

REVIEWER NOTES

1. THIS WILL BE A 3 WEEK BRIDGE CLOSURE. THE TOWNS OF FAYSTON AND WARREN HAVE APPROVED THE USE OF THEIR LOCAL ROADS FOR THE SIGNED DETOUR ROUTE. AT THE REQUEST OF THE COMMUNITIES, THE CLOSURE WILL TAKE PLACE DURING SCHOOL SUMMER VACATION.
2. THE DETOUR SHALL CONSIST OF VT ROUTE 17, TO GERMAN FLATS ROAD (FAYSTON TH-2/WARREN TH-6), TO SUGARBUSH ACCESS ROAD (TH-5).
3. AS MUCH SUBSTRUCTURE WORK AS POSSIBLE WILL TAKE PLACE BEFORE THE BRIDGE CLOSURE. THE SOUTH ABUTMENT AND BRIDGE SEAT WILL BE POURED TO BEDROCK IN FRONT OF THE EXISTING ABUTMENT WHILE THE BRIDGE IS STILL OPEN TO TRAFFIC.
4. THIS WILL BE A SINGLE SPAN PRECAST SUPERSTRUCTURE. THE SUPERSTRUCTURE WILL BE COMPRISED OF PRECAST BRIDGE UNITS. IN ORDER TO ACCOMMODATE MAXIMUM SPAN AND LIFTING LIMITS, TWO SECTIONS FOR EACH BRIDGE UNIT ADDING UP TO THE TOTAL SPAN WILL BE ALLOWED. THE SPANS WOULD THEN BE TEMPORARILY SUPPORTED ON A BENT WHILE THEY ARE PLACED, AND THEN SPliced TOGETHER.
5. ALL WORK WILL TAKE PLACE WITHIN THE EXISTING RIGHT-OF-WAY.
6. IT IS ANTICIPATED THAT OVERHEAD UTILITIES WILL NEED TO BE RELOCATED.

STATE OF VERMONT

AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT

BRIDGE PROJECT

TOWN OF WAITSFIELD

COUNTY OF WASHINGTON

ROUTE NO : VERMONT ROUTE 100

BRIDGE NO : 177

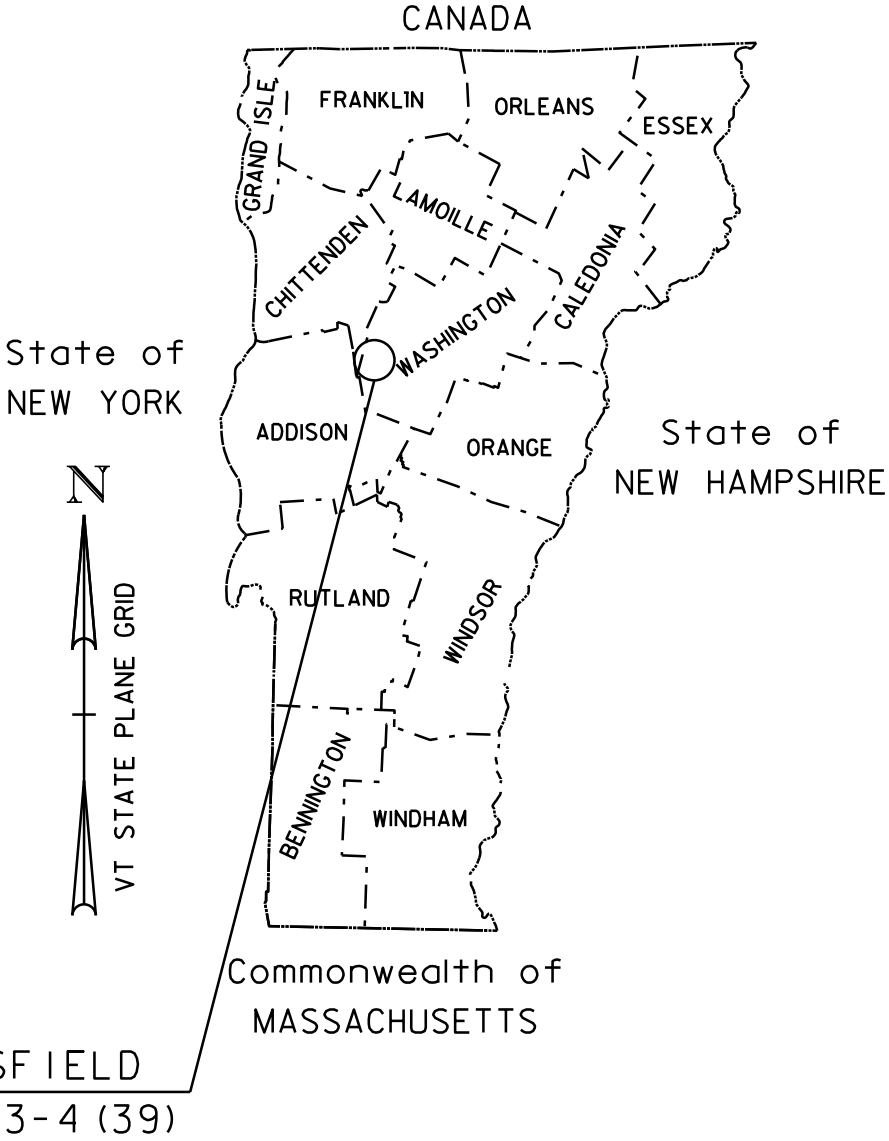
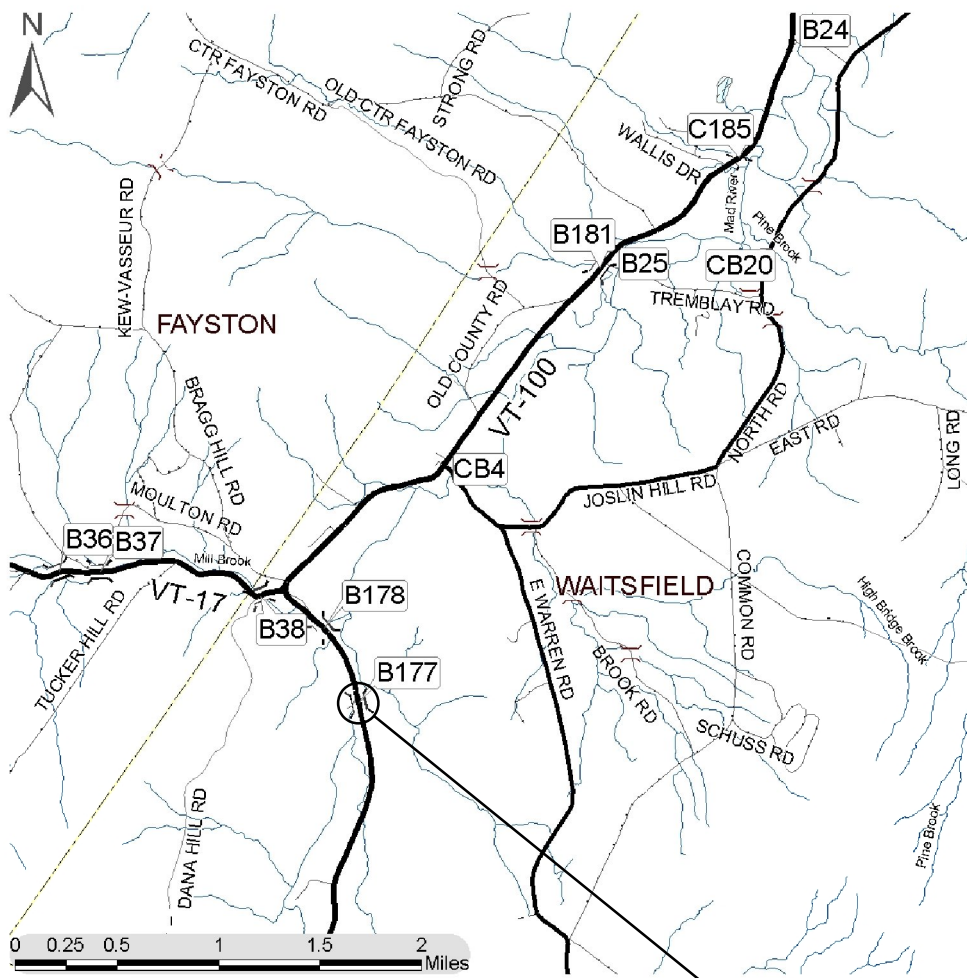
PROJECT LOCATION: 0.8 MILES SOUTH OF JUNCTION WITH VT ROUTE 17

PROJECT DESCRIPTION: DEMOLITION OF EXISTING STRUCTURE, AND REPLACEMENT WITH A NEW STRUCTURE.

LENGTH OF STRUCTURE: 156.50 FEET

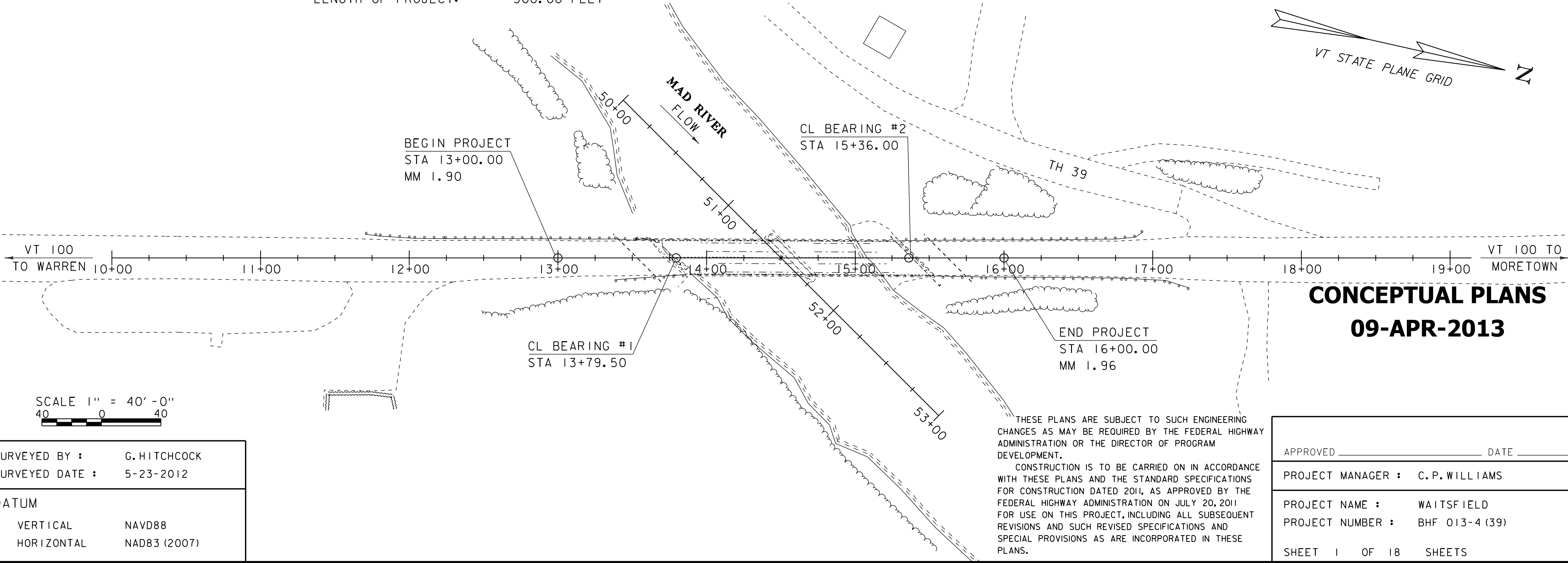
LENGTH OF ROADWAY: 143.50 FEET

LENGTH OF PROJECT: 300.00 FEET



QUALITY ASSURANCE PROGRAM: **LEVEL 2**

CONVENTIONAL SYMBOLS	
COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	



CONCEPTUAL PLANS

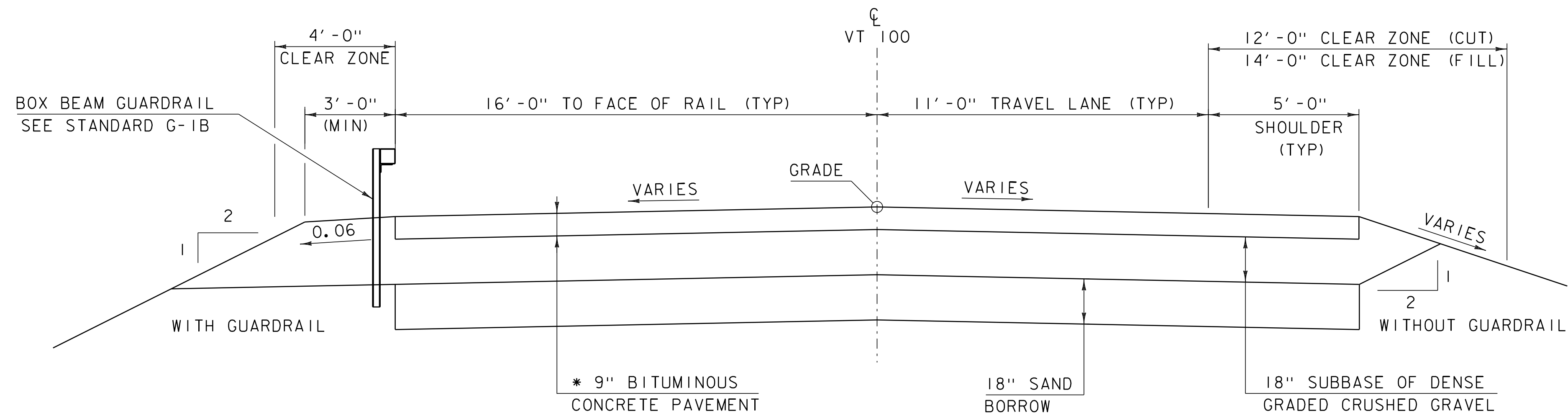
09-APR-2013

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

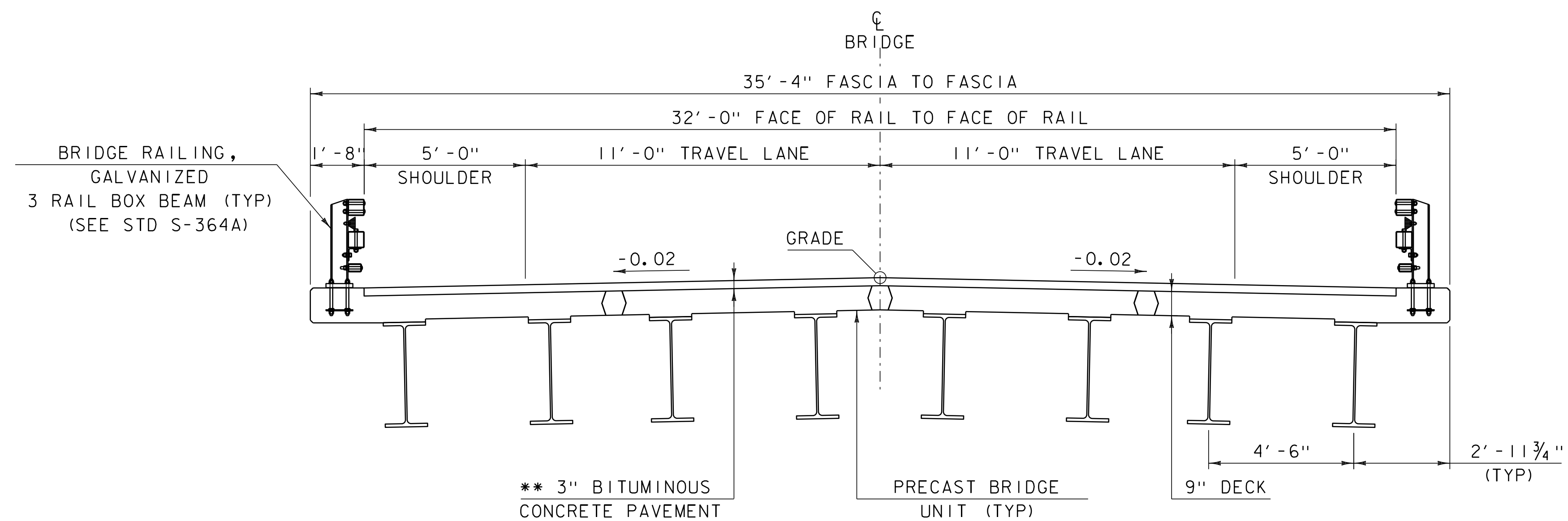
APPROVED _____ DATE _____
PROJECT MANAGER : C.P.WILLIAMS
PROJECT NAME : WAITSFIELD
PROJECT NUMBER : BHF 013-4 (39)
SHEET 1 OF 18 SHEETS

[illegible]



* 1 1/2" TYPE IIIS OR IVS OVER
 1 1/2" TYPE IIIS OR IVS OVER
 3" TYPE I OR II OVER
 3" TYPE I OR II

VT 100 TYPICAL SECTION
 SCALE 3/8" = 1'-0"



** 1 1/2" TYPE IIIS OR IVS OVER
 1 1/2" TYPE IIIS OR IVS

BRIDGE TYPICAL SECTION

SCALE 3/8" = 1'-0"

MATERIAL TOLERANCES (IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

PROJECT NAME:	WAITSFIELD	PLOT DATE:	09-APR-2013
PROJECT NUMBER:	BHF 013-4(39)	DRAWN BY:	D.D.BEARD
FILE NAME:	I2BI36\sl2BI36+typical.dgn	CHECKED BY:	L.J.STONE
PROJECT LEADER:	C.P.WILLIAMS	SHEET	3 OF 18
DESIGNED BY:	L.J.STONE		
TYPICAL SECTIONS			

GENERAL INFORMATION

SYMBOLOLOGY LEGEND NOTE

THE SYMBOLOLOGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLOLOGY. THE SYMBOLOLOGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLOLOGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

R.O.W. ABBREVIATIONS (CODES) & SYMBOLS

POINT	CODE	DESCRIPTION
	CH	CHANNEL EASEMENT
	CONST	CONSTRUCTION EASEMENT
	CUL	CULVERT EASEMENT
	D&C	DISCONNECT & CONNECT
	DIT	DITCH EASEMENT
	DR	DRAINAGE EASEMENT
	DRIVE	DRIVEWAY EASEMENT
	EC	EROSION CONTROL
	I&M	INSTALL & MAINTAIN EASEMENT
	LAND	LANDSCAPE EASEMENT
	SR	SLOPE RIGHT
	UE	UTILITY EASEMENT
	(P)	PERMANENT EASEMENT
	(T)	TEMPORARY EASEMENT
■	BNDNS	BOUND SET
▣	BNDNS	BOUND TO BE SET
●	IPNS	IRON PIN SET
◎	IPNS	IRON PIN TO BE SET
⊠	CALC	CALCULATED ROW POINT
[DISTANCE]		DISTANCE CARRIED ON NEXT SHEET

COMMON TOPOGRAPHIC POINT SYMBOLS

POINT	CODE	DESCRIPTION
⌘	APL	BOUND APPARENT LOCATION
▣	BM	BENCH MARK
▣	BND	BOUND
▣	CB	CATCH BASIN
⌘	COMB	COMBINATION POLE
▣	DITHR	DROP INLET THROATED DNC
⌘	EL	ELECTRIC POWER POLE
⊙	FPOLE	FLAGPOLE
⊙	GASFIL	GAS FILLER
⊙	GP	GUIDE POST
⌘	GSO	GAS SHUT OFF
⊙	GUY	GUY POLE
⊙	GUYW	GUY WIRE
⌘	GV	GATE VALUE
⌘	H	TREE HARDWOOD
⌘	HCTRL	CONTROL HORIZONTAL
⌘	HVCTRL	CONTROL HORIZ. & VERTICAL
⌘	HYD	HYDRANT
⊙	IP	IRON PIN
⊙	IPIPE	IRON PIPE
⌘	LI	LIGHT - STREET OR YARD
⌘	MB	MAILBOX
⊙	MH	MANHOLE (MH)
▣	MM	MILE MARKER
⊙	PM	PARKING METER
▣	PMK	PROJECT MARKER
⊙	POST	POST STONE/WOOD
⌘	RRSIG	RAILROAD SIGNAL
⌘	RRSL	RAILROAD SWITCH LEVER
⌘	S	TREE SOFTWOOD
⌘	SAT	SATELLITE DISH
⌘	SHRUB	SHRUB
⌘	SIGN	SIGN
⌘	STUMP	STUMP
⌘	TEL	TELEPHONE POLE
⊙	TIE	TIE
⌘	TSIGN	SIGN W/DOUBLE POST
⌘	VCTRL	CONTROL VERTICAL
⊙	WELL	WELL
⌘	WSO	WATER SHUT OFF

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

PROPOSED GEOMETRY CODES

CODE	DESCRIPTION
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
STA	STATION PREFIX
AH	AHEAD STATION SUFFIX
BK	BACK STATION SUFFIX
D	CURVE DEGREE OF (100FT)
R	CURVE RADUIS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE

UTILITY SYMBOLOLOGY

UNDERGROUND UTILITIES

— UT —	— · · · · · —	TELEPHONE
— UE —	— · · · · · —	ELECTRIC
— UC —	— · · · · · —	CABLE (TV)
— UEC —	— · · · · · —	ELECTRIC+CABLE
— UET —	— · · · · · —	ELECTRIC+TELEPHONE
— UCT —	— · · · · · —	CABLE+TELEPHONE
— UECT —	— · · · · · —	ELECTRIC+CABLE+TELEP.
— G —	— · · · · · —	GAS LINE
— W —	— · · · · · —	WATER LINE
— S —	— · · · · · —	SANITARY SEWER (SEPTIC)

