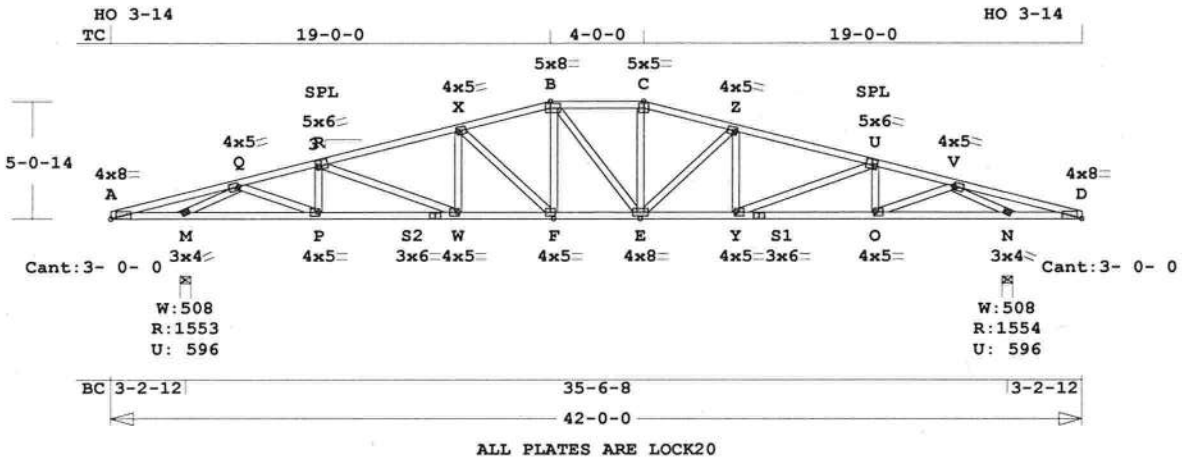
NOTES:
Trusses Manufactured by:
RIDGWAY ROOF TRUSS
Analysis Conforms To:
FBC2004
Design checked for 10 psf non-concurrent LL on BC.
Wind Loads - ANSI / ASCE 7-02

Truss is designed as
Components and Claddings*
for Exterior zone location.
Wind Speed: 110 mph
Mean Roof Height: 25-0
Exposure Category: B
Occupancy Factor : 1.00
Building Type: Enclosed
TC Dead Load: 4.0 psf
BC Dead Load: 6.0 psf
Max comp. force 1178 Lbs
Quality Control Factor 1.25

FABRICATOR NOTES:
1. Delegated Engineer (Truss Designer)
Gary Dounson, PE 35054
Gary Dounson & Associates, Inc.
2830 NW 41st Street Suite D
Gainesville, FL 32606
(352)375-8593
CA 5201

Job	Mark	Quan	Type	Span	P1-H1	Left OH	Right OH	*Engineering*
061065	*R12*	2	HIPP	420000	3	0	0	

Ruiz Residence



Scale: 0.125" = 1'

Robbins Engineering, Inc./Online Plus™ APPROX. TRUSS WEIGHT: 277.5 LBS

Online Plus -- Version 19.0.028
RUN DATE: 11-AUG-06

	CSI	-Size-	----Lumber----
TC	0.40	2x 4	SP-#2
BC	0.55	2x 4	SP-#2
WB	0.51	2x 4	SP-#3

Brace truss as follows:

O.C.	From	To
TC Cont.	0- 0- 0	42- 0- 0
BC Cont.	0- 0- 0	42- 0- 0

Loading	Live	Dead	(psf)
TC	20.0	7.0	
BC	0.0	10.0	
Total	20.0	17.0	37.0
Spacing			24.0"
Lumber Duration Factor			1.25
Plate Duration Factor			1.25
TC Fb=1.15	Fc=1.10	Ft=1.10	
BC Fb=1.10	Fc=1.10	Ft=1.10	

Plus 9 Wind Load Case(s)
Plus 1 UBC LL Load Case(s)

Jt	React Lbs	Uplft Lbs	Size Req'd In-Sx	In-Sx
M	1554	596	5- 8	1-11
		Hz =	-46	
N	1554	596	5- 8	1-11
		Hz =	47	

Membr	CSI	P Lbs	Axl-CSI-Bnd	
Top Chords				
A -Q	0.19	687 C	0.07	0.12
Q -R	0.27	2755 C	0.15	0.12
R -X	0.40	2763 C	0.10	0.30
X -B	0.33	2420 C	0.15	0.18
B -C	0.21	2345 C	0.15	0.06
C -Z	0.33	2420 C	0.15	0.18
Z -U	0.40	2763 C	0.10	0.30
U -V	0.27	2755 C	0.15	0.12
V -D	0.19	584 C	0.07	0.12
Bottom Chords				
A -M	0.36	723 T	0.09	0.27
M -P	0.50	1792 T	0.30	0.20
P -S2	0.55	2676 T	0.44	0.11
S2-W	0.52	2676 T	0.44	0.08
W -F	0.53	2680 T	0.45	0.08
F -E	0.42	2339 T	0.39	0.03
E -Y	0.53	2681 T	0.45	0.08
Y -S1	0.52	2675 T	0.44	0.08
S1-O	0.55	2675 T	0.44	0.11
O -N	0.50	1792 T	0.30	0.20
N -D	0.34	623 T	0.08	0.26
Webs				
M -Q	0.51	2584 C		
Q -P	0.30	955 T		
P -R	0.06	266 C		
R -W	0.04	77 C		
W -X	0.05	219 T		
X -F	0.20	451 C		
F -B	0.11	372 T		
B -E	0.03	64 C		
E -C	0.11	373 T		
E -Z	0.20	454 C		
Y -Z	0.05	216 T		
Y -U	0.03	57 C		
O -U	0.06	265 C		
O -V	0.30	954 T		
V -N	0.51	2584 C		

TL Defl	-0.38"	in F -E	L/999
LL Defl	-0.21"	in F -E	L/999
LL Cant	0.02"	in A -M	L/999
Shear // Grain		in R -X	0.20

Plates for each ply each face.
ALL CONNECTOR PLATES
TO BE MANUFACTURED BY
ROBBINS ENGINEERING, INC.
Plate - LOCK 20 Ga, Gross Area
Plate - RHS 20 Ga, Gross Area

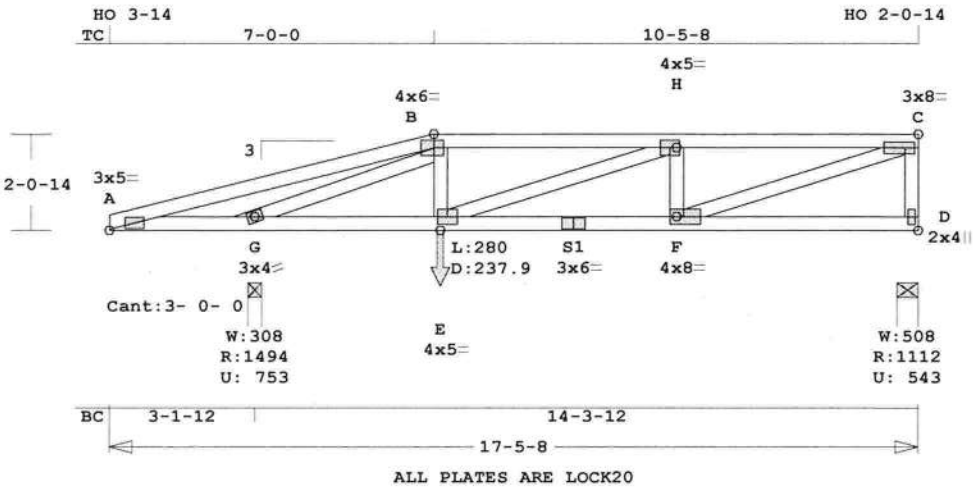
Jt	Type	Plt Size	X	Y	JSI
A	LOCK	4.0x 8.0	Ctr	0.1	0.85
Q	LOCK	4.0x 5.0	0.5	0.1	0.98
R	LOCK	5.0x 6.0-0.1	0.5		0.87
X	LOCK	4.0x 5.0	Ctr	Ctr	0.62
B	LOCK	5.0x 8.0-0.5	Ctr		0.98
C	LOCK	5.0x 5.0	Ctr	Ctr	0.98
Z	LOCK	4.0x 5.0	Ctr	Ctr	0.62
U	LOCK	5.0x 6.0	0.1	0.5	0.87
V	LOCK	4.0x 5.0-0.5	0.1		0.98
D	LOCK	4.0x 8.0	Ctr	0.1	0.85
M	LOCK	3.0x 4.0	Ctr	Ctr	0.79
P	LOCK	4.0x 5.0	Ctr	Ctr	0.60
S2	LOCK	3.0x 6.0	Ctr	Ctr	0.88
W	LOCK	4.0x 5.0	Ctr	Ctr	0.60
F	LOCK	4.0x 5.0	Ctr	Ctr	0.60
E	LOCK	4.0x 8.0	Ctr	Ctr	0.51
Y	LOCK	4.0x 5.0	Ctr	Ctr	0.60
S1	LOCK	3.0x 6.0	Ctr	Ctr	0.88
O	LOCK	4.0x 5.0	Ctr	Ctr	0.60
N	LOCK	3.0x 4.0	Ctr	Ctr	0.80

NOTES:
Trusses Manufactured by:
RIDGWAY ROOF TRUSS
Analysis Conforms To:
FBC2004
Design checked for 10 psf non-concurrent LL on BC.
Wind Loads - ANSI / ASCE 7-02
Truss is designed as
Components and Claddings* for Exterior zone location.
Wind Speed: 110 mph
Mean Roof Height: 25-0
Exposure Category: B
Occupancy Factor : 1.00
Building Type: Enclosed
TC Dead Load: 4.0 psf
BC Dead Load: 6.0 psf
Max comp. force 2763 Lbs
Quality Control Factor 1.25

FABRICATOR NOTES:
1. Delegated Engineer (Truss Designer)
Gary Dounson, PE 35054
Gary Dounson & Associates, Inc.
2830 NW 41st Street Suite D
Gainesville, FL 32606
(352)375-8593
CA 5201

Job	Mark	Quan	Type	Span	P1-H1	Left OH	Right OH	*Engineering*
061065	***R14***	2	HHIP	170508	3	0	0	

Ruiz Residence



Scale: 0.250" = 1'

Online Plus -- Version 20.0.025
RUN DATE: 06-MAR-07

	CSI	-Size-	----Lumber----
TC	0.80	2x 4	SP-#2
BC	0.63	2x 4	SP-2400
EX	S1-D	2x 4	SP-#2
WB	0.87	2x 4	SP-#3

Brace truss as follows:

O.C.	From	To
TC Cont.	0- 0- 0	17- 5- 8
BC Cont.	0- 0- 0	17- 5- 8

Loading	Live	Dead	(psf)
TC	20.0	7.0	
BC	0.0	10.0	
Total	20.0	17.0	37.0
Spacing			24.0"
Lumber Duration Factor			1.25
Plate Duration Factor			1.25

TC Fb=1.00 Fc=1.00 Ft=1.00
BC Fb=1.00 Fc=1.00 Ft=1.00

Load Case # 1 Girder Loading
Lumber Duration Factor 1.25
Plate Duration Factor 1.25

plf -	Live	Dead	From	To
TC V	40	14	0.0'	17.5'
BC V	0	20	0.0'	17.5'
TC V	50	18	7.0'	16.5'
TC V	-40	-14	16.5'	17.5'
BC V	0	25	7.1'	16.5'
BC V	0	-20	16.5'	17.5'
BC V	280	238	7.1'	CL-LB

Plus 9 Wind Load Case(s)
Plus 1 UBC LL Load Case(s)

Jt	React Lbs	Uplft Lbs	Size Req'd In-Sx	In-Sx
G	1495	753	3- 8	1- 8
			Hz =	35
D	1112	543	5- 8	1- 8
			Hz =	72

Membr	CSI	P Lbs	Axl	CSI	Bnd
Top Chords					
A -B	0.72	133	C	0.00	0.72
B -H	0.80	2460	C	0.04	0.76
H -C	0.69	2527	C	0.07	0.62
Bottom Chords					
A -G	0.44	186	T	0.00	0.44
G -E	0.63	2434	T	0.19	0.44
E -S1	0.40	2527	T	0.20	0.20
S1-F	0.69	2527	T	0.46	0.23
F -D	0.40	56	T	0.00	0.40
Webs					
G -B	0.87	2734	C		
E -B	0.17	601	T		
E -H	0.03	98	T		
F -H	0.12	599	C		
F -C	0.85	2678	T		
D -C	0.17	1054	C	WindLd	

TL Defl -0.25" in E -S1 L/651
LL Defl -0.13" in E -S1 L/999
LL Cant -0.05" in A -G L/672
Shear // Grain in H -C 0.45

Plates for each ply each face.
ALL CONNECTOR PLATES
TO BE MANUFACTURED BY
ROBBINS ENGINEERING, INC.
Plate - LOCK 20 Ga, Gross Area
Plate - RHS 20 Ga, Gross Area

Jt	Type	Plt Size	X	Y	JSI
A	LOCK	3.0x 5.0	Ctr	Ctr	0.78
B	LOCK	4.0x 6.0-0.5	Ctr	Ctr	0.99
H	LOCK	4.0x 5.0	Ctr	Ctr	0.60
C	LOCK	3.0x 8.0-1.5	Ctr	Ctr	0.98
G	LOCK	3.0x 4.0	Ctr	Ctr	0.90
E	LOCK	4.0x 5.0	Ctr	Ctr	0.60
S1	LOCK	3.0x 6.0	Ctr	Ctr	0.93
F	LOCK	4.0x 8.0	0.5	Ctr	0.97
D	LOCK	2.0x 4.0	Ctr	Ctr	0.53

NOTES:
Trusses Manufactured by:
RIDGWAY ROOF TRUSS
Analysis Conforms To:
FBC2004
Girder Half Hip
Framing King Jacks
Jack Open Faced
Setback 7- 0- 0
Design checked for 10 psf non-concurrent LL on BC.
Wind Loads - ANSI / ASCE 7-02
Truss is designed as
Components and Claddings* for Exterior zone location.
Wind Speed: 110 mph
Mean Roof Height: 25-0
Exposure Category: B
Occupancy Factor : 1.00
Building Type: Enclosed
TC Dead Load: 4.0 psf
BC Dead Load: 6.0 psf
User-defined wind-exposed BC regions

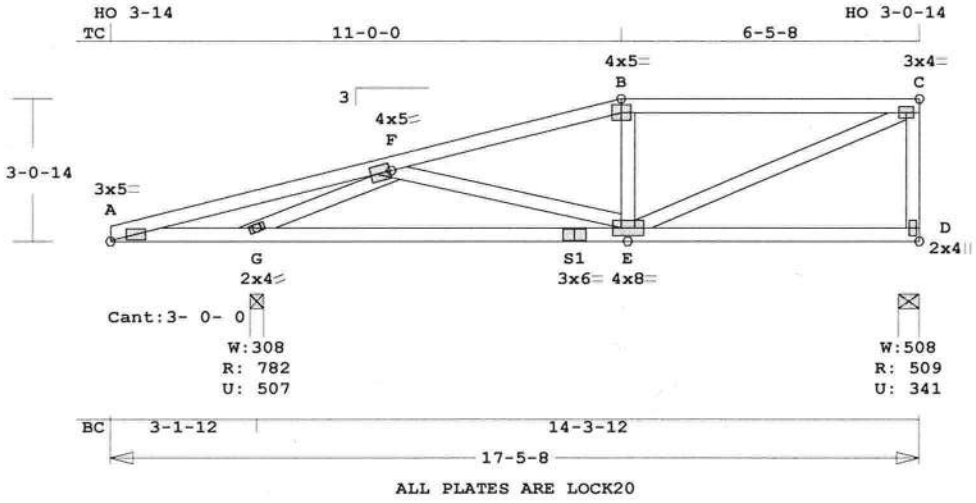
--From--	---To---
3- 1-12	17- 5- 8

Max comp. force 2734 Lbs
Quality Control Factor 1.25

FABRICATOR NOTES:
1. Delegated Engineer (Truss Designer)
Gary Dounson, PE 35054
Gary Dounson & Associates, Inc.
2830 NW 41st Street Suite D
Gainesville, FL 32606
(352)375-8593
CA 5201

Job	Mark	Quan	Type	Span	P1-H1	Left OH	Right OH	*Engineering*
061065	*R16*	2	HHIP	170508	3	0	0	

Ruiz Residence



Scale: 0.250" = 1'

Robbins Engineering, Inc./Online Plus™ APPROX. TRUSS WEIGHT: 105.3 LBS

Online Plus -- Version 20.0.025
RUN DATE: 06-MAR-07

	CSI	-Size-	----Lumber----
TC	0.39	2x 4	SP-#2
BC	0.37	2x 4	SP-#2
WB	0.44	2x 4	SP-#3

Brace truss as follows:

	O.C.	From	To
TC	Cont.	0- 0- 0	17- 5- 8
BC	Cont.	0- 0- 0	17- 5- 8

Loading	Live	Dead	(psf)
TC	20.0	7.0	
BC	0.0	10.0	
Total	20.0	17.0	37.0
Spacing			24.0"

Lumber Duration Factor 1.25
Plate Duration Factor 1.25
TC Fb=1.15 Fc=1.10 Ft=1.10
BC Fb=1.10 Fc=1.10 Ft=1.10

Plus 9 Wind Load Case(s)
Plus 1 UBC LL Load Case(s)

Jt	React Lbs	Uplft Lbs	Size Req'd In-Sx	In-Sx
G	783	507	3- 8	1- 8
			Hz =	51
D	509	342	5- 8	1- 8
			Hz =	114

Membr	CSI	P Lbs	Axl-CSI-Bnd
----------Top Chords----------			
A -F	0.28	393 T	0.07 0.21
F -B	0.26	688 C	0.08 0.18
B -C	0.39	694 T	0.00 0.39
--------Bottom Chords---------			
A -G	0.28	380 C	0.00 0.28
G -S1	0.34	650 T	0.10 0.24
S1-E	0.37	650 T	0.05 0.32
E -D	0.32	89 T	0.00 0.32
------------Webs------------			
G -F	0.26	1166 C	
F -E	0.05	143 T	
E -B	0.04	160 T	
E -C	0.44	731 T	
D -C	0.09	458 C	WindLd

TL Defl -0.13" in G -S1 L/999
LL Defl -0.07" in G -S1 L/999
LL Cant -0.02" in A -G L/999
Shear // Grain in B -C 0.23

Plates for each ply each face.
ALL CONNECTOR PLATES
TO BE MANUFACTURED BY
ROBBINS ENGINEERING, INC.
Plate - LOCK 20 Ga, Gross Area
Plate - RHS 20 Ga, Gross Area

Jt	Type	Plt Size	X	Y	JSI
A	LOCK	3.0x 5.0	Ctr	Ctr	0.78
F	LOCK	4.0x 5.0	1.0	0.2	0.96
B	LOCK	4.0x 5.0	Ctr	Ctr	0.81
C	LOCK	3.0x 4.0	Ctr	Ctr	0.65
G	LOCK	2.0x 4.0	Ctr	Ctr	0.55
S1	LOCK	3.0x 6.0	Ctr	Ctr	0.88
E	LOCK	4.0x 8.0	Ctr	Ctr	0.77
D	LOCK	2.0x 4.0	Ctr	Ctr	0.40

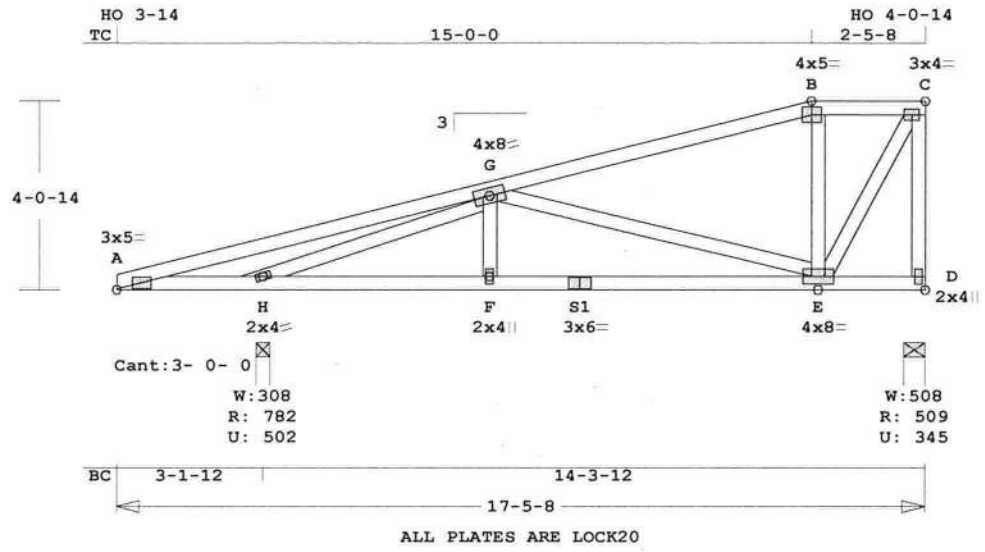
NOTES:
Trusses Manufactured by:
RIDGWAY ROOF TRUSS

Analysis Conforms To:
FBC2004
Design checked for 10 psf non-concurrent LL on BC.
Wind Loads - ANSI / ASCE 7-02
Truss is designed as
Components and Claddings*
for Exterior zone location.
Wind Speed: 110 mph
Mean Roof Height: 25-0
Exposure Category: B
Occupancy Factor : 1.00
Building Type: Enclosed
TC Dead Load: 4.0 psf
BC Dead Load: 6.0 psf
User-defined wind-exposed BC regions --From-- ---To---
3- 1-12 17- 5- 8
Max comp. force 1166 Lbs
Quality Control Factor 1.25

FABRICATOR NOTES:
1. Delegated Engineer (Truss Designer)
Gary Dounson, PE 35054
Gary Dounson & Associates, Inc.
2830 NW 41st Street Suite D
Gainesville, FL 32606
(352)375-8593
CA 5201

Job	Mark	Quan	Type	Span	P1-H1	Left OH	Right OH	*Engineering*
061065	*R18*	2	HHIP	170508	3	0	0	

Ruiz Residence



Scale: 0.250" = 1'

Online Plus -- Version 20.0.025
RUN DATE: 06-MAR-07

	CSI	-Size-	----Lumber----
TC	0.54	2x 4	SP-#2
BC	0.44	2x 4	SP-#2
WB	0.62	2x 4	SP-#3

