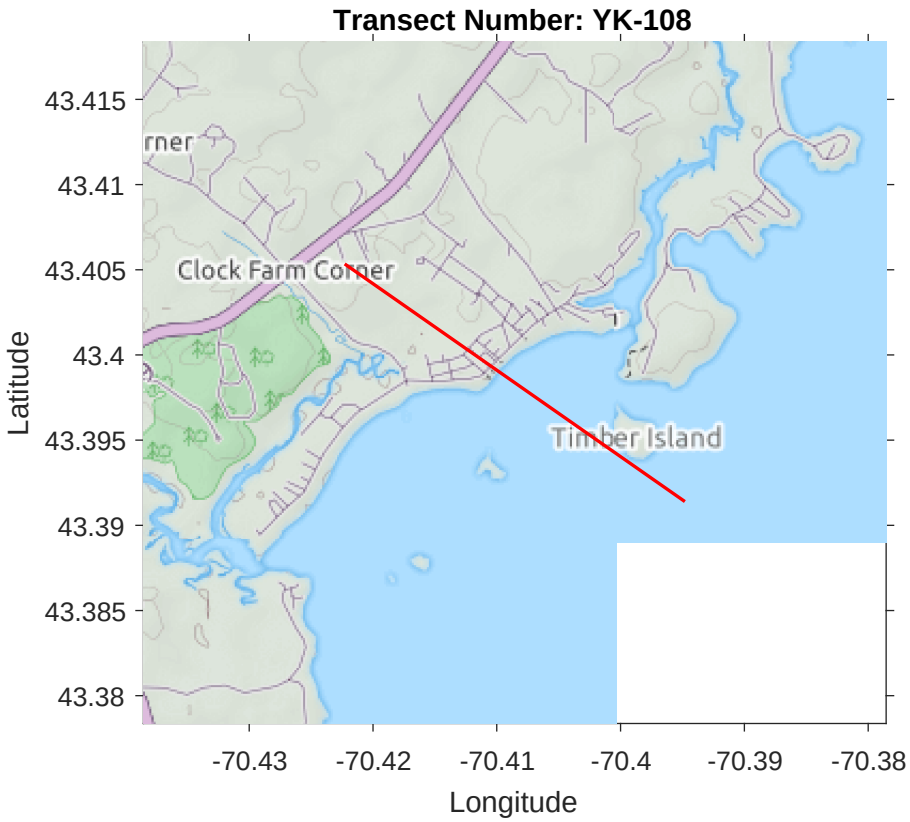
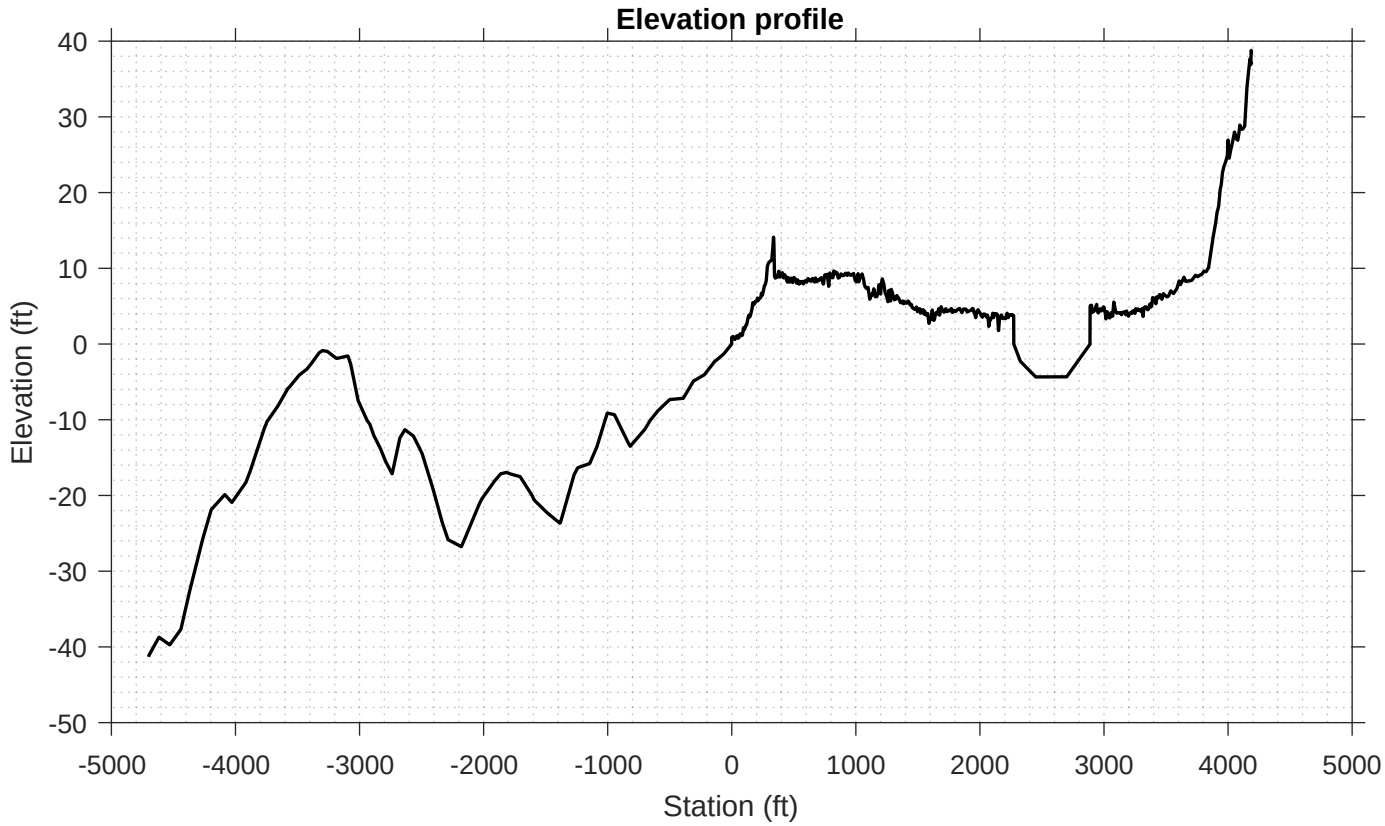

Transect Number: YK-108
Clock Farm Corner
Timber Island
Latitude
Longitude
43.415
43.41
43.405
43.4
43.395
43.39
43.385
43.38
-70.43
-70.42
-70.41
-70.4
-70.39
-70.38


Elevation profile
Elevation (ft)
Station (ft)
40
30
20
10
0
-10
-20
-30
-40
-50
-5000
-4000
-3000
-2000
-1000
0
1000
2000
3000
4000
5000

DATA LOG FOR TRANSECT ID: YK-108

PART 1: USER INPUT

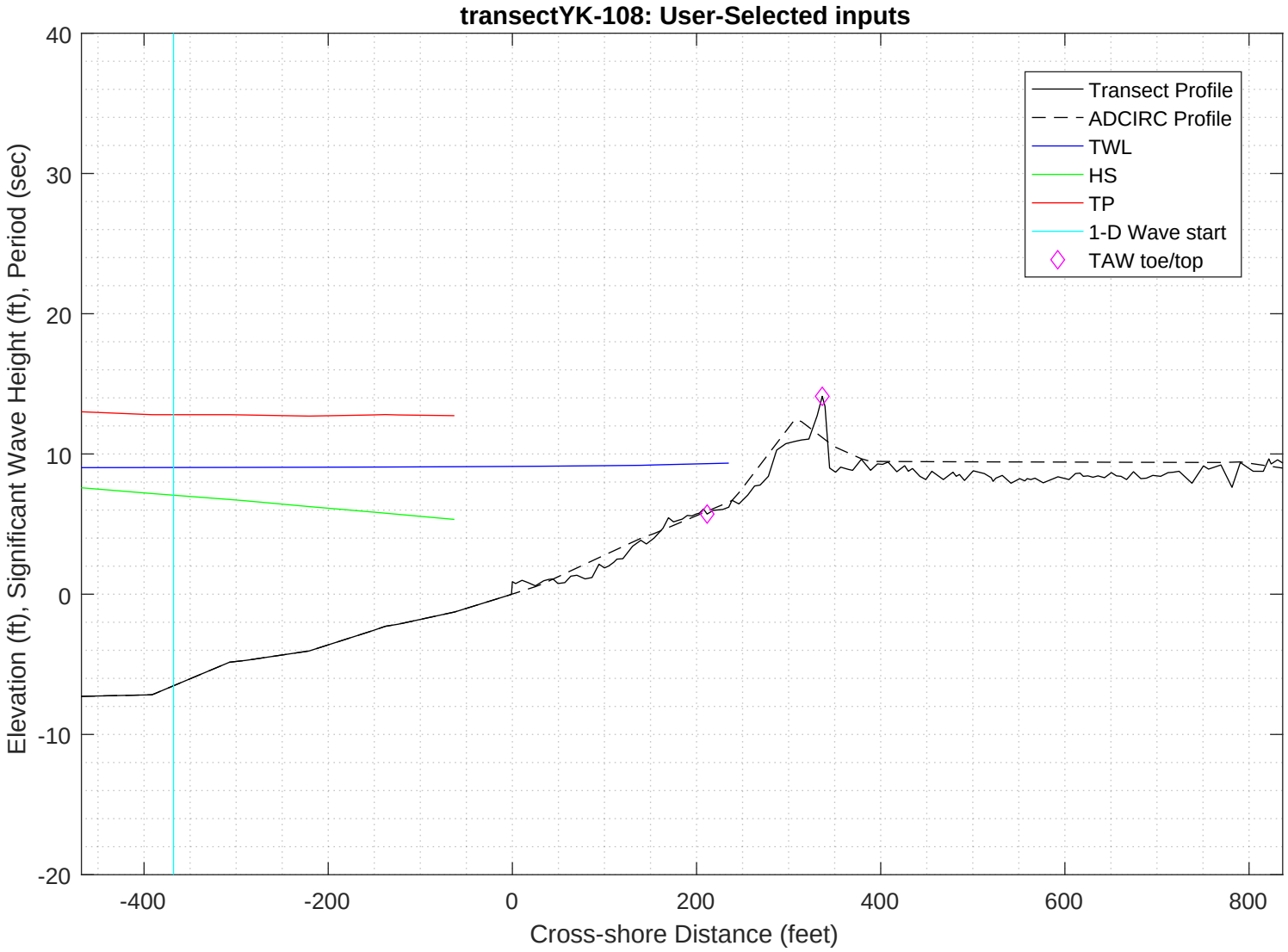
SWAN 1-D / WHAFIS input

station: -368 ft
LON: -70.4082 deg E
LAT: 43.3982 deg N
Bottom ELEV: -6.5279 ft-NAVD88
TWL: 9.0347 ft-NAVD88
HS: 7.0598 ft
TP: 12.8 sec
Wave Direction bin: 135 deg CCW from East (90 deg sector)
Transect Direction: 153.0954 deg CCW from East

TAW/RUNUP input

toe sta: 211.5 ft
toe elev: 5.7152 ft-NAVD88
top sta: 336.5 ft
top elev: 14.1109 ft-NAVD88
Wave and water level conditions at toe to be calculated in SWAN 1-D

PART 1 COMPLETE


transectYK-108: User-Selected inputs
Transect Profile
ADCIRC Profile
TWL
HS
TP
1-D Wave start
TAW toe/top
Elevation (ft), Significant Wave Height (ft), Period (sec)
Cross-shore Distance (feet)
40
30
20
10
0
-10
-20
-400
-200
0
200
400
600
800

_____
PART 2: SWAN 1-D

swan input grid name: 2_swan/gridfiles/YK-108zmeters_xmeters.grd
swan file name: 2_swan/swanfiles/YK-108.swn
swan output name: 2_swan/swanfiles/YK-108.dat

Boundary Conditions:
    TWL- 2.7538 meters
    HS- 2.1518 meters
    PER- 12.8 seconds

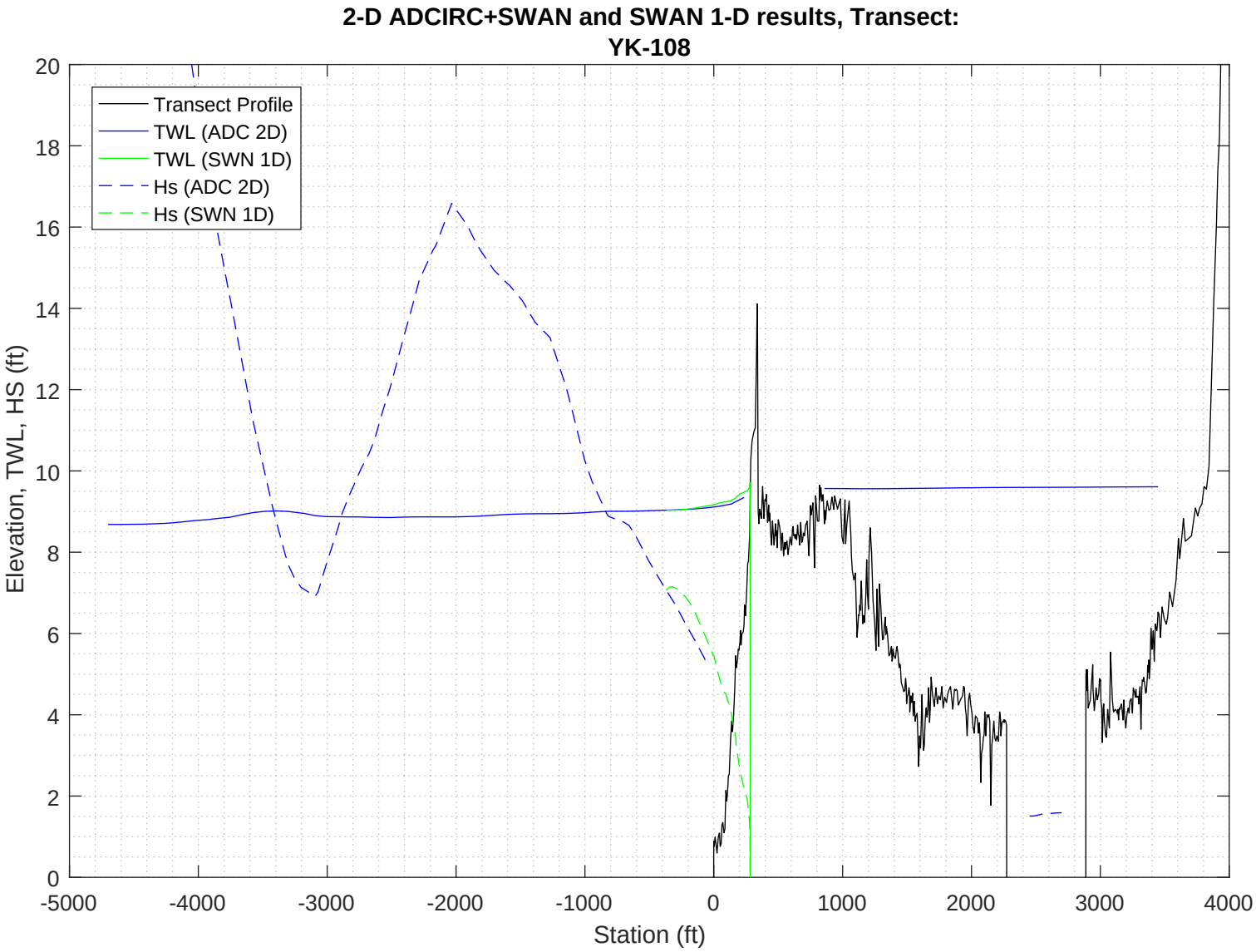
Batch File: 2_swan/swanfiles/runswan.dat

SWAN maximum additional wave setup: 0.68007 feet
SWAN output at toe:
    SETUP- 0.41366 feet
    HS-   2.4638 feet
    PER-   12.522 seconds

PART 2 COMPLETE_____

SWAN maximum additional wave setup: 0.68007 feet
SWAN output at toe:
    SETUP- 0.41366 feet
    HS-   2.4638 feet
    PER-   12.522 seconds

PART 2 COMPLETE_____


2-D ADCIRC+SWAN and SWAN 1-D results, Transect:
YK-108
Transect Profile
TWL (ADC 2D)
TWL (SWN 1D)
Hs (ADC 2D)
Hs (SWN 1D)
Elevation, TWL, HS (ft)
Station (ft)
20
18
16
14
12
10
8
6
4
2
0
-5000
-4000
-3000
-2000
-1000
0
1000
2000
3000
4000

1

Execution started at 20200401.174325

SWAN
SIMULATION OF WAVES IN NEAR SHORE AREAS
VERSION NUMBER 41.20A

```
PROJECT '2018FemaAppeal' '1'
   '100-year Wind and Wave conditions'
! -- SET commands ------------------------------------------------------
 SET DEPMIN=0.01 MAXMES=999 MAXERR=3 PWTAIL=4
 SET LEVEL 0
 SET CARTESIAN
! -- MODE commands -----------------------------------------------------
 MODE STATIONARY ONED
!-- COORDINATES commands-----------------------------------------------
COORDINATES CART
!
!  --  computational (CGRID) grid commands -------------------------------------
!                                  xlenc=length of grid in meters
!  mxc = number of mesh cells (one less than number of grid points)
!CGRID REGular [xpc]  [ypc]  [alpc]  [xlenc]   [ylenc]  [mxc]  [myc] &
!      [ CIRcle|SECtor[dir1] [dir2] ] [mdc] [flow] [fhigh] [msc]
 CGRID REGULAR   0      0       0      199       0.   199     0    &
       CIRCLE                          36    0.03    0.8     30
Resolution in sigma-space: df/f =  0.1157
! -- READgrid ---- not used in 1-D mode ----------------------------------
! -- INPgrid commands  -------------------------------------------------------
!INPgrid BOTtom REGular [xpinp] [ypinp] [alpinp] [mxinp] [myinp] [dxinp] [dyinp]
!
 INPGRID BOTTOM REGULAR    0       0        0      199   0      1       1
!READinp BOTtom [fac]  'fname1'  [idla]  [nhedf]  [FREe|FORmat[form]|UNFormatted]
 READ    BOTTOM   -1. '../gridfiles/YK-108zmeters_xmeters.grd'    1      0       FREE
!---------------------------------------------------------------------------
! -- WIND [vel] [dir]
WIND      25.1  0
! -- BOUnd SHAPespec
BOUND SHAPE JONSWAP 3.3  PEAK DSPR POWER
! -- BOUndspec
! BOU SIDE W CCW CON FILE 'swanspec.txt' 1
BOUN SIDE W CCW CONSTANT PAR   2.1518     12.8     0  2
!-- BOUndnest1  - optional for boundary from parent run
!-- BOUndnest2
!-- BOUndnest3
!-- INITial -- usest to specify initial values
!
```

```
!---------------- P H Y S I C S ------------------------
!-- GEN1 [cf10] [cf20] [cf30] [cf40] [edm1pm] [cdrag] [umin] [cfpm]
!-- GEN2 [cf10] [cf20] [cf30] [cf40] [cf50] [cf60] [edm1pm] [cdrag] [umin] [cfpm]
    GEN3 KOMEN
!   whitecapping ( on by default)
!-- WCAPping KOMen [cds2] [stpm] [powst] [delta] [powk]
    WCAP KOM
!   quadruplet wave interactions
!-- QUADrupl [iquad] [lambda] [Cn14] [Csh1] [Csh2]
! -- BREaking CONstant [alpha] [gamma]
     BREAK    CON       1.      0.73
!-- FRICtion JONswap CONstant [cfjon]
    FRIC     JONSWAP CON       0.038
!-- TRIad [itriad] [trfac] [cutfr]   [a]  [b]  [urcrit] [urslim]
! TRIAD        1      0.65    2.5    0.95 -0.75  0.2       0.01
  TRIAD
!-- VEGEtation [height] [diamtr] [nstems] [drag]
!-- MUD [layer] [rhom] [viscm]
!- LIMiter [ursell] [qb] deactivates quadruplets with Ursell number exceeds ursell
!-- OBSTacle -- not in 1-D
!-- SETUP [supcor]
   SETUP    0
!
! ----------------- N U M E R I C S -----------------------------
!
!-- PROP  can use BBST or GSE instead of default
! -- NUMeric -- lots of options
!     NUM ACCUR npnts=100. stat 30
     NUMeric STOPC
!
! -------------------O U T P U T ------------------------------
!
!OUTPut OPTIons "comment' (TABLE [field]) (BLOck [ndec] [len]) (SPEC [ndec])
 OUTPUT OPTIONS '%' TABLE 16
 $BLOCK 9 1000 SPEC 8
!CURve 'sname' [xp1] [yp1] <[int]   [xp]   [yp] >
 CURVE 'curve' 0     0      199  199    0
!TABLe 'sname' < HEADer|NOHEADer|INDexed > 'fname' <output parameters> (output time)
 Table 'curve'   HEADER 'YK-108.dat' XP YP HSIGN TPS RTP TMM10 DIR &
 DSPR DEPTH SETUP
!QUANTITY XP hexp=99999
!
!-----------------------------------------------
COMPUTE STATIONARY
------------------------------------------------------------------
                 COMPUTATIONAL PART OF SWAN
------------------------------------------------------------------
```

```
One-dimensional mode of SWAN is activated
Gridresolution       : MXC             200 MYC              1
                     : MCGRD           201
                     : MSC              31 MDC             36
                     : MTC               1
                     : NSTATC            0 ITERMX          50
Propagation flags    : ITFRE             1 IREFR            1
Source term flags    : IBOT              1 ISURF            1
                     : IWCAP             1 IWIND            3
                     : ITRIAD            1 IQUAD            2
                     : IVEG              0 ITURBV           0
                     : IMUD              0
Spatial step         : DX       0.1000E+01 DY       0.1000E+01
Spectral bin         : df/f     0.1157E+00 DDIR     0.1000E+02
Physical constants   : GRAV     0.9810E+01 RHO      0.1025E+04
Wind input           : WSPEED   0.2510E+02 DIR      0.0000E+00
Tail parameters      : E(f)     0.4000E+01 E(k)     0.2500E+01
                     : A(f)     0.5000E+01 A(k)     0.3000E+01
Accuracy parameters  : DREL     0.1000E-01 NPNTS    0.9950E+02
                     : DHABS    0.0000E+00 CURVAT   0.5000E-02
                     : GRWMX    0.1000E+00
Drying/flooding      : LEVEL    0.0000E+00 DEPMIN   0.1000E-01
The Cartesian convention for wind and wave directions is used
Scheme for geographic propagation is SORDUP
Scheme geogr. space  : PROPSC            2 ICMAX             7
Scheme spectral space: CSS      0.5000E+00 CDD      0.5000E+00
Current is off
Quadruplets          : IQUAD             2
                     : LAMBDA   0.2500E+00 CNL4     0.3000E+08
                     : CSH1     0.5500E+01 CSH2     0.8330E+00
                     : CSH3    -0.1250E+01
Maximum Ursell nr for Snl4 :    0.1000E+02
Triads               : ITRIAD            1 TRFAC    0.8000E+00
                     : CUTFR    0.2500E+01 URCRI    0.2000E+00
Minimum Ursell nr for Snl3 :    0.1000E-01
JONSWAP (‘73)        : GAMMA    0.3800E-01
Vegetation is off
Turbulence is off
Fluid mud is off
W-cap Komen (‘84)    : EMPCOF (CDS2):   0.2360E-04
W-cap Komen (‘84)    : APM (STPM)   :   0.3020E-02
W-cap Komen (‘84)    : POWST        :   0.2000E+01
W-cap Komen (‘84)    : DELTA        :   0.1000E+01
W-cap Komen (‘84)    : POWK         :   0.1000E+01
Wind drag is fit
Snyder/Komen wind input
Battjes&Janssen (‘78): ALPHA    0.1000E+01 GAMMA    0.7300E+00
Set-up               : SUPCOR   0.0000E+00
Diffraction is off
Janssen (‘89,‘90)    : ALPHA    0.1000E-01 KAPPA    0.4100E+00
Janssen (‘89,‘90)    : RHOA     0.1280E+01 RHOW     0.1025E+04

1st and 2nd gen. wind: CF10     0.1880E+03 CF20     0.5900E+00
                     : CF30     0.1200E+00 CF40     0.2500E+03
                     : CF50     0.2300E-02 CF60    -0.2230E+00
                     : CF70     0.0000E+00 CF80    -0.5600E+00
                     : RHOAW    0.1249E-02 EDMLPM   0.3600E-02
                     : CDRAG    0.1230E-02 UMIN     0.1000E+01
                     : LIM_PM   0.1300E+00

 ---------------------------------------------------------------
 First guess by 2nd generation model flags for first iteration:
 ITER       1 GRWMX      0.1000E+23 ALFA       0.0000E+00
 IWIND      2 IWCAP      0 IQUAD      0
 ITRIAD     1 IBOT       1 ISURF      1
 IVEG       0 ITURBV     0 IMUD       0
 ---------------------------------------------------------------
iteration    1; sweep 1
iteration    1; sweep 2
iteration    1; sweep 3
iteration    1; sweep 4
not possible to compute, first iteration

 ---------------------------------------------------------------
 Options given by user are activated for proceeding calculation:
 ITER       2 GRWMX      0.1000E+00 ALFA       0.0000E+00
 IWIND      3 IWCAP      1 IQUAD      2
 ITRIAD     1 IBOT       1 ISURF      1
 IVEG       0 ITURBV     0 IMUD       0
 ---------------------------------------------------------------
iteration    2; sweep 1
iteration    2; sweep 2
iteration    2; sweep 3
iteration    2; sweep 4
accuracy OK in  10.06 % of wet grid points ( 99.50 % required)

iteration    3; sweep 1
iteration    3; sweep 2
iteration    3; sweep 3
```

```
iteration    3; sweep 4
accuracy OK in   0.51 % of wet grid points ( 99.50 % required)

iteration    4; sweep 1
iteration    4; sweep 2
iteration    4; sweep 3
iteration    4; sweep 4
accuracy OK in  12.07 % of wet grid points ( 99.50 % required)

iteration    5; sweep 1
iteration    5; sweep 2
iteration    5; sweep 3
iteration    5; sweep 4
accuracy OK in  47.24 % of wet grid points ( 99.50 % required)

iteration    6; sweep 1
iteration    6; sweep 2
iteration    6; sweep 3
iteration    6; sweep 4
accuracy OK in  98.50 % of wet grid points ( 99.50 % required)

iteration    7; sweep 1
iteration    7; sweep 2
iteration    7; sweep 3
iteration    7; sweep 4
accuracy OK in  99.00 % of wet grid points ( 99.50 % required)

iteration    8; sweep 1
iteration    8; sweep 2
iteration    8; sweep 3
iteration    8; sweep 4
accuracy OK in  99.50 % of wet grid points ( 99.50 % required)


STOP
```

```
%
%
% Run:1     Table:curve             SWAN version:41.20A
%
%       Xp            Yp            Hsig          TPsmoo        RTpeak        Tm_10         Dir           Dspr          Depth         Setup
%      [m]           [m]            [m]           [sec]         [sec]         [sec]         [degr]        [degr]        [m]           [m]
%
          0.            0.       2.15170       12.4979       12.4477       11.5501         0.000        31.5057        4.7400       0.000000
          1.            0.       2.15604       12.5015       12.4477       11.3729         0.000        31.3554        4.7200      -0.000047
          2.            0.       2.16052       12.5049       12.4477       11.2109         0.000        31.1804        4.6898      -0.000164
          3.            0.       2.16433       12.5081       12.4477       11.0654         0.000        31.0186        4.6597      -0.000267
          4.            0.       2.16781       12.5109       12.4477       10.9351         0.000        30.8866        4.6296      -0.000362
          5.            0.       2.16992       12.5135       12.4477       10.8179         0.000        30.7619        4.6096      -0.000375
          6.            0.       2.17227       12.5158       12.4477       10.7129         0.000        30.6199        4.5795      -0.000458
          7.            0.       2.17411       12.5179       12.4477       10.6178         0.000        30.4709        4.5495      -0.000536
          8.            0.       2.17597       12.5198       12.4477       10.5289         0.000        30.3358        4.5194      -0.000611
          9.            0.       2.17669       12.5215       12.4477       10.4464         0.000        30.2049        4.4994      -0.000600
         10.            0.       2.17781       12.5230       12.4477       10.3711         0.000        30.0582        4.4693      -0.000662
         11.            0.       2.17857       12.5243       12.4477       10.3015         0.000        29.9059        4.4393      -0.000718
         12.            0.       2.17901       12.5255       12.4477       10.2370         0.000        29.7513        4.4092      -0.000766
         13.            0.       2.17936       12.5265       12.4477       10.1771         0.000        29.6115        4.3792      -0.000808
         14.            0.       2.17860       12.5274       12.4477       10.1208         0.000        29.4770        4.3592      -0.000756
         15.            0.       2.17833       12.5282       12.4477       10.0691         0.000        29.3278        4.3292      -0.000782
         16.            0.       2.17775       12.5289       12.4477       10.0208         0.000        29.1736        4.2992      -0.000799
         17.            0.       2.17708       12.5294       12.4477        9.9756         0.000        29.0334        4.2692      -0.000807
         18.            0.       2.17550       12.5299       12.4477        9.9325         0.000        28.9137        4.2493      -0.000716
         19.            0.       2.17396       12.5303       12.4477        9.8923         0.000        28.8163        4.2294      -0.000618
         20.            0.       2.17159       12.5305       12.4477        9.8539         0.000        28.7424        4.2196      -0.000421
         21.            0.       2.16934       12.5307       12.4477        9.8182         0.000        28.6916        4.2098      -0.000221
         22.            0.       2.16769       12.5307       12.4477        9.7681         0.000        28.6565        4.2101       0.000075
         23.            0.       2.16710       12.5307       12.4477        9.7166         0.000        28.6098        4.2003       0.000285
         24.            0.       2.16635       12.5305       12.4477        9.6663         0.000        28.5585        4.1905       0.000501
         25.            0.       2.16535       12.5303       12.4477        9.6183         0.000        28.5052        4.1807       0.000725
         26.            0.       2.16329       12.5299       12.4477        9.5773       359.991        28.4590        4.1710       0.000993
         27.            0.       2.16119       12.5295       12.4477        9.5375       359.987        28.4093        4.1613       0.001257
         28.            0.       2.15814       12.5290       12.4477        9.5041       359.964        28.3619        4.1516       0.001559
         29.            0.       2.15471       12.5284       12.4477        9.4735       359.934        28.3127        4.1419       0.001871
         30.            0.       2.15102       12.5277       12.4477        9.4452       359.897        28.2603        4.1322       0.002190
         31.            0.       2.14722       12.5270       12.4477        9.4182       359.862        28.2089        4.1225       0.002512
         32.            0.       2.14333       12.5263       12.4477        9.3924       359.827        28.1575        4.1128       0.002835
         33.            0.       2.13934       12.5254       12.4477        9.3678       359.794        28.1060        4.1032       0.003161
         34.            0.       2.13527       12.5246       12.4477        9.3443       359.761        28.0539        4.0935       0.003487
         35.            0.       2.13195       12.5237       12.4477        9.3171       359.749        28.0003        4.0838       0.003780
         36.            0.       2.12883       12.5228       12.4477        9.2893       359.744        27.9459        4.0741       0.004062
         37.            0.       2.12572       12.5219       12.4477        9.2620       359.743        27.8910        4.0643       0.004342
         38.            0.       2.12255       12.5209       12.4477        9.2355       359.744        27.8356        4.0546       0.004622
         39.            0.       2.11945       12.5199       12.4477        9.2099       359.745        27.7929        4.0449       0.004904
         40.            0.       2.11584       12.5189       12.4477        9.1791       359.733        27.7612        4.0453       0.005301
         41.            0.       2.11406       12.5179       12.4477        9.1398       359.741        27.7183        4.0356       0.005603
         42.            0.       2.11271       12.5170       12.4477        9.0968       359.746        27.6708        4.0259       0.005898
         43.            0.       2.11111       12.5162       12.4477        9.0551       359.750        27.6232        4.0162       0.006201
         44.            0.       2.10662       12.5154       12.4477        9.0295       359.753        27.5825        4.0066       0.006615
         45.            0.       2.10386       12.5148       12.4477        8.9988       359.754        27.5089        3.9869       0.006885
         46.            0.       2.10017       12.5142       12.4477        8.9727       359.727        27.4308        3.9672       0.007189
         47.            0.       2.09613       12.5136       12.4477        8.9481       359.691        27.3449        3.9475       0.007504
         48.            0.       2.09191       12.5131       12.4477        8.9240       359.655        27.2571        3.9278       0.007826
         49.            0.       2.08749       12.5127       12.4477        8.9008       359.621        27.1687        3.9082       0.008158
         50.            0.       2.08286       12.5123       12.4477        8.8782       359.588        27.0795        3.8885       0.008499
         51.            0.       2.07804       12.5119       12.4477        8.8565       359.556        26.9901        3.8689       0.008851
         52.            0.       2.07301       12.5116       12.4477        8.8356       359.525        26.9004        3.8492       0.009212
         53.            0.       2.06775       12.5114       12.4477        8.8156       359.493        26.8091        3.8296       0.009584
         54.            0.       2.06338       12.5112       12.4477        8.7903       359.488        26.7162        3.8099       0.009922
         55.            0.       2.05898       12.5110       12.4477        8.7640       359.491        26.6106        3.7903       0.010258
         56.            0.       2.05515       12.5108       12.4477        8.7398       359.497        26.4995        3.7605       0.010507
         57.            0.       2.05034       12.5107       12.4477        8.7147       359.503        26.3995        3.7409       0.010872
         58.            0.       2.04578       12.5106       12.4477        8.6866       359.510        26.3040        3.7213       0.011250
         59.            0.       2.04110       12.5105       12.4477        8.6584       359.516        26.2099        3.7016       0.011644
```

60.	0.	2.03616	12.5105	12.4477	8.6309	359.522	26.1162	3.6821	0.012052
61.	0.	2.03095	12.5105	12.4477	8.6045	359.528	26.0226	3.6625	0.012475
62.	0.	2.02547	12.5105	12.4477	8.5791	359.534	25.9290	3.6429	0.012912
63.	0.	2.01970	12.5105	12.4477	8.5550	359.540	25.8356	3.6234	0.013363
64.	0.	2.01355	12.5106	12.4477	8.5326	359.544	25.7437	3.6038	0.013833
65.	0.	2.00697	12.5107	12.4477	8.5117	359.547	25.6405	3.5843	0.014318
66.	0.	2.00077	12.5108	12.4477	8.4940	359.548	25.5325	3.5547	0.014720
67.	0.	1.99360	12.5109	12.4477	8.4752	359.548	25.4358	3.5352	0.015246
68.	0.	1.98626	12.5110	12.4477	8.4572	359.547	25.3423	3.5158	0.015782
69.	0.	1.97864	12.5112	12.4477	8.4400	359.545	25.2373	3.4963	0.016328
70.	0.	1.97192	12.5114	12.4477	8.4238	359.549	25.1382	3.4668	0.016772
71.	0.	1.96378	12.5115	12.4477	8.4036	359.554	25.0677	3.4574	0.017438
72.	0.	1.95574	12.5117	12.4477	8.3840	359.560	25.0066	3.4481	0.018099
73.	0.	1.94774	12.5118	12.4477	8.3650	359.567	24.9493	3.4388	0.018754
74.	0.	1.93985	12.5120	12.4477	8.3463	359.577	24.8936	3.4294	0.019398
75.	0.	1.93194	12.5121	12.4477	8.3280	359.589	24.8266	3.4200	0.020031
76.	0.	1.92484	12.5123	12.4477	8.3116	359.605	24.7555	3.4006	0.020554
77.	0.	1.91710	12.5125	12.4477	8.2926	359.629	24.6856	3.3912	0.021174
78.	0.	1.91046	12.5127	12.4477	8.2741	359.661	24.6125	3.3717	0.021670
79.	0.	1.90328	12.5128	12.4477	8.2530	359.700	24.5542	3.3623	0.022266
80.	0.	1.89620	12.5130	12.4477	8.2314	359.743	24.4882	3.3529	0.022851
81.	0.	1.88997	12.5132	12.4477	8.2114	359.788	24.4187	3.3333	0.023328
82.	0.	1.88290	12.5133	12.4477	8.1896	359.834	24.3506	3.3239	0.023913
83.	0.	1.87650	12.5135	12.4477	8.1707	359.883	24.2819	3.3044	0.024396
84.	0.	1.86919	12.5137	12.4477	8.1506	359.932	24.2147	3.2950	0.024991
85.	0.	1.86257	12.5138	12.4477	8.1333	359.982	24.1471	3.2755	0.025481
86.	0.	1.85509	12.5140	12.4477	8.1151	0.032	24.0927	3.2661	0.026085
87.	0.	1.84745	12.5141	12.4477	8.0982	0.079	24.0323	3.2567	0.026688
88.	0.	1.84050	12.5143	12.4477	8.0841	0.126	23.9688	3.2372	0.027185
89.	0.	1.83271	12.5144	12.4477	8.0684	0.172	23.9055	3.2278	0.027791
90.	0.	1.82565	12.5146	12.4477	8.0553	0.218	23.8409	3.2083	0.028290
91.	0.	1.81794	12.5147	12.4477	8.0400	0.262	23.7877	3.1989	0.028896
92.	0.	1.81023	12.5148	12.4477	8.0250	0.305	23.7271	3.1895	0.029495
93.	0.	1.80317	12.5150	12.4477	8.0125	0.348	23.6519	3.1700	0.029985
94.	0.	1.79596	12.5151	12.4477	8.0004	0.391	23.5723	3.1505	0.030483
95.	0.	1.78862	12.5152	12.4477	7.9886	0.433	23.4909	3.1310	0.030990
96.	0.	1.78129	12.5153	12.4477	7.9763	0.478	23.4084	3.1115	0.031500
97.	0.	1.77389	12.5155	12.4477	7.9640	0.525	23.3255	3.0920	0.032017
98.	0.	1.76653	12.5156	12.4477	7.9515	0.573	23.2404	3.0725	0.032533
99.	0.	1.75911	12.5157	12.4477	7.9391	0.621	23.1541	3.0531	0.033053
100.	0.	1.75157	12.5158	12.4477	7.9268	0.669	23.0674	3.0336	0.033583
101.	0.	1.74396	12.5160	12.4477	7.9145	0.718	22.9800	3.0141	0.034121
102.	0.	1.73621	12.5161	12.4477	7.9026	0.767	22.8925	2.9947	0.034669
103.	0.	1.72834	12.5162	12.4477	7.8910	0.815	22.8047	2.9752	0.035228
104.	0.	1.72034	12.5163	12.4477	7.8797	0.862	22.7168	2.9558	0.035797
105.	0.	1.71227	12.5164	12.4477	7.8685	0.911	22.6286	2.9364	0.036374
106.	0.	1.70407	12.5165	12.4477	7.8576	0.959	22.5404	2.9170	0.036960
107.	0.	1.69577	12.5166	12.4477	7.8471	1.006	22.4522	2.8976	0.037556
108.	0.	1.68735	12.5167	12.4477	7.8368	1.053	22.3638	2.8782	0.038161
109.	0.	1.67882	12.5168	12.4477	7.8269	1.100	22.2753	2.8588	0.038776
110.	0.	1.67012	12.5168	12.4477	7.8172	1.146	22.1754	2.8394	0.039398
111.	0.	1.66140	12.5169	12.4477	7.8091	1.189	21.9338	2.8099	0.039892
112.	0.	1.66072	12.5172	12.4477	7.8255	1.245	21.5155	2.6690	0.039032
113.	0.	1.65671	12.5173	12.4477	7.8370	1.313	21.1872	2.5486	0.038589
114.	0.	1.64096	12.5174	12.4477	7.8226	1.372	21.0008	2.5400	0.039956
115.	0.	1.62772	12.5174	12.4477	7.8173	1.426	20.8784	2.5010	0.040961
116.	0.	1.61048	12.5173	12.4477	7.8002	1.481	20.8742	2.5127	0.042689
117.	0.	1.59380	12.5173	12.4477	7.7818	1.535	20.9451	2.5344	0.044425
118.	0.	1.57788	12.5172	12.4477	7.7620	1.590	21.0615	2.5661	0.046125
119.	0.	1.56336	12.5171	12.4477	7.7432	1.640	21.1608	2.5976	0.047644
120.	0.	1.55112	12.5170	12.4477	7.7300	1.682	21.1466	2.6088	0.048775
121.	0.	1.54280	12.5169	12.4477	7.7301	1.718	21.0268	2.5693	0.049261
122.	0.	1.53399	12.5169	12.4477	7.7304	1.753	20.8841	2.5298	0.049781
123.	0.	1.52411	12.5168	12.4477	7.7282	1.790	20.7717	2.5005	0.050470
124.	0.	1.51260	12.5167	12.4477	7.7210	1.828	20.6969	2.4914	0.051425
125.	0.	1.50156	12.5166	12.4477	7.7143	1.870	20.6779	2.4824	0.052364
126.	0.	1.48918	12.5165	12.4477	7.7002	1.919	20.8030	2.5036	0.053627

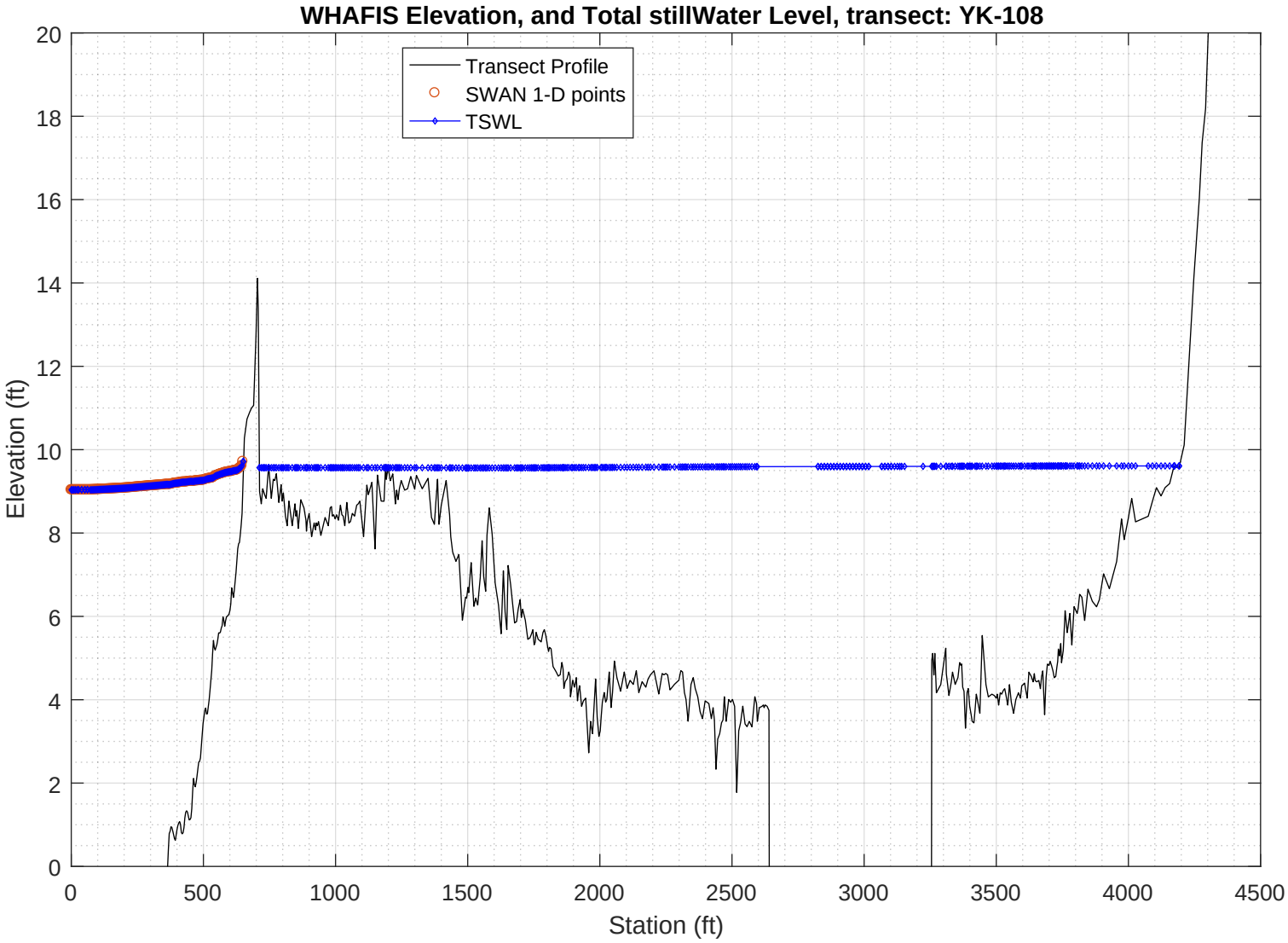
127.	0.	1.47499	12.5163	12.4477	7.6762	1.970	20.9664	2.5652	0.055215
128.	0.	1.46566	12.5162	12.4477	7.6654	2.009	21.0128	2.5761	0.056075
129.	0.	1.45787	12.5161	12.4477	7.6601	2.039	20.9560	2.5667	0.056662
130.	0.	1.45184	12.5160	12.4477	7.6628	2.059	20.7829	2.5269	0.056914
131.	0.	1.44739	12.5160	12.4477	7.6738	2.078	20.5661	2.4569	0.056876
132.	0.	1.43998	12.5159	12.4477	7.6766	2.104	20.4150	2.4173	0.057271
133.	0.	1.43011	12.5158	12.4477	7.6716	2.138	20.3537	2.4081	0.058069
134.	0.	1.41927	12.5157	12.4477	7.6610	2.178	20.3780	2.4191	0.059084
135.	0.	1.40862	12.5155	12.4477	7.6476	2.222	20.4685	2.4401	0.060146
136.	0.	1.39802	12.5154	12.4477	7.6318	2.263	20.5479	2.4712	0.061222
137.	0.	1.39020	12.5153	12.4477	7.6244	2.294	20.5534	2.4719	0.061887
138.	0.	1.38292	12.5152	12.4477	7.6197	2.314	20.4425	2.4624	0.062409
139.	0.	1.37928	12.5152	12.4477	7.6314	2.317	20.1407	2.3923	0.062285
140.	0.	1.37803	12.5152	12.4477	7.6572	2.313	19.7256	2.2717	0.061656
141.	0.	1.37409	12.5152	12.4477	7.6778	2.336	19.4749	2.1714	0.061411
142.	0.	1.35747	12.5150	12.4477	7.6595	2.385	19.4942	2.2132	0.063174
143.	0.	1.34382	12.5149	12.4477	7.6472	2.423	19.4746	2.2345	0.064507
144.	0.	1.33469	12.5149	12.4477	7.6493	2.446	19.3429	2.2051	0.065136
145.	0.	1.32665	12.5148	12.4477	7.6575	2.464	19.1441	2.1555	0.065547
146.	0.	1.31779	12.5148	12.4477	7.6661	2.484	18.9209	2.1060	0.066030
147.	0.	1.30832	12.5148	12.4477	7.6749	2.513	18.7563	2.0566	0.066608
148.	0.	1.29399	12.5147	12.4477	7.6697	2.548	18.6454	2.0579	0.067928
149.	0.	1.28243	12.5147	12.4477	7.6730	2.570	18.4403	2.0288	0.068793
150.	0.	1.27452	12.5147	12.4477	7.6902	2.581	18.1157	1.9490	0.069022
151.	0.	1.26583	12.5148	12.4477	7.7089	2.595	17.7460	1.8593	0.069277
152.	0.	1.25429	12.5149	12.4477	7.7231	2.626	17.4071	1.7799	0.069927
153.	0.	1.23755	12.5150	12.4477	7.7288	2.663	17.1230	1.7314	0.071375
154.	0.	1.21993	12.5151	12.4477	7.7343	2.713	16.9106	1.6830	0.072994
155.	0.	1.19804	12.5152	12.4477	7.7291	2.786	16.8778	1.6754	0.075405
156.	0.	1.17280	12.5152	12.4477	7.7111	2.864	16.9375	1.7184	0.078405
157.	0.	1.15425	12.5153	12.4477	7.7059	2.915	16.8654	1.7203	0.080341
158.	0.	1.14135	12.5155	12.4477	7.7157	2.948	16.6681	1.6714	0.081384
159.	0.	1.12755	12.5156	12.4477	7.7254	2.971	16.3975	1.6225	0.082525
160.	0.	1.11457	12.5158	12.4477	7.7399	2.989	16.0593	1.5535	0.083490
161.	0.	1.10069	12.5161	12.4477	7.7553	3.012	15.6897	1.4746	0.084553
162.	0.	1.08299	12.5164	12.4477	7.7665	3.022	15.2398	1.4062	0.086165
163.	0.	1.06832	12.5168	12.4477	7.7869	3.034	14.7016	1.2872	0.087197
164.	0.	1.04624	12.5173	12.4477	7.7976	3.112	14.3987	1.1896	0.089606
165.	0.	1.00331	12.5177	12.4477	7.7689	3.240	14.4500	1.2459	0.095882
166.	0.	0.97109	12.5180	12.4477	7.7548	3.338	14.4572	1.2701	0.100142
167.	0.	0.94752	12.5183	12.4477	7.7562	3.407	14.3743	1.2530	0.102956
168.	0.	0.92540	12.5187	12.4477	7.7594	3.456	14.2286	1.2355	0.105545
169.	0.	0.90640	12.5190	12.4477	7.7692	3.491	14.0237	1.1977	0.107650
170.	0.	0.88724	12.5194	12.4477	7.7789	3.540	13.8648	1.1598	0.109828
171.	0.	0.86381	12.5198	12.4477	7.7756	3.604	13.7782	1.1627	0.112730
172.	0.	0.84353	12.5201	12.4477	7.7762	3.656	13.6669	1.1551	0.115133
173.	0.	0.82669	12.5205	12.4477	7.7833	3.700	13.5320	1.1270	0.117020
174.	0.	0.80890	12.5209	12.4477	7.7866	3.724	13.3423	1.1091	0.119056
175.	0.	0.79586	12.5213	12.4477	7.8016	3.773	13.1913	1.0504	0.120399
176.	0.	0.77332	12.5217	12.4477	7.7888	3.889	13.3086	1.0733	0.123303
177.	0.	0.75096	12.5220	12.4477	7.7667	3.979	13.3686	1.1261	0.126084
178.	0.	0.74148	12.5223	12.4477	7.7756	4.009	13.2528	1.0870	0.126989
179.	0.	0.73042	12.5227	12.4477	7.7817	4.042	13.1283	1.0581	0.128130
180.	0.	0.71715	12.5230	12.4477	7.7800	4.091	13.0539	1.0496	0.129610
181.	0.	0.70358	12.5233	12.4477	7.7745	4.143	12.9982	1.0511	0.131140
182.	0.	0.69203	12.5236	12.4477	7.7727	4.176	12.8955	1.0424	0.132382
183.	0.	0.68282	12.5239	12.4477	7.7782	4.176	12.7037	1.0133	0.133285
184.	0.	0.67479	12.5242	12.4477	7.7906	4.115	12.3443	0.9640	0.133985
185.	0.	0.67119	12.5248	12.4477	7.8214	4.110	12.0605	0.8540	0.134010
186.	0.	0.64767	12.5251	12.4477	7.8021	4.224	12.1510	0.8872	0.137177
187.	0.	0.62711	12.5254	12.4477	7.7798	4.298	12.1528	0.9298	0.139757
188.	0.	0.61948	12.5258	12.4477	7.7869	4.270	11.9086	0.8805	0.140463
189.	0.	0.61200	12.5262	12.4477	7.8046	4.207	11.5333	0.8111	0.141111
190.	0.	0.60107	12.5267	12.4477	7.8191	4.126	11.0922	0.7423	0.142273
191.	0.	0.58696	12.5273	12.4477	7.8318	4.026	10.5758	0.6640	0.143970
192.	0.	0.56820	12.5281	12.4477	7.8379	3.952	10.0938	0.5766	0.146609
193.	0.	0.53659	12.5289	12.4477	7.8221	3.954	9.7955	0.5419	0.151912

