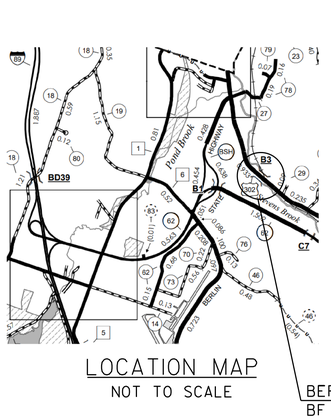
REVIEWER NOTES:

1. CONSTRUCTION WILL BE PERFORMED IN THREE STAGES AND IS EXPECTED TO BE COMPLETED IN ONE SEASON.
2. UTILITIES:
   - A) EXISTING 8" CAST IRON CITY OF MONTPELIER WATER MAIN EXISTS IMMEDIATELY NORTH OF THE NORTHWEST CORNER OF THE PROPOSED BRIDGE. THE EXACT LOCATION OF THIS MAIN SHALL BE DETERMINED DURING THE DESIGN PHASE OR AT THE START OF CONSTRUCTION TO ENSURE THE CONTRACTOR PROTECTS THE PIPELINE. EARLY COORDINATION WITH THE UTILITY OWNER IS RECOMMENDED.
   - B) THERE IS AN EXISTING GUY WIRE CROSSING THE ROADWAY TO A STUB POLE/ANCHOR APPROXIMATELY 50' WEST OF THE BRIDGE. THIS OVERHEAD GUY WIRE MUST BE REMOVED PRIOR TO CONSTRUCTION FOR CRANE OPERATIONS. THE EXISTING STUB POLE/ANCHOR IS LOCATED IN THE FUTURE SHOULDER AND MUST BE REMOVED OR RELOCATED.
   - C) AN EXISTING ELECTRIC LINE CROSSES THE ROADWAY APPROXIMATELY 80' WEST OF THE BRIDGE. IT APPEARS THAT THE WIRE IS ABANDONED. THIS SHOULD BE CONFIRMED AND THE WIRE REMOVED PRIOR TO CONSTRUCTION.
3. RIGHT-OF-WAY:
   - A) IF A PUSH BRACE IS USED TO REPLACE THE EXISTING GUY WIRE/STUB POLE THAT IS IN CONFLICT, A PERMANENT UTILITY ROW EASEMENT WOULD BE REQUIRED, SEE UTILITY NOTE 2B ABOVE.
   - B) THREE TEMPORARY CONSTRUCTION EASEMENTS WILL BE REQUIRED FOR:
     1. ROADWAY SIDE SLOPE CONSTRUCTION NORTHWEST OF THE BRIDGE AT STA. 147+90, LT. THIS TEMPORARY EASEMENT SHALL BE INCREASED IN SIZE TO ALLOW FOR CONTRACTOR ACCESS AND EQUIPMENT STAGING AS SHOWN ON THE STAGING PLAN.
     2. REMOVAL OF THE EXISTING UPSTREAM WINGWALLS SOUTH OF THE BRIDGE. THESE TWO TEMPORARY EASEMENTS SHALL BE INCREASED IN SIZE TO ALLOW FOR CONTRACTOR ACCESS AS SHOWN ON THE STAGING PLAN.
   - C) IT IS EXPECTED THAT THE CONTRACTOR WILL UTILIZE THE AREA SOUTHWEST OF THE BRIDGE (OWNED BY THE STATE OF VERMONT AND PART OF THE VAST TRAIL) FOR EQUIPMENT STAGING/LAYDOWN.
   - D) ADDITIONAL LAYOUT SURVEY IS REQUIRED AT THE WESTERN LIMIT OF PROJECT TO FULLY DISPLAY EXTENT OF RIGHT-OF-WAY IMPACTS.
4. PROJECT LIMITS: THE PROJECT BEGINS WHERE THE TYPICAL SECTION OF THE CORRIDOR CURRENTLY NARROWS TO MEET THE EXISTING BRIDGE AND THE PROJECT ENDS AT THE LIMITS OF THE APRON OF THE EXISTING CONCRETE RAILROAD CROSSING.
5. TEMPORARY SPEED LIMIT REDUCTION IS NOT INCLUDED BUT CAN BE ADDED AT THE DIRECTION OF VTRANS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
BRIDGE PROJECT

TOWN OF BERLIN
COUNTY OF WASHINGTON

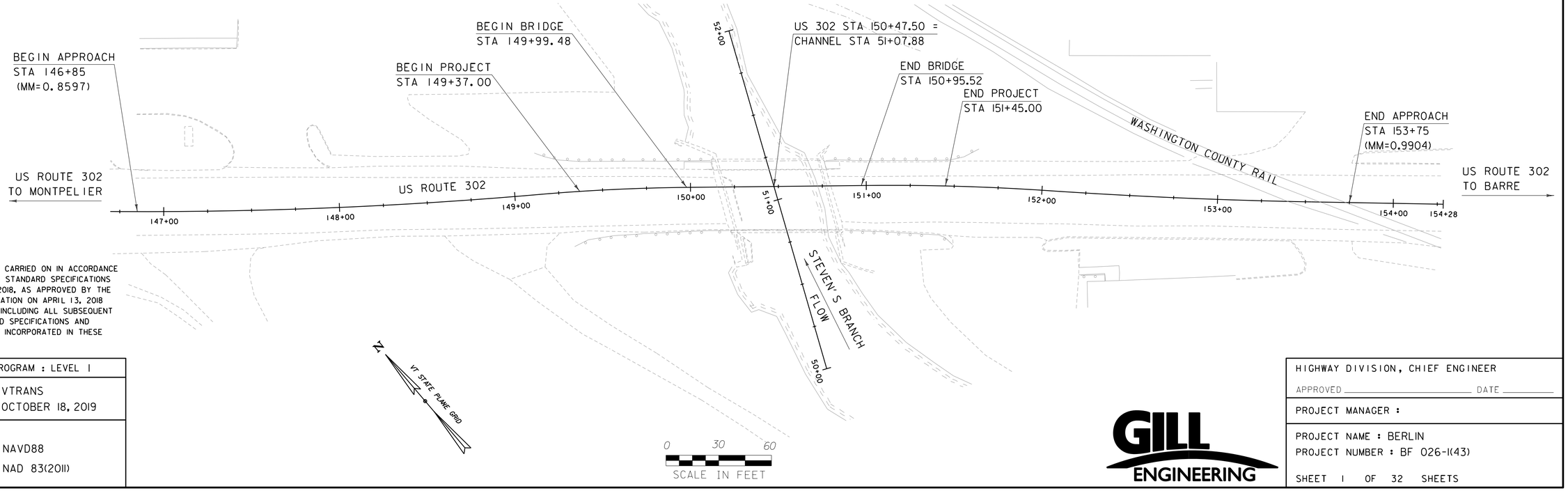
ROUTE NO: US ROUTE 302, URBAN PRINCIPAL ARTERIAL
BRIDGE NO: 3 OVER STEVENS BRANCH

PROJECT LOCATION: 0.7 MILES SOUTHEAST OF THE INTERSECTION OF US 302 AND THE BERLIN STATE HIGHWAY

PROJECT DESCRIPTION: REMOVAL OF EXISTING BRIDGE AND CONSTRUCTION OF A WIDER BRIDGE ON A SIMILAR ALIGNMENT SHIFTED NORTH WITH RELATED APPROACH WORK AND INCIDENTAL ITEMS.

LENGTH OF STRUCTURE: 96.04 FEET
LENGTH OF ROADWAY: 111.96 FEET
TOTAL LENGTH OF PROJECT: 208.00 FEET

PRELIMINARY PLANS
JULY 20, 2020



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 1	
SURVEYED BY :	VTRANS
SURVEYED DATE :	OCTOBER 18, 2019
DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAD 83(2011)

GILL ENGINEERING

HIGHWAY DIVISION, CHIEF ENGINEER
APPROVED _____ DATE _____

PROJECT MANAGER :

PROJECT NAME : BERLIN
PROJECT NUMBER : BF 026-1(43)

SHEET 1 OF 32 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version
2018.12.18.10

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DETAIL SHEETS

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HSD-621.06	MISCELLANEOUS GUARDRAIL DETAILS	2/27/2017
HSD-621.07	MIDWEST GUARDRAIL SYSTEM (MGS)	4/17/2019
HSD-621.07	W-BEAM GUARDRAIL COMPONENTS	4/17/2019
HSD-621.07	MIDWEST GUARDRAIL SYSTEM (MGS) ANCHOR	4/17/2019
HSD-621.07	MIDWEST GUARDRAIL SYSTEM (MGS) ANCHOR COMPONENTS	4/17/2019
HSD-621.07	MIDWEST GUARDRAIL SYSTEM (MGS) ANCHOR COMPONENTS	4/17/2019
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C-3B	SIDEWALK RAMPS AND MEDIAN ISLANDS	03-10-2008
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G-1	STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR, TYPICALS)	03-10-2017
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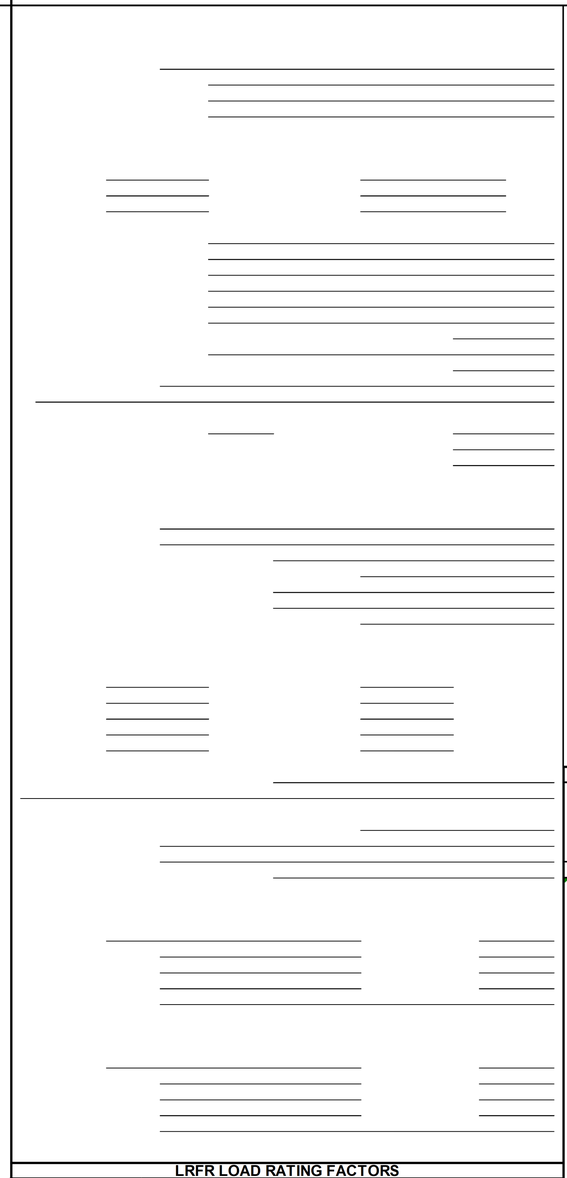
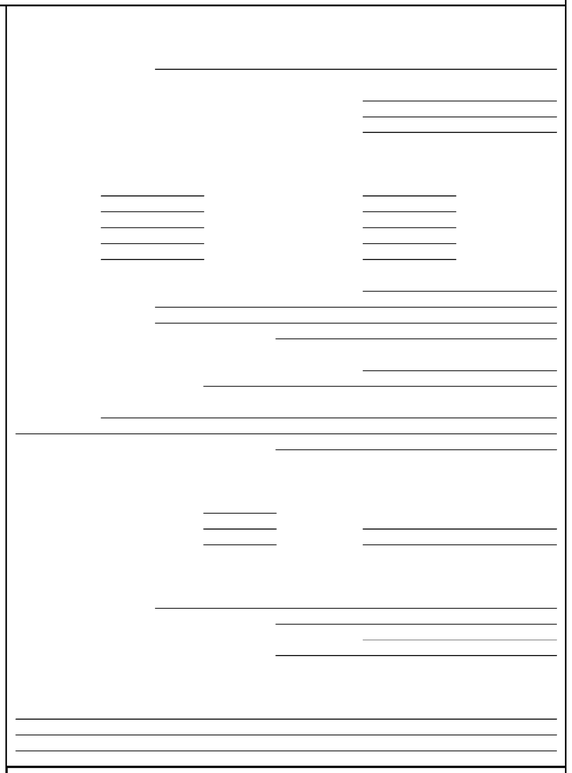
T-45	SQUARE TUBE SIGN POST AND ANCHOR	01-02-2013
T-56	STANDARD SIGN PLACEMENT	10-26-2015

FINAL HYDRAULIC REPORT





LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY							
POSTING							
OPERATING							
COMMENTS:							

DESIGN VALUES

1.	DESIGN LIVE LOAD		HL-93
2.	FUTURE PAVEMENT	d_p:	2.5 INCH
3.	DESIGN SPAN	L:	95.00 FT
4.	MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	---
5.	PRESTRESSING STRAND	f_y:	---
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:	4.0 KSI
11.	CONCRETE, CLASS C	f'_c:	3.0 KSI
12.	REINFORCING STEEL	f_y:	60 KSI
13.	STRUCTURAL STEEL AASHTO M270 (WEATHERING)	f_y:	50 KSI
14.	NOMINAL BEARING RESISTANCE OF SOIL	q_n:	4.0 KSF
15.	SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
16.	NOMINAL BEARING RESISTANCE OF ROCK	q_n:	10.0 KSF
17.	ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
18.	PILE RESISTANCE FACTOR	ϕ:	0.60
19.	LATERAL PILE DEFLECTION	Δ:	0.03 INCH
20.	BASIC WIND SPEED	V_{3s}:	---
21.	MINIMUM GROUND SNOW LOAD	p_g:	---
22.	SEISMIC DATA PGA: ---	S_s:	---
		S_1:	---
23.			
24.			---
25.			---
26.			---

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2017	13600	1400	51	3.8	650
2037	14400	1500	51	5.6	1000

20 year ESAL for flexible pavement from 2017 to 2037 : 4336000

40 year ESAL for flexible pavement from 2017 to 2057 : 10249000

Design Speed : 40 mph

AS BUILT "REBAR" DETAIL

LEVEL I	LEVEL II	LEVEL III
TYPE:	TYPE:	TYPE:
GRADE:	GRADE:	GRADE:

PROJECT NAME: **BERLIN**

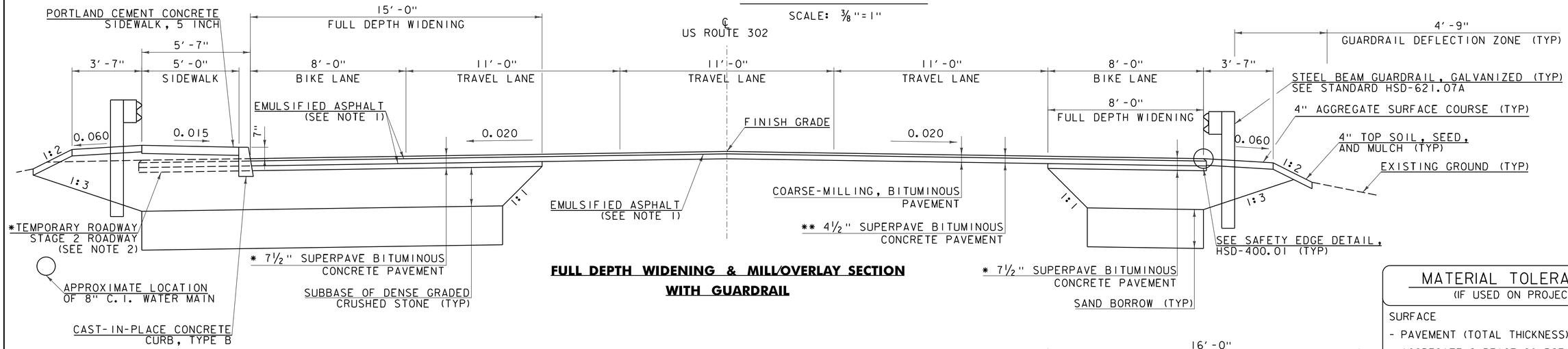
PROJECT NUMBER: **26-1(43)**

FILE NAME: **PI Sheet Builder_v008-20c.xls**
PROJECT LEADER: **A.SPERA**
DESIGNED BY: **C.BURNER**
PRELIMINARY INFORMATION SHEET 1

PLOT DATE: 7/20/2020
DRAWN BY: **C.BURNER**
CHECKED BY: -----
SHEET 2 OF 32

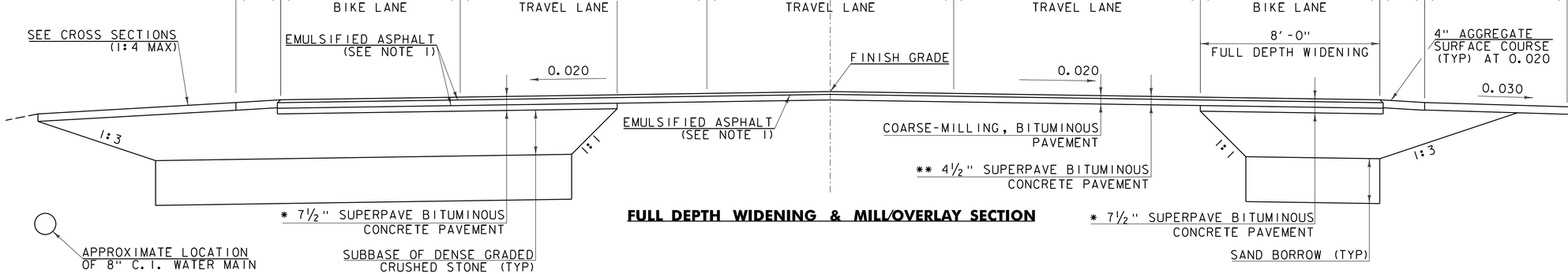
TYPICAL ROADWAY SECTION
US ROUTE 302

SCALE: 3/8"=1"

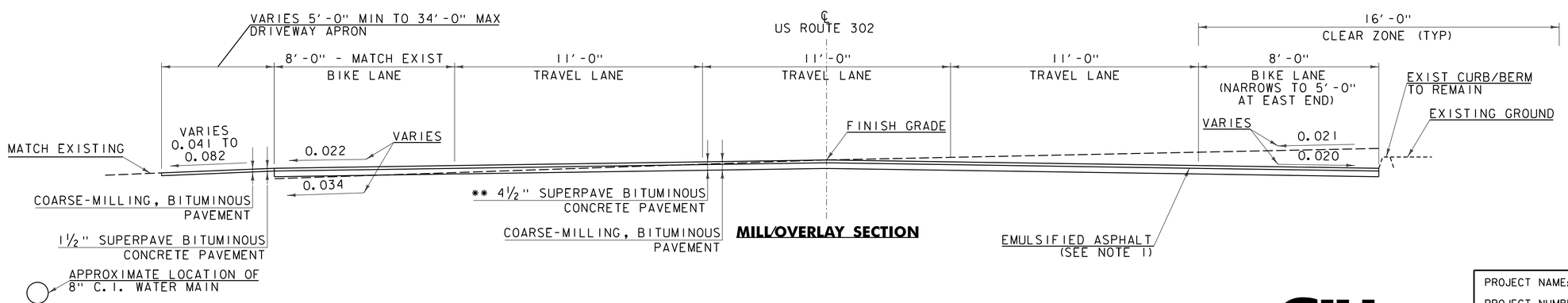


FULL DEPTH WIDENING & MILL/OVERLAY SECTION WITH GUARDRAIL

MATERIAL TOLERANCES (IF USED ON PROJECT)	
SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- ¼"
- AGGREGATE SURFACE COURSE	+/- ½"
SUBBASE	+/- 1"
SAND BORROWS	+/- 1"



FULL DEPTH WIDENING & MILL/OVERLAY SECTION



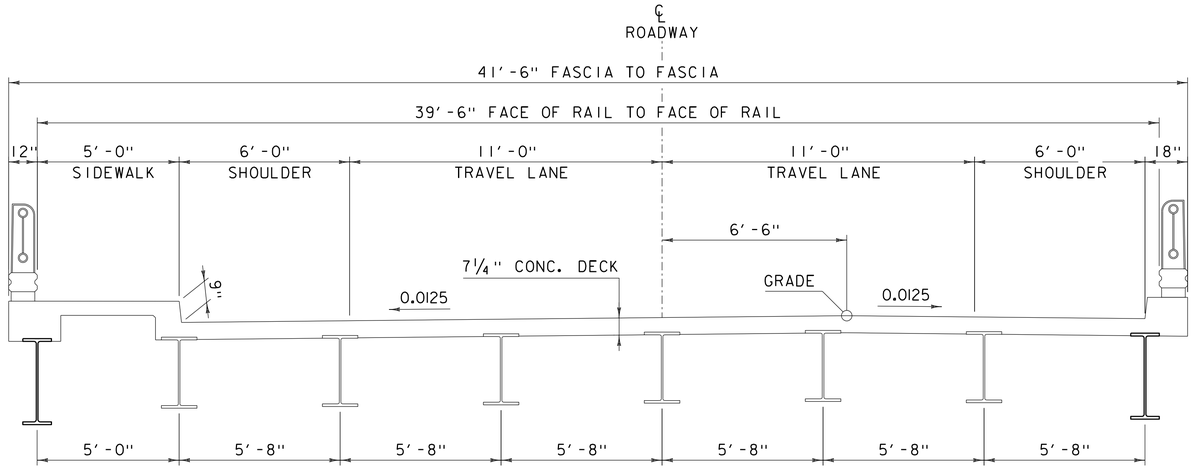
MILL/OVERLAY SECTION

NOTES:
1. EMULSION APPLICATION RATE SHALL BE APPLIED PER TABLE 406.12A OF THE STANDARD SPECIFICATIONS
2. FULL DEPTH ROADWAY CONSTRUCTION SHALL BE EXTENDED TO THE LIMITS SHOWN ON THE TRAFFIC STAGING PLAN FOR USE DURING STAGE
3. THE EXTENDED TEMPORARY ROADWAY CONSTRUCTION AND REMOVAL TO BE PAID AS ITEM 641.10.
4. THE CONTRACTOR MAY SUBSTITUTE SUBBASE MATERIAL FOR THE SAND BORROW SHOWN ON THE PLANS. THE SUBBASE MATERIAL SHALL BE THE TYPE SPECIFIED IN THE CONTRACT AND SHALL BE PLACED TO MEET THE SUBBASE SPECIFICATIONS. IF SUBBASE IS PLACED IN LIEU OF SAND BORROW, A GEOTEXTILE MEETING THE REQUIREMENTS OF ITEM 649.11 "GEOTEXTILE FOR ROAD BED SEPARATOR" SHALL BE PLACED BETWEEN THE SUBGRADE AND THE SUBBASE MATERIAL. ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INCLUDING THE GEOTEXTILE SHALL BE INCIDENTAL TO 203.31 "SAND BORROW".