Brace truss as follows:

	O.C.	From	To
TC	Cont.	0- 0- 0	17- 5- 8
BC	Cont.	0- 0- 0	17- 5- 8

Loading	Live	Dead	(psf)
TC	20.0	7.0	
BC	0.0	10.0	
Total	20.0	17.0	37.0
Spacing			24.0"

Lumber Duration Factor 1.25
Plate Duration Factor 1.25
TC Fb=1.15 Fc=1.10 Ft=1.10
BC Fb=1.10 Fc=1.10 Ft=1.10

Plus 9 Wind Load Case(s)
Plus 1 UBC LL Load Case(s)

Jt	React Lbs	Uplft Lbs	Size Req'd In-Sx	In-Sx
H	783	503	3- 8	1- 8
			Hz =	69
D	509	346	5- 8	1- 8
			Hz =	156

Membr	CSI	P Lbs	Axl-CSI-Bnd	
----------Top Chords----------				
A -G	0.54	406 T	0.07	0.47
G -B	0.47	317 T	0.00	0.47
B -C	0.18	363 T	0.04	0.14
--------Bottom Chords---------				
A -H	0.44	391 C	0.00	0.44
H -F	0.39	848 T	0.14	0.25
F -S1	0.26	848 T	0.08	0.18
S1-E	0.31	848 T	0.08	0.23
E -D	0.23	122 T	0.00	0.23
------------Webs------------				
H -G	0.62	1342 C		
F -G	0.06	240 T		
G -E	0.45	585 C		
E -B	0.05	220 T		
E -C	0.18	575 T		
D -C	0.12	523 C	WindLd	

TL Defl -0.11" in S1-E L/999
LL Defl -0.05" in S1-E L/999
LL Cant -0.03" in A -H L/999
Shear // Grain in G -B 0.27

Plates for each ply each face.
ALL CONNECTOR PLATES
TO BE MANUFACTURED BY
ROBBINS ENGINEERING, INC.
Plate - LOCK 20 Ga, Gross Area
Plate - RHS 20 Ga, Gross Area

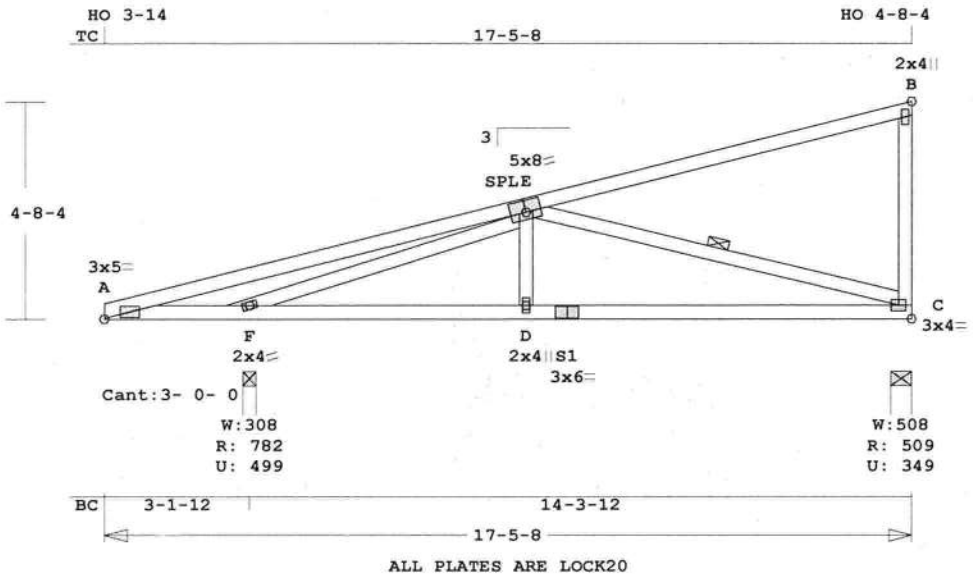
Jt	Type	Plt Size	X	Y	JSI
A	LOCK	3.0x 5.0	Ctr	Ctr	0.78
G	LOCK	4.0x 8.0	Ctr	Ctr	0.77
B	LOCK	4.0x 5.0	Ctr	Ctr	0.81
C	LOCK	3.0x 4.0	Ctr	Ctr	0.65
H	LOCK	2.0x 4.0	Ctr	Ctr	0.66
F	LOCK	2.0x 4.0	Ctr	Ctr	0.40
S1	LOCK	3.0x 6.0	Ctr	Ctr	0.88
E	LOCK	4.0x 8.0	Ctr	Ctr	0.77
D	LOCK	2.0x 4.0	Ctr	Ctr	0.40

NOTES:
Trusses Manufactured by:
RIDGWAY ROOF TRUSS
Analysis Conforms To:
FBC2004
Design checked for 10 psf non-concurrent LL on BC.
Wind Loads - ANSI / ASCE 7-02
Truss is designed as
Components and Claddings*
for Exterior zone location.
Wind Speed: 110 mph
Mean Roof Height: 25-0
Exposure Category: B
Occupancy Factor : 1.00
Building Type: Enclosed
TC Dead Load: 4.0 psf
BC Dead Load: 6.0 psf
User-defined wind-exposed BC regions --From-- ---To---
3- 1-12 17- 5- 8
Max comp. force 1342 Lbs
Quality Control Factor 1.25

FABRICATOR NOTES:
1. Delegated Engineer (Truss Designer)
Gary Dounson, PE 35054
Gary Dounson & Associates, Inc.
2830 NW 41st Street Suite D
Gainesville, FL 32606
(352)375-8593
CA 5201

Job	Mark	Quan	Type	Span	P1-H1	Left OH	Right OH	*Engineering*
061065	*R20*	3	MONO	170508	3	0	0	

Ruiz Residence



Scale: 0.250" = 1'

Robbins Engineering, Inc./Online Plus™ APPROX. TRUSS WEIGHT: 106.6 LBS

Online Plus -- Version 20.0.025
RUN DATE: 06-MAR-07

	CSI	-Size-	----Lumber----
TC	0.77	2x 4	SP-#2
BC	0.53	2x 4	SP-#2
WB	0.89	2x 4	SP-#3

Brace truss as follows:

	O.C.	From	To
TC	Cont.	0- 0- 0	17- 5- 8
BC	Cont.	0- 0- 0	17- 5- 8

WB 1 rows CLB on E -C
Attach CLB with (2)-10d nails at each web.

Loading	Live	Dead	(psf)
TC	20.0	7.0	
BC	0.0	10.0	
Total	20.0	17.0	37.0
Spacing			24.0"

Lumber Duration Factor 1.25
Plate Duration Factor 1.25
TC Fb=1.15 Fc=1.10 Ft=1.10
BC Fb=1.10 Fc=1.10 Ft=1.10

Plus 8 Wind Load Case(s)
Plus 1 UBC LL Load Case(s)

Jt	React Lbs	Uplft Lbs	Size Req'd In-Sx	In-Sx
F	783	499	3- 8	1- 8
			Hz =	81
C	509	350	5- 8	1- 8
			Hz =	180

Membr	CSI	P Lbs	Axl-CSI-Bnd	
Top Chords				
A -E	0.77	397 T	0.07	0.70
E -B	0.70	63 C	0.00	0.70
Bottom Chords				
A -F	0.53	380 C	0.00	0.53
F -D	0.45	896 T	0.09	0.36
D -S1	0.45	896 T	0.09	0.36
S1-C	0.45	896 T	0.09	0.36
Webs				
F -E	0.89	1368 C		
D -E	0.08	332 T		
E -C	0.28	930 C		1 Br
C -B	0.14	206 T	WindLd	

TL Defl -0.30" in S1-C L/540
LL Defl -0.14" in S1-C L/999
LL Cant -0.04" in A -F L/846
Shear // Grain in E -B 0.33

Plates for each ply each face.
ALL CONNECTOR PLATES
TO BE MANUFACTURED BY
ROBBINS ENGINEERING, INC.
Plate - LOCK 20 Ga, Gross Area
Plate - RHS 20 Ga, Gross Area

Jt	Type	Plt Size	X	Y	JSI
A	LOCK	3.0x 5.0	Ctr	Ctr	0.78
E	LOCK	5.0x 8.0-0.1	0.5		0.87
B	LOCK	2.0x 4.0	Ctr	Ctr	0.38
F	LOCK	2.0x 4.0	Ctr	Ctr	0.67
D	LOCK	2.0x 4.0	Ctr	Ctr	0.40
S1	LOCK	3.0x 6.0	Ctr	Ctr	0.88
C	LOCK	3.0x 4.0	Ctr	Ctr	0.67

NOTES:
Trusses Manufactured by:
RIDGWAY ROOF TRUSS

Analysis Conforms To:
FBC2004
Design checked for 10 psf non-concurrent LL on BC.
Wind Loads - ANSI / ASCE 7-02
Truss is designed as
Components and Claddings*
for Exterior zone location.
Wind Speed: 110 mph
Mean Roof Height: 25-0
Exposure Category: B
Occupancy Factor : 1.00
Building Type: Enclosed
TC Dead Load: 4.0 psf
BC Dead Load: 6.0 psf
User-defined wind-exposed BC regions --From-- ---To---
3- 1-12 17- 5- 8
Max comp. force 1368 Lbs
Quality Control Factor 1.25

FABRICATOR NOTES:
1. Delegated Engineer (Truss Designer)
Gary Dounson, PE 35054
Gary Dounson & Associates, Inc.
2830 NW 41st Street Suite D
Gainesville, FL 32606
(352)375-8593
CA 5201

BCSI-B1 SUMMARY SHEET 2 of 2

BRACING FOR THREE PLANES OF ROOF
EL ARRIOSTRE EN TRES PLANOS DE TECHO

☑ This bracing method is for all trusses except 3x2 and 4x2 parallel chord trusses.
Este metodo de arriostre es para todo trusses excepto trusses de cuerdas paralelas 3x2 y 4x2

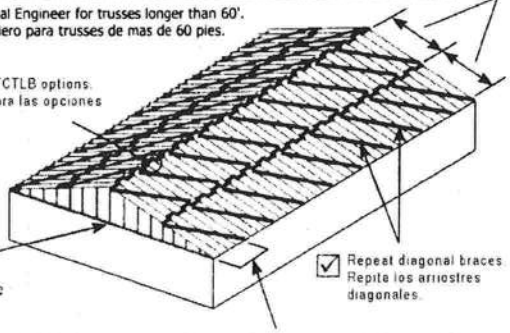
1) TOP CHORD — CUERDA SUPERIOR

Truss Span Longitud de Tramo	Top Chord Temporary Lateral Brace (TCTLB) Spacing Espaciamiento del Arriostre Temporal de la Cuerda Superior
Up to 30' Hasta 30 pies	10' o.c. max. 10 pies máximo
30' to 45' 30 a 45 pies	8' o.c. max. 8 pies máximo
45' to 60' 45 a 60 pies	6' o.c. max. 6 pies máximo
60' to 80'* 60 a 80 pies*	4' o.c. max. 4 pies máximo

*Consult a Professional Engineer for trusses longer than 60'.
*Consulte a un ingeniero para trusses de mas de 60 pies.

☑ See BCSI-B2 for TCTLB options.
Vea el BCSI-B2 para las opciones de TCTLB.

⚠ Refer to BCSI-B6 Summary Sheet - Gable End Frame Bracing.
Vea el resúmen BCSI-B6 - Arriostre del truss terminal de un techo a dos aguas.

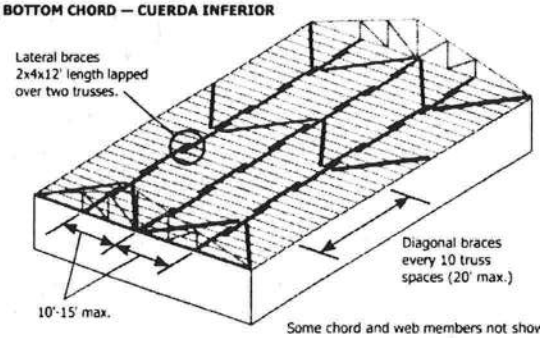


☑ Repeat diagonal braces.
Repita los arriostres diagonales.

☑ Set first five trusses with spacer pieces, then add diagonals. Repeat process on groups of four trusses until all trusses are set.

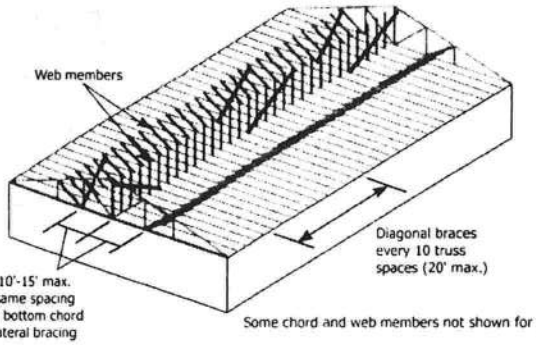
Instale los cinco primeros trusses con espaciadores, luego los arriostres diagonales. Repita este procedimiento en grupos de cuatro trusses hasta que todos los trusses esten instalados.

2) BOTTOM CHORD — CUERDA INFERIOR



Some chord and web members not shown for clarity.

3) WEB MEMBER PLANE — PLANO DE LOS MIEMBROS SECUNDARIOS

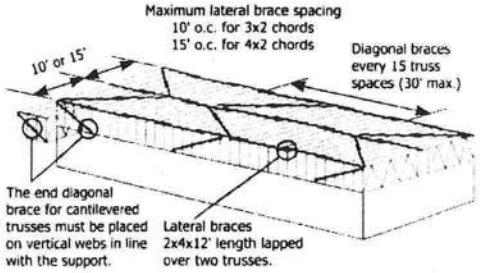


Some chord and web members not shown for clarity.

⚠ DIAGONAL BRACING IS VERY IMPORTANT
⚠ ¡EL ARRIOSTRE DIAGONAL ES MUY IMPORTANTE! ⚠

BRACING FOR 3x2 AND 4x2 PARALLEL CHORD TRUSSES
EL ARRIOSTRE PARA TRUSSES DE CUERDAS PARALELAS 3x2 Y 4x2

⚠ Refer to BCSI-B7 Summary Sheet - Temporary and Permanent Bracing for Parallel Chord Trusses for more information.
Vea el resumen BCSI-B7 - Arriostre temporal y permanente de trusses de cuerdas paralelas para mayor informacion.



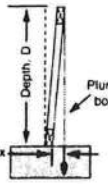
INSTALLING — INSTALACION

☑ Tolerances for Out-of-Plane. Tolerancias para Fuera-de-Plano.



Max. Bow	Truss Length
3/4"	12.5'
7/8"	14.6'
1"	16.7'
1-1/8"	18.8'
1-1/4"	20.8'
1-3/8"	22.9'
1-1/2"	25.0'
1-3/4"	29.2'
2"	≥33.3'

☑ Tolerances for Out-of-Plumb
Tolerances para Fuerta-de-Plomada



D/50	D (ft.)
1/4"	1'
1/2"	2'
3/4"	3'
1"	4'
1-1/4"	5'
1-1/2"	6'
1-3/4"	7'
2"	≥ 8'

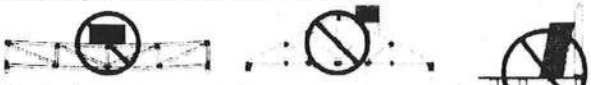
CONSTRUCTION LOADING — CARGA DE CONSTRUCCION

⚠ Do not proceed with construction until all bracing is securely and properly in place.
No proceda con la construcción hasta que todos los arriostres estén colocados en forma apropiada y segura.

⊘ Do not exceed maximum stack heights. Refer to BCSI-B4 Summary Sheet - Construction Loading for more information.
No exceda las máximas alturas recomendadas. Vea el resúmen BCSI-B4 Carga de Construcción para mayor informacion.

Maximum Stack Height for Materials on Trusses

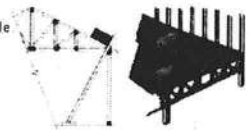
Material	Height (h)
Gypsum Board	12'
Plywood or OSB	16'
Asphalt Shingles	2 bundles
Concrete Block	8'
Clay Tile	3-4 tiles high



⊘ Do not overload small groups or single trusses.
No sobrecargue pequeños grupos o trusses individuales.

☑ Place loads over as many trusses as possible
Cologue las cargas sobre tantos trusses como sea posible

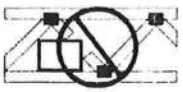
☑ Position loads over load bearing walls.
Coloque las cargas sobre las paredes soportantes.



ALTERATIONS — ALTERACIONES

⚠ Refer to BCSI-B5 Summary Sheet - Truss Damage, Jobsite Modifications and Installation Errors.
Vea el resumen BCSI-B5 Daños de trusses, Modificaciones en la Obra y Errores de Instalacion.

⊘ Do not cut, alter, or drill any structural member of a truss unless specifically permitted by the Truss Design Drawing.
No corte, altere o perfore ningun miembro estructural de los trusses, a menos que esté especificamente permitido en el dibujo del diseño del truss.



⚠ Trusses that have been overloaded during construction or altered without the Truss Manufacturer's prior approval may render the Truss Manufacturer's limited warranty null and void.
Trusses que se han sobrecargado durante la construccion o han sido alterados sin una autorizacion previa del Fabricante de Trusses, pueden reducir o eliminar la garantia del Fabricante de Trusses.

NOTE: The Truss Manufacturer and Truss Designer must rely on the fact that the Contractor and crane operator (if applicable) are capable to undertake the work they have agreed to do on a particular project. The Contractor should seek any required assistance regarding construction practices from a competent party. The methods and procedures outlined are intended to ensure that the overall construction techniques employed will put floor and roof trusses into place SAFELY. These recommendations for handling, installing and bracing wood trusses are based upon the collective experience of leading technical personnel in the wood truss industry, but must, due to the nature of responsibilities involved, be presented only as a GUIDE for use by a qualified Building Designer or Erection/Installation Contractor. It is not intended that these recommendations be interpreted as superior to any design specification (provided by either an Architect, Engineer, the Building Designer, the Erection/Installation Contractor or otherwise) for handling, installing and bracing wood trusses and it does not preclude the use of other equivalent methods for bracing and providing stability for the walls and columns as may be determined by the truss Erection/Installation Contractor. Thus, the Wood Truss Council of America and the Truss Plate Institute expressly disclaim any responsibility for damages arising from the use, application, or reliance on the recommendations and information contained herein.

WOOD TRUSS COUNCIL OF AMERICA
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608/274-4849 • www.woodtruss.com

TRUSS PLATE INSTITUTE
583 D'Onofrio Drive • Madison, WI 53719
608/833-5900 • www.tpinst.org

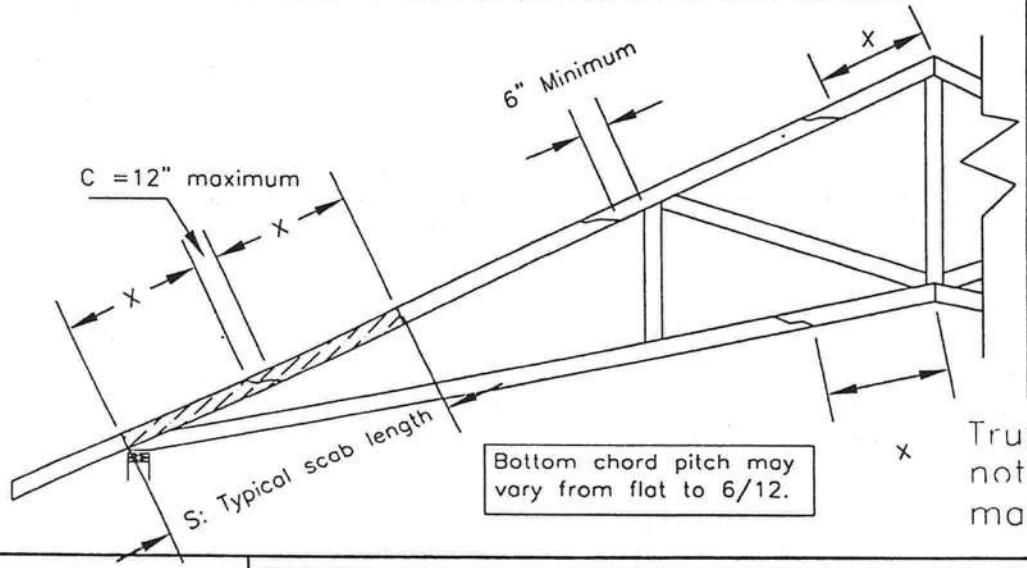
General detail for repair of broken chords and damaged or missing chord splices that meet the following conditions:

* Chord size must be maximum 2x6 and southern pine species.
* Scab must be the same size and grade as broken chord.
* Truss must be single ply.
* No more than two broken or cracked chords per truss.
* Perimeter of break area must be minimum of X distance from any heel or peak, and minimum of 6" away from any interior joint locations.

C = Maximum length of damaged area not to exceed 12".
S = Overall length of scab member (shaded) must be equal or greater than 2(X)+C.
X = Minimum length of scab member at each end of break area.
Refer to following table for minimum length of scab, and minimum number of nails at each end of break area and maximum axial force of broken member.
For all lumber, plates, web bracing, etc. refer to original drawing sealed by Robbins Engineering Inc.

1) Apply all nails so as to avoid damaging of lumber and loosening of plates at joints.
2) Use 2 rows of 10d common nails 3" on center each row and staggered into 2x4 members.
   Use 3 rows of 10d common nails 3" on center each row and staggered into 2x6 members.
   Use 6" spacing If scabs applied to each face of truss.
   Minimum end distance of 2" must be provided for all scab members.

THOMAS ALBANI
CERTIFICATE
No. 29384
STATE OF
FLORIDA
PROFESSIONAL ENGINEER



TOTAL NUMBER OF NAILS ON EACH SIDE OF BREAK		X (INCHES)	MAXIMUM FORCE (LBS.) AT 33% LOAD DURATION	
2X4 SYP	2X6 SYP		2X4 SYP	2X6 SYP
13	20	24"	1924	2886
17	26	30"	2501	3752
21	32	36"	3079	4618
25	38	42"	3656	5484
29	44	48"	4233	6349

Bottom chord pitch may vary from flat to 6/12.

Truss manufacturer must be notified if field conditions do not match this general detail.