194.	0.	0.50166	12.5294	12.4477	7.8013	3.964	9.5372	0.5378	0.157767
195.	0.	0.47583	12.5299	12.4477	7.8098	3.911	9.1933	0.4819	0.161896
196.	0.	0.44501	12.5305	12.4477	7.8934	3.677	8.8426	0.4172	0.167193
197.	0.	0.39257	12.5319	12.4477	8.3406	3.196	9.0911	0.3471	0.177127
198.	0.	0.25861	12.7412	12.4477	10.1717	2.534	11.0698	0.1673	0.207286
199.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000

PART 3: WHAFIS

WHAFIS input: YK-108.dat
WHAFIS output: YK-108.out

PART 3 COMPLETE


WHAFIS Elevation, and Total stillWater Level, transect: YK-108
Transect Profile
SWAN 1-D points
TSWL
Elevation (ft)
Station (ft)
0
2
4
6
8
10
12
14
16
18
20
0
500
1000
1500
2000
2500
3000
3500
4000
4500

WAVE HEIGHT COMPUTATIONS FOR FLOOD INSURANCE STUDIES (WHAFIS VERSION 4.0G, 08_2007)
Executed on: Thu Apr 2 11:05:19 2020
Input file: C:\FEMA-TransectAnalysis\LOMR-TransectAnalysis-Kennebunkport\3_whafis\whafis4\YK-108.dat
Output file: C:\FEMA-TransectAnalysis\LOMR-TransectAnalysis-Kennebunkport\3_whafis\whafis4\YK-108.out

header

THIS IS A 100-YEAR CASE
THE FOLLOWING NON-DEFAULT WIND SPEEDS ARE BEING USED
WINDIF 56.14 WINDOF 56.14 WINDVH 60.00

PART1 INPUT

IE	0.000	-6.528	1.000	1.000	9.035	11.296	12.800	56.140	0.028	0.000
OF	3.000	-6.445	0.000	9.035	0.000	0.000	0.000	0.000	0.028	0.000
OF	4.000	-6.417	0.000	9.035	0.000	0.000	0.000	0.000	0.028	0.000
OF	9.000	-6.279	0.000	9.036	0.000	0.000	0.000	0.000	0.028	0.000
OF	10.000	-6.252	0.000	9.036	0.000	0.000	0.000	0.000	0.028	0.000
OF	15.000	-6.114	0.000	9.036	0.000	0.000	0.000	0.000	0.028	0.000
OF	16.000	-6.086	0.000	9.036	0.000	0.000	0.000	0.000	0.028	0.000
OF	22.000	-5.920	0.000	9.037	0.000	0.000	0.000	0.000	0.028	0.000
OF	27.000	-5.782	0.000	9.037	0.000	0.000	0.000	0.000	0.028	0.000
OF	28.000	-5.755	0.000	9.038	0.000	0.000	0.000	0.000	0.028	0.000
OF	39.000	-5.451	0.000	9.039	0.000	0.000	0.000	0.000	0.028	0.000
OF	40.000	-5.424	0.000	9.039	0.000	0.000	0.000	0.000	0.028	0.000
OF	51.000	-5.120	0.000	9.040	0.000	0.000	0.000	0.000	0.028	0.000
OF	52.000	-5.092	0.000	9.040	0.000	0.000	0.000	0.000	0.027	0.000
OF	61.000	-4.847	0.000	9.041	0.000	0.000	0.000	0.000	0.025	0.000
OF	62.000	-4.840	0.000	9.041	0.000	0.000	0.000	0.000	0.007	0.000
OF	72.200	-4.765	0.000	9.035	0.000	0.000	0.000	0.000	0.007	0.000
OF	75.500	-4.741	0.000	9.036	0.000	0.000	0.000	0.000	0.008	0.000
OF	78.700	-4.715	0.000	9.036	0.000	0.000	0.000	0.000	0.009	0.000
OF	82.000	-4.684	0.000	9.037	0.000	0.000	0.000	0.000	0.010	0.000
OF	85.300	-4.652	0.000	9.038	0.000	0.000	0.000	0.000	0.010	0.000
OF	88.600	-4.620	0.000	9.039	0.000	0.000	0.000	0.000	0.010	0.000
OF	91.900	-4.588	0.000	9.040	0.000	0.000	0.000	0.000	0.010	0.000
OF	95.100	-4.556	0.000	9.041	0.000	0.000	0.000	0.000	0.010	0.000
OF	98.400	-4.524	0.000	9.042	0.000	0.000	0.000	0.000	0.010	0.000
OF	101.700	-4.492	0.000	9.043	0.000	0.000	0.000	0.000	0.010	0.000
OF	105.000	-4.460	0.000	9.044	0.000	0.000	0.000	0.000	0.010	0.000
OF	108.300	-4.428	0.000	9.045	0.000	0.000	0.000	0.000	0.010	0.000
OF	111.500	-4.396	0.000	9.046	0.000	0.000	0.000	0.000	0.010	0.000
OF	114.800	-4.364	0.000	9.047	0.000	0.000	0.000	0.000	0.010	0.000
OF	118.100	-4.332	0.000	9.048	0.000	0.000	0.000	0.000	0.010	0.000
OF	121.400	-4.300	0.000	9.049	0.000	0.000	0.000	0.000	0.010	0.000
OF	124.700	-4.268	0.000	9.050	0.000	0.000	0.000	0.000	0.010	0.000
OF	128.000	-4.236	0.000	9.051	0.000	0.000	0.000	0.000	0.010	0.000
OF	131.200	-4.204	0.000	9.052	0.000	0.000	0.000	0.000	0.010	0.000
OF	134.500	-4.172	0.000	9.053	0.000	0.000	0.000	0.000	0.010	0.000
OF	137.800	-4.140	0.000	9.054	0.000	0.000	0.000	0.000	0.010	0.000
OF	141.100	-4.108	0.000	9.055	0.000	0.000	0.000	0.000	0.010	0.000
OF	144.400	-4.076	0.000	9.056	0.000	0.000	0.000	0.000	0.011	0.000
OF	147.600	-4.038	0.000	9.057	0.000	0.000	0.000	0.000	0.016	0.000
OF	150.900	-3.971	0.000	9.058	0.000	0.000	0.000	0.000	0.021	0.000
OF	154.200	-3.902	0.000	9.059	0.000	0.000	0.000	0.000	0.021	0.000
OF	157.500	-3.833	0.000	9.060	0.000	0.000	0.000	0.000	0.021	0.000
OF	160.800	-3.764	0.000	9.061	0.000	0.000	0.000	0.000	0.021	0.000
OF	164.000	-3.695	0.000	9.063	0.000	0.000	0.000	0.000	0.021	0.000
OF	167.300	-3.626	0.000	9.064	0.000	0.000	0.000	0.000	0.021	0.000
OF	170.600	-3.558	0.000	9.065	0.000	0.000	0.000	0.000	0.021	0.000
OF	173.900	-3.489	0.000	9.066	0.000	0.000	0.000	0.000	0.021	0.000
OF	177.200	-3.420	0.000	9.067	0.000	0.000	0.000	0.000	0.021	0.000
OF	180.400	-3.351	0.000	9.068	0.000	0.000	0.000	0.000	0.021	0.000
OF	183.700	-3.282	0.000	9.069	0.000	0.000	0.000	0.000	0.021	0.000
OF	187.000	-3.214	0.000	9.070	0.000	0.000	0.000	0.000	0.021	0.000
OF	190.300	-3.145	0.000	9.072	0.000	0.000	0.000	0.000	0.021	0.000
OF	193.600	-3.076	0.000	9.073	0.000	0.000	0.000	0.000	0.021	0.000
OF	196.800	-3.007	0.000	9.074	0.000	0.000	0.000	0.000	0.021	0.000
OF	200.100	-2.938	0.000	9.076	0.000	0.000	0.000	0.000	0.021	0.000
OF	203.400	-2.869	0.000	9.077	0.000	0.000	0.000	0.000	0.021	0.000
OF	206.700	-2.800	0.000	9.079	0.000	0.000	0.000	0.000	0.021	0.000
OF	210.000	-2.732	0.000	9.080	0.000	0.000	0.000	0.000	0.021	0.000
OF	213.300	-2.663	0.000	9.082	0.000	0.000	0.000	0.000	0.021	0.000
OF	216.500	-2.592	0.000	9.083	0.000	0.000	0.000	0.000	0.022	0.000
OF	219.800	-2.519	0.000	9.085	0.000	0.000	0.000	0.000	0.022	0.000
OF	223.100	-2.445	0.000	9.087	0.000	0.000	0.000	0.000	0.022	0.000
OF	226.400	-2.371	0.000	9.088	0.000	0.000	0.000	0.000	0.022	0.000
OF	229.700	-2.297	0.000	9.090	0.000	0.000	0.000	0.000	0.018	0.000
OF	232.900	-2.257	0.000	9.092	0.000	0.000	0.000	0.000	0.012	0.000
OF	236.200	-2.222	0.000	9.094	0.000	0.000	0.000	0.000	0.011	0.000
OF	239.500	-2.187	0.000	9.096	0.000	0.000	0.000	0.000	0.011	0.000
OF	242.800	-2.152	0.000	9.098	0.000	0.000	0.000	0.000	0.012	0.000
OF	246.100	-2.110	0.000	9.101	0.000	0.000	0.000	0.000	0.014	0.000
OF	249.300	-2.063	0.000	9.102	0.000	0.000	0.000	0.000	0.014	0.000
OF	252.600	-2.017	0.000	9.104	0.000	0.000	0.000	0.000	0.014	0.000
OF	255.900	-1.970	0.000	9.106	0.000	0.000	0.000	0.000	0.014	0.000
OF	259.200	-1.923	0.000	9.108	0.000	0.000	0.000	0.000	0.014	0.000
OF	262.500	-1.877	0.000	9.110	0.000	0.000	0.000	0.000	0.014	0.000
OF	265.700	-1.830	0.000	9.111	0.000	0.000	0.000	0.000	0.014	0.000
OF	269.000	-1.783	0.000	9.113	0.000	0.000	0.000	0.000	0.014	0.000
OF	272.300	-1.737	0.000	9.115	0.000	0.000	0.000	0.000	0.014	0.000
OF	275.600	-1.690	0.000	9.117	0.000	0.000	0.000	0.000	0.014	0.000
OF	278.900	-1.643	0.000	9.118	0.000	0.000	0.000	0.000	0.014	0.000
OF	282.200	-1.597	0.000	9.120	0.000	0.000	0.000	0.000	0.014	0.000
OF	285.400	-1.550	0.000	9.122	0.000	0.000	0.000	0.000	0.014	0.000
OF	288.700	-1.503	0.000	9.124	0.000	0.000	0.000	0.000	0.014	0.000
OF	292.000	-1.457	0.000	9.126	0.000	0.000	0.000	0.000	0.014	0.000
OF	295.300	-1.410	0.000	9.128	0.000	0.000	0.000	0.000	0.014	0.000
OF	298.600	-1.363	0.000	9.130	0.000	0.000	0.000	0.000	0.014	0.000
OF	301.800	-1.316	0.000	9.132	0.000	0.000	0.000	0.000	0.014	0.000
OF	305.100	-1.269	0.000	9.133	0.000	0.000	0.000	0.000	0.017	0.000
OF	308.400	-1.205	0.000	9.135	0.000	0.000	0.000	0.000	0.020	0.000
OF	311.700	-1.138	0.000	9.136	0.000	0.000	0.000	0.000	0.020	0.000
OF	315.000	-1.072	0.000	9.138	0.000	0.000	0.000	0.000	0.021	0.000
OF	318.200	-1.005	0.000	9.140	0.000	0.000	0.000	0.000	0.021	0.000
OF	321.500	-0.938	0.000	9.142	0.000	0.000	0.000	0.000	0.020	0.000

OF	324.800	-0.872	0.000	9.143	0.000	0.000	0.000	0.000	0.020	0.000
OF	328.100	-0.805	0.000	9.145	0.000	0.000	0.000	0.000	0.020	0.000
OF	331.400	-0.738	0.000	9.147	0.000	0.000	0.000	0.000	0.021	0.000
OF	334.600	-0.671	0.000	9.149	0.000	0.000	0.000	0.000	0.021	0.000
OF	337.900	-0.605	0.000	9.150	0.000	0.000	0.000	0.000	0.020	0.000
OF	341.200	-0.538	0.000	9.152	0.000	0.000	0.000	0.000	0.020	0.000
OF	344.500	-0.471	0.000	9.154	0.000	0.000	0.000	0.000	0.020	0.000
OF	347.800	-0.405	0.000	9.156	0.000	0.000	0.000	0.000	0.021	0.000
OF	351.000	-0.338	0.000	9.158	0.000	0.000	0.000	0.000	0.021	0.000
OF	354.300	-0.271	0.000	9.160	0.000	0.000	0.000	0.000	0.020	0.000
OF	357.600	-0.204	0.000	9.162	0.000	0.000	0.000	0.000	0.020	0.000
OF	360.900	-0.138	0.000	9.164	0.000	0.000	0.000	0.000	0.021	0.000
OF	364.200	-0.068	0.000	9.166	0.000	0.000	0.000	0.000	0.081	0.000
IF	367.500	0.400	0.000	9.163	0.000	0.000	0.000	0.000	0.132	0.000
IF	370.700	0.790	0.000	9.161	0.000	0.000	0.000	0.000	0.068	0.000
IF	374.000	0.844	0.000	9.166	0.000	0.000	0.000	0.000	0.024	0.000
IF	377.300	0.951	0.000	9.169	0.000	0.000	0.000	0.000	0.014	0.000
IF	380.600	0.938	0.000	9.175	0.000	0.000	0.000	0.000	-0.014	0.000
IF	383.900	0.856	0.000	9.181	0.000	0.000	0.000	0.000	-0.027	0.000
IF	387.100	0.765	0.000	9.186	0.000	0.000	0.000	0.000	-0.028	0.000
IF	390.400	0.671	0.000	9.191	0.000	0.000	0.000	0.000	-0.021	0.000
IF	393.700	0.625	0.000	9.195	0.000	0.000	0.000	0.000	0.013	0.000
IF	397.000	0.757	0.000	9.196	0.000	0.000	0.000	0.000	0.040	0.000
IF	400.300	0.888	0.000	9.198	0.000	0.000	0.000	0.000	0.035	0.000
IF	403.500	0.986	0.000	9.200	0.000	0.000	0.000	0.000	0.024	0.000
IF	406.800	1.044	0.000	9.203	0.000	0.000	0.000	0.000	0.014	0.000
IF	410.100	1.075	0.000	9.207	0.000	0.000	0.000	0.000	-0.006	0.000
IF	413.400	1.007	0.000	9.211	0.000	0.000	0.000	0.000	-0.040	0.000
IF	416.700	0.811	0.000	9.216	0.000	0.000	0.000	0.000	-0.034	0.000
IF	419.900	0.783	0.000	9.219	0.000	0.000	0.000	0.000	0.000	0.000
IF	423.200	0.811	0.000	9.221	0.000	0.000	0.000	0.000	0.023	0.000
IF	426.500	0.933	0.000	9.222	0.000	0.000	0.000	0.000	0.054	0.000
IF	429.800	1.165	0.000	9.221	0.000	0.000	0.000	0.000	0.056	0.000
IF	433.100	1.302	0.000	9.223	0.000	0.000	0.000	0.000	0.026	0.000
IF	436.400	1.335	0.000	9.225	0.000	0.000	0.000	0.000	0.000	0.000
IF	439.600	1.305	0.000	9.229	0.000	0.000	0.000	0.000	-0.019	0.000
IF	442.900	1.210	0.000	9.232	0.000	0.000	0.000	0.000	-0.029	0.000
IF	446.200	1.116	0.000	9.236	0.000	0.000	0.000	0.000	-0.013	0.000
IF	449.500	1.125	0.000	9.238	0.000	0.000	0.000	0.000	0.008	0.000
IF	452.800	1.168	0.000	9.240	0.000	0.000	0.000	0.000	0.040	0.000
IF	456.000	1.385	0.000	9.239	0.000	0.000	0.000	0.000	0.097	0.000
IF	459.300	1.800	0.000	9.237	0.000	0.000	0.000	0.000	0.110	0.000
IF	462.600	2.113	0.000	9.236	0.000	0.000	0.000	0.000	0.026	0.000
IF	465.900	1.969	0.000	9.242	0.000	0.000	0.000	0.000	-0.031	0.000
IF	469.200	1.910	0.000	9.246	0.000	0.000	0.000	0.000	0.006	0.000
IF	472.400	2.006	0.000	9.248	0.000	0.000	0.000	0.000	0.039	0.000
IF	475.700	2.162	0.000	9.250	0.000	0.000	0.000	0.000	0.050	0.000
IF	479.000	2.336	0.000	9.251	0.000	0.000	0.000	0.000	0.052	0.000
IF	482.300	2.504	0.000	9.253	0.000	0.000	0.000	0.000	0.028	0.000
IF	485.600	2.520	0.000	9.258	0.000	0.000	0.000	0.000	0.015	0.000
IF	488.800	2.604	0.000	9.260	0.000	0.000	0.000	0.000	0.055	0.000
IF	492.100	2.881	0.000	9.261	0.000	0.000	0.000	0.000	0.084	0.000
IF	495.400	3.158	0.000	9.262	0.000	0.000	0.000	0.000	0.083	0.000
IF	498.700	3.428	0.000	9.264	0.000	0.000	0.000	0.000	0.064	0.000
IF	502.000	3.583	0.000	9.269	0.000	0.000	0.000	0.000	0.048	0.000
IF	505.200	3.738	0.000	9.274	0.000	0.000	0.000	0.000	0.033	0.000
IF	508.500	3.800	0.000	9.282	0.000	0.000	0.000	0.000	-0.012	0.000
IF	511.800	3.657	0.000	9.292	0.000	0.000	0.000	0.000	-0.021	0.000
IF	515.100	3.662	0.000	9.298	0.000	0.000	0.000	0.000	0.026	0.000
IF	518.400	3.827	0.000	9.302	0.000	0.000	0.000	0.000	0.050	0.000
IF	521.700	3.992	0.000	9.306	0.000	0.000	0.000	0.000	0.061	0.000
IF	524.900	4.222	0.000	9.309	0.000	0.000	0.000	0.000	0.072	0.000
IF	528.200	4.460	0.000	9.312	0.000	0.000	0.000	0.000	0.072	0.000
IF	531.500	4.698	0.000	9.317	0.000	0.000	0.000	0.000	0.098	0.000
IF	534.800	5.110	0.000	9.321	0.000	0.000	0.000	0.000	0.110	0.000
IF	538.100	5.423	0.000	9.329	0.000	0.000	0.000	0.000	0.021	0.000
IF	541.300	5.247	0.000	9.349	0.000	0.000	0.000	0.000	-0.035	0.000
IF	544.600	5.193	0.000	9.363	0.000	0.000	0.000	0.000	0.003	0.000
IF	547.900	5.264	0.000	9.373	0.000	0.000	0.000	0.000	0.021	0.000
IF	551.200	5.328	0.000	9.381	0.000	0.000	0.000	0.000	0.028	0.000
IF	554.500	5.448	0.000	9.388	0.000	0.000	0.000	0.000	0.043	0.000
IF	557.700	5.604	0.000	9.395	0.000	0.000	0.000	0.000	0.023	0.000
IF	561.000	5.597	0.000	9.405	0.000	0.000	0.000	0.000	0.003	0.000
IF	564.300	5.622	0.000	9.413	0.000	0.000	0.000	0.000	0.018	0.000
IF	567.600	5.717	0.000	9.419	0.000	0.000	0.000	0.000	0.024	0.000
IF	570.900	5.778	0.000	9.425	0.000	0.000	0.000	0.000	0.042	0.000
IF	574.100	5.987	0.000	9.430	0.000	0.000	0.000	0.000	0.019	0.000
IF	577.400	5.902	0.000	9.439	0.000	0.000	0.000	0.000	-0.034	0.000
IF	580.700	5.764	0.000	9.448	0.000	0.000	0.000	0.000	-0.001	0.000
IF	584.000	5.897	0.000	9.451	0.000	0.000	0.000	0.000	0.034	0.000
IF	587.300	5.986	0.000	9.455	0.000	0.000	0.000	0.000	0.017	0.000
IF	590.500	6.006	0.000	9.460	0.000	0.000	0.000	0.000	0.006	0.000
IF	593.800	6.027	0.000	9.465	0.000	0.000	0.000	0.000	0.008	0.000
IF	597.100	6.059	0.000	9.469	0.000	0.000	0.000	0.000	0.017	0.000
IF	600.400	6.141	0.000	9.472	0.000	0.000	0.000	0.000	0.037	0.000
IF	603.700	6.302	0.000	9.474	0.000	0.000	0.000	0.000	0.082	0.000
IF	607.000	6.684	0.000	9.474	0.000	0.000	0.000	0.000	0.041	0.000
IF	610.200	6.569	0.000	9.485	0.000	0.000	0.000	0.000	-0.035	0.000
IF	613.500	6.454	0.000	9.493	0.000	0.000	0.000	0.000	0.008	0.000
IF	616.800	6.621	0.000	9.496	0.000	0.000	0.000	0.000	0.058	0.000
IF	620.100	6.836	0.000	9.498	0.000	0.000	0.000	0.000	0.065	0.000
IF	623.400	7.051	0.000	9.502	0.000	0.000	0.000	0.000	0.077	0.000
IF	626.600	7.335	0.000	9.507	0.000	0.000	0.000	0.000	0.088	0.000
IF	629.900	7.622	0.000	9.516	0.000	0.000	0.000	0.000	0.062	0.000
IF	633.200	7.741	0.000	9.533	0.000	0.000	0.000	0.000	0.023	0.000
IF	636.500	7.777	0.000	9.552	0.000	0.000	0.000	0.000	0.035	0.000
IF	639.800	7.973	0.000	9.566	0.000	0.000	0.000	0.000	0.065	0.000
IF	643.000	8.201	0.000	9.583	0.000	0.000	0.000	0.000	0.077	0.000
IF	646.300	8.473	0.000	9.616	0.000	0.000	0.000	0.000	0.145	0.000
IF	649.600	9.155	0.000	9.715	0.000	0.000	0.000	0.000	0.207	0.000
IF	652.300	9.715	0.000	9.715	0.000	0.000	0.000	0.000	0.207	0.000
AS	711.900	9.567	0.000	9.567	0.000	0.000	0.000	0.000	-0.952	0.000

IF	712.500	8.996	0.000	9.567	0.000	0.000	0.000	0.000	-0.122	0.000
IF	719.000	8.701	0.000	9.567	0.000	0.000	0.000	0.000	0.005	0.000
IF	724.500	9.062	0.000	9.567	0.000	0.000	0.000	0.000	0.025	0.000
IF	729.500	8.963	0.000	9.567	0.000	0.000	0.000	0.000	-0.019	0.000
IF	733.000	8.898	0.000	9.567	0.000	0.000	0.000	0.000	-0.016	0.000
IF	737.500	8.832	0.000	9.567	0.000	0.000	0.000	0.000	0.050	0.000
IF	746.400	9.567	0.000	9.567	0.000	0.000	0.000	0.000	0.083	0.000
AS	747.700	9.567	0.000	9.567	0.000	0.000	0.000	0.000	-0.079	0.000
IF	757.000	8.832	0.000	9.567	0.000	0.000	0.000	0.000	-0.016	0.000
IF	764.500	9.291	0.000	9.567	0.000	0.000	0.000	0.000	0.033	0.000
IF	770.000	9.259	0.000	9.567	0.000	0.000	0.000	0.000	0.011	0.000
IF	776.000	9.423	0.000	9.567	0.000	0.000	0.000	0.000	-0.034	0.000
IF	785.500	8.734	0.000	9.567	0.000	0.000	0.000	0.000	-0.015	0.000
IF	794.000	9.160	0.000	9.567	0.000	0.000	0.000	0.000	0.003	0.000
IF	798.000	8.766	0.000	9.567	0.000	0.000	0.000	0.000	-0.023	0.000
IF	802.500	8.963	0.000	9.567	0.000	0.000	0.000	0.000	-0.029	0.000
IF	810.500	8.406	0.000	9.567	0.000	0.000	0.000	0.000	-0.054	0.000
IF	817.000	8.176	0.000	9.567	0.000	0.000	0.000	0.000	0.028	0.000
IF	823.500	8.766	0.000	9.567	0.000	0.000	0.000	0.000	0.000	0.000
IF	836.000	8.176	0.000	9.567	0.000	0.000	0.000	0.000	-0.003	0.000
IF	846.500	8.701	0.000	9.567	0.000	0.000	0.000	0.000	0.016	0.000
IF	850.000	8.406	0.000	9.567	0.000	0.000	0.000	0.000	-0.023	0.000
IF	853.500	8.537	0.000	9.567	0.000	0.000	0.000	0.000	-0.033	0.000
IF	859.000	8.110	0.000	9.567	0.000	0.000	0.000	0.000	0.018	0.000
IF	868.500	8.799	0.000	9.567	0.000	0.000	0.000	0.000	0.023	0.000
IF	880.500	8.602	0.000	9.567	0.000	0.000	0.000	0.000	-0.025	0.000
IF	888.000	8.307	0.000	9.567	0.000	0.000	0.000	0.000	-0.059	0.000
IF	890.000	8.045	0.000	9.567	0.000	0.000	0.000	0.000	-0.007	0.000
IF	893.000	8.274	0.000	9.567	0.000	0.000	0.000	0.000	0.043	0.000
IF	900.000	8.471	0.000	9.567	0.000	0.000	0.000	0.000	-0.022	0.000
IF	909.500	7.913	0.000	9.567	0.000	0.000	0.000	0.000	-0.012	0.000
IF	919.000	8.241	0.000	9.567	0.000	0.000	0.000	0.000	0.011	0.000
IF	924.500	8.077	0.000	9.567	0.000	0.000	0.000	0.000	0.000	0.000
IF	927.000	8.241	0.000	9.567	0.000	0.000	0.000	0.000	0.015	0.000
IF	931.000	8.176	0.000	9.567	0.000	0.000	0.000	0.000	0.004	0.000
IF	935.500	8.274	0.000	9.567	0.000	0.000	0.000	0.000	-0.017	0.000
IF	944.500	7.943	0.000	9.567	0.000	0.000	0.000	0.000	0.004	0.000
IF	960.500	8.373	0.000	9.567	0.000	0.000	0.000	0.000	0.008	0.000
IF	972.500	8.176	0.000	9.567	0.000	0.000	0.000	0.000	0.012	0.000
IF	979.500	8.602	0.000	9.567	0.000	0.000	0.000	0.000	0.038	0.000
IF	984.500	8.635	0.000	9.567	0.000	0.000	0.000	0.000	-0.023	0.000
IF	988.000	8.406	0.000	9.567	0.000	0.000	0.000	0.000	-0.023	0.000
IF	993.000	8.438	0.000	9.567	0.000	0.000	0.000	0.000	-0.006	0.000
IF	998.500	8.340	0.000	9.567	0.000	0.000	0.000	0.000	0.000	0.000
IF	1004.000	8.438	0.000	9.567	0.000	0.000	0.000	0.000	-0.003	0.000
IF	1011.000	8.307	0.000	9.567	0.000	0.000	0.000	0.000	0.016	0.000
IF	1018.500	8.668	0.000	9.567	0.000	0.000	0.000	0.000	0.010	0.000
IF	1024.000	8.438	0.000	9.567	0.000	0.000	0.000	0.000	-0.025	0.000
IF	1029.000	8.406	0.000	9.567	0.000	0.000	0.000	0.000	-0.024	0.000
IF	1035.000	8.176	0.000	9.567	0.000	0.000	0.000	0.000	0.024	0.000
IF	1042.500	8.734	0.000	9.567	0.000	0.000	0.000	0.000	0.004	0.000
IF	1050.500	8.241	0.000	9.567	0.000	0.000	0.000	0.000	-0.033	0.000
IF	1056.500	8.274	0.000	9.567	0.000	0.000	0.000	0.000	0.018	0.000
IF	1063.500	8.471	0.000	9.567	0.000	0.000	0.000	0.000	0.009	0.000
IF	1072.000	8.406	0.000	9.567	0.000	0.000	0.000	0.000	0.012	0.000
IF	1080.000	8.668	0.000	9.567	0.000	0.000	0.000	0.000	0.021	0.000
IF	1086.000	8.701	0.000	9.567	0.000	0.000	0.000	0.000	0.008	0.000
IF	1092.000	8.766	0.000	9.567	0.000	0.000	0.000	0.000	-0.039	0.000
IF	1106.000	7.913	0.000	9.567	0.000	0.000	0.000	0.000	0.014	0.000
IF	1118.500	9.150	0.000	9.567	0.000	0.000	0.000	0.000	0.056	0.000
IF	1124.000	8.921	0.000	9.567	0.000	0.000	0.000	0.000	0.004	0.000
IF	1137.500	9.216	0.000	9.567	0.000	0.000	0.000	0.000	-0.051	0.000
IF	1149.500	7.618	0.000	9.567	0.000	0.000	0.000	0.000	0.008	0.000
IF	1158.500	9.390	0.000	9.567	0.000	0.000	0.000	0.000	0.050	0.000
IF	1172.500	8.766	0.000	9.567	0.000	0.000	0.000	0.000	-0.025	0.000
IF	1183.500	8.763	0.000	9.567	0.000	0.000	0.000	0.000	0.049	0.000
IF	1188.900	9.567	0.000	9.567	0.000	0.000	0.000	0.000	0.149	0.000
AS	1190.100	9.567	0.000	9.567	0.000	0.000	0.000	0.000	-0.147	0.000
IF	1192.000	9.288	0.000	9.567	0.000	0.000	0.000	0.000	0.000	0.000
IF	1198.600	9.567	0.000	9.567	0.000	0.000	0.000	0.000	0.042	0.000
AS	1199.400	9.567	0.000	9.567	0.000	0.000	0.000	0.000	-0.041	0.000
IF	1207.000	9.255	0.000	9.567	0.000	0.000	0.000	0.000	-0.009	0.000
IF	1216.500	9.419	0.000	9.567	0.000	0.000	0.000	0.000	-0.029	0.000
IF	1226.500	8.698	0.000	9.567	0.000	0.000	0.000	0.000	-0.027	0.000
IF	1231.000	9.029	0.000	9.567	0.000	0.000	0.000	0.000	0.010	0.000
IF	1236.500	8.799	0.000	9.567	0.000	0.000	0.000	0.000	0.003	0.000
IF	1241.500	9.062	0.000	9.567	0.000	0.000	0.000	0.000	0.038	0.000
IF	1248.500	9.259	0.000	9.567	0.000	0.000	0.000	0.000	-0.002	0.000
IF	1261.500	9.029	0.000	9.567	0.000	0.000	0.000	0.000	-0.008	0.000
IF	1272.500	9.062	0.000	9.567	0.000	0.000	0.000	0.000	0.014	0.000
IF	1284.500	9.357	0.000	9.567	0.000	0.000	0.000	0.000	0.000	0.000
IF	1299.500	9.055	0.000	9.566	0.000	0.000	0.000	0.000	0.001	0.000
IF	1306.000	9.383	0.000	9.566	0.000	0.000	0.000	0.000	0.000	0.000
IF	1328.000	9.062	0.000	9.566	0.000	0.000	0.000	0.000	-0.002	0.000
IF	1350.000	9.314	0.000	9.566	0.000	0.000	0.000	0.000	-0.020	0.000
IF	1363.000	8.373	0.000	9.565	0.000	0.000	0.000	0.000	-0.046	0.000
IF	1374.000	8.209	0.000	9.565	0.000	0.000	0.000	0.000	0.022	0.000
IF	1379.500	8.734	0.000	9.565	0.000	0.000	0.000	0.000	0.090	0.000
IF	1386.000	9.291	0.000	9.565	0.000	0.000	0.000	0.000	-0.044	0.000
IF	1391.500	8.209	0.000	9.565	0.000	0.000	0.000	0.000	-0.045	0.000
IF	1400.000	8.668	0.000	9.564	0.000	0.000	0.000	0.000	0.039	0.000
IF	1418.500	9.259	0.000	9.564	0.000	0.000	0.000	0.000	-0.007	0.000
IF	1431.500	8.435	0.000	9.563	0.000	0.000	0.000	0.000	-0.077	0.000
IF	1436.000	7.910	0.000	9.563	0.000	0.000	0.000	0.000	-0.077	0.000
IF	1443.000	7.549	0.000	9.563	0.000	0.000	0.000	0.000	-0.030	0.000
IF	1455.500	7.320	0.000	9.563	0.000	0.000	0.000	0.000	-0.003	0.000
IF	1466.500	7.484	0.000	9.562	0.000	0.000	0.000	0.000	-0.058	0.000
IF	1480.000	5.909	0.000	9.562	0.000	0.000	0.000	0.000	-0.040	0.000
IF	1492.000	6.463	0.000	9.562	0.000	0.000	0.000	0.000	0.033	0.000
IF	1496.000	6.437	0.000	9.561	0.000	0.000	0.000	0.000	0.026	0.000
IF	1501.000	6.696	0.000	9.561	0.000	0.000	0.000	0.000	0.016	0.000
IF	1504.000	6.568	0.000	9.561	0.000	0.000	0.000	0.000	0.049	0.000

IF	1513.000	7.290	0.000	9.561	0.000	0.000	0.000	0.000	-0.017	0.000
IF	1523.500	6.240	0.000	9.561	0.000	0.000	0.000	0.000	-0.049	0.000
IF	1530.500	6.437	0.000	9.561	0.000	0.000	0.000	0.000	0.002	0.000
IF	1538.000	6.273	0.000	9.561	0.000	0.000	0.000	0.000	0.029	0.000
IF	1547.500	6.929	0.000	9.561	0.000	0.000	0.000	0.000	0.094	0.000
IF	1554.500	7.815	0.000	9.562	0.000	0.000	0.000	0.000	0.002	0.000
IF	1560.500	6.962	0.000	9.562	0.000	0.000	0.000	0.000	-0.090	0.000
IF	1568.000	6.601	0.000	9.562	0.000	0.000	0.000	0.000	0.079	0.000
IF	1573.000	7.946	0.000	9.562	0.000	0.000	0.000	0.000	0.148	0.000
IF	1581.500	8.602	0.000	9.562	0.000	0.000	0.000	0.000	0.002	0.000
IF	1592.500	7.979	0.000	9.562	0.000	0.000	0.000	0.000	-0.080	0.000
IF	1604.000	6.798	0.000	9.562	0.000	0.000	0.000	0.000	-0.071	0.000
IF	1616.500	6.273	0.000	9.562	0.000	0.000	0.000	0.000	-0.054	0.000
IF	1626.500	5.584	0.000	9.562	0.000	0.000	0.000	0.000	0.044	0.000
IF	1635.000	7.093	0.000	9.562	0.000	0.000	0.000	0.000	0.035	0.000
IF	1641.500	6.109	0.000	9.562	0.000	0.000	0.000	0.000	-0.108	0.000
IF	1648.000	5.682	0.000	9.562	0.000	0.000	0.000	0.000	0.097	0.000
IF	1653.000	7.221	0.000	9.562	0.000	0.000	0.000	0.000	0.074	0.000
IF	1662.500	6.762	0.000	9.563	0.000	0.000	0.000	0.000	-0.056	0.000
IF	1677.500	5.843	0.000	9.563	0.000	0.000	0.000	0.000	-0.039	0.000
IF	1685.000	5.876	0.000	9.563	0.000	0.000	0.000	0.000	0.024	0.000
IF	1691.000	6.171	0.000	9.563	0.000	0.000	0.000	0.000	0.039	0.000
IF	1698.500	6.401	0.000	9.563	0.000	0.000	0.000	0.000	-0.016	0.000
IF	1703.000	5.974	0.000	9.563	0.000	0.000	0.000	0.000	-0.024	0.000
IF	1708.000	6.171	0.000	9.563	0.000	0.000	0.000	0.000	-0.004	0.000
IF	1718.000	5.909	0.000	9.563	0.000	0.000	0.000	0.000	-0.037	0.000
IF	1727.500	5.450	0.000	9.564	0.000	0.000	0.000	0.000	-0.024	0.000
IF	1735.500	5.482	0.000	9.564	0.000	0.000	0.000	0.000	0.009	0.000
IF	1741.500	5.581	0.000	9.564	0.000	0.000	0.000	0.000	0.018	0.000
IF	1746.500	5.679	0.000	9.564	0.000	0.000	0.000	0.000	-0.026	0.000
IF	1751.500	5.318	0.000	9.564	0.000	0.000	0.000	0.000	-0.033	0.000
IF	1755.500	5.384	0.000	9.565	0.000	0.000	0.000	0.000	0.040	0.000
IF	1759.000	5.617	0.000	9.565	0.000	0.000	0.000	0.000	0.006	0.000
IF	1766.500	5.453	0.000	9.565	0.000	0.000	0.000	0.000	-0.012	0.000
IF	1778.000	5.387	0.000	9.566	0.000	0.000	0.000	0.000	0.009	0.000
IF	1785.000	5.617	0.000	9.566	0.000	0.000	0.000	0.000	0.025	0.000
IF	1790.000	5.682	0.000	9.566	0.000	0.000	0.000	0.000	-0.009	0.000
IF	1796.500	5.518	0.000	9.566	0.000	0.000	0.000	0.000	-0.033	0.000
IF	1802.000	5.289	0.000	9.566	0.000	0.000	0.000	0.000	-0.038	0.000
IF	1806.000	5.157	0.000	9.567	0.000	0.000	0.000	0.000	-0.004	0.000
IF	1809.500	5.256	0.000	9.567	0.000	0.000	0.000	0.000	0.007	0.000
IF	1815.500	5.223	0.000	9.567	0.000	0.000	0.000	0.000	-0.034	0.000
IF	1823.000	4.797	0.000	9.567	0.000	0.000	0.000	0.000	-0.036	0.000
IF	1829.000	4.731	0.000	9.568	0.000	0.000	0.000	0.000	-0.011	0.000
IF	1835.000	4.665	0.000	9.568	0.000	0.000	0.000	0.000	-0.012	0.000
IF	1842.500	4.567	0.000	9.568	0.000	0.000	0.000	0.000	-0.004	0.000
IF	1850.000	4.600	0.000	9.568	0.000	0.000	0.000	0.000	0.023	0.000
IF	1856.500	4.895	0.000	9.568	0.000	0.000	0.000	0.000	0.012	0.000
IF	1861.000	4.731	0.000	9.569	0.000	0.000	0.000	0.000	-0.083	0.000
IF	1864.000	4.272	0.000	9.569	0.000	0.000	0.000	0.000	-0.037	0.000
IF	1869.000	4.436	0.000	9.569	0.000	0.000	0.000	0.000	0.019	0.000
IF	1876.000	4.501	0.000	9.569	0.000	0.000	0.000	0.000	0.017	0.000
IF	1882.500	4.665	0.000	9.569	0.000	0.000	0.000	0.000	-0.019	0.000
IF	1892.000	4.203	0.000	9.570	0.000	0.000	0.000	0.000	-0.014	0.000
IF	1897.000	4.465	0.000	9.570	0.000	0.000	0.000	0.000	0.008	0.000
IF	1904.500	4.301	0.000	9.570	0.000	0.000	0.000	0.000	0.005	0.000
IF	1911.000	4.531	0.000	9.570	0.000	0.000	0.000	0.000	-0.004	0.000
IF	1920.000	4.236	0.000	9.571	0.000	0.000	0.000	0.000	-0.016	0.000
IF	1923.500	4.334	0.000	9.571	0.000	0.000	0.000	0.000	-0.036	0.000
IF	1931.000	3.842	0.000	9.571	0.000	0.000	0.000	0.000	-0.025	0.000
IF	1938.000	3.973	0.000	9.571	0.000	0.000	0.000	0.000	0.013	0.000
IF	1946.500	4.039	0.000	9.571	0.000	0.000	0.000	0.000	-0.062	0.000
IF	1958.000	2.726	0.000	9.571	0.000	0.000	0.000	0.000	-0.032	0.000
IF	1967.000	3.382	0.000	9.572	0.000	0.000	0.000	0.000	0.032	0.000
IF	1972.500	3.186	0.000	9.572	0.000	0.000	0.000	0.000	0.047	0.000
IF	1979.000	3.940	0.000	9.572	0.000	0.000	0.000	0.000	0.114	0.000
IF	1984.000	4.498	0.000	9.572	0.000	0.000	0.000	0.000	-0.033	0.000
IF	1990.000	3.579	0.000	9.572	0.000	0.000	0.000	0.000	-0.044	0.000
IF	2005.000	3.579	0.000	9.573	0.000	0.000	0.000	0.000	0.019	0.000
IF	2009.500	3.940	0.000	9.573	0.000	0.000	0.000	0.000	0.052	0.000
IF	2016.500	4.173	0.000	9.573	0.000	0.000	0.000	0.000	0.000	0.000
IF	2022.000	3.944	0.000	9.573	0.000	0.000	0.000	0.000	-0.016	0.000
IF	2026.500	4.009	0.000	9.573	0.000	0.000	0.000	0.000	0.054	0.000
IF	2035.500	4.665	0.000	9.574	0.000	0.000	0.000	0.000	-0.012	0.000
IF	2042.500	3.812	0.000	9.574	0.000	0.000	0.000	0.000	-0.039	0.000
IF	2048.000	4.173	0.000	9.574	0.000	0.000	0.000	0.000	0.089	0.000
IF	2055.000	4.928	0.000	9.574	0.000	0.000	0.000	0.000	0.022	0.000
IF	2064.500	4.534	0.000	9.575	0.000	0.000	0.000	0.000	-0.031	0.000
IF	2078.500	4.206	0.000	9.575	0.000	0.000	0.000	0.000	0.005	0.000
IF	2092.500	4.665	0.000	9.576	0.000	0.000	0.000	0.000	0.003	0.000
IF	2103.000	4.272	0.000	9.576	0.000	0.000	0.000	0.000	-0.009	0.000
IF	2114.500	4.465	0.000	9.576	0.000	0.000	0.000	0.000	0.004	0.000
IF	2126.500	4.367	0.000	9.577	0.000	0.000	0.000	0.000	0.010	0.000
IF	2138.000	4.695	0.000	9.577	0.000	0.000	0.000	0.000	-0.009	0.000
IF	2147.500	4.170	0.000	9.578	0.000	0.000	0.000	0.000	-0.012	0.000
IF	2160.000	4.432	0.000	9.578	0.000	0.000	0.000	0.000	0.005	0.000
IF	2174.000	4.301	0.000	9.579	0.000	0.000	0.000	0.000	0.003	0.000
IF	2182.500	4.498	0.000	9.579	0.000	0.000	0.000	0.000	0.017	0.000
IF	2191.500	4.596	0.000	9.580	0.000	0.000	0.000	0.000	0.009	0.000
IF	2205.000	4.695	0.000	9.580	0.000	0.000	0.000	0.000	-0.015	0.000
IF	2223.000	4.137	0.000	9.581	0.000	0.000	0.000	0.000	-0.002	0.000
IF	2236.000	4.629	0.000	9.582	0.000	0.000	0.000	0.000	0.024	0.000
IF	2242.500	4.596	0.000	9.582	0.000	0.000	0.000	0.000	0.000	0.000
IF	2249.500	4.629	0.000	9.582	0.000	0.000	0.000	0.000	0.000	0.000
IF	2256.500	4.596	0.000	9.583	0.000	0.000	0.000	0.000	-0.025	0.000
IF	2265.500	4.236	0.000	9.583	0.000	0.000	0.000	0.000	-0.009	0.000
IF	2282.500	4.370	0.000	9.584	0.000	0.000	0.000	0.000	0.007	0.000
IF	2299.000	4.469	0.000	9.584	0.000	0.000	0.000	0.000	0.014	0.000
IF	2306.500	4.698	0.000	9.584	0.000	0.000	0.000	0.000	0.014	0.000
IF	2313.000	4.665	0.000	9.585	0.000	0.000	0.000	0.000	-0.039	0.000
IF	2320.000	4.173	0.000	9.585	0.000	0.000	0.000	0.000	-0.051	0.000
IF	2326.000	4.009	0.000	9.585	0.000	0.000	0.000	0.000	-0.049	0.000

