

INDEX OF SHEETS

SEE SHEET 2

RECORD PLANS

CONTRACTOR G W TATRO CONSTRUCTION, INC. - JEFFERSONVILLE, VT
 RESIDENT ENGINEER RAY HAYES
 CONSTRUCTION BEGAN APRIL 17, 2007
 CONSTRUCTION COMPLETE JUNE 12, 2007
 RECORD PLANS BY RAY HAYES & C. PIERCE

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN

BY Ray Hayes RESIDENT ENGINEER

DATE 7/26/2010

NOTE Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives

TRAFFIC DATA

VT 120		VT 236	
2006 ADT = 790	2026 ADT = 1175	2006 ADT = 440	2026 ADT = 655
2006 DHV = 110	2026 DHV = 165	2006 DHV = 65	2026 DHV = 95
2006 ADTT = 24	2026 ADTT = 35	2006 ADTT = 13	2026 ADTT = 20
%T = 3%		%T = 3%	
%D = 50%		%D = 50%	
V = 35 MPH		V = 35 MPH	

2006-2026 (20 YEAR) 18K ESAL = N/A
 2006-2046 URBAN MINOR ARTERIAL (40 YEAR) 18K ESAL = N/A

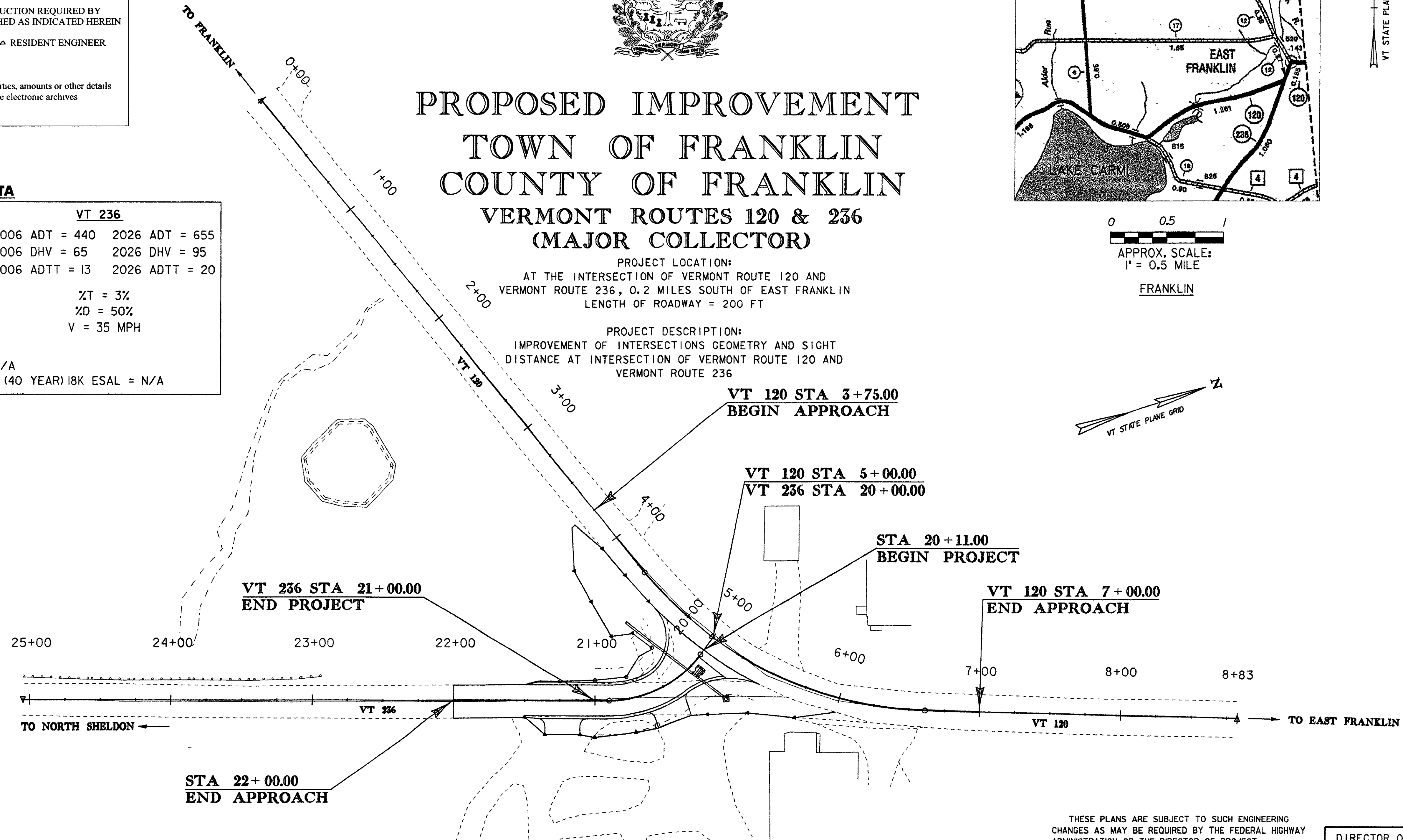
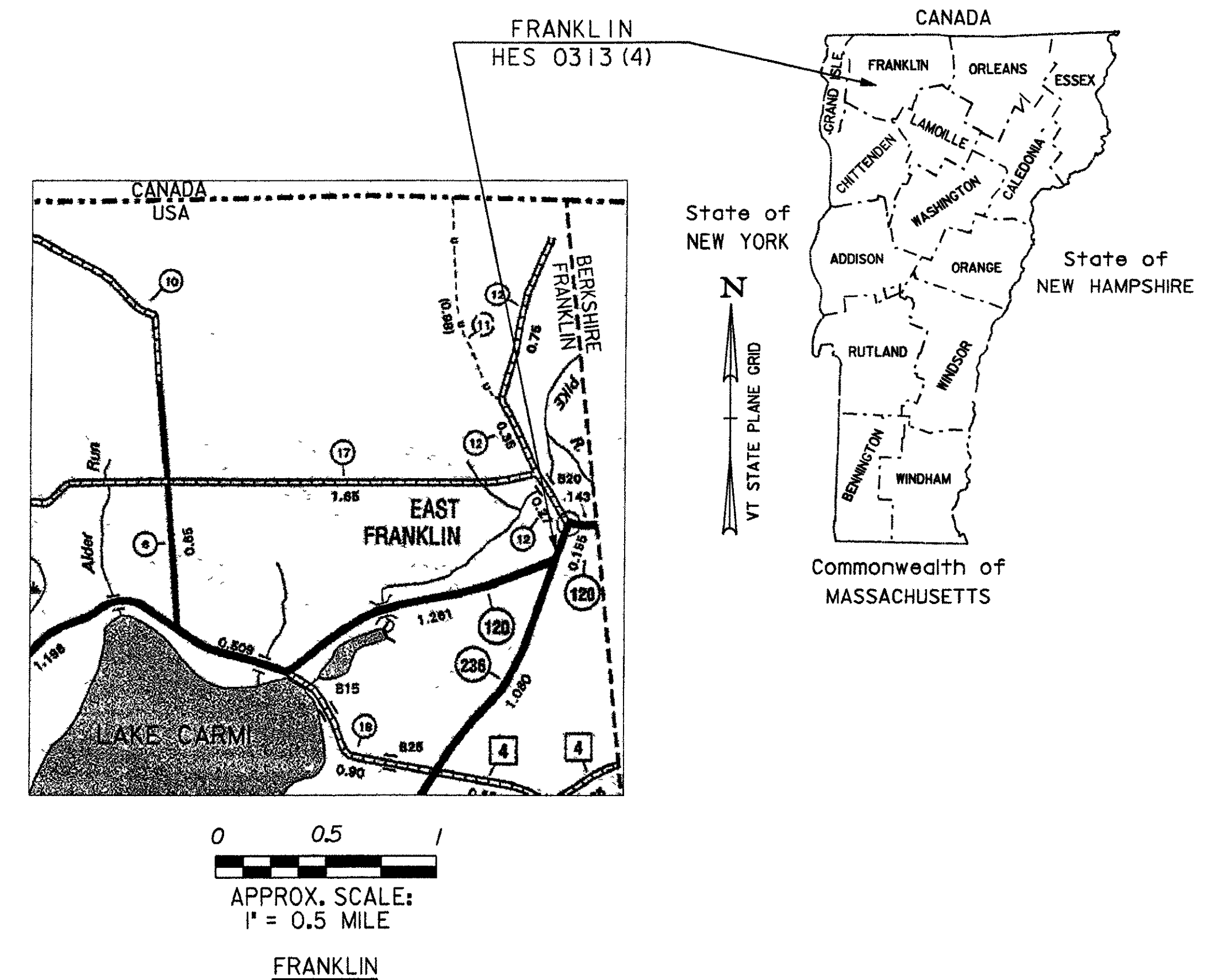
STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT TOWN OF FRANKLIN COUNTY OF FRANKLIN VERMONT ROUTES 120 & 236 (MAJOR COLLECTOR)