ROBBINS
Engineering Inc.
P.O.Box 280055, Tampa, FL 33682

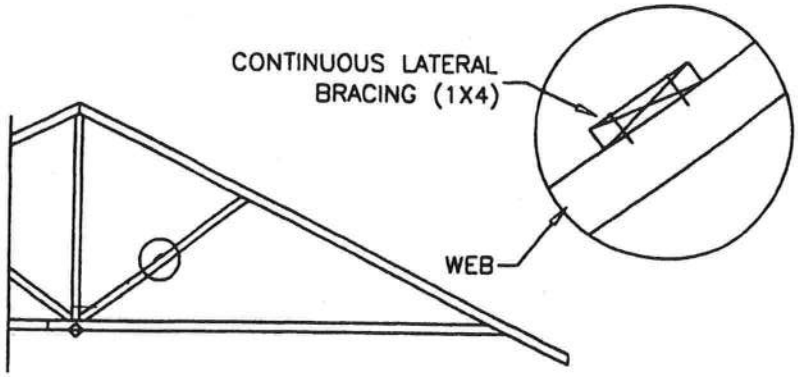
ROBBINS LOCK connector plates (20 ga. galv. steel-ASTM A653 SS Grade 40) shall be applied on both faces of truss at each joint. Center the plates,unless shown otherwise by circles (o) or dimensions. Unless otherwise indicated by a "v", all slots in plates run parallel with the chords or horizontally at the peak and / or heel. No loose knots or wanes in plate contact area. Splice only where shown. Overall spans assume 4" bearings at each end, unless indicated otherwise. Cutting and fabrications shall be performed on equipment which produces snug-fitting joints and plates. This design was prepared in accordance with "National Design Specifications for Stress-Grade lumber and its Fastenings" (AFPA), "Design Specifications for Light Metal Plate Connected Wood Trusses" (TPI), and HUD Design Criteria for Trussed Rafters.

Robbins Mfg., Co. bears no responsibility for the erection of trusses, field bracing or permanent truss bracing. Refer to HIB-91 as published by the Truss Plate Institute,583 D'Onofrio Drive,Suite 200, Madison, Wisconsin 53719. Persons erecting trusses are cautioned to seek professional advice concerning proper erection bracing to prevent toppling and "dominoing". Care should be taken to prevent damage during fabrication, storage, shipping and erection. Top and bottom chords shall be adequately braced in the absence of sheathing or rigid ceiling, respectively it is the responsibility of others to ascertain that the design loads utilized on this drawing meet or exceed the actual dead loads imposed by the structure and the live loads imposed by the local building code or historical climatic records.

FURNISH A COPY OF THIS DESIGN TO ERECTION CONTRACTOR
IT IS THE RESPONSIBILITY OF THE BUILDING DESIGNER AND TRUSS FAB. TO REVIEW THIS DRWG. & VERIFY THAT DATA INCLUDING DIM. & LOADS CONFORM TO ARCH. PLAN/SPECS & FAB. TRUSS LAYOUTS.

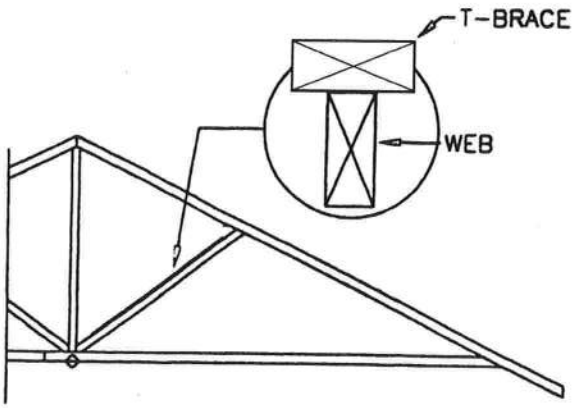
Designed By: MG
Checked By: TAA
Rev. Date: 12/01/03
Dwg. No: GD-62-33

PERMANENT WEB BRACING



CONTINUOUS LATERAL BRACING

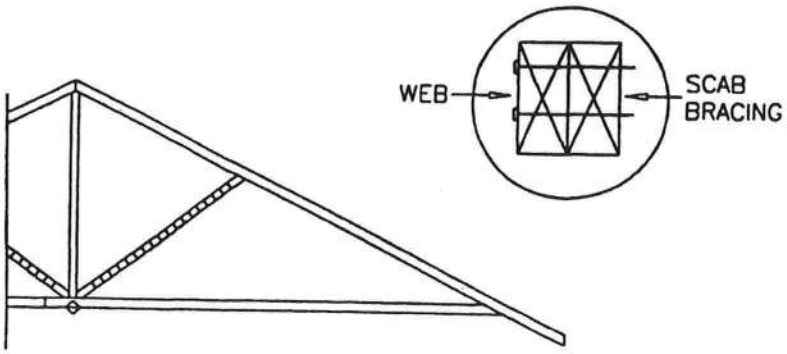
1x4 #3 HEM–FIR OR BETTER CONTINUOUS LATERAL BRACING TO BE EQUALLY SPACED. ATTACH WITH (2) 8d NAILS. BRACING MATERIAL TO BE SUPPLIED AND ATTACHED AT BOTH ENDS TO A SUITABLE SUPPORT BY ERECTION CONTRACTOR.



T-BRACE

THESE DETAILS APPLY TO 1.5" WIDE WOOD TRUSSES.

- USE A 2x4 T-BRACE IF THE TRUSS DESIGN SPECIFIES ONE LATERAL BRACE (MID POINT OF WEB).
- USE A 2x6 T-BRACE IF THE TRUSS DESIGN SPECIFIES TWO LATERAL BRACES (AT THE THIRD POINTS OF THE WEB).
- USE A CONTINUOUS PIECE FOR THE T-BRACE, OF THE SAME GRADE AS THE WEB AND COVERING AT LEAST 90% OF THE WEB LENGTH.
- CENTER THE T-BRACE ON THE WEB AND FASTEN WITH 10d COMMON NAILS SPACED 4" ON CENTER.



SCAB BRACE

SCAB BRACE SAME SIZE, GRADE, AND LENGTH AS WEB MEMBER. ATTACH WITH 10d NAILS @ 4" O.C. BRACING MATERIAL TO BE SUPPLIED BY ERECTION CONTRACTOR.

MANUAL DJ

MANUAL DJ

Project Summary
Entire House
CRYSTAL AIR & WATER

Job:
Date:
By:

1611-B NW 55 PLACE, GAINESVILLE, FL 32653 Phone: 352-333-0460 Fax: 352-378-7867 Email: krsmith777@aol.com Web: www.crystalairwater.com

Project Information

For: Builder- R Kelly Const.
Builder- R Kelly Const., ~~High Springs~~, FL
KT WHITE

Notes: Ruiz Residence

Design Information

Weather: Gainesville, FL, US

Winter Design Conditions

Outside db	***31***	°F
Inside db	68	°F
Design TD	37	°F

Summer Design Conditions

Outside db	***93***	°F
Inside db	75	°F
Design TD	18	°F
Daily range	M	
Relative humidity	50	%
Moisture difference	50	gr/lb

Heating Summary

Structure	22290	Btuh
Ducts	1115	Btuh
Central vent (0 cfm)	0	Btuh
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	23405	Btuh

Sensible Cooling Equipment Load Sizing

Structure	24669	Btuh
Ducts	2466	Btuh
Central vent (0 cfm)	0	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	0.98	
Equipment sensible load	26580	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	1260	1260
Volume (ft³)	11340	11340
Air changes/hour	1.00	0.50
Equiv. AVF (cfm)	189	95

Latent Cooling Equipment Load Sizing

Structure	5508	Btuh
Ducts	0	Btuh
Central vent (0 cfm)	0	Btuh
Equipment latent load	5508	Btuh
Equipment total load	32087	Btuh
Req. total capacity at 0.75 SHR	3.0	ton

Heating Equipment Summary

Make Trane
Trade XL14i Weathertron
Model 2TWX4036B1

Efficiency	8.6 HSPF	
Heating input		
Heating output	32800	Btuh @ 47°F
Temperature rise	23	°F
Actual air flow	1298	cfm
Air flow factor	0.055	cfm/Btuh
Static pressure	0.50	in H2O
Space thermostat		

Cooling Equipment Summary

Make Trane
Trade XL14i Weathertron
Cond 2TWX4036B1
Coil TWE037E13

Efficiency	14 SEER	
Sensible cooling	27150	Btuh
Latent cooling	9050	Btuh
Total cooling	36200	Btuh
Actual air flow	1298	cfm
Air flow factor	0.048	cfm/Btuh
Static pressure	0.50	in H2O
Load sensible heat ratio	0.83	

Bold/italic values have been manually overridden

Printout certified by ACCA to meet all requirements of Manual J 7th Ed.

Short Form
Entire House
CRYSTAL AIR & WATER

Job:
Date:
By:

1611-B NW 55 PLACE, GAINESVILLE, FL 32653 Phone: 352-333-0460 Fax: 352-378-7867 Email: krsmith777@aol.com Web: www.crystalairwater.com

Project Information

For: Ruiz Residence
Builder- R Kelly Const., ~~High Springs~~, FL
FT WHITE

Design Information

	Htg	Clg
Outside db (°F)	***31***	***93***
Inside db (°F)	68	75
Design TD (°F)	37	18
Daily range	-	M
Inside humidity (%)	-	50
Moisture difference (gr/lb)	-	50

Infiltration	
Method	Simplified
Construction quality	Average
Fireplaces	0

HEATING EQUIPMENT

Make	Trane
Trade	XL14i Weathertron
Model	2TWX4036B1

Efficiency	8.6 HSPF	
Heating input		
Heating output	32800	Btuh @ 47°F
Temperature rise	23	°F
Actual air flow	1298	cfm
Air flow factor	0.055	cfm/Btuh
Static pressure	0.50	in H2O
Space thermostat		

COOLING EQUIPMENT

Make	Trane
Trade	XL14i Weathertron
Cond	2TWX4036B1
Coil	TWE037E13

Efficiency	14 SEER	
Sensible cooling	27150	Btuh
Latent cooling	9050	Btuh
Total cooling	36200	Btuh
Actual air flow	1298	cfm
Air flow factor	0.048	cfm/Btuh
Static pressure	0.50	in H2O
Load sensible heat ratio	0.83	

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
bed	110	4181	3719	232	178
utility	70	1674	4258	93	204
mst bath	60	1714	1598	95	76
bath	50	64	406	4	19
storage	110	141	168	8	8
office	110	2031	2117	113	101
kitchen/dining/l	549	9302	11041	516	528
mst clo	22	0	0	0	0
mst bed	165	4298	3815	238	183
clo	14	0	0	0	0

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Entire House	d	1260	23405	27122	1298	1298
Other equip loads			0	0		
Equip. @ 0.98	RSM			26580		
Latent cooling				5508		
TOTALS		1260	23405	32087	1298	1298

Bold/italic values have been manually overridden

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Building Analysis
Entire House
CRYSTAL AIR & WATER

Job:
Date:
By:

1611-B NW 55 PLACE, GAINESVILLE, FL 32653 Phone: 352-333-0460 Fax: 352-378-7867 Email: krsmith777@aol.com Web: www.crystalairwater.com

Project Information

For: Ruiz Residence
Builder- R Kelly Const., ~~High Springs~~, FL
RT WHITE

Design Conditions

Location:
Gainesville, FL, US
Elevation: 151 ft
Latitude: 30°N

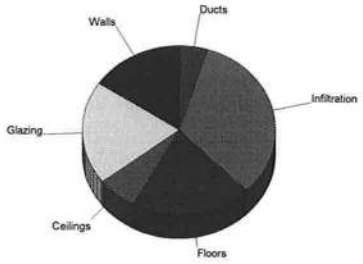
Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	***31***	***93***
Daily range (°F)	-	19 (M)
Wet bulb (°F)	-	77
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	37	18
Relative humidity (%)	50	50
Moisture difference (gr/lb)	30.7	49.9

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

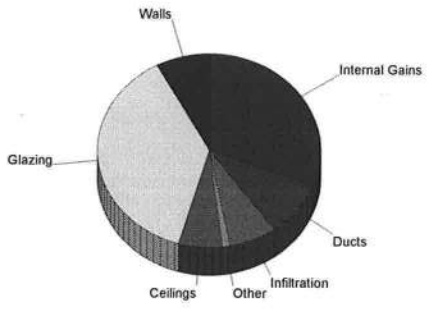
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.3	3692	15.8
Glazing	22.5	4629	19.8
Doors	0.0	0	0.0
Ceilings	1.2	1538	6.6
Floors	3.8	4769	20.3
Infiltration	37.4	7692	32.8
Ducts		1115	4.8
Piping		0	0.0
Humidification		0	0.0
Ventilation		0	0.0
Adjustments		-29	
Total		**23405**	**100.0**



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.9	2155	7.9
Glazing	49.6	10195	37.6
Doors	0.0	0	0.0
Ceilings	1.4	1746	6.4
Floors	0.2	301	1.1
Infiltration	9.1	1871	6.9
Ducts		2466	9.1
Ventilation		0	0.0
Internal gains		8400	31.0
Blower		0	0.0
Adjustments		-12	
Total		**27122**	**100.0**



Overall U-value = 0.103 Btuh/ft²-°F

Data entries checked.

Bold/italic values have been manually overridden

Component Constructions
Entire House
CRYSTAL AIR & WATER

Job:
Date:
By:

1611-B NW 55 PLACE, GAINESVILLE, FL 32653 Phone: 352-333-0460 Fax: 352-378-7867 Email: krsmith777@aol.com Web: www.crystalairwater.com

Project Information

For: Ruiz Residence
Builder- R Kelly Const., ~~High Springs,~~ FT WHITE FL

Design Conditions

Location:
Gainesville, FL, US
Elevation: 151 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	***31***	***93***
Daily range (°F)	-	19 (M)
Wet bulb (°F)	-	77
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	37	18
Relative humidity (%)	50	50
Moisture difference (gr/lb)	30.7	49.9

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** (ft²)	**U-value** (Btuh/ft²-°F)	**Insul R** (ft²-°F/Btuh)	**Htg HTM** (Btuh/ft²)	**Loss** (Btuh)	**Clg HTM** (Btuh/ft²)	**Gain** (Btuh)
Walls								
12C0: Wood fr, R-11, ½" gypsum,R0.5		1109	0.090	11.0	3.33	3692	1.94	2155
Partitions								
(none)								
Windows								
3B0: 2 pane, TIM frame; clear; 1.5 ft overhang (5 ft window ht, 2 ft sep.)	n	50	0.609	0.0	22.5	1136	22.2	1119
	e	60	0.609	0.0	22.5	1352	71.2	4272
	s	40	0.609	0.0	22.5	901	22.2	888
	w	55	0.609	0.0	22.5	1239	71.2	3916
	all	205	0.609	0.0	22.5	4629	49.6	10195
Doors								
(none)								
Ceilings								
16G0: Ceiling under unconditioned room, R-30 insulation		1260	0.033	30.0	1.22	1538	1.39	1746
Floors								
22A0: Slab floor on grade, no edge insulation		136	0.810	0.0	30.0	4076	0.00	0
20A0: Floor over open crawl space/garage, hardwood, no insul		60	0.312	0.0	11.5	693	5.02	301

Bold/italic values have been manually overridden

Right-J Worksheet
Entire House
CRYSTAL AIR & WATER

Job:
Date:
By:

1611-B NW 55 PLACE, GAINESVILLE, FL 32653 Phone: 352-333-0460 Fax: 352-378-7867 Email: krsmith777@aol.com Web: www.crystalairwater.com

MANUAL J: 7th Ed.

1	Name of room					Entire House			bed			utility			mst bath			
2	Length of exposed wall					146.0 ft			25.0 ft			10.0 ft			10.0 ft			
3	Room dimensions								1.0 x 110.0 ft			7.0 x 10.0 ft			10.0 x 6.0 ft			
4	Ceilings	Condit. Option				9.0 ft		d	9.0 ft	heat/cool		9.0 ft	heat/cool		9.0 ft	heat/cool		
	TYPE OF EXPOSURE		CST NO.	HTM Htg	HTM Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg		
5	Gross Exposed walls and partitions	a	12C0	3.3	1.9	1314	****	****	225	****	****	90	****	****	90	****	****		
		b		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****		
		c		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****		
		d		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****		
		e		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****		
		f		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****		
6	Windows and glass doors Heating	a	3B0	22.5	**	205	4629	****	40	911	****	15	338	****	10	225	****		
		b		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****		
		c		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****		
		d		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****		
		e		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****		
		f		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****		
7	Windows and glass doors Cooling	North			22.2	90	****	2007	20	****	453	0	****	0	10	****	222		
		NE/NW			0.0	0	****	0	0	****	0	0	****	0	0	****	0		
		E/W			71.2	115	****	8188	20	****	1424	15	****	1068	0	****	0		
		SE/SW			0.0	0	****	0	0	****	0	0	****	0	0	****	0		
		South			0.0	0	****	0	0	****	0	0	****	0	0	****	0		
		Horz			0.0	0	****	0	0	****	0	0	****	0	0	****	0		
8	Other doors	a		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
		b		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
9	Net exposed walls and partitions	a	12C0	3.3	1.9	1109	3692	2155	185	615	359	75	250	146	80	266	156		
		b		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
		d		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
		e		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
		f		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
10	Ceilings	a	16G0	1.2	1.4	1260	1538	1746	110	134	152	70	85	97	60	73	83		
		b		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
		d		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
		e		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
		f		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
11	Floors (Note: room perimeter is displ. for slab floors)	a	22A0	30.0	0.0	136	4076	0	25	749	0	10	300	0	0	0	0		
		b	20A0	11.5	5.0	60	693	301	0	0	0	0	0	0	60	693	301		
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
		d		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
		e		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
		f		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0		
12	Infiltration Ventilation	a		37.4	9.1	205	7692 0	1871 0	40	1513 0	368 0	15	562 0	137 0	10	374 0	91 0		
13	Subtotal loss=6+8..+11+12					****	22320	****	****	3922	****	****	1535	****	****	1632	****		
	Less external heating					****	0	****	****	0	****	****	0	****	****	0	****		
	Less transfer					****	0	****	****	0	****	****	0	****	****	0	****		
	Heating redistribution					****	-29	****	****	60	****	****	60	****	****	0	****		
14	Duct loss					5%	1115	****	5%	199	****	5%	80	****	5%	82	****		
15	Total loss = 13+14					****	23405	****	****	4181	****	****	1674	****	****	1714	****		
16	Int. gains: People @ 300					10	****	3000	2	****	600	0	****	0	0	****	0		
	Appl. @ 1200					5	****	5400	0	****	0	2	****	2400	1	****	600		
17	Subtot RSH gain=7+8..+12+16					****	****	24669	****	****	3357	****	****	3847	****	****	1453		
	Less external cooling					****	****	0	****	****	0	****	****	0	****	****	0		
	Less transfer					****	****	0	****	****	0	****	****	0	****	****	0		
	Cooling redistribution					****	****	-12	****	****	24	****	****	24	****	****	0		
18	Duct gain					10%	****	2466	10%	****	338	10%	****	387	10%	****	145		
19	Total RSH gain=(17+18)*PLF					1.00	****	27122	1.00	****	3719	1.00	****	4258	1.00	****	1598		
20	Air required (cfm)						1298	1298		232	178		93	204		95	76		

Printout certified by ACCA to meet all requirements of Manual J 7th Ed.

Right-J Worksheet
Entire House
CRYSTAL AIR & WATER

Job:
Date:
By:

1611-B NW 55 PLACE, GAINESVILLE, FL 32653 Phone: 352-333-0460 Fax: 352-378-7867 Email: krsmith777@aol.com Web: www.crystalairwater.com

MANUAL J: 7th Ed.

					bath			storage			office			kitchen/dining/l		
1	Name of room					0.0 ft			0.0 ft			10.0 ft			61.0 ft	
2	Length of exposed wall				10.0 x	5.0 ft		10.0 x	11.0 ft		11.0 x	10.0 ft		1.0 x	549.0 ft	
3	Room dimensions				9.0 ft	heat/cool		9.0 ft	heat/cool		9.0 ft	heat/cool		9.0 ft	heat/cool	
4	Ceilings	Condit. Option														
	TYPE OF EXPOSURE		CST NO.	HTM Htg	HTM Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg
5	Gross Exposed walls and partitions	a	12C0	3.3	1.9	0	****	****	0	****	****	90	****	****	549	****	****
		b		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****
		c		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****
		d		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****
		e		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****
		f		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****
6	Windows and glass doors Heating	a	3B0	22.5	**	0	0	****	0	0	****	20	451	****	80	1803	****
		b		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****
		c		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****
		d		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****
		e		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****
		f		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****
7	Windows and glass doors Cooling	North			22.2	0	****	0	0	****	0	0	****	0	40	****	888
		NE/NW			0.0	0	****	0	0	****	0	0	****	0	0	****	0
		E/W			71.2	0	****	0	0	****	0	20	****	1424	40	****	2848
		SE/SW			0.0	0	****	0	0	****	0	0	****	0	0	****	0
		South			0.0	0	****	0	0	****	0	0	****	0	0	****	0
		Horz			0.0	0	****	0	0	****	0	0	****	0	0	****	0
8	Other doors	a		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		b		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
9	Net exposed walls and partitions	a	12C0	3.3	1.9	0	0	0	0	0	0	70	233	136	469	1562	912
		b		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		d		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		e		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		f		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
10	Ceilings	a	16G0	1.2	1.4	50	61	69	110	134	152	110	134	152	549	670	761
		b		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		d		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		e		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		f		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
11	Floors (Note: room perimeter is displ. for slab floors)	a	22A0	30.0	0.0	0	0	0	0	0	0	10	300	0	61	1828	0
		b	20A0	11.5	5.0	0	0	0	0	0	0	0	0	0	0	0	0
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		d		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		e		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		f		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
12	Infiltration Ventilation	a		37.4	9.1	0	0 0	0 0	0	0 0	0 0	20	749 0	182 0	80	2996 0	729 0
13	Subtotal loss=6+8..+11+12					****	61	****	****	134	****	****	1867	****	****	8859	****
	Less external heating					****	0	****	****	0	****	****	0	****	****	0	****
	Less transfer					****	0	****	****	0	****	****	0	****	****	0	****
	Heating redistribution					****	0	****	****	0	****	****	67	****	****	0	****
14	Duct loss					5%	3	****	5%	7	****	5%	97	****	5%	443	****
15	Total loss = 13+14					****	64	****	****	141	****	****	2031	****	****	9302	****
16	Int. gains: People @ 300					1	****	300	0	****	0	0	****	0	5	****	1500
	Appl. @ 1200					0	****	0	0	****	0	0	****	0	2	****	2400
17	Subtot RSH gain=7+8..+12+16					****	****	369	****	****	152	****	****	1895	****	****	10037
	Less external cooling					****	****	0	****	****	0	****	****	0	****	****	0
	Less transfer					****	****	0	****	****	0	****	****	0	****	****	0
	Cooling redistribution					****	****	0	****	****	0	****	****	30	****	****	0
18	Duct gain					10%	****	37	10%	****	15	10%	****	192	10%	****	1004
19	Total RSH gain=(17+18)*PLF					1.00	****	406	1.00	****	168	1.00	****	2117	1.00	****	11041
20	Air required (cfm)						4	19		8	8		113	101		516	528

Printout certified by ACCA to meet all requirements of Manual J 7th Ed.