IF	2334.000	3.484	0.000	9.585	0.000	0.000	0.000	0.000	0.019	0.000
IF	2345.000	4.367	0.000	9.586	0.000	0.000	0.000	0.000	0.054	0.000
IF	2353.500	4.531	0.000	9.586	0.000	0.000	0.000	0.000	-0.006	0.000
IF	2361.000	4.268	0.000	9.586	0.000	0.000	0.000	0.000	-0.027	0.000
IF	2370.500	4.071	0.000	9.586	0.000	0.000	0.000	0.000	-0.030	0.000
IF	2379.500	3.711	0.000	9.587	0.000	0.000	0.000	0.000	-0.029	0.000
IF	2388.500	3.547	0.000	9.587	0.000	0.000	0.000	0.000	0.014	0.000
IF	2398.500	3.973	0.000	9.587	0.000	0.000	0.000	0.000	0.023	0.000
IF	2405.500	3.940	0.000	9.587	0.000	0.000	0.000	0.000	-0.005	0.000
IF	2412.500	3.908	0.000	9.588	0.000	0.000	0.000	0.000	-0.024	0.000
IF	2422.000	3.547	0.000	9.588	0.000	0.000	0.000	0.000	-0.006	0.000
IF	2428.500	3.809	0.000	9.588	0.000	0.000	0.000	0.000	-0.069	0.000
IF	2439.500	2.333	0.000	9.589	0.000	0.000	0.000	0.000	-0.043	0.000
IF	2446.000	3.055	0.000	9.589	0.000	0.000	0.000	0.000	0.061	0.000
IF	2453.500	3.186	0.000	9.589	0.000	0.000	0.000	0.000	0.027	0.000
IF	2460.500	3.448	0.000	9.589	0.000	0.000	0.000	0.000	0.026	0.000
IF	2466.000	3.514	0.000	9.589	0.000	0.000	0.000	0.000	0.059	0.000
IF	2471.000	4.071	0.000	9.589	0.000	0.000	0.000	0.000	-0.003	0.000
IF	2478.000	3.481	0.000	9.590	0.000	0.000	0.000	0.000	-0.004	0.000
IF	2487.500	4.006	0.000	9.590	0.000	0.000	0.000	0.000	0.027	0.000
IF	2495.000	3.940	0.000	9.590	0.000	0.000	0.000	0.000	0.000	0.000
IF	2502.000	4.006	0.000	9.590	0.000	0.000	0.000	0.000	-0.007	0.000
IF	2510.000	3.842	0.000	9.590	0.000	0.000	0.000	0.000	-0.139	0.000
IF	2518.000	1.775	0.000	9.591	0.000	0.000	0.000	0.000	-0.038	0.000
IF	2525.500	3.251	0.000	9.591	0.000	0.000	0.000	0.000	0.115	0.000
IF	2532.500	3.448	0.000	9.591	0.000	0.000	0.000	0.000	0.038	0.000
IF	2541.000	3.845	0.000	9.591	0.000	0.000	0.000	0.000	-0.002	0.000
IF	2549.500	3.419	0.000	9.592	0.000	0.000	0.000	0.000	-0.031	0.000
IF	2557.000	3.353	0.000	9.592	0.000	0.000	0.000	0.000	0.004	0.000
IF	2565.500	3.481	0.000	9.592	0.000	0.000	0.000	0.000	0.000	0.000
IF	2575.500	3.350	0.000	9.592	0.000	0.000	0.000	0.000	0.028	0.000
IF	2586.500	4.071	0.000	9.592	0.000	0.000	0.000	0.000	0.032	0.000
IF	2593.000	3.908	0.000	9.592	0.000	0.000	0.000	0.000	-0.062	0.000
IF	2596.000	3.481	0.000	9.592	0.000	0.000	0.000	0.000	-0.036	0.000
OF	2825.000	-4.342	0.000	9.595	0.000	0.000	0.000	0.000	-0.034	0.000
OF	2826.000	-4.342	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2837.000	-4.341	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2838.000	-4.341	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2849.000	-4.340	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2850.000	-4.340	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2861.000	-4.340	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2862.000	-4.340	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2873.000	-4.339	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2874.000	-4.339	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2885.000	-4.339	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2886.000	-4.339	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2897.000	-4.338	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2898.000	-4.338	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2909.000	-4.338	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2910.000	-4.337	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2921.000	-4.337	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2922.000	-4.337	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2933.000	-4.336	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
OF	2934.000	-4.336	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
OF	2945.000	-4.336	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
OF	2946.000	-4.336	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
OF	2957.000	-4.335	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
OF	2958.000	-4.335	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
OF	2969.000	-4.335	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
OF	2970.000	-4.334	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
OF	2981.000	-4.334	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
OF	2982.000	-4.334	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
OF	2993.000	-4.333	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
OF	2994.000	-4.333	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
OF	3005.000	-4.333	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
OF	3006.000	-4.333	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
OF	3017.000	-4.332	0.000	9.597	0.000	0.000	0.000	0.000	0.000	0.000
OF	3018.000	-4.332	0.000	9.597	0.000	0.000	0.000	0.000	0.000	0.000
OF	3066.000	-4.332	0.000	9.597	0.000	0.000	0.000	0.000	0.000	0.000
OF	3067.000	-4.332	0.000	9.597	0.000	0.000	0.000	0.000	0.020	0.000
OF	3078.000	-4.090	0.000	9.597	0.000	0.000	0.000	0.000	0.022	0.000
OF	3079.000	-4.068	0.000	9.597	0.000	0.000	0.000	0.000	0.023	0.000
OF	3090.000	-3.814	0.000	9.597	0.000	0.000	0.000	0.000	0.023	0.000
OF	3091.000	-3.791	0.000	9.597	0.000	0.000	0.000	0.000	0.023	0.000
OF	3102.000	-3.538	0.000	9.597	0.000	0.000	0.000	0.000	0.023	0.000
OF	3103.000	-3.515	0.000	9.597	0.000	0.000	0.000	0.000	0.023	0.000
OF	3115.000	-3.239	0.000	9.598	0.000	0.000	0.000	0.000	0.023	0.000
OF	3126.000	-2.986	0.000	9.598	0.000	0.000	0.000	0.000	0.023	0.000
OF	3135.000	-2.779	0.000	9.598	0.000	0.000	0.000	0.000	0.023	0.000
OF	3142.000	-2.618	0.000	9.598	0.000	0.000	0.000	0.000	0.023	0.000
OF	3153.000	-2.365	0.000	9.598	0.000	0.000	0.000	0.000	0.023	0.000
OF	3223.000	-0.754	0.000	9.600	0.000	0.000	0.000	0.000	0.071	0.000
IF	3256.000	4.948	0.000	9.600	0.000	0.000	0.000	0.000	0.161	0.000
IF	3259.500	5.111	0.000	9.600	0.000	0.000	0.000	0.000	-0.044	0.000
IF	3264.000	4.593	0.000	9.600	0.000	0.000	0.000	0.000	0.000	0.000
IF	3267.500	5.111	0.000	9.600	0.000	0.000	0.000	0.000	-0.045	0.000
IF	3273.500	4.167	0.000	9.601	0.000	0.000	0.000	0.000	-0.033	0.000
IF	3290.000	4.364	0.000	9.601	0.000	0.000	0.000	0.000	0.030	0.000
IF	3309.000	5.236	0.000	9.601	0.000	0.000	0.000	0.000	0.013	0.000
IF	3311.000	4.626	0.000	9.601	0.000	0.000	0.000	0.000	-0.095	0.000
IF	3321.000	4.101	0.000	9.602	0.000	0.000	0.000	0.000	-0.010	0.000
IF	3330.000	4.432	0.000	9.602	0.000	0.000	0.000	0.000	0.042	0.000
IF	3334.500	4.662	0.000	9.602	0.000	0.000	0.000	0.000	-0.004	0.000
IF	3344.500	4.367	0.000	9.602	0.000	0.000	0.000	0.000	-0.006	0.000
IF	3355.000	4.531	0.000	9.602	0.000	0.000	0.000	0.000	0.031	0.000
IF	3361.500	4.892	0.000	9.602	0.000	0.000	0.000	0.000	0.027	0.000
IF	3366.000	4.826	0.000	9.603	0.000	0.000	0.000	0.000	-0.004	0.000
IF	3369.000	4.859	0.000	9.603	0.000	0.000	0.000	0.000	-0.075	0.000
IF	3373.000	4.301	0.000	9.603	0.000	0.000	0.000	0.000	-0.073	0.000
IF	3378.000	4.203	0.000	9.603	0.000	0.000	0.000	0.000	-0.008	0.000
IF	3389.500	4.170	0.000	9.603	0.000	0.000	0.000	0.000	0.004	0.000
IF	3394.000	4.268	0.000	9.603	0.000	0.000	0.000	0.000	-0.033	0.000

	IF	3399.500	3.842	0.000	9.603	0.000	0.000	0.000	0.000	-0.059	0.000
	IF	3404.000	3.678	0.000	9.604	0.000	0.000	0.000	0.000	-0.038	0.000
	IF	3409.000	3.481	0.000	9.604	0.000	0.000	0.000	0.000	0.006	0.000
	IF	3420.000	3.773	0.000	9.604	0.000	0.000	0.000	0.000	0.042	0.000
	IF	3424.500	4.134	0.000	9.604	0.000	0.000	0.000	0.000	0.021	0.000
	IF	3429.500	3.970	0.000	9.604	0.000	0.000	0.000	0.000	-0.034	0.000
	IF	3438.000	3.674	0.000	9.604	0.000	0.000	0.000	0.000	0.090	0.000
	IF	3447.000	5.541	0.000	9.604	0.000	0.000	0.000	0.000	0.030	0.000
	IF	3461.000	4.364	0.000	9.605	0.000	0.000	0.000	0.000	-0.064	0.000
	IF	3470.000	4.068	0.000	9.605	0.000	0.000	0.000	0.000	-0.010	0.000
	IF	3483.500	4.134	0.000	9.605	0.000	0.000	0.000	0.000	0.002	0.000
	IF	3492.500	4.101	0.000	9.606	0.000	0.000	0.000	0.000	-0.006	0.000
	IF	3500.000	4.035	0.000	9.606	0.000	0.000	0.000	0.000	0.003	0.000
	IF	3504.000	4.134	0.000	9.606	0.000	0.000	0.000	0.000	-0.018	0.000
	IF	3509.000	3.871	0.000	9.606	0.000	0.000	0.000	0.000	0.003	0.000
	IF	3515.000	4.167	0.000	9.606	0.000	0.000	0.000	0.000	0.023	0.000
	IF	3520.500	4.134	0.000	9.606	0.000	0.000	0.000	0.000	0.005	0.000
	IF	3527.500	4.232	0.000	9.606	0.000	0.000	0.000	0.000	0.011	0.000
	IF	3532.000	4.265	0.000	9.606	0.000	0.000	0.000	0.000	-0.012	0.000
	IF	3536.000	4.134	0.000	9.606	0.000	0.000	0.000	0.000	-0.034	0.000
	IF	3543.500	3.871	0.000	9.606	0.000	0.000	0.000	0.000	0.016	0.000
	IF	3550.000	4.364	0.000	9.606	0.000	0.000	0.000	0.000	0.005	0.000
	IF	3557.000	3.937	0.000	9.606	0.000	0.000	0.000	0.000	-0.045	0.000
	IF	3565.500	3.674	0.000	9.606	0.000	0.000	0.000	0.000	0.004	0.000
	IF	3574.000	4.003	0.000	9.606	0.000	0.000	0.000	0.000	0.027	0.000
	IF	3584.000	4.167	0.000	9.606	0.000	0.000	0.000	0.000	0.002	0.000
	IF	3591.500	4.039	0.000	9.606	0.000	0.000	0.000	0.000	0.013	0.000
	IF	3596.500	4.334	0.000	9.606	0.000	0.000	0.000	0.000	0.023	0.000
	IF	3607.000	4.400	0.000	9.606	0.000	0.000	0.000	0.000	-0.014	0.000
	IF	3617.000	4.039	0.000	9.607	0.000	0.000	0.000	0.000	0.016	0.000
	IF	3623.500	4.662	0.000	9.607	0.000	0.000	0.000	0.000	0.034	0.000
	IF	3632.500	4.560	0.000	9.607	0.000	0.000	0.000	0.000	-0.015	0.000
	IF	3639.500	4.429	0.000	9.607	0.000	0.000	0.000	0.000	0.006	0.000
	IF	3644.000	4.626	0.000	9.607	0.000	0.000	0.000	0.000	0.004	0.000
	IF	3647.000	4.462	0.000	9.607	0.000	0.000	0.000	0.000	-0.022	0.000
	IF	3653.000	4.429	0.000	9.607	0.000	0.000	0.000	0.000	0.000	0.000
	IF	3661.000	4.462	0.000	9.608	0.000	0.000	0.000	0.000	-0.012	0.000
	IF	3667.000	4.265	0.000	9.608	0.000	0.000	0.000	0.000	0.009	0.000
	IF	3671.500	4.560	0.000	9.608	0.000	0.000	0.000	0.000	0.047	0.000
	IF	3676.000	4.692	0.000	9.608	0.000	0.000	0.000	0.000	-0.080	0.000
	IF	3683.000	3.642	0.000	9.608	0.000	0.000	0.000	0.000	-0.013	0.000
	IF	3688.500	4.528	0.000	9.608	0.000	0.000	0.000	0.000	0.116	0.000
	IF	3693.500	4.856	0.000	9.608	0.000	0.000	0.000	0.000	0.027	0.000
	IF	3699.500	4.823	0.000	9.608	0.000	0.000	0.000	0.000	0.006	0.000
	IF	3704.000	4.921	0.000	9.608	0.000	0.000	0.000	0.000	0.000	0.000
	IF	3709.000	4.823	0.000	9.609	0.000	0.000	0.000	0.000	-0.022	0.000
	IF	3714.500	4.692	0.000	9.609	0.000	0.000	0.000	0.000	-0.028	0.000
	IF	3719.500	4.528	0.000	9.609	0.000	0.000	0.000	0.000	-0.013	0.000
	IF	3725.000	4.560	0.000	9.609	0.000	0.000	0.000	0.000	0.030	0.000
	IF	3732.500	4.921	0.000	9.609	0.000	0.000	0.000	0.000	0.066	0.000
	IF	3735.000	5.216	0.000	9.609	0.000	0.000	0.000	0.000	0.019	0.000
	IF	3739.500	5.052	0.000	9.609	0.000	0.000	0.000	0.000	0.015	0.000
	IF	3744.000	5.348	0.000	9.609	0.000	0.000	0.000	0.000	-0.022	0.000
	IF	3747.000	4.889	0.000	9.609	0.000	0.000	0.000	0.000	-0.017	0.000
	IF	3753.500	5.184	0.000	9.609	0.000	0.000	0.000	0.000	0.092	0.000
	IF	3760.500	6.135	0.000	9.609	0.000	0.000	0.000	0.000	0.069	0.000
	IF	3764.000	5.905	0.000	9.609	0.000	0.000	0.000	0.000	-0.066	0.000
	IF	3768.500	5.610	0.000	9.609	0.000	0.000	0.000	0.000	0.011	0.000
	IF	3778.500	6.070	0.000	9.609	0.000	0.000	0.000	0.000	-0.017	0.000
	IF	3786.000	5.315	0.000	9.609	0.000	0.000	0.000	0.000	0.010	0.000
	IF	3794.500	6.234	0.000	9.609	0.000	0.000	0.000	0.000	0.038	0.000
	IF	3806.000	6.070	0.000	9.609	0.000	0.000	0.000	0.000	-0.002	0.000
	IF	3810.000	6.198	0.000	9.609	0.000	0.000	0.000	0.000	0.048	0.000
	IF	3815.500	6.529	0.000	9.609	0.000	0.000	0.000	0.000	0.019	0.000
	IF	3824.000	6.460	0.000	9.609	0.000	0.000	0.000	0.000	-0.033	0.000
	IF	3834.500	5.902	0.000	9.609	0.000	0.000	0.000	0.000	0.008	0.000
	IF	3847.000	6.654	0.000	9.609	0.000	0.000	0.000	0.000	0.016	0.000
	IF	3863.500	6.361	0.000	9.609	0.000	0.000	0.000	0.000	-0.013	0.000
	IF	3879.500	6.230	0.000	9.609	0.000	0.000	0.000	0.000	0.001	0.000
	IF	3890.000	6.398	0.000	9.609	0.000	0.000	0.000	0.000	0.030	0.000
	IF	3906.000	7.021	0.000	9.609	0.000	0.000	0.000	0.000	0.007	0.000
	IF	3928.000	6.663	0.000	9.609	0.000	0.000	0.000	0.000	0.006	0.000
	IF	3955.500	7.316	0.000	9.609	0.000	0.000	0.000	0.000	0.036	0.000
	IF	3974.000	8.337	0.000	9.609	0.000	0.000	0.000	0.000	0.018	0.000
	IF	3984.000	7.841	0.000	9.609	0.000	0.000	0.000	0.000	0.001	0.000
	IF	4000.000	8.366	0.000	9.609	0.000	0.000	0.000	0.000	0.035	0.000
	IF	4012.500	8.829	0.000	9.609	0.000	0.000	0.000	0.000	-0.004	0.000
	IF	4027.000	8.268	0.000	9.609	0.000	0.000	0.000	0.000	-0.007	0.000
	IF	4075.000	8.402	0.000	9.609	0.000	0.000	0.000	0.000	0.008	0.000
	IF	4091.000	8.763	0.000	9.609	0.000	0.000	0.000	0.000	0.022	0.000
	IF	4106.000	9.088	0.000	9.609	0.000	0.000	0.000	0.000	0.004	0.000
	IF	4123.500	8.891	0.000	9.609	0.000	0.000	0.000	0.000	0.000	0.000
	IF	4139.000	9.091	0.000	9.609	0.000	0.000	0.000	0.000	0.009	0.000
	IF	4156.000	9.186	0.000	9.609	0.000	0.000	0.000	0.000	0.015	0.000
	IF	4172.700	9.609	0.000	9.609	0.000	0.000	0.000	0.000	0.025	0.000
	AS	4174.800	9.609	0.000	9.609	0.000	0.000	0.000	0.000	-0.004	0.000
	IF	4191.000	9.550	0.000	9.609	0.000	0.000	0.000	0.000	0.000	0.000
	IF	4193.100	9.609	0.000	9.609	0.000	0.000	0.000	0.000	0.028	0.000
	ET	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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	END STATION	END ELEVATION	FETCH LENGTH	SURGE ELEV 10-YEAR	SURGE ELEV 100-YEAR	INITIAL WAVE HEIGHT	INITIAL W. PERIOD		BOTTOM SLOPE	AVERAGE A-ZONES
IE	0.000	-6.528	1.000	1.000	9.035	11.296	12.800	56.140	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3.000	-6.445	0.000	9.035	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	4.000	-6.417	0.000	9.035	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	9.000	-6.279	0.000	9.036	0.000	0.000	0.000	0.000	0.028	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	10.000	-6.252	0.000	9.036	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	15.000	-6.114	0.000	9.036	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	16.000	-6.086	0.000	9.036	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	22.000	-5.920	0.000	9.037	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	27.000	-5.782	0.000	9.037	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	28.000	-5.755	0.000	9.038	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	39.000	-5.451	0.000	9.039	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	40.000	-5.424	0.000	9.039	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	51.000	-5.120	0.000	9.040	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	52.000	-5.092	0.000	9.040	0.000	0.000	0.000	0.000	0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	61.000	-4.847	0.000	9.041	0.000	0.000	0.000	0.000	0.025	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	62.000	-4.840	0.000	9.041	0.000	0.000	0.000	0.000	0.007	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	72.200	-4.765	0.000	9.035	0.000	0.000	0.000	0.000	0.007	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	75.500	-4.741	0.000	9.036	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	78.700	-4.715	0.000	9.036	0.000	0.000	0.000	0.000	0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	82.000	-4.684	0.000	9.037	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	85.300	-4.652	0.000	9.038	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	88.600	-4.620	0.000	9.039	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	91.900	-4.588	0.000	9.040	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	95.100	-4.556	0.000	9.041	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	98.400	-4.524	0.000	9.042	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	101.700	-4.492	0.000	9.043	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	105.000	-4.460	0.000	9.044	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	108.300	-4.428	0.000	9.045	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	111.500	-4.396	0.000	9.046	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	114.800	-4.364	0.000	9.047	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	118.100	-4.332	0.000	9.048	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	121.400	-4.300	0.000	9.049	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	124.700	-4.268	0.000	9.050	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	128.000	-4.236	0.000	9.051	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	131.200	-4.204	0.000	9.052	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	134.500	-4.172	0.000	9.053	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	137.800	-4.140	0.000	9.054	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	141.100	-4.108	0.000	9.055	0.000	0.000	0.000	0.000	0.010	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	144.400	-4.076	0.000	9.056	0.000	0.000	0.000	0.000	0.011	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	147.600	-4.038	0.000	9.057	0.000	0.000	0.000	0.000	0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	150.900	-3.971	0.000	9.058	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	154.200	-3.902	0.000	9.059	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	157.500	-3.833	0.000	9.060	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	160.800	-3.764	0.000	9.061	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	164.000	-3.695	0.000	9.063	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	167.300	-3.626	0.000	9.064	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	170.600	-3.558	0.000	9.065	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	173.900	-3.489	0.000	9.066	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	177.200	-3.420	0.000	9.067	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	180.400	-3.351	0.000	9.068	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	183.700	-3.282	0.000	9.069	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	187.000	-3.214	0.000	9.070	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	190.300	-3.145	0.000	9.072	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	193.600	-3.076	0.000	9.073	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	196.800	-3.007	0.000	9.074	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	200.100	-2.938	0.000	9.076	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	203.400	-2.869	0.000	9.077	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	206.700	-2.800	0.000	9.079	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	210.000	-2.732	0.000	9.080	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	213.300	-2.663	0.000	9.082	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	216.500	-2.592	0.000	9.083	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	219.800	-2.519	0.000	9.085	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	223.100	-2.445	0.000	9.087	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	226.400	-2.371	0.000	9.088	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	229.700	-2.297	0.000	9.090	0.000	0.000	0.000	0.000	0.018	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	232.900	-2.257	0.000	9.092	0.000	0.000	0.000	0.000	0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	236.200	-2.222	0.000	9.094	0.000	0.000	0.000	0.000	0.011	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	239.500	-2.187	0.000	9.096	0.000	0.000	0.000	0.000	0.011	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	242.800	-2.152	0.000	9.098	0.000	0.000	0.000	0.000	0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	246.100	-2.110	0.000	9.101	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	249.300	-2.063	0.000	9.102	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	252.600	-2.017	0.000	9.104	0.000	0.000	0.000	0.000	0.014	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	255.900	-1.970	0.000	9.106	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	259.200	-1.923	0.000	9.108	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	262.500	-1.877	0.000	9.110	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	265.700	-1.830	0.000	9.111	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	269.000	-1.783	0.000	9.113	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	272.300	-1.737	0.000	9.115	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	275.600	-1.690	0.000	9.117	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	278.900	-1.643	0.000	9.118	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	282.200	-1.597	0.000	9.120	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	285.400	-1.550	0.000	9.122	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	288.700	-1.503	0.000	9.124	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	292.000	-1.457	0.000	9.126	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	295.300	-1.410	0.000	9.128	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	298.600	-1.363	0.000	9.130	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	301.800	-1.316	0.000	9.132	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	305.100	-1.269	0.000	9.133	0.000	0.000	0.000	0.000	0.017	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	308.400	-1.205	0.000	9.135	0.000	0.000	0.000	0.000	0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	311.700	-1.138	0.000	9.136	0.000	0.000	0.000	0.000	0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	315.000	-1.072	0.000	9.138	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	318.200	-1.005	0.000	9.140	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	321.500	-0.938	0.000	9.142	0.000	0.000	0.000	0.000	0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	324.800	-0.872	0.000	9.143	0.000	0.000	0.000	0.000	0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	328.100	-0.805	0.000	9.145	0.000	0.000	0.000	0.000	0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	331.400	-0.738	0.000	9.147	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	334.600	-0.671	0.000	9.149	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	337.900	-0.605	0.000	9.150	0.000	0.000	0.000	0.000	0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	341.200	-0.538	0.000	9.152	0.000	0.000	0.000	0.000	0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	344.500	-0.471	0.000	9.154	0.000	0.000	0.000	0.000	0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	347.800	-0.405	0.000	9.156	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	351.000	-0.338	0.000	9.158	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	354.300	-0.271	0.000	9.160	0.000	0.000	0.000	0.000	0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	357.600	-0.204	0.000	9.162	0.000	0.000	0.000	0.000	0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	360.900	-0.138	0.000	9.164	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	364.200	-0.068	0.000	9.166	0.000	0.000	0.000	0.000	0.081	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	367.500	0.400	0.000	9.163	0.000	0.000	0.000	0.000	0.132	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	370.700	0.790	0.000	9.161	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	374.000	0.844	0.000	9.166	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	377.300	0.951	0.000	9.169	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	380.600	0.938	0.000	9.175	0.000	0.000	0.000	0.000	-0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	383.900	0.856	0.000	9.181	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	387.100	0.765	0.000	9.186	0.000	0.000	0.000	0.000	-0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	390.400	0.671	0.000	9.191	0.000	0.000	0.000	0.000	-0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	393.700	0.625	0.000	9.195	0.000	0.000	0.000	0.000	0.013	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	397.000	0.757	0.000	9.196	0.000	0.000	0.000	0.000	0.040	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	400.300	0.888	0.000	9.198	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	403.500	0.986	0.000	9.200	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	406.800	1.044	0.000	9.203	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	410.100	1.075	0.000	9.207	0.000	0.000	0.000	0.000	-0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	413.400	1.007	0.000	9.211	0.000	0.000	0.000	0.000	-0.040	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	416.700	0.811	0.000	9.216	0.000	0.000	0.000	0.000	-0.034	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	419.900	0.783	0.000	9.219	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	423.200	0.811	0.000	9.221	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	426.500	0.933	0.000	9.222	0.000	0.000	0.000	0.000	0.054	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	429.800	1.165	0.000	9.221	0.000	0.000	0.000	0.000	0.056	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	433.100	1.302	0.000	9.223	0.000	0.000	0.000	0.000	0.026	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	436.400	1.335	0.000	9.225	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	439.600	1.305	0.000	9.229	0.000	0.000	0.000	0.000	-0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	442.900	1.210	0.000	9.232	0.000	0.000	0.000	0.000	-0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	446.200	1.116	0.000	9.236	0.000	0.000	0.000	0.000	-0.013	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	449.500	1.125	0.000	9.238	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	452.800	1.168	0.000	9.240	0.000	0.000	0.000	0.000	0.040	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	456.000	1.385	0.000	9.239	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	459.300	1.800	0.000	9.237	0.000	0.000	0.000	0.000	0.110	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	462.600	2.113	0.000	9.236	0.000	0.000	0.000	0.000	0.026	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	465.900	1.969	0.000	9.242	0.000	0.000	0.000	0.000	-0.031	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	469.200	1.910	0.000	9.246	0.000	0.000	0.000	0.000	0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	472.400	2.006	0.000	9.248	0.000	0.000	0.000	0.000	0.039	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	475.700	2.162	0.000	9.250	0.000	0.000	0.000	0.000	0.050	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	479.000	2.336	0.000	9.251	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	482.300	2.504	0.000	9.253	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	485.600	2.520	0.000	9.258	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	488.800	2.604	0.000	9.260	0.000	0.000	0.000	0.000	0.055	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	492.100	2.881	0.000	9.261	0.000	0.000	0.000	0.000	0.084	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	495.400	3.158	0.000	9.262	0.000	0.000	0.000	0.000	0.083	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	498.700	3.428	0.000	9.264	0.000	0.000	0.000	0.000	0.064	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	502.000	3.583	0.000	9.269	0.000	0.000	0.000	0.000	0.048	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	505.200	3.738	0.000	9.274	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	508.500	3.800	0.000	9.282	0.000	0.000	0.000	0.000	-0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	511.800	3.657	0.000	9.292	0.000	0.000	0.000	0.000	-0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	515.100	3.662	0.000	9.298	0.000	0.000	0.000	0.000	0.026	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	518.400	3.827	0.000	9.302	0.000	0.000	0.000	0.000	0.050	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	521.700	3.992	0.000	9.306	0.000	0.000	0.000	0.000	0.061	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	524.900	4.222	0.000	9.309	0.000	0.000	0.000	0.000	0.072	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	528.200	4.460	0.000	9.312	0.000	0.000	0.000	0.000	0.072	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	531.500	4.698	0.000	9.317	0.000	0.000	0.000	0.000	0.098	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	534.800	5.110	0.000	9.321	0.000	0.000	0.000	0.000	0.110	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	538.100	5.423	0.000	9.329	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	541.300	5.247	0.000	9.349	0.000	0.000	0.000	0.000	-0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	544.600	5.193	0.000	9.363	0.000	0.000	0.000	0.000	0.003	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	547.900	5.264	0.000	9.373	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	551.200	5.328	0.000	9.381	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	554.500	5.448	0.000	9.388	0.000	0.000	0.000	0.000	0.043	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	557.700	5.604	0.000	9.395	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	561.000	5.597	0.000	9.405	0.000	0.000	0.000	0.000	0.003	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	564.300	5.622	0.000	9.413	0.000	0.000	0.000	0.000	0.018	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	567.600	5.717	0.000	9.419	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	570.900	5.778	0.000	9.425	0.000	0.000	0.000	0.000	0.042	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	574.100	5.987	0.000	9.430	0.000	0.000	0.000	0.000	0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	577.400	5.902	0.000	9.439	0.000	0.000	0.000	0.000	-0.034	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	580.700	5.764	0.000	9.448	0.000	0.000	0.000	0.000	-0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	584.000	5.897	0.000	9.451	0.000	0.000	0.000	0.000	0.034	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	587.300	5.986	0.000	9.455	0.000	0.000	0.000	0.000	0.017	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	590.500	6.006	0.000	9.460	0.000	0.000	0.000	0.000	0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	593.800	6.027	0.000	9.465	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	597.100	6.059	0.000	9.469	0.000	0.000	0.000	0.000	0.017	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	600.400	6.141	0.000	9.472	0.000	0.000	0.000	0.000	0.037	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	603.700	6.302	0.000	9.474	0.000	0.000	0.000	0.000	0.082	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	607.000	6.684	0.000	9.474	0.000	0.000	0.000	0.000	0.041	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	610.200	6.569	0.000	9.485	0.000	0.000	0.000	0.000	-0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	613.500	6.454	0.000	9.493	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	616.800	6.621	0.000	9.496	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	620.100	6.836	0.000	9.498	0.000	0.000	0.000	0.000	0.065	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	623.400	7.051	0.000	9.502	0.000	0.000	0.000	0.000	0.077	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	626.600	7.335	0.000	9.507	0.000	0.000	0.000	0.000	0.088	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	629.900	7.622	0.000	9.516	0.000	0.000	0.000	0.000	0.062	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	633.200	7.741	0.000	9.533	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	636.500	7.777	0.000	9.552	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	639.800	7.973	0.000	9.566	0.000	0.000	0.000	0.000	0.065	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	643.000	8.201	0.000	9.583	0.000	0.000	0.000	0.000	0.077	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	646.300	8.473	0.000	9.616	0.000	0.000	0.000	0.000	0.145	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	649.600	9.155	0.000	9.715	0.000	0.000	0.000	0.000	0.207	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	652.300	9.715	0.000	9.715	0.000	0.000	0.000	0.000	0.207	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
AS	711.900	9.567	0.000	9.567	0.000	0.000	0.000	0.000	-0.952	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	712.500	8.996	0.000	9.567	0.000	0.000	0.000	0.000	-0.122	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	719.000	8.701	0.000	9.567	0.000	0.000	0.000	0.000	0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	724.500	9.062	0.000	9.567	0.000	0.000	0.000	0.000	0.025	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	729.500	8.963	0.000	9.567	0.000	0.000	0.000	0.000	-0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	733.000	8.898	0.000	9.567	0.000	0.000	0.000	0.000	-0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	737.500	8.832	0.000	9.567	0.000	0.000	0.000	0.000	0.050	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	746.400	9.567	0.000	9.567	0.000	0.000	0.000	0.000	0.083	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
AS	747.700	9.567	0.000	9.567	0.000	0.000	0.000	0.000	-0.079	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	757.000	8.832	0.000	9.567	0.000	0.000	0.000	0.000	-0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	764.500	9.291	0.000	9.567	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	770.000	9.259	0.000	9.567	0.000	0.000	0.000	0.000	0.011	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	776.000	9.423	0.000	9.567	0.000	0.000	0.000	0.000	-0.034	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	785.500	8.734	0.000	9.567	0.000	0.000	0.000	0.000	-0.015	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	794.000	9.160	0.000	9.567	0.000	0.000	0.000	0.000	0.003	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	798.000	8.766	0.000	9.567	0.000	0.000	0.000	0.000	-0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	802.500	8.963	0.000	9.567	0.000	0.000	0.000	0.000	-0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	810.500	8.406	0.000	9.567	0.000	0.000	0.000	0.000	-0.054	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	817.000	8.176	0.000	9.567	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	823.500	8.766	0.000	9.567	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	836.000	8.176	0.000	9.567	0.000	0.000	0.000	0.000	-0.003	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	846.500	8.701	0.000	9.567	0.000	0.000	0.000	0.000	0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	850.000	8.406	0.000	9.567	0.000	0.000	0.000	0.000	-0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	853.500	8.537	0.000	9.567	0.000	0.000	0.000	0.000	-0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	859.000	8.110	0.000	9.567	0.000	0.000	0.000	0.000	0.018	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	868.500	8.799	0.000	9.567	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	880.500	8.602	0.000	9.567	0.000	0.000	0.000	0.000	-0.025	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	888.000	8.307	0.000	9.567	0.000	0.000	0.000	0.000	-0.059	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	890.000	8.045	0.000	9.567	0.000	0.000	0.000	0.000	-0.007	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	893.000	8.274	0.000	9.567	0.000	0.000	0.000	0.000	0.043	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	900.000	8.471	0.000	9.567	0.000	0.000	0.000	0.000	-0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	909.500	7.913	0.000	9.567	0.000	0.000	0.000	0.000	-0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	919.000	8.241	0.000	9.567	0.000	0.000	0.000	0.000	0.011	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	924.500	8.077	0.000	9.567	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	927.000	8.241	0.000	9.567	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	931.000	8.176	0.000	9.567	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	935.500	8.274	0.000	9.567	0.000	0.000	0.000	0.000	-0.017	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	944.500	7.943	0.000	9.567	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	960.500	8.373	0.000	9.567	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	972.500	8.176	0.000	9.567	0.000	0.000	0.000	0.000	0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	979.500	8.602	0.000	9.567	0.000	0.000	0.000	0.000	0.038	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	984.500	8.635	0.000	9.567	0.000	0.000	0.000	0.000	-0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	988.000	8.406	0.000	9.567	0.000	0.000	0.000	0.000	-0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	993.000	8.438	0.000	9.567	0.000	0.000	0.000	0.000	-0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	998.500	8.340	0.000	9.567	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1004.000	8.438	0.000	9.567	0.000	0.000	0.000	0.000	-0.003	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1011.000	8.307	0.000	9.567	0.000	0.000	0.000	0.000	0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1018.500	8.668	0.000	9.567	0.000	0.000	0.000	0.000	0.010	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1024.000	8.438	0.000	9.567	0.000	0.000	0.000	0.000	-0.025	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1029.000	8.406	0.000	9.567	0.000	0.000	0.000	0.000	-0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1035.000	8.176	0.000	9.567	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1042.500	8.734	0.000	9.567	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1050.500	8.241	0.000	9.567	0.000	0.000	0.000	0.000	-0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1056.500	8.274	0.000	9.567	0.000	0.000	0.000	0.000	0.018	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1063.500	8.471	0.000	9.567	0.000	0.000	0.000	0.000	0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1072.000	8.406	0.000	9.567	0.000	0.000	0.000	0.000	0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1080.000	8.668	0.000	9.567	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1086.000	8.701	0.000	9.567	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1092.000	8.766	0.000	9.567	0.000	0.000	0.000	0.000	-0.039	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1106.000	7.913	0.000	9.567	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1118.500	9.150	0.000	9.567	0.000	0.000	0.000	0.000	0.056	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1124.000	8.921	0.000	9.567	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1137.500	9.216	0.000	9.567	0.000	0.000	0.000	0.000	-0.051	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1149.500	7.618	0.000	9.567	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1158.500	9.390	0.000	9.567	0.000	0.000	0.000	0.000	0.050	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1172.500	8.766	0.000	9.567	0.000	0.000	0.000	0.000	-0.025	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1183.500	8.763	0.000	9.567	0.000	0.000	0.000	0.000	0.049	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1188.900	9.567	0.000	9.567	0.000	0.000	0.000	0.000	0.149	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
AS	1190.100	9.567	0.000	9.567	0.000	0.000	0.000	0.000	-0.147	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1192.000	9.288	0.000	9.567	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1198.600	9.567	0.000	9.567	0.000	0.000	0.000	0.000	0.042	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
AS	1199.400	9.567	0.000	9.567	0.000	0.000	0.000	0.000	-0.041	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1207.000	9.255	0.000	9.567	0.000	0.000	0.000	0.000	-0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1216.500	9.419	0.000	9.567	0.000	0.000	0.000	0.000	-0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1226.500	8.698	0.000	9.567	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1231.000	9.029	0.000	9.567	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1236.500	8.799	0.000	9.567	0.000	0.000	0.000	0.000	0.003	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1241.500	9.062	0.000	9.567	0.000	0.000	0.000	0.000	0.038	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1248.500	9.259	0.000	9.567	0.000	0.000	0.000	0.000	-0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1261.500	9.029	0.000	9.567	0.000	0.000	0.000	0.000	-0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1272.500	9.062	0.000	9.567	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1284.500	9.357	0.000	9.567	0.000	0.000	0.000	0.000	0.000	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1299.500	9.055	0.000	9.566	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1306.000	9.383	0.000	9.566	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1328.000	9.062	0.000	9.566	0.000	0.000	0.000	0.000	-0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1350.000	9.314	0.000	9.566	0.000	0.000	0.000	0.000	-0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1363.000	8.373	0.000	9.565	0.000	0.000	0.000	0.000	-0.046	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1374.000	8.209	0.000	9.565	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1379.500	8.734	0.000	9.565	0.000	0.000	0.000	0.000	0.090	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1386.000	9.291	0.000	9.565	0.000	0.000	0.000	0.000	-0.044	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1391.500	8.209	0.000	9.565	0.000	0.000	0.000	0.000	-0.045	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1400.000	8.668	0.000	9.564	0.000	0.000	0.000	0.000	0.039	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1418.500	9.259	0.000	9.564	0.000	0.000	0.000	0.000	-0.007	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1431.500	8.435	0.000	9.563	0.000	0.000	0.000	0.000	-0.077	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1436.000	7.910	0.000	9.563	0.000	0.000	0.000	0.000	-0.077	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1443.000	7.549	0.000	9.563	0.000	0.000	0.000	0.000	-0.030	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1455.500	7.320	0.000	9.563	0.000	0.000	0.000	0.000	-0.003	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1466.500	7.484	0.000	9.562	0.000	0.000	0.000	0.000	-0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1480.000	5.909	0.000	9.562	0.000	0.000	0.000	0.000	-0.040	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1492.000	6.463	0.000	9.562	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1496.000	6.437	0.000	9.561	0.000	0.000	0.000	0.000	0.026	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1501.000	6.696	0.000	9.561	0.000	0.000	0.000	0.000	0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1504.000	6.568	0.000	9.561	0.000	0.000	0.000	0.000	0.049	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1513.000	7.290	0.000	9.561	0.000	0.000	0.000	0.000	-0.017	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1523.500	6.240	0.000	9.561	0.000	0.000	0.000	0.000	-0.049	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1530.500	6.437	0.000	9.561	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1538.000	6.273	0.000	9.561	0.000	0.000	0.000	0.000	0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1547.500	6.929	0.000	9.561	0.000	0.000	0.000	0.000	0.094	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1554.500	7.815	0.000	9.562	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1560.500	6.962	0.000	9.562	0.000	0.000	0.000	0.000	-0.090	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1568.000	6.601	0.000	9.562	0.000	0.000	0.000	0.000	0.079	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1573.000	7.946	0.000	9.562	0.000	0.000	0.000	0.000	0.148	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1581.500	8.602	0.000	9.562	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1592.500	7.979	0.000	9.562	0.000	0.000	0.000	0.000	-0.080	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1604.000	6.798	0.000	9.562	0.000	0.000	0.000	0.000	-0.071	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1616.500	6.273	0.000	9.562	0.000	0.000	0.000	0.000	-0.054	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1626.500	5.584	0.000	9.562	0.000	0.000	0.000	0.000	0.044	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1635.000	7.093	0.000	9.562	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1641.500	6.109	0.000	9.562	0.000	0.000	0.000	0.000	-0.108	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1648.000	5.682	0.000	9.562	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1653.000	7.221	0.000	9.562	0.000	0.000	0.000	0.000	0.074	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1662.500	6.762	0.000	9.563	0.000	0.000	0.000	0.000	-0.056	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1677.500	5.843	0.000	9.563	0.000	0.000	0.000	0.000	-0.039	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1685.000	5.876	0.000	9.563	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1691.000	6.171	0.000	9.563	0.000	0.000	0.000	0.000	0.039	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1698.500	6.401	0.000	9.563	0.000	0.000	0.000	0.000	-0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1703.000	5.974	0.000	9.563	0.000	0.000	0.000	0.000	-0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1708.000	6.171	0.000	9.563	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1718.000	5.909	0.000	9.563	0.000	0.000	0.000	0.000	-0.037	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1727.500	5.450	0.000	9.564	0.000	0.000	0.000	0.000	-0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1735.500	5.482	0.000	9.564	0.000	0.000	0.000	0.000	0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1741.500	5.581	0.000	9.564	0.000	0.000	0.000	0.000	0.018	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1746.500	5.679	0.000	9.564	0.000	0.000	0.000	0.000	-0.026	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1751.500	5.318	0.000	9.564	0.000	0.000	0.000	0.000	-0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1755.500	5.384	0.000	9.565	0.000	0.000	0.000	0.000	0.040	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1759.000	5.617	0.000	9.565	0.000	0.000	0.000	0.000	0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1766.500	5.453	0.000	9.565	0.000	0.000	0.000	0.000	-0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1778.000	5.387	0.000	9.566	0.000	0.000	0.000	0.000	0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1785.000	5.617	0.000	9.566	0.000	0.000	0.000	0.000	0.025	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1790.000	5.682	0.000	9.566	0.000	0.000	0.000	0.000	-0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1796.500	5.518	0.000	9.566	0.000	0.000	0.000	0.000	-0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1802.000	5.289	0.000	9.566	0.000	0.000	0.000	0.000	-0.038	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1806.000	5.157	0.000	9.567	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1809.500	5.256	0.000	9.567	0.000	0.000	0.000	0.000	0.007	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1815.500	5.223	0.000	9.567	0.000	0.000	0.000	0.000	-0.034	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1823.000	4.797	0.000	9.567	0.000	0.000	0.000	0.000	-0.036	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1829.000	4.731	0.000	9.568	0.000	0.000	0.000	0.000	-0.011	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1835.000	4.665	0.000	9.568	0.000	0.000	0.000	0.000	-0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1842.500	4.567	0.000	9.568	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1850.000	4.600	0.000	9.568	0.000	0.000	0.000	0.000	0.023	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1856.500	4.895	0.000	9.568	0.000	0.000	0.000	0.000	0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1861.000	4.731	0.000	9.569	0.000	0.000	0.000	0.000	-0.083	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1864.000	4.272	0.000	9.569	0.000	0.000	0.000	0.000	-0.037	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1869.000	4.436	0.000	9.569	0.000	0.000	0.000	0.000	0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1876.000	4.501	0.000	9.569	0.000	0.000	0.000	0.000	0.017	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1882.500	4.665	0.000	9.569	0.000	0.000	0.000	0.000	-0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1892.000	4.203	0.000	9.570	0.000	0.000	0.000	0.000	-0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1897.000	4.465	0.000	9.570	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1904.500	4.301	0.000	9.570	0.000	0.000	0.000	0.000	0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1911.000	4.531	0.000	9.570	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1920.000	4.236	0.000	9.571	0.000	0.000	0.000	0.000	-0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1923.500	4.334	0.000	9.571	0.000	0.000	0.000	0.000	-0.036	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1931.000	3.842	0.000	9.571	0.000	0.000	0.000	0.000	-0.025	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1938.000	3.973	0.000	9.571	0.000	0.000	0.000	0.000	0.013	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1946.500	4.039	0.000	9.571	0.000	0.000	0.000	0.000	-0.062	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1958.000	2.726	0.000	9.571	0.000	0.000	0.000	0.000	-0.032	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1967.000	3.382	0.000	9.572	0.000	0.000	0.000	0.000	0.032	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1972.500	3.186	0.000	9.572	0.000	0.000	0.000	0.000	0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1979.000	3.940	0.000	9.572	0.000	0.000	0.000	0.000	0.114	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1984.000	4.498	0.000	9.572	0.000	0.000	0.000	0.000	-0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1990.000	3.579	0.000	9.572	0.000	0.000	0.000	0.000	-0.044	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2005.000	3.579	0.000	9.573	0.000	0.000	0.000	0.000	0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2009.500	3.940	0.000	9.573	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2016.500	4.173	0.000	9.573	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2022.000	3.944	0.000	9.573	0.000	0.000	0.000	0.000	-0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2026.500	4.009	0.000	9.573	0.000	0.000	0.000	0.000	0.054	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2035.500	4.665	0.000	9.574	0.000	0.000	0.000	0.000	-0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2042.500	3.812	0.000	9.574	0.000	0.000	0.000	0.000	-0.039	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2048.000	4.173	0.000	9.574	0.000	0.000	0.000	0.000	0.089	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2055.000	4.928	0.000	9.574	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2064.500	4.534	0.000	9.575	0.000	0.000	0.000	0.000	-0.031	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2078.500	4.206	0.000	9.575	0.000	0.000	0.000	0.000	0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2092.500	4.665	0.000	9.576	0.000	0.000	0.000	0.000	0.003	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2103.000	4.272	0.000	9.576	0.000	0.000	0.000	0.000	-0.009	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2114.500	4.465	0.000	9.576	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2126.500	4.367	0.000	9.577	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2138.000	4.695	0.000	9.577	0.000	0.000	0.000	0.000	-0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2147.500	4.170	0.000	9.578	0.000	0.000	0.000	0.000	-0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2160.000	4.432	0.000	9.578	0.000	0.000	0.000	0.000	0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2174.000	4.301	0.000	9.579	0.000	0.000	0.000	0.000	0.003	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2182.500	4.498	0.000	9.579	0.000	0.000	0.000	0.000	0.017	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2191.500	4.596	0.000	9.580	0.000	0.000	0.000	0.000	0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2205.000	4.695	0.000	9.580	0.000	0.000	0.000	0.000	-0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2223.000	4.137	0.000	9.581	0.000	0.000	0.000	0.000	-0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2236.000	4.629	0.000	9.582	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2242.500	4.596	0.000	9.582	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2249.500	4.629	0.000	9.582	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2256.500	4.596	0.000	9.583	0.000	0.000	0.000	0.000	-0.025	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2265.500	4.236	0.000	9.583	0.000	0.000	0.000	0.000	-0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2282.500	4.370	0.000	9.584	0.000	0.000	0.000	0.000	0.007	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2299.000	4.469	0.000	9.584	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2306.500	4.698	0.000	9.584	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2313.000	4.665	0.000	9.585	0.000	0.000	0.000	0.000	-0.039	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2320.000	4.173	0.000	9.585	0.000	0.000	0.000	0.000	-0.051	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2326.000	4.009	0.000	9.585	0.000	0.000	0.000	0.000	-0.049	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2334.000	3.484	0.000	9.585	0.000	0.000	0.000	0.000	0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2345.000	4.367	0.000	9.586	0.000	0.000	0.000	0.000	0.054	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2353.500	4.531	0.000	9.586	0.000	0.000	0.000	0.000	-0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2361.000	4.268	0.000	9.586	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2370.500	4.071	0.000	9.586	0.000	0.000	0.000	0.000	-0.030	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2379.500	3.711	0.000	9.587	0.000	0.000	0.000	0.000	-0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2388.500	3.547	0.000	9.587	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2398.500	3.973	0.000	9.587	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2405.500	3.940	0.000	9.587	0.000	0.000	0.000	0.000	-0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2412.500	3.908	0.000	9.588	0.000	0.000	0.000	0.000	-0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2422.000	3.547	0.000	9.588	0.000	0.000	0.000	0.000	-0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2428.500	3.809	0.000	9.588	0.000	0.000	0.000	0.000	-0.069	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2439.500	2.333	0.000	9.589	0.000	0.000	0.000	0.000	-0.043	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2446.000	3.055	0.000	9.589	0.000	0.000	0.000	0.000	0.061	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2453.500	3.186	0.000	9.589	0.000	0.000	0.000	0.000	0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2460.500	3.448	0.000	9.589	0.000	0.000	0.000	0.000	0.026	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2466.000	3.514	0.000	9.589	0.000	0.000	0.000	0.000	0.059	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2471.000	4.071	0.000	9.589	0.000	0.000	0.000	0.000	-0.003	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2478.000	3.481	0.000	9.590	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2487.500	4.006	0.000	9.590	0.000	0.000	0.000	0.000	0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2495.000	3.940	0.000	9.590	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2502.000	4.006	0.000	9.590	0.000	0.000	0.000	0.000	-0.007	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2510.000	3.842	0.000	9.590	0.000	0.000	0.000	0.000	-0.139	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2518.000	1.775	0.000	9.591	0.000	0.000	0.000	0.000	-0.038	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2525.500	3.251	0.000	9.591	0.000	0.000	0.000	0.000	0.115	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2532.500	3.448	0.000	9.591	0.000	0.000	0.000	0.000	0.038	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2541.000	3.845	0.000	9.591	0.000	0.000	0.000	0.000	-0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2549.500	3.419	0.000	9.592	0.000	0.000	0.000	0.000	-0.031	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2557.000	3.353	0.000	9.592	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2565.500	3.481	0.000	9.592	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2575.500	3.350	0.000	9.592	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2586.500	4.071	0.000	9.592	0.000	0.000	0.000	0.000	0.032	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2593.000	3.908	0.000	9.592	0.000	0.000	0.000	0.000	-0.062	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	2596.000	3.481	0.000	9.592	0.000	0.000	0.000	0.000	-0.036	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2825.000	-4.342	0.000	9.595	0.000	0.000	0.000	0.000	-0.034	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2826.000	-4.342	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2837.000	-4.341	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2838.000	-4.341	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2849.000	-4.340	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2850.000	-4.340	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2861.000	-4.340	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2862.000	-4.340	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2873.000	-4.339	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2874.000	-4.339	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2885.000	-4.339	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2886.000	-4.339	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2897.000	-4.338	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2898.000	-4.338	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2909.000	-4.338	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2910.000	-4.337	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2921.000	-4.337	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2922.000	-4.337	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2933.000	-4.336	0.000	9.595	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2934.000	-4.336	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2945.000	-4.336	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2946.000	-4.336	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2957.000	-4.335	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2958.000	-4.335	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2969.000	-4.335	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2970.000	-4.334	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2981.000	-4.334	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2982.000	-4.334	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2993.000	-4.333	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2994.000	-4.333	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3005.000	-4.333	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3006.000	-4.333	0.000	9.596	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3017.000	-4.332	0.000	9.597	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3018.000	-4.332	0.000	9.597	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3066.000	-4.332	0.000	9.597	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3067.000	-4.332	0.000	9.597	0.000	0.000	0.000	0.000	0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3078.000	-4.090	0.000	9.597	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3079.000	-4.068	0.000	9.597	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3090.000	-3.814	0.000	9.597	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3091.000	-3.791	0.000	9.597	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3102.000	-3.538	0.000	9.597	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3103.000	-3.515	0.000	9.597	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3115.000	-3.239	0.000	9.598	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3126.000	-2.986	0.000	9.598	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3135.000	-2.779	0.000	9.598	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3142.000	-2.618	0.000	9.598	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3153.000	-2.365	0.000	9.598	0.000	0.000	0.000	0.000	0.023	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3223.000	-0.754	0.000	9.600	0.000	0.000	0.000	0.000	0.071	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3256.000	4.948	0.000	9.600	0.000	0.000	0.000	0.000	0.161	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3259.500	5.111	0.000	9.600	0.000	0.000	0.000	0.000	-0.044	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3264.000	4.593	0.000	9.600	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3267.500	5.111	0.000	9.600	0.000	0.000	0.000	0.000	-0.045	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3273.500	4.167	0.000	9.601	0.000	0.000	0.000	0.000	-0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3290.000	4.364	0.000	9.601	0.000	0.000	0.000	0.000	0.030	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3309.000	5.236	0.000	9.601	0.000	0.000	0.000	0.000	0.013	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3311.000	4.626	0.000	9.601	0.000	0.000	0.000	0.000	-0.095	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3321.000	4.101	0.000	9.602	0.000	0.000	0.000	0.000	-0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3330.000	4.432	0.000	9.602	0.000	0.000	0.000	0.000	0.042	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3334.500	4.662	0.000	9.602	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3344.500	4.367	0.000	9.602	0.000	0.000	0.000	0.000	-0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3355.000	4.531	0.000	9.602	0.000	0.000	0.000	0.000	0.031	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3361.500	4.892	0.000	9.602	0.000	0.000	0.000	0.000	0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3366.000	4.826	0.000	9.603	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3369.000	4.859	0.000	9.603	0.000	0.000	0.000	0.000	-0.075	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3373.000	4.301	0.000	9.603	0.000	0.000	0.000	0.000	-0.073	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3378.000	4.203	0.000	9.603	0.000	0.000	0.000	0.000	-0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3389.500	4.170	0.000	9.603	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3394.000	4.268	0.000	9.603	0.000	0.000	0.000	0.000	-0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3399.500	3.842	0.000	9.603	0.000	0.000	0.000	0.000	-0.059	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3404.000	3.678	0.000	9.604	0.000	0.000	0.000	0.000	-0.038	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3409.000	3.481	0.000	9.604	0.000	0.000	0.000	0.000	0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3420.000	3.773	0.000	9.604	0.000	0.000	0.000	0.000	0.042	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3424.500	4.134	0.000	9.604	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3429.500	3.970	0.000	9.604	0.000	0.000	0.000	0.000	-0.034	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3438.000	3.674	0.000	9.604	0.000	0.000	0.000	0.000	0.090	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3447.000	5.541	0.000	9.604	0.000	0.000	0.000	0.000	0.030	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3461.000	4.364	0.000	9.605	0.000	0.000	0.000	0.000	-0.064	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3470.000	4.068	0.000	9.605	0.000	0.000	0.000	0.000	-0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3483.500	4.134	0.000	9.605	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3492.500	4.101	0.000	9.606	0.000	0.000	0.000	0.000	-0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3500.000	4.035	0.000	9.606	0.000	0.000	0.000	0.000	0.003	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3504.000	4.134	0.000	9.606	0.000	0.000	0.000	0.000	-0.018	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3509.000	3.871	0.000	9.606	0.000	0.000	0.000	0.000	0.003	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3515.000	4.167	0.000	9.606	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3520.500	4.134	0.000	9.606	0.000	0.000	0.000	0.000	0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3527.500	4.232	0.000	9.606	0.000	0.000	0.000	0.000	0.011	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3532.000	4.265	0.000	9.606	0.000	0.000	0.000	0.000	-0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3536.000	4.134	0.000	9.606	0.000	0.000	0.000	0.000	-0.034	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3543.500	3.871	0.000	9.606	0.000	0.000	0.000	0.000	0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3550.000	4.364	0.000	9.606	0.000	0.000	0.000	0.000	0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3557.000	3.937	0.000	9.606	0.000	0.000	0.000	0.000	-0.045	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3565.500	3.674	0.000	9.606	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3574.000	4.003	0.000	9.606	0.000	0.000	0.000	0.000	0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3584.000	4.167	0.000	9.606	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3591.500	4.039	0.000	9.606	0.000	0.000	0.000	0.000	0.013	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3596.500	4.334	0.000	9.606	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3607.000	4.400	0.000	9.606	0.000	0.000	0.000	0.000	-0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3617.000	4.039	0.000	9.607	0.000	0.000	0.000	0.000	0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3623.500	4.662	0.000	9.607	0.000	0.000	0.000	0.000	0.034	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3632.500	4.560	0.000	9.607	0.000	0.000	0.000	0.000	-0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3639.500	4.429	0.000	9.607	0.000	0.000	0.000	0.000	0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3644.000	4.626	0.000	9.607	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3647.000	4.462	0.000	9.607	0.000	0.000	0.000	0.000	-0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3653.000	4.429	0.000	9.607	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3661.000	4.462	0.000	9.608	0.000	0.000	0.000	0.000	-0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3667.000	4.265	0.000	9.608	0.000	0.000	0.000	0.000	0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3671.500	4.560	0.000	9.608	0.000	0.000	0.000	0.000	0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3676.000	4.692	0.000	9.608	0.000	0.000	0.000	0.000	-0.080	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3683.000	3.642	0.000	9.608	0.000	0.000	0.000	0.000	-0.013	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3688.500	4.528	0.000	9.608	0.000	0.000	0.000	0.000	0.116	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3693.500	4.856	0.000	9.608	0.000	0.000	0.000	0.000	0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3699.500	4.823	0.000	9.608	0.000	0.000	0.000	0.000	0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3704.000	4.921	0.000	9.608	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3709.000	4.823	0.000	9.609	0.000	0.000	0.000	0.000	-0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3714.500	4.692	0.000	9.609	0.000	0.000	0.000	0.000	-0.028	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3719.500	4.528	0.000	9.609	0.000	0.000	0.000	0.000	-0.013	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3725.000	4.560	0.000	9.609	0.000	0.000	0.000	0.000	0.030	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3732.500	4.921	0.000	9.609	0.000	0.000	0.000	0.000	0.066	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3735.000	5.216	0.000	9.609	0.000	0.000	0.000	0.000	0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3739.500	5.052	0.000	9.609	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3744.000	5.348	0.000	9.609	0.000	0.000	0.000	0.000	-0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3747.000	4.889	0.000	9.609	0.000	0.000	0.000	0.000	-0.017	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3753.500	5.184	0.000	9.609	0.000	0.000	0.000	0.000	0.092	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3760.500	6.135	0.000	9.609	0.000	0.000	0.000	0.000	0.069	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3764.000	5.905	0.000	9.609	0.000	0.000	0.000	0.000	-0.066	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3768.500	5.610	0.000	9.609	0.000	0.000	0.000	0.000	0.011	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3778.500	6.070	0.000	9.609	0.000	0.000	0.000	0.000	-0.017	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3786.000	5.315	0.000	9.609	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3794.500	6.234	0.000	9.609	0.000	0.000	0.000	0.000	0.038	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3806.000	6.070	0.000	9.609	0.000	0.000	0.000	0.000	-0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3810.000	6.198	0.000	9.609	0.000	0.000	0.000	0.000	0.048	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3815.500	6.529	0.000	9.609	0.000	0.000	0.000	0.000	0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3824.000	6.460	0.000	9.609	0.000	0.000	0.000	0.000	-0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3834.500	5.902	0.000	9.609	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3847.000	6.654	0.000	9.609	0.000	0.000	0.000	0.000	0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3863.500	6.361	0.000	9.609	0.000	0.000	0.000	0.000	-0.013	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3879.500	6.230	0.000	9.609	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3890.000	6.398	0.000	9.609	0.000	0.000	0.000	0.000	0.030	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3906.000	7.021	0.000	9.609	0.000	0.000	0.000	0.000	0.007	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3928.000	6.663	0.000	9.609	0.000	0.000	0.000	0.000	0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3955.500	7.316	0.000	9.609	0.000	0.000	0.000	0.000	0.036	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3974.000	8.337	0.000	9.609	0.000	0.000	0.000	0.000	0.018	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	3984.000	7.841	0.000	9.609	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	4000.000	8.366	0.000	9.609	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	4012.500	8.829	0.000	9.609	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	4027.000	8.268	0.000	9.609	0.000	0.000	0.000	0.000	-0.007	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	4075.000	8.402	0.000	9.609	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	4091.000	8.763	0.000	9.609	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	4106.000	9.088	0.000	9.609	0.000	0.000	0.000	0.000	0.004	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	4123.500	8.891	0.000	9.609	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	4139.000	9.091	0.000	9.609	0.000	0.000	0.000	0.000	0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	4156.000	9.186	0.000	9.609	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	4172.700	9.609	0.000	9.609	0.000	0.000	0.000	0.000	0.025	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
AS	4174.800	9.609	0.000	9.609	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	4191.000	9.550	0.000	9.609	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	4193.100	9.609	0.000	9.609	0.000	0.000	0.000	0.000	0.028	0.000