ABOVE GROUND UTILITIES (AERIAL)

— T —	— · · · · · —	TELEPHONE
— E —	— · · · · · —	ELECTRIC
— C —	— · · · · · —	CABLE (TV)
— EC —	— · · · · · —	ELECTRIC+CABLE
— ET —	— · · · · · —	ELECTRIC+TELEPHONE
— AER E&T —	— · · · · · —	ELECTRIC+TELEPHONE
— CT —	— · · · · · —	CABLE+TELEPHONE
— ECT —	— · · · · · —	ELECTRIC+CABLE+TELEP.
— · · —	— · · · · · —	UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOLOGY

— · · · · · —	CLEAR ZONE
—————	PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

▲ — ▲ — ▲ — ▲	TOP OF CUT SLOPE
○ — ○ — ○ — ○	TOE OF FILL SLOPE
⊗ ⊗ ⊗ ⊗ ⊗	STONE FILL
— · · · · · —	BOTTOM OF DITCH 'L
=====	CULVERT PROPOSED
-----	STRUCTURE SUBSURFACE
PDF — PDF —	PROJECT DEMARCATION FENCE
BF — x — x — BF — x — x —	BARRIER FENCE
xxxxxxxxxxxxxxxxxxxx	TREE PROTECTION ZONE (TPZ)
//////////	STRIPING LINE REMOVAL
~~~~~	SHEET PILES

CONVENTIONAL BOUNDARY SYMBOLOLOGY

BOUNDARY LINES

————— TOWN LINE ———	TOWN BOUNDARY LINE
————— COUNTY LINE ———	COUNTY BOUNDARY LINE
————— STATE LINE ———	STATE BOUNDARY LINE
—— // ——	PROPOSED STATE R.O.W. (LIMITED ACCESS)
—— — — — —	PROPOSED STATE R.O.W.
—— // ——	STATE ROW (LIMITED ACCESS)
—— — — — —	STATE ROW
—— — — — —	TOWN ROW
— · · · · · —	PERMANENT EASEMENT LINE (P)
— · · · · · —	TEMPORARY EASEMENT LINE (T)
+ — + — + — + — + —	SURVEY LINE
· — · — · — ·	PROPERTY LINE (P/L)
▲ — SR — ○ — SR — ▲ — SR — ○	SLOPE RIGHTS
6f ————— 6f ———	6F PROPERTY BOUNDARY
4f ————— 4f ———	4F PROPERTY BOUNDARY
HAZ ————— HAZ ———	HAZARDOUS WASTE

EPSC LAYOUT PLAN SYMBOLOLOGY

EPSC MEASURES

ONNOONNOONNO	FILTER CURTAIN
▣ — ▣ — ▣ — ▣	SILT FENCE
▣ — x — ▣ — x — ▣	SILT FENCE WOVEN WIRE
▶ — ▶ — ▶ —	CHECK DAM
▣	DISTURBED AREAS REQUIRING RE-VEGETATION