Right-J Worksheet
Entire House
CRYSTAL AIR & WATER

Job:
Date:
By:

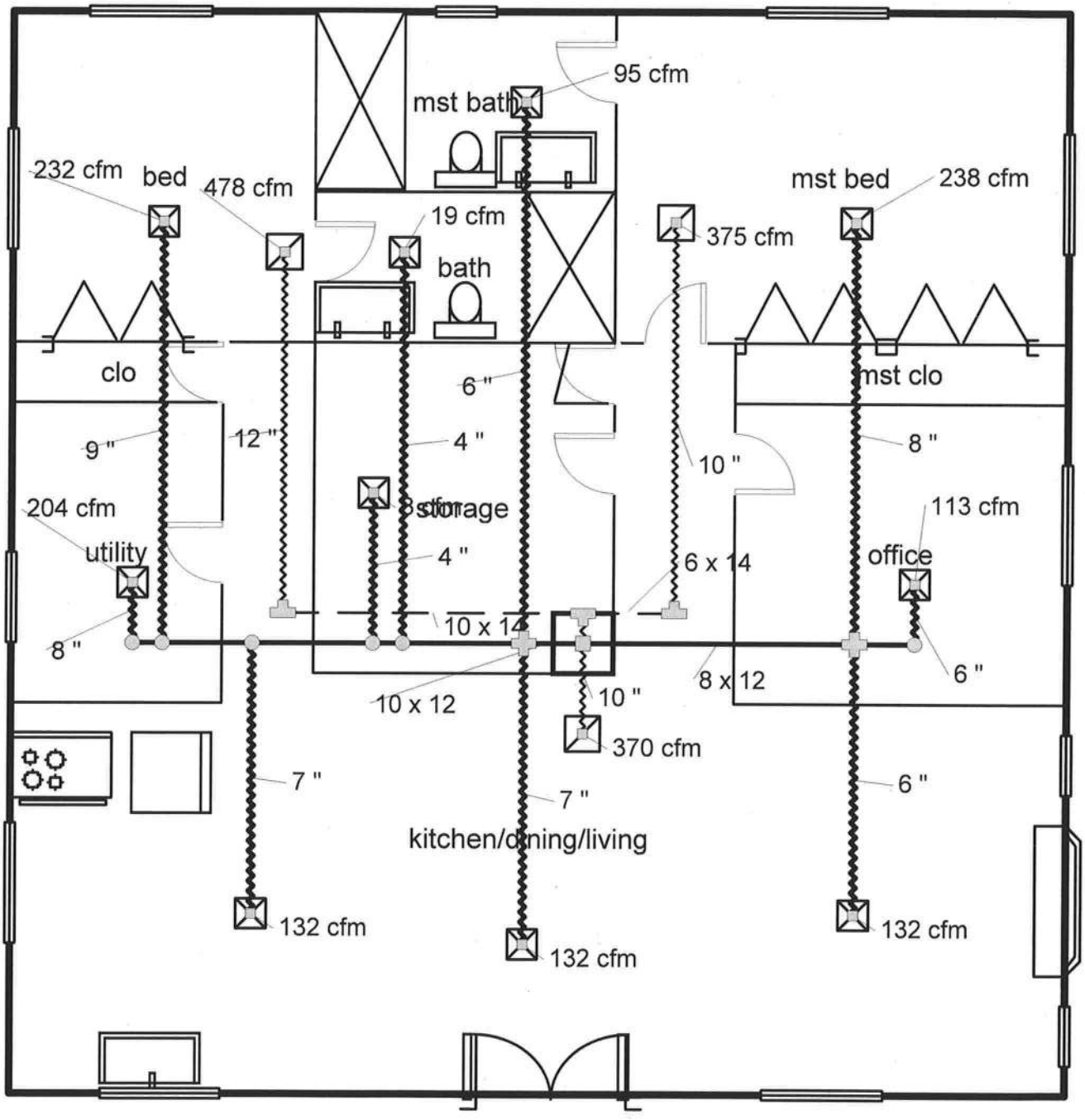
1611-B NW 55 PLACE, GAINESVILLE, FL 32653 Phone: 352-333-0460 Fax: 352-378-7867 Email: krsmith777@aol.com Web: www.crystalairwater.com

MANUAL J: 7th Ed.

						mst clo 2.0 ft 11.0 x 2.0 ft 9.0 ft heat/cool			mst bed 26.0 ft 15.0 x 11.0 ft 9.0 ft heat/cool			clo 2.0 ft 7.0 x 2.0 ft 9.0 ft heat/cool					
1	Name of room																
2	Length of exposed wall																
3	Room dimensions																
4	Ceilings	Condit. Option															
	TYPE OF EXPOSURE		CST NO.	HTM Htg	HTM Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area	Htg	Clg
5	Gross Exposed walls and partitions	a	12C0	3.3	1.9	18	****	****	234	****	****	18	****	****		****	****
		b		0.0	0.0	0	****	****	0	****	****	0	****	****		****	****
		c		0.0	0.0	0	****	****	0	****	****	0	****	****		****	****
		d		0.0	0.0	0	****	****	0	****	****	0	****	****		****	****
		e		0.0	0.0	0	****	****	0	****	****	0	****	****		****	****
		f		0.0	0.0	0	****	****	0	****	****	0	****	****		****	****
6	Windows and glass doors Heating	a	3B0	22.5	**	0	0	****	40	901	****	0	0	****			****
		b		0.0	**	0	0	****	0	0	****	0	0	****			****
		c		0.0	**	0	0	****	0	0	****	0	0	****			****
		d		0.0	**	0	0	****	0	0	****	0	0	****			****
		e		0.0	**	0	0	****	0	0	****	0	0	****			****
		f		0.0	**	0	0	****	0	0	****	0	0	****			****
7	Windows and glass doors Cooling		North		22.2	0	****	0	20	****	444	0	****	0		****	
			NE/NW		0.0	0	****	0	0	****	0	0	****	0		****	
			E/W		71.2	0	****	0	20	****	1424	0	****	0		****	
			SE/SW		0.0	0	****	0	0	****	0	0	****	0		****	
			South		0.0	0	****	0	0	****	0	0	****	0		****	
			Horz		0.0	0	****	0	0	****	0	0	****	0		****	
8	Other doors	a		0.0	0.0	0	0	0	0	0	0	0	0	0			
		b		0.0	0.0	0	0	0	0	0	0	0	0	0			
		c		0.0	0.0	0	0	0	0	0	0	0	0	0			
9	Net exposed walls and partitions	a	12C0	3.3	1.9	18	60	35	194	646	377	18	60	35			
		b		0.0	0.0	0	0	0	0	0	0	0	0	0			
		c		0.0	0.0	0	0	0	0	0	0	0	0	0			
		d		0.0	0.0	0	0	0	0	0	0	0	0	0			
		e		0.0	0.0	0	0	0	0	0	0	0	0	0			
		f		0.0	0.0	0	0	0	0	0	0	0	0	0			
10	Ceilings	a	16G0	1.2	1.4	22	27	30	165	201	229	14	17	19			
		b		0.0	0.0	0	0	0	0	0	0	0	0	0			
		c		0.0	0.0	0	0	0	0	0	0	0	0	0			
		d		0.0	0.0	0	0	0	0	0	0	0	0	0			
		e		0.0	0.0	0	0	0	0	0	0	0	0	0			
		f		0.0	0.0	0	0	0	0	0	0	0	0	0			
11	Floors (Note: room perimeter is displ. for slab floors)	a	22A0	30.0	0.0	2	60	0	26	779	0	2	60	0			
		b	20A0	11.5	5.0	0	0	0	0	0	0	0	0	0			
		c		0.0	0.0	0	0	0	0	0	0	0	0	0			
		d		0.0	0.0	0	0	0	0	0	0	0	0	0			
		e		0.0	0.0	0	0	0	0	0	0	0	0	0			
		f		0.0	0.0	0	0	0	0	0	0	0	0	0			
12	Infiltration Ventilation	a		37.4	9.1	0	0 0	0 0	40	1498 0	364 0	0	0 0	0 0			
13	Subtotal loss=6+8..+11+12					****	147	****	****	4026	****	****	137	****	****		****
	Less external heating					****	0	****	****	0	****	****	0	****	****		****
	Less transfer					****	0	****	****	0	****	****	0	****	****		****
	Heating redistribution					****	-147	****	****	67	****	****	-137	****	****		****
14	Duct loss					5%	0	****	5%	205	****	5%	0	****	%		****
15	Total loss = 13+14					****	0	****	****	4298	****	****	0	****	****		****
16	Int. gains: People @ 300					0	****	0	2	****	600	0	****	0		****	
	Appl. @ 1200					0	****	0	0	****	0	0	****	0		****	
17	Subtot RSH gain=7+8..+12+16					****	****	65	****	****	3438	****	****	54	****	****	
	Less external cooling					****	****	0	****	****	0	****	****	0	****	****	
	Less transfer					****	****	0	****	****	0	****	****	0	****	****	
	Cooling redistribution					****	****	-65	****	****	30	****	****	-54	****	****	
18	Duct gain					10%	****	0	10%	****	347	10%	****	0	%	****	
19	Total RSH gain=(17+18)*PLF					1.00	****	0	1.00	****	3815	1.00	****	0		****	
20	Air required (cfm)						0	0		238	183		0	0			

Printout certified by ACCA to meet all requirements of Manual J 7th Ed.

Level 2



Job #:
Performed for:
Ruiz Residence
Builder- R Kelly Const.
~~High Springs~~, FL
FT WHITE

CRYSTAL AIR & WATER
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GAINESVILLE, FL 32653
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Scale: 1 : 64
Page 1
Right-Suite Residential
6.0.53 RSR32438
2006-Aug-25 09:53:25
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Level 1

Job #: **Performed for:** Ruiz Residence Builder- R Kelly Const. ~~High Springs,~~ FL FT WHITE	**CRYSTAL AIR & WATER** 1611-B NW 55 PLACE GAINESVILLE, FL 32653 Phone: 352-333-0460 Fax: 352-378-7867 www.crystalairwater.com krsmith777@aol.com	Scale: 1 : 64 Page 2 Right-Suite Residential 6.0.53 RSR32438 2006-Aug-25 09:53:25 \\crystal-server\Data\Wrightsoft\G...

PRODUCT APPROVAL

PRODUCT APPROVAL SPECIFICATION SHEET

As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and approval numbers on the building components listed below if they will be utilized on the construction project for which you are applying for a building permit. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. Statewide approved products are listed online @ www.floridabuilding.org

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)
1. EXTERIOR DOORS			
A. SWINGING	MASONITE	STEEL DOOR UNIT	FL4904
B. SLIDING			
C. SECTIONAL/ROLL UP			
D. OTHER			
2. WINDOWS			
A. SINGLE/DOUBLE HUNG	BETTER BILT (By MI WINDOWS + DOORS	ALUMINUM WINDOWS	5438.27
B. HORIZONTAL SLIDER			
C. CASEMENT			
D. FIXED			
E. MULLION			
F. SKYLIGHTS			
G. OTHER			
3. PANEL WALL			
A. SIDING			
B. SOFFITS			
C. STOREFRONTS			
D. GLASS BLOCK			
E. OTHER			
4. ROOFING PRODUCTS			
A. ASPHALT SHINGLES	CERTAINTEED	LANDMARK 30	FL 250.6
B. NON-STRUCT METAL			
C. ROOFING TILES			
D. SINGLE PLY ROOF			
E. OTHER			
5. STRUCT COMPONENTS			
A. WOOD CONNECTORS	SIMPSON		FL474-R1
B. WOOD ANCHORS	SIMPSON		FL474-R1
C. TRUSS PLATES			
D. INSULATION FORMS			
E. LINTELS			
F. OTHERS			
6. NEW EXTERIOR ENVELOPE PRODUCTS		30# FELT OR TYVEX	
A.			

The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector on the jobsite; 1) copy of the product approval, 2) performance characteristics which the product was tested and certified to comply with, 3) copy of the applicable manufacturers installation requirements. Further, I understand these products may have to be removed if approval cannot be demonstrated during inspection.

APPLICANT SIGNATURE

1-8-07
DATE

R-1305 01-04

CERTAINTEED LANDMARK 50

SHINGLES

PRODUCT APPROVAL

Product Approval

USER: Public User

Search Criteria				Re
Code Version	2004	FL#	ALL	
Application Type	ALL	Product Manufacturer	CertainTeed Corporat	
Category	Roofing	Subcategory	Asphalt Shingles	
Application Status	ALL	Compliance Method	ALL	

Search Results - Applications

FL#	Type	Manufacturer	Validated By
FL250-R1 History	Revision	CertainTeed Corporation-Roofing **Category:** Roofing **Subcategory:** Asphalt Shingles	
FL3328-R1 History	Revision	CertainTeed Corporation-Roofing **Category:** Roofing **Subcategory:** Asphalt Shingles	
FL5444	New	CertainTeed Corporation-Roofing **Category:** Roofing **Subcategory:** Asphalt Shingles	John W Knezevich (954) 522-3690

DCA Administration

Department of Community Affairs
Florida Building Code Online
Codes and Standards
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100
(850) 487-1824, Suncom 277-1824, Fax (850) 414-8436

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Product Approval Accepts:

VeriSign Secured VERIFY

Bobby APPROVED

Product Approval

USER: Public User

FL #	FL250-R1
Application Type	Revision
Code Version	2004
Application Status	Approved
Comments	
Archived	☐
Product Manufacturer	CertainTeed Corporation-Roofing
Address/Phone/Email	PO Box 1100 1400 Union Meeting Rd Blue Bell, PA 19422 (610) 341-6678 allan.r.snyder@saint-gobain.com
Authorized Signature	Richard Snyder allan.r.snyder@saint-gobain.com
Technical Representative Address/Phone/Email	
Quality Assurance Representative Address/Phone/Email	
Category	Roofing
Subcategory	Asphalt Shingles
Compliance Method	Certification Mark or Listing
Certification Agency	Miami-Dade BCCO - CER

Referenced Standard and Year (of Standard)	**Standard**
	ASTM D3462
	ASTM E108
	TAS 100
	TAS 107
	TAS 110
	UL 790

Equivalence of Product Standards Certified By	
Product Approval Method	Method 1 Option A
Date Submitted	09/08/2005
Date Validated	09/08/2005
Date Pending FBC Approval	09/27/2005
Date Approved	10/11/2005

Summary of Products

FL #	Model, Number or Name	Description
250.1	Carriage House Shangle	Fiberglass laminated shin
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Refer to current Miami-Dade NOA.		**Certification Agency Ce** **Installation Instruction** PTID_250_R1_I_010503(Series.pdf PTID_250_R1_I_010516(PTID_250_R1_I_010612(PTID_250_R1_I_020110(Series.pdf PTID_250_R1_I_021216(CT20_XT25_XT30_Patriot PTID_250_R1_I_021219(Series.pdf PTID_250_R1_I_040616(Grand Manor.pdf Verified By:
250.2	Classic Horizon Shangle	Fiberglass 3 tab overlay s
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Refer to current Miami-Dade NOA.		**Certification Agency Ce** **Installation Instruction** Verified By:

250.3	CT 20 (and AR)	Fiberglass 3 tab shingle
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Refer to current Miami-Dade NOA.		**Certification Agency Ce** **Installation Instruction** Verified By:
250.4	Grand Manor Shangle	Fiberglass laminated shin
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Refer to current Miami-Dade NOA.		**Certification Agency Ce** **Installation Instruction** Verified By:
250.5	Hatteras	Fiberglass 4 tab shingle
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Refer to current Miami-Dade NOA.		**Certification Agency Ce** **Installation Instruction** Verified By:
250.6	Landmark 30 (and AR)	Fiberglass laminated shin
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Refer to current Miami-Dade NOA.		**Certification Agency Ce** **Installation Instruction** Verified By:
250.7	Landmark 40 (and AR)	Fiberglass laminate shingl
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Refer to current Miami-Dade NOA.		**Certification Agency Ce** **Installation Instruction** Verified By:
250.8	Landmark 50 (and AR)	Fiberglass laminated shin
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Refer to current Miami-Dade NOA.		**Certification Agency Ce** **Installation Instruction** Verified By:
250.9	Landmark TL	Fiberglass laminated shin
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:**		**Certification Agency Ce** **Installation Instruction** Verified By:

MIAMI-DADE

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

CertainTeed Corporation
1400 Union Meeting Road
Blue Bell, PA 19422

SCOPE:
This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Landmark 30 (and-AR) (and WideTrack QB), Landmark 40 (and-AR) (and WideTrack QB) and Landmark 50 (and-AR) (and WideTrack QB)

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of pages 1 through 4.
The submitted documentation was reviewed by Frank Zuloaga, RRC

ROOFING ASSEMBLY APPROVAL

Category:	Roofing
Sub-Category:	07310 Asphalt Shingles
Materials	Dimensional
Deck Type:	Wood

1. SCOPE

This revises **CertainTeed Landmark 30 and AR (and WideTrack QB), CertainTeed Landmark 40 and AR (and WideTrack QB), CertainTeed Landmark 50 and AR (and WideTrack QB)** Shingles as manufactured by **CertainTeed Corporation** described in Section 2 of this Notice of Acceptance.

2. PRODUCT DESCRIPTION

Product	Dimensions	Test Specifications	Product Description
Certainteed Landmark 30 and AR (and WideTrack QB)	13¼" x 38 ¾"	PA 110	A heavy weight, 247lb/sq, dimensional asphalt shingle.
Certainteed Landmark 40 and AR (and WideTrack QB)	13¼" x 38 ¾"	PA 110	A heavy weight, 264lb/sq, dimensional asphalt shingle.
Certainteed Landmark 50 and AR (and WideTrack QB)	13¼" x 38 ¾"	PA 110	A heavy weight, 296lb/sq, dimensional asphalt shingle.
Accessory Shingles	various	proprietary	Accessory shingles for hip, ridge and starter strip applications.

3. EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Test Name/Report	Date
Underwriters Laboratories, Inc.	R684	UL 790	04/02/01
PRI Asphalt Technologies, Inc.	PCTC-01-02-01 CTC-006-02-01	PA 100	01/12/01 11/12/02
Underwriters Laboratories, Inc.	94NK9632 02NK42448	Wind uplift resistance PA 107	11/30/00 11/08/02

4. LIMITATIONS

- **4.1** Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
- **4.2** Shall not be installed on roof mean heights in excess of 33 ft.

5. INSTALLATION

- **5.1** Shingles shall be installed in compliance with Roofing Application Standard RAS 115.
- **5.2** Flashing shall be in accordance with Roofing Application Standard RAS 115
- **5.3** The manufacturer shall provide clearly written application instructions.
- **5.4** Exposure and course layout shall be in compliance with Detail 'A', attached.
- **5.5** Nailing shall be in compliance with Detail 'B', attached.

6. LABELING

6.1 Shingles shall be labeled with the Miami-Dade Logo or the wording "Miami-Dade County Product Control Approved".

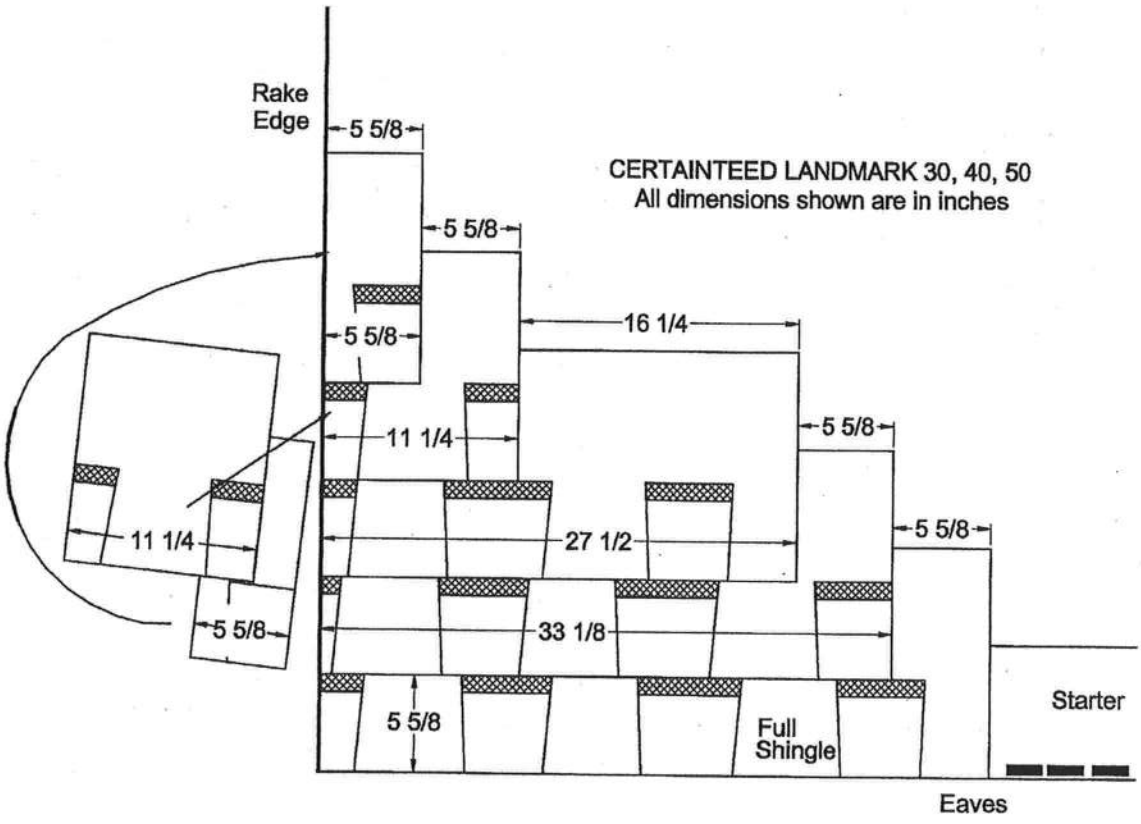
7. BUILDING PERMIT REQUIREMENTS

7.1 Application for building permit shall be accompanied by copies of the following:

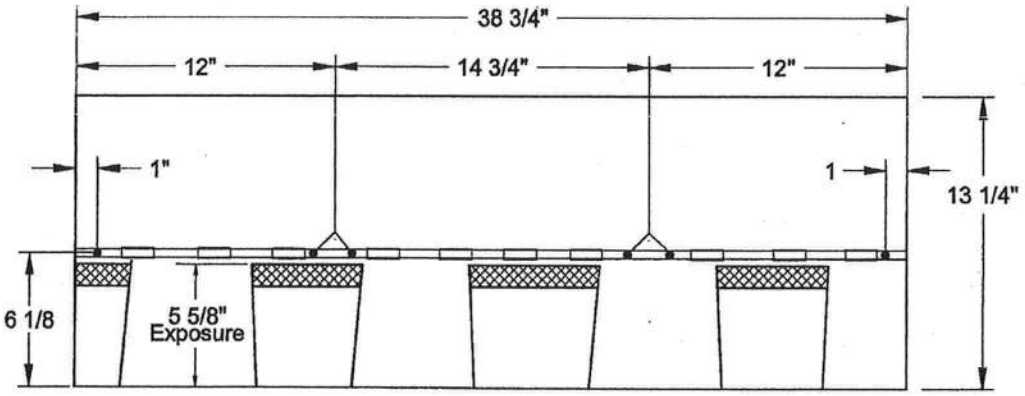
7.1.1 This Notice of Acceptance.