----------END OF TRANSECT----------

NOTE:
SURGE ELEVATION INCLUDES CONTRIBUTIONS FROM ASTRONOMICAL AND STORM TIDES.

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PART2: CONTROLLING WAVE HEIGHTS, SPECTRAL PEAK WAVE PERIOD, AND WAVE CREST ELEVATIONS

	LOCATION	CONTROLLING WAVE HEIGHT	SPECTRAL PEAK WAVE PERIOD	WAVE CREST ELEVATION
IE	0.00	11.30	12.80	16.94
OF	3.00	11.28	12.80	16.93
OF	4.00	11.28	12.80	16.93
OF	9.00	11.26	12.80	16.91
OF	10.00	11.25	12.80	16.91
OF	15.00	11.23	12.80	16.90
OF	16.00	11.22	12.80	16.89
OF	22.00	11.19	12.80	16.87
OF	27.00	11.17	12.80	16.85
OF	28.00	11.16	12.80	16.85
OF	39.00	11.00	12.80	16.74
OF	40.00	10.98	12.80	16.73
OF	51.00	10.76	12.80	16.57
OF	52.00	10.74	12.80	16.56
OF	61.00	10.56	12.80	16.43
OF	62.00	10.55	12.80	16.43
OF	72.20	10.49	12.80	16.38
OF	75.50	10.47	12.80	16.37
OF	78.70	10.46	12.80	16.35
OF	82.00	10.43	12.80	16.34
OF	85.30	10.41	12.80	16.33
OF	88.60	10.39	12.80	16.31
OF	91.90	10.36	12.80	16.29
OF	95.10	10.34	12.80	16.28
OF	98.40	10.32	12.80	16.26
OF	101.70	10.30	12.80	16.25
OF	105.00	10.27	12.80	16.23
OF	108.30	10.25	12.80	16.22
OF	111.50	10.23	12.80	16.20
OF	114.80	10.20	12.80	16.19
OF	118.10	10.18	12.80	16.17
OF	121.40	10.16	12.80	16.16
OF	124.70	10.13	12.80	16.14
OF	128.00	10.11	12.80	16.13
OF	131.20	10.09	12.80	16.11
OF	134.50	10.07	12.80	16.10
OF	137.80	10.04	12.80	16.08
OF	141.10	10.02	12.80	16.07
OF	144.40	10.00	12.80	16.05
OF	147.60	9.97	12.80	16.04
OF	150.90	9.92	12.80	16.00
OF	154.20	9.87	12.80	15.97
OF	157.50	9.82	12.80	15.93
OF	160.80	9.77	12.80	15.90
OF	164.00	9.72	12.80	15.87
OF	167.30	9.67	12.80	15.83
OF	170.60	9.62	12.80	15.80
OF	173.90	9.57	12.80	15.76
OF	177.20	9.52	12.80	15.73
OF	180.40	9.47	12.80	15.69
OF	183.70	9.42	12.80	15.66
OF	187.00	9.37	12.80	15.63
OF	190.30	9.32	12.80	15.59
OF	193.60	9.26	12.80	15.56
OF	196.80	9.21	12.80	15.52
OF	200.10	9.16	12.80	15.49
OF	203.40	9.11	12.80	15.46
OF	206.70	9.06	12.80	15.42
OF	210.00	9.01	12.80	15.39
OF	213.30	8.96	12.80	15.36
OF	216.50	8.91	12.80	15.32
OF	219.80	8.86	12.80	15.29
OF	223.10	8.80	12.80	15.25
OF	226.40	8.75	12.80	15.21
OF	229.70	8.70	12.80	15.18
OF	232.90	8.67	12.80	15.16
OF	236.20	8.64	12.80	15.14
OF	239.50	8.62	12.80	15.13
OF	242.80	8.59	12.80	15.11
OF	246.10	8.56	12.80	15.10
OF	249.30	8.53	12.80	15.07
OF	252.60	8.50	12.80	15.05
OF	255.90	8.46	12.80	15.03

OF	259.20	8.43	12.80	15.01
OF	262.50	8.40	12.80	14.99
OF	265.70	8.36	12.80	14.96
OF	269.00	8.33	12.80	14.94
OF	272.30	8.30	12.80	14.92
OF	275.60	8.26	12.80	14.90
OF	278.90	8.23	12.80	14.88
OF	282.20	8.19	12.80	14.86
OF	285.40	8.16	12.80	14.83
OF	288.70	8.13	12.80	14.81
OF	292.00	8.09	12.80	14.79
OF	295.30	8.06	12.80	14.77
OF	298.60	8.03	12.80	14.75
OF	301.80	7.99	12.80	14.73
OF	305.10	7.96	12.80	14.70
OF	308.40	7.91	12.80	14.67
OF	311.70	7.86	12.80	14.64
OF	315.00	7.81	12.80	14.61
OF	318.20	7.77	12.80	14.58
OF	321.50	7.72	12.80	14.54
OF	324.80	7.67	12.80	14.51
OF	328.10	7.62	12.80	14.48
OF	331.40	7.57	12.80	14.45
OF	334.60	7.52	12.80	14.41
OF	337.90	7.47	12.80	14.38
OF	341.20	7.42	12.80	14.35
OF	344.50	7.37	12.80	14.32
OF	347.80	7.33	12.80	14.28
OF	351.00	7.28	12.80	14.25
OF	354.30	7.23	12.80	14.22
OF	357.60	7.18	12.80	14.19
OF	360.90	7.13	12.80	14.16
OF	364.20	7.08	12.80	14.12
IF	367.50	6.72	12.80	13.87
IF	370.70	6.43	12.80	13.66
IF	374.00	6.39	12.80	13.64
IF	377.30	6.31	12.80	13.59
IF	380.60	6.32	12.80	13.60
IF	383.90	6.34	12.80	13.62
IF	387.10	6.36	12.80	13.64
IF	390.40	6.38	12.80	13.65
IF	393.70	6.39	12.80	13.67
IF	397.00	6.36	12.80	13.65
IF	400.30	6.34	12.80	13.64
IF	403.50	6.31	12.80	13.62
IF	406.80	6.27	12.80	13.59
IF	410.10	6.25	12.80	13.58
IF	413.40	6.26	12.80	13.59
IF	416.70	6.30	12.80	13.63
IF	419.90	6.31	12.80	13.64
IF	423.20	6.31	12.80	13.63
IF	426.50	6.28	12.80	13.62
IF	429.80	6.19	12.80	13.55
IF	433.10	6.09	12.80	13.48
IF	436.40	6.06	12.80	13.47
IF	439.60	6.07	12.80	13.48
IF	442.90	6.09	12.80	13.50
IF	446.20	6.11	12.80	13.51
IF	449.50	6.11	12.80	13.52
IF	452.80	6.11	12.80	13.51
IF	456.00	6.04	12.80	13.46
IF	459.30	5.72	12.80	13.24
IF	462.60	5.48	12.80	13.07
IF	465.90	5.51	12.80	13.10
IF	469.20	5.52	12.80	13.11
IF	472.40	5.51	12.80	13.10
IF	475.70	5.46	12.80	13.07
IF	479.00	5.32	12.80	12.98
IF	482.30	5.20	12.80	12.89
IF	485.60	5.19	12.80	12.89
IF	488.80	5.13	12.80	12.85
IF	492.10	4.92	12.80	12.70
IF	495.40	4.71	12.80	12.56
IF	498.70	4.50	12.80	12.42
IF	502.00	4.39	12.80	12.34
IF	505.20	4.27	12.80	12.27
IF	508.50	4.23	12.80	12.24
IF	511.80	4.27	12.80	12.28
IF	515.10	4.28	12.80	12.29
IF	518.40	4.23	12.80	12.26
IF	521.70	4.10	12.80	12.18
IF	524.90	3.93	12.80	12.06
IF	528.20	3.75	12.80	11.94
IF	531.50	3.57	12.80	11.82
IF	534.80	3.26	12.80	11.60
IF	538.10	3.02	12.80	11.45
IF	541.30	3.07	12.80	11.50
IF	544.60	3.09	12.80	11.52
IF	547.90	3.07	12.80	11.52
IF	551.20	3.06	12.80	11.52
IF	554.50	3.04	12.80	11.51
IF	557.70	2.94	12.80	11.45
IF	561.00	2.94	12.80	11.46
IF	564.30	2.94	12.80	11.47
IF	567.60	2.87	12.80	11.43
IF	570.90	2.83	12.80	11.40
IF	574.10	2.67	12.80	11.30
IF	577.40	2.69	12.80	11.32
IF	580.70	2.72	12.80	11.35
IF	584.00	2.70	12.80	11.34
IF	587.30	2.68	12.80	11.33
IF	590.50	2.68	12.80	11.33

IF	593.80	2.66	12.80	11.33
IF	597.10	2.64	12.80	11.32
IF	600.40	2.58	12.80	11.28
IF	603.70	2.46	12.80	11.20
IF	607.00	2.16	12.80	10.99
IF	610.20	2.19	12.80	11.02
IF	613.50	2.22	12.80	11.04
IF	616.80	2.19	12.80	11.03
IF	620.10	2.07	12.80	10.94
IF	623.40	1.90	12.80	10.83
IF	626.60	1.69	12.80	10.69
IF	629.90	1.47	12.80	10.55
IF	633.20	1.39	12.80	10.51
IF	636.50	1.38	12.80	10.52
IF	639.80	1.24	12.80	10.43
IF	643.00	1.08	12.80	10.34
IF	646.30	0.89	12.80	10.24
IF	649.60	0.44	12.80	10.02
IF	652.30	0.01	12.80	9.72
AS	711.90	0.00	0.00	9.57
IF	712.50	0.01	0.14	9.58
IF	719.00	0.05	0.27	9.61
IF	724.50	0.08	0.33	9.62
IF	729.50	0.10	0.37	9.64
IF	733.00	0.11	0.39	9.64
IF	737.50	0.13	0.42	9.66
IF	746.40	0.01	0.46	9.57
AS	747.70	0.00	0.00	9.57
IF	757.00	0.07	0.30	9.61
IF	764.50	0.09	0.36	9.63
IF	770.00	0.11	0.40	9.64
IF	776.00	0.09	0.43	9.63
IF	785.50	0.16	0.47	9.68
IF	794.00	0.17	0.50	9.69
IF	798.00	0.20	0.52	9.70
IF	802.50	0.20	0.53	9.71
IF	810.50	0.23	0.56	9.73
IF	817.00	0.24	0.58	9.74
IF	823.50	0.25	0.59	9.74
IF	836.00	0.29	0.62	9.77
IF	846.50	0.30	0.65	9.78
IF	850.00	0.31	0.66	9.79
IF	853.50	0.32	0.66	9.79
IF	859.00	0.33	0.67	9.80
IF	868.50	0.32	0.69	9.79
IF	880.50	0.36	0.71	9.82
IF	888.00	0.38	0.73	9.83
IF	890.00	0.39	0.73	9.84
IF	893.00	0.39	0.74	9.84
IF	900.00	0.39	0.75	9.84
IF	909.50	0.42	0.76	9.86
IF	919.00	0.43	0.78	9.87
IF	924.50	0.45	0.79	9.88
IF	927.00	0.44	0.79	9.88
IF	931.00	0.45	0.80	9.88
IF	935.50	0.46	0.80	9.89
IF	944.50	0.48	0.81	9.90
IF	960.50	0.48	0.84	9.90
IF	972.50	0.51	0.85	9.92
IF	979.50	0.47	0.86	9.89
IF	984.50	0.46	0.87	9.89
IF	988.00	0.49	0.87	9.91
IF	993.00	0.50	0.88	9.92
IF	998.50	0.52	0.88	9.93
IF	1004.00	0.51	0.89	9.93
IF	1011.00	0.54	0.90	9.94
IF	1018.50	0.48	0.91	9.90
IF	1024.00	0.51	0.91	9.92
IF	1029.00	0.52	0.92	9.93
IF	1035.00	0.56	0.92	9.96
IF	1042.50	0.47	0.93	9.89
IF	1050.50	0.53	0.94	9.93
IF	1056.50	0.54	0.95	9.94
IF	1063.50	0.53	0.95	9.94
IF	1072.00	0.55	0.96	9.96
IF	1080.00	0.50	0.97	9.92
IF	1086.00	0.50	0.97	9.91
IF	1092.00	0.47	0.98	9.90
IF	1106.00	0.56	0.99	9.96
IF	1118.50	0.29	1.00	9.77
IF	1124.00	0.31	1.01	9.79
IF	1137.50	0.25	1.02	9.74
IF	1149.50	0.32	1.03	9.79
IF	1158.50	0.13	1.04	9.66
IF	1172.50	0.23	1.05	9.72
IF	1183.50	0.29	1.06	9.77
IF	1188.90	0.01	1.06	9.57
AS	1190.10	0.00	0.00	9.57
IF	1192.00	0.02	0.18	9.58
IF	1198.60	0.01	0.29	9.57
AS	1199.40	0.00	0.00	9.57
IF	1207.00	0.06	0.28	9.61
IF	1216.50	0.08	0.36	9.62
IF	1226.50	0.13	0.42	9.66
IF	1231.00	0.14	0.44	9.67
IF	1236.50	0.16	0.47	9.68
IF	1241.50	0.17	0.49	9.69
IF	1248.50	0.16	0.51	9.68
IF	1261.50	0.21	0.56	9.72
IF	1272.50	0.23	0.59	9.73
IF	1284.50	0.14	0.62	9.66
IF	1299.50	0.25	0.65	9.74

IF	1306.00	0.13	0.66	9.65
IF	1328.00	0.27	0.71	9.75
IF	1350.00	0.17	0.74	9.69
IF	1363.00	0.28	0.77	9.76
IF	1374.00	0.34	0.78	9.80
IF	1379.50	0.34	0.79	9.80
IF	1386.00	0.19	0.80	9.70
IF	1391.50	0.24	0.81	9.74
IF	1400.00	0.28	0.82	9.76
IF	1418.50	0.21	0.84	9.71
IF	1431.50	0.30	0.86	9.77
IF	1436.00	0.33	0.87	9.80
IF	1443.00	0.37	0.87	9.82
IF	1455.50	0.42	0.89	9.85
IF	1466.50	0.45	0.90	9.88
IF	1480.00	0.50	0.92	9.91
IF	1492.00	0.53	0.93	9.93
IF	1496.00	0.54	0.93	9.94
IF	1501.00	0.56	0.94	9.95
IF	1504.00	0.57	0.94	9.96
IF	1513.00	0.59	0.95	9.97
IF	1523.50	0.61	0.96	9.99
IF	1530.50	0.63	0.97	10.00
IF	1538.00	0.65	0.98	10.02
IF	1547.50	0.67	0.98	10.03
IF	1554.50	0.66	0.99	10.03
IF	1560.50	0.70	1.00	10.05
IF	1568.00	0.71	1.00	10.06
IF	1573.00	0.68	1.01	10.04
IF	1581.50	0.55	1.02	9.94
IF	1592.50	0.61	1.02	9.99
IF	1604.00	0.67	1.03	10.03
IF	1616.50	0.70	1.05	10.05
IF	1626.50	0.72	1.05	10.07
IF	1635.00	0.73	1.06	10.07
IF	1641.50	0.75	1.07	10.09
IF	1648.00	0.77	1.07	10.10
IF	1653.00	0.76	1.07	10.09
IF	1662.50	0.79	1.08	10.11
IF	1677.50	0.82	1.09	10.14
IF	1685.00	0.83	1.10	10.15
IF	1691.00	0.84	1.10	10.15
IF	1698.50	0.85	1.11	10.16
IF	1703.00	0.86	1.11	10.17
IF	1708.00	0.87	1.12	10.17
IF	1718.00	0.89	1.12	10.19
IF	1727.50	0.91	1.13	10.20
IF	1735.50	0.92	1.14	10.21
IF	1741.50	0.93	1.14	10.21
IF	1746.50	0.94	1.14	10.22
IF	1751.50	0.94	1.15	10.23
IF	1755.50	0.95	1.15	10.23
IF	1759.00	0.95	1.15	10.23
IF	1766.50	0.97	1.16	10.24
IF	1778.00	0.98	1.17	10.25
IF	1785.00	0.99	1.17	10.26
IF	1790.00	1.00	1.17	10.27
IF	1796.50	1.01	1.18	10.27
IF	1802.00	1.02	1.18	10.28
IF	1806.00	1.02	1.18	10.28
IF	1809.50	1.03	1.19	10.29
IF	1815.50	1.03	1.19	10.29
IF	1823.00	1.04	1.19	10.30
IF	1829.00	1.05	1.20	10.30
IF	1835.00	1.06	1.20	10.31
IF	1842.50	1.06	1.21	10.31
IF	1850.00	1.07	1.21	10.32
IF	1856.50	1.08	1.22	10.32
IF	1861.00	1.08	1.22	10.33
IF	1864.00	1.09	1.22	10.33
IF	1869.00	1.09	1.22	10.33
IF	1876.00	1.10	1.23	10.34
IF	1882.50	1.11	1.23	10.34
IF	1892.00	1.12	1.24	10.35
IF	1897.00	1.12	1.24	10.36
IF	1904.50	1.13	1.24	10.36
IF	1911.00	1.14	1.25	10.37
IF	1920.00	1.15	1.25	10.37
IF	1923.50	1.15	1.26	10.38
IF	1931.00	1.16	1.26	10.38
IF	1938.00	1.17	1.26	10.39
IF	1946.50	1.18	1.27	10.39
IF	1958.00	1.19	1.27	10.40
IF	1967.00	1.20	1.28	10.41
IF	1972.50	1.20	1.28	10.41
IF	1979.00	1.21	1.29	10.42
IF	1984.00	1.21	1.29	10.42
IF	1990.00	1.22	1.29	10.43
IF	2005.00	1.24	1.30	10.44
IF	2009.50	1.24	1.30	10.44
IF	2016.50	1.25	1.31	10.45
IF	2022.00	1.25	1.31	10.45
IF	2026.50	1.26	1.31	10.45
IF	2035.50	1.26	1.32	10.46
IF	2042.50	1.27	1.32	10.46
IF	2048.00	1.28	1.32	10.47
IF	2055.00	1.28	1.33	10.47
IF	2064.50	1.29	1.33	10.48
IF	2078.50	1.31	1.34	10.49
IF	2092.50	1.32	1.35	10.50
IF	2103.00	1.33	1.35	10.51
IF	2114.50	1.34	1.36	10.51

IF	2126.50	1.35	1.36	10.52
IF	2138.00	1.36	1.37	10.53
IF	2147.50	1.37	1.37	10.54
IF	2160.00	1.38	1.38	10.54
IF	2174.00	1.39	1.38	10.56
IF	2182.50	1.40	1.39	10.56
IF	2191.50	1.41	1.39	10.56
IF	2205.00	1.42	1.40	10.57
IF	2223.00	1.44	1.41	10.59
IF	2236.00	1.44	1.41	10.59
IF	2242.50	1.45	1.42	10.60
IF	2249.50	1.46	1.42	10.60
IF	2256.50	1.46	1.42	10.61
IF	2265.50	1.48	1.43	10.62
IF	2282.50	1.49	1.43	10.63
IF	2299.00	1.50	1.44	10.63
IF	2306.50	1.50	1.44	10.64
IF	2313.00	1.51	1.45	10.64
IF	2320.00	1.52	1.45	10.65
IF	2326.00	1.53	1.45	10.66
IF	2334.00	1.54	1.46	10.66
IF	2345.00	1.54	1.46	10.66
IF	2353.50	1.54	1.46	10.67
IF	2361.00	1.56	1.47	10.67
IF	2370.50	1.57	1.47	10.68
IF	2379.50	1.58	1.47	10.69
IF	2388.50	1.59	1.48	10.70
IF	2398.50	1.59	1.48	10.70
IF	2405.50	1.60	1.49	10.71
IF	2412.50	1.60	1.49	10.71
IF	2422.00	1.62	1.49	10.72
IF	2428.50	1.62	1.49	10.72
IF	2439.50	1.64	1.50	10.73
IF	2446.00	1.64	1.50	10.74
IF	2453.50	1.64	1.50	10.74
IF	2460.50	1.65	1.51	10.74
IF	2466.00	1.65	1.51	10.75
IF	2471.00	1.65	1.51	10.74
IF	2478.00	1.66	1.51	10.75
IF	2487.50	1.66	1.52	10.75
IF	2495.00	1.67	1.52	10.76
IF	2502.00	1.68	1.52	10.76
IF	2510.00	1.68	1.53	10.77
IF	2518.00	1.70	1.53	10.78
IF	2525.50	1.70	1.53	10.78
IF	2532.50	1.71	1.54	10.79
IF	2541.00	1.71	1.54	10.79
IF	2549.50	1.72	1.54	10.80
IF	2557.00	1.73	1.54	10.80
IF	2565.50	1.73	1.55	10.80
IF	2575.50	1.74	1.55	10.81
IF	2586.50	1.74	1.56	10.81
IF	2593.00	1.75	1.56	10.81
IF	2596.00	1.76	1.56	10.82
	2756.30	1.89	1.62	10.92
OF	2825.00	1.94	1.64	10.95
OF	2826.00	1.94	1.64	10.95
OF	2837.00	1.95	1.64	10.96
OF	2838.00	1.95	1.64	10.96
OF	2849.00	1.96	1.65	10.97
OF	2850.00	1.96	1.65	10.97
OF	2861.00	1.97	1.65	10.97
OF	2862.00	1.97	1.65	10.97
OF	2873.00	1.98	1.66	10.98
OF	2874.00	1.98	1.66	10.98
OF	2885.00	1.98	1.66	10.98
OF	2886.00	1.99	1.66	10.98
OF	2897.00	1.99	1.66	10.99
OF	2898.00	1.99	1.66	10.99
OF	2909.00	2.00	1.67	11.00
OF	2910.00	2.00	1.67	11.00
OF	2921.00	2.01	1.67	11.00
OF	2922.00	2.01	1.67	11.00
OF	2933.00	2.02	1.68	11.01
OF	2934.00	2.02	1.68	11.01
OF	2945.00	2.03	1.68	11.02
OF	2946.00	2.03	1.68	11.02
OF	2957.00	2.04	1.68	11.02
OF	2958.00	2.04	1.68	11.02
OF	2969.00	2.05	1.69	11.03
OF	2970.00	2.05	1.69	11.03
OF	2981.00	2.05	1.69	11.03
OF	2982.00	2.05	1.69	11.03
OF	2993.00	2.06	1.69	11.04
OF	2994.00	2.06	1.69	11.04
OF	3005.00	2.07	1.70	11.05
OF	3006.00	2.07	1.70	11.05
OF	3017.00	2.08	1.70	11.05
OF	3018.00	2.08	1.70	11.05
OF	3066.00	2.11	1.72	11.08
OF	3067.00	2.11	1.72	11.08
OF	3078.00	2.12	1.72	11.08
OF	3079.00	2.12	1.72	11.08
OF	3090.00	2.13	1.72	11.09
OF	3091.00	2.13	1.72	11.09
OF	3102.00	2.14	1.73	11.09
OF	3103.00	2.14	1.73	11.09
OF	3115.00	2.15	1.73	11.10
OF	3126.00	2.16	1.74	11.11
OF	3135.00	2.16	1.74	11.11
OF	3142.00	2.17	1.74	11.11
OF	3153.00	2.17	1.74	11.12

OF	3223.00	2.22	1.76	11.15
IF	3256.00	2.07	1.77	11.05
IF	3259.50	2.05	1.77	11.03
IF	3264.00	2.11	1.78	11.07
IF	3267.50	2.05	1.78	11.04
IF	3273.50	2.15	1.78	11.11
IF	3290.00	2.14	1.78	11.10
IF	3309.00	2.05	1.79	11.03
IF	3311.00	2.11	1.79	11.08
IF	3321.00	2.17	1.79	11.12
IF	3330.00	2.14	1.79	11.10
IF	3334.50	2.12	1.79	11.08
IF	3344.50	2.16	1.80	11.11
IF	3355.00	2.14	1.80	11.10
IF	3361.50	2.10	1.80	11.07
IF	3366.00	2.11	1.80	11.08
IF	3369.00	2.11	1.80	11.08
IF	3373.00	2.18	1.80	11.13
IF	3378.00	2.20	1.81	11.14
IF	3389.50	2.21	1.81	11.15
IF	3394.00	2.20	1.81	11.14
IF	3399.50	2.23	1.81	11.17
IF	3404.00	2.24	1.81	11.17
IF	3409.00	2.25	1.81	11.18
IF	3420.00	2.25	1.82	11.18
IF	3424.50	2.23	1.82	11.16
IF	3429.50	2.24	1.82	11.17
IF	3438.00	2.26	1.82	11.19
IF	3447.00	2.04	1.82	11.03
IF	3461.00	2.16	1.83	11.12
IF	3470.00	2.18	1.83	11.13
IF	3483.50	2.18	1.83	11.13
IF	3492.50	2.19	1.84	11.14
IF	3500.00	2.20	1.84	11.14
IF	3504.00	2.19	1.84	11.14
IF	3509.00	2.21	1.84	11.15
IF	3515.00	2.20	1.84	11.14
IF	3520.50	2.20	1.84	11.15
IF	3527.50	2.20	1.85	11.15
IF	3532.00	2.20	1.85	11.15
IF	3536.00	2.21	1.85	11.15
IF	3543.50	2.23	1.85	11.16
IF	3550.00	2.21	1.85	11.15
IF	3557.00	2.23	1.85	11.17
IF	3565.50	2.25	1.85	11.18
IF	3574.00	2.24	1.86	11.17
IF	3584.00	2.23	1.86	11.17
IF	3591.50	2.24	1.86	11.18
IF	3596.50	2.23	1.86	11.17
IF	3607.00	2.23	1.87	11.17
IF	3617.00	2.26	1.87	11.19
IF	3623.50	2.20	1.87	11.15
IF	3632.50	2.22	1.87	11.16
IF	3639.50	2.24	1.87	11.17
IF	3644.00	2.22	1.87	11.16
IF	3647.00	2.24	1.88	11.18
IF	3653.00	2.25	1.88	11.18
IF	3661.00	2.25	1.88	11.18
IF	3667.00	2.28	1.88	11.20
IF	3671.50	2.24	1.88	11.18
IF	3676.00	2.22	1.88	11.16
IF	3683.00	2.33	1.88	11.24
IF	3688.50	2.25	1.89	11.18
IF	3693.50	2.21	1.89	11.16
IF	3699.50	2.22	1.89	11.16
IF	3704.00	2.21	1.89	11.16
IF	3709.00	2.22	1.89	11.16
IF	3714.50	2.24	1.89	11.18
IF	3719.50	2.27	1.89	11.19
IF	3725.00	2.26	1.89	11.19
IF	3732.50	2.23	1.90	11.17
IF	3735.00	2.20	1.90	11.15
IF	3739.50	2.21	1.90	11.16
IF	3744.00	2.17	1.90	11.13
IF	3747.00	2.20	1.90	11.15
IF	3753.50	2.19	1.90	11.14
IF	3760.50	1.95	1.90	10.97
IF	3764.00	1.96	1.90	10.98
IF	3768.50	1.99	1.90	11.00
IF	3778.50	1.96	1.91	10.98
IF	3786.00	2.04	1.91	11.04
IF	3794.50	1.92	1.91	10.95
IF	3806.00	1.93	1.91	10.96
IF	3810.00	1.93	1.91	10.96
IF	3815.50	1.82	1.92	10.88
IF	3824.00	1.82	1.92	10.88
IF	3834.50	1.88	1.92	10.93
IF	3847.00	1.77	1.92	10.85
IF	3863.50	1.78	1.93	10.86
IF	3879.50	1.81	1.93	10.87
IF	3890.00	1.79	1.93	10.87
IF	3906.00	1.62	1.94	10.74
IF	3928.00	1.64	1.94	10.76
IF	3955.50	1.48	1.95	10.64
IF	3974.00	0.90	1.95	10.24
IF	3984.00	0.92	1.95	10.25
IF	4000.00	0.88	1.96	10.22
IF	4012.50	0.57	1.96	10.01
IF	4027.00	0.59	1.96	10.02
IF	4075.00	0.71	1.97	10.11
IF	4091.00	0.62	1.98	10.04
IF	4106.00	0.39	1.98	9.88

IF	4123.50	0.45	1.98	9.93
IF	4139.00	0.39	1.99	9.88
IF	4156.00	0.32	1.99	9.83
IF	4172.70	0.01	1.99	9.61
AS	4174.80	0.00	0.00	9.61
IF	4191.00	0.04	0.36	9.64
IF	4193.10	0.01	0.37	9.61

PART3 LOCATION OF AREAS ABOVE 100-YEAR SURGE

BETWEEN	652.30	AND	711.90	
BETWEEN	746.40	AND	747.70	
BETWEEN	1188.90	AND	1190.10	
BETWEEN	1198.60	AND	1199.40	
BETWEEN	4172.70	AND	4174.80	

PART4 LOCATION OF SURGE CHANGES

STATION	10-YEAR SURGE	100-YEAR SURGE
9.00	1.00	9.04
22.00	1.00	9.04
28.00	1.00	9.04
39.00	1.00	9.04
51.00	1.00	9.04
61.00	1.00	9.04
72.20	1.00	9.03
75.50	1.00	9.04
82.00	1.00	9.04
85.30	1.00	9.04
88.60	1.00	9.04
91.90	1.00	9.04
95.10	1.00	9.04
98.40	1.00	9.04
101.70	1.00	9.04
105.00	1.00	9.04
108.30	1.00	9.05
111.50	1.00	9.05
114.80	1.00	9.05
118.10	1.00	9.05
121.40	1.00	9.05
124.70	1.00	9.05
128.00	1.00	9.05
131.20	1.00	9.05
134.50	1.00	9.05
137.80	1.00	9.05
141.10	1.00	9.06
144.40	1.00	9.06
147.60	1.00	9.06
150.90	1.00	9.06
154.20	1.00	9.06
157.50	1.00	9.06
160.80	1.00	9.06
164.00	1.00	9.06
167.30	1.00	9.06
170.60	1.00	9.06
173.90	1.00	9.07
177.20	1.00	9.07
180.40	1.00	9.07
183.70	1.00	9.07
187.00	1.00	9.07
190.30	1.00	9.07
193.60	1.00	9.07
196.80	1.00	9.07
200.10	1.00	9.08
203.40	1.00	9.08
206.70	1.00	9.08
210.00	1.00	9.08
213.30	1.00	9.08
216.50	1.00	9.08
219.80	1.00	9.09
223.10	1.00	9.09
226.40	1.00	9.09
229.70	1.00	9.09
232.90	1.00	9.09
236.20	1.00	9.09
239.50	1.00	9.10
242.80	1.00	9.10
246.10	1.00	9.10
249.30	1.00	9.10
252.60	1.00	9.10
255.90	1.00	9.11
259.20	1.00	9.11
262.50	1.00	9.11
265.70	1.00	9.11
269.00	1.00	9.11
272.30	1.00	9.11
275.60	1.00	9.12
278.90	1.00	9.12
282.20	1.00	9.12
285.40	1.00	9.12
288.70	1.00	9.12
292.00	1.00	9.13
295.30	1.00	9.13
298.60	1.00	9.13
301.80	1.00	9.13
305.10	1.00	9.13
308.40	1.00	9.14
311.70	1.00	9.14
315.00	1.00	9.14
318.20	1.00	9.14
321.50	1.00	9.14
324.80	1.00	9.14
328.10	1.00	9.15
331.40	1.00	9.15
334.60	1.00	9.15
337.90	1.00	9.15

341.20	1.00	9.15
344.50	1.00	9.15
347.80	1.00	9.16
351.00	1.00	9.16
354.30	1.00	9.16
357.60	1.00	9.16
360.90	1.00	9.16
364.20	1.00	9.17
367.50	1.00	9.16
370.70	1.00	9.16
374.00	1.00	9.17
377.30	1.00	9.17
380.60	1.00	9.18
383.90	1.00	9.18
387.10	1.00	9.19
390.40	1.00	9.19
393.70	1.00	9.19
397.00	1.00	9.20
400.30	1.00	9.20
403.50	1.00	9.20
406.80	1.00	9.20
410.10	1.00	9.21
413.40	1.00	9.21
416.70	1.00	9.22
419.90	1.00	9.22
423.20	1.00	9.22
426.50	1.00	9.22
429.80	1.00	9.22
433.10	1.00	9.22
436.40	1.00	9.23
439.60	1.00	9.23
442.90	1.00	9.23
446.20	1.00	9.24
449.50	1.00	9.24
452.80	1.00	9.24
456.00	1.00	9.24
459.30	1.00	9.24
462.60	1.00	9.24
465.90	1.00	9.24
469.20	1.00	9.25
472.40	1.00	9.25
475.70	1.00	9.25
479.00	1.00	9.25
482.30	1.00	9.25
485.60	1.00	9.26
488.80	1.00	9.26
492.10	1.00	9.26
495.40	1.00	9.26
498.70	1.00	9.26
502.00	1.00	9.27
505.20	1.00	9.27
508.50	1.00	9.28
511.80	1.00	9.29
515.10	1.00	9.30
518.40	1.00	9.30
521.70	1.00	9.31
524.90	1.00	9.31
528.20	1.00	9.31
531.50	1.00	9.32
534.80	1.00	9.32
538.10	1.00	9.33
541.30	1.00	9.35
544.60	1.00	9.36
547.90	1.00	9.37
551.20	1.00	9.38
554.50	1.00	9.39
557.70	1.00	9.40
561.00	1.00	9.40
564.30	1.00	9.41
567.60	1.00	9.42
570.90	1.00	9.43
574.10	1.00	9.43
577.40	1.00	9.44
580.70	1.00	9.45
584.00	1.00	9.45
587.30	1.00	9.45
590.50	1.00	9.46
593.80	1.00	9.47
597.10	1.00	9.47
600.40	1.00	9.47
603.70	1.00	9.47
610.20	1.00	9.48
613.50	1.00	9.49
616.80	1.00	9.50
620.10	1.00	9.50
623.40	1.00	9.50
626.60	1.00	9.51
629.90	1.00	9.52
633.20	1.00	9.53
636.50	1.00	9.55
639.80	1.00	9.57
643.00	1.00	9.58
646.30	1.00	9.62
649.60	1.00	9.72
711.90	1.00	9.57
1299.50	1.00	9.57
1363.00	1.00	9.56
1400.00	1.00	9.56
1431.50	1.00	9.56
1466.50	1.00	9.56
1496.00	1.00	9.56
1554.50	1.00	9.56

1662.50	1.00	9.56
1727.50	1.00	9.56
1755.50	1.00	9.56
1778.00	1.00	9.57
1806.00	1.00	9.57
1829.00	1.00	9.57
1861.00	1.00	9.57
1892.00	1.00	9.57
1920.00	1.00	9.57
1967.00	1.00	9.57
2005.00	1.00	9.57
2035.50	1.00	9.57
2064.50	1.00	9.57
2092.50	1.00	9.58
2126.50	1.00	9.58
2147.50	1.00	9.58
2174.00	1.00	9.58
2191.50	1.00	9.58
2223.00	1.00	9.58
2236.00	1.00	9.58
2256.50	1.00	9.58
2282.50	1.00	9.58
2313.00	1.00	9.59
2345.00	1.00	9.59
2379.50	1.00	9.59
2412.50	1.00	9.59
2439.50	1.00	9.59
2478.00	1.00	9.59
2518.00	1.00	9.59
2549.50	1.00	9.59
2825.00	1.00	9.60
2934.00	1.00	9.60
3017.00	1.00	9.60
3115.00	1.00	9.60
3223.00	1.00	9.60
3273.50	1.00	9.60
3321.00	1.00	9.60
3366.00	1.00	9.60
3404.00	1.00	9.60
3461.00	1.00	9.60
3492.50	1.00	9.61
3617.00	1.00	9.61
3661.00	1.00	9.61
3709.00	1.00	9.61

