

**REVIEWER NOTES:**

1. ALIGNMENT: THE PROPOSED BRIDGE IS SHOWN TO BE LOCATED ON THE WEST SIDE OF THE EXISTING MILL STREET FOOTPRINT. THIS ALIGNMENT WAS SHIFTED TO THE WEST TO STAY AWAY FROM OVERHEAD WIRES (SEE #3 BELOW) AND THE UTILITY POLE IMMEDIATELY EAST OF THE BRIDGE AS MUCH AS POSSIBLE.

2. PROPOSED BRIDGE/PATH WIDTH IS 8'-0" PER TOWN'S REQUEST.

3. UTILITIES: OVERHEAD WIRES ARE IN CLOSE PROXIMITY TO THE BRIDGE RUNNING ALONG THE EAST SIDE OF MILL STREET AND THE NORTH SIDE OF PLEASANT STREET. IT IS ANTICIPATED THAT THE PROJECT CAN BE CONSTRUCTED WITHOUT THE NEED TO REMOVE/RELOCATE THE WIRES OR POLES, HOWEVER, IT IS EXPECTED THAT THE ELECTRIC WIRES MAY NEED TO BE DE-ENERGIZED DURING PILE INSTALLATION, CRANE OPERATIONS FOR SELECT DEMOLITION AND ERECTION ACTIVITIES.

4. GUARDRAIL/ENDPOSTS: THE PROPOSED TRANSITION BETWEEN THE EXISTING PLEASANT ST. GUARDRAIL AND THE BRIDGE WILL BE A CONCRETE ENDPOST DIRECTLY ABUTTING THE END OF THE BRIDGE. THE GUARDRAIL WILL NOT MEET MASH STANDARDS DUE TO EXISTING CONDITION CONSTRAINTS.

5. HYDRAULIC OPENING WILL BE INCREASED AS THE STRUCTURAL DEPTH OF THE PROPOSED PEDESTRIAN BRIDGE IS SIGNIFICANTLY LESS THAN THE EXISTING HIGHWAY BRIDGE AND THE PROPOSED PROFILE IS A CREST VERTICAL CURVE.

6. ROW IMPACT FOR CRANE SWING: TO DEMOLISH THE EXISTING BRIDGE AND ERECT THE NEW BRIDGE, A CRANE WILL NEED TO SWING OVER PRIVATE PROPERTY AND EXISTING VEGETATION ON THE PRIVATE PROPERTY MAY NEED TO BE TRIMMED. TEMPORARY EASEMENTS MAY BE REQUIRED FOR CRANE OPERATION.

7. THE MATERIALS ON THE PROPOSED BRIDGE ARE SHOWN IN THIS PLAN SET AS CONCRETE DECK AND WOOD RAILINGS. OTHER MATERIALS CAN BE USED IF VTRANS OR THE TOWN PREFER A DIFFERENT MATERIAL OR FINISH.

8. STEEL TRUSS IS TO BE GALVANIZED AND MAY BE PAINTED AS DIRECTED BY TOWN/HISTORIC.

9. MILL STREET & PLEASANT STREET PAVEMENT DESIGN: SHALL BE REVIEWED AND APPROVED BY THE VTRANS PAVEMENT DESIGN GROUP.

10. GEOTECHNICAL: BORINGS WILL BE REQUIRED FOR THE DESIGN OF THE PROPOSED UNDERPINNING OF THE SOUTH ABUTMENT.

11. EXISTING SEWER INVERTS AND SIZE IN PLEASANT STREET SHALL BE DETERMINED AND SHOWN ON THE FINAL DESIGN PLANS. SURVEY REQUIRED.

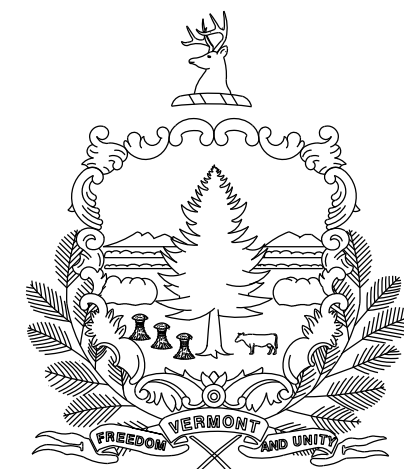
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2018, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON APRIL 13, 2018 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 2

SURVEYED BY : VTRANS  
SURVEYED DATE : 1/9/2017

DATUM  
VERTICAL NAVD88  
HORIZONTAL NAD83

# STATE OF VERMONT AGENCY OF TRANSPORTATION



## PROPOSED IMPROVEMENT BRIDGE PROJECT

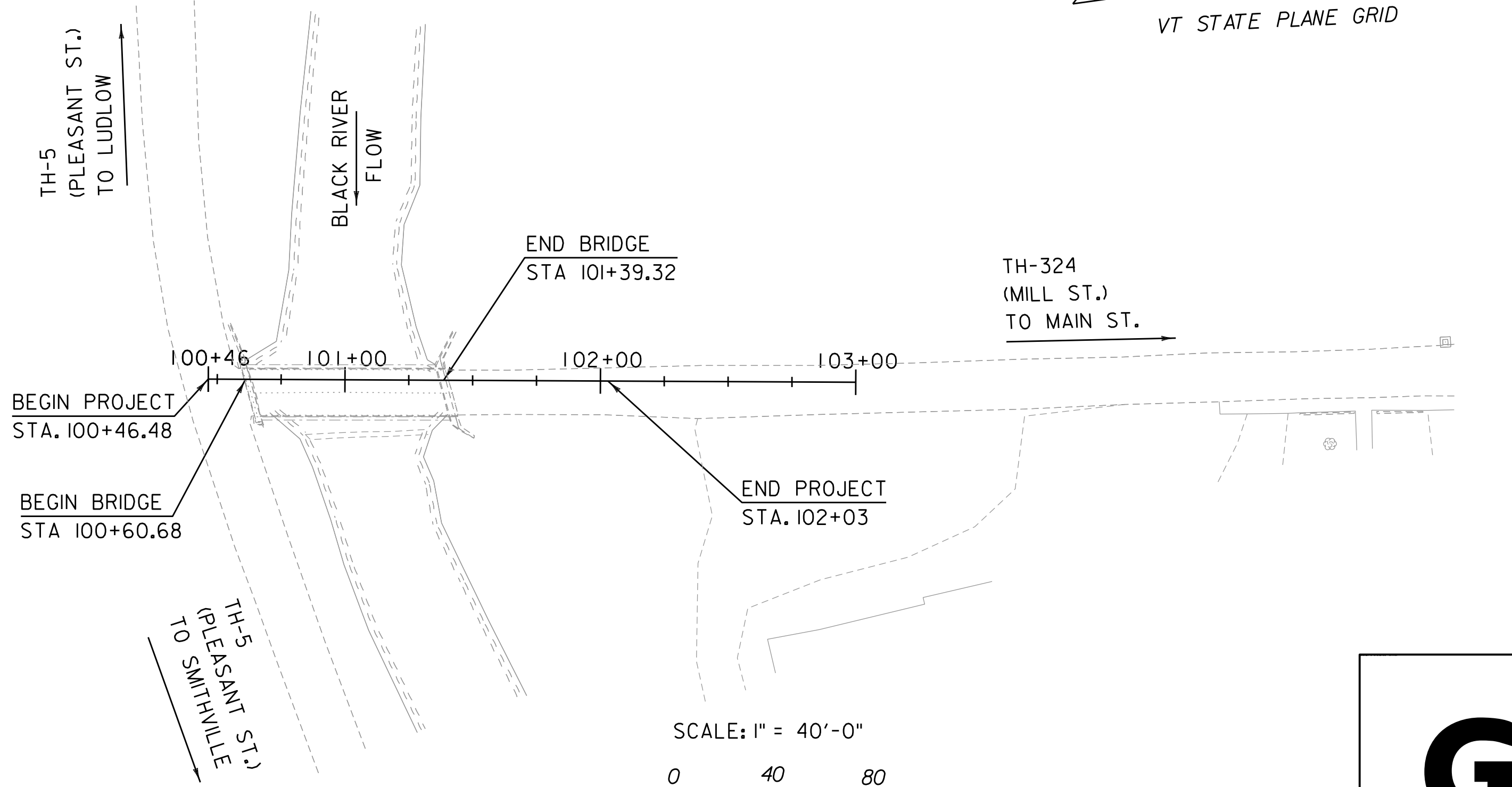
TOWN OF LUDLOW  
COUNTY OF WINDSOR

ROUTE NO: TH 324 (MILL STREET) , CLASS 3 , LOCAL ROAD  
BRIDGE NO: 57 OVER BLACK RIVER

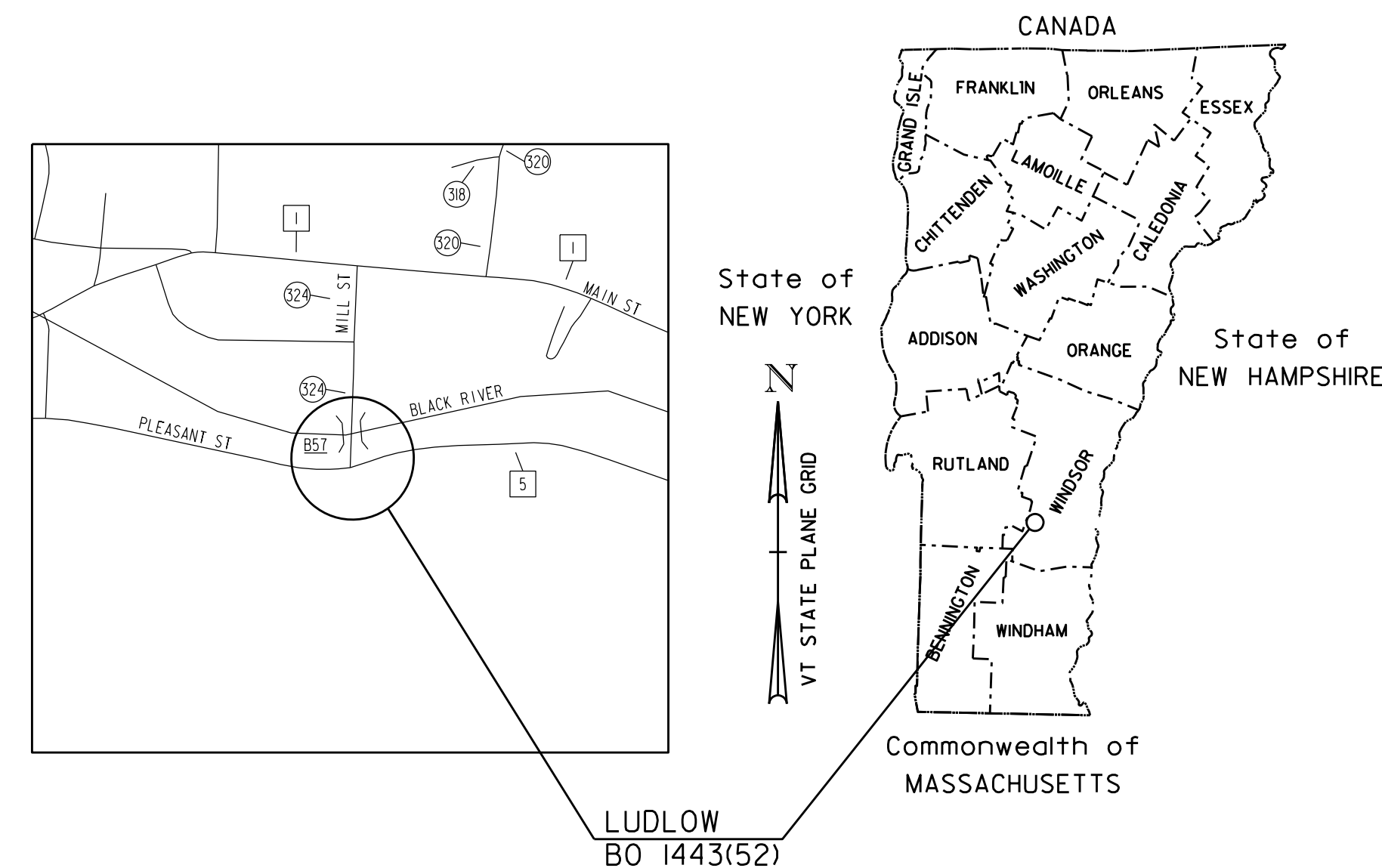
PROJECT LOCATION: BRIDGE 57 IS LOCATED ON TH-324, MILL STREET IN LUDLOW VILLAGE OVER BLACK RIVER. THE SOUTH END OF THE BRIDGE IS AT THE INTERSECTION OF MILL STREET AND TH-5, PLEASANT STREET

PROJECT DESCRIPTION: REMOVAL OF EXISTING TRUSS SUPERSTRUCTURE AND CONSTRUCTION OF A PEDESTRIAN BRIDGE ON THE EXISTING ABUTMENTS WITH RELATED SUBSTRUCTURE REPAIR, APPROACH WORK, AND INCIDENTAL ITEMS.

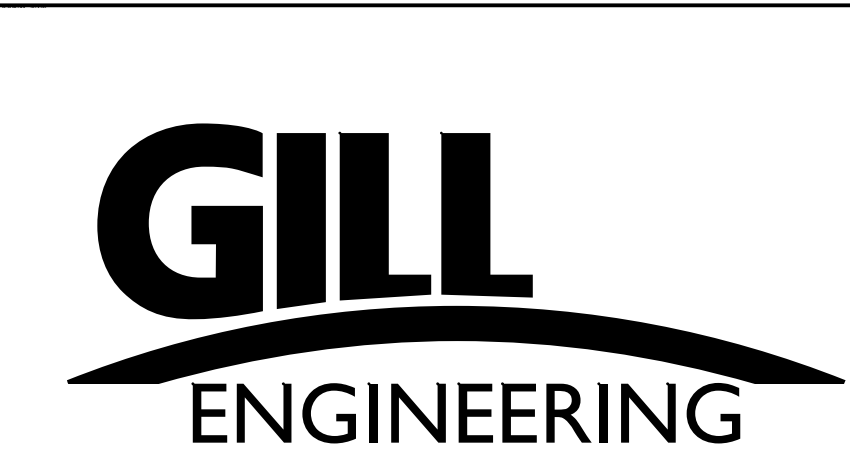
LENGTH OF STRUCTURE: 78.64 FEET  
LENGTH OF ROADWAY: 77.88 FEET  
TOTAL LENGTH OF PROJECT: 156.52 FEET



SCALE: 1" = 40'-0"  
0 40 80  
SCALE IN FEET



PRELIMINARY PLANS  
FEBRUARY 19, 2021

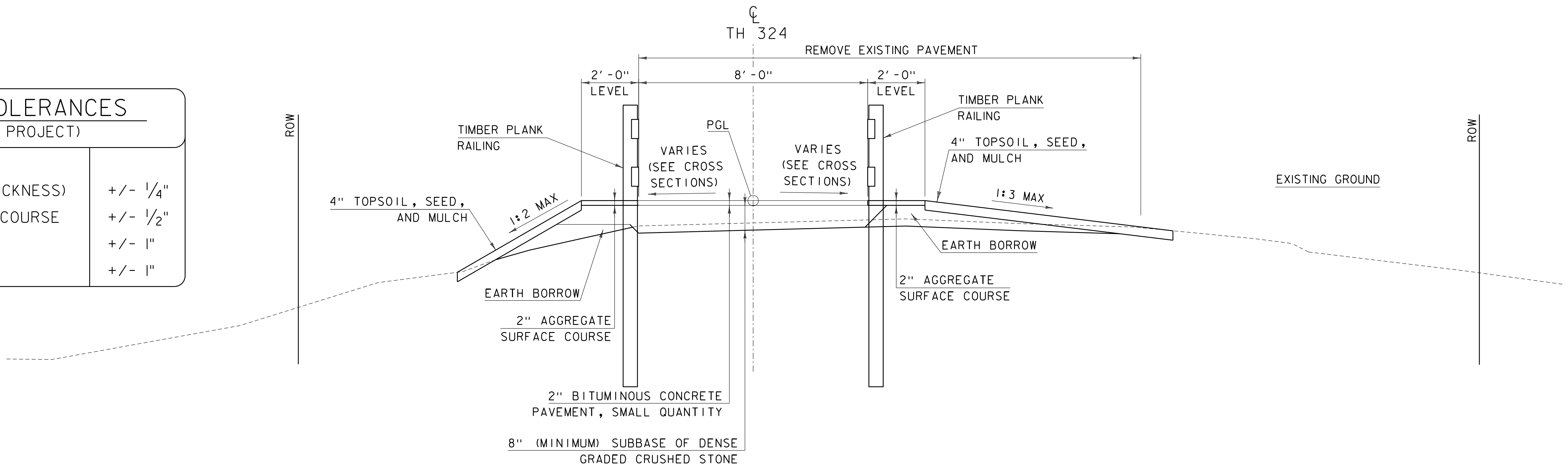


HIGHWAY DIVISION, CHIEF ENGINEER  
APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
PROJECT MANAGER : TODD SUMNER, PE  
PROJECT NAME : LUDLOW VILLAGE  
PROJECT NUMBER : BO 1443 (52)  
SHEET 1 OF 19 SHEETS

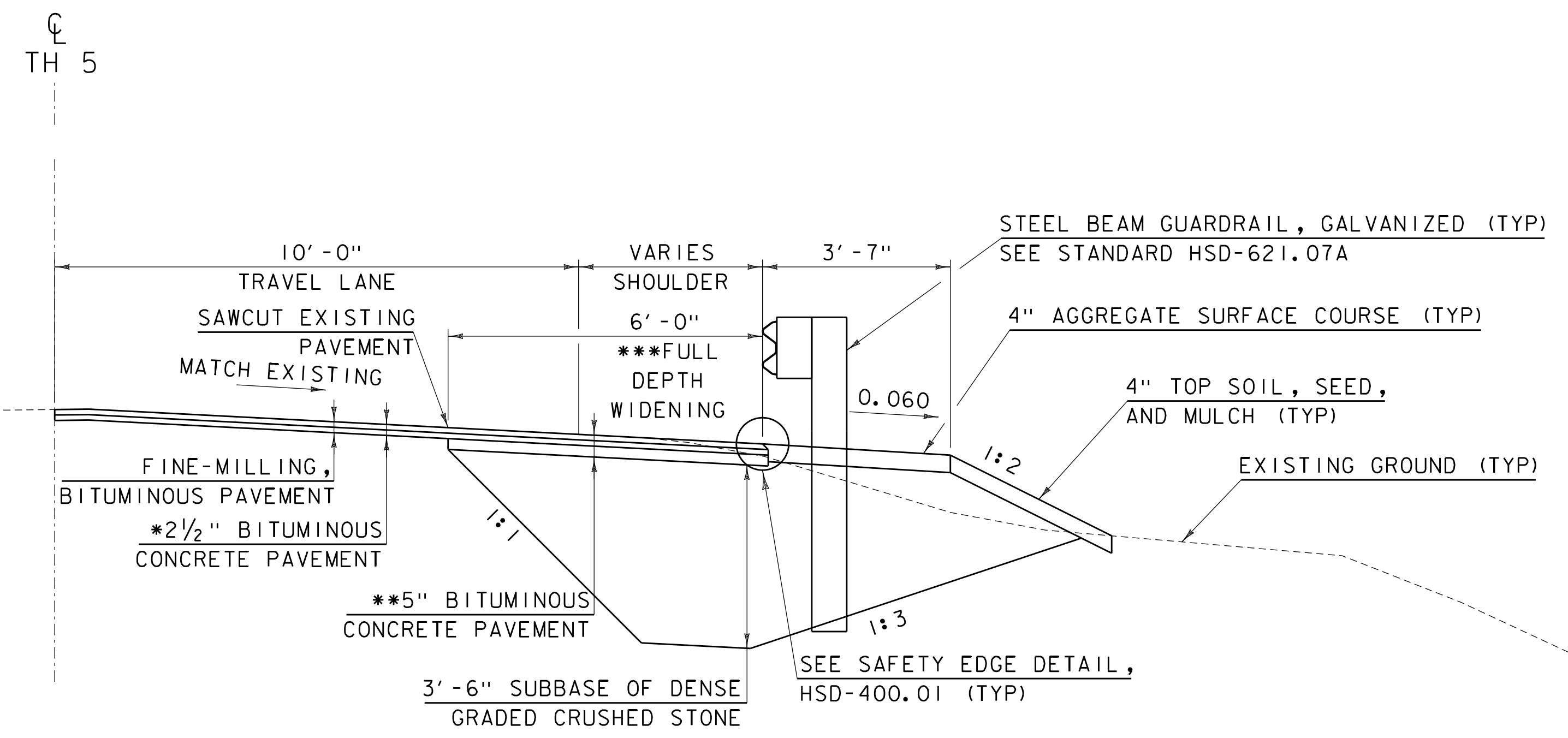
INDEX OF SHEETS						FINAL HYDRAULIC REPORT															
<b>PLAN SHEETS</b>						HYDRAULIC REPORT WILL BE PROVIDED AFTER INPUT RECEIVED FROM VTRANS HYDRAULICS															
1	TITLE SHEET																				
2	PRELIMINARY INFORMATION SHEET																				
3	TYPICAL SECTIONS SHEET																				
4	EARTHWORK SECTIONS SHEET																				
5	LEGEND SHEET																				
6	TIE SHEET																				
7	EXISTING CONDITIONS																				
8	LAYOUT SHEET																				
9	PROFILE SHEET																				
10	TRAFFIC CONTROL SHEET																				
11	UTILITY SHEET																				
12	BORING LAYOUT SHEET																				
13	PLAN AND ELEVATION																				
14 - 16	ROADWAY CROSS SECTION 1-3																				
17 - 18	CHANNEL CROSS SECTIONS SHEET 1-2																				
19	EPSC DETAILS																				
<b>DETAIL SHEETS</b>																					
SD-501.00	CONCRETE DETAILS AND NOTES		5/7/2010																		
SD-601.00	STRUCTURAL STEEL DETAILS AND NOTES		5/7/2010																		
<b>HIGHWAY SAFETY AND DESIGN DETAIL SHEETS</b>																					
400.01	SAFETY EDGE DETAILS		1/5/2018																		
621.01	POST AND BLOCKOUT DETAILS FOR STEEL BEAM GUARDRAIL, GALV.		6/9/2015																		
621.06	MISCELLANEOUS GUARDRAIL DETAILS		2/27/2017																		
621.07A	MIDWEST GUARDRAIL SYSTEM (MGS)		1/4/2021																		
621.07B	W-BEAM GUARDRAIL COMPONENTS		4/17/2019																		
621.07C	MIDWEST GUARDRAIL SYSTEM (MGS) ANCHOR		4/17/2019																		
621.07D	MIDWEST GUARDRAIL SYSTEM (MGS) ANCHOR COMPONENTS		4/17/2019																		
621.07E	MIDWEST GUARDRAIL SYSTEM (MGS) ANCHOR COMPONENTS		4/17/2019																		
<b>STANDARDS LIST</b>																					
A-76	STANDARDS FOR TOWN & DEVELOPMENT ROADS		03-03-2003																		
B-5	SLOPE GRADING, EMBANKMENTS, MUCK		06-01-1994																		
E-15	SILT FENCE		04-07-2020																		
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD		08-08-1995																		
E-193	PAVEMENT MARKING DETAILS		08-18-1995																		
G-1	STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR, TYPICALS)		03-10-2017																		
G-1D	STEEL BEAM GUARDRAIL DETAILS (END TERMINAL, ANCHOR, MEDIUM)		03-10-2017																		
S-352A	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION		08-22-2012																		
S-352B	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION		08-22-2012																		
S-352C	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION		08-22-2012																		
S-352D	GUARDRAIL APPROACH SECTION TO CONCRETE COMBINATION BRIDGE RAILING, TL		02-02-2017																		
S-363	GUARDRAIL APPROACH SECTION TO CONCRETE COMBINATION BRIDGE RAILING, TL		02-02-2017																		
T-1	TRAFFIC CONTROL GENERAL NOTES		04-25-2016																		
T-2	TRAFFIC SIGN GENERAL NOTES		04-07-2020																		
T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING		08-06-2012																		
T-17	TRAFFIC CONTROL MISCELLANEOUS DETAILS		08-06-2012																		
T-28	CONSTRUCTION SIGN DETAILS		08-06-2012																		
T-29	CONSTRUCTION SIGN DETAILS		08-06-2012																		
T-30	CONSTRUCTION SIGN DETAILS		08-06-2012																		
T-31	CONSTRUCTION SIGN DETAILS		08-06-2012																		
T-35	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS		08-06-2012																		
T-36	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS FOR PAVING		08-06-2012																		
T-45	SQUARE TUBE SIGN POST AND ANCHOR		01-02-2013																		
<b>TRAFFIC DATA</b>																					
YEAR	ADT	DHV	% D	% T	ADTT													20 year ESAL for flexible pavement from 2018 to 2038 : N/A			
2018	N/A	N/A	N/A	N/A	N/A	40 year ESAL for flexible pavement from 2018 to 2058 : N/A															
2038	N/A	N/A	N/A	N/A	N/A	Design Speed : N/A mph															
<b>AS BUILT "REBAR" DETAIL</b>																					
LEVEL I		LEVEL II		LEVEL III																	
TYPE:		TYPE:		TYPE:																	
GRADE:		GRADE:		GRADE:																	
<b>LRFR LOAD RATING FACTORS</b>																					
LOADING LEVELS																		TRUCK			
						H-20	HL-93	3S2	6 AXLE	3A STR.	4A STR.	5A SEM									
TONNAGE						N/A	N/A	N/A	N/A	N/A	N/A	N/A									
INVENTORY																					
POSTING																					
OPERATING																					
COMMENTS:						BRIDGE DESIGNED FOR H-10 VEHICLE LOADING AND 0.090 k/sf PEDESTRIAN LOADING.															
<b>DESIGN VALUES</b>																					
1. DESIGN LIVE LOAD																					
2. FUTURE PAVEMENT												dp: --- INCH									
3. DESIGN SPAN												L: 78.14 FT									
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)												Δ: ---									
5. PRESTRESSING STRAND												fy: ---									
6. PRESTRESSED CONCRETE STRENGTH												f'c: ---									
7. PRESTRESSED CONCRETE RELEASE STRENGTH												f'ci: ---									
8. HIGH PERFORMANCE CONCRETE, CLASS PCD												f'c: 4.0 KSI									
9. HIGH PERFORMANCE CONCRETE, CLASS PCS												f'c: 3.5 KSI									
10. CONCRETE HIGH PERFORMANCE, CLASS PSS												f'c: 3.5 KSI									
11. CONCRETE, CLASS C												f'c: 3.0 KSI									
12. REINFORCING STEEL												fy: 60 KSI									
13. STRUCTURAL STEEL AASHTO M270												fy: 50 KSI									
14. NOMINAL BEARING RESISTANCE OF SOIL												qn: --- KSF									
15. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)												φ: ---									
16. NOMINAL BEARING RESISTANCE OF ROCK												qn: --- KSF									
17. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)												φ: ---									
18. PILE RESISTANCE FACTOR												φ: ---									
19. LATERAL PILE DEFLECTION												Δ: ---									
20. BASIC WIND SPEED												V3s: ---									
21. MINIMUM GROUND SNOW LOAD												pg: ---									
22. SEISMIC DATA						PGA: ---						Ss: ---									
												S1: ---									
23. STRUCTURAL TUBE STEEL ASTM A500 GRADE B												Fy: 46 KSI									
24.												---									
25.												---									
26.												---									
PROJECT NAME:						LUDLOW VILLAGE															
PROJECT NUMBER:						B0 1443(52)															
FILE NAME:						z12j638pi.dgn						PLOT DATE: 2/19/2021									
PROJECT LEADER:						G.KOBER						DRAWN BY: D.CASALE									
DESIGNED BY:						D.CASALE						CHECKED BY: G.KOBER									
PRELIMINARY INFORMATION SHEET												SHEET 2 OF 19									