7.1.2 Any other documents required by the Building Official or the applicable code in order to properly evaluate the installation of this system.

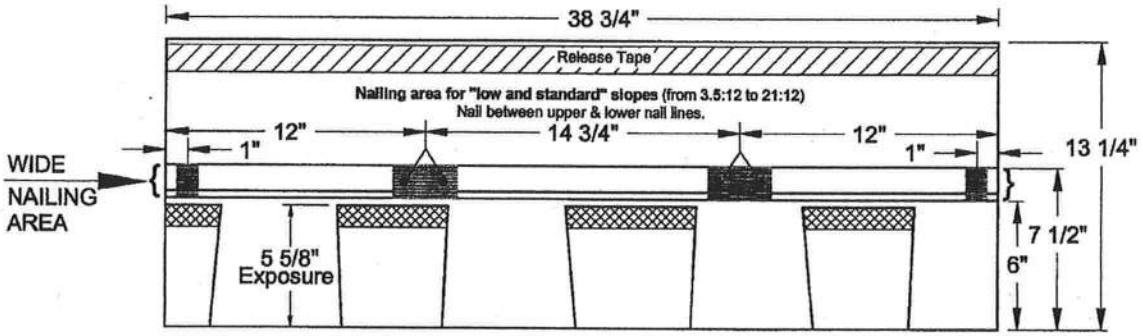
DETAIL A



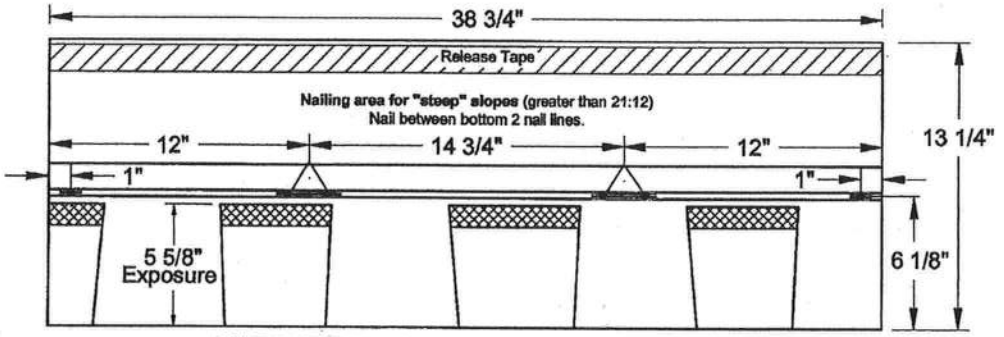
DETAIL B



LANDMARK 30, 40, 50 (AND AR)



LANDMARK 30, 40, 50 (AND AR) - WIDETRACK QB
(Low and Standard Slope)



LANDMARK 30, 40, 50 (AND AR) - WIDETRACK QB
(Steep Slope)

END OF THIS ACCEPTANCE

EXIT DOORS

FLORIDA DEPARTMENT OF Community Affairs

my

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- COMMUNITY PLANNING
- HOUSING & COMMUNITY DEVELOPMENT
- EMERGENCY MANAGEMENT
- OFFICE OF THE SECRETARY

Product Approval

USER: Public User

Product Approval Menu > Product or Application Search > **Application List**

Search Criteria

Code Version	2004	FL#	ALL
Application Type	ALL	Product Manufacturer	Masonite Interr
Category	Exterior Doors	Subcategory	Swinging Exter
Application Status	ALL	Compliance Method	ALL

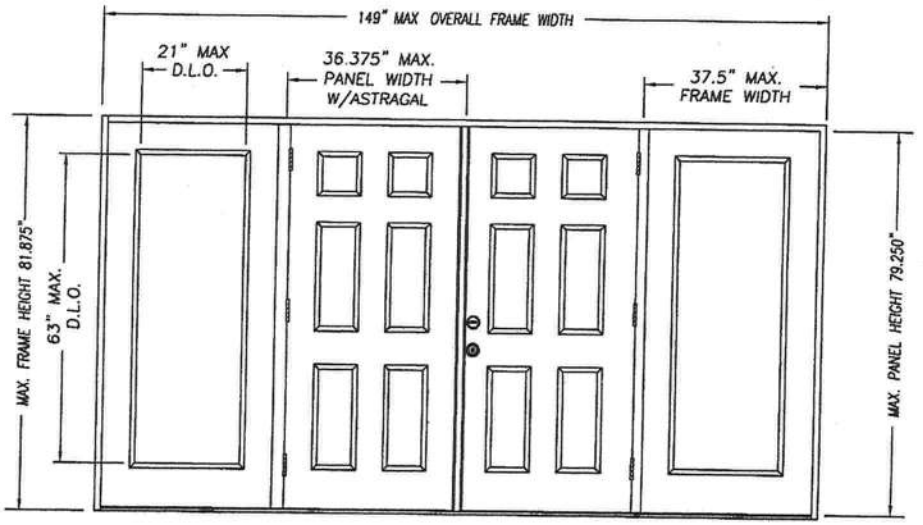
Search Results - Applications

FL#	Type	Manufacturer	Valid
FL4242-R1 History	Revision	Masonite International **Category:** Exterior Doors **Subcategory:** Swinging Exterior Door Assemblies	
FL4334-R1 History	Revision	Masonite International **Category:** Exterior Doors **Subcategory:** Swinging Exterior Door Assemblies	
FL4668-R1 History	Revision	Masonite International **Category:** Exterior Doors **Subcategory:** Swinging Exterior Door Assemblies	
FL4904	New	Masonite International **Category:** Exterior Doors **Subcategory:** Swinging Exterior Door Assemblies	
FL4940	New	Masonite International **Category:** Exterior Doors **Subcategory:** Swinging Exterior Door Assemblies	
FL5114	New	Masonite International **Category:** Exterior Doors **Subcategory:** Swinging Exterior Door Assemblies	
FL5465	New	Masonite International **Category:** Exterior Doors **Subcategory:** Swinging Exterior Door Assemblies	
FL5507	New	Masonite International **Category:** Exterior Doors **Subcategory:** Swinging Exterior Door Assemblies	
FL5508	New	Masonite International **Category:** Exterior Doors **Subcategory:** Swinging Exterior Door Assemblies	

4904 OPAQUE

Masonite

SIDE-HINGED WOOD-EDGE STEEL DOOR UNIT
6'-8" DOUBLE DOOR WITH / WITHOUT SIDELITES



DOUBLE INSWING UNIT W/SIDELITES

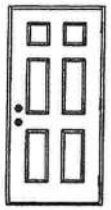
GENERAL NOTES

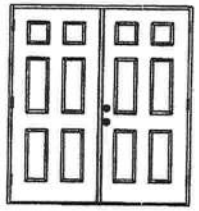
1. EVALUATED FOR USE IN LOCATIONS ADHERING TO THE FLORIDA BUILDING CODE AND WHERE PRESSURE REQUIREMENTS AS DETERMINED BY ASCE 7, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, DOES NOT EXCEED THE DESIGN PRESSURES LISTED
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3. POLYURETHANE CORE FLAME SPREAD INDEX OF 50 AND SMOKE DEVELOPED INDEX OF 60 PER ASTM E84
4. PLASTICS TESTING OF LITE FRAME MATERIAL:

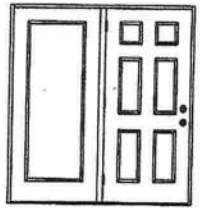
TEST DESCRIPTION	DESIGNATION	RESULT
SELF IGNITION TEMP	ASTM D1929	680 °F > 650 °F
RATE OF BURNING	ASTM D635	1.10 IN/MIN
SMOKE DENSITY	ASTM D2843	69.6%
TENSILE STRENGTH*	ASTM D638	-7.48% DIFF

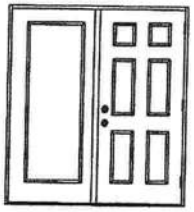
* COMPARATIVE TENSILE STRENGTH AFTER WEATHERING 4500 HOURS XENON ARC METHOD 1

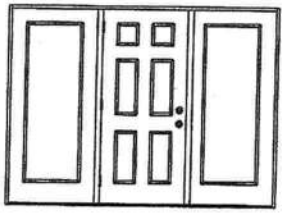
Addendum to NAMI
Certification No.: NT006110
Reviewed By:
Date Reviewed: 8/10/05


SINGLE DOOR UNIT


DOUBLE DOOR UNIT


SINGLE DOOR UNIT WITH SIDELITE


SINGLE DOOR UNIT WITH SIDELITE


SINGLE DOOR UNIT W/SIDELITES

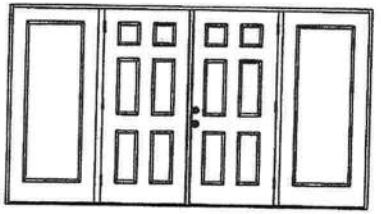

DOUBLE DOOR UNIT W/SIDELITES

TABLE OF CONTENTS

SHEET #	DESCRIPTION
1	TYPICAL ELEVATIONS & GENERAL NOTES
2	ANCHORING LOCATIONS & DETAILS
3	ANCHORING LOCATIONS & DETAILS

CONFIG	MAX WIDTH	DESIGN PRESSURE RATING		WHERE WATER INFILTRATION PERFORMANCE IS REQUIRED TO BE 15% OF DESIGN PRESSURE	
		INSWING	OUTSWING	INSWING	OUTSWING
X	37.5"	+76.0 / -76.0	+76.0 / -76.0	+19.0 / -19.0	+55.0 / -55.0
XX	74"	+55.0 / -55.0	+55.0 / -55.0	+19.0 / -19.0	+55.0 / -55.0
OX or XO	75"	+55.0 / -55.0	+55.0 / -55.0	+19.0 / -19.0	+55.0 / -55.0
OXO	112.5"	+55.0 / -55.0	+55.0 / -55.0	+19.0 / -19.0	+55.0 / -55.0
OXXO	149"	+55.0 / -55.0	+55.0 / -55.0	+19.0 / -19.0	+55.0 / -55.0

MASONITE INTERNATIONAL CORP.
7300 REAMES RD.
CHARLOTTE, NC 28216

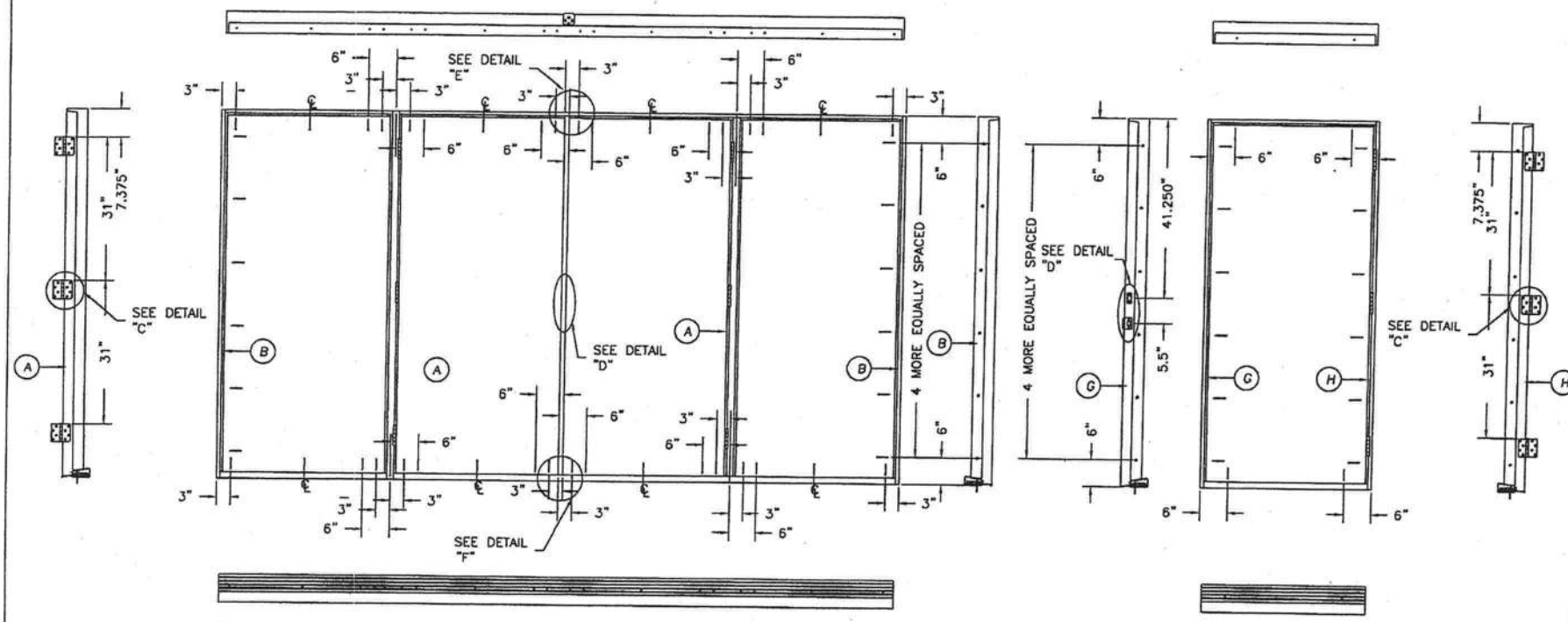
PRODUCT: "EXTERIOR DOOR PRODUCT" DOUBLE 6'8" OPAQUE WOOD-EDGE STEEL DOOR

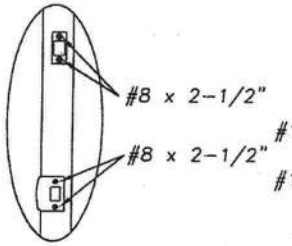
PART OR ASSEMBLY: TYPICAL ELEVATIONS & GENERAL NOTES

REVISIONS

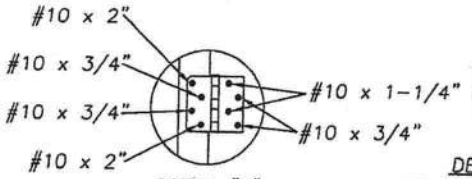
NO.	DATE	BY

DATE: 7/11/05
SCALE: N.T.S.
DWG. BY: SWS
CHK. BY:
DRAWING NO.: DWG-MA-FL0128-05
SHEET 1 OF 3

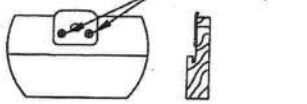




DETAIL "D"

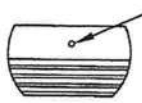


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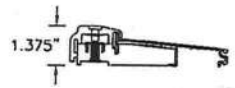
DETAIL "E" ASTRAGAL

ATTACH ASTRAGAL RETAINER BOLT STRIKE PLATE TO FRAME AS SHOWN.

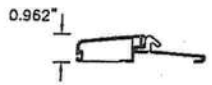


ASTRAGAL RETAINER BOLT HOLE MUST BE DRILLED THROUGH THE THRESHOLD & INTO THE STRUCTURE DEEP ENOUGH FOR A 1.375" THROW

DETAIL "F" ASTRAGAL

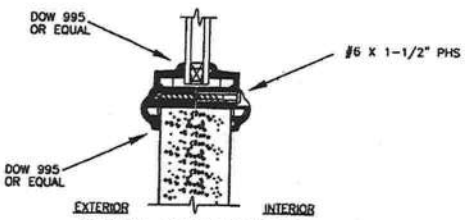


INSWING THRESHOLD



OUTSWING THRESHOLD

Addendum to NAMI
Certification No.: NT006110
Reviewed By:
Date Reviewed: 8/10/05



TYPICAL GLAZING DETAIL

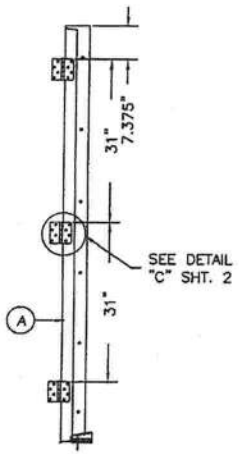
MASONITE INTERNATIONAL CORP.
7300 REAMES RD.
CHARLOTTE, NC 28216

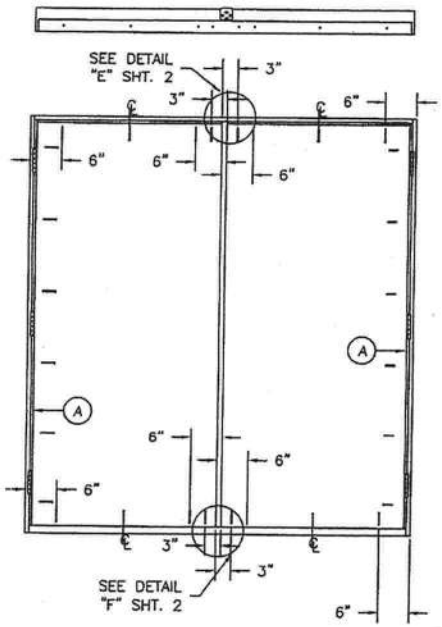
PRODUCT: "EXTERIOR DOOR PRODUCT" DOUBLE 6'-8" OPAQUE WOOD-EDGE STEEL DOOR

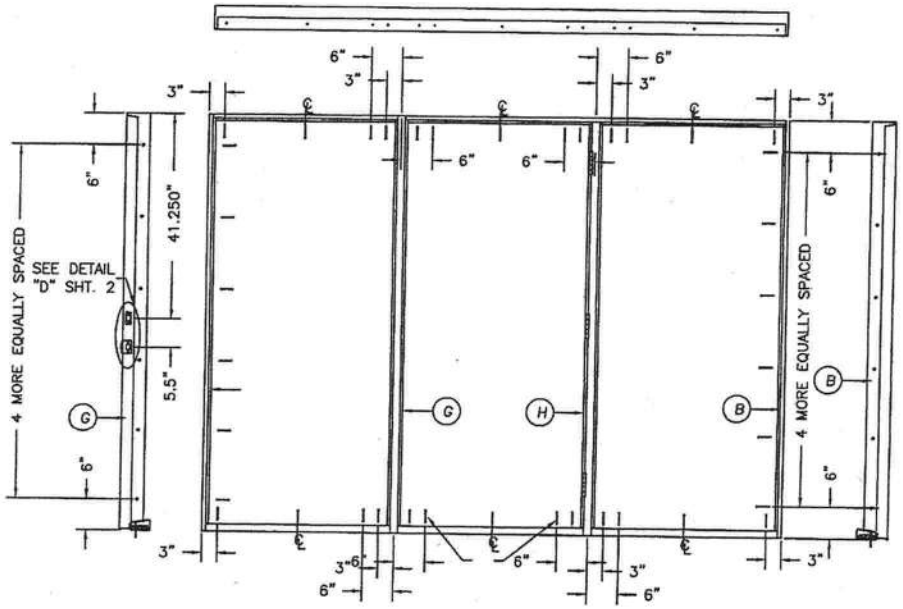
PART OR ASSEMBLY: ANCHORING LOCATIONS & DETAILS

NO.	DATE	REVISIONS	BY

DATE: 7/11/05
SCALE: N.T.S.
DWG. BY: SWS
CHK. BY:
DRAWING NO.: DWG-MA-FL0128-05
SHEET 2 OF 3

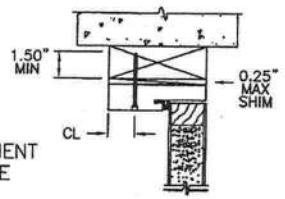






ATTACHMENT DETAIL

1. ANCHOR ANALYSIS FOR LOADING CONDITIONS PREPARED, SIGNED AND SEALED BY HAROLD E. RUPP, PE (FLORIDA #15935) WITH THE LOWEST (LEAST) FASTENER RATING FROM THE DIFFERENT FASTENERS BEING CONSIDERED FOR USE. JAMB, HEAD, AND THRESHOLD FASTENERS ANALYZED FOR THIS UNIT INCLUDE #10 WOOD SCREWS OR 3/16" TAPCONS. A PHYSICAL SHIM MUST BE PLACED IN SHIM SPACE AT EACH ANCHOR LOCATION.
2. THE WOOD SCREW SINGLE SHEAR DESIGN VALUES COME FROM ANSI/AF&PA NDA FOR SOUTHERN PINE LUMBER AND ACHEIVEMENT OF 1-1/2" MINIMUM EMBEDMENT. THE TAPCON MUST ACHIEVE MINIMUM EMBEDMENT OF 1-1/4".
3. WOOD BUCKS BY OTHERS MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO STRUCTURE.
4. MINIMUM DESIGN VALUE STRENGTH OF ANCHORS 171 LBS.