PROJECT LOCATION:
 AT THE INTERSECTION OF VERMONT ROUTE 120 AND
 VERMONT ROUTE 236, 0.2 MILES SOUTH OF EAST FRANKLIN
 LENGTH OF ROADWAY = 200 FT

PROJECT DESCRIPTION:
 IMPROVEMENT OF INTERSECTIONS GEOMETRY AND SIGHT
 DISTANCE AT INTERSECTION OF VERMONT ROUTE 120 AND
 VERMONT ROUTE 236



CONVENTIONAL SYMBOLS

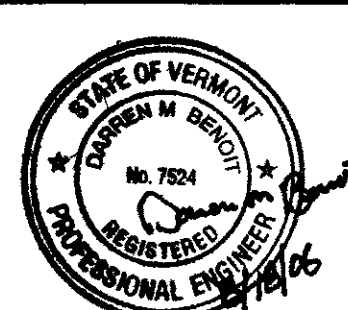
COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY : VTRANS
 SURVEYED DATE : 06/2005

DATUM

VERTICAL: NAVD 88
 HORIZONTAL: NAD83

McFarland-Johnson, Inc.
 CONCORD CENTER, STE 210
 10 FERRY STREET, UNIT 11
 CONCORD, NH 03301
 PHONE (603) 225-2978
 FAX (603) 225-0095



0 40 80
 SCALE IN FEET
 1" = 40'

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

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JANUARY 4, 2001 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DIRECTOR OF PROGRAM DEVELOPMENT
 APPROVED Robert Johnson DATE 10-23-06
 PROJECT MANAGER : GAMBLE
 PROJECT NAME : FRANKLIN
 PROJECT NUMBER : HES 0313 (4)
 SHEET 1 OF 23 SHEETS

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15	EXISTING CONDITIONS SITE PLAN
16	EROSION PREVENTION AND SEDIMENT CONTROL PLAN
17	FINAL CONDITIONS SITE PLAN
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24	TRAFFIC SIGN SUMMARY SHEETS
25	VT 236 CROSS SECTIONS
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STANDARD SHEETS		
STANDARD	DESCRIPTION	REVISION
B-5	EMBANKMENT ON EARTH SLOPE EMBANKMENT ON ROCK SLOPE MUCK EXCAVATION TYPICAL SLOPE ROUNDING	06/01/94
D-6	REINFORCED CONCRETE DROP INLET WITH GRATE FOR USE IN DITCHES	06/01/94
D-11	STEEL GRATE CAST IRON GRATE, TYPE A CAST IRON COVER	06/01/94
D-20	HIGHWAY CROSSING SLEEVES FOR UNDERGROUND UTILITIES	03/03/03
E-100	CONSTRUCTION APPROACH SIGNS	01/02/04
E-101	CONSTRUCTION SIGN DETAILS	05/30/03
E-102	CONSTRUCTION SIGN DETAILS	06/30/03
E-106	TRAFFIC CONTROL MISCELLANEOUS DETAILS	03/01/04
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS	06/30/03
E-107A	BREAKAWAY BARRICADE DETAILS	08/08/95
E-110	MAJOR MAINTENANCE OPERATION LANE CLOSURE	08/08/95
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08/08/95
E-123	GUIDE SIGN PLACEMENT - MISCELLANEOUS DETAILS	03/16/04
E-136B	STATE ROUTE MARKER SIGN DETAILS	08/08/95
E-138	MILEMARKER DETAILS - STATE & TOWN HIGHWAYS	05/30/03
E-160	FLANGED CHANNEL STEEL POST	05/20/99
E-164	SQUARE STEEL SIGN POST	05/20/99
E-191	PAVEMENT MARKING DETAILS	02/01/99
E-193	PAVEMENT MARKING DETAILS	08/18/95

DATUM
VERTICAL: NAVD 88
HORIZONTAL: NAD83

PROJECT NAME: FRANKLIN	
PROJECT NUMBER: HES 0313(4)	
FILE NAME: INDEX.DGN	PLOT DATE: 11-OCT-2006
PROJECT LEADER: GAMBLE	DRAWN BY: MJF
DESIGNED BY: BRC	CHECKED BY: DMB
INDEX OF SHEETS	SHEET 2 OF 26

