

REMOVAL AND DISPOSAL OF GUARDRAIL  
 STA 10+61 LT - 11+05 LT  
 STA 10+80 RT - 10+93 RT  
 STA 11+77 LT - 12+50 LT  
 MANUFACTURED TERMINAL SECTION,  
 TANGENT TL-2  
 STA 12+26 LT - 12+55 LT

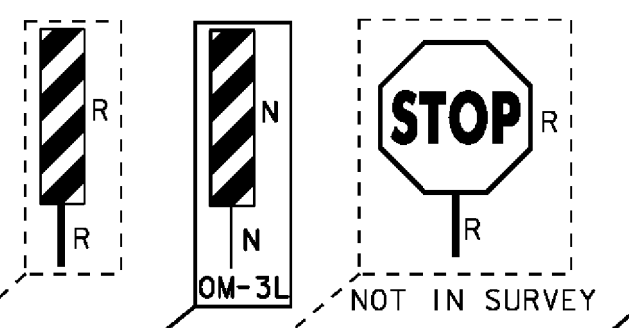
HD STEEL BEAM GUARDRAIL, GALVANIZED  
 W/8 FEET POSTS  
 STA 10+45 LT - 11+05 LT  
 STA 10+46 RT - 10+95 RT  
 STA 11+77 LT - 12+26 LT  
 STA 11+61 RT - 11+78 RT  
 4 INCH WHITE LINE  
 STA 10+50 LT - 12+20 LT  
 STA 10+50 RT - 11+70 RT  
 11+70 RT  
 12+20  
 4 INCH YELLOW LINE (DOUBLE)  
 STA 10+50 - 12+20 C

ANCHOR FOR STEEL BEAM  
 GUARDRAIL  
 STA 10+52 LT  
 STA 10+52 RT  
 STA 11+75 RT  
 BRIDGE RAILING, GALVANIZED  
 HDSB/FASCIA MOUNTED/STEEL TUBING  
 STA 11+05 LT - 11+77 LT  
 STA 10+95 RT - 11+61 RT

CONSTRUCT 5' PAVED APRON  
 STA 11+70 RT - 12+11 RT

REMOVING SIGNS  
 STA 10+50 RT  
 STA 10+94 RT  
 STA 11+05 LT  
 STA 11+61 RT  
 STA 11+79 LT  
 STA 12+10 LT

TRAFFIC SIGNS, TYPE A  
 STA 8+50 RT  
 STA 10+94 RT  
 STA 11+05 LT  
 STA 11+61 RT  
 STA 11+79 LT  
 STA 14+20 LT

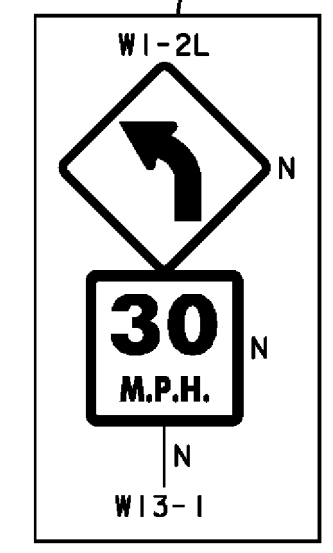
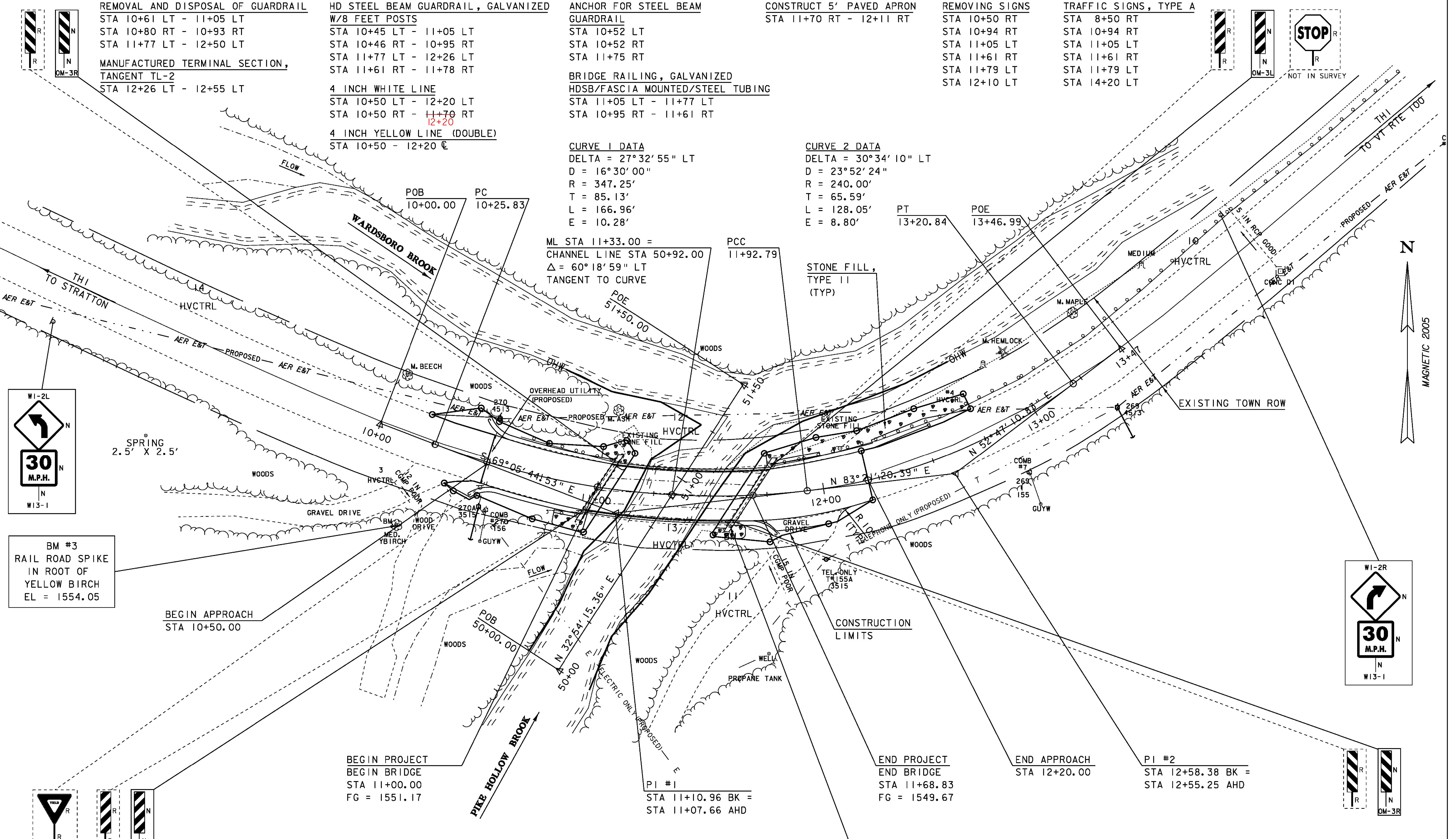


CURVE 1 DATA  
 DELTA = 27°32'55" LT  
 D = 16°30'00"  
 R = 347.25'  
 T = 85.13'  
 L = 166.96'  
 E = 10.28'

CURVE 2 DATA  
 DELTA = 30°34'10" LT  
 D = 23°52'24"  
 R = 240.00'  
 T = 65.59'  
 L = 128.05'  
 E = 8.80'

ML STA 11+33.00 =  
 CHANNEL LINE STA 50+92.00  
 Δ = 60°18'59" LT  
 TANGENT TO CURVE

STONE FILL,  
 TYPE II  
 (TYP)



BM #3  
 RAIL ROAD SPIKE  
 IN ROOT OF  
 YELLOW BIRCH  
 EL = 1554.05

BEGIN APPROACH  
 STA 10+50.00

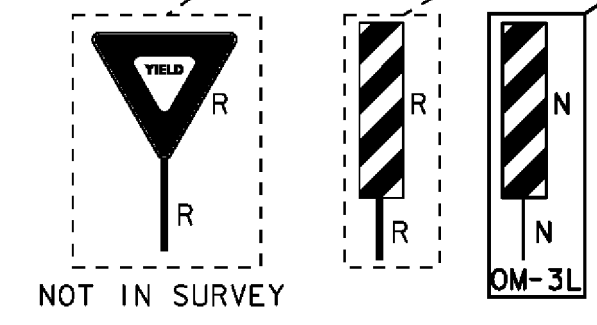
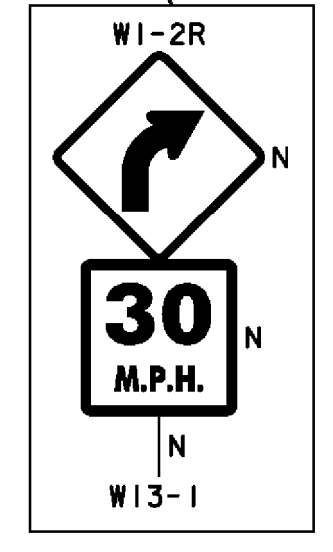
BEGIN PROJECT  
 BEGIN BRIDGE  
 STA 11+00.00  
 FG = 1551.17

PI #1  
 STA 11+10.96 BK =  
 STA 11+07.66 AHD

END PROJECT  
 END BRIDGE  
 STA 11+68.83  
 FG = 1549.67

END APPROACH  
 STA 12+20.00

PI #2  
 STA 12+58.38 BK =  
 STA 12+55.25 AHD



EXISTING BRIDGE DATA  
 ROLLED BEAM WITH CIP CONCRETE DECK  
 BUILT IN 1939  
 SPAN LENGTH = 67 FEET  
 STRUCTURE LENGTH = 69 FEET  
 DECK WIDTH OUT TO OUT = 25.2 FEET  
 BRIDGE WIDTH CURB TO CURB = 22.4 FEET

LAYOUT I

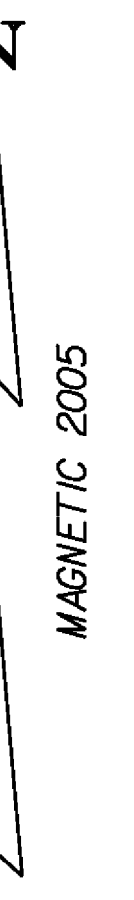
SCALE 1" = 20'-0"  
 20 0 20

DESTROYED DURING  
 OLD BRIDGE  
 REMOVAL WORK

BM #3a  
 USGS TABLET  
 "TT8 PBK 1942"  
 EL = 1550.29

LEGEND  
 N NEW  
 R REMOVE  
 RET RETAIN

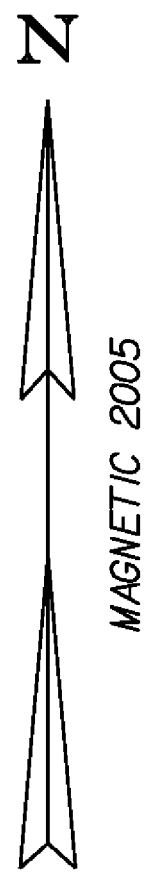
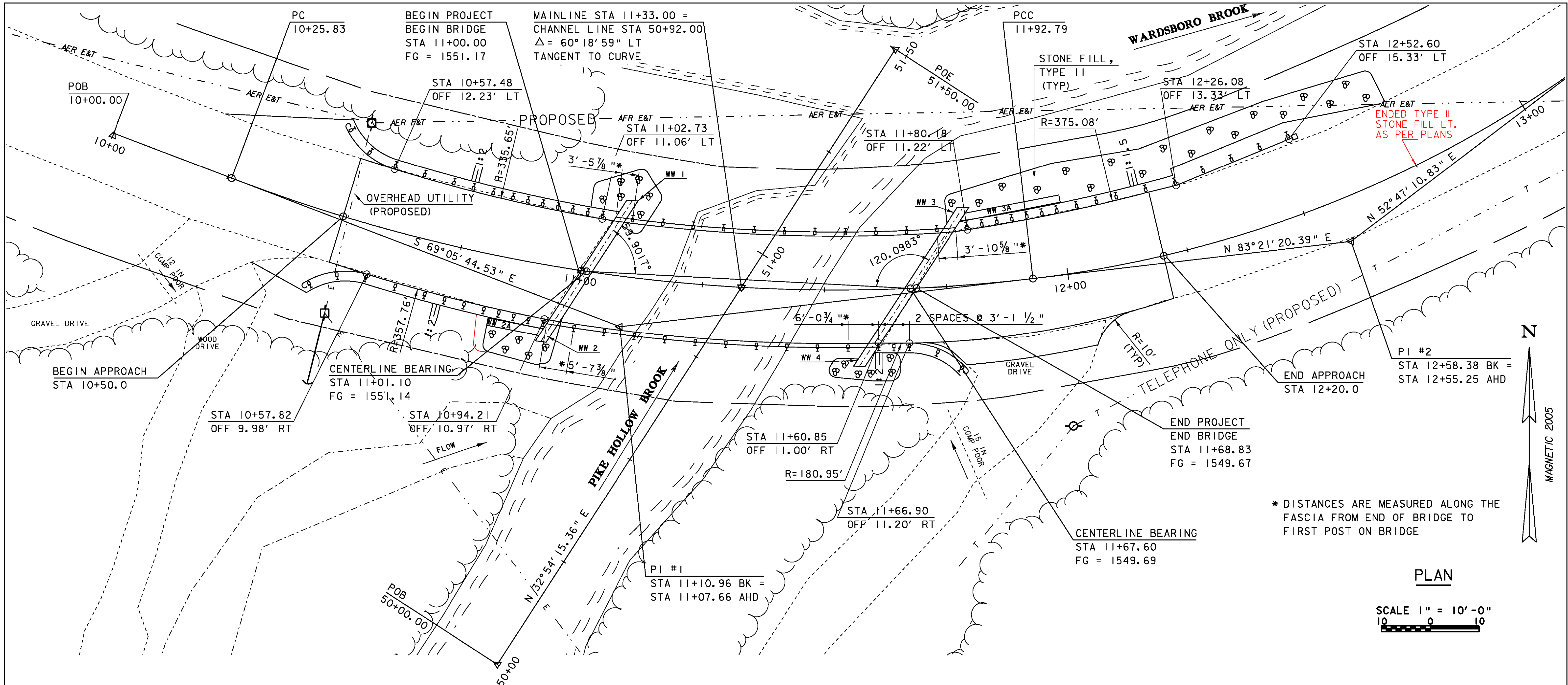
PROJECT NAME: WARDSBORO  
 PROJECT NUMBER: BHF 0114(5)  
 FILE NAME: 05J006/Str/s05J006bdr.dgn PLOT DATE: 17-NOV-2009  
 PROJECT LEADER: C.P.WILLIAMS DRAWN BY: M.FESSEL  
 DESIGNED BY: E.Charbonneau CHECKED BY: E.Charbonneau  
 LAYOUT SHEET 8 OF 33







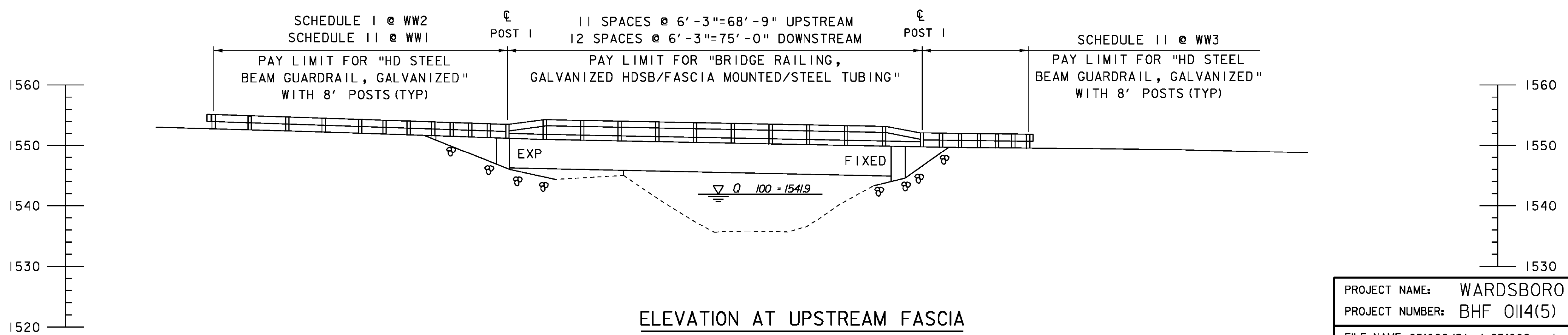




\* DISTANCES ARE MEASURED ALONG THE FASCIA FROM END OF BRIDGE TO FIRST POST ON BRIDGE

**PLAN**

SCALE 1" = 10'-0"



**ELEVATION AT UPSTREAM FASCIA**

SCALE 1" = 10'-0"

NOTE:  
 SEE STANDARD SB-R6-82 FOR SCHEDULE DETAILS.

PROJECT NAME: WARDBORO	PLOT DATE: 17-NOV-2009
PROJECT NUMBER: BHF 014(5)	DRAWN BY: M.FESSEL
FILE NAME: 05J006/Str/s05J006pe.dgn	CHECKED BY: E.Charbonneau
PROJECT LEADER: C.P.WILLIAMS	SHEET 12 OF 33
DESIGNED BY: E.Charbonneau	
PLAN AND ELEVATION	











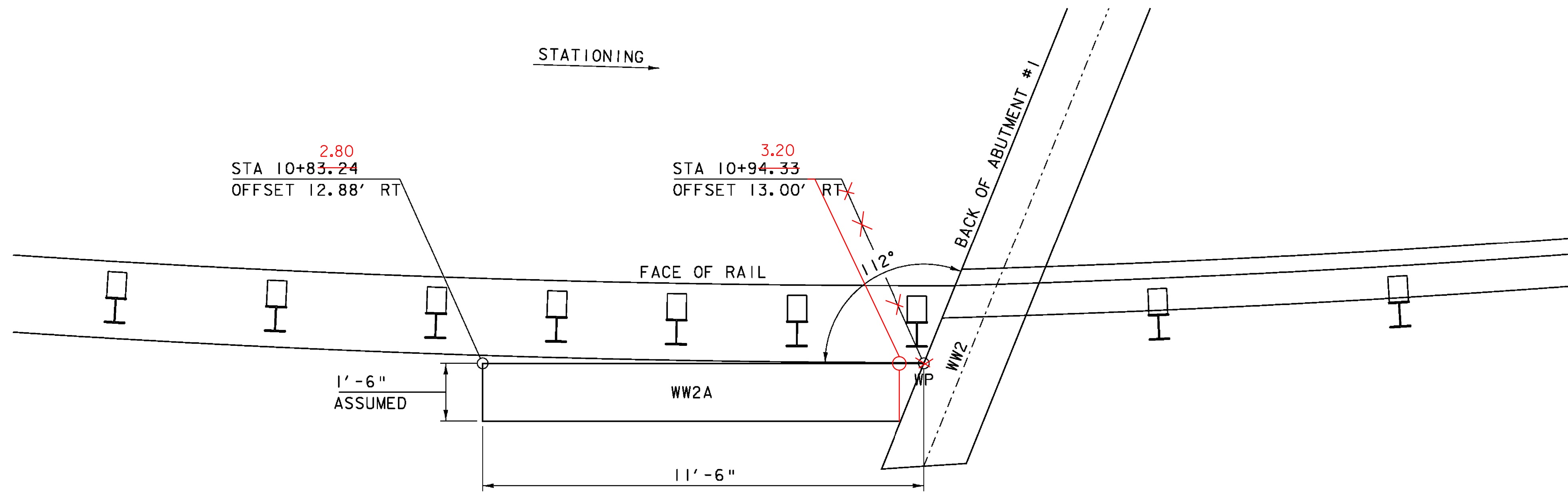




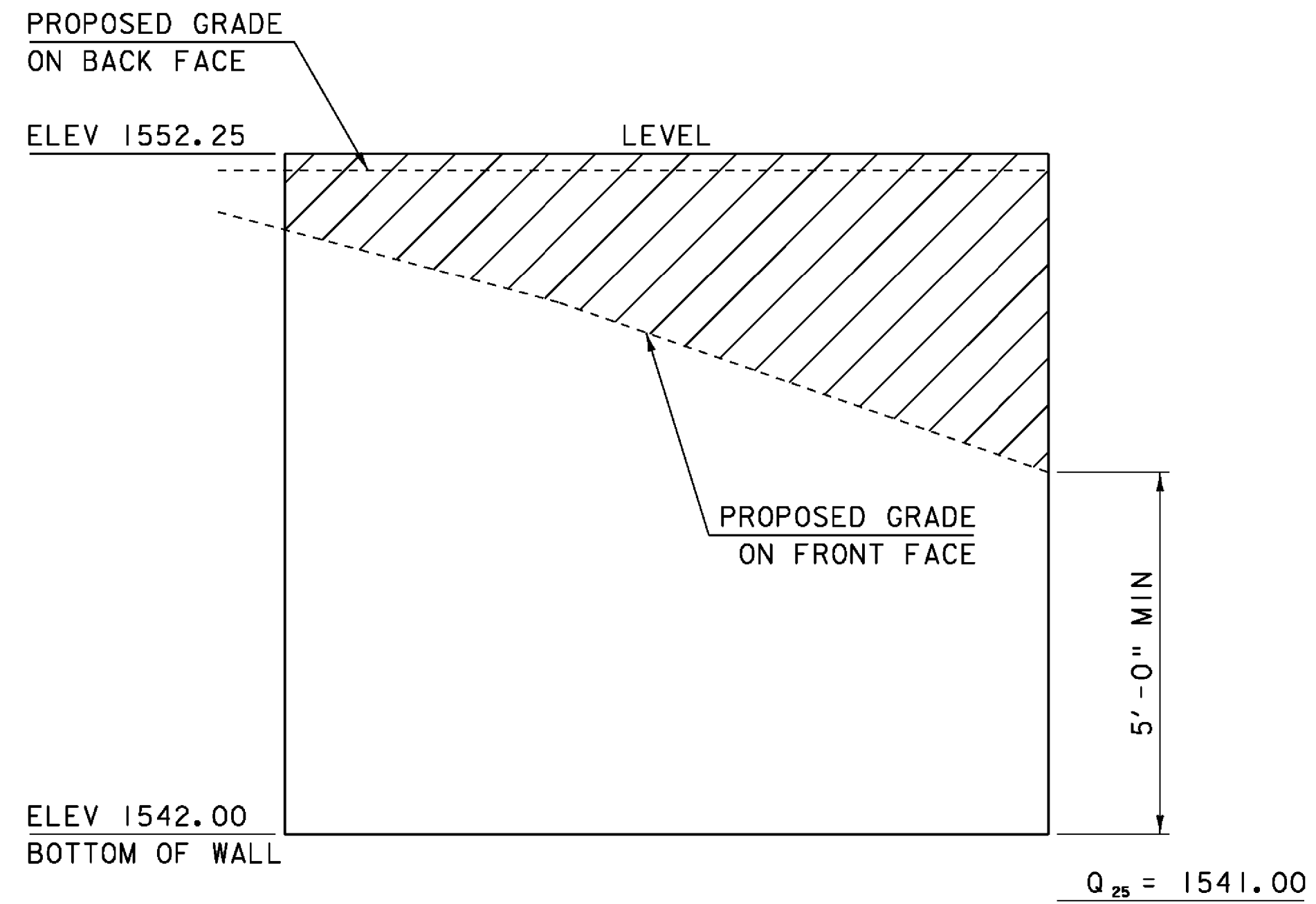








**WINGWALL 2A PLAN VIEW**  
SCALE: 1/2" = 1'-0"



**WINGWALL 2A ELEVATION VIEW**  
SCALE: 1/2" = 1'-0"

 PAY LIMITS OF ITEM 900.670 "SPECIAL PROVISION (CONCRETE RETAINING WALL)"

**NOTES:**


1. WINGWALL 2A AND WINGWALL 3A SHALL BE SELECTED FROM THE LIST OF WALLS ON THE APPROVED RETAINING WALL DOCUMENT AVAILABLE FROM VAOT MATERIALS & RESEARCH WEB SITE.
2. THE WALL SHALL BE PAID FOR UNDER ITEM 900.670 "SPECIAL PROVISION (CONCRETE RETAINING WALL)".
3. THE BOTTOM OF WALL SHALL BE A MINIMUM OF 5 FEET BELOW THE FINISH GRADE IN THE FRONT OF WALL.
4. THE WALL SHALL BE DESIGNED IN ACCORDANCE WITH 2007 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND ITS LATEST REVISIONS. THE DESIGN SHALL ALSO CONSIDER THE EFFECT OF ALL LOADS INCLUDING BUT NOT LIMITED TO LOADS FROM THE GUARDRAIL, EARTH SURCHARGE, AND HYDROSTATIC PRESSURE.
5. THE TYPE OF WALL SELECTED SHALL BE COMPATIBLE WITH THE GUARD RAIL SYSTEM SHOWN ON THE PLANS AND SHALL CONSIDER THE EFFECT OF 8 FOOT GUARD RAIL POSTS ON ANY REINFORCING OR ANCHORING SYSTEM.
6. THE EXPOSED PORTIONS OF THE WALL SHALL BE REASONABLY AESTHETICALLY PLEASING (I.E. NO EXPOSED SHEET PILES).
7. THE FOLLOWING SOIL PROPERTIES SHALL BE USED IN THE DESIGN OF WINGWALL 2A AND WINGWALL 3A:

SELECT BACKFILL (GRANULAR BACKFILL FOR STRUCTURES)  
 UNIT WEIGHT: 140 PCF  
 FRICTION ANGLE: 34 DEGREES  
 COHESION, c: 0

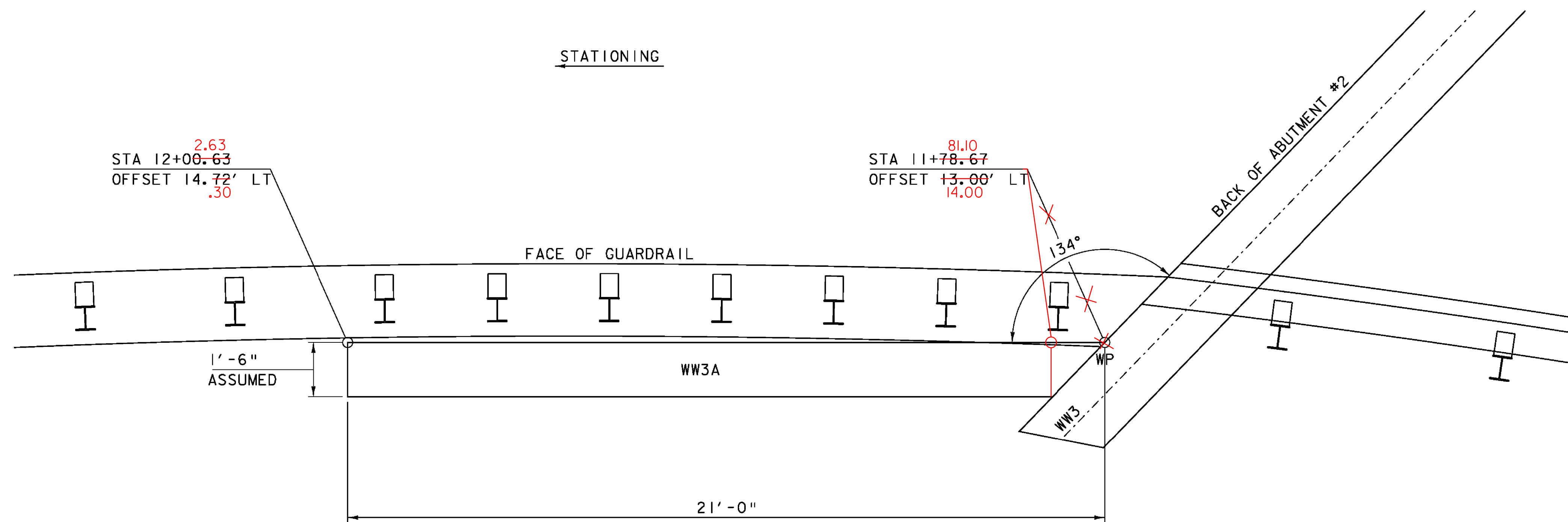
RETAINED SOIL  
 UNIT WEIGHT: 130 PCF  
 FRICTION ANGLE: 32 DEGREES  
 COHESION, c: 0

FOUNDATION SOIL  
 UNIT WEIGHT: 115 PCF  
 FRICTION ANGLE: 30 DEGREES  
 COHESION, c: 0  
 NOMINAL BEARING RESISTANCE: 12 KSF

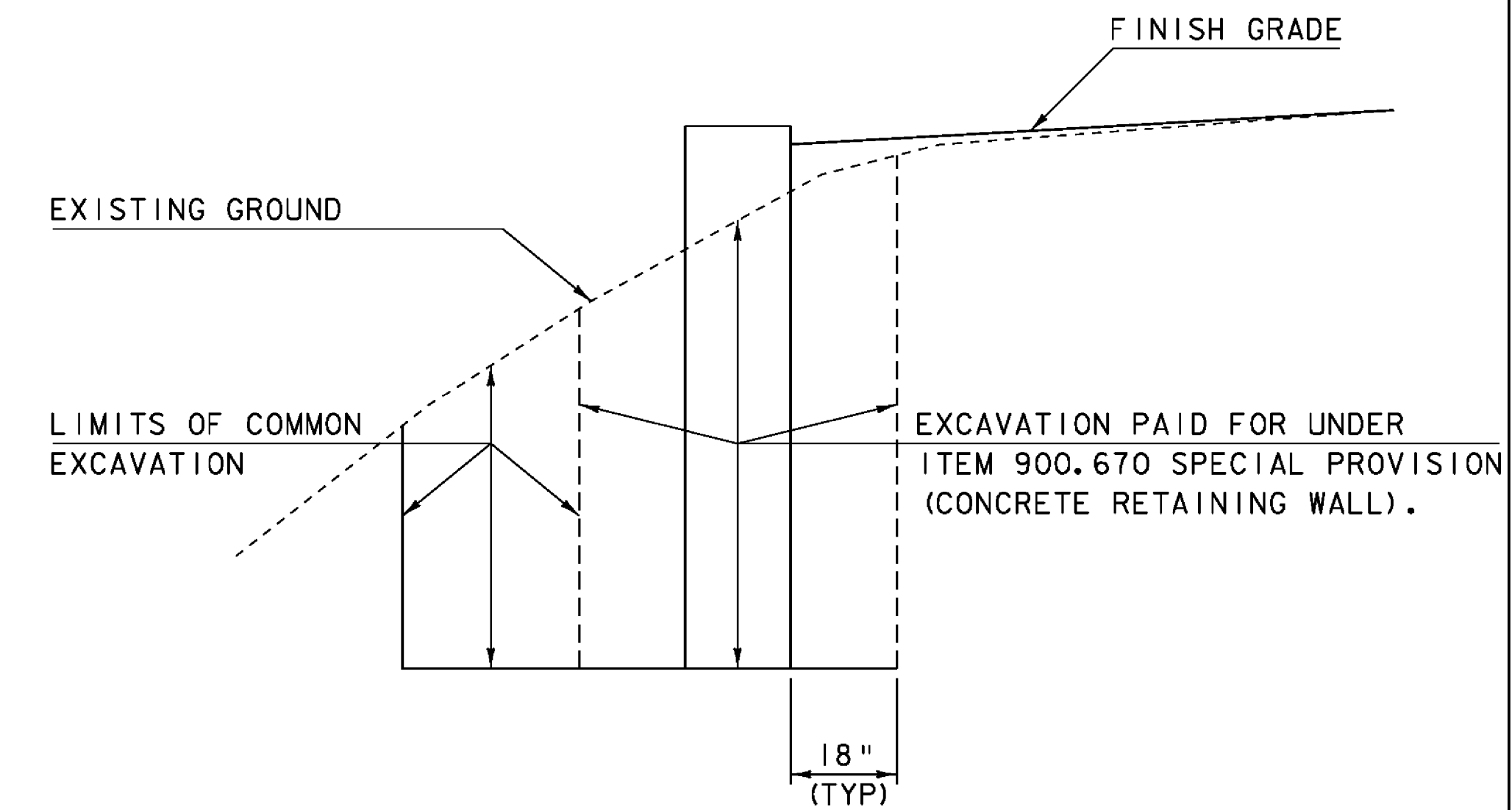
8. THE CONNECTION BETWEEN THE WINGWALL AND THE ABUTMENT STEM SHALL BE DESIGNED AND SUBMITTED TO THE PROJECT MANAGER FOR REVIEW AND APPROVAL. ALL COMPONENTS SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 900.670.
9. SEE WINGWALL 3A DETAILS SHEET FOR TYPICAL SECTION.

SCALE 1/2" = 1'-0"  


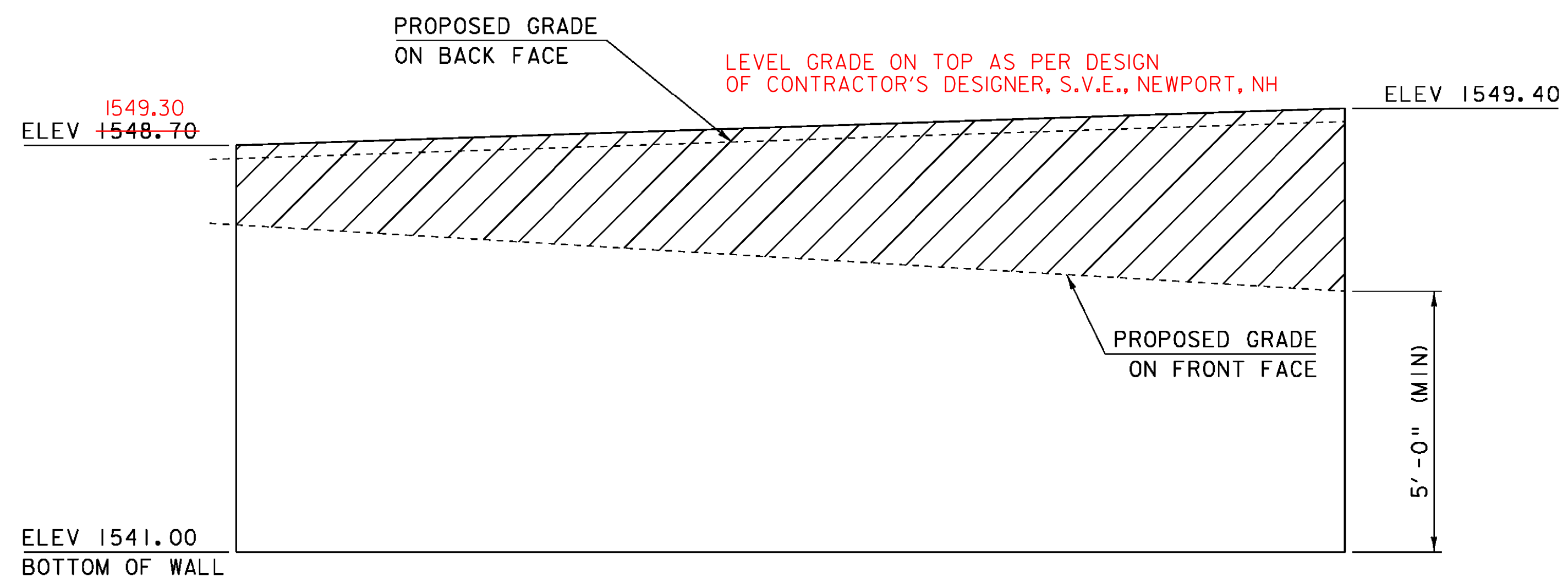
PROJECT NAME: WARDBORO	
PROJECT NUMBER: BHF 0114(5)	
FILE NAME: 05J006/Str/s05J006-WW2A	PLOT DATE: 17-NOV-2009
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: E.Charbonneau
DESIGNED BY: E.Charbonneau	CHECKED BY: R.S.YOUNG
WINGWALL 2A DETAILS	SHEET 23 OF 33



**WINGWALL 3A PLAN VIEW**  
SCALE: 1/2" = 1'-0"



**TYPICAL WINGWALL EXCAVATION DETAIL**  
SCALE: 1/2" = 1'-0"



**WINGWALL 3A ELEVATION VIEW**  
SCALE: 1/2" = 1'-0"

 PAY LIMITS OF ITEM 900.670 "SPECIAL PROVISION (CONCRETE RETAINING WALL)"

SCALE 1/2" = 1'-0"  
0 1 2

SEE NOTES ON PREVIOUS SHEET, WINGWALL 2A DETAILS, FOR ADDITIONAL INFORMATION.