* 1½"	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IVS	** 1½"	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IVS
6"	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IIS, (2 LIFTS - 3" PER LIFT)	3"	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IIS
24"	SUBBASE OF DENSE GRADED CRUSHED STONE		
24"	SAND BORROW		

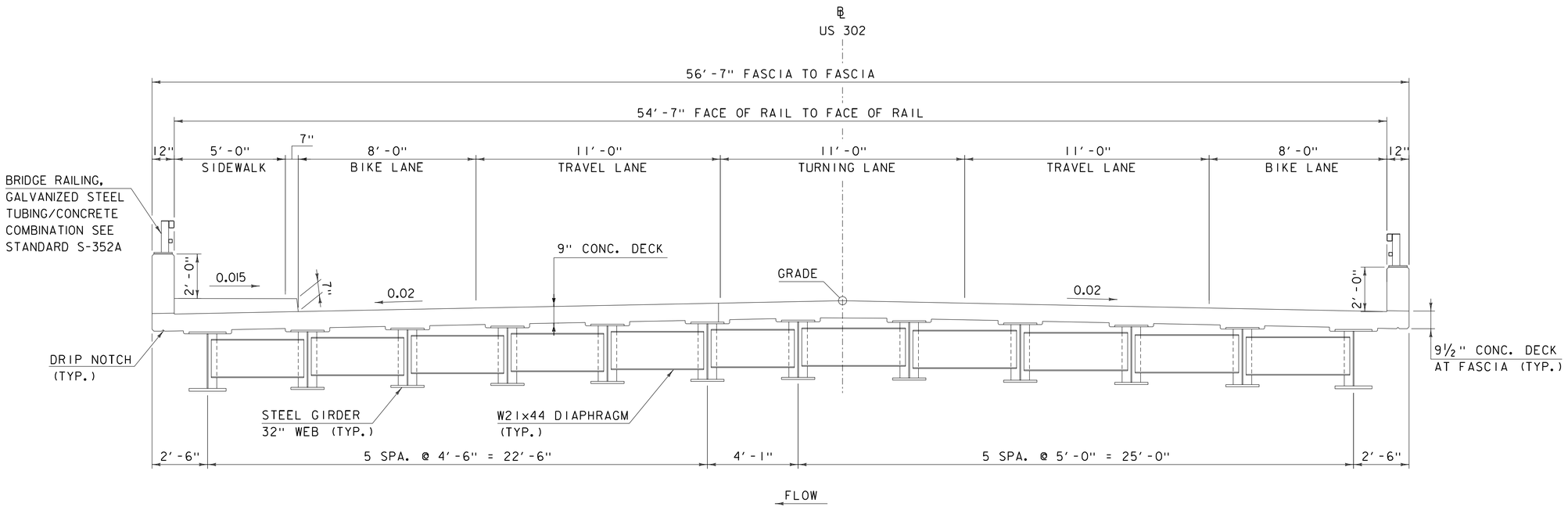
GILL ENGINEERING

PROJECT NAME:	BERLIN
PROJECT NUMBER:	BF 026-1(43)
FILE NAME: z13b254typ.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: A. LEENHOUTS
DESIGNED BY: A. LEENHOUTS	CHECKED BY: -----
TYPICAL ROADWAY SECTIONS	SHEET 3 OF 32



EXISTING BRIDGE TYPICAL SECTION

SCALE ⅜" = 1'-0"

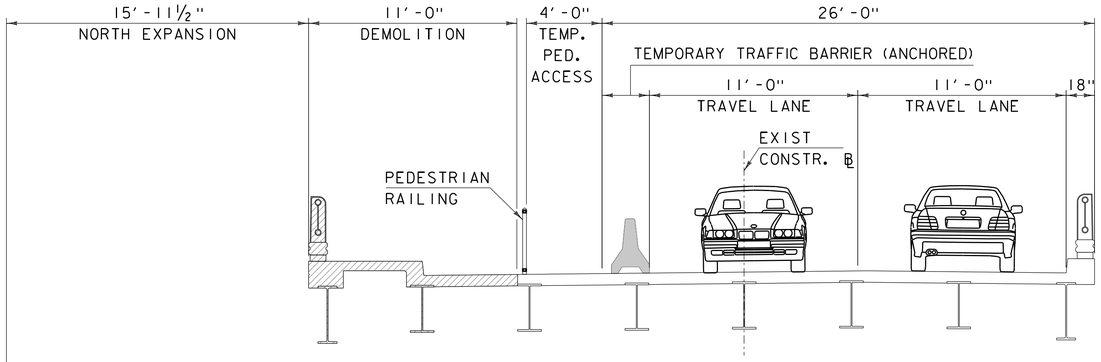


PROPOSED BRIDGE TYPICAL SECTION

SCALE ⅜" = 1'-0"

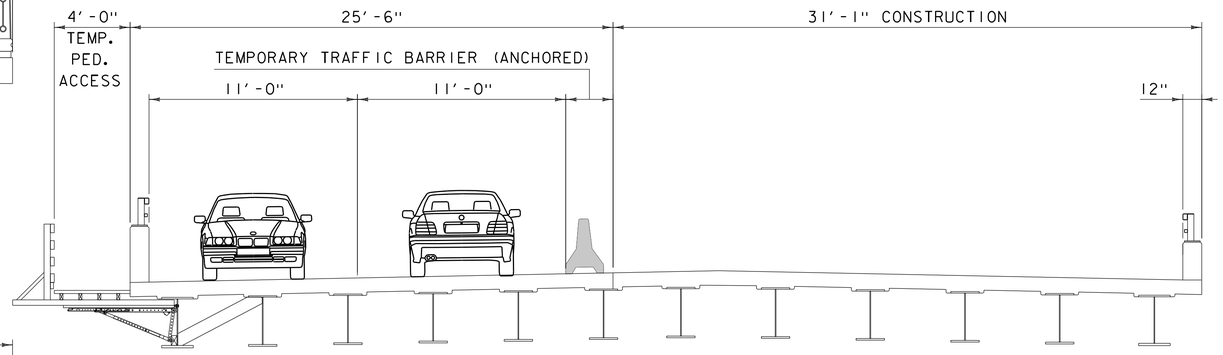
GILL ENGINEERING

PROJECT NAME:	BERLIN
PROJECT NUMBER:	BF 026-1(43)
FILE NAME: zl3b254typ.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: C. BURNER
DESIGNED BY: C.BURNER	CHECKED BY: -----
TYPICAL BRIDGE SECTIONS	SHEET 4 OF 32



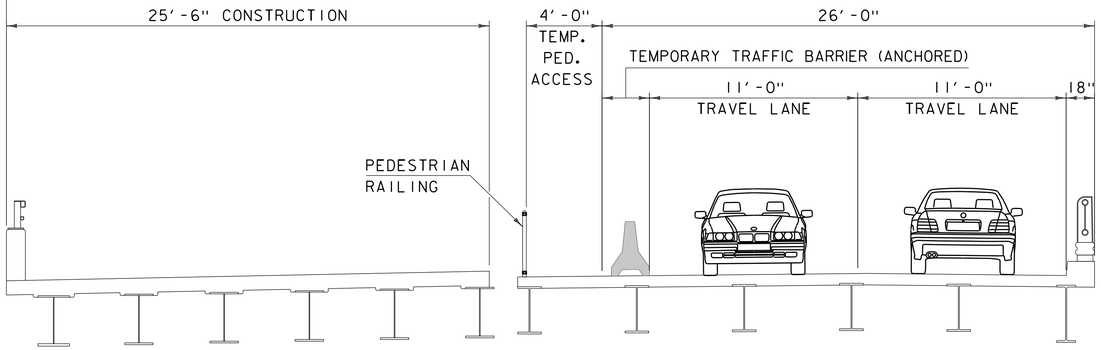
STAGE 1 - DEMOLITION

SCALE: ¼″ = 1′-0″



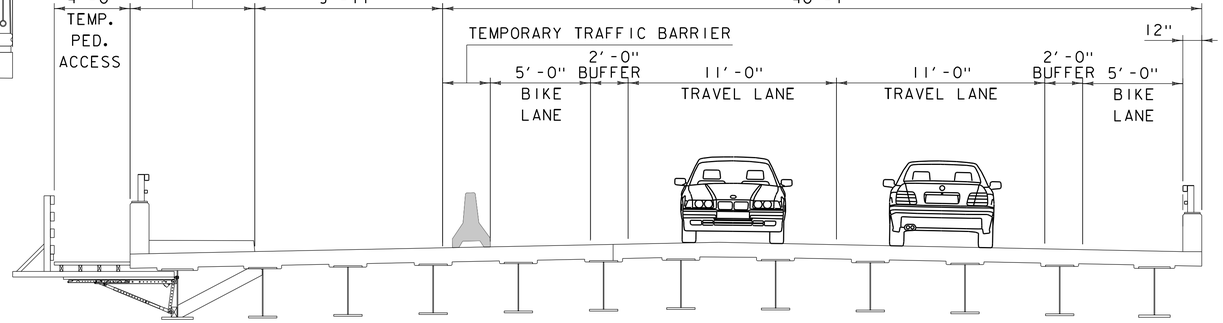
STAGE 2 - CONSTRUCTION

SCALE: ¼″ = 1′-0″



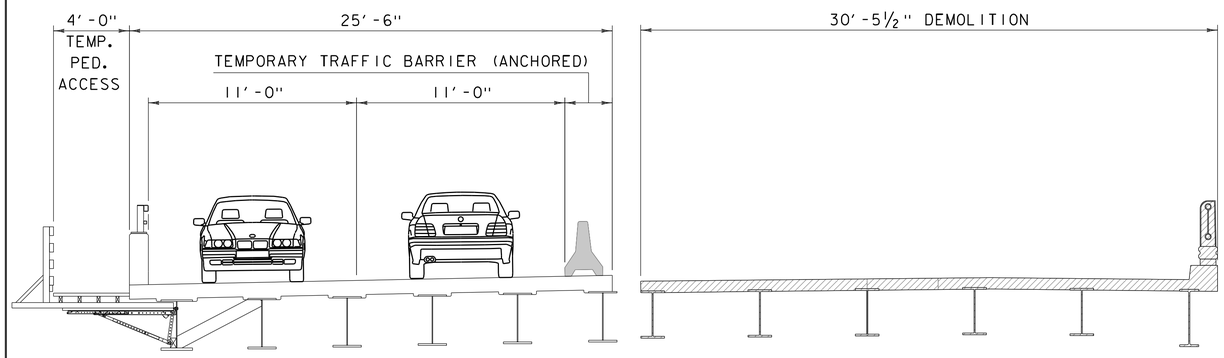
STAGE 1 - CONSTRUCTION

SCALE: ¼″ = 1′-0″



STAGE 3 - CONSTRUCTION

SCALE: ¼″ = 1′-0″

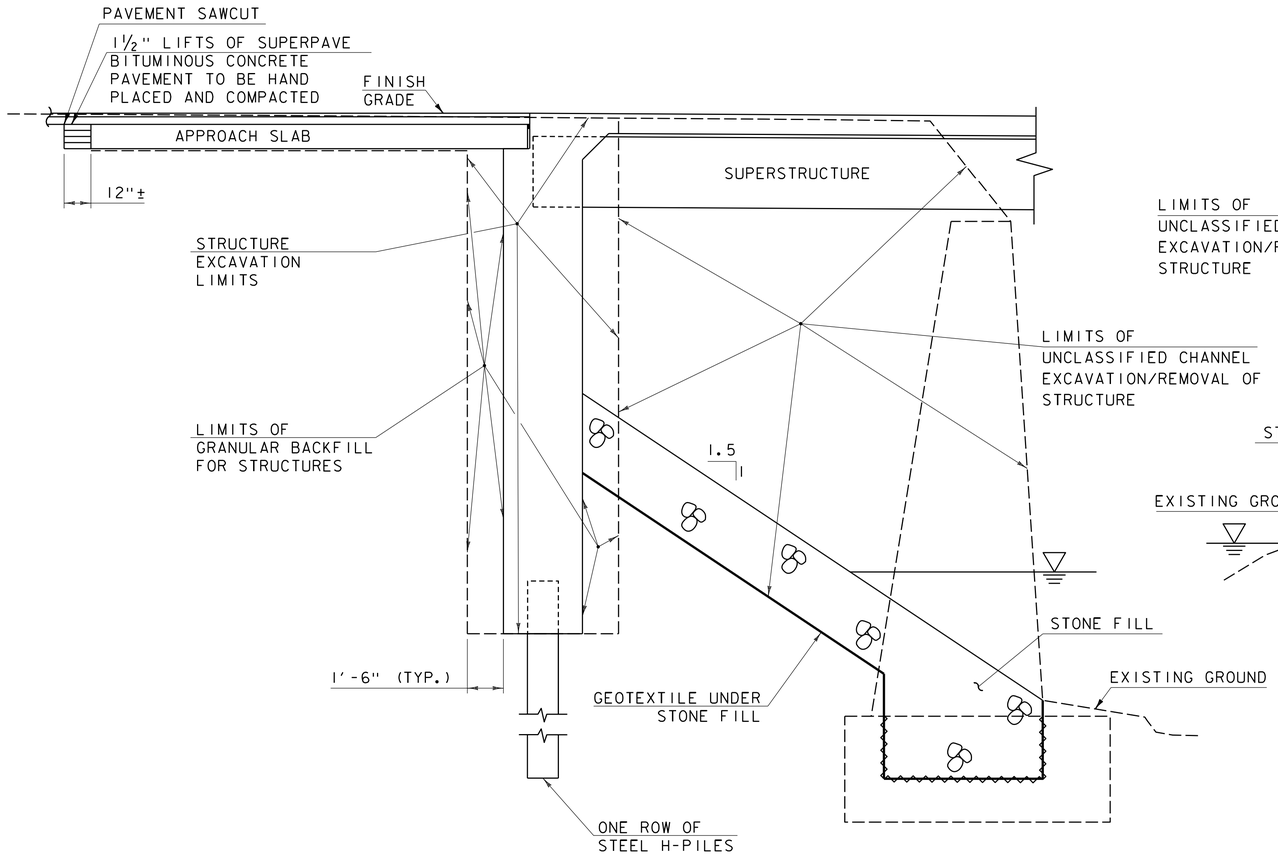


STAGE 2 - DEMOLITION

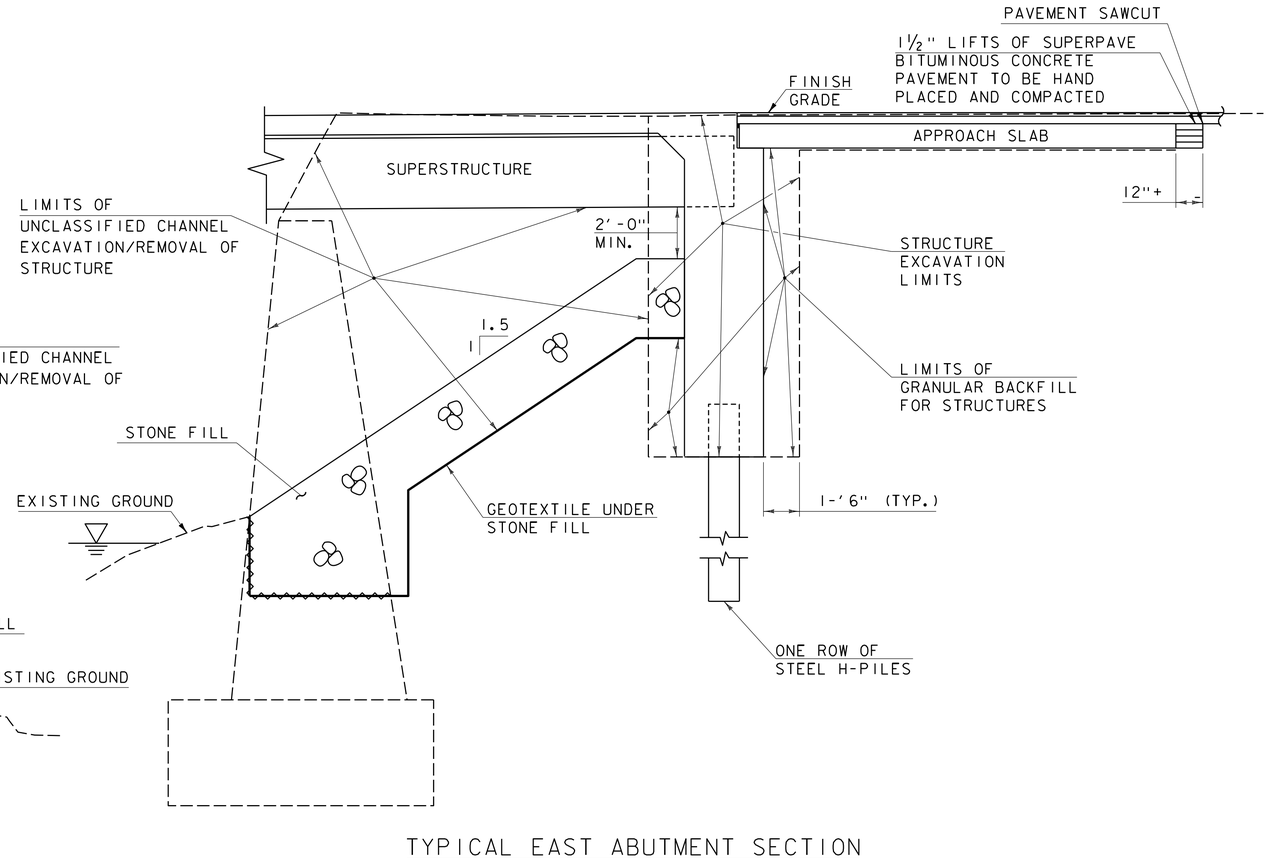
SCALE: ¼″ = 1′-0″

GILL ENGINEERING

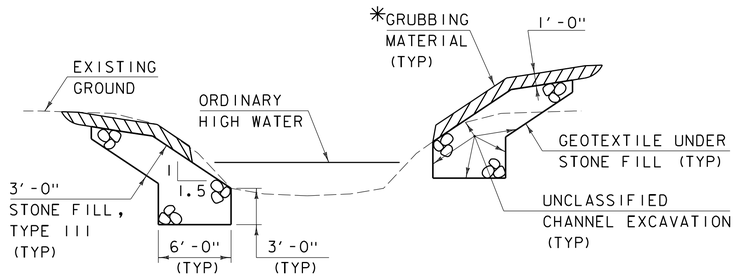
PROJECT NAME: BERLIN	
PROJECT NUMBER: BF 026-1(43)	
FILE NAME: z13b254typ.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: C.BURNER
DESIGNED BY: C.BURNER	CHECKED BY: -----
BRIDGE STAGING SECTIONS	SHEET 5 OF 32



TYPICAL WEST ABUTMENT SECTION
(NOT TO SCALE)

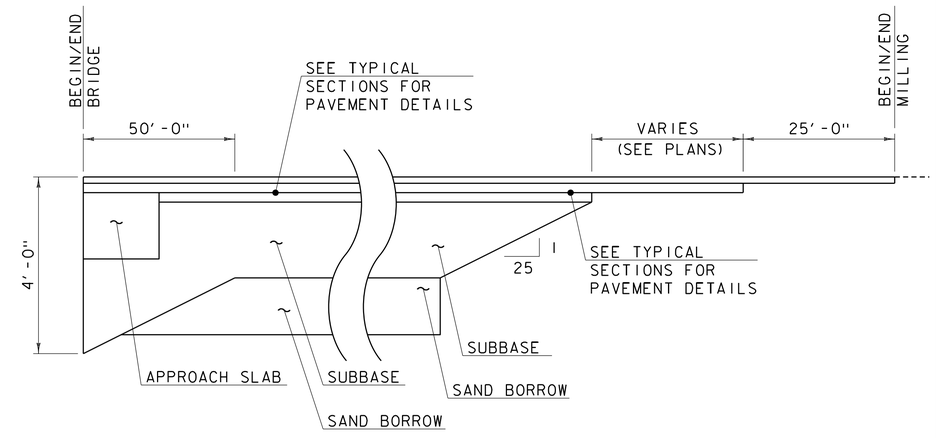


TYPICAL EAST ABUTMENT SECTION
(NOT TO SCALE)



TYPICAL CHANNEL SECTION
(NOT TO SCALE)

*GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.



SUBBASE DETAIL AT ABUTMENT
(NOT TO SCALE)

MATERIAL TRANSITION DETAIL
(NOT TO SCALE)

GILL ENGINEERING

PROJECT NAME:	BERLIN
PROJECT NUMBER:	BF 026-1(43)
FILE NAME: z13b254typ.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: C.BURNER
DESIGNED BY: C.BURNER	CHECKED BY: -----
EARTHWORK SECTIONS	SHEET 6 OF 32

GENERAL INFORMATION

SYMBOLOGY LEGEND NOTE

THE SYMBOLOGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLOGY. THE SYMBOLOGY 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. SYMBOLOGY 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 SYMBOLOGY

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 SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

- 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 — PROJECT DEMARCATION FENCE
- BF — BARRIER FENCE
- TREE PROTECTION ZONE (TPZ)
- STRIPING LINE REMOVAL
- SHEET PILES

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

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

EPSC LAYOUT PLAN SYMBOLOGY

EPSC MEASURES

- FILTER CURTAIN
- SILT FENCE
- SILT FENCE WOVEN WIRE
- CHECK DAM
- DISTURBED AREAS REQUIRING RE-VEGETATION
- EROSION MATTING

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLOGY

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 SYMBOLOGY

EXISTING FEATURES

- ROAD EDGE PAVEMENT
- ROAD EDGE GRAVEL
- DRIVEWAY EDGE
- DITCH
- FOUNDATION
- 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

GILL ENGINEERING

PROJECT NAME: BERLIN
PROJECT NUMBER: BF 026-I(43)

FILE NAME: z13a254legend.dgn
PROJECT LEADER: A.SPERA
DESIGNED BY: VTRANS
LEGEND SHEET

PLOT DATE: 7/20/2020
DRAWN BY: VTRANS
CHECKED BY: VTRANS
SHEET 7 OF 32

GPS CONTROL POINTS

PT #1 LAB
NORTH = 631390.1500
EAST = 1626554.6500
ELEV. = 542.570

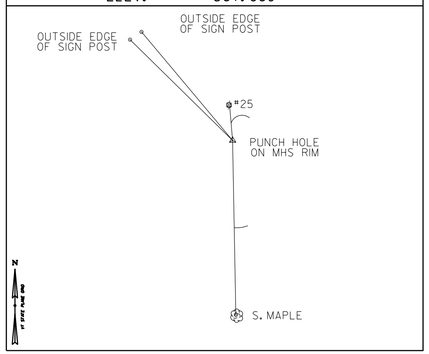
GENERAL LOCATION - BERLIN
TO REACH FROM THE INTERSECTION OF U.S. ROUTES 2 AND 302 IN MONTPELIER, GO SOUTH ALONG U.S. ROUTE 302 FOR 1.0 MI (1.6 KM) TO A TRAFFIC LIGHT AT A 4-WAY INTERSECTION. TURN LEFT AND GO EAST ALONG A PAVED ROAD (PARTRIDGE ROAD) FOR 0.05 MI (0.08 KM) TO THE SITE OF THE MARK ON THE LEFT IN A GRASS STRIP BETWEEN PARTRIDGE ROAD AND A PAVED PARKING LOT FOR THE VERMONT AGENCY OF TRANSPORTATION MATERIALS AND RESEARCH LABORATORY.
THE STATION IS LOCATED 57.5 M (188.6 FT) EAST OF THE EAST EDGE OF U.S. ROUTE 302, 1.8 M (5.9 FT) NORTH OF THE NORTH EDGE OF PARTRIDGE ROAD, 0.9 M (3.0 FT) SOUTH OF THE SOUTH EDGE OF THE PAVED PARKING LOT, 20.9 (68.6 FT) NORTHWEST OF POLE NUMBER 1/01, 27.1 M (88.9 FT) NORTHEAST OF POLE NUMBER 50/1/2, 0.45 M (1.48 FT) SOUTH OF A FIBERGLASS WITNESS POST.