TYPICAL SECTIONS

SEEDING FORMULA

RURAL AREAS

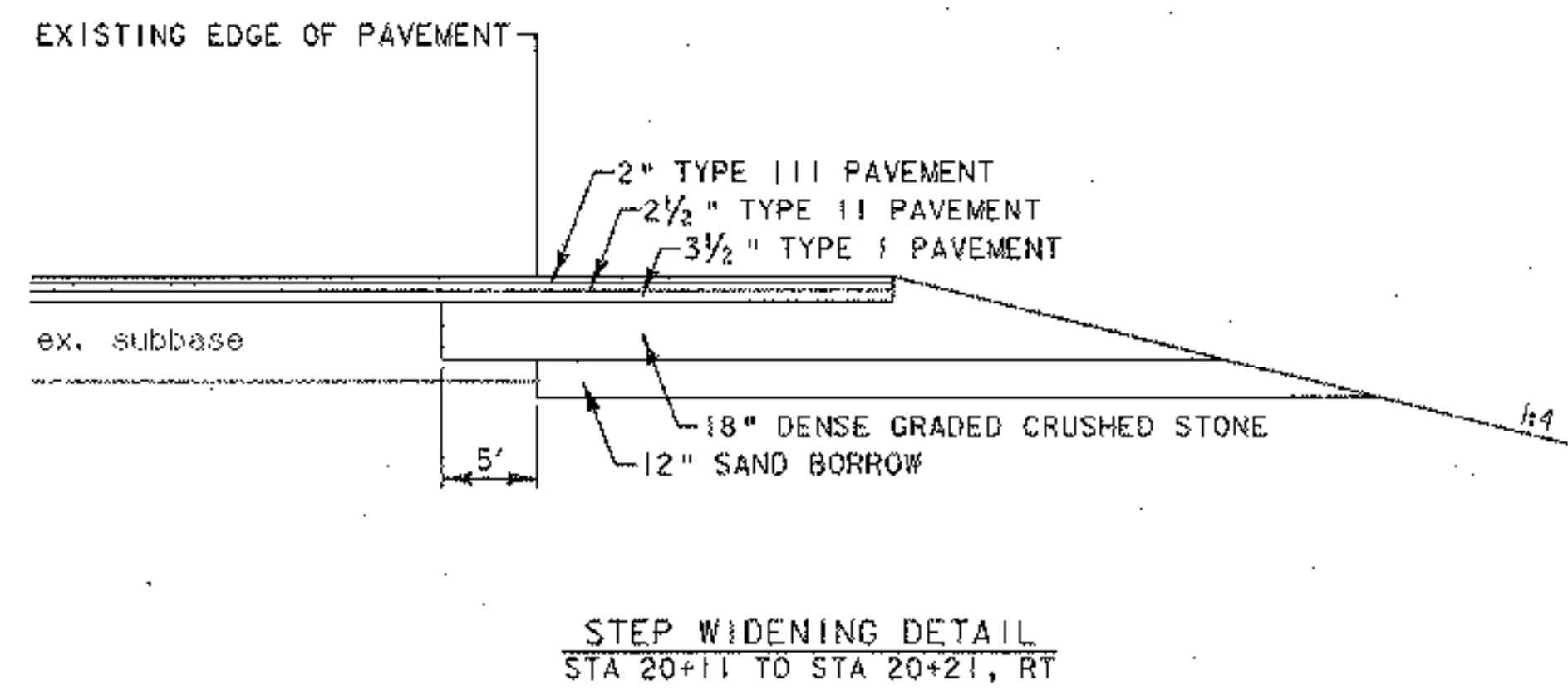
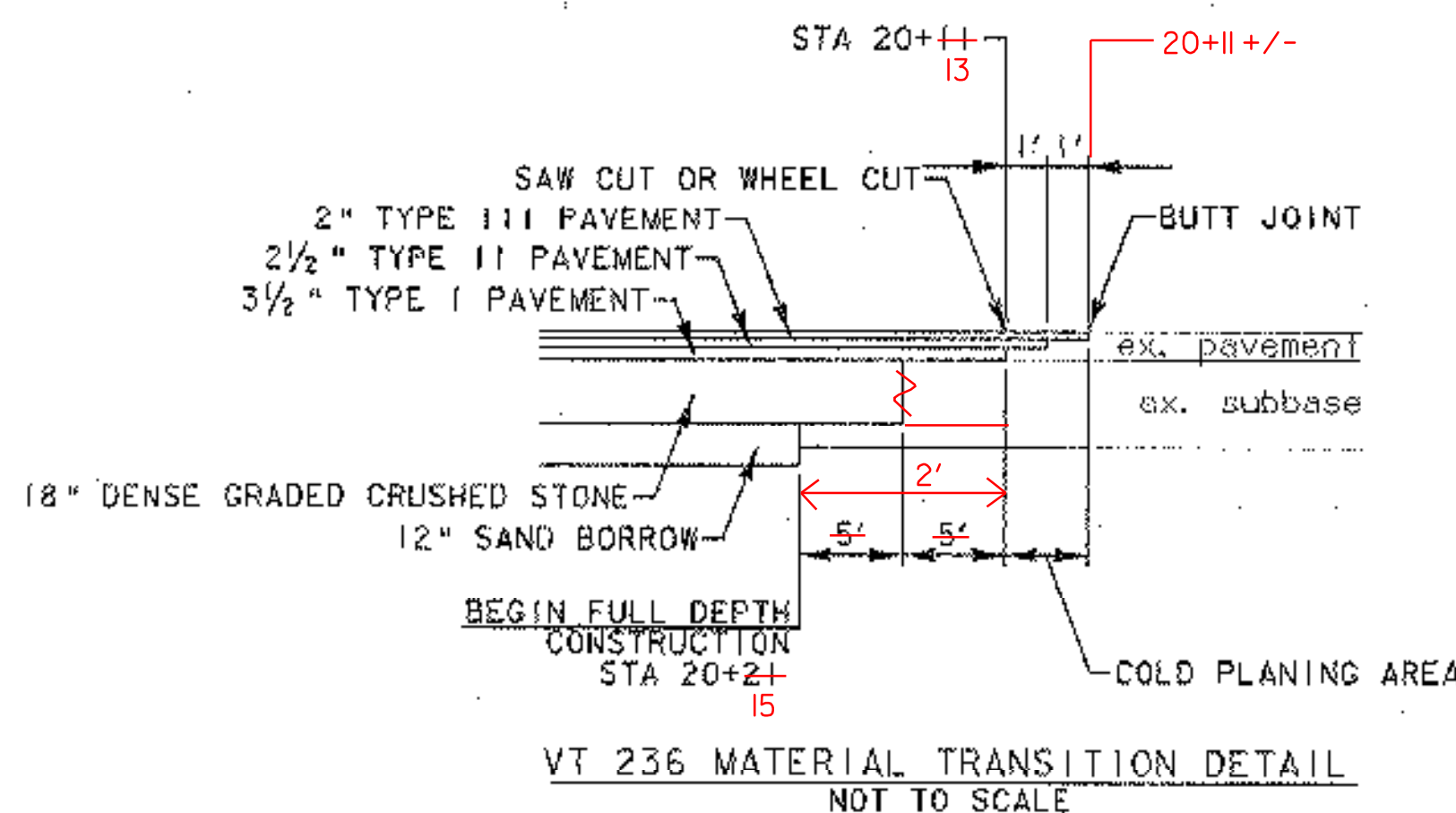
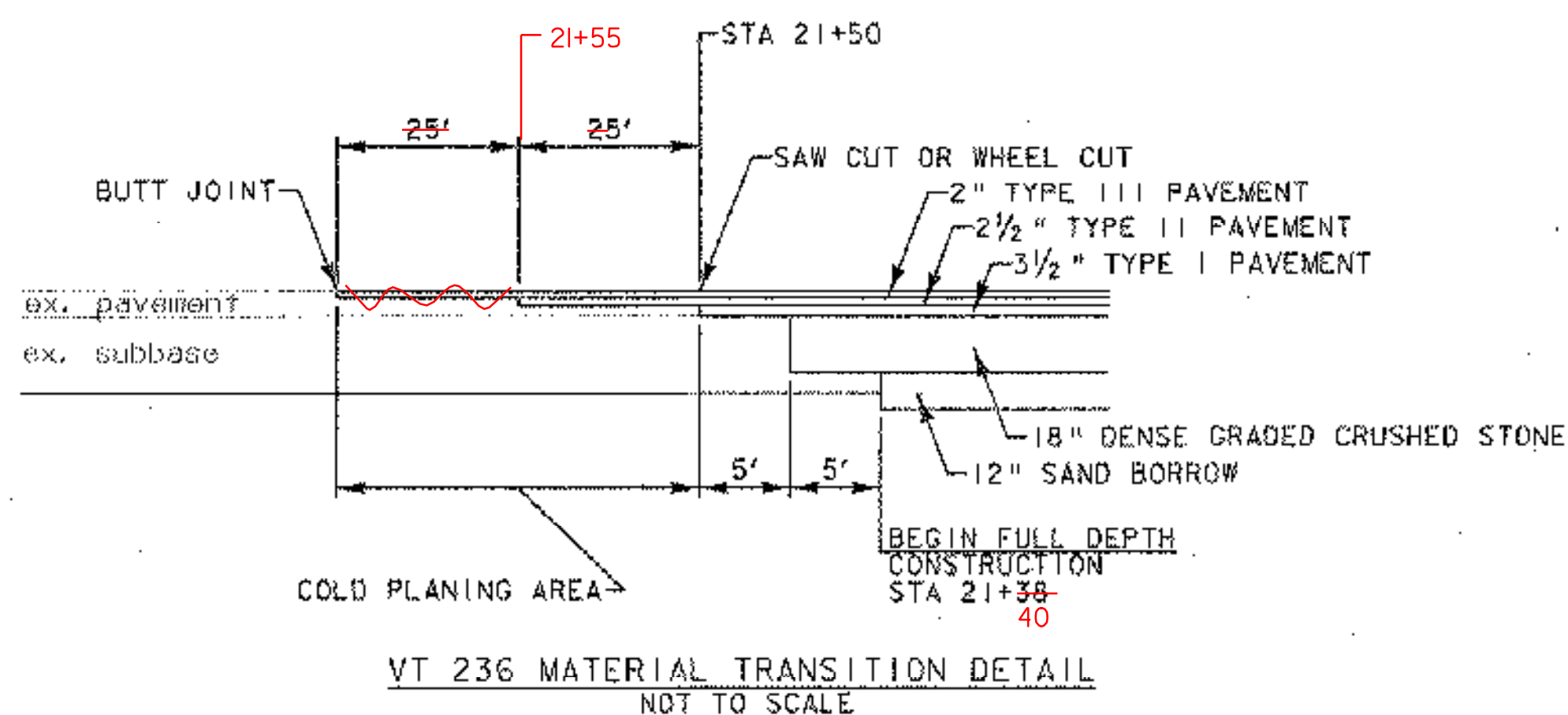
% WT	lb/ac	NAME	PUR %	GERM %
5.0	4	RED TOP	95	90
37.5	23	CREeping RED FESCUE	98	85
15.0	9	BIRDFOOT TREFOIL	98	85
37.5	23	TALL FESCUE	95	90
5.0	4	ANNUAL RYE GRASS	95	85
100.0	63			