MATERIAL TOLERANCES (IF USED ON PROJECT)	
SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	
SAND BORROWS	+/- 1"



PROPOSED TH 324 SHARED USE PATH TYPICAL SECTION  
SCALE 1/2" = 1'-0"

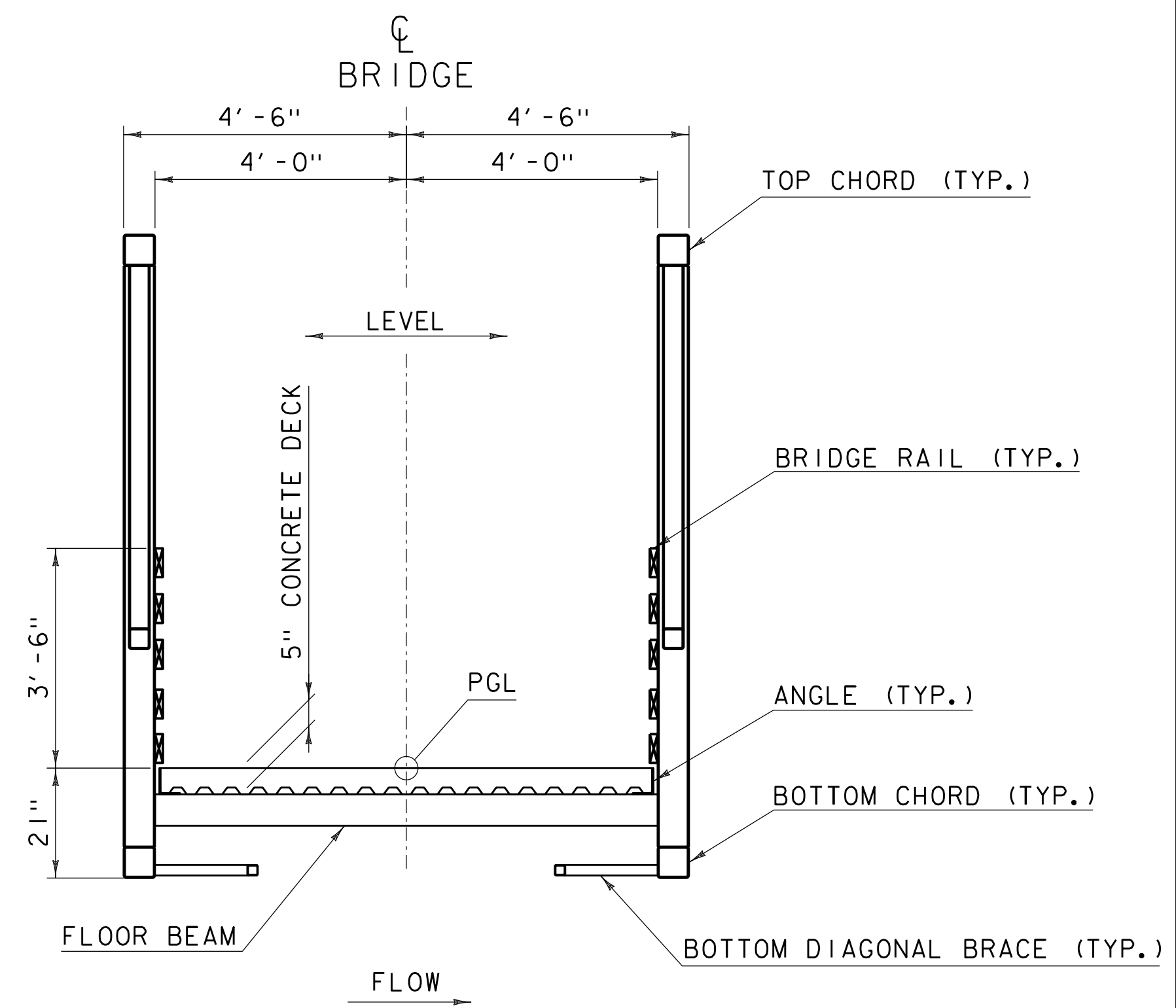


PROPOSED TH 5 WIDENING TYPICAL SECTION  
SCALE 1/2" = 1'-0"

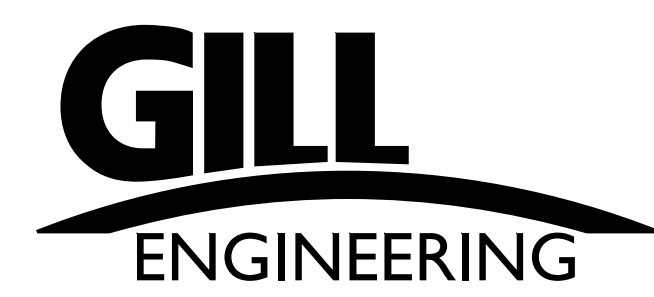
\*2 1/2" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT  
1/4" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IVS (2 LIFTS)

\*\*5" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT  
1/4" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IVS (2 LIFTS)  
2 1/2" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IIS

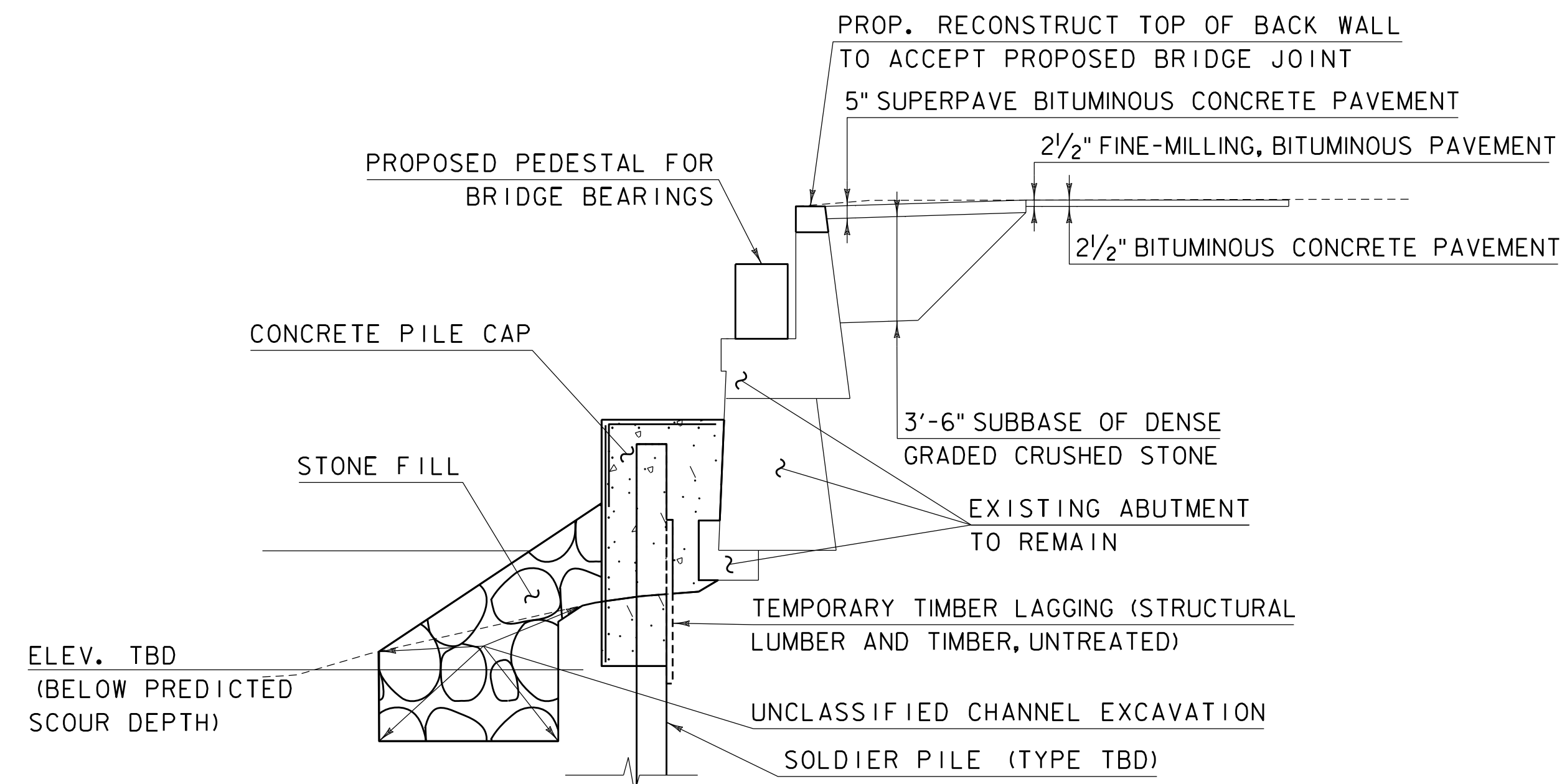
\*\*\*PROPOSED FULL DEPTH WIDENING SHALL INCLUDE AREAS NECESSARY FOR EXCAVATION AND CONSTRUCTION OF MOMENT SLAB RAIL (SEE DETAIL ON EARTHWORK SECTIONS SHEET)



PEDESTRIAN BRIDGE REPLACEMENT TYPICAL SECTION  
SCALE 1/2" = 1'-0"



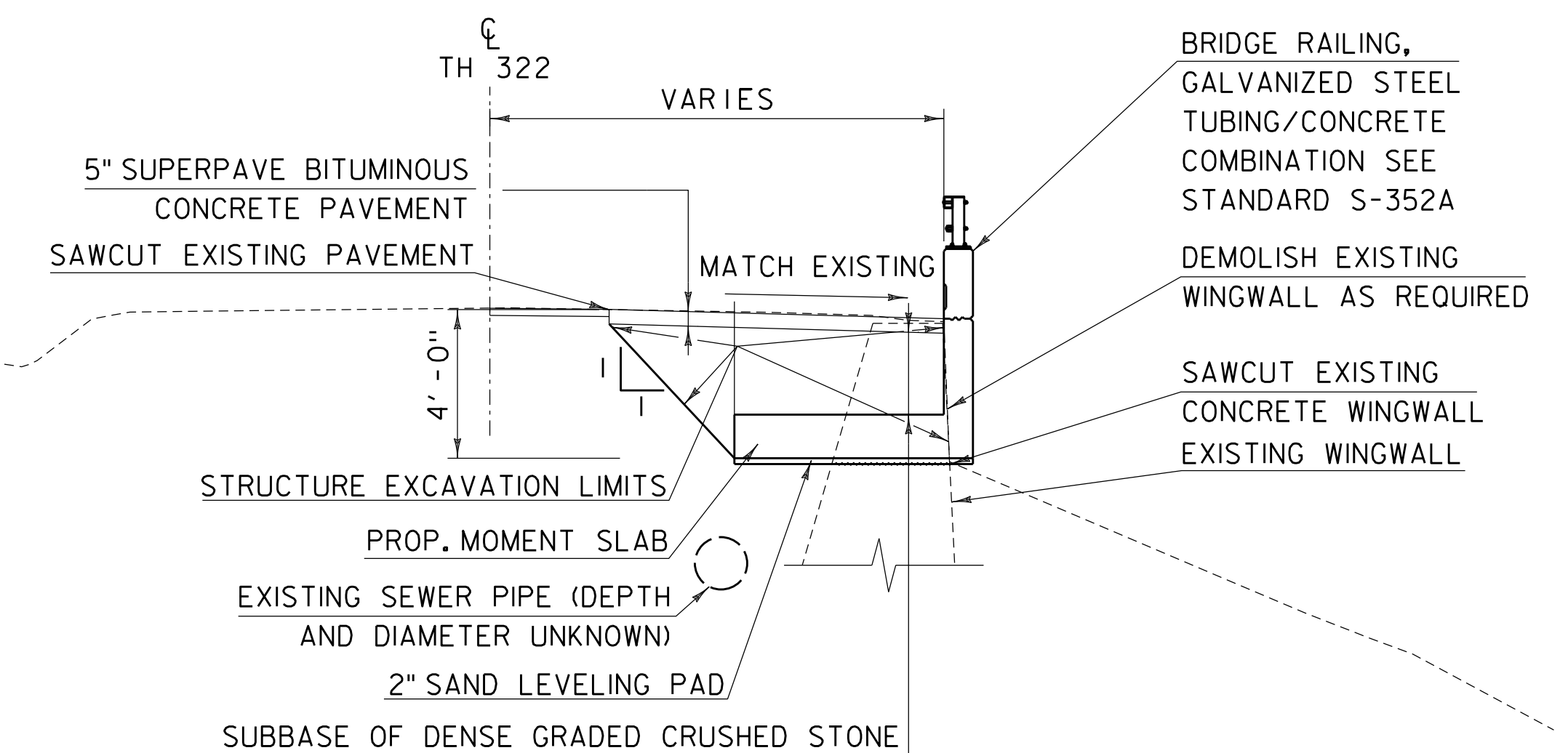
PROJECT NAME: LUDLOW VILLAGE	PLOT DATE: 2/19/2021
PROJECT NUMBER: BO 1443(52)	DRAWN BY: D.CASALE
FILE NAME: z12j638typ.dgn	DESIGNED BY: A.LEENHOUTS
PROJECT LEADER: G.KOBER	CHECKED BY: -----
TYPICAL SECTIONS SHEET	SHEET 3 OF 19



**NOTE:**  
UNDERPINNING TO BE INSTALLED PRIOR TO  
REMOVAL OF EXISTING BRIDGE.

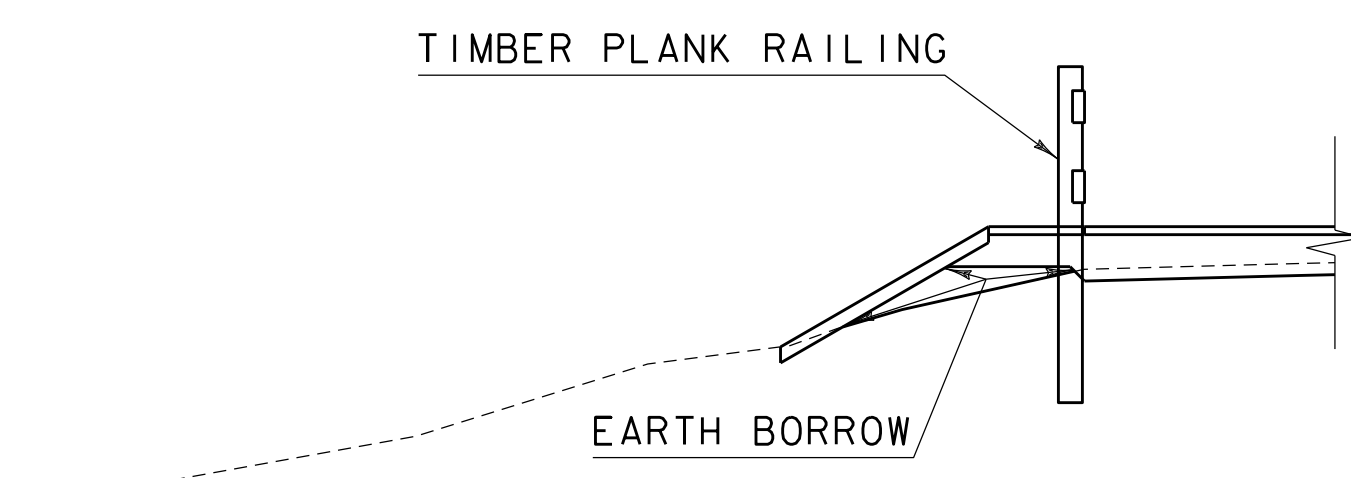
**TYPICAL SOUTH ABUTMENT SCOUR/UNDERPINNING REPAIR**

NOT TO SCALE



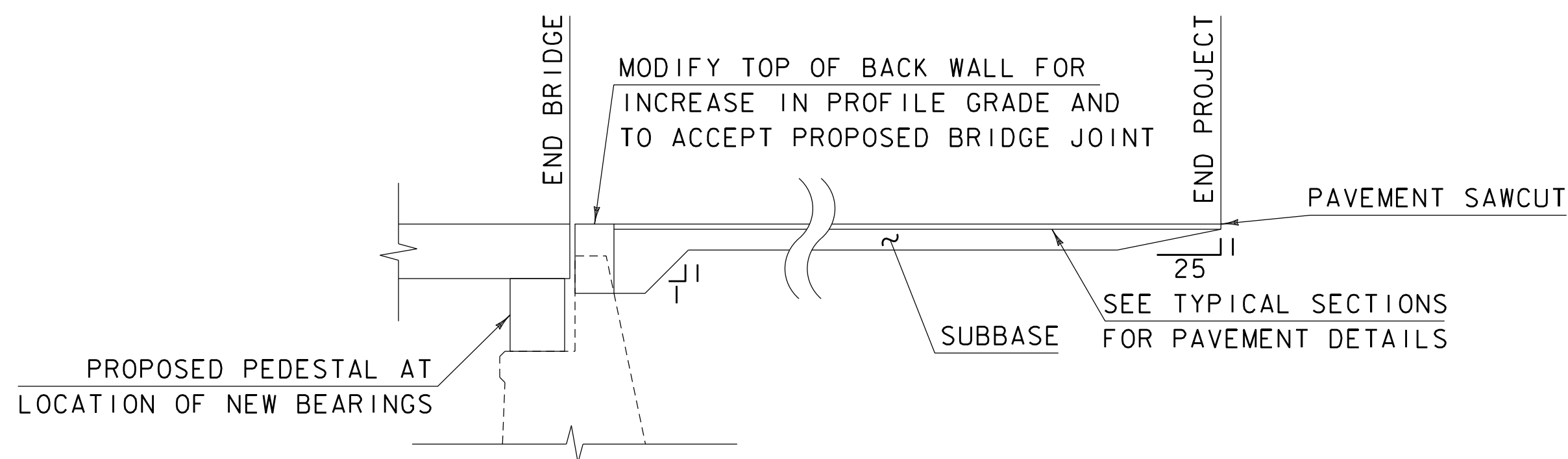
**MOMENT SLAB RAIL AT SOUTHWEST WINGWALL**

SCALE: 1/4" = 1'-0"



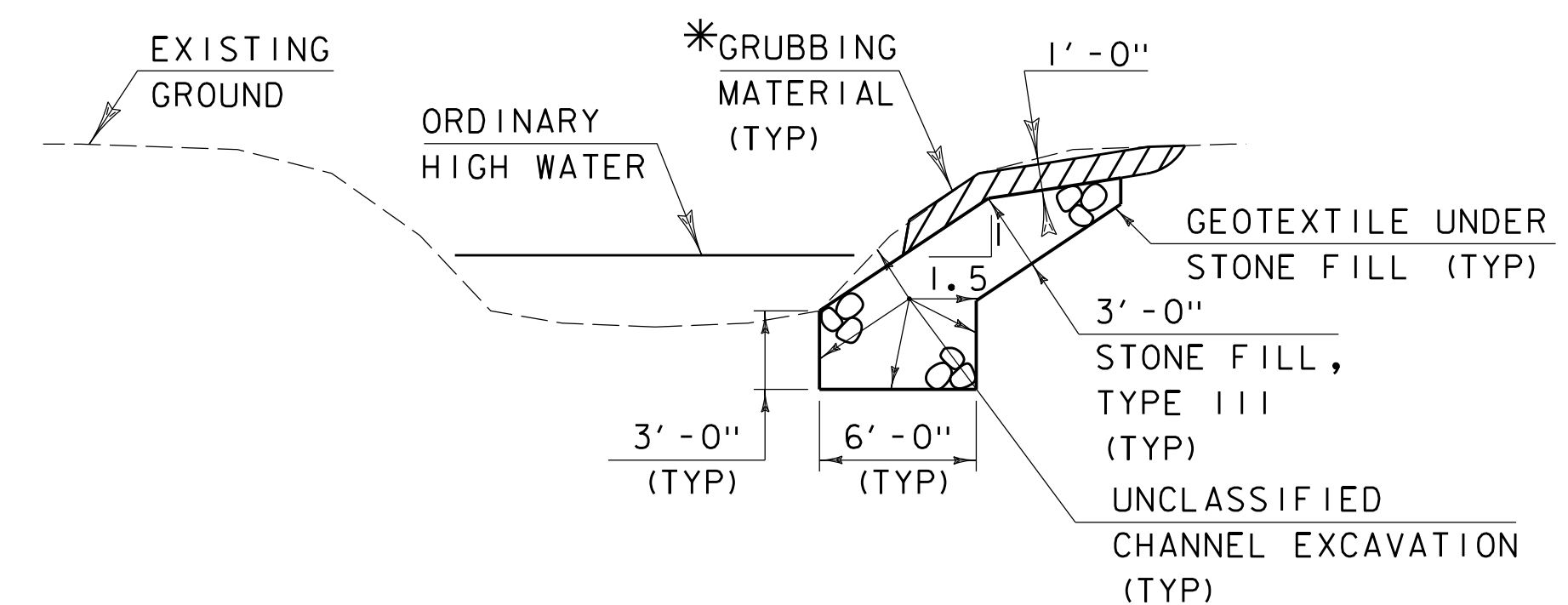
**TIMBER PLANK RAILING**

NOT TO SCALE



**MATERIAL TRANSITION (NORTH ABUTMENT)**

NOT TO SCALE

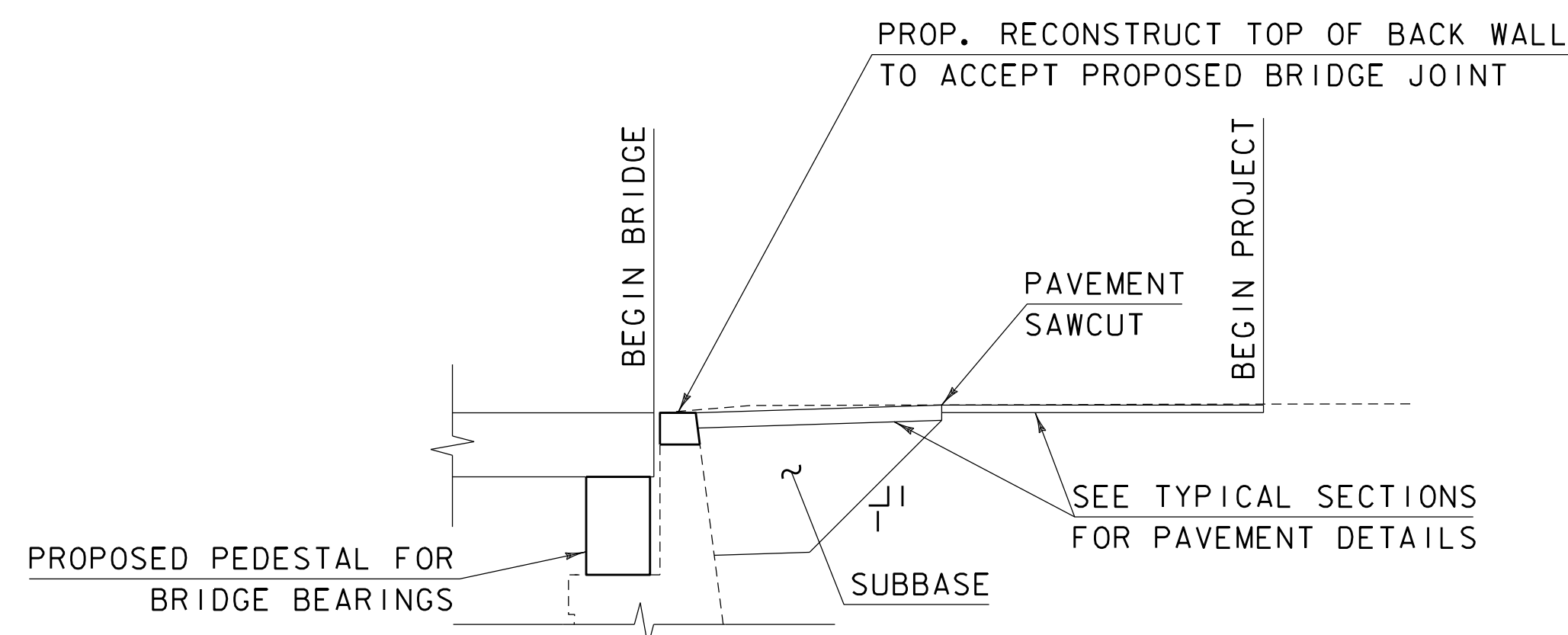


**TYPICAL CHANNEL SECTION**

(NOT TO SCALE)

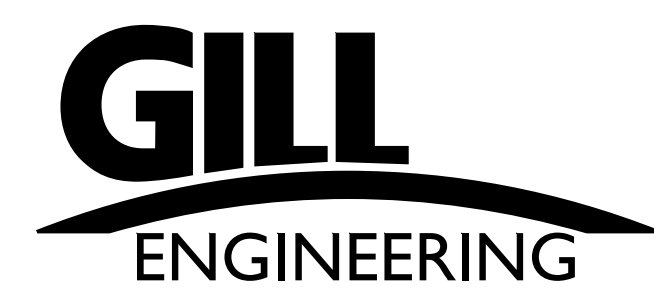
**\*NOTES**

- 1) GRUBBING MATERIAL SHALL BE PLACED UNDERNEATH STRUCTURES WHERE THERE IS MORE THAN 6 FEET VERTICALLY FROM ORDINARY HIGH WATER (OHW) TO THE BOTTOM OF SUPERSTRUCTURE AND MORE THAN 6 FEET HORIZONTALLY FROM OHW LINE TO FRONT FACE OF ABUTMENT. THIS MATERIAL SHALL START JUST ABOVE THE OHW ELEVATION AND TERMINATE 3 FEET HORIZONTALLY FROM THE FRONT FACE OF THE ABUTMENT. THIS MATERIAL SHALL NOT BE PLACED UNDERNEATH DOWNSPOUTS. SEE THE CHANNEL SECTIONS FOR ADDITIONAL DETAILING.
- 2) WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.