⊗	EROSION MATTING

ENVIRONMENTAL RESOURCES

▼ ————— ▼	WETLAND BOUNDARY
— · · · · · —	RIPARIAN BUFFER ZONE
-----	WETLAND BUFFER ZONE
— · · · · · —	SOIL TYPE BOUNDARY
—————	THREATENED & ENDANGERED SPECIES
HAZ — HAZ —	HAZARDOUS WASTE AREA
— · —	AGRICULTURAL LAND
— - —	FISH & WILDLIFE HABITAT
— - —	FLOOD PLAIN
— ~ — ~ —	ORDINARY HIGH WATER (OHW)
— ● — ● — ● —	STORM WATER
— - - - -	USDA FOREST SERVICE LANDS
— · · — · · —	WILDLIFE HABITAT SUIT/CONN

ARCHEOLOGICAL & HISTORIC

— · —	ARCHEOLOGICAL BOUNDARY
— - —	HISTORIC DISTRICT BOUNDARY
— · —	HISTORIC AREA
Ⓜ	HISTORIC STRUCTURE

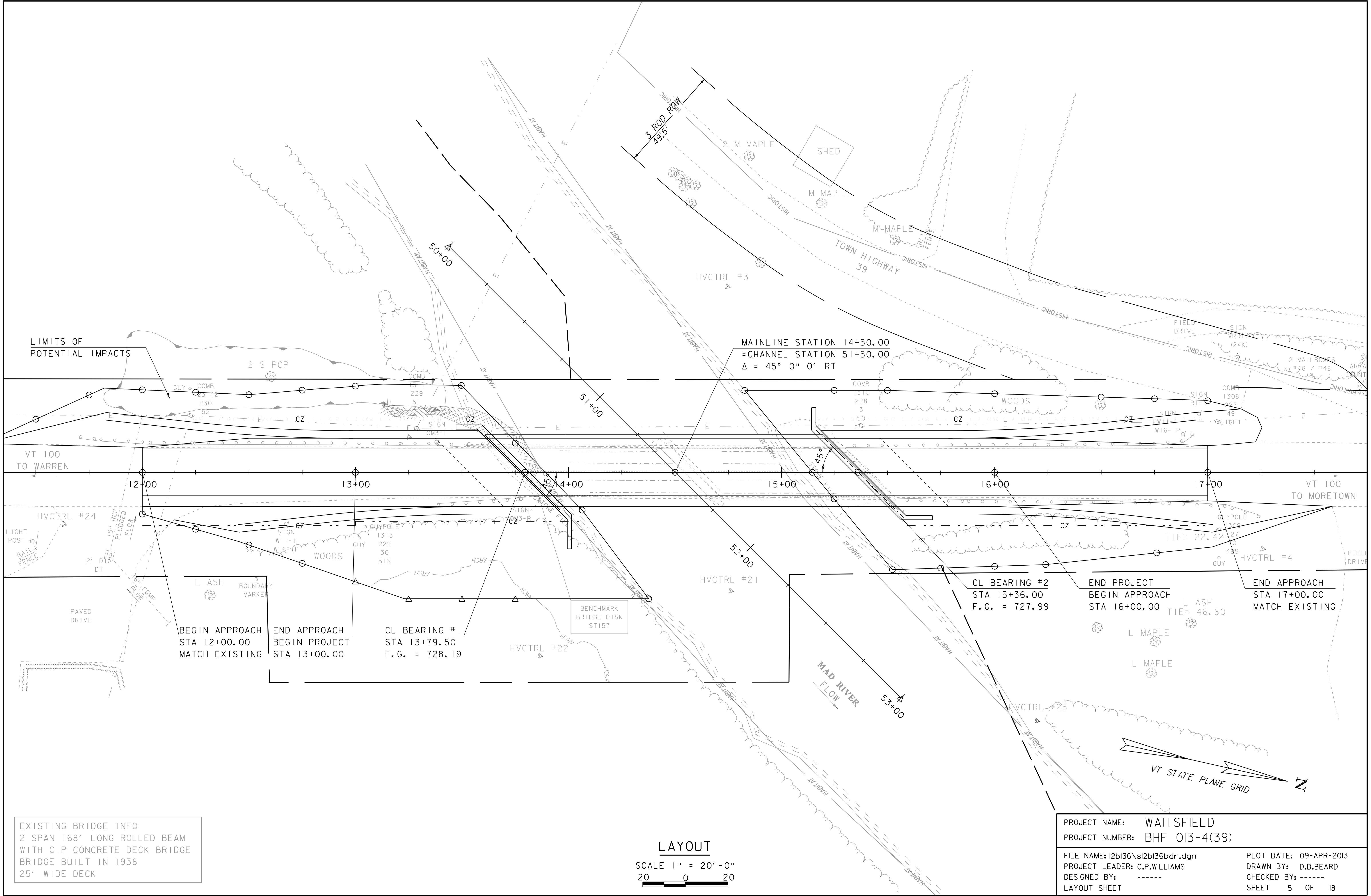
CONVENTIONAL TOPOGRAPHIC SYMBOLOLOGY

EXISTING FEATURES

-----	ROAD EDGE PAVEMENT
-----	ROAD EDGE GRAVEL
-----	DRIVEWAY EDGE
-----	DITCH
—————	FOUNDATION
x — x — x — x — x —	FENCE (EXISTING)
▣ — ▣ — ▣ — ▣ —	FENCE WOOD POST
○ — ○ — ○ — ○ —	FENCE STEEL POST
~~~~~	GARDEN
○ — ○ — ○ — ○ —	ROAD GUARDRAIL
	RAILROAD TRACKS
-----	CULVERT (EXISTING)
○○○○○○○○○○○○○○○○	STONE WALL
-----	WALL
~~~~~	WOOD LINE
~~~~~	BRUSH LINE
~~~~~	HEDGE
==	BODY OF WATER EDGE
	LEDGE EXPOSED

PROJECT NAME:	WAITSFIELD
PROJECT NUMBER:	BHF 013-4(39)
FILE NAME: I2b136/sI2b136excel.dgn	PLOT DATE: 09-APR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: M.LONGSTREET
DESIGNED BY: -----	CHECKED BY: -----
LEGEND SHEET	SHEET 4 OF 18





LIMITS OF  
POTENTIAL IMPACTS

MAINLINE STATION 14+50.00  
= CHANNEL STATION 51+50.00  
 $\Delta = 45^\circ 0'' 0''$  RT

BEGIN APPROACH  
STA 12+00.00  
MATCH EXISTING

END APPROACH  
BEGIN PROJECT  
STA 13+00.00

CL BEARING #1  
STA 13+79.50  
F.G. = 728.19

BENCHMARK  
BRIDGE DISK  
ST157

CL BEARING #2  
STA 15+36.00  
F.G. = 727.99

END PROJECT  