TYPICAL
ANCHOR INSTALLATION

HARDWARE SCHEDULE

1.	KWIKSET OR SCHLEGE ANSI/BHMA GRADE 3 OR BETTER CYLINDRICAL AND DEADLOCK HARDWARE TO BE INSTALLED AT 5-1/2" CENTERLINE.
2.	4" X 4" FULL MORTISE BUTT HINGES

Addendum to NAMI
Certification No.: NI006110
Reviewed By:
Date Reviewed: 8/16/05

MASONITE INTERNATIONAL CORP.
7300 REAMES RD.
CHARLOTTE, NC 28216

PRODUCT: "EXTERIOR DOOR PRODUCT" 6'-8" WOOD-EDGE STEEL OPAQUE DOUBLE DOOR UNIT

PART OR ASSEMBLY: ANCHORING LOCATIONS & DETAILS

REVISIONS

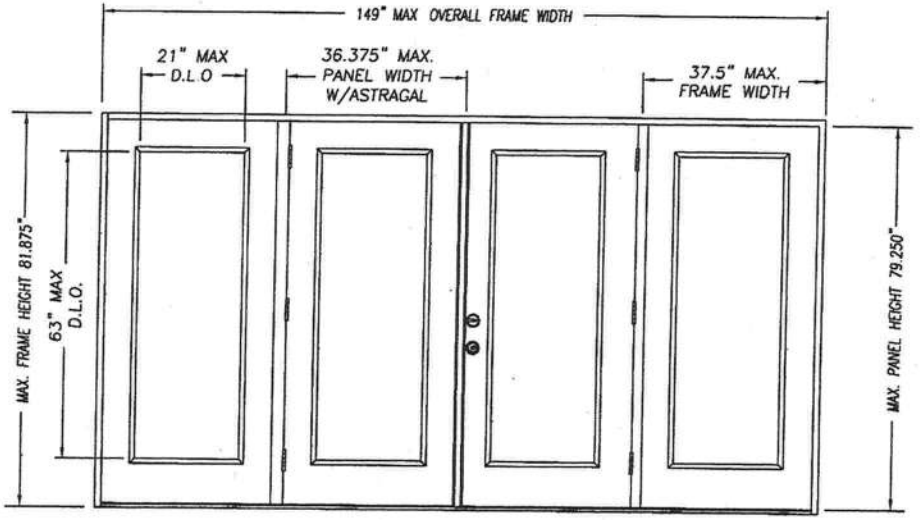
NO.	DATE	BY

DATE: 7/11/05
SCALE: N.T.S.
DWG. BY: SWS
CHK. BY:
DRAWING NO.: DWG-MA-FL0128-05
SHEET 3 OF 3

4904 GLAZED

Masonite

SIDE-HINGED WOOD-EDGE STEEL DOOR UNIT
6'-8" GLAZED DOUBLE DOOR WITH / WITHOUT SIDELITES



DOUBLE INSWING UNIT W/SIDELITES

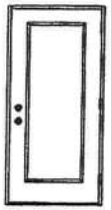
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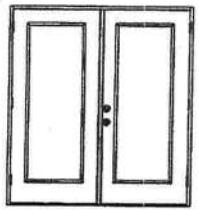
GENERAL NOTES

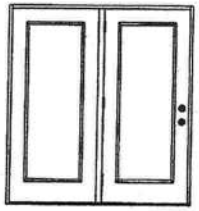
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3. POLYURETHANE CORE FLAME SPREAD INDEX OF 50 AND SMOKE DEVELOPED INDEX OF 60 PER ASTM E84
4. PLASTICS TESTING OF LITE FRAME MATERIAL*

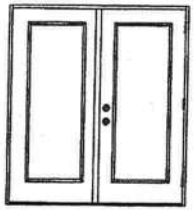
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RATE OF BURNING	ASTM D635	1.10 IN/MIN
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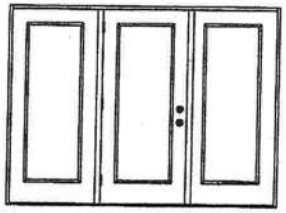
* COMPARATIVE TENSILE STRENGTH AFTER WEATHERING 4500 HOURS XENON ARC METHOD 1


SINGLE DOOR UNIT


DOUBLE DOOR UNIT


SINGLE DOOR UNIT WITH SIDELITE


SINGLE DOOR UNIT WITH SIDELITE


SINGLE DOOR UNIT W/SIDELITES

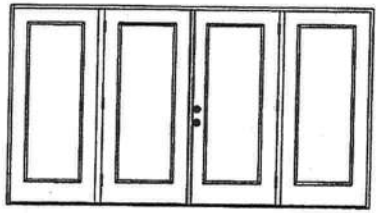

DOUBLE DOOR UNIT W/SIDELITES

TABLE OF CONTENTS

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1	TYPICAL ELEVATIONS & GENERAL NOTES
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3	ANCHORING LOCATIONS & DETAILS

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		INSWING	OUTSWING	INSWING	OUTSWING
X	37.5"	+50.5 / -50.5	+50.5 / -50.5	+19.0 / -19.0	+50.5 / -50.5
XX	74"	+50.5 / -50.5	+50.5 / -50.5	+19.0 / -19.0	+50.5 / -50.5
OX or XO	75"	+50.5 / -50.5	+50.5 / -50.5	+19.0 / -19.0	+50.5 / -50.5
OXO	112.5"	+50.5 / -50.5	+50.5 / -50.5	+19.0 / -19.0	+50.5 / -50.5
OXXO	149"	+50.5 / -50.5	+50.5 / -50.5	+19.0 / -19.0	+50.5 / -50.5

MASONITE INTERNATIONAL CORP.
7300 REAMES RD.
CHARLOTTE, NC 28216

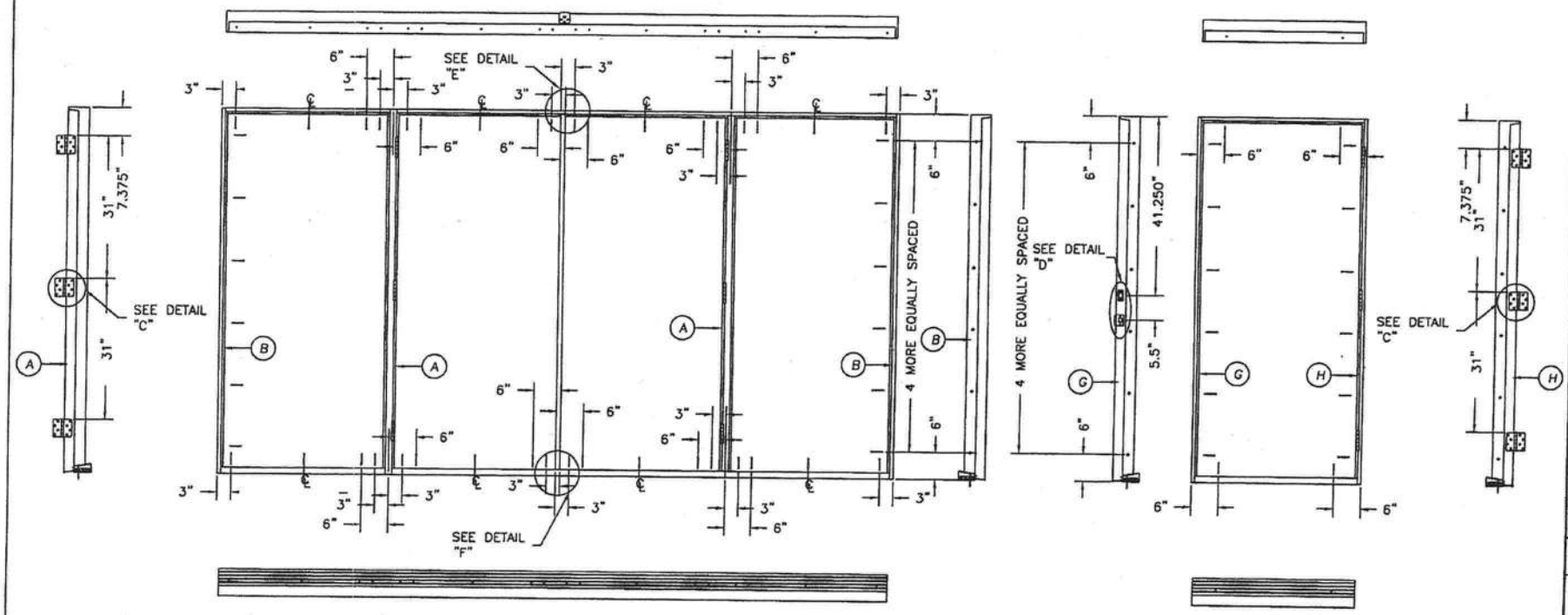
PRODUCT: "EXTERIOR DOOR PRODUCT" DOUBLE 6'8" GLAZED WOOD-EDGE STEEL DOOR

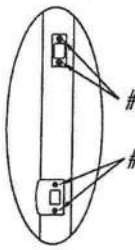
PART OR ASSEMBLY: TYPICAL ELEVATIONS & GENERAL NOTES

REVISIONS

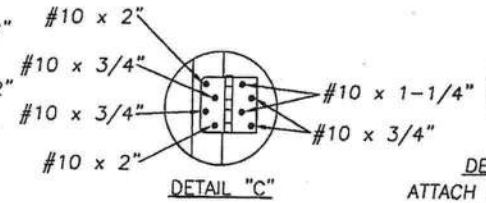
NO.	DATE	BY

DATE: 7/11/05
SCALE: N.T.S.
DWG. BY: SWS
CHK. BY:
DRAWING NO.: DWG-MA-FL0130-05
SHEET 1 OF 3

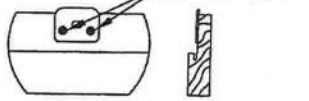




DETAIL "D"

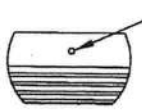


DETAIL "C"



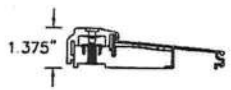
DETAIL "E" ASTRAGAL

ATTACH ASTRAGAL RETAINER BOLT STRIKE PLATE TO FRAME AS SHOWN.

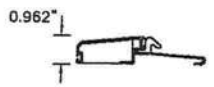


ASTRAGAL RETAINER BOLT HOLE MUST BE DRILLED THROUGH THE THRESHOLD & INTO THE STRUCTURE DEEP ENOUGH FOR A 1.375" THROW

DETAIL "F" ASTRAGAL

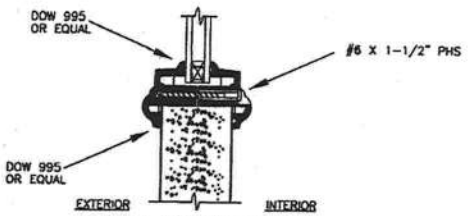


INSWING THRESHOLD



OUTSWING THRESHOLD

Addendum to NAMI
Certification No.: NI006110
Reviewed By:
Date Reviewed: 8/10/05



TYPICAL GLAZING DETAIL

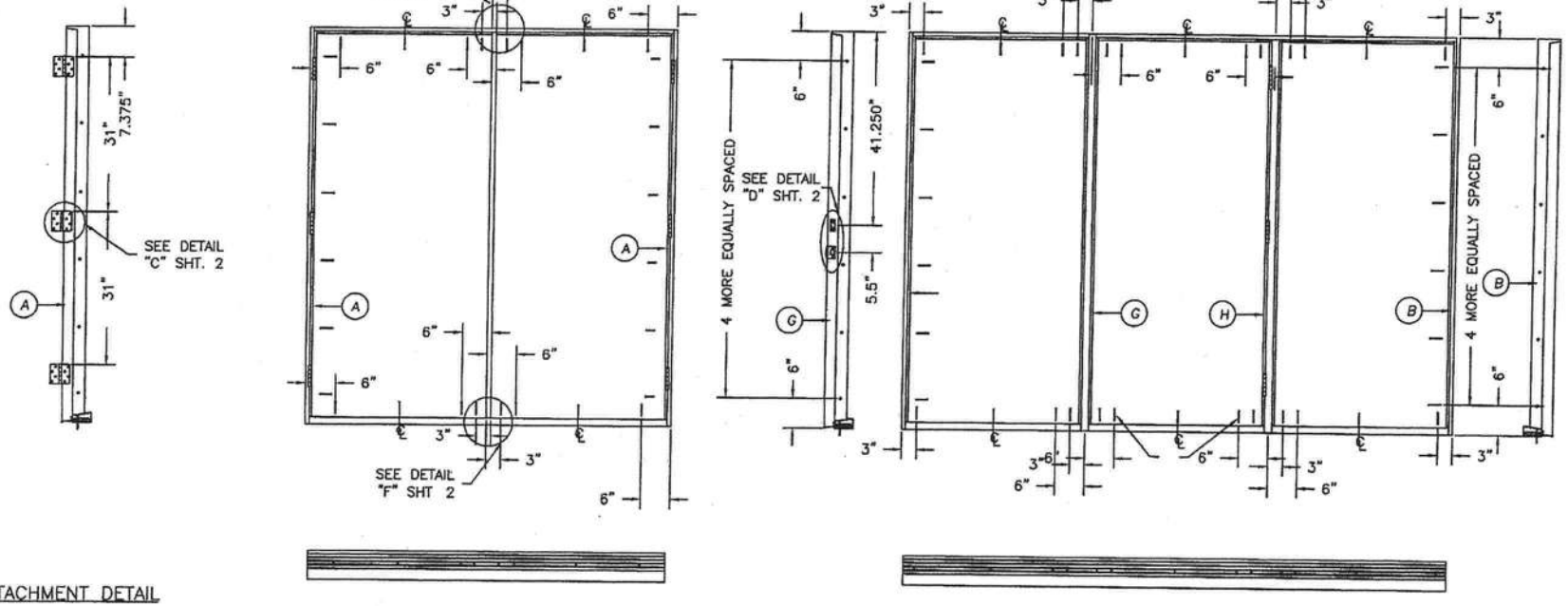
MASONITE INTERNATIONAL CORP.
7300 REAMES RD.
CHARLOTTE, NC 28216

PRODUCT: "EXTERIOR DOOR PRODUCT" DOUBLE 6'-8" GLAZED WOOD-EDGE STEEL DOOR

PART OR ASSEMBLY: ANCHORING LOCATIONS & DETAILS

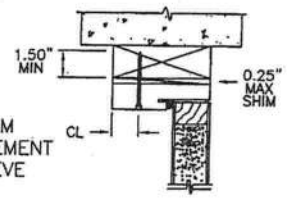
NO.	DATE	REVISIONS	BY

DATE: 7/11/05
SCALE: N.T.S.
DWG. BY: SWS
CHK. BY:
DRAWING NO.: DWG-MA-FL0130-05
SHEET 2 OF 3



ATTACHMENT DETAIL

1. ANCHOR ANALYSIS FOR LOADING CONDITIONS PREPARED, SIGNED AND SEALED BY HAROLD E. RUPP, PE (FLORIDA #15935) WITH THE LOWEST (LEAST) FASTENER RATING FROM THE DIFFERENT FASTENERS BEING CONSIDERED FOR USE. JAMB, HEAD, AND THRESHOLD FASTENERS ANALYZED FOR THIS UNIT INCLUDE #10 WOOD SCREWS OR 3/16" TAPCONS. A PHYSICAL SHIM MUST BE PLACED IN SHIM SPACE AT EACH ANCHOR LOCATION.
2. THE WOOD SCREW SINGLE SHEAR DESIGN VALUES COME FROM ANSI/AF&PA NDA FOR SOUTHERN PINE LUMBER AND ACHEIVEMENT OF 1-1/2" MINIMUM EMBEDMENT. THE TAPCON MUST ACHIEVE MINIMUM EMBEDMENT OF 1-1/4".
3. WOOD BUCKS BY OTHERS MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO STRUCTURE.
4. MINIMUM DESIGN VALUE STRENGTH OF ANCHORS 171 LBS.



TYPICAL ANCHOR INSTALLATION

HARDWARE SCHEDULE

1.	KWIKSET OR SCHLEGE ANSI/BHMA GRADE 3 OR BETTER CYLINDRICAL AND DEADLOCK HARDWARE TO BE INSTALLED AT 5-1/2" CENTERLINE.
2.	4" X 4" FULL MORTISE BUTT HINGES

Addendum to NAMI
Certification No.: NI0006110
Reviewed By:
Date Reviewed: 8/10/05

MASONITE INTERNATIONAL CORP.
7300 REAMES RD.
CHARLOTTE, NC 28216

PRODUCT: "EXTERIOR DOOR PRODUCT" 6'-8" WOOD-EDGE STEEL GLAZED DOUBLE DOOR UNIT

PART OR ASSEMBLY: ANCHORING LOCATIONS & DETAILS

NO.	DATE	BY
REVISIONS		

DATE: 7/11/05
SCALE: N.T.S.
DWG. BY: SWS
CHK. BY:
DRAWING NO.: DWG-MA-FL0130-05
SHEET 3 OF 3

WINDOWS

FLORIDA DEPARTMENT OF Community Affairs

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- COMMUNITY PLANNING
- HOUSING & COMMUNITY DEVELOPMENT
- EMERGENCY MANAGEMENT
- OFFICE OF THE SECRETARY

Product Approval

USER: Public User

Product Approval Menu > Product or Application Search > **Application List**

Search Criteria			Re
Code Version	2004	FL#	54
Application Type	ALL	Product Manufacturer	ALI
Category	ALL	Subcategory	ALI
Application Status	ALL	Compliance Method	ALI

Search Results - Applications

FL#	Type	Manufacturer	Validated By
FL5438	New	MI Windows and Doors **FL#:** FL5438.27 **Model:** 740/3740 Flange Frame **Description:** 52x71 Insulated DSB Annealed **Category:** Windows **Subcategory:** Single Hung	

DCA Administration

Department of Community Affairs
Florida Building Code Online
Codes and Standards
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100
(850) 487-1824, Suncom 277-1824, Fax (850) 414-8436

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Product Approval Accepts:







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COMMUNITY PLANNING

HOUSING & COMMUNITY DEVELOPMENT

EMERGENCY MANAGEMENT

OFFICE OF THE SECRETARY

Product Approval

USER: Public User

FL #	FL5438
Application Type	New
Code Version	2004
Application Status	Approved
Comments	
Archived	☐
Product Manufacturer	MI Windows and Doors
Address/Phone/Email	650 W Market St Gratz, PA 17030 (717) 365-3300 ext 2101 surich@miwd.com
Authorized Signature	Steven Urich surich@miwd.com
Technical Representative Address/Phone/Email	
Quality Assurance Representative Address/Phone/Email	
Category	Windows
Subcategory	Single Hung
Compliance Method	Certification Mark or Listing
Certification Agency	American Architectural Manufacturers
Referenced Standard and Year (of	**Standard**

Standard)	ANSI/AAMA/NWWDA 101/I.S.2
Equivalence of Product Standards Certified By	
Product Approval Method	Method 1 Option A
Date Submitted	09/22/2005
Date Validated	10/14/2005
Date Pending FBC Approval	10/07/2005
Date Approved	10/17/2005

Summary of Products

Go to Page GO!