PT #3 SIMPLY X
NORTH = 630294.6540
EAST = 1626456.8400
ELEV. = 547.252

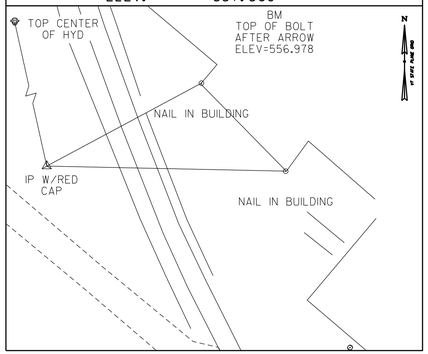
GENERAL LOCATION - BERLIN
TO REACH FROM THE INTERSECTION OF U.S. ROUTES 2 AND 302 IN MONTPELIER, GO SOUTH ALONG U.S. ROUTE 302 FOR 1.0 MI (1.6 KM) TO A TRAFFIC LIGHT AT A 4-WAY INTERSECTION; CONTINUE SOUTH ON 302 FOR 0.2 MI TO OVERLOOK DR AND WHAT USED TO BE SIMPLY SUBS TWO ON THE RIGHT. THE MARK IS A STAMPED X ON THE RIM OF A SEWER MANHOLE IN THE LAWN. THE MARK IS (42.6 FT) SE OF THE CENTERLINE OF OVERLOOK DR AND (11.6 FT) NW OF THE EDGE OF RT 302.

TRAVERSE TIES

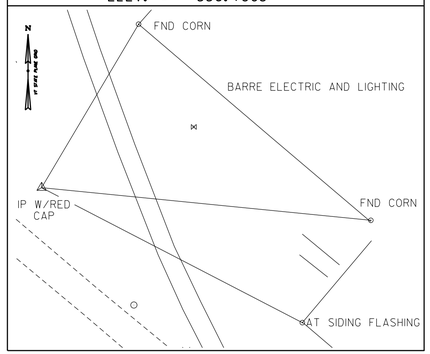
HVCTRL #5
NORTH = 628331.6541
EAST = 1627129.4351
ELEV. = 561.069



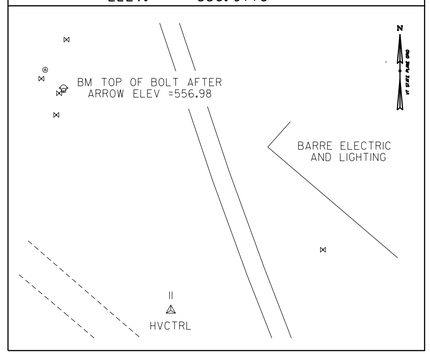
HVCTRL #6
NORTH = 627848.8300
EAST = 1627794.3700
ELEV. = 557.360



HVCTRL #11
NORTH = 627849.0118
EAST = 1627794.2326
ELEV. = 556.7803



BM #1153
NORTH = 627907.1023
EAST = 1627765.9470
ELEV. = 556.9776



NORTH =
EAST =
ELEV. =

ALIGNMENT TIES

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

DATUM
VERTICAL NAVD88
HORIZONTAL NAD83(2011)
ADJUSTMENT COMPASS

PROJECT NAME: BERLIN
PROJECT NUMBER: BF 026-1(43)

FILE NAME: X13B254T1.DGN
PROJECT LEADER: W.PELLETIER
DESIGNED BY: VTRANS
TIE SHEET

PLOT DATE: 7/20/2020
DRAWN BY: H.MCGOWAN
CHECKED BY: -----
SHEET 8 OF 32

N

VT STATE PLANE GRID

SOIL CLASSIFICATION:
BUXTON SILT LOAM
15-25% SLOPES

SOIL CLASSIFICATION:
WATER

SOIL CLASSIFICATION:
URBAN LAND -
UDIPSAMMENTS COMPLEX
OCCASIONALLY FLOODED
"K" FACTOR 0.05
LOW ERODIBILITY

SOIL CLASSIFICATION:
WATER

SOIL CLASSIFICATION:
BUCKLAND LOAM
VERY STONY
15-35% SLOPES

AGE

CONNOR REALTY LLC

EXISTING
RIGHT-OF-WAY

560

550

540

PAVED
DRIVE

EXISTING RIGHT-OF-WAY

MATCH LINE STA 149+25.00

US ROUTE 302
TO MONTPELIER

146+50

147+00

148+00

149+00

EXISTING
RIGHT-OF-WAY

GRAVEL
DRIVE

FIELD
DRIVE
(VAST TRAIL)

PAVED
DRIVE

STATE OF VERM
AGENCY OF TRANSP

BUDZYN, FREDERICK & BETHANY

P
L

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

GILL ENGINEERING

PROJECT NAME: BERLIN	
PROJECT NUMBER: BF 026-1(43)	
FILE NAME: zl3b254existingconditions.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: C. BURNER
DESIGNED BY: C. BURNER	CHECKED BY: -----
EXISTING CONDITIONS SHEET 1	SHEET 9 OF 32

STATE OF VERMONT
NCY OF TRANSPORTATION

CIAMPI, GREGORY V.
HEBERT, STELLA K.

MALONE 856 US ROUTE 302 PROPERTIES LLC

ANDREWS, ELLEN
SHADOURI, PAUL
CESARI, GENE

MALONE 921 ROUTE 302 PROPERTIES LLC

STEVENS BRANCH
FLOW

EXISTING RIGHT-OF-WAY

MATCH LINE STA 149+25.00

US ROUTE 302
TO BARRE

150+00 151+00 152+00 153+00 154+00 154+28

SOIL CLASSIFICATION:
URBAN LAND-
UDIPSAMMENTS COMPLEX
OCCASIONALLY FLOODED
"K" FACTOR 0.05
LOW ERODIBILITY

SOIL CLASSIFICATION:
BUCKLAND LOAM
VERY STONY
15-35% SLOPES

SOIL CLASSIFICATION:
WATER

VT STATE PLANE GRID

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

EXISTING BRIDGE INFO
BUILT 1929, EXPANDED 1941
SINGLE SPAN ROLLED BEAM
STRUCTURE LENGTH = 64 FEET

GILL ENGINEERING

PROJECT NAME: BERLIN
PROJECT NUMBER: BF 026-1(43)

FILE NAME: zl3b254existingconditions.dgn
PROJECT LEADER: A.SPERA
DESIGNED BY: C. BURNER
EXISTING CONDITIONS SHEET 2

PLOT DATE: 7/20/2020
DRAWN BY: C.BURNER
CHECKED BY: -----
SHEET 10 OF 32

AGGREGATE SURFACE COURSE

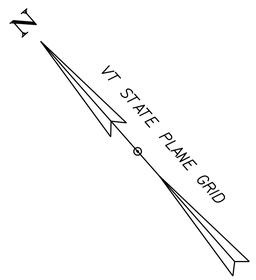
STA.	146+85.0	TO 147+35.2	LT
STA.	147+50.2	TO 148+79.4	RT
STA.	147+91.5	TO 149+25.0	LT
STA.	148+79.4	TO 149+18.2	RT (DRIVEWAY)
STA.	149+18.2	TO 149+25.0	RT

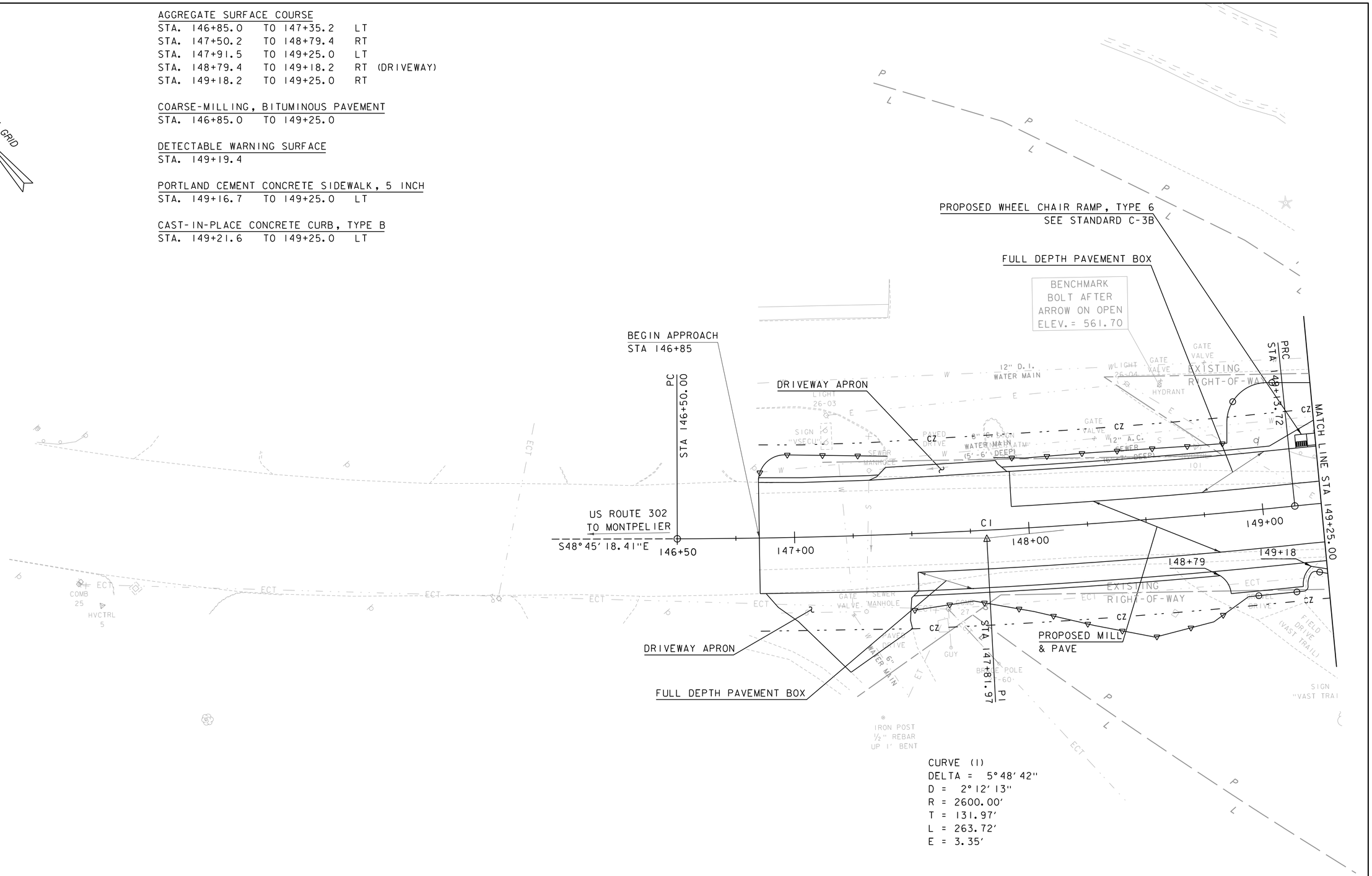
COARSE-MILLING, BITUMINOUS PAVEMENT
STA. 146+85.0 TO 149+25.0

DETECTABLE WARNING SURFACE
STA. 149+19.4

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
STA. 149+16.7 TO 149+25.0 LT

CAST-IN-PLACE CONCRETE CURB, TYPE B
STA. 149+21.6 TO 149+25.0 LT





CURVE (1)
DELTA = 5°48'42"
D = 2°12'13"
R = 2600.00'
T = 131.97'
L = 263.72'
E = 3.35'

LAYOUT 1

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

GILL ENGINEERING

PROJECT NAME:	BERLIN
PROJECT NUMBER:	BF 026-1(43)
FILE NAME: zl3b254bdr.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: A. LEENHOUTS
DESIGNED BY: A. LEENHOUTS	CHECKED BY: -----
LAYOUT 1	SHEET 11 OF 32

PERFORM TEST PITS OR SUBSURFACE INVESTIGATION PRIOR TO CONSTRUCTION TO LOCATE EXISTING WATERLINE. THE WATERLINE SHALL REMAIN IN PLACE AND SHALL NOT BE DISTURBED. ANY POTENTIAL CONFLICT SHALL BE IDENTIFIED BY THE CONTRACTOR AND REPORTED TO THE ENGINEER IMMEDIATELY.

PROPOSED WHEEL CHAIR RAMP, TYPE 6
SEE STANDARD C-3B

FULL DEPTH PAVEMENT BOX

CURVE (2)
DELTA = 4°22'24"
D = 5°12'31"
R = 1100.00'
T = 42.00'
L = 83.96'
E = 0.80'

REMOVE OVERHEAD WIRE
REMOVE GUY POLE AND WIRE
℄ BEARINGS
STA 150+00.00

CURVE (3)
DELTA = 4°28'00"
D = 4°24'27"
R = 1300.00'
T = 50.70' LOCATE, MAINTAIN, AND
L = 101.34' PROTECT EXISTING WATERLINE
E = 0.99'

BENCHMARK
TOP OF BOLT
AFTER ARROW
ELEV. = 556.98

PROPOSED WHEEL CHAIR RAMP, TYPE 6
SEE STANDARD C-3B

FULL DEPTH PAVEMENT BOX

℄ BEARINGS
STA 150+95.00

END BRIDGE
STA 150+95.52

PI STA 151+52.48

PT STA 153+53.40

POE STA 154+28.40

END APPROACH
STA 153+75

US ROUTE 302
TO BARRE

S48°35'48.86"E

S50°11'36.37"E

MATCH LINE STA 149+25.00

PI STA 149+55.72

BEGIN PROJECT
STA 149+37.00

PT STA 149+97.69

BEGIN BRIDGE
STA 149+99.48

US 302 STA 150+47.50 =
CHANNEL STA 51+07.88

PC STA 151+01.78

DRIVEWAY APRON

PRC STA 152+03.12

END PROJECT
STA 151+45.00
AGGREGATE SHOULDERS

PI STA 152+78.27

CURVE (4)
DELTA = 2°52'12"
D = 1°54'35"
R = 3000.00'
T = 75.15'
L = 150.28'
E = 0.94'

PROPOSED MILL & PAVE

GUARDRAIL APPROACH SECTION TO BRIDGE RAILING TL-3 WITH SYMMETRIC THRIE BEAM TO W-BEAM TRANSITION SECTION

STEVENS BRANCH
FLOW

WASHINGTON COUNTY RAIL

VT STATE PLANE GRID

AGGREGATE SURFACE COURSE
STA. 149+25.0 TO 149+82.0 LT
STA. 149+25.0 TO 149+96.4 RT
STA. 150+97.1 TO 152+44.5 LT
STA. 151+12.3 TO 151+49.4 RT

CAST-IN-PLACE CONCRETE CURB, TYPE B
STA. 149+25.0 TO 149+91.4 LT
STA. 149+81.0 TO 149+96.4 RT
STA. 150+90.4 TO 151+59.9 LT
STA. 151+12.2 TO 151+27.5 RT

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
STA. 149+25.0 TO 149+93.5 LT
STA. 150+90.4 TO 151+64.8 LT

DETECTABLE WARNING SURFACE
STA. 151+62.4 LT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 149+13.1 TO 150+11.6 LT
STA. 149+31.9 TO 150+22.0 RT
STA. 150+77.1 TO 151+63.3 LT
STA. 150+87.7 TO 151+50.0 RT

ANCHOR FOR STEEL BEAM RAIL
STA. 149+26.4 LT
STA. 149+38.0 RT
STA. 151+52.9 LT
STA. 151+48.0 RT

COARSE-MILLING, BITUMINOUS PAVEMENT
STA. 149+25.0 TO 149+81.1
STA. 151+15.5 TO 153+75.0

STEEL BEAM GUARDRAIL, GALVANIZED
STA. 149+26.0 TO 149+36.9 (STANDARD G-1D) LT
STA. 149+36.9 TO 149+61.2 (TRANSITION SECTION) LT
STA. 149+61.2 TO 149+81.9 (STANDARD S-352D) LT
STA. 149+37.5 TO 149+49.1 (STANDARD G-1D) RT
STA. 149+49.1 TO 149+74.7 (TRANSITION SECTION) RT
STA. 149+74.7 TO 149+96.4 (STANDARD S-352D) RT
STA. 150+97.1 TO 151+17.9 (STANDARD S-352D) LT
STA. 151+17.9 TO 151+42.4 (TRANSITION SECTION) LT
STA. 151+42.4 TO 151+53.4 (STANDARD G-1D) LT
STA. 151+12.2 TO 151+37.1 (STANDARD S-352D) RT
STA. 151+37.1 TO 151+48.5 (STANDARD G-1D) RT

EXISTING BRIDGE INFO
BUILT 1929, EXPANDED 1941
SINGLE SPAN ROLLED BEAM
STRUCTURE LENGTH = 64 FEET

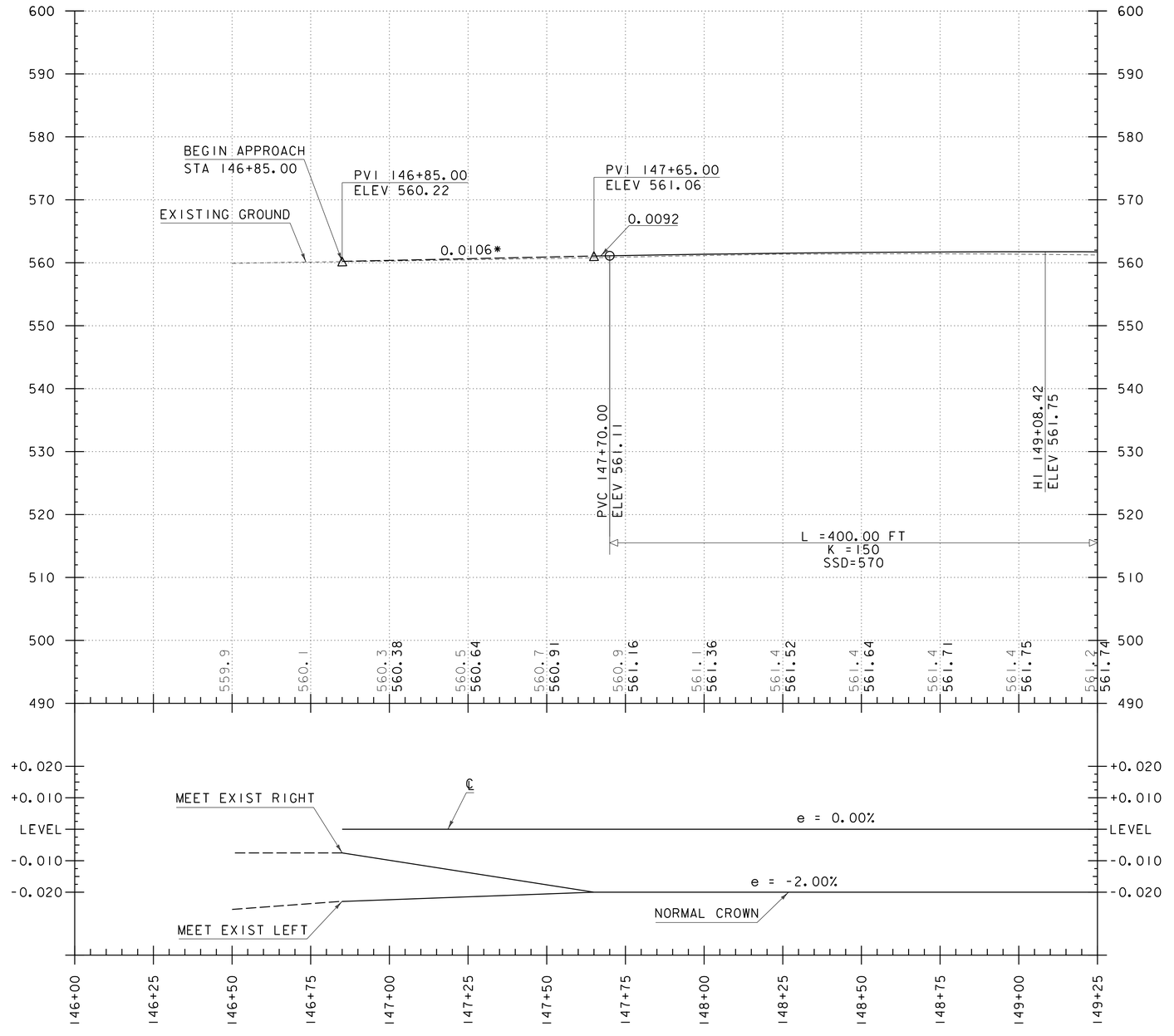
LAYOUT 2
SCALE 1" = 20'-0"
20 0 20

GILL ENGINEERING

PROJECT NAME: BERLIN
PROJECT NUMBER: BF 026-1(43)

FILE NAME: zl3b254bdr.dgn
PROJECT LEADER: A.SPERA
DESIGNED BY: A.LEENHOUTS
LAYOUT 2

PLOT DATE: 7/20/2020
DRAWN BY: A. LEENHOUTS
CHECKED BY: -----
SHEET 12 OF 32



US ROUTE 302 PROFILE AND BANKING DIAGRAM

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

*CROWNLINE TRANSITION TO TIE INTO EXISTING CROSS SLOPE

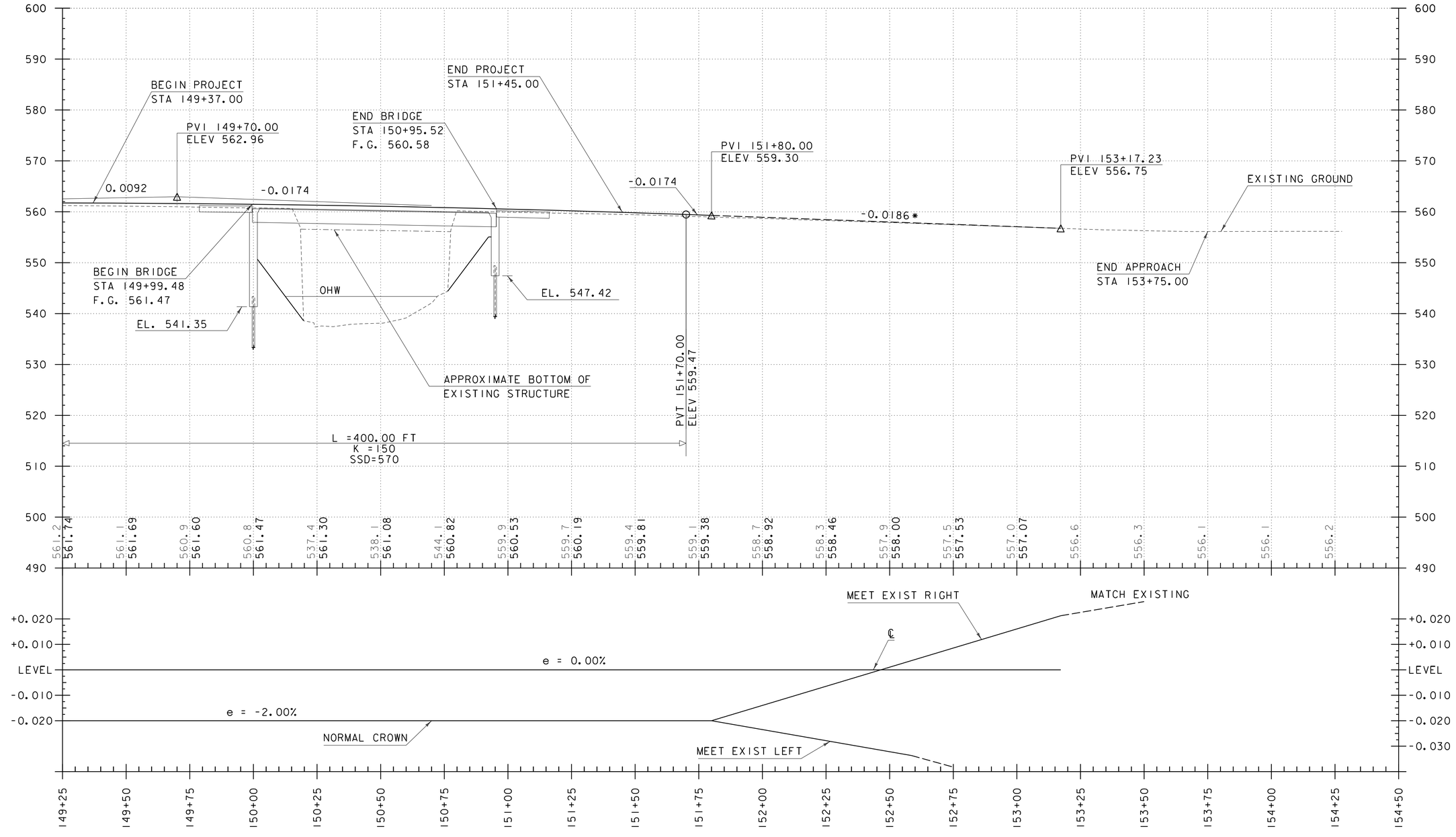
NOTE:
GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GRADE ALONG ℄
GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISHED GRADE ALONG ℄