**MATERIAL TRANSITION (SOUTH ABUTMENT)**

NOT TO SCALE



PROJECT NAME:	LUDLOW VILLAGE
PROJECT NUMBER:	BO 1443(52)
FILE NAME:	z12j638ear thwork.dgn
PROJECT LEADER:	G.KOBER
DESIGNED BY:	A.LEENHOUTS
EARTHWORK SECTIONS SHEET	
PLOT DATE:	2/19/2021
DRAWN BY:	D.CASALE
CHECKED BY:	-----
SHEET	4 OF 19

**GENERAL INFORMATION**

**SYMBOLGY LEGEND NOTE**

THE SYMBOLGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLGY. THE SYMBOLGY 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. SYMBOLGY 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
HWY	HIGHWAY EASEMENT
I&M	INSTALL & MAINTAIN EASEMENT
LAND	LANDSCAPE EASEMENT
R&RES	REMOVE & RESET
R&REP	REMOVE & REPLACE
R.T.& I.	RIGHT, TITLE, AND INTEREST
SR	SLOPE RIGHT
UE	UTILITY EASEMENT
(P)	PERMANENT EASEMENT
(T)	TEMPORARY EASEMENT
■	BNDNS BOUND SET
□	BNDNS BOUND TO BE SET
⊙	IPNF IRON PIN FOUND
●	IPNS IRON PIN TO BE SET
⊠	CALC EXISTING ROW POINT
○	PROW PROPOSED ROW POINT
[LENGTH]	LENGTH CARRIED ON NEXT SHEET

**COMMON TOPOGRAPHIC POINT SYMBOLS**

POINT CODE	DESCRIPTION
⊕	APL BOUND APPARENT LOCATION
□	BM BENCHMARK
⊖	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 VALVE
⊕	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 RADIUS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE
CB	CHORD BEARING

**UTILITY SYMBOLGY**

**UNDERGROUND UTILITIES**

— UGU —	UTILITY (GENERIC-UNKNOWN)
— UT —	TELEPHONE
— UE —	ELECTRIC
— UC —	CABLE (TV)
— UEC —	ELECTRIC+CABLE
— UET —	ELECTRIC+TELEPHONE
— UCT —	CABLE+TELEPHONE
— UECT —	ELECTRIC+CABLE+TELEPHONE
— G —	GAS LINE
— W —	WATER LINE
— S —	SANITARY SEWER (SEPTIC)

**ABOVE GROUND UTILITIES (AERIAL)**

— AGU —	UTILITY (GENERIC-UNKNOWN)
— T —	TELEPHONE
— E —	ELECTRIC
— C —	CABLE (TV)
— EC —	ELECTRIC+CABLE
— ET —	ELECTRIC+TELEPHONE
— AER E&T —	ELECTRIC+TELEPHONE
— CT —	CABLE+TELEPHONE
— ECT —	ELECTRIC+CABLE+TELEPHONE
—	UTILITY POLE GUY WIRE

**PROJECT CONSTRUCTION SYMBOLGY**

**PROJECT DESIGN & LAYOUT SYMBOLGY**

— — — CZ — — —	CLEAR ZONE
—————	PLAN LAYOUT MATCHLINE

**PROJECT CONSTRUCTION FEATURES**

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

**CONVENTIONAL BOUNDARY SYMBOLGY**

**BOUNDARY LINES**

—————	TOWN BOUNDARY LINE
—————	COUNTY BOUNDARY 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
— P — P —	PROPERTY LINE (P/L)
— L — L —	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 SYMBOLGY**

**EPSC MEASURES**

ONNOONNOONNO	FILTER CURTAIN
— — — — —	SILT FENCE
— X — X — X — X —	SILT FENCE WOVEN WIRE
— — — — —	CHECK DAM
▬	DISTURBED AREAS REQUIRING RE-VEGETATION
▨	EROSION MATTING

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLGY

**ENVIRONMENTAL RESOURCES**

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

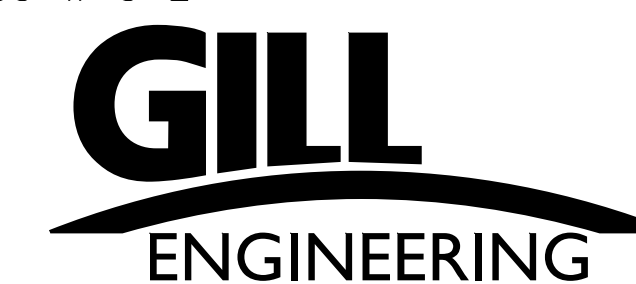
**ARCHEOLOGICAL & HISTORIC**

— ARCH —	ARCHEOLOGICAL BOUNDARY
— HISTORIC DIST —	HISTORIC DISTRICT BOUNDARY
— HISTORIC —	HISTORIC AREA
Ⓜ	HISTORIC STRUCTURE

**CONVENTIONAL TOPOGRAPHIC SYMBOLGY**

**EXISTING FEATURES**

-----	ROAD EDGE PAVEMENT
-----	ROAD EDGE GRAVEL
-----	DRIVEWAY EDGE
-----	DITCH
-----	FOUNDATION
— 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: LUDLOW VILLAGE

PROJECT NUMBER: BO 1443(53)

FILE NAME: Z12J638legend.dgn

PROJECT LEADER: G.KOBER

DESIGNED BY: VTRANS

LEGEND SHEET

PLOT DATE: 2/19/2021

DRAWN BY: VTRANS

CHECKED BY: VTRANS

SHEET 5 OF 19

NETWORK CONTROL

HVCTRL #1  
 BRIGADE AZ MK  
 NORTH = 326083.6000  
 EAST = 1591965.7300  
 ELEV. = 971.8700

THE STATION IS LOCATED ABOUT 6.4 MI (10.3 KM) WEST-NORTHWEST OF BALTIMORE, 3.8 MI (6.1 KM) WEST-NORTHWEST OF CAVENDISH AND 1.0 MI (1.6KM) EAST OF LUDLOW. TO REACH FROM THE INTERSECTION OF VT ROUTE 100 SOUTH (ANDOVER STREET) AND VT ROUTE 103 EAST (MAIN STREET), GO EAST ALONG MAIN STREET FOR 1.0 MI (1.6 KM) TO THE SITE OF THE MARK ON THE RIGHT, OPPOSITE THE LAWN ON THE NORTHWEST SIDE OF SAM'S STEAKHOUSE. THE MARK IS SET 3 CM (1 INCH) BELOW GROUND SURFACE IN THE TOP OF A 30 CM (12 INCHES) DIAMETER CONCRETE MONUMENT ON THE NORTH EDGE OF A SMALL FIELD BETWEEN THE TIMBER INN MOTEL AND THE BROOKHAVEN RESORT CONDOMINIUMS. IT IS 7.1 M (23.3 FT) SOUTHWEST OF AND ABOUT 0.3 M (1.0 FT) LOWER THAN THE CENTERLINE OF MAIN STREET, 21.5 M (70.5 FT) SOUTHWEST OF POLE NO 7/24/1 WITH GUY, 14.9 M (48.9 FT) NORTHWEST OF POLE NO 7/25/2, 14.1 M (46.3 FT) EAST OF A 4 CM (2 INCHES) DIAMETER IRON PIPE WHICH PROJECTS 0.5 M (1.6 FT) ABOVE GROUND SURFACE AND 0.3 M (1.0 FT) NORTHEAST OF A FIBERGLASS WITNESS POST.

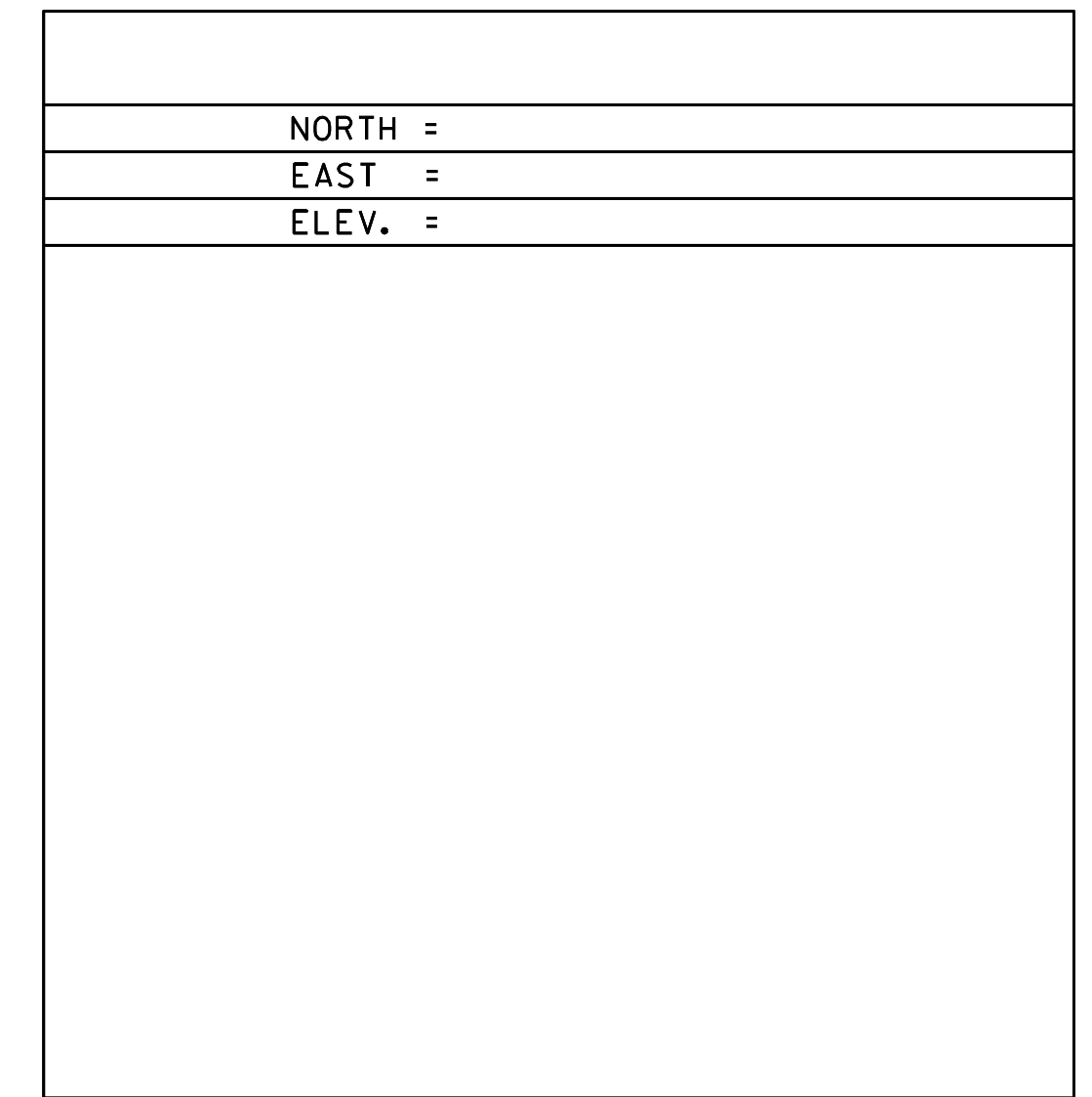
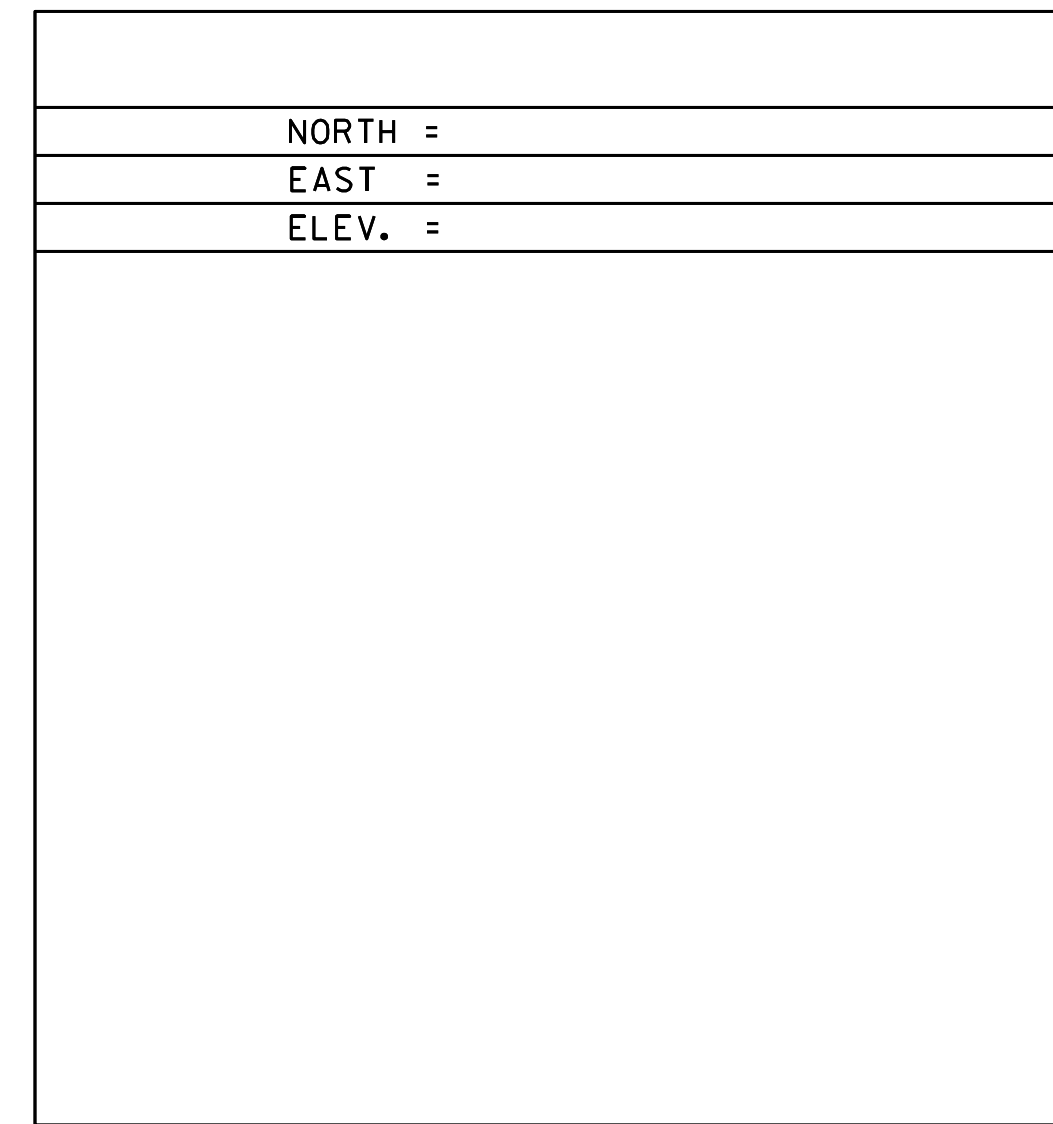
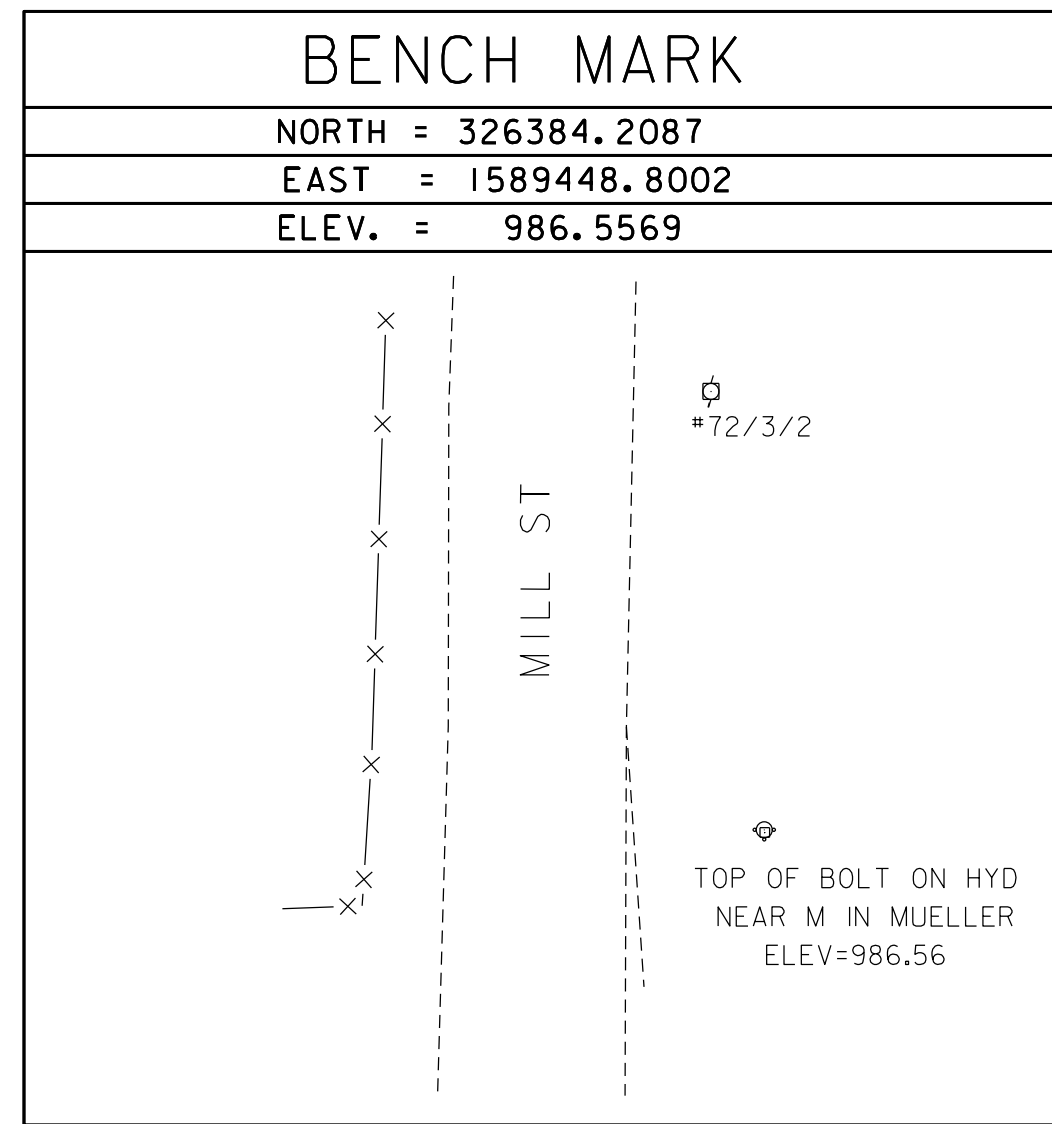
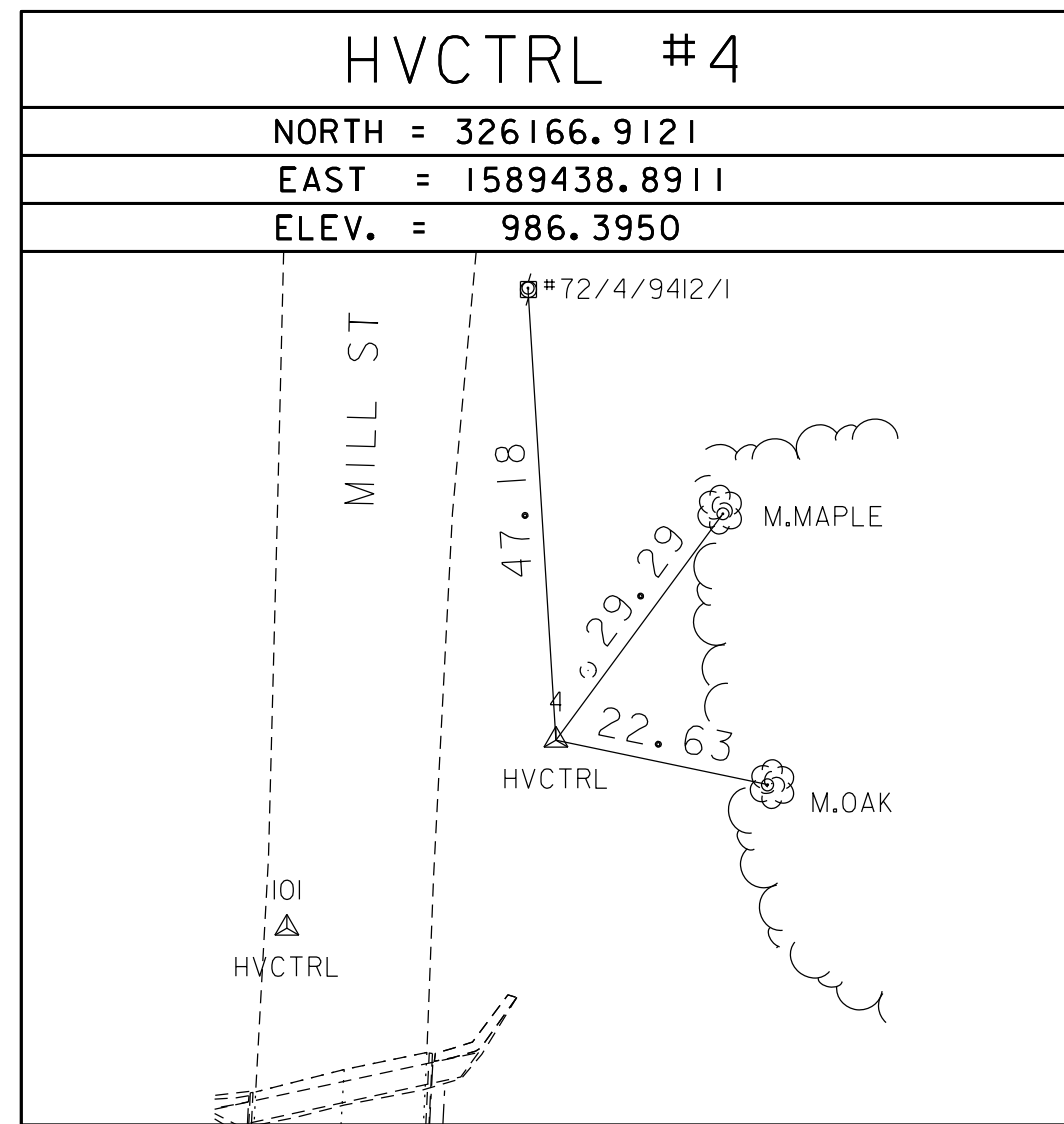
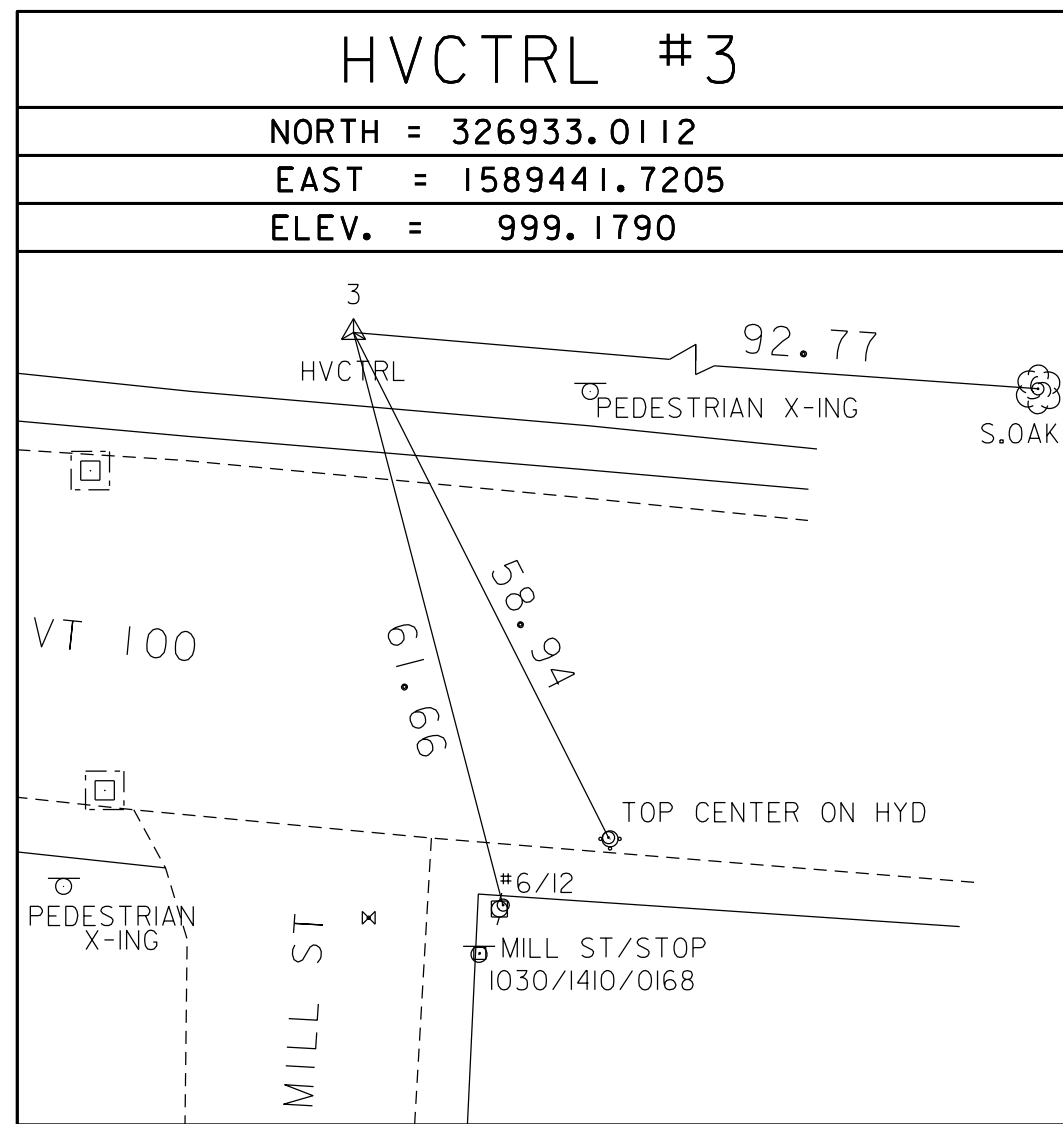
HVCTRL #2  
 BRIGADE  
 NORTH = 326830.1000  
 EAST = 1590300.1300  
 ELEV. = 990.0200

BRIGADE  
 GENERAL LOCATION, LUDLOW, VT.  
 TO REACH FROM THE INTERSECTION OF VT ROUTE 100 SOUTH (ANDOVER STREET) AND VT ROUTE 103 EAST (MAIN STREET), GO EAST ALONG MAIN STREET FOR 0.7 MI (1.13 KM) TO THE SITE OF THE MARK ON THE LEFT.