PART5 LOCATION OF V ZONES

STATION OF GUTTER	LOCATION OF ZONE
555.69	WINDWARD

PART6 NUMBERED A ZONES AND V ZONES

STATION OF GUTTER	ELEVATION	ZONE DESIGNATION		FHF
0.00	16.94	V22	EL=17	120
4.00	16.93	V22	EL=17	120
9.00	16.91	V22	EL=17	120
16.00	16.89	V22	EL=17	120
22.00	16.87	V22	EL=17	120
27.00	16.85	V22	EL=17	120
28.00	16.85	V22	EL=17	120
39.00	16.74	V22	EL=17	120
40.00	16.73	V22	EL=17	120
51.00	16.57	V22	EL=17	120
52.00	16.56	V22	EL=17	120
56.04	16.50	V22	EL=16	120
61.00	16.43	V22	EL=16	120
62.00	16.43	V22	EL=16	120
72.20	16.38	V22	EL=16	120
75.50	16.37	V22	EL=16	120
78.70	16.35	V22	EL=16	120
82.00	16.34	V22	EL=16	120
85.30	16.33	V22	EL=16	120
88.60	16.31	V22	EL=16	120
91.90	16.29	V22	EL=16	120
95.10	16.28	V22	EL=16	120
98.40	16.26	V22	EL=16	120
101.70	16.25	V22	EL=16	120
105.00	16.23	V22	EL=16	120
108.30	16.22	V22	EL=16	120
111.50	16.20			

114.80	16.19	V22	EL=16	120
118.10	16.17	V22	EL=16	120
121.40	16.16	V22	EL=16	120
124.70	16.14	V22	EL=16	120
128.00	16.13	V22	EL=16	120
131.20	16.11	V22	EL=16	120
134.50	16.10	V22	EL=16	120
137.80	16.08	V22	EL=16	120
141.10	16.07	V22	EL=16	120
144.40	16.05	V22	EL=16	120
147.60	16.04	V22	EL=16	120
150.90	16.00	V22	EL=16	120
154.20	15.97	V22	EL=16	120
157.50	15.93	V22	EL=16	120
160.80	15.90	V22	EL=16	120
164.00	15.87	V22	EL=16	120
167.30	15.83	V22	EL=16	120
170.60	15.80	V23	EL=16	130
173.90	15.76	V23	EL=16	130
177.20	15.73	V23	EL=16	130
180.40	15.69	V23	EL=16	130
183.70	15.66	V23	EL=16	130
187.00	15.63	V23	EL=16	130
190.30	15.59	V23	EL=16	130
193.60	15.56	V23	EL=16	130
196.80	15.52	V23	EL=16	130
199.17	15.50	V23	EL=16	130
200.10	15.49	V23	EL=15	130
203.40	15.46	V23	EL=15	130
206.70	15.42	V23	EL=15	130
210.00	15.39	V23	EL=15	130
213.30	15.36	V23	EL=15	130
216.50	15.32	V23	EL=15	130
219.80	15.29	V23	EL=15	130
223.10	15.25	V23	EL=15	130
226.40	15.21	V23	EL=15	130
229.70	15.18	V23	EL=15	130
232.90	15.16	V23	EL=15	130
236.20	15.14	V23	EL=15	130
239.50	15.13	V23	EL=15	130
242.80	15.11	V23	EL=15	130
246.10	15.10	V23	EL=15	130
249.30	15.07	V23	EL=15	130
252.60	15.05	V23	EL=15	130
255.90	15.03	V23	EL=15	130
259.20	15.01	V23	EL=15	130
262.50	14.99	V23	EL=15	130
265.70	14.96	V23	EL=15	130
269.00	14.94	V23	EL=15	130
272.30	14.92	V23	EL=15	130
275.60	14.90			

278.90	14.88	V23	EL=15	130
282.20	14.86	V23	EL=15	130
285.40	14.83	V23	EL=15	130
288.70	14.81	V23	EL=15	130
292.00	14.79	V23	EL=15	130
295.30	14.77	V23	EL=15	130
298.60	14.75	V23	EL=15	130
301.80	14.73	V23	EL=15	130
305.10	14.70	V23	EL=15	130
308.40	14.67	V23	EL=15	130
311.70	14.64	V23	EL=15	130
315.00	14.61	V23	EL=15	130
318.20	14.58	V23	EL=15	130
321.50	14.54	V23	EL=15	130
324.80	14.51	V23	EL=15	130
325.84	14.50	V23	EL=14	130
328.10	14.48	V23	EL=14	130
331.40	14.45	V23	EL=14	130
334.60	14.41	V23	EL=14	130
337.90	14.38	V23	EL=14	130
341.20	14.35	V23	EL=14	130
344.50	14.32	V23	EL=14	130
347.80	14.28	V23	EL=14	130
351.00	14.25	V23	EL=14	130
354.30	14.22	V23	EL=14	130
357.60	14.19	V23	EL=14	130
360.90	14.16	V23	EL=14	130
364.20	14.12	V23	EL=14	130
367.50	13.87	V23	EL=14	130
370.70	13.66	V23	EL=14	130
374.00	13.64	V23	EL=14	130
377.30	13.59	V23	EL=14	130
380.60	13.60	V23	EL=14	130
383.90	13.62	V23	EL=14	130
387.10	13.64	V23	EL=14	130
390.40	13.65	V23	EL=14	130
393.70	13.67	V23	EL=14	130
397.00	13.65	V23	EL=14	130
400.30	13.64	V23	EL=14	130
403.50	13.62	V23	EL=14	130
406.80	13.59	V23	EL=14	130
410.10	13.58	V23	EL=14	130
413.40	13.59	V23	EL=14	130
416.70	13.63	V23	EL=14	130
419.90	13.64	V23	EL=14	130
423.20	13.63	V23	EL=14	130
426.50	13.62	V23	EL=14	130
429.80	13.55	V23	EL=14	130
432.36	13.50	V23	EL=13	130
433.10	13.48	V23	EL=13	130
436.40	13.47			

439.60	13.48	V23	EL=13	130
442.90	13.50	V23	EL=13	130
443.56	13.50	V23	EL=13	130
446.20	13.51	V23	EL=14	130
449.50	13.52	V23	EL=14	130
452.80	13.51	V23	EL=14	130
453.69	13.50	V23	EL=14	130
456.00	13.46	V23	EL=13	130
459.30	13.24	V23	EL=13	130
462.60	13.07	V23	EL=13	130
465.90	13.10	V23	EL=13	130
469.20	13.11	V23	EL=13	130
472.40	13.10	V23	EL=13	130
475.70	13.07	V23	EL=13	130
479.00	12.98	V23	EL=13	130
482.30	12.89	V23	EL=13	130
485.60	12.89	V23	EL=13	130
488.80	12.85	V23	EL=13	130
492.10	12.70	V23	EL=13	130
495.40	12.56	V23	EL=13	130
496.73	12.50	V23	EL=12	130
498.70	12.42	V23	EL=12	130
502.00	12.34	V23	EL=12	130
505.20	12.27	V23	EL=12	130
508.50	12.24	V23	EL=12	130
511.80	12.28	V23	EL=12	130
515.10	12.29	V23	EL=12	130
518.40	12.26	V23	EL=12	130
521.70	12.18	V23	EL=12	130
524.90	12.06	V23	EL=12	130
528.20	11.94	V23	EL=12	130
531.50	11.82	V23	EL=12	130
534.80	11.60	V23	EL=12	130
536.96	11.50	V23	EL=11	130
538.10	11.45	V23	EL=11	130
541.30	11.50	V23	EL=11	130
541.57	11.50	V23	EL=12	130
544.60	11.52	V23	EL=12	130
547.90	11.52	V23	EL=12	130
551.20	11.52	V23	EL=12	130
554.50	11.51	V23	EL=12	130
555.23	11.50	V23	EL=11	130
555.69	11.49	A19	EL=11	95
557.70	11.45	A19	EL=11	95
561.00	11.46	A19	EL=11	95
564.30	11.47	A19	EL=11	95
567.60	11.43	A19	EL=11	95
570.90	11.40	A19	EL=11	95
574.10	11.30	A19	EL=11	95
577.40	11.32	A19	EL=11	95
580.70	11.35			

584.00	11.34	A19	EL=11	95
587.30	11.33	A19	EL=11	95
590.50	11.33	A19	EL=11	95
593.80	11.33	A19	EL=11	95
597.10	11.32	A19	EL=11	95
600.40	11.28	A19	EL=11	95
603.70	11.20	A19	EL=11	95
607.00	10.99	A19	EL=11	95
610.20	11.02	A19	EL=11	95
613.50	11.04	A19	EL=11	95
616.80	11.03	A19	EL=11	95
620.10	10.94	A19	EL=11	95
623.40	10.83	A19	EL=11	95
626.60	10.69	A19	EL=11	95
629.90	10.55	A19	EL=11	95
633.20	10.51	A19	EL=11	95
636.50	10.52	A19	EL=11	95
637.20	10.50	A19	EL=10	95
639.80	10.43	A19	EL=10	95
643.00	10.34	A19	EL=10	95
646.30	10.24	A19	EL=10	95
649.60	10.02	A19	EL=10	95
652.30	9.72			
711.90	9.57	A19	EL=10	95
746.40	9.57			
747.70	9.57	A19	EL=10	95
1188.90	9.57			
1190.10	9.57	A19	EL=10	95
1198.60	9.57			
1199.40	9.57	A19	EL=10	95
1284.50	9.66	A19	EL=10	95
1299.50	9.74	A19	EL=10	95
1350.00	9.69	A19	EL=10	95
1363.00	9.76	A19	EL=10	95
1391.50	9.74	A19	EL=10	95
1400.00	9.76	A19	EL=10	95
1418.50	9.71	A19	EL=10	95
1431.50	9.77	A19	EL=10	95
1455.50	9.85	A19	EL=10	95
1466.50	9.88	A19	EL=10	95
1492.00	9.93	A19	EL=10	95
1496.00	9.94	A19	EL=10	95
1547.50	10.03	A19	EL=10	95
1554.50	10.03	A19	EL=10	95
1653.00	10.09	A19	EL=10	95
1662.50	10.11	A19	EL=10	95
1718.00	10.19	A19	EL=10	95
1727.50	10.20	A19	EL=10	95
1751.50	10.23	A19	EL=10	95
1755.50	10.23	A19	EL=10	95
1766.50	10.24	A19	EL=10	95
1778.00	10.25	A19	EL=10	95
1802.00	10.28			

1806.00	10.28	A19	EL=10	95
1823.00	10.30	A19	EL=10	95
1829.00	10.30	A19	EL=10	95
1856.50	10.32	A19	EL=10	95
1861.00	10.33	A19	EL=10	95
1882.50	10.34	A19	EL=10	95
1892.00	10.35	A19	EL=10	95
1911.00	10.37	A19	EL=10	95
1920.00	10.37	A19	EL=10	95
1958.00	10.40	A19	EL=10	95
1967.00	10.41	A19	EL=10	95
1990.00	10.43	A19	EL=10	95
2005.00	10.44	A19	EL=10	95
2026.50	10.45	A19	EL=10	95
2035.50	10.46	A19	EL=10	95
2055.00	10.47	A19	EL=10	95
2064.50	10.48	A19	EL=10	95
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2092.50	10.50	A19	EL=10	95
2095.90	10.50	A19	EL=10	95
2114.50	10.51	A19	EL=11	95
2126.50	10.52	A19	EL=11	95
2138.00	10.53	A19	EL=11	95
2147.50	10.54	A19	EL=11	95
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2182.50	10.56	A19	EL=11	95
2191.50	10.56	A19	EL=11	95
2205.00	10.57	A19	EL=11	95
2223.00	10.59	A19	EL=11	95
2236.00	10.59	A19	EL=11	95
2249.50	10.60	A19	EL=11	95
2256.50	10.61	A19	EL=11	95
2265.50	10.62	A19	EL=11	95
2282.50	10.63	A19	EL=11	95
2306.50	10.64	A19	EL=11	95
2313.00	10.64	A19	EL=11	95
2334.00	10.66	A19	EL=11	95
2345.00	10.66	A19	EL=11	95
2370.50	10.68	A19	EL=11	95
2379.50	10.69	A19	EL=11	95
2405.50	10.71	A19	EL=11	95
2412.50	10.71	A19	EL=11	95
2428.50	10.72	A19	EL=11	95
2439.50	10.73	A19	EL=11	95
2471.00	10.74	A19	EL=11	95
2478.00	10.75	A19	EL=11	95
2510.00	10.77	A19	EL=11	95
2518.00	10.78	A19	EL=11	95
2541.00	10.79	A19	EL=11	95
2549.50	10.80			

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                          2596.00          10.82
                                                    A19  EL=11      95
                          2825.00          10.95
                                                    A19  EL=11      95
                          2933.00          11.01
                                                    A19  EL=11      95
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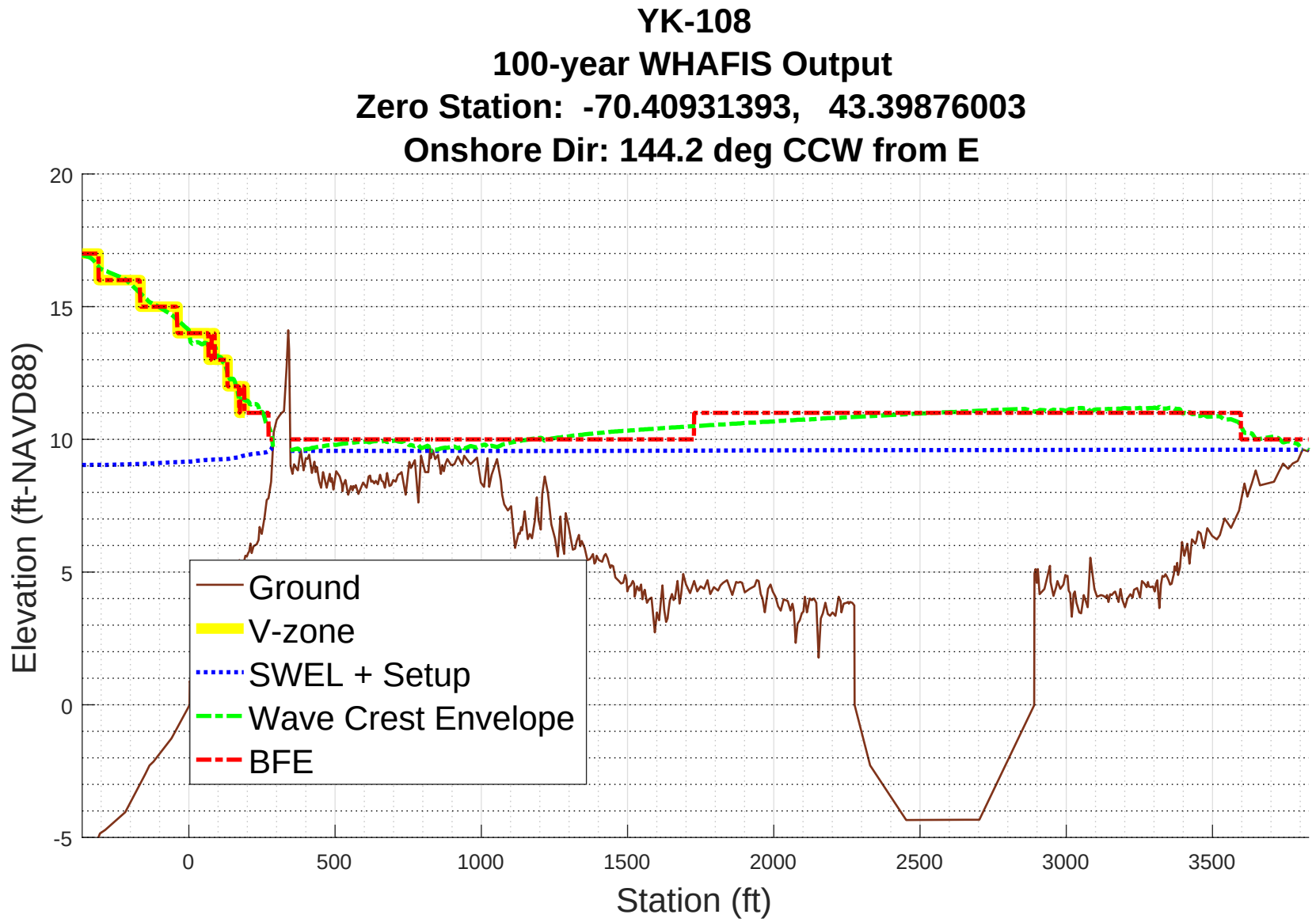
                                                    A19  EL=11      95
                          3006.00          11.05
                                                    A19  EL=11      95
                          3017.00          11.05
                                                    A19  EL=11      95
                          3103.00          11.09
                                                    A19  EL=11      95
                          3115.00          11.10
                                                    A19  EL=11      95
                          3153.00          11.12
                                                    A19  EL=11      95
                          3223.00          11.15
                                                    A19  EL=11      95
                          3267.50          11.04
                                                    A19  EL=11      95
                          3273.50          11.11
                                                    A19  EL=11      95
                          3311.00          11.08
                                                    A19  EL=11      95
                          3321.00          11.12
                                                    A19  EL=11      95
                          3361.50          11.07
                                                    A19  EL=11      95
                          3366.00          11.08
                                                    A19  EL=11      95
                          3399.50          11.17
                                                    A19  EL=11      95
                          3404.00          11.17
                                                    A19  EL=11      95
                          3447.00          11.03
                                                    A19  EL=11      95
                          3461.00          11.12
                                                    A19  EL=11      95
                          3483.50          11.13
                                                    A19  EL=11      95
                          3492.50          11.14
                                                    A19  EL=11      95
                          3607.00          11.17
                                                    A19  EL=11      95
                          3617.00          11.19
                                                    A19  EL=11      95
                          3653.00          11.18
                                                    A19  EL=11      95
                          3661.00          11.18
                                                    A19  EL=11      95
                          3704.00          11.16
                                                    A19  EL=11      95
                          3709.00          11.16
                                                    A19  EL=11      95
                          3962.02          10.50
                                                    A19  EL=10      95
                          4172.70           9.61
                          4174.80           9.61
                                                    A19  EL=10      95
                          4193.10           9.61
                                ZONE TERMINATED AT END OF TRANSECT
                                PART 7   POSTSCRIPT NOTES
                     PS#  1   START(385964.2581,4805997.3955)
                     PS#  2   END(384882.4587,4806777.6613)
-1.000000e+00
```


YK-108
100-year WHAFIS Output
Zero Station: -70.40931393, 43.39876003
Onshore Dir: 144.2 deg CCW from E
Elevation (ft-NAVD88)
Station (ft)
20
15
10
5
0
-5
0
500
1000
1500
2000
2500
3000
3500
Ground
V-zone
SWEL + Setup
Wave Crest Envelope
BFE

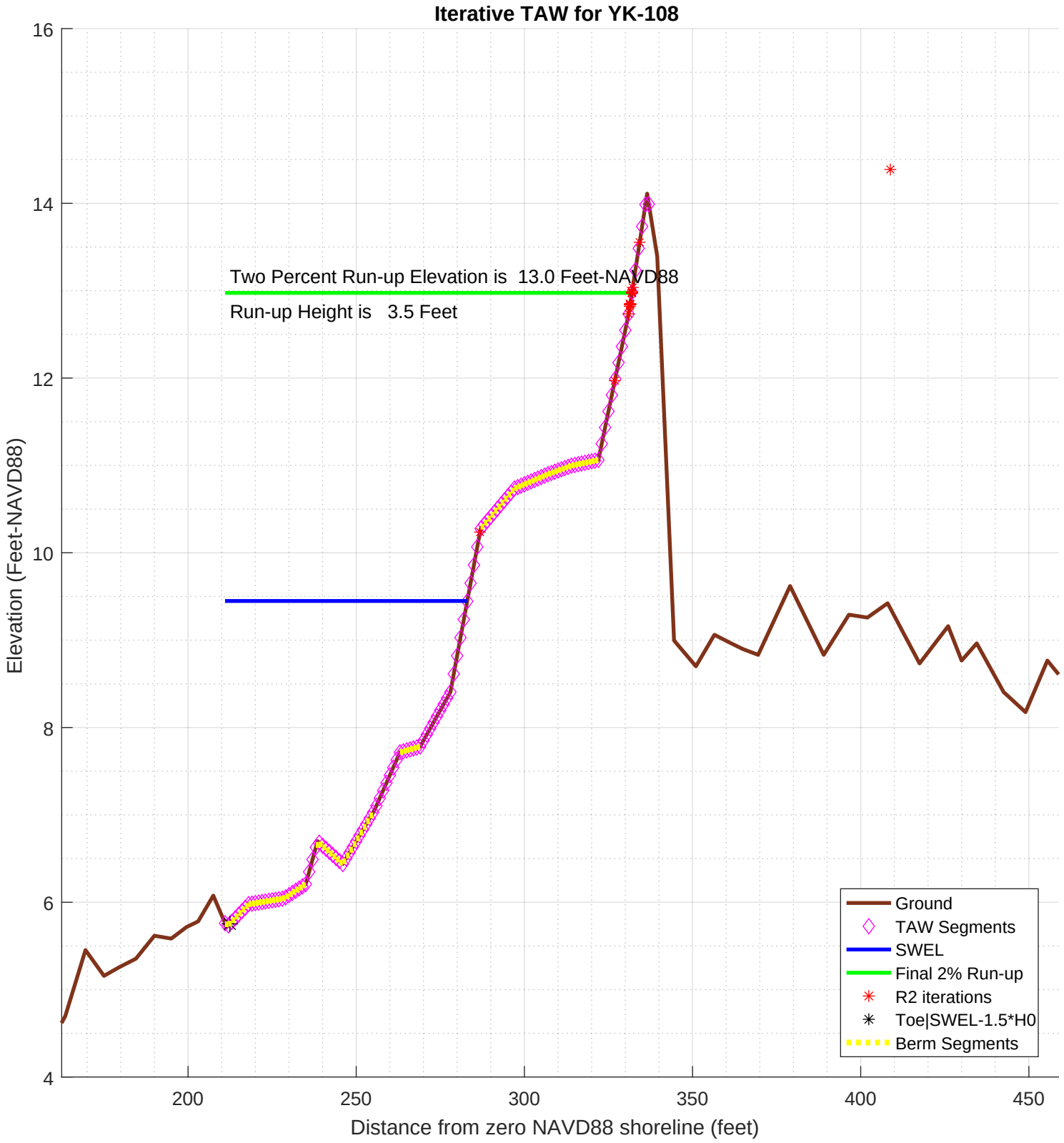
```
_____________________________________________________________
PART 4: TAW

Input Paramters:
    TWL- 9.0347 feet
    HS-  2.4638 feet
    PER- 12.522 seconds
    TOE- x: 211.5 , z: 5.7152 feet
    TOP- x: 336.5 , z: 14.1109 feet
    GBERM-   0.70216
    GGROUGH- 0.6
    GBETA-   1
    GPERM-   1

RUNNING TAW:
...
MATLAB DIARY: /4_taw/logfiles/YK-108-DIARY.txt

CHECKING VALIDITY:
...
TAW method is not valid!
Runup elevation to be calculated using another method

PART 4 COMPLETE_____________________________________________
```


Iterative TAW for YK-108
Two Percent Run-up Elevation is 13.0 Feet-NAVD88
Run-up Height is 3.5 Feet
Elevation (Feet-NAVD88)
Distance from zero NAVD88 shoreline (feet)
16
14
12
10
8
6
4
200
250
300
350
400
450
Ground
TAW Segments
SWEL
Final 2% Run-up
R2 iterations
Toe|SWEL-1.5*H0
Berm Segments

```
diary on         % begin recording

% FEMA appeal for The Town of Kennebunkport, York county, Maine
% TRANSECT ID: YK-108
% calculation by SJH, Ransom Consulting, Inc. 02-Apr-2020
% 100-year wave runup using TAW methodology
% including berm and weighted average with foreshore if necessary
%
% chk nld 20200220
%
% This script assumes that the incident wave conditions provided
% as input in the configuration section below are the
% appropriate values located at the end of the foreshore
% or toe of the slope on which the run-up is being calculated
% the script does not attempt to apply a depth limit or any other
% transformation to the incident wave conditions other than
% conversion of the peak wave period to the spectral mean wave
% as recommended in the references below
%
% references:
%
% Van der Meer, J.W., 2002. Technical Report Wave Run-up and
% Wave Overtopping at Dikes. TAW Technical Advisory Committee on
% Flood Defence, The Netherlands.
%
% FEMA. 2007,  Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update
%
%
%

%-------------------------------------------------------------------------
% CONFIG
%-------------------------------------------------------------------------
fname='inpfiles/YK-108sta_ele_include.csv';   % file with station, elevation, include
                                    % third colunm is 0 for excluded points
imgname='logfiles/YK-108-runup';
SWEL=9.0347;  % 100-yr still water level including wave setup.
H0=2.4638;    % significant wave height at toe of structure
Tp=12.522;    % peak period, 1/fma,
T0=Tp/1.1;

gamma_berm=0.99585;   % this may get changed automatically below
gamma_rough=0.6;
gamma_beta=1;
gamma_perm=1;

setupAtToe=0.41366;
maxSetup=0.68007;   % only used in case of berm/shallow foreshore weighted average

plotTitle='Iterative TAW for YK-108'

plotTitle =

Iterative TAW for YK-108



% END CONFIG
%------------------------------

SWEL=SWEL+setupAtToe

SWEL =

    9.44836

SWEL_fore=SWEL+maxSetup

SWEL_fore =

   10.12843



% FIND WAVELENGTH USING DEEPWATER DISPERSION RELATION
% using English units
L0=32.15/(2*pi)*T0^2

L0 =

  663.075738236217


% Find Hb (Munk, 1949)
%Hb=H0/(3.3*(H0/L0)^(1/3))
%Db=-Hb/.78+SWEL;  % depth at breaking

% The toe elevation here is only used to determine the average
% structure slope, it is not used to depth limit the wave height.
% Any depth limiting or other modification of the wave height
```

```
% to make it consitent with TAW guidance should be performed
% prior to the input of the significant wave height given above.
Ztoe=SWEL-1.5*H0

Ztoe =

                    5.75266


% read the transect
[sta,dep,inc] = textread(fname,'%n%n%n%*[^\n]','delimiter',',','headerlines',0);

% remove unselected points
k=find(inc==0);
sta(k)=[];
dep(k)=[];

sta_org=sta;  % used for plotting purposes
dep_org=dep;


% initial guess at maximum run-up elevation to estimate slope
Z2=SWEL+1.5*H0

Z2 =

                   13.14406


% determine station at the max runup and -1.5*H0 (i.e. the toe)
top_sta=-999;
toe_sta=-999;
for kk=1:length(sta)-1
    if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
       top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
    end
    if  ((Ztoe > dep(kk)) & (Ztoe <= dep(kk+1)))    % here is the intersection of Ztoe with profile
       toe_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Ztoe)
    end
end

toe_sta =

          212.427117384844


top_sta =

           332.64095522817

% check to make sure we got them, if not extend the end slopes outward
S=diff(dep)./diff(sta);
if toe_sta==-999
   dy=dep(1)-Ztoe;
   toe_sta=sta(1)-dy/S(1)
end
if top_sta==-999
   dy=Z2-dep(end);
   top_sta=sta(end)+dy/S(end)
end

% just so the reader can tell the values aren't -999 anymore
top_sta

top_sta =

           332.64095522817

toe_sta

toe_sta =

          212.427117384844




% check for case where the toe of slope is below SWL-1.5*H0
% in this case interpolate setup from the setupAtToe(really setup as first station), and the max setup
% also un-include points seaward of SWL-1.5*H0
if Ztoe > dep(1)
   dd=SWEL_fore-dep;
   k=find(dd<0,1); % k is index of first land point
   staAtSWL=interp1(dep(k-1:k),sta(k-1:k),SWEL_fore);
   dsta=staAtSWL-sta(1);
   dsetup=maxSetup-setupAtToe;
   dsetdsta=dsetup/dsta;
   setup=setupAtToe+dsetdsta*(toe_sta-sta(1));
   sprintf('-!!- Location of SWEL-1.5*H0 is %4.1f ft landward of toe of slope',dsta)
   sprintf('-!!- Setup is interpolated between setup at toe of slope and max setup')
```

```
   sprintf('-!!-       setup is adjusted to %4.2f feet',setup)
   SWEL=SWEL-setupAtToe+setup;
   sprintf('-!!-       SWEL is adjusted to %4.2f feet',SWEL)
   k=find(dep < SWEL-1.5*H0)
   sta(k)=[];
   dep(k)=[];
else
   sprintf('-!!- The User has selected a starting point that is %4.2f feet above the elevation of SWEL-1.5H0\n',dep(1
   sprintf('-!!- This may be reasonable for some cases.  However the user may want to consider:\n')
   sprintf('-!!-   1) Selecting a starting point that is at or below %4.2f feet elevation, or\n', Ztoe)
   sprintf('-!!-   2) Reducing the incident wave height to a depth limited condition.\n')
end

ans =

-!!- The User has selected a starting point that is 0.01 feet above the elevation of SWEL-1.5H0



ans =

-!!- This may be reasonable for some cases.  However the user may want to consider:



ans =

-!!-   1) Selecting a starting point that is at or below 5.75 feet elevation, or



ans =

-!!-   2) Reducing the incident wave height to a depth limited condition.




% now iterate converge on a runup elevation
tol=0.01;  % convergence criteria
R2del=999;
R2_new=3*H0; %initial guess
R2=R2_new;
iter=0;
R2_all=[];
topStaAll=[];
Berm_Segs=[];
TAW_ALWAYS_VALID=1;
while(abs(R2del) > tol && iter <= 25)
    iter=iter+1;
    sprintf ('!----------------- STARTING ITERATION %d -----------------!',iter)
    % elevation of toe of slope
    Ztoe
    % station of toe slope (relative to 0-NAVD88 shoreline
    toe_sta
    % station of top of slope/extent of 2% run-up
    top_sta
    % elevation of top of slope/extent of 2% run-up
    Z2
    % incident significant wave height
    H0
    % incident spectral peak wave period
    Tp
    % incident spectral mean wave period
    T0

    R2=R2_new
    Z2=R2+SWEL
    % determine slope for this iteration
    top_sta=-999;
    for kk=1:length(sta)-1
       if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
          top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
          break;
       end
    end
    if top_sta==-999
       dy=Z2-dep(end);
       top_sta=sta(end)+dy/S(end)
    end

    % get the length of the slope (not accounting for berm)
    Lslope=top_sta-toe_sta

    % loop over profile segments to determine berm factor
    % re-calculate influence of depth of berm based on this run-up elevation
    % check for berm, berm width, berm height
    berm_width=0;
    rdh_sum=0;
```

```
Berm_Segs=[];
Berm_Heights=[];
for kk=1:length(sta)-1
   ddep=dep(kk+1)-dep(kk);
   dsta=sta(kk+1)-sta(kk);
   s=ddep/dsta;
   if  (s < 1/15)     % count it as a berm if slope is flatter than 1:15 (see TAW manual)
      sprintf ('Berm Factor Calculation: Iteration %d, Profile Segment: %d',iter,kk)
      berm_width=berm_width+dsta;   % tally the width of all berm segments
      % compute the rdh for this segment and weight it by the segment length
      dh=SWEL-(dep(kk)+dep(kk+1))/2
      if  dh < 0
          chi=R2;
      else
          chi=2* H0;
      end
      if (dh <= R2 & dh >=-2*H0)
         rdh=(0.5-0.5*cos(3.14159*dh/chi)) ;
      else
         rdh=1;
      end
      rdh_sum=rdh_sum + rdh * dsta
      Berm_Segs=[Berm_Segs, kk];
      Berm_Heights=[Berm_Heights, (dep(kk)+dep(kk+1))/2];
   end
   if dep(kk) >= Z2  % jump out of loop if we reached limit of run-up for this iteration
      break
   end
end
sprintf ('!------- End Berm Factor Calculation, Iter: %d ---------!',iter)
berm_width
rB=berm_width/Lslope
if (berm_width > 0)
   rdh_mean=rdh_sum/berm_width
else
   rdh_mean=1
end
gamma_berm=1- rB * (1-rdh_mean)
if gamma_berm > 1
   gamma_berm=1
end
if gamma_berm < 0.6
   gamma_berm =0.6
end
% Iribarren number
slope=(Z2-Ztoe)/(Lslope-berm_width)
Irb=(slope/(sqrt(H0/L0)))
% runup height
gamma_berm
gamma_perm
gamma_beta
gamma_rough
gamma=gamma_berm*gamma_perm*gamma_beta*gamma_rough

% check validity
TAW_VALID=1;
if (Irb*gamma_berm < 0.5 | Irb*gamma_berm > 10 )
   sprintf('!!! - - Iribaren number: %6.2f is outside the valid range (0.5-10), TAW NOT VALID - - !!!\n', Irb*gam
   TAW_VALID=0;
else
   sprintf('!!! - - Iribaren number: %6.2f is in the valid range (0.5-10), TAW RECOMMENDED - - !!!\n', Irb*gamma_
end
islope=1/slope;
if (slope < 1/8 | slope > 1)
   sprintf('!!! - - slope: 1:%3.1f V:H is outside the valid range (1:8 - 1:1), TAW NOT VALID - - !!!\n', islope)
   TAW_VALID=0;
else
   sprintf('!!! - - slope: 1:%3.1f V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!\n', islope)
end
if TAW_VALID == 0
   TAW_ALWAYS_VALID=0;
end

if (Irb*gamma_berm < 1.8)
   R2_new=gamma*H0*1.77*Irb
else
   R2_new=gamma*H0*(4.3-(1.6/sqrt(Irb)))
end


% check to see if we need to evaluate a shallow foreshore
if berm_width > 0.25 * L0;
   disp ('!   Berm_width is greater than 1/4 wave length')
   disp ('!   Runup will be weighted average with foreshore calculation assuming depth limited wave height on ber
   % do the foreshore calculation
   fore_H0=0.78*(SWEL_fore-min(Berm_Heights))
   % get upper slope
   fore_toe_sta=-999;
   fore_toe_dep=-999;
   for kk=length(dep)-1:-1:1
```

```
          ddep=dep(kk+1)-dep(kk);
          dsta=sta(kk+1)-sta(kk);
          s=ddep/dsta;
          if s < 1/15
             break
          end
          fore_toe_sta=sta(kk);
          fore_toe_dep=dep(kk);
          upper_slope=(Z2-fore_toe_dep)/(top_sta-fore_toe_sta)
       end
       fore_Irb=upper_slope/(sqrt(fore_H0/L0));
       fore_gamma=gamma_perm*gamma_beta*gamma_rough;
       if (fore_Irb < 1.8)
          fore_R2=fore_gamma*fore_H0*1.77*fore_Irb;
       else
          fore_R2=fore_gamma*fore_H0*(4.3-(1.6/sqrt(fore_Irb)));
       end
       if berm_width >= L0
          R2_new=fore_R2
          disp ('berm is wider than one wavelength, use full shallow foreshore solution');
       else
          w2=(berm_width-0.25*L0)/(0.75*L0)
          w1=1-w2
          R2_new=w2*fore_R2 + w1*R2_new
       end
    end % end berm width check

    % convergence criterion
    R2del=abs(R2-R2_new)
    R2_all(iter)=R2_new;

    % get the new top station (for plot purposes)
    Z2=R2_new+SWEL
    top_sta=-999;
    for kk=1:length(sta)-1
       if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
          top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
          break;
       end
    end
    if top_sta==-999
       dy=Z2-dep(end);
       top_sta=sta(end)+dy/S(end);
    end
    topStaAll(iter)=top_sta;
end
ans =
!----------------- STARTING ITERATION 1 -----------------!
Ztoe =
                  5.75266
toe_sta =
          212.427117384844
top_sta =
           332.64095522817
Z2 =
                 13.14406
H0 =
                   2.4638
Tp =
                   12.522
T0 =
          11.3836363636364
R2 =
                   7.3914
Z2 =
                 16.83976
top_sta =
           853.24102935843
Lslope =
          640.813911973586
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 1
dh =
                 3.700486
rdh_sum =
         0.854629843592181
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 2
dh =
                 3.692757
rdh_sum =
          1.70751853192025
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 3
dh =
                3.6523775
rdh_sum =
          2.55117235854404
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 4
```

```
dh =
                3.611998
rdh_sum =
          3.38536357933416
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 5
dh =
               3.5716185
rdh_sum =
          4.20987072116057
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 6
dh =
                3.531239
rdh_sum =
          5.02447872866588
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 7
dh =
               3.4908595
rdh_sum =
          5.82897910678553
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 8
dh =
                3.467545
rdh_sum =
          6.62755116654938
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 9
dh =
               3.4612955
rdh_sum =
          7.42452286255871
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 10
dh =
               3.4550465
rdh_sum =
           8.219889608945
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 11
dh =
               3.4487975
rdh_sum =
           9.0136467174644
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 12
dh =
                3.442548
rdh_sum =
          9.80578939607165
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 13
dh =
               3.4362985
rdh_sum =
          10.5963130069552
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 14
dh =
               3.4300495
rdh_sum =
          11.3852130680951
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 15
dh =
               3.4238005
rdh_sum =
          12.1724849938907
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 16
dh =
               3.4175515
rdh_sum =
          12.9581242245842
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 17
dh =
                3.411302
rdh_sum =
          13.7421260951528
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 18
dh =
               3.4003055
rdh_sum =
          14.5232359682026
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 19
```

```
dh =
                3.3798155
rdh_sum =
          15.2989203750387
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
          16.0678578183687
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
          16.8299785406263
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
          17.5852146819812
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          18.3335003032842
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
          19.0747711289892
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          19.6788755386565
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          20.2802018069415
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
          20.8924261630196
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          21.5154927442284
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
          22.1493402908991
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
          22.7939023294304
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 34
dh =
                2.9588585
rdh_sum =
          23.4491067466467
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
          24.1148762854152
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
          24.7760334371378
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 37
```

```
dh =
                2.9129265
rdh_sum =
          25.4172546007938
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 38
dh =
                 2.84731
rdh_sum =
          26.0382928170551
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
          26.6389362920358
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 40
dh =
                2.7160765
rdh_sum =
          27.2190087614432
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 41
dh =
                2.6504595
rdh_sum =
          27.7783701115315
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 42
dh =
                2.5848425
rdh_sum =
          28.3169164696317
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 43
dh =
                 2.519226
rdh_sum =
          28.8345805451998
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 44
dh =
                2.4536095
rdh_sum =
           29.331331429459
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 53
dh =
                 1.726356
rdh_sum =
          29.6048176138964
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 54
dh =
                  1.71542
rdh_sum =
          29.8752014637987
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 55
dh =
                 1.704484
rdh_sum =
          30.1424941412628
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 56
dh =
                 1.693548
rdh_sum =
          30.4067069586539
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 57
dh =
                 1.682612
rdh_sum =
          30.6678513780551
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 58
dh =
                 1.671676
rdh_sum =
          30.9259390107105
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          30.9582309149951
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 78
```

```
dh =
               -0.8961285
rdh_sum =
          30.9940627842217
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          31.0336115186145
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          31.0770526451754
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 81
dh =
                -1.033924
rdh_sum =
          31.1245601679345
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 82
dh =
               -1.0798555
rdh_sum =
          31.1763064940586
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 83
dh =
                -1.125787
rdh_sum =
          31.2324624585753
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 84
dh =
                -1.171719
rdh_sum =
          31.2931972667024
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 85
dh =
                -1.217651
rdh_sum =
          31.3586783314902
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 86
dh =
               -1.2635825
rdh_sum =
           31.429071202729
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 87
dh =
               -1.2947505
rdh_sum =
          31.5028904700443
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          31.5785432157297
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
          31.6560500125799
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          31.7354313988286
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          31.8167078215817
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          31.8998996945149
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 93
```

```
dh =
                -1.393176
rdh_sum =
          31.9850272807344
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          32.0721106893207
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          32.1611699929693
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          32.2522251683237
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          32.3451514820193
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
           32.439820175667
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
          32.5362457265432
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          32.6344424859339
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          32.7344248040827
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          32.8362070317194
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          32.9398033920457
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
           33.044845968831
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          33.1509598172267
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
          33.2581497241443
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 107
dh =
                -1.577723
rdh_sum =
           33.366420463418
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 108
```

```
dh =
                -1.585925
rdh_sum =
          33.4757767957466
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 109
dh =
                -1.594127
rdh_sum =
          33.5862234686356
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 110
dh =
                -1.602329
rdh_sum =
          33.6977652163396
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
          33.8104067598047
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 126
dh =
                -4.540023
rdh_sum =
          34.4860121429232
ans =
!------- End Berm Factor Calculation, Iter: 1 ---------!
berm_width =
    83
rB =
         0.129522781027609
rdh_mean =
         0.415494122203894
gamma_berm =
         0.924293173180865
slope =
        0.0198759833019815
Irb =
          0.32606746457757
gamma_berm =
         0.924293173180865
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                        0.6
gamma =
         0.554575903908519
ans =
!!! - - Iribaren number:   0.30 is outside the valid range (0.5-10), TAW NOT VALID - - !!!
ans =
!!! - - slope: 1:50.3 V:H is outside the valid range (1:8 - 1:1), TAW NOT VALID - - !!!
R2_new =
         0.788582580619379
R2del =
          6.60281741938062
Z2 =
          10.2369425806194
top_sta =
          286.813999820101
ans =
!----------------- STARTING ITERATION 2 -----------------!
Ztoe =
                   5.75266
toe_sta =
          212.427117384844
top_sta =
          286.813999820101
Z2 =
          10.2369425806194
H0 =
                    2.4638
Tp =
                    12.522
T0 =
          11.3836363636364
R2 =
         0.788582580619379
Z2 =
          10.2369425806194
top_sta =
          286.813999820101
Lslope =
          74.3868824352572
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 1
```

```
dh =
                3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 2
dh =
                3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 3
dh =
               3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 4
dh =
                3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 5
dh =
               3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 6
dh =
                3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 7
dh =
               3.4908595
rdh_sum =
     7
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 8
dh =
                3.467545
rdh_sum =
     8
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 9
dh =
               3.4612955
rdh_sum =
     9
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 10
dh =
               3.4550465
rdh_sum =
    10
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 11
dh =
               3.4487975
rdh_sum =
    11
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 12
dh =
                3.442548
rdh_sum =
    12
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 13
dh =
               3.4362985
rdh_sum =
    13
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 14
dh =
               3.4300495
rdh_sum =
    14
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 15
dh =
               3.4238005
rdh_sum =
    15
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 16
```

```
dh =
                3.4175515
rdh_sum =
    16
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 17
dh =
                 3.411302
rdh_sum =
    17
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
    18
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
    19
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
    20
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
    21
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
    22
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
    23
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
    24
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
    25
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
    26
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
    27
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
    28
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
    29
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
    30
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 34
```

```
dh =
                2.9588585
rdh_sum =
    31
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
    32
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
    33
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 37
dh =
                2.9129265
rdh_sum =
    34
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 38
dh =
                  2.84731
rdh_sum =
    35
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
    36
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 40
dh =
                2.7160765
rdh_sum =
    37
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 41
dh =
                2.6504595
rdh_sum =
    38
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 42
dh =
                2.5848425
rdh_sum =
    39
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 43
dh =
                 2.519226
rdh_sum =
    40
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 44
dh =
                2.4536095
rdh_sum =
    41
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 53
dh =
                 1.726356
rdh_sum =
    42
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 54
dh =
                  1.71542
rdh_sum =
    43
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 55
dh =
                 1.704484
rdh_sum =
    44
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 56
dh =
                 1.693548
rdh_sum =
    45
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 57
```

```
dh =
                1.682612
rdh_sum =
    46
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 58
dh =
                1.671676
rdh_sum =
    47
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 77
dh =
       -0.850196999999998
rdh_sum =
          47.985012873909
ans =
!------- End Berm Factor Calculation, Iter: 2 ---------!
berm_width =
    48
rB =
         0.645275059642093
rdh_mean =
         0.999687768206437
gamma_berm =
         0.999798524610787
slope =
         0.169943629817657
Irb =
          2.78794199279831
gamma_berm =
         0.999798524610787
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                      0.6
gamma =
         0.599879114766472
ans =
!!! - - Iribaren number:   2.79 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.9 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          4.93904921486272
R2del =
          4.15046663424334
Z2 =
          14.3874092148627
ans =
!----------------- STARTING ITERATION 3 -----------------!
Ztoe =
                   5.75266
toe_sta =
          212.427117384844
top_sta =
          408.813558329594
Z2 =
          14.3874092148627
H0 =
                    2.4638
Tp =
                    12.522
T0 =
          11.3836363636364
R2 =
          4.93904921486272
Z2 =
          14.3874092148627
top_sta =
          408.813558329594
Lslope =
           196.38644094475
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 1
dh =
                3.700486
rdh_sum =
         0.854629843592181
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 2
dh =
                3.692757
rdh_sum =
          1.70751853192025
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 3
dh =
               3.6523775
```

```
rdh_sum =
          2.55117235854404
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 4
dh =
                  3.611998
rdh_sum =
          3.38536357933416
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 5
dh =
                 3.5716185
rdh_sum =
          4.20987072116057
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 6
dh =
                  3.531239
rdh_sum =
          5.02447872866588
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 7
dh =
                 3.4908595
rdh_sum =
          5.82897910678553
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 8
dh =
                  3.467545
rdh_sum =
          6.62755116654938
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 9
dh =
                 3.4612955
rdh_sum =
          7.42452286255871
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 10
dh =
                 3.4550465
rdh_sum =
           8.219889608945
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 11
dh =
                 3.4487975
rdh_sum =
           9.0136467174644
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 12
dh =
                  3.442548
rdh_sum =
          9.80578939607165
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 13
dh =
                 3.4362985
rdh_sum =
          10.5963130069552
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 14
dh =
                 3.4300495
rdh_sum =
          11.3852130680951
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 15
dh =
                 3.4238005
rdh_sum =
          12.1724849938907
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 16
dh =
                 3.4175515
rdh_sum =
          12.9581242245842
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 17
dh =
                  3.411302
rdh_sum =
          13.7421260951528
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 18
dh =
                 3.4003055
```

```
rdh_sum =
          14.5232359682026
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
          15.2989203750387
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
          16.0678578183687
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
          16.8299785406263
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
          17.5852146819812
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          18.3335003032842
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
          19.0747711289892
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          19.6788755386565
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          20.2802018069415
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
          20.8924261630196
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          21.5154927442284
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
          22.1493402908991
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
          22.7939023294304
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 34
dh =
                2.9588585
rdh_sum =
          23.4491067466467
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
          24.1148762854152
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 36
dh =
                2.9785435
```

```
rdh_sum =
          24.7760334371378
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 37
dh =
                  2.9129265
rdh_sum =
          25.4172546007938
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 38
dh =
                   2.84731
rdh_sum =
          26.0382928170551
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 39
dh =
                  2.7816935
rdh_sum =
          26.6389362920358
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 40
dh =
                  2.7160765
rdh_sum =
          27.2190087614432
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 41
dh =
                  2.6504595
rdh_sum =
          27.7783701115315
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 42
dh =
                  2.5848425
rdh_sum =
          28.3169164696317
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 43
dh =
                   2.519226
rdh_sum =
          28.8345805451998
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 44
dh =
                  2.4536095
rdh_sum =
           29.331331429459
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 53
dh =
                   1.726356
rdh_sum =
          29.6048176138964
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 54
dh =
                    1.71542
rdh_sum =
          29.8752014637987
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 55
dh =
                   1.704484
rdh_sum =
          30.1424941412628
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 56
dh =
                   1.693548
rdh_sum =
          30.4067069586539
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 57
dh =
                   1.682612
rdh_sum =
          30.6678513780551
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 58
dh =
                   1.671676
rdh_sum =
          30.9259390107105
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 77
dh =
        -0.850196999999998
```

```
rdh_sum =
          30.9972869478005
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 78
dh =
                -0.8961285
rdh_sum =
          31.0763370219085
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          31.1634485130887
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          31.2589739144722
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 81
dh =
                 -1.033924
rdh_sum =
          31.3632584519643
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 82
dh =
                -1.0798555
rdh_sum =
          31.4766397745638
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 83
dh =
                 -1.125787
rdh_sum =
          31.5994478606616
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 84
dh =
                 -1.171719
rdh_sum =
          31.7320047507665
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 85
dh =
                 -1.217651
rdh_sum =
          31.8746240637825
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 86
dh =
                -1.2635825
rdh_sum =
          32.0276107156804
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 87
dh =
                -1.2947505
rdh_sum =
          32.1878016200761
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 88
dh =
                 -1.311155
rdh_sum =
          32.3518381290203
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 89
dh =
                 -1.327559
rdh_sum =
          32.5197567021796
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 90
dh =
                 -1.343963
rdh_sum =
          32.6915934932308
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 91
dh =
                 -1.360367
rdh_sum =
          32.8673842292747
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 92
dh =
                -1.3767715
```