GILL ENGINEERING

PROJECT NAME: BERLIN
PROJECT NUMBER: BF 026-1(43)

FILE NAME: z13b254bdr.dgn
PROJECT LEADER: A.SPERA
DESIGNED BY: A.LEENHOUTS
PROFILE 1

PLOT DATE: 7/20/2020
DRAWN BY: A. LEENHOUTS
CHECKED BY: -----
SHEET 13 OF 32



US ROUTE 302 PROFILE AND BANKING DIAGRAM

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

*CROWNLINE TRANSITION TO TIE INTO EXISTING CROSS SLOPE

NOTE:
GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GRADE ALONG ℄
GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISHED GRADE ALONG ℄

GILL ENGINEERING

PROJECT NAME: BERLIN
PROJECT NUMBER: BF 026-1(43)

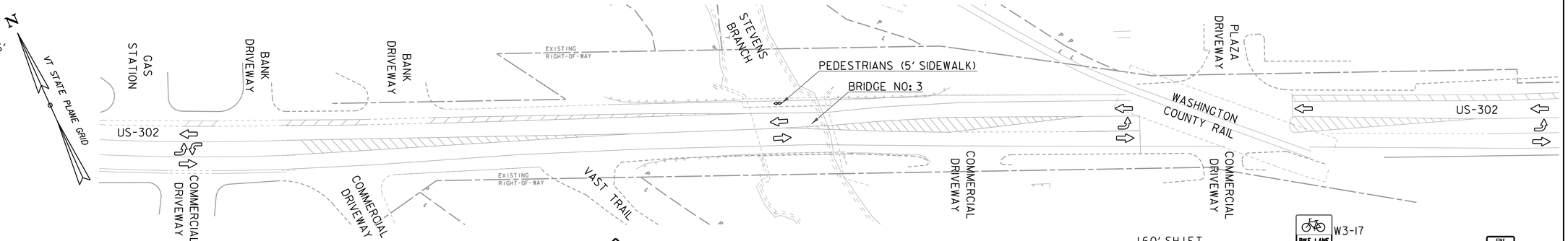
FILE NAME: z13b254bdr.dgn
PROJECT LEADER: A.SPERA
DESIGNED BY: A. LEENHOUTS
PROFILE 2

PLOT DATE: 7/20/2020
DRAWN BY: A. LEENHOUTS
CHECKED BY: -----
SHEET 14 OF 32

EXISTING

EXISTING CONDITIONS

NOTE: 11' TRAVEL LANES WITH 6' SHOULDERS

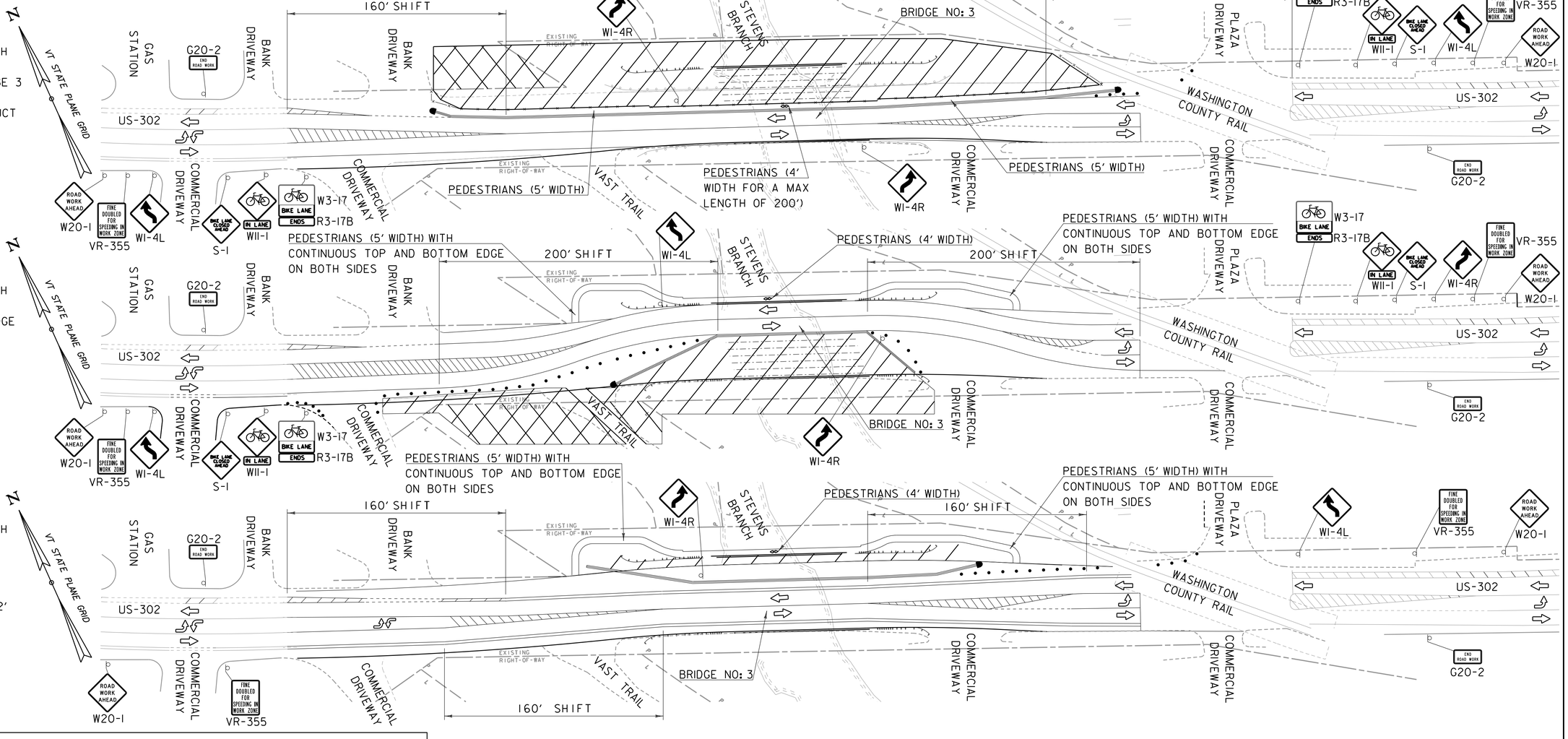


STAGE 1

NORTHERN PORTION OF BRIDGE 3 REPLACEMENT

-WITH TRAFFIC ON THE SOUTH SIDE OF US-302 CONSTRUCT NORTHERN PORTION OF BRIDGE 3 REPLACEMENT, ROADWAY IMPROVEMENTS, AND CONSTRUCT TEMP SIDEWALK

NOTE: 11' TRAVEL LANES



STAGE 2

SOUTHERN PORTION OF BRIDGE 3 REPLACEMENT

-WITH TRAFFIC ON THE NORTH SIDE OF US-302 CONSTRUCT SOUTHERN PORTION OF BRIDGE 3 REPLACEMENT

NOTE: 11' TRAVEL LANES

STAGE 3

BRIDGE 3 SIDEWALK

-WITH TRAFFIC ON THE SOUTH SIDE OF US-302 CONSTRUCT BRIDGE 3 SIDEWALK ON THE NORTH SIDE

NOTE: 11' TRAVEL LANES WITH 2' BUFFERS AND 5' BIKE LANES

LEGEND

AREA OF CONSTRUCTION ACTIVITY	TEMPORARY TRAFFIC BARRIER
STAGING/LAYDOWN AREA	TEMPORARY IMPACT ATTENUATOR
DIRECTION OF TRAFFIC	REFLECTORIZED DRUM
CHAIN LINK FENCE	SIGN

STAGE 4

COMPLETE CONSTRUCTION

-WITH TEMPORARY LANE CLOSURES DURING WORK HOURS, REMOVE TEMPORARY SIDEWALK, FINAL PAVING, TURF ESTABLISHMENT, INSTALL PAVEMENT MARKINGS, REMAINING ITEMS, AND FINAL CLEANUP

GILL ENGINEERING

PROJECT NAME: BERLIN
PROJECT NUMBER: BF 026-1(43)

FILE NAME: zl3b254staging.dgn
PROJECT LEADER: A.SPERA
DESIGNED BY: A. LEENHOUTS
TRAFFIC STAGING

PLOT DATE: 7/20/2020
DRAWN BY: P. O'REILLY
CHECKED BY: -----
SHEET 15 OF 32

DURABLE 4 INCH WHITE LINE, POLYUREA
STA 146+85.0 TO 152+68.9 LT - SOLID EDGE
STA. 146+85.0 TO 153+03.1 RT - SOLID EDGE
STA. 151+69.7 TO 152+55.4 RT - DOTTED LANE LINE
STA. 152+55.4 TO 153+03.1 RT - SOLID LANE LINE

DURABLE 4 INCH YELLOW LINE, POLYUREA
STA. 146+85.0 TO 151+69.7 LT - SOLID/DASHED TURN LANE
STA. 146+85.0 TO 151+69.7 RT - SOLID/DASHED TURN LANE
STA. 151+69.7 TO 153+03.1 CL - DOUBLE SOLID

DURABLE 24 INCH STOP BAR, POLYUREA
STA. 153+03.1 RT

DELINEATOR WITH STEEL POST
STA. 149+25 LT (GREEN)
STA. 149+35 RT (BLUE)
STA. 151+49 RT (GREEN)
STA. 151+55 LT (BLUE)

STA. 146+83, LT
BEGIN R
CENTER LANE
ONLY
RET
RET

DURABLE LETTER OR SYMBOL, POLYUREA
STA. 149+25.0 CL - CENTER LANE DOUBLE ARROW
STA. 151+50.0 CL - CENTER LANE DOUBLE ARROW
STA. 151+07.0 RT - "S,I,G,N,A,L"
STA. 151+46.0 RT - "A,H,E,A,D"
STA. 152+59.0 RT - ARROW
STA. 152+59.0 RT - ARROW
STA. 152+92.0 RT - ARROW
STA. 152+92.0 RT - ARROW
STA. 152+92.0 RT - BIKE LANE SYMBOL

DURABLE RAILROAD CROSSING SYMBOL, POLYUREA
STA. 149+59.0 RT

STA. 151+48, LT TO
STA. 149+00, LT
SPEED LIMIT 40
RES
RES

STA. 150+97, LT TO
STA. 151+09, LT
BRIDGE 3 US-302
RES
RES

STA. 151+75, LT
BEGIN N
CENTER LANE
ONLY
N
N

BENCHMARK
BOLT AFTER
ARROW ON OPEN
ELEV. = 561.70

BENCHMARK
TOP OF BOLT
AFTER ARROW
ELEV. = 556.98

VT STATE PLANE GRID

EXISTING
RIGHT-OF-WAY

US ROUTE 302
TO MONTPELIER

147+00
148+00
149+00
150+00
151+00
152+00
153+00

SIGNAL AHEAD

WASHINGTON
COUNTY RAIL

STEVENS BRANCH
FLOW

STA. 146+40, RT
IRON POST
½" REBAR
UP 1" BENT
END R
CENTER LANE
ONLY
RET
RET

STA. 149+59, RT
R R
RET
RET

STA. 150+05, RT
BRIDGE 3 US-302
RES
RES

STA. 151+44, RT
END N
CENTER LANE
ONLY
N
N

STA. 151+15, RT
RET
RET
RET RET

MATCH EXISTING
BIKE LANE

NEW
EXIST

SIGN LEGEND
RES = RESETTING SIGNS
RET = RETAIN
N = NEW TRAFFIC SIGN, TYPE A
R = REMOVING SIGNS

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

GILL ENGINEERING

PROJECT NAME: BERLIN
PROJECT NUMBER: BF 026-1(43)

FILE NAME: zl3b254trafssbdr.dgn
PROJECT LEADER: A.SPERA
DESIGNED BY: A. LEENHOUTS
TRAFFIC SIGNS AND LINES

PLOT DATE: 7/20/2020
DRAWN BY: A. LEENHOUTS
CHECKED BY: -----
SHEET 16 OF 32

SOIL CLASSIFICATION

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

ROCK QUALITY DESIGNATION

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

SHEAR STRENGTH

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

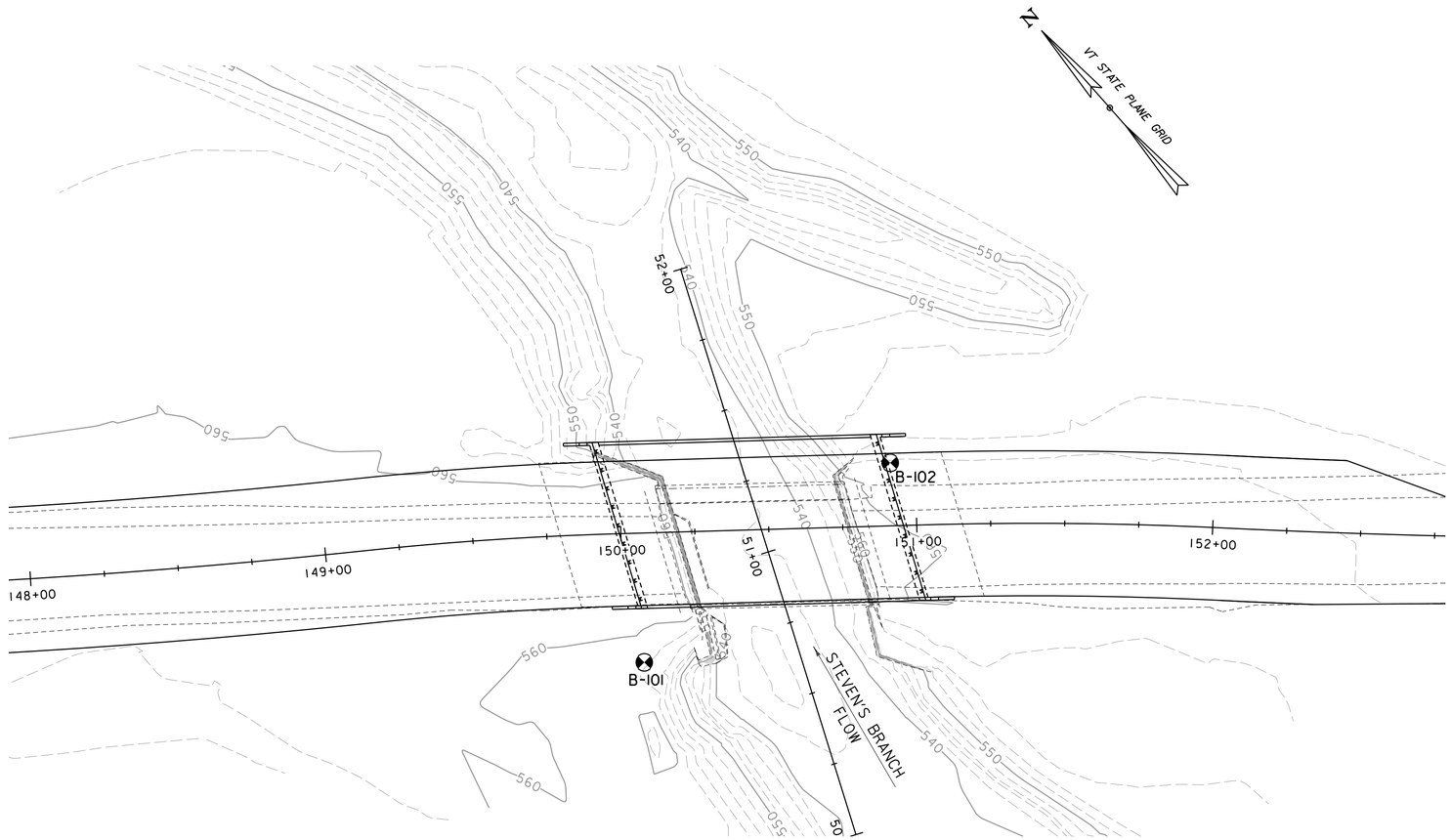
CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

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

COMMONLY USED SYMBOLS

▼	Water Elevation
⊗	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	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 5/8"
NX	Core Size 2 1/8"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	Top of Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
ROD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)
VTSPG	NAD83 - See Note 7

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



BORING LAYOUT

SCALE 1" = 25'-0"
25 0 25

BORING LOCATIONS					
BORING	NORTHING	EASTING	STATION	OFFSET	BEDROCK ELEVATION
B-101	627936.90	1627584.40	43+23	36.60	468.3
B-102	627932.40	1627691.20	44+8	-29.20	447.6

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.

1. The subsurface explorations shown herein were made between June 24, 2019 and July 2, 2019 by the Agency.

2. 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.

3. 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.

GENERAL NOTES

4. 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.

5. 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.

6. 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.

7. Northing and Easting coordinates are shown in Vermont State Plane Grid North American Datum 1983 in meters and survey feet.

GILL ENGINEERING

PROJECT NAME: BERLIN
PROJECT NUMBER: BF 026-1(43)

FILE NAME: zl3b254bor.dgn
PROJECT LEADER: A.SPERA
DESIGNED BY: Y.SIMONSON
BORING INFORMATION SHEET

PLOT DATE: 7/20/2020
DRAWN BY: Y.SIMONSON
CHECKED BY: -----
SHEET 17 OF 32

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Berlin
BF 026-1(43)
US 302 Br No 3

Boring No.: B-101
Page No.: 1 of 2
Pin No.: 13b254
Checked By: END

Boring Crew: Brochu, Emerson, Gonyaw
Date Started: 6/24/19 Date Finished: 6/26/19
VTSPG NAD83: N 627936.90 ft E 1627584.40 ft
Station: 43+23 Offset: 36.60
Ground Elevation: 558.3 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:		Auto/AWJ
Rig:	CME 55 TRACK AUTO	CE = 1.52

Groundwater Observations

Date	Depth (ft)	Notes
06/26/19	6.0	During drilling

BOTTOM OF ABUTMENT #1
PILE CAP EL=541.35

BOT. PILE
EL = 517.19

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft				2-4-4-5 (8)	6.7	28.4	51.8	19.8
		A-2-4, GrSiSa, blk, Moist, Rec. = 1.0 ft				3-3-2-2 (5)	13.1	23.1	51.8	25.1
		A-2-4, SiSa, blk, Moist, Rec. = 0.5 ft, Cleanout NXDC 6.3'-7'				2-1-2-3 (3)	19.5	11.8	55.5	32.7
		A-4, SaSi, brn, Moist, Rec. = 1.0 ft				4-7-9-23 (16)	19.4	5.5	35.2	59.3
		A-4, SaSi, brn, Moist, Rec. = 1.5 ft				18-18-20-25 (38)	16.3	6.5	34.9	58.6
10		A-4, SaSi, brn, Moist, Rec. = 1.5 ft, Cleanout NXDC 11.4'-12'				15-25-26-20 (51)	15.5	10.0	39.5	50.5
		A-4, Si, brn, Moist, Rec. = 1.5 ft, Cleanout NXDC 13.5'-14'				21-32-33-R@2" (65)	18.2	8.2	12.7	79.1
		A-4, SaSi Broken rock was within sample, brn, Moist, Rec. = 1.1 ft, Cleanout NXDC 15.4'-16'				15-23-36-R (59) R@4" (R)	16.4	8.4	25.5	66.1
		A-1-b, Gr Broken rock was within sample, blk, Dry, Rec. = 0.2 ft, Cleanout NXDC 19.8'-21'				35-46-R@2" (R)	3.3	77.7	16.8	5.5
20		A-4, GrSaSi, gry, Moist, Rec. = 0.9 ft, Cleanout NXDC 25.3'-26'				35-49-R@2" (R)	12.2	28.7	30.7	40.6
		A-4, SaGrSi, gry, Moist, Rec. = 0.9 ft, Cleanout NXDC 30'-31'				48-49-R@1" (R)	11.8	24.7	22.4	52.9
30		A-4, SaGrSi, gry, Moist, Rec. = 0.9 ft				10-20-30-35 (50)	12.6	27.4	25.4	47.2
		A-4, Si, gry, Moist, Rec. = 1.2 ft, Cleanout NXDC 40.6'-41'				15-R@5" (R)	18.5	10.3	15.7	74.0
40		A-4, SaSi, gry, Moist, Rec. = 0.9 ft, Cleanout NXDC 45.2'-46'				25-47-R@4" (R)	12.4	13.2	25.1	61.7
		A-4, SaSi, gry, Moist, Rec. = 1.2 ft, Cleanout NXDC 50'-51'				42-R@0" (R)	16.9	3.7	22.4	73.9
50		A-4, SaSi, gry, Moist, Rec. = 0.9 ft, Cleanout NXDC 59.9'-60'				25-R@5" (R)	9.7	12.1	35.1	52.8
60		A-4, SaSi, gry, Moist, Rec. = 0.9 ft, Cleanout NXDC 70.2'-71'					11.6	17.9	30.2	51.9

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG BERLIN BF 026-1(43).GPJ VERMONT AOT.GDT 12/24/19

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Berlin
BF 026-1(43)
US 302 Br No 3

Boring No.: B-101
Page No.: 2 of 2
Pin No.: 13b254
Checked By: END

Boring Crew: Brochu, Emerson, Gonyaw
Date Started: 6/24/19 Date Finished: 6/26/19
VTSPG NAD83: N 627936.90 ft E 1627584.40 ft
Station: 43+23 Offset: 36.60
Ground Elevation: 558.3 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:		Auto/AWJ
Rig:	CME 55 TRACK AUTO	CE = 1.52