BEGIN APPROACH  
STA 16+00.00

END APPROACH  
STA 17+00.00  
MATCH EXISTING

EXISTING BRIDGE INFO  
2 SPAN 168' LONG ROLLED BEAM  
WITH CIP CONCRETE DECK BRIDGE  
BRIDGE BUILT IN 1938  
25' WIDE DECK

LAYOUT

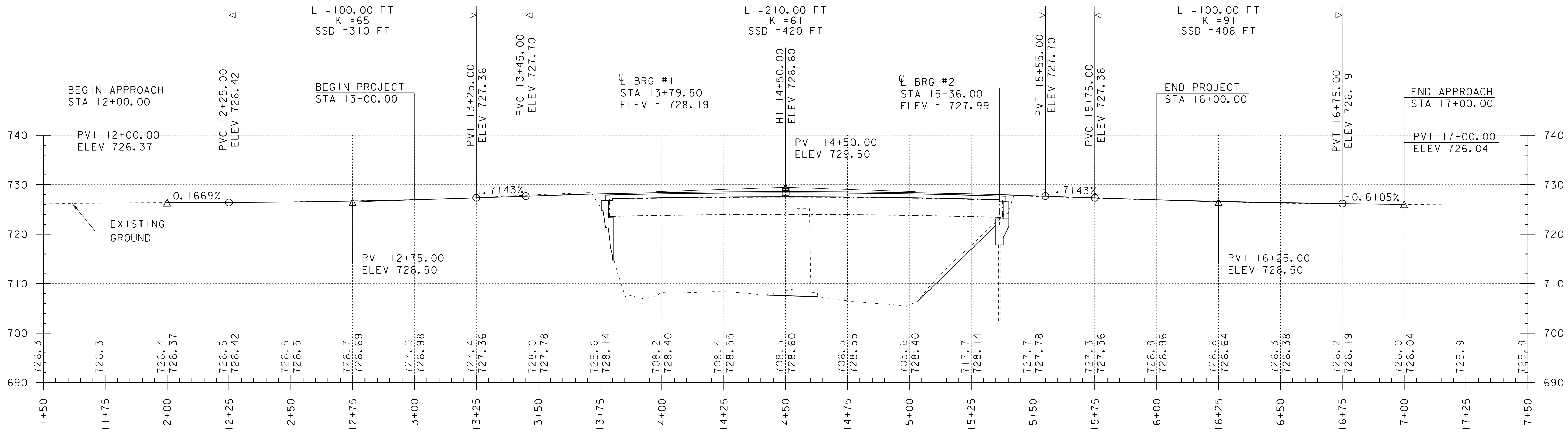
SCALE 1" = 20'-0"  
20 0 20

PROJECT NAME: WAITSFIELD  
PROJECT NUMBER: BHF 013-4(39)

FILE NAME: I2b136\sl2b136bdr.dgn  
PROJECT LEADER: C.P. WILLIAMS  
DESIGNED BY: -----  
LAYOUT SHEET

PLOT DATE: 09-APR-2013  
DRAWN BY: D.D. BEARD  
CHECKED BY: -----  
SHEET 5 OF 18





VT RT 100 PROFILE

SCALE: HORIZONTAL 1"=20'-0"  
VERTICAL 1"=10'-0"

NOTE:

GRADES SHOWN TO THE NEAREST  
TENTH ARE EXISTING GROUND ALONG CL

GRADES SHOWN TO THE NEAREST  
HUNDREDTH ARE FINISH GRADE ALONG CL

PROJECT NAME: WAITSFIELD  
PROJECT NUMBER: BHF 013-4(39)

FILE NAME: I2b136\sl2b136profile.dgn	PLOT DATE: 09-APR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: L.J.STONE	CHECKED BY: L.J.STONE
PROFILE SHEET	SHEET 6 OF 18



SOIL CLASSIFICATION

AASHTO	
A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil - Low Compressibility
A5	Silty Soil - Highly Compressible
A6	Clayey Soil - Low Compressibility
A7	Clayey Soil - Highly Compressible

ROCK QUALITY DESIGNATION

R.Q.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

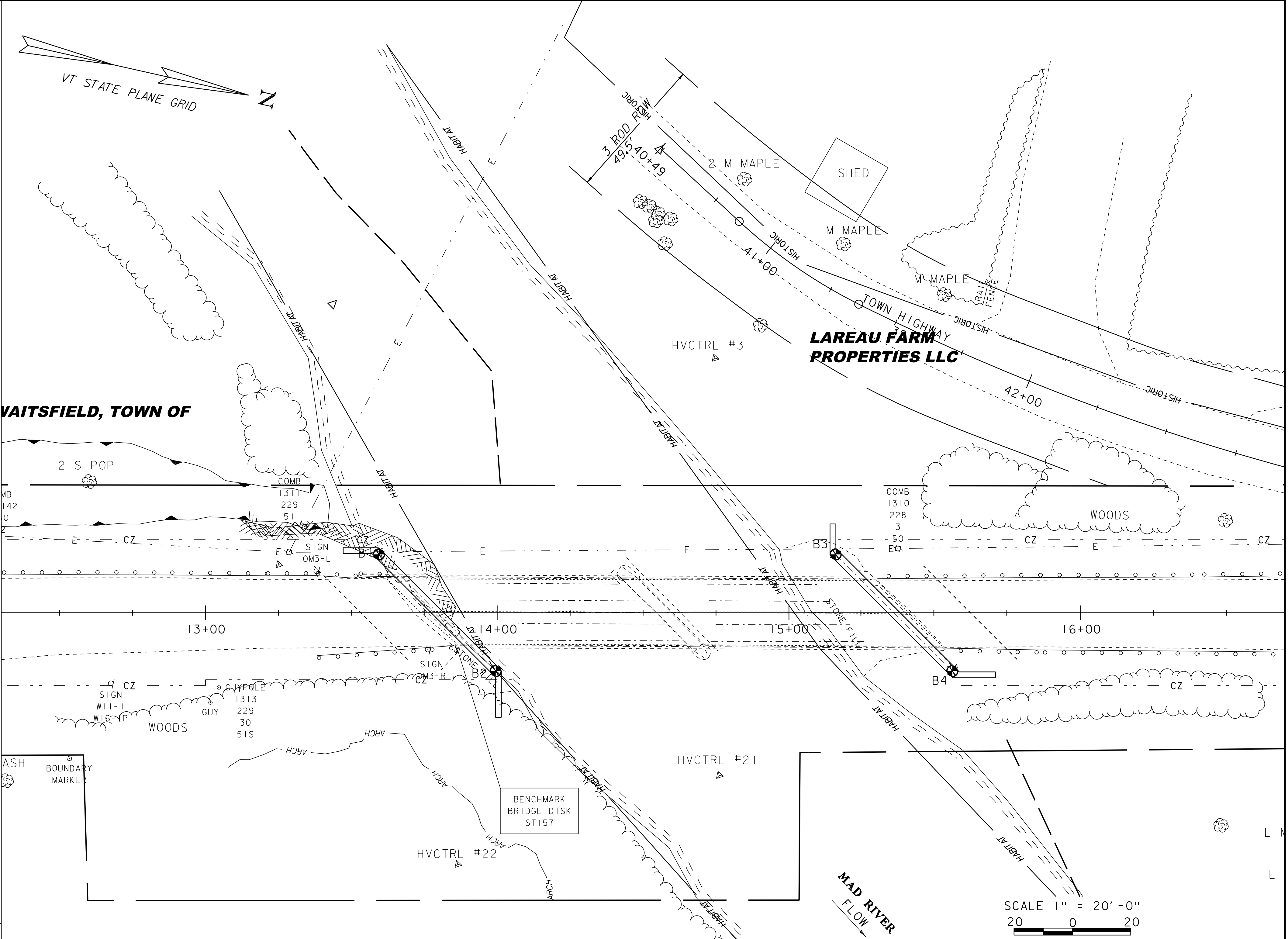
DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

COMMONLY USED SYMBOLS

▼	Water Elevation
⊙	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
○	Sample
N	Standard Penetration Test
	Blow Count Per Foot For:
	2" O.D. Sampler
	1 3/8" I.D. Sampler
	Hammer Weight Of 140 Lbs.
	Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 3/8"