```
rdh_sum =
          33.0471643290736
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          33.2309686570662
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          33.4188315153213
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          33.6107868861832
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 96
dh =
                 -1.442388
rdh_sum =
          33.8068683064446
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          34.0068107493371
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          34.2103422816865
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
           34.41748661834
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          34.6282670554379
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          34.8427067263342
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          35.0608286030369
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          35.2826552332953
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          35.5074305556439
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          35.7343873937061
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
           35.963533179079
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 107
dh =
                -1.577723
```

```
rdh_sum =
          36.1948752837817
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 108
dh =
                -1.585925
rdh_sum =
          36.4284210200543
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 109
dh =
                -1.594127
rdh_sum =
          36.6641776401597
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 110
dh =
                -1.602329
rdh_sum =
          36.9021523361853
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
          37.1423522398478
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 126
dh =
                -4.540023
rdh_sum =
          38.1263333822086
ans =
!------- End Berm Factor Calculation, Iter: 3 ---------!
berm_width =
    83
rB =
         0.422636102577727
rdh_mean =
         0.459353414243477
gamma_berm =
         0.771503234123908
slope =
       0.0761532784953555
Irb =
          1.24930203758898
gamma_berm =
         0.771503234123908
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.6
gamma =
         0.462901940474345
ans =
!!! - - Iribaren number:   0.96 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:13.1 V:H is outside the valid range (1:8 - 1:1), TAW NOT VALID - - !!!
R2_new =
           2.5219424210483
R2del =
          2.41710679381442
Z2 =
          11.9703024210483
top_sta =
          326.889848671777
ans =
!----------------- STARTING ITERATION 4 -----------------!
Ztoe =
                 5.75266
toe_sta =
          212.427117384844
top_sta =
          326.889848671777
Z2 =
          11.9703024210483
H0 =
                  2.4638
Tp =
                  12.522
T0 =
          11.3836363636364
R2 =
           2.5219424210483
Z2 =
          11.9703024210483
top_sta =
          326.889848671777
```

```
Lslope =
          114.462731286933
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 1
dh =
                  3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 2
dh =
                  3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 3
dh =
                 3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 4
dh =
                  3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 5
dh =
                 3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 6
dh =
                  3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 7
dh =
                 3.4908595
rdh_sum =
     7
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 8
dh =
                  3.467545
rdh_sum =
     8
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 9
dh =
                 3.4612955
rdh_sum =
     9
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 10
dh =
                 3.4550465
rdh_sum =
    10
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 11
dh =
                 3.4487975
rdh_sum =
    11
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 12
dh =
                  3.442548
rdh_sum =
    12
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 13
dh =
                 3.4362985
rdh_sum =
    13
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 14
dh =
                 3.4300495
rdh_sum =
    14
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 15
dh =
                 3.4238005
```

```
rdh_sum =
    15
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 16
dh =
                3.4175515
rdh_sum =
    16
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 17
dh =
                 3.411302
rdh_sum =
    17
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
    18
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
    19
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
    20
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
    21
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
    22
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
    23
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
    24
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
    25
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
    26
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
    27
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
    28
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
    29
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 33
dh =
                 2.923863
```

```
rdh_sum =
    30
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 34
dh =
                2.9588585
rdh_sum =
    31
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
    32
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
    33
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 37
dh =
                2.9129265
rdh_sum =
    34
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 38
dh =
                  2.84731
rdh_sum =
    35
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
    36
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 40
dh =
                2.7160765
rdh_sum =
    37
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 41
dh =
                2.6504595
rdh_sum =
    38
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 42
dh =
                2.5848425
rdh_sum =
    39
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 43
dh =
                 2.519226
rdh_sum =
          39.5176640755681
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 44
dh =
                2.4536095
rdh_sum =
          40.0144149598273
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 53
dh =
                 1.726356
rdh_sum =
          40.2879011442647
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 54
dh =
                  1.71542
rdh_sum =
           40.558284994167
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 55
dh =
                 1.704484
rdh_sum =
          40.8255776716311
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 56
dh =
                 1.693548
```

```
rdh_sum =
          41.0897904890222
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 57
dh =
                 1.682612
rdh_sum =
          41.3509349084234
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 58
dh =
                 1.671676
rdh_sum =
          41.6090225410788
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          41.8641907850563
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 78
dh =
                -0.8961285
rdh_sum =
           42.14469014795
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          42.4512390312671
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          42.7844708728844
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 81
dh =
                -1.033924
rdh_sum =
          43.1449314985707
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 82
dh =
                -1.0798555
rdh_sum =
          43.5330773117988
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 83
dh =
                -1.125787
rdh_sum =
          43.9492743990521
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 84
dh =
                -1.171719
rdh_sum =
           44.393797347574
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 85
dh =
                -1.217651
rdh_sum =
          44.8668277316205
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 86
dh =
                -1.2635825
rdh_sum =
          45.3684535102834
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 87
dh =
                -1.2947505
rdh_sum =
          45.8894861119588
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          46.4207221312532
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 89
dh =
                -1.327559
```

```
rdh_sum =
          46.9621482142789
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          47.5137470633917
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          48.0754971332639
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          48.6473729480721
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          49.2293444939223
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          49.8213772350422
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          50.4234327427536
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          51.0354684033283
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          51.6567296786553
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          52.2864683690515
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
           52.924644671178
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
           53.571215895325
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
           54.226137077194
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          54.8893609852979
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          55.5608375431604
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 104
dh =
                -1.553117
```

```
rdh_sum =
          56.2388101902174
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 105
dh =
                 -1.561319
rdh_sum =
          56.9215475105037
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 106
dh =
                 -1.569521
rdh_sum =
          57.6090304278274
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 107
dh =
                 -1.577723
rdh_sum =
          58.3012393705975
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 108
dh =
                 -1.585925
rdh_sum =
          58.9981542738669
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 109
dh =
                 -1.594127
rdh_sum =
          59.6997545814269
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 110
dh =
                 -1.602329
rdh_sum =
          60.4060192479533
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 111
dh =
                 -1.610531
rdh_sum =
          61.1169267412034
ans =
!------- End Berm Factor Calculation, Iter: 4 ---------!
berm_width =
    82
rB =
          0.716390383822343
rdh_mean =
          0.745328374892725
gamma_berm =
          0.817555696740739
slope =
          0.191531709580794
Irb =
           3.14209656852503
gamma_berm =
          0.817555696740739
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.6
gamma =
          0.490533418044443
ans =
!!! - - Iribaren number:   2.57 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          4.10597950258665
R2del =
          1.58403708153835
Z2 =
          13.5543395025867
top_sta =
          334.278555672762
ans =
!----------------- STARTING ITERATION 5 -----------------!
Ztoe =
                   5.75266
toe_sta =
          212.427117384844
top_sta =
          334.278555672762
Z2 =
          13.5543395025867
```

```
H0 =
                    2.4638
Tp =
                    12.522
T0 =
          11.3836363636364
R2 =
          4.10597950258665
Z2 =
          13.5543395025867
top_sta =
          334.278555672762
Lslope =
          121.851438287918
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 1
dh =
                   3.700486
rdh_sum =
         0.854629843592181
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 2
dh =
                   3.692757
rdh_sum =
          1.70751853192025
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 3
dh =
                  3.6523775
rdh_sum =
          2.55117235854404
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 4
dh =
                   3.611998
rdh_sum =
          3.38536357933416
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 5
dh =
                  3.5716185
rdh_sum =
          4.20987072116057
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 6
dh =
                   3.531239
rdh_sum =
          5.02447872866588
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 7
dh =
                  3.4908595
rdh_sum =
          5.82897910678553
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 8
dh =
                   3.467545
rdh_sum =
          6.62755116654938
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 9
dh =
                  3.4612955
rdh_sum =
          7.42452286255871
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 10
dh =
                  3.4550465
rdh_sum =
           8.219889608945
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 11
dh =
                  3.4487975
rdh_sum =
           9.0136467174644
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 12
dh =
                   3.442548
rdh_sum =
          9.80578939607165
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 13
dh =
                  3.4362985
```

```
rdh_sum =
          10.5963130069552
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 14
dh =
                  3.4300495
rdh_sum =
          11.3852130680951
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 15
dh =
                  3.4238005
rdh_sum =
          12.1724849938907
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 16
dh =
                  3.4175515
rdh_sum =
          12.9581242245842
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 17
dh =
                   3.411302
rdh_sum =
          13.7421260951528
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 18
dh =
                  3.4003055
rdh_sum =
          14.5232359682026
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 19
dh =
                  3.3798155
rdh_sum =
          15.2989203750387
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 20
dh =
                  3.3545785
rdh_sum =
          16.0678578183687
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 21
dh =
                   3.329341
rdh_sum =
          16.8299785406263
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 22
dh =
                  3.3041035
rdh_sum =
          17.5852146819812
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 23
dh =
                  3.2788665
rdh_sum =
          18.3335003032842
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 24
dh =
                  3.2536295
rdh_sum =
          19.0747711289892
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 28
dh =
                  2.7927855
rdh_sum =
          19.6788755386565
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 29
dh =
                  2.7838805
rdh_sum =
          20.2802018069415
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 30
dh =
                   2.818876
rdh_sum =
          20.8924261630196
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 31
dh =
                  2.8538715
```

```
rdh_sum =
          21.5154927442284
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 32
dh =
                  2.888867
rdh_sum =
          22.1493402908991
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 33
dh =
                  2.923863
rdh_sum =
          22.7939023294304
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 34
dh =
                 2.9588585
rdh_sum =
          23.4491067466467
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 35
dh =
                  2.993854
rdh_sum =
          24.1148762854152
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 36
dh =
                 2.9785435
rdh_sum =
          24.7760334371378
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 37
dh =
                 2.9129265
rdh_sum =
          25.4172546007938
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 38
dh =
                   2.84731
rdh_sum =
          26.0382928170551
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 39
dh =
                 2.7816935
rdh_sum =
          26.6389362920358
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 40
dh =
                 2.7160765
rdh_sum =
          27.2190087614432
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 41
dh =
                 2.6504595
rdh_sum =
          27.7783701115315
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 42
dh =
                 2.5848425
rdh_sum =
          28.3169164696317
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 43
dh =
                  2.519226
rdh_sum =
          28.8345805451998
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 44
dh =
                 2.4536095
rdh_sum =
           29.331331429459
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 53
dh =
                  1.726356
rdh_sum =
          29.6048176138964
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 54
dh =
                   1.71542
```

```
rdh_sum =
          29.8752014637987
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 55
dh =
                  1.704484
rdh_sum =
          30.1424941412628
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 56
dh =
                  1.693548
rdh_sum =
          30.4067069586539
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 57
dh =
                  1.682612
rdh_sum =
          30.6678513780551
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 58
dh =
                  1.671676
rdh_sum =
          30.9259390107105
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          31.0280507237207
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 78
dh =
                -0.8961285
rdh_sum =
          31.1410471696547
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          31.2654062704542
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          31.4015920472012
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 81
dh =
                 -1.033924
rdh_sum =
          31.5500537944393
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 82
dh =
                -1.0798555
rdh_sum =
          31.7112255057645
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 83
dh =
                 -1.125787
rdh_sum =
          31.8855256100824
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 84
dh =
                 -1.171719
rdh_sum =
          32.0733564730845
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 85
dh =
                 -1.217651
rdh_sum =
          32.2751036099072
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 86
dh =
                -1.2635825
rdh_sum =
          32.4911351922629
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 87
dh =
                -1.2947505
```

```
rdh_sum =
          32.7170606665314
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          32.9482565087037
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
          33.1847649031252
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          33.4266273572466
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          33.6738845351014
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
           33.926576417145
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          34.1847419638417
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          34.4484191047776
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          34.7176450675503
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          34.9924562056593
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          35.2724854338905
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          35.5573579765236
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
          35.8470987329957
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          36.1417318648817
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          36.4412811402113
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 102
dh =
               -1.5279245
```

```
rdh_sum =
          36.7457699340984
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          37.0552208755417
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          37.3686158090096
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          37.6849254633857
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
          38.0041570728599
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 107
dh =
                -1.577723
rdh_sum =
          38.3263177565478
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 108
dh =
                -1.585925
rdh_sum =
          38.6514145182109
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 109
dh =
                -1.594127
rdh_sum =
          38.9794542459803
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 110
dh =
                -1.602329
rdh_sum =
          39.3104437120859
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
          39.6443895725894
ans =
!------- End Berm Factor Calculation, Iter: 5 ---------!
berm_width =
    82
rB =
          0.672950612254947
rdh_mean =
          0.483468165519383
gamma_berm =
          0.652399585737098
slope =
          0.195769082315707
Irb =
           3.21161108577688
gamma_berm =
          0.652399585737098
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                        0.6
gamma =
          0.391439751442259
ans =
!!! - - Iribaren number:   2.10 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.1 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
           3.28599479467491
R2del =
          0.819984707911739
Z2 =
           12.7343547946749
```

```
top_sta =
          331.005647048839
ans =
!----------------- STARTING ITERATION 6 -----------------!
Ztoe =
                   5.75266
toe_sta =
          212.427117384844
top_sta =
          331.005647048839
Z2 =
          12.7343547946749
H0 =
                    2.4638
Tp =
                    12.522
T0 =
          11.3836363636364
R2 =
          3.28599479467491
Z2 =
          12.7343547946749
top_sta =
          331.005647048839
Lslope =
          118.578529663995
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 1
dh =
                  3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 2
dh =
                  3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 3
dh =
                 3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 4
dh =
                  3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 5
dh =
                 3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 6
dh =
                  3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 7
dh =
                 3.4908595
rdh_sum =
     7
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 8
dh =
                  3.467545
rdh_sum =
     8
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 9
dh =
                 3.4612955
rdh_sum =
     9
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 10
dh =
                 3.4550465
rdh_sum =
    10
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 11
dh =
                 3.4487975
```

```
rdh_sum =
    11
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 12
dh =
                 3.442548
rdh_sum =
    12
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 13
dh =
                3.4362985
rdh_sum =
    13
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 14
dh =
                3.4300495
rdh_sum =
    14
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 15
dh =
                3.4238005
rdh_sum =
    15
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 16
dh =
                3.4175515
rdh_sum =
    16
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 17
dh =
                 3.411302
rdh_sum =
    17
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
    18
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
    19
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
    20
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
    21
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
    22
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          22.748285621303
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
         23.4895564470081
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
         24.0936608566754
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 29
dh =
                2.7838805
```

```
rdh_sum =
          24.6949871249603
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 30
dh =
                  2.818876
rdh_sum =
          25.3072114810385
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 31
dh =
                 2.8538715
rdh_sum =
          25.9302780622472
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 32
dh =
                  2.888867
rdh_sum =
          26.5641256089179
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 33
dh =
                  2.923863
rdh_sum =
          27.2086876474492
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 34
dh =
                 2.9588585
rdh_sum =
          27.8638920646655
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 35
dh =
                  2.993854
rdh_sum =
           28.529661603434
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 36
dh =
                 2.9785435
rdh_sum =
          29.1908187551566
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 37
dh =
                 2.9129265
rdh_sum =
          29.8320399188126
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 38
dh =
                   2.84731
rdh_sum =
          30.4530781350739
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 39
dh =
                 2.7816935
rdh_sum =
          31.0537216100547
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 40
dh =
                 2.7160765
rdh_sum =
           31.633794079462
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 41
dh =
                 2.6504595
rdh_sum =
          32.1931554295503
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 42
dh =
                 2.5848425
rdh_sum =
          32.7317017876506
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 43
dh =
                  2.519226
rdh_sum =
          33.2493658632186
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 44
dh =
                 2.4536095
```

```
rdh_sum =
          33.7461167474778
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 53
dh =
                  1.726356
rdh_sum =
          34.0196029319152
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 54
dh =
                   1.71542
rdh_sum =
          34.2899867818175
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 55
dh =
                  1.704484
rdh_sum =
          34.5572794592817
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 56
dh =
                  1.693548
rdh_sum =
          34.8214922766728
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 57
dh =
                  1.682612
rdh_sum =
           35.082636696074
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 58
dh =
                  1.671676
rdh_sum =
          35.3407243287294
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          35.4970030423345
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 78
dh =
                -0.8961285
rdh_sum =
          35.6695536529763
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          35.8590074971876
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          36.0659635149986
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 81
dh =
                 -1.033924
rdh_sum =
          36.2909867201335
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 82
dh =
                -1.0798555
rdh_sum =
          36.5346070860419
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 83
dh =
                 -1.125787
rdh_sum =
          36.7973189237057
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 84
dh =
                 -1.171719
rdh_sum =
           37.079579950087
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 85
dh =
                 -1.217651
```

```
rdh_sum =
          37.381809984448
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 86
dh =
               -1.2635825
rdh_sum =
          37.7043901206445
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 87
dh =
               -1.2947505
rdh_sum =
          38.0409765810757
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          38.3849939939069
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
           38.736480497968
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          39.0954726209154
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          39.4620050443602
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
           39.836110826651
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          40.2178209340043
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          40.6071642291132
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
           41.004167928562
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          41.4088573648196
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          41.8207046881751
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          42.2391760289589
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
           42.664286120519
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 100
dh =
                -1.499803
```

```
rdh_sum =
          43.0960482597126
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 101
dh =
                -1.5138635
rdh_sum =
          43.5344747771811
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 102
dh =
                -1.5279245
rdh_sum =
          43.9795770368751
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 103
dh =
                -1.5419855
rdh_sum =
          44.4313649595702
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 104
dh =
                 -1.553117
rdh_sum =
          44.8884518778111
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 105
dh =
                 -1.561319
rdh_sum =
          45.3494463875654
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 106
dh =
                 -1.569521
rdh_sum =
          45.8143508872703
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 107
dh =
                 -1.577723
rdh_sum =
          46.2831675349385
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 108
dh =
                 -1.585925
rdh_sum =
          46.7558982480258
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 109
dh =
                 -1.594127
rdh_sum =
          47.2325447033132
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 110
dh =
                 -1.602329
rdh_sum =
           47.713108336804
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 111
dh =
                 -1.610531
rdh_sum =
           48.197590343635
ans =
!------- End Berm Factor Calculation, Iter: 6 ---------!
berm_width =
    82
rB =
         0.691524850513461
rdh_mean =
         0.587775491995549
gamma_berm =
         0.714936508724237
slope =
         0.190868655979553
Irb =
          3.13121910886174
gamma_berm =
         0.714936508724237
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.6
```

```
gamma =
         0.428961905234542
ans =
!!! - - Iribaren number:   2.24 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          3.58894343172231
R2del =
         0.302948637047396
Z2 =
          13.0373034317223
top_sta =
          332.214844241459
ans =
!----------------- STARTING ITERATION 7 -----------------!
Ztoe =
                    5.75266
toe_sta =
          212.427117384844
top_sta =
          332.214844241459
Z2 =
          13.0373034317223
H0 =
                    2.4638
Tp =
                    12.522
T0 =
          11.3836363636364
R2 =
          3.58894343172231
Z2 =
          13.0373034317223
top_sta =
          332.214844241459
Lslope =
          119.787726856615
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 1
dh =
                  3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 2
dh =
                  3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 3
dh =
                 3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 4
dh =
                  3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 5
dh =
                 3.5716185
rdh_sum =
           4.8245071418264
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 6
dh =
                  3.531239
rdh_sum =
          5.63911514933172
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 7
dh =
                 3.4908595
rdh_sum =
          6.44361552745137
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 8
dh =
                  3.467545
rdh_sum =
          7.24218758721522
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 9
dh =
                 3.4612955
```

```
rdh_sum =
          8.03915928322455
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 10
dh =
                  3.4550465
rdh_sum =
          8.83452602961084
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 11
dh =
                  3.4487975
rdh_sum =
          9.62828313813024
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 12
dh =
                   3.442548
rdh_sum =
          10.4204258167375
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 13
dh =
                  3.4362985
rdh_sum =
          11.2109494276211
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 14
dh =
                  3.4300495
rdh_sum =
           11.999849488761
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 15
dh =
                  3.4238005
rdh_sum =
          12.7871214145566
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 16
dh =
                  3.4175515
rdh_sum =
            13.57276064525
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 17
dh =
                   3.411302
rdh_sum =
          14.3567625158187
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 18
dh =
                  3.4003055
rdh_sum =
          15.1378723888684
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 19
dh =
                  3.3798155
rdh_sum =
          15.9135567957046
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 20
dh =
                  3.3545785
rdh_sum =
          16.6824942390346
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 21
dh =
                   3.329341
rdh_sum =
          17.4446149612921
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 22
dh =
                  3.3041035
rdh_sum =
           18.199851102647
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 23
dh =
                  3.2788665
rdh_sum =
            18.94813672395
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 24
dh =
                  3.2536295
```

```
rdh_sum =
          19.6894075496551
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          20.2935119593224
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          20.8948382276074
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
          21.5070625836855
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          22.1301291648943
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
          22.7639767115649
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
          23.4085387500962
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 34
dh =
                2.9588585
rdh_sum =
          24.0637431673125
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
          24.7295127060811
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
          25.3906698578036
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 37
dh =
                2.9129265
rdh_sum =
          26.0318910214597
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 38
dh =
                  2.84731
rdh_sum =
          26.6529292377209
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
          27.2535727127017
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 40
dh =
                2.7160765
rdh_sum =
           27.833645182109
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 41
dh =
                2.6504595
rdh_sum =
          28.3930065321973
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 42
dh =
                2.5848425
```

```
rdh_sum =
          28.9315528902976
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 43
dh =
                 2.519226
rdh_sum =
          29.4492169658656
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 44
dh =
                2.4536095
rdh_sum =
          29.9459678501248
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 53
dh =
                 1.726356
rdh_sum =
          30.2194540345623
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 54
dh =
                  1.71542
rdh_sum =
          30.4898378844645
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 55
dh =
                 1.704484
rdh_sum =
          30.7571305619287
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 56
dh =
                 1.693548
rdh_sum =
          31.0213433793198
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 57
dh =
                 1.682612
rdh_sum =
           31.282487798721
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 58
dh =
                 1.671676
rdh_sum =
          31.5405754313764
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          31.6727678353644
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 78
dh =
               -0.8961285
rdh_sum =
          31.8188716672814
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          31.9794589381497
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          32.1550784155893
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 81
dh =
               -1.033924
rdh_sum =
          32.3462544151769
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 82
dh =
               -1.0798555
rdh_sum =
          32.5534859301548
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 83
dh =
                -1.125787
```

```
rdh_sum =
          32.7772461693779
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 84
dh =
                -1.171719
rdh_sum =
          33.0179818130397
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 85
dh =
                -1.217651
rdh_sum =
          33.2761119255755
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 86
dh =
               -1.2635825
rdh_sum =
          33.5520272600737
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 87
dh =
               -1.2947505
rdh_sum =
          33.8402192692142
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          34.1349367086472
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
          34.4362217064004
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
           34.7441152346
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          35.0586569027897
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          35.3798851541363
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          35.7078368510057
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          36.0425472628687
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
           36.38405047002
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          36.7323791521793
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          37.0870738968301
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 98
dh =
               -1.4716815
```

```
rdh_sum =
          37.4476680588213
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
          37.8141827571687
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          38.1866380023701
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          38.5650531151956
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          38.9494467265095
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          39.3398363498764
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          39.7349845838882
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          40.1336454904689
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
          40.5358242933452
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 107
dh =
                -1.577723
rdh_sum =
          40.9415260349071
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 108
dh =
                -1.585925
rdh_sum =
          41.3507555759476
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 109
dh =
                -1.594127
rdh_sum =
          41.7635175954121
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 110
dh =
                -1.602329
rdh_sum =
          42.1798165901572
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
          42.5996568747194
ans =
!------- End Berm Factor Calculation, Iter: 7 ---------!
berm_width =
    82
rB =
         0.684544253003095
rdh_mean =
          0.51950801066731
gamma_berm =
         0.671081970088282
```

```
slope =
        0.192778027092338
Irb =
         3.16254253010959
gamma_berm =
        0.671081970088282
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                      0.6
gamma =
        0.402649182052969
ans =
!!! - - Iribaren number:   2.12 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          3.3732492257251
R2del =
        0.215694205997213
Z2 =
         12.8216092257251
top_sta =
         331.353916689851
ans =
!----------------- STARTING ITERATION 8 -----------------!
Ztoe =
                  5.75266
toe_sta =
         212.427117384844
top_sta =
         331.353916689851
Z2 =
         12.8216092257251
H0 =
                   2.4638
Tp =
                   12.522
T0 =
         11.3836363636364
R2 =
          3.3732492257251
Z2 =
         12.8216092257251
top_sta =
         331.353916689851
Lslope =
         118.926799305007
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 1
dh =
                 3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 2
dh =
                 3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 3
dh =
                3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 4
dh =
                 3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 5
dh =
                3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 6
dh =
                 3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 7
dh =
                3.4908595
```

```
rdh_sum =
     7
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 8
dh =
                  3.467545
rdh_sum =
     8
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 9
dh =
                 3.4612955
rdh_sum =
     9
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 10
dh =
                 3.4550465
rdh_sum =
    10
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 11
dh =
                 3.4487975
rdh_sum =
    11
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 12
dh =
                  3.442548
rdh_sum =
    12
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 13
dh =
                 3.4362985
rdh_sum =
    13
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 14
dh =
                 3.4300495
rdh_sum =
    14
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 15
dh =
                 3.4238005
rdh_sum =
    15
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 16
dh =
                 3.4175515
rdh_sum =
    16
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 17
dh =
                  3.411302
rdh_sum =
    17
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 18
dh =
                 3.4003055
rdh_sum =
    18
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 19
dh =
                 3.3798155
rdh_sum =
    19
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 20
dh =
                 3.3545785
rdh_sum =
           19.76893744333
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 21
dh =
                  3.329341
rdh_sum =
         20.5310581655875
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 22
dh =
                 3.3041035
```

```
rdh_sum =
          21.2862943069424
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          22.0345799282454
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
          22.7758507539505
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          23.3799551636178
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          23.9812814319028
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
          24.5935057879809
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          25.2165723691897
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
          25.8504199158604
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
          26.4949819543916
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 34
dh =
                2.9588585
rdh_sum =
          27.1501863716079
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
          27.8159559103765
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
          28.4771130620991
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 37
dh =
                2.9129265
rdh_sum =
          29.1183342257551
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 38
dh =
                  2.84731
rdh_sum =
          29.7393724420163
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
          30.3400159169971
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 40
dh =
                2.7160765
```

```
rdh_sum =
          30.9200883864044
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 41
dh =
                 2.6504595
rdh_sum =
          31.4794497364927
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 42
dh =
                 2.5848425
rdh_sum =
           32.017996094593
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 43
dh =
                  2.519226
rdh_sum =
          32.5356601701611
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 44
dh =
                 2.4536095
rdh_sum =
          33.0324110544202
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 53
dh =
                  1.726356
rdh_sum =
          33.3058972388577
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 54
dh =
                   1.71542
rdh_sum =
          33.5762810887599
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 55
dh =
                  1.704484
rdh_sum =
          33.8435737662241
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 56
dh =
                  1.693548
rdh_sum =
          34.1077865836152
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 57
dh =
                  1.682612
rdh_sum =
          34.3689310030164
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 58
dh =
                  1.671676
rdh_sum =
          34.6270186356718
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          34.7757392046747
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 78
dh =
                -0.8961285
rdh_sum =
          34.9399971366068
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          35.1204067066152
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          35.3175528240006
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 81
dh =
                 -1.033924
```

```
rdh_sum =
          35.5319896036051
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 82
dh =
               -1.0798555
rdh_sum =
          35.7642393278771
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 83
dh =
                -1.125787
rdh_sum =
          36.0147918738851
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 84
dh =
                -1.171719
rdh_sum =
           36.284103838344
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 85
dh =
                -1.217651
rdh_sum =
          36.5725972982741
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 86
dh =
               -1.2635825
rdh_sum =
          36.8806590203917
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 87
dh =
               -1.2947505
rdh_sum =
           37.202201500502
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          37.5309003613587
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
          37.8667953664496
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          38.2099248172081
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          38.5603253265775
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          38.9180320336697
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          39.2830781511806
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          39.6554949535899
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
           40.035312218293
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 96
dh =
                -1.442388
```

```
rdh_sum =
          40.4225579954478
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 97
dh =
                -1.4576205
rdh_sum =
          40.8167253755021
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 98
dh =
                -1.4716815
rdh_sum =
          41.2173009688845
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 99
dh =
                -1.4857425
rdh_sum =
          41.6243018254767
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 100
dh =
                 -1.499803
rdh_sum =
          42.0377436640029
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 101
dh =
                -1.5138635
rdh_sum =
          42.4576413269098
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 102
dh =
                -1.5279245
rdh_sum =
          42.8840087799328
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 103
dh =
                -1.5419855
rdh_sum =
           43.316858650014
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 104
dh =
                 -1.553117
rdh_sum =
          43.7548485973251
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 105
dh =
                 -1.561319
rdh_sum =
          44.1966301925175
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 106
dh =
                 -1.569521
rdh_sum =
          44.6422068326251
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 107
dh =
                 -1.577723
rdh_sum =
          45.0915816932413
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 108
dh =
                 -1.585925
rdh_sum =
          45.5447577283345
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 109
dh =
                 -1.594127
rdh_sum =
          46.0017376700747
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 110
dh =
                 -1.602329
rdh_sum =
           46.462524028675
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 111
dh =
                 -1.610531
```

```
rdh_sum =
          46.9271190922445
ans =
!------- End Berm Factor Calculation, Iter: 8 ---------!
berm_width =
    82
rB =
          0.689499763545288
rdh_mean =
          0.572281940149324
gamma_berm =
          0.705088498868909
slope =
          0.191431409132897
Irb =
           3.14045112979403
gamma_berm =
          0.705088498868909
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                        0.6
gamma =
          0.423053099321346
ans =
!!! - - Iribaren number:   2.21 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
           3.5408932455372
R2del =
          0.167644019812107
Z2 =
           12.9892532455372
top_sta =
          332.023055459023
ans =
!----------------- STARTING ITERATION 9 -----------------!
Ztoe =
                    5.75266
toe_sta =
          212.427117384844
top_sta =
          332.023055459023
Z2 =
          12.9892532455372
H0 =
                     2.4638
Tp =
                     12.522
T0 =
          11.3836363636364
R2 =
           3.5408932455372
Z2 =
          12.9892532455372
top_sta =
          332.023055459023
Lslope =
          119.595938074179
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 1
dh =
                   3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 2
dh =
                   3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 3
dh =
                  3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 4
dh =
                   3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 5
dh =
                  3.5716185
```

```
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 6
dh =
                  3.531239
rdh_sum =
          5.81460800750531
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 7
dh =
                  3.4908595
rdh_sum =
          6.61910838562496
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 8
dh =
                  3.467545
rdh_sum =
          7.41768044538882
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 9
dh =
                  3.4612955
rdh_sum =
          8.21465214139815
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 10
dh =
                  3.4550465
rdh_sum =
          9.01001888778443
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 11
dh =
                  3.4487975
rdh_sum =
          9.80377599630383
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 12
dh =
                   3.442548
rdh_sum =
          10.5959186749111
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 13
dh =
                  3.4362985
rdh_sum =
          11.3864422857947
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 14
dh =
                  3.4300495
rdh_sum =
          12.1753423469345
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 15
dh =
                  3.4238005
rdh_sum =
          12.9626142727301
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 16
dh =
                  3.4175515
rdh_sum =
          13.7482535034236
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 17
dh =
                   3.411302
rdh_sum =
          14.5322553739923
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 18
dh =
                  3.4003055
rdh_sum =
           15.313365247042
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 19
dh =
                  3.3798155
rdh_sum =
          16.0890496538782
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 20
dh =
                  3.3545785
```

```
rdh_sum =
          16.8579870972082
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 21
dh =
                  3.329341
rdh_sum =
          17.6201078194657
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 22
dh =
                  3.3041035
rdh_sum =
          18.3753439608206
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 23
dh =
                  3.2788665
rdh_sum =
          19.1236295821236
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 24
dh =
                  3.2536295
rdh_sum =
          19.8649004078287
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 28
dh =
                  2.7927855
rdh_sum =
           20.469004817496
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 29
dh =
                  2.7838805
rdh_sum =
          21.0703310857809
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 30
dh =
                   2.818876
rdh_sum =
          21.6825554418591
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 31
dh =
                  2.8538715
rdh_sum =
          22.3056220230679
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 32
dh =
                   2.888867
rdh_sum =
          22.9394695697385
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 33
dh =
                   2.923863
rdh_sum =
          23.5840316082698
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 34
dh =
                  2.9588585
rdh_sum =
          24.2392360254861
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 35
dh =
                   2.993854
rdh_sum =
          24.9050055642546
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 36
dh =
                  2.9785435
rdh_sum =
          25.5661627159772
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 37
dh =
                  2.9129265
rdh_sum =
          26.2073838796333
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 38
dh =
                   2.84731
```

```
rdh_sum =
          26.8284220958945
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 39
dh =
                  2.7816935
rdh_sum =
          27.4290655708753
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 40
dh =
                  2.7160765
rdh_sum =
          28.0091380402826
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 41
dh =
                  2.6504595
rdh_sum =
          28.5684993903709
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 42
dh =
                  2.5848425
rdh_sum =
          29.1070457484712
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 43
dh =
                   2.519226
rdh_sum =
          29.6247098240392
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 44
dh =
                  2.4536095
rdh_sum =
          30.1214607082984
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 53
dh =
                   1.726356
rdh_sum =
          30.3949468927358
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 54
dh =
                    1.71542
rdh_sum =
          30.6653307426381
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 55
dh =
                   1.704484
rdh_sum =
          30.9326234201023
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 56
dh =
                   1.693548
rdh_sum =
          31.1968362374934
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 57
dh =
                   1.682612
rdh_sum =
          31.4579806568946
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 58
dh =
                   1.671676
rdh_sum =
            31.71606828955
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          31.8516999714941
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 78
dh =
                 -0.8961285
rdh_sum =
           32.001583617091
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 79
dh =
        -0.942059999999998
```

```
rdh_sum =
          32.1663005886813
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          32.3464077885873
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 81
dh =
                -1.033924
rdh_sum =
           32.542436405007
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 82
dh =
               -1.0798555
rdh_sum =
          32.7548910068591
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 83
dh =
                -1.125787
rdh_sum =
          32.9842490584595
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 84
dh =
                -1.171719
rdh_sum =
          33.2309601474705
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 85
dh =
                -1.217651
rdh_sum =
          33.4954448650408
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 86
dh =
               -1.2635825
rdh_sum =
          33.7780940891095
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 87
dh =
               -1.2947505
rdh_sum =
          34.0732767155348
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          34.3751195059644
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
           34.683664231544
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          34.9989514461651
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
           35.321020275531
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          35.6499086172839
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          35.9856527183575
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 94
dh =
                 -1.40958
```

```
rdh_sum =
          36.3282871628803
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
           36.677845283889
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          37.0343589478529
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          37.3973586674859
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          37.7663678505761
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
           38.141406883544
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          38.5224949989264
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          38.9096507019538
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          39.3028917703034
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          39.7022348191283
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          40.1064197049131
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          40.5141781979427
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
          40.9255151829108
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 107
dh =
                -1.577723
rdh_sum =
          41.3404353550105
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 108
dh =
                -1.585925
rdh_sum =
          41.7589432196854
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 109
dh =
                -1.594127
```

```
rdh_sum =
          42.1810430923912
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 110
dh =
                -1.602329
rdh_sum =
          42.6067390983669
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
          43.0360351724167
ans =
!------- End Berm Factor Calculation, Iter: 9 ---------!
berm_width =
    82
rB =
          0.685642015275969
rdh_mean =
          0.524829697224594
gamma_berm =
          0.674203276005779
slope =
          0.192483380285897
Irb =
           3.15770882021649
gamma_berm =
          0.674203276005779
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                        0.6
gamma =
          0.404521965603467
ans =
!!! - - Iribaren number:   2.13 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
            3.3882526695457
R2del =
          0.152640575991503
Z2 =
           12.8366126695457
top_sta =
          331.413801831848
ans =
!----------------- STARTING ITERATION 10 -----------------!
Ztoe =
                    5.75266
toe_sta =
          212.427117384844
top_sta =
          331.413801831848
Z2 =
          12.8366126695457
H0 =
                     2.4638
Tp =
                     12.522
T0 =
          11.3836363636364
R2 =
            3.3882526695457
Z2 =
          12.8366126695457
top_sta =
          331.413801831848
Lslope =
          118.986684447004
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 1
dh =
                   3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 2
dh =
                   3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 3
dh =
                  3.6523775
```

```
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 4
dh =
                 3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 5
dh =
                3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 6
dh =
                 3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 7
dh =
                3.4908595
rdh_sum =
     7
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 8
dh =
                 3.467545
rdh_sum =
     8
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 9
dh =
                3.4612955
rdh_sum =
     9
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 10
dh =
                3.4550465
rdh_sum =
    10
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 11
dh =
                3.4487975
rdh_sum =
    11
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 12
dh =
                 3.442548
rdh_sum =
    12
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 13
dh =
                3.4362985
rdh_sum =
    13
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 14
dh =
                3.4300495
rdh_sum =
    14
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 15
dh =
                3.4238005
rdh_sum =
    15
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 16
dh =
                3.4175515
rdh_sum =
    16
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 17
dh =
                 3.411302
rdh_sum =
    17
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 18
dh =
                3.4003055
```

```
rdh_sum =
    18
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
          18.7756844068362
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
          19.5446218501661
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
          20.3067425724237
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
          21.0619787137786
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          21.8102643350816
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
          22.5515351607866
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          23.1556395704539
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          23.7569658387389
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
           24.369190194817
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          24.9922567760258
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
          25.6261043226965
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
          26.2706663612278
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 34
dh =
                2.9588585
rdh_sum =
          26.9258707784441
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
          27.5916403172126
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 36
dh =
                2.9785435
```

```
rdh_sum =
          28.2527974689352
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 37
dh =
                2.9129265
rdh_sum =
          28.8940186325912
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 38
dh =
                 2.84731
rdh_sum =
          29.5150568488525
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
          30.1157003238332
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 40
dh =
                2.7160765
rdh_sum =
          30.6957727932406
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 41
dh =
                2.6504595
rdh_sum =
          31.2551341433289
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 42
dh =
                2.5848425
rdh_sum =
          31.7936805014291
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 43
dh =
                 2.519226
rdh_sum =
          32.3113445769972
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 44
dh =
                2.4536095
rdh_sum =
          32.8080954612564
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 53
dh =
                 1.726356
rdh_sum =
          33.0815816456938
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 54
dh =
                  1.71542
rdh_sum =
          33.3519654955961
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 55
dh =
                 1.704484
rdh_sum =
          33.6192581730603
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 56
dh =
                 1.693548
rdh_sum =
          33.8834709904514
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 57
dh =
                 1.682612
rdh_sum =
          34.1446154098525
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 58
dh =
                 1.671676
rdh_sum =
          34.4027030425079
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 77
dh =
        -0.850196999999998
```

```
rdh_sum =
          34.5501782248791
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 78
dh =
               -0.8961285
rdh_sum =
          34.7130691928891
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          34.8919872733409
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          35.0875149127072
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 81
dh =
                -1.033924
rdh_sum =
          35.3002042651844
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 82
dh =
               -1.0798555
rdh_sum =
          35.5305761673561
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 83
dh =
                -1.125787
rdh_sum =
          35.7791195734401
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 84
dh =
                -1.171719
rdh_sum =
          36.0462906898679
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 85
dh =
                -1.217651
rdh_sum =
          36.3325117469033
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 86
dh =
               -1.2635825
rdh_sum =
          36.6381702145709
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 87
dh =
               -1.2947505
rdh_sum =
          36.9572213286324
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          37.2833827390903
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
          37.6166944445506
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          37.9571950056047
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          38.3049213198206
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 92
dh =
               -1.3767715
```

```
rdh_sum =
          38.6599088350445
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          39.0221910995712
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          39.3917997502932
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          39.7687649511014
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
           40.15311516407
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          40.5443469772715
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          40.9419504298898
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
          41.3459429263232
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          41.7563405569727
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
           42.17315855052
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          42.5964112735048
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          43.0261117707044
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          43.4609252265528
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          43.8995105269536
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
          44.3418712237781
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 107
dh =
                -1.577723
```

```
rdh_sum =
          44.7880106505501
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 108
dh =
                 -1.585925
rdh_sum =
          45.2379319222541
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 109
dh =
                 -1.594127
rdh_sum =
          45.6916379351539
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 110
dh =
                 -1.602329
rdh_sum =
          46.1491313666262
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 111
dh =
                 -1.610531
rdh_sum =
          46.6104146750051
ans =
!------- End Berm Factor Calculation, Iter: 10 ---------!
berm_width =
    82
rB =
          0.689152743276264
rdh_mean =
          0.568419691158599
gamma_berm =
          0.702575246217931
slope =
          0.191527106997003
Irb =
           3.14202106268441
gamma_berm =
          0.702575246217931
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.6
gamma =
          0.421545147730759
ans =
!!! - - Iribaren number:   2.21 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          3.52850620749376
R2del =
          0.14025353794806
Z2 =
          12.9768662074938
top_sta =
           331.97361350816
ans =
!----------------- STARTING ITERATION 11 -----------------!
Ztoe =
                   5.75266
toe_sta =
          212.427117384844
top_sta =
           331.97361350816
Z2 =
          12.9768662074938
H0 =
                    2.4638
Tp =
                    12.522
T0 =
          11.3836363636364
R2 =
          3.52850620749376
Z2 =
          12.9768662074938
top_sta =
           331.97361350816
Lslope =
          119.546496123316
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 1
dh =
                  3.700486
```

```
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 2
dh =
                  3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 3
dh =
                 3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 4
dh =
                  3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 5
dh =
                 3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 6
dh =
                  3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 7
dh =
                 3.4908595
rdh_sum =
          6.80450037811965
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 8
dh =
                  3.467545
rdh_sum =
          7.6030724378835
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 9
dh =
                 3.4612955
rdh_sum =
          8.40004413389283
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 10
dh =
                 3.4550465
rdh_sum =
          9.19541088027912
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 11
dh =
                 3.4487975
rdh_sum =
          9.98916798879852
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 12
dh =
                  3.442548
rdh_sum =
          10.7813106674058
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 13
dh =
                 3.4362985
rdh_sum =
          11.5718342782893
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 14
dh =
                 3.4300495
rdh_sum =
          12.3607343394292
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 15
dh =
                 3.4238005
rdh_sum =
          13.1480062652248
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 16
dh =
                 3.4175515
```

```
rdh_sum =
          13.9336454959183
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 17
dh =
                 3.411302
rdh_sum =
          14.7176473664869
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
          15.4987572395367
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
          16.2744416463729
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
          17.0433790897028
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
          17.8054998119604
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
          18.5607359533153
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          19.3090215746183
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
          20.0502924003234
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          20.6543968099907
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          21.2557230782756
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
          21.8679474343538
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          22.4910140155625
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
          23.1248615622332
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
          23.7694236007645
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 34
dh =
                2.9588585
```

```
rdh_sum =
          24.4246280179808
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
          25.0903975567493
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
          25.7515547084719
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 37
dh =
                2.9129265
rdh_sum =
          26.3927758721279
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 38
dh =
                 2.84731
rdh_sum =
          27.0138140883892
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
           27.61445756337
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 40
dh =
                2.7160765
rdh_sum =
          28.1945300327773
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 41
dh =
                2.6504595
rdh_sum =
          28.7538913828656
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 42
dh =
                2.5848425
rdh_sum =
          29.2924377409659
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 43
dh =
                 2.519226
rdh_sum =
          29.8101018165339
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 44
dh =
                2.4536095
rdh_sum =
          30.3068527007931
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 53
dh =
                 1.726356
rdh_sum =
          30.5803388852305
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 54
dh =
                  1.71542
rdh_sum =
          30.8507227351328
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 55
dh =
                 1.704484
rdh_sum =
           31.118015412597
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 56
dh =
                 1.693548
rdh_sum =
          31.3822282299881
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 57
dh =
                 1.682612
```

```
rdh_sum =
          31.6433726493892
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 58
dh =
                 1.671676
rdh_sum =
          31.9014602820446
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          32.0379999388124
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 78
dh =
               -0.8961285
rdh_sum =
          32.1888812692253
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          32.3546880557463
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          32.5359792945862
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 81
dh =
                -1.033924
rdh_sum =
          32.7332879295603
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 82
dh =
               -1.0798555
rdh_sum =
          32.9471199377176
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 83
dh =
                -1.125787
rdh_sum =
          33.1779538378816
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 84
dh =
                -1.171719
rdh_sum =
           33.426239911306
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 85
dh =
                -1.217651
rdh_sum =
          33.6923990732485
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 86
dh =
               -1.2635825
rdh_sum =
          33.9768221508079
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 87
dh =
               -1.2947505
rdh_sum =
          34.2738458667652
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          34.5775650153055
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
          34.8880212614671
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 90
dh =
                -1.343963
```

```
rdh_sum =
          35.2052550366259
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          35.5293053264501
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          35.8602098720553
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          36.1980047452114
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          36.5427243362494
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          36.8944017678677
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          37.2530686785949
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          37.6182529380874
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          37.9894753473376
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
          38.3667560892788
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          38.7501141808942
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          39.1395679018271
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          39.5351347941157
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          39.9368312252537
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          40.3433911272565
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 105
dh =
                -1.561319
```

```
rdh_sum =
         40.7535404700615
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
         41.1672840452197
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 107
dh =
                -1.577723
rdh_sum =
         41.5846264526087
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 108
dh =
                -1.585925
rdh_sum =
          42.005572100188
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 109
dh =
                -1.594127
rdh_sum =
         42.4301252037638
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 110
dh =
                -1.602329
rdh_sum =
         42.8582897867639
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
         43.2900696800233
ans =
!------- End Berm Factor Calculation, Iter: 11 ---------!
berm_width =
    82
rB =
         0.685925582590181
rdh_mean =
         0.527927679024675
gamma_berm =
         0.676193518210301
slope =
         0.192406934158836
Irb =
          3.15645471396932
gamma_berm =
         0.676193518210301
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                      0.6
gamma =
         0.405716110926181
ans =
!!! - - Iribaren number:   2.13 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
         3.39807598015199
R2del =
         0.130430227341773
Z2 =
          12.846435980152
top_sta =
         331.453010853295
ans =
!----------------- STARTING ITERATION 12 -----------------!
Ztoe =
                  5.75266
toe_sta =
         212.427117384844
top_sta =
         331.453010853295
Z2 =
          12.846435980152
H0 =
                    2.4638
Tp =
                    12.522
T0 =
         11.3836363636364
```

```
R2 =
          3.39807598015199
Z2 =
           12.846435980152
top_sta =
          331.453010853295
Lslope =
          119.025893468451
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 1
dh =
                   3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 2
dh =
                   3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 3
dh =
                  3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 4
dh =
                   3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 5
dh =
                  3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 6
dh =
                   3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 7
dh =
                  3.4908595
rdh_sum =
     7
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 8
dh =
                   3.467545
rdh_sum =
     8
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 9
dh =
                  3.4612955
rdh_sum =
     9
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 10
dh =
                  3.4550465
rdh_sum =
    10
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 11
dh =
                  3.4487975
rdh_sum =
    11
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 12
dh =
                   3.442548
rdh_sum =
    12
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 13
dh =
                  3.4362985
rdh_sum =
    13
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 14
dh =
                  3.4300495
```

```
rdh_sum =
    14
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 15
dh =
                3.4238005
rdh_sum =
    15
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 16
dh =
                3.4175515
rdh_sum =
    16
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 17
dh =
                 3.411302
rdh_sum =
    17
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
    18
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
          18.7756844068362
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
          19.5446218501661
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
          20.3067425724237
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
          21.0619787137786
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          21.8102643350816
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
          22.5515351607866
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          23.1556395704539
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          23.7569658387389
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
           24.369190194817
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          24.9922567760258
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 32
dh =
                 2.888867
```