Groundwater Observations

Date	Depth (ft)	Notes
06/26/19	6.0	During drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
70		A-4, SiSa, gry, Moist, Rec. = 1.4 ft, Cleanout NXDC 80.5'-81'				20-35-R (R)	9.7	10.8	46.8	42.4
80		A-4, Si, gry, Moist, Rec. = 0.7 ft				37-R@5" (R)	20.7	3.0	15.1	81.9
90		90.0 ft - 95.0 ft, Dark gray to black, Sandy PHYLLITE, Cleavage planes dip ~ 40° and are mimicked by close, slightly open fractures. Small <0.5mm sulfides are strewn throughout sample and weather to a bright orange at open joints. Hard, Slightly weathered, Fair rock, NXMDC, RMR = 43	R-1 (40)	98 (61)	3 3 3 3 3 3	Top of Bedrock @ 90.0 ft				
		95.0 ft - 100.0 ft, Dark gray to black, Sandy PHYLLITE, Cleavage planes dip ~ 40° and are mimicked by close, slightly open fractures. Small <0.5mm sulfides are strewn throughout sample and weather to a bright orange at open joints. @ 97.5 ft and 98.5 ft veins of CaCO3 disrupt the rock fabric. Hard, Moderately weathered, Poor rock, NXMDC, RMR = 33	R-2 (40)	100 (35)	2 3 3 3 3 3					
100		Hole stopped @ 100.0 ft								
110										
120										

Remarks:
Hole collapsed at 48'

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG BERLIN BF 026-1(43).GPJ VERMONT AOT.GDT 12/24/19

GILL ENGINEERING

PROJECT NAME: BERLIN
PROJECT NUMBER: BF 026-1(43)

FILE NAME: zl3b254bor.dgn
PROJECT LEADER: A.SPERA
DESIGNED BY: Y.SIMONSON
BORING LOGS 1

PLOT DATE: 7/20/2020
DRAWN BY: Y.SIMONSON
CHECKED BY: -----
SHEET 18 OF 32

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Berlin
BF 026-1(43)
US 302 Br No 3

Boring No.: B-102
Page No.: 1 of 2
Pin No.: 13b254
Checked By: END

Boring Crew: Brochu, Gonyaw, Emerson
Date Started: 6/27/19 Date Finished: 7/02/19
VTSPG NAD83: N 627932.40 ft E 1627691.20 ft
Station: 44+8 Offset: -29.20
Ground Elevation: 557.6 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:		Auto/AWJ
Rig:	CME 55 TRACK AUTO	CE = 1.52

Groundwater Observations

Date	Depth (ft)	Notes
06/27/19	3.0	During drilling

BOTTOM OF ABUTMENT #2
PILE CAP EL=547.42

BOT. PILE
EL = 517.19

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-1-b, GrSa, brn, Moist, Rec. = 0.6 ft				2-2-5-7 (7)	9.7	39.9	60.0	0.1
		A-2-4, GrSiSa, blk, Moist, Rec. = 1.0 ft				6-15-24-18 (39)	8.0	62.5	32.3	5.2
		A-1-b, SaGr, brn, Moist, Rec. = 0.7 ft				4-3-4-7 (7)	9.9	46.7	36.8	16.5
		A-1-b, SaGr, brn, Moist, Rec. = 0.4 ft				5-7-5-3 (12)	9.6	72.3	22.3	5.4
		A-1-b, SaGr, brn, Moist, Rec. = 0.7 ft				3-3-3-3 (6)	13.0	47.3	36.1	16.6
10		A-2-4, GrSiSa, brn, MTW, Rec. = 0.3 ft, Cleanout NXDC 10.6'-12'				4-3-3-4 (6)	18.0	26.3	45.8	27.9
		A-4, SiSa, brn, MTW, Rec. = 0.6 ft, Cleanout NXDC 12.5'-14'				2-3-1-3 (4)	23.5	9.6	49.9	40.5
		A-1-b, SiSaGr, brn, MTW, Rec. = 0.7 ft, Cleanout NXDC 17'-19'				2-4-5-9 (9)	16.8	39.7	36.6	23.7
20		Field Note:, No Recovery, Cleanout NXDC 21'-24'				9-R@5" (R)				
		Field Note:, No Recovery, Cleanout NXDC 27.4'-29'				3-12-7-10 (19)				
30		A-2-4, SaSiGr, gry, Moist, Rec. = 0.7 ft, Cleanout NXDC 32.9'-34'				23-R@4" (R)	13.0	46.3	20.6	33.1
		A-4, GrSaSi, gry, Moist, Rec. = 0.5 ft, Cleanout NXDC 35.4'-39'				23-R@5" (R)	11.4	29.2	33.7	37.1
40		A-4, SaSi Broken rock was within sample, gry, Moist, Rec. = 0.6 ft, Cleanout NXDC 47.4'-49'				4-47-R@1" (R)	14.2	6.6	27.4	66.0
50		A-4, SaGrSi Broken rock was within sample, gry, Moist, Rec. = 0.7 ft, Cleanout NXDC 58.3'-59'				36-R@2" (R)	13.6	23.0	22.2	54.8
60		A-4, Si, gry, Moist, Rec. = 1.1 ft				25-36-36-R@1" (72)	15.2	11.3	17.9	70.8

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG BERLIN BF 026-1(43).GPJ VERMONT AOT.GDT 12/24/19

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Berlin
BF 026-1(43)
US 302 Br No 3

Boring No.: B-102
Page No.: 2 of 2
Pin No.: 13b254
Checked By: END

Boring Crew: Brochu, Gonyaw, Emerson
Date Started: 6/27/19 Date Finished: 7/02/19
VTSPG NAD83: N 627932.40 ft E 1627691.20 ft
Station: 44+8 Offset: -29.20
Ground Elevation: 557.6 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:		Auto/AWJ
Rig:	CME 55 TRACK AUTO	CE = 1.52

Groundwater Observations

Date	Depth (ft)	Notes
06/27/19	3.0	During drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
70		A-4, SaSi, gry, Moist, Rec. = 0.7 ft, Cleanout NXDC 77.5'-79'				23-R@4" (R)	11.5	17.5	37.9	44.6
80		A-1-b, Gr Broken rock was within sample, gry, Moist, Rec. = 0.2 ft, Cleanout NXDC 87.6'-89'				R@4" (R)	1.6	96.0	2.7	1.3
90		A-1-b, Gr, gry, Moist, Rec. = 0.2 ft, Cleanout NXDC 92.9'-99'				R@5" (R)	9.0	68.7	14.7	16.6
100		A-1-b, Gr Broken rock was within sample, gry, Moist, Rec. = 0.1 ft, Cleanout NXDC 100.6'-109'				R@6" (R)	1.4	95.7	2.5	1.8
110		110.0 ft - 115.0 ft, Dark gray to black, Sandy calcareous PHYLLITE, Cleavage planes dip ~ 40° and are mimicked by close, slightly open fractures ± CaCO3. Small <1mm sulfides and Ti-oxides are strewn throughout sample and weather to a brown-orange at open joints. Hard, Slightly weathered, Fair rock, NXMDC, RMR = 49	R-1 (40)	98 (74)	3 3 2 2 3	Top of Bedrock @ 110.0 ft				
120		115.0 ft - 120.0 ft, Dark gray to black, Sandy calcareous PHYLLITE, Cleavage planes dip ~ 40° and are mimicked by close, slightly open fractures ± CaCO3. Small <1mm sulfides and Ti-oxides are strewn throughout sample and weather to a brown-orange at open joints. Hard, Slightly weathered, Fair rock, NXMDC, RMR = 53	(40)	96 (81)	3 2 2 3 2					
		Hole stopped @ 120.0 ft								

Remarks:
1. Hole collapsed at 14.5'
2. Bentonite added at 39'

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

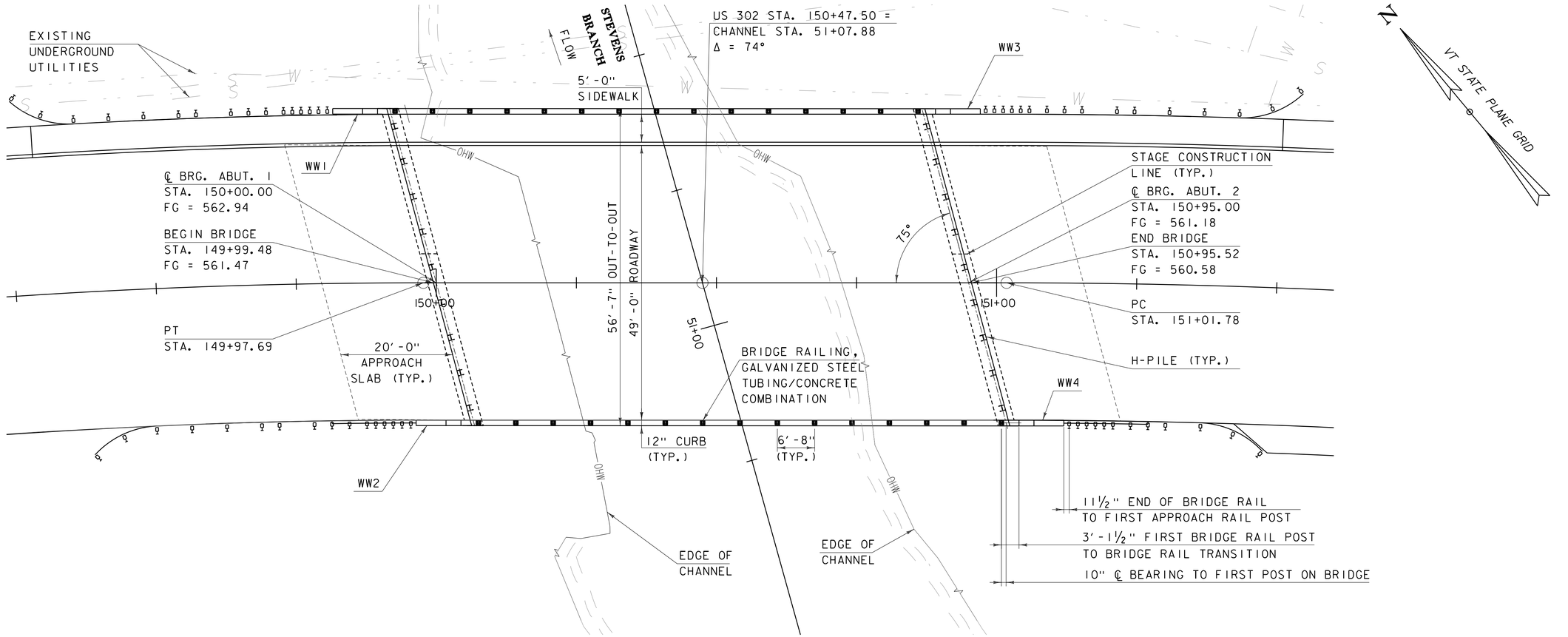
BORING LOG BERLIN BF 026-1(43).GPJ VERMONT AOT.GDT 12/24/19

GILL ENGINEERING

PROJECT NAME: BERLIN
PROJECT NUMBER: BF 026-1(43)

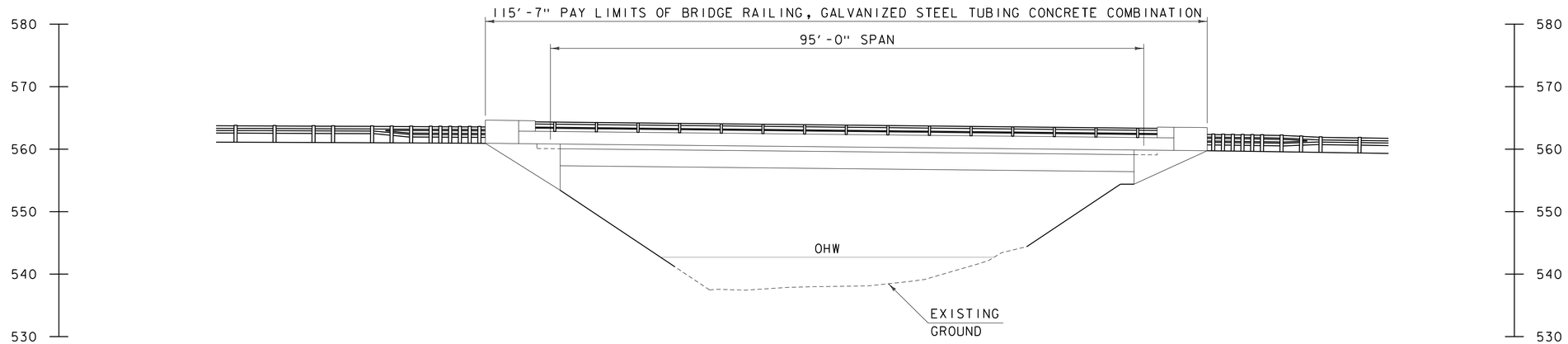
FILE NAME: z13b254bor.dgn
PROJECT LEADER: A.SPERA
DESIGNED BY: Y.SIMONSON
BORING LOGS 2

PLOT DATE: 7/20/2020
DRAWN BY: Y.SIMONSON
CHECKED BY: -----
SHEET 19 OF 32



PLAN

SCALE 1" = 10'-0"

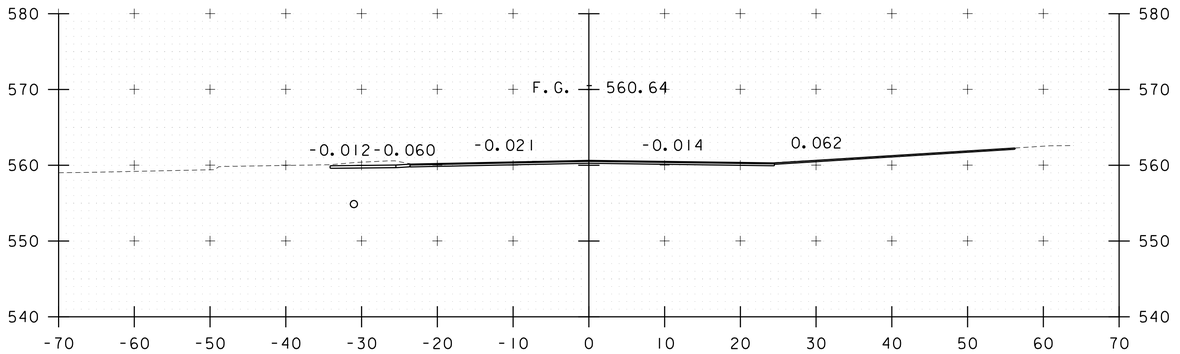


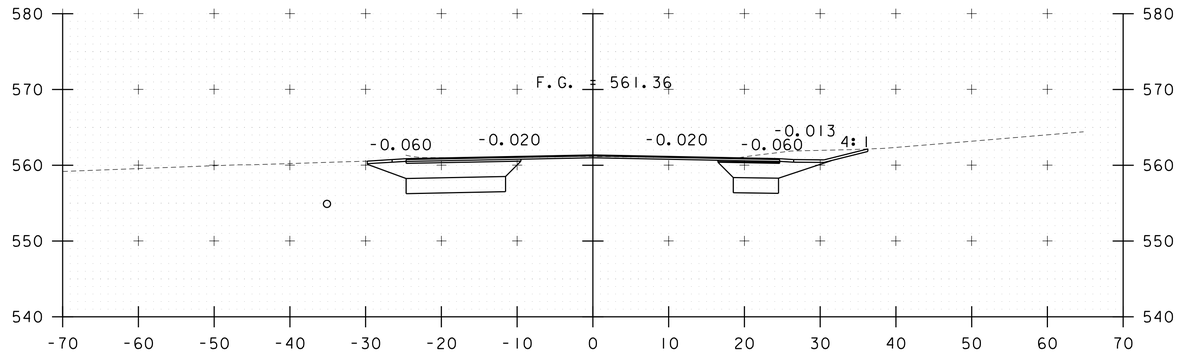
ELEVATION

SCALE 1" = 10'-0"

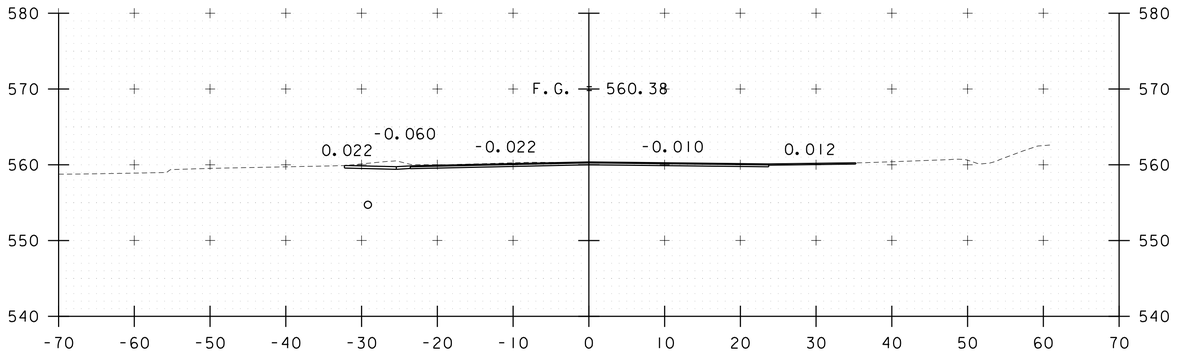
GILL ENGINEERING

PROJECT NAME:	BERLIN
PROJECT NUMBER:	BF 026-1(43)
FILE NAME: z13b254pe.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: C.BURNER
DESIGNED BY: C.BURNER	CHECKED BY: -----
PLAN AND ELEVATION	SHEET 20 OF 32

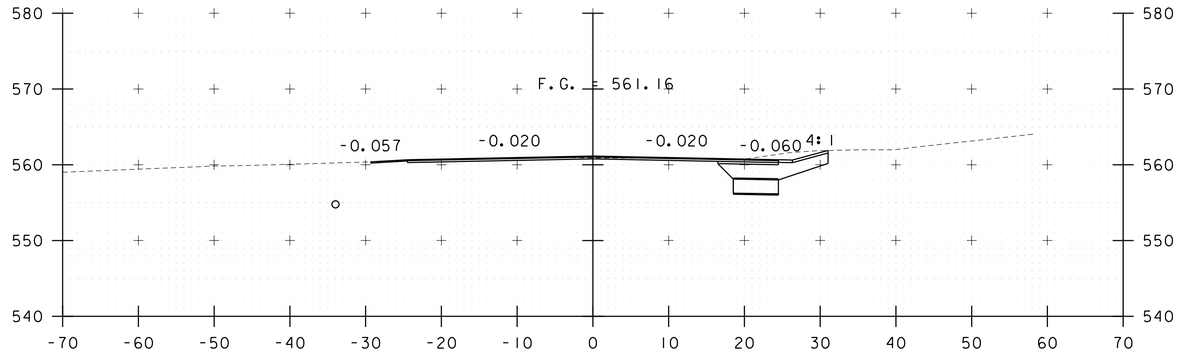




147+25

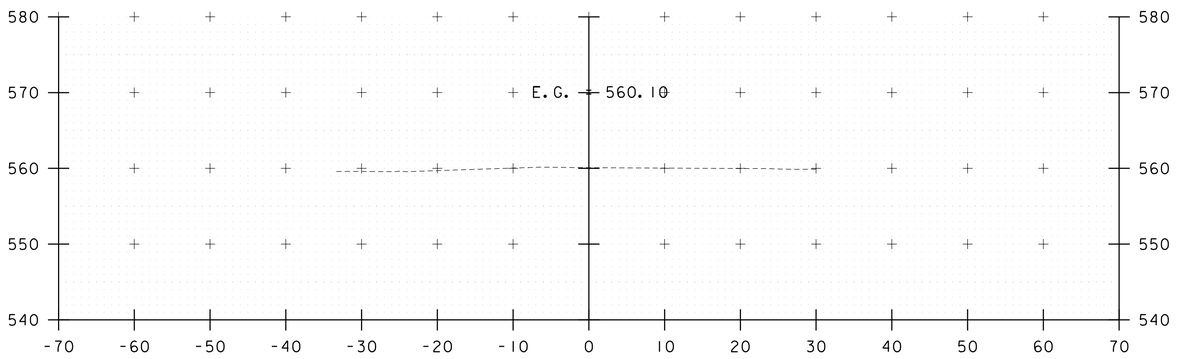


148+00

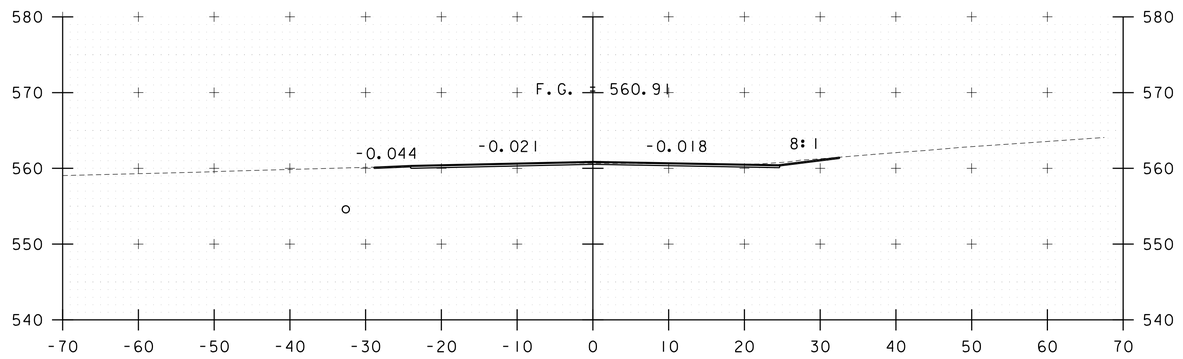


STA 146+85.00
BEGIN APPROACH

147+00



147+75



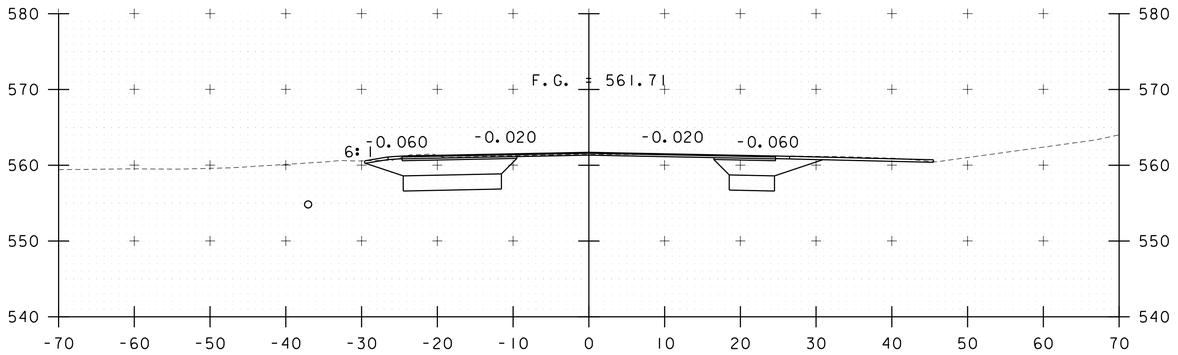
146+75

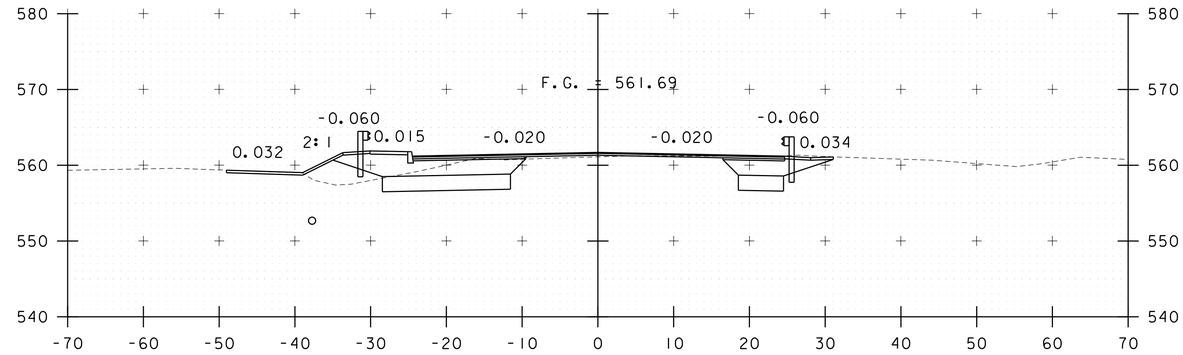
147+50

STA. 146+75 TO STA. 148+00

GILL ENGINEERING

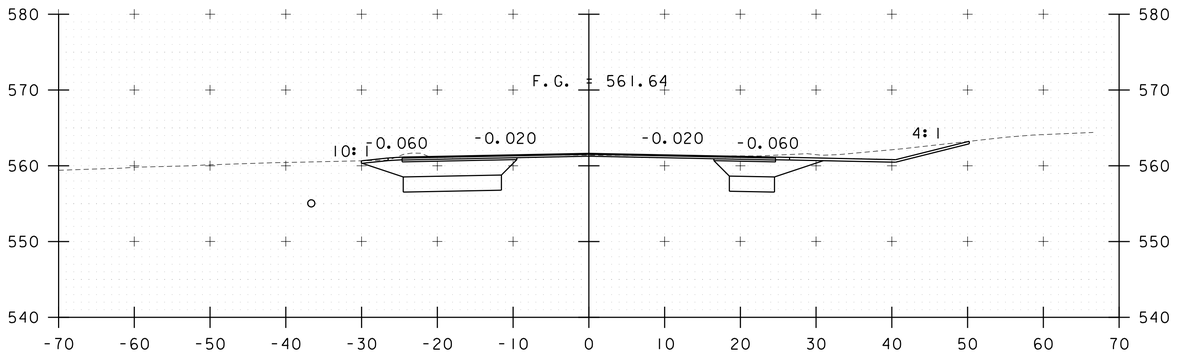
PROJECT NAME:	BERLIN
PROJECT NUMBER:	BF 026-1(43)
FILE NAME: z13b254xs.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: A. LEENHOUTS
DESIGNED BY: A. LEENHOUTS	CHECKED BY: -----
CROSS SECTIONS 1	SHEET 21 OF 32