PROJECT NAME: WARDBORO	PLOT DATE: 17-NOV-2009
PROJECT NUMBER: BHF 0114(5)	DRAWN BY: E.Charbonneau
FILE NAME: 05J006/Str/s05J006-WW3A	CHECKED BY: R.S.YOUNG
PROJECT LEADER: C.P.WILLIAMS	SHEET 24 OF 33
DESIGNED BY: E.Charbonneau	
WINGWALL 3A DETAILS	

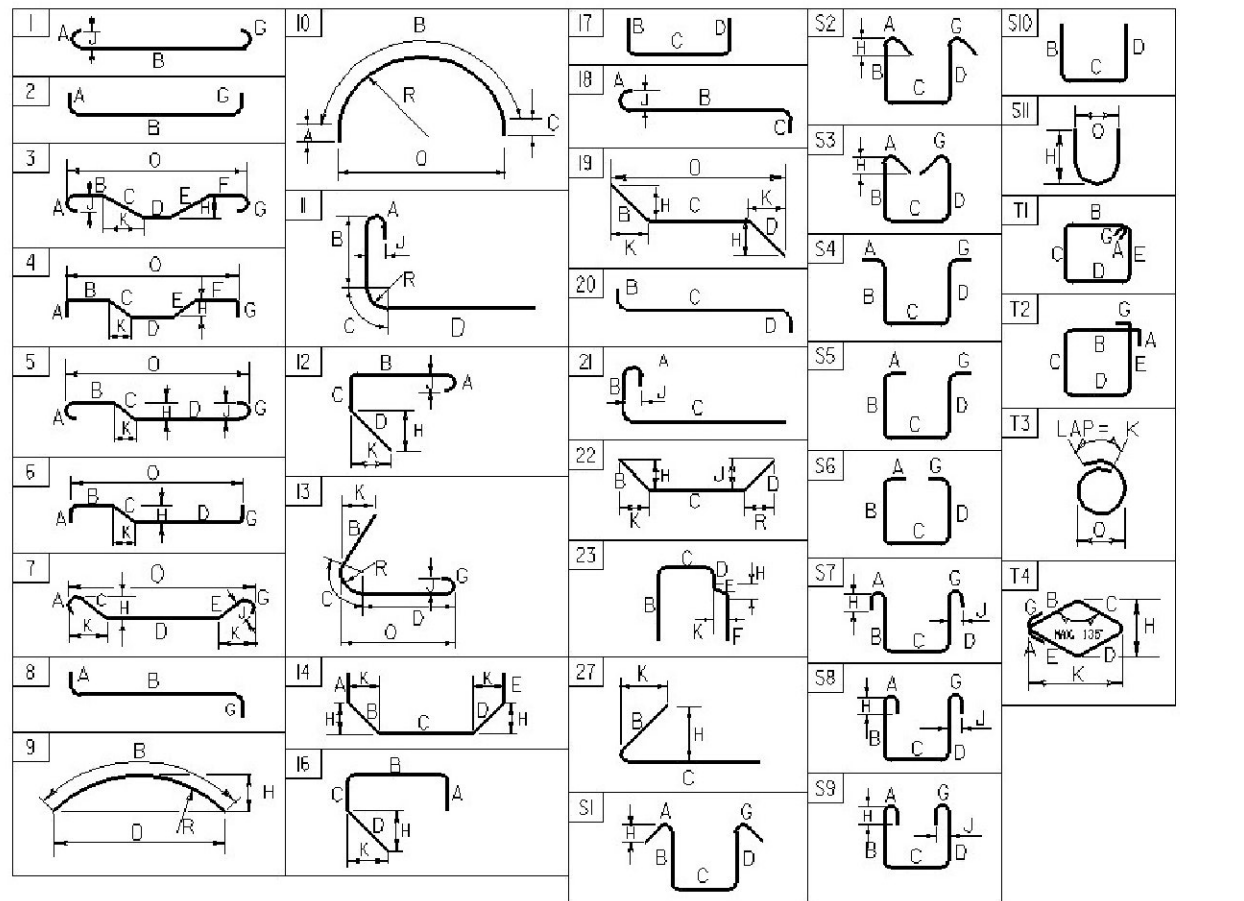
STATE OF VERMONT  
AGENCY OF TRANSPORTATION

# REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O				
<b>DECK</b>																																							
▲	278	5	25'-2"	E5501	STR																																		
▲	140	6	38'-3"	E5502	STR																																		
▲	22	5	28'-10"	E5503	STR																																		
▲	48	5	11'-0"	E5504	S5	2'-2"	3'-3"	0'-6"	2'-11"			2'-2"																											
▲	278	7	9'-9"	E5701	S5	3'-6"	1'-2"	0'-9"	0'-10"			3'-6"																											
<b>ABUTMENT #1</b>																																							
▲	6	5	34'-0"	1A501	STR																																		
▲	26	5	3'-9"	1A502	STR																																		
▲	22	5	7'-3"	1A503	STR																																		
▲	14	5	5'-3"	1A504	17					9"	2'-6"																												
▲	27	5	4'-0"	1A505	17					1'-3"	1'-6"	1'-3"																											
▲	10	5	5'-8"	1A506	17					2'-2"	1'-4"	2'-2"																											
▲	2	5	4'-6"	1A507	22					2'-6"	2'-0"																												
<b>ABUTMENT #2</b>																																							
▲	6	5	38'-4"	2A501	STR																																		
▲	26	5	4'-7"	2A502	STR																																		
▲	26	5	6'-10"	2A503	STR																																		
▲	16	5	3'-1"	2A504	17					9"	2'-4"																												
▲	30	5	3'-10"	2A505	17					1'-2"	1'-6"	1'-2"																											
▲	12	5	5'-8"	2A506	17					2'-2"	1'-4"	2'-2"																											
▲	2	5	4'-11"	2A507	22					2'-10"	2'-1"																												

~ NOTES ~

- UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE N SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-S1). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
- FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
- BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
- "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
- "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
- WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "Y" AND "K" MUST BE SHOWN.
- ▲ DENOTES BARS TO BE CUT IN FIELD.
- # DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
- △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
- E N BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS				
BAR SIZE (ENGLISH)	WEIGHT PER FOOT (LBS)	NOMINAL DIAMETER (INCHES)	CROSS SECTIONAL AREA (SQ INCHES)	PERIMETER (INCHES)
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

PROJECT NAME: **WARDSBORO**  
 PROJECT NUMBER: **BHF 0114(5)**  
 FILE NAME: 405j006xcel.dgn PLOT DATE: 10/19/2009  
 PROJECT MANAGER: C.P.WILLIAMS DRAWN BY: D.D.BEARD  
 DESIGNED BY: E.Charbonneau CHECKED BY: E.Charbonneau  
 REINFORCING STEEL SCHEDULE SHEET SHEET 25 OF 33

**EPSC PLAN NARRATIVE**

**1.1 PROJECT DESCRIPTION**  
BRIDGE 111 IS LOCATED IN THE TOWN OF WARDSBORO, WINDHAM COUNTY, VERMONT ON TH1, 1.1 MILES WEST OF THE JUNCTION OF TH-1 AND VT ROUTE 100. WORK TO BE PERFORMED ON THIS PROJECT INCLUDES CONSTRUCTION OF A NEW SUPERSTRUCTURE, CONSTRUCTION OF NEW BRIDGE SEATS AND MINOR APPROACH WORK. THE ROAD WILL BE CLOSED DURING CONSTRUCTION AND TRAFFIC WILL BE MAINTAINED ON AN OFF-SITE DETOUR.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS.

TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 0.11 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

**1.2 SITE INVENTORY**

**1.2.1 TOPOGRAPHY**

THE TERRAIN IS HILLY TO MOUNTAINOUS, FORESTED, RURAL.

**1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MANMADE WATER FEATURES**

PIKE HOLLOW BROOK AND WARDSBORO BROOK ARE THE TWO WATER SOURCES ON THE PROJECT SITE. PIKE HOLLOW BROOK FLOWS UNDER BRIDGE 111 AND IS CLASSIFIED AS STEEP AND SINUOUS, WITH A STREAMBED OF COBBLES AND GRAVEL. THE TRIBUTARY AREA IS 3.5 SQUARE MILES. THERE ARE TWO COWP CULVERTS IN THE PROJECT AREA WHICH ARE OUTSIDE THE PROJECT CONSTRUCTION LIMITS.

**1.2.3 VEGETATION**

THE VEGETATION IN THE PROJECT AREA CONSISTS OF MIXED HARD AND SOFTWOOD TREES AND UNDERGROWTH. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

**1.2.4 SOILS**

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE'S SOIL CONSERVATION SERVICE FOR THE COUNTY OF WINDHAM, VERMONT.

COLTON LOAMY FINE SAND 2-8% SLOPES	COLTON LOAMY FINE SAND 8-15% SLOPES	HOUGHTONVILLE FINE SANDY LOAM 5-25% SLOPES
HYDRO SOIL GROUP A K-FACTOR 0.17	HYDRO SOIL GROUP A K-FACTOR 0.17	VERY STONY, HYDRO SOIL GROUP B K-FACTOR 0.49

SEE EXISTING CONDITIONS SITE PLAN FOR SOIL LOCATIONS

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:  
0.0-0.23 = LOW EROSION POTENTIAL  
0.24-0.36 = MODERATE EROSION POTENTIAL  
0.37 AND HIGHER = HIGH EROSION POTENTIAL

**1.2.5 SENSITIVE RESOURCE AREAS**

CRITICAL HABITATS: NO. LAND TO THE NORTH OF WARDSBORO BROOK IS MAPPED AS DEER WINTERING HABITAT.  
HISTORICAL OR ARCHEOLOGICAL AREAS: NO  
PRIME AGRICULTURAL LAND: NO  
THREATENED AND ENDANGERED SPECIES: NO  
WATER RESOURCE: PIKE HOLLOW BROOK AND WARDSBORO BROOK. PIKE HOLLOW BROOK IS A COLD WATER STREAM THAT IS STOCKED WITH ATLANTIC SALMON AS PART OF THE CONNECTICUT RIVER SALMON RESTORATION EFFORT. REMOVAL OF VEGETATION ALONG STREAM BANKS SHOULD BE MINIMIZED.  
WETLANDS: NO

**1.3 RISK EVALUATION**

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-902.0 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

**1.4 EROSION PREVENTION AND SEDIMENT CONTROL**

THE CONTRACTOR SHALL REFER TO THE VTRANS EROSION PREVENTION AND SEDIMENT CONTROL PLAN CHECKLIST TO DEVELOP THE EPSC PLAN. THIS CHECKLIST SHALL BE OBTAINED FROM THE ENGINEER.

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT.

**1.4.1 MARK SITE BOUNDARIES**

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION.

**1.4.2 LIMIT DISTURBANCE AREA**

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING EXPOSED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EARLY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

THE CONTRACTOR SHALL ESTABLISH THE LIMITS OF CONSTRUCTION ACCORDING TO THE CONTRACT. ALL EFFORTS SHALL BE MADE TO MINIMIZE EARTH DISTURBANCE.

**1.4.3 SITE ENTRANCE/EXIT STABILIZATION**

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR'S PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS ACCEPTED IN THE EPSC PLAN AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

**1.4.4 INSTALL SEDIMENT BARRIERS**

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP-SLOPE WORK.

SILT FENCE WILL BE INSTALLED ACCORDING TO THE ACCEPTED EPSC PLAN OR AS NECESSARY.

**1.4.5 DIVERT UPLAND RUNOFF**

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

UPLAND RUNOFF SHALL BE DIVERTED AROUND THE PROJECT AS APPROPRIATE.

**1.4.6 SLOW DOWN CHANNELIZED RUNOFF**

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSION POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

STONE CHECK DAMS WILL BE INSTALLED AS ACCEPTED IN THE EPSC PLAN.

**1.4.7 CONSTRUCT PERMANENT CONTROLS**

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS ACCEPTED IN THE EPSC PLAN AND IN ACCORDANCE WITH PERMIT CONDITIONS.

**1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION**

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-902.0 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

**1.4.9 WINTER STABILIZATION**

VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

WINTER WORK IS NOT ANTICIPATED.

**1.4.10 STABILIZE SOIL AT FINAL GRADE**

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

**1.4.11 DEWATERING ACTIVITIES**

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

ANY NECESSARY DEWATERING SHALL BE PERFORMED AS INDICATED IN THE ACCEPTED EPSC PLAN.

**1.4.12 INSPECT YOUR SITE**

INSPECT THE PROJECT SITE BASED ON REGULATORY PROVISIONS, REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

**1.5 SEQUENCE AND STAGING**

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

**1.5.1 CONSTRUCTION SEQUENCE**

**1.5.2 OFF-SITE ACTIVITIES**

IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SPECIFICATION 105.25-105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

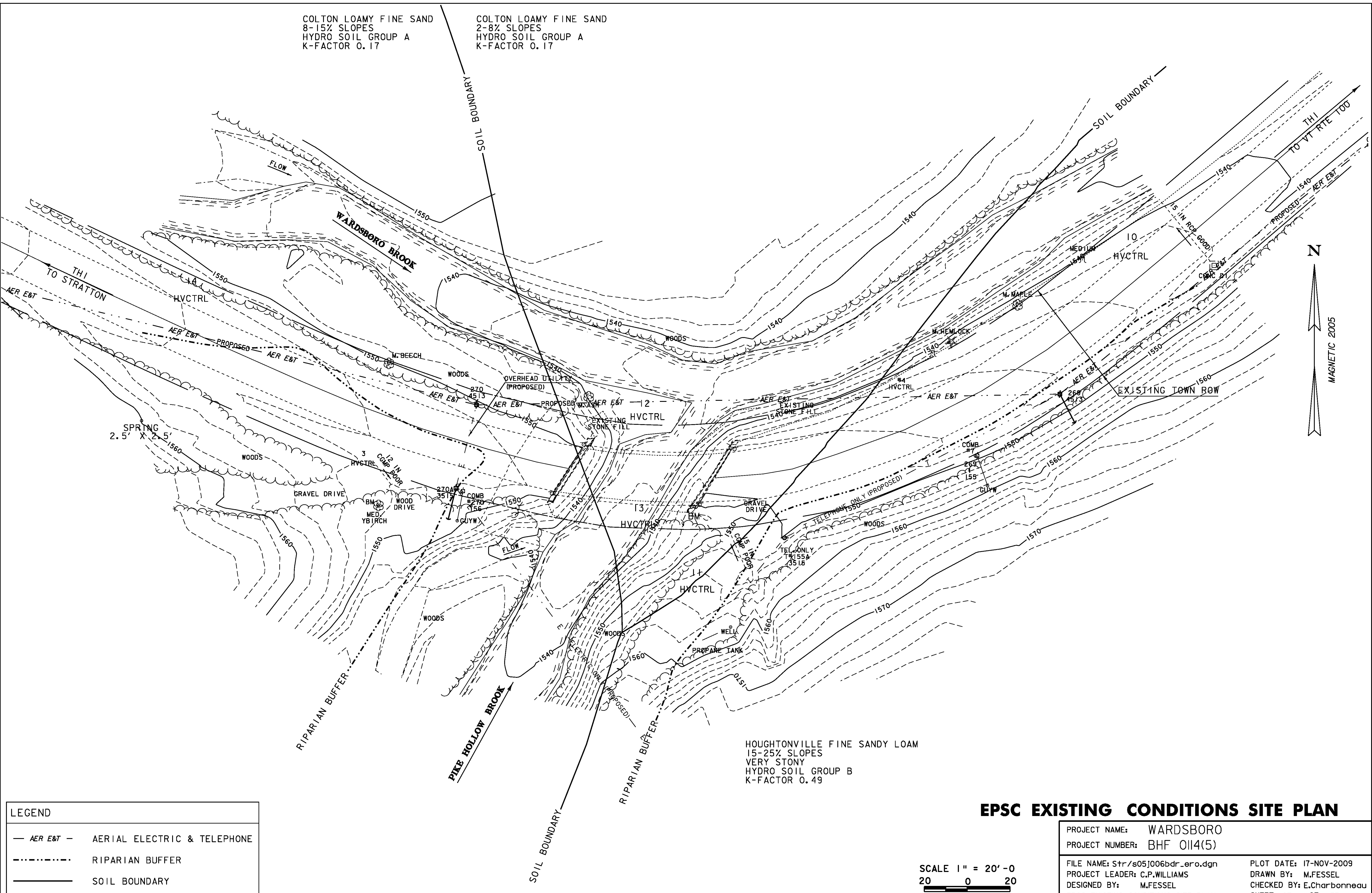
**1.5.3 UPDATES**

PROJECT NAME:	WARDSBORO
PROJECT NUMBER:	BHF 014(5)
FILE NAME:	05J006/Str/epsnarrative.dgn
PROJECT LEADER:	C.P.WILLIAMS
DESIGNED BY:	M.FESSEL
EPSC NARRATIVE	
PLOT DATE:	17-NOV-2009
DRAWN BY:	M.FESSEL
CHECKED BY:	E.Charbonneau
SHEET	26 OF 33

COLTON LOAMY FINE SAND  
8-15% SLOPES  
HYDRO SOIL GROUP A  
K-FACTOR 0.17

COLTON LOAMY FINE SAND  
2-8% SLOPES  
HYDRO SOIL GROUP A  
K-FACTOR 0.17

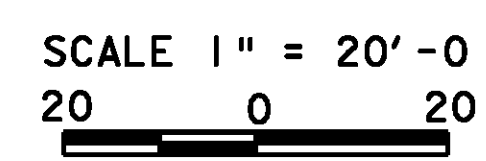
HOUGHTONVILLE FINE SANDY LOAM  
15-25% SLOPES  
VERY STONY  
HYDRO SOIL GROUP B  
K-FACTOR 0.49



LEGEND	
— AER E&T —	AERIAL ELECTRIC & TELEPHONE
.....	RIPARIAN BUFFER
————	SOIL BOUNDARY

**EPSC EXISTING CONDITIONS SITE PLAN**

PROJECT NAME: WARDSBORO	PLOT DATE: 17-NOV-2009
PROJECT NUMBER: BHF 0114(5)	DRAWN BY: M.FESSEL
FILE NAME: Str/s05j006bdr_ero.dgn	CHECKED BY: E.Charbonneau
PROJECT LEADER: C.P.WILLIAMS	SHEET 27 OF 33
DESIGNED BY: M.FESSEL	
EPSC EXISTING CONDITIONS SITE PLAN	



VAOT RURAL AREA MIX					
% WEIGHT	LBS/AC		NAME	GERM %	PURITY %
	BROADCAST	HYDROSEED			
37.5%	22.5	45	CREEPING RED FESCUE	85%	98%
37.5%	22.5	45	TALL FESCUE	90%	95%
5.0%	3	6	RED TOP	90%	95%
15.0%	9	18	BIRDSFOOT TREFOIL	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	85%	95%
100%	60	120			

VAOT URBAN AREA MIX					
% WEIGHT	LBS/AC		NAME	GERM %	PURITY %
	BROADCAST	HYDROSEED			
42.5%	34	68	CREEPING RED FESCUE	85%	98%
10.0%	8	16	PERENNIAL RYE GRASS	90%	95%
42.5%	34	68	KENTUCKY BLUE GRASS	85%	85%
5.0%	4	8	ANNUAL RYE GRASS	85%	95%
100%	80	160			

GENERAL GUIDANCE			
FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10/20/2010	19-19-19	PELLETIZED	LIQUID
500 LBS/AC		2 TONS/AC	4.4 GAL/AC

#### CONSTRUCTION GUIDANCE

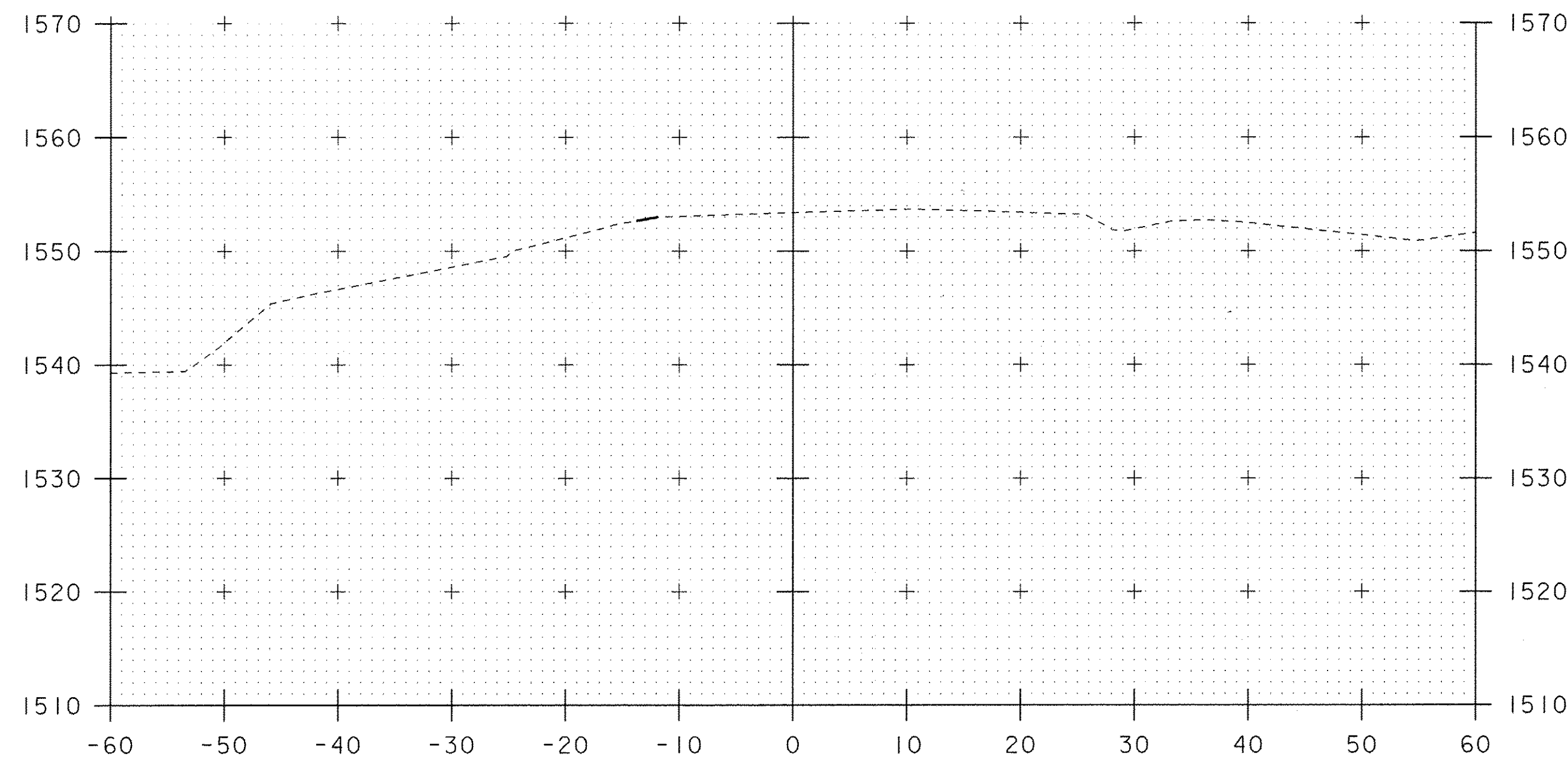
1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
7. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
8. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

SEED

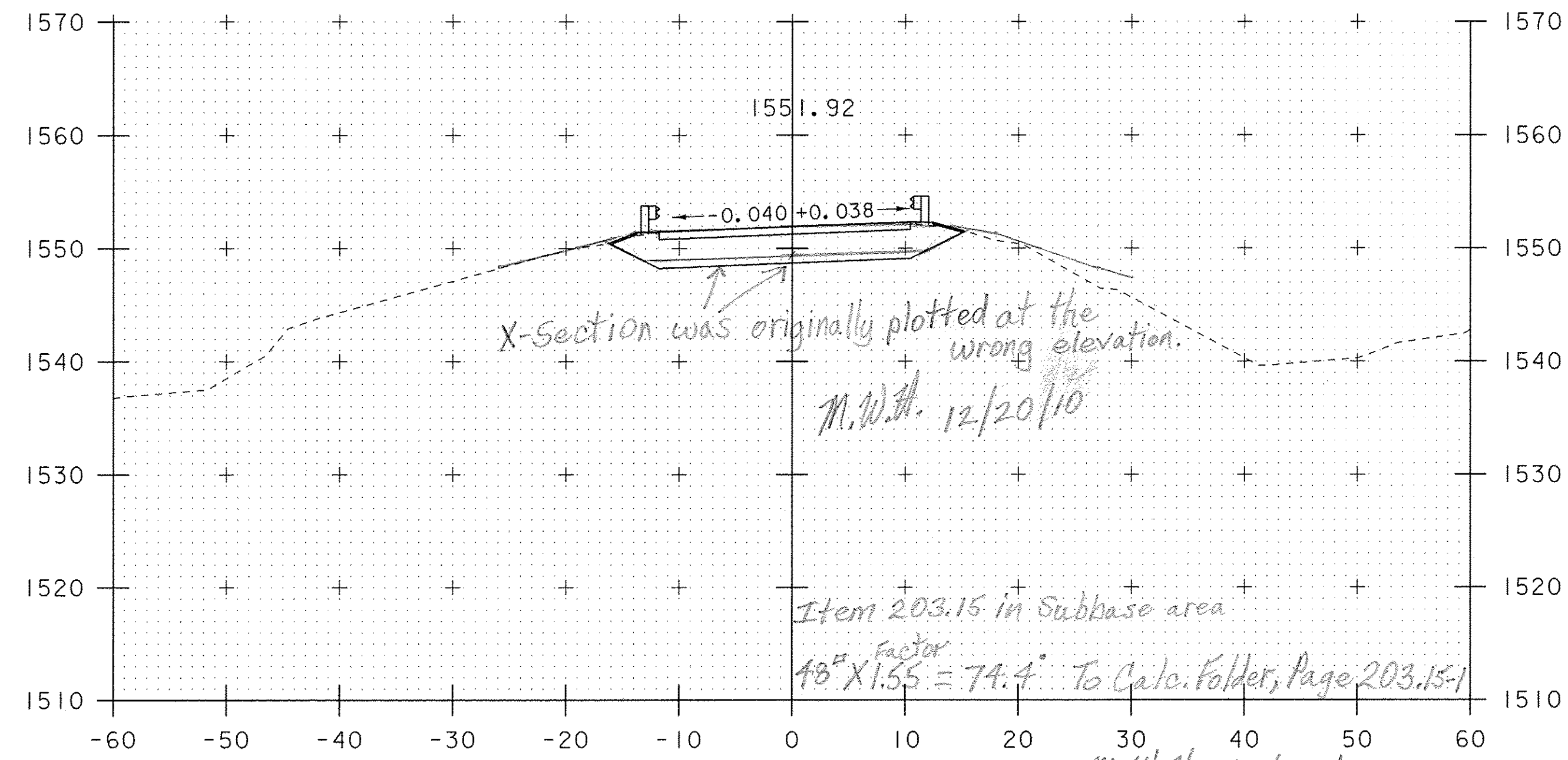
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 FOR SEED (PAY ITEM 651.15)

PROJECT NAME: WARDSBORO  
PROJECT NUMBER: BHF 0114(5)

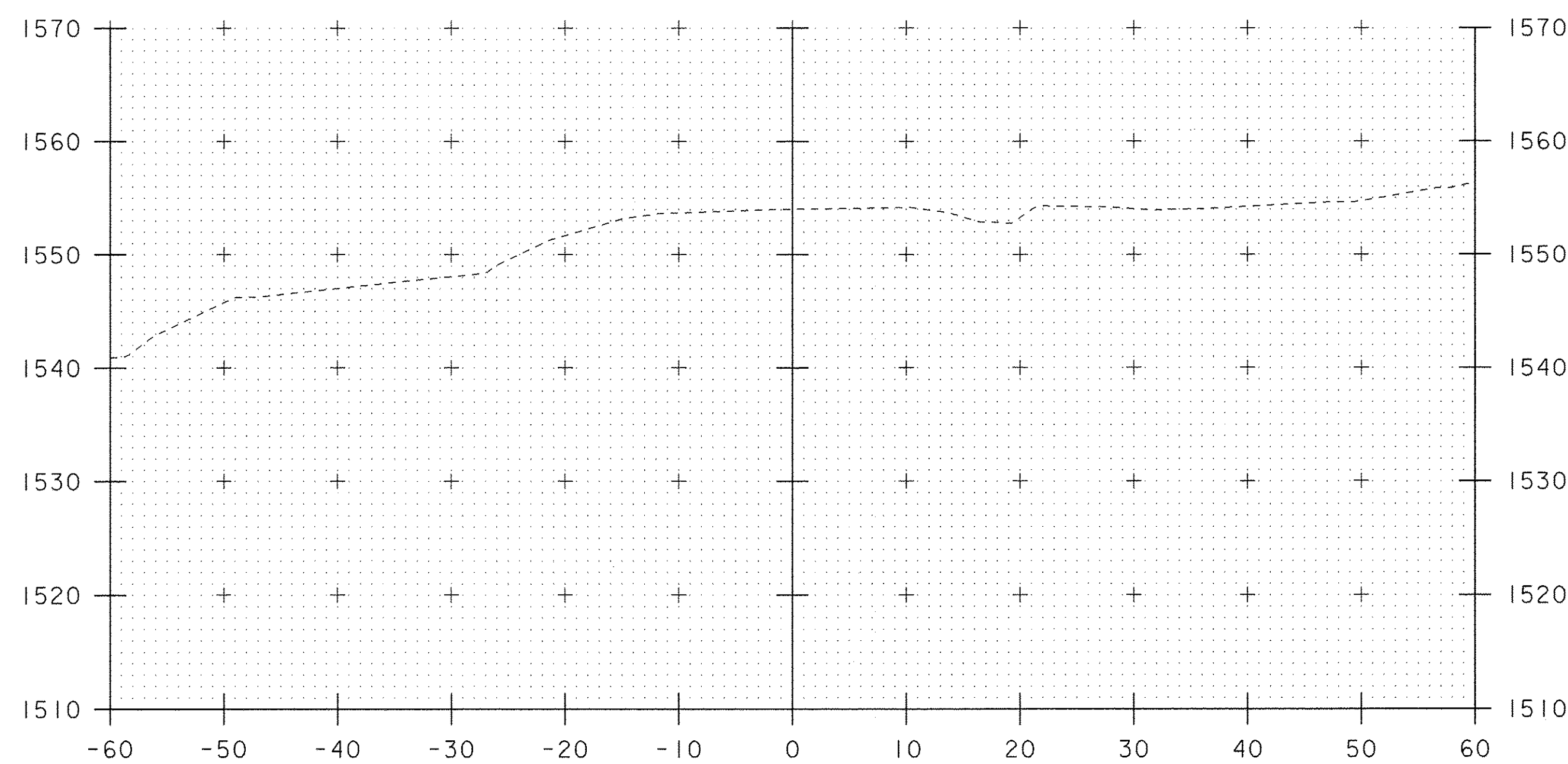
FILE NAME: Str/s05j006bdr\_ero.dgn PLOT DATE: 17-NOV-2009  
PROJECT LEADER: C.P.WILLIAMS DRAWN BY: M.FESSEL  
DESIGNED BY: M.FESSEL CHECKED BY: E.Charbonn  
SEEDING FORMULA SHEET 28 OF 33