NX	Core Size 2 1/8"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	Top of Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
ROD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)
VTSPG	NAD83 - See Note 7

COLOR

blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gry	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		



BORING CHART

HOLE NO.	SURV. STATION	OFFSET	GROUND ELEV.	ELEV. TLOB
B1	13+59.50	20.0LT		
B2	13+99.50	20.0RT		
B3	15+16.00	20.0LT		
B4	15+56.00	20.0RT		

PROJECT NAME: WAITSFIELD  
PROJECT NUMBER: BHF 013-4(39)

FILE NAME: I2b136/s12b136boring  
PROJECT LEADER: C.P.WILLIAMS  
DESIGNED BY: L.J.STONE  
BORING INFORMATION SHEET

PLOT DATE: 09-APR-2013  
DRAWN BY: D.D.BEARD  
CHECKED BY: -----  
SHEET 7 OF 18

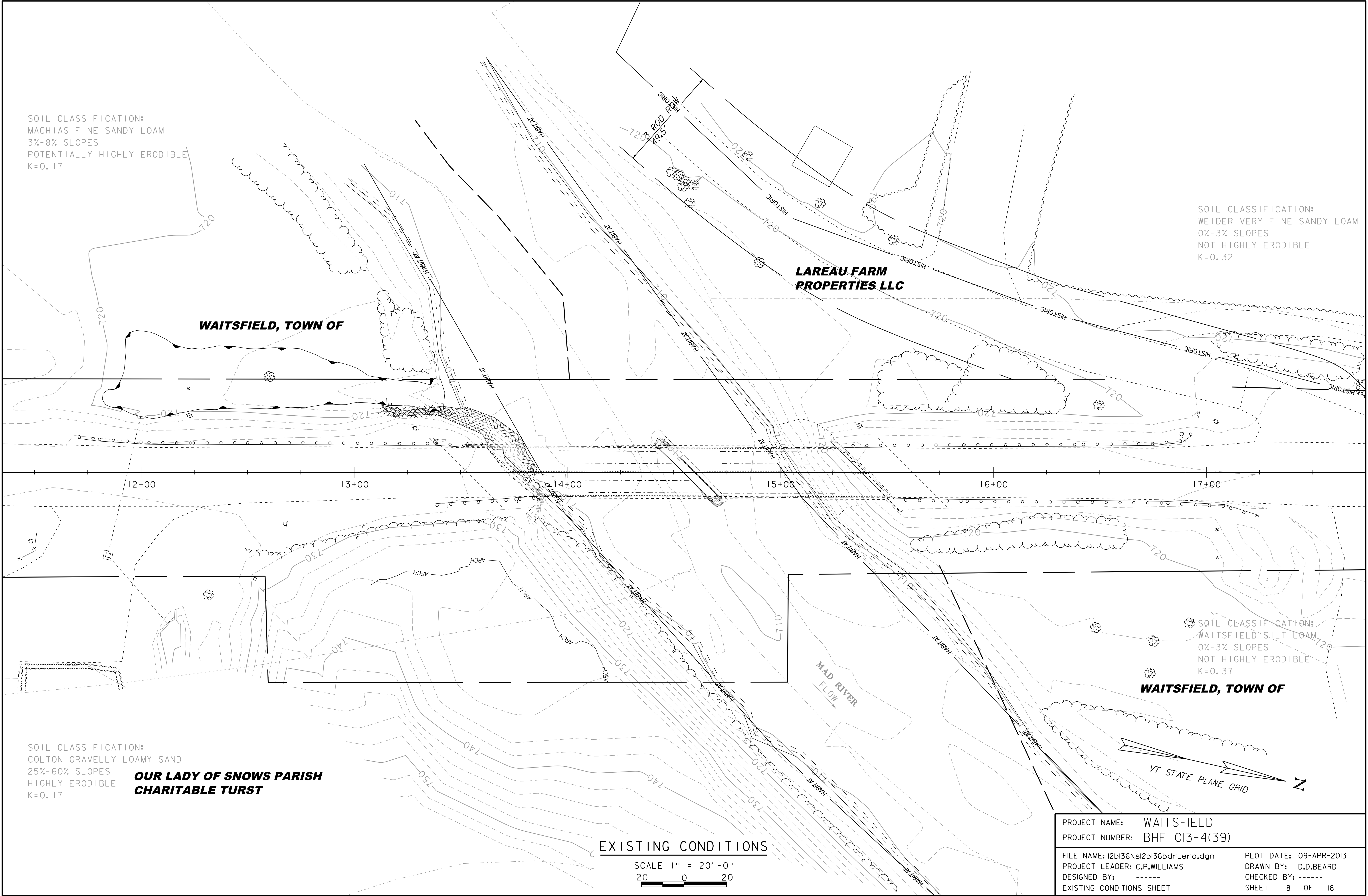
GENERAL NOTES

- The subsurface explorations shown herein were made between ----- and ----- by the Agency.
- Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
- Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
- Engineering judgment was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgment by the Contractor.
- Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
- Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.
- Northing and Easting coordinates are shown in Vermont State Plane Grid North American Datum 1983 in meters and survey feet.

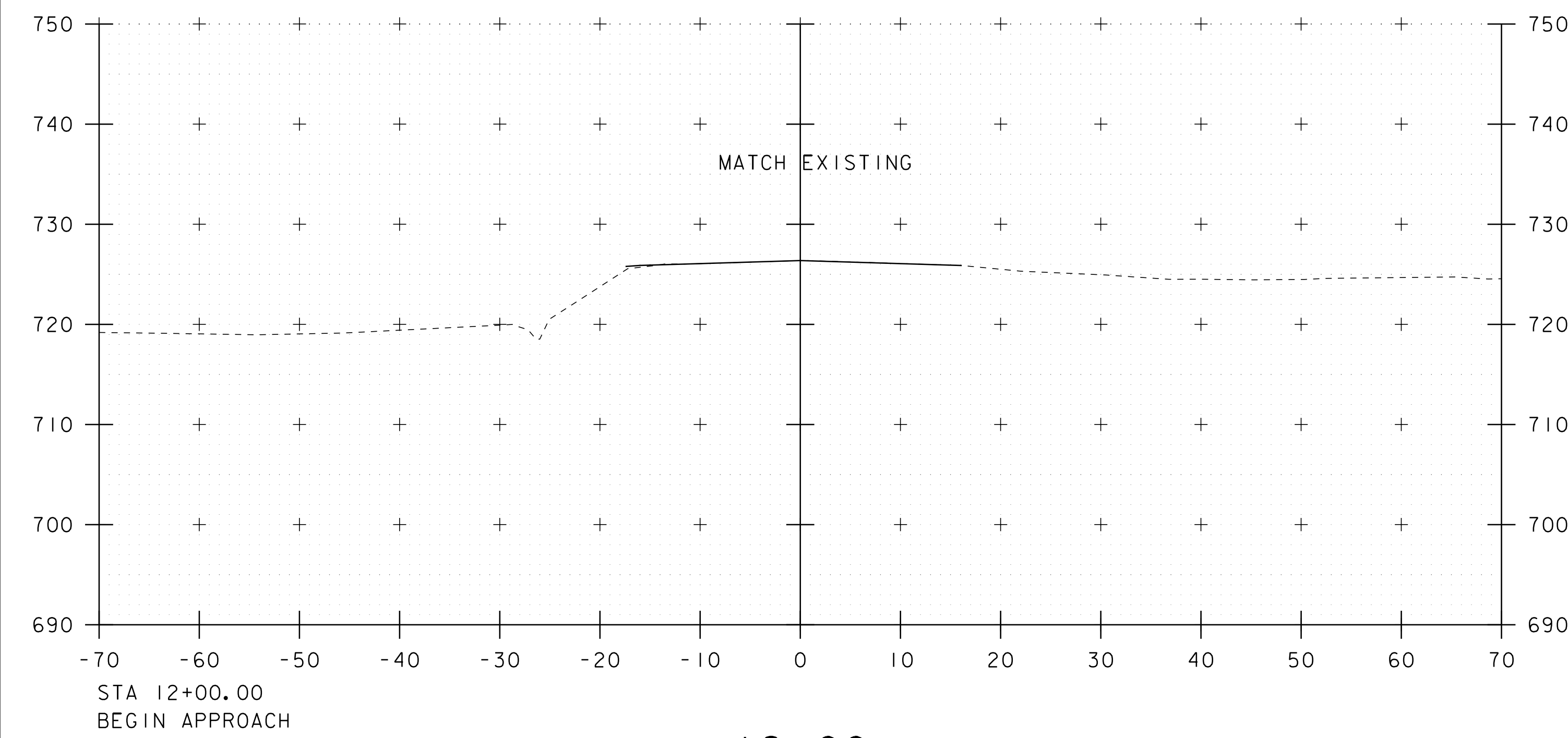
DEFINITIONS (AASHTO)

- BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.
- BOULDER - A rock fragment with an average dimension > 12 inches.
- COBBLE - Rock fragments with an average dimension between 3 and 12 inches.
- GRAVEL - Rounded particles of rock < 3" and > 0.075" (#10 sieve).