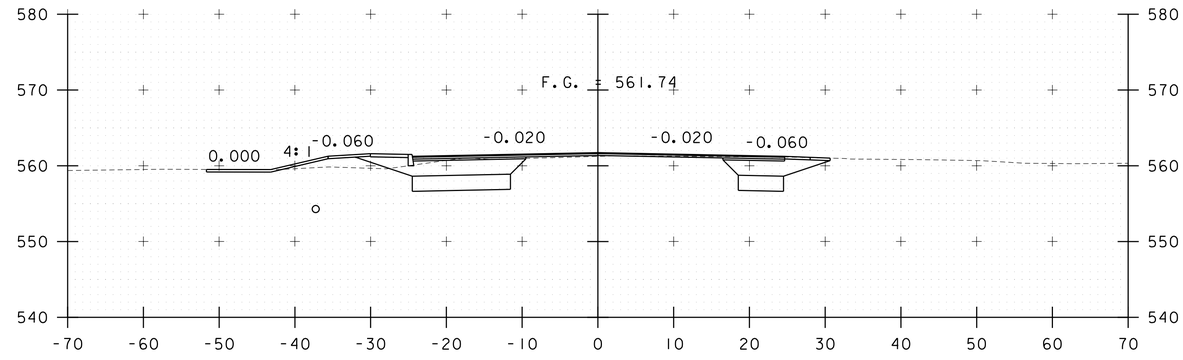


STA 149+37.00
BEGIN PROJECT

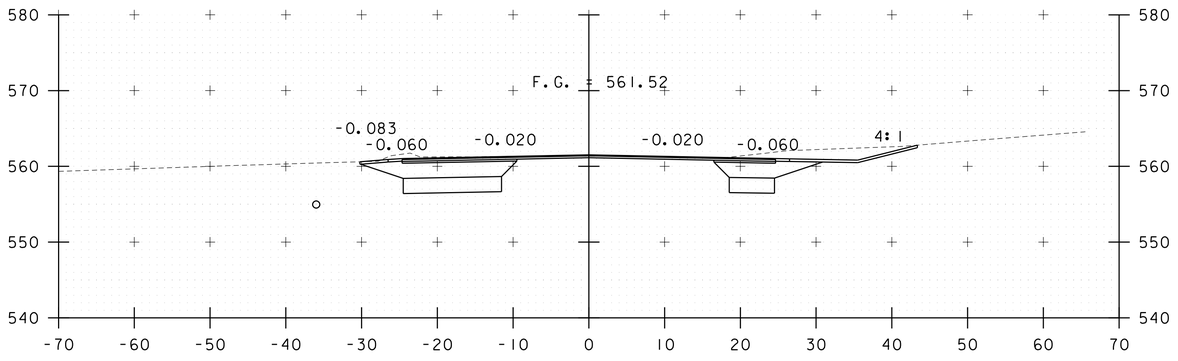
148+75



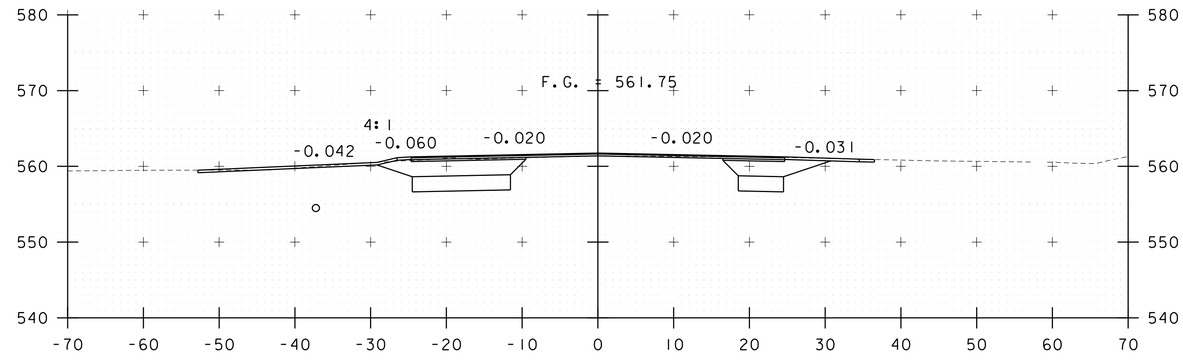
149+50



148+50



149+25



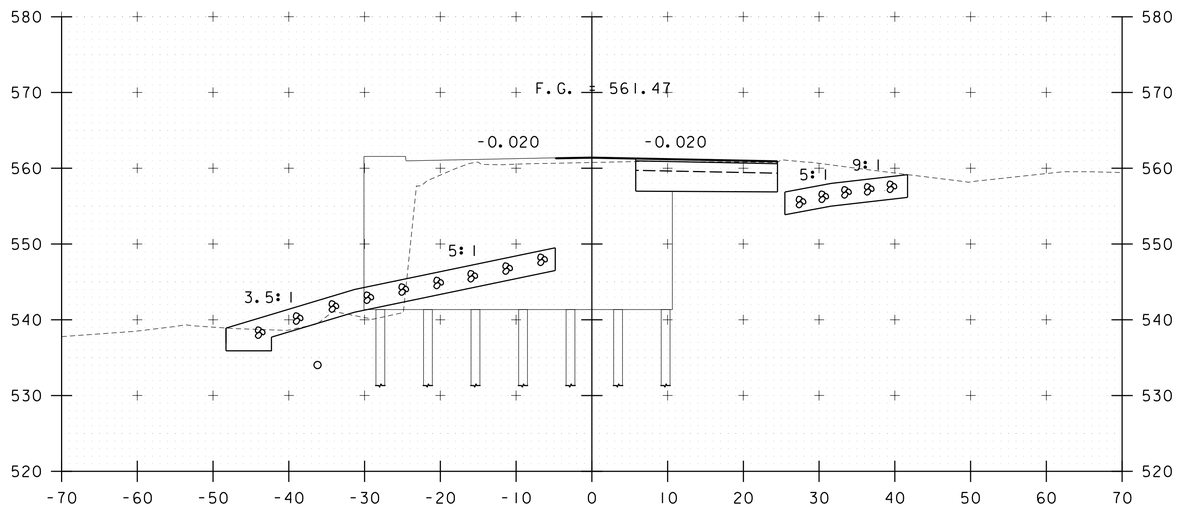
148+25

149+00

STA. 148+25 TO STA. 149+50

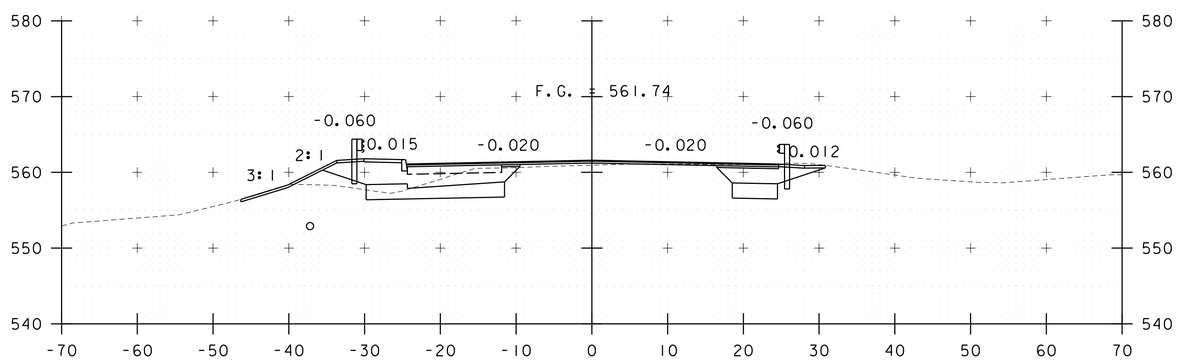
GILL ENGINEERING

PROJECT NAME:	BERLIN
PROJECT NUMBER:	BF 026-1(43)
FILE NAME: z13b254xs.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: A. LEENHOUTS
DESIGNED BY: A. LEENHOUTS	CHECKED BY: -----
CROSS SECTIONS 2	SHEET 22 OF 32

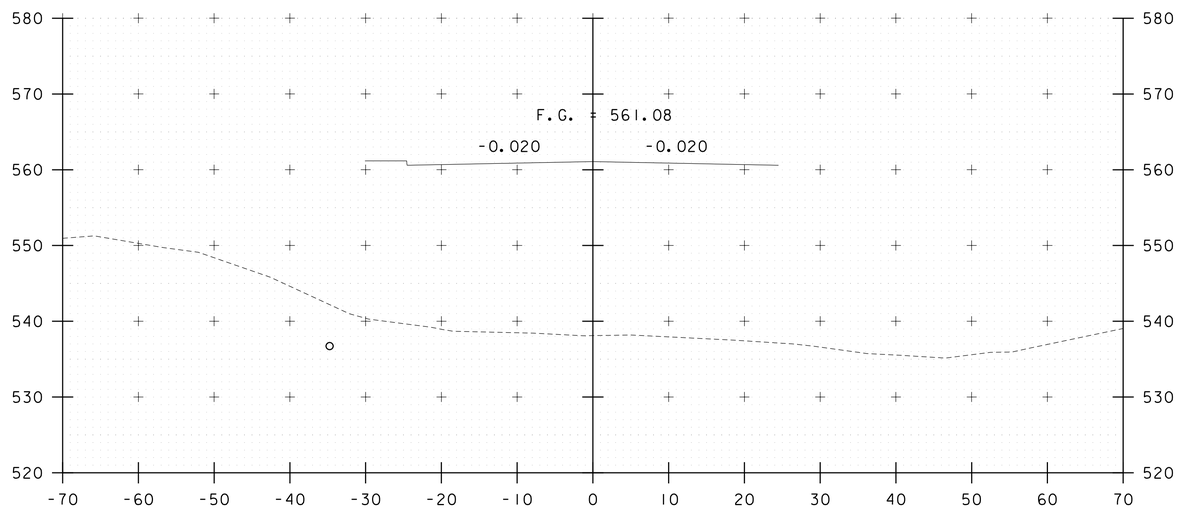


STA 149+99.48
BEGIN BRIDGE

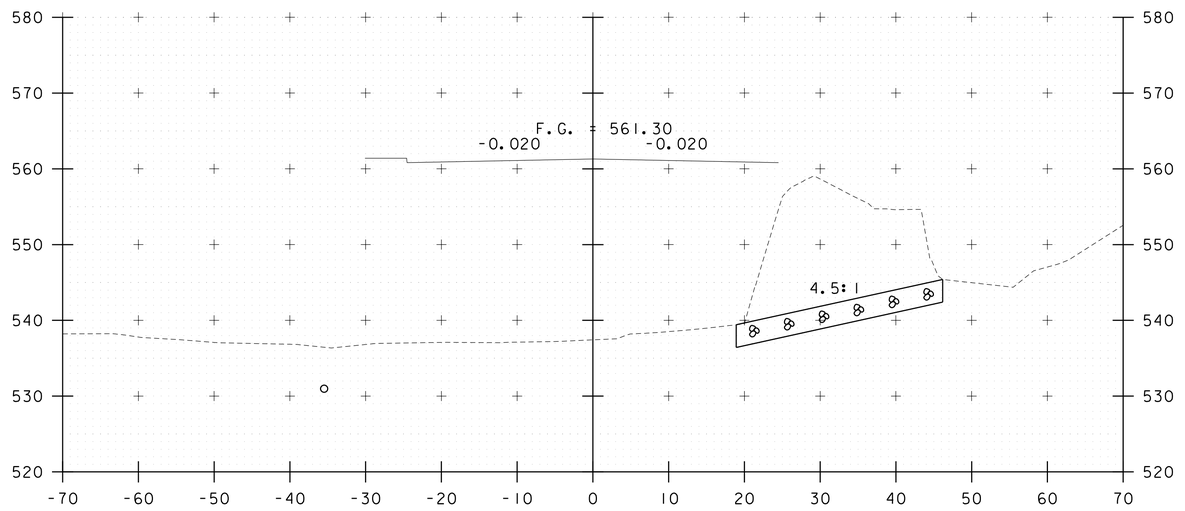
150+00



149+75



150+50

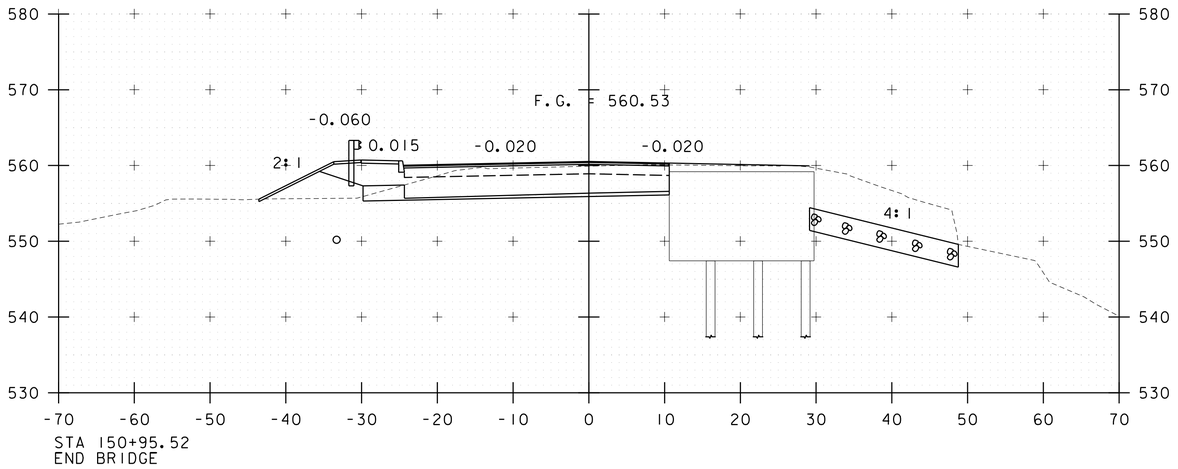


150+25

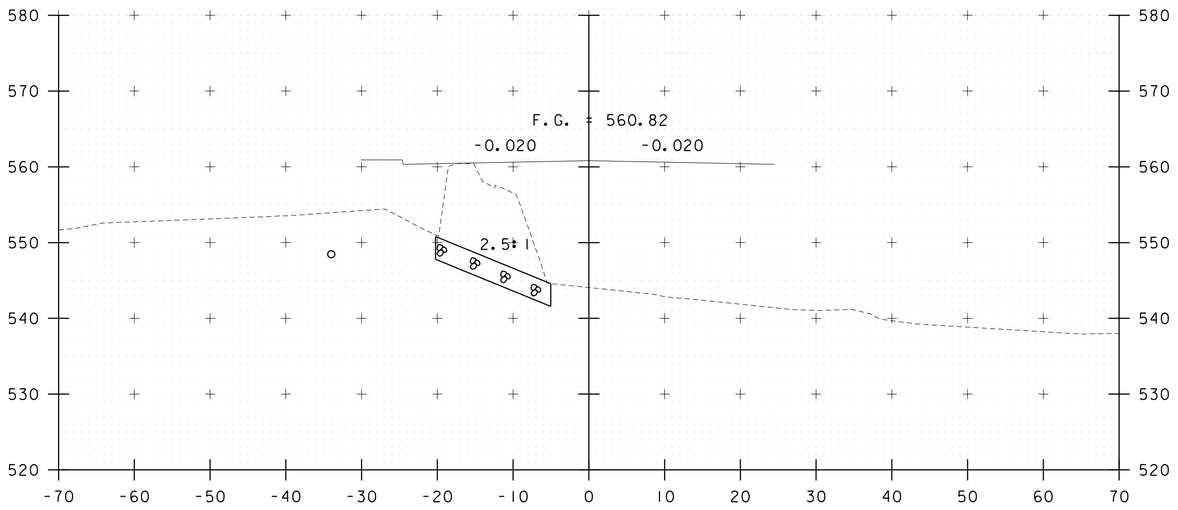
STA. 149+75 TO STA. 150+50

GILL ENGINEERING

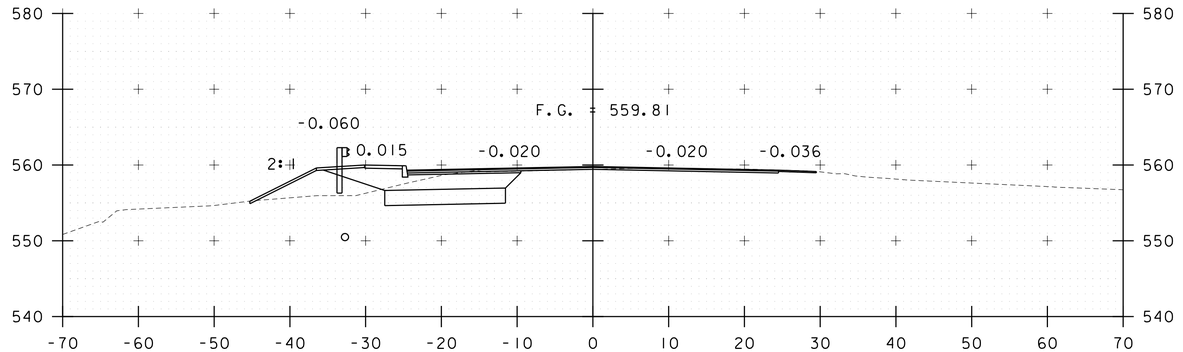
PROJECT NAME:	BERLIN
PROJECT NUMBER:	BF 026-1(43)
FILE NAME: zl3b254xs.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: A. LEENHOUTS
DESIGNED BY: A. LEENHOUTS	CHECKED BY: -----
CROSS SECTIONS 3	SHEET 23 OF 32



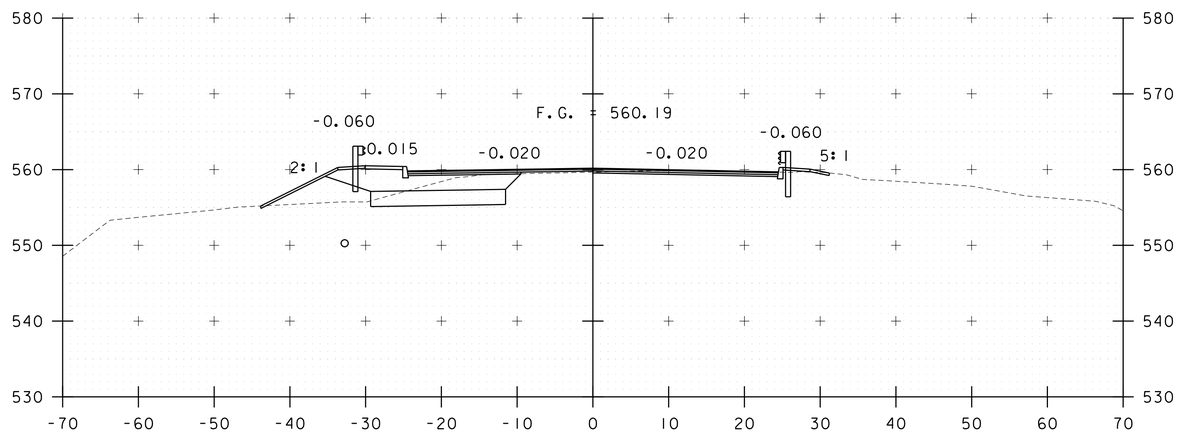
151+00



150+75



151+50

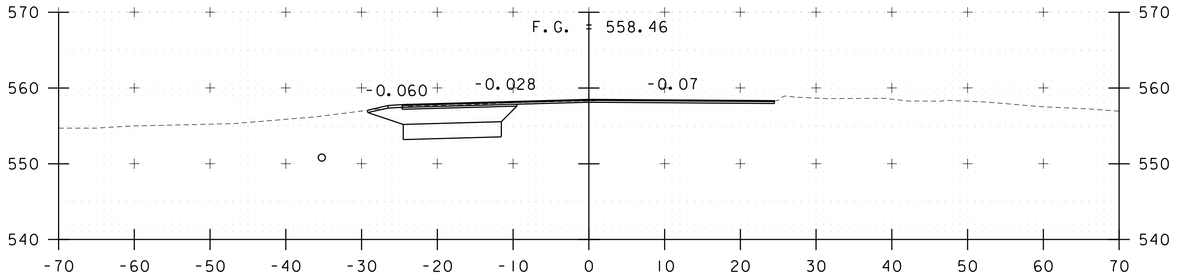


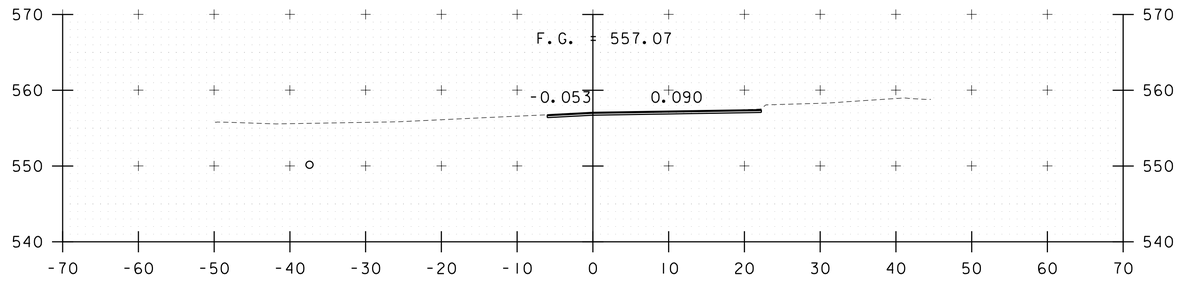
151+25

STA. 150+75 TO STA. 151+50

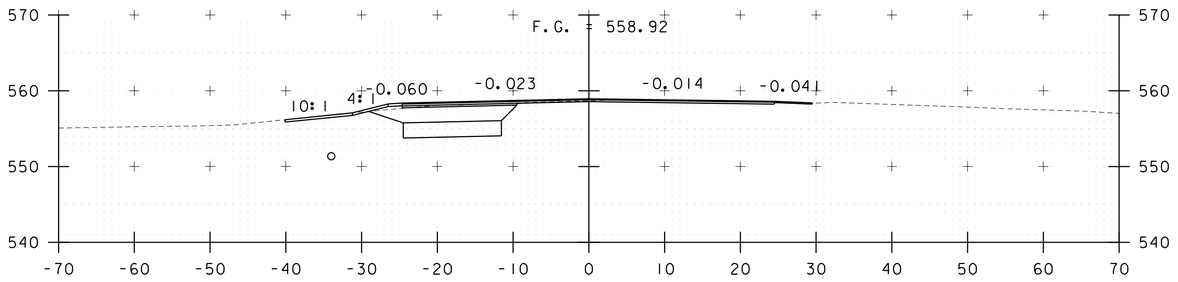
GILL ENGINEERING

PROJECT NAME:	BERLIN
PROJECT NUMBER:	BF 026-1(43)
FILE NAME: zl3b254xs.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: A. LEENHOUTS
DESIGNED BY: A. LEENHOUTS	CHECKED BY: -----
CROSS SECTIONS 4	SHEET 24 OF 32