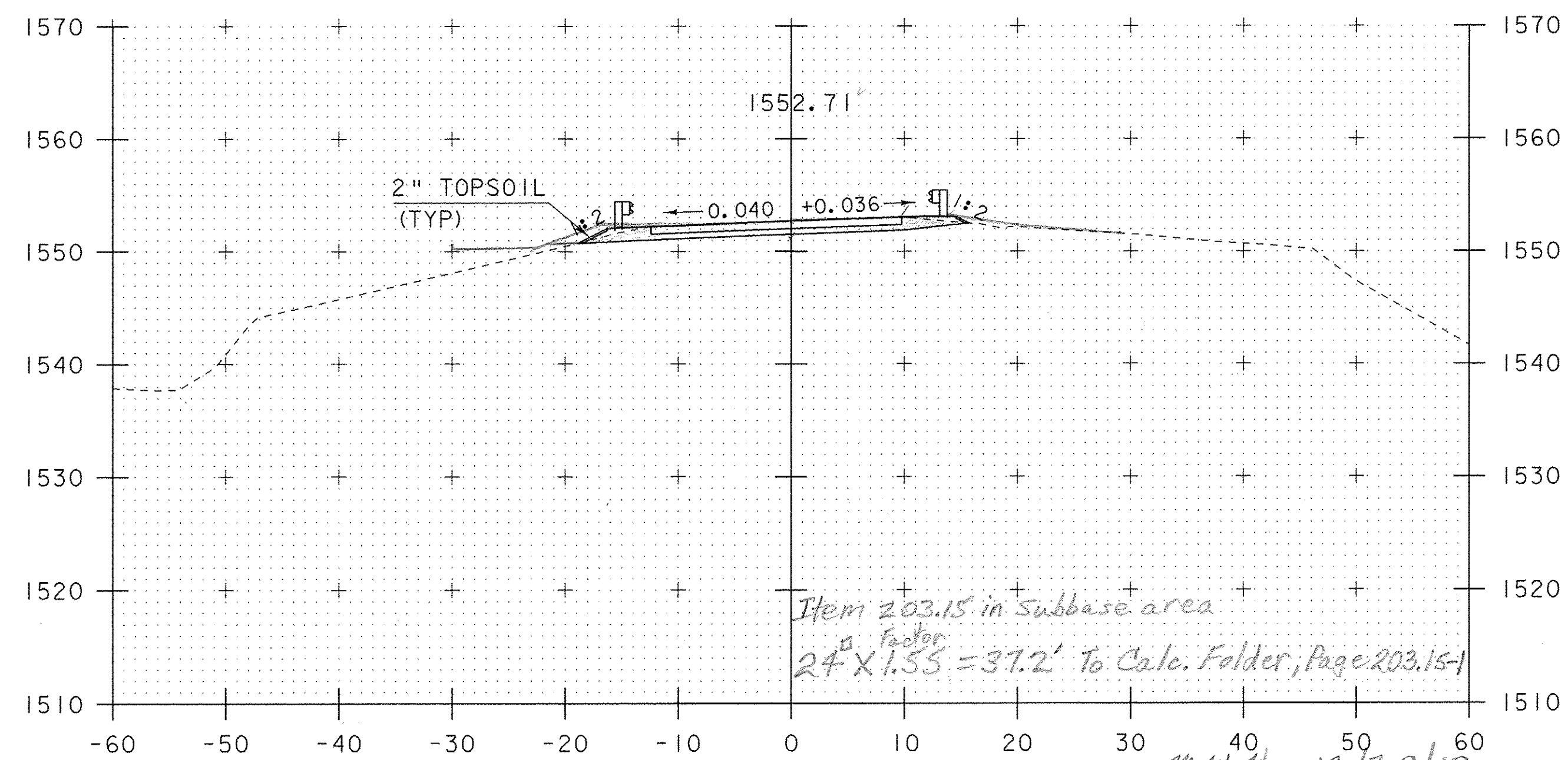
10+25



10+75



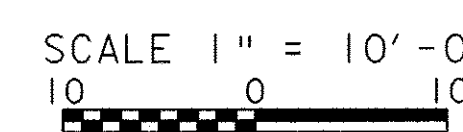
10+00



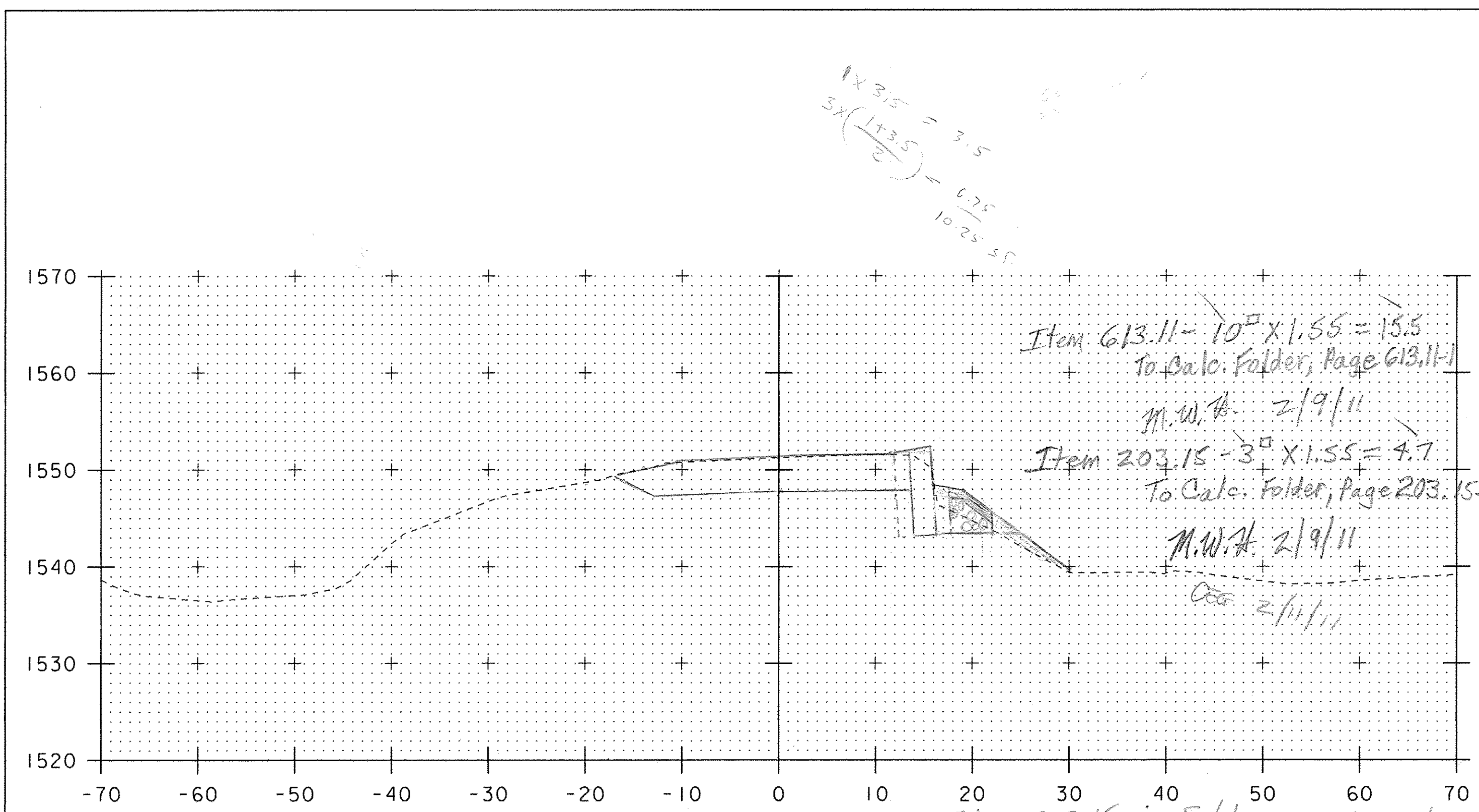
10+50

BEGIN APPROACH  
STA 10+50

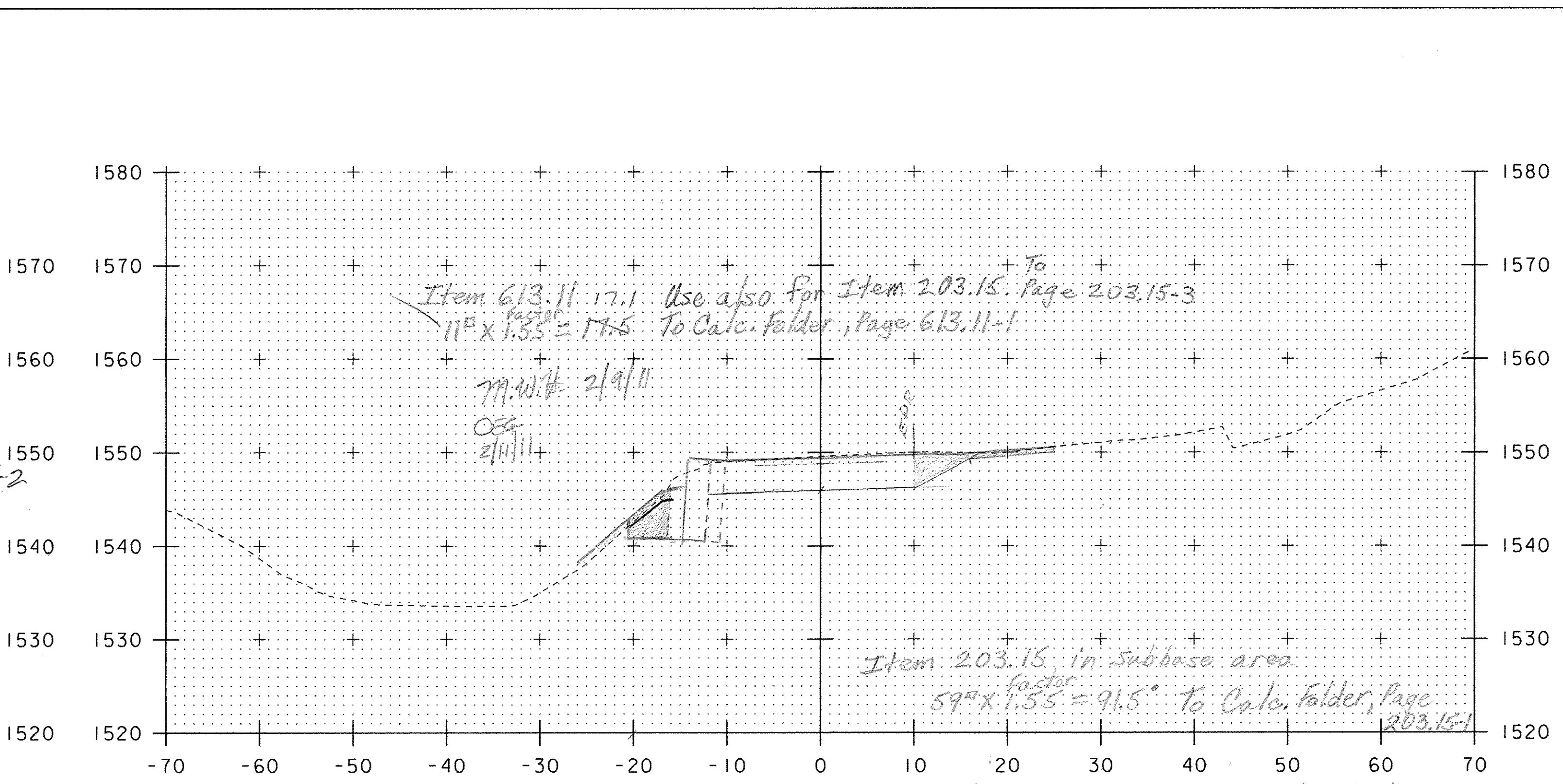
STA. 10+00 TO STA. 10+75



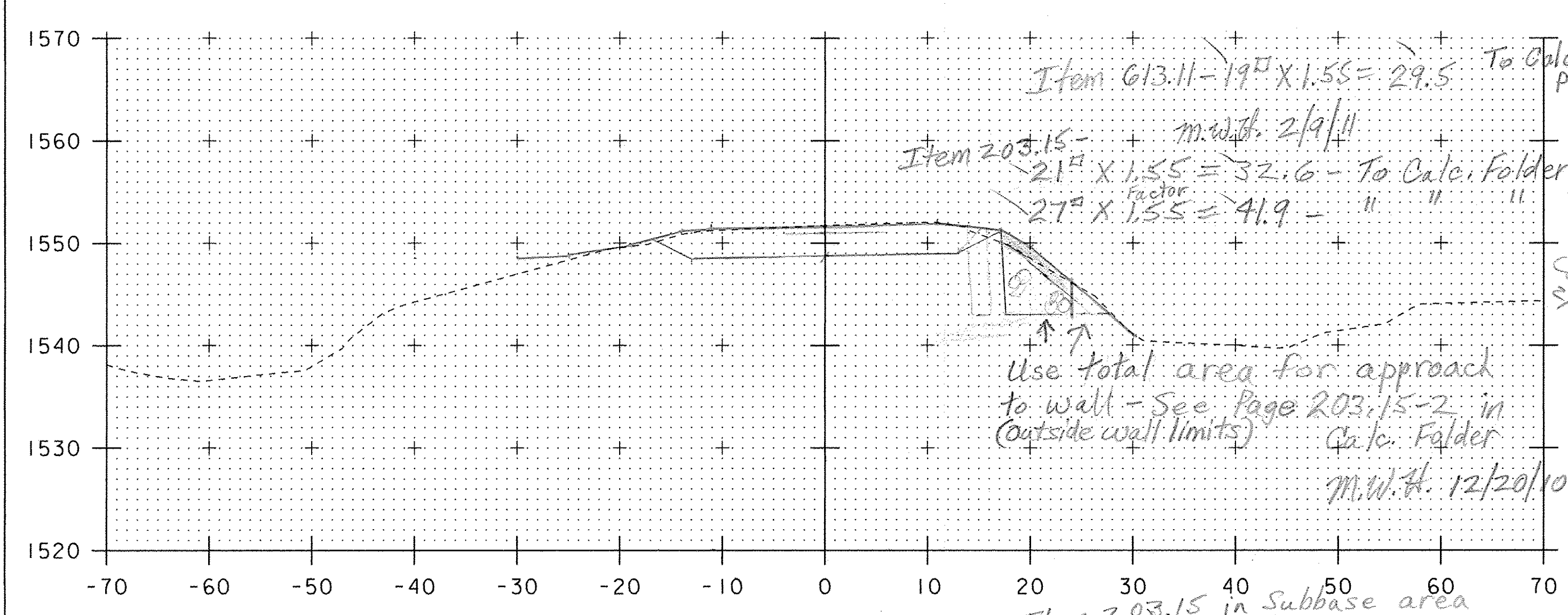
PROJECT NAME: WARDBORO	PLOT DATE: 17-NOV-2009
PROJECT NUMBER: BHF 0114(5)	DRAWN BY: M.FESSEL
FILE NAME: s05j006xsl.dgn	CHECKED BY: E.Charbonneau
PROJECT LEADER: C.P.WILLIAMS	SHEET 29 OF 33
DESIGNED BY: E.Charbonneau	MAINLINE CROSS SECTIONS I



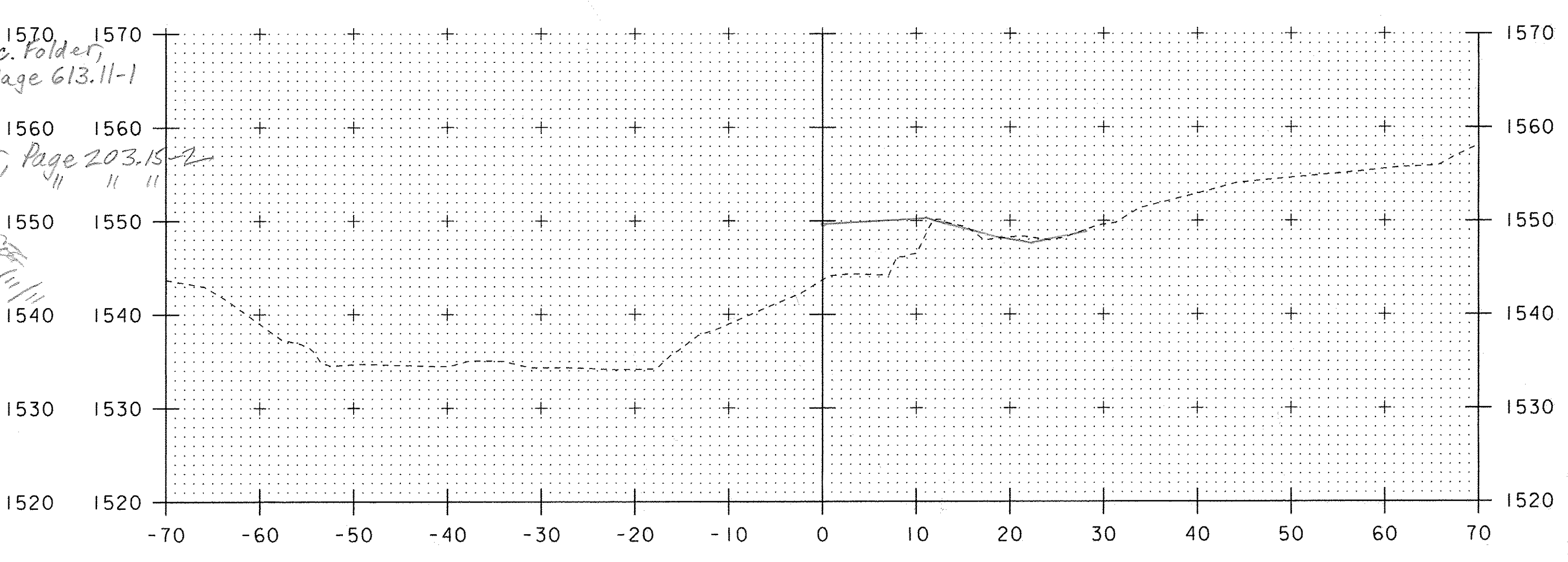
10+94 END FULL WIDTH CB  
 Item 203.15 in Subbase area  
 Factor  
 $64.5^2 \times 1.55 = 100^2$   
 To Calc. Folder, Page 203.15-1  
 M.W.H. 12/20/10



11+8 D.5 FULL WIDTH CB

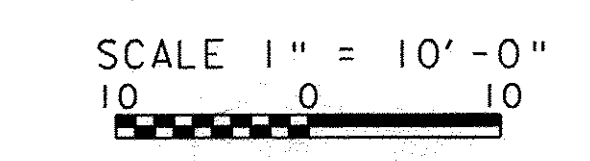


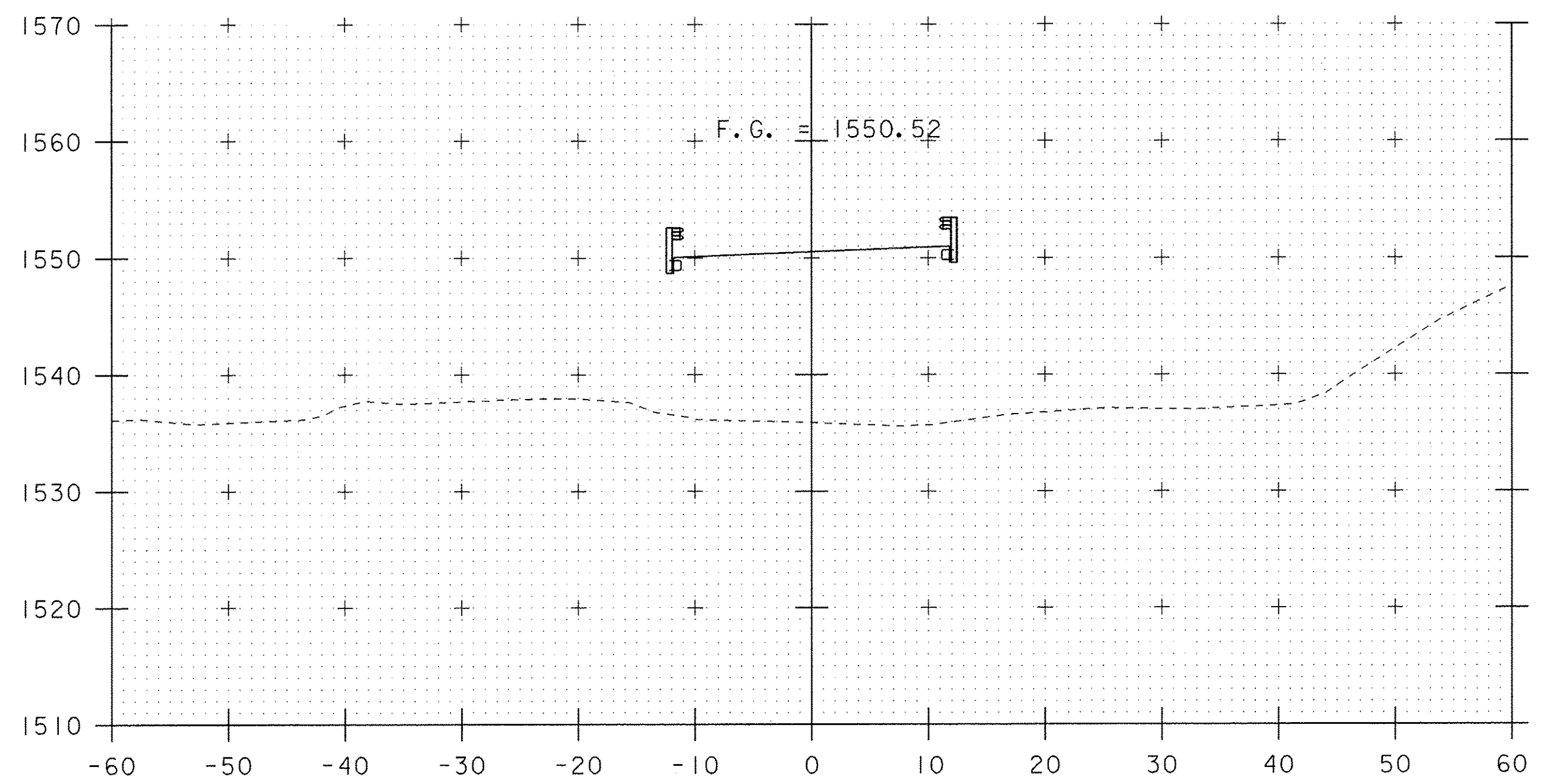
10+81  
 Item 203.15 in Subbase area  
 Factor  
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 To Calc. Folder, Page 203.15-1  
 M.W.H. 12/20/10



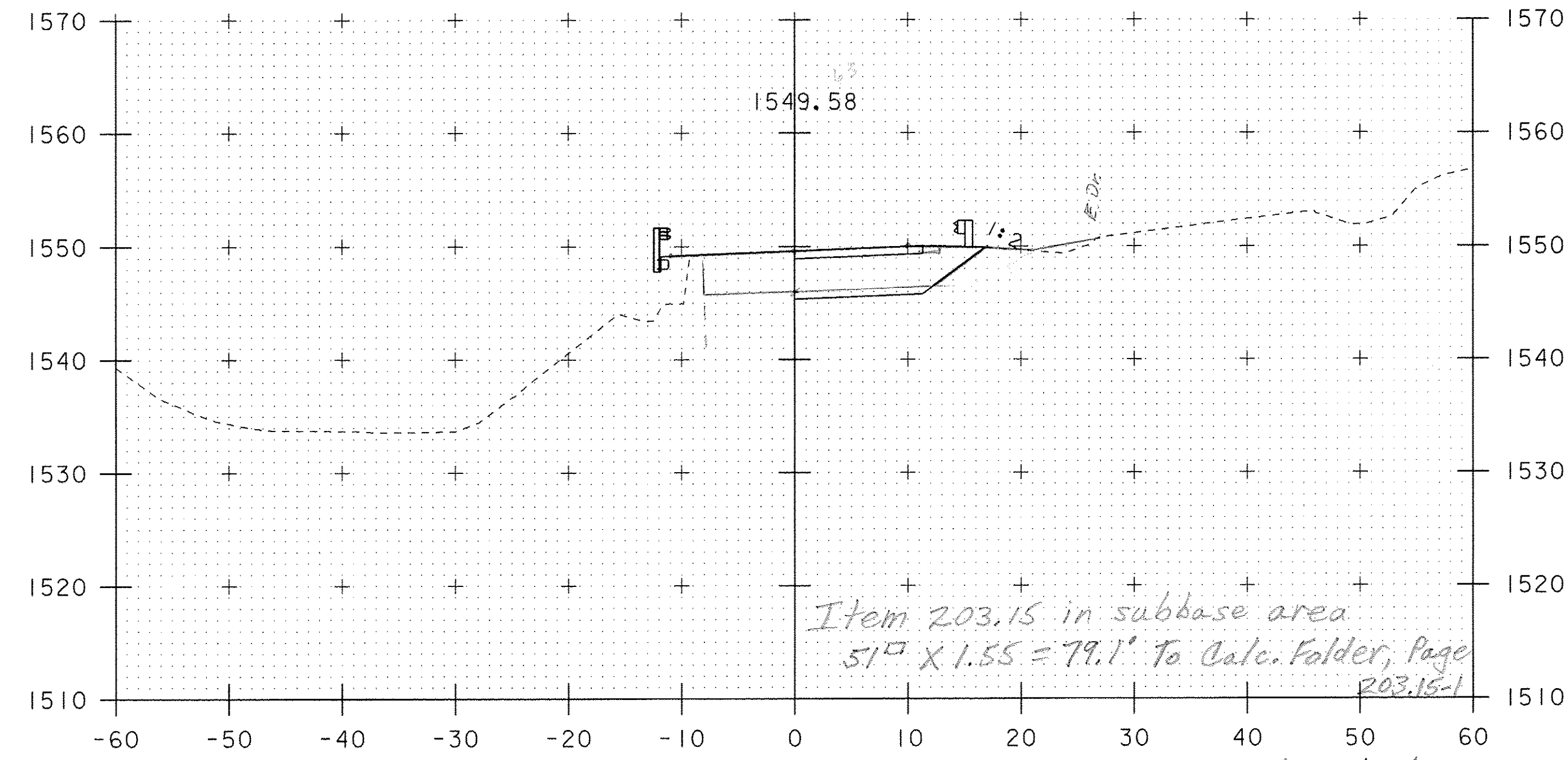
11+61

PROJECT NAME:	WARDSBORO	PLOT DATE:	12-OCT-2010
PROJECT NUMBER:	BHF 0114(5)	DRAWN BY:	D.D.BEARD
FILE NAME:	ppms*/Section/-----dgn	CHECKED BY:	-----
PROJECT LEADER:	C.P.WILLIAMS	SHEET	29A OF 1
DESIGNED BY:	E.R.CHARBONNEAU		