GENERAL NOTES

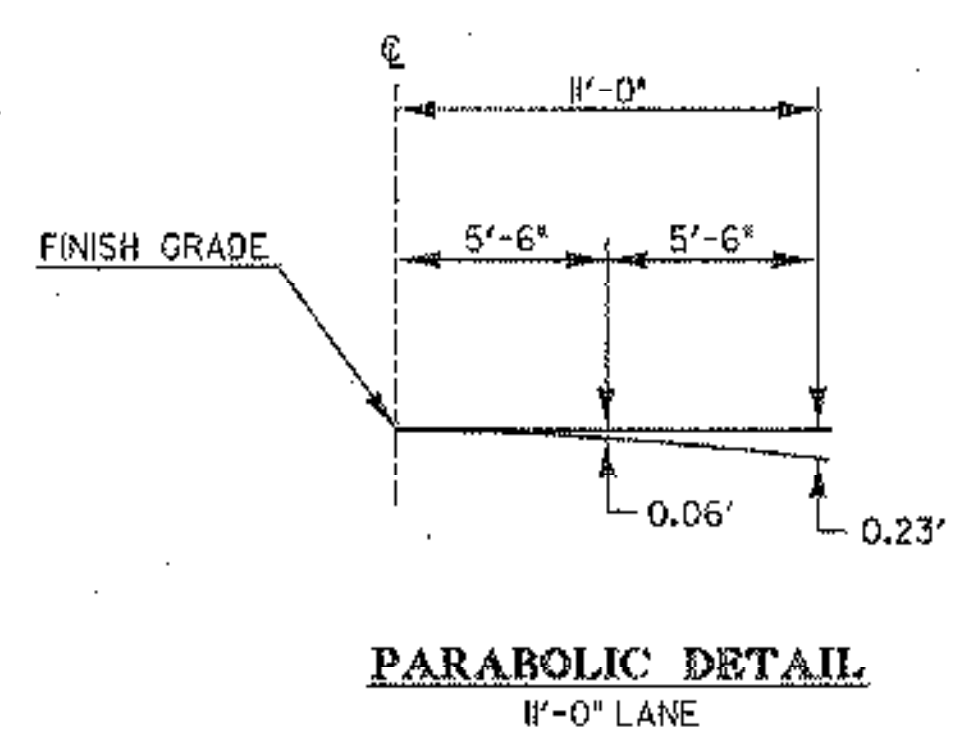
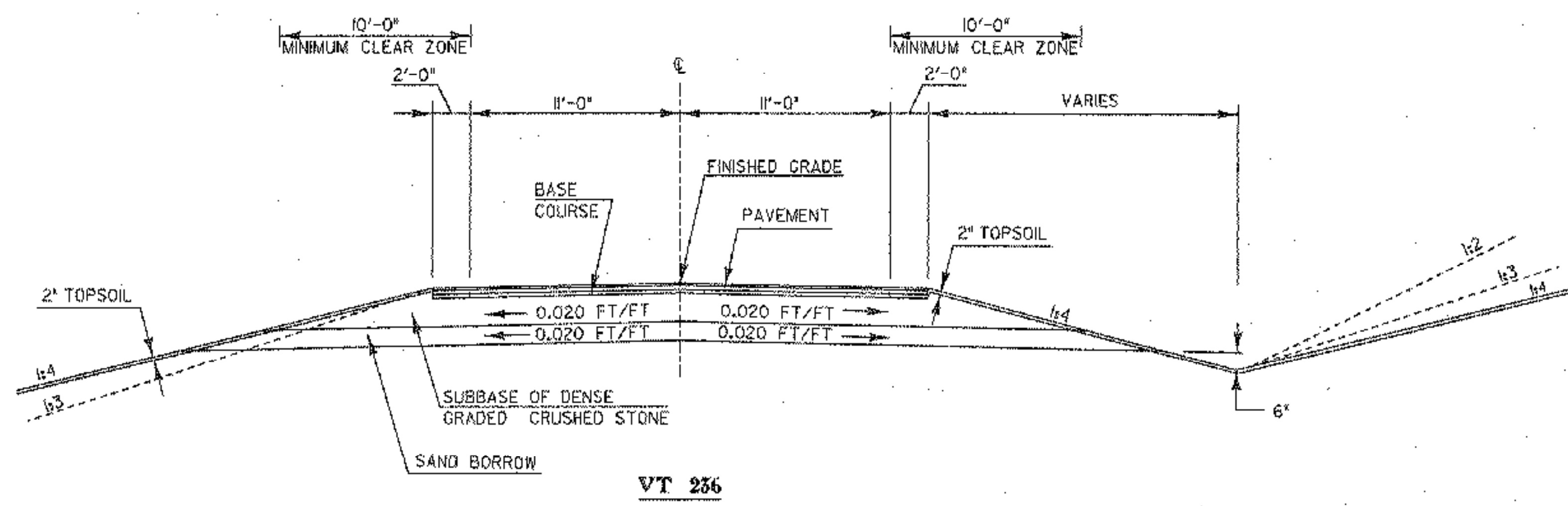
- SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
- SEED: TO BE APPLIED PER SEEDING FORMULAS, OR AS DIRECTED BY THE ENGINEER.
- FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 lb/ac (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).
- AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2.0 tons/ac, OR AS DIRECTED BY THE ENGINEER.
- HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2.0 tons/ac, OR AS DIRECTED BY THE ENGINEER.
- TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
- MARKER POSTS: TO BE PLACED AS INDICATED OR AS DIRECTED BY THE ENGINEER.
- SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5.
- TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.002 gal/ft² BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.

MATERIALS TOLERANCE TABLE

MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH)	+/- 1/4 INCH
SUBBASE (TOTAL DEPTH)	+/- 1 INCH
SAND BORROW (TOTAL DEPTH)	+/- 1 INCH



4 1/2" BITUMINOUS CONCRETE PAVEMENT, 2" TYPE III, OVER 2 1/2" TYPE II (TWO LIFTS) PG 58-34
3 1/2" BITUMINOUS CONCRETE PAVEMENT, TYPE I
18" SUBBASE OF DENSE GRADED CRUSHED STONE
12" SAND BORROW



DATUM
VERTICAL: NAVD 88
HORIZONTAL: NAD83

NOT TO SCALE

NOTE:
ALL DIMENSIONS IN FEET (FT) EXCEPT WHERE NOTED

PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	HES 0313(4)
FILE NAME:	Z04C202TYP
PROJECT LEADER:	GAMBLE
DESIGNED BY:	BRC
TYPICAL SECTION - VT 236	
PLOT DATE:	02-NOV-2006
DRAWN BY:	MJF
CHECKED BY:	DMB
SHEET 3	OF 26

QUANTITY SHEET # 1

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES

				FULL C.E.	EROSION CONTROL	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
						560	560	CY	COMMON EXCAVATION	203.15	5
						155	155	CY	SAND BORROW	203.31	3.7
						535	535	SY	FINE GRADING - SUBGRADE	203.40	4.2
						70	70	CY	TRENCH EXCAVATION OF EARTH	204.20	2.7
						10	10	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	
						150	150	SY	COLD PLANING - BIT. PAVEMENT	210.10	0.5
						275	275	CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	3.9
						0.2	0.2	CWT	EMULSIFIED ASPHALT	404.65	0.05
						260	260	TON	BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	406.25	5.3
						2	2	CY	CONCRETE, CLASS B	501.25	0.1
						160	160	LB	REINFORCING STEEL	507.15	2
						87	87	LF	18" RCP CLASS IV	601.0816	
						1	1	EA	CAST IRON GRATE WITH FRAME, TYPE A	604.45	
						3	3	MGAL	DUST CONTROL WITH WATER	609.10	0.1
					4		4	CY	STONE FILL, TYPE 1 (MOD. - CHECK DAM)	613.10	
					34		34	CY	STONE FILL, TYPE 1 (MOD. - CONSTRUCTION ENTRANCE)	613.10	0.7
					1		1	CY	STONE FILL, TYPE 1 (MOD. - INLET PROTECTION)	613.10	0.9
						6	6	EA	YIELDING MARKER POSTS	619.17	
						133	133	LF	REMOVAL OF EXISTING FENCE	620.55	
						90	90	LF	SNOW FENCE (MOD. - ARCH)	620.70	4.2
						455	455	LF	SNOW FENCE (MOD. - PDF)	620.70	1.6
						64	64	LF	SLEEVES FOR UTILITIES (1X 2")	625.10	
						51	51	LF	SLEEVES FOR UTILITIES (1X 6")	625.10	0.5
						61	61	LF	SEAMLESS COPPER WATER TUBE (1")	629.23	0.5
						50	50	HR	UNIFORMED TRAFFIC OFFICERS	630.10	4
						155	155	HR	FLAGGERS	630.15	2
						1	1	LS	TESTING EQUIPMENT - CONCRETE	631.16	
						1	1	LS	TESTING EQUIPMENT - BITUMINOUS	631.17	
						1	1	LS	MOBILIZATION/DEMOBILIZATION	635.11	
						1	1	LS	TRAFFIC CONTROL	641.10	
						375	375	LF	DURABLE 4" WHITE LINE (THERMOPLASTIC)	646.40	4.2
						900	900	LF	DURABLE 4" YELLOW LINE (THERMOPLASTIC)	646.41	14
						26	26	LF	DURABLE 24" STOP BAR (THERMOPLASTIC)	646.46	0.7
						4	4	EA	DURABLE LETTER OR SYMBOL (THERMOPLASTIC)	646.50	
						370	370	LF	TEMPORARY 4" YELLOW LINE (PAINT)	646.61	4
						45	45	EA	LINE STRIPING TARGETS	646.76	
					45		45	SY	GEOTEXTILE FOR SILT FENCE	649.51	1.2
					13		13	LB	SEED	651.15	