```
rdh_sum =
          25.6261043226965
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
          26.2706663612278
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 34
dh =
                2.9588585
rdh_sum =
          26.9258707784441
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
          27.5916403172126
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
          28.2527974689352
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 37
dh =
                2.9129265
rdh_sum =
          28.8940186325912
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 38
dh =
                  2.84731
rdh_sum =
          29.5150568488525
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
          30.1157003238332
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 40
dh =
                2.7160765
rdh_sum =
          30.6957727932406
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 41
dh =
                2.6504595
rdh_sum =
          31.2551341433289
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 42
dh =
                2.5848425
rdh_sum =
          31.7936805014291
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 43
dh =
                 2.519226
rdh_sum =
          32.3113445769972
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 44
dh =
                2.4536095
rdh_sum =
          32.8080954612564
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 53
dh =
                 1.726356
rdh_sum =
          33.0815816456938
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 54
dh =
                  1.71542
rdh_sum =
          33.3519654955961
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 55
dh =
                 1.704484
```

```
rdh_sum =
          33.6192581730603
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 56
dh =
                  1.693548
rdh_sum =
          33.8834709904514
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 57
dh =
                  1.682612
rdh_sum =
          34.1446154098525
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 58
dh =
                  1.671676
rdh_sum =
          34.4027030425079
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          34.5493711042915
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 78
dh =
                -0.8961285
rdh_sum =
          34.7113760768893
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          34.8893273556661
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          35.0838057682147
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 81
dh =
                 -1.033924
rdh_sum =
          35.2953621732077
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 82
dh =
                -1.0798555
rdh_sum =
          35.5245164432332
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 83
dh =
                 -1.125787
rdh_sum =
          35.7717569053935
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 84
dh =
                 -1.171719
rdh_sum =
          36.0375394821074
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 85
dh =
                 -1.217651
rdh_sum =
          36.3222864698807
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 86
dh =
                -1.2635825
rdh_sum =
          36.6263857595336
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 87
dh =
                -1.2947505
rdh_sum =
          36.9438203633587
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 88
dh =
                 -1.311155
```

```
rdh_sum =
          37.2683352697709
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
          37.5999706248167
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          37.9387651520257
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          38.2847559283326
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          38.6379785964959
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          38.9984669170647
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          39.3662527564977
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          39.7413665237858
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          40.1238369425115
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          40.5131628746275
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          40.9088365896165
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
          41.3108757175017
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          41.7192965853998
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          42.1341146681012
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          42.5553445876564
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 103
dh =
               -1.5419855
```

```
rdh_sum =
          42.9829996553642
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 104
dh =
                 -1.553117
rdh_sum =
          43.4157499653368
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 105
dh =
                 -1.561319
rdh_sum =
          43.8522591798187
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 106
dh =
                 -1.569521
rdh_sum =
          44.2925309495508
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 107
dh =
                 -1.577723
rdh_sum =
          44.7365687089255
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 108
dh =
                 -1.585925
rdh_sum =
          45.1843756757898
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 109
dh =
                 -1.594127
rdh_sum =
          45.6359548512601
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 110
dh =
                 -1.602329
rdh_sum =
          46.0913090195493
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 111
dh =
                 -1.610531
rdh_sum =
          46.5504407478074
ans =
!------- End Berm Factor Calculation, Iter: 12 ---------!
berm_width =
    82
rB =
          0.688925725407261
rdh_mean =
          0.567688301802529
gamma_berm =
          0.702169349717263
slope =
          0.191589596242868
Irb =
           3.1430462049203
gamma_berm =
          0.702169349717263
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.6
gamma =
          0.421301609830358
ans =
!!! - - Iribaren number:   2.21 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          3.52662050549167
R2del =
          0.128544525339685
Z2 =
           12.9749805054917
top_sta =
          331.966086867376
ans =
!----------------- STARTING ITERATION 13 -----------------!
Ztoe =
                  5.75266
```

```
toe_sta =
          212.427117384844
top_sta =
          331.966086867376
Z2 =
          12.9749805054917
H0 =
                    2.4638
Tp =
                    12.522
T0 =
          11.3836363636364
R2 =
          3.52662050549167
Z2 =
          12.9749805054917
top_sta =
          331.966086867376
Lslope =
          119.538969482532
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 1
dh =
                   3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 2
dh =
                   3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 3
dh =
                  3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 4
dh =
                   3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 5
dh =
                  3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 6
dh =
                   3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 7
dh =
                  3.4908595
rdh_sum =
          6.80450037811965
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 8
dh =
                   3.467545
rdh_sum =
           7.6030724378835
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 9
dh =
                  3.4612955
rdh_sum =
          8.40004413389283
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 10
dh =
                  3.4550465
rdh_sum =
          9.19541088027912
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 11
dh =
                  3.4487975
rdh_sum =
          9.98916798879852
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 12
dh =
                   3.442548
```

```
rdh_sum =
          10.7813106674058
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 13
dh =
                3.4362985
rdh_sum =
          11.5718342782893
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 14
dh =
                3.4300495
rdh_sum =
          12.3607343394292
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 15
dh =
                3.4238005
rdh_sum =
          13.1480062652248
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 16
dh =
                3.4175515
rdh_sum =
          13.9336454959183
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 17
dh =
                 3.411302
rdh_sum =
          14.7176473664869
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
          15.4987572395367
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
          16.2744416463729
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
          17.0433790897028
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
          17.8054998119604
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
          18.5607359533153
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          19.3090215746183
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
          20.0502924003234
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          20.6543968099907
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          21.2557230782756
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 30
dh =
                 2.818876
```

```
rdh_sum =
          21.8679474343538
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          22.4910140155625
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
          23.1248615622332
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
          23.7694236007645
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 34
dh =
                2.9588585
rdh_sum =
          24.4246280179808
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
          25.0903975567493
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
          25.7515547084719
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 37
dh =
                2.9129265
rdh_sum =
          26.3927758721279
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 38
dh =
                 2.84731
rdh_sum =
          27.0138140883892
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
            27.61445756337
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 40
dh =
                2.7160765
rdh_sum =
          28.1945300327773
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 41
dh =
                2.6504595
rdh_sum =
          28.7538913828656
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 42
dh =
                2.5848425
rdh_sum =
          29.2924377409659
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 43
dh =
                 2.519226
rdh_sum =
          29.8101018165339
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 44
dh =
                2.4536095
rdh_sum =
          30.3068527007931
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 53
dh =
                 1.726356
```

```
rdh_sum =
          30.5803388852305
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 54
dh =
                   1.71542
rdh_sum =
          30.8507227351328
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 55
dh =
                  1.704484
rdh_sum =
           31.118015412597
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 56
dh =
                  1.693548
rdh_sum =
          31.3822282299881
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 57
dh =
                  1.682612
rdh_sum =
          31.6433726493892
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 58
dh =
                  1.671676
rdh_sum =
          31.9014602820446
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          32.0381389456419
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 78
dh =
                -0.8961285
rdh_sum =
          32.1891730099848
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          32.3551466262501
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          32.5366191092318
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 81
dh =
                 -1.033924
rdh_sum =
          32.7341236693535
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 82
dh =
                -1.0798555
rdh_sum =
          32.9481664968867
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 83
dh =
                 -1.125787
rdh_sum =
          33.1792262695524
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 84
dh =
                 -1.171719
rdh_sum =
          33.4277533720617
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 85
dh =
                 -1.217651
rdh_sum =
          33.6941687663817
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 86
dh =
                -1.2635825
```

```
rdh_sum =
          33.9788632687397
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 87
dh =
               -1.2947505
rdh_sum =
          34.2761686830875
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          34.5801749183611
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
          34.8909236229165
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          35.2084552089273
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          35.5328086401699
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          35.8640216333365
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          36.2021302329127
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          36.5471687990868
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          36.8991704218747
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          37.2581667044212
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          37.6236851123592
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
           37.995246048303
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
          38.3728696636621
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          38.7565749420456
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 101
dh =
               -1.5138635
```

```
rdh_sum =
          39.1463801281824
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          39.5423027276532
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          39.9443590696512
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          40.3512821821123
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          40.7617971500881
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
          41.1759087507359
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 107
dh =
                -1.577723
rdh_sum =
          41.5936215692071
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 108
dh =
                -1.585925
rdh_sum =
          42.0149399984019
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 109
dh =
                -1.594127
rdh_sum =
          42.4398682387349
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 110
dh =
                -1.602329
rdh_sum =
          42.8684102979113
ans =
Berm Factor Calculation: Iteration 13, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
          43.3005699907123
ans =
!------- End Berm Factor Calculation, Iter: 13 ---------!
berm_width =
    82
rB =
         0.685968771146072
rdh_mean =
         0.528055731594052
gamma_berm =
          0.67626097015214
slope =
         0.192395278960775
Irb =
          3.15626350929666
gamma_berm =
          0.67626097015214
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.6
gamma =
         0.405756582091284
ans =
!!! - - Iribaren number:   2.13 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
```

```
R2_new =
          3.39838767679335
R2del =
         0.128232828698324
Z2 =
          12.8467476767934
top_sta =
          331.454254967503
ans =
!----------------- STARTING ITERATION 14 -----------------!
Ztoe =
                    5.75266
toe_sta =
          212.427117384844
top_sta =
          331.454254967503
Z2 =
          12.8467476767934
H0 =
                     2.4638
Tp =
                     12.522
T0 =
          11.3836363636364
R2 =
          3.39838767679335
Z2 =
          12.8467476767934
top_sta =
          331.454254967503
Lslope =
          119.027137582659
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 1
dh =
                   3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 2
dh =
                   3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 3
dh =
                  3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 4
dh =
                   3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 5
dh =
                  3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 6
dh =
                   3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 7
dh =
                  3.4908595
rdh_sum =
     7
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 8
dh =
                   3.467545
rdh_sum =
     8
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 9
dh =
                  3.4612955
rdh_sum =
     9
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 10
dh =
                  3.4550465
```

```
rdh_sum =
    10
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 11
dh =
                3.4487975
rdh_sum =
    11
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 12
dh =
                 3.442548
rdh_sum =
    12
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 13
dh =
                3.4362985
rdh_sum =
    13
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 14
dh =
                3.4300495
rdh_sum =
    14
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 15
dh =
                3.4238005
rdh_sum =
    15
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 16
dh =
                3.4175515
rdh_sum =
    16
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 17
dh =
                 3.411302
rdh_sum =
    17
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
    18
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
          18.7756844068362
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
          19.5446218501661
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
          20.3067425724237
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
          21.0619787137786
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          21.8102643350816
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
          22.5515351607866
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 28
dh =
                2.7927855
```

```
rdh_sum =
          23.1556395704539
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 29
dh =
                 2.7838805
rdh_sum =
          23.7569658387389
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 30
dh =
                  2.818876
rdh_sum =
           24.369190194817
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 31
dh =
                 2.8538715
rdh_sum =
          24.9922567760258
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 32
dh =
                  2.888867
rdh_sum =
          25.6261043226965
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 33
dh =
                  2.923863
rdh_sum =
          26.2706663612278
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 34
dh =
                 2.9588585
rdh_sum =
          26.9258707784441
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 35
dh =
                  2.993854
rdh_sum =
          27.5916403172126
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 36
dh =
                 2.9785435
rdh_sum =
          28.2527974689352
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 37
dh =
                 2.9129265
rdh_sum =
          28.8940186325912
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 38
dh =
                   2.84731
rdh_sum =
          29.5150568488525
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 39
dh =
                 2.7816935
rdh_sum =
          30.1157003238332
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 40
dh =
                 2.7160765
rdh_sum =
          30.6957727932406
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 41
dh =
                 2.6504595
rdh_sum =
          31.2551341433289
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 42
dh =
                 2.5848425
rdh_sum =
          31.7936805014291
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 43
dh =
                  2.519226
```

```
rdh_sum =
          32.3113445769972
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 44
dh =
                2.4536095
rdh_sum =
          32.8080954612564
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 53
dh =
                 1.726356
rdh_sum =
          33.0815816456938
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 54
dh =
                  1.71542
rdh_sum =
          33.3519654955961
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 55
dh =
                 1.704484
rdh_sum =
          33.6192581730603
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 56
dh =
                 1.693548
rdh_sum =
          33.8834709904514
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 57
dh =
                 1.682612
rdh_sum =
          34.1446154098525
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 58
dh =
                 1.671676
rdh_sum =
          34.4027030425079
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          34.5493456004071
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 78
dh =
               -0.8961285
rdh_sum =
           34.711322575736
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
           34.889243302564
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          35.0836885570384
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 81
dh =
               -1.033924
rdh_sum =
          35.2952091565765
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 82
dh =
               -1.0798555
rdh_sum =
          35.5243249429599
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 83
dh =
                -1.125787
rdh_sum =
          35.7715242231033
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 84
dh =
                -1.171719
```

```
rdh_sum =
          36.0372629100525
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 85
dh =
                -1.217651
rdh_sum =
          36.3219633019827
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 86
dh =
               -1.2635825
rdh_sum =
          36.6260133025615
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 87
dh =
               -1.2947505
rdh_sum =
          36.9433968027713
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
           37.267859656177
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
          37.5994420134208
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          37.9381826031168
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          38.2841185078017
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          38.6372853763268
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          38.9977169758809
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          39.3654451801084
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          39.7405004056761
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          40.1229113843596
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          40.5121770500544
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
           40.907789742822
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 99
dh =
               -1.4857425
```

```
rdh_sum =
          41.3097670997621
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          41.7181254554175
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          42.1328802923016
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          42.5540462404842
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          42.9816366196307
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          43.4143216794193
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          43.8507652334742
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
          44.2909709356412
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 107
dh =
                -1.577723
rdh_sum =
          44.7349422234812
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 108
dh =
                -1.585925
rdh_sum =
          45.1826823180724
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 109
dh =
                -1.594127
rdh_sum =
           45.634194223825
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 110
dh =
                -1.602329
rdh_sum =
          46.0894807283087
ans =
Berm Factor Calculation: Iteration 14, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
          46.5485444020924
ans =
!------- End Berm Factor Calculation, Iter: 14 ---------!
berm_width =
    82
rB =
         0.688918524509208
rdh_mean =
         0.567665175635273
gamma_berm =
         0.702156530704705
slope =
         0.191591576879432
Irb =
           3.1430786974583
gamma_berm =
         0.702156530704705
```

```
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.6
gamma =
         0.421293918422823
ans =
!!! - - Iribaren number:   2.21 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          3.52656096456957
R2del =
         0.128173287776214
Z2 =
          12.9749209645696
top_sta =
          331.965849214166
ans =
!----------------- STARTING ITERATION 15 -----------------!
Ztoe =
                    5.75266
toe_sta =
          212.427117384844
top_sta =
          331.965849214166
Z2 =
          12.9749209645696
H0 =
                     2.4638
Tp =
                     12.522
T0 =
          11.3836363636364
R2 =
          3.52656096456957
Z2 =
          12.9749209645696
top_sta =
          331.965849214166
Lslope =
          119.538731829322
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 1
dh =
                   3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 2
dh =
                   3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 3
dh =
                  3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 4
dh =
                   3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 5
dh =
                  3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 6
dh =
                   3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 7
dh =
                  3.4908595
rdh_sum =
          6.80450037811965
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 8
dh =
                   3.467545
```

```
rdh_sum =
          7.6030724378835
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 9
dh =
                3.4612955
rdh_sum =
          8.40004413389283
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 10
dh =
                3.4550465
rdh_sum =
          9.19541088027912
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 11
dh =
                3.4487975
rdh_sum =
          9.98916798879852
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 12
dh =
                 3.442548
rdh_sum =
          10.7813106674058
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 13
dh =
                3.4362985
rdh_sum =
          11.5718342782893
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 14
dh =
                3.4300495
rdh_sum =
          12.3607343394292
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 15
dh =
                3.4238005
rdh_sum =
          13.1480062652248
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 16
dh =
                3.4175515
rdh_sum =
          13.9336454959183
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 17
dh =
                 3.411302
rdh_sum =
          14.7176473664869
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
          15.4987572395367
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
          16.2744416463729
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
          17.0433790897028
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
          17.8054998119604
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
          18.5607359533153
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 23
dh =
                3.2788665
```

```
rdh_sum =
          19.3090215746183
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
          20.0502924003234
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          20.6543968099907
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          21.2557230782756
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
          21.8679474343538
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          22.4910140155625
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
          23.1248615622332
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
          23.7694236007645
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 34
dh =
                2.9588585
rdh_sum =
          24.4246280179808
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
          25.0903975567493
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
          25.7515547084719
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 37
dh =
                2.9129265
rdh_sum =
          26.3927758721279
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 38
dh =
                  2.84731
rdh_sum =
          27.0138140883892
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
            27.61445756337
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 40
dh =
                2.7160765
rdh_sum =
          28.1945300327773
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 41
dh =
                2.6504595
```

```
rdh_sum =
          28.7538913828656
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 42
dh =
                2.5848425
rdh_sum =
          29.2924377409659
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 43
dh =
                 2.519226
rdh_sum =
          29.8101018165339
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 44
dh =
                2.4536095
rdh_sum =
          30.3068527007931
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 53
dh =
                 1.726356
rdh_sum =
          30.5803388852305
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 54
dh =
                  1.71542
rdh_sum =
          30.8507227351328
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 55
dh =
                 1.704484
rdh_sum =
           31.118015412597
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 56
dh =
                 1.693548
rdh_sum =
          31.3822282299881
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 57
dh =
                 1.682612
rdh_sum =
          31.6433726493892
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 58
dh =
                 1.671676
rdh_sum =
          31.9014602820446
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          32.0381433381649
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 78
dh =
               -0.8961285
rdh_sum =
          32.1891822287673
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          32.3551611166718
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          32.5366393267311
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 81
dh =
                -1.033924
rdh_sum =
          32.7341500777839
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 82
dh =
               -1.0798555
```

```
rdh_sum =
          32.9481995668292
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 83
dh =
                -1.125787
rdh_sum =
          33.1792664765981
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 84
dh =
                -1.171719
rdh_sum =
           33.427801195059
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 85
dh =
                -1.217651
rdh_sum =
          33.6942246856425
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 86
dh =
               -1.2635825
rdh_sum =
          33.9789277642188
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 87
dh =
               -1.2947505
rdh_sum =
          34.2762420793373
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          34.5802573856015
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
          34.8910153308385
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          35.2085563266128
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          35.5329193360076
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          35.8641420749409
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          36.2022605870344
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          36.5473092315218
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
           36.899321097384
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          37.2583277866457
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 97
dh =
               -1.4576205
```

```
rdh_sum =
          37.6238567521757
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          37.9954283840029
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
          38.3730628325389
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          38.7567790803367
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          39.1465953710202
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          39.5425292090164
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          39.9445969223068
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          40.3515315102714
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          40.7620580300136
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
          41.1761812582354
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 107
dh =
                -1.577723
rdh_sum =
          41.5939057796221
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 108
dh =
                -1.585925
rdh_sum =
          42.0152359865975
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 109
dh =
                -1.594127
rdh_sum =
          42.4401760790894
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 110
dh =
                -1.602329
rdh_sum =
          42.8687300643054
ans =
Berm Factor Calculation: Iteration 15, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
           43.300901756519
ans =
!------- End Berm Factor Calculation, Iter: 15 ---------!
berm_width =
    82
```

```
rB =
         0.685970134910581
rdh_mean =
         0.528059777518524
gamma_berm =
         0.676263101914652
slope =
         0.192394910872511
Irb =
          3.15625747077243
gamma_berm =
         0.676263101914652
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                        0.6
gamma =
         0.405757861148791
ans =
!!! - - Iribaren number:   2.13 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          3.39839752819641
R2del =
          0.12816343637316
Z2 =
          12.8467575281964
top_sta =
          331.454294288654
ans =
!----------------- STARTING ITERATION 16 -----------------!
Ztoe =
                    5.75266
toe_sta =
          212.427117384844
top_sta =
          331.454294288654
Z2 =
          12.8467575281964
H0 =
                     2.4638
Tp =
                     12.522
T0 =
          11.3836363636364
R2 =
          3.39839752819641
Z2 =
          12.8467575281964
top_sta =
          331.454294288654
Lslope =
           119.02717690381
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 1
dh =
                   3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 2
dh =
                   3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 3
dh =
                  3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 4
dh =
                   3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 5
dh =
                  3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 6
dh =
                   3.531239
```

```
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 7
dh =
                3.4908595
rdh_sum =
     7
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 8
dh =
                 3.467545
rdh_sum =
     8
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 9
dh =
                3.4612955
rdh_sum =
     9
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 10
dh =
                3.4550465
rdh_sum =
    10
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 11
dh =
                3.4487975
rdh_sum =
    11
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 12
dh =
                 3.442548
rdh_sum =
    12
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 13
dh =
                3.4362985
rdh_sum =
    13
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 14
dh =
                3.4300495
rdh_sum =
    14
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 15
dh =
                3.4238005
rdh_sum =
    15
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 16
dh =
                3.4175515
rdh_sum =
    16
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 17
dh =
                 3.411302
rdh_sum =
    17
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
    18
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
          18.7756844068362
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
          19.5446218501661
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 21
dh =
                 3.329341
```

```
rdh_sum =
          20.3067425724237
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 22
dh =
                  3.3041035
rdh_sum =
          21.0619787137786
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 23
dh =
                  3.2788665
rdh_sum =
          21.8102643350816
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 24
dh =
                  3.2536295
rdh_sum =
          22.5515351607866
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 28
dh =
                  2.7927855
rdh_sum =
          23.1556395704539
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 29
dh =
                  2.7838805
rdh_sum =
          23.7569658387389
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 30
dh =
                   2.818876
rdh_sum =
           24.369190194817
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 31
dh =
                  2.8538715
rdh_sum =
          24.9922567760258
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 32
dh =
                   2.888867
rdh_sum =
          25.6261043226965
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 33
dh =
                   2.923863
rdh_sum =
          26.2706663612278
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 34
dh =
                  2.9588585
rdh_sum =
          26.9258707784441
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 35
dh =
                   2.993854
rdh_sum =
          27.5916403172126
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 36
dh =
                  2.9785435
rdh_sum =
          28.2527974689352
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 37
dh =
                  2.9129265
rdh_sum =
          28.8940186325912
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 38
dh =
                    2.84731
rdh_sum =
          29.5150568488525
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 39
dh =
                  2.7816935
```

```
rdh_sum =
          30.1157003238332
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 40
dh =
                  2.7160765
rdh_sum =
          30.6957727932406
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 41
dh =
                  2.6504595
rdh_sum =
          31.2551341433289
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 42
dh =
                  2.5848425
rdh_sum =
          31.7936805014291
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 43
dh =
                   2.519226
rdh_sum =
          32.3113445769972
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 44
dh =
                  2.4536095
rdh_sum =
          32.8080954612564
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 53
dh =
                   1.726356
rdh_sum =
          33.0815816456938
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 54
dh =
                    1.71542
rdh_sum =
          33.3519654955961
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 55
dh =
                   1.704484
rdh_sum =
          33.6192581730603
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 56
dh =
                   1.693548
rdh_sum =
          33.8834709904514
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 57
dh =
                   1.682612
rdh_sum =
          34.1446154098525
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 58
dh =
                   1.671676
rdh_sum =
          34.4027030425079
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          34.5493447944442
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 78
dh =
                 -0.8961285
rdh_sum =
          34.7113208850142
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          34.8892406463501
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 80
dh =
        -0.987991999999998
```

```
rdh_sum =
          35.0836848529731
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 81
dh =
                -1.033924
rdh_sum =
          35.2952043209965
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 82
dh =
               -1.0798555
rdh_sum =
          35.5243188912281
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 83
dh =
                -1.125787
rdh_sum =
          35.7715168699441
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 84
dh =
                -1.171719
rdh_sum =
          36.0372541698937
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 85
dh =
                -1.217651
rdh_sum =
          36.3219530893046
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 86
dh =
               -1.2635825
rdh_sum =
          36.6260015322498
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 87
dh =
               -1.2947505
rdh_sum =
          36.9433834174806
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          37.2678446259036
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
          37.5994253083059
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          37.9381641934623
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          38.2840983640865
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          38.6372634692222
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
           38.997693276268
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          39.3654196590953
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 95
dh =
                -1.425984
```

```
rdh_sum =
          39.7404730346135
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          40.1228821348569
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          40.5121458959946
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          40.9077566603188
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
          41.3097320651524
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          41.7180884452733
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          42.1328412834386
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          42.5540052099714
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          42.9815935448017
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          43.4142765425241
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          43.8507180215471
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
          44.2909216358146
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 107
dh =
                -1.577723
rdh_sum =
          44.7348908229877
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 108
dh =
                -1.585925
rdh_sum =
          45.1826288042466
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 109
dh =
                -1.594127
rdh_sum =
          45.6341385841056
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 110
dh =
                -1.602329
```

```
rdh_sum =
         46.0894229502404
ans =
Berm Factor Calculation: Iteration 16, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
          46.548484473328
ans =
!------- End Berm Factor Calculation, Iter: 16 ---------!
berm_width =
    82
rB =
         0.688918296921949
rdh_mean =
         0.567664444796683
gamma_berm =
         0.702156125610526
slope =
         0.191591639476746
Irb =
          3.14307972437341
gamma_berm =
         0.702156125610526
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                      0.6
gamma =
         0.421293675366316
ans =
!!! - - Iribaren number:   2.21 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          3.5265590830276
R2del =
         0.128161554831192
Z2 =
          12.9749190830276
top_sta =
          331.96584170413
ans =
!----------------- STARTING ITERATION 17 -----------------!
Ztoe =
                   5.75266
toe_sta =
          212.427117384844
top_sta =
          331.96584170413
Z2 =
          12.9749190830276
H0 =
                    2.4638
Tp =
                    12.522
T0 =
          11.3836363636364
R2 =
          3.5265590830276
Z2 =
          12.9749190830276
top_sta =
          331.96584170413
Lslope =
          119.538724319286
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 1
dh =
                  3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 2
dh =
                  3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 3
dh =
                 3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 4
dh =
                  3.611998
```

```
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 5
dh =
                3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 6
dh =
                 3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 7
dh =
                3.4908595
rdh_sum =
          6.80450037811965
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 8
dh =
                 3.467545
rdh_sum =
           7.6030724378835
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 9
dh =
                3.4612955
rdh_sum =
          8.40004413389283
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 10
dh =
                3.4550465
rdh_sum =
          9.19541088027912
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 11
dh =
                3.4487975
rdh_sum =
          9.98916798879852
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 12
dh =
                 3.442548
rdh_sum =
          10.7813106674058
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 13
dh =
                3.4362985
rdh_sum =
          11.5718342782893
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 14
dh =
                3.4300495
rdh_sum =
          12.3607343394292
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 15
dh =
                3.4238005
rdh_sum =
          13.1480062652248
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 16
dh =
                3.4175515
rdh_sum =
          13.9336454959183
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 17
dh =
                 3.411302
rdh_sum =
          14.7176473664869
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
          15.4987572395367
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 19
dh =
                3.3798155
```

```
rdh_sum =
          16.2744416463729
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
          17.0433790897028
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
          17.8054998119604
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
          18.5607359533153
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          19.3090215746183
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
          20.0502924003234
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          20.6543968099907
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          21.2557230782756
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
          21.8679474343538
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          22.4910140155625
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
          23.1248615622332
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
          23.7694236007645
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 34
dh =
                2.9588585
rdh_sum =
          24.4246280179808
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
          25.0903975567493
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
          25.7515547084719
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 37
dh =
                2.9129265
```

```
rdh_sum =
         26.3927758721279
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 38
dh =
                  2.84731
rdh_sum =
         27.0138140883892
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
          27.61445756337
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 40
dh =
                2.7160765
rdh_sum =
         28.1945300327773
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 41
dh =
                2.6504595
rdh_sum =
         28.7538913828656
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 42
dh =
                2.5848425
rdh_sum =
         29.2924377409659
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 43
dh =
                 2.519226
rdh_sum =
         29.8101018165339
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 44
dh =
                2.4536095
rdh_sum =
         30.3068527007931
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 53
dh =
                 1.726356
rdh_sum =
         30.5803388852305
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 54
dh =
                  1.71542
rdh_sum =
         30.8507227351328
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 55
dh =
                 1.704484
rdh_sum =
          31.118015412597
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 56
dh =
                 1.693548
rdh_sum =
         31.3822282299881
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 57
dh =
                 1.682612
rdh_sum =
         31.6433726493892
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 58
dh =
                 1.671676
rdh_sum =
         31.9014602820446
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 77
dh =
       -0.850196999999998
rdh_sum =
         32.0381434769756
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 78
dh =
               -0.8961285
```

```
rdh_sum =
          32.1891825200955
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          32.3551615745921
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          32.5366399656361
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 81
dh =
                 -1.033924
rdh_sum =
          32.7341509123319
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 82
dh =
                -1.0798555
rdh_sum =
          32.9482006118914
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 83
dh =
                 -1.125787
rdh_sum =
          33.1792677472038
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 84
dh =
                 -1.171719
rdh_sum =
          33.4278027063405
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 85
dh =
                 -1.217651
rdh_sum =
          33.6942264527782
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 86
dh =
                -1.2635825
rdh_sum =
          33.9789298023761
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 87
dh =
                -1.2947505
rdh_sum =
          34.2762443987724
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 88
dh =
                 -1.311155
rdh_sum =
          34.5802599916936
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 89
dh =
                 -1.327559
rdh_sum =
          34.8910182289499
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 90
dh =
                 -1.343963
rdh_sum =
           35.208559522087
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 91
dh =
                 -1.360367
rdh_sum =
          35.5329228341657
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 92
dh =
                -1.3767715
rdh_sum =
          35.8641458810798
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 93
dh =
                 -1.393176
```

```
rdh_sum =
          36.2022647064235
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 94
dh =
                -1.40958
rdh_sum =
          36.5473136694005
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          36.8993258589591
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          37.2583328770883
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          37.6238621762538
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          37.9954341460865
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
          38.3730689369667
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
           38.756785531414
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          39.1466021730173
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          39.5425363661673
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          39.9446044388069
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
           40.351539389414
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          40.7620662742087
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
          41.1761898698785
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 107
dh =
                -1.577723
rdh_sum =
          41.5939147610942
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 108
dh =
                -1.585925
```

```
rdh_sum =
          42.0152453402643
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 109
dh =
                -1.594127
rdh_sum =
          42.4401858073014
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 110
dh =
                -1.602329
rdh_sum =
          42.8687401693972
ans =
Berm Factor Calculation: Iteration 17, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
          43.3009122408093
ans =
!------- End Berm Factor Calculation, Iter: 17 ---------!
berm_width =
    82
rB =
          0.685970178006747
rdh_mean =
          0.528059905375723
gamma_berm =
          0.676263169282064
slope =
          0.192394899240544
Irb =
           3.15625727994887
gamma_berm =
          0.676263169282064
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                        0.6
gamma =
          0.405757901569238
ans =
!!! - - Iribaren number:   2.13 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          3.39839783951841
R2del =
          0.128161243509191
Z2 =
           12.8467578395184
top_sta =
          331.454295531272
ans =
!----------------- STARTING ITERATION 18 -----------------!
Ztoe =
                    5.75266
toe_sta =
          212.427117384844
top_sta =
          331.454295531272
Z2 =
          12.8467578395184
H0 =
                     2.4638
Tp =
                     12.522
T0 =
          11.3836363636364
R2 =
          3.39839783951841
Z2 =
          12.8467578395184
top_sta =
          331.454295531272
Lslope =
          119.027178146428
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 1
dh =
                  3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 2
dh =
                  3.692757
```

```
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 3
dh =
                3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 4
dh =
                 3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 5
dh =
                3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 6
dh =
                 3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 7
dh =
                3.4908595
rdh_sum =
     7
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 8
dh =
                 3.467545
rdh_sum =
     8
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 9
dh =
                3.4612955
rdh_sum =
     9
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 10
dh =
                3.4550465
rdh_sum =
    10
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 11
dh =
                3.4487975
rdh_sum =
    11
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 12
dh =
                 3.442548
rdh_sum =
    12
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 13
dh =
                3.4362985
rdh_sum =
    13
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 14
dh =
                3.4300495
rdh_sum =
    14
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 15
dh =
                3.4238005
rdh_sum =
    15
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 16
dh =
                3.4175515
rdh_sum =
    16
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 17
dh =
                 3.411302
```

```
rdh_sum =
    17
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
    18
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
          18.7756844068362
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
          19.5446218501661
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
          20.3067425724237
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
          21.0619787137786
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          21.8102643350816
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
          22.5515351607866
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          23.1556395704539
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          23.7569658387389
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
           24.369190194817
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          24.9922567760258
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
          25.6261043226965
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
          26.2706663612278
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 34
dh =
                2.9588585
rdh_sum =
          26.9258707784441
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 35
dh =
                 2.993854
```

```
rdh_sum =
          27.5916403172126
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
          28.2527974689352
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 37
dh =
                2.9129265
rdh_sum =
          28.8940186325912
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 38
dh =
                 2.84731
rdh_sum =
          29.5150568488525
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
          30.1157003238332
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 40
dh =
                2.7160765
rdh_sum =
          30.6957727932406
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 41
dh =
                2.6504595
rdh_sum =
          31.2551341433289
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 42
dh =
                2.5848425
rdh_sum =
          31.7936805014291
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 43
dh =
                 2.519226
rdh_sum =
          32.3113445769972
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 44
dh =
                2.4536095
rdh_sum =
          32.8080954612564
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 53
dh =
                 1.726356
rdh_sum =
          33.0815816456938
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 54
dh =
                  1.71542
rdh_sum =
          33.3519654955961
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 55
dh =
                 1.704484
rdh_sum =
          33.6192581730603
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 56
dh =
                 1.693548
rdh_sum =
          33.8834709904514
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 57
dh =
                 1.682612
rdh_sum =
          34.1446154098525
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 58
dh =
                 1.671676
```

```
rdh_sum =
          34.4027030425079
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          34.5493447689744
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 78
dh =
                -0.8961285
rdh_sum =
          34.7113208315845
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          34.8892405624094
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          35.0836847359185
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 81
dh =
                 -1.033924
rdh_sum =
          35.2952041681841
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 82
dh =
                -1.0798555
rdh_sum =
          35.5243186999833
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 83
dh =
                 -1.125787
rdh_sum =
           35.771516637572
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 84
dh =
                 -1.171719
rdh_sum =
          36.0372538936901
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 85
dh =
                 -1.217651
rdh_sum =
          36.3219527665669
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 86
dh =
                -1.2635825
rdh_sum =
          36.6260011602883
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 87
dh =
                -1.2947505
rdh_sum =
          36.9433829944831
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 88
dh =
                 -1.311155
rdh_sum =
          37.2678441509218
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 89
dh =
                 -1.327559
rdh_sum =
          37.5994247803964
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 90
dh =
                 -1.343963
rdh_sum =
          37.9381636116864
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 91
dh =
                 -1.360367
```

```
rdh_sum =
          38.2840977275114
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          38.6372627769211
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          38.9976925273206
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          39.3654188525886
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
           39.740472169642
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          40.1228812105236
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          40.5121449114741
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          40.9077556148562
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
             41.309730958
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          41.7180872756907
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
           42.132840050693
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          42.5540039133383
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          42.9815921835648
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          43.4142751161224
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          43.8507165295708
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 106
dh =
                -1.569521
```

```
rdh_sum =
          44.2909200778573
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 107
dh =
                -1.577723
rdh_sum =
          44.7348891986457
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 108
dh =
                -1.585925
rdh_sum =
          45.1826271131197
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 109
dh =
                -1.594127
rdh_sum =
          45.6341368257969
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 110
dh =
                -1.602329
rdh_sum =
          46.0894211243563
ans =
Berm Factor Calculation: Iteration 18, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
          46.5484825794782
ans =
!------- End Berm Factor Calculation, Iter: 18 ---------!
berm_width =
    82
rB =
         0.688918289729786
rdh_mean =
         0.567664421700954
gamma_berm =
         0.702156112808884
slope =
         0.191591641454932
Irb =
          3.14307975682573
gamma_berm =
         0.702156112808884
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                      0.6
gamma =
         0.42129366768533
ans =
!!! - - Iribaren number:   2.21 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          3.52655902356779
R2del =
         0.128161184049384
Z2 =
          12.9749190235678
top_sta =
            331.9658414668
ans =
!----------------- STARTING ITERATION 19 -----------------!
Ztoe =
                  5.75266
toe_sta =
          212.427117384844
top_sta =
            331.9658414668
Z2 =
          12.9749190235678
H0 =
                   2.4638
Tp =
                   12.522
T0 =
          11.3836363636364
R2 =
          3.52655902356779
Z2 =
          12.9749190235678
top_sta =
            331.9658414668
```

```
Lslope =
          119.538724081956
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 1
dh =
                   3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 2
dh =
                   3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 3
dh =
                  3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 4
dh =
                   3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 5
dh =
                  3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 6
dh =
                   3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 7
dh =
                  3.4908595
rdh_sum =
          6.80450037811965
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 8
dh =
                   3.467545
rdh_sum =
           7.6030724378835
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 9
dh =
                  3.4612955
rdh_sum =
          8.40004413389283
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 10
dh =
                  3.4550465
rdh_sum =
          9.19541088027912
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 11
dh =
                  3.4487975
rdh_sum =
          9.98916798879852
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 12
dh =
                   3.442548
rdh_sum =
          10.7813106674058
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 13
dh =
                  3.4362985
rdh_sum =
          11.5718342782893
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 14
dh =
                  3.4300495
rdh_sum =
          12.3607343394292
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 15
dh =
                  3.4238005
```

```
rdh_sum =
          13.1480062652248
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 16
dh =
                3.4175515
rdh_sum =
          13.9336454959183
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 17
dh =
                 3.411302
rdh_sum =
          14.7176473664869
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
          15.4987572395367
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
          16.2744416463729
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
          17.0433790897028
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
          17.8054998119604
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
          18.5607359533153
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          19.3090215746183
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
          20.0502924003234
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          20.6543968099907
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          21.2557230782756
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
          21.8679474343538
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          22.4910140155625
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
          23.1248615622332
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 33
dh =
                 2.923863
```

```
rdh_sum =
          23.7694236007645
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 34
dh =
                2.9588585
rdh_sum =
          24.4246280179808
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
          25.0903975567493
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
          25.7515547084719
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 37
dh =
                2.9129265
rdh_sum =
          26.3927758721279
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 38
dh =
                  2.84731
rdh_sum =
          27.0138140883892
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
           27.61445756337
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 40
dh =
                2.7160765
rdh_sum =
          28.1945300327773
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 41
dh =
                2.6504595
rdh_sum =
          28.7538913828656
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 42
dh =
                2.5848425
rdh_sum =
          29.2924377409659
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 43
dh =
                 2.519226
rdh_sum =
          29.8101018165339
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 44
dh =
                2.4536095
rdh_sum =
          30.3068527007931
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 53
dh =
                 1.726356
rdh_sum =
          30.5803388852305
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 54
dh =
                  1.71542
rdh_sum =
          30.8507227351328
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 55
dh =
                 1.704484
rdh_sum =
           31.118015412597
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 56
dh =
                 1.693548
```

```
rdh_sum =
          31.3822282299881
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 57
dh =
                 1.682612
rdh_sum =
          31.6433726493892
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 58
dh =
                 1.671676
rdh_sum =
          31.9014602820446
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          32.0381434813623
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 78
dh =
                -0.8961285
rdh_sum =
          32.1891825293019
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          32.3551615890632
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          32.5366399858265
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 81
dh =
                -1.033924
rdh_sum =
           32.734150938705
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 82
dh =
                -1.0798555
rdh_sum =
          32.9482006449171
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 83
dh =
                 -1.125787
rdh_sum =
           33.179267787357
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 84
dh =
                 -1.171719
rdh_sum =
          33.4278027540995
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 85
dh =
                 -1.217651
rdh_sum =
          33.6942265086227
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 86
dh =
                -1.2635825
rdh_sum =
          33.9789298667852
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 87
dh =
                -1.2947505
rdh_sum =
          34.2762444720704
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 88
dh =
                 -1.311155
rdh_sum =
          34.5802600740504
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 89
dh =
                 -1.327559
```

```
rdh_sum =
          34.8910183205351
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          35.2085596230692
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          35.5329229447133
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          35.8641460013601
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
           36.202264836603
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          36.5473138096449
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          36.8993260094327
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          37.2583330379548
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          37.6238623476636
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          37.9954343281779
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
          38.3730691298768
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          38.7567857352788
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          39.1466023879717
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          39.5425365923452
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          39.9446046763408
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 104
dh =
                -1.553117
```

```
rdh_sum =
          40.351539638408
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          40.7620665347389
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
          41.1761901420208
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 107
dh =
                -1.577723
rdh_sum =
          41.5939150449236
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 108
dh =
                -1.585925
rdh_sum =
          42.0152456358557
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 109
dh =
                -1.594127
rdh_sum =
          42.440186114729
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 110
dh =
                -1.602329
rdh_sum =
          42.8687404887349
ans =
Berm Factor Calculation: Iteration 19, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
          43.3009125721303
ans =
!------- End Berm Factor Calculation, Iter: 19 ---------!
berm_width =
    82
rB =
          0.685970179368656
rdh_mean =
          0.528059909416223
gamma_berm =
          0.676263171410987
slope =
          0.192394898872956
Irb =
           3.15625727391853
gamma_berm =
          0.676263171410987
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                        0.6
gamma =
          0.405757902846592
ans =
!!! - - Iribaren number:   2.13 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
           3.3983978493567
R2del =
          0.128161174211089
Z2 =
           12.8467578493567
top_sta =
          331.454295570541
ans =
!----------------- STARTING ITERATION 20 -----------------!
Ztoe =
                  5.75266
toe_sta =
          212.427117384844
top_sta =
          331.454295570541
Z2 =
          12.8467578493567
```

```
H0 =
                    2.4638
Tp =
                    12.522
T0 =
          11.3836363636364
R2 =
           3.3983978493567
Z2 =
          12.8467578493567
top_sta =
          331.454295570541
Lslope =
          119.027178185697
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 1
dh =
                   3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 2
dh =
                   3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 3
dh =
                  3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 4
dh =
                   3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 5
dh =
                  3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 6
dh =
                   3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 7
dh =
                  3.4908595
rdh_sum =
     7
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 8
dh =
                   3.467545
rdh_sum =
     8
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 9
dh =
                  3.4612955
rdh_sum =
     9
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 10
dh =
                  3.4550465
rdh_sum =
    10
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 11
dh =
                  3.4487975
rdh_sum =
    11
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 12
dh =
                   3.442548
rdh_sum =
    12
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 13
dh =
                  3.4362985
```

```
rdh_sum =
    13
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 14
dh =
                3.4300495
rdh_sum =
    14
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 15
dh =
                3.4238005
rdh_sum =
    15
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 16
dh =
                3.4175515
rdh_sum =
    16
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 17
dh =
                 3.411302
rdh_sum =
    17
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
    18
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
          18.7756844068362
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
          19.5446218501661
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
          20.3067425724237
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
          21.0619787137786
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          21.8102643350816
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
          22.5515351607866
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          23.1556395704539
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          23.7569658387389
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
           24.369190194817
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 31
dh =
                2.8538715
```

```
rdh_sum =
          24.9922567760258
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 32
dh =
                  2.888867
rdh_sum =
          25.6261043226965
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 33
dh =
                  2.923863
rdh_sum =
          26.2706663612278
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 34
dh =
                 2.9588585
rdh_sum =
          26.9258707784441
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 35
dh =
                  2.993854
rdh_sum =
          27.5916403172126
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 36
dh =
                 2.9785435
rdh_sum =
          28.2527974689352
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 37
dh =
                 2.9129265
rdh_sum =
          28.8940186325912
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 38
dh =
                   2.84731
rdh_sum =
          29.5150568488525
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 39
dh =
                 2.7816935
rdh_sum =
          30.1157003238332
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 40
dh =
                 2.7160765
rdh_sum =
          30.6957727932406
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 41
dh =
                 2.6504595
rdh_sum =
          31.2551341433289
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 42
dh =
                 2.5848425
rdh_sum =
          31.7936805014291
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 43
dh =
                  2.519226
rdh_sum =
          32.3113445769972
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 44
dh =
                 2.4536095
rdh_sum =
          32.8080954612564
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 53
dh =
                  1.726356
rdh_sum =
          33.0815816456938
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 54
dh =
                   1.71542
```

```
rdh_sum =
          33.3519654955961
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 55
dh =
                  1.704484
rdh_sum =
          33.6192581730603
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 56
dh =
                  1.693548
rdh_sum =
          33.8834709904514
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 57
dh =
                  1.682612
rdh_sum =
          34.1446154098525
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 58
dh =
                  1.671676
rdh_sum =
          34.4027030425079
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          34.5493447681695
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 78
dh =
                -0.8961285
rdh_sum =
          34.7113208298961
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          34.8892405597567
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          35.0836847322194
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 81
dh =
                 -1.033924
rdh_sum =
           35.295204163355
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 82
dh =
                -1.0798555
rdh_sum =
          35.5243186939396
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 83
dh =
                 -1.125787
rdh_sum =
          35.7715166302287
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 84
dh =
                 -1.171719
rdh_sum =
          36.0372538849616
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 85
dh =
                 -1.217651
rdh_sum =
          36.3219527563679
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 86
dh =
                -1.2635825
rdh_sum =
          36.6260011485337
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 87
dh =
                -1.2947505
```

```
rdh_sum =
          36.9433829811157
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          37.2678441359116
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
          37.5994247637136
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          37.9381635933013
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          38.2840977073946
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          38.6372627550432
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          38.9976925036526
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          39.3654188271016
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          39.7404721423075
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          40.1228811813132
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          40.5121448803617
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          40.9077555818178
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
          41.3097309230122
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          41.7180872387299
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          42.1328400117362
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 102
dh =
               -1.5279245
```

```
rdh_sum =
          42.5540038723626
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          42.9815921405475
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          43.4142750710457
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          43.8507164824219
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
          44.2909200286232
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 107
dh =
                -1.577723
rdh_sum =
          44.7348891473138
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 108
dh =
                -1.585925
rdh_sum =
          45.1826270596773
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 109
dh =
                -1.594127
rdh_sum =
          45.6341367702314
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 110
dh =
                -1.602329
rdh_sum =
          46.0894210666553
ans =
Berm Factor Calculation: Iteration 20, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
          46.5484825196294
ans =
!------- End Berm Factor Calculation, Iter: 20 ---------!
berm_width =
    82
rB =
         0.688918289502501
rdh_mean =
         0.567664420971091
gamma_berm =
          0.70215611240433
slope =
         0.191591641517446
Irb =
          3.14307975785128
gamma_berm =
          0.70215611240433
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.6
gamma =
         0.421293667442598
ans =
!!! - - Iribaren number:   2.21 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          3.52655902168876
R2del =
          0.12816117233206
Z2 =
          12.9749190216888
```

```
top_sta =
          331.9658414593
ans =
!----------------- STARTING ITERATION 21 -----------------!
Ztoe =
           5.75266
toe_sta =
         212.427117384844
top_sta =
          331.9658414593
Z2 =
         12.9749190216888
H0 =
           2.4638
Tp =
           12.522
T0 =
         11.3836363636364
R2 =
         3.52655902168876
Z2 =
         12.9749190216888
top_sta =
          331.9658414593
Lslope =
         119.538724074456
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 1
dh =
           3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 2
dh =
           3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 3
dh =
          3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 4
dh =
           3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 5
dh =
          3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 6
dh =
           3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 7
dh =
          3.4908595
rdh_sum =
         6.80450037811965
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 8
dh =
           3.467545
rdh_sum =
          7.6030724378835
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 9
dh =
          3.4612955
rdh_sum =
         8.40004413389283
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 10
dh =
          3.4550465
rdh_sum =
         9.19541088027912
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 11
dh =
          3.4487975
```