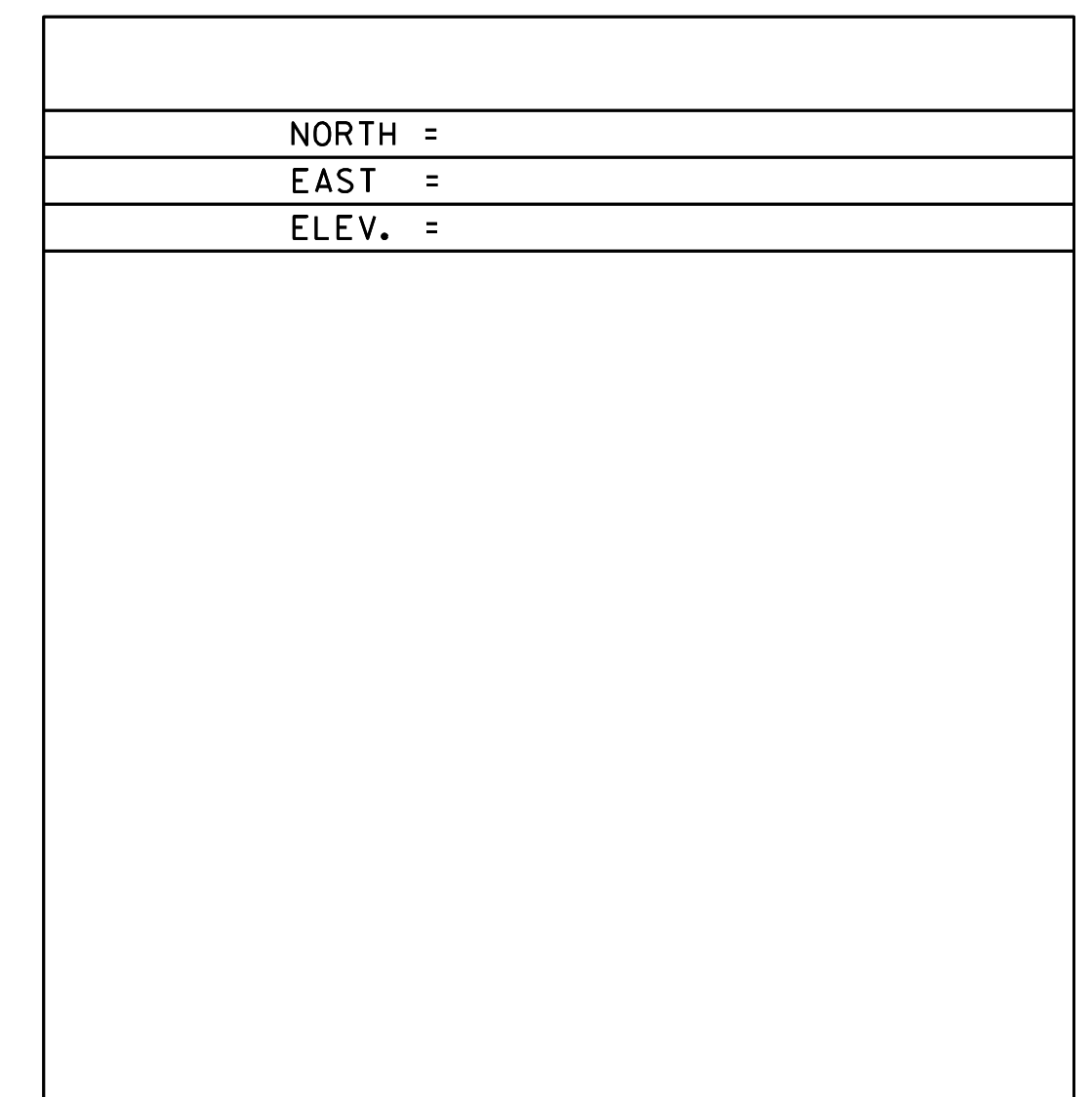
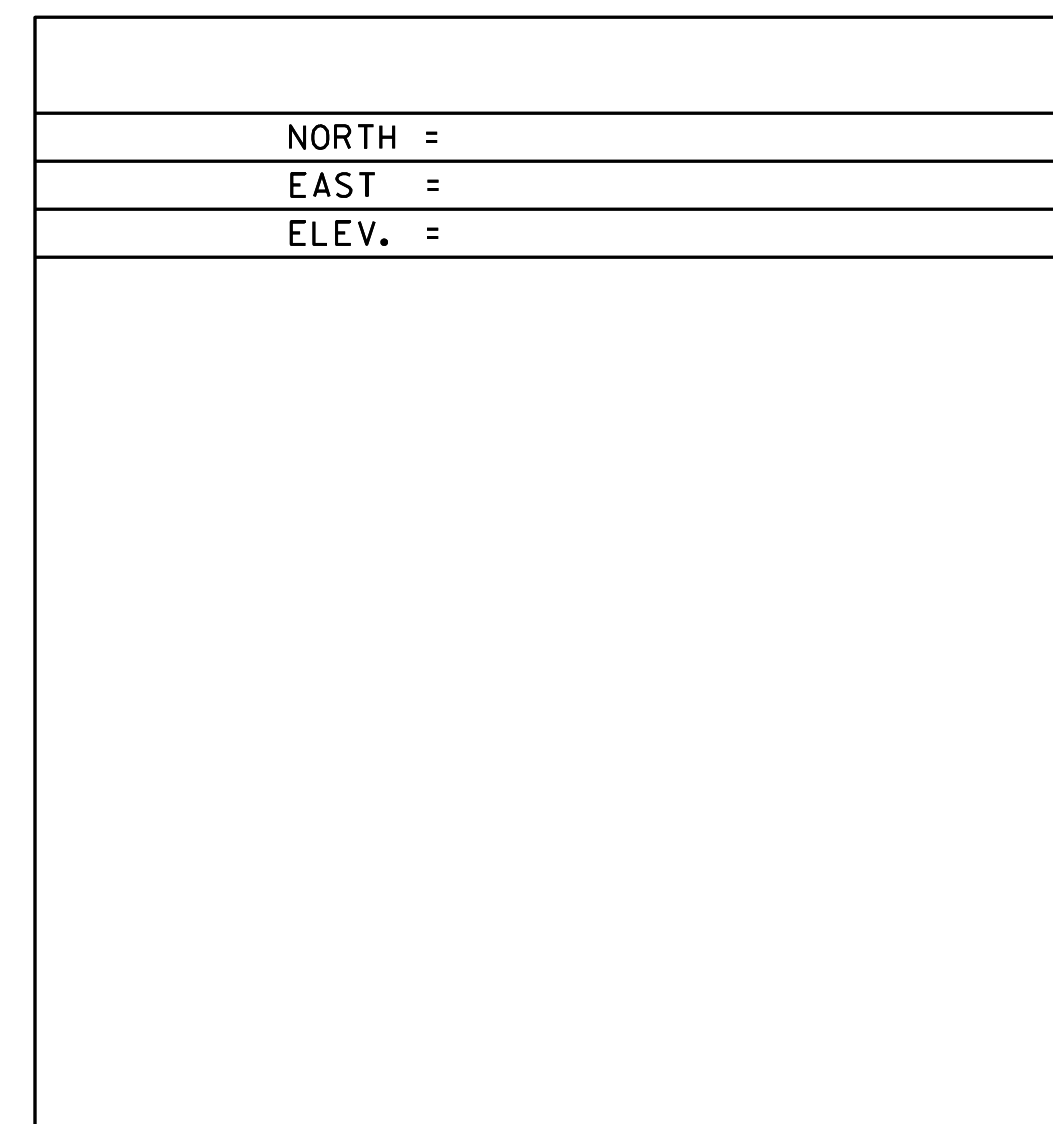
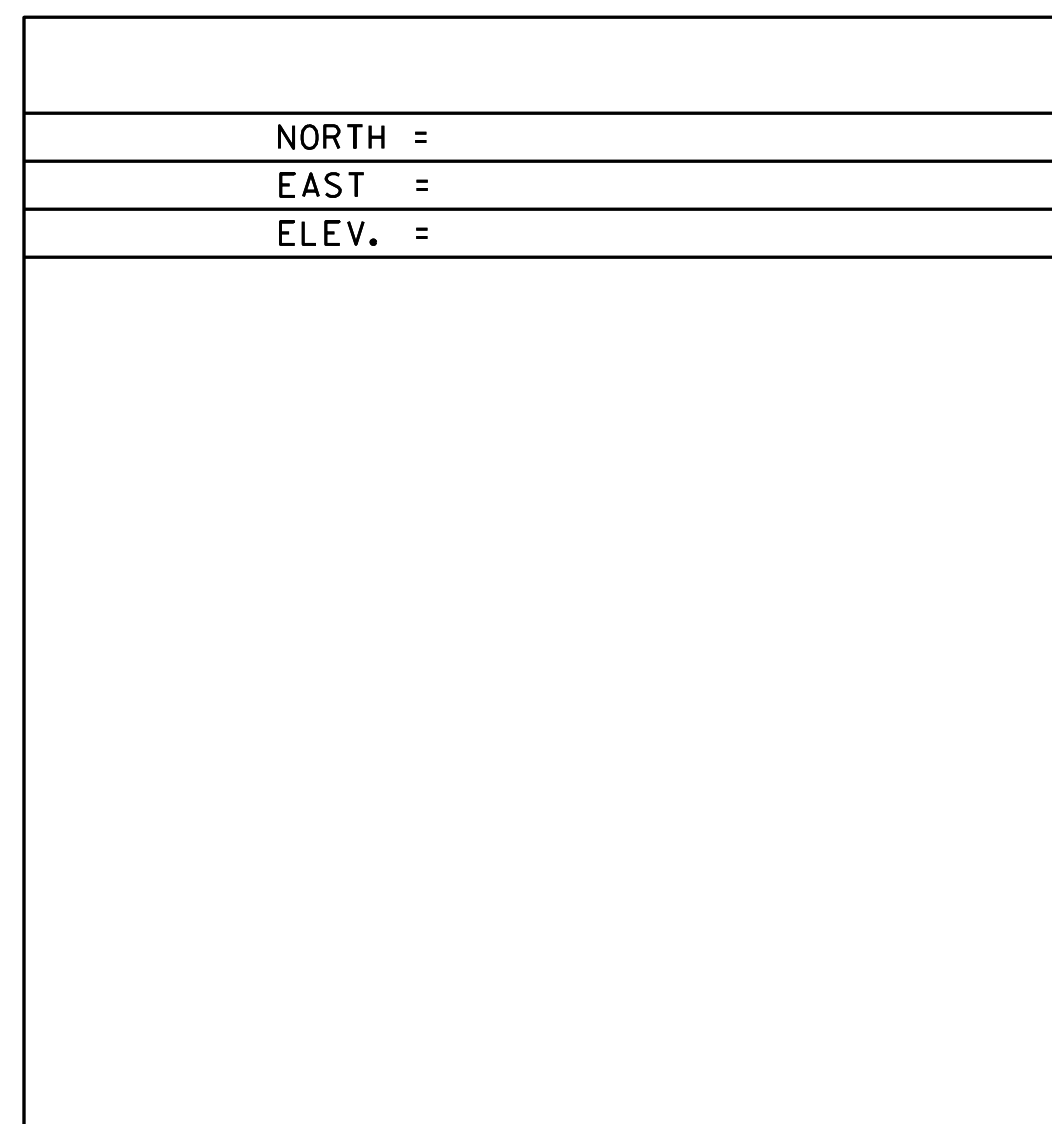
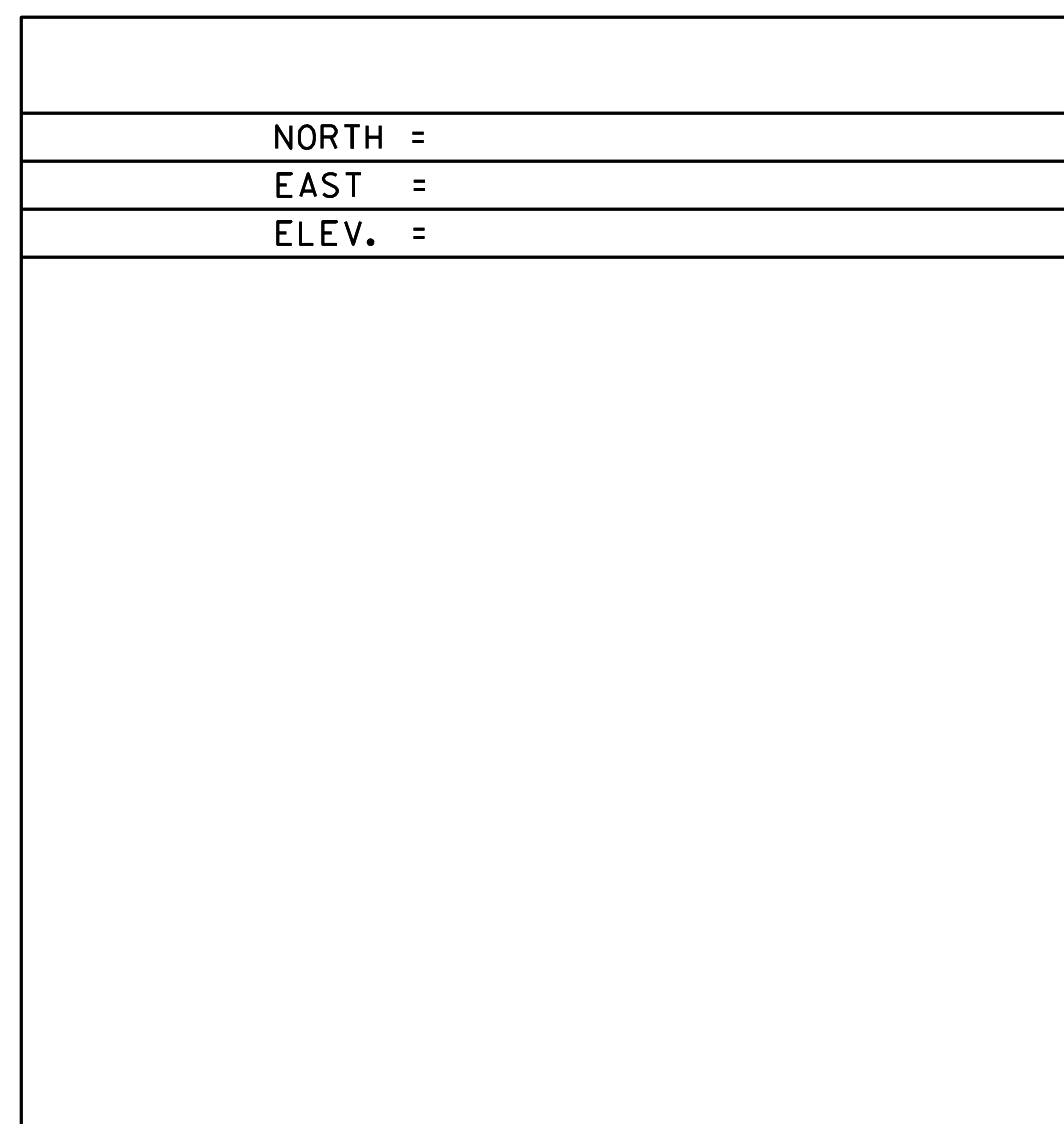
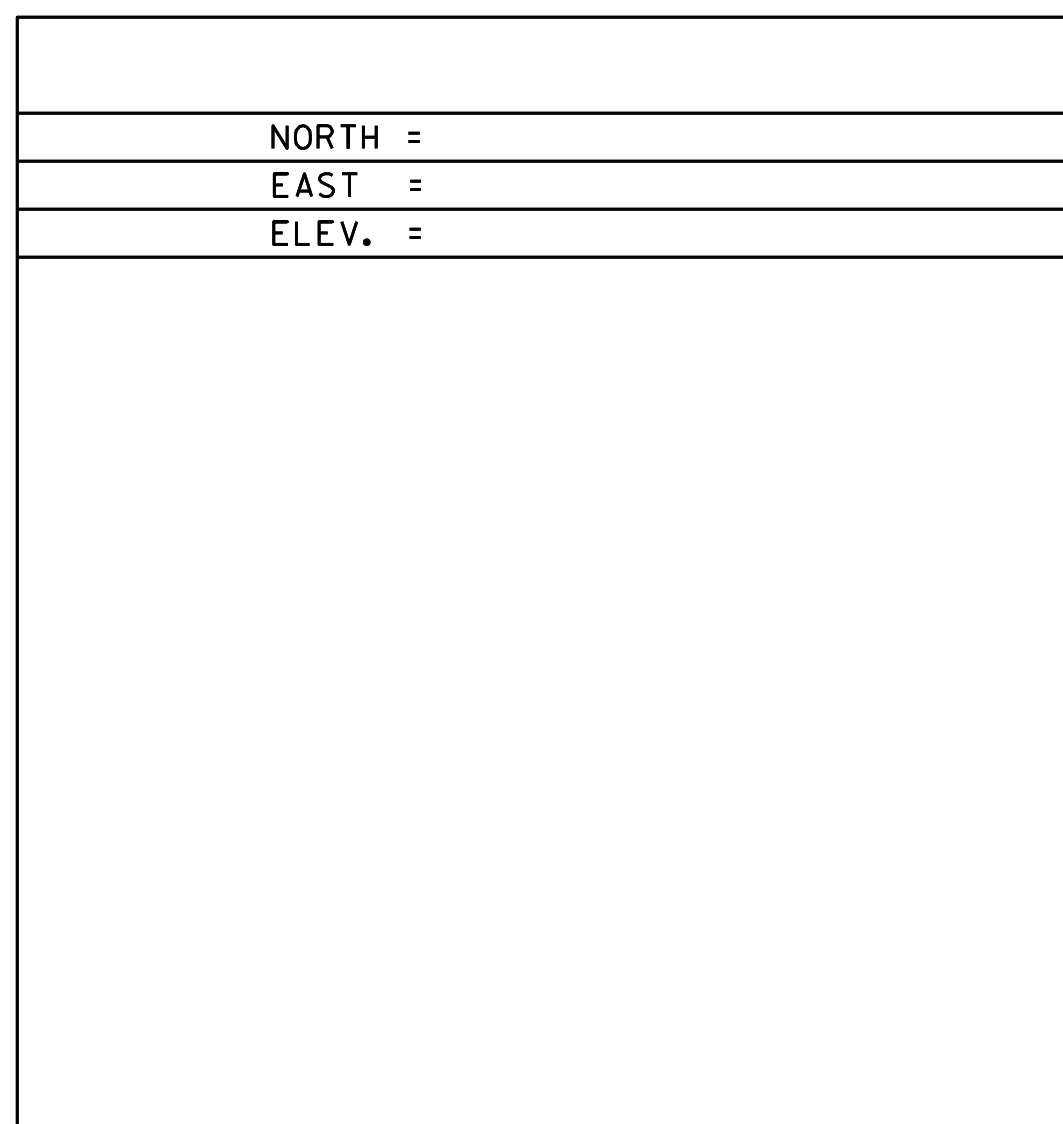
THE MARK IS A CHISELED CROSS CUT IN THE TOP OF THE WEST SIDE OF THE RIM FOR A 60 CM (24 INCH) DIAMETER MANHOLE, IN THE CONCRETE SIDEWALK SOUTHWEST OF BLACK RIVER HIGH SCHOOL.

IT IS 5.7 M (18.7 FT) NORTHEAST OF AND ABOUT 0.2 M (0.7 FT) HIGHER THAN THE CENTERLINE OF MAIN STREET, 0.7 M (2.3 FT) NORTHEAST OF THE SOUTHWEST EDGE OF THE SIDEWALK CURB, 9.1 M (29.9 FT) SOUTHWEST OF POLE NO 9S/2300/185 WITH GUY, 15.9 M (52.2 FT) SOUTH OF THE SOUTHWEST CORNER OF A BRICK PLANTER WITH MARBLE BLACK RIVER HIGH SCHOOL SIGN, 36.8 M (120.7 FT) WEST NORTHWEST OF THE CENTERLINE OF THE SCHOOL EXIT DRIVE, 49.6 M (162.7 FT) EAST OF THE CENTERLINE OF THE SCHOOL ENTRANCE DRIVE, AND 30.4 M (99.7 FT) WEST OF A 60 CM (24 INCH) MAPLE.

LOCAL CONTROL



LOCAL CONTROL



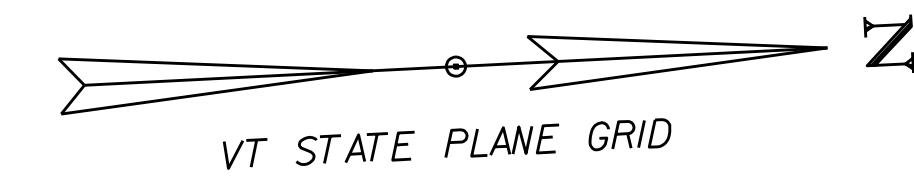
DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAD83(96)
ADJUSTMENT	COMPASS

PROJECT NAME:	LUDLOW	PLOT DATE:	2/19/2021
PROJECT NUMBER:	BO 1443 (52)	DRAWN BY:	H. MCGOWAN
FILE NAME:	X12J638T1.DGN	CHECKED BY:	G. HITCHCOCK
PROJECT LEADER:	J. FITCH	TIE SHEET	SHEET 6 OF 19
DESIGNED BY:	VTRANS		



SOIL CLASSIFICATION:  
URBAN  
LAND-COLTON-CROGHAN  
COMPLEX,  
0-8% SLOPES

SOIL  
CLASSIFICATION:  
WATER



SOIL CLASSIFICATION:  
URBAN  
LAND-COLTON-CROGHAN  
COMPLEX,  
0-8% SLOPES

SOIL CLASSIFICATION:  
MARLOW FINE SANDY  
LOAM,  
35-60% SLOPES, VERY  
STONY

**STATE OF  
VERMONT**

**DOLAN, WILLIAM C.  
& FISH, BRETT E.**

**KELLY, STEVEN J.  
& DIANE M.**

**CRES MANAGEMENT LLC**

**N/F  
REILLY, LYNN D.**

**N/F  
COUCH, ALAN  
& KATHERINE**

**FRANKE,  
RICHARD A.**

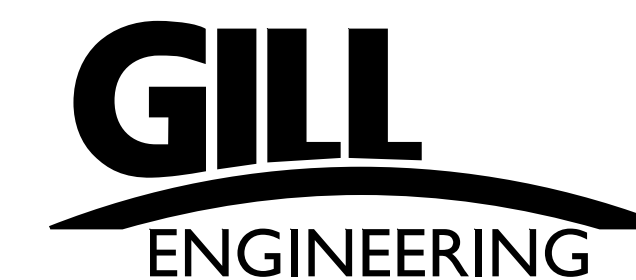
**CRES MANAGEMENT LLC**

**EXISTING CONDITIONS**

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

GENERAL NOTE: THE CONTRACTOR SHALL PROVIDE A SITE-SPECIFIC EROSION PREVENTION AND SEDIMENT CONTROL PLAN IN ACCORDANCE WITH SECTION 653 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. ESTIMATED QUANTITIES FOR EPSC WORK HAVE BEEN INCLUDED IN THE CONTRACT FOR BIDDING PURPOSES. IF THE CONTRACTOR'S EPSC PLAN REQUIRES ITEMS OF WORK THAT ARE NOT INCLUDED IN THE PLANS IT SHALL BE PAID FOR AS PART OF ITEM 653.03 MAINTENANCE OF EPSC PLAN.

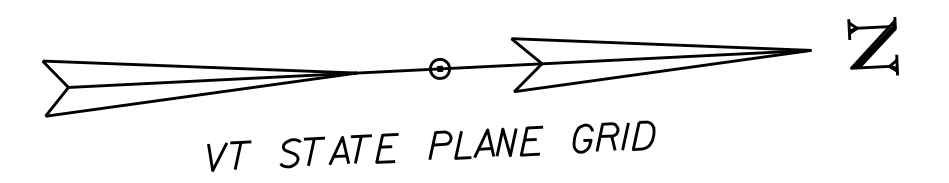
EXISTING BRIDGE INFO  
78' SINGLE SPAN  
STEEL PONY TRUSS  
BUILT 1929, CLOSED 2007



PROJECT NAME: LUDLOW VILLAGE  
PROJECT NUMBER: BO 1443(52)

FILE NAME: z12J638bdr\_ero.dgn  
PROJECT LEADER: G.KOBER  
DESIGNED BY: S.CARPENTER  
EXISTING CONDITIONS

PLOT DATE: 2/19/2021  
DRAWN BY: D.CASALE  
CHECKED BY: -----  
SHEET 7 OF 19



STEEL BEAM GUARDRAIL, GALVANIZED  
STA. 4+53.2 TO STA. 4+66.0 RT

TIMBER PLANK RAILING  
STA. 101+38.9 TO STA. 101+65.2 LT  
STA. 101+40.4 TO STA. 101+67.7 RT

ANCHOR FOR STEEL BEAM RAIL  
STA. 4+53.2 RT

BOLLARD  
STA. 100+61.8 CL (REMOVABLE)  
STA. 101+69.0 LT  
STA. 101+69.0 CL (REMOVABLE)  
STA. 101+69.0 RT

GUARDRAIL APPROACH SECTION TO CONCRETE  
BRIDGE RAILING, TL-3  
STA. 3+86.3 TO STA. 3+96.1 RT  
STA. 4+34.6 TO STA. 4+53.2 RT

DETECTABLE WARNING SURFACE  
STA. 100+61.8  
STA. 102+03.0

AGGREGATE SURFACE COURSE  
STA. 4+34.6 TO STA. 4+91.0 RT  
STA. 101+39.3 TO STA. 102+03.0 LT  
STA. 101+41.8 TO STA. 102+03.0 RT

DURABLE 6 INCH YELLOW LINE, THERMOPLASTIC  
STA. 3+00.0 TO STA. 5+00.0 CL (DOUBLE CENTER LINE)

DURABLE 6 INCH WHITE LINE, THERMOPLASTIC  
STA. 3+00.0 TO STA. 5+00.0 RT (SOLID EDGE LINE)

CURVE (1)  
DELTA = 29° 39' 59"  
D = 10° 36' 37"  
R = 540.00'  
T = 143.01'  
L = 279.60'  
E = 18.62'

GUARDRAIL APPROACH SECTION TO  
BRIDGE CONCRETE BRIDGE RAILING,  
TL-3 WITH SYMMETRIC THRIE BEAM  
TO W-BEAM TRANSITION SECTION  
SAWCUT EXISTING PAVEMENT

FULL DEPTH PAVEMENT BOX

STA 100+46.48 =  
STA 04+07.02

BEGIN PROJECT  
STA 100+46.48

BEGIN BRIDGE  
STA 100+60.68

SAWCUT EXISTING PAVEMENT

PROPOSED END POST

PROPOSED MILL & PAVE

GUARDRAIL DETAILS TO BE DETERMINED  
FOR FINAL SUBMISSION

PC  
STA 3+59.20

PROPOSED PAVEMENT MARKINGS

TEMPORARY WATER CONTROL

STA 101+01.29 =  
CHAN 51+95.07  
Δ = 90° RT

BRIDGE 57

END BRIDGE  
STA 101+39.32

CLEARING FOR CRANE OPERATION  
(APPROXIMATE 50' RADIUS)

BITUMINOUS CONCRETE PAVEMENT,  
SMALL QUANTITY

END PROJECT  
STA 102+03

SCOUR  
REPAIR

**ROAD  
CLOSED**  
R11-2

SAWCUT EXISTING PAVEMENT

TEMPORARY CONSTRUCTION LIMITS

PERMANENT CONSTRUCTION LIMITS



W14-1 (TO BE PLACED AT MEADOW STREET)

TH-324  
(MILL ST.)  
TO MAIN ST.

EXISTING TOWN R.O.W.