FL #	Model, Number or Name	Description
5438.21	740/3740 Fin Frame	52x71 Insulated DSB Ann
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** R-45 DP-47.2 Per manufacturers installation instructions.		**Certification Agency Ce** **Installation Instruction** Verified By:
5438.22	740/3740 Fin Frame	52x71 Single Glazed 3/16
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** R-35 DP-47.2 Per manufacturers installation instructions.		**Certification Agency Ce** **Installation Instruction** Verified By:
5438.23	740/3740 Fin Frame Oriel	52x71 Single Glazed 3/16
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** R-35 DP-47.2 Per manufacturers installation instructions.		**Certification Agency Ce** **Installation Instruction** Verified By:
5438.24	740/3740 Fin Frame Oriel	47x89 Single Glazed 3/16
Limits of Use (See Other) **Approved for use in HVHZ:**		**Certification Agency Ce** **Installation Instruction**

Approved for use outside HVHZ: **Impact Resistant:** **Design Pressure:** +/- **Other:** R-35 DP-47.2 Per manufacturers installation instructions.		Verified By:
5438.25	740/3740 Fin Frame Oriel	39x90 Single Glazed 3/16 Tempered Fixed
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** R-35* DP-47.2 Per manufacturers installation instructions.		**Certification Agency Ce** **Installation Instruction** Verified By:
5438.26	740/3740 Flange Frame	52x71 Single Glazed DSB
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** R-45 DP-47.2 Per manufacturers installation instructions.		**Certification Agency Ce** **Installation Instruction** Verified By:
5438.27	740/3740 Flange Frame	52x71 Insulated DSB Ann
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** R-45 DP-47.2 Per manufacturers installation instructions.		**Certification Agency Ce** **Installation Instruction** Verified By:
5438.28	740/3740 Flange Frame	53x72 Single Glazed 3/16
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** R-25 DP-34.7 Per manufacturers installation instructions.		**Certification Agency Ce** **Installation Instruction** Verified By:
5438.29	740/3740 Flange Frame Oriel	47x89 Single Glazed DSB
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** R-35 DP-42.9 Per manufacturers installation instructions.		**Certification Agency Ce** **Installation Instruction** Verified By:

Products authorized for AAMA certification

Style	Product Series	Material	Frame	Standard	Size	Glass	Rating	Negative DP	Report	Expiration
SH	165/3000	Alum	FIN ORIEL	ANSI/AAMA 101/I.S.2.97	47 x 89	INSULATED 3/16 ANNEALED	R-30	-42.7	01-42090.03	7/06
SH	165/3000	Alum	FIN ORIEL	ANSI/AAMA 101/I.S.2.97	40 x 90	INSULATED SSB BOT - DSB ANNEALED TOP	R-35*	-47.2	01-42090.03	7/06
SH	165/3000	Alum	FLANGE ORIEL	ANSI/AAMA 101/I.S.2.97	47 x 89	INSULATED 3/16 ANNEALED	R-25	-34.7	01-42090.04	7/06
SH	165/3000	Alum	FLANGE ORIEL	ANSI/AAMA 101/I.S.2.97	36 x 88	INSULATED SSB BOT - DSB ANNEALED TOP	R-35*	-47.2	01-42090.04	7/06
SH	165/3000	Alum	FLANGE DEV BUCK	ANSI/AAMA 101/I.S.2.97	53 x 72	SINGLE GLAZED 3/16 ANNEALED	R-35	-47.2	01-42249.01	7/06
SH	165	Alum	TRIPLE CONT HEAD SILL	ANSI/AAMA 101/I.S.2.97	106 x 72	INSULATED SSB	R-30*	-31.4	42273.02	10/06
SH	455	Alum	FIN	ANSI/AAMA 101/I.S.2.97	48 x 84	INSULATED DSB ANNEALED	LC-50	-50	01-42769.01	10/06
SH	455	Alum	FIN	ANSI/AAMA 101/I.S.2.97	54 x 96	INSULATED DSB ANNEALED	LC-35	-50	01-42769.01	10/06
SH	650	Alum	FIN	ANSI/AAMA 101/I.S.2.97	53 x 90	INSULATED SSB	LC-30	-47.2	01-42487.01	8/06
SH	650	Alum	FLANGE	ANSI/AAMA 101/I.S.2.97	48 x 84	INSULATED SSB	LC-35	-47.2	01-42487.02	12/06
SH	650	Alum	FLANGE ORIEL	ANSI/AAMA 101/I.S.2.97	48 x 84	INSULATED 3/16 ANNEALED	R-35	-47.2	01-42963.02	10/06
SH	650	Alum	FIN ORIEL	ANSI/AAMA 101/I.S.2.97	48 x 84	INSULATED 3/16 ANNEALED	R-35	-47.2	01-42963.03	10/06
SH	740/3740	Alum	FLANGE	ANSI/AAMA 101/I.S.2.97	52 x 71	SINGLE GLAZED DSB TEMP	R-45	-47.2	01-40350.04	12/05
SH	740/3740	Alum	FIN ORIEL	ANSI/AAMA 101/I.S.2.97	47 x 89	SINGLE GLAZED 3/16 ANNEALED	R-35	-47.2	01-41979.01	7/06
SH	740/3740	Alum	FIN ORIEL	ANSI/AAMA 101/I.S.2.97	39 x 90	SINGLE GLAZED FIXED 1/8T / SASH 3/16 ANNEAL	R-35*	-47.2	01-41979.01	7/06
SH	740/3740	Alum	FLANGE ORIEL	ANSI/AAMA 101/I.S.2.97	47 x 89	SINGLE GLAZED 1/8 TEMP	R-35	-42.9	01-41980.01	8/06
SH	740/3740	Alum	FLANGE ORIEL	ANSI/AAMA 101/I.S.2.97	47 x 89	INSULATED 3/16 ANNEALED	R-35	-42.7	01-41978.01	7/06
SH	740/3740	Alum	FLANGE ORIEL	ANSI/AAMA 101/I.S.2.97	36 x 88	INSULATED FIXED 1/8 TEMP / SASH 3/16 ANNEAL	R-35*	-47.2	01-41978.01	7/06
SH	740/3740	Alum	FLANGE ORIEL	ANSI/AAMA 101/I.S.2.97	52 x 71	INSULATED DSB ANNEALED	R-35	-47.2	01-42251.01	7/06
SH	740/3740	Alum	FIN ORIEL	ANSI/AAMA 101/I.S.2.97	52 x 71	SINGLE 3/16 ANNEALED	R-35	-47.2	01-42250.01	7/06
SH	740/3740	Alum	FLANGE	ANSI/AAMA 101/I.S.2.97	52 x 71	INSULATED DSB ANNEALED	R-45	-47.2	01-40656.03	12/05
SH	740/3740	Alum	FIN	ANSI/AAMA 101/I.S.2.97	52 x 71	SINGLE GLAZED 3/16 ANNEALED	R-35	-47.2	42250.02	2/09
SH	740/3740	Alum	FLANGE	ANSI/AAMA 101/I.S.2.97	53 x 72	SINGLE GLAZED 3/16 ANNEALED	R-25	-34.7	42250.02	2/09
SH	740/3740	Alum	FLANGE ORIEL	ANSI/AAMA 101/I.S.2.97	53 x 72	SINGLE GLAZED 3/16 ANNEALED	R-45	-47.2	42250.02	2/09
SH	740/3740	Alum	FIN	ANSI/AAMA 101/I.S.2.97	52 x 71	INSULATED DSB ANNEALED	R-45	-47.2	40656.04	12/05
SH	3540 TRIPLE	PVC	FIN	ANSI/AAMA 101/I.S.2.97	108 x 72	INSULATED 3/31" ANNEALED	LC-35*	-50	01-49341.04	10/06
SH	3540	PVC	FIN	ANSI/AAMA 101/I.S.2.97	36 x 74	INSULATED SSB	LC-40*	-47	01-42585.03	10/06
SH	3540	PVC	FIN	ANSI/AAMA 101/I.S.2.97	44 x 72	INSULATED SSB	R-40	-47.2	01-41640.02	5/06
SH	4340	PVC	FIN	ANSI/AAMA 101/I.S.2.97	36 x 62	INSULATED SSB ANNEALED	R-40*	-55	50816.05	8-6/08
SH	4340	PVC	FIN	ANSI/AAMA 101/I.S.2.97	36 x 60	INSULATED SSB ANNEALED	LC-40*	-55	51214.02	05/08

06/30/05

Products authorized for AAMA certification

Style	Product Series	Material	Frame	Standard	Size	Class	Rating	Negative DP	Report	Expiration
SH	4340	PVC	FIN	ANSI/AAMA 101/I.S.2.97	36 x 74	INSULATED SSB ANNEALED	LC-40*	-47	51214.02	05/08
SH	4340	PVC	FIN	ANSI/AAMA 101/I.S.2.97	36 x 72	INSULATED SSB ANNEALED	R-40*	-50	50816.05	04/08
SH	8540	PVC	FIN	ANSI/AAMA 101/I.S.2.97	48 x 72	INSULATED SSB	R-40	-50	55344.01	3/09

Associated Laboratories, Inc.

John G. Smith 10/7/05

John G. Smith Date

American Architectural Manufacturers Association

Dean Lewis 10-7-05

Dean Lewis Date

10-07-05 11:46 FROM-AAMA 847-303-5774 T-152 P.007/008 F-658

BetterBilt
DOORS AND WINDOWS

- Series 165/3000 Single Hung and Fixed Windows
- Series 740/744/3740 Single Hung and Fixed Windows
- Series 168/3168 Horizontal Slider and Fixed Windows
- Series 680 Horizontal Slider and Fixed Windows

NOTE: SEE INDIVIDUAL TEST REPORT(S) FOR DP RATINGS AND MAXIMUM ALLOWABLE SIZES.

INSTALLATION INSTRUCTIONS FOR "APPROVED FOR FLORIDA" ALUMINUM FIN WINDOWS

BetterBilt Windows & Doors appreciates your recent purchase of a maintenance free prime window, which will not rust, rot, mildew, or warp. This is a quality product that left our factory in good condition – proper handling and installation are just as important as good design and workmanship. Please follow these recommendations to allow this product to complete its function.

1 Handle units one at a time in the closed and locked position and take care not to scratch frame or glass or to bend the nailing fin. Place a continuous bead of caulk on the back side of nail fin (mounting flange).

2. Set unit plumb and square into opening and make sure that there is 3/16" ± 1/16" clearance around the frame. Fasten unit into opening in the closed and locked position, making sure that fasteners are screwed in straight in order to avoid twisting or bowing of the frame. Make sure that sill is straight and level. Check operation of unit frequently as fasteners are set.

3. Use # 8 sheet metal or wood screws with a minimum of 1" penetration into the framing (stud). Place first screws (two at each corner) 3" from end of fin. For positive and negative DPs (design pressures) up to **35**, do not exceed **24"** spacing of additional screws. For DPs from **35.1** to **50**, do not exceed **18"** spacing.

4. Caulk entire perimeter of fin to mounting surface joint and caulk over screw heads.
Note: this step can be eliminated if 4" wide adhesive type flashing is used (sill 1st., jambs 2nd., head 3rd.).

5. Fill voids between frame and construction with loose batten type insulation or non-expanding aerosol foam specifically formulated for windows and doors to eliminate drafts. The use of expanding aerosol type insulating foam, which can bow the frame, waives all stated warranties.

6. Remove plaster, mortar, paint, and debris that has collected on the unit and make sure that sash/vent tracks and interlocks are also clean. Do not use abrasives, solvents, ammonia, vinegar, alkaline, or acid solutions for clean-up, especially with insulated glass units as their use could cause chemical breakdown of the glass seal. Take care not to scratch glass; scratches severely weaken glass and it could eventually break from thermal expansion and contraction. Clean units with water and mild detergent.

- CAUTION -

BetterBilt Windows & Doors or its representatives are unable to control and cannot assume responsibility for the selection and placement of their products in a building or structure in a manner required by laws, statutes, and/or building codes. The purchaser is solely responsible for knowledge of and adherence to the same. BetterBilt window products are not provided with safety glazing unless specifically ordered with such. Many laws and codes require safety glazing (tempered glass) near doors, bathtubs, and shower enclosures. Also be aware of other code requirements such as emergency egress and structural / energy performance.

Corporate Headquarters:
M.I. Home Products
650 West Market St.
Gratz, PA 17030-0370
(717) 365-3300

www.mihp.com



St 221
July 29, 2003

Rev. 7-24-03

CHECKLIST

COLUMBIA COUNTY BUILDING DEPARTMENT

RESIDENTIAL MINIMUM PLAN REQUIREMENTS AND CHECKLIST FOR FLORIDA BUILDING CODE 2001 ONE (1) AND TWO (2) FAMILY DWELLINGS

ALL REQUIREMENTS ARE SUBJECT TO CHANGE

EFFECTIVE MARCH 1, 2002

ALL BUILDING PLANS MUST INDICATE THE FOLLOWING ITEMS AND INDICATE COMPLIANCE WITH CHAPTER 1606 OF THE FLORIDA BUILDING CODE 2001 BY PROVIDING CALCULATIONS AND DETAILS THAT HAVE THE SEAL AND SIGNATURE OF A CERTIFIED ARCHITECT OR ENGINEER REGISTERED IN THE STATE OF FLORIDA, OR ALTERNATE METHODOLOGIES, APPROVED BY THE STATE OF FLORIDA BUILDING COMMISSION FOR ONE-AND-TWO FAMILY DWELLINGS. FOR DESIGN PURPOSES THE FOLLOWING BASIC WIND SPEED AS PER FIGURE 1606 SHALL BE USED.

WIND SPEED LINE SHALL BE DEFINED AS FOLLOWS: THE CENTERLINE OF INTERSTATE 75.

1. ALL BUILDINGS CONSTRUCTED EAST OF SAID LINE SHALL BE -------- 100 MPH
2. ALL BUILDINGS CONSTRUCTED WEST OF SAID LINE SHALL BE --------110 MPH
3. NO AREA IN COLUMBIA COUNTY IS IN A WIND BORNE DEBRIS REGION

APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL

GENERAL REQUIREMENTS; Two (2) complete sets of plans containing the following:

Applicant	Plans Examiner	
X	☐	All drawings must be clear, concise and drawn to scale ("Optional " details that are not used shall be marked void or crossed off). Square footage of different areas shall be shown on plans.
X	☐	Designers name and signature on document (FBC 104.2.1). If licensed architect or engineer, official seal shall be affixed.
X	☐	**Site Plan including:** a) Dimensions of lot b) Dimensions of building set backs c) Location of all other buildings on lot, well and septic tank if applicable, and all utility easements. d) Provide a full legal description of property.
X	☐	**Wind-load Engineering Summary, calculations and any details required** a) Plans or specifications must state compliance with FBC Section 1606 b) The following information must be shown as per section 1606.1.7 FBC a. Basic wind speed (MPH) b. Wind importance factor (I) and building category c. Wind exposure – if more than one wind exposure is used, the wind exposure and applicable wind direction shall be indicated d. The applicable internal pressure coefficient e. Components and Cladding. The design wind pressure in terms of psf (kN/m²), to be used for the design of exterior component and cladding materials not specifically designed by the registered design professional
X	☐	**Elevations including:**
☐	☐	a) All sides
☐	☐	b) Roof pitch
☐	☐	c) Overhang dimensions and detail with attic ventilation
☐	☐	d) Location, size and height above roof of chimneys
☐	☐	e) Location and size of skylights
☐	☐	f) Building height
☐	☐	e) Number of stories

Floor Plan including:

- ☐ ☐ a) Rooms labeled and dimensioned
- ☐ ☐ b) Shear walls
- ☐ ☐ c) Windows and doors (including garage doors) showing size, mfg., approval listing and attachment specs. (FBC 1707) and safety glazing where needed (egress windows in bedrooms to be shown)
- ☐ ☐ d) Fireplaces (gas appliance) (vented or non-vented) or wood burning with hearth
- ☐ ☐ e) Stairs with dimensions (width, tread and riser) and details of guardrails and handrails
- ☐ ☐ f) Must show and identify accessibility requirements (accessible bathroom)

Foundation Plan including:

- ☐ ☐ a) Location of all load-bearing wall with required footings indicated as standard Or monolithic and dimensions and reinforcing
- ☐ ☐ b) All posts and/or column footing including size and reinforcing
- ☐ ☐ c) Any special support required by soil analysis such as piling
- ☐ ☐ d) Location of any vertical steel

Roof System:

- ☒ ☐ a) Truss package including:
  1. Truss layout and truss details signed and sealed by Fl. Pro. Eng.
  2. Roof assembly (FBC 104.2.1 Roofing system, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)
- ☐ ☐ b) Conventional Framing Layout including:
  1. Rafter size, species and spacing
  2. Attachment to wall and uplift
  3. Ridge beam sized and valley framing and support details
  4. Roof assembly (FBC 104.2.1 Roofing systems, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)

Wall Sections including:

- ☐ ☐ a) Masonry wall
  1. All materials making up wall
  2. Block size and mortar type with size and spacing of reinforcement
  3. Lintel, tie-beam sizes and reinforcement
  4. Gable ends with rake beams showing reinforcement or gable truss and wall bracing details
  5. All required connectors with uplift rating and required number and size of fasteners for continuous tie from roof to foundation
  6. Roof assembly shown here or on roof system detail (FBC 104.2.1 Roofing system, materials, manufacturer, fastening requirements and product evaluation with resistance rating)
  7. Fire resistant construction (if required)
  8. Fireproofing requirements
  9. Shoe type of termite treatment (termicide or alternative method)
  10. Slab on grade
      a. Vapor retardant (6mil. Polyethylene with joints lapped 6 inches and sealed)
      b. Must show control joints, synthetic fiber reinforcement or Welded fire fabric reinforcement and supports
  11. Indicate where pressure treated wood will be placed
  12. Provide insulation R value for the following:
      a. Attic space
      b. Exterior wall cavity
      c. Crawl space (if applicable)

☒ ☐ **b) Wood frame wall**

1. All materials making up wall
2. Size and species of studs
3. Sheathing size, type and nailing schedule
4. Headers sized
5. Gable end showing balloon framing detail or gable truss and wall hinge bracing detail
6. All required fasteners for continuous tie from roof to foundation (truss anchors, straps, anchor bolts and washers)
7. Roof assembly shown here or on roof system detail (FBC104.2.1 Roofing system, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)
8. Fire resistant construction (if applicable)
9. Fireproofing requirements
10. Show type of termite treatment (termicide or alternative method)
11. Slab on grade
    a. Vapor retardant (6Mil. Polyethylene with joints lapped 6 inches and sealed
    b. Must show control joints, synthetic fiber reinforcement or welded wire fabric reinforcement and supports
12. Indicate where pressure treated wood will be placed
13. Provide insulation R value for the following:
    a. Attic space
    b. Exterior wall cavity
    c. Crawl space (if applicable)

☐ ☐ c) Metal frame wall and roof (designed, signed and sealed by Florida Prof. Engineer or Architect)

Floor Framing System:

☐ ☐ a) Floor truss package including layout and details, signed and sealed by Florida Registered Professional Engineer

☒ ☐ b) Floor joist size and spacing

☐ ☐ c) Girder size and spacing

☐ ☐ d) Attachment of joist to girder

☒ ☐ e) Wind load requirements where applicable

☐ ☐ **Plumbing Fixture layout**

Electrical layout including:

☒ ☐ a) Switches, outlets/receptacles, lighting and all required GFCI outlets identified

☐ ☐ b) Ceiling fans

☐ ☐ c) Smoke detectors

☐ ☐ d) Service panel and sub-panel size and location(s)

☐ ☐ e) Meter location with type of service entrance (overhead or underground)

☐ ☐ f) Appliances and HVAC equipment

☐ ☐ g) Arc Fault Circuits (AFCI) in bedrooms

HVAC information

☒ ☐ a) Manual J sizing equipment or equivalent computation

☒ ☐ b) Exhaust fans in bathroom

☒ ☐ **Energy Calculations** (dimensions shall match plans)

☐ ☐ **Gas System** Type (LP or Natural) Location and BTU demand of equipment

☐ ☐ **Disclosure Statement for Owner Builders**

☐ WILL GO ☐ ***Notice Of Commencement Required Before Any Inspections Will Be Done**

☒ ☐ **Private Potable Water**

EXISTING a) Size of pump motor

b) Size of pressure tank

c) Cycle stop valve if used

1-8-07

CERTIFICATE OF OCCUPANCY

COLUMBIA COUNTY, FLORIDA

Department of Building and Zoning Inspection

This Certificate of Occupancy is issued to the below named permit holder for the building and premises at the below named location, and certifies that the work has been completed in accordance with the Columbia County Building Code.

Parcel Number 18-7S-16-04236-042 **Building permit No.** 000025739

Use Classification SFD,UTILITY **Fire:** 44.94

Permit Holder ROBERT KELLY CONSTRUCTION **Waste:** 117.25

Owner of Building CHARLES RUIZ **Total:** 162.19

Location: 1200 SW BLUFF DRIVE, FT. WHITE, FL

Date: 03/24/2008

Harry Dicks

Building Inspector

POST IN A CONSPICUOUS PLACE
(Business Places Only)

Notice of Treatment 4/93

Applicator: Florida Pest Control & Chemical Co. (www.flapest .com)
Address: 116 NW 16 AVE
City Quille Phone 376 2661

Site Location: Subdivision
Lot # Block# Permit # 25739
Address 1200 SW Bluff Dr Ft. White

Product used	Active Ingredient	% Concentration
☑ Premise	Imidacloprid	0.1%
☐ Termidor	Fipronil	0.12%
☐ Bora-Care	Disodium Octaborate Tetrahydrate	23.0%

Type treatment: ☐ Soil ☐ Wood

Area Treated	Square feet	Linear feet	Gallons Applied
Final		148	30

As per Florida Building Code 104.2.6 – If soil chemical barrier method for termite prevention is used, final exterior treatment shall be completed prior to final building approval.

If this notice is for the final exterior treatment, initial this line EB.

2/5 Date

11:15 Time

Edwin Print Technician's Name

Remarks:

Applicator - White Permit File - Canary Permit Holder - Pink

10/05 ©

BUILDING DIAGRAMS

The following eight diagrams illustrate various types of buildings. Compare the features of the building being certified with the features shown in the diagrams and select the diagram most applicable. Enter the diagram number in Item C2 and the elevations in Items C3a-C3g.

In A zones, the floor elevation is taken at the top finished surface of the floor indicated; in V zones, the floor elevation is taken at the bottom of the lowest horizontal structural member (see drawing in instructions for Section C).

DIAGRAM 1

All slab-on-grade single- and multiple-floor buildings (other than split-level) and high-rise buildings, either detached or row type (e.g., townhouses); with or without attached garage.

Distinguishing Feature – The bottom floor is at or above ground level (grade) on at least one side. *

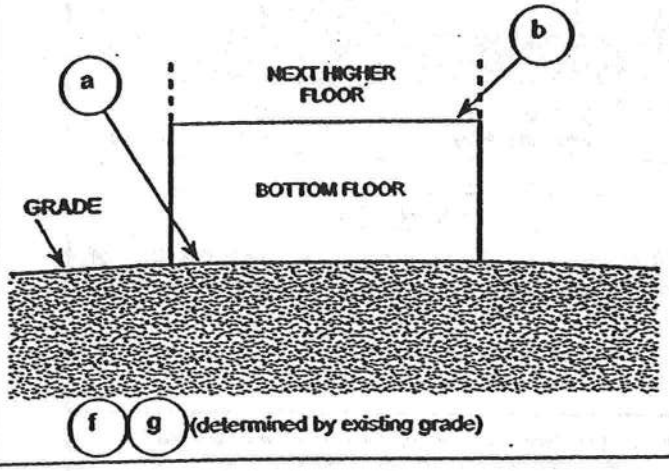


DIAGRAM 2

All single- and multiple-floor buildings with basement (other than split-level) and high-rise buildings with basement, either detached or row type (e.g., townhouses); with or without attached garage.

Distinguishing Feature – The bottom floor (basement or underground garage) is below ground level (grade) on all sides. Buildings constructed above crawl spaces that are below grade on all sides should also use this diagram.*

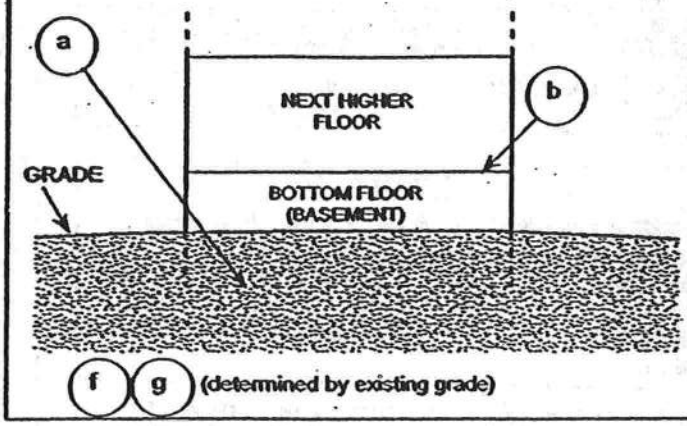


DIAGRAM 3

All split-level buildings that are slab-on-grade, either detached or row type (e.g., townhouses); with or without attached garage.