```
rdh_sum =
          9.98916798879852
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 12
dh =
                  3.442548
rdh_sum =
          10.7813106674058
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 13
dh =
                 3.4362985
rdh_sum =
          11.5718342782893
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 14
dh =
                 3.4300495
rdh_sum =
          12.3607343394292
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 15
dh =
                 3.4238005
rdh_sum =
          13.1480062652248
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 16
dh =
                 3.4175515
rdh_sum =
          13.9336454959183
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 17
dh =
                  3.411302
rdh_sum =
          14.7176473664869
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 18
dh =
                 3.4003055
rdh_sum =
          15.4987572395367
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 19
dh =
                 3.3798155
rdh_sum =
          16.2744416463729
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 20
dh =
                 3.3545785
rdh_sum =
          17.0433790897028
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 21
dh =
                  3.329341
rdh_sum =
          17.8054998119604
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 22
dh =
                 3.3041035
rdh_sum =
          18.5607359533153
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 23
dh =
                 3.2788665
rdh_sum =
          19.3090215746183
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 24
dh =
                 3.2536295
rdh_sum =
          20.0502924003234
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 28
dh =
                 2.7927855
rdh_sum =
          20.6543968099907
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 29
dh =
                 2.7838805
```

```
rdh_sum =
          21.2557230782756
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
          21.8679474343538
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          22.4910140155625
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
          23.1248615622332
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
          23.7694236007645
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 34
dh =
                2.9588585
rdh_sum =
          24.4246280179808
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
          25.0903975567493
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
          25.7515547084719
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 37
dh =
                2.9129265
rdh_sum =
          26.3927758721279
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 38
dh =
                  2.84731
rdh_sum =
          27.0138140883892
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
            27.61445756337
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 40
dh =
                2.7160765
rdh_sum =
          28.1945300327773
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 41
dh =
                2.6504595
rdh_sum =
          28.7538913828656
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 42
dh =
                2.5848425
rdh_sum =
          29.2924377409659
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 43
dh =
                 2.519226
rdh_sum =
          29.8101018165339
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 44
dh =
                2.4536095
```

```
rdh_sum =
          30.3068527007931
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 53
dh =
                  1.726356
rdh_sum =
          30.5803388852305
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 54
dh =
                   1.71542
rdh_sum =
          30.8507227351328
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 55
dh =
                  1.704484
rdh_sum =
           31.118015412597
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 56
dh =
                  1.693548
rdh_sum =
          31.3822282299881
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 57
dh =
                  1.682612
rdh_sum =
          31.6433726493892
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 58
dh =
                  1.671676
rdh_sum =
          31.9014602820446
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          32.0381434815009
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 78
dh =
                -0.8961285
rdh_sum =
          32.1891825295928
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          32.3551615895205
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          32.5366399864646
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 81
dh =
                 -1.033924
rdh_sum =
          32.7341509395385
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 82
dh =
                -1.0798555
rdh_sum =
          32.9482006459608
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 83
dh =
                 -1.125787
rdh_sum =
          33.1792677886259
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 84
dh =
                 -1.171719
rdh_sum =
          33.4278027556087
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 85
dh =
                 -1.217651
```

```
rdh_sum =
          33.6942265103874
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 86
dh =
                -1.2635825
rdh_sum =
          33.9789298688207
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 87
dh =
                -1.2947505
rdh_sum =
          34.2762444743867
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 88
dh =
                 -1.311155
rdh_sum =
           34.580260076653
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 89
dh =
                 -1.327559
rdh_sum =
          34.8910183234293
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 90
dh =
                 -1.343963
rdh_sum =
          35.2085596262605
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 91
dh =
                 -1.360367
rdh_sum =
          35.5329229482068
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 92
dh =
                -1.3767715
rdh_sum =
          35.8641460051611
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 93
dh =
                 -1.393176
rdh_sum =
          36.2022648407169
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 94
dh =
                  -1.40958
rdh_sum =
          36.5473138140768
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 95
dh =
                 -1.425984
rdh_sum =
          36.8993260141879
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 96
dh =
                 -1.442388
rdh_sum =
          37.2583330430384
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 97
dh =
                -1.4576205
rdh_sum =
          37.6238623530805
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 98
dh =
                -1.4716815
rdh_sum =
          37.9954343339323
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 99
dh =
                -1.4857425
rdh_sum =
           38.373069135973
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 100
dh =
                 -1.499803
```

```
rdh_sum =
          38.7567857417212
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          39.1466023947647
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          39.5425365994927
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          39.9446046838473
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          40.3515396462766
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          40.7620665429721
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
          41.1761901506209
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 107
dh =
                -1.577723
rdh_sum =
          41.5939150538931
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 108
dh =
                -1.585925
rdh_sum =
          42.0152456451969
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 109
dh =
                -1.594127
rdh_sum =
          42.4401861244442
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 110
dh =
                -1.602329
rdh_sum =
          42.8687404988265
ans =
Berm Factor Calculation: Iteration 21, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
          43.3009125826006
ans =
!------- End Berm Factor Calculation, Iter: 21 ---------!
berm_width =
    82
rB =
         0.685970179411695
rdh_mean =
         0.528059909543909
gamma_berm =
         0.676263171478264
slope =
         0.192394898861339
Irb =
          3.15625727372796
gamma_berm =
         0.676263171478264
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.6
```

```
gamma =
         0.405757902886958
ans =
!!! - - Iribaren number:   2.13 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          3.39839784966761
R2del =
         0.128161172021153
Z2 =
          12.8467578496676
top_sta =
          331.454295571782
ans =
!----------------- STARTING ITERATION 22 -----------------!
Ztoe =
                    5.75266
toe_sta =
          212.427117384844
top_sta =
          331.454295571782
Z2 =
          12.8467578496676
H0 =
                    2.4638
Tp =
                     12.522
T0 =
          11.3836363636364
R2 =
          3.39839784966761
Z2 =
          12.8467578496676
top_sta =
          331.454295571782
Lslope =
          119.027178186938
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 1
dh =
                   3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 2
dh =
                   3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 3
dh =
                  3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 4
dh =
                   3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 5
dh =
                  3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 6
dh =
                   3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 7
dh =
                  3.4908595
rdh_sum =
     7
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 8
dh =
                   3.467545
rdh_sum =
     8
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 9
dh =
                  3.4612955
```

```
rdh_sum =
     9
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 10
dh =
                3.4550465
rdh_sum =
    10
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 11
dh =
                3.4487975
rdh_sum =
    11
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 12
dh =
                 3.442548
rdh_sum =
    12
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 13
dh =
                3.4362985
rdh_sum =
    13
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 14
dh =
                3.4300495
rdh_sum =
    14
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 15
dh =
                3.4238005
rdh_sum =
    15
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 16
dh =
                3.4175515
rdh_sum =
    16
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 17
dh =
                 3.411302
rdh_sum =
    17
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
    18
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
          18.7756844068362
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
          19.5446218501661
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
          20.3067425724237
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
          21.0619787137786
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          21.8102643350816
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 24
dh =
                3.2536295
```

```
rdh_sum =
          22.5515351607866
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          23.1556395704539
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          23.7569658387389
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
           24.369190194817
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          24.9922567760258
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
          25.6261043226965
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
          26.2706663612278
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 34
dh =
                2.9588585
rdh_sum =
          26.9258707784441
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
          27.5916403172126
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
          28.2527974689352
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 37
dh =
                2.9129265
rdh_sum =
          28.8940186325912
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 38
dh =
                  2.84731
rdh_sum =
          29.5150568488525
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
          30.1157003238332
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 40
dh =
                2.7160765
rdh_sum =
          30.6957727932406
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 41
dh =
                2.6504595
rdh_sum =
          31.2551341433289
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 42
dh =
                2.5848425
```

```
rdh_sum =
          31.7936805014291
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 43
dh =
                 2.519226
rdh_sum =
          32.3113445769972
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 44
dh =
                2.4536095
rdh_sum =
          32.8080954612564
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 53
dh =
                 1.726356
rdh_sum =
          33.0815816456938
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 54
dh =
                  1.71542
rdh_sum =
          33.3519654955961
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 55
dh =
                 1.704484
rdh_sum =
          33.6192581730603
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 56
dh =
                 1.693548
rdh_sum =
          33.8834709904514
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 57
dh =
                 1.682612
rdh_sum =
          34.1446154098525
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 58
dh =
                 1.671676
rdh_sum =
          34.4027030425079
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          34.5493447681441
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 78
dh =
               -0.8961285
rdh_sum =
          34.7113208298427
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          34.8892405596729
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          35.0836847321025
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 81
dh =
                -1.033924
rdh_sum =
          35.2952041632024
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 82
dh =
               -1.0798555
rdh_sum =
          35.5243186937486
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 83
dh =
                -1.125787
```

```
rdh_sum =
          35.7715166299966
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 84
dh =
                -1.171719
rdh_sum =
          36.0372538846858
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 85
dh =
                -1.217651
rdh_sum =
          36.3219527560456
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 86
dh =
               -1.2635825
rdh_sum =
          36.6260011481622
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 87
dh =
               -1.2947505
rdh_sum =
          36.9433829806932
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          37.2678441354373
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
          37.5994247631863
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          37.9381635927203
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          38.2840977067588
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          38.6372627543518
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          38.9976925029046
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          39.3654188262962
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          39.7404721414437
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          40.1228811803901
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          40.5121448793785
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 98
dh =
               -1.4716815
```

```
rdh_sum =
          40.9077555807738
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 99
dh =
                -1.4857425
rdh_sum =
          41.3097309219065
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 100
dh =
                 -1.499803
rdh_sum =
          41.7180872375619
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 101
dh =
                -1.5138635
rdh_sum =
          42.1328400105051
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 102
dh =
                -1.5279245
rdh_sum =
          42.5540038710676
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 103
dh =
                -1.5419855
rdh_sum =
           42.981592139188
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 104
dh =
                 -1.553117
rdh_sum =
          43.4142750696212
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 105
dh =
                 -1.561319
rdh_sum =
          43.8507164809319
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 106
dh =
                 -1.569521
rdh_sum =
          44.2909200270673
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 107
dh =
                 -1.577723
rdh_sum =
          44.7348891456916
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 108
dh =
                 -1.585925
rdh_sum =
          45.1826270579884
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 109
dh =
                 -1.594127
rdh_sum =
          45.6341367684754
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 110
dh =
                 -1.602329
rdh_sum =
          46.0894210648318
ans =
Berm Factor Calculation: Iteration 22, Profile Segment: 111
dh =
                 -1.610531
rdh_sum =
          46.5484825177381
ans =
!------- End Berm Factor Calculation, Iter: 22 ---------!
berm_width =
    82
rB =
         0.688918289495319
rdh_mean =
         0.567664420948026
gamma_berm =
         0.702156112391546
```

```
slope =
         0.191591641519421
Irb =
          3.14307975788369
gamma_berm =
         0.702156112391546
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.6
gamma =
         0.421293667434928
ans =
!!! - - Iribaren number:   2.21 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          3.52655902162938
R2del =
         0.128161171961773
Z2 =
          12.9749190216294
top_sta =
          331.965841459063
ans =
!----------------- STARTING ITERATION 23 -----------------!
Ztoe =
                   5.75266
toe_sta =
          212.427117384844
top_sta =
          331.965841459063
Z2 =
          12.9749190216294
H0 =
                    2.4638
Tp =
                    12.522
T0 =
          11.3836363636364
R2 =
          3.52655902162938
Z2 =
          12.9749190216294
top_sta =
          331.965841459063
Lslope =
          119.538724074219
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 1
dh =
                  3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 2
dh =
                  3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 3
dh =
                 3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 4
dh =
                  3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 5
dh =
                 3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 6
dh =
                  3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 7
dh =
                 3.4908595
```

```
rdh_sum =
          6.80450037811965
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 8
dh =
                   3.467545
rdh_sum =
           7.6030724378835
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 9
dh =
                  3.4612955
rdh_sum =
          8.40004413389283
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 10
dh =
                  3.4550465
rdh_sum =
          9.19541088027912
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 11
dh =
                  3.4487975
rdh_sum =
          9.98916798879852
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 12
dh =
                   3.442548
rdh_sum =
          10.7813106674058
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 13
dh =
                  3.4362985
rdh_sum =
          11.5718342782893
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 14
dh =
                  3.4300495
rdh_sum =
          12.3607343394292
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 15
dh =
                  3.4238005
rdh_sum =
          13.1480062652248
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 16
dh =
                  3.4175515
rdh_sum =
          13.9336454959183
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 17
dh =
                   3.411302
rdh_sum =
          14.7176473664869
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 18
dh =
                  3.4003055
rdh_sum =
          15.4987572395367
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 19
dh =
                  3.3798155
rdh_sum =
          16.2744416463729
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 20
dh =
                  3.3545785
rdh_sum =
          17.0433790897028
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 21
dh =
                   3.329341
rdh_sum =
          17.8054998119604
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 22
dh =
                  3.3041035
```

```
rdh_sum =
          18.5607359533153
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          19.3090215746183
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
          20.0502924003234
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          20.6543968099907
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          21.2557230782756
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
          21.8679474343538
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          22.4910140155625
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
          23.1248615622332
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
          23.7694236007645
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 34
dh =
                2.9588585
rdh_sum =
          24.4246280179808
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
          25.0903975567493
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
          25.7515547084719
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 37
dh =
                2.9129265
rdh_sum =
          26.3927758721279
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 38
dh =
                  2.84731
rdh_sum =
          27.0138140883892
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
            27.61445756337
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 40
dh =
                2.7160765
```

```
rdh_sum =
          28.1945300327773
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 41
dh =
                  2.6504595
rdh_sum =
          28.7538913828656
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 42
dh =
                  2.5848425
rdh_sum =
          29.2924377409659
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 43
dh =
                   2.519226
rdh_sum =
          29.8101018165339
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 44
dh =
                  2.4536095
rdh_sum =
          30.3068527007931
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 53
dh =
                   1.726356
rdh_sum =
          30.5803388852305
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 54
dh =
                    1.71542
rdh_sum =
          30.8507227351328
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 55
dh =
                   1.704484
rdh_sum =
           31.118015412597
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 56
dh =
                   1.693548
rdh_sum =
          31.3822282299881
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 57
dh =
                   1.682612
rdh_sum =
          31.6433726493892
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 58
dh =
                   1.671676
rdh_sum =
          31.9014602820446
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          32.0381434815053
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 78
dh =
                 -0.8961285
rdh_sum =
           32.189182529602
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          32.3551615895349
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          32.5366399864847
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 81
dh =
                  -1.033924
```

```
rdh_sum =
          32.7341509395648
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 82
dh =
               -1.0798555
rdh_sum =
          32.9482006459938
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 83
dh =
                -1.125787
rdh_sum =
           33.179267788666
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 84
dh =
                -1.171719
rdh_sum =
          33.4278027556564
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 85
dh =
                -1.217651
rdh_sum =
          33.6942265104432
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 86
dh =
               -1.2635825
rdh_sum =
           33.978929868885
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 87
dh =
               -1.2947505
rdh_sum =
          34.2762444744599
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          34.5802600767353
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
          34.8910183235208
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
          35.2085596263613
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          35.5329229483172
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          35.8641460052812
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          36.2022648408469
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          36.5473138142169
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          36.8993260143382
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 96
dh =
                -1.442388
```

```
rdh_sum =
          37.2583330431991
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 97
dh =
                -1.4576205
rdh_sum =
          37.6238623532517
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 98
dh =
                -1.4716815
rdh_sum =
          37.9954343341142
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 99
dh =
                -1.4857425
rdh_sum =
          38.3730691361657
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 100
dh =
                 -1.499803
rdh_sum =
          38.7567857419248
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 101
dh =
                -1.5138635
rdh_sum =
          39.1466023949793
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 102
dh =
                -1.5279245
rdh_sum =
          39.5425365997186
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 103
dh =
                -1.5419855
rdh_sum =
          39.9446046840845
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 104
dh =
                 -1.553117
rdh_sum =
          40.3515396465253
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 105
dh =
                 -1.561319
rdh_sum =
          40.7620665432323
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 106
dh =
                 -1.569521
rdh_sum =
          41.1761901508927
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 107
dh =
                 -1.577723
rdh_sum =
          41.5939150541765
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 108
dh =
                 -1.585925
rdh_sum =
          42.0152456454921
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 109
dh =
                 -1.594127
rdh_sum =
          42.4401861247513
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 110
dh =
                 -1.602329
rdh_sum =
          42.8687404991455
ans =
Berm Factor Calculation: Iteration 23, Profile Segment: 111
dh =
                 -1.610531
```

```
rdh_sum =
          43.3009125829315
ans =
!------- End Berm Factor Calculation, Iter: 23 ---------!
berm_width =
    82
rB =
         0.685970179413055
rdh_mean =
         0.528059909547945
gamma_berm =
          0.67626317148039
slope =
         0.192394898860972
Irb =
          3.15625727372194
gamma_berm =
          0.67626317148039
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.6
gamma =
         0.405757902888234
ans =
!!! - - Iribaren number:   2.13 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          3.39839784967743
R2del =
         0.128161171951948
Z2 =
          12.8467578496774
top_sta =
          331.454295571821
ans =
!----------------- STARTING ITERATION 24 -----------------!
Ztoe =
                   5.75266
toe_sta =
          212.427117384844
top_sta =
          331.454295571821
Z2 =
          12.8467578496774
H0 =
                    2.4638
Tp =
                    12.522
T0 =
          11.3836363636364
R2 =
          3.39839784967743
Z2 =
          12.8467578496774
top_sta =
          331.454295571821
Lslope =
          119.027178186977
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 1
dh =
                  3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 2
dh =
                  3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 3
dh =
                 3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 4
dh =
                  3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 5
dh =
                 3.5716185
```

```
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 6
dh =
                 3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 7
dh =
                3.4908595
rdh_sum =
     7
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 8
dh =
                 3.467545
rdh_sum =
     8
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 9
dh =
                3.4612955
rdh_sum =
     9
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 10
dh =
                3.4550465
rdh_sum =
    10
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 11
dh =
                3.4487975
rdh_sum =
    11
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 12
dh =
                 3.442548
rdh_sum =
    12
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 13
dh =
                3.4362985
rdh_sum =
    13
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 14
dh =
                3.4300495
rdh_sum =
    14
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 15
dh =
                3.4238005
rdh_sum =
    15
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 16
dh =
                3.4175515
rdh_sum =
    16
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 17
dh =
                 3.411302
rdh_sum =
    17
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
    18
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
          18.7756844068362
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 20
dh =
                3.3545785
```

```
rdh_sum =
          19.5446218501661
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 21
dh =
                  3.329341
rdh_sum =
          20.3067425724237
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 22
dh =
                  3.3041035
rdh_sum =
          21.0619787137786
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 23
dh =
                  3.2788665
rdh_sum =
          21.8102643350816
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 24
dh =
                  3.2536295
rdh_sum =
          22.5515351607866
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 28
dh =
                  2.7927855
rdh_sum =
          23.1556395704539
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 29
dh =
                  2.7838805
rdh_sum =
          23.7569658387389
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 30
dh =
                   2.818876
rdh_sum =
           24.369190194817
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 31
dh =
                  2.8538715
rdh_sum =
          24.9922567760258
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 32
dh =
                   2.888867
rdh_sum =
          25.6261043226965
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 33
dh =
                   2.923863
rdh_sum =
          26.2706663612278
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 34
dh =
                  2.9588585
rdh_sum =
          26.9258707784441
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 35
dh =
                   2.993854
rdh_sum =
          27.5916403172126
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 36
dh =
                  2.9785435
rdh_sum =
          28.2527974689352
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 37
dh =
                  2.9129265
rdh_sum =
          28.8940186325912
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 38
dh =
                    2.84731
```

```
rdh_sum =
          29.5150568488525
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 39
dh =
                  2.7816935
rdh_sum =
          30.1157003238332
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 40
dh =
                  2.7160765
rdh_sum =
          30.6957727932406
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 41
dh =
                  2.6504595
rdh_sum =
          31.2551341433289
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 42
dh =
                  2.5848425
rdh_sum =
          31.7936805014291
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 43
dh =
                   2.519226
rdh_sum =
          32.3113445769972
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 44
dh =
                  2.4536095
rdh_sum =
          32.8080954612564
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 53
dh =
                   1.726356
rdh_sum =
          33.0815816456938
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 54
dh =
                    1.71542
rdh_sum =
          33.3519654955961
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 55
dh =
                   1.704484
rdh_sum =
          33.6192581730603
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 56
dh =
                   1.693548
rdh_sum =
          33.8834709904514
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 57
dh =
                   1.682612
rdh_sum =
          34.1446154098525
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 58
dh =
                   1.671676
rdh_sum =
          34.4027030425079
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          34.5493447681433
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 78
dh =
                 -0.8961285
rdh_sum =
           34.711320829841
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 79
dh =
        -0.942059999999998
```

```
rdh_sum =
          34.8892405596702
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          35.0836847320988
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 81
dh =
                -1.033924
rdh_sum =
          35.2952041631976
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 82
dh =
               -1.0798555
rdh_sum =
          35.5243186937426
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 83
dh =
                -1.125787
rdh_sum =
          35.7715166299893
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 84
dh =
                -1.171719
rdh_sum =
          36.0372538846771
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 85
dh =
                -1.217651
rdh_sum =
          36.3219527560354
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 86
dh =
               -1.2635825
rdh_sum =
          36.6260011481505
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 87
dh =
               -1.2947505
rdh_sum =
          36.9433829806799
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 88
dh =
                -1.311155
rdh_sum =
          37.2678441354223
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 89
dh =
                -1.327559
rdh_sum =
          37.5994247631697
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 90
dh =
                -1.343963
rdh_sum =
           37.938163592702
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          38.2840977067387
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
            38.63726275433
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
           38.997692502881
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 94
dh =
                 -1.40958
```

```
rdh_sum =
          39.3654188262708
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          39.7404721414164
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          40.1228811803609
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          40.5121448793474
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          40.9077555807408
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
          41.3097309218715
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
           41.718087237525
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          42.1328400104662
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          42.5540038710267
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          42.9815921391451
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          43.4142750695762
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          43.8507164808848
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
          44.2909200270182
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 107
dh =
                -1.577723
rdh_sum =
          44.7348891456404
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 108
dh =
                -1.585925
rdh_sum =
          45.1826270579351
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 109
dh =
                -1.594127
```

```
rdh_sum =
          45.6341367684199
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 110
dh =
                -1.602329
rdh_sum =
          46.0894210647742
ans =
Berm Factor Calculation: Iteration 24, Profile Segment: 111
dh =
                -1.610531
rdh_sum =
          46.5484825176783
ans =
!------- End Berm Factor Calculation, Iter: 24 ---------!
berm_width =
    82
rB =
          0.688918289495091
rdh_mean =
          0.567664420947297
gamma_berm =
          0.702156112391142
slope =
          0.191591641519484
Irb =
           3.14307975788471
gamma_berm =
          0.702156112391142
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                        0.6
gamma =
          0.421293667434685
ans =
!!! - - Iribaren number:   2.21 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
           3.5265590216275
R2del =
          0.128161171950071
Z2 =
           12.9749190216275
top_sta =
          331.965841459056
ans =
!----------------- STARTING ITERATION 25 -----------------!
Ztoe =
                    5.75266
toe_sta =
          212.427117384844
top_sta =
          331.965841459056
Z2 =
          12.9749190216275
H0 =
                     2.4638
Tp =
                     12.522
T0 =
          11.3836363636364
R2 =
           3.5265590216275
Z2 =
          12.9749190216275
top_sta =
          331.965841459056
Lslope =
          119.538724074212
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 1
dh =
                  3.700486
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 2
dh =
                  3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 3
dh =
                 3.6523775
```

```
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 4
dh =
                  3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 5
dh =
                 3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 6
dh =
                  3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 7
dh =
                 3.4908595
rdh_sum =
          6.80450037811965
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 8
dh =
                  3.467545
rdh_sum =
           7.6030724378835
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 9
dh =
                 3.4612955
rdh_sum =
          8.40004413389283
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 10
dh =
                 3.4550465
rdh_sum =
          9.19541088027912
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 11
dh =
                 3.4487975
rdh_sum =
          9.98916798879852
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 12
dh =
                  3.442548
rdh_sum =
          10.7813106674058
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 13
dh =
                 3.4362985
rdh_sum =
          11.5718342782893
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 14
dh =
                 3.4300495
rdh_sum =
          12.3607343394292
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 15
dh =
                 3.4238005
rdh_sum =
          13.1480062652248
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 16
dh =
                 3.4175515
rdh_sum =
          13.9336454959183
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 17
dh =
                  3.411302
rdh_sum =
          14.7176473664869
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 18
dh =
                 3.4003055
```

```
rdh_sum =
          15.4987572395367
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 19
dh =
                  3.3798155
rdh_sum =
          16.2744416463729
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 20
dh =
                  3.3545785
rdh_sum =
          17.0433790897028
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 21
dh =
                   3.329341
rdh_sum =
          17.8054998119604
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 22
dh =
                  3.3041035
rdh_sum =
          18.5607359533153
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 23
dh =
                  3.2788665
rdh_sum =
          19.3090215746183
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 24
dh =
                  3.2536295
rdh_sum =
          20.0502924003234
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 28
dh =
                  2.7927855
rdh_sum =
          20.6543968099907
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 29
dh =
                  2.7838805
rdh_sum =
          21.2557230782756
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 30
dh =
                   2.818876
rdh_sum =
          21.8679474343538
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 31
dh =
                  2.8538715
rdh_sum =
          22.4910140155625
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 32
dh =
                   2.888867
rdh_sum =
          23.1248615622332
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 33
dh =
                   2.923863
rdh_sum =
          23.7694236007645
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 34
dh =
                  2.9588585
rdh_sum =
          24.4246280179808
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 35
dh =
                   2.993854
rdh_sum =
          25.0903975567493
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 36
dh =
                  2.9785435
```

```
rdh_sum =
          25.7515547084719
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 37
dh =
                  2.9129265
rdh_sum =
          26.3927758721279
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 38
dh =
                    2.84731
rdh_sum =
          27.0138140883892
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 39
dh =
                  2.7816935
rdh_sum =
            27.61445756337
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 40
dh =
                  2.7160765
rdh_sum =
          28.1945300327773
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 41
dh =
                  2.6504595
rdh_sum =
          28.7538913828656
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 42
dh =
                  2.5848425
rdh_sum =
          29.2924377409659
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 43
dh =
                   2.519226
rdh_sum =
          29.8101018165339
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 44
dh =
                  2.4536095
rdh_sum =
          30.3068527007931
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 53
dh =
                   1.726356
rdh_sum =
          30.5803388852305
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 54
dh =
                    1.71542
rdh_sum =
          30.8507227351328
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 55
dh =
                   1.704484
rdh_sum =
           31.118015412597
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 56
dh =
                   1.693548
rdh_sum =
          31.3822282299881
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 57
dh =
                   1.682612
rdh_sum =
          31.6433726493892
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 58
dh =
                   1.671676
rdh_sum =
          31.9014602820446
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 77
dh =
        -0.850196999999998
```

```
rdh_sum =
          32.0381434815054
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 78
dh =
                -0.8961285
rdh_sum =
          32.1891825296023
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          32.3551615895354
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          32.5366399864854
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 81
dh =
                 -1.033924
rdh_sum =
          32.7341509395656
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 82
dh =
                -1.0798555
rdh_sum =
          32.9482006459948
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 83
dh =
                 -1.125787
rdh_sum =
          33.1792677886673
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 84
dh =
                 -1.171719
rdh_sum =
          33.4278027556579
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 85
dh =
                 -1.217651
rdh_sum =
           33.694226510445
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 86
dh =
                -1.2635825
rdh_sum =
           33.978929868887
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 87
dh =
                -1.2947505
rdh_sum =
          34.2762444744622
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 88
dh =
                 -1.311155
rdh_sum =
          34.5802600767379
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 89
dh =
                 -1.327559
rdh_sum =
          34.8910183235237
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 90
dh =
                 -1.343963
rdh_sum =
          35.2085596263645
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 91
dh =
                 -1.360367
rdh_sum =
          35.5329229483207
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 92
dh =
                -1.3767715
```

```
rdh_sum =
          35.8641460052851
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
           36.202264840851
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          36.5473138142213
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
           36.899326014343
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
          37.2583330432041
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          37.6238623532571
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          37.9954343341199
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
          38.3730691361718
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          38.7567857419313
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
          39.1466023949861
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          39.5425365997258
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
           39.944604684092
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          40.3515396465331
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 105
dh =
                -1.561319
rdh_sum =
          40.7620665432405
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 106
dh =
                -1.569521
rdh_sum =
          41.1761901509013
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 107
dh =
                -1.577723
```

```
rdh_sum =
          41.5939150541855
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 108
dh =
                 -1.585925
rdh_sum =
          42.0152456455014
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 109
dh =
                 -1.594127
rdh_sum =
           42.440186124761
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 110
dh =
                 -1.602329
rdh_sum =
          42.8687404991555
ans =
Berm Factor Calculation: Iteration 25, Profile Segment: 111
dh =
                 -1.610531
rdh_sum =
          43.3009125829419
ans =
!------- End Berm Factor Calculation, Iter: 25 ---------!
berm_width =
    82
rB =
         0.685970179413098
rdh_mean =
         0.528059909548072
gamma_berm =
         0.676263171480457
slope =
          0.19239489886096
Irb =
          3.15625727372175
gamma_berm =
         0.676263171480457
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.6
gamma =
         0.405757902888274
ans =
!!! - - Iribaren number:   2.13 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          3.39839784967774
R2del =
         0.128161171949761
Z2 =
          12.8467578496777
top_sta =
          331.454295571823
ans =
!----------------- STARTING ITERATION 26 -----------------!
Ztoe =
                   5.75266
toe_sta =
          212.427117384844
top_sta =
          331.454295571823
Z2 =
          12.8467578496777
H0 =
                    2.4638
Tp =
                    12.522
T0 =
          11.3836363636364
R2 =
          3.39839784967774
Z2 =
          12.8467578496777
top_sta =
          331.454295571823
Lslope =
          119.027178186979
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 1
dh =
                  3.700486
```

```
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 2
dh =
                 3.692757
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 3
dh =
                3.6523775
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 4
dh =
                 3.611998
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 5
dh =
                3.5716185
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 6
dh =
                 3.531239
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 7
dh =
                3.4908595
rdh_sum =
     7
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 8
dh =
                 3.467545
rdh_sum =
     8
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 9
dh =
                3.4612955
rdh_sum =
     9
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 10
dh =
                3.4550465
rdh_sum =
    10
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 11
dh =
                3.4487975
rdh_sum =
    11
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 12
dh =
                 3.442548
rdh_sum =
    12
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 13
dh =
                3.4362985
rdh_sum =
    13
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 14
dh =
                3.4300495
rdh_sum =
    14
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 15
dh =
                3.4238005
rdh_sum =
    15
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 16
dh =
                3.4175515
```

```
rdh_sum =
    16
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 17
dh =
                3.411302
rdh_sum =
    17
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 18
dh =
                3.4003055
rdh_sum =
    18
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 19
dh =
                3.3798155
rdh_sum =
          18.7756844068362
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 20
dh =
                3.3545785
rdh_sum =
          19.5446218501661
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 21
dh =
                 3.329341
rdh_sum =
          20.3067425724237
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 22
dh =
                3.3041035
rdh_sum =
          21.0619787137786
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 23
dh =
                3.2788665
rdh_sum =
          21.8102643350816
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 24
dh =
                3.2536295
rdh_sum =
          22.5515351607866
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 28
dh =
                2.7927855
rdh_sum =
          23.1556395704539
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 29
dh =
                2.7838805
rdh_sum =
          23.7569658387389
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 30
dh =
                 2.818876
rdh_sum =
           24.369190194817
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 31
dh =
                2.8538715
rdh_sum =
          24.9922567760258
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 32
dh =
                 2.888867
rdh_sum =
          25.6261043226965
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 33
dh =
                 2.923863
rdh_sum =
          26.2706663612278
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 34
dh =
                2.9588585
```

```
rdh_sum =
          26.9258707784441
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 35
dh =
                 2.993854
rdh_sum =
          27.5916403172126
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 36
dh =
                2.9785435
rdh_sum =
          28.2527974689352
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 37
dh =
                2.9129265
rdh_sum =
          28.8940186325912
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 38
dh =
                 2.84731
rdh_sum =
          29.5150568488525
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 39
dh =
                2.7816935
rdh_sum =
          30.1157003238332
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 40
dh =
                2.7160765
rdh_sum =
          30.6957727932406
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 41
dh =
                2.6504595
rdh_sum =
          31.2551341433289
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 42
dh =
                2.5848425
rdh_sum =
          31.7936805014291
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 43
dh =
                 2.519226
rdh_sum =
          32.3113445769972
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 44
dh =
                2.4536095
rdh_sum =
          32.8080954612564
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 53
dh =
                 1.726356
rdh_sum =
          33.0815816456938
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 54
dh =
                  1.71542
rdh_sum =
          33.3519654955961
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 55
dh =
                 1.704484
rdh_sum =
          33.6192581730603
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 56
dh =
                 1.693548
rdh_sum =
          33.8834709904514
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 57
dh =
                 1.682612
```

```
rdh_sum =
          34.1446154098525
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 58
dh =
                  1.671676
rdh_sum =
          34.4027030425079
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 77
dh =
        -0.850196999999998
rdh_sum =
          34.5493447681432
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 78
dh =
                -0.8961285
rdh_sum =
           34.711320829841
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 79
dh =
        -0.942059999999998
rdh_sum =
          34.8892405596701
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 80
dh =
        -0.987991999999998
rdh_sum =
          35.0836847320987
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 81
dh =
                 -1.033924
rdh_sum =
          35.2952041631974
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 82
dh =
                -1.0798555
rdh_sum =
          35.5243186937424
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 83
dh =
                 -1.125787
rdh_sum =
           35.771516629989
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 84
dh =
                 -1.171719
rdh_sum =
          36.0372538846768
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 85
dh =
                 -1.217651
rdh_sum =
           36.321952756035
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 86
dh =
                -1.2635825
rdh_sum =
          36.6260011481501
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 87
dh =
                -1.2947505
rdh_sum =
          36.9433829806795
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 88
dh =
                 -1.311155
rdh_sum =
          37.2678441354218
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 89
dh =
                 -1.327559
rdh_sum =
          37.5994247631692
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 90
dh =
                 -1.343963
```

```
rdh_sum =
          37.9381635927014
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 91
dh =
                -1.360367
rdh_sum =
          38.2840977067381
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 92
dh =
               -1.3767715
rdh_sum =
          38.6372627543293
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 93
dh =
                -1.393176
rdh_sum =
          38.9976925028803
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 94
dh =
                 -1.40958
rdh_sum =
          39.3654188262699
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 95
dh =
                -1.425984
rdh_sum =
          39.7404721414155
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 96
dh =
                -1.442388
rdh_sum =
           40.12288118036
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 97
dh =
               -1.4576205
rdh_sum =
          40.5121448793464
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 98
dh =
               -1.4716815
rdh_sum =
          40.9077555807397
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 99
dh =
               -1.4857425
rdh_sum =
          41.3097309218704
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 100
dh =
                -1.499803
rdh_sum =
          41.7180872375238
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 101
dh =
               -1.5138635
rdh_sum =
           42.132840010465
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 102
dh =
               -1.5279245
rdh_sum =
          42.5540038710254
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 103
dh =
               -1.5419855
rdh_sum =
          42.9815921391437
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 104
dh =
                -1.553117
rdh_sum =
          43.4142750695748
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 105
dh =
                -1.561319
```

```
rdh_sum =
          43.8507164808834
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 106
dh =
                 -1.569521
rdh_sum =
          44.2909200270166
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 107
dh =
                 -1.577723
rdh_sum =
          44.7348891456388
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 108
dh =
                 -1.585925
rdh_sum =
          45.1826270579334
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 109
dh =
                 -1.594127
rdh_sum =
          45.6341367684182
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 110
dh =
                 -1.602329
rdh_sum =
          46.0894210647724
ans =
Berm Factor Calculation: Iteration 26, Profile Segment: 111
dh =
                 -1.610531
rdh_sum =
          46.5484825176765
ans =
!------- End Berm Factor Calculation, Iter: 26 ---------!
berm_width =
    82
rB =
          0.688918289495085
rdh_mean =
          0.567664420947274
gamma_berm =
          0.702156112391129
slope =
          0.191591641519486
Irb =
           3.14307975788475
gamma_berm =
          0.702156112391129
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.6
gamma =
          0.421293667434677
ans =
!!! - - Iribaren number:   2.21 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          3.52655902162744
R2del =
          0.128161171949702
Z2 =
           12.9749190216274
top_sta =
          331.965841459056
% final 2% runup elevation
Z2=R2_new+SWEL
Z2 =
          12.9749190216274
diary off
-1.000000e+00
```

PART 5: RUNUP2

for transect: YK-108

Station locations shifted by: -0.99 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input

RUNUP2 INPUT CONVERSIONS
for transect: YK-108

Incident significant wave height: 7.06 feet

Peak wave period: 12.80 seconds

Mean wave height: 4.42 feet

Local Depth below SWEL: 15.56 feet

Mean wave height deshoaled using Hunt approximation for
celerity assuming constant wave energy flux.
References: R.G. Dean and R.A. Dalrymple. 2000. Water

Wave Mechanics for Engineers and Scientists. World
Scientific Publishing Company, River Edge New Jersy

USACE (1985), Direct Methods for Calculating Wavelength, CETN-1-17
US Army Engineer Waterways Experiment Station Coastel Engineering
Research Center, Vicksburg, MS

also see Coastal Engineering Manual Part II-3
for discussion of shoaling coefficient

Depth, D = 15.56
Period, T = 10.88
Waveheight, H = 4.42
Deep water wavelength, L0 (ft)
L0 = g*T*T/twopi
L0 = 32.17*10.88*10.88/6.28 = 606.15
Deep water wave celerity, C0 (ft/s)
C0 = L0/T
C0 = 606.15/10.88 = 55.71
Angular frequency, sigma (rad/s)
sigma = twopi/T
sigma = 6.28/10.88 = 0.58
Hunts (1979) approximation for Celerity C1H (ft/s) at Depth D (ft)
y = sigma.*sigma.*D./g
y = 0.58*0.58*15.56/32.17 = 0.16
C1H = sqrt(g.*D./(y+1./(1 + 0.6522.*y + 0.4622.*y.^2 + 0.0864.*y.^4 +0.0675.*y.^5)))
C1H = 21.77
Shoaling Coefficient KsH
KsH = sqrt(C0/C1H)
KsH = sqrt(55.71/21.77) = 1.60
Deepwater Wave Height H0_H (ft)
H0_H = H/KsH
H0_H = 4.42/1.60 = 2.76

Deepwater mean wave height: 2.76 feet

END RUNUP2 CONVERSIONS

RUNUP2 RESULTS
for transect: YK-108

RUNUP2 SWEL:
9.00
9.00
9.00
9.00

9.00
9.00
9.00
9.00
9.00

RUNUP2 deepwater mean wave heights:
2.62
2.62
2.62
2.76
2.76
2.76
2.90
2.90
2.90

RUNUP2 mean wave periods:
10.34
10.88
11.42
10.34
10.88
11.42
10.34
10.88
11.42

RUNUP2 runup above SWEL:
0.85
0.83
0.80
0.75
0.86
0.89
0.84
0.84
0.85

RUNUP2 Mean runup height above SWEL: 0.83 feet

RUNUP2 2-percent runup height above SWEL: 1.84 feet

RUNUP2 2-percent runup elevation: 10.84 feet-NAVD88

RUNUP2 Messages:
No Messages

_____END RUNUP2 RESULTS_____

_____ACES BEACH RUNUP_____

Incident significant wave height: 7.06 feet

Significant wave height is mean wave height divided by 0.626
Reference: D.2.8.1.2.1 Atlanic and Gulf of Mexico G&S Feb. 2007

Deepwater significant wave height: 4.41 feet

Peak wave period: 12.80 seconds

Average beach Slope: 1:34.13 (H:V)

ACES IRREGULAR WAVE RUNUP ON BEACHES

Reference:
Leenknecht, David A., Andre Szuwaiski, and Ann Sherlock. 1992.
"Automated Coastal Engineering System Technical Reference",
Coastal Engineering Research Center, Department of the Army

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# Waterways Experiments Station, Corps of Eniggneers, 3909 Halls
# Ferry Road, Vicksburg, Mississippi 39180-6199.

INPUTS:

Acceleration Due to Gravity,        g  =   32.174
Deepwater Significant Wave height,  Hs =     4.41
Wave Period,                        T  =    12.80
Beach Slope,                        S  =    0.029

EQUATIONS:

Runup,           R   = Hs * a * Irb^b
Iribarren,       Irb = S/sqrt(Hs/L0)
Wavelength,      L0  = g * T^2 / 2 / pi

COEFFICIENTS:
(Mase, H. 1989, "Random Wave Runup Height on Gentle Slopes,"
j. Waterway, Port, Coastal and Ocean Engineering Division,
ASCE, Vol 115, No. 5, pp 649-661.)

               [Rmax,  R2%, R-1/3, R-1/10, R-mean]
          a = [2.32, 1.86,  1.70,   1.38,   0.88]
          b = [0.77, 0.71,  0.71,   0.70,   0.69]

RESULTS:

       RUNUP = [ 5.1,  4.3,   3.9,    3.2,    2.1]

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 4.31 feet

ACES Beach 2-percent runup elevation: 13.31 feet-NAVD88

ACES BEACH RUNUP is valid

_____________END ACES BEACH RESULTS_____________________

PART 5 COMPLETE_____________________________________________
```

```
  FEMA                                                    sjh            job 2
  RUNUP2 transect: YK-108                                                   1
5.00
  -6.53 -367.0 0.6
  -4.85 -306.0 0.6
  -4.05 -220.0 0.6
  -2.29 -137.0 0.6
  -1.27 -62.0  0.6
  -0.01 -0.0   0.6
  0.89  1.0    0.6
  1.35  87.5   0.6
  2.14  95.0   0.6
  2.53  121.0  0.6
  3.85  140.5  0.6
  4.01  155.0  0.6
  5.45  170.5  0.6
  6.08  208.5  0.6
  6.08  229.5  0.6
  7.06  256.5  0.6
  8.41  279.0  0.6
  10.28 288.0  0.6
  11.06 323.0  0.6
1 14.11 337.5  0.6
 9.0   2.62  10.34
 9.0   2.62  10.88
 9.0   2.62  11.42
 9.0   2.76  10.34
 9.0   2.76  10.88
 9.0   2.76  11.42
 9.0   2.90  10.34
 9.0   2.90  10.88
 9.0   2.90  11.42
```

****

CROSS SECTION PROFILE

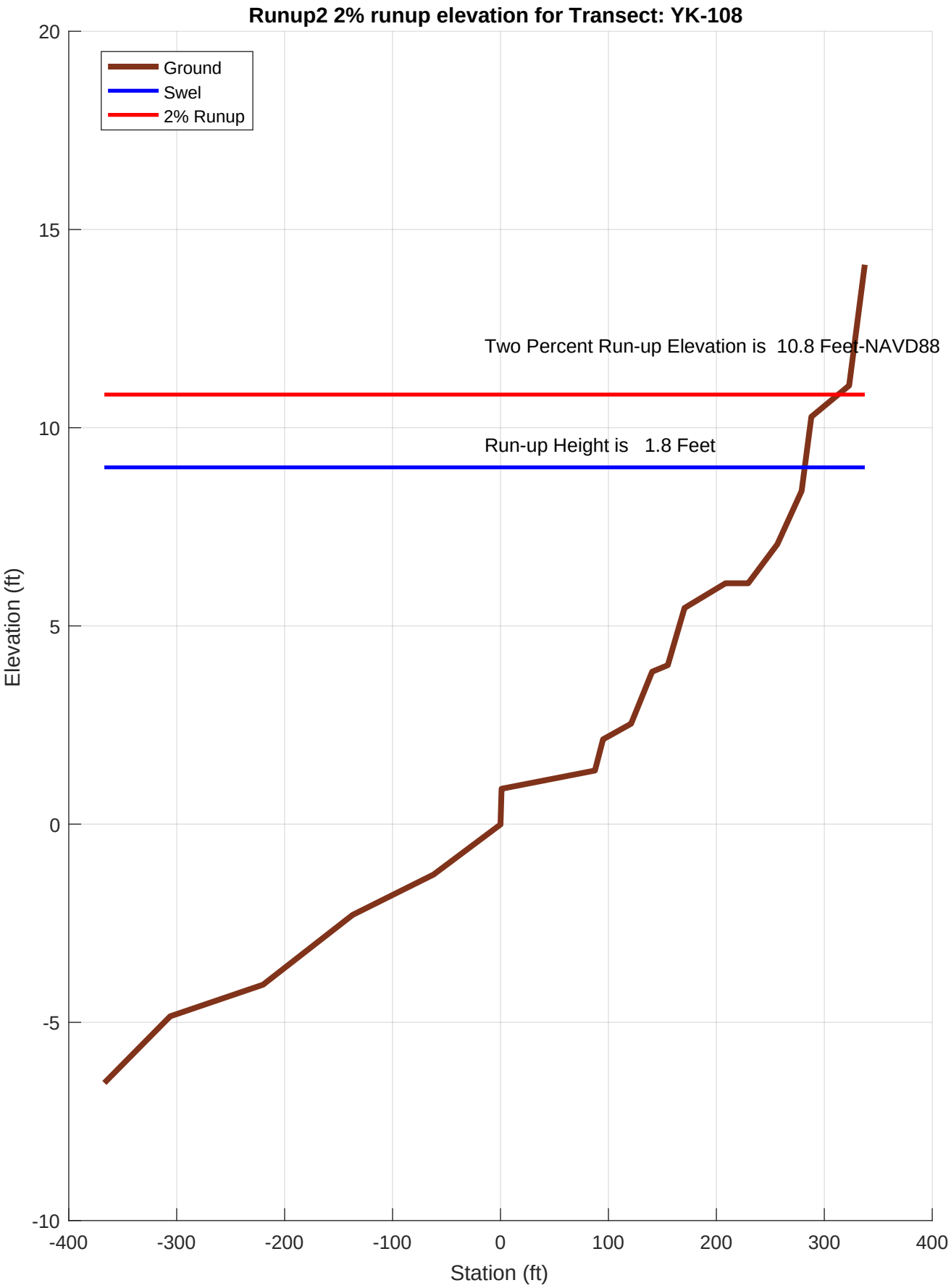
	LENGTH	ELEV.	SLOPE	ROUGHNESS
1	-367.0	-6.5		
2	-306.0	-4.8	.00	.60
3	-220.0	-4.0	107.50	.60
4	-137.0	-2.3	47.16	.60
5	-62.0	-1.3	73.53	.60
6	.0	.0	49.21	.60
7	1.0	.9	1.11	.60
8	87.5	1.4	188.04	.60
9	95.0	2.2	9.49	.60
10	121.0	2.5	66.67	.60
11	140.5	3.9	14.77	.60
12	155.0	4.0	90.63	.60
13	170.5	5.5	10.76	.60
14	208.5	6.1	60.32	.60
15	229.5	6.1	FLAT	.60
16	256.5	7.1	27.55	.60
17	279.0	8.4	16.67	.60
18	288.0	10.3	4.81	.60
19	323.0	11.1	44.87	.60
20	337.5	14.1	4.75	.60

LAST SLOPE 5.00 LAST ROUGHNESS .60

****

OUTPUT TABLE

INPUT PARAMETERS			RUNUP RESULTS			
WATER LEVEL ABOVE DATUM (FT.)	DEEP WATER WAVE HEIGHT (FT.)	WAVE PERIOD (SEC.)	BREAKING SLOPE NUMBER	RUNUP SLOPE NUMBER	RUNUP ABOVE WATER LEVEL (FT.)	BREAKER DEPTH (FT.)
9.00	2.62	10.34	11	17	.85	4.90
9.00	2.62	10.88	11	17	.83	5.02
9.00	2.62	11.42	11	17	.80	5.14
9.00	2.76	10.34	11	17	.75	5.10
9.00	2.76	10.88	10	17	.86	5.22
9.00	2.76	11.42	9	17	.89	6.56
9.00	2.90	10.34	10	17	.84	5.30
9.00	2.90	10.88	9	17	.84	6.63
9.00	2.90	11.42	9	17	.85	6.80


Runup2 2% runup elevation for Transect: YK-108
Ground
Swel
2% Runup
Two Percent Run-up Elevation is 10.8 Feet-NAVD88
Run-up Height is 1.8 Feet
Elevation (ft)
Station (ft)
20
15
10
5
0
-5
-10
-400
-300
-200
-100
0
100
200
300
400