BENCHMARK  
TOP OF BOLT  
NEAR M IN MUELLER  
ELEV. = 986.56'

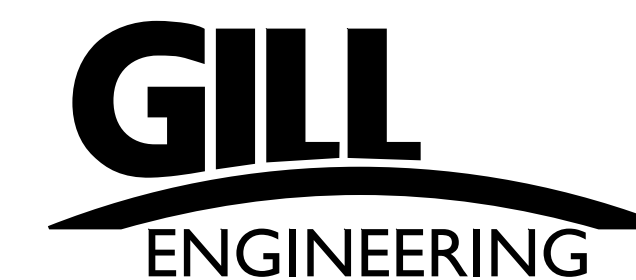
**LEGEND**

- = BOLLARD
- = REMOVABLE BOLLARD

**LAYOUT**

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

EXISTING BRIDGE INFO  
78' SINGLE SPAN  
STEEL PONY TRUSS  
BUILT 1929, CLOSED 2007

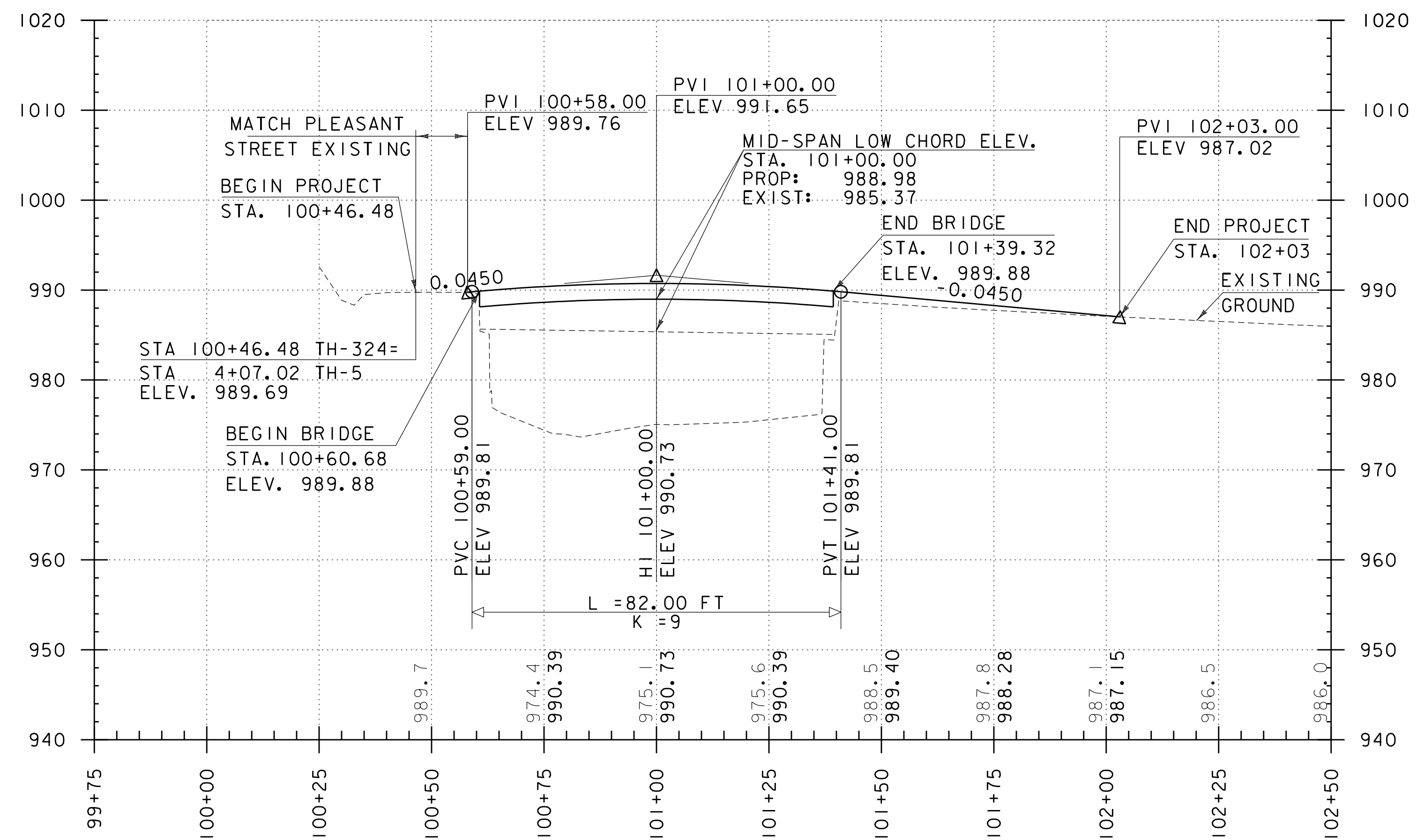


PROJECT NAME: LUDLOW VILLAGE  
PROJECT NUMBER: BO 1443(52)

FILE NAME: z12J638border.dgn  
PROJECT LEADER: G.KOBER  
DESIGNED BY: A.LEENHOUTS  
LAYOUT SHEET

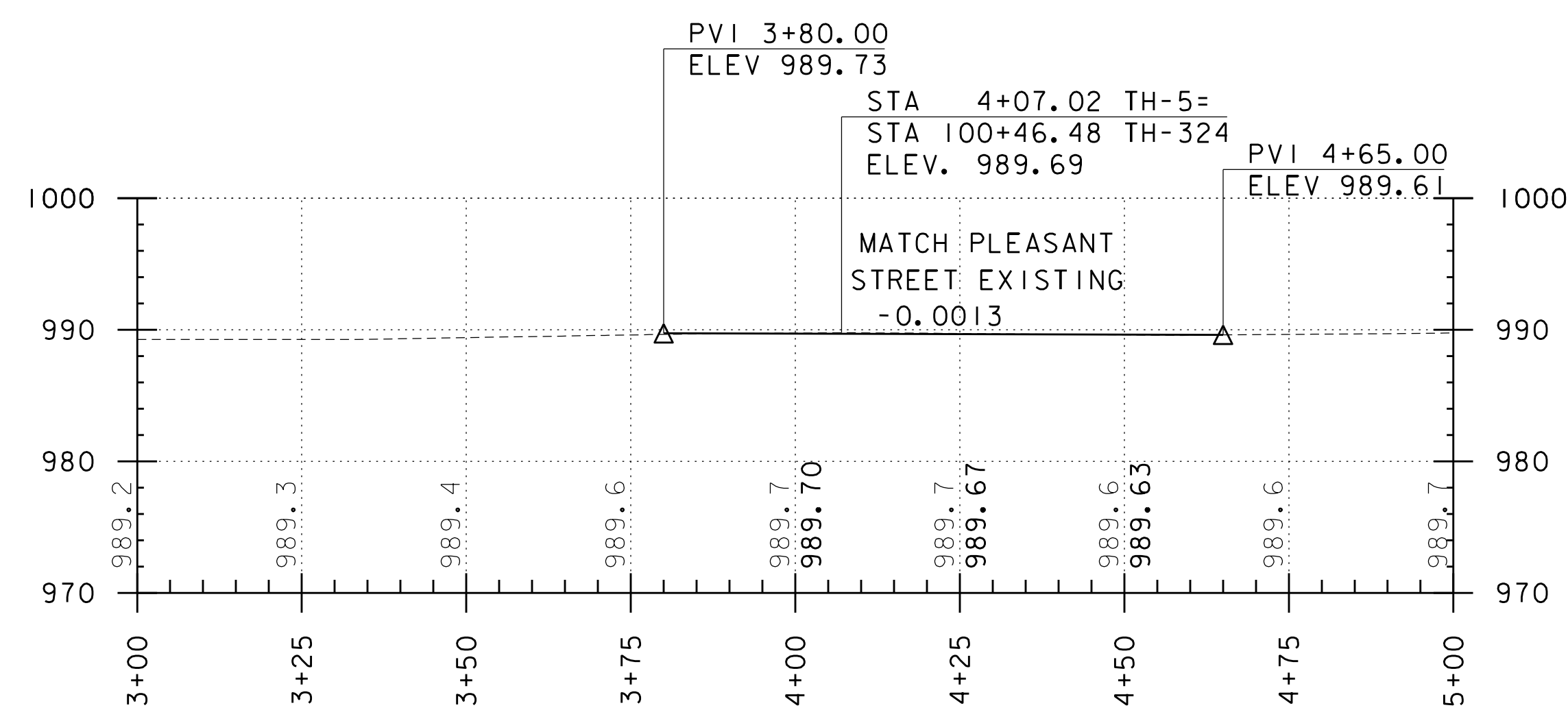
PLOT DATE: 2/19/2021  
DRAWN BY: D.CASALE  
CHECKED BY: -----  
SHEET 8 OF 19





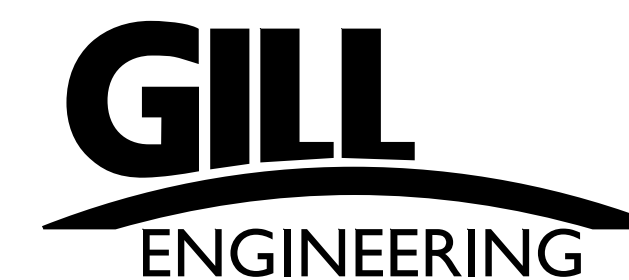
**TOWN HIGHWAY 324 PROFILE**

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



**TOWN HIGHWAY 5 PROFILE**

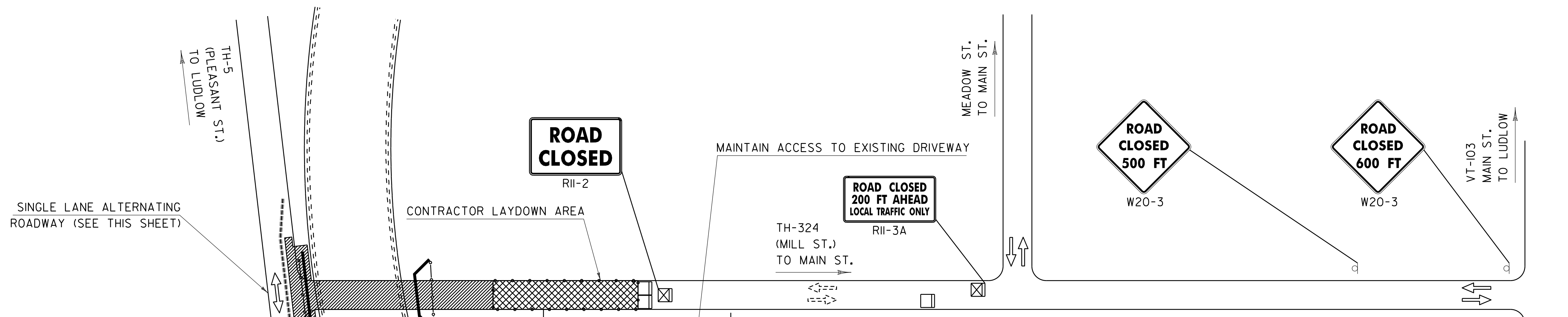
SCALE: HORIZONTAL 1"=20'-0"  
VERTICAL 1"=10'-0"



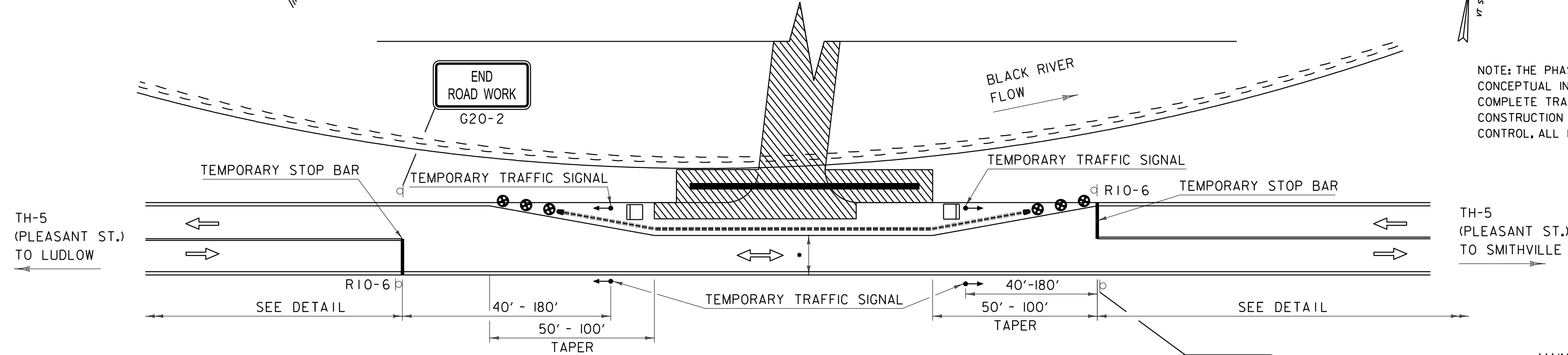
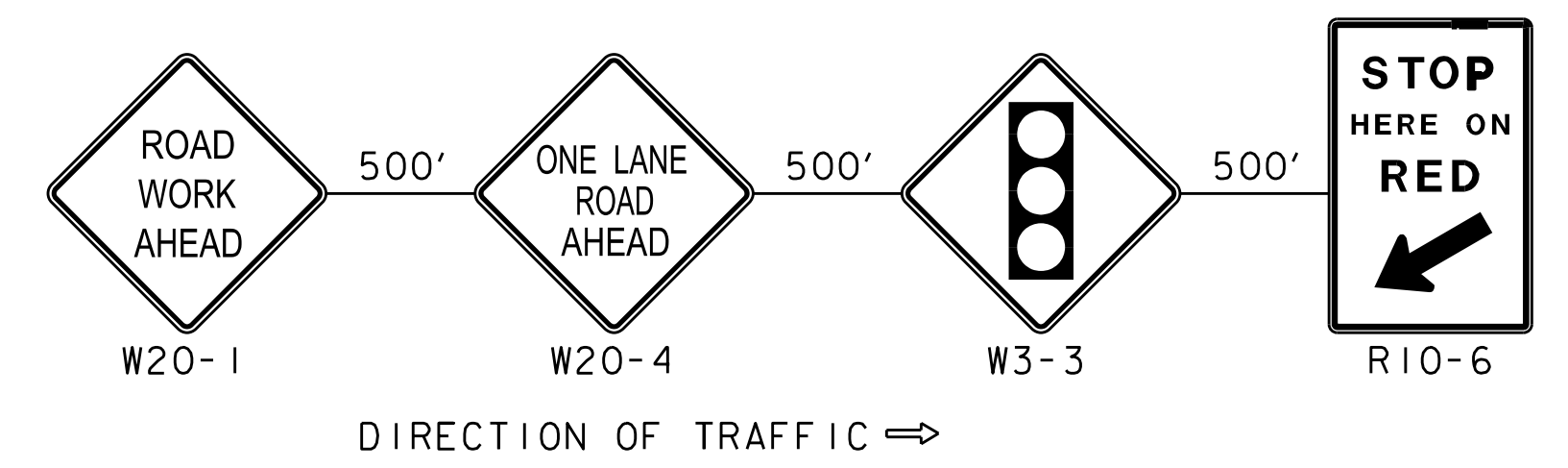
PROJECT NAME: LUDLOW VILLAGE  
PROJECT NUMBER: BO 1443(52)

FILE NAME: z12j638profile.dgn  
PROJECT LEADER: G.KOBER  
DESIGNED BY: A.LEENHOUTS  
PROFILE SHEET

PLOT DATE: 2/19/2021  
DRAWN BY: D.CASALE  
CHECKED BY: -----  
SHEET 9 OF 19



MILL STREET BRIDGE CLOSURE DETAIL  
NOT TO SCALE



PLEASANT STREET ONE-LANE ALTERNATING DETAIL  
NOT TO SCALE

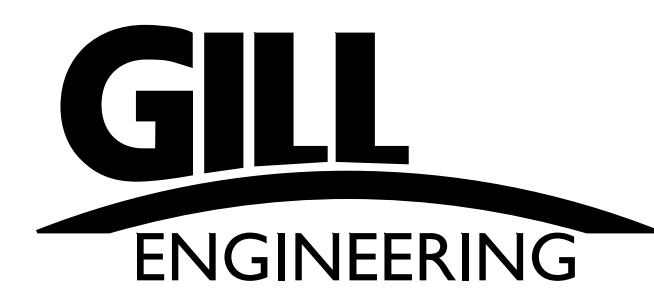
NOTE: THE PHASING PLAN SHOWN IN THESE PLANS IS CONCEPTUAL IN NATURE. THE CONTRACTOR SHALL SUBMIT A COMPLETE TRAFFIC CONTROL PLAN FOR ALL PHASES OF CONSTRUCTION IN ACCORDANCE WITH ITEM 641.11 TRAFFIC CONTROL, ALL INCLUSIVE.

• MAINTAIN MINIMUM OF 11' TRAVEL LANE WITH 1' SHOULDERS

**LEGEND**

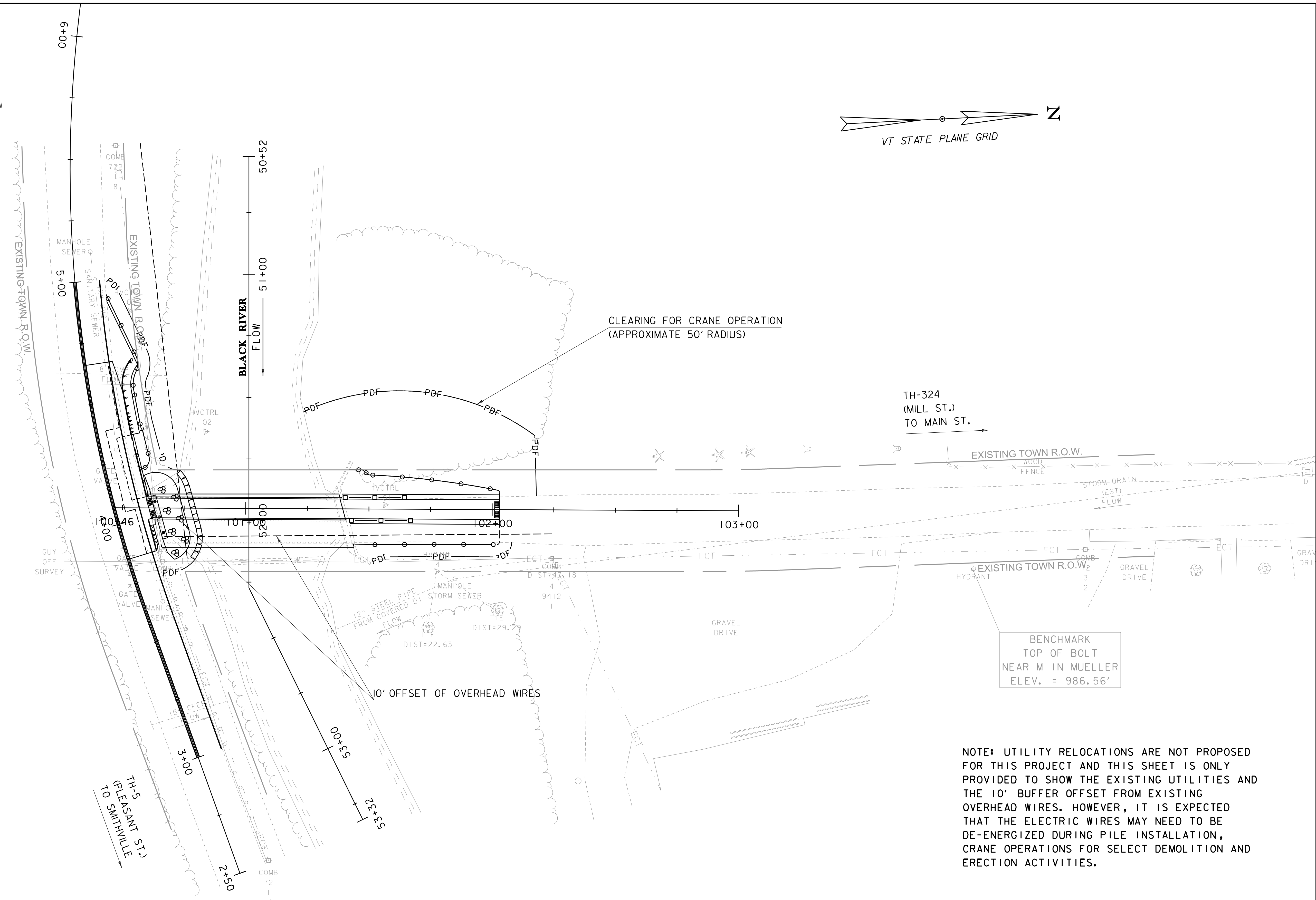
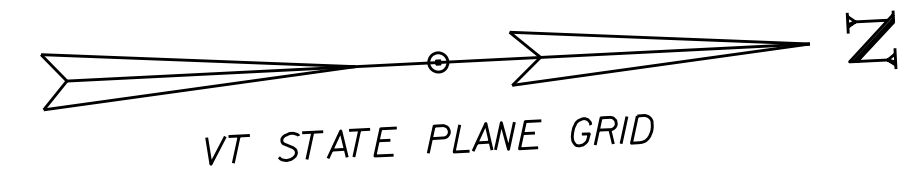
- TYPE III BARRICADES
- TYPE III BARRICADE WITH SIGN
- TEMPORARY TRAFFIC SIGN
- TRAFFIC FLOW
- LOCAL TRAFFIC FLOW
- WORK ZONE
- CONTRACTOR LAYDOWN AREA
- TEMPORARY TRAFFIC BARRIER
- TEMPORARY TRAFFIC SIGNAL
- ENERGY ABSORPTION ATTENUATOR, TEMPORARY
- REFLECTORIZED DRUM
- TEMPORARY CHAIN LINK FENCE

GENERAL NOTE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR ALL STAGES OF CONSTRUCTION. THE PLAN SHALL CLEARLY DETAIL HOW TRAFFIC WILL BE MAINTAINED. THE PLAN SHALL SPECIFY ALL CONSTRUCTION ACTIVITIES REQUIRING ALTERNATING ONE WAY TRAFFIC, RELATE THOSE ACTIVITIES TO THE CONSTRUCTION SCHEDULE, AND SHOW APPROPRIATE TEMPORARY TRAFFIC CONTROL. ALL COSTS WILL BE INCLUDED IN ITEM 641.11 "TRAFFIC CONTROL, ALL-INCLUSIVE".



PROJECT NAME: LUDLOW VILLAGE	
PROJECT NUMBER: BO 1443(52)	
FILE NAME: z12j638trafficbdr.dgn	PLOT DATE: 2/19/2021
PROJECT LEADER: G.KOBER	DRAWN BY: D.CASALE
DESIGNED BY: A.LEENHOUTS	CHECKED BY: -----
TRAFFIC CONTROL SHEET	SHEET 10 OF 19

TH-5  
(PLEASANT ST.)  
TO LUDLOW



CLEARING FOR CRANE OPERATION  
(APPROXIMATE 50' RADIUS)

TH-324  
(MILL ST.)  
TO MAIN ST.

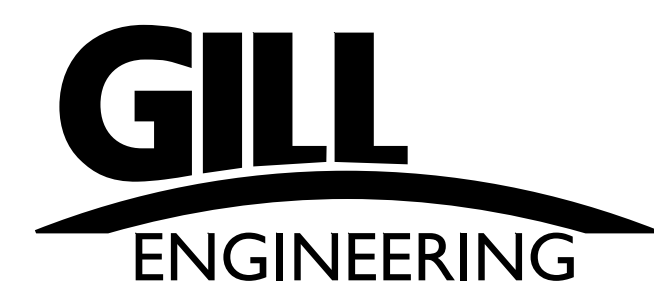
BENCHMARK  
TOP OF BOLT  
NEAR M IN MUELLER  
ELEV. = 986.56'

NOTE: UTILITY RELOCATIONS ARE NOT PROPOSED FOR THIS PROJECT AND THIS SHEET IS ONLY PROVIDED TO SHOW THE EXISTING UTILITIES AND THE 10' BUFFER OFFSET FROM EXISTING OVERHEAD WIRES. HOWEVER, IT IS EXPECTED THAT THE ELECTRIC WIRES MAY NEED TO BE DE-ENERGIZED DURING PILE INSTALLATION, CRANE OPERATIONS FOR SELECT DEMOLITION AND ERECTION ACTIVITIES.

UTILITY LAYOUT

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

EXISTING BRIDGE INFO  
78' SINGLE SPAN  
STEEL PONY TRUSS  
BUILT 1929, CLOSED 2007



PROJECT NAME:	LUDLOW VILLAGE	PLOT DATE:	2/19/2021
PROJECT NUMBER:	BO 1443(52)	DRAWN BY:	D.CASALE
FILE NAME:	z12J638utilitybdr.dgn	DESIGNED BY:	A.LEENHOUTS
PROJECT LEADER:	G.KOBER	CHECKED BY:	-----
UTILITY SHEET		SHEET	11 OF 19



**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.O.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

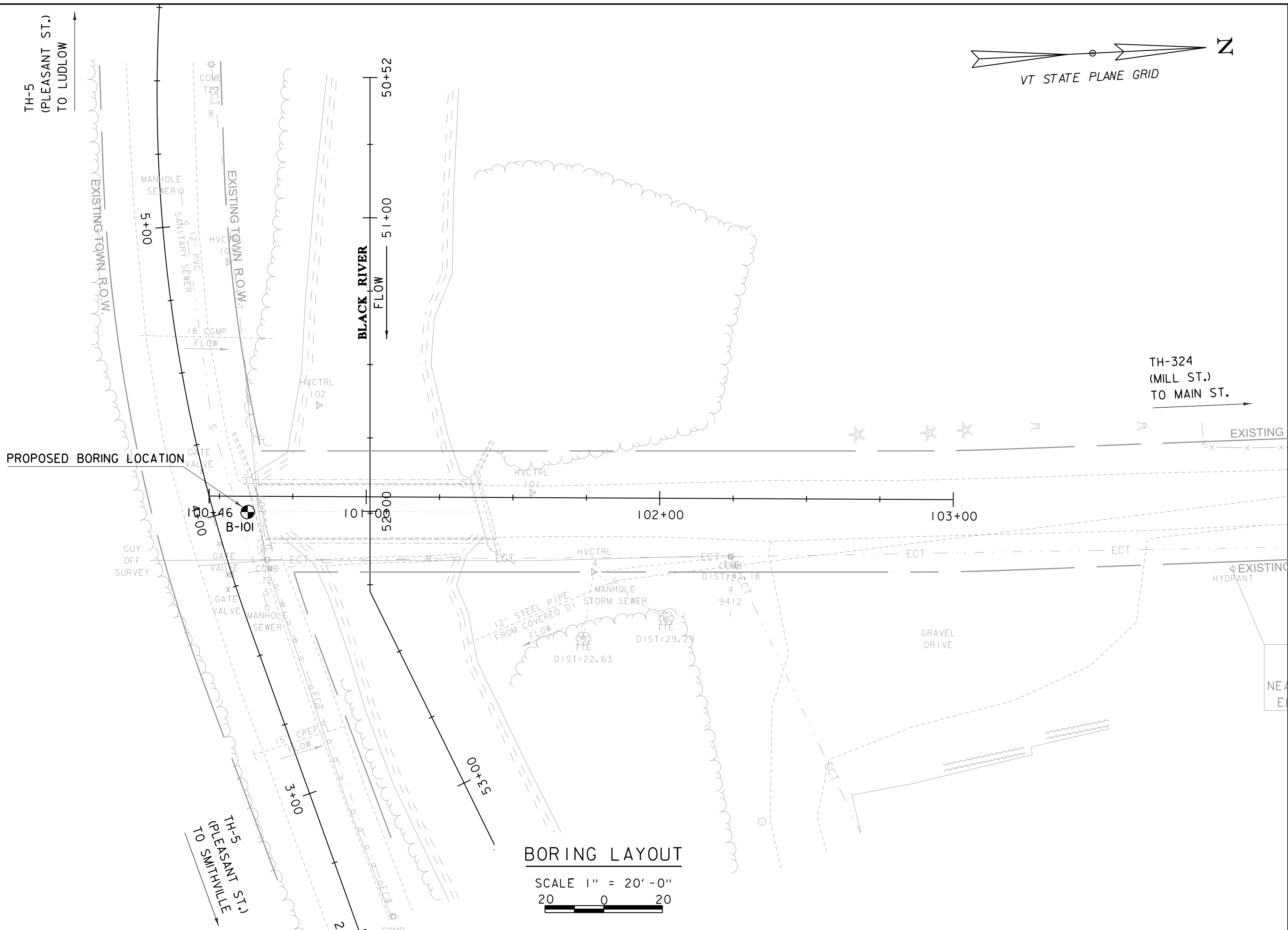
**CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY**

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		

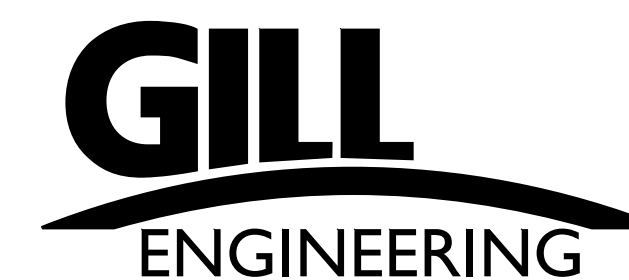


**DEFINITIONS (AASHTO)**

- 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 > 0.0787" (#10 sieve).
- SAND** - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve).
- SILT** - Soil < 0.0029" (#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.