DETAILED SUMMARY OF QUANTITIES

[illegible]

DETAILED SUMMARY OF QUANTITIES

[illegible]

PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	HES 0313(4)

FILE NAME: TOTSUMOI.DGN
PROJECT LEADER: GAMBLE
DESIGNED BY: BRC
QUANTITIES SHEET #1

PLOT DATE: 02-NOV-2006
DRAWN BY: MJF
CHECKED BY: DMB
SHEET 4 OF 26

QUANTITY SHEET # 2

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES

	FULL C.E.	EROSION CONTROL	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
		60		60	LB	FERTILIZER	651.18	1
		0.3		0.3	TON	AGRICULTURAL LIMESTONE	651.20	0.06
		0.3		0.3	TON	HAY MULCH	651.25	0.06
			32	32	CY	TOPSOIL	651.35	0.3
	I			I	LS	EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.10	
	20			20	HR	MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.20	
	I			I	LU	MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN (N.A.B.I.)	652.30	
			10	10	SF	TRAFFIC SIGNS, TYPE A	675.20	0.82
						*** BEGIN OPTION SIGN POSTS ***		
			88	88	LF	FLANGED CHANNEL SIGN POST	675.301	0.9
			88	88	LF	SQUARE TUBE SIGN POSTS AND ANCHOR	675.341	0.9
						*** END OPTION SIGN POSTS ***		
			17	17	EA	REMOVING SIGNS	675.50	
			11	11	EA	ERECTING SALVAGED SIGNS	675.60	
			7	7	EA	DELINEATORS W/ STEEL POSTS	676.10	(EST)
			I	I	EA	PRECAST REINFORCED CONCRETE CATCH BASIN W/ CAST IRON GRATE - CHANGE ORDER #I	604.20	
			I	I	LS	SUPPLEMENTAL AGREEMENT (FIELD DRIVE RELOCATION)	900.545	

DETAILED SUMMARY OF QUANTITIES

[illegible]

DETAILED SUMMARY OF QUANTITIES

[illegible]

PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	HES 0313(4)

FILE NAME: TOTSUMO.DGN
PROJECT LEADER: GAMBLE
DESIGNED BY: BRC
QUANTITIES SHEET #2

PLOT DATE: 02-NOV-2006
DRAWN BY: MJF
CHECKED BY: DMB
SHEET 5 OF 26

STATE OF VERMONT
AGENCY OF TRANSPORTATION

GUARD RAIL

[illegible]

EARTHWORKS

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

[illegible][illegible][illegible][illegible]

REMARKS	
EARTH AND ROCK EXCAVATION	552
SOLID ROCK EXCAVATION	0
EARTH EXCAVATION	552
PLANIMETERED FILL	7
LESS FACTORED SOLID ROCK (FACTOR = 1.3)	0
LESS FACTORED ROCK OVERBREAKAGE (FACTOR = 1.3)	0
LESS DISPLACEMENT OF ANY LARGE STRUCTURES	0
NET PLANIMETERED FILL	7
FACTOR	0
PLANIMETERED FILL INCLUDING FILL	7
MATERIALS AVAILABLE FOR FILLS	
EARTH EXCAVATION	552
CHANNEL EXCAVATION	0
UNDERDRAIN EARTH EXCAVATION	0
UNDERDRAIN ROCK EXCAVATION (FACTORED)	0
STRUCTURE EXCAVATION	0
TOTAL MATERIAL AVAILABLE FOR FILL	552
TOTAL FILL INCLUDING FACTOR	7
TOTAL MATERIAL FOR FILL	552
BORROW	
EXCESS EXCAVATION	545

PROJECT NAME: FRANKLIN
PROJECT NUMBER: HES 0313(4)

FILE NAME: EARTH01.DGN
PROJECT LEADER: GAMBLE
DESIGNED BY: BRC
EARTHWORKS SHEET

PLOT DATE: 11-OCT-2006
DRAWN BY: MJF
CHECKED BY: DMB
SHEET 7 OF 26

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

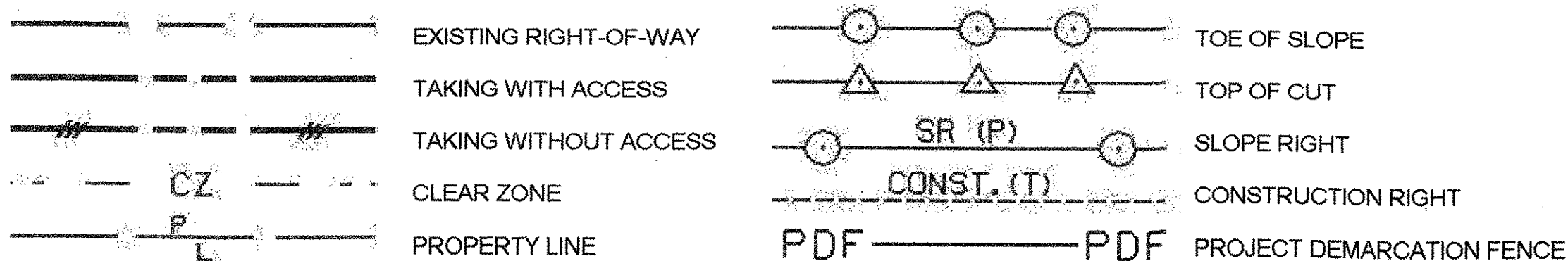
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TABLE OF REVISIONS

