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

OMB No. 1660-0008
Expiration Date: November 30, 2018

ELEVATION CERTIFICATE

Important: Follow the instructions on pages 1–9.

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

SECTION A – PROPERTY INFORMATION

FOR INSURANCE COMPANY USE

A1. Building Owner's Name
Danny and Jennifer Donaldson

Policy Number:

A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.
61 Road 4275

Company NAIC Number:

City	State	ZIP Code
Navajo Dam	New Mexico	87419

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)
Lot 28G,Block 6of San Juan River Estates Subdivision No. 3 Replat G

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

A5. Latitude/Longitude: Lat. 36° 47' 25.7" N Long. 107° 42' 14.0" 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 9

A8. For a building with a crawlspace or enclosure(s):

a) Square footage of crawlspace or enclosure(s) 2000.00 sq ft

b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 0

c) Total net area of flood openings in A8.b 0.00 sq in

d) Engineered flood openings? ☐ Yes ☒ No

A9. For a building with an attached garage:

a) Square footage of attached garage N/A sq ft

b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade N/A

c) Total net area of flood openings in A9.b N/A sq in

d) Engineered flood openings? ☐ Yes ☒ No

SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number	B2. County Name	B3. State
San Juan County/350064	San Juan	New Mexico

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)
35045C0800	F	08-05-2010	08-05-2010	A	5664.59

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/Source: HEC-RAS

B11. Indicate elevation datum used for BFE in Item B9: ☐ NGVD 1929 ☒ NAVD 1988 ☐ Other/Source:

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

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Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 61 Road 4275			Policy Number:
City Navajo Dam	State New Mexico	ZIP Code 87419	Company NAIC Number

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–h below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters.

Benchmark Utilized: OPUS Vertical Datum: NAVD 1988

Indicate elevation datum used for the elevations in items a) through h) below.

☐ NGVD 1929 ☒ NAVD 1988 ☐ Other/Source:

Datum used for building elevations must be the same as that used for the BFE.

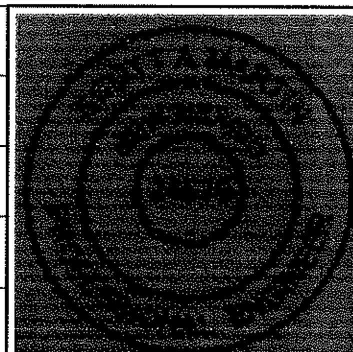
		Check the measurement used.	
a) Top of bottom floor (including basement, crawlspace, or enclosure floor)	5664.65	☒ feet	☐ meters
b) Top of the next higher floor	5667.65	☒ feet	☐ meters
c) Bottom of the lowest horizontal structural member (V Zones only)	N/A	☐ feet	☐ meters
d) Attached garage (top of slab)	N/A	☐ feet	☐ meters
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	N/A	☐ feet	☐ meters
f) Lowest adjacent (finished) grade next to building (LAG)	5666.10	☒ feet	☐ meters
g) Highest adjacent (finished) grade next to building (HAG)	5666.15	☒ feet	☐ meters
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	N/A	☐ feet	☐ meters

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.*

Were latitude and longitude in Section A provided by a licensed land surveyor? ☒ Yes ☐ No ☐ Check here if attachments.

Certifier's Name Scott A. Martin	License Number 24570		
Title Professional Engineer			
Company Name Sakura Engineering and Surveying			
Address 125 West Main St.			
City Farmington	State New Mexico	ZIP Code 87401	
Signature Scott A Martin Digitally signed by Scott A Martin	Date 07-08-2019	Telephone (505) 320-6767	Ext.



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

Comments (including type of equipment and location, per C2(e), if applicable)

ELEVATION CERTIFICATE

OMB No. 1660-0008
Expiration Date: November 30, 2018

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. 61 Road 4275			Policy Number:
City Navajo Dam	State New Mexico	ZIP Code 87419	Company NAIC Number

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, crawlspace, or enclosure) is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

b) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ ☐ feet ☐ meters ☐ above or ☐ below the LAG.