**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.

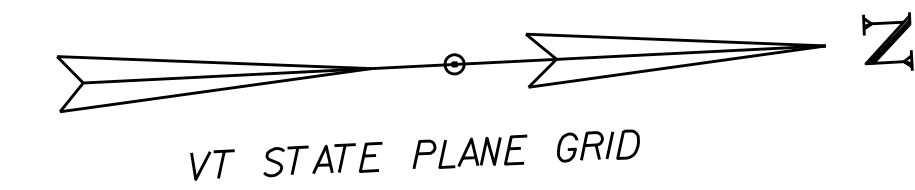
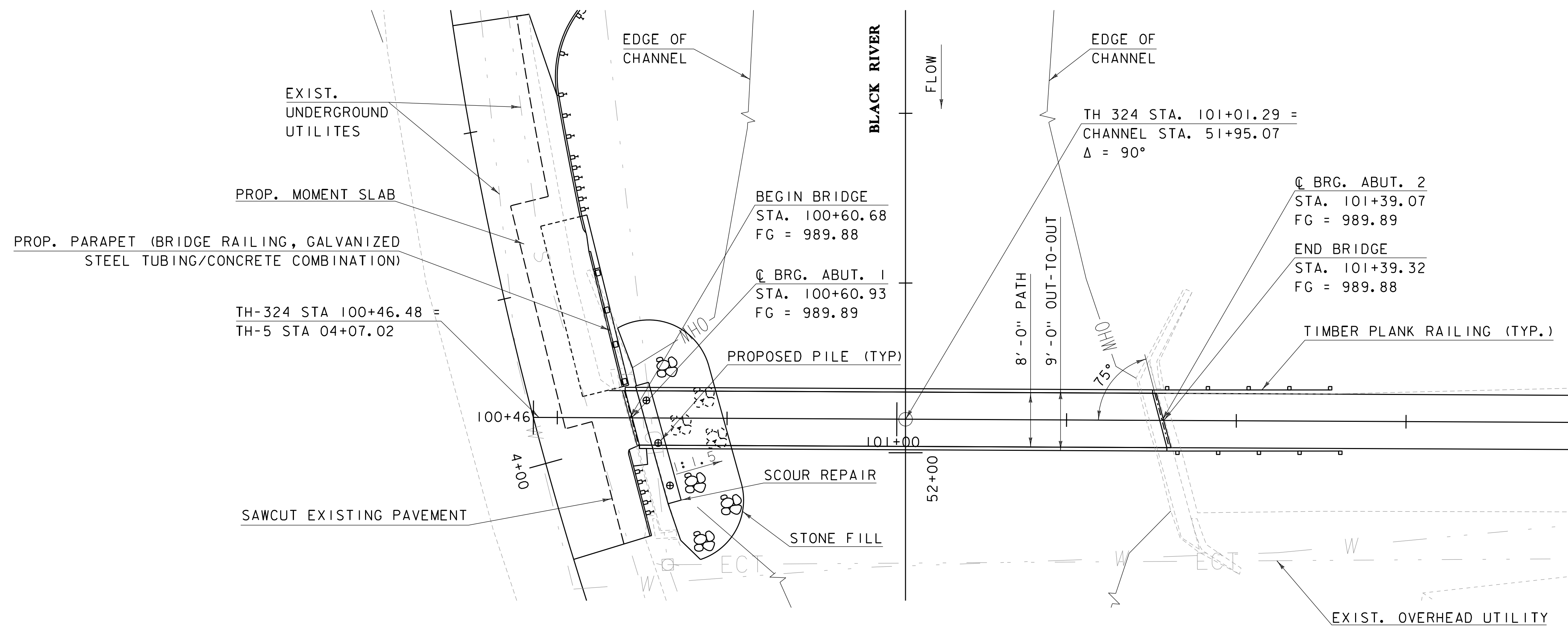


**BORING LOCATIONS**

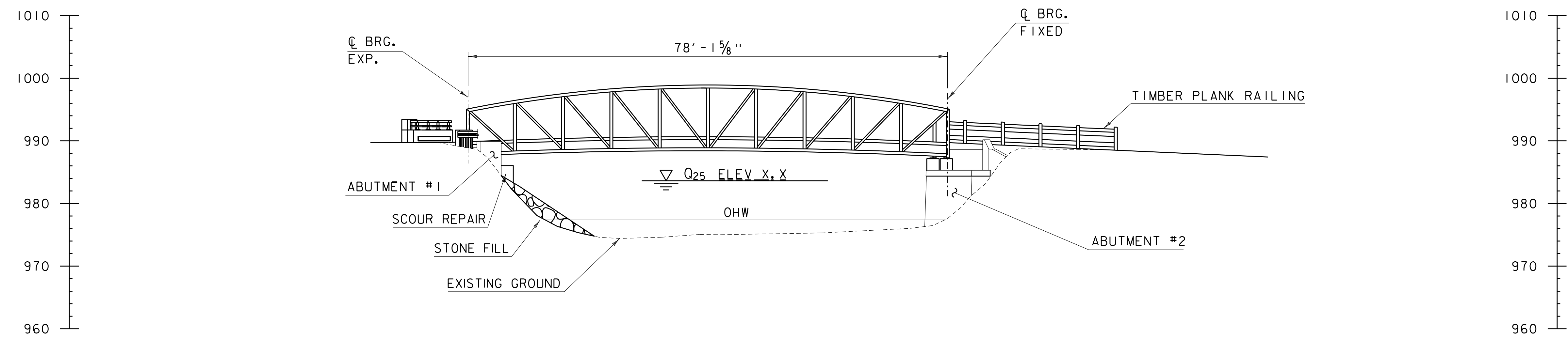
BORING	NORTHING	EASTING	STATION	OFFSET	BEDROCK ELEVATION
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PROJECT NAME: LUDLOW VILLAGE  
PROJECT NUMBER: BO 1443(52)

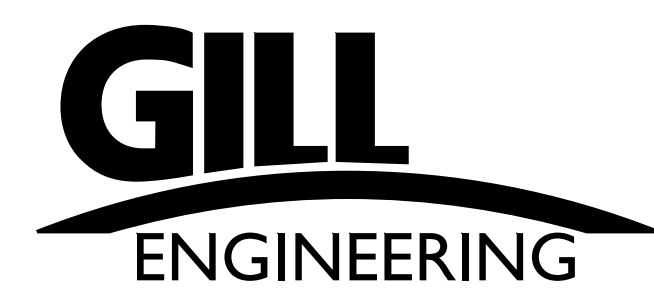
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PROJECT LEADER: G.KOBER DRAWN BY: D.CASALE  
DESIGNED BY: A.LEENHOUTS CHECKED BY: -----  
BORING LAYOUT SHEET SHEET 12 OF 19



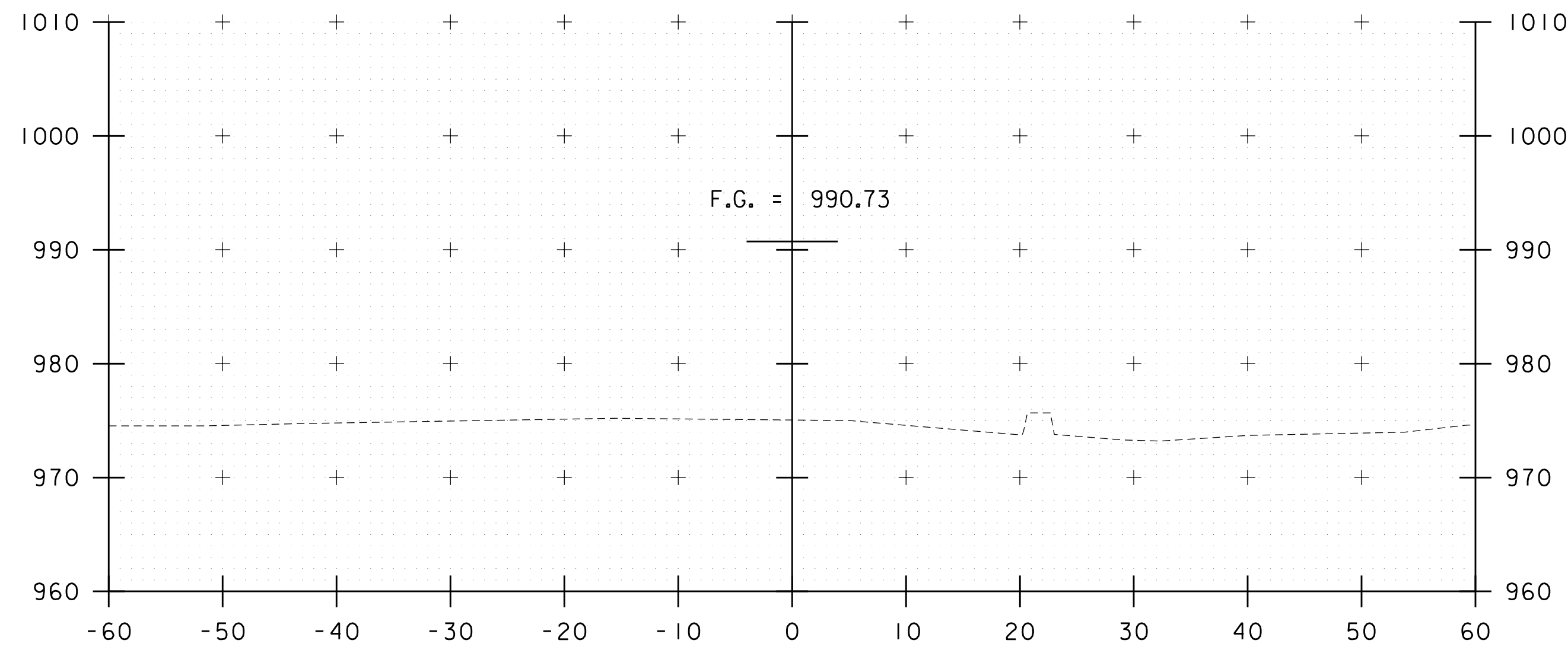
PLAN  
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10 0 10



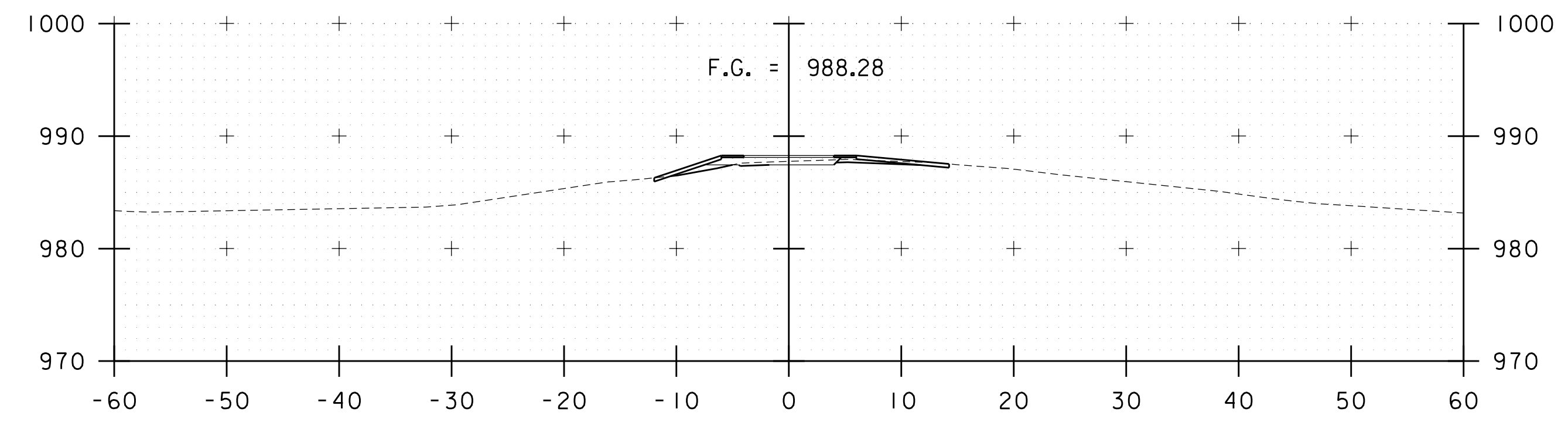
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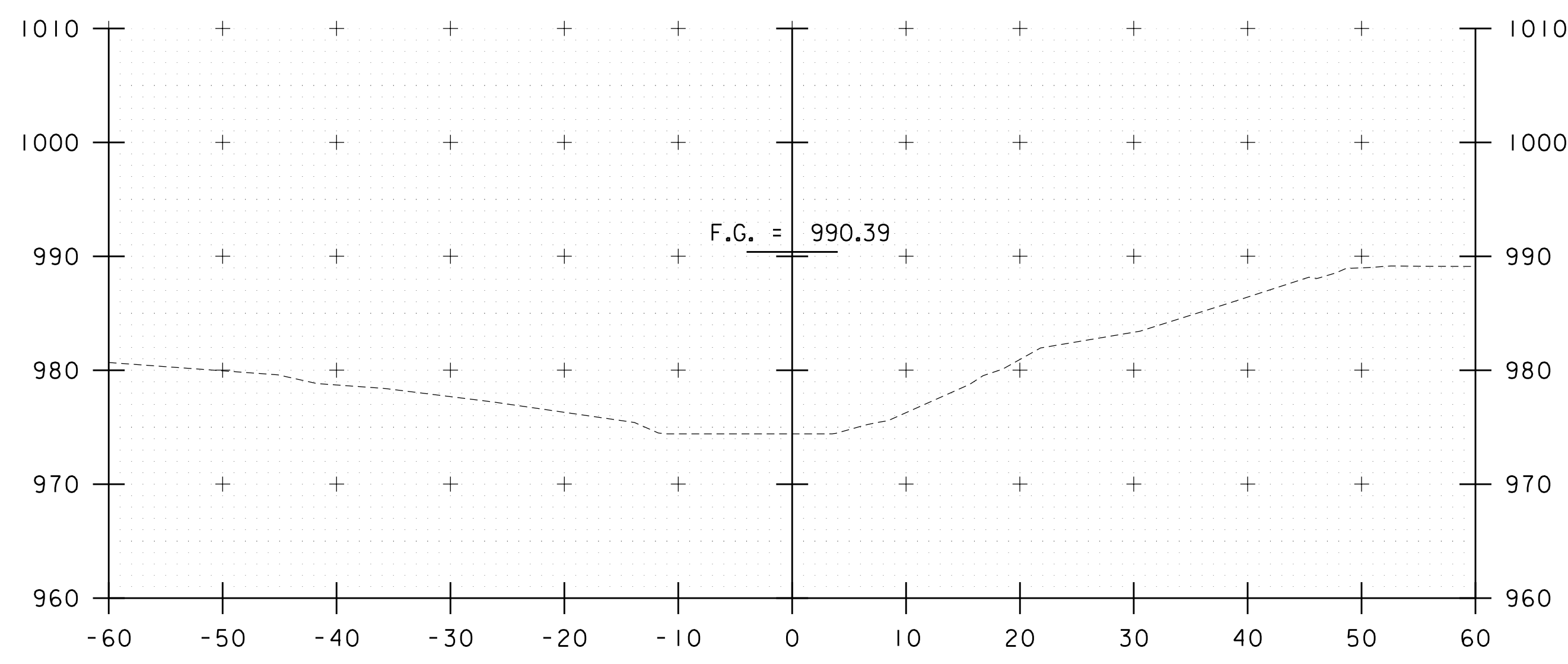
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PROJECT NUMBER: BO 1443(52)	
FILE NAME: z12j638pe.dgn	PLOT DATE: 2/19/2021
PROJECT LEADER: G.KOBER	DRAWN BY: D.CASALE
DESIGNED BY: A.LEENHOUTS	CHECKED BY: -----
PLAN AND ELEVATION	SHEET 13 OF 19



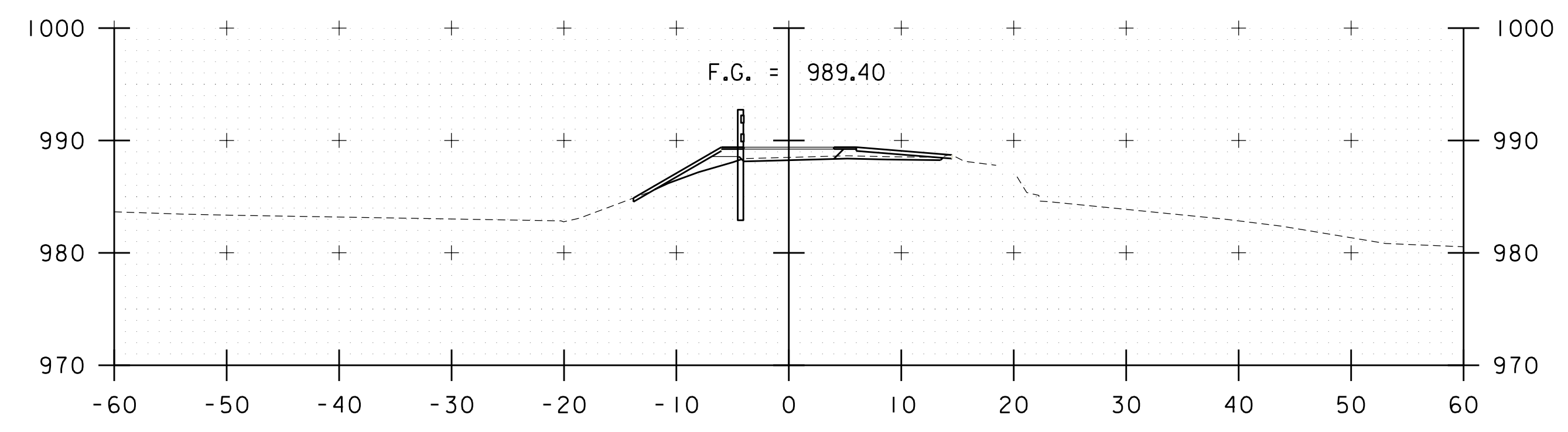
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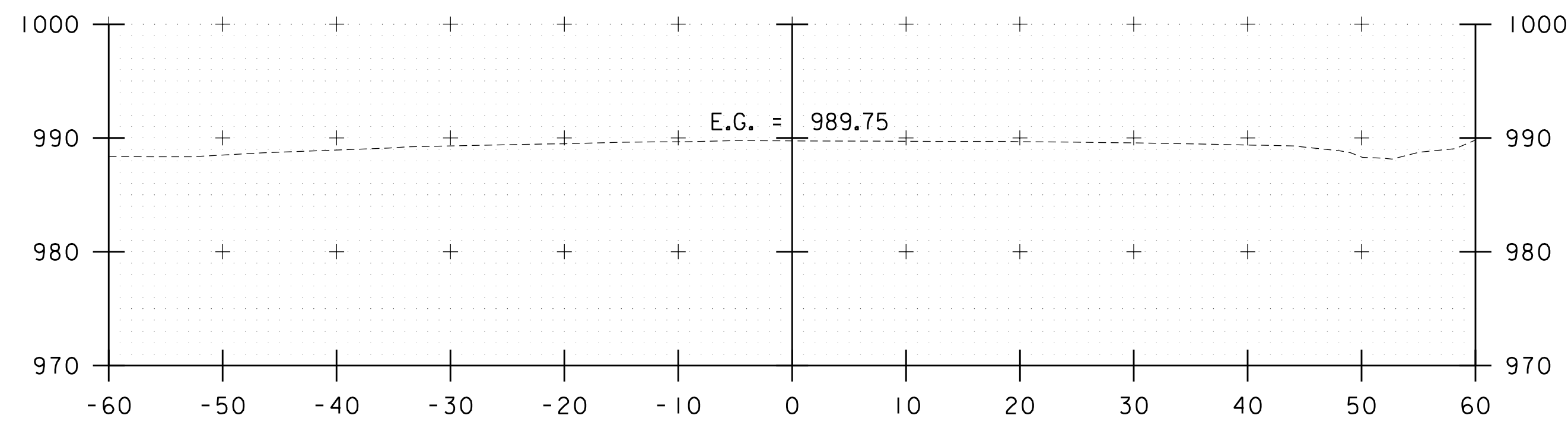
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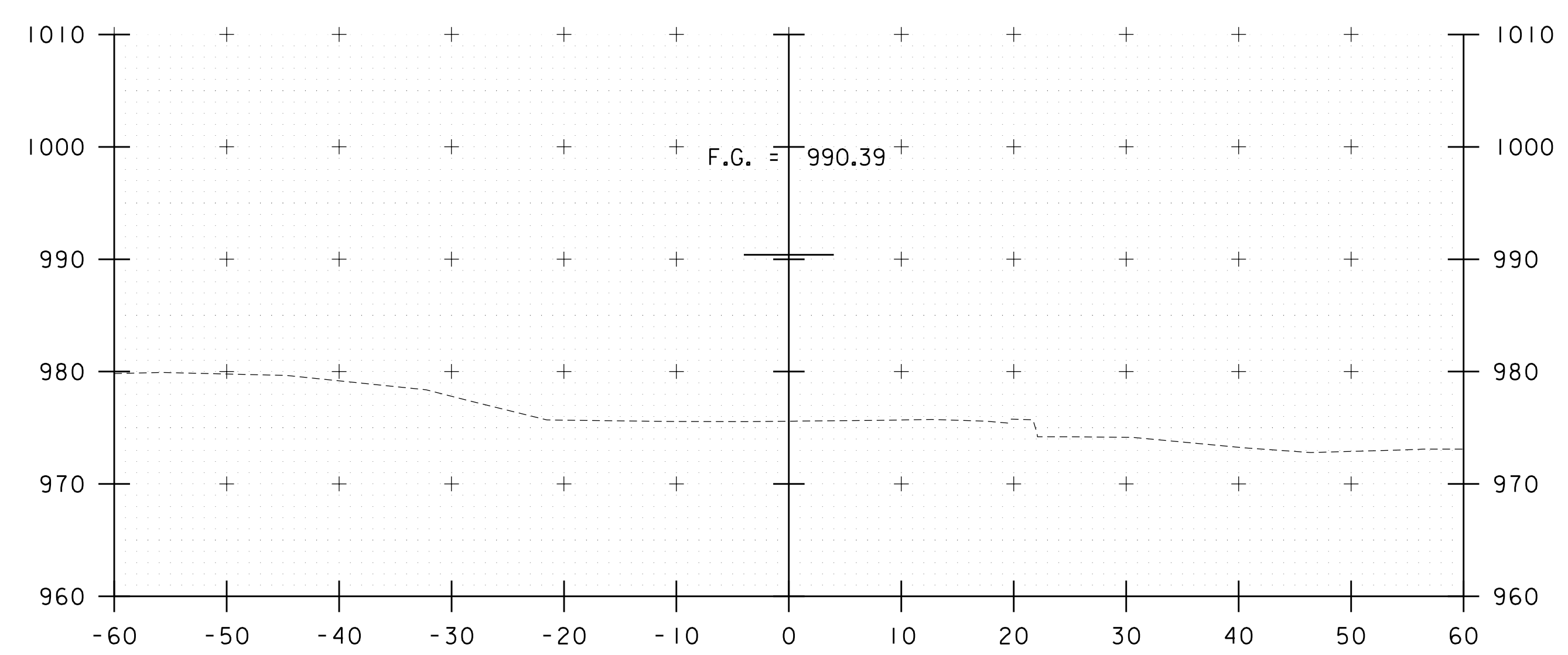
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101+50



100+50



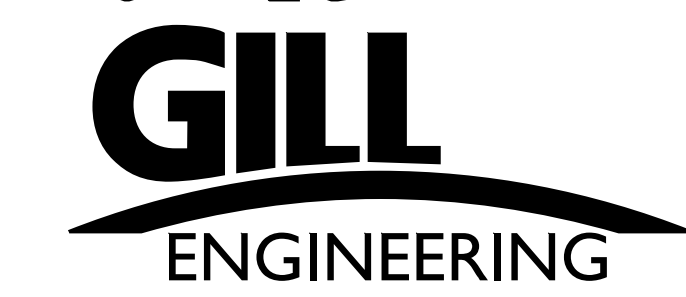
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STA. 100+60.68  
BEGIN BRIDGE

STA. 101+39.32  
END BRIDGE

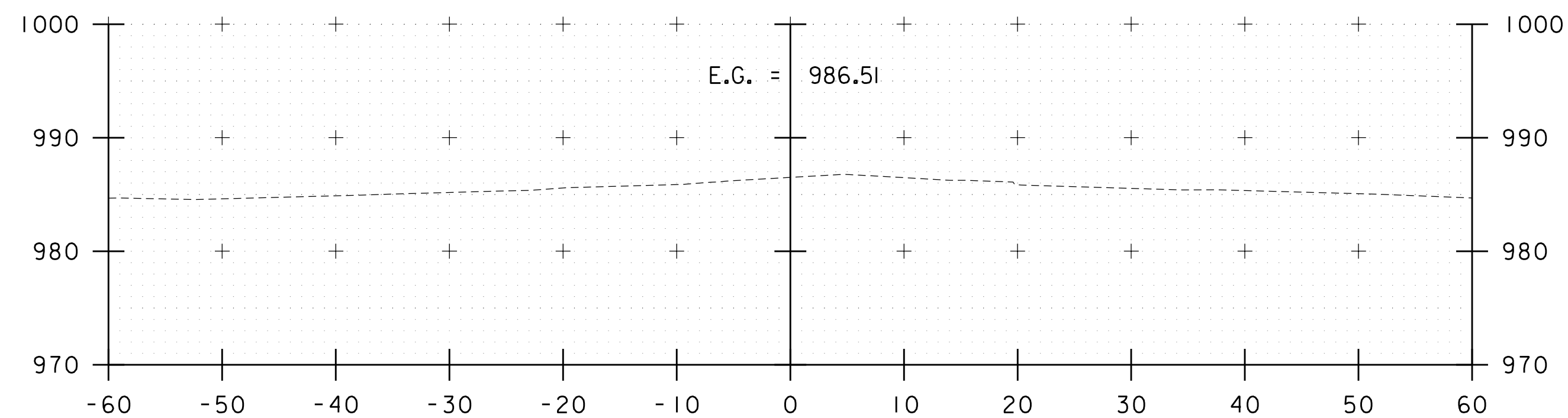
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STA. 100+50 TO STA. 101+75



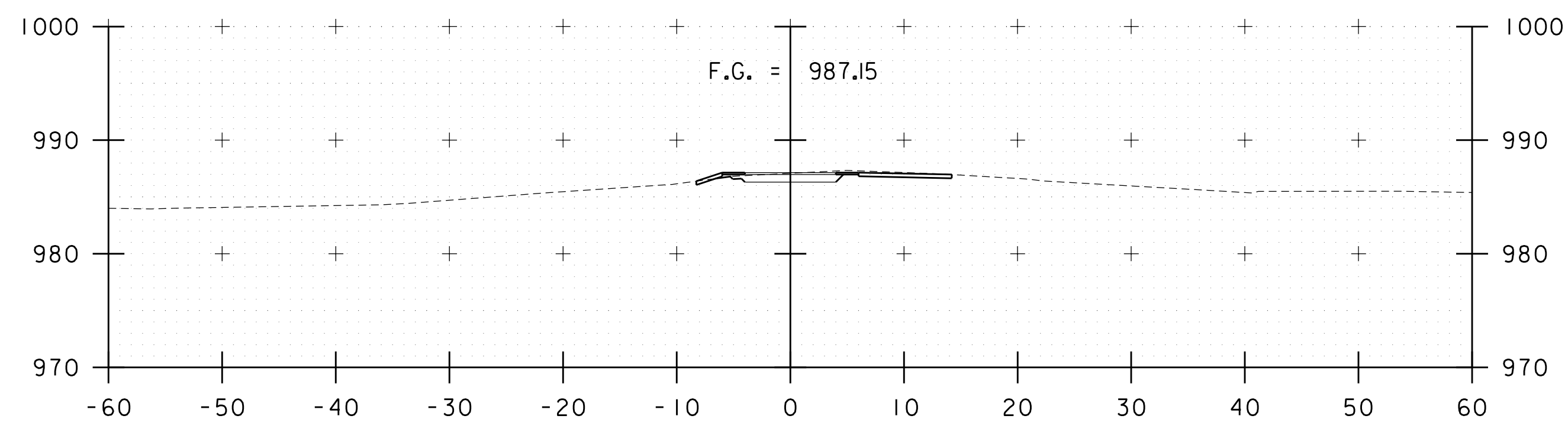
PROJECT NAME: LUDLOW VILLAGE	
PROJECT NUMBER: BO 1443(52)	
FILE NAME: z12j638xs.dgn	PLOT DATE: 2/19/2021
PROJECT LEADER: G.KOBER	DRAWN BY: D.CASALE
DESIGNED BY: A.LEENHOUTS	CHECKED BY: -----
ROADWAY CROSS SECTIONS SHEET 1	SHEET 14 OF 19





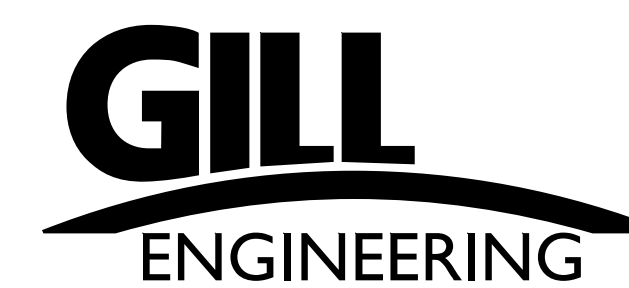
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102+25