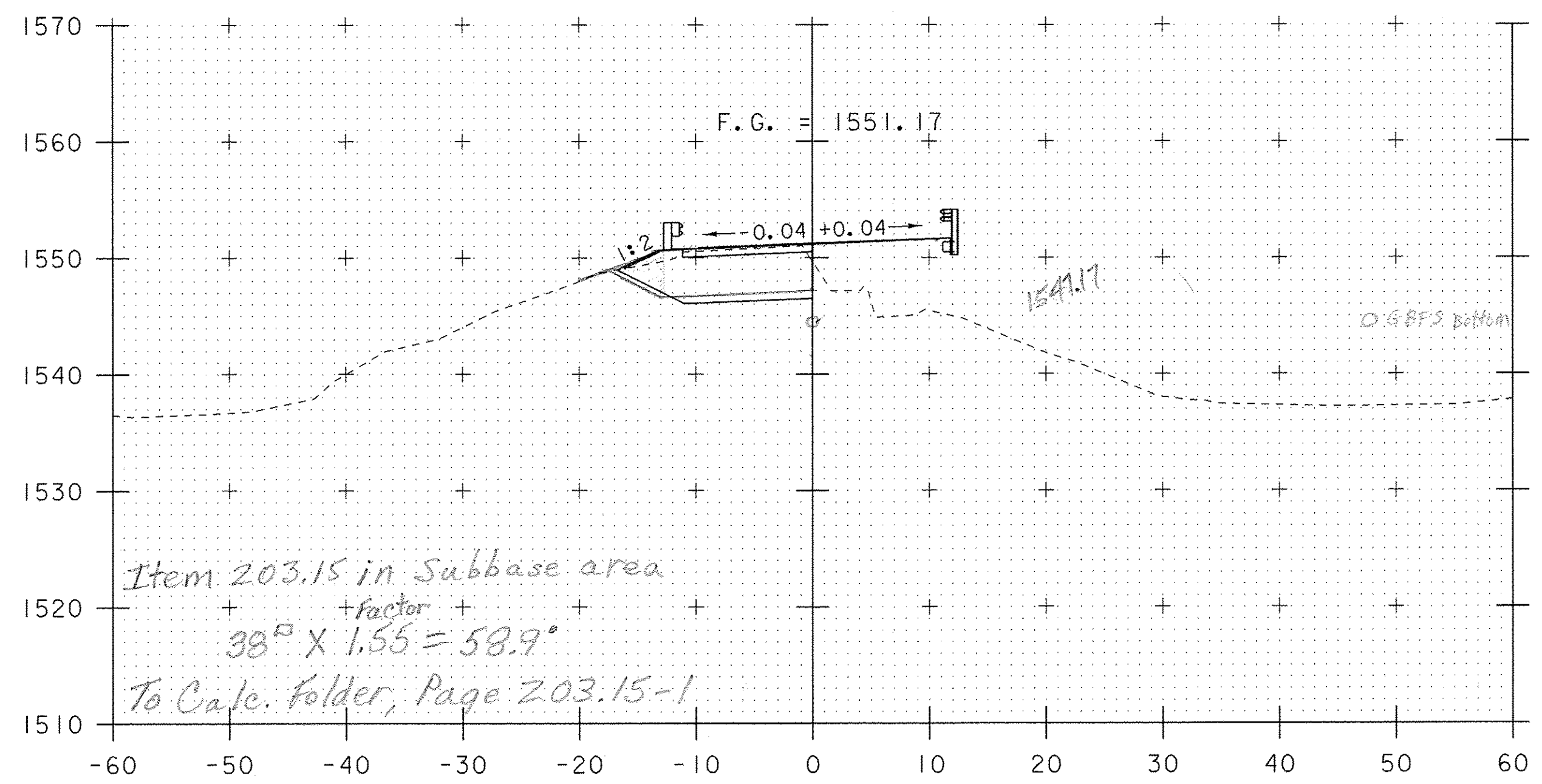




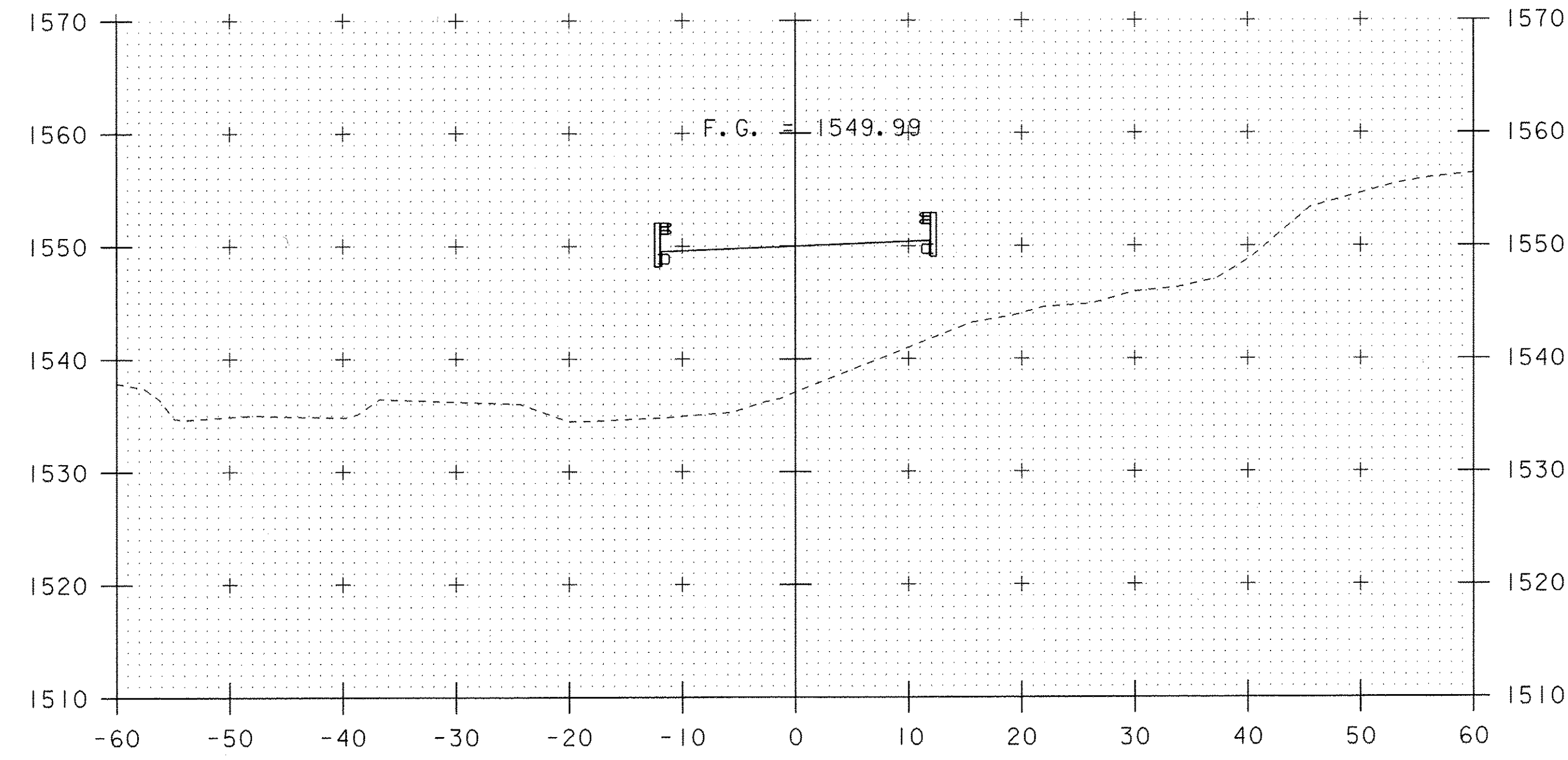
11+25



11+75  
END PROJECT / BRIDGE  
STA 11+68.83



11+00  
BEGIN PROJECT / BRIDGE  
STA 11+00  
11+04 END SB  
11+01 END SB

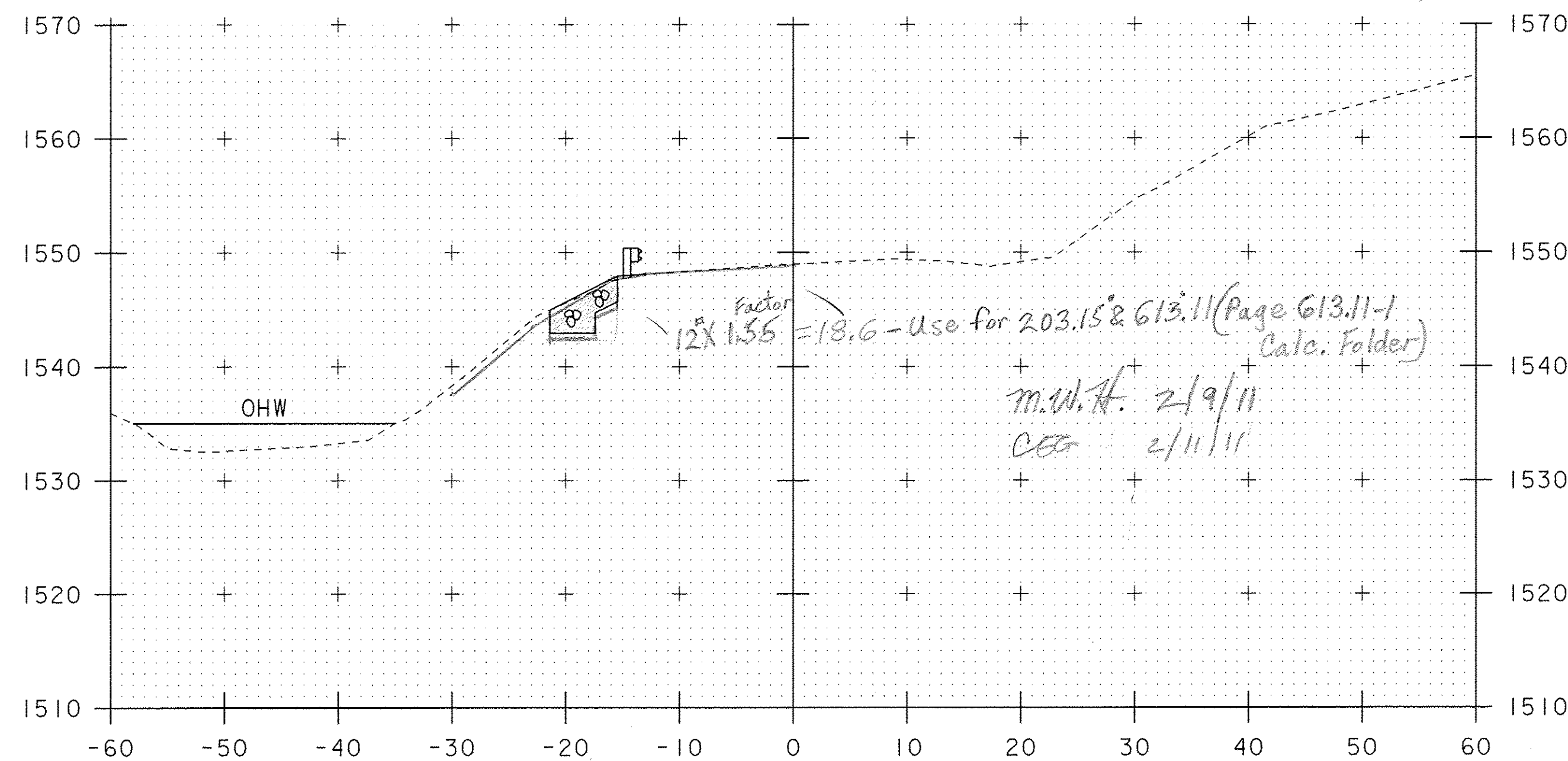


11+50

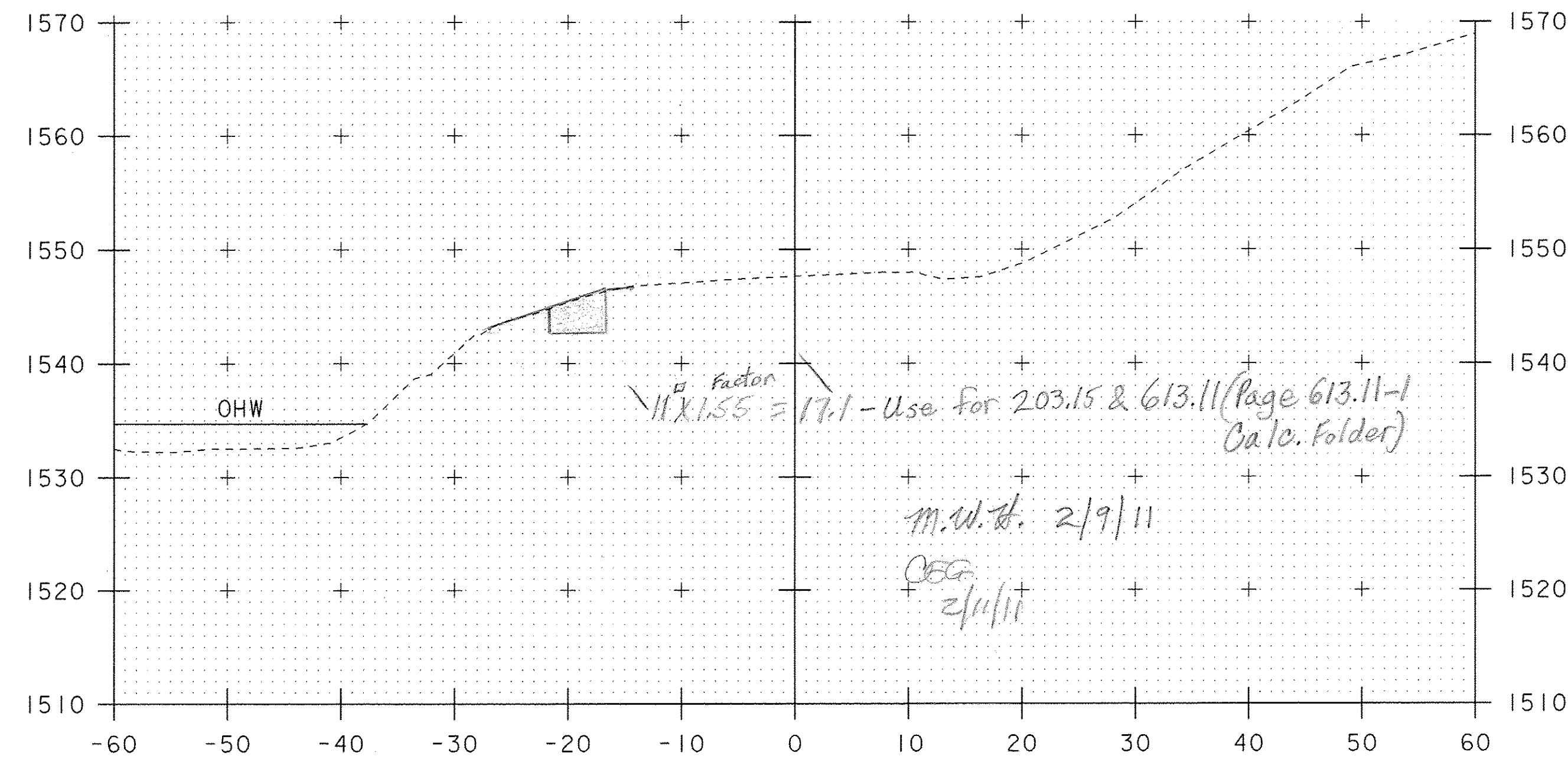
SCALE 1" = 10'-0"  
10 0 10

STA. 11+00 TO STA. 11+75

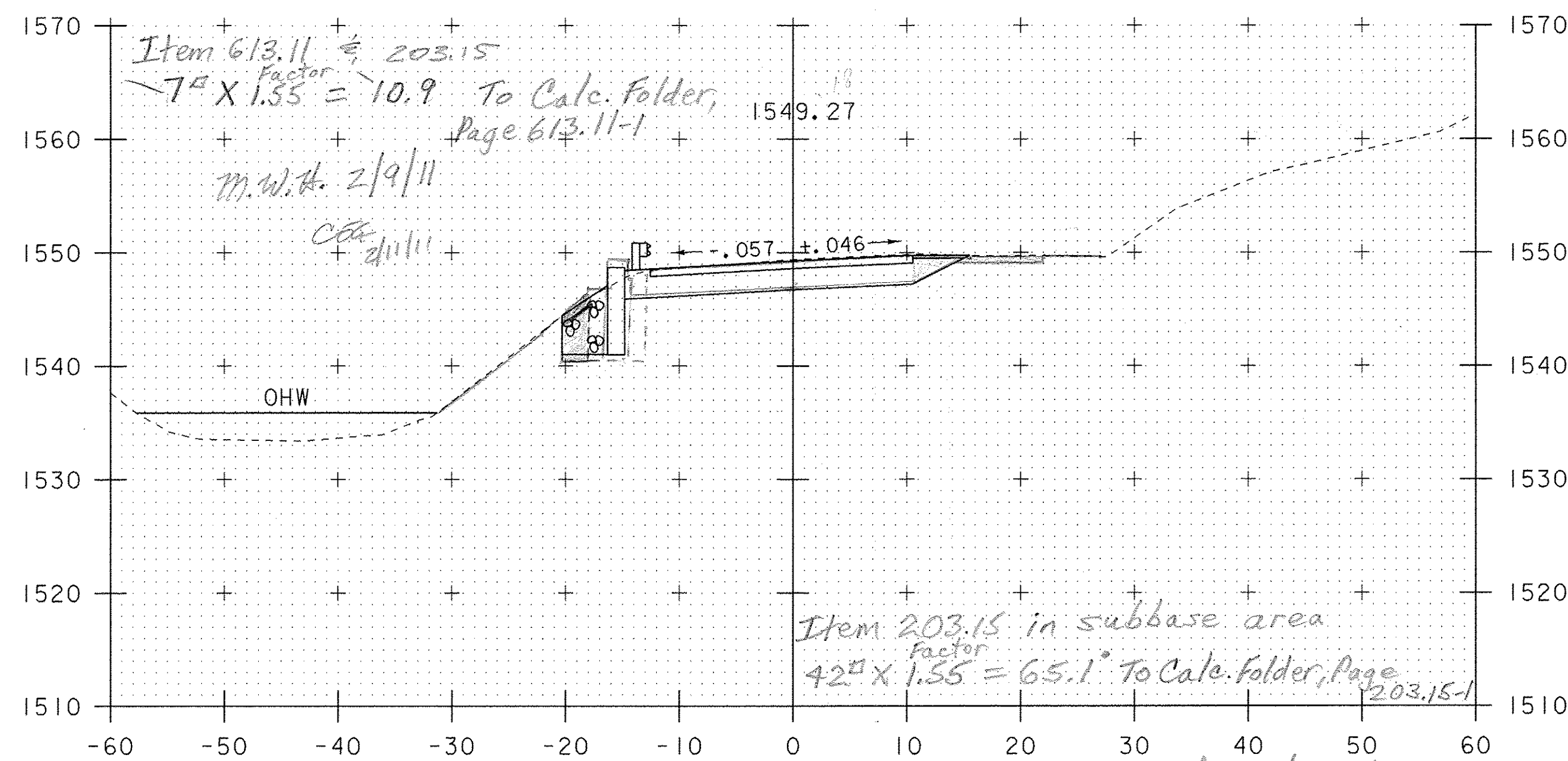
PROJECT NAME: WARDBORO	PLOT DATE: 17-NOV-2009
PROJECT NUMBER: BHF 0114(5)	DRAWN BY: M.FESSEL
FILE NAME: s05j006xsl.dgn	CHECKED BY: E.Charbonneau
PROJECT LEADER: C.P.WILLIAMS	SHEET 30 OF 33
DESIGNED BY: E.Charbonneau	
MAINLINE CROSS SECTIONS 2	



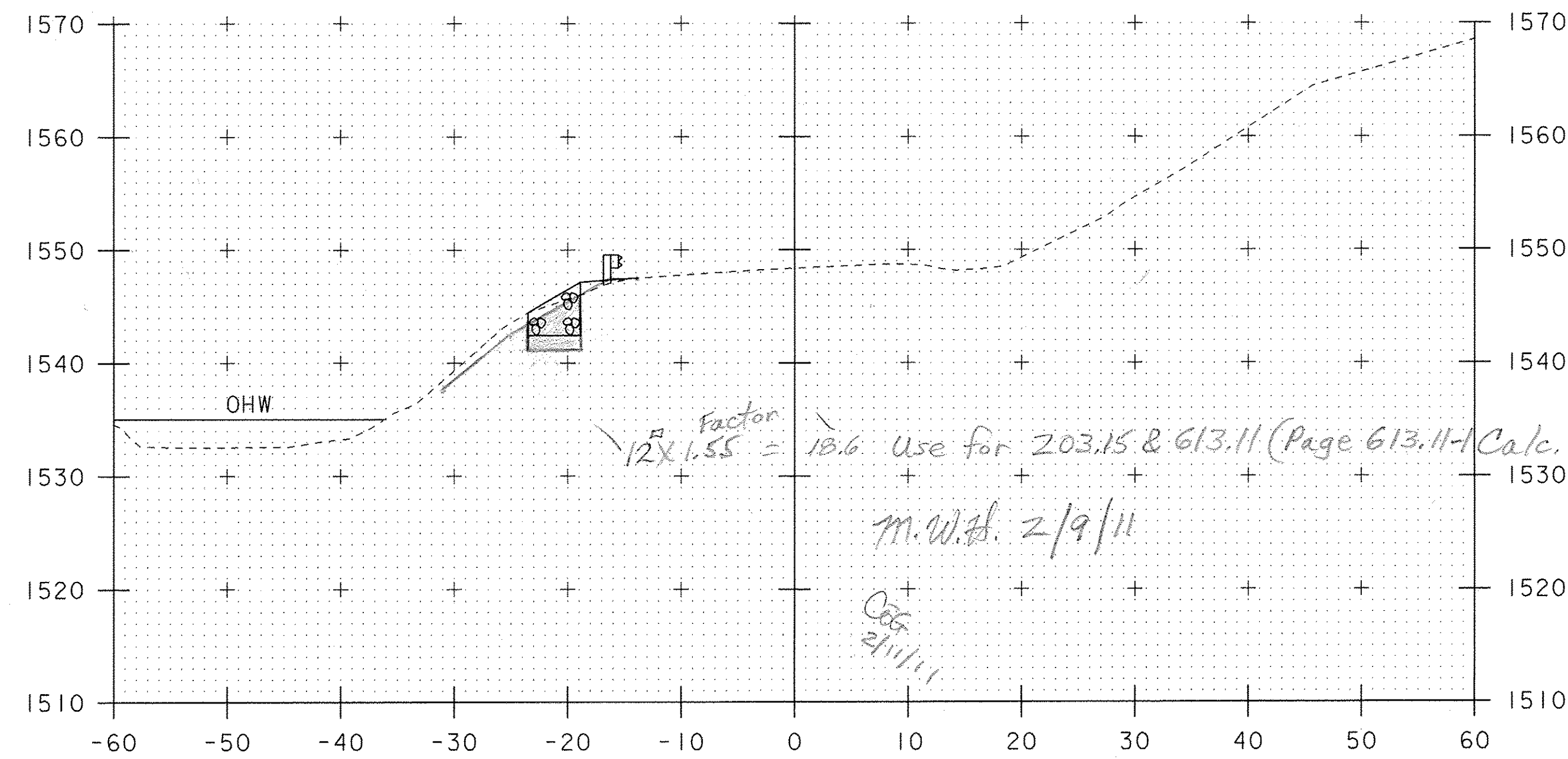
12+25  
END APPROACH  
STA 12+20



12+75 - End Stone Fill, Type II - Batt



12+00

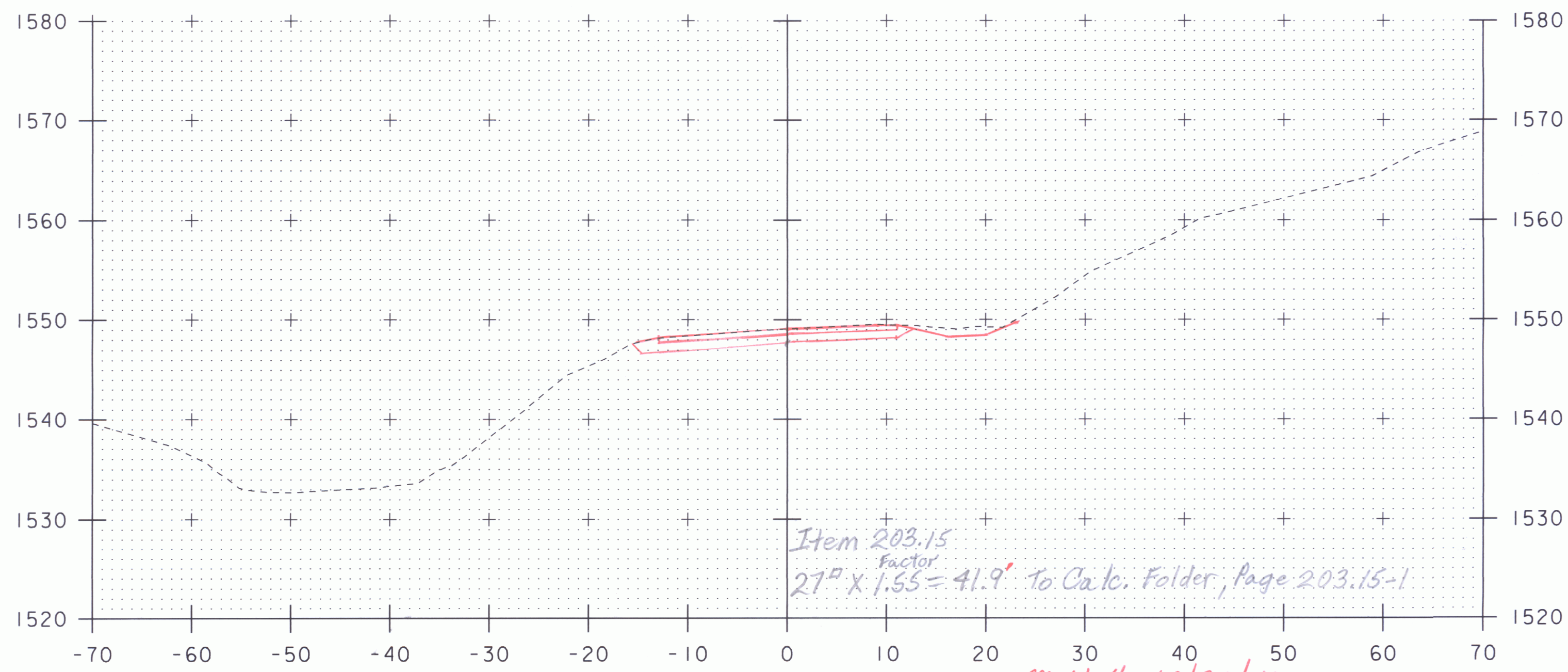


12+50

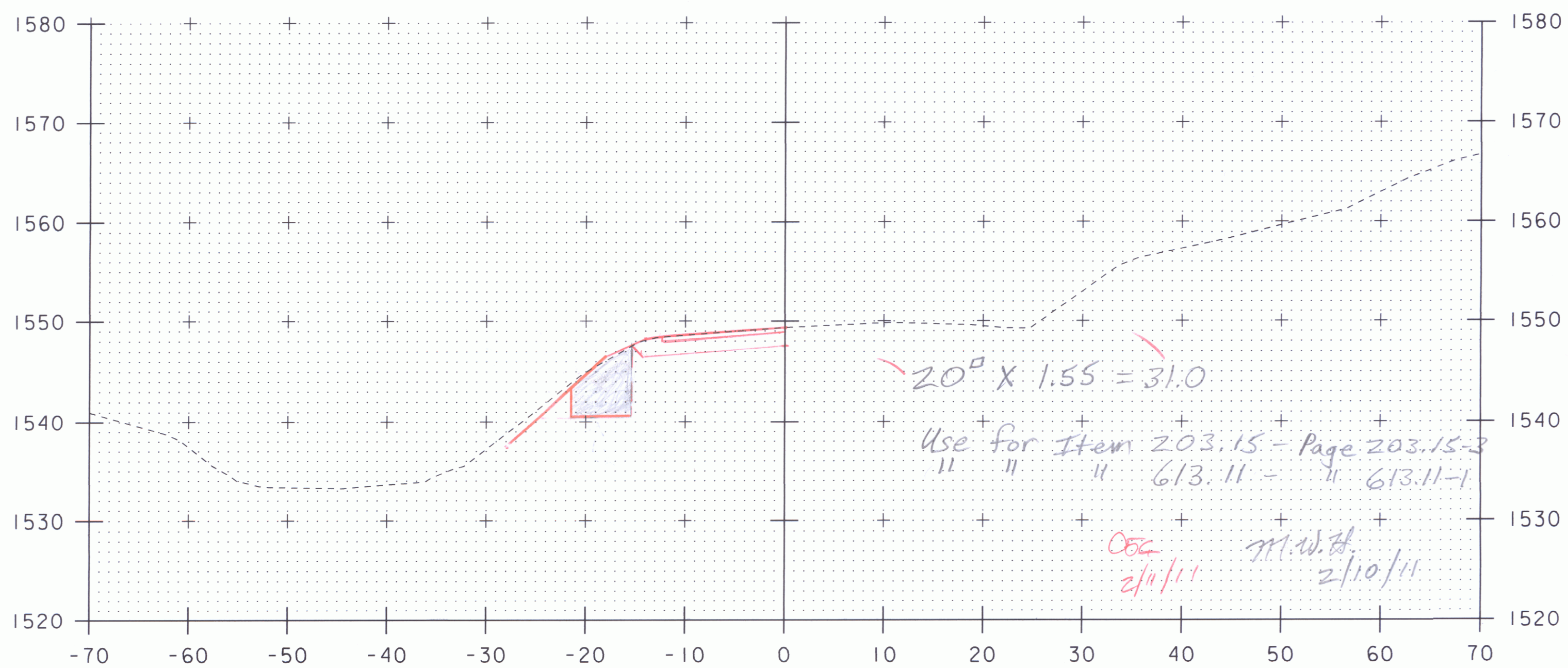
SCALE 1" = 10'-0"  
10 0 10

STA. 12+00 TO STA. 12+75

PROJECT NAME: WARDBORO	PLOT DATE: 17-NOV-2009
PROJECT NUMBER: BHF 0114(5)	DRAWN BY: M.FESSEL
FILE NAME: s05j006xsl.dgn	CHECKED BY: E.Charbonneau
PROJECT LEADER: C.P.WILLIAMS	SHEET 31 OF 33
DESIGNED BY: E.Charbonneau	MAINLINE CROSS SECTIONS 3



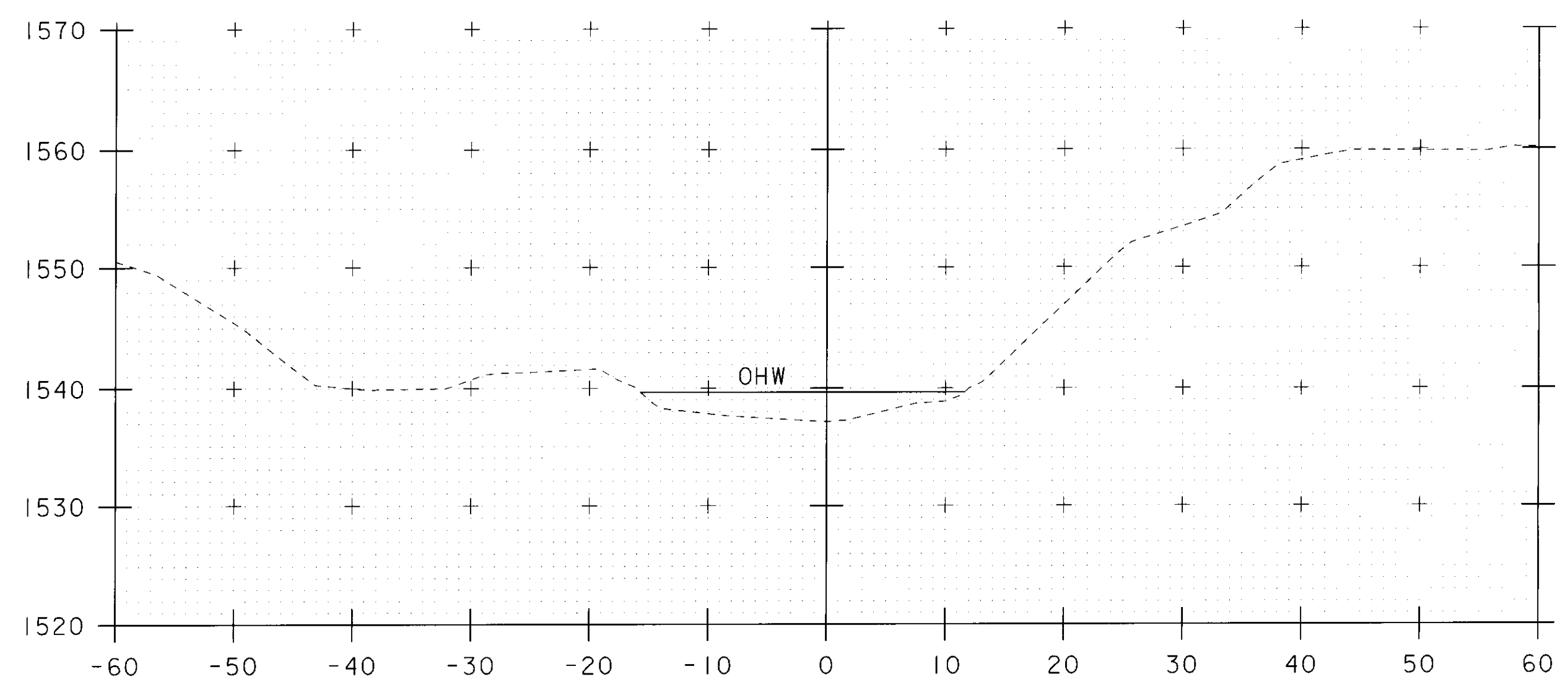
12+20 End SB



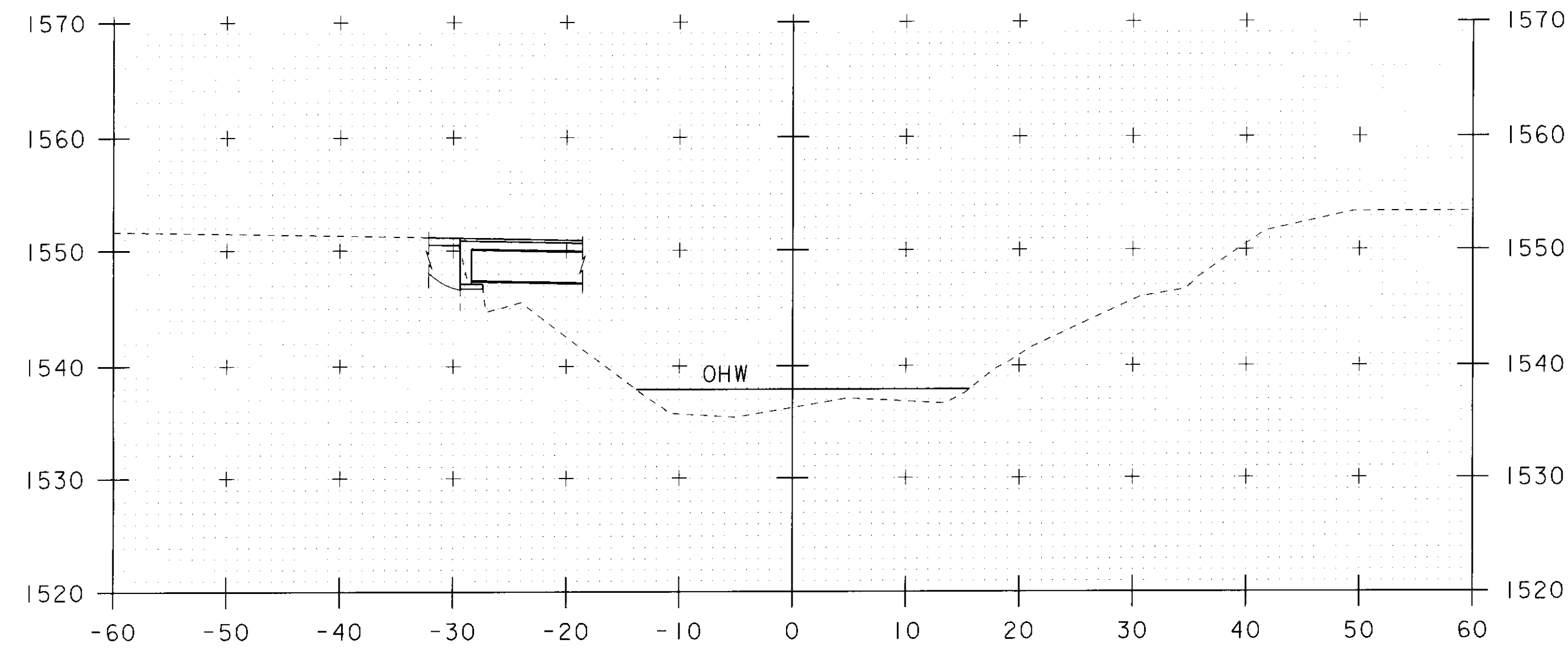
12+04 End Wall 3A

SCALE 1" = 10'-0"  
10 0 10

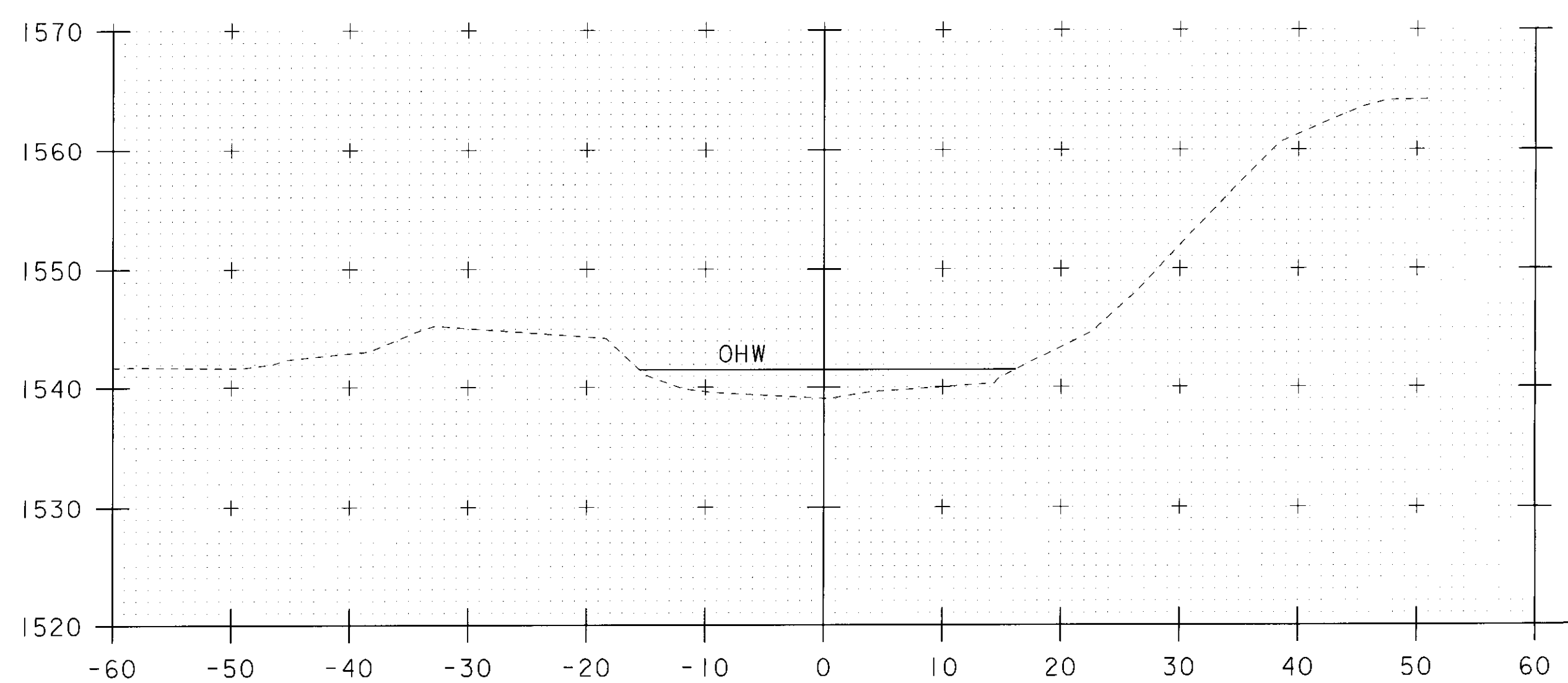
PROJECT NAME: WARDSBORO	PLOT DATE: 12-OCT-2010
PROJECT NUMBER: BHF 0114(5)	DRAWN BY: D.D.BEARD
FILE NAME: ppms*/Section/-----dgn	CHECKED BY: -----
PROJECT LEADER: C.P.WILLIAMS	SHEET 31A OF 1
DESIGNED BY: E.R.CHARBONNEAU	



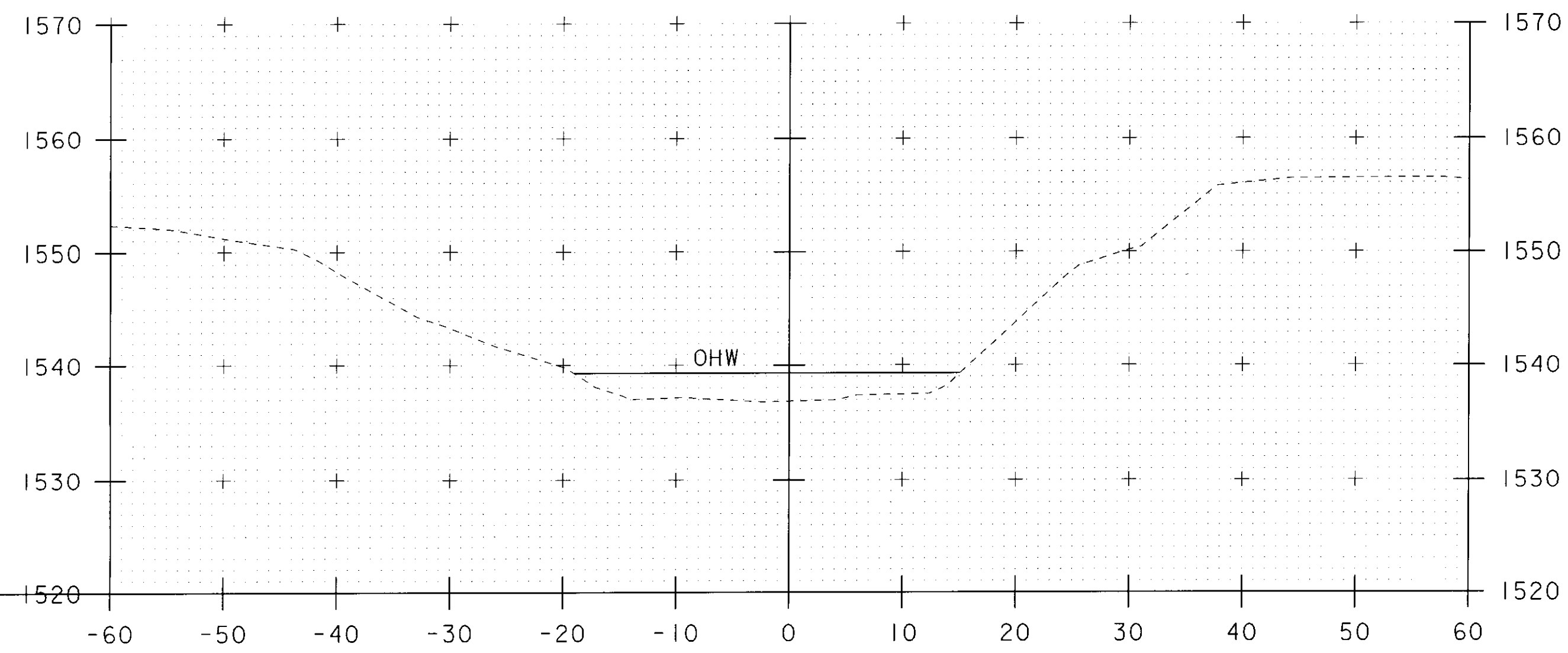
50+25



50+75



50+00

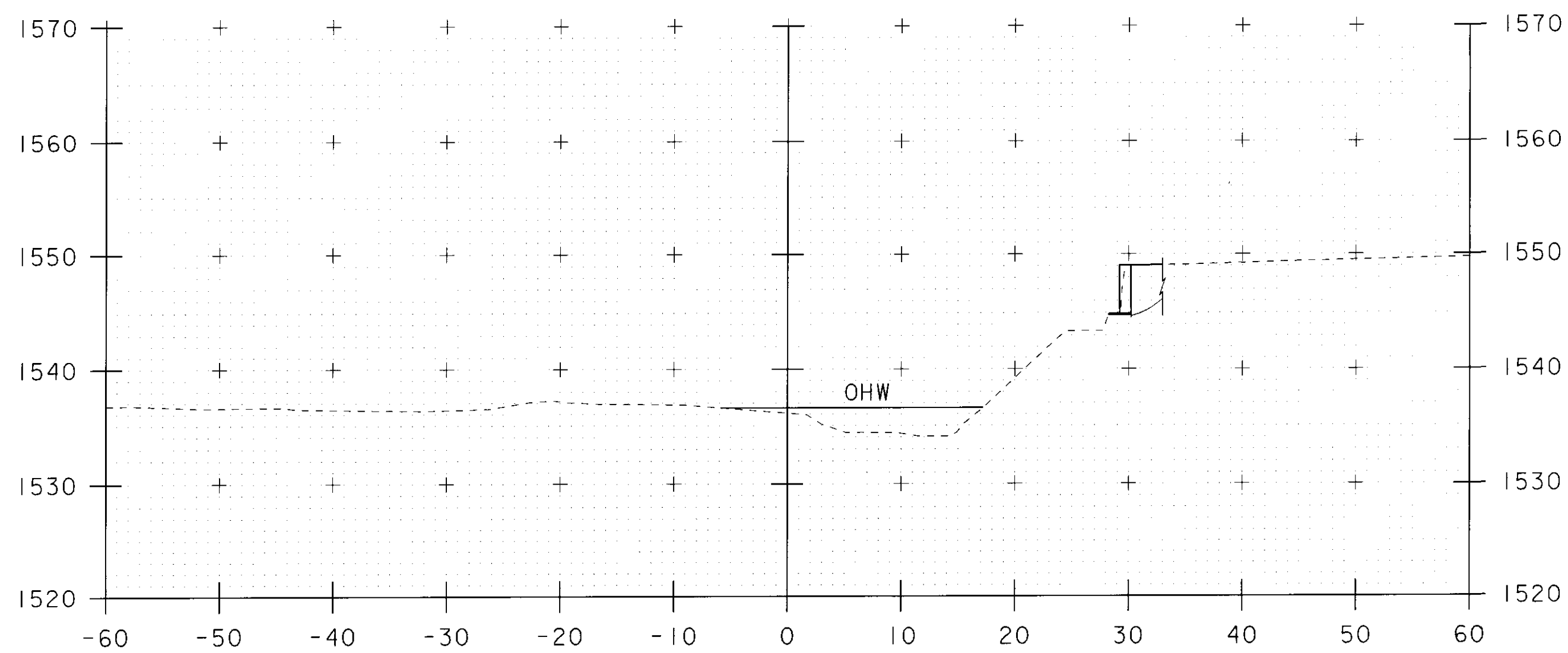


50+50

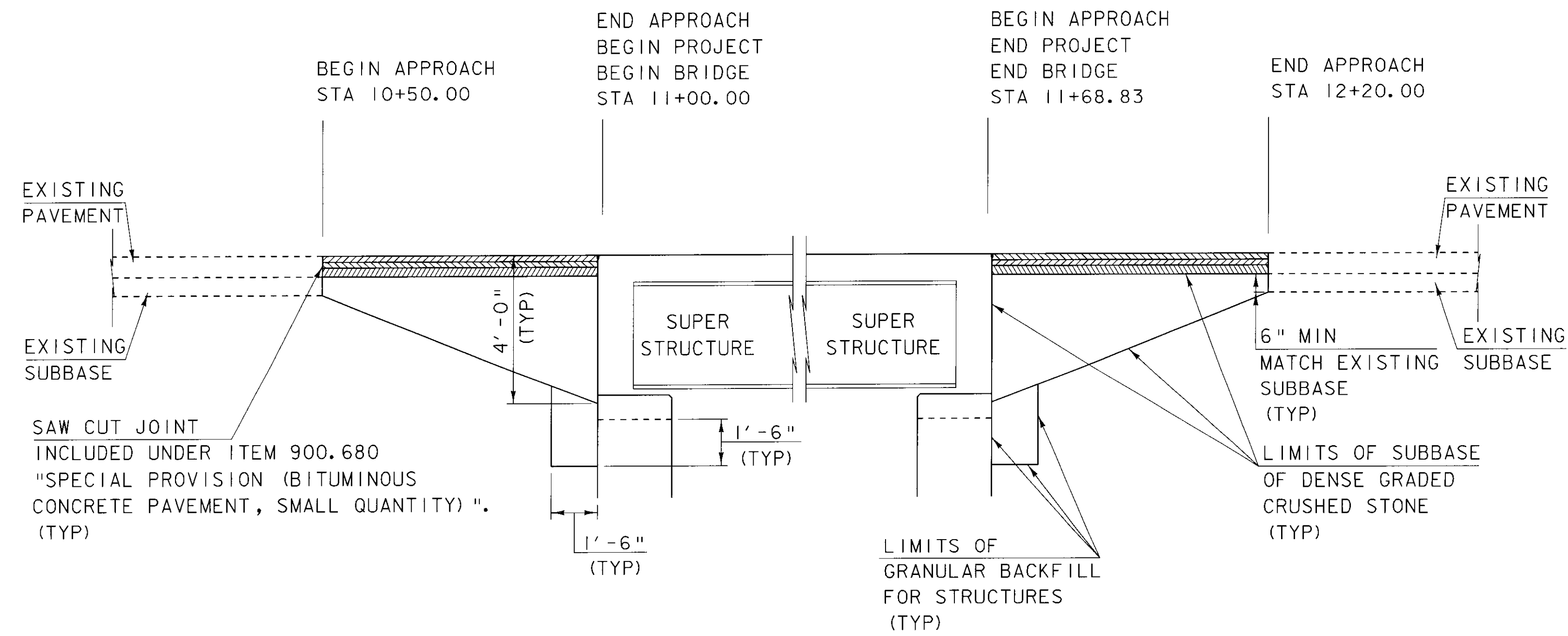
SCALE 1" = 10'-0"  
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STA. 50+00 TO STA. 50+75