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PLOT DATE 09/26/06

PLAN LEGEND

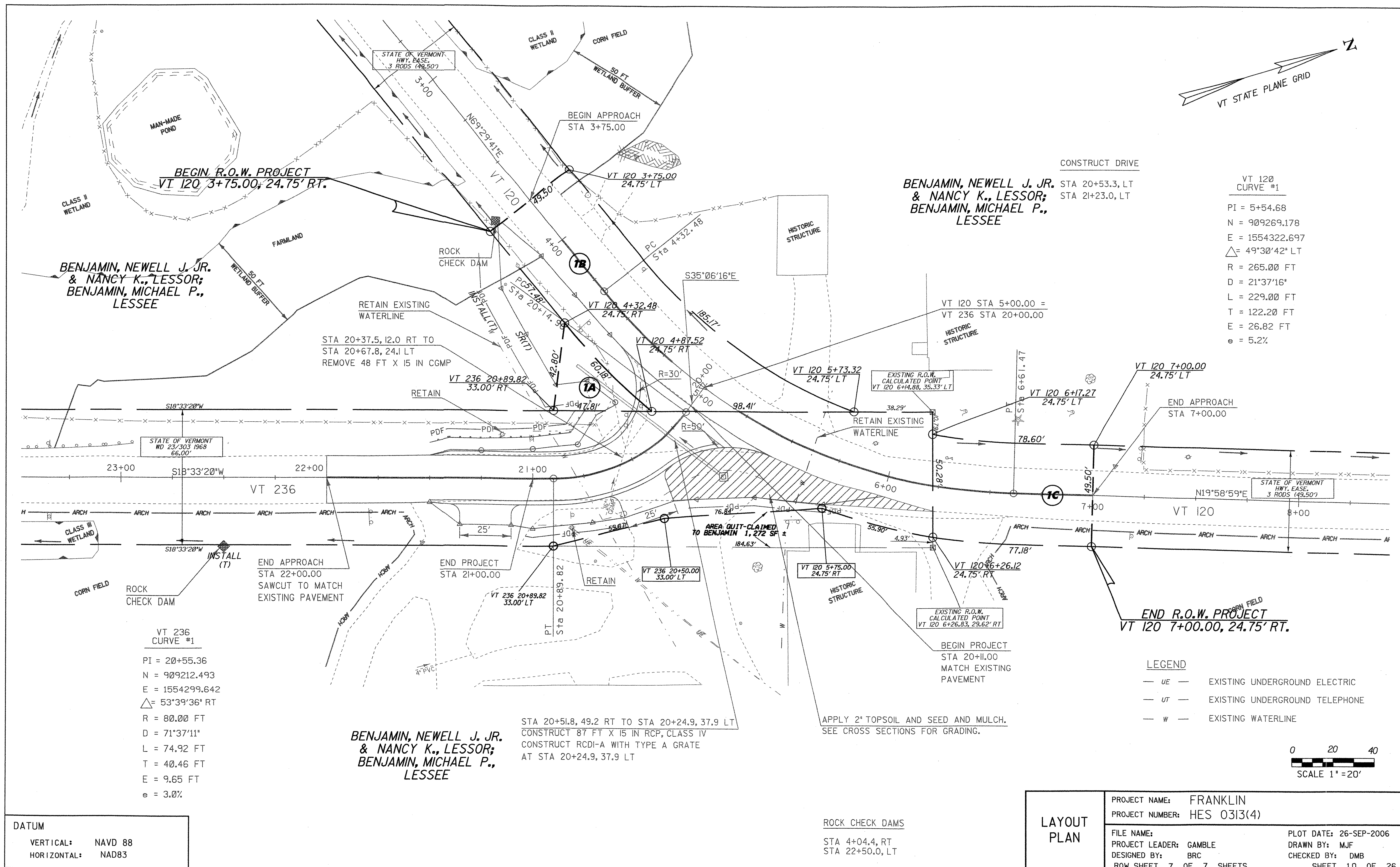


EC	-EROSION CONTROL
(P)	-PERMANENT
(T)	-TEMPORARY
DR.	-DRAINAGE RIGHT
DIT.	-DITCHING RIGHT
CH.	-CHANNEL RIGHT
DRIVE	-DRIVE RIGHT
CUL.	-CULVERT RIGHT
C&T	-CLEARING & TRIMMING RIGHT
SR	-SLOPE RIGHT
UE	-UTILITY EASEMENT

APPROVED: ROGER P. DUMAS DATE: 09-25-06
CHIEF, PLANS & TITLES

PROJECT NAME: **FRANKLIN**
PROJECT NUMBER: **HES 0313 (4)**

FILE NAME:	04c202.XLS	PLOT DATE:	6/22/06
PROJECT LEADER:	EGP	DRAWN BY:	JAB
DESIGNED BY:	EGP	CHECKED BY:	RMG
R.O.W. SHEET 6 of 7		SHEET 9	OF 26



HVCTRL #1

Franklin Az MK
Northing 908334.77
Easting 1551937.16
Elev: 436.94

To reach from the Intersection of VT route 120 (Lake Road) and VT route 236 (State Park Road), go southwest along route 120 for 0.4 mi to the site of the mark on the left, just south of a field drive. The mark is set 2 3/4 inches below ground surface in the top of a Feno style monument. It is 23.3 ft south of and about 6 in lower than the centerline of route 120, 372.5 ft east southeast of and across the road from an unnumbered pole, 19.7 ft east of the centerline of the field drive, 239.5 ft west of the center of the south (inlet) and of a 12 in diameter metal culvert, and 1 ft north of a fiberglass witness post.