- SAND - Particles of rock < 0.075" (#10 sieve) and > 0.0025" (#200 sieve).
- SILT - Soil < 0.0025" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.
- CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.
- VARVED - Alternate layers of silt and clay.
- HARDPAN - Extremely dense soil, cemented layer, not softened when wet.
- MUCK - Soft organic soil (containing > 10% organic material).
- MOISTURE CONTENT - Weight of water divided by dry weight of soil.
- FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.
- STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.
- DIP - Inclination of bed with a horizontal plane.

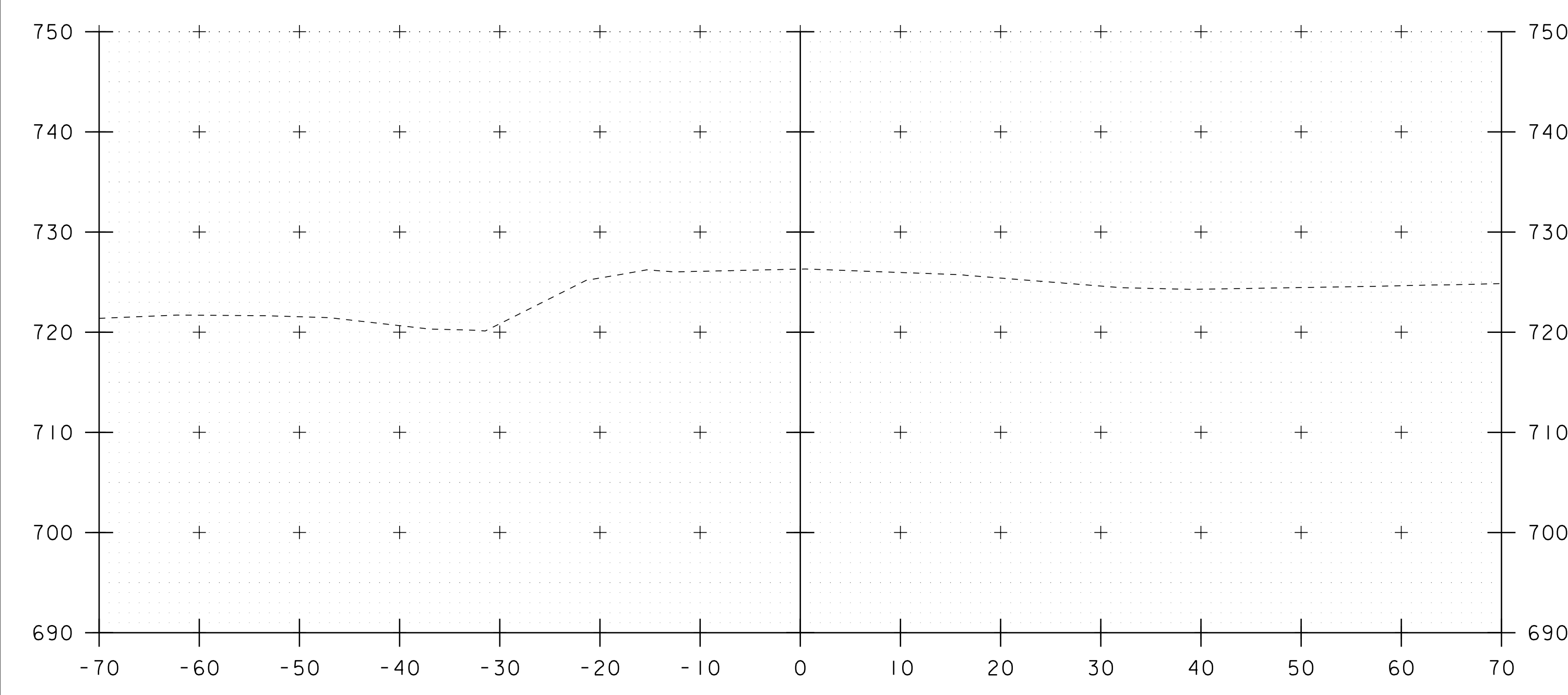




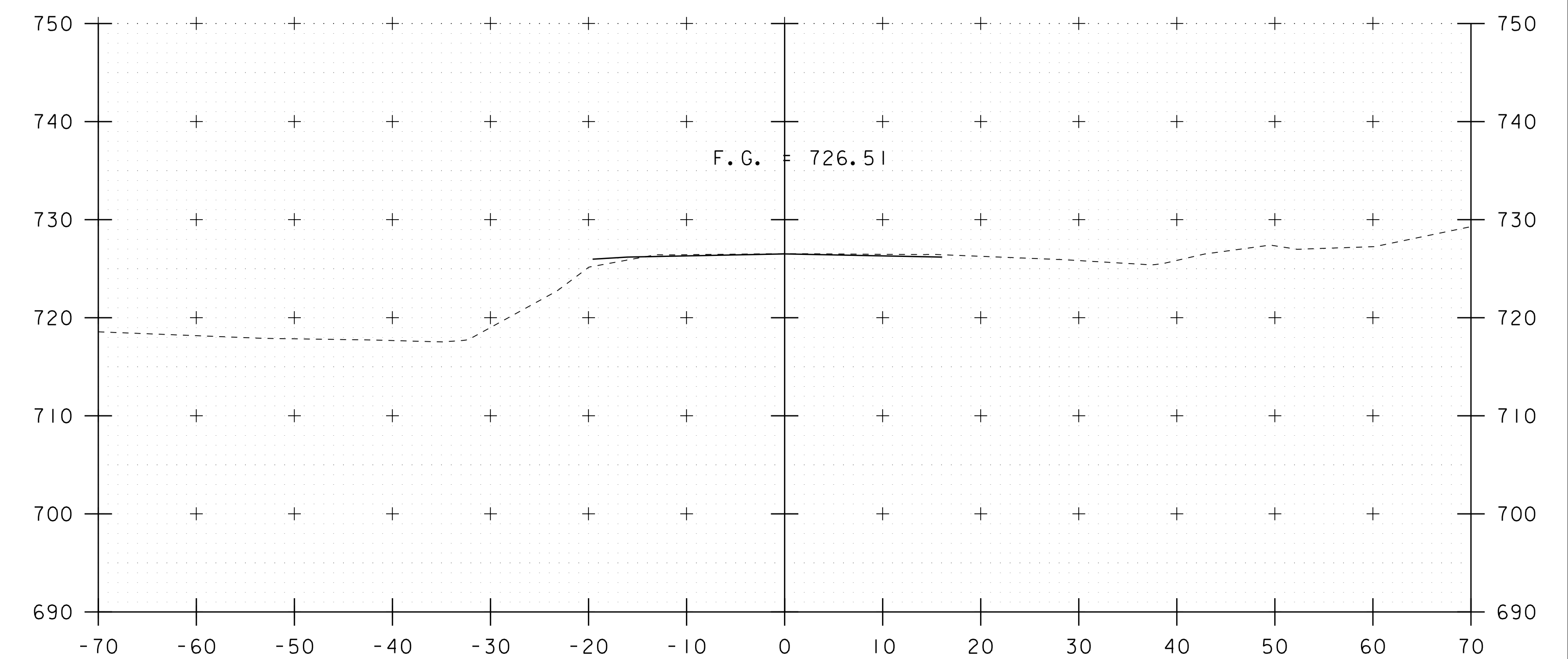




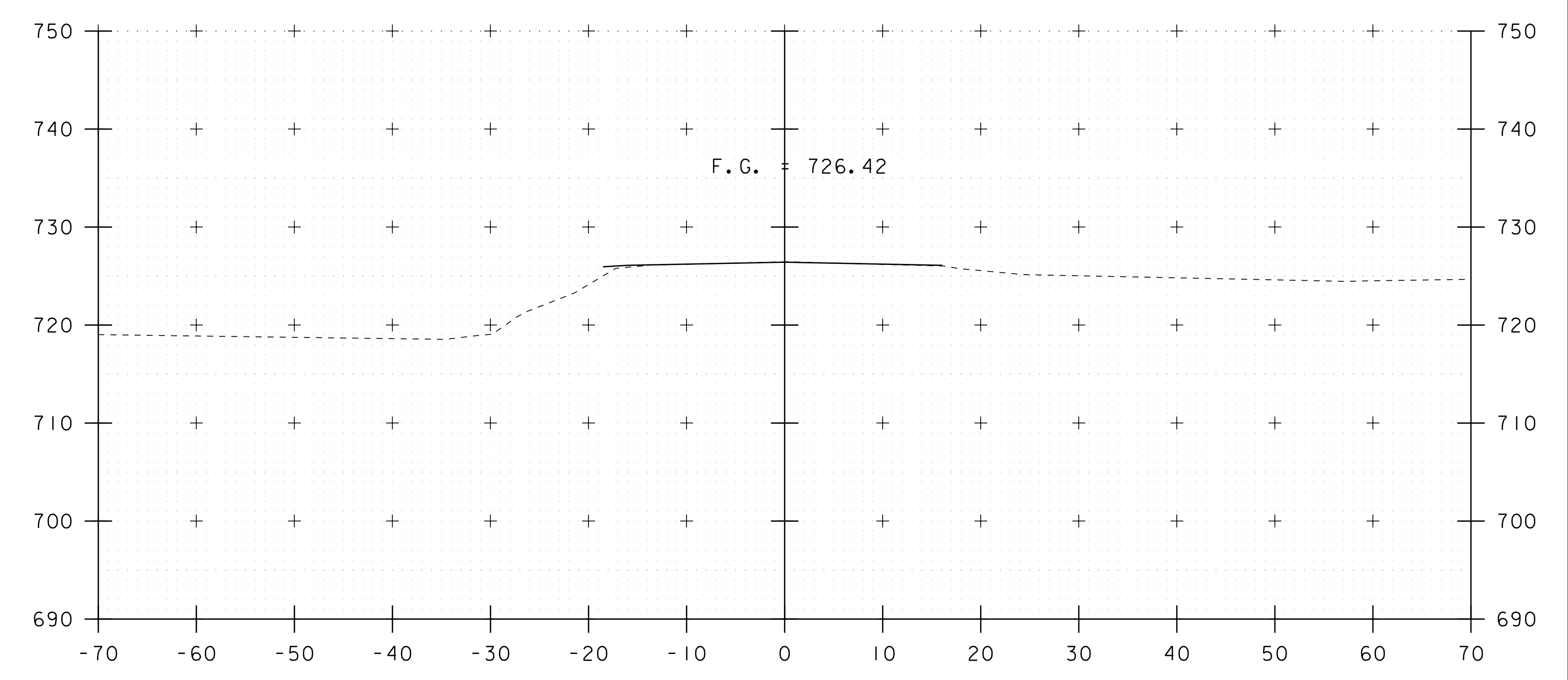
12+00



11+75



12+50

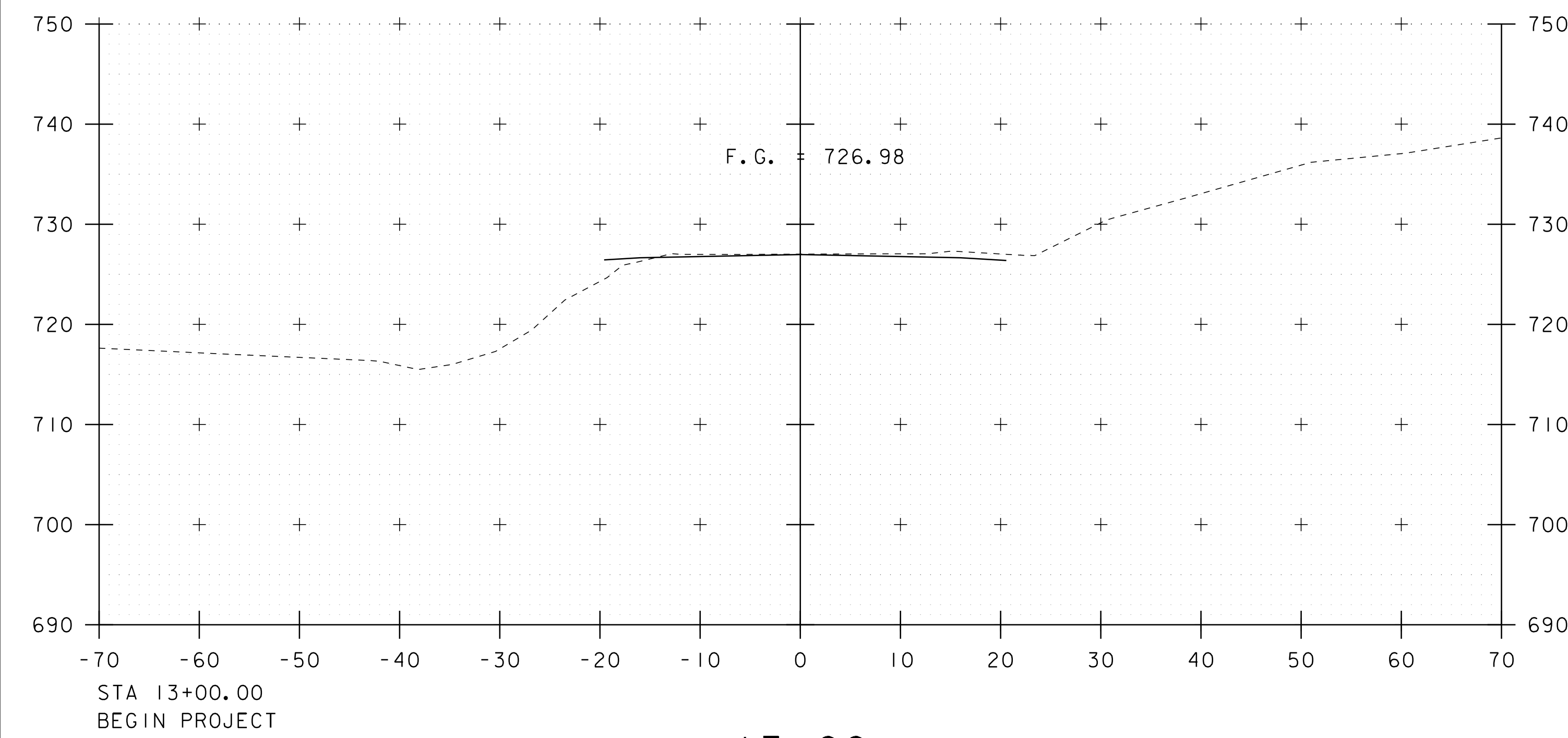


12+25

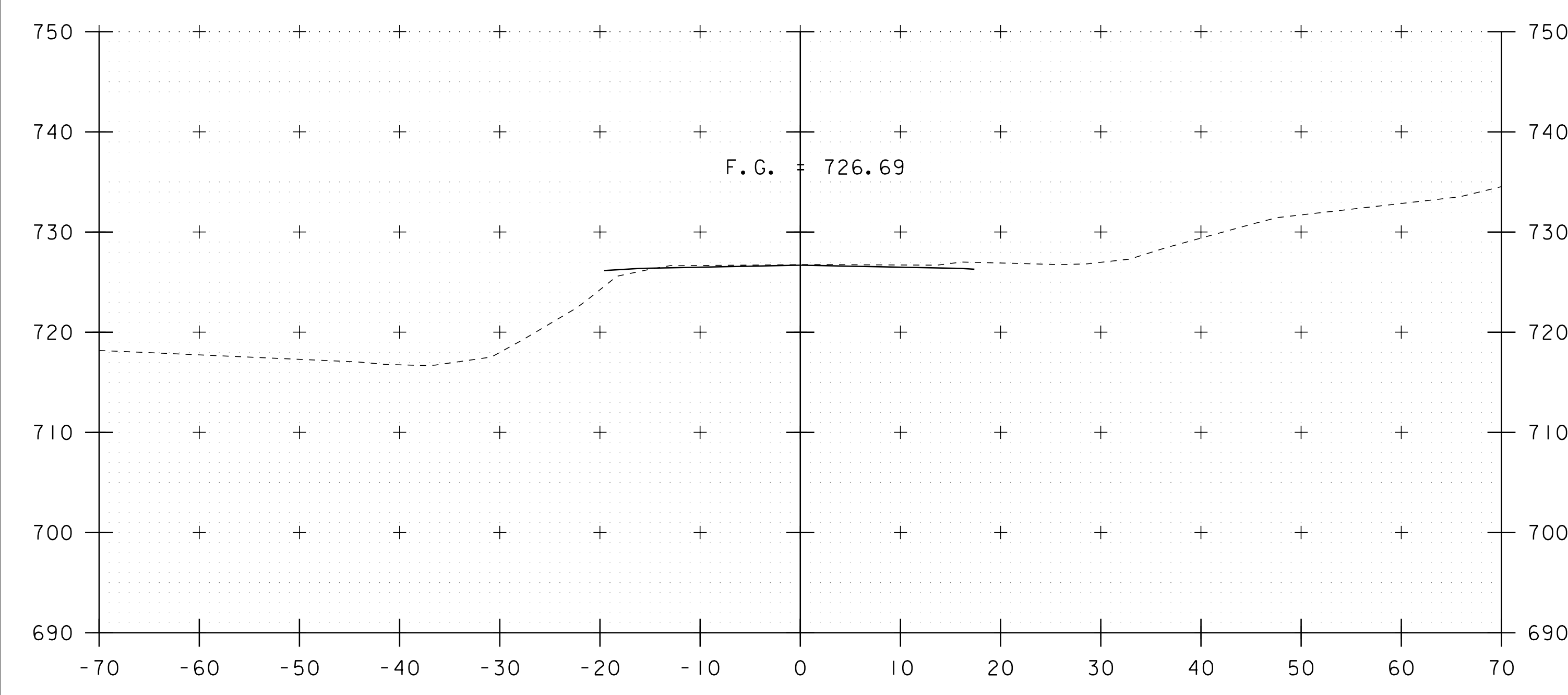
STA. 11+75 TO STA. 12+50

PROJECT NAME: WAITSFIELD	
PROJECT NUMBER: BHF 013-4(39)	
FILE NAME: I2b136\sl2b136xsl.dgn	PLOT DATE: 09-APR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: -----	CHECKED BY: -----
MAINLINE CROSS SECTIONS 1	SHEET 9 OF 18

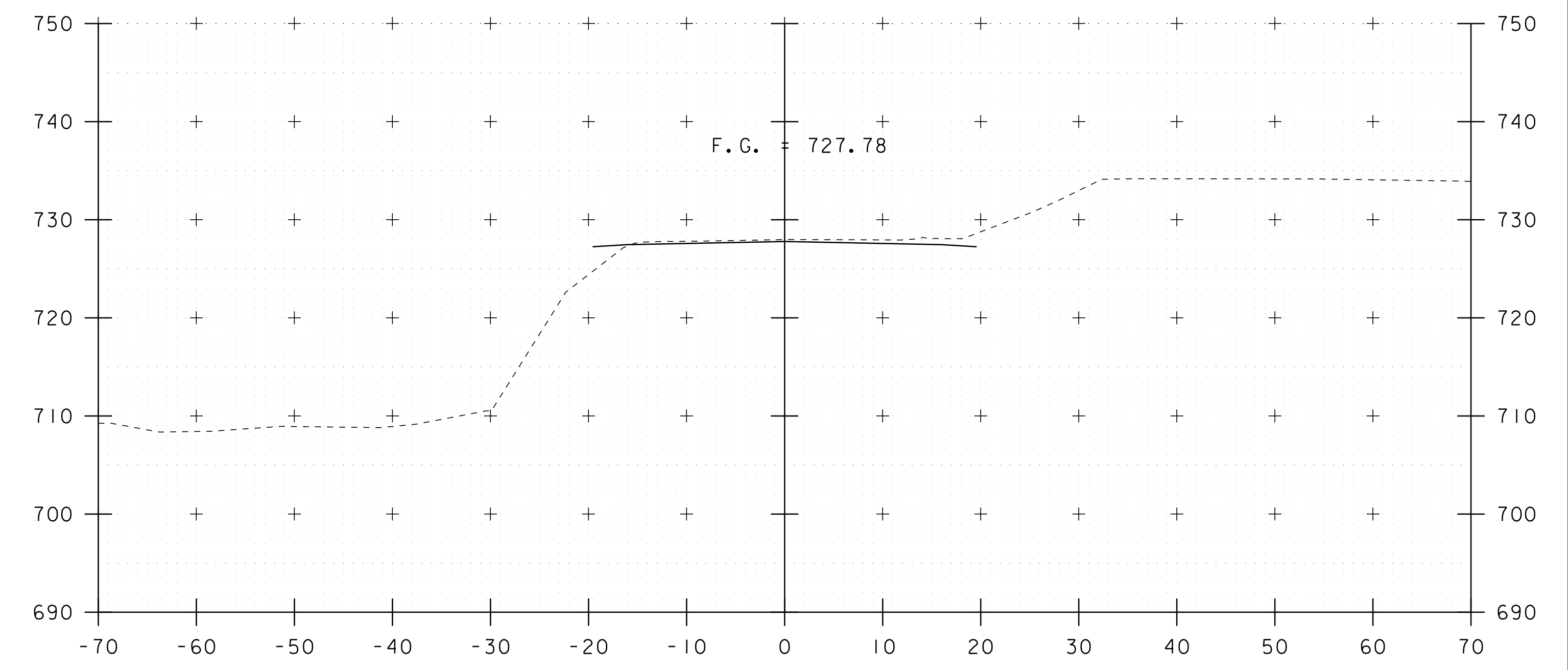




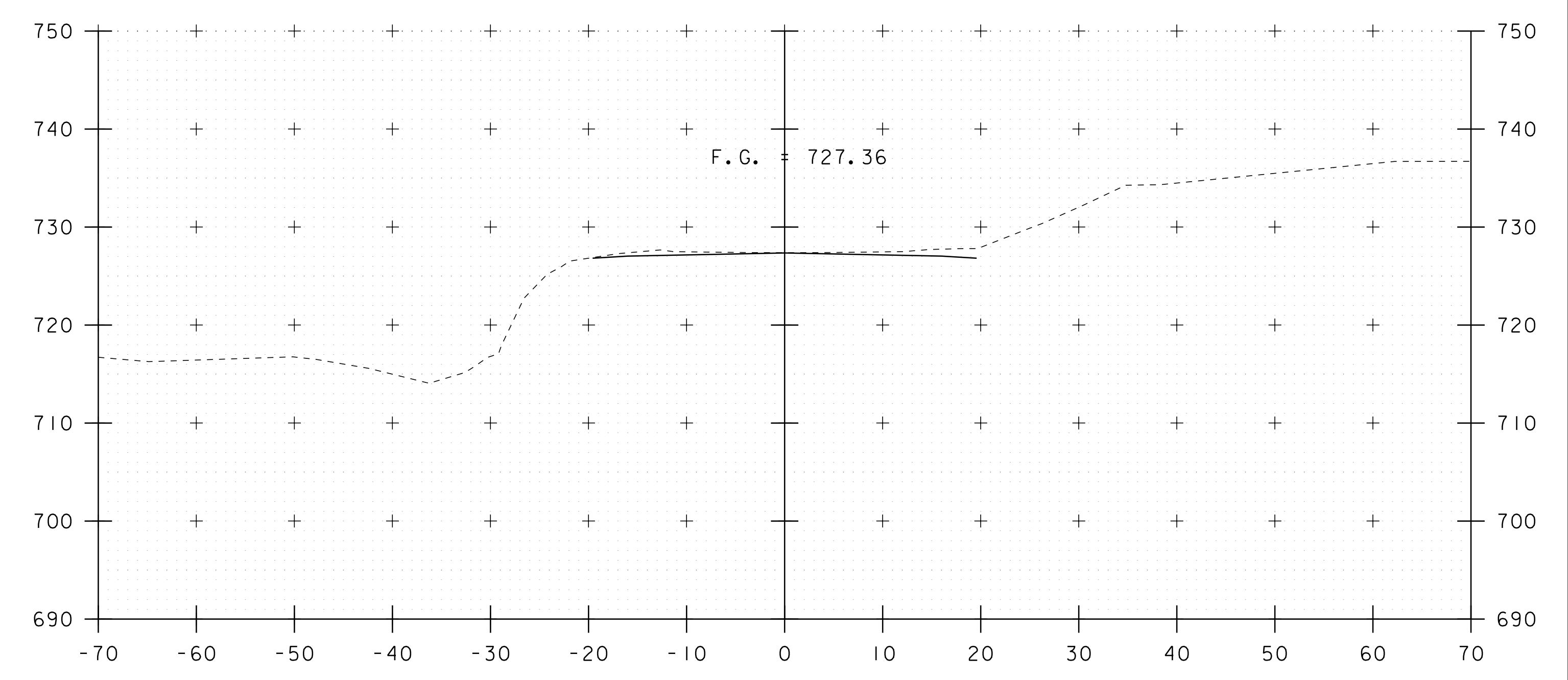
13+00



12+75



13+50

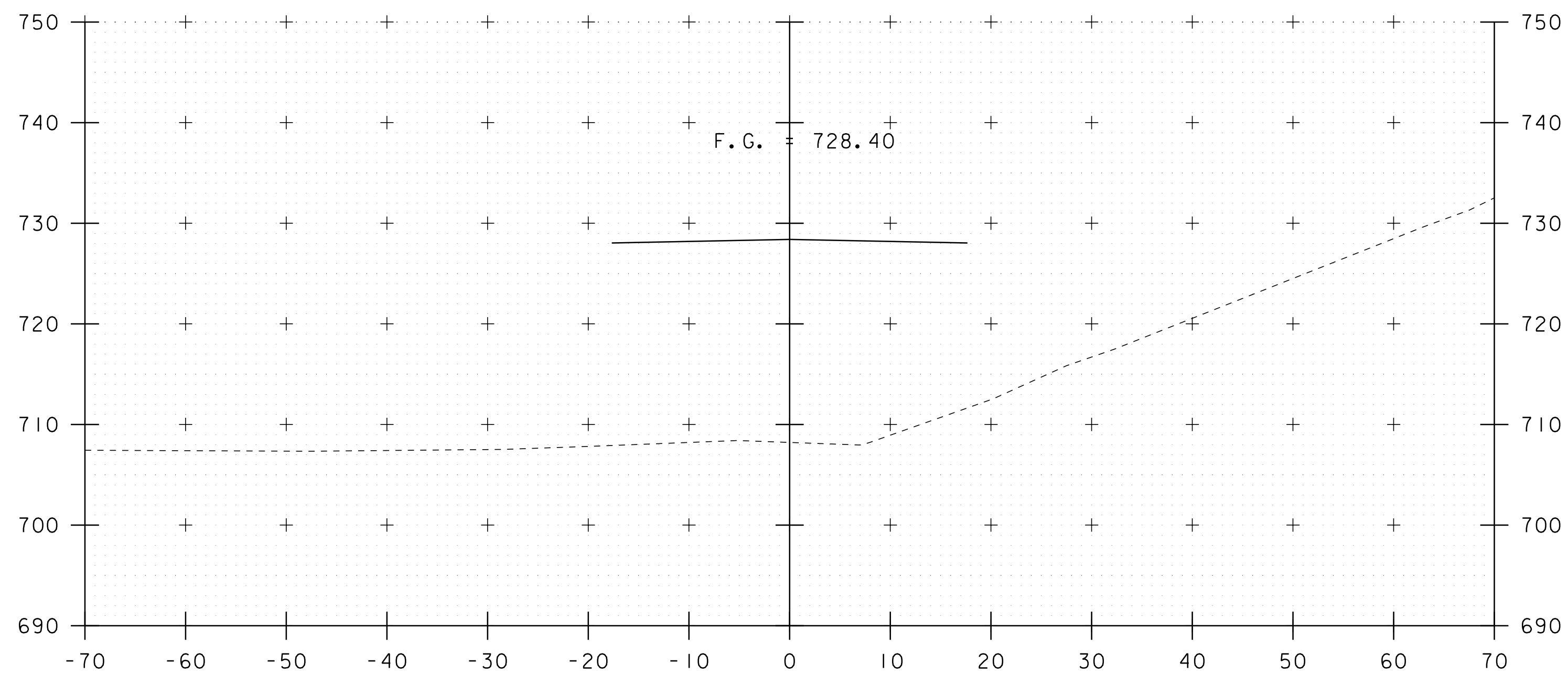


13+25

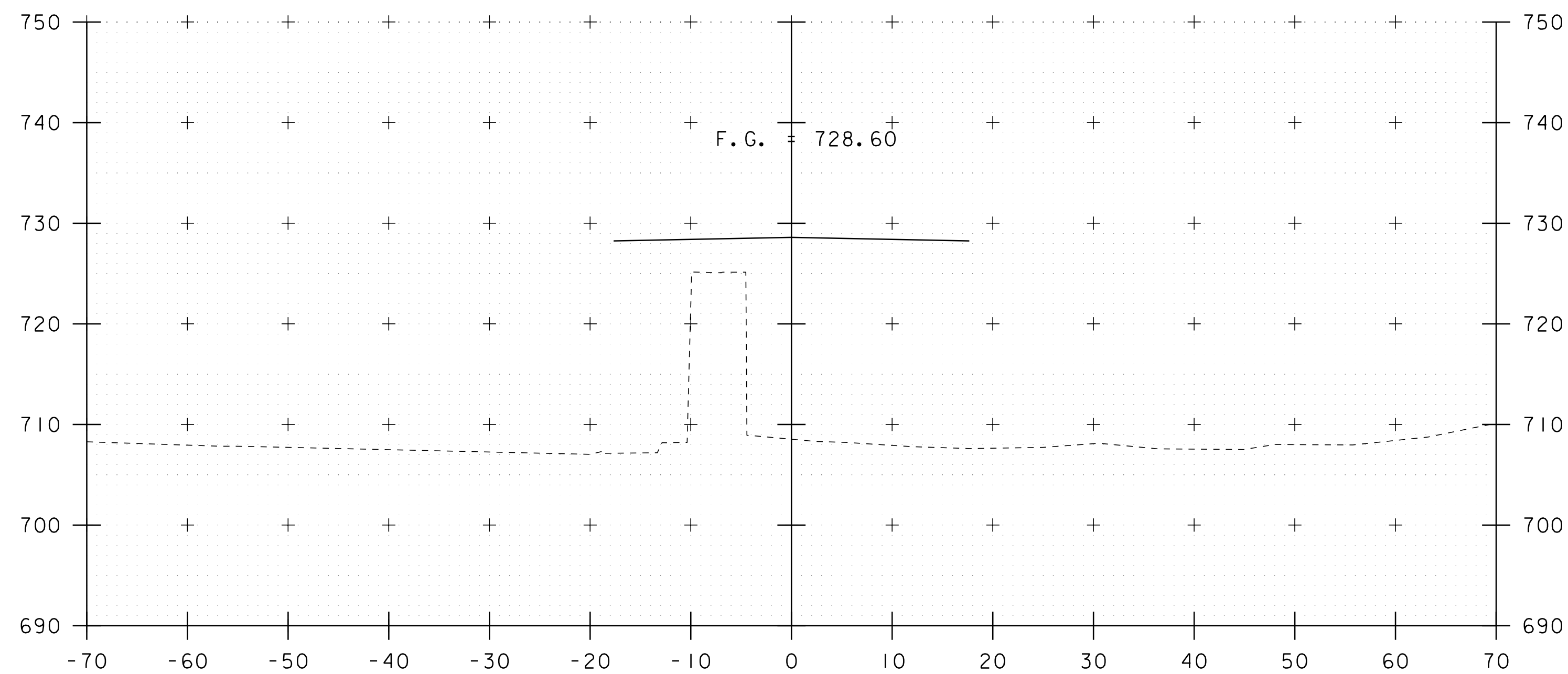
STA. 12+75 TO STA. 13+50

PROJECT NAME: WAITSFIELD	
PROJECT NUMBER: BHF 013-4(39)	
FILE NAME: I2b136\sl2b136xsl.dgn	PLOT DATE: 09-APR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: -----	CHECKED BY: -----
MAINLINE CROSS SECTIONS 2	SHEET 10 OF 18

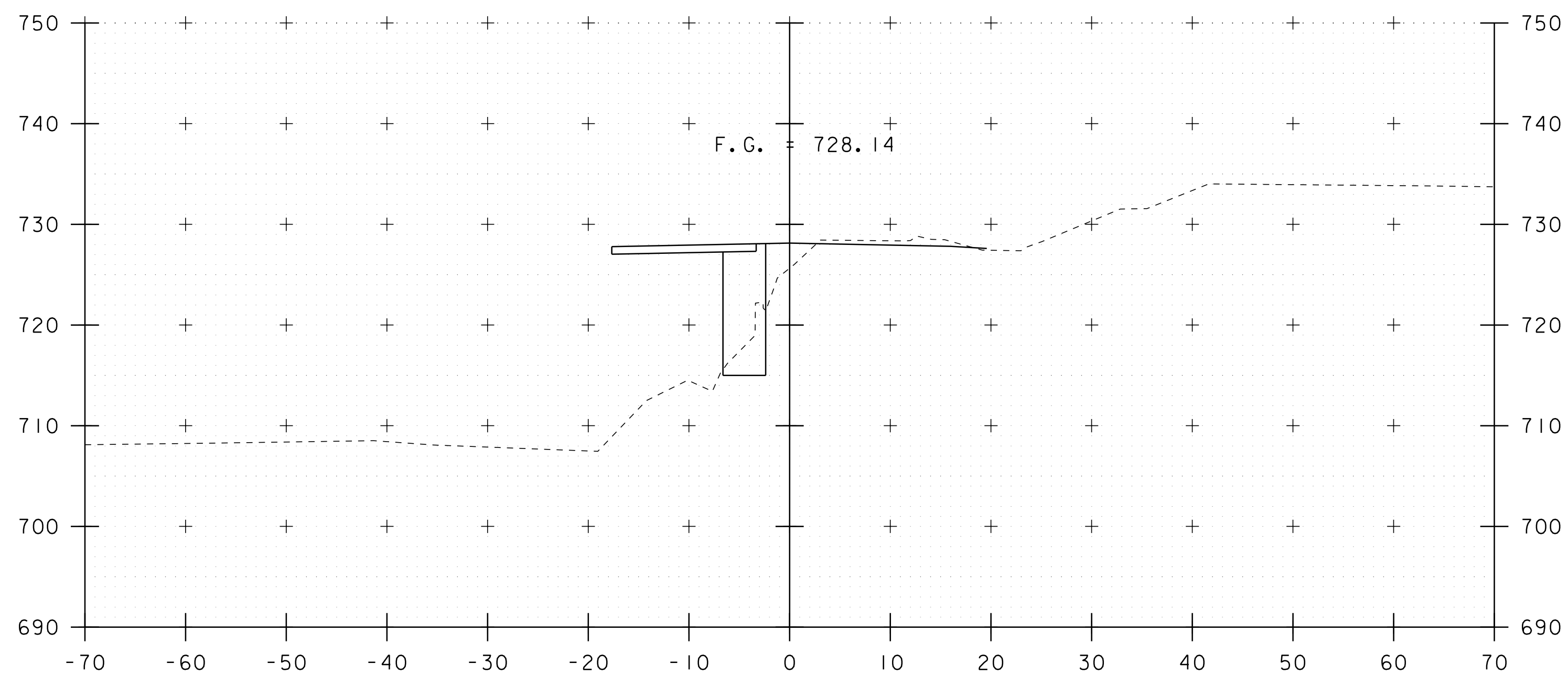




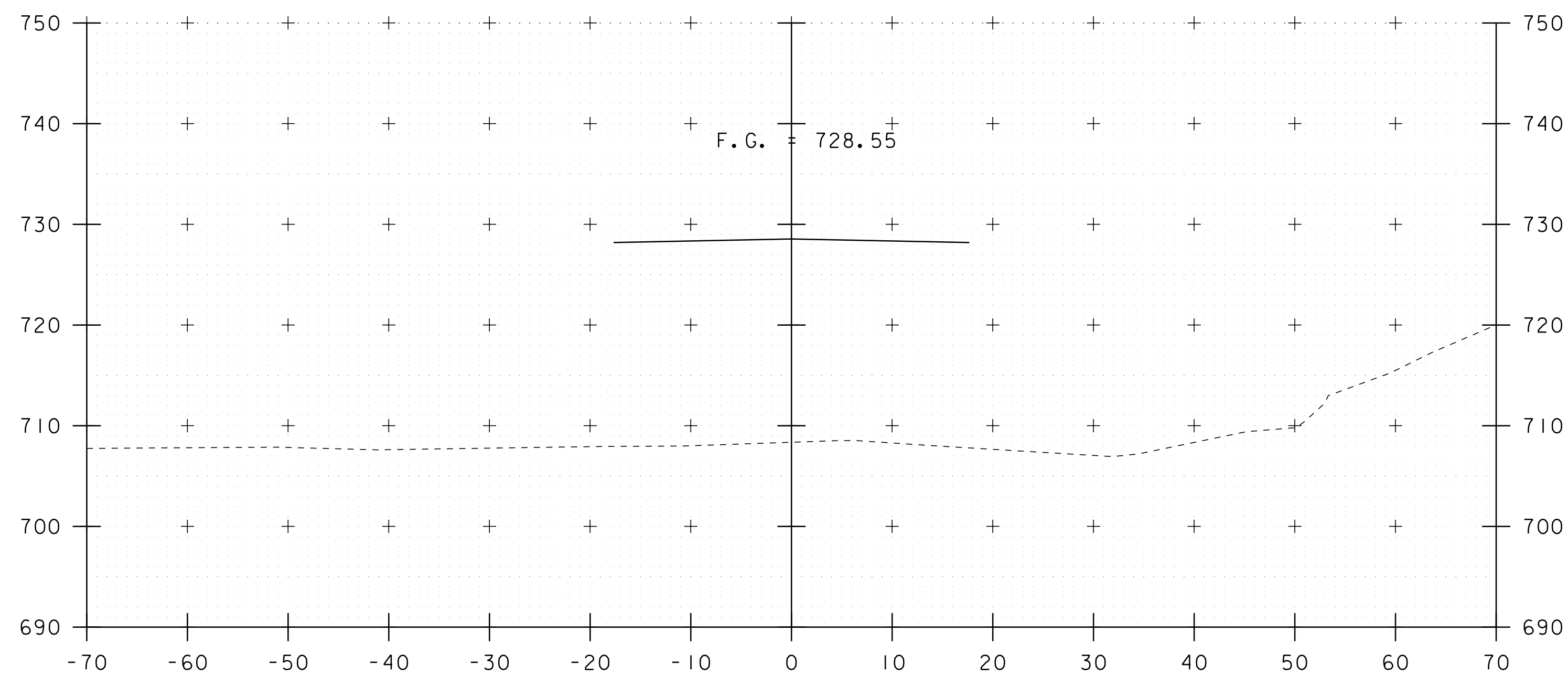
14+00



14+50