PROJECT NAME: WARDBORO	PLOT DATE: 17-NOV-2009
PROJECT NUMBER: BHF 0114(5)	DRAWN BY: M.FESSEL
FILE NAME: s05j006xsl.dgn	CHECKED BY: E.Charbonneau
PROJECT LEADER: C.P.WILLIAMS	SHEET 32 OF 33
DESIGNED BY: E.Charbonneau	
CHANNEL CROSS SECTIONS I	

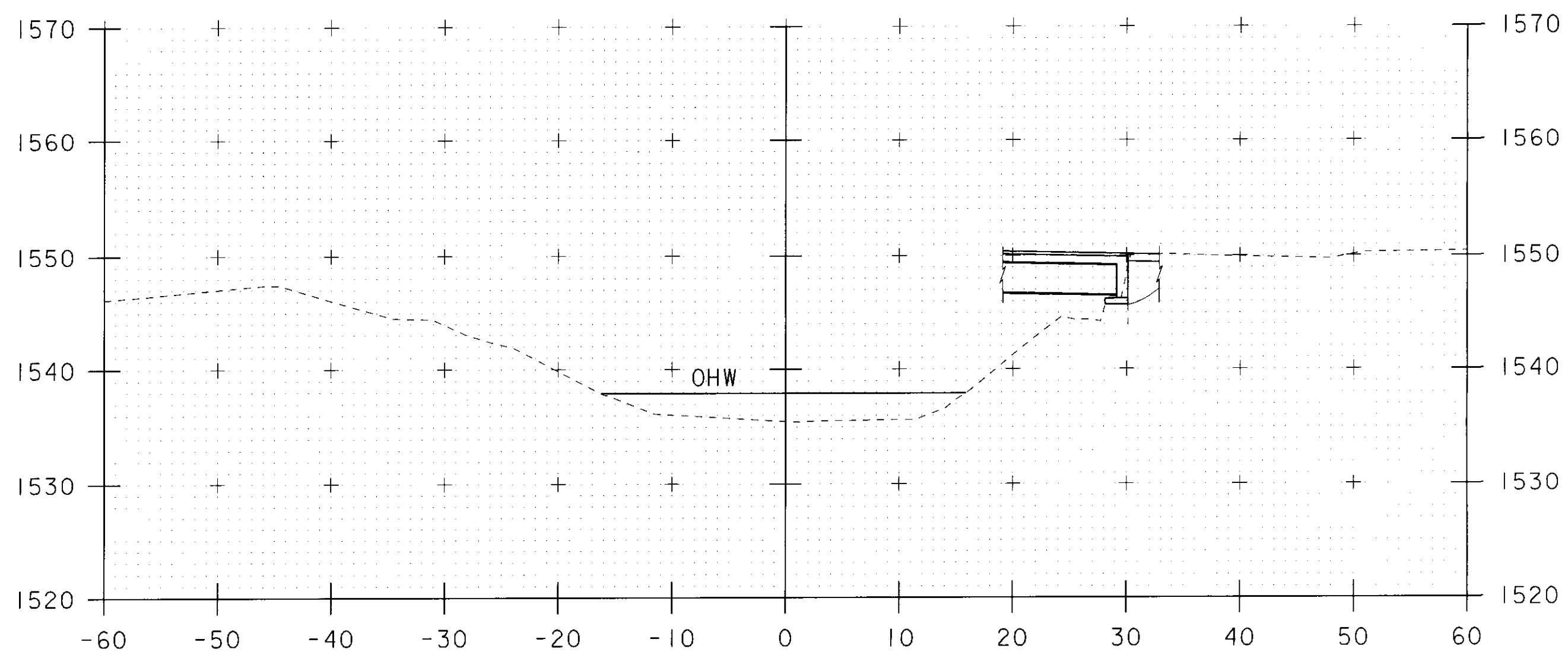


51+25

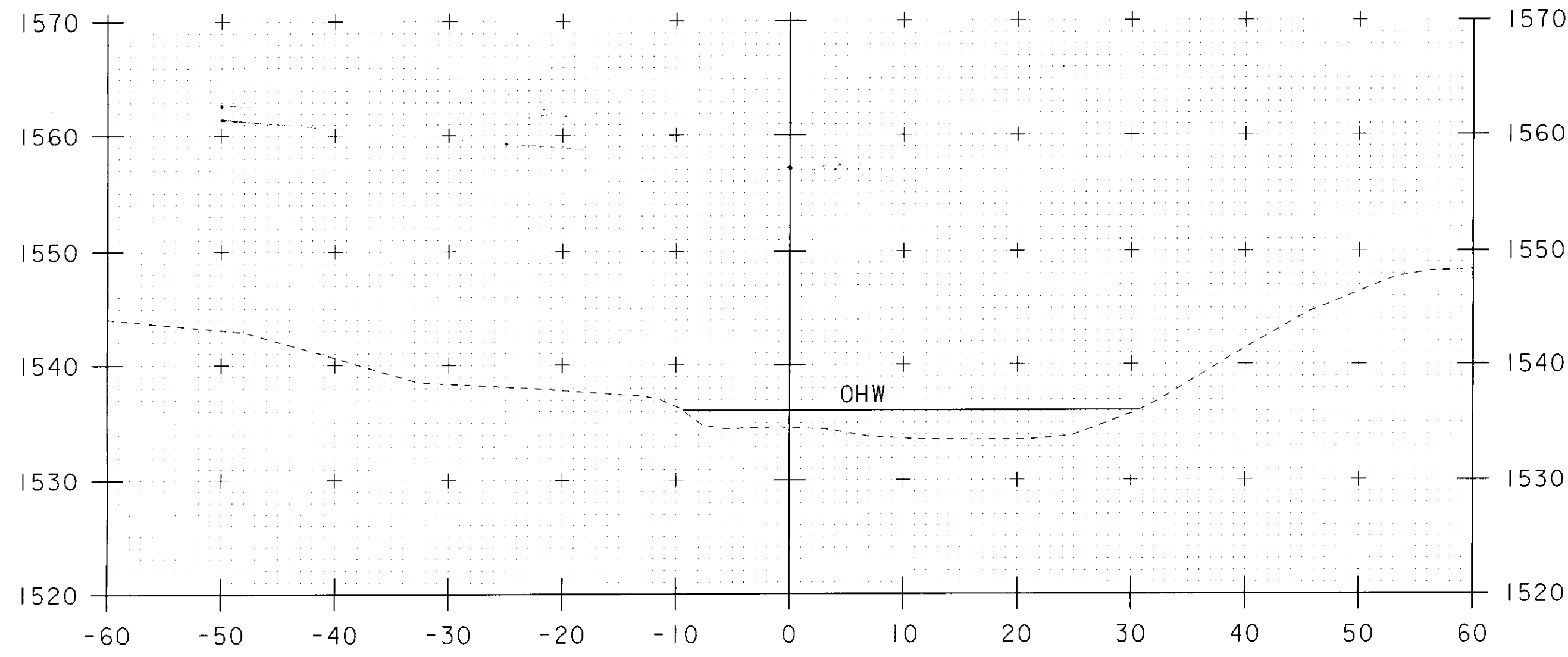


BEGIN PROJECT MATERIAL TRANSITION  
NOT TO SCALE

END PROJECT MATERIAL TRANSITION  
NOT TO SCALE



51+00



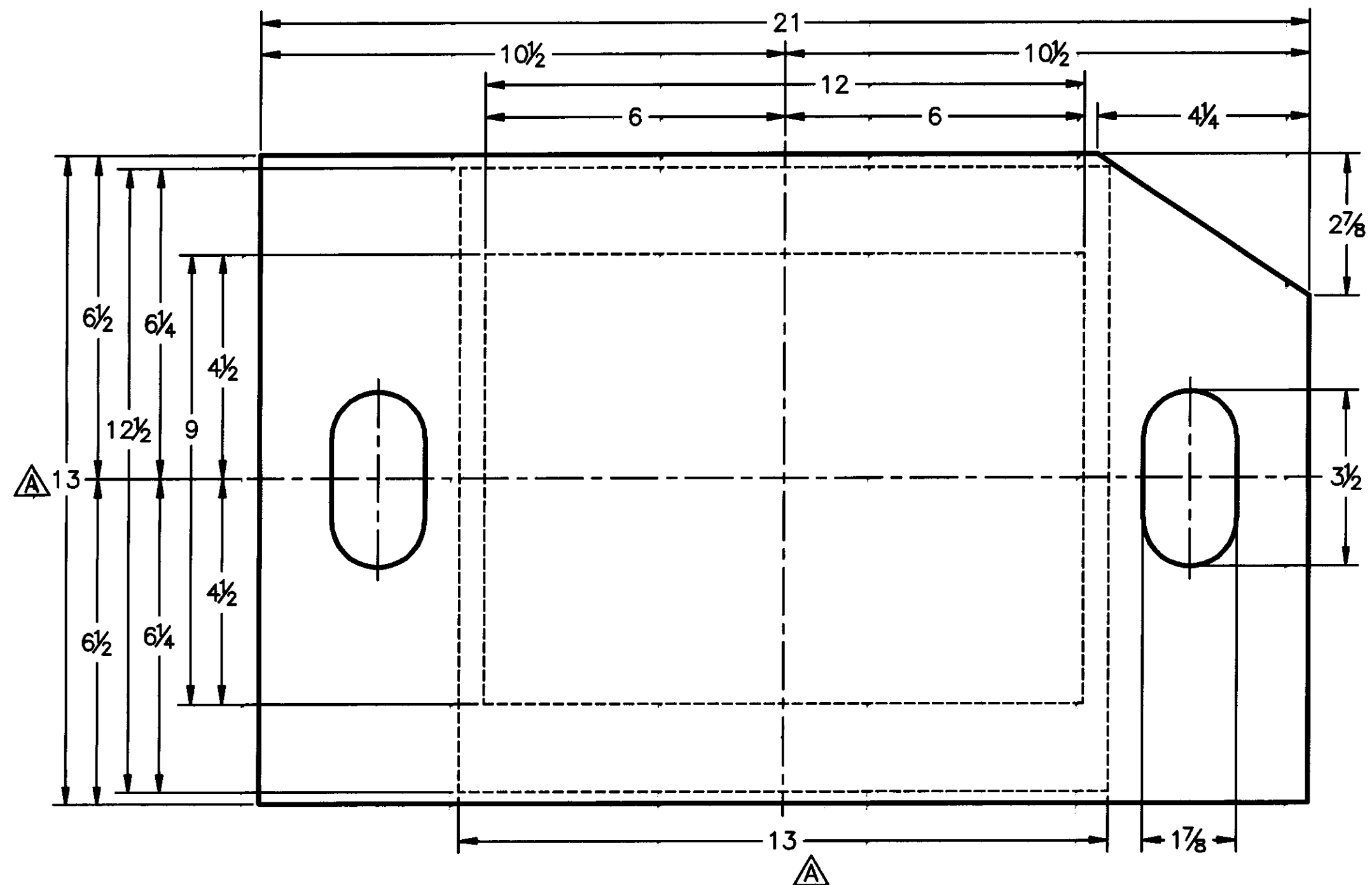
51+50

SCALE 1" = 10'-0"  
10 0 10

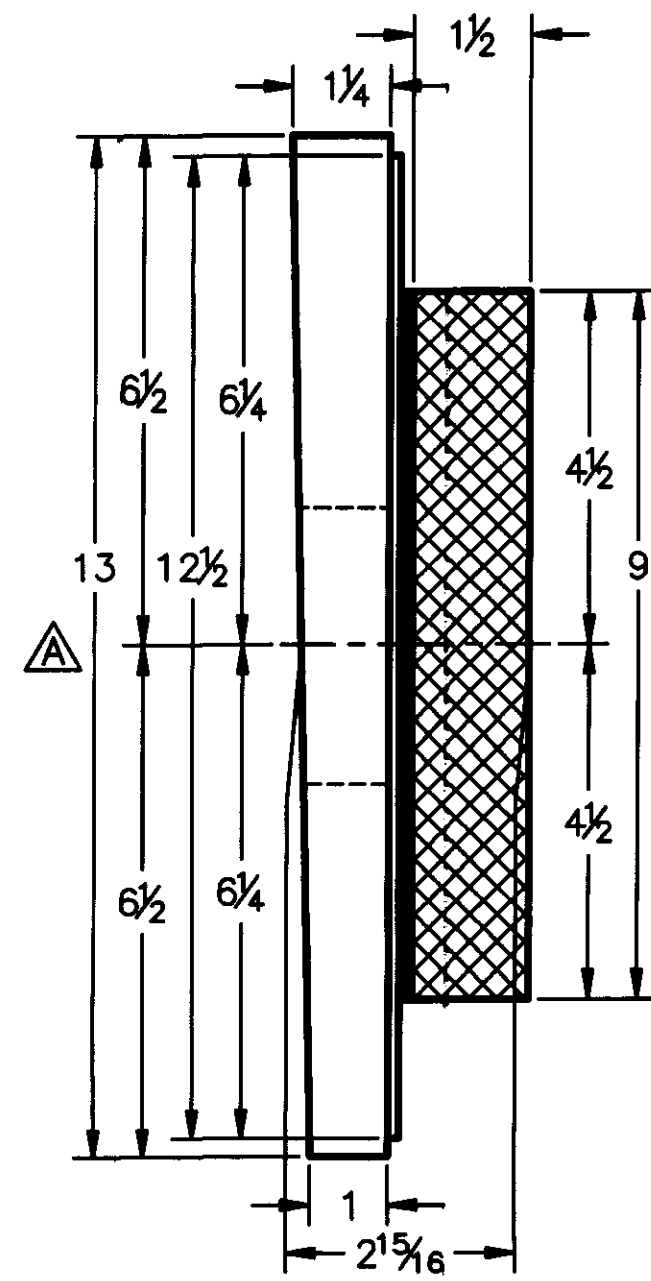
STA. 51+00 TO STA. 51+50

PROJECT NAME:	WARDSBORO	PLOT DATE:	17-NOV-2009
PROJECT NUMBER:	BHF 0114(5)	DRAWN BY:	M.FESSEL
FILE NAME:	s05j006xsl.dgn	CHECKED BY:	E.Charbonneau
PROJECT LEADER:	C.P.WILLIAMS	SHEET	33 OF 33
DESIGNED BY:	E.Charbonneau	CHANNEL CROSS SECTIONS	2

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
--	A	PER ENGINEER'S MARK	4/12/10	C.A.M.

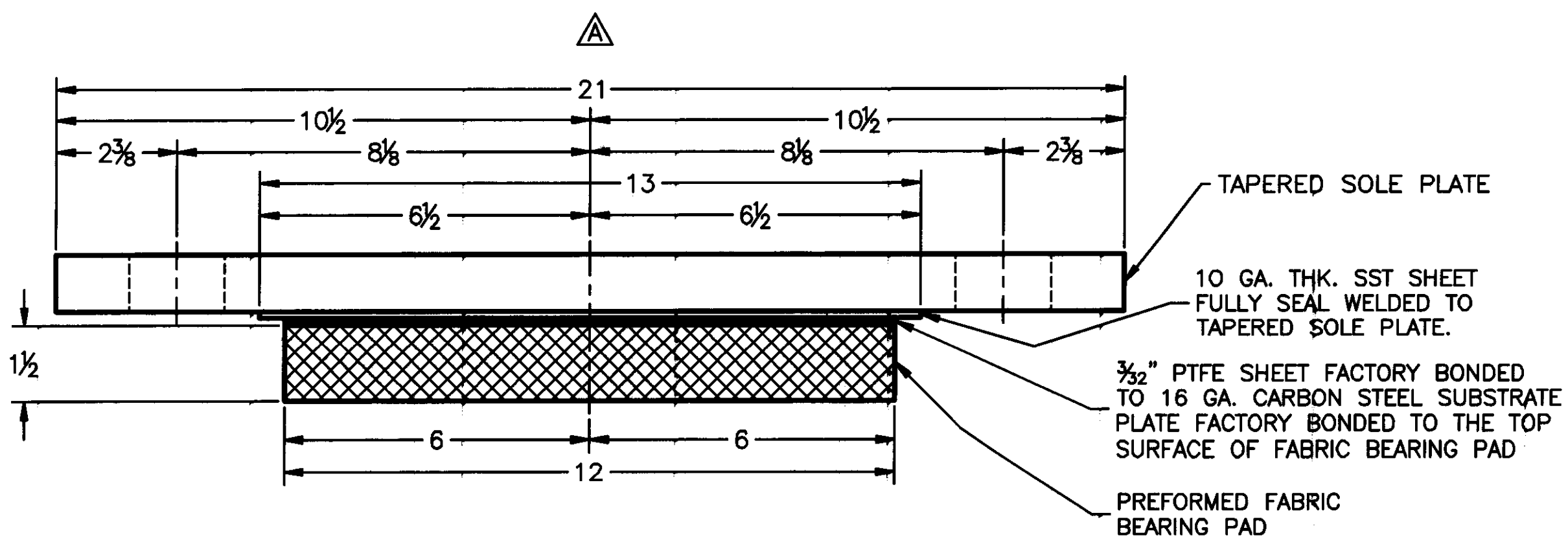


PLAN VIEW

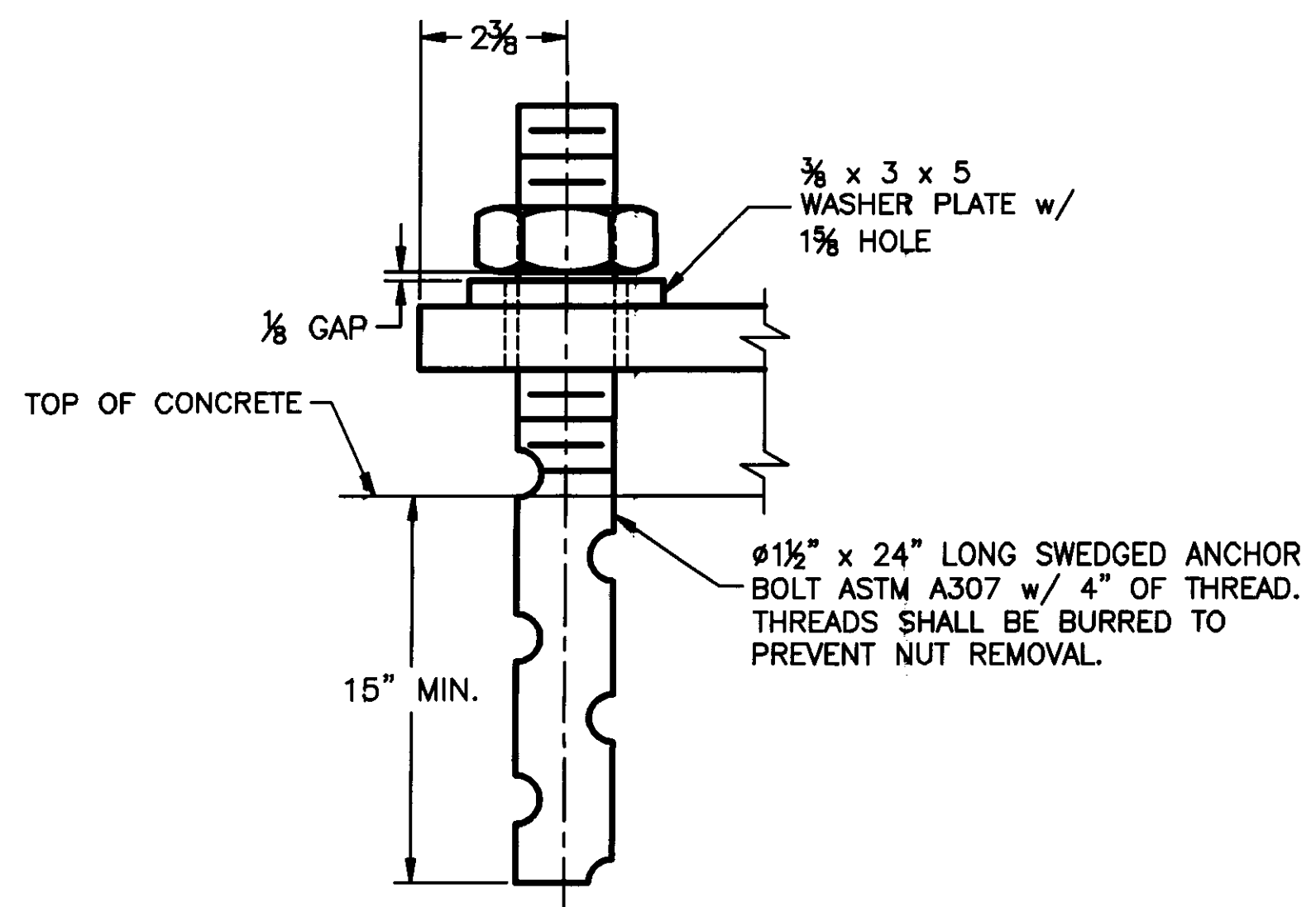


SIDE VIEW

- NOTES:**
- BEARINGS TO BE MANUFACTURED ACCORDING TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17th. EDITION, 2002.
  - THE BEARINGS ARE DESIGNED SO THAT THE SUPERSTRUCTURE MAY BE ERECTED WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 4° C. TO 32° C.
  - ALL STEEL IN BEARINGS SHALL BE AASHTO M270 GRADE 36.
  - ANCHOR BOLTS SHALL CONFORM TO ASTM A307.
  - STAINLESS STEEL SHALL BE ASTM A240 TYPE 304 W/ #8 MIRROR FINISH OF LESS THAN 0.25 MICROMETERS RMS PER AASHTO AND VTRANS SPEC. 731.05.
  - ALL STEEL PRODUCED IN THE U.S.A.
  - CONTACT PETER SOMOGYI, COORDINATOR.
  - TOLERANCES: THICKNESS -0+1/16"  
PLAN -0+1/8"
  - MANUFACTURING FACILITY LOCATION:  
AMSCOT STRUCTURAL PRODUCTS INC.  
241 EAST BLACKWELL STREET  
DOVER, NJ 07801
  - ALL DIMENSIONS ARE IN INCHES.
  - ALL BEARING DEVICES SHALL BE GALVANIZED AS PER STANDARD SPECIFICATIONS 506.15 AND 531.04(b), AS MODIFIED BY THE GENERAL SPECIAL PROVISIONS.
  - ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.
  - PRIOR TO GALVANIZING, ALL CORNERS AND EDGES OF STEEL PLATES, SHAPES, ETC. SHALL BE GROUND TO A 1/16" RADIUS (TYP).
  - THE SURFACE FINISH OF THE CONTACT (SLIDING) FACE OF THE STAINLESS STEEL SHALL HAVE #8 MIRROR FINISH OF LESS THAN 0.25 MICROMETERS RMS.



ELEVATION VIEW  
ITEM NO. 531.10  
© ABUTMENT NO. 1  
QTY REQ'D = 4 ASSY.



ANCHOR BOLT DETAIL  
ITEM NO. 531.10  
QTY REQ'D = 8 ASSY.

VERMONT AGENCY OF TRANSPORTATION  
TOWN OF WARDBORO  
COUNTY OF WINDHAM  
PROJECT NO. BMF 0114(5)

EXPANSION PREFORMED FABRIC  
BEARING PAD

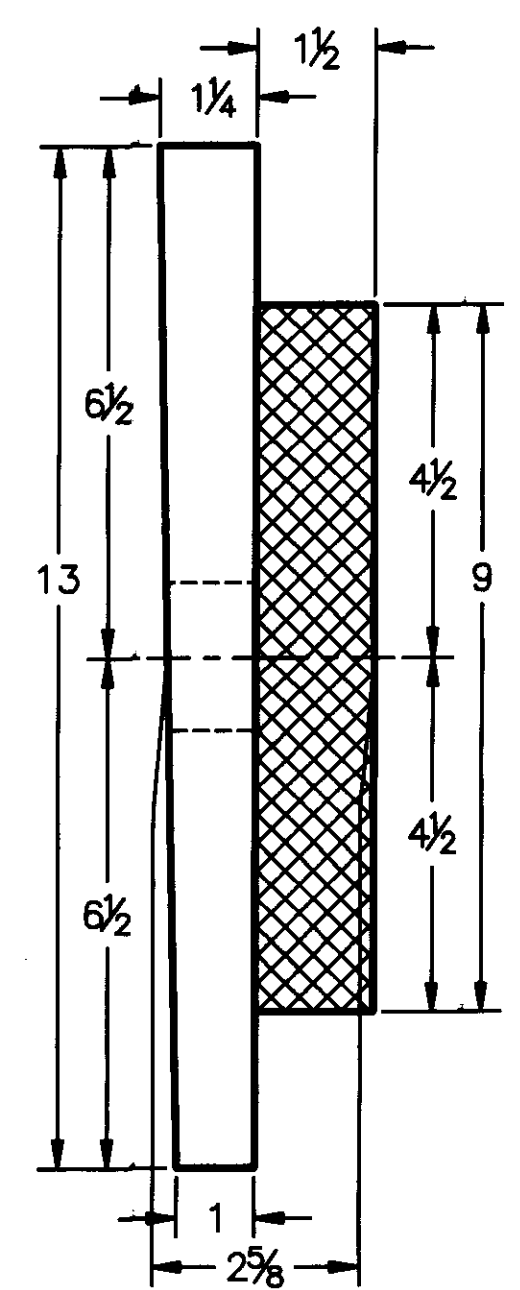
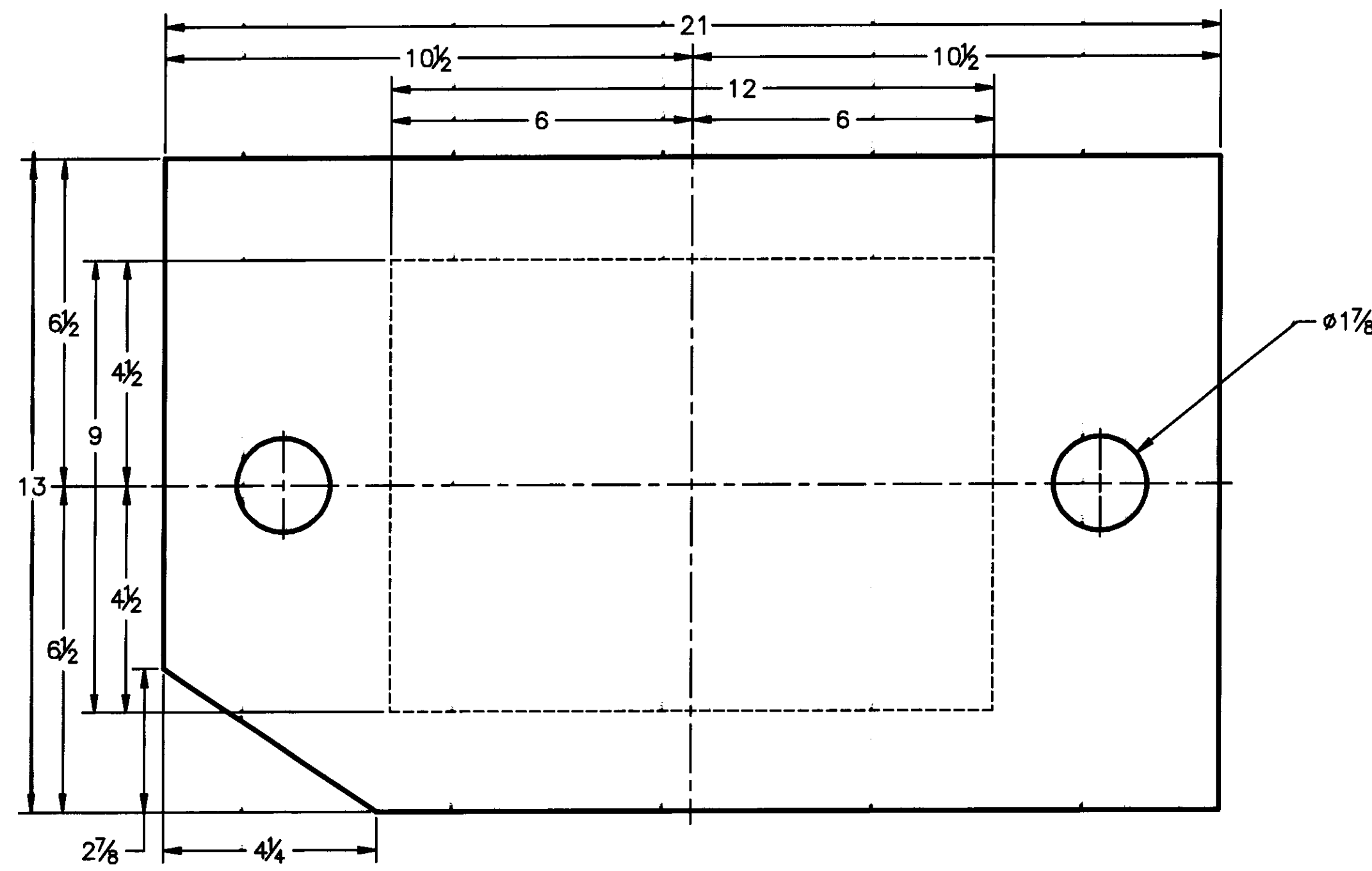
**AMSCOT**  
STRUCTURAL PRODUCTS CORP.  
DOVER, NJ JOB # 3367

SCALE: N.T.S.	APPRVD: B.F.	DRAWN BY: C.A.M.
DATE: 3/4/10	REVISION: A	
FOR: B.U.R. CONSTRUCTION		
DWG NO: BUR10A1RA	SHEET NO. 1 OF 2	

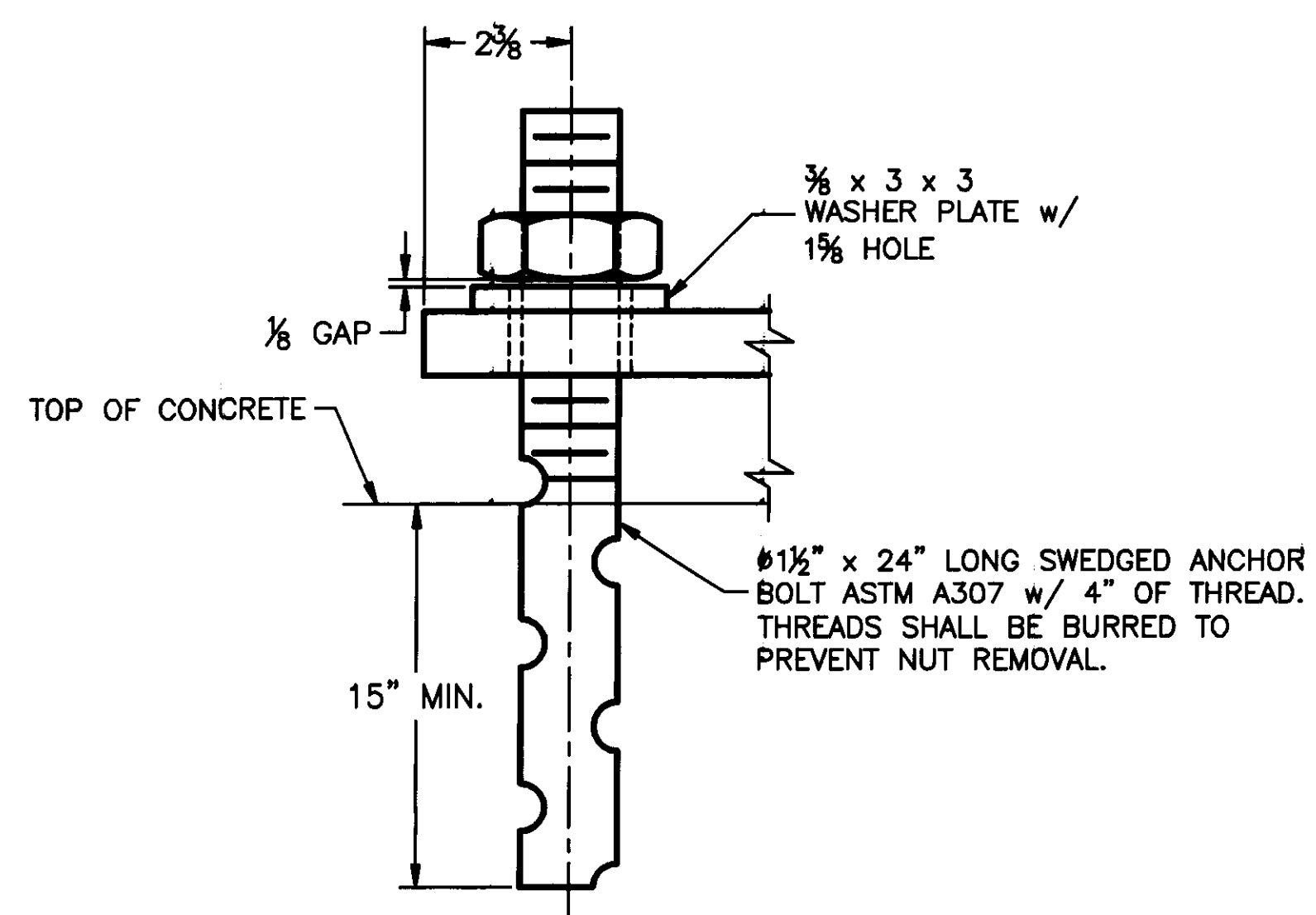
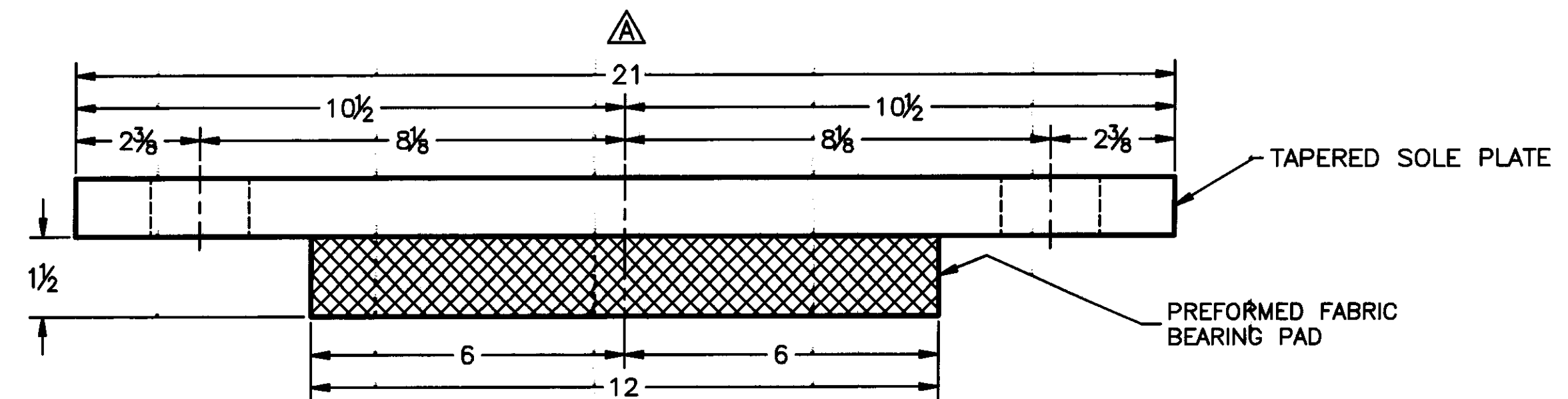
Structures  
Copy

RECEIVED  
APR 12 2010  
BY: C.A.M. 4/13/10

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
--	A	PER ENGINEER'S MARK	4/12/10	C.A.M.