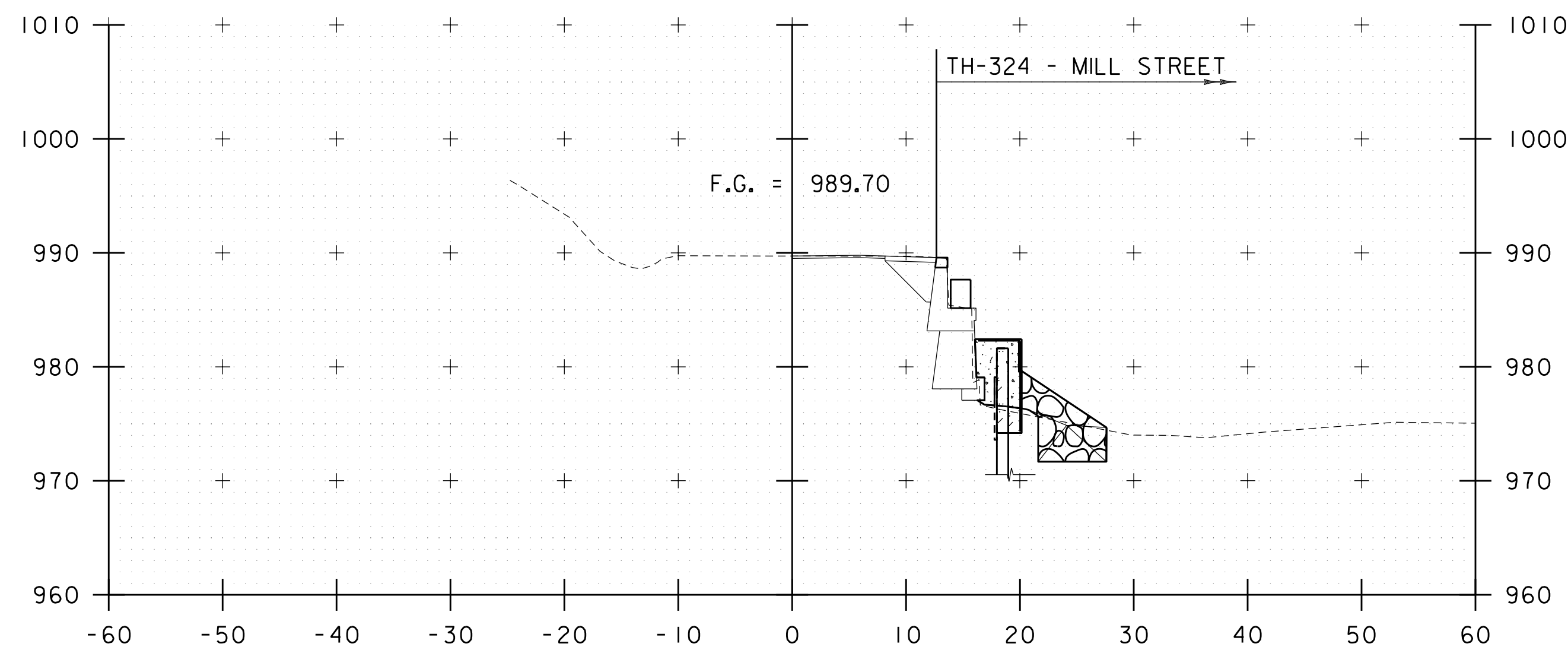


102+00

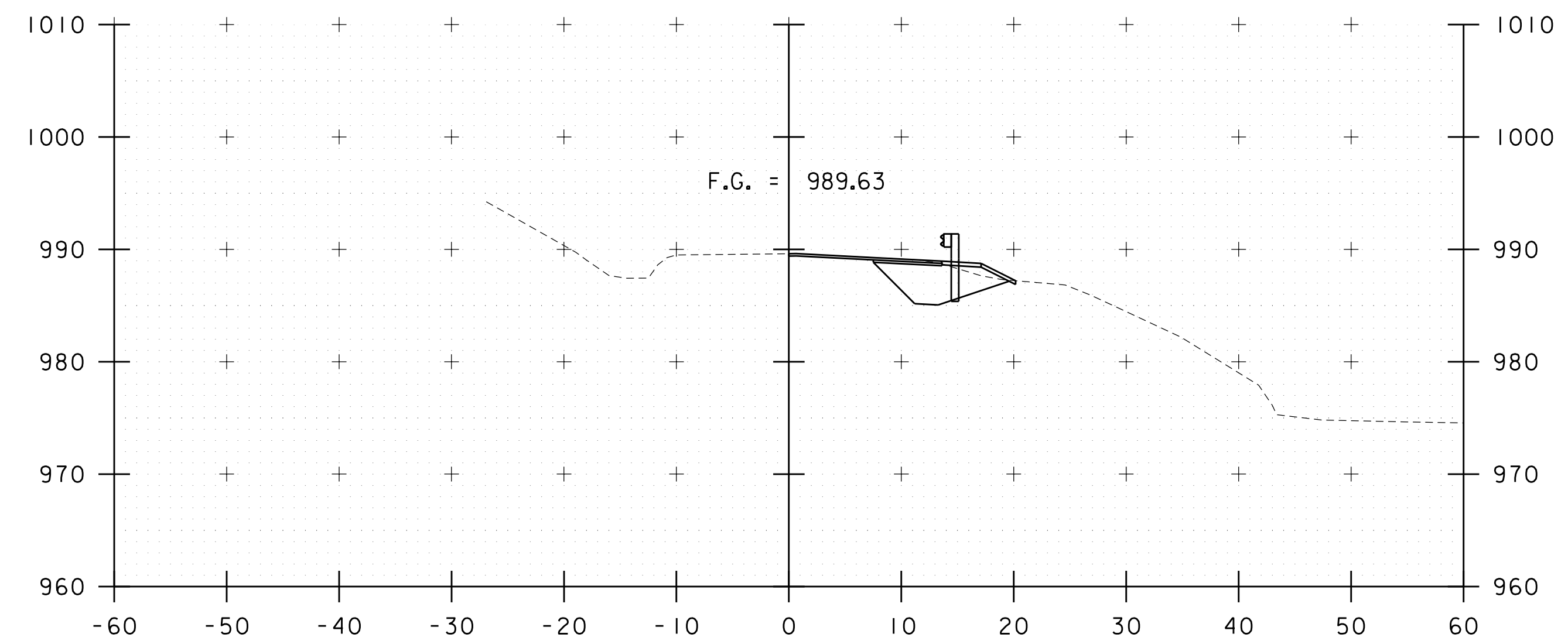
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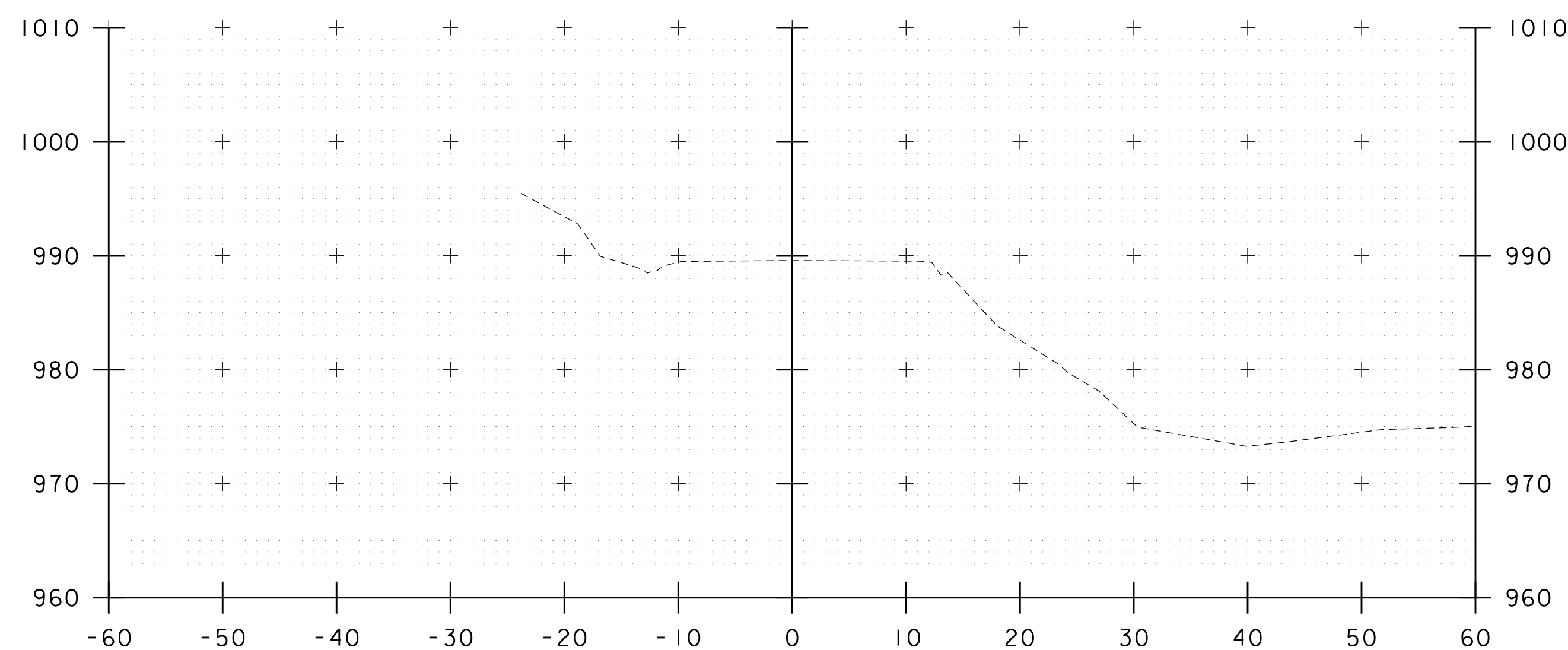
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PROJECT NUMBER: BO 1443(52)	
FILE NAME: z12j638xs.dgn	PLOT DATE: 2/19/2021
PROJECT LEADER: G.KOBER	DRAWN BY: D.CASALE
DESIGNED BY: A.LEENHOUTS	CHECKED BY: -----
ROADWAY CROSS SECTIONS SHEET 2	SHEET 15 OF 19



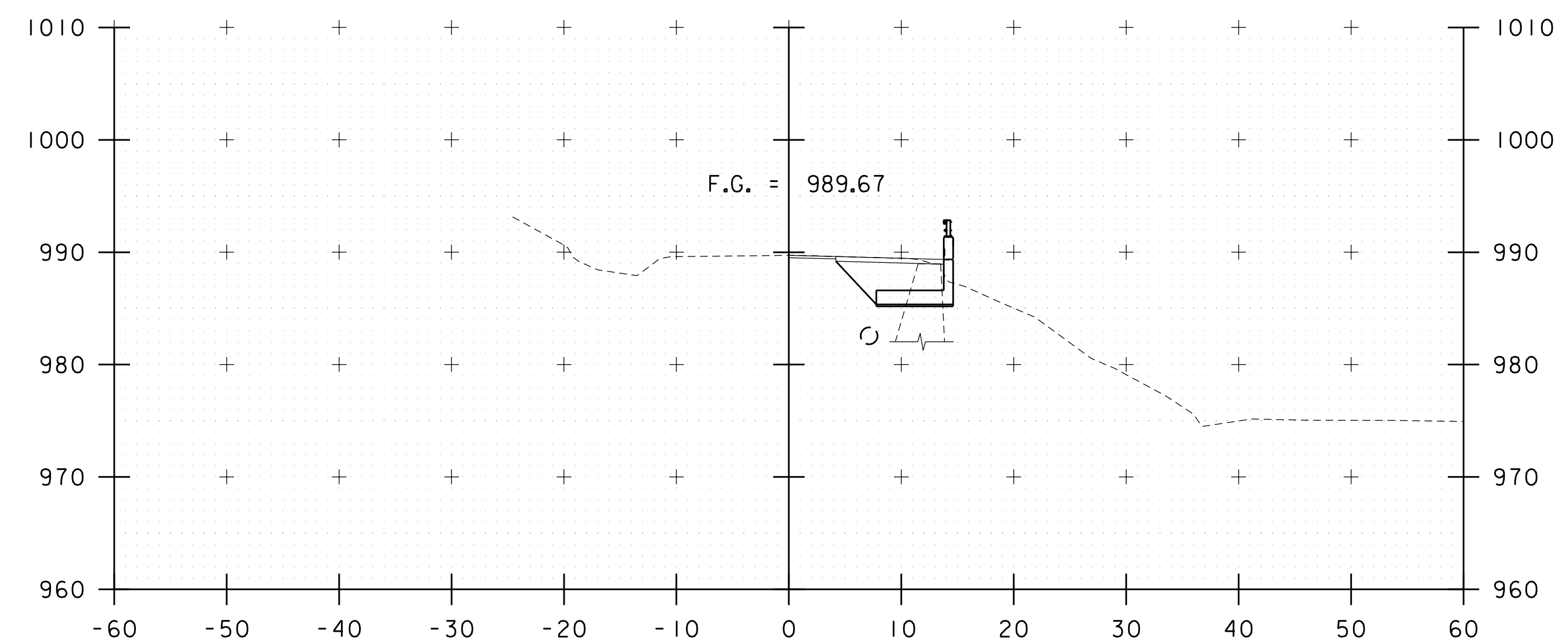
4+00



4+50



3+75

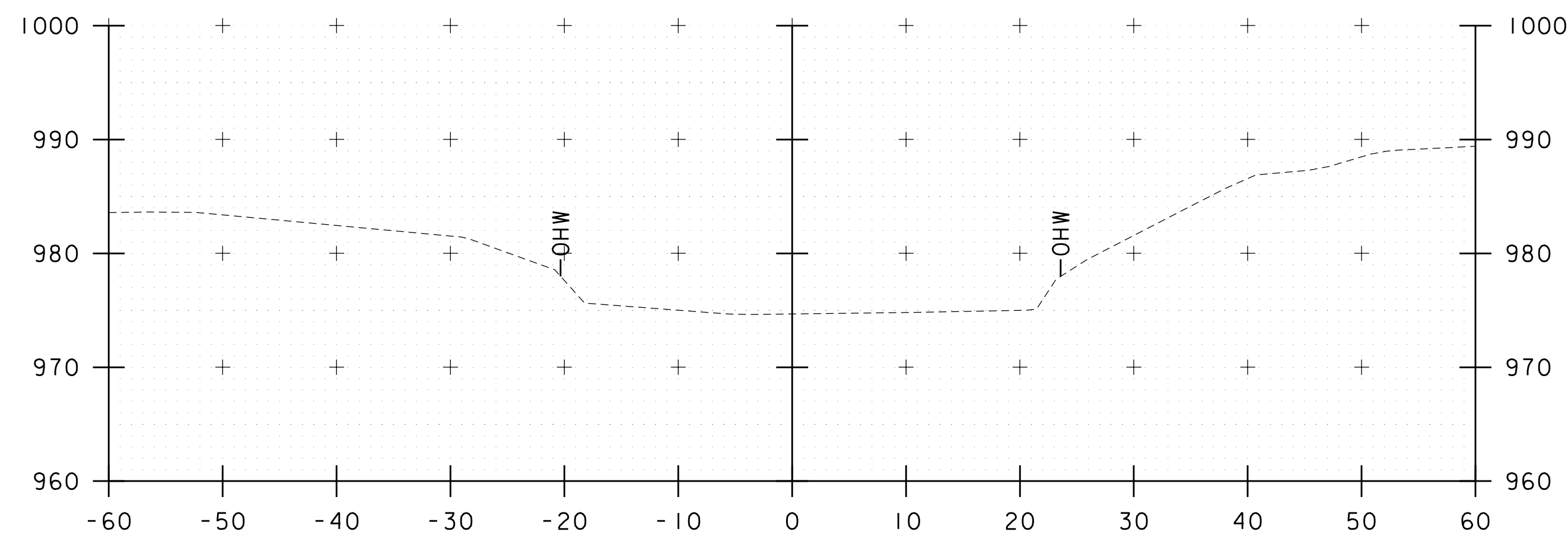


4+25

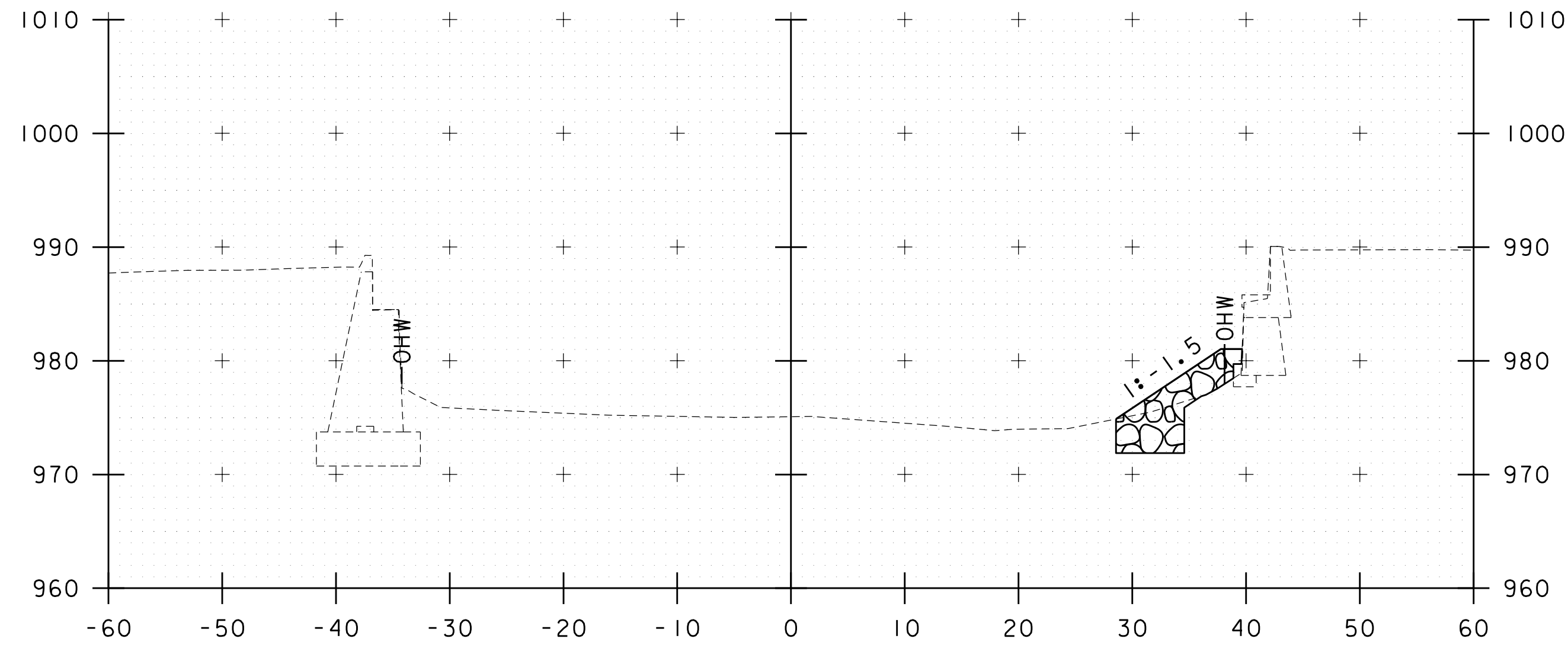
STA. 3+75 TO STA. 4+50



PROJECT NAME: LUDLOW VILLAGE	
PROJECT NUMBER: BO 1443(52)	
FILE NAME: z12j638xs.dgn	PLOT DATE: 2/19/2021
PROJECT LEADER: G.KOBER	DRAWN BY: D.CASALE
DESIGNED BY: A.LEENHOUTS	CHECKED BY: -----
ROADWAY CROSS SECTIONS SHEET 3	SHEET 16 OF 19

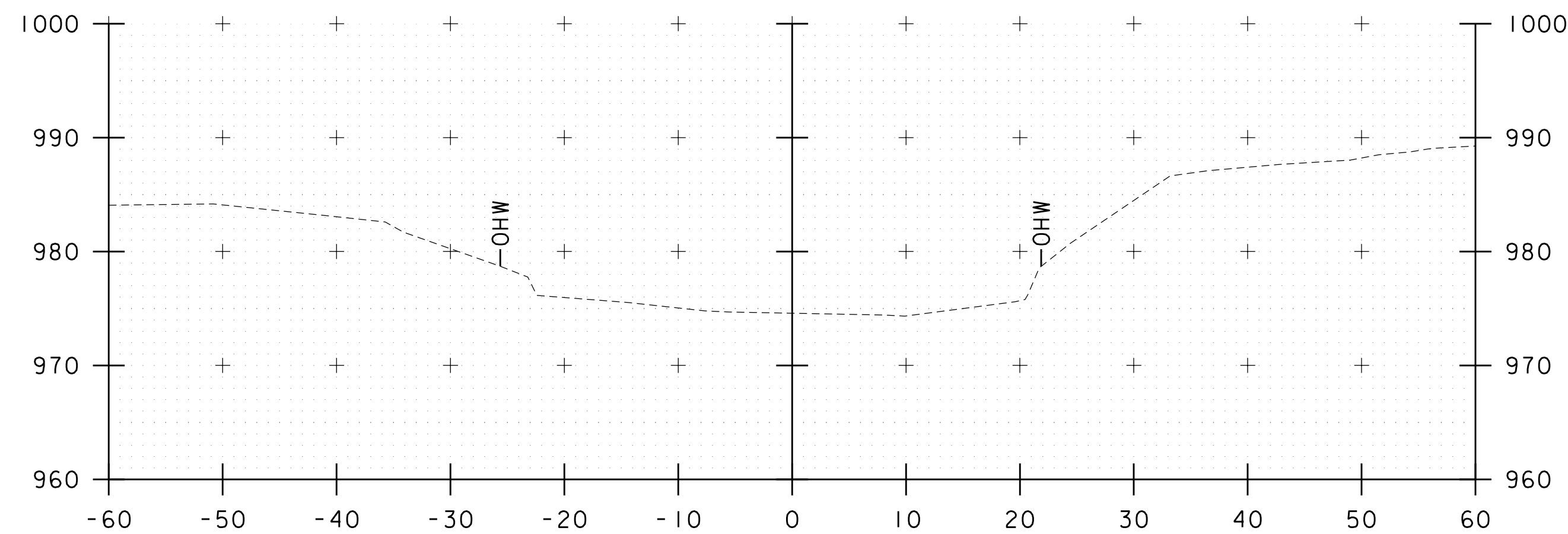


51+50

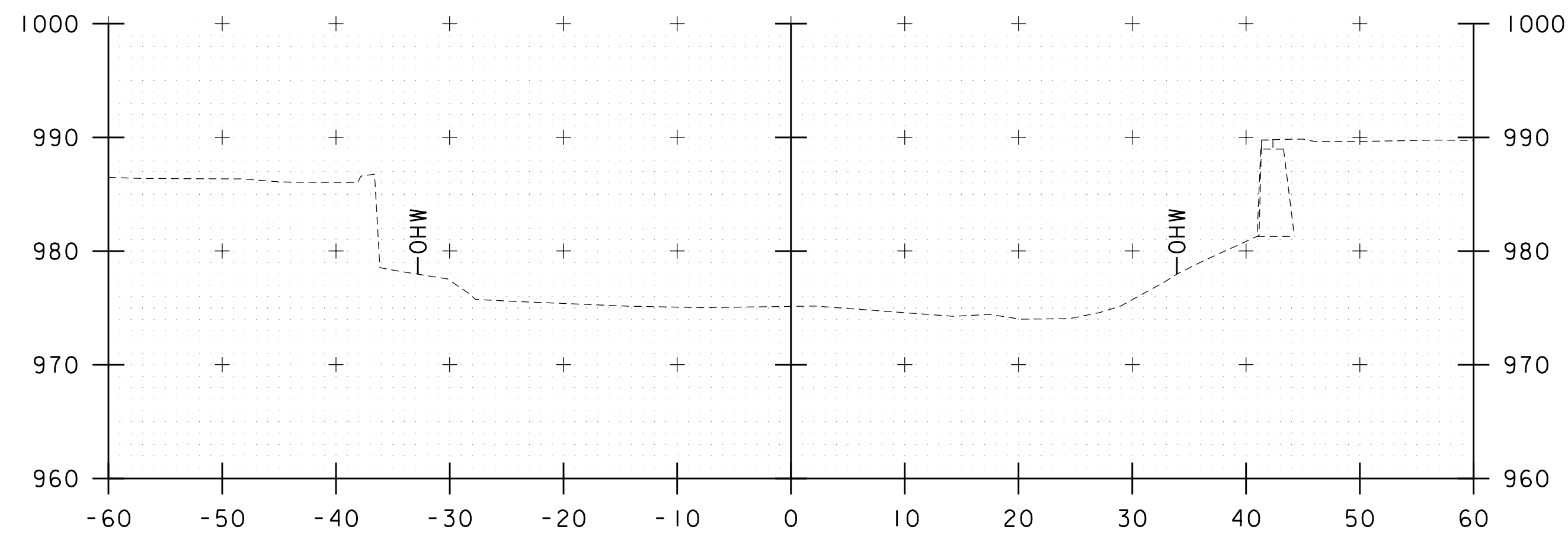


BEGIN CHANNEL EXCAVATION  
STA. 51+82.46 RT

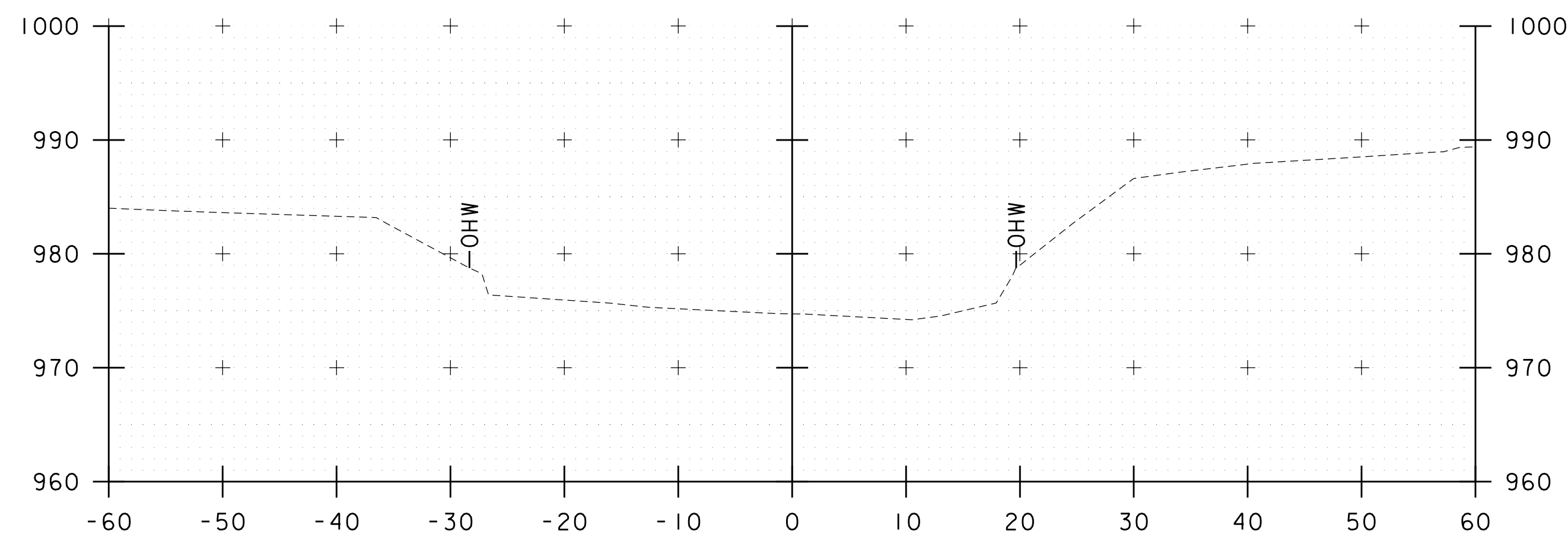
51+90



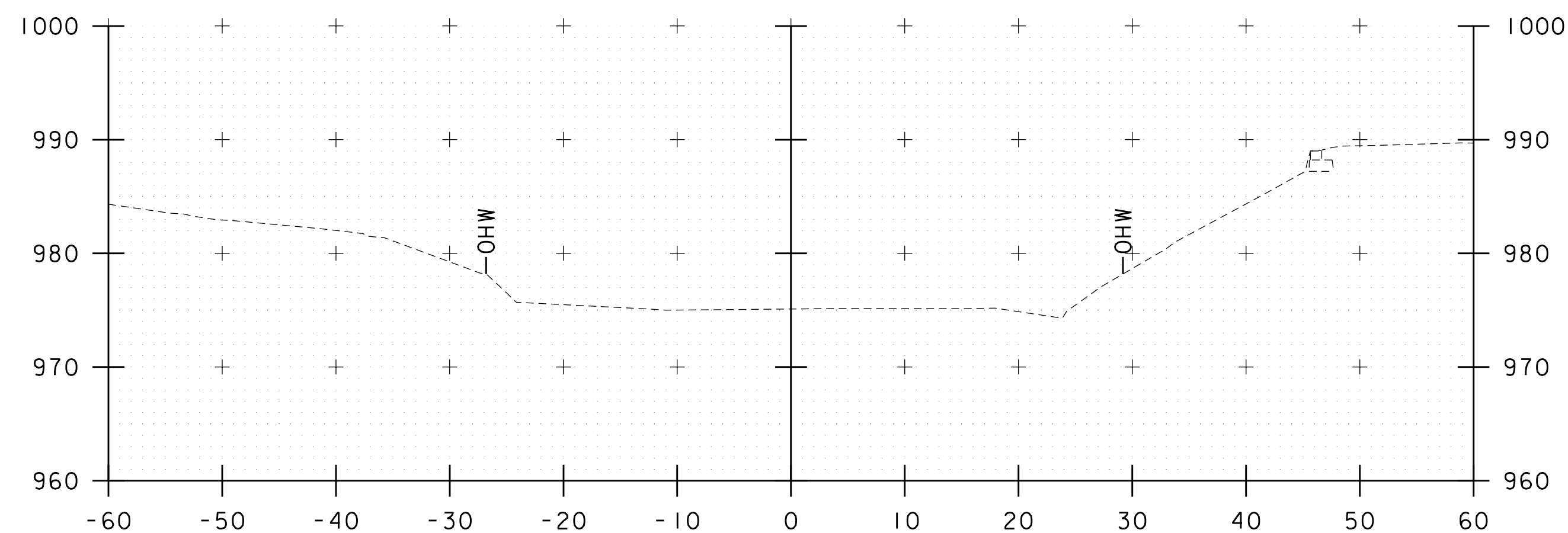
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51+85