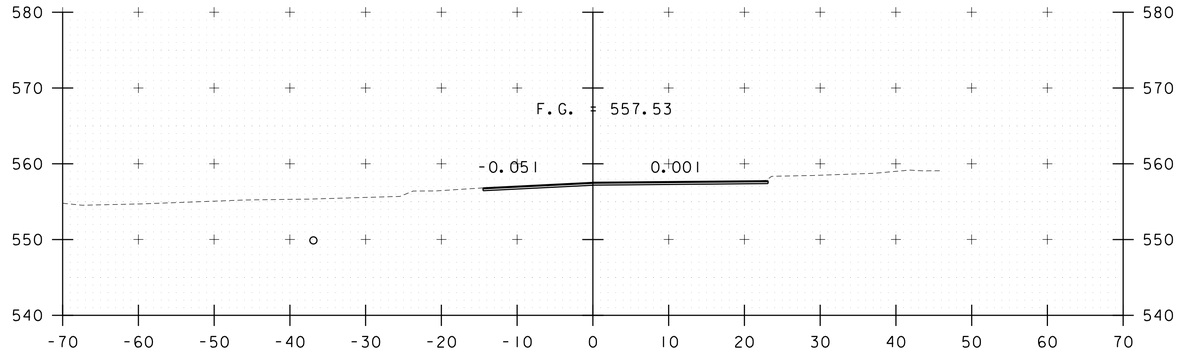




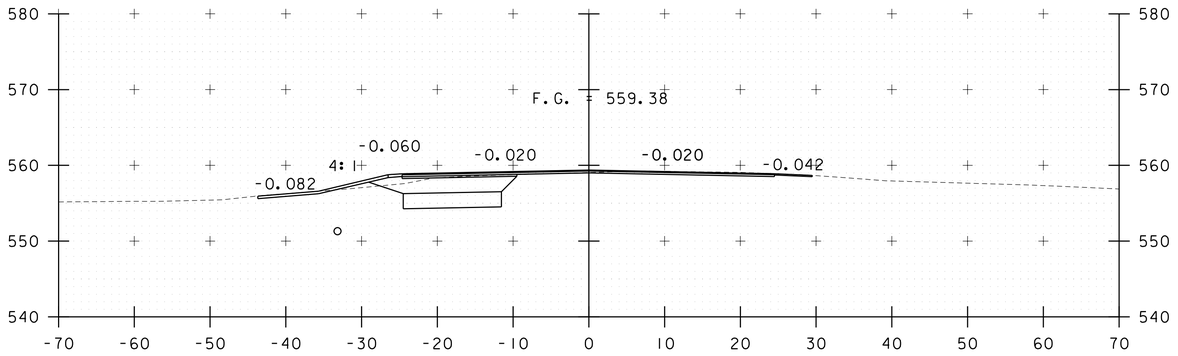
152+25



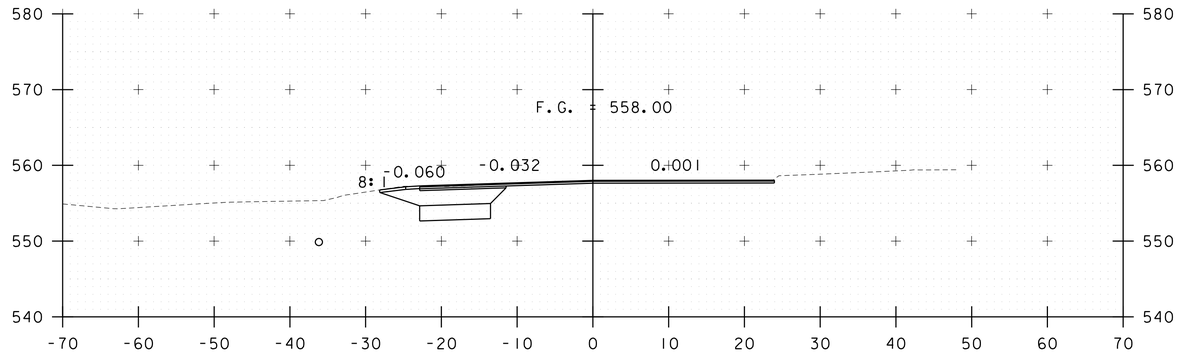
153+00



152+00



152+75



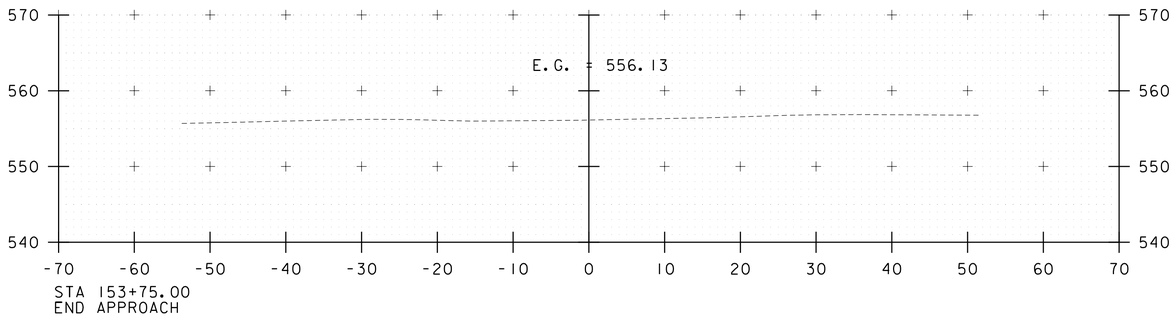
151+75

152+50

STA. 151+75 TO STA. 153+00

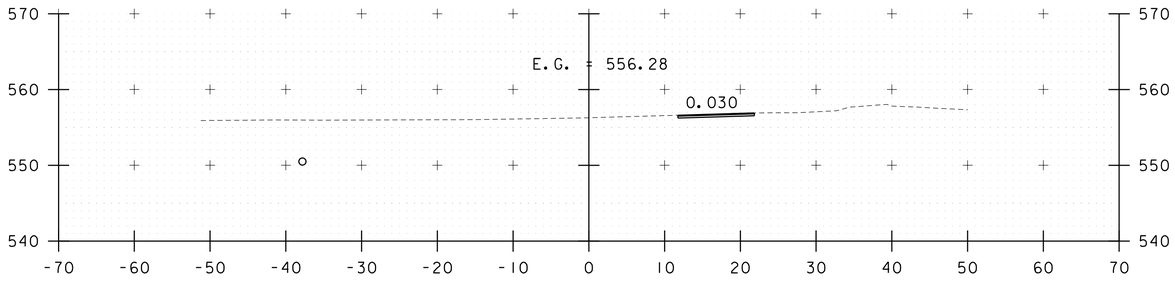
GILL ENGINEERING

PROJECT NAME:	BERLIN
PROJECT NUMBER:	BF 026-1(43)
FILE NAME: z13b254xs.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: A. LEENHOUTS
DESIGNED BY: A. LEENHOUTS	CHECKED BY: -----
CROSS SECTIONS 5	SHEET 25 OF 32

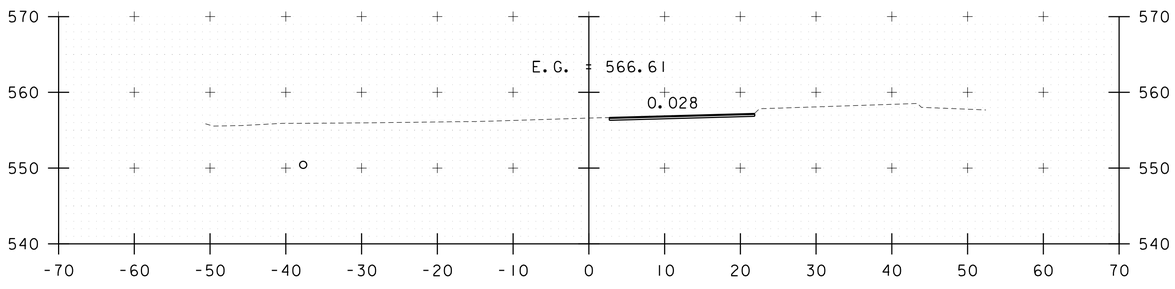


STA 153+75.00
END APPROACH

153+75



153+50

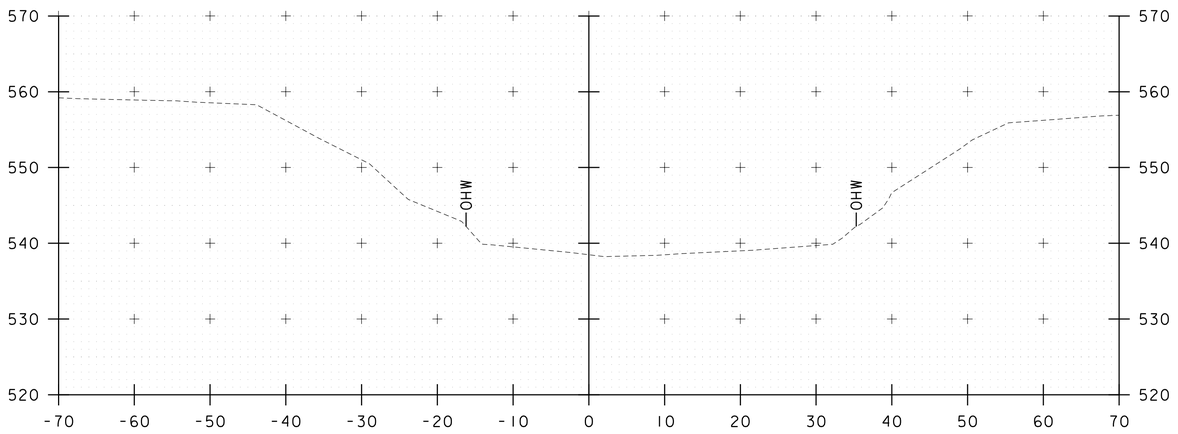


153+25

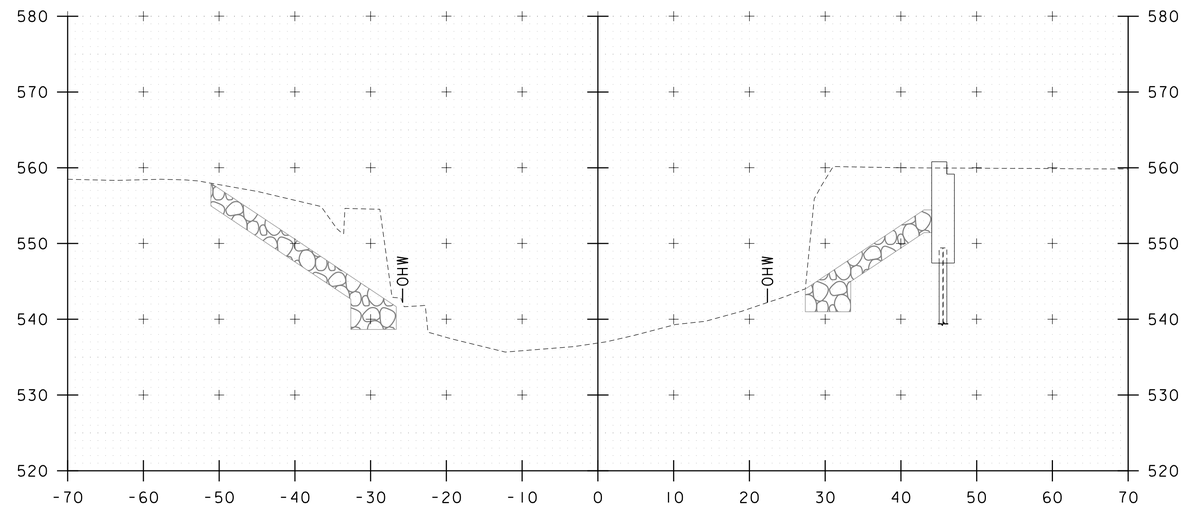
STA. 153+25 TO STA. 153+75

GILL ENGINEERING

PROJECT NAME: BERLIN	
PROJECT NUMBER: BF 026-1(43)	
FILE NAME: z13b254xs.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: A. LEENHOUTS
DESIGNED BY: A. LEENHOUTS	CHECKED BY: -----
CROSS SECTIONS 6	SHEET 26 OF 32



50+25

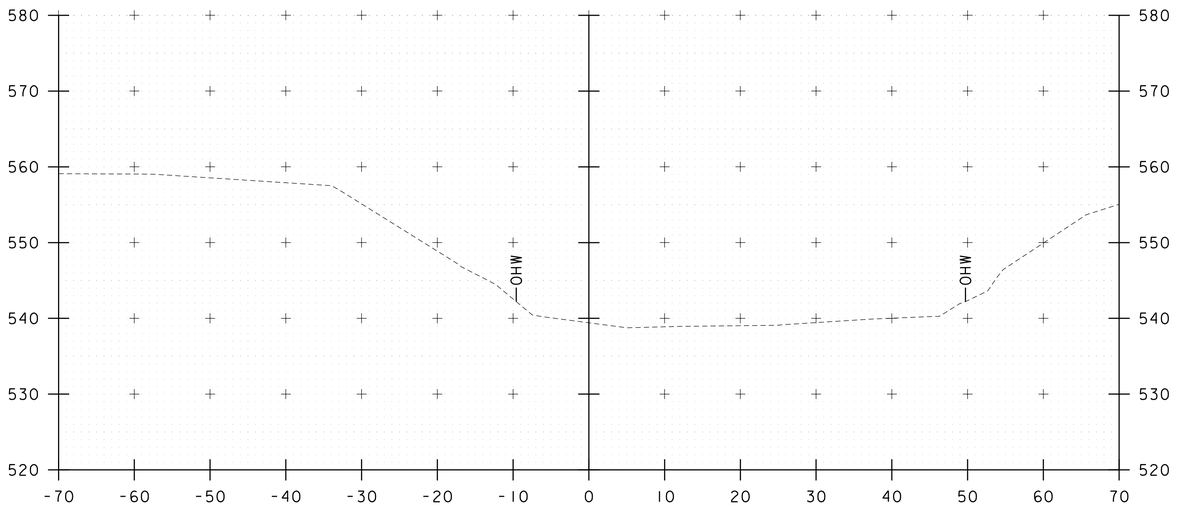


BEG CHANNEL EXCAVATION
STA. 50+69.2 LT

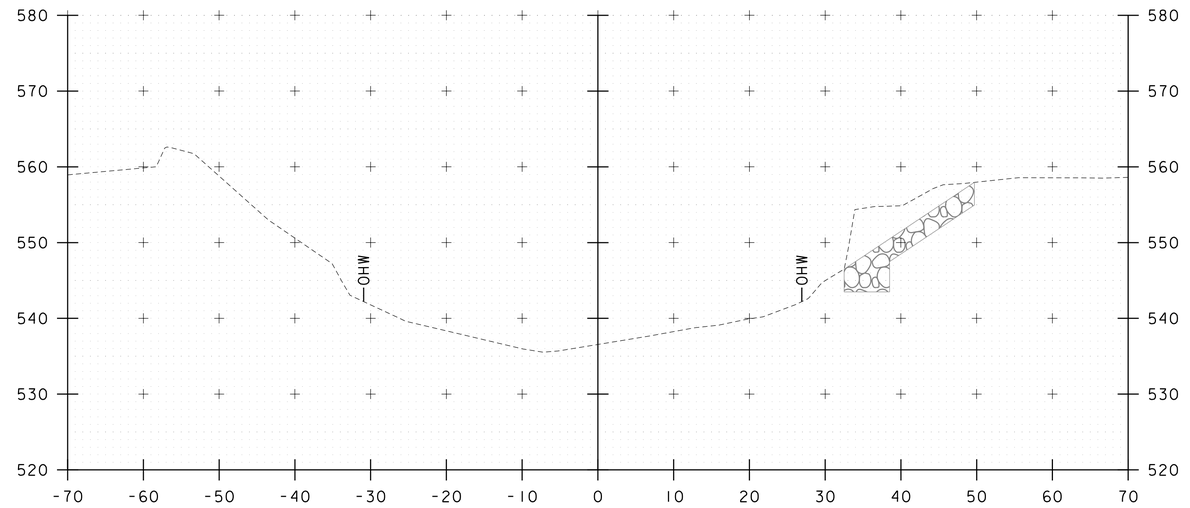
BEG STONE FILL/GEOTEXTILE/GRUBBING MATERIAL
STA. 50+64.3 LT

50+75

BEG STONE FILL/GEOTEXTILE/GRUBBING MATERIAL
STA. 50+60.6 RT



50+00



BEG STONE FILL/GEOTEXTILE/GRUBBING MATERIAL
STA. 50+44.5 RT

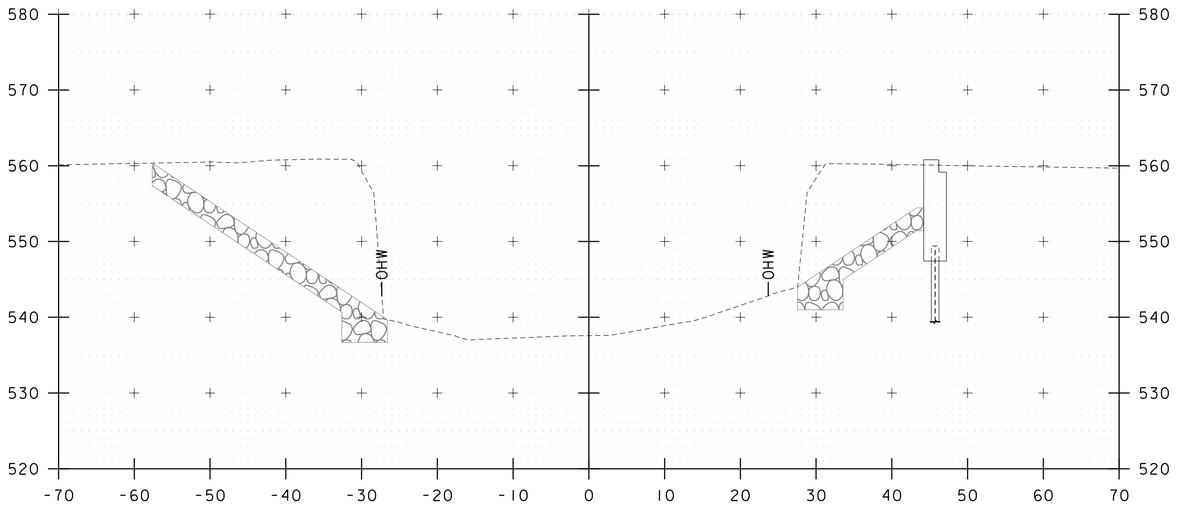
50+50

STA. 50+00 TO STA. 50+75

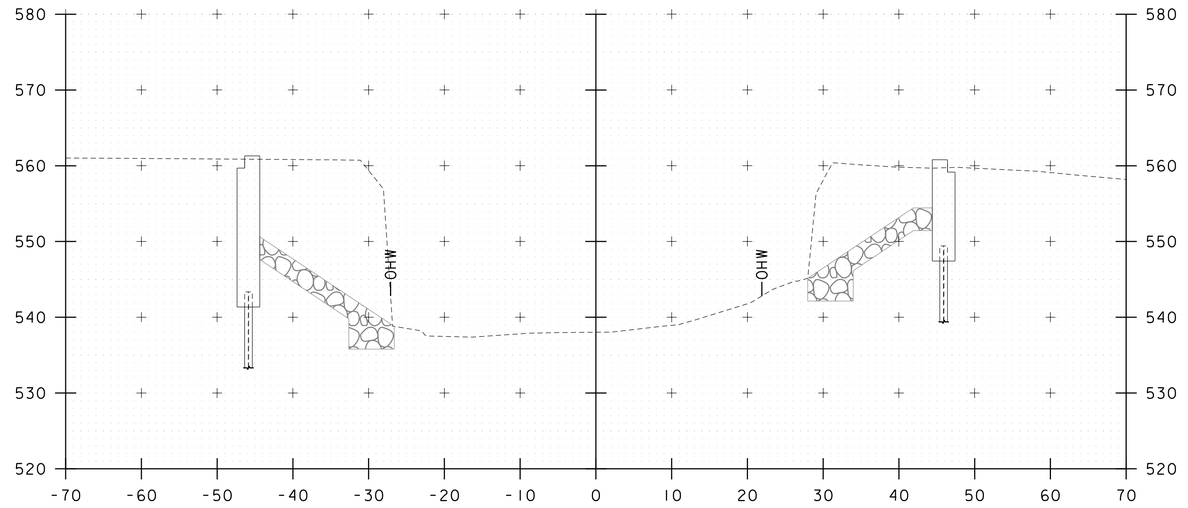
GILL ENGINEERING

PROJECT NAME:	BERLIN
PROJECT NUMBER:	BF 026-1(43)