E2. For Building Diagrams 6–9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 1–2 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 or Owner's Authorized Representative's Name			
Address	City	State	ZIP Code
Signature	Date	Telephone	

Comments

☐ Check here if attachments.

ELEVATION CERTIFICATE

OMB No. 1660-0008
Expiration Date: November 30, 2018

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. 61 Road 4275			Policy Number:
City Navajo Dam	State New Mexico	ZIP Code 87419	Company NAIC Number

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–G10. In Puerto Rico only, enter meters.

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–G10) 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 Datum _____

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

G10. Community's design flood elevation: _____ ☐ feet ☐ meters Datum _____

Local Official's Name	Title
Community Name	**Telephone**
Signature	**Date**

Comments (including type of equipment and location, per C2(e), if applicable)

☐ Check here if attachments.

ELEVATION CERTIFICATE

BUILDING PHOTOGRAPHS

See Instructions for Item A6.

OMB No. 1660-0008
Expiration Date: November 30, 2018

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Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 61 Road 4275			Policy Number:
City Navajo Dam	State New Mexico	ZIP Code 87419	Company NAIC Number

If using the Elevation Certificate to obtain NFIP flood insurance, affix at least 2 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." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8. If submitting more photographs than will fit on this page, use the Continuation Page.

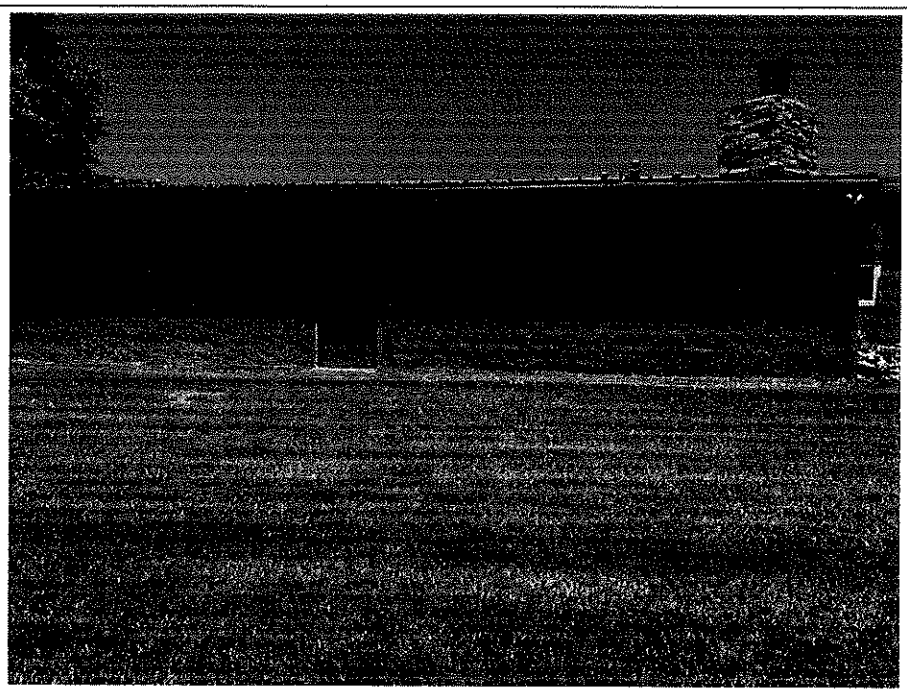

Photo One

Photo One Caption South Side (Date Taken 7-3-2019) Clear Photo One

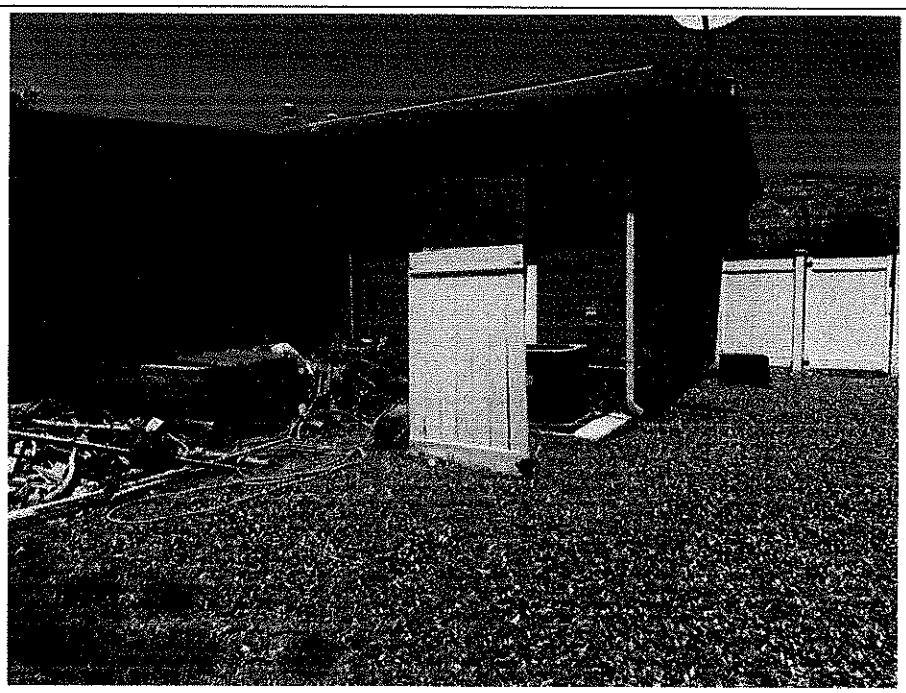

Photo Two

Photo Two Caption East Side (Date Taken 7-3-2019) Clear Photo Two

ELEVATION CERTIFICATE

BUILDING PHOTOGRAPHS
Continuation Page

OMB No. 1660-0008
Expiration Date: November 30, 2018

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Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 61 Road 4275			Policy Number:
City Navajo Dam	State New Mexico	ZIP Code 87419	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." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8.