51+00



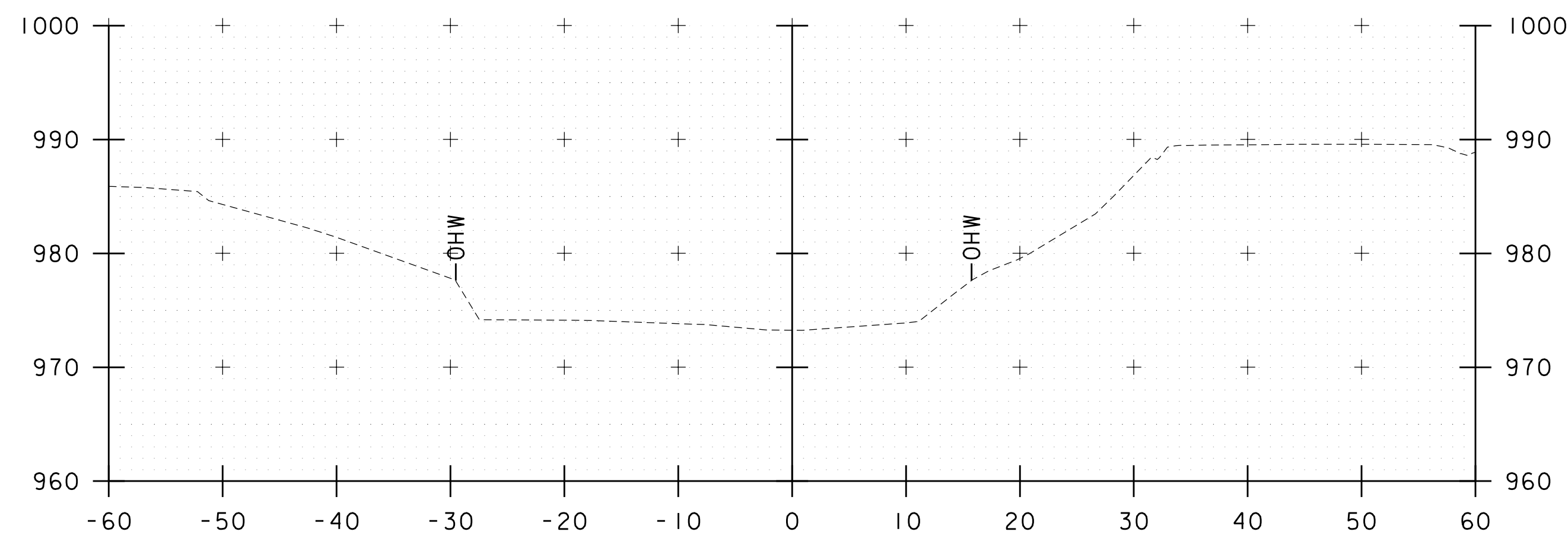
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STA. 51+00 TO STA. 51+90



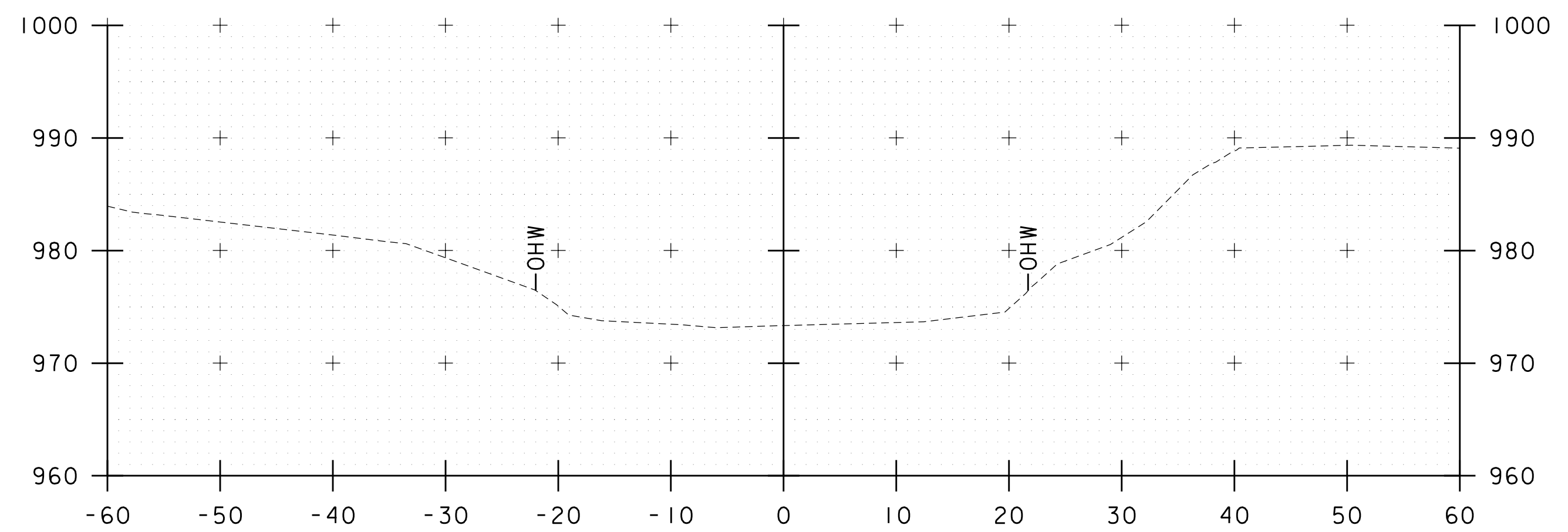
PROJECT NAME: LUDLOW VILLAGE	PLOT DATE: 2/19/2021
PROJECT NUMBER: BO 1443(52)	DRAWN BY: D.CASALE
FILE NAME: z12j638xs.dgn	DESIGNED BY: A.LEENHOUTS
PROJECT LEADER: G.KOBER	CHECKED BY: -----
CHANNEL CROSS SECTIONS SHEET 1	SHEET 17 OF 19



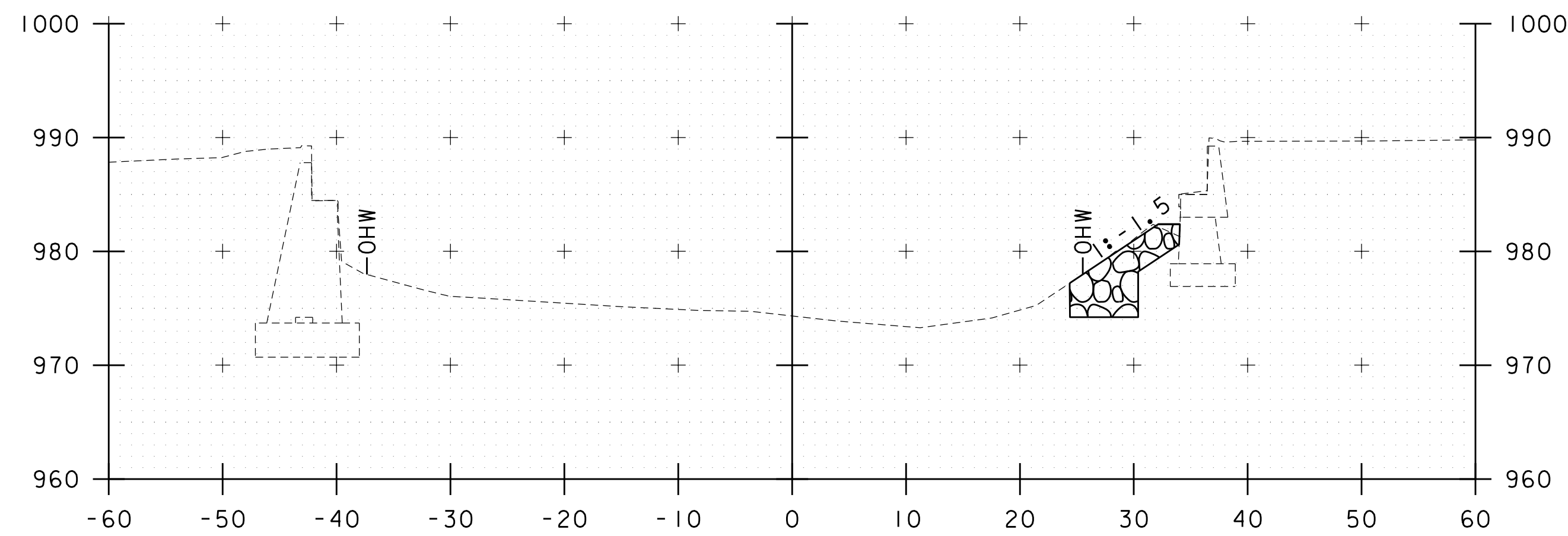


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STA. 52+12.38 RT

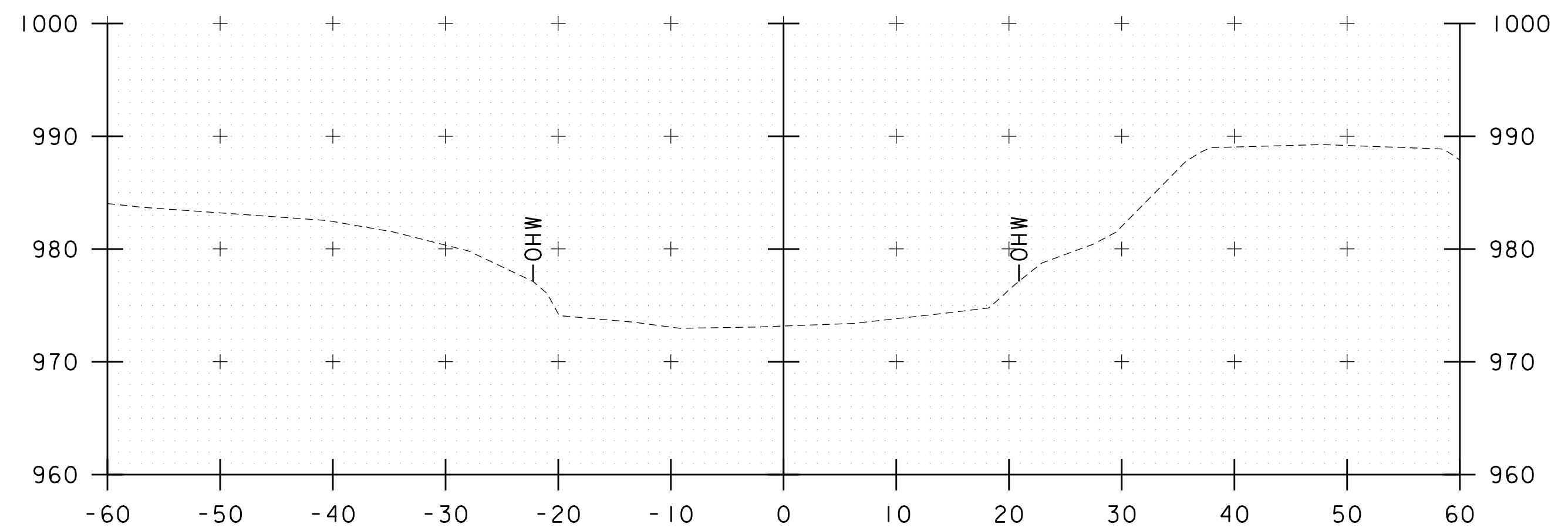
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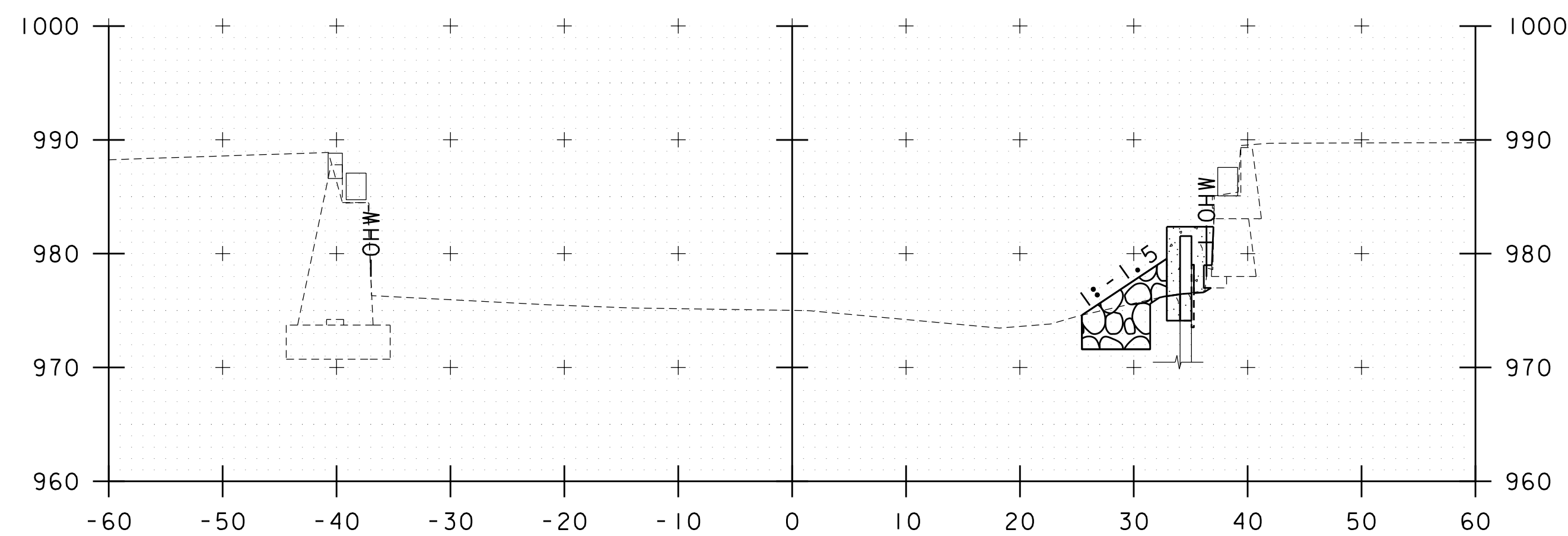
53+00



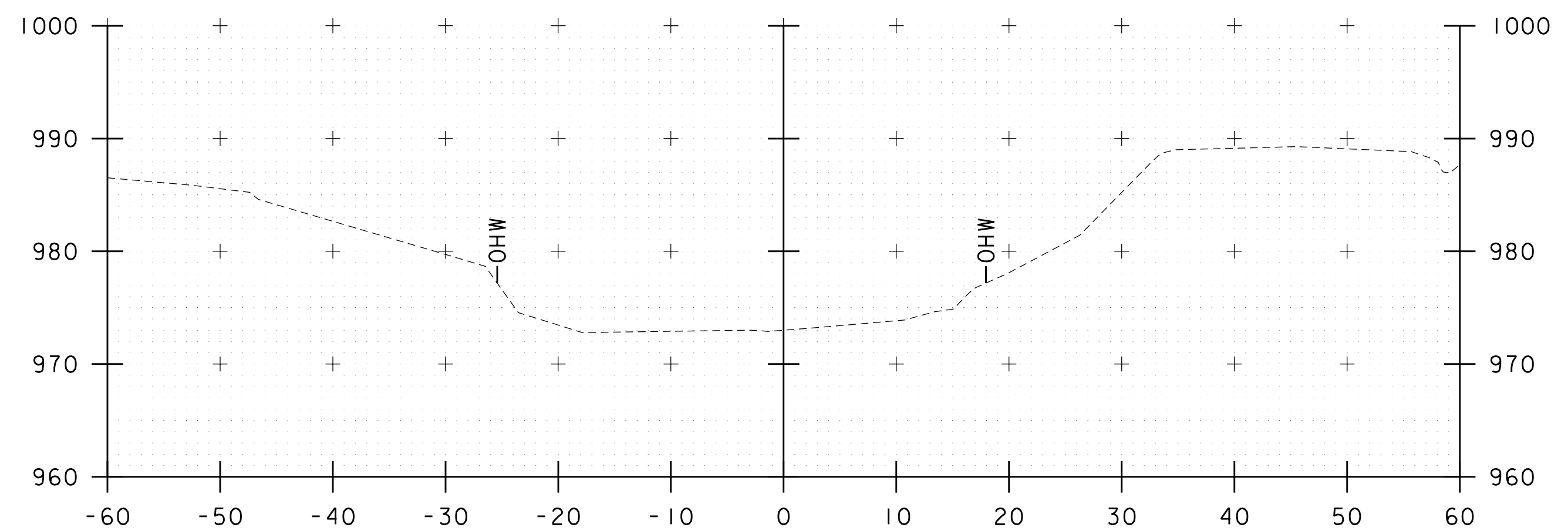
52+10



52+75

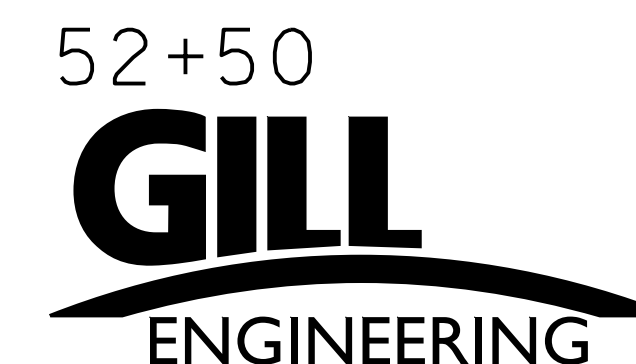


52+00



52+50

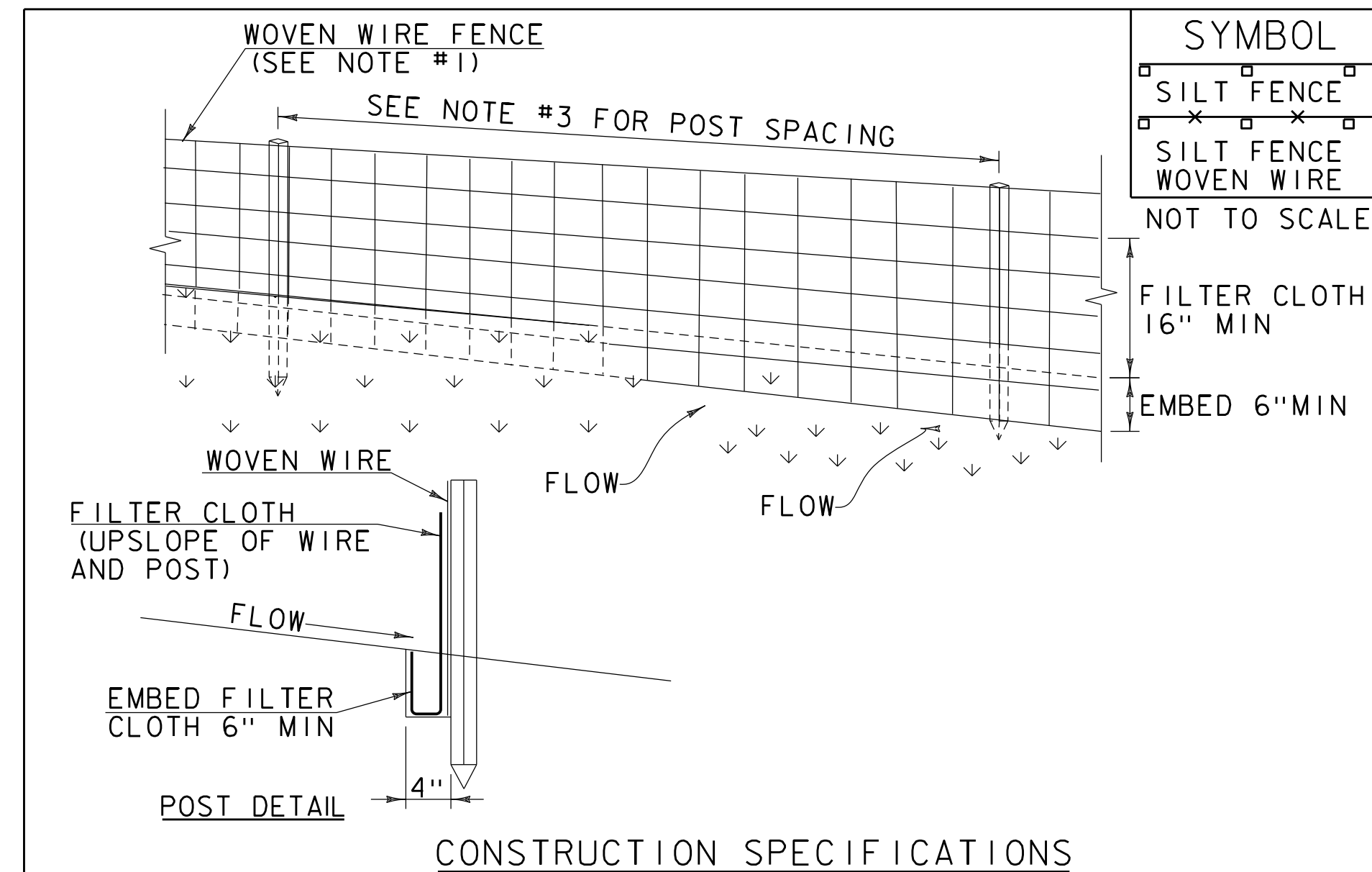
STA. 52+00 TO STA. 53+00



PROJECT NAME: LUDLOW VILLAGE  
PROJECT NUMBER: BO 1443(52)

FILE NAME: z12j638xs.dgn  
PROJECT LEADER: G.KOBER  
DESIGNED BY: A.LEENHOUTS  
CHANNEL CROSS SECTIONS SHEET 2

PLOT DATE: 2/19/2021  
DRAWN BY: D.CASALE  
CHECKED BY: -----  
SHEET 18 OF 19



- CONSTRUCTION SPECIFICATIONS**
1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
  2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAF1100X, STABILINKA T140N OR APPROVED EQUIVALENT.
  3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
  4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
  5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
  6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

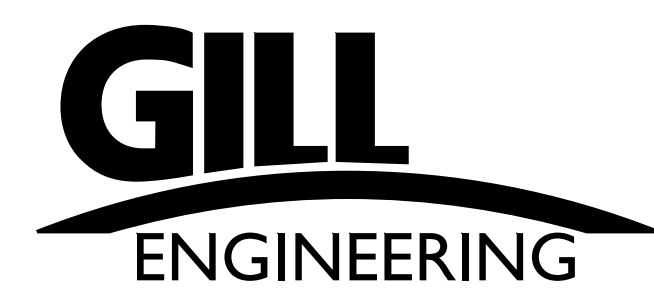
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	<b>SILT FENCE</b>
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**NOTES:**  
 REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.51) OR GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).

REVISIONS		
MARCH 21, 2008	WHF	
DECEMBER 11, 2008	WHF	
JANUARY 13, 2009	WHF	

EPSC LAYOUT PLAN SYMBOLOGY LEGEND	
<b>PROJECT BOUNDARY FENCE</b>	
PDF ——— PDF	PROJECT DEMARCATION FENCE
BF — x — x — BF	BARRIER FENCE
<b>EPSC MEASURES</b>	
ONNOONNOONNO	FILTER CURTAIN
— x — x — x — x —	SILT FENCE
— x — x — x — x —	SILT FENCE WOVEN WIRE
— > — > — > —	CHECK DAM
[Shaded Box]	DISTURBED AREAS REQUIRING RE-VEGETATION
[Cross-hatched Box]	EROSION MATTING
<b>ENVIRONMENTAL RESOURCES</b>	
— > — > — > — > —	WETLAND BOUNDARY
- - - - -	RIPARIAN BUFFER ZONE
- - - - -	SOIL TYPE BOUNDARY
— · — · — · — · —	THREATENED & ENDANGERED SPECIES
HAZ ——— HAZ	HAZARDOUS WASTE AREA
— · — · — · — · —	AGRICULTURAL LAND
— · — · — · — · —	FISH & WILDLIFE HABITAT
— · — · — · — · —	FLOOD PLAIN
— ◆ — ◆ — ◆ — ◆ —	STORM WATER
— · — · — · — · —	USDA FOREST SERVICE LANDS
— · — · — · — · —	WILDLIFE HABITAT SUIT/CONN
<b>ARCHEOLOGICAL &amp; HISTORIC</b>	
— · — · — · — · —	ARCHEOLOGICAL BOUNDARY
— · — · — · — · —	HISTORIC DISTRICT BOUNDARY
— · — · — · — · —	HISTORIC AREA
(H)	HISTORIC STRUCTURE
<b>UTILITY SYMBOLOGY</b>	
— AER E&T —	AREAL ELECTRIC & TELEPHONE
— E — · — ·	AREAL ELECTRIC
— UE — · — ·	UNDERGROUND ELECTRIC
— UT — · — ·	UNDERGROUND TELEPHONE
— UC — · — ·	UNDER GROUND TV
— G — · — ·	GAS LINE
— W — · — ·	WATER LINE
<b>CONSTRUCTION FEATURES</b>	
○ — △ — ○	TOE OF SLOPE CUT OR FILL
⊗ ⊗ ⊗ ⊗	STONE FILL, TYPE III
⊗ ⊗ ⊗ ⊗	STONE FILL, TYPE II
⊗ ⊗ ⊗ ⊗	STONE FILL, TYPE I



PROJECT NAME: LUDLOW VILLAGE	
PROJECT NUMBER: BO 1443(52)	
FILE NAME: z12j638erodetails.dgn	PLOT DATE: 2/19/2021
PROJECT LEADER: G.KOBER	DRAWN BY: D.CASALE
DESIGNED BY: S.CARPENTER	CHECKED BY: -----
EPSC DETAILS	SHEET 19 OF 19