13+75



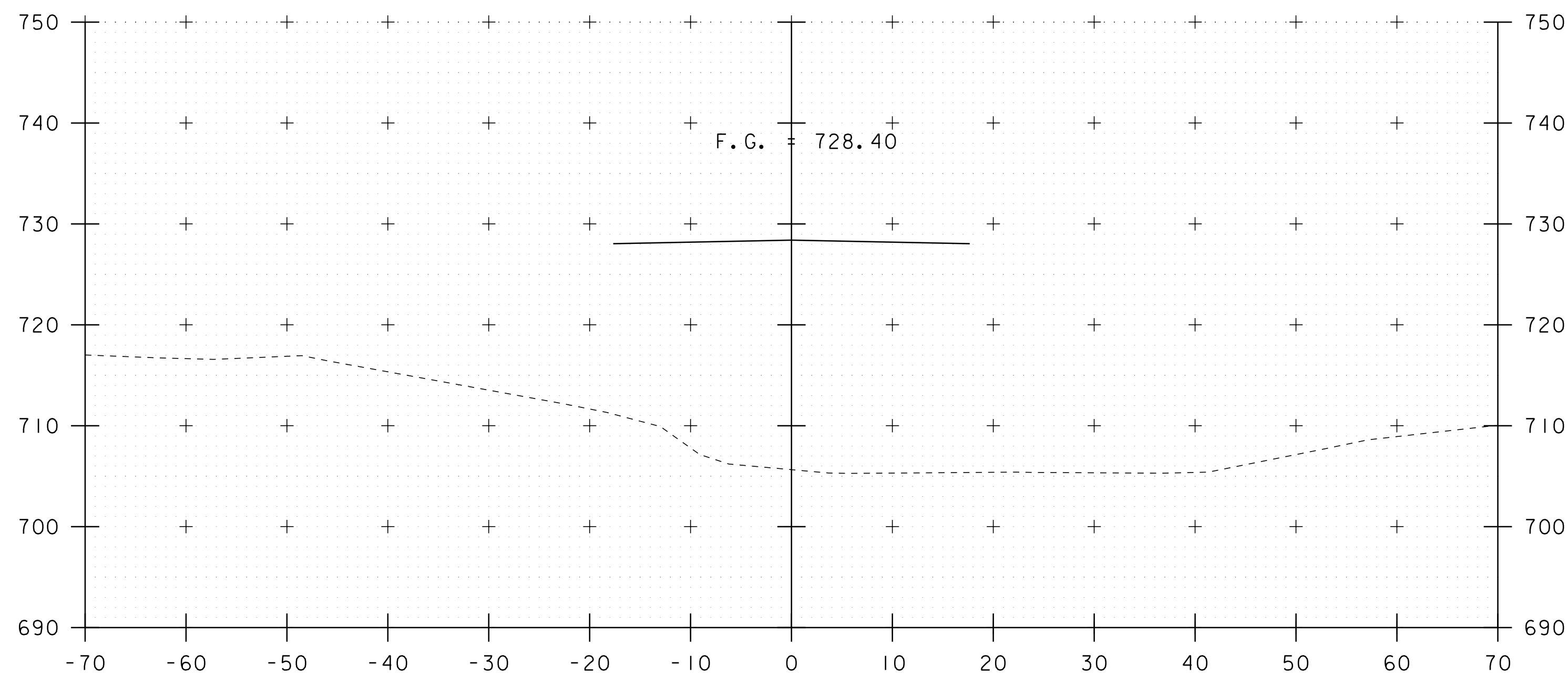
14+25

STA 13+79.50  
CL BEARING #1

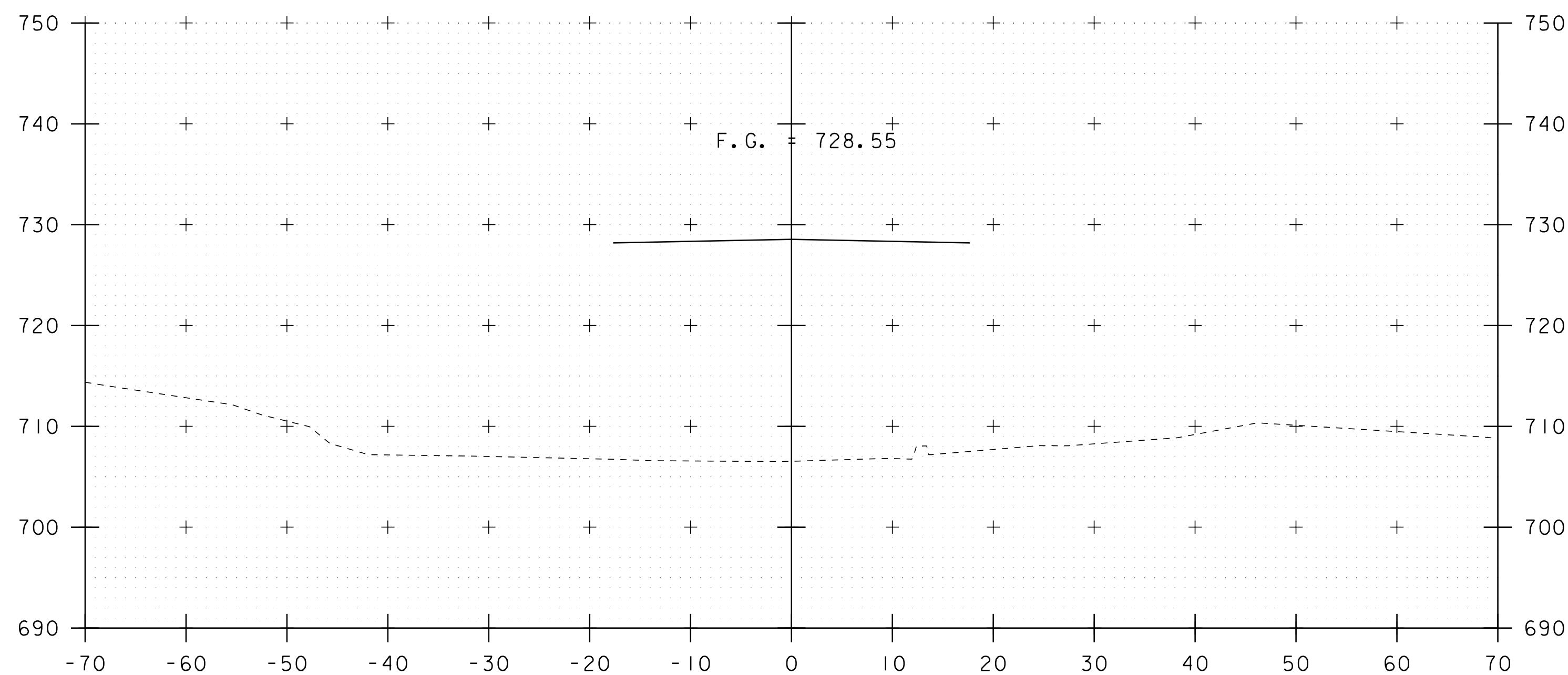
STA. 13+75 TO STA. 14+50

PROJECT NAME: WAITSFIELD	
PROJECT NUMBER: BHF 013-4(39)	
FILE NAME: I2b136\sl2b136xsl.dgn	PLOT DATE: 09-APR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: -----	CHECKED BY: -----
MAINLINE CROSS SECTIONS 3	SHEET II OF 18

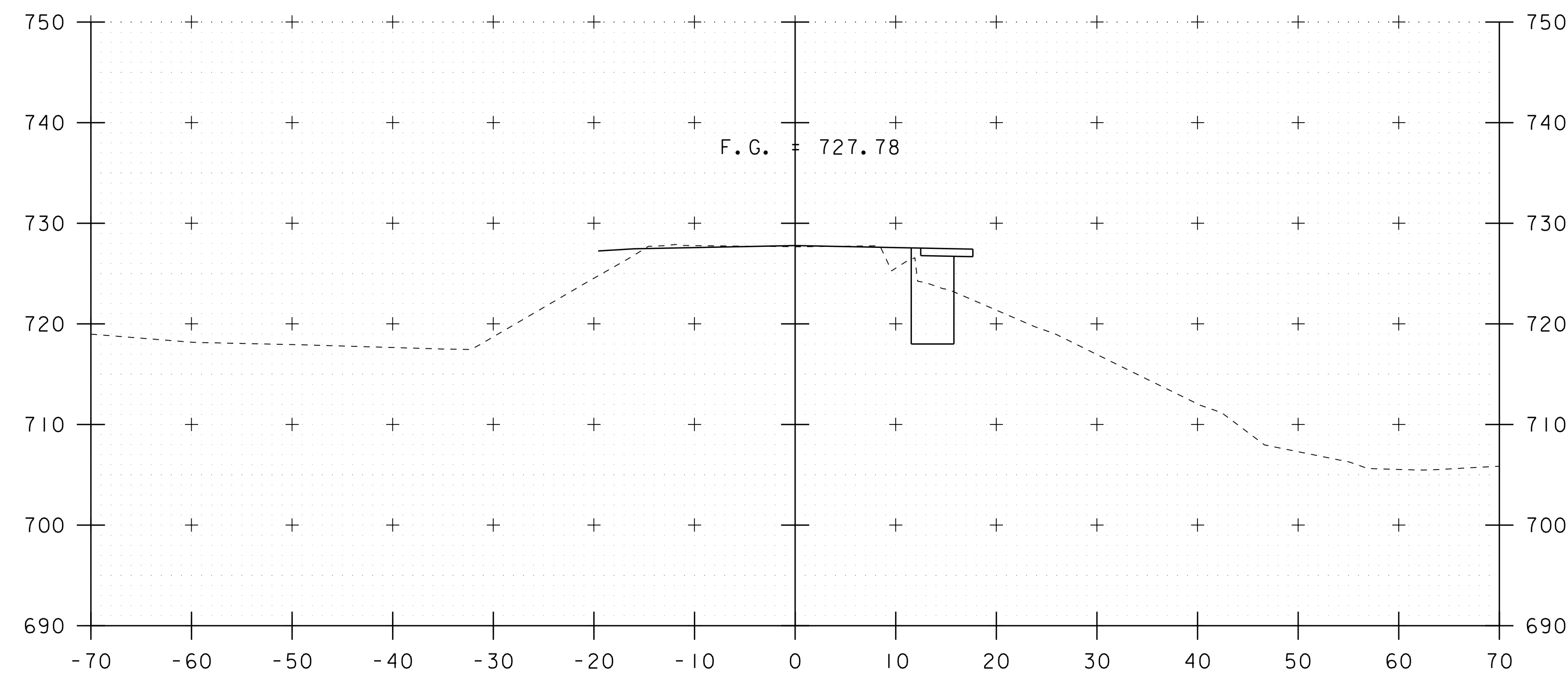




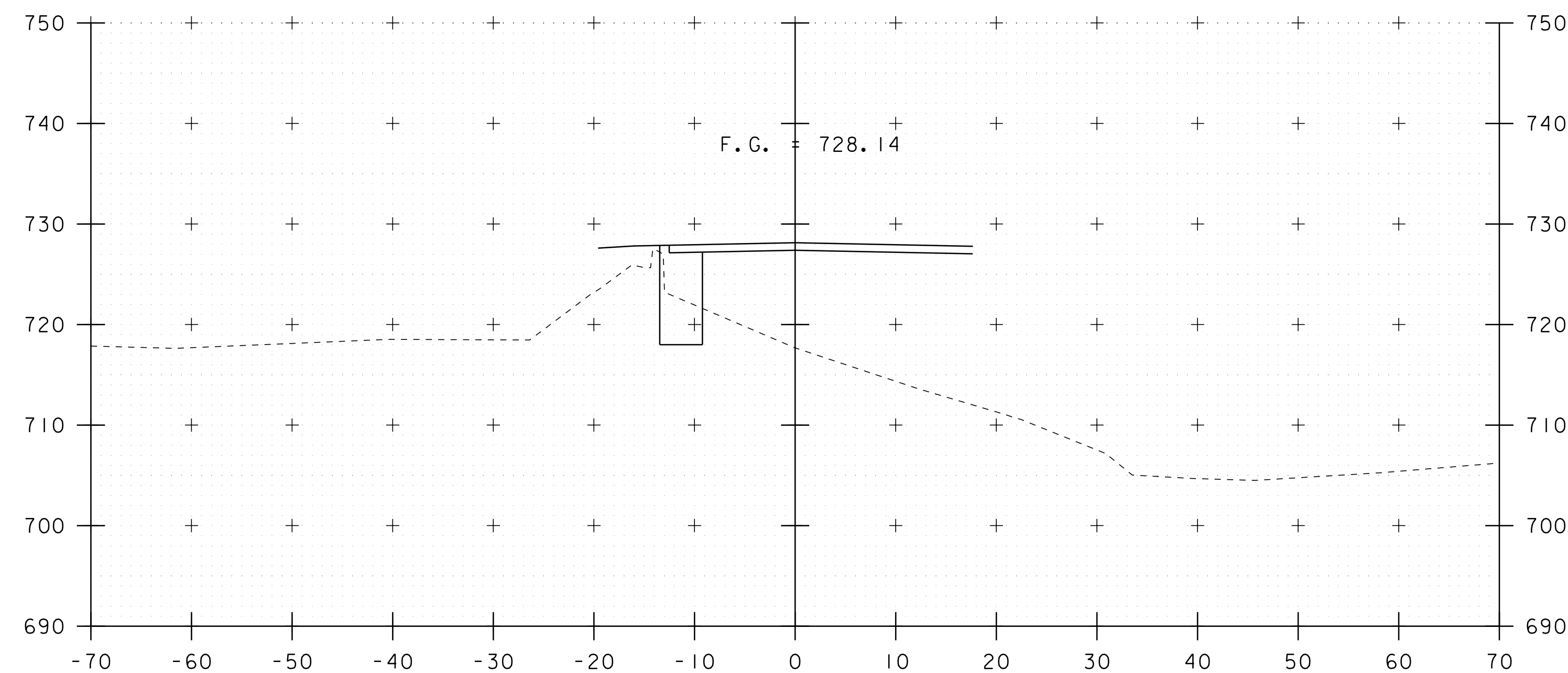
15+00



14+75



15+50



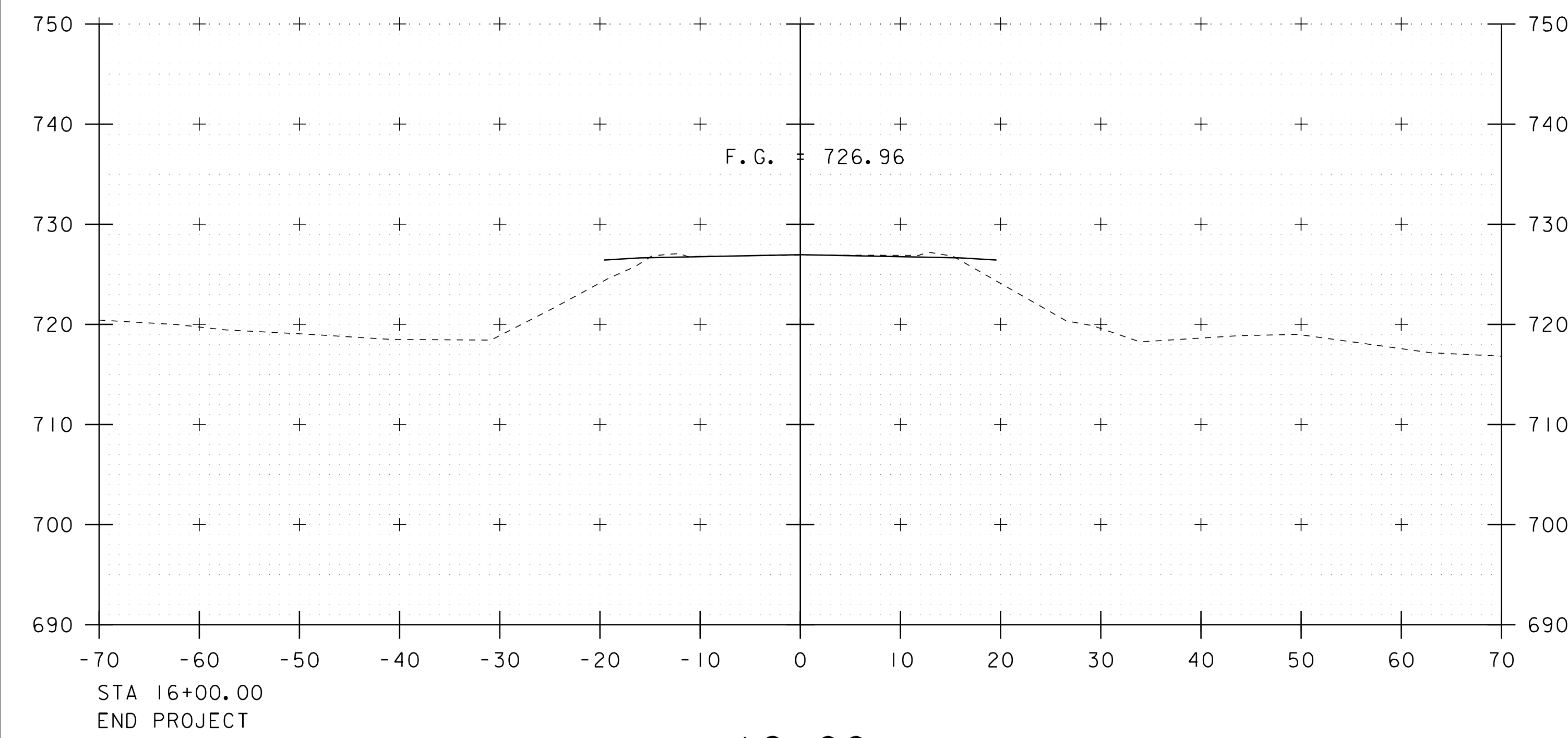
15+25

STA 15+36.00  
CL BEARING #2

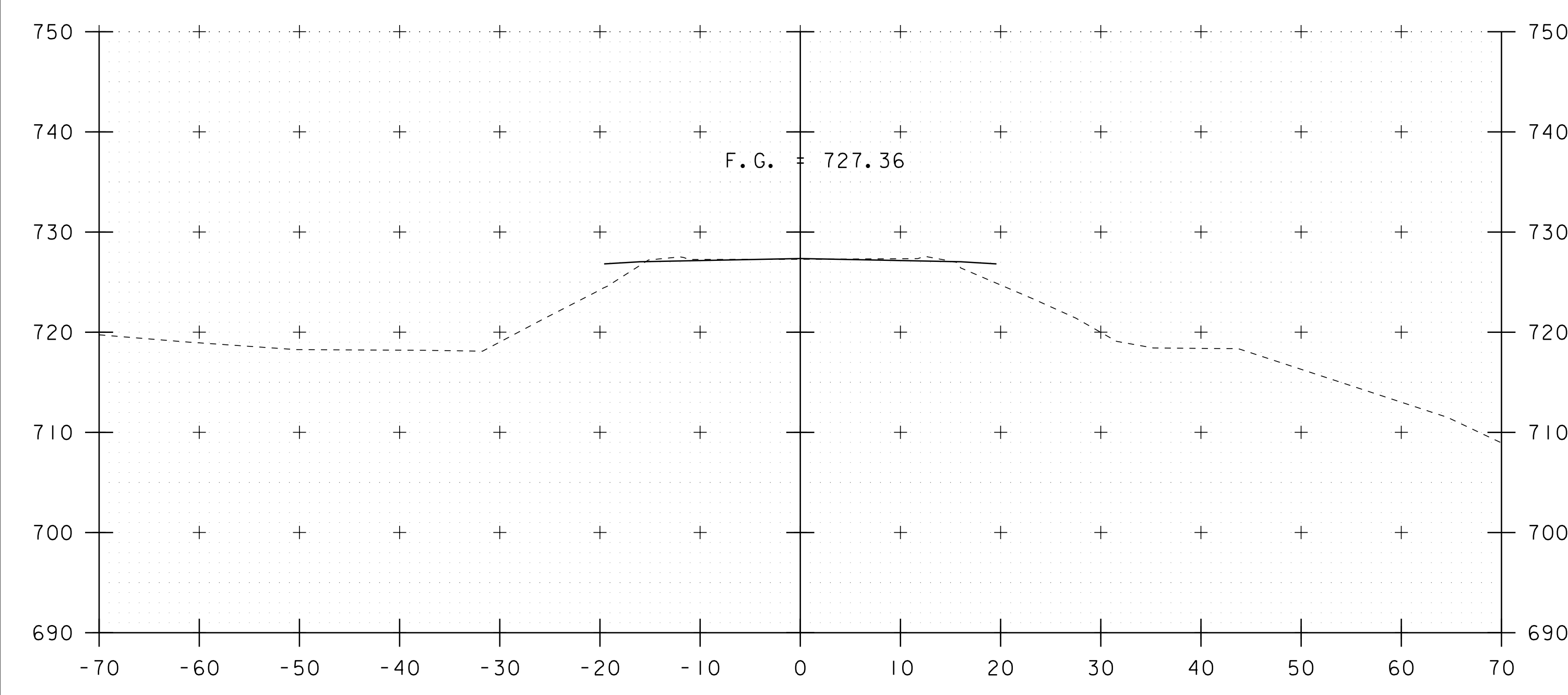
STA. 14+75 TO STA. 15+50

PROJECT NAME: WAITSFIELD	
PROJECT NUMBER: BHF 013-4(39)	
FILE NAME: I2b136\sl2b136xsl.dgn	PLOT DATE: 09-APR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: -----	CHECKED BY: -----
MAINLINE CROSS SECTIONS 4	SHEET 12 OF 18

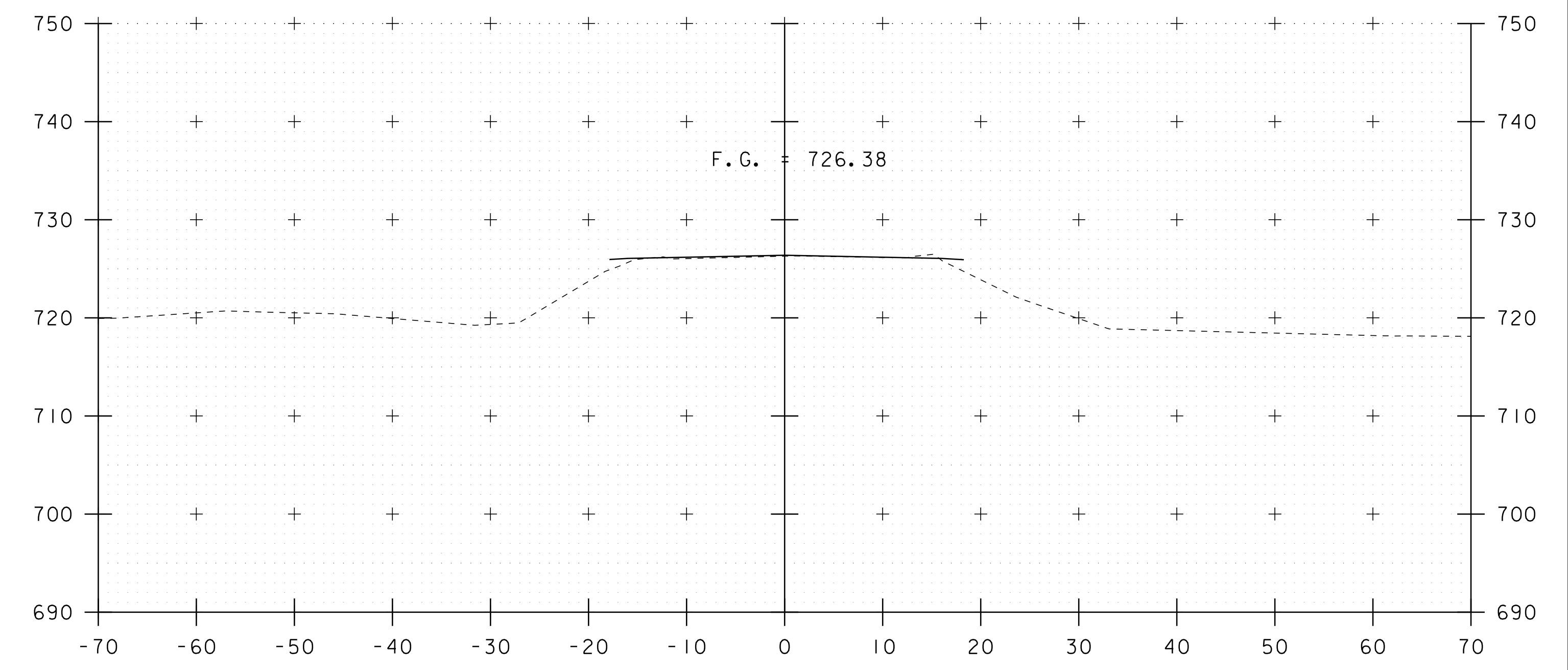




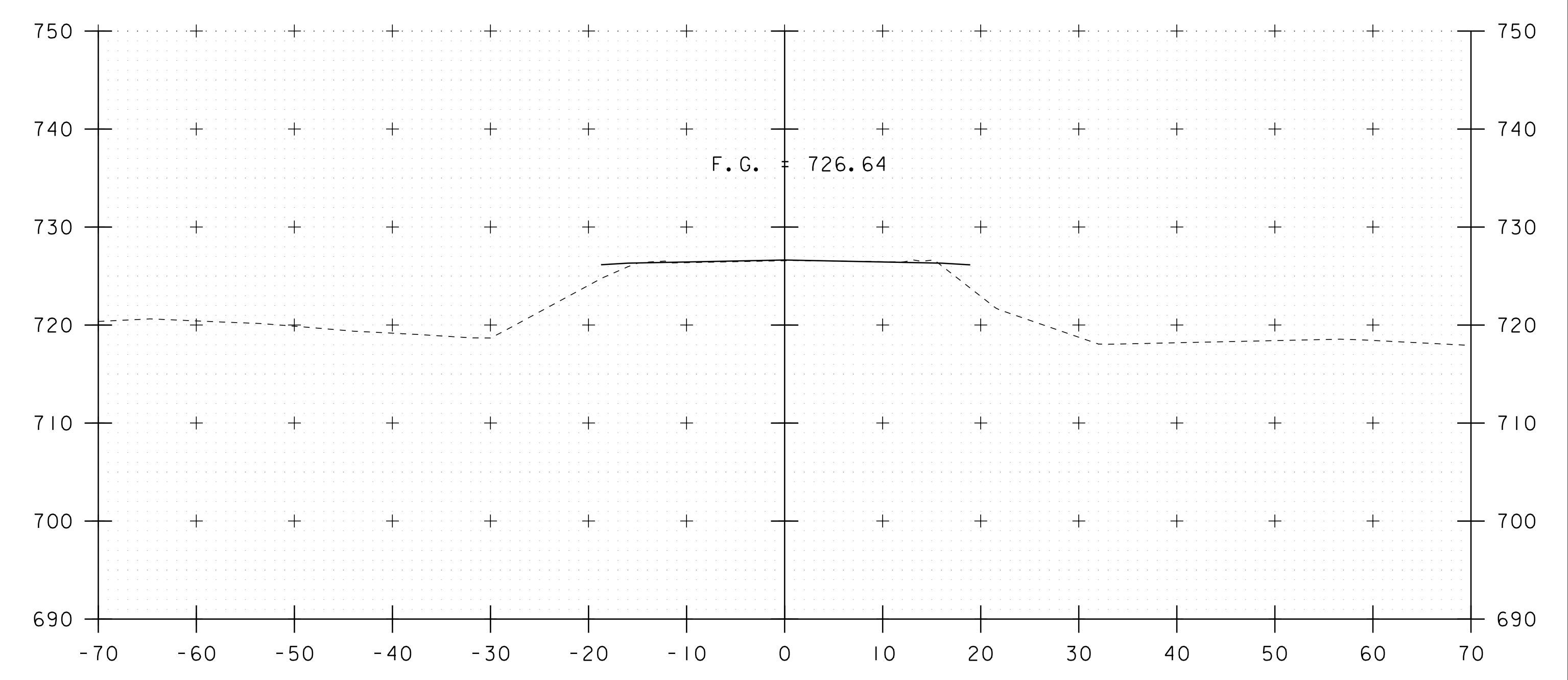
16+00



15+75



16+50

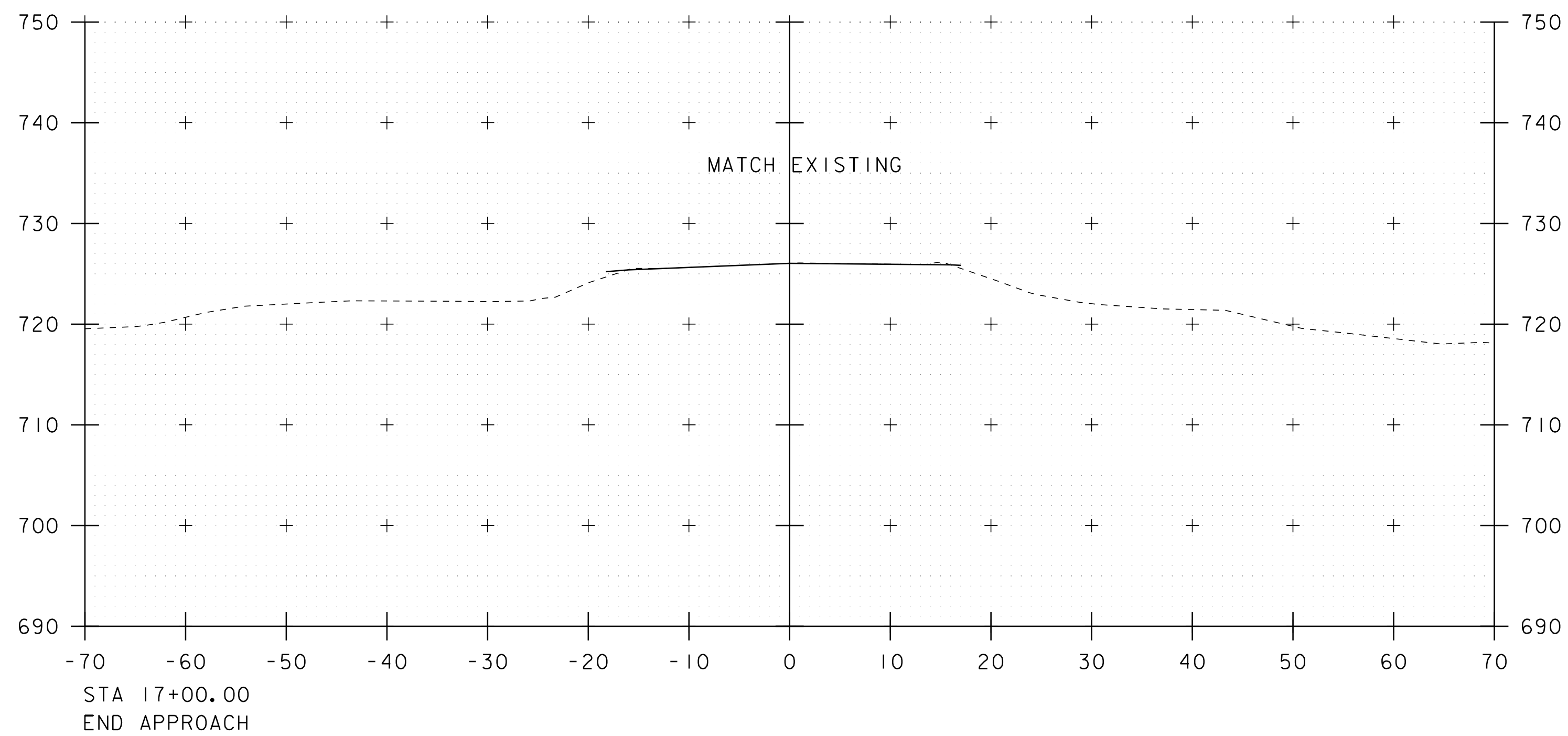


16+25

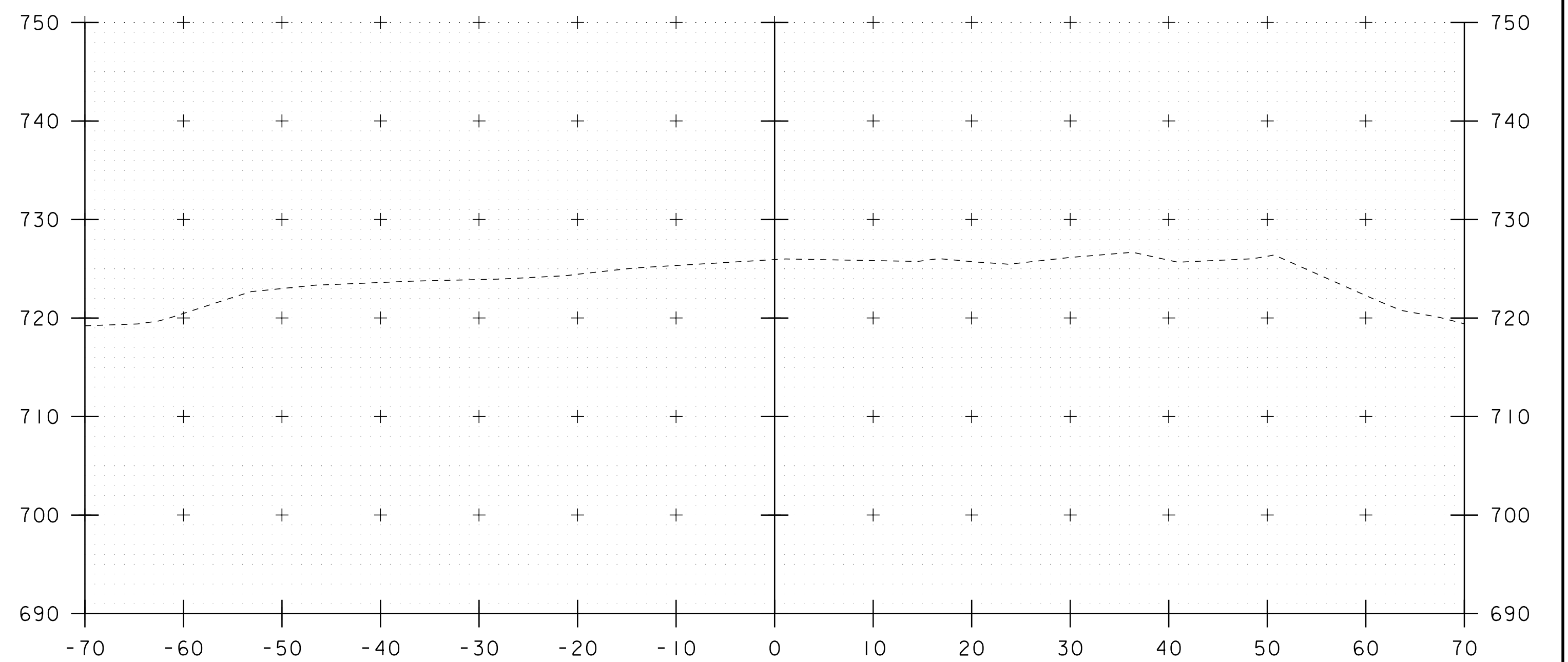
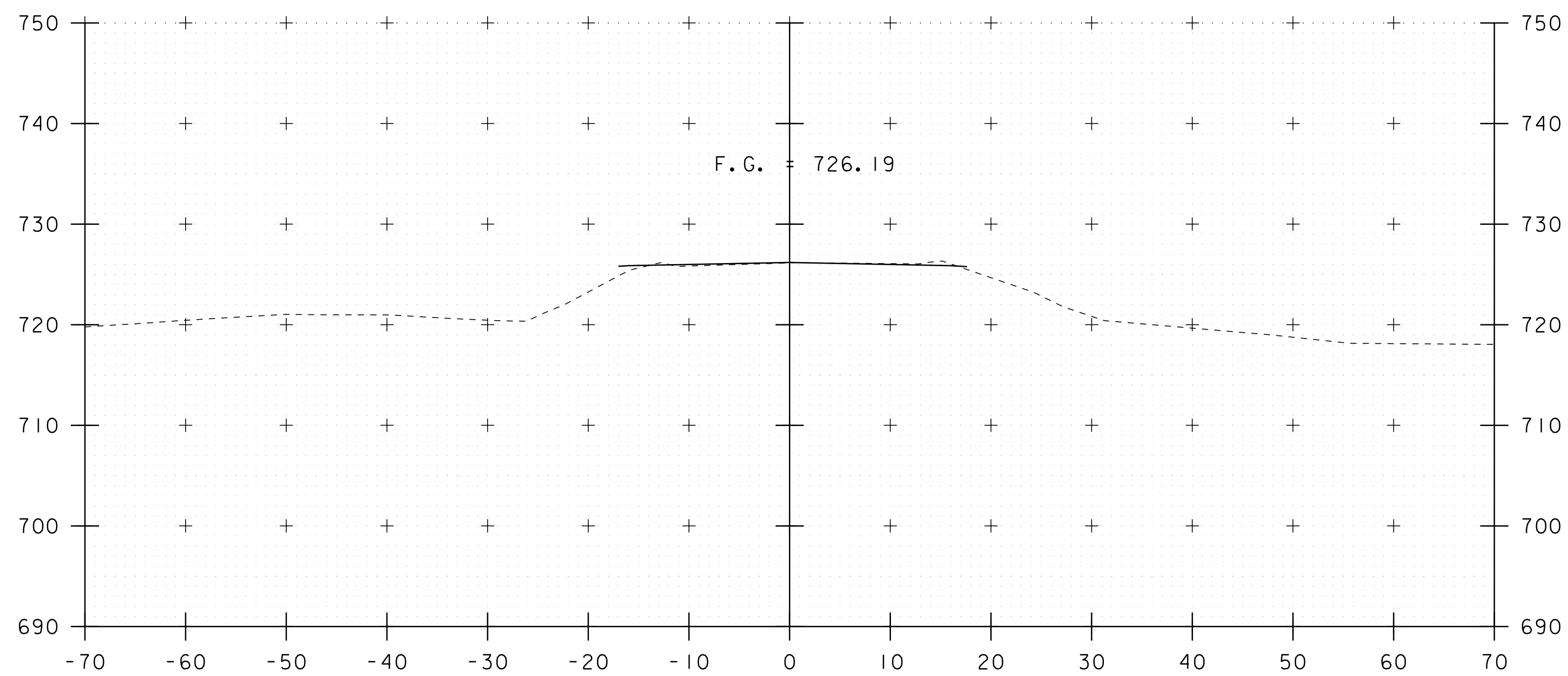
STA. 15+75 TO STA. 16+50

PROJECT NAME: WAITSFIELD	
PROJECT NUMBER: BHF 013-4(39)	
FILE NAME: I2b136\sl2b136xsl.dgn	PLOT DATE: 09-APR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: -----	CHECKED BY: -----
MAINLINE CROSS SECTIONS 5	SHEET 13 OF 18





17+00



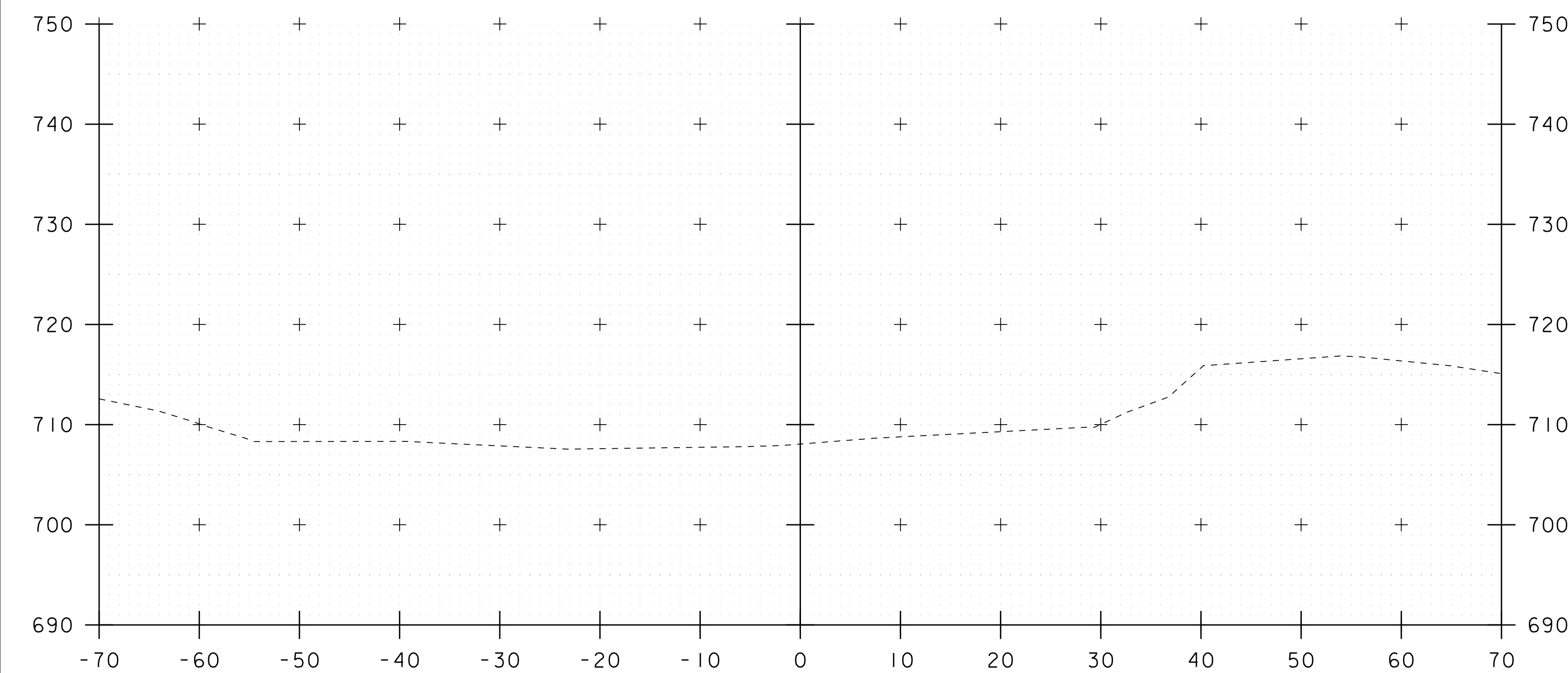
STA. 16+75 TO STA. 17+25

PROJECT NAME: WAITSFIELD  
PROJECT NUMBER: BHF 013-4(39)

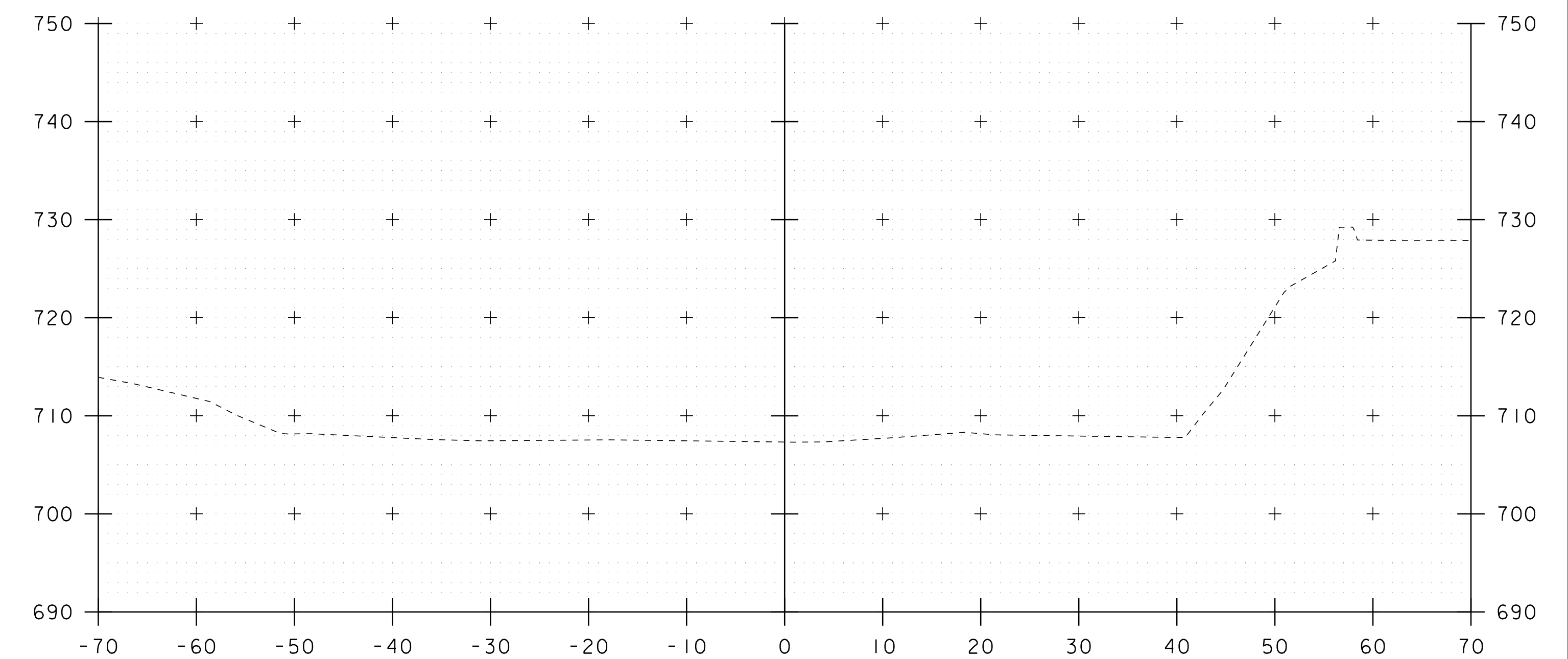
FILE NAME: I2b136\sl2b136xsl.dgn  
PROJECT LEADER: C.P.WILLIAMS  
DESIGNED BY: -----  
MAINLINE CROSS SECTIONS 6

PLOT DATE: 09-APR-2013  