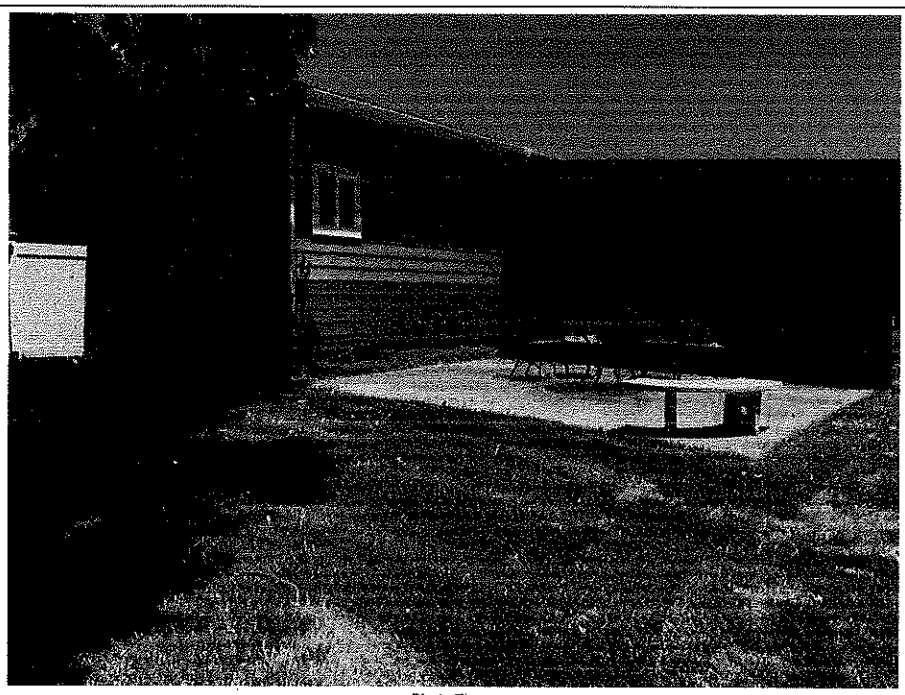

Photo Three

Photo Three Caption West Side (Date Taken 7-3-2019) Clear Photo Three

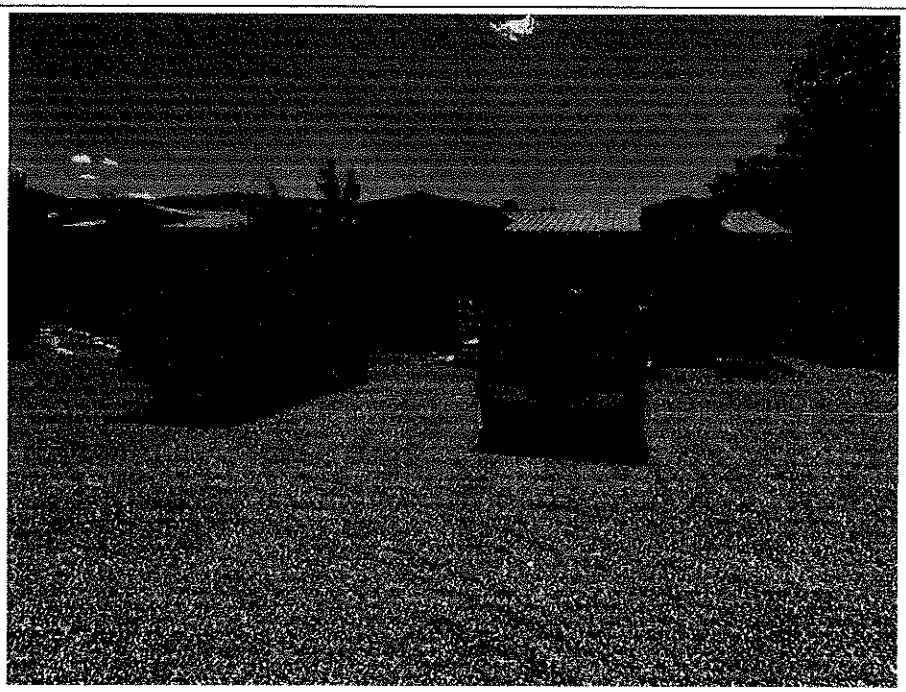

Photo Four

Photo Four Caption North Side (Date Taken 7-3-2019) Clear Photo Four

Subject : OPUS solution : 7388_1102_135539.m00 OP1352132400851

FILE: 7388_1102_135539.m00 OP1352132400851

NGS OPUS SOLUTION REPORT

All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy

USER: tojoe@sakuraeng.com DATE: November 05, 2012
RINEX FILE: 7388307t.12o TIME: 16:20:50 UTC

SOFTWARE: page5 1209.04 master63.pl 082112 START: 2012/11/02 19:56:00
EPHEMERIS: igr17125.eph [rapid] STOP: 2012/11/02 22:03:00
NAV FILE: brdc3070.12n OBS USED: 5367 / 5568 : 96%
ANT NAME: LEIGS15 NONE # FIXED AMB: 27 / 32 : 84%
ARP HEIGHT: 1.342 OVERALL RMS: 0.011(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2012.8385)

X:	-1556901.483(m)	0.004(m)	-1556902.276(m)	0.004(m)
Y:	-4873120.467(m)	0.004(m)	-4873119.128(m)	0.004(m)
Z:	3799195.685(m)	0.015(m)	3799195.578(m)	0.015(m)

LAT:	36 47 0.48008	0.010(m)	36 47 0.49738	0.010(m)
E LON:	252 16 55.07218	0.004(m)	252 16 55.02529	0.004(m)
W LON:	107 43 4.92782	0.004(m)	107 43 4.97471	0.004(m)
EL HGT:	1705.016(m)	0.011(m)	1704.124(m)	0.011(m)
ORTHO HGT:	1725.689(m)	0.024(m)	[NAVD88 (Computed using GEOID12A)]	