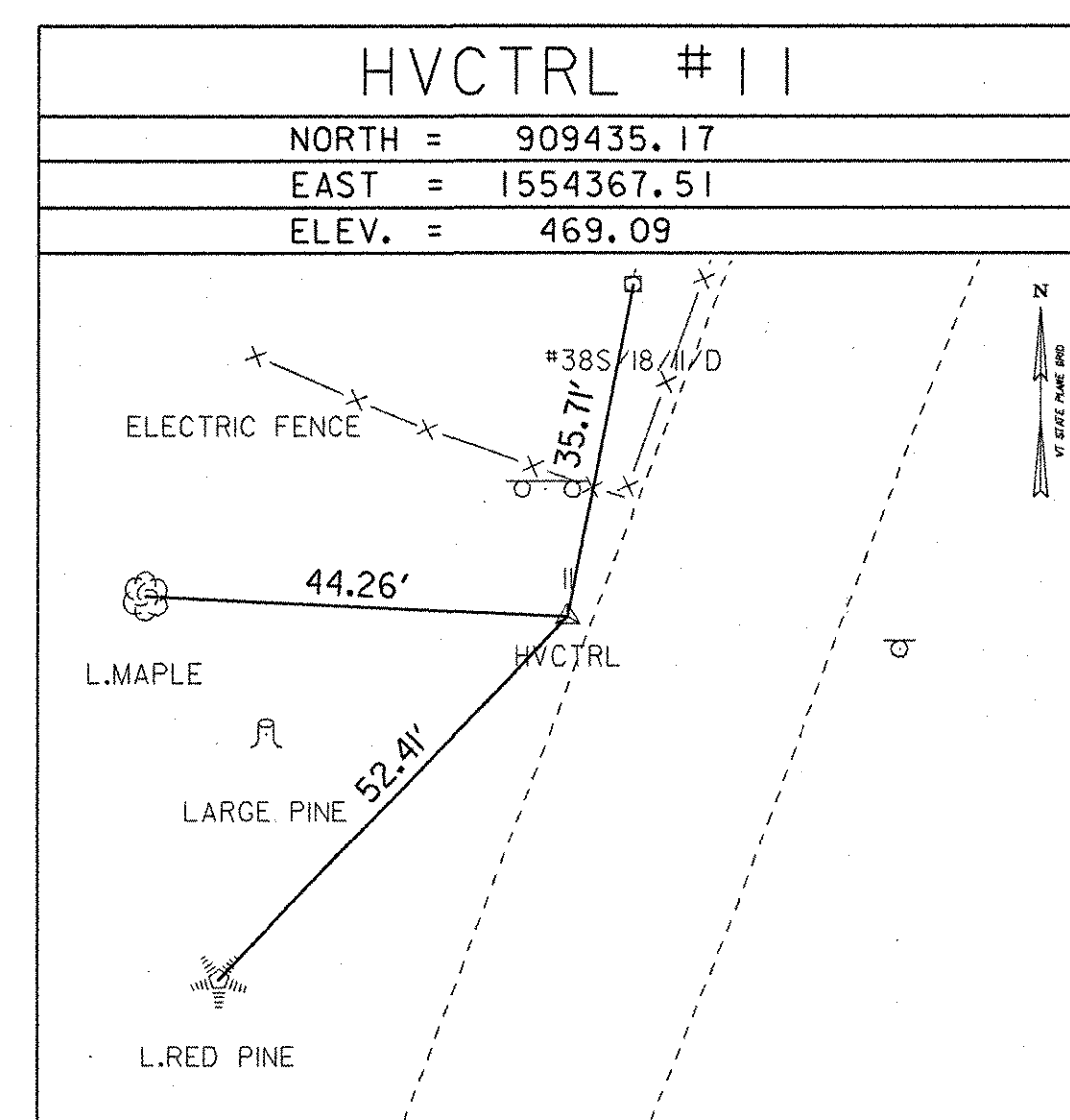
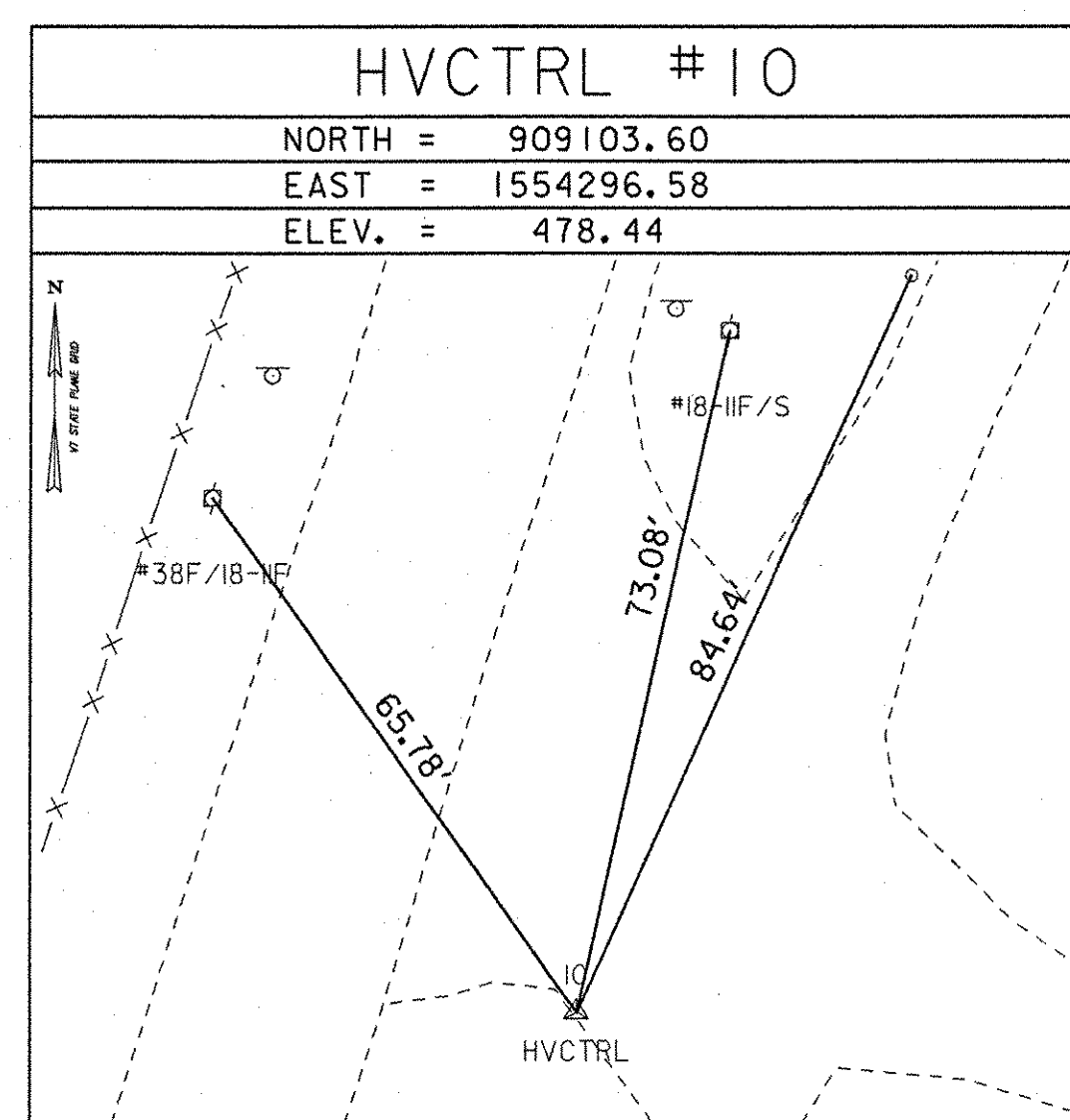
* Description provided by Vermont Agency of Transportation Geodetic Survey Unit

HVCTRL #2