- NOTES:
1. BEARINGS TO BE MANUFACTURED ACCORDING TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17th. EDITION, 2002.
  2. THE BEARINGS ARE DESIGNED SO THAT THE SUPERSTRUCTURE MAY BE ERECTED WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 4° C. TO 32° C.
  3. ALL STEEL IN BEARINGS SHALL BE AASHTO M270 GRADE 36.
  4. ANCHOR BOLTS SHALL CONFORM TO ASTM A307.
  5. ALL STEEL PRODUCED IN THE U.S.A.
  6. CONTACT PETER SOMOGYI, COORDINATOR.
  7. TOLERANCES: THICKNESS  $-0+1/16"$   
PLAN  $-0+1/6"$
  8. MANUFACTURING FACILITY LOCATION:  
AMSCOT STRUCTURAL PRODUCTS INC.  
241 EAST BLACKWELL STREET  
DOVER, NJ 07801
  9. ALL DIMENSIONS ARE IN INCHES.
  10. ALL BEARING DEVICES SHALL BE GALVANIZED AS PER STANDARD SPECIFICATIONS 506.15 AND 531.04(b), AS MODIFIED BY THE GENERAL SPECIAL PROVISIONS.
  11. ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.
  12. PRIOR TO GALVANIZING, ALL CORNERS AND EDGES OF STEEL PLATES, SHAPES, ETC. SHALL BE GROUND TO A 1/16" RADIUS (TYP).



ITEM NO. 531.10  
 © ABUTMENT NO. 2  
 QTY REQ'D = 4 ASSY.

ITEM NO. 531.10  
 QTY REQ'D = 8 ASSY.

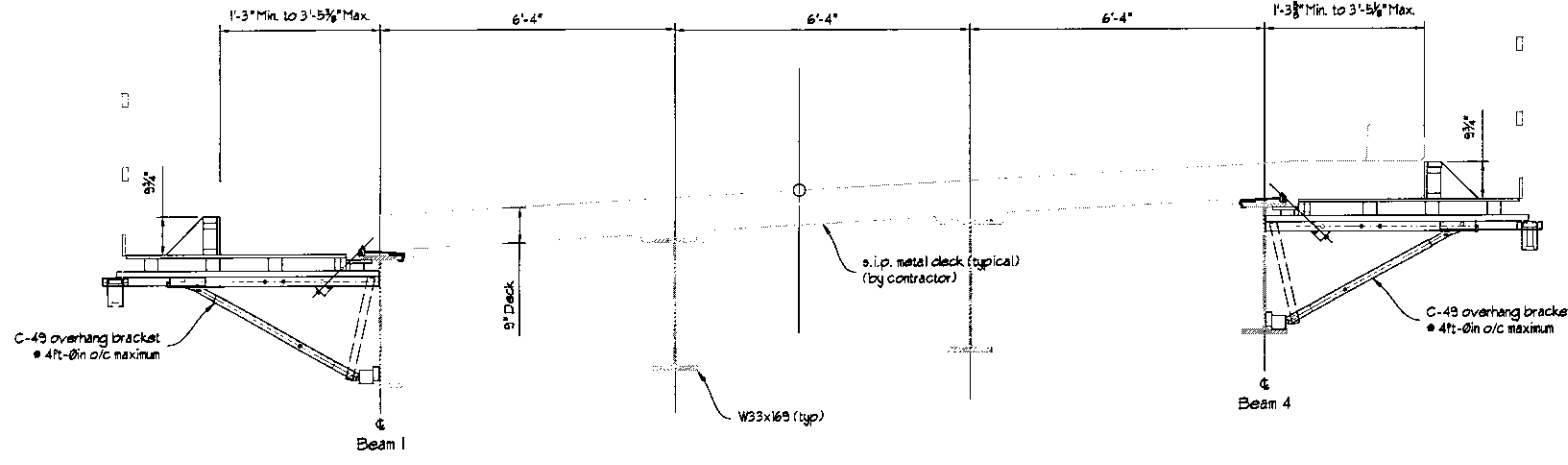
VERMONT AGENCY OF TRANSPORTATION  
 TOWN OF WARDBORO  
 COUNTY OF WINDHAM  
 PROJECT NO. BHF 0114(5)

**FIXED PREFORMED FABRIC BEARING PAD**

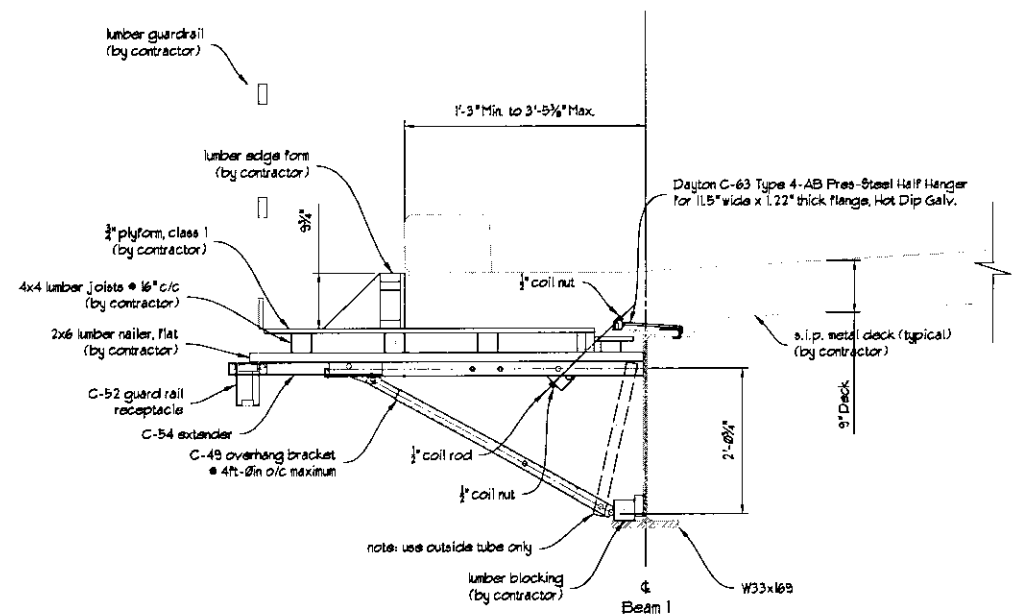
**AMSCOT**  
 STRUCTURAL PRODUCTS CORP.  
 DOVER, NJ JOB # 3387

SCALE: N.T.S.	APPRVD: B.F.	DRAWN BY: C.A.M.
DATE: 3/4/10	REVISION: A	
FOR: B.U.R. CONSTRUCTION		
DWG NO: BUR10A2RA		SHEET NO. 2 OF 2

RECEIVED  
 APR 12 2010  
 BY: CPW DATE: 4/13/10



Bridge Overhang Bracket Layout, Typical Section



C-49 Bridge Overhang Bracket Detail

This drawing is provided as a service to illustrate the assembly of Harris' products only. It is not intended to be fully directive nor to cover engineering details of such products or equipment or materials not furnished by A.H. Harris nor the interconnection therewith. Inasmuch as A.H. Harris does not control jobsite assembly or procedures, grade or quality of material or equipment supplied by others, it is the responsibility of the contractor to integrate this drawing into a composite drawing suitable complete for construction purposes consistent with safe practice and overall project objectives.

**General Notes**

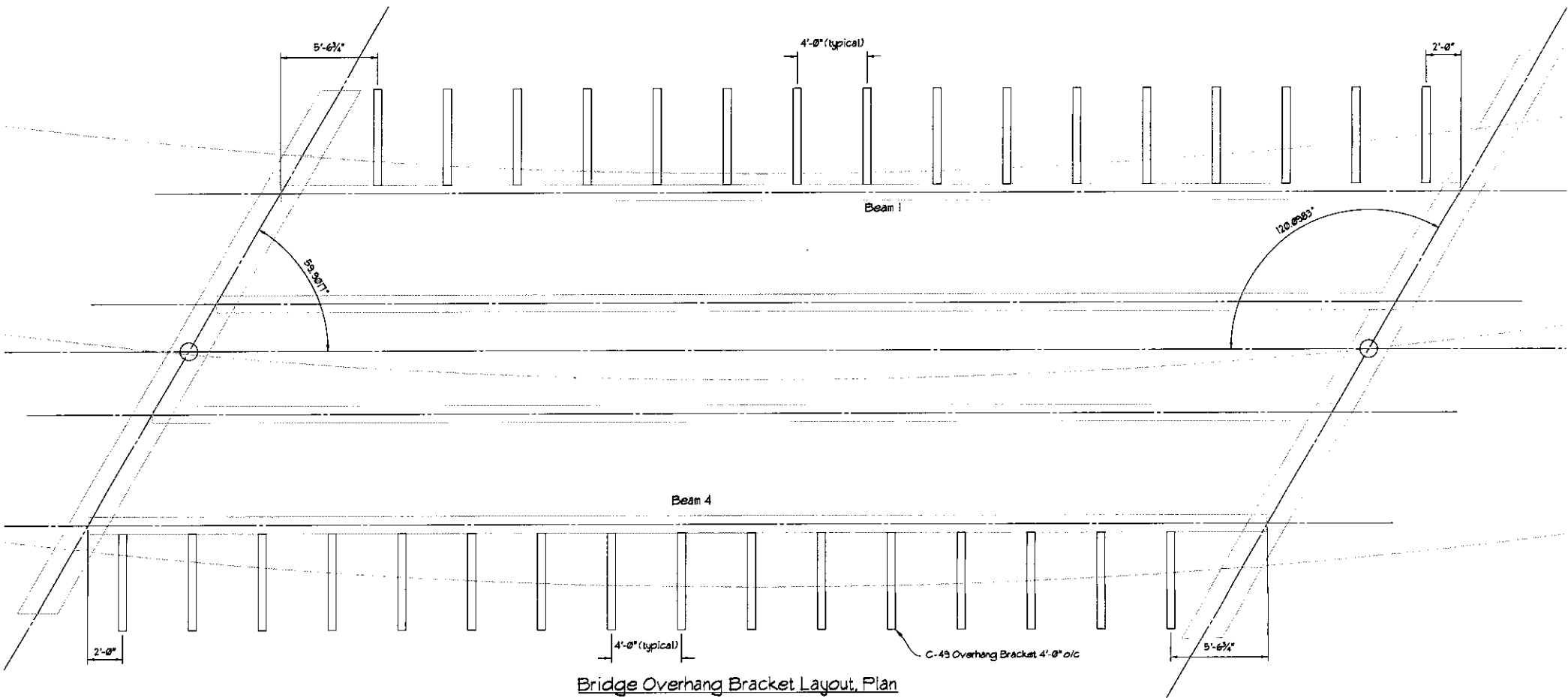
- All dimensions and details shown on this layout must be checked and verified by the contractor before proceeding with the work.
- Design Loads used for the shoring shown on this layout are as follows:  
Concrete = 80 pounds per cubic foot  
Construction Live Load = 40 pounds per square foot  
Plus actual weight of formwork & shoring components as required.
- The design of the shoring does NOT include provisions for concrete placement using motorized buggies. Further, the shoring system as shown has been designed with the assumption that adequate lateral restraint will be provided by the contractor. The overhang brackets have NOT been designed for the load(s) from screeding and/or finishing machine(s). These loads must be applied directly over to the bridge girders.
- When establishing deck elevations, allow for the take-up of material and lumber compression.
- Plyform design is based upon the Douglas Fir Plywood Association's Technical Data Handbook. All plyform is assumed to be 3/4" B-B used the strong way.
- The lumber sizes implied by the suggested forming details must be confirmed by the contractor before proceeding with construction. When lumber sizes are specifically stated, the contractor must determine the appropriate grade based upon actual design stresses.
- The determination of the required concrete strength necessary to permit removal of the shoring and formwork shall be made by the Engineer based upon the actual in-place strength of the newly-cast structure.
- "Span-It" stringers & hardware, Micro-Lam joists, and associated connecting hardware are owned by the contractor. The design of all formwork deck conditions using these products is based on the assumption that they are in like-new condition, having been fully inspected by the contractor prior to being put into service on this project. A.H. Harris & Sons, Inc. in no way assumes responsibility for equipment not owned by us.
- This print is the property of A.H. Harris & Sons, Inc. and is furnished for the exclusive use of our customer for this specific project. This drawing and the information contained hereon shall not be copied nor used by others without the express written consent of A.H. Harris & Sons, Inc.

**Safety Concerns**

- Incorrect use of hangers, insufficient bolt penetration through a coil nut, or altering a hanger in any way can result in premature failure and expose workers to unsafe conditions.
- Reusable bridge deck forming accessories are subject to wear, misuse, overloading, corrosion, deformation, alteration and other factors which may affect safe working loads. Coil Bolts, Coil Rods and similar accessories may sustain excessive thread wear, field alterations or bending and straightening.
- It is the responsibility of the user to continually inspect reusable accessories for wear and/or misuse and to discard them if wear or misuse is detected. Do not straighten bent forming accessories - discard them. Discard any reusable forming accessory that has been subjected to 70% or more of ultimate load of the product. Such items may have become brittle hard.
- Dayton/Richmond recommends that all users of Dayton/Richmond deck forming products establish a quality control program to monitor and inspect their deck forming accessories. The frequency of inspections is best determined by the user and is dependent on the type of product use, frequency of use, duration of use and the environmental conditions during use.
- The user of Dayton/Richmond products must evaluate the product application, determine appropriate safety factor, calculate the applied loads and control all field conditions to prevent application of loads in excess of the products' safe working loads.

**Safe Working Load Considerations**

- All safe working loads shown were established with the following factors considered:
- All safe working loads shown are based on the item being new or in "as new" condition. The safe working load is considered to be the greatest load that should be applied to a product.
  - All hangers shall have full bearing under the end section and shall be used only on the size beam for which they are manufactured.
  - Hangers must be correctly positioned on top of the beam so that the Coil Bolt or Coil Rods are the proper distance from the edge of the beam flange. This is normally 3/8" from the beam flange to the centerline of a 1/2" diameter Coil Bolt or Coil Rod. Improper positioning of the hanger can seriously compromise the hanger's safe working loads. Refer to the various product application sketches.
  - Coil Nuts must have full bearing on hanger end sections. Use caution to ensure that the hangers and related hardware are not subjected to side loading.
  - All Coil Bolts, Coil Rods and related hardware shall be of proper length, diameter and capacity.
  - All Coil Bolts and Coil Rods must fully penetrate and extend through the Coil Nuts a minimum of one diameter (1/2" for a 1/2" diameter Coil Bolt or Coil Rod).



Bridge Overhang Bracket Layout, Plan

**CONTRACTOR NOTE:**  
All equipment supplied by A.H. Harris, while under the control of our customer, shall not be modified UNLESS:  
1) It is specifically required by our drawings, or  
2) Written authorization has been obtained from an A.H. Harris representative prior to any modification. Equipment altered in any way (by cutting, drilling, welding, etc.) shall result in damages charges up to the full replacement cost of the damaged component(s).

DRAWING STATUS		REVISIONS			
NO.	DATE	BY	REMARKS		
□			PRELIMINARY DETAILS ONLY - NOT FOR CONSTRUCTION.		
□			ISSUED FOR INFORMATIONAL PURPOSES ONLY.		
□			ISSUED FOR ARCH/ENG APPROVAL.		
□			ISSUED FOR CONTRACTOR APPROVAL.		
□			ISSUED FOR CONSTRUCTION.		
□			DESTROY ALL PREVIOUS COPIES.		

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CONSTRUCTION SPECIALTIES SINCE 1916

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Charlotte NC 28269  
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Albany NY 12205  
(518) 438-3976

**Overhang Bracket Layout Drawing**

FOR Bur Construction LLC  
JOB Wardsboro Bridge Improvement  
LOC Wardsboro, VT

DRAWN BY M. Bochenek  
DATE 5-18-10  
REP Tad Spiller  
CHECKED BY  
DATE  
DRAWING NUMBER 1.0



# GENERAL NOTES

## SPECIFICATIONS

ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS AND AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FOURTH EDITION, DATED 2007 AND ITS LATEST REVISIONS.

ALL WELDING SHALL BE IN ACCORDANCE WITH THE CURRENT STRUCTURAL WELDING CODE ANSI/AASHTO/AWS D1.5. AND THE PROVISIONS OF SUBSECTION 506.10

## MATERIAL SPECIFICATIONS

ALL STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M270 GR 50W (U.O.N.).

ALL BOLTS FOR THIS PROJECT SHALL BE HIGH STRENGTH HEX HEAD BOLTS AND CONFORM TO ASTM A325 TYPE 3

## FABRICATION

CVN- INDICATES CHARPY V-NOTCH TESTED FOR ZONE 2, IN ACCORDANCE WITH SUBSECTION 714.01 OF THE STANDARD SPECIFICATIONS.

MAIN LOAD CARRYING MEMBERS ARE ALL STRINGER BEAMS.

THE BOTTOM FLANGE OF STEEL BEAMS AT BEARING AREAS SHALL BE SHOP STRAIGHTENED AS NECESSARY TO PROVIDE UNIFORM CONTACT BETWEEN THE BEAM FLANGE & THE BEARING AT THE BRIDGE SEAT.

## ERECTION NOTES

ALL CONNECTION ARE BEING MADE WITH HIGH STRENGTH BOLTS NOTED ABOVE WITH ONE (1) HARDENED WASHER (ASTM F436 TYPE 1) TO BE PLACED UNDER THE TURNED ELEMENT.

SHIPPING MARK NUMBER WILL BE LOCATED AS SHOWN ON ERECTION PLANS.

## CLEANING

ALL STEEL SHALL BE CLEANED IN ACCORDANCE WITH SSPC-SP10 BLAST CLEANING BEFORE SHIPPING FOR UNIFORM APPEARANCE

## PAINT

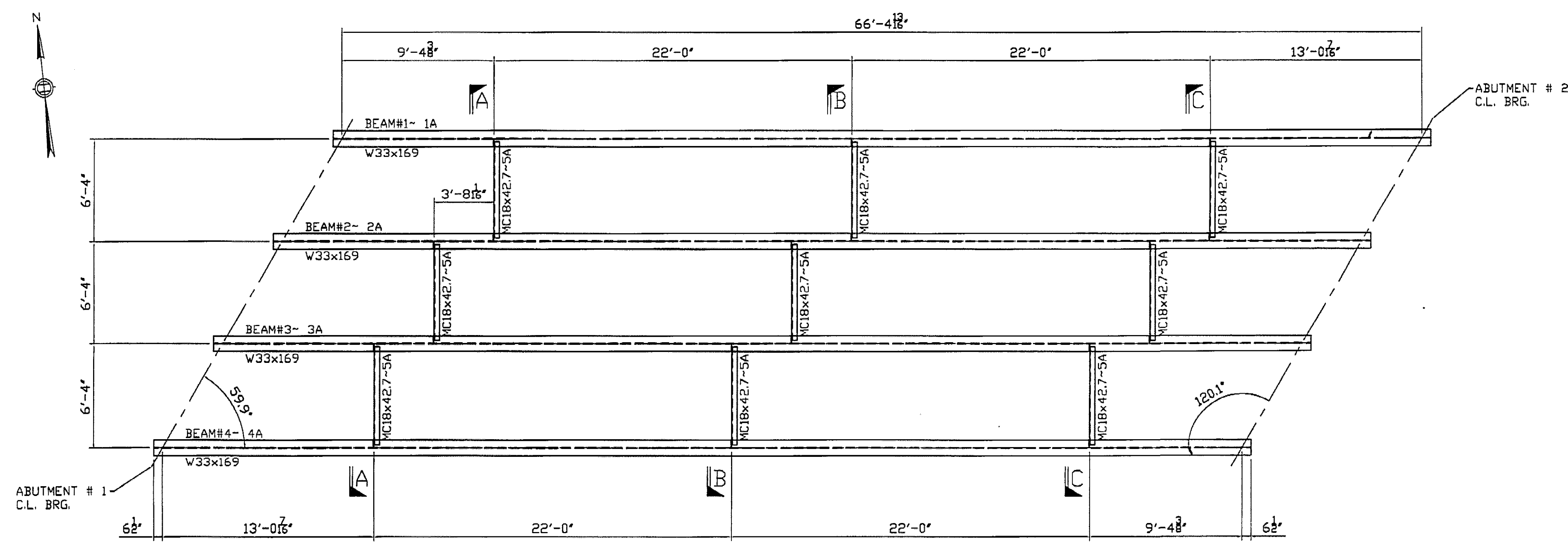
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ITEM NO.	DESCRIPTION	PER LB
506.50	Structural Steel, Rolled Beam	

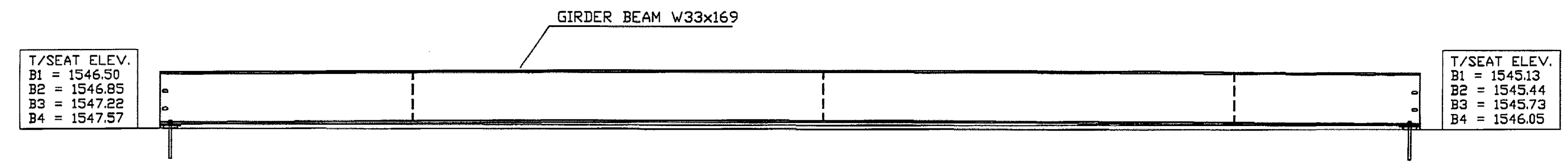
*CPW* 4/19/10

3					
2					
1					
REV. NO.	DATE	REVISION			
GENERAL NOTES					
ROUTE TH 1 (FAS 0114)			TOWN OF WARDBORO		
PROJECT NO.: BHF 0114(5)			COUNTY OF WINDHAM		
<b>FOSTER • PRECISE</b>					
3 FARM LANE GEORGETOWN, MA 01833					
978-352-2591 FAX 978-352-2182					
OWNER: VT AOT					
CONTRACTOR: B.U.R. CONSTRUCTION					
DRAWN BY	CHECKED BY		JOB NO.	SHEET NO.	
KC	WL		3525	GN1	
02/22/10	02/26/10				

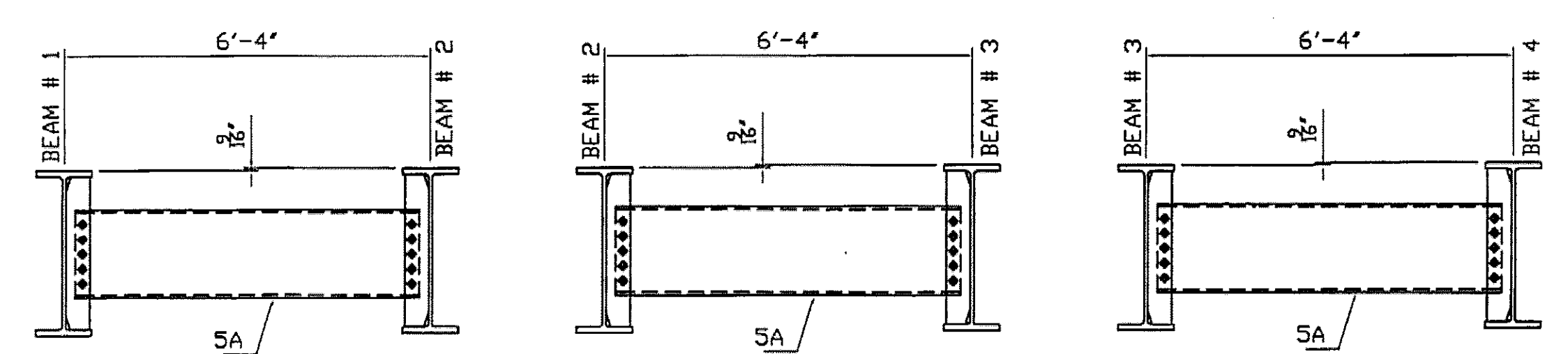
FIELD BOLT SUMMARY				NOTE: 4% ADDITIONAL BOLTS ADDED + 3 FOR TESTING	
LINE	No. OF BOLT BOLTS/DIAM	TYPE	BOLT LENGTH	ACTUAL COUNT	REMARKS
1	97	3/8" ASTM - A325 TYPE 3	2 1/2"	90	w / 1 FLAT WASHER
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-



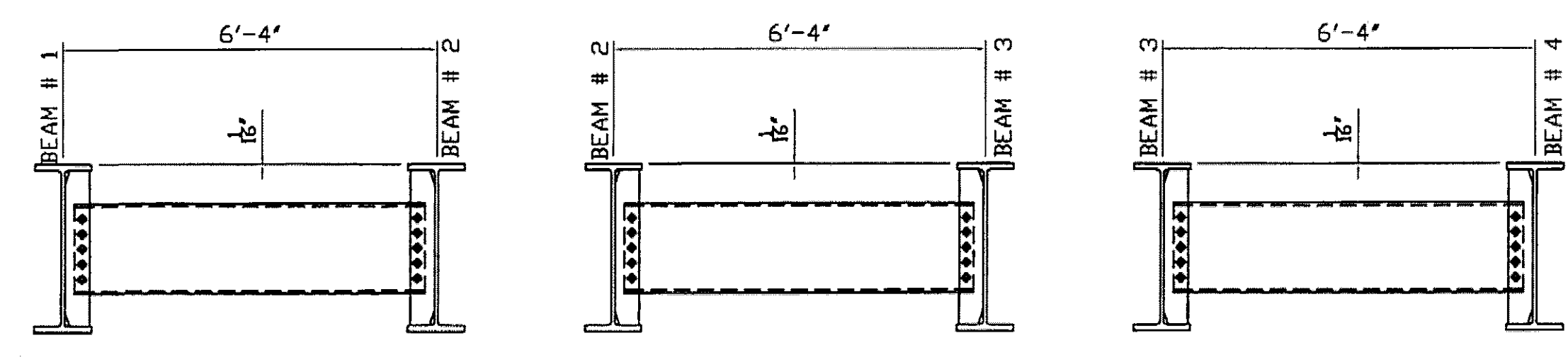
PLAN VIEW



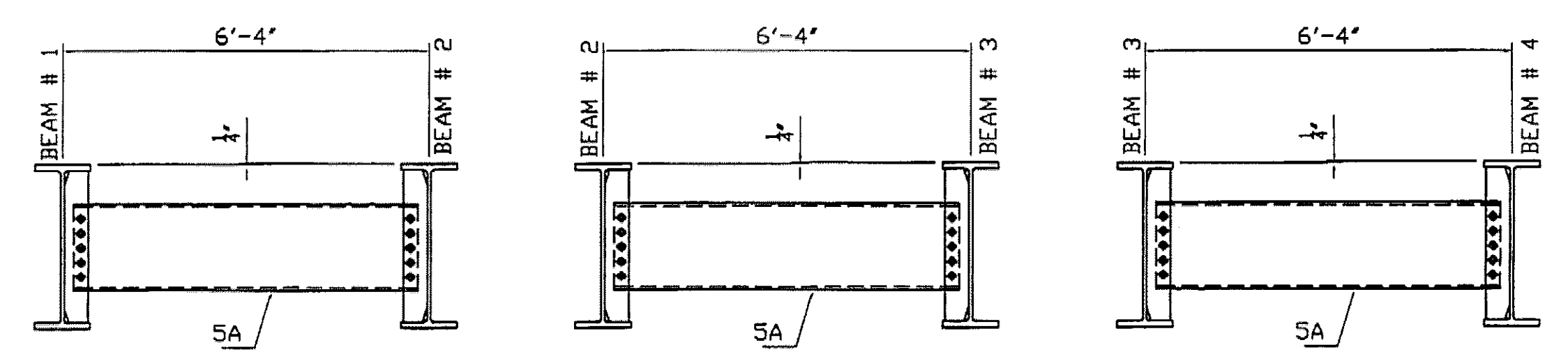
ELEVATION VIEW



SECTION A-A



SECTION C-C



SECTION B-B

*Handwritten notes:*  
 E.C.  
 C.P.W. - 2/19/10

**SHOP NOTES**  
 HOLES 15/16" Ø (U.N.)  
 BOLTS NONE  
 PAINT NONE  
 WELDS TO BE MADE USING ER80-NiL ELECTRODES  
 MATERIAL M270 Gr-50W

REV. NO.	DATE	REVISION
1		

ERECTOR DRAWING  
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 PROJECT NO.: BHF 0114(5) COUNTY OF WINDHAM

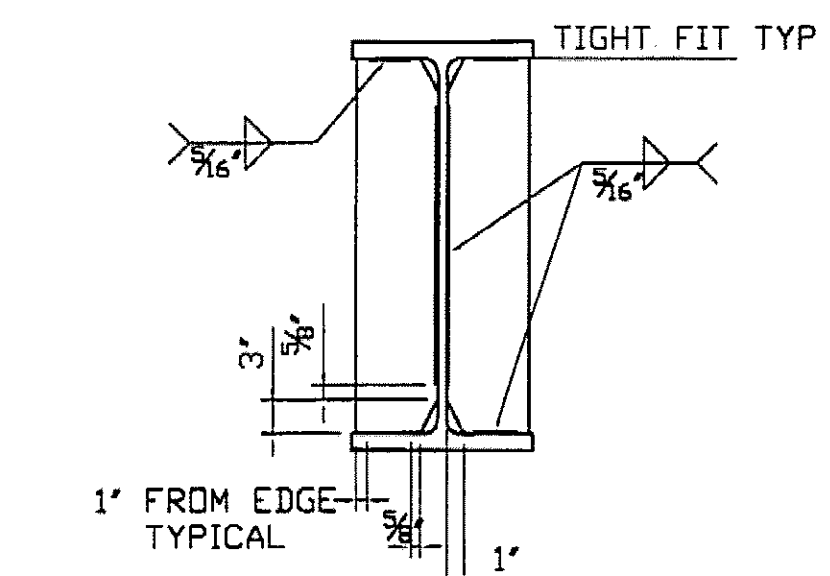
DRAWN BY		CHECKED BY		JDB NO.	SHEET NO.
KC	02/22/10	WL	02/25/10	3525	E1