Survey ID #M21663

SCOTT A MARTIN NEW MEXICO 24570 PROFESSIONAL ENGINEER

7-8-19

	UTM COORDINATES UTM (Zone 13)	STATE PLANE COORDINATES SPC (3003 NM W)
Northing (Y) [meters]	4074298.483	641459.475
Easting (X) [meters]	257449.884	840291.025
Convergence [degrees]	-1.62833296	0.06903954
Point Scale	1.00032484	0.99991797
Combined Factor	1.00005725	0.99965049

US NATIONAL GRID DESIGNATOR: 13SBA5744974298(NAD 83)

PAUL FRANCIS MARTIN NEW MEXICO 8548 REGISTERED PROFESSIONAL ENGINEER

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH5816	P028 CHACOCNHP_NM2005 CORS ARP	N360154.048	W1075430.227	85176.7
DI0438	NMGR GRANTS NMDOT CORS ARP	N351259.649	W1075548.368	174955.5
DL3585	MC10 MONTROSE CORS ARP	N382720.137	W1075242.393	186172.5

NEAREST NGS PUBLISHED CONTROL POINT

GN0652	LARGO	N364301.329	W1073924.777	9189.0

This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

garytillery.rep

HEC-RAS Version 4.1.0 Jan 2010
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
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
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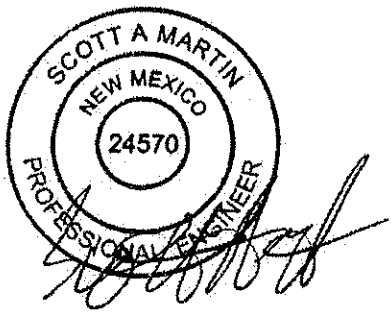
PROJECT DATA
Project Title: garytillery
Project File : garytillery.prj
Run Date and Time: 4/24/2014 10:40:59 AM

Project in English units



PLAN DATA

Plan Title: Plan 01
Plan File : C:\Users\Scott\Documents\garytillery.p01

Geometry Title: Geom 01
Geometry File : C:\Users\Scott\Documents\garytillery.g01

Flow Title : Flow 01
Flow File : C:\Users\Scott\Documents\garytillery.f01

Plan Summary Information:

Number of:	Cross Sections	= 2	Multiple Openings	=	0
	Culverts	= 0	Inline Structures	=	0
	Bridges	= 0	Lateral Structures	=	0

Computational Information

Water surface calculation tolerance	= 0.01
Critical depth calculation tolerance	= 0.01
Maximum number of iterations	= 20
Maximum difference tolerance	= 0.3
Flow tolerance factor	= 0.001

Computation Options
Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

FLOW DATA

Flow Title: Flow 01

garytillery.rep

Flow File : C:\Users\Scott\Documents\garytillery.f01

Flow Data (cfs)

River	Reach	RS	100 yr flood
San Juan	1	100.52	18867

Boundary Conditions

River	Reach	Profile	Upstream	Downstream
San Juan	1	100 yr flood	Critical	Critical

GEOMETRY DATA

Geometry Title: Geom 01
Geometry File : C:\Users\Scott\Documents\garytillery.g01

CROSS SECTION

RIVER: San Juan
REACH: 1 RS: 100.52

INPUT
Description:
Station Elevation Data num= 19

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5740.33	90	5680	144.08	5659.67	148.87	5657.17	360.17	5657.17
369.52	5659.84	416.67	5663.83	446.12	5667.65	477.21	5669.43	515.05	5670.07
624.09	5672.21	686.64	5673.63	692.53	5674.16	699.98	5675.77	712.74	5676.16
720.36	5675.82	726.46	5674.57	742.71	5677.9	776.25	5679.06		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	144.08	.035	369.52	.06

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
144.08	369.52	100.52	100.52 100.52	.1	.3

CROSS SECTION OUTPUT Profile #100 yr flood

E.G. Elev (ft)	5666.45	Element	Left OB	Channel
Right OB				
Vel Head (ft)	1.87	Wt. n-Val.	0.060	0.035
0.060				
W.S. Elev (ft)	5664.59	Reach Len. (ft)	100.52	100.52
100.52				
Crit W.S. (ft)	5663.28	Flow Area (sq ft)	32.14	1653.40
131.91				
E.G. Slope (ft/ft)	0.004826	Area (sq ft)	32.14	1653.40
131.91				
Q Total (cfs)	18867.00	Flow (cfs)	96.38	18335.15
				435.47