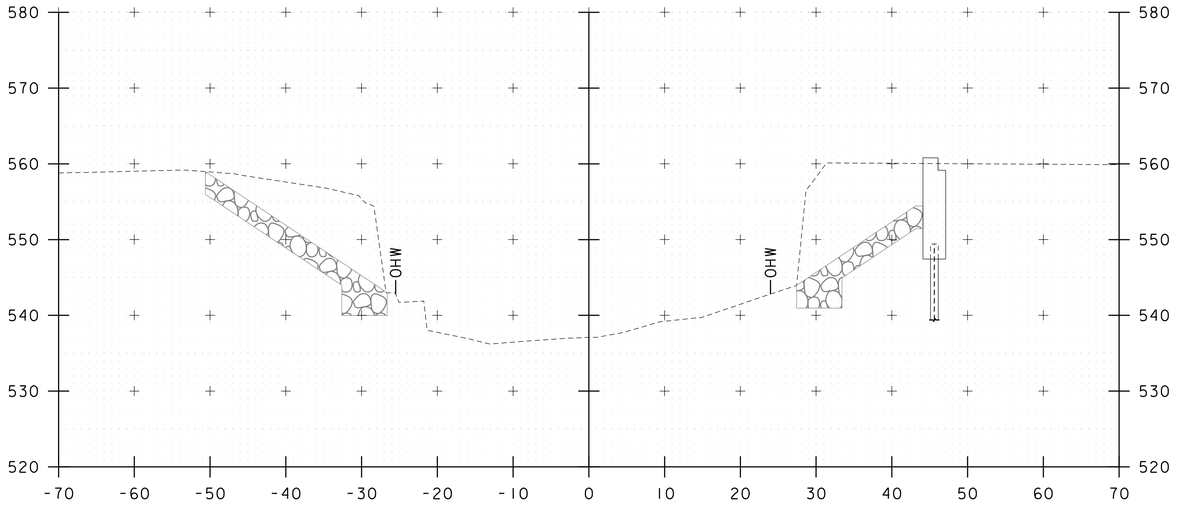
FILE NAME: zl3b254xs.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: A. LEENHOUTS
DESIGNED BY: A. LEENHOUTS	CHECKED BY: -----
CHANNEL CROSS SECTIONS 1	SHEET 27 OF 32



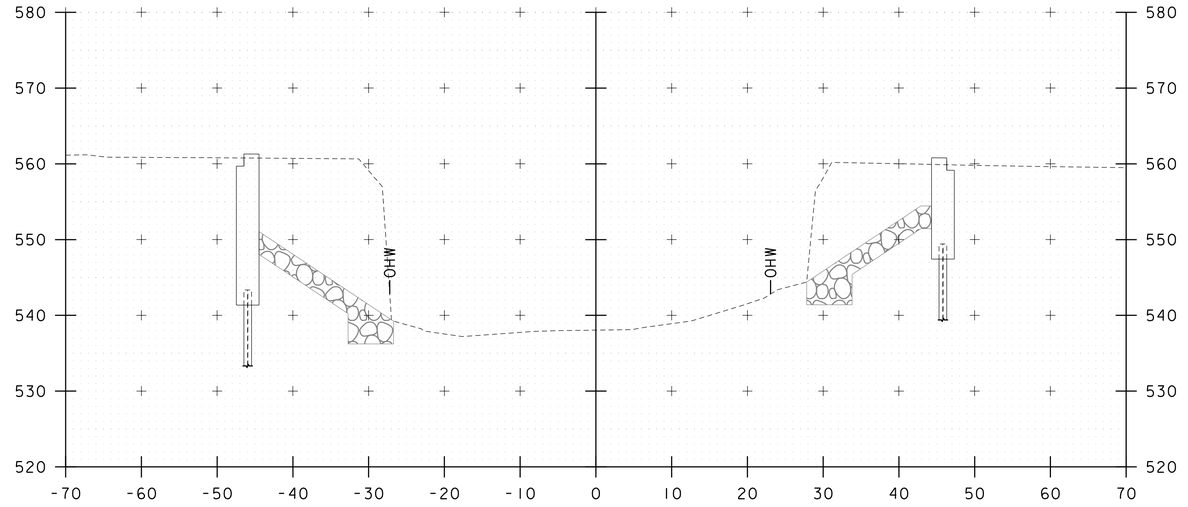
50+90



51+10



50+80



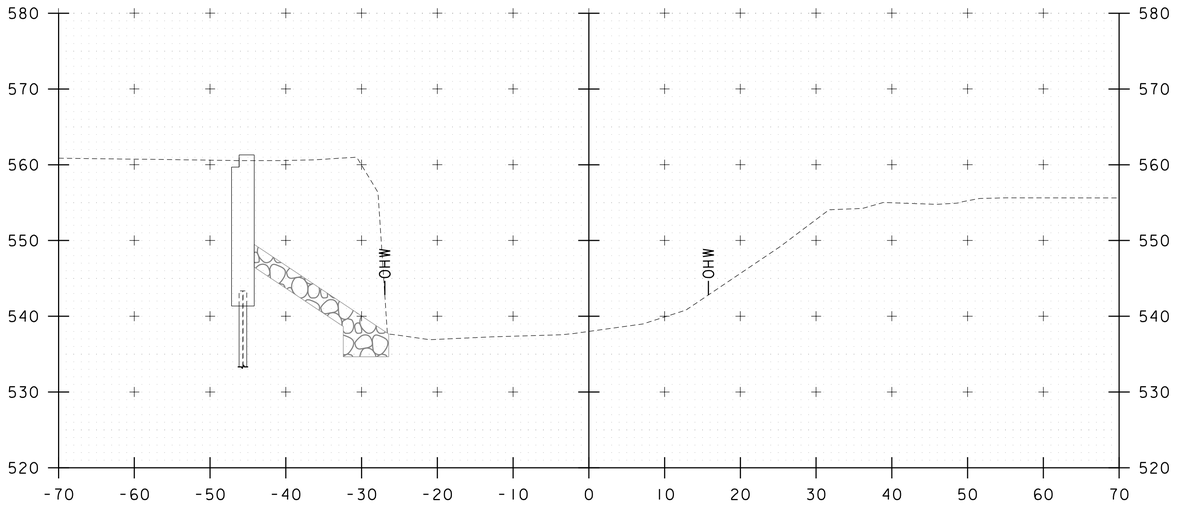
51+00

STA. 50+80 TO STA. 51+10

GILL ENGINEERING

PROJECT NAME:	BERLIN
PROJECT NUMBER:	BF 026-1(43)

FILE NAME: z13b254xs.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: A. LEENHOUTS
DESIGNED BY: A. LEENHOUTS	CHECKED BY: -----
CHANNEL CROSS SECTIONS 2	SHEET 28 OF 32

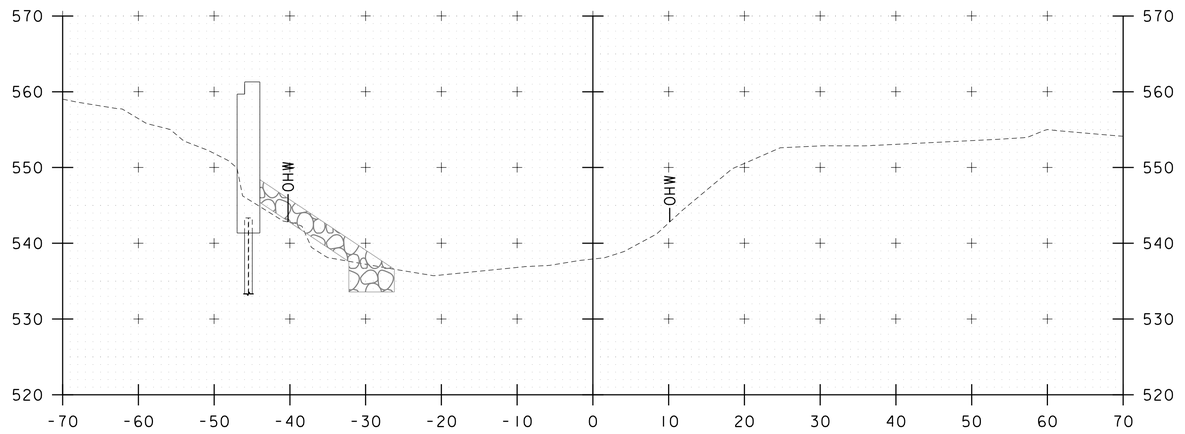


51+30

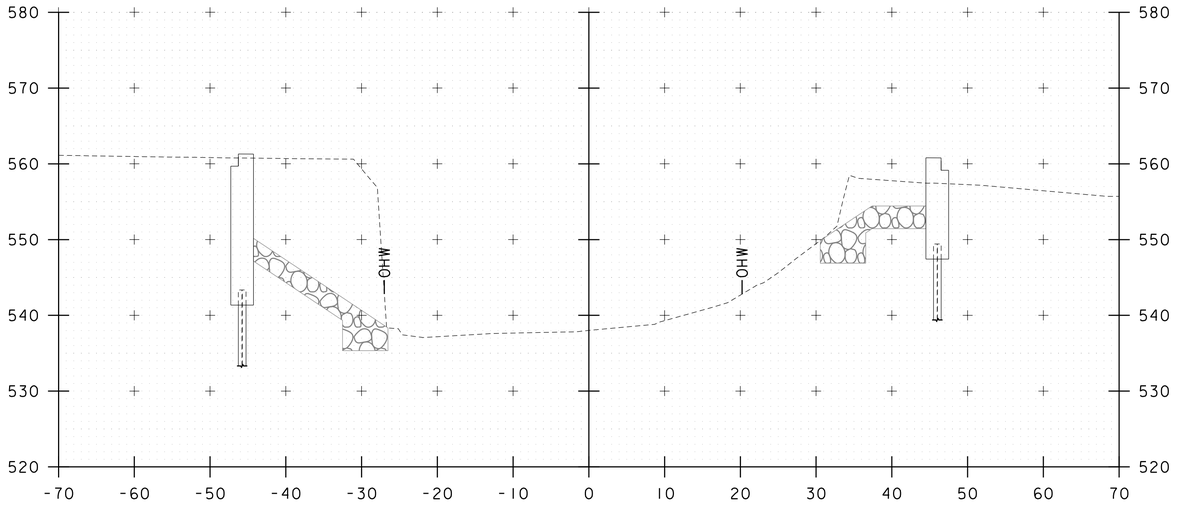
END CHANNEL EXCAVATION
STA. 51+68.5 LT

END STONE FILL/GEOTEXTILE/GRUBBING MATERIAL
STA. 51+68.5 LT

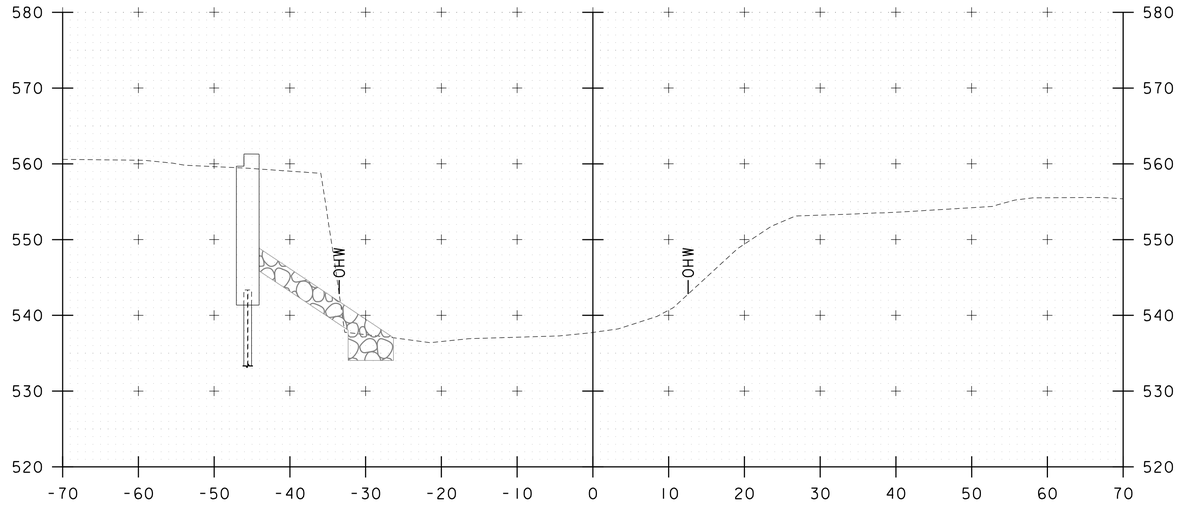
END STONE FILL/GEOTEXTILE/GRUBBING MATERIAL
STA. 51+28.7 RT



51+50



51+20

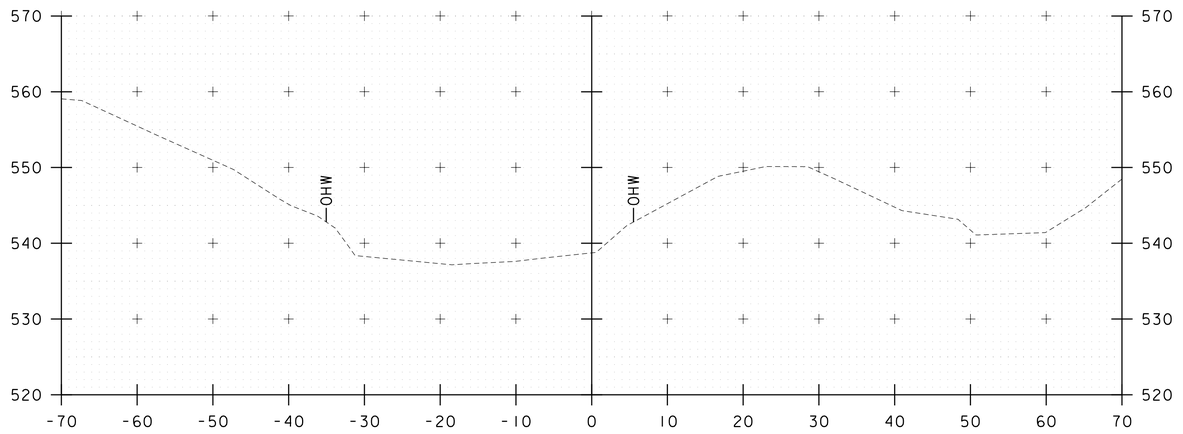


51+40

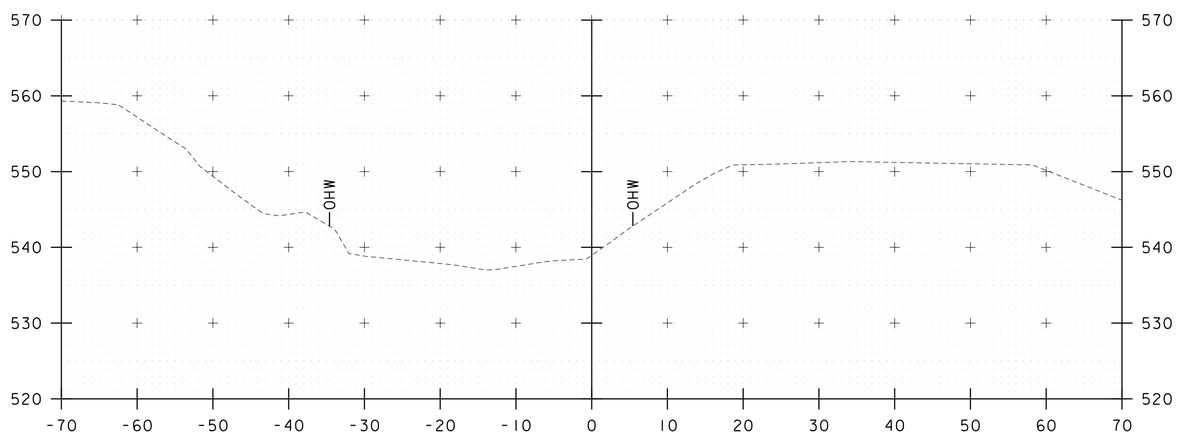
STA. 51+20 TO STA. 51+50

GILL ENGINEERING

PROJECT NAME:	BERLIN
PROJECT NUMBER:	BF 026-1(43)
FILE NAME: zl3b254xs.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: A. LEENHOUTS
DESIGNED BY: A. LEENHOUTS	CHECKED BY: -----
CHANNEL CROSS SECTIONS 3	SHEET 29 OF 32



52+00

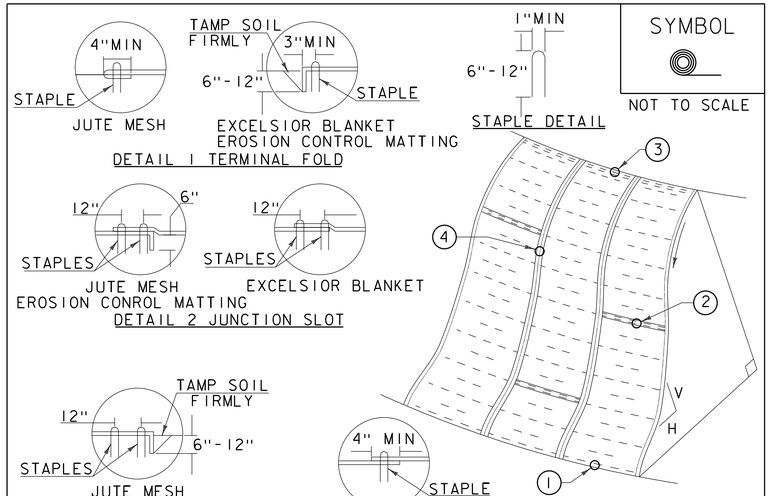


51+75

STA. 51+75 TO STA. 52+00

GILL ENGINEERING

PROJECT NAME:	BERLIN
PROJECT NUMBER:	BF 026-1(43)
FILE NAME: z13b254xs.dgn	PLOT DATE: 7/20/2020
PROJECT LEADER: A.SPERA	DRAWN BY: A. LEENHOUTS
DESIGNED BY: A. LEENHOUTS	CHECKED BY: -----
CHANNEL CROSS SECTIONS 4	SHEET 30 OF 32



SYMBOL

NOT TO SCALE

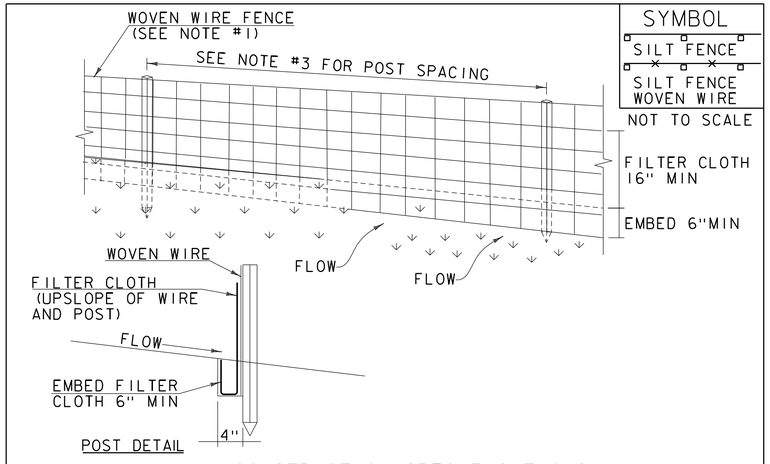
CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H: 1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

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 653 AND AS SHOWN IN THE PLANS FOR ROLLED EROSION CONTROL PRODUCT, TYPE I (PAY ITEM 653.20) OR ROLLED EROSION CONTROL PRODUCT, TYPE II (PAY ITEM 653.21)

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF



SYMBOL

SILT FENCE

SILT FENCE WOVEN WIRE

NOT TO SCALE

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, MIRAFI100X, 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	SILT FENCE

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 653 AND AS SHOWN IN THE PLANS FOR SILT FENCE TYPE I (PAY ITEM 653.475).

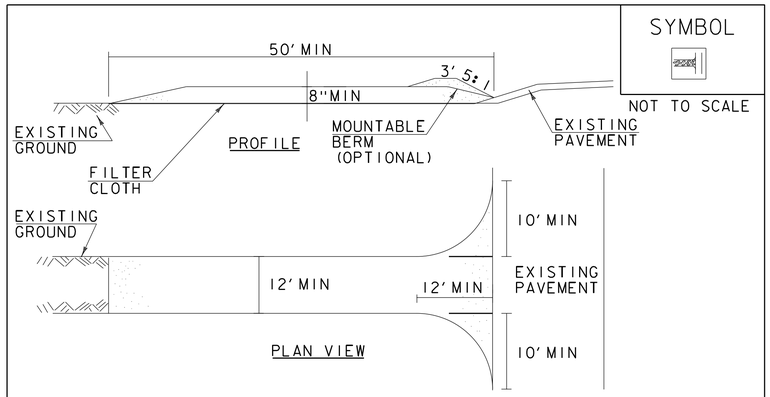
REVISIONS	
MARCH 21, 2008	WHF
DECEMBER 11, 2008	WHF
JANUARY 13, 2009	WHF

GILL ENGINEERING

PROJECT NAME: BERLIN
PROJECT NUMBER: BF 026-1(43)

FILE NAME: z13b254erodetails.dgn
PROJECT LEADER: A.SPERA
DESIGNED BY: S.CARPENTER
EPSC DETAILS 1

PLOT DATE: 7/20/2020
DRAWN BY: Y.SIMONSON
CHECKED BY: -----



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS- NOT LESS THAN 8".
4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STABILIZED CONSTRUCTION ENTRANCE

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 653 FOR STABILIZED CONSTRUCTION ENTRANCE (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

VAOT LOW GROW/FINE FESCUE MIX

	LBS/AC					
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
38%	57	95	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	90%	98%
29%	43.5	72.5	HARD FESCUE	FESTUCA LONGIFOLIA	85%	95%
15%	22.5	37.5	CHEWINGS FESCUE	FESTUCA RUBRA VAR. COMMUTATA	87%	95%
15%	22.5	37.5	ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	90%	95%
3%	4.5	7.5	INERTS			
100%	150	250				

VAOT RURAL AREA MIX

	LBS/AC					
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
37.5%	22.5	45	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	85%	98%
37.5%	22.5	45	TALL FESCUE	FESTUCA ARUNDINACEA	90%	95%
5.0%	3	6	RED TOP	AGROSTIS GIGANTEA	90%	95%
15.0%	9	18	WHITE FIELD CLOVER	TRIFOLIUM REPENS	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	LOLIUM MULTIFLORUM	85%	95%
100%	60	120				

GENERAL AMENDMENT GUIDANCE

FERTILIZER	LIME	
10/20/10	AG LIME	PELLITIZED
500 LBS/AC	2 TONS/AC	1 TONS/AC

CONSTRUCTION GUIDANCE

1. SEED MIX: THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER ON WHICH SEED MIX TO USE.
2. SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) 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. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED PROPOSED FOR USE WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED.
7. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

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

REVISIONS	
JANUARY 12, 2015	WHF

GILL ENGINEERING

PROJECT NAME: BERLIN
PROJECT NUMBER: BF 026-1(43)

FILE NAME: z13b254erodetails.dgn
PROJECT LEADER: A.SPERA
DESIGNED BY: S.CARPENTER
EPSC DETAILS 2

PLOT DATE: 7/20/2020
DRAWN BY: Y.SIMONSON
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SHEET 32 OF 32