DRAWN BY: D.D.BEARD  
CHECKED BY: -----  
SHEET 14 OF 18

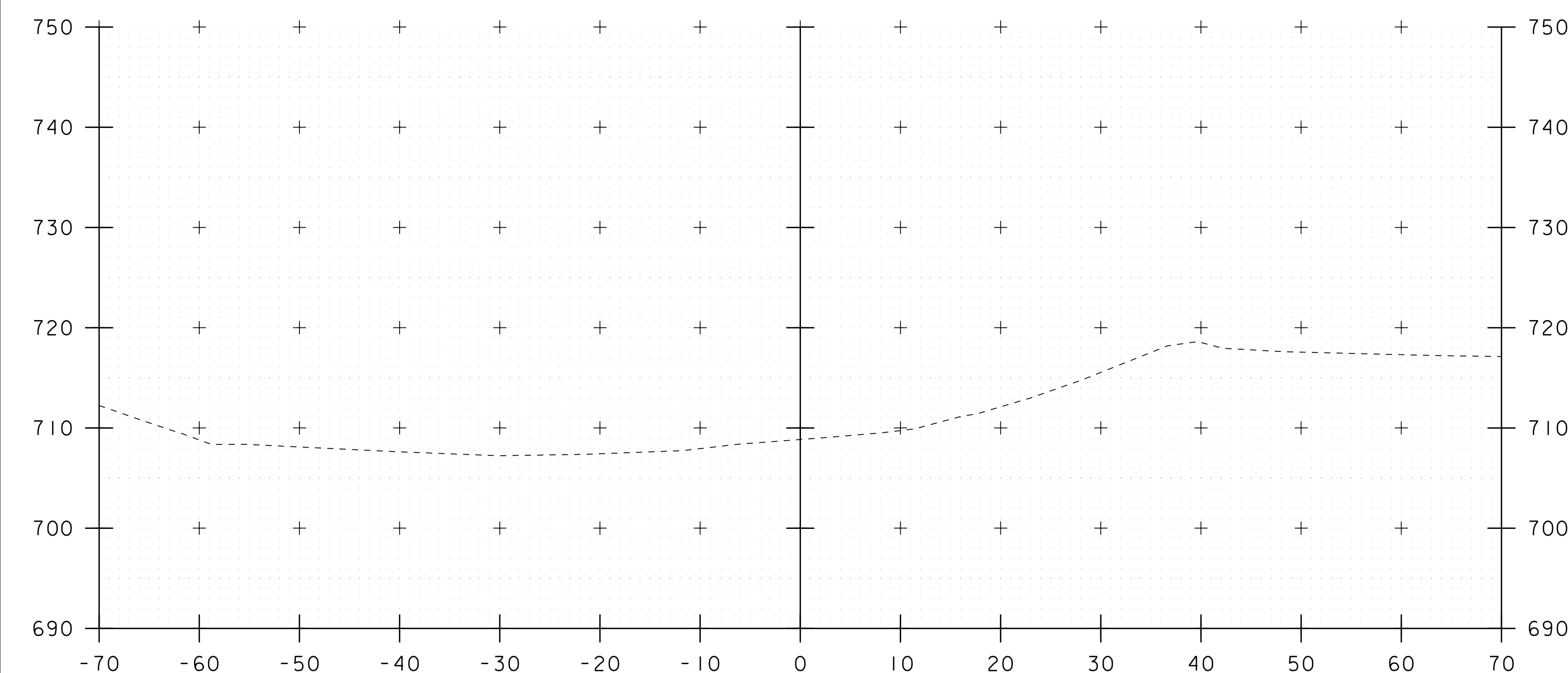




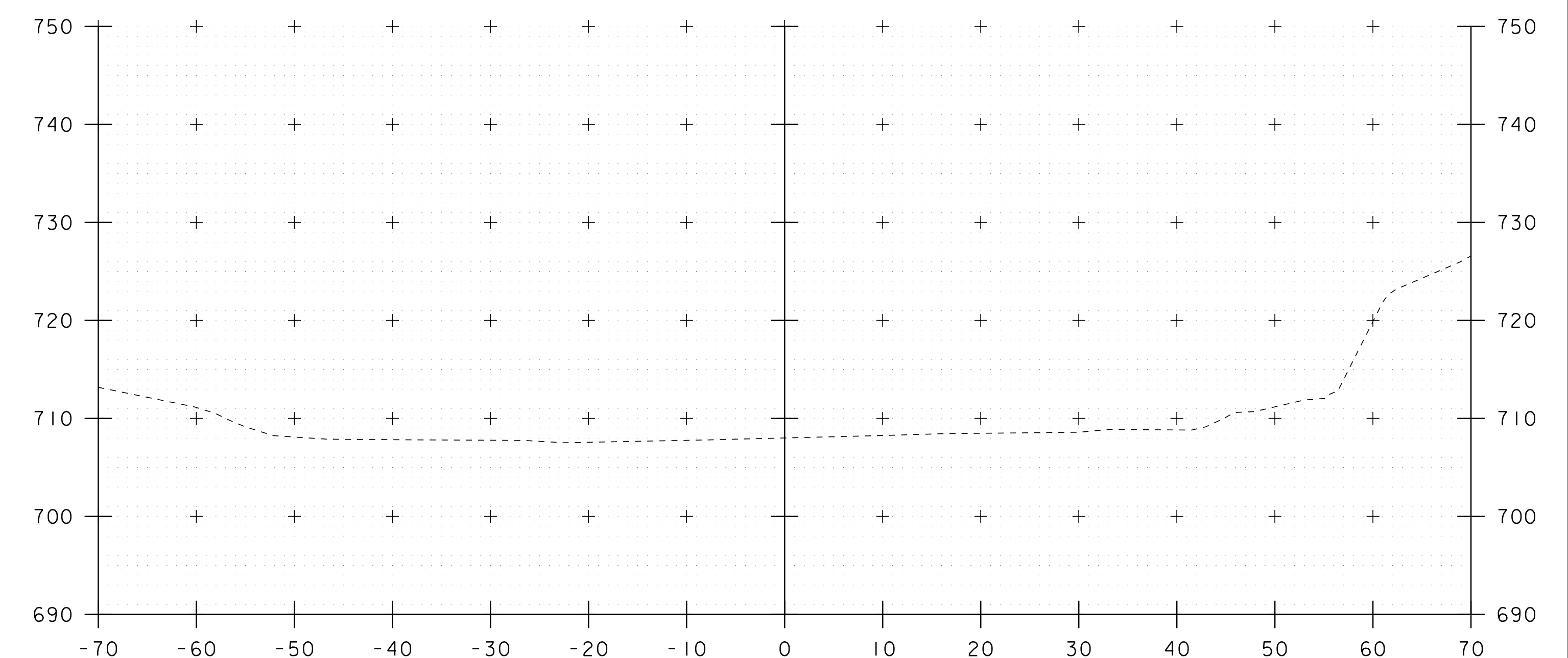
50+25



50+75



50+00

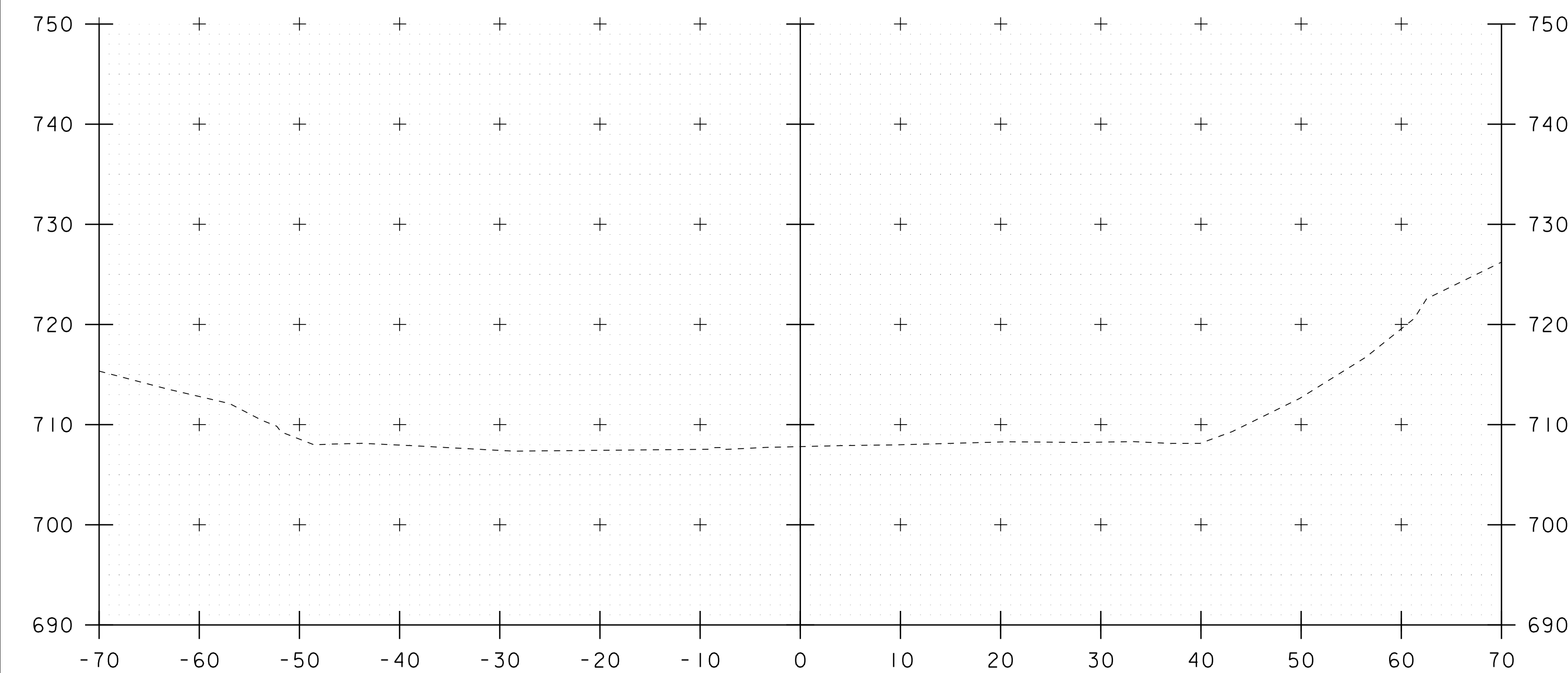


50+50

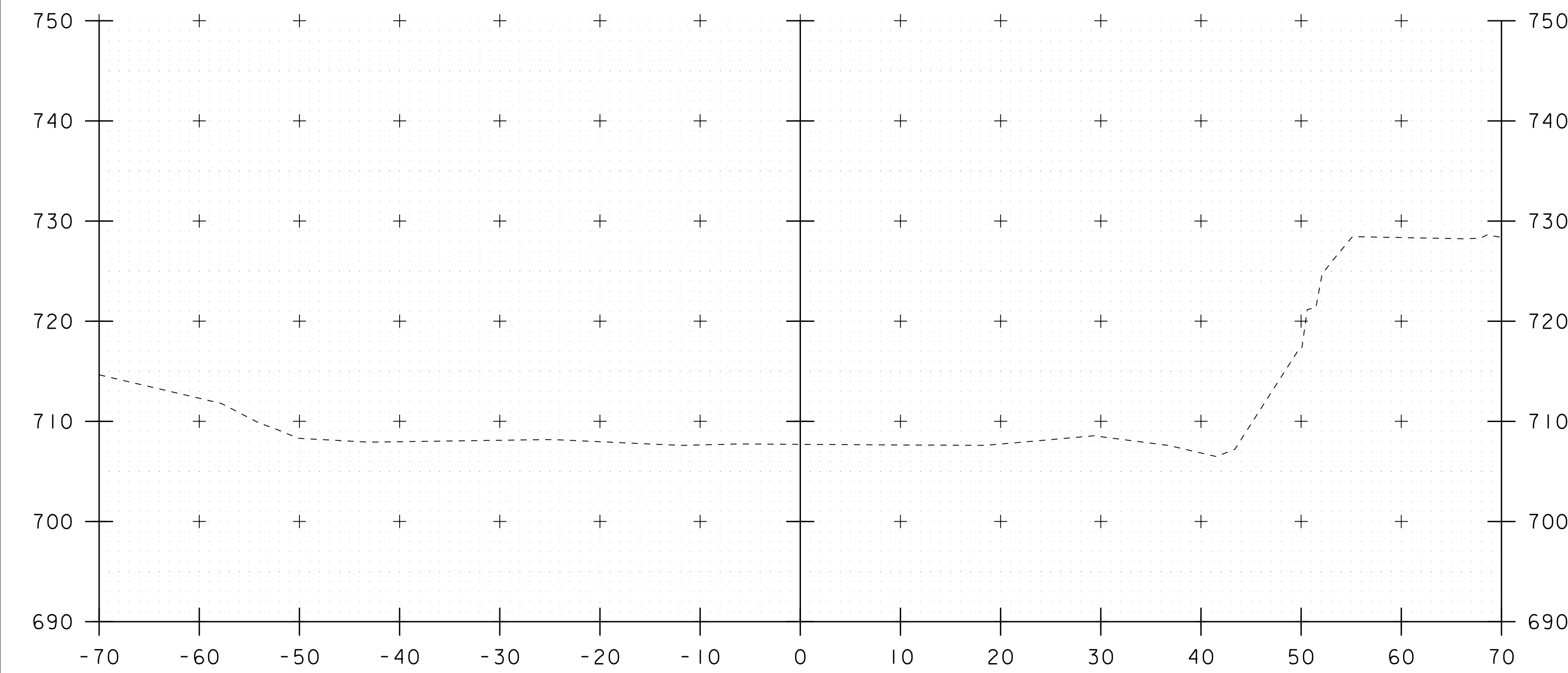
STA. 50+00 TO STA. 50+75

PROJECT NAME: WAITSFIELD	
PROJECT NUMBER: BHF 013-4(39)	
FILE NAME: I2b136\sl2b136xsl.dgn	PLOT DATE: 09-APR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: -----	CHECKED BY: -----
CHANNEL CROSS SECTIONS 1	SHEET 15 OF 18

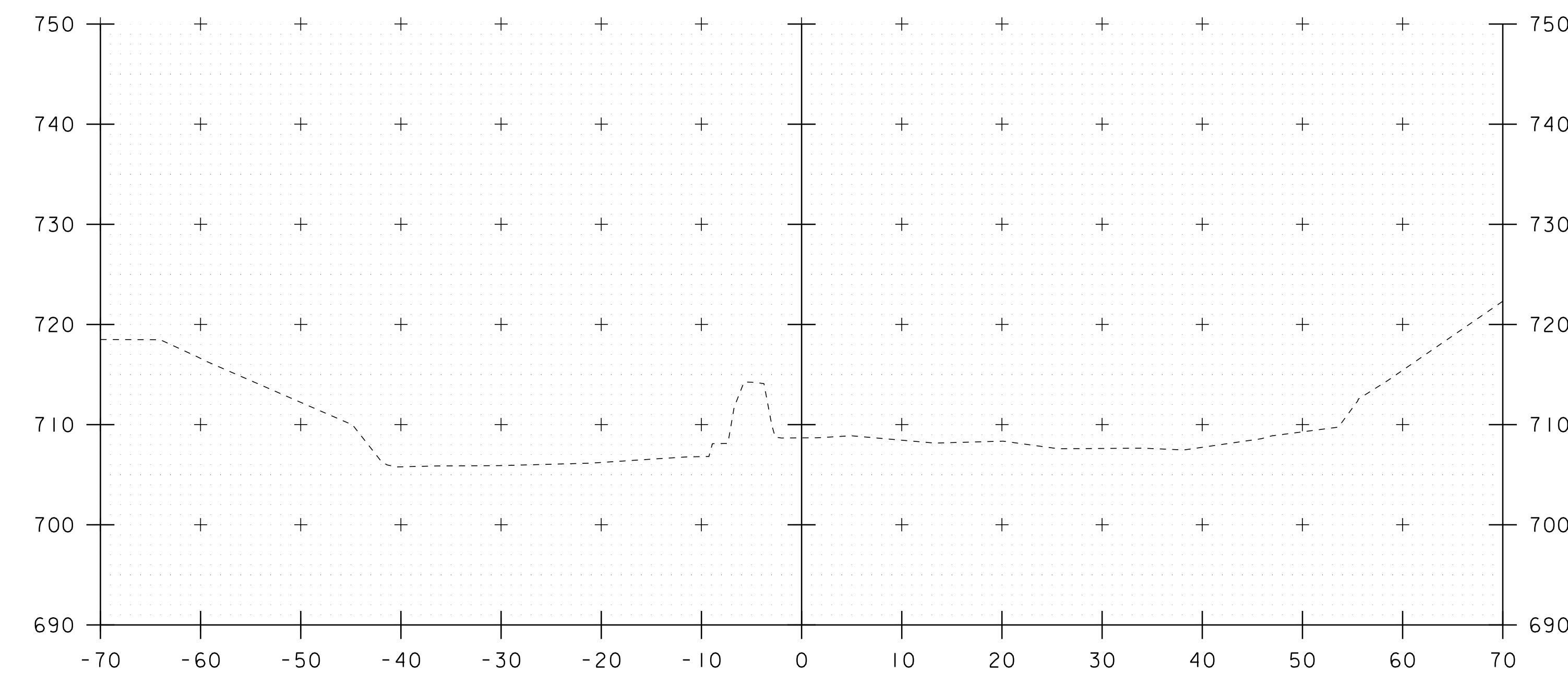




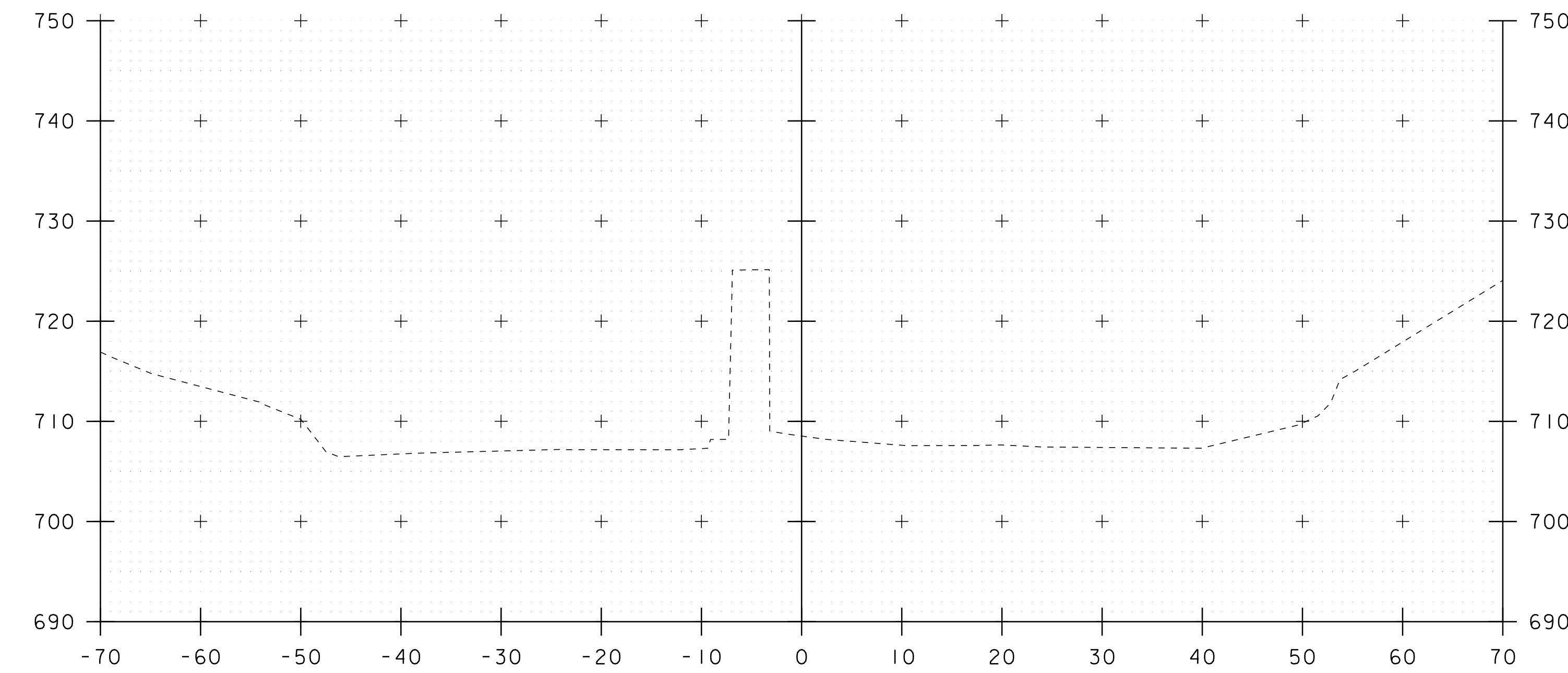
51+25



51+00



51+75

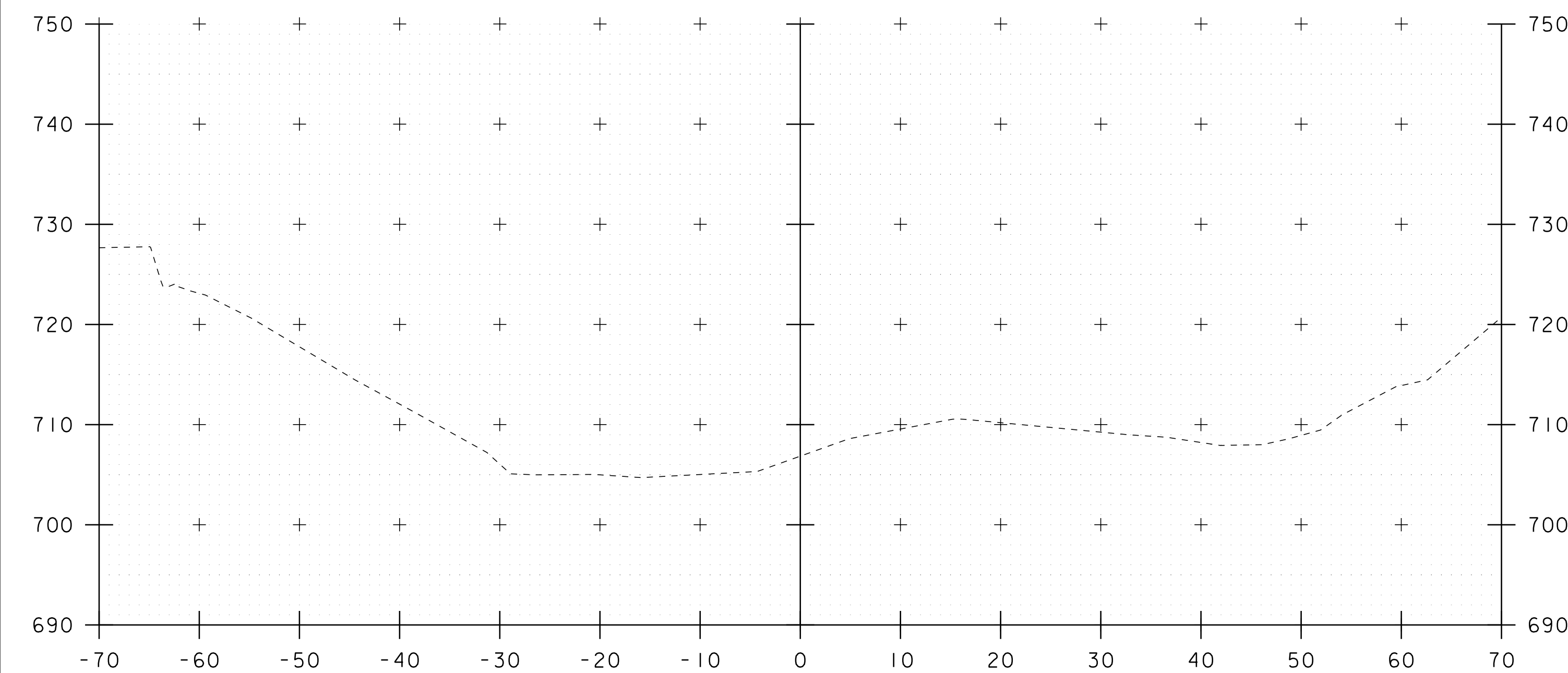


51+50

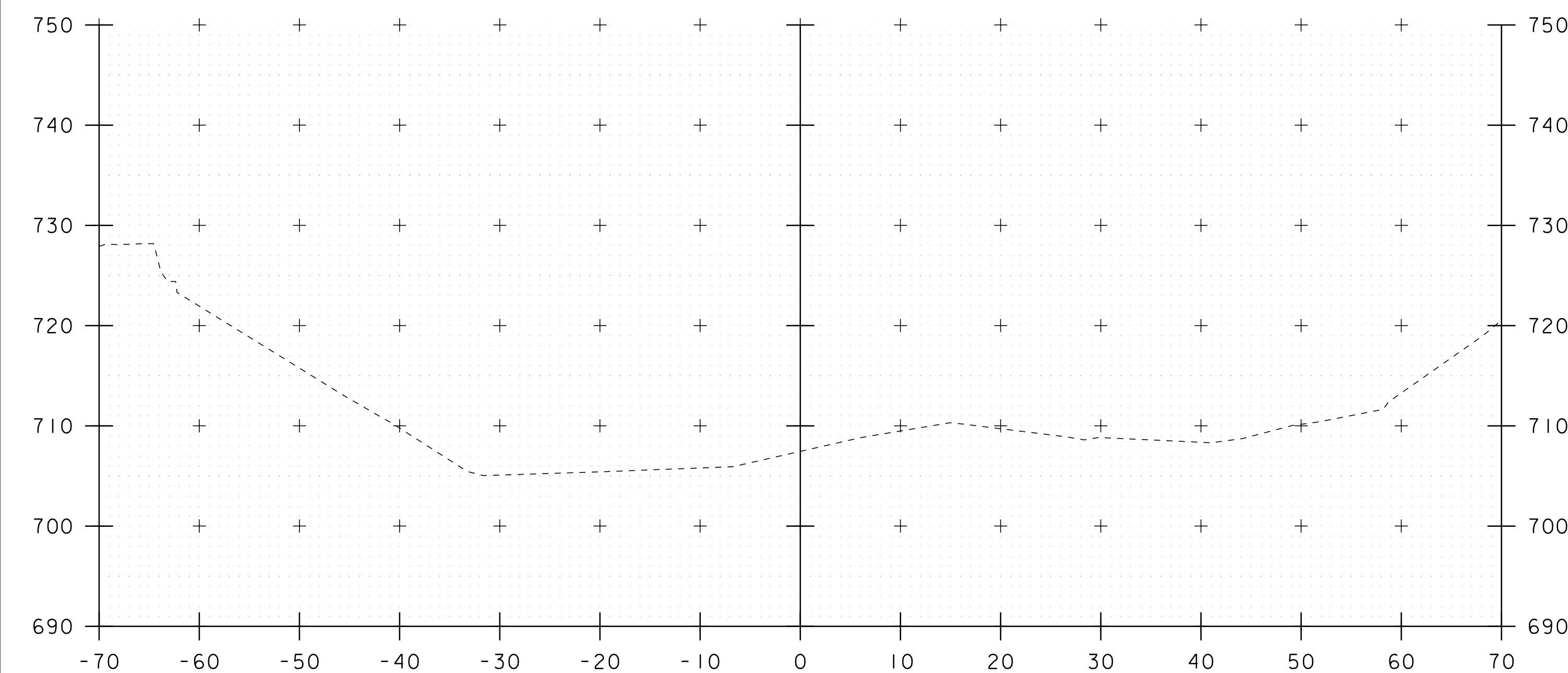
STA. 51+00 TO STA. 51+75

PROJECT NAME: WAITSFIELD	
PROJECT NUMBER: BHF 013-4(39)	
FILE NAME: I2b136\sl2b136xsl.dgn	PLOT DATE: 09-APR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: -----	CHECKED BY: -----
CHANNEL CROSS SECTIONS 2	SHEET 16 OF 18

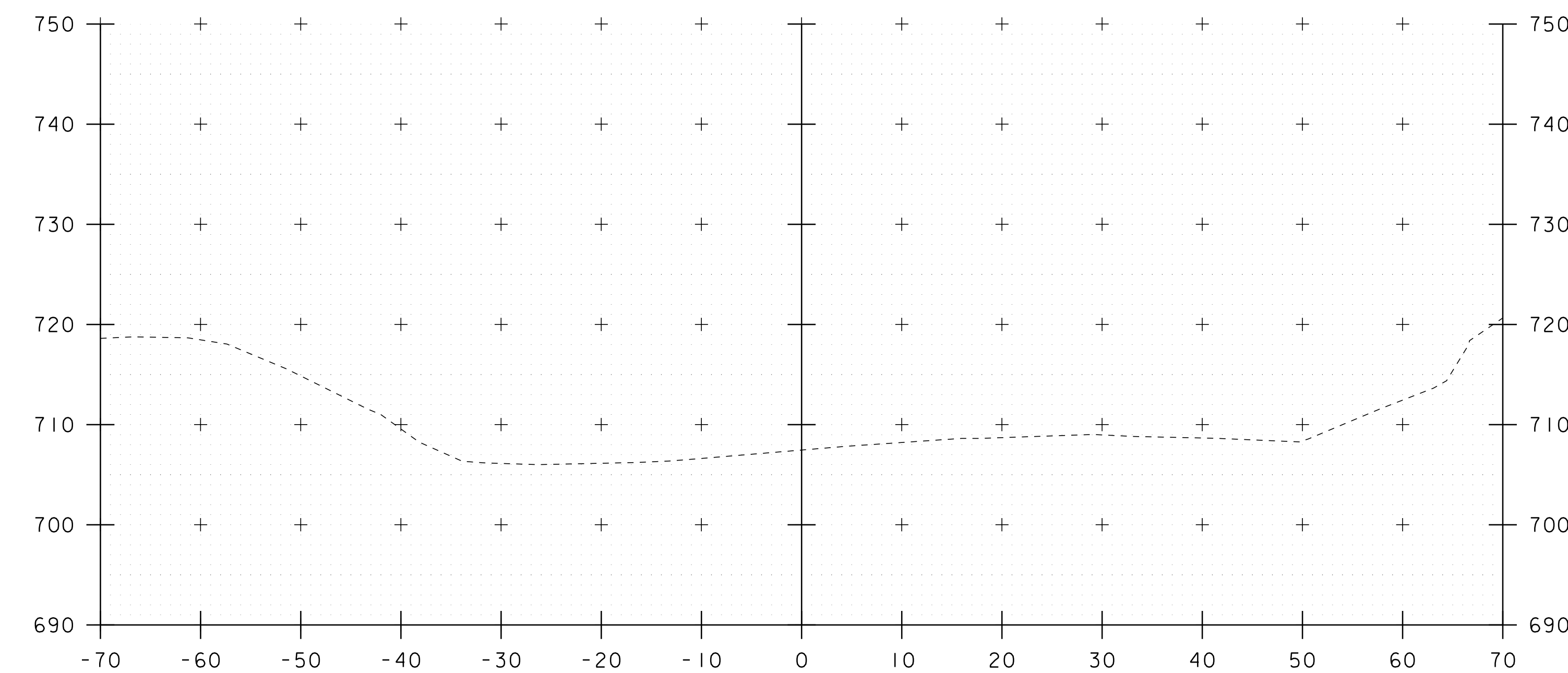




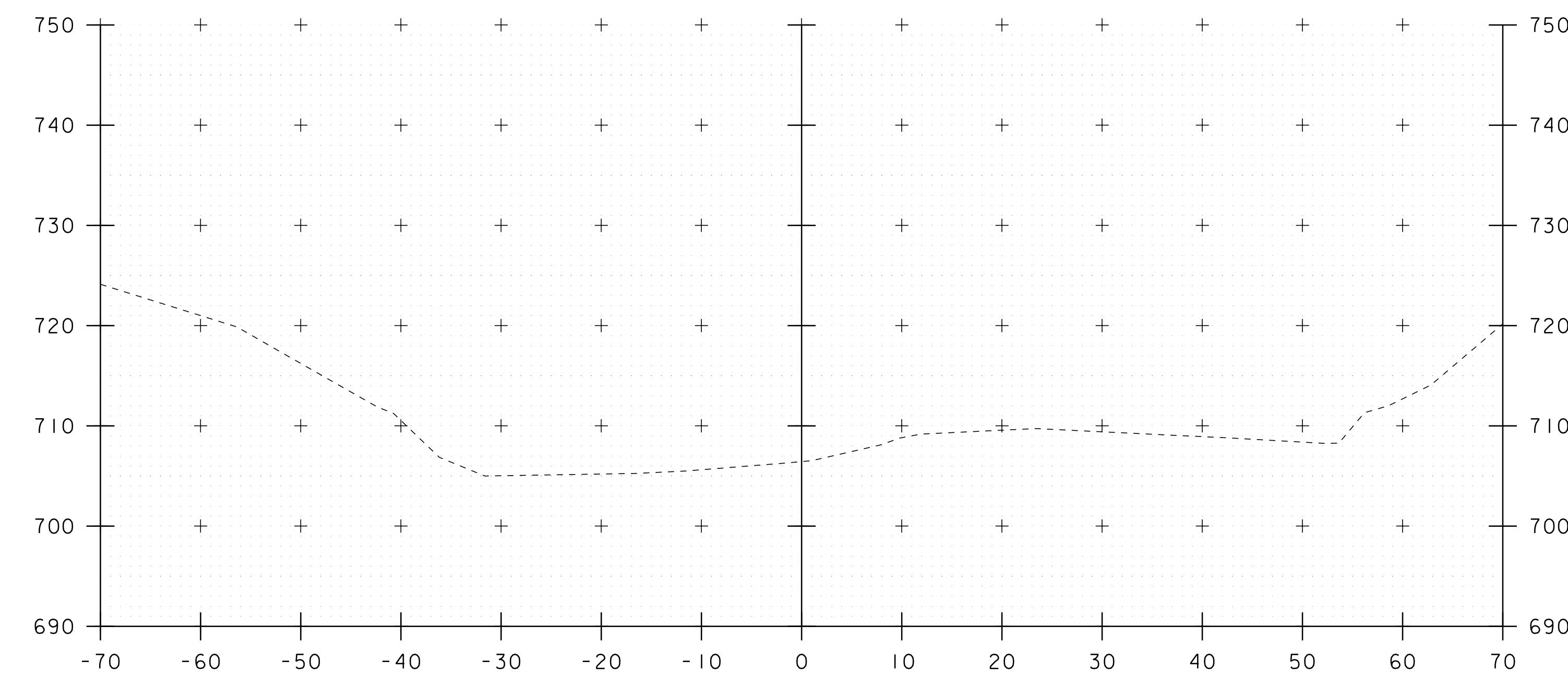
52+25



52+00



52+75

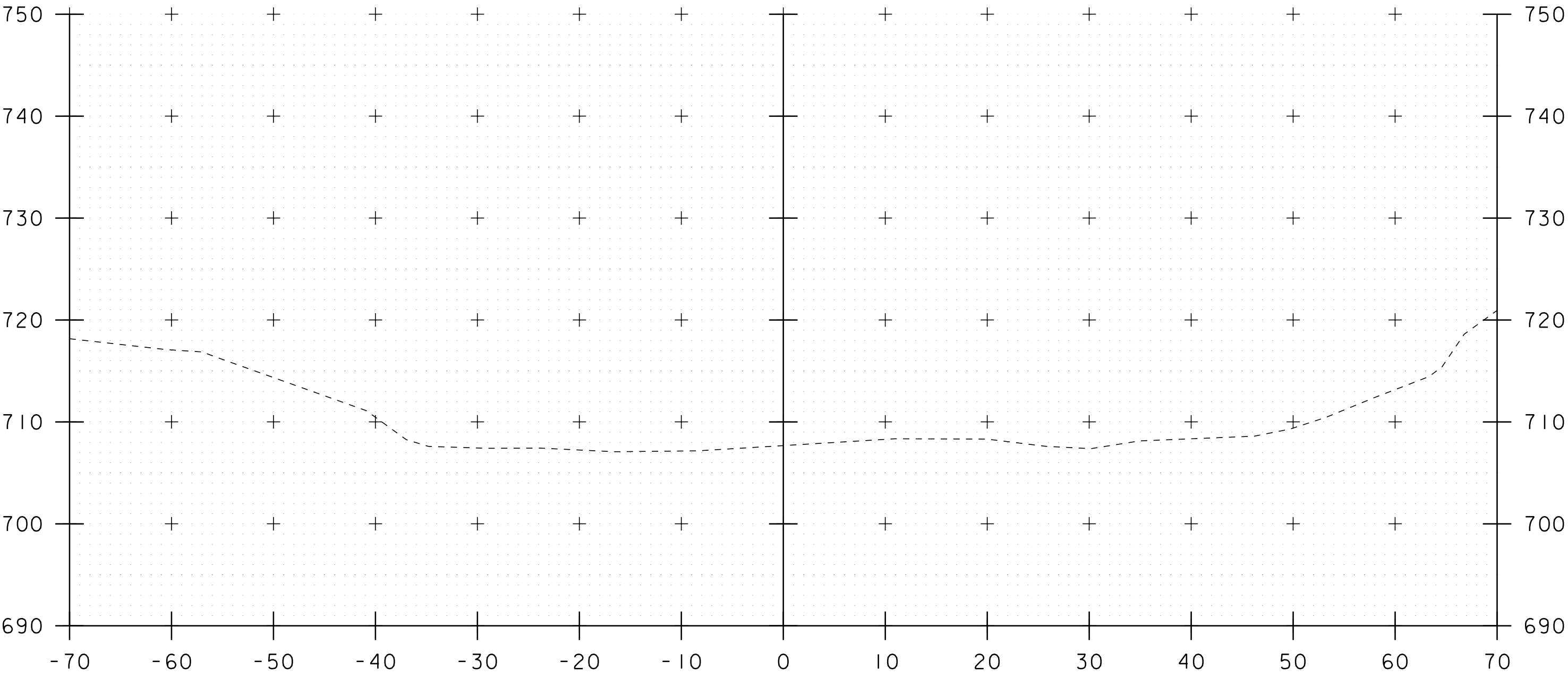


52+50

STA. 52+00 TO STA. 52+75

PROJECT NAME: WAITSFIELD	
PROJECT NUMBER: BHF 013-4(39)	
FILE NAME: I2b136\sl2b136xsl.dgn	PLOT DATE: 09-APR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: -----	CHECKED BY: -----
CHANNEL CROSS SECTIONS 3	SHEET 17 OF 18





53+00

STA. 53+00 TO STA. 53+00

PROJECT NAME: WAITSFIELD  
PROJECT NUMBER: BHF 013-4(39)  
FILE NAME: I2b136\sl2b136xsl.dgn  
PROJECT LEADER: C.P.WILLIAMS  
DESIGNED BY: -----  
CHANNEL CROSS SECTIONS 4

PLOT DATE: 09-APR-2013  
DRAWN BY: D.D.BEARD  
CHECKED BY: -----  
SHEET 18 OF 18