415.79				
Top Width (ft)	291.49	Top Width (ft)	13.08	225.44
52.98				
Vel Total (ft/s)	10.38	Avg. Vel. (ft/s)	3.00	11.10
3.15				
Max Chl Dpth (ft)	7.42	Hydr. Depth (ft)	2.46	7.33
2.49				
Conv. Total (cfs)	271575.0	Conv. (cfs)	1387.4	264202.6
5985.0				
Length Wtd. (ft)	100.52	Wetted Per. (ft)	13.97	226.43
53.19				
Min Ch El (ft)	5657.17	Shear (lb/sq ft)	0.69	2.20
0.75				
Alpha	1.11	Stream Power (lb/ft s)	776.25	0.00
0.00				
Frctn Loss (ft)	0.67	Cum Volume (acre-ft)	0.05	3.52
0.18				
C & E Loss (ft)	0.09	Cum SA (acres)	0.03	0.55
0.08				

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.

CROSS SECTION

RIVER: San Juan
REACH: 1 RS: 0

INPUT
Description:
Station Elevation Data num= 19

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5738.76	90	5680	150.34	5659.8	155.81	5657.17	387.88	5657.17
397.35	5660.08	418.36	5663.55	451.1	5667.22	503.9	5669.71	544.68	5670.14
631.01	5671.5	700.41	5673.51	708.24	5673.41	714.08	5674.82	726.57	5675.32
733.85	5675.05	739.5	5673.89	751.32	5675.65	801.69	5678.43		

Manning's n Values num= 3

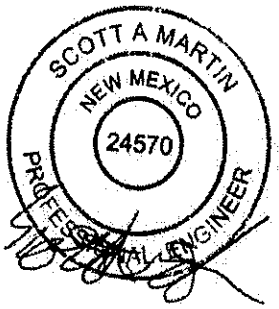
Sta	n Val	Sta	n Val	Sta	n Val
0	.06	150.34	.035	397.35	.06

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
150.34	397.35	0	0	.1	.3

CROSS SECTION OUTPUT Profile #100 yr flood

E.G. Elev (ft)	5665.69	Element	Left OB	Channel
Right OB				
Vel Head (ft)	2.77	Wt. n-Val.	0.060	0.035
0.060				
W.S. Elev (ft)	5662.92	Reach Len. (ft)		
Crit W.S. (ft)	5662.92	Flow Area (sq ft)	14.58	1400.30
24.48				
E.G. Slope (ft/ft)	0.009890	Area (sq ft)	14.58	1400.30
24.48				

Q Total (cfs)	18867.00	Flow (cfs)	46.65	18744.78
75.57				
Top Width (ft)	273.56	Top Width (ft)	9.33	247.01
17.22				
Vel Total (ft/s)	13.11	Avg. Vel. (ft/s)	3.20	13.39
3.09				
Max Chl Dpth (ft)	5.75	Hydr. Depth (ft)	1.56	5.67
1.42				
Conv. Total (cfs)	189712.6	Conv. (cfs)	469.1	188483.7
759.9				
Length Wtd. (ft)		Wetted Per. (ft)	9.84	248.05
17.45				
Min Ch El (ft)	5657.17	Shear (lb/sq ft)	0.91	3.49
0.87				
Alpha	1.04	Stream Power (lb/ft s)	801.69	0.00
0.00				
Frctn Loss (ft)		Cum Volume (acre-ft)		
C & E Loss (ft)		Cum SA (acres)		