Distinguishing Feature – The bottom floor (excluding garage) is at or above ground level (grade) on at least one side.*

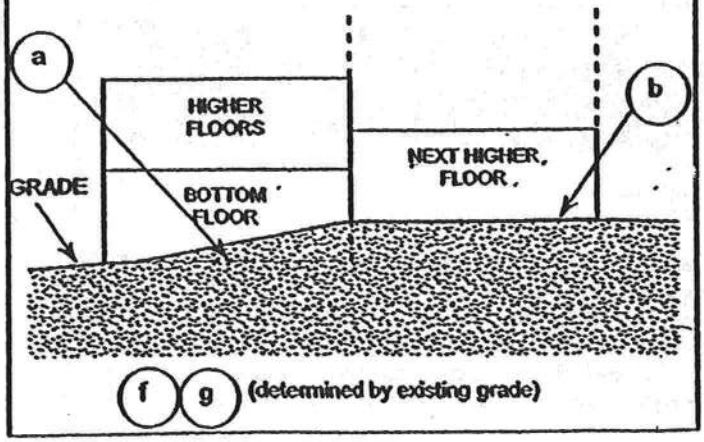
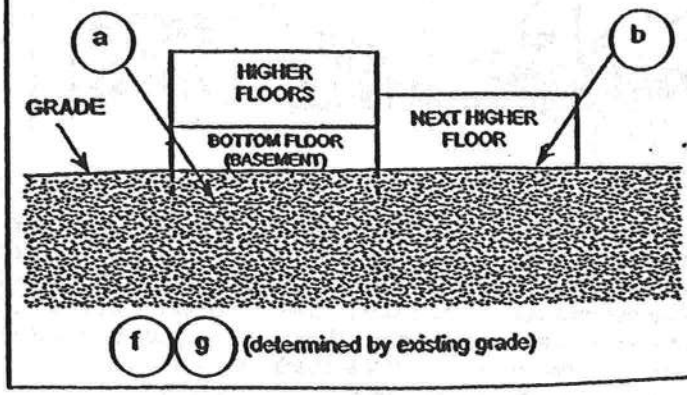


DIAGRAM 4

All split-level buildings (other than slab-on-grade), either detached or row type (e.g., townhouses); with or without attached garage.

Distinguishing Feature – The bottom floor (basement or underground garage) is below ground level (grade) on all sides. Buildings constructed above crawl spaces that are below grade on all sides should also use this diagram.*



* A floor that is below ground level (grade) on all sides is considered a basement even if the floor is used for living purposes, or as an office, garage, workshop, etc.

DIAGRAM 5

All buildings elevated on piers, posts, piles, columns, or parallel shear walls. No obstructions below the elevated floor.

Distinguishing Feature – For all zones, the area below the elevated floor is open, with no obstruction to flow of flood waters (open lattice work and/or readily removable insect screening is permissible).

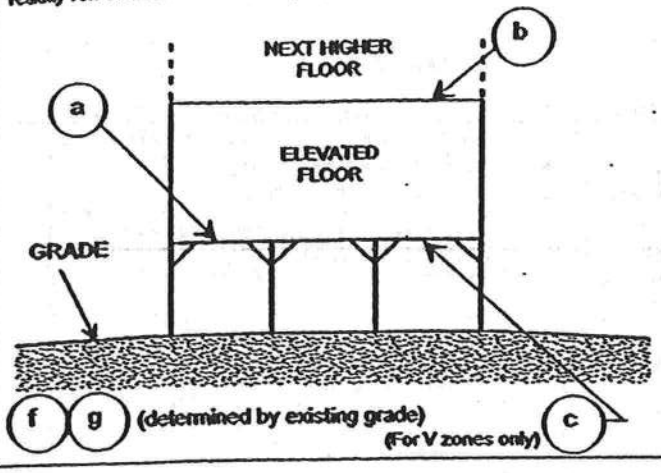


DIAGRAM 6

All buildings elevated on piers, posts, piles, columns, or parallel shear walls with full or partial enclosure below the elevated floor.

Distinguishing Feature – For all zones, the area below the elevated floor is enclosed, either partially or fully. In A Zones, the partially or fully enclosed area below the elevated floor is with or without openings** present in the walls of the enclosure. Indicate information about openings in Section C, Building Elevation Information (Survey Required).

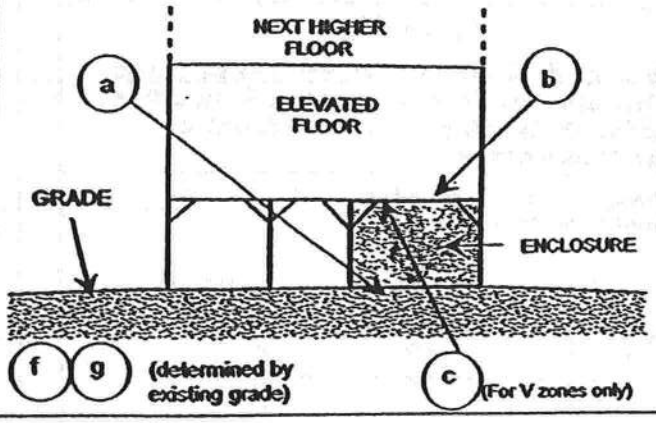


DIAGRAM 7

All buildings elevated on full-story foundation walls with a partially or fully enclosed area below the elevated floor. This includes walkout levels, where at least one side is at or above grade. The principal use of this building is located in the elevated floors of the building.

Distinguishing Feature – For all zones, the area below the elevated floor is enclosed, either partially or fully. In A Zones, the partially or fully enclosed area below the elevated floor is with or without openings** present in the walls of the enclosure. Indicate information about openings in Section C, Building Elevation Information (Survey Required).

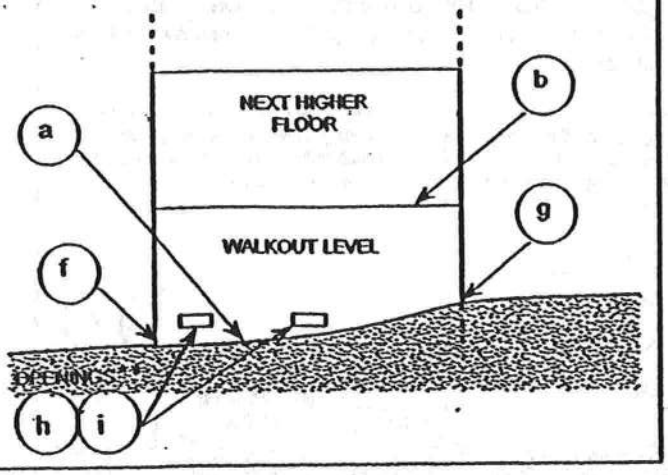
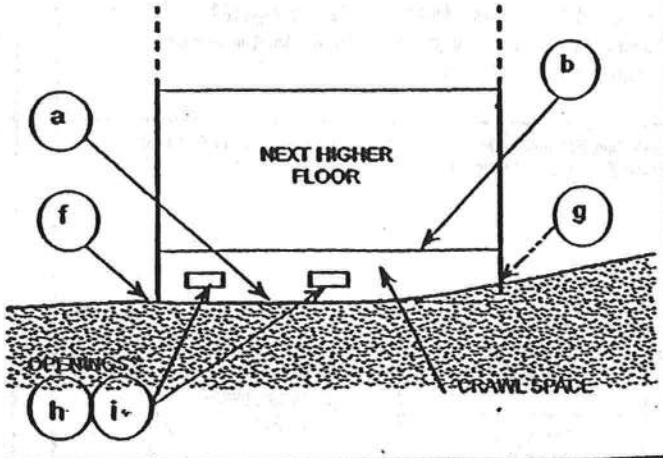


DIAGRAM 8

All buildings elevated on a crawl space with the floor of the crawl space at or above grade on at least one side.

Distinguishing Feature – For all zones, the area below the first floor is enclosed by solid or partial perimeter walls. In all A zones, the crawl space is with or without openings** present in the walls of the crawl space. Indicate information about the openings in Section C, Building Elevation Information (Survey Required).



An "opening" (flood vent) is defined as a permanent opening in a wall that allows for the free passage of water automatically in both directions without human intervention. Under the NFIP, a minimum of two openings is required for enclosures or crawl spaces with a total net area of not less than one square inch for every square foot of area enclosed. Each opening must be on different sides of the enclosed area. If a building has more than one enclosed area, each area must have openings on exterior walls to allow floodwater to directly enter. The bottom of the openings must be no higher than one foot above the grade underneath the flood vents. Alternatively, you may submit a certification by a registered professional engineer or architect that the design will allow for the automatic equalization of hydrostatic flood forces on exterior walls. A window, a door, or a garage door is not considered an opening.

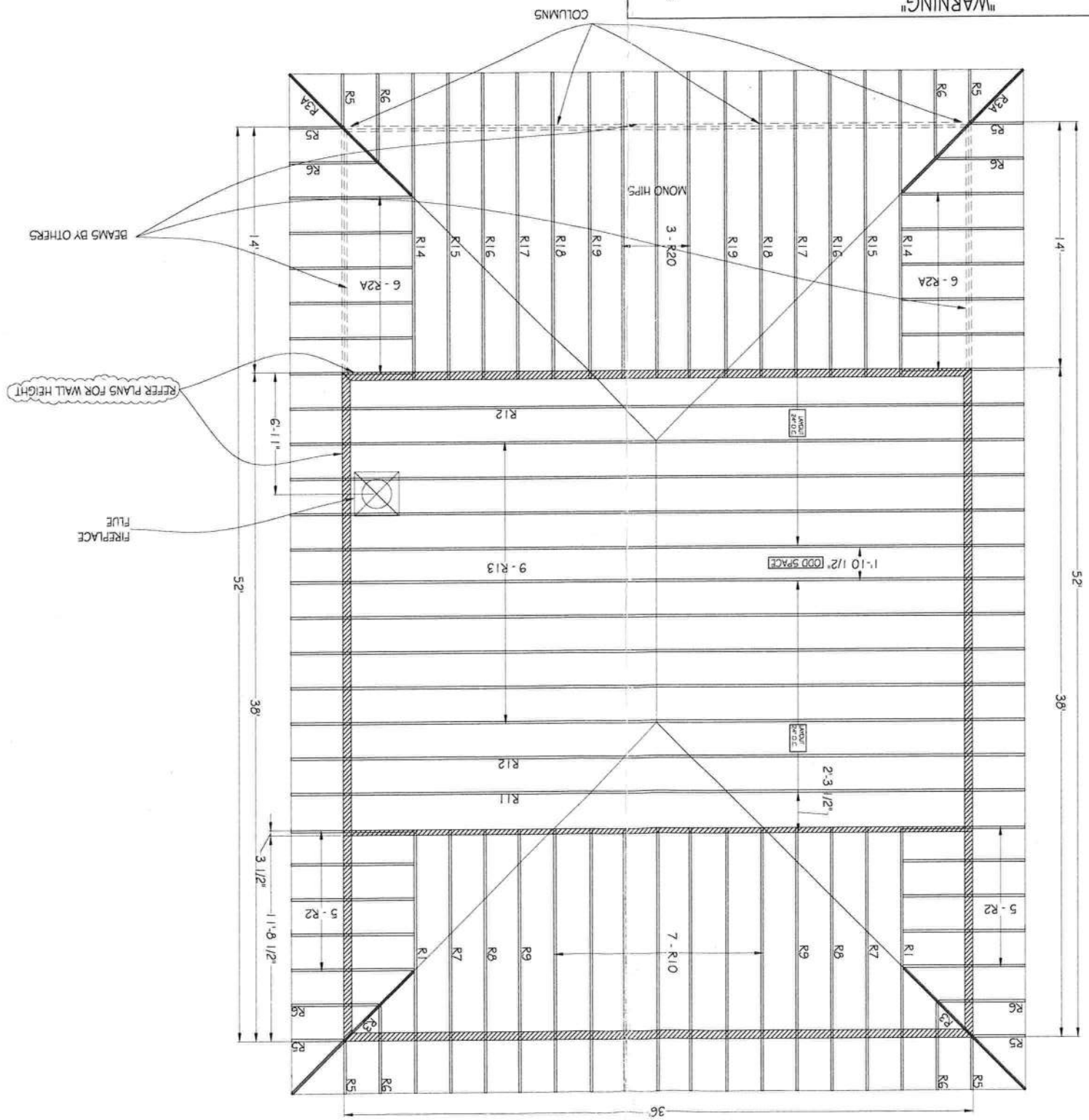
ROBERT L. KELLY
RUIZ RESIDENCE

SCALE: 1/8" = 1'-0"

ROOF TRUSS LAYOUT

Ridgway Roof Truss Company
Mailing: P.O. Box 1309 Gainesville, Florida 32602
Physical: 235 sw 11th Place Gainesville, Florida 32601
Telephone (352) 376-4436 FAX (352) 371-3316

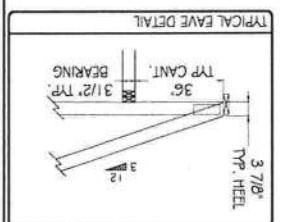
SALESMAN:	MIKE WELDON	PAGE:	1 of 1
DESIGN:	PRS	CAD:	PBS
JOB #:	061065	DATE:	08-11-06
FILE:	K:\Jobs\061065\061065.90		



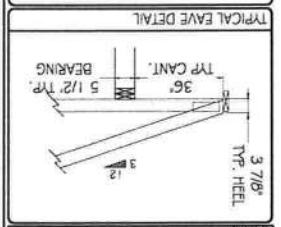
LEGEND

- BEAM BY OTHERS
- SUPPLIED BEAM
- VALLEY/FIELD FRAME
- PLUMBING DROP
- SLOPED CEILING
- RAISED CEILING
- BEARING HT.
- BEARING HT.
- BEARING HT.
- BEARING HT.

TYPICAL EAVE DETAIL



TYPICAL EAVE DETAIL



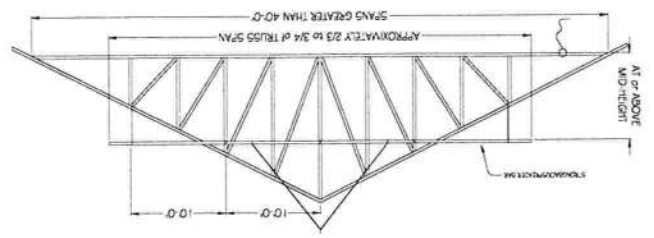
"ATTENTION"

1. LIMITED RESPONSIBILITY OF ROOF TRUSS MANUFACTURER. SEE WTCA 1-1995, SECTION 6.0, FOUND IN DESIGN MANUAL.
2. WARNING FAILURE TO FOLLOW RECOMMENDATIONS IN "BCSI-B1" MAY RESULT IN SERIOUS INJURY, LOSS OF LIFE, OR PROPERTY DAMAGE.
3. CUSTOMER TO VERIFY ALL DIMENSIONS, BEARING HEIGHTS, PITCHES AND ALL INFORMATION REGARDING THE DESIGN AND FABRICATION OF TRUSS SYSTEM.
4. DO NOT OVERLOAD TRUSSES W/ SHEETROCK / SHEATHING OR OTHER BUILDING MATERIALS.
5. TRUSSES ARE NOT MARKED IN ANY WAY TO IDENTIFY THE FREQUENCY, OR LOCATION OF TEMPORARY ERECTION BRACING. ALL TEMPORARY BRACING SHALL COMPLY WITH THE LATEST EDITION OF BCSI-B1 PUBLISHED BY THE TRUSS PLATE INSTITUTE FOUND IN THE DESIGN MANUAL.
6. NON-LOAD BEARING WALLS TO BE SINGLE TOP PLATED, TO PREVENT LOAD TRANSFER TO THESE WALLS. A 1x4 MAY BE USED AS SECOND TOP PLATE.

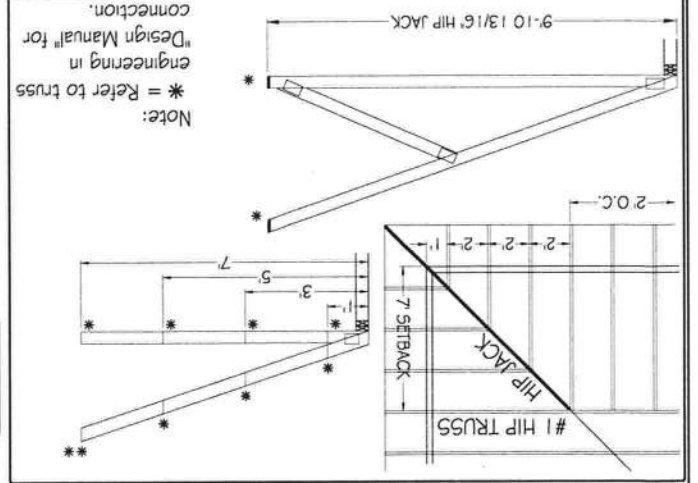
"WARNING"

FAILURE TO FOLLOW RECOMMENDATIONS IN "BCSI-B1" COULD RESULT IN SEVERE PERSONAL INJURY, LOSS OF LIFE OR PROPERTY DAMAGE

FOR ERECTION INSTRUCTIONS SEE BCSI-B1 IN ENGINEERING BOOK



TYPICAL HIP CORNER DETAIL



Note:
* = Refer to truss engineering in "Design Manual" for connection.

DESCRIPTION:
LOT 6 IN "CEDAR SPRINGS SHORES - UNIT NO. 5" AS PER PLAT THEREOF RECORDED IN PLAT BOOK 4, PAGES 5, 5A & 5B OF THE PUBLIC RECORDS OF COLUMBIA COUNTY, FLORIDA.

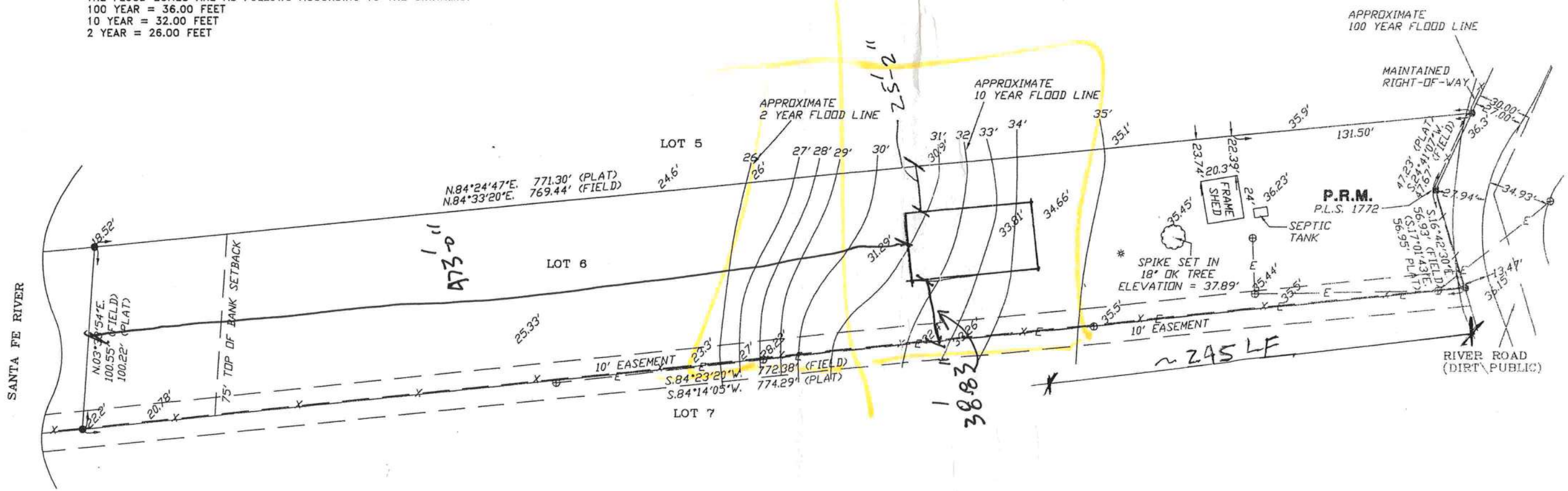
SURVEYOR'S NOTES:
1. BOUNDARY BASED ON MONUMENTATION FOUND IN ACCORDANCE WITH THE RETRACEMENT OF THE ORIGINAL SURVEY FOR SAID PLAT OF RECORD.
2. BEARINGS ARE BASED ON SAID PLAT OF RECORD.
3. THIS PARCEL IS IN ZONE "AE" AND IS SUBJECT TO FLOODING. A BASE FLOOD ELEVATION IS ESTABLISHED TO BE 36.00 FEET AS PER FLOOD INSURANCE RATE MAP, DATED 6 JAN. 1988 COMMUNITY PANEL NO. 120070 0255 B. HOWEVER, THE FLOOD INSURANCE RATE MAPS ARE SUBJECT TO CHANGE.
4. THE IMPROVEMENTS, IF ANY, INDICATED ON THIS SURVEY DRAWING ARE AS LOCATED ON DATE OF FIELD SURVEY AS SHOWN HEREON.
5. IF THEY EXIST, NO UNDERGROUND ENCROACHMENTS AND/OR UTILITIES WERE LOCATED FOR THIS SURVEY EXCEPT AS SHOWN HEREON.
6. THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A TITLE COMMITMENT OR A TITLE POLICY.

THE FLOOD ZONES ARE AS FOLLOWS ACCORDING TO THE S.R.W.M.D.
100 YEAR = 36.00 FEET
10 YEAR = 32.00 FEET
2 YEAR = 26.00 FEET

BOUNDARY SURVEY IN SECTION 18, TOWNSHIP 7 SOUTH, RANGE 16 EAST, COLUMBIA COUNTY, FLORIDA.

SCALE: 1" = 60'

SYMBOL LEGEND
- 4"X4" CONCRETE MONUMENT FOUND
- 4"X4" CONCRETE MONUMENT SET
- IRON PIPE FOUND
- IRON PIN AND CAP SET
- POWER POLE
- WATER METER
- CENTERLINE
- WELL
- SATELLITE DISH
- TELEPHONE BOX
- ELECTRIC LINES
- WIRE FENCE
- CHAIN LINK FENCE
- WOODEN FENCE



CERTIFIED TO:

CHARLES JOHN RUIZ

FIELD BOOK: SEE PAGE(S): FILE

SURVEYOR'S CERTIFICATION:

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE UNDER MY RESPONSIBLE CHARGE AND MEETS THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

09/22/06 FIELD SURVEY DATE
10/02/06 DRAWING DATE
L. SCOTT BRITT, P.S.M. CERTIFICATION # 5757

NOTE: UNLESS IT BEARS THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER THIS DRAWING, SKETCH, PLAT OR MAP IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT VALID.

BRITT SURVEYING
LAND SURVEYORS AND MAPPERS
830 WEST DUVAL STREET LAKE CITY, FLORIDA 32055
(386)752-7163 FAX (386)752-5573

WORK ORDER # L-17759