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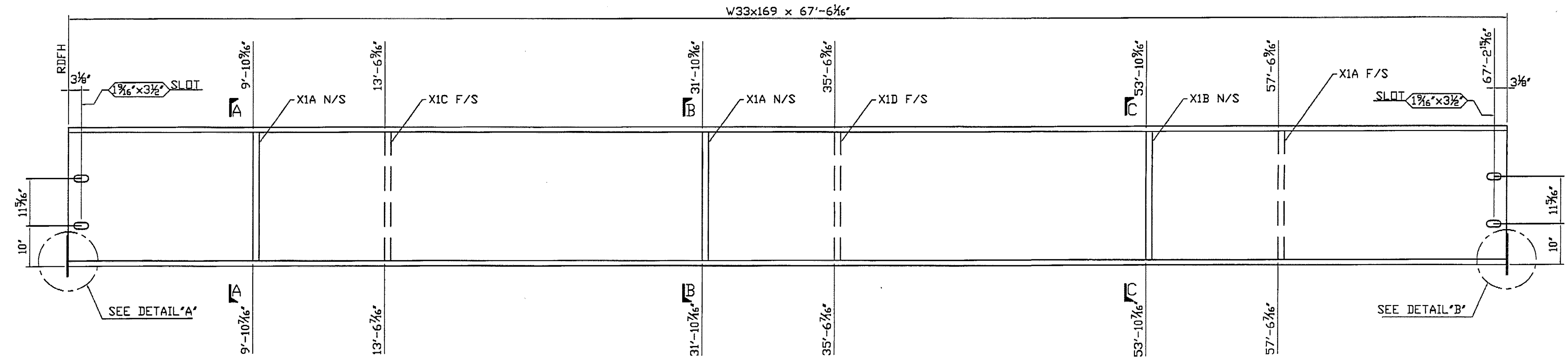
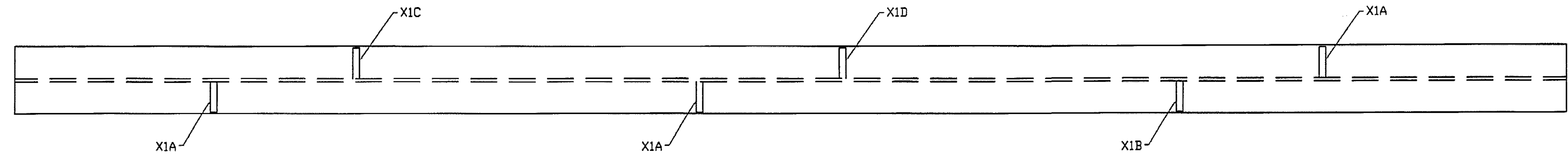
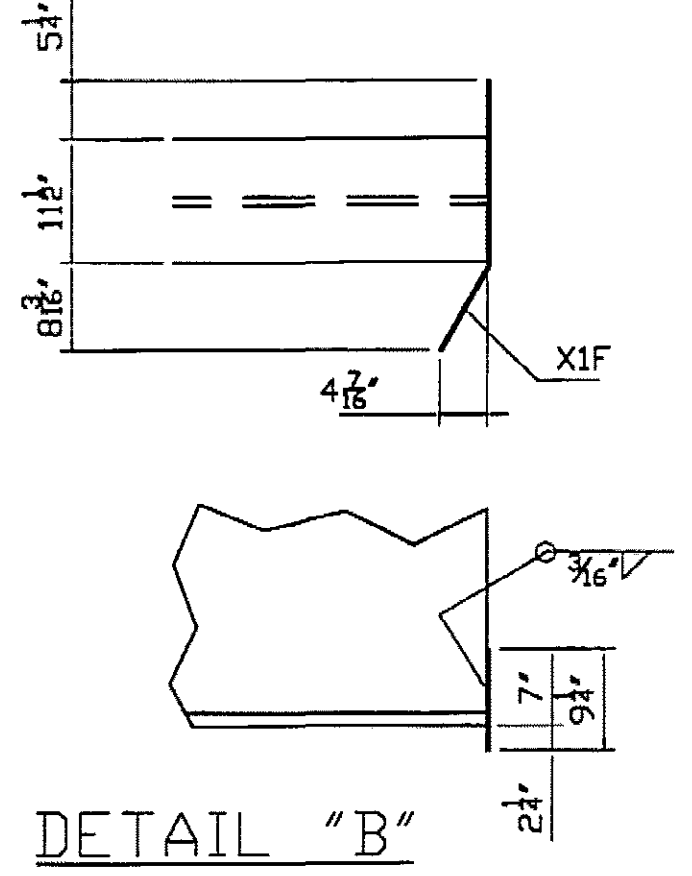
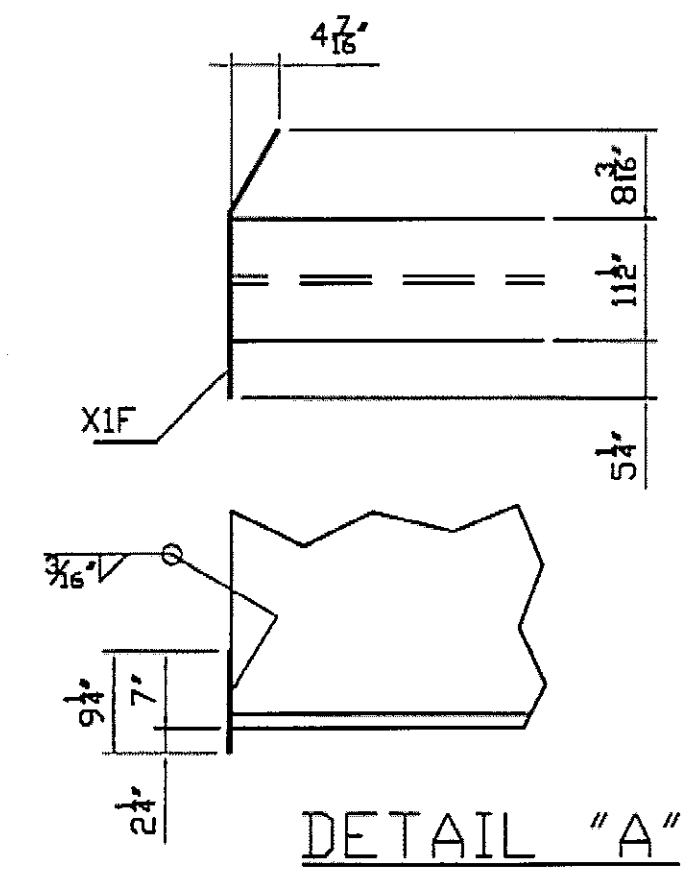
OWNER: VT AOT  
 CONTRACTOR: B.U.R. CONSTRUCTION



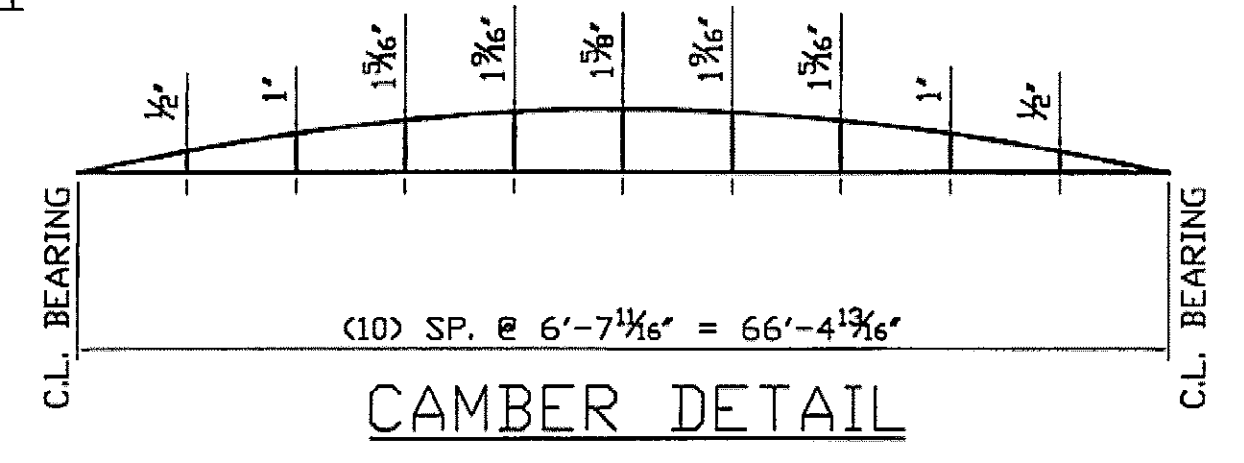
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		3	X1A	PL <sup>1</sup> / <sub>2</sub> x5	2'-7 <sup>1</sup> / <sub>8</sub> "		66.73
		1	X1B	PL <sup>1</sup> / <sub>2</sub> x5	2'-7 <sup>1</sup> / <sub>8</sub> "		22.24
		1	X1C	PL <sup>1</sup> / <sub>2</sub> x5	2'-7 <sup>1</sup> / <sub>8</sub> "		22.24
		1	X1D	PL <sup>1</sup> / <sub>2</sub> x5	2'-7 <sup>1</sup> / <sub>8</sub> "		22.24
		2	X1F	PL <sup>1</sup> / <sub>2</sub> x9 <sup>1</sup> / <sub>4</sub>	2'-2 <sup>1</sup> / <sub>8</sub> "		34.26



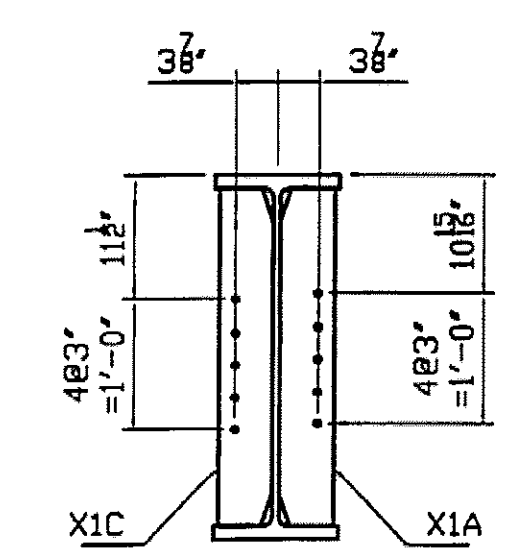
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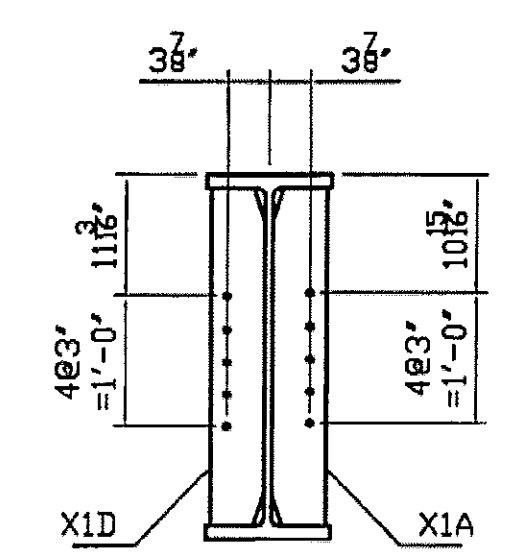
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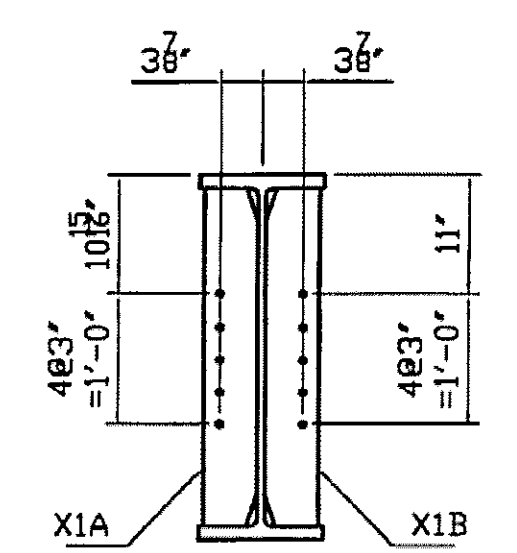
ELC  
CPW 4/19/10



SECTION A-A



SECTION B-B



SECTION C-C

**SHOP NOTES**  
 HOLES 15/16" Ø (U.N.)  
 BOLTS NONE  
 PAINT NONE  
 WELDS TO BE MADE USING ER80-NiL ELECTRODES  
 MATERIAL M270 Gr.50W

REV. NO.	DATE	APPROVER COMMENTS	REVISION
1	4/19/10		

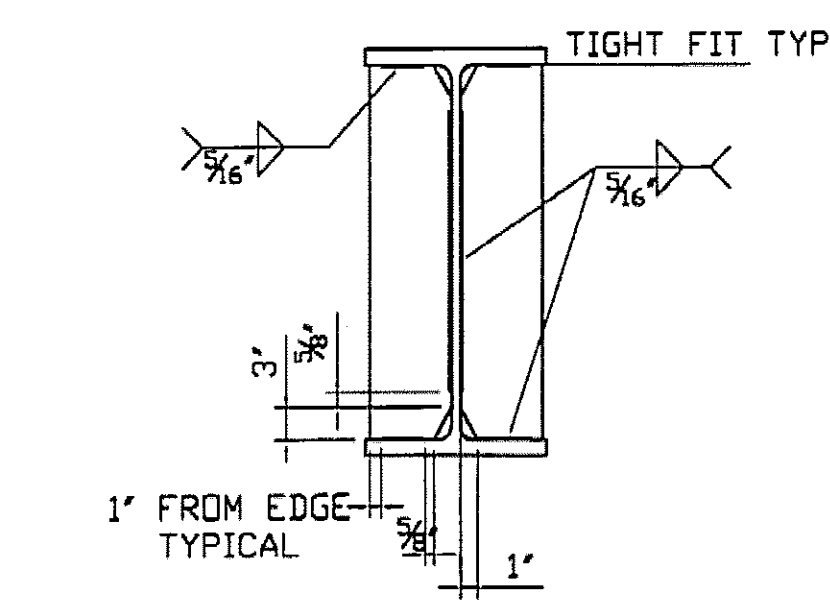
**GIRDER DETAILS**  
 ROUTE TH 1 (FAS 0114) TOWN OF WARDBORO  
 PROJECT NO.: BHF 0114(5) COUNTY OF WINDHAM

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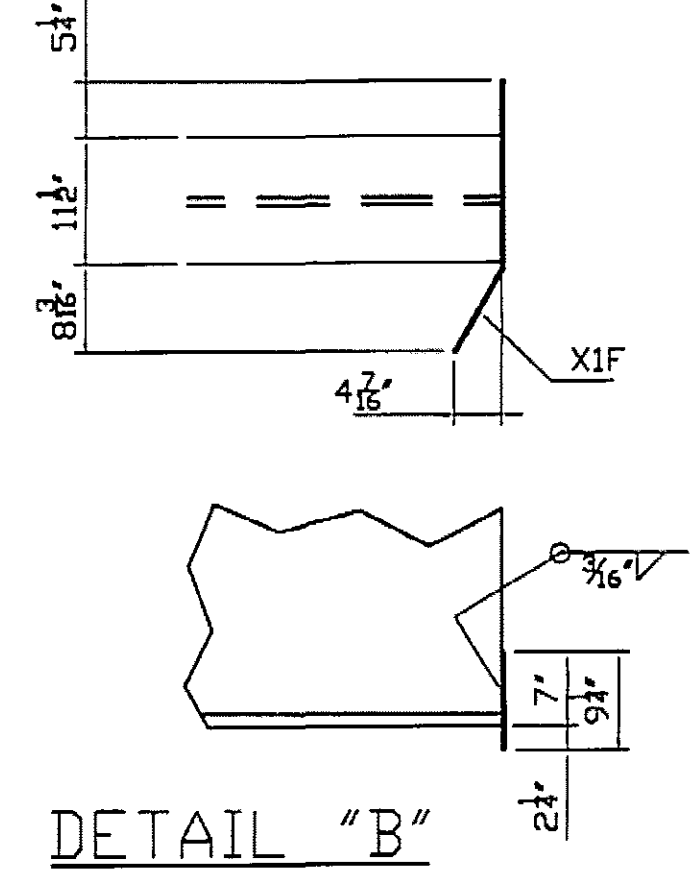
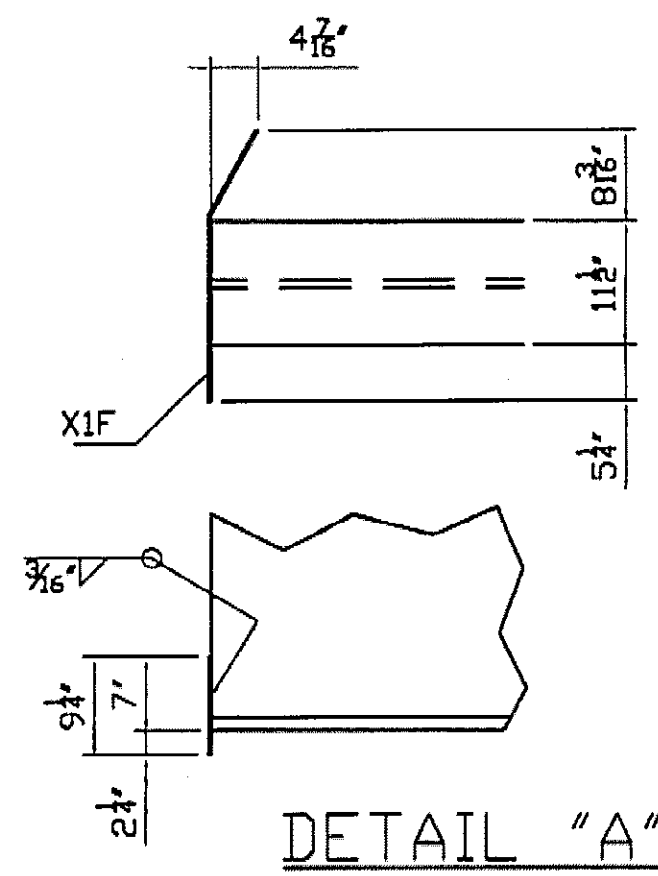
OWNER: VT AOT  
 CONTRACTOR: B.U.R. CONSTRUCTION

DRAWN BY	CHECKED BY	JOB NO.	SHEET NO.
KC	WL	3525	2
02/22/10	02/26/10		

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		1	X1B	PL $\frac{1}{2}$ x5	2'-7 $\frac{3}{8}$ "		22.24
		1	X1C	PL $\frac{1}{2}$ x5	2'-7 $\frac{3}{8}$ "		22.24
		1	X1D	PL $\frac{1}{2}$ x5	2'-7 $\frac{3}{8}$ "		22.24
		2	X1F	PL $\frac{1}{2}$ x9 $\frac{1}{2}$	2'-2 $\frac{1}{8}$ "		34.28

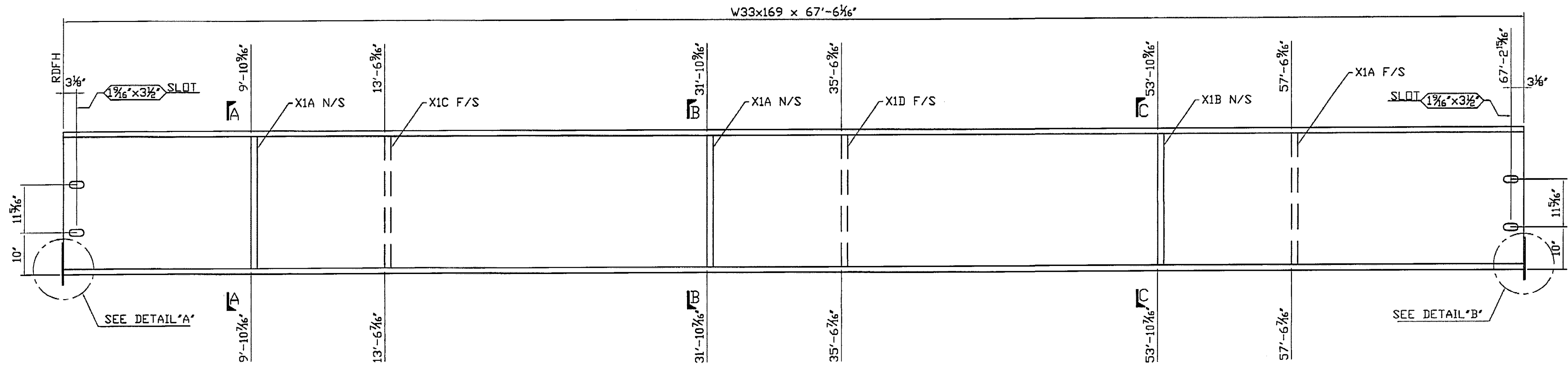
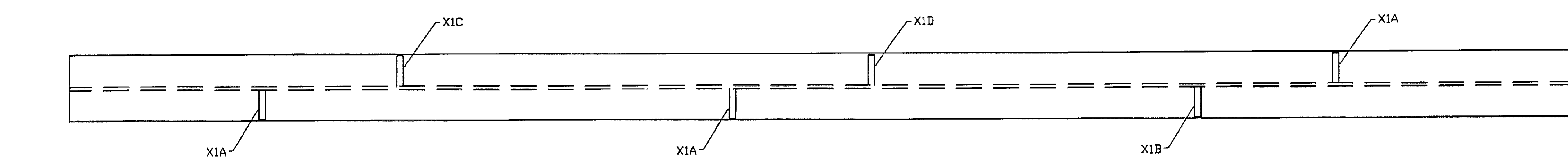


△ TYP. CONN. GUSSET WELD DETAIL

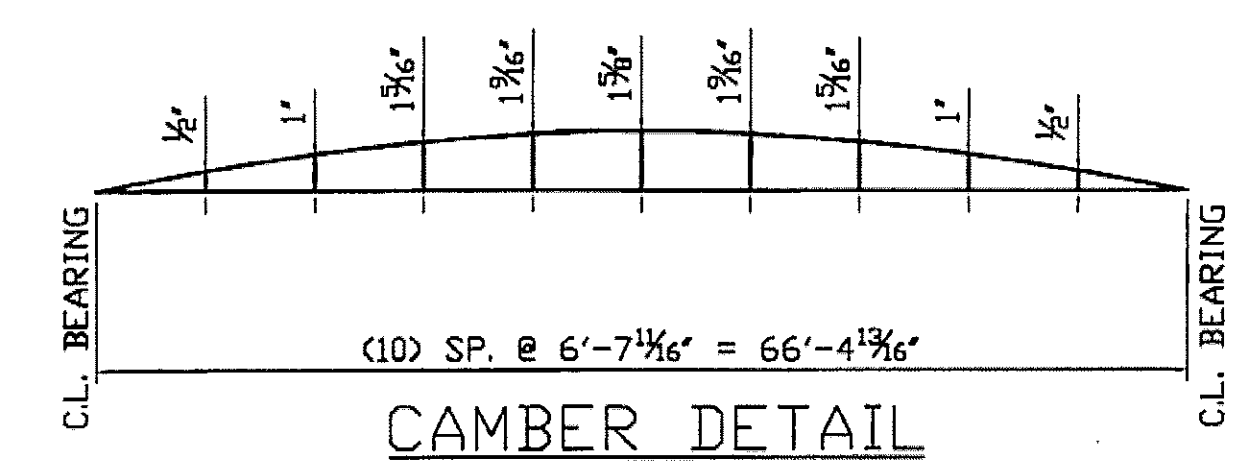


DETAIL "A"

DETAIL "B"

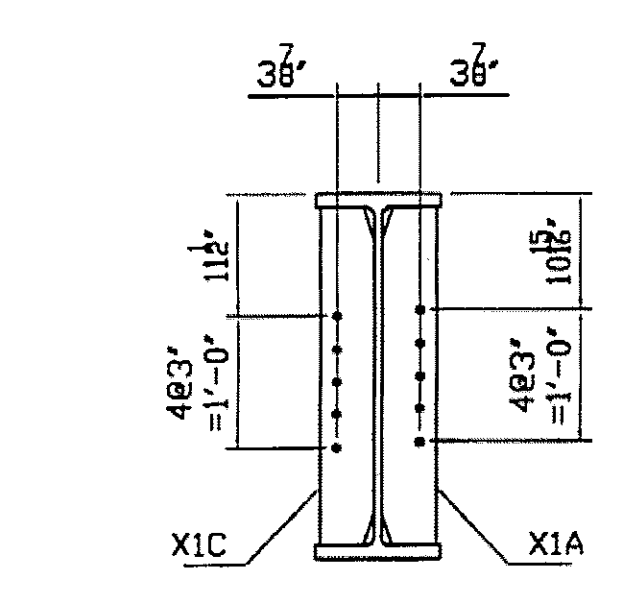


3A ~ GIRDER DETAIL ~ ONE REQ'D

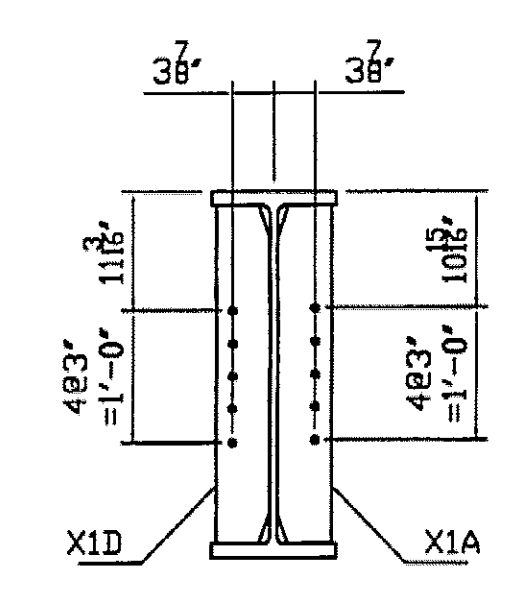


CAMBER DETAIL

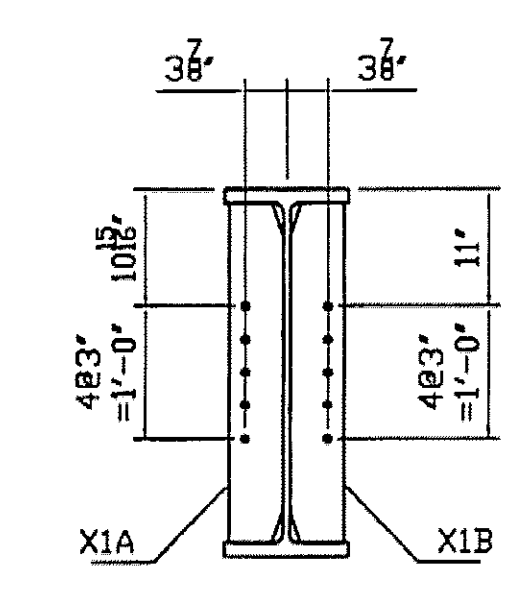
CPW 4/19/10



SECTION A-A



SECTION B-B



SECTION C-C

**SHOP NOTES**  
 HOLES 15/16" Ø (U.N.)  
 BOLTS  
 PAINT NONE  
 WELDS TO BE MADE USING ER80-NL ELECTRODES  
 MATERIAL M270 Gr.50W

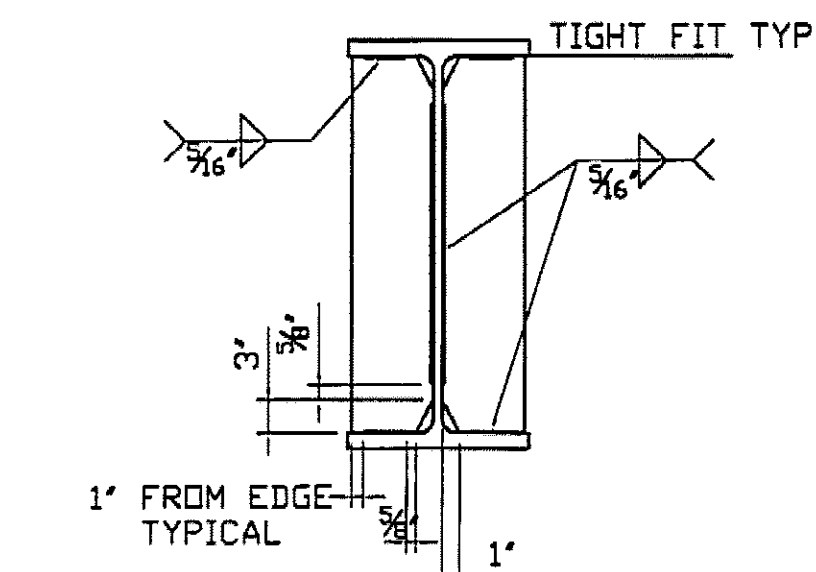
REV. NO.	DATE	APPROVER COMMENTS	REVISION

**GIRDER DETAILS**  
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 PROJECT NO.: BHF 0114(5) COUNTY OF WINDHAM

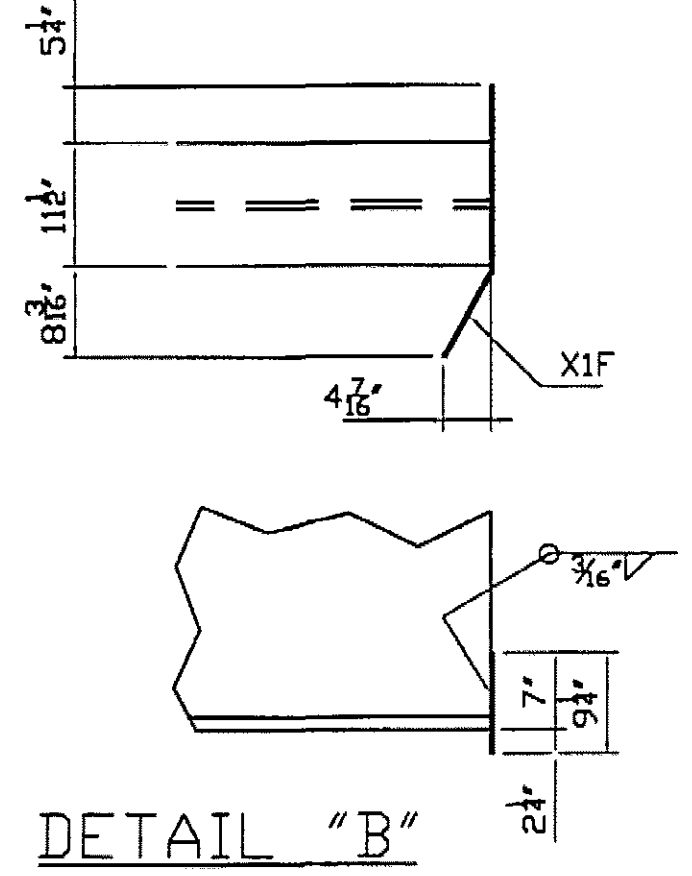
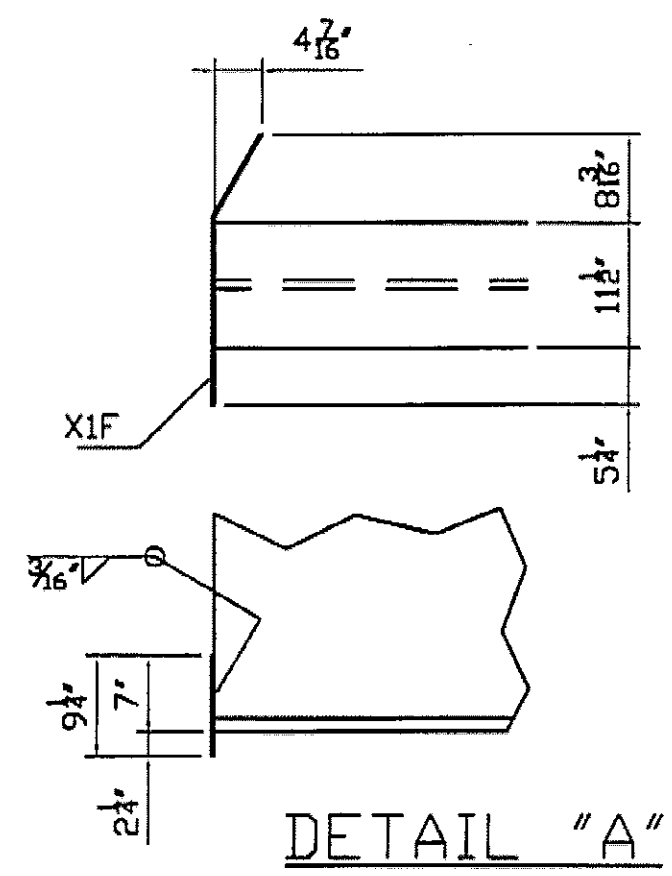
**FOSTER-PRECISE**  
 3 FARM LANE GEORGETOWN, MA 01833  
 978-352-2591 FAX 978-352-2182

OWNER: VT AOT  
 CONTRACTOR: B.U.R. CONSTRUCTION

DRAWN BY	CHECKED BY	JOB NO.	SHEET NO.
KC	WL	3525	3
02/22/10	02/26/10		



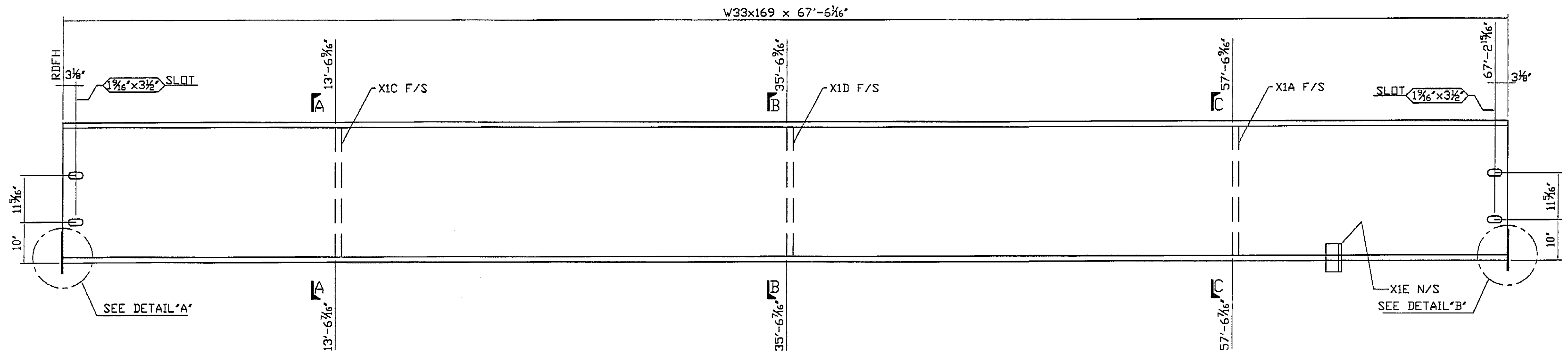
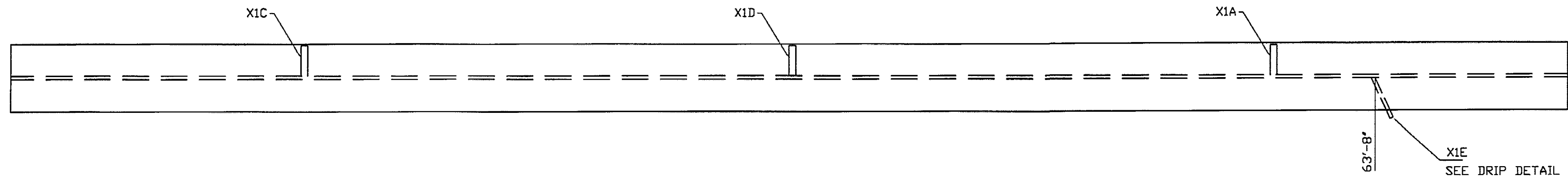
△ TYP. CONN. GUSSET WELD DETAIL



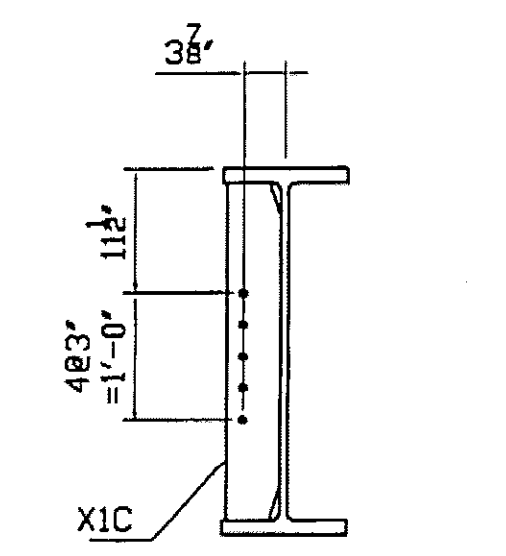
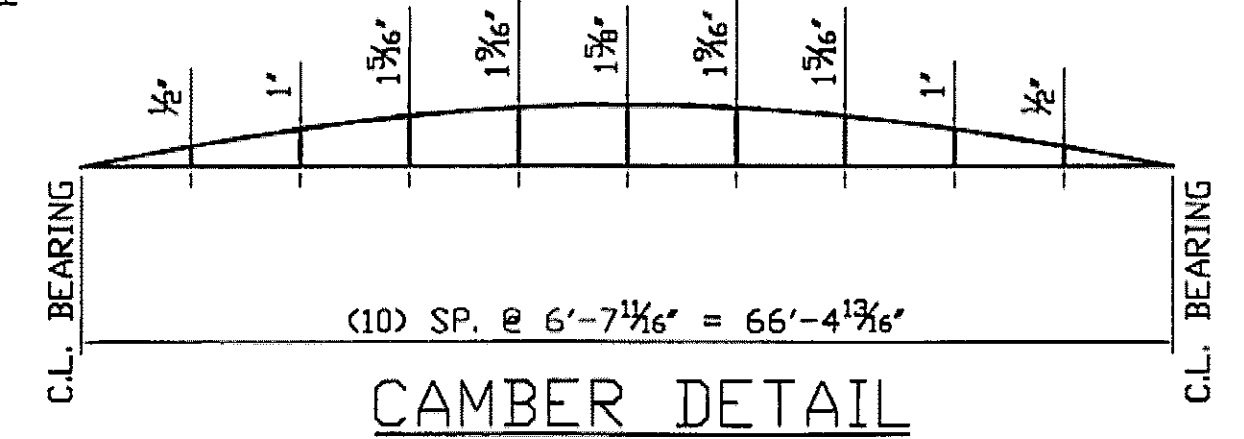
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DETAIL "B"

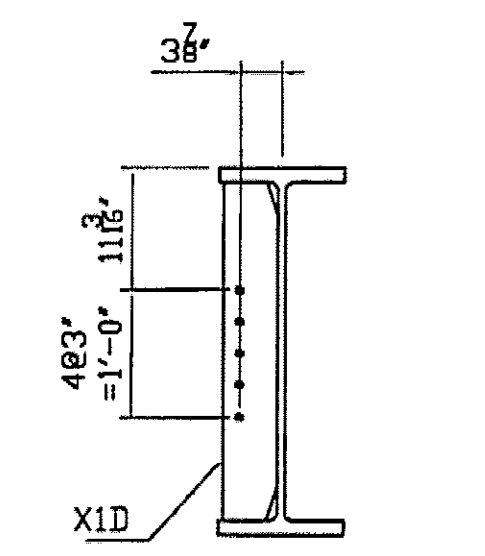
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		1	X1C	PL 1/2 x 5	2'-7 3/8"		22.24
		1	X1D	PL 1/2 x 5	2'-7 3/8"		22.24
		1	X1E	PL 1/4 x 3 1/2	0'-9"		2.07
		2	X1F	PL 1/4 x 9 1/2	2'-2 1/8"		34.26



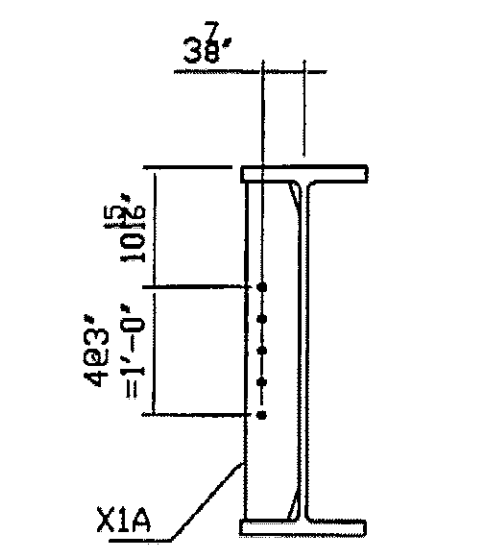
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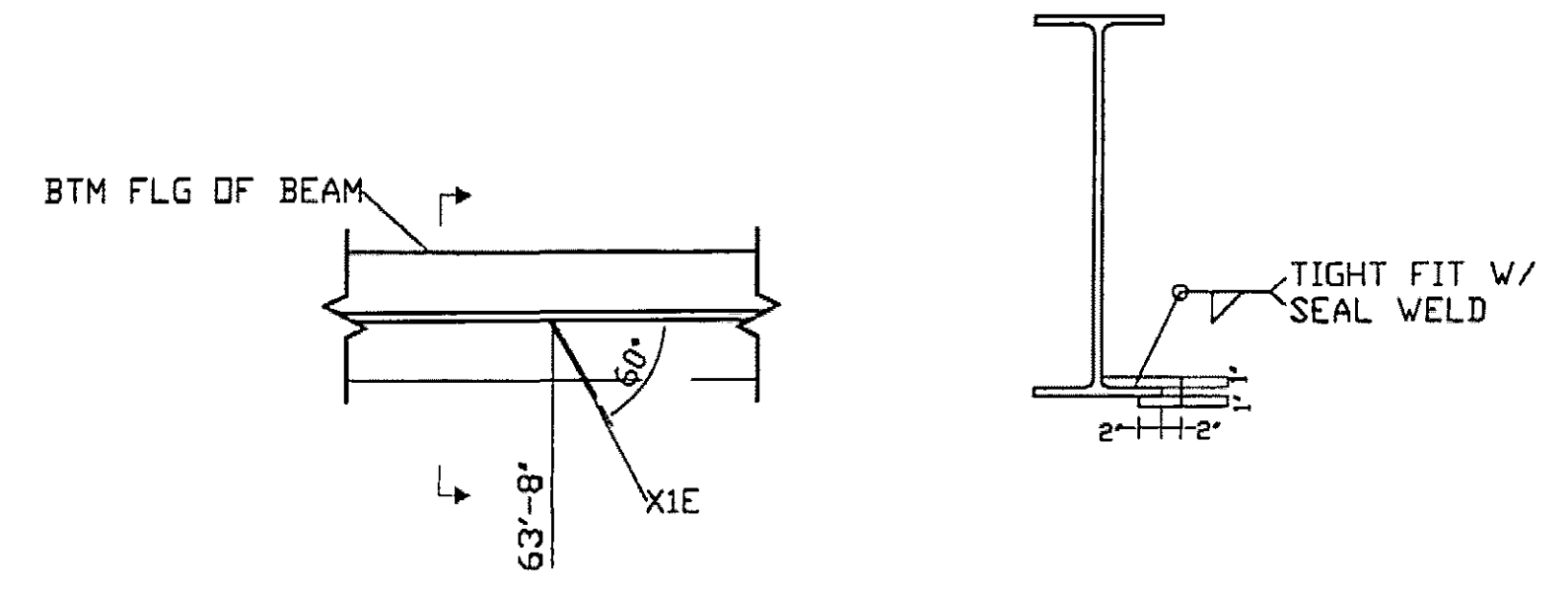
SECTION A-A



SECTION B-B



SECTION C-C



△ PLAN DRIP PLATE

**SHOP NOTES**  
 HOLES 15/16" Ø (U.N.)  
 BOLTS NONE  
 PAINT NONE  
 WELDS TO BE MADE USING ER80-NiL ELECTRODES  
 MATERIAL M270 Gr.50W

REV. NO.	DATE	APPROVER COMMENTS	REVISION
1	4/1/10		

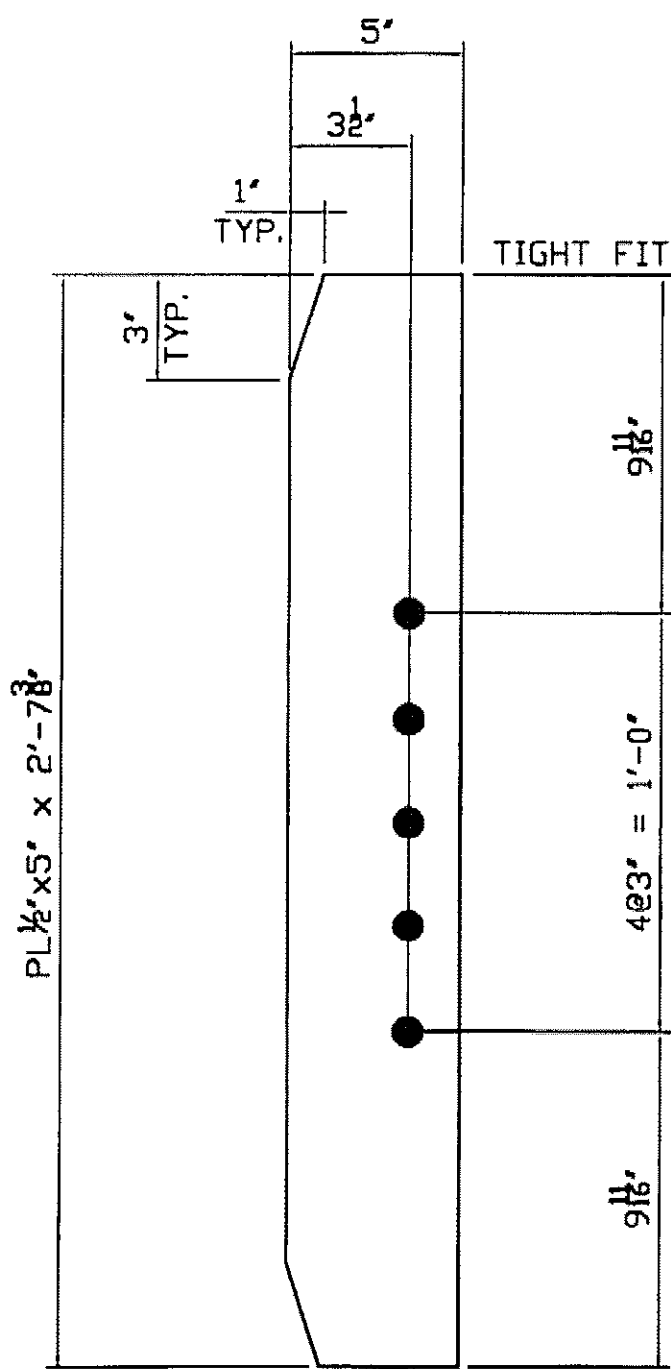
**GIRDER DETAILS**  
 ROUTE TH 1 (FAS 0114) TOWN OF WARDBORO  
 PROJECT NO.: BHF 0114(S) COUNTY OF WINDHAM

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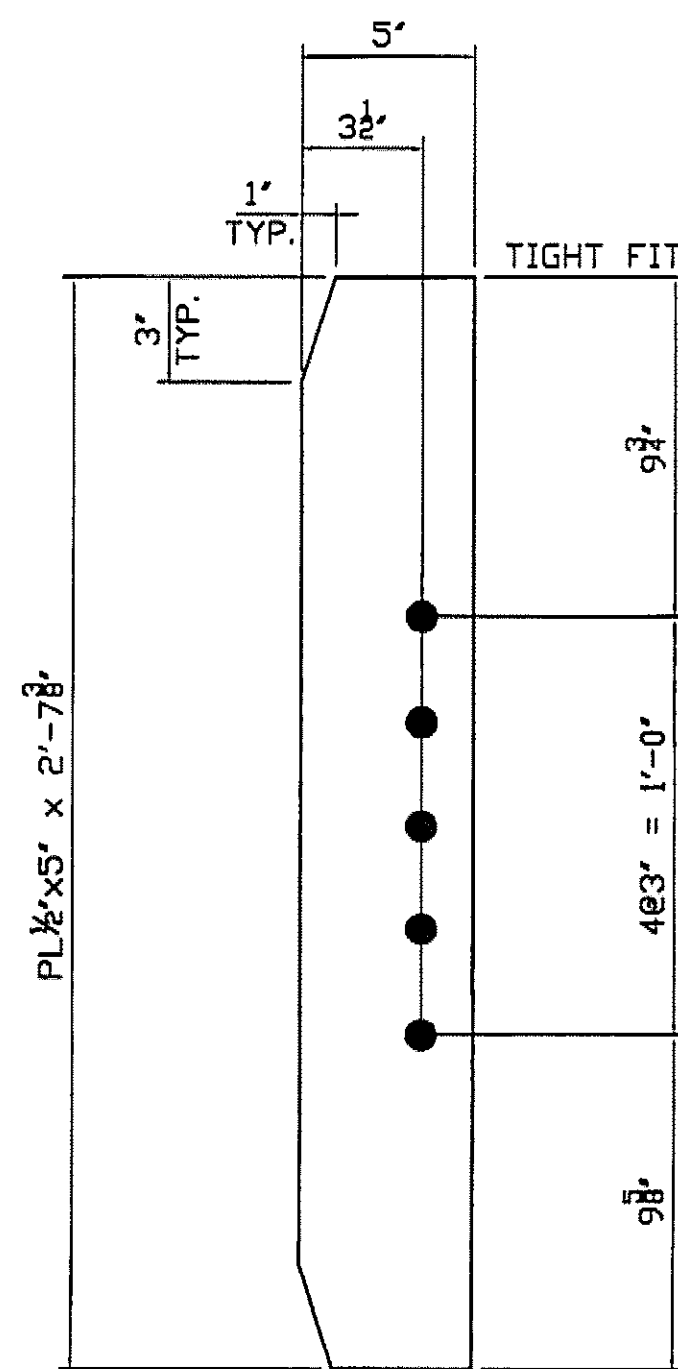
OWNER: VT AOT  
 CONTRACTOR: B.U.R. CONSTRUCTION

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02/22/10	02/26/10		

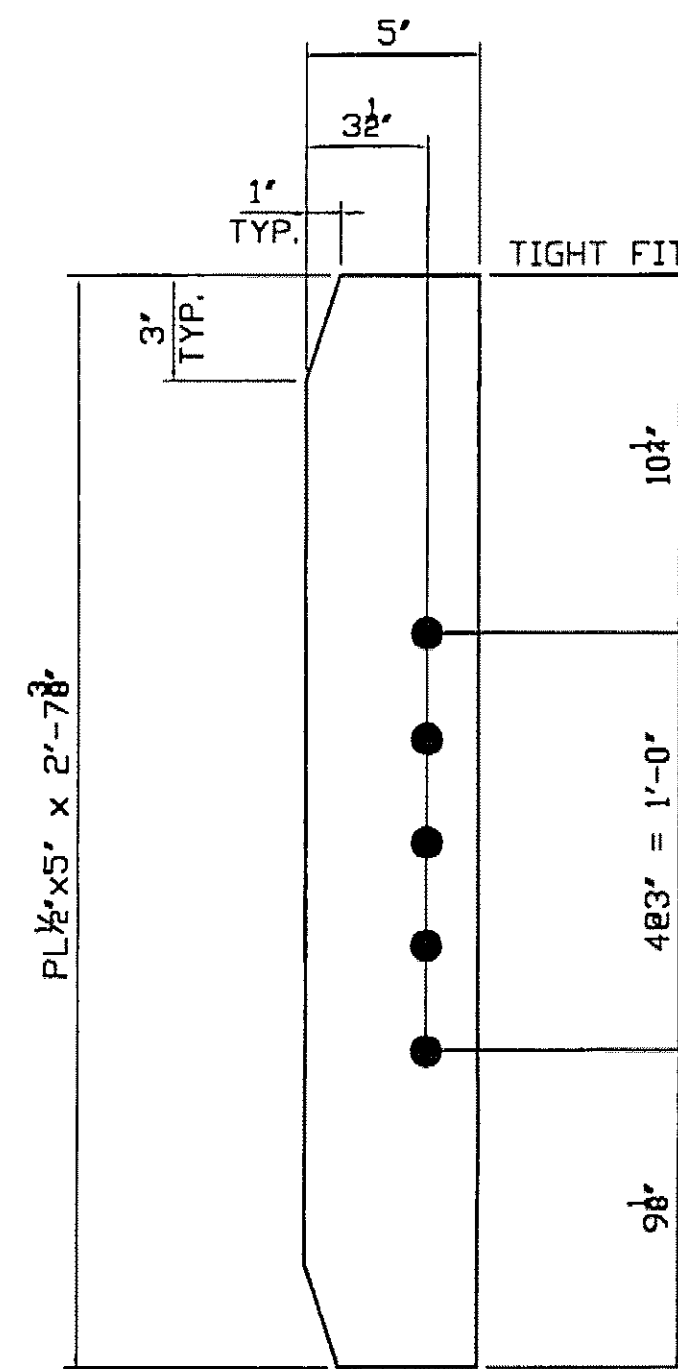




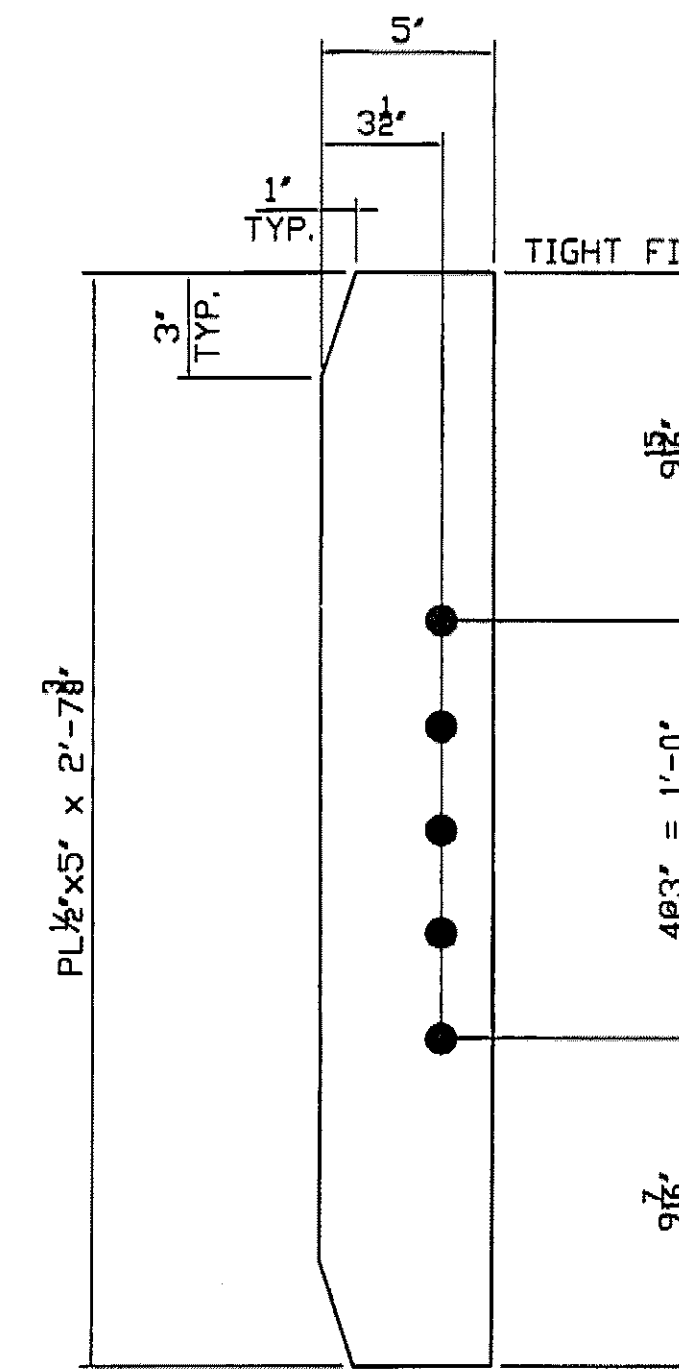
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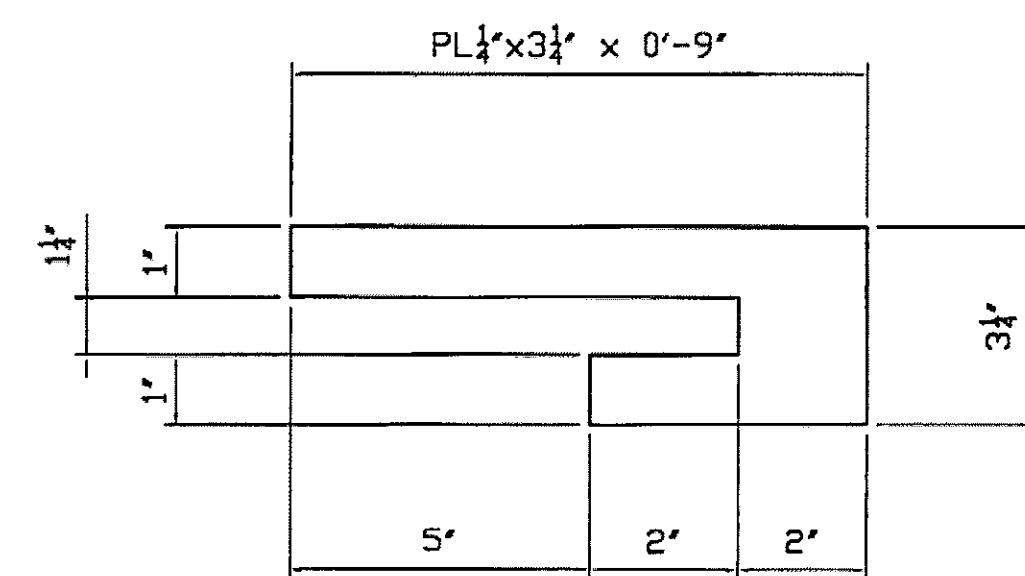
X1B ~ GUSSET ~ 3 REQ'D



X1C ~ GUSSET ~ 3 REQ'D

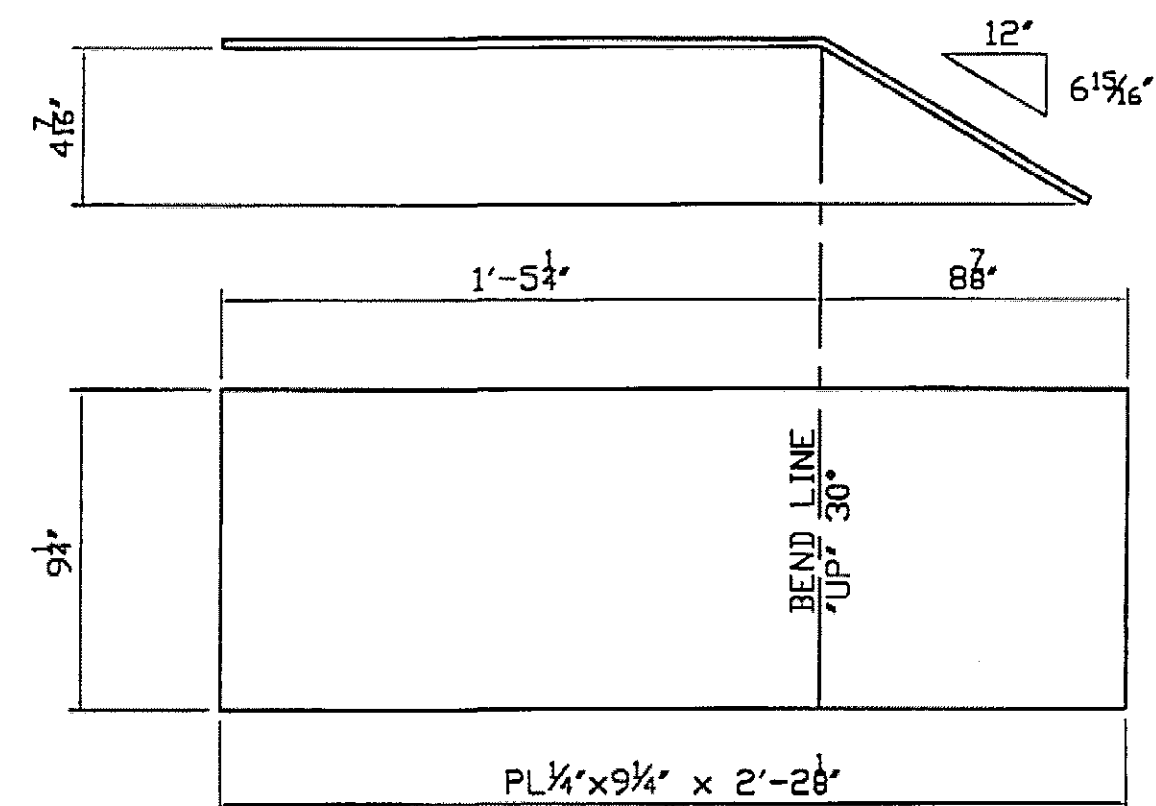


X1D ~ GUSSET ~ 3 REQ'D



X1E ~ GUSSET ~ 2 REQ'D

FIT TO SEAL PER DRIP PL. DETAIL ON SHTS 1&4



X1F ~ END PLATE ~ 8 REQ'D

REV. NO.	DATE	APPROVER COMMENTS	REVISION
3			
2			
1	4/9/10		

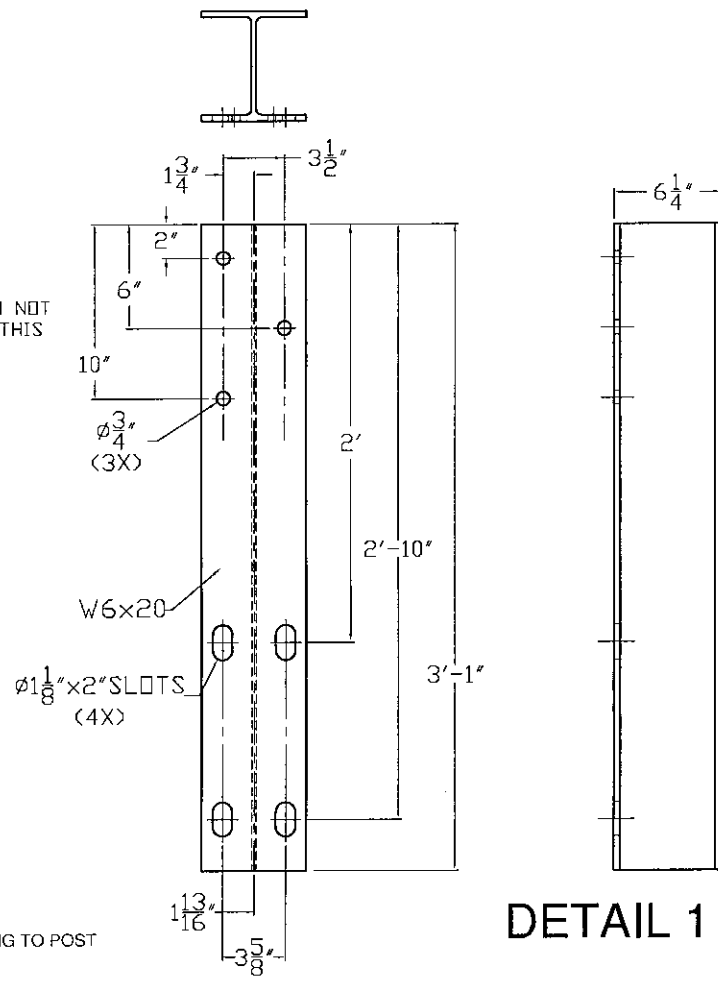
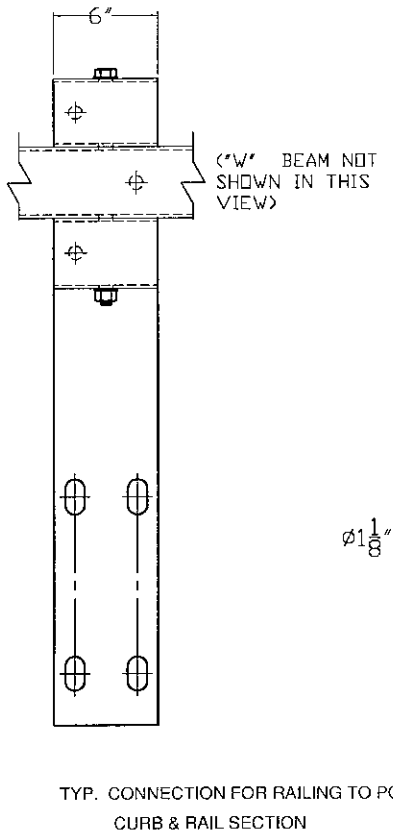
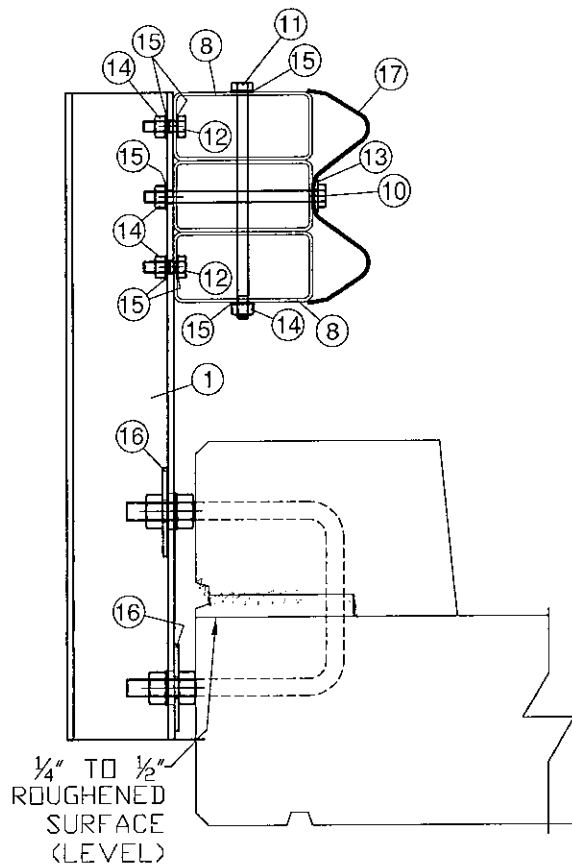
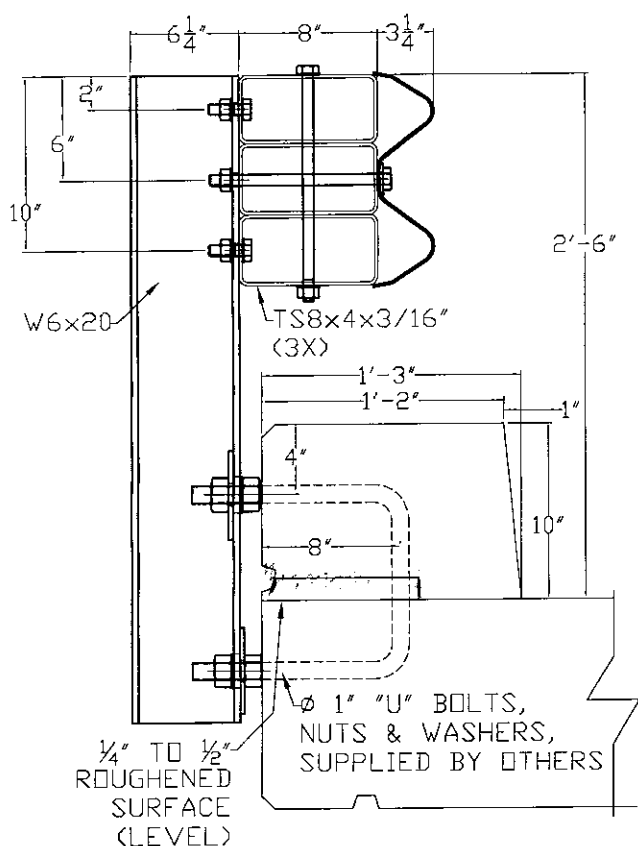
PART DETAILS  
 ROUTE TH 1 (FAS 0114) TOWN OF WARDBORO  
 PROJECT NO.: BHF 0114(5) COUNTY OF WINDHAM

**SHOP NOTES**  
 HOLES 15/16" Ø (U.N.)  
 BOLTS NONE  
 PAINT NONE  
 WELDS TO BE MADE USING ER80-NiL ELECTRODES  
 MATERIAL M270 Gr.50W

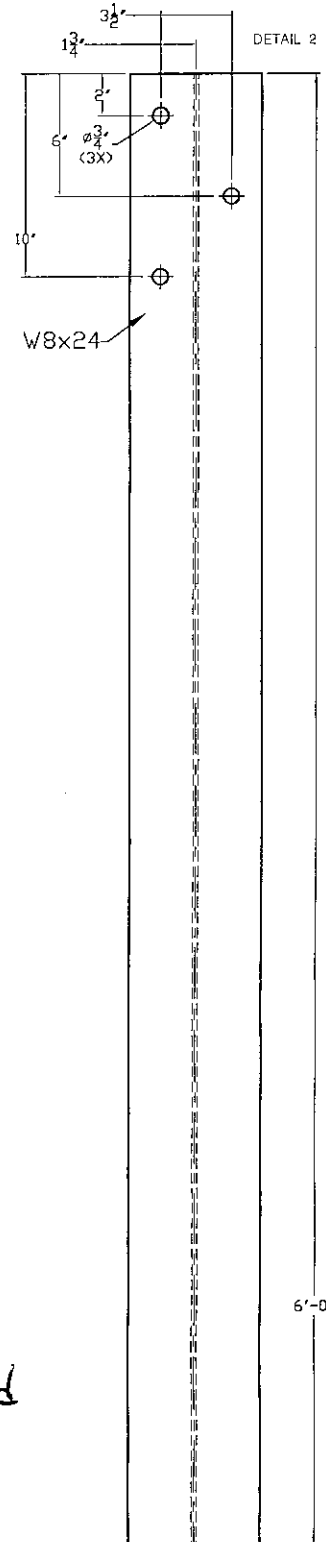
**FOSTER • PRECISE**  
 3 FARM LANE GEORGETOWN, MA 01833  
 978-352-2591 FAX 978-352-2182  
 OWNER: VT AOT  
 CONTRACTOR: B.U.R. CONSTRUCTION  
 DRAWN BY: KC  
 CHECKED BY: WL  
 DATE: 02/22/10  
 JOB NO. 3525  
 SHEET NO. X1

*Handwritten notes:*  
 BUC  
 CRW 4/19/10

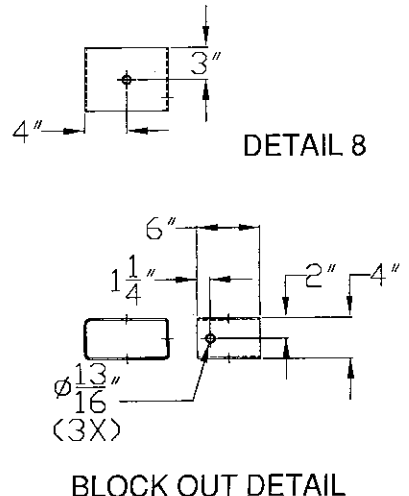




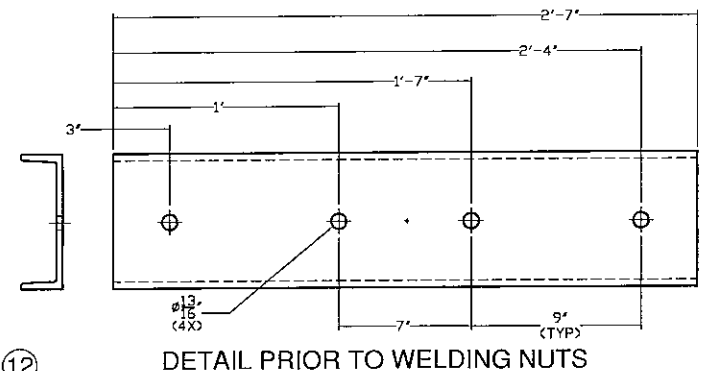
DETAIL 1



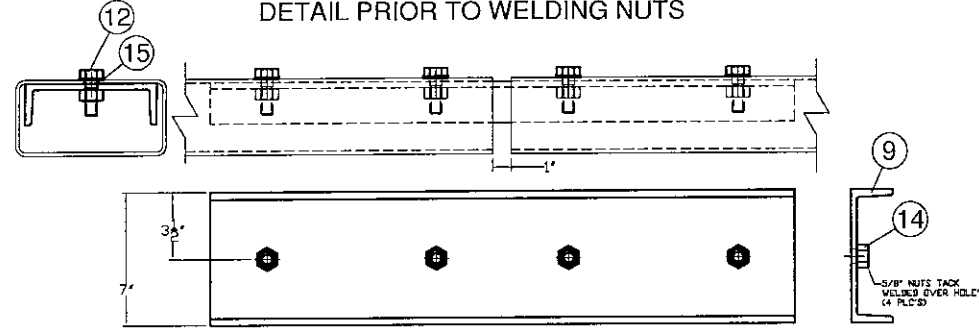
DETAIL 2



DETAIL 8



DETAIL PRIOR TO WELDING NUTS



RECEIVED  
 CK'D BY \_\_\_\_\_ OK'D BY ELC  
 JUN 29 2010  
 RESUBMIT \_\_\_\_\_ APPROVED As Noted  
 BY CPW DATE 6/30/10

ITEM #: 525.44 BRIDGE RAILING GEN CONTR: F R LaFayette SHEET 2 OF 2

APPROVED BY: \_\_\_\_\_

**BRIDGE RAIL DETAILS SHEET**  
 WARDBORO, PROJECT # BHF 0114 (5), BRIDGE #11  
 TOWN OF WARDBORO, WINDHAM COUNTY, STATE OF VERMONT

R NO.	DATE	DESCRIPTION	BY	R NO.	DATE	DESCRIPTION	BY
E A	6/25/10	REVISED PER 6/24/10 UPDATES	EP	E			
V				V			

ELDERLEE, INC.  
 OAKS CORNERS, NEW YORK 14518  
 E-Mail: dlong@eldertee.com  
 Tel: 315-789-6670 Fax: 315-789-6615

DRAWN E.P. 4/6/10  
 CHECKED D.L. 4/6/10  
 APPROVED  
 SCALE SCHEMATIC  
 DRAWING NO. F R LAFAYETTE EM10-004