SUMMARY OF MANNING'S N VALUES

River:San Juan

Reach	River Sta.	n1	n2	n3
1	100.52	.06	.035	.06
1	0	.06	.035	.06

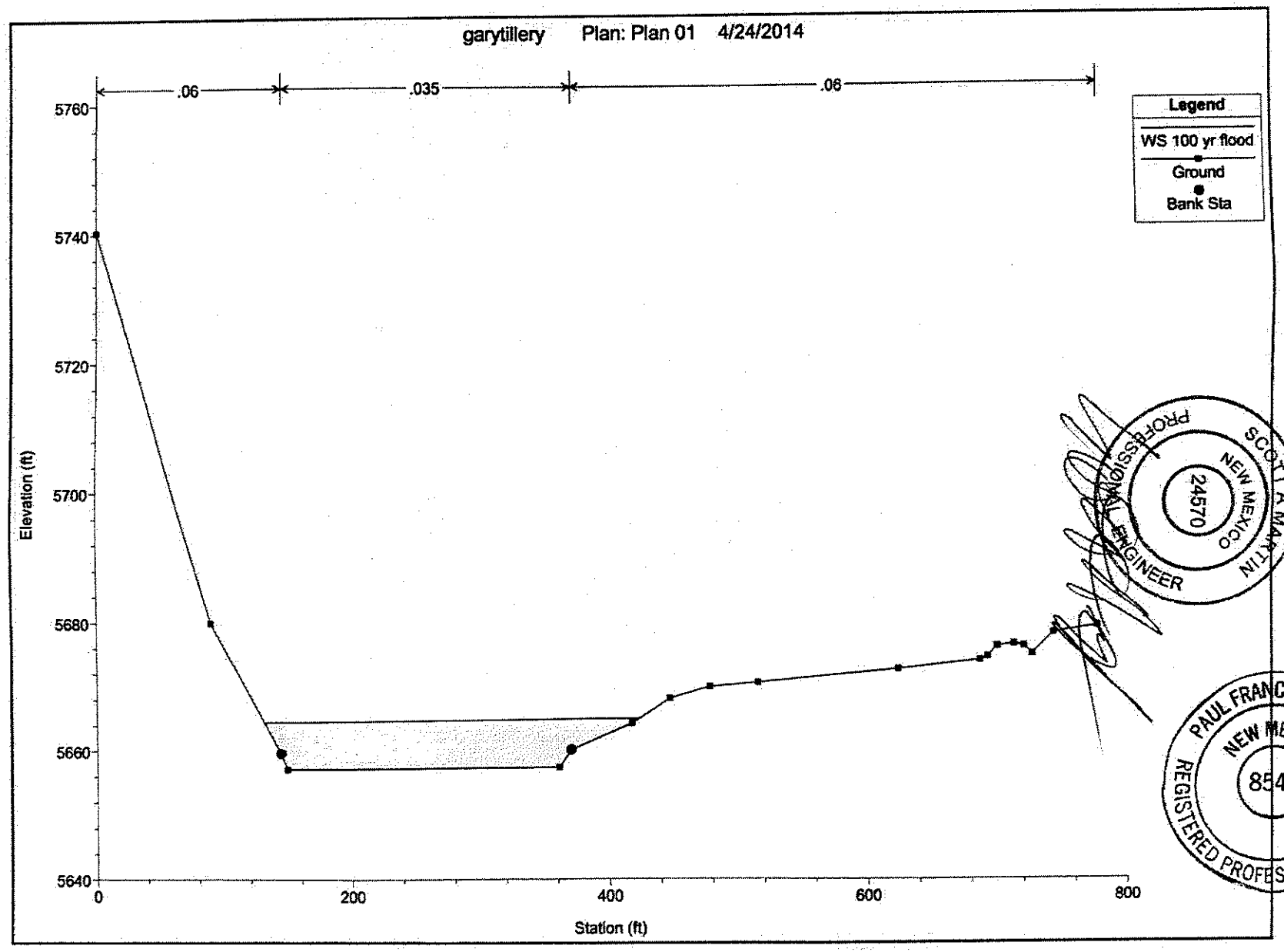
SUMMARY OF REACH LENGTHS

River: San Juan

Reach	River Sta.	Left	Channel	Right
1	100.52	100.52	100.52	100.52
1	0	0	0	0

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: San Juan

Reach	River Sta.	Contr.	Expan.
1	100.52	.1	.3
1	0	.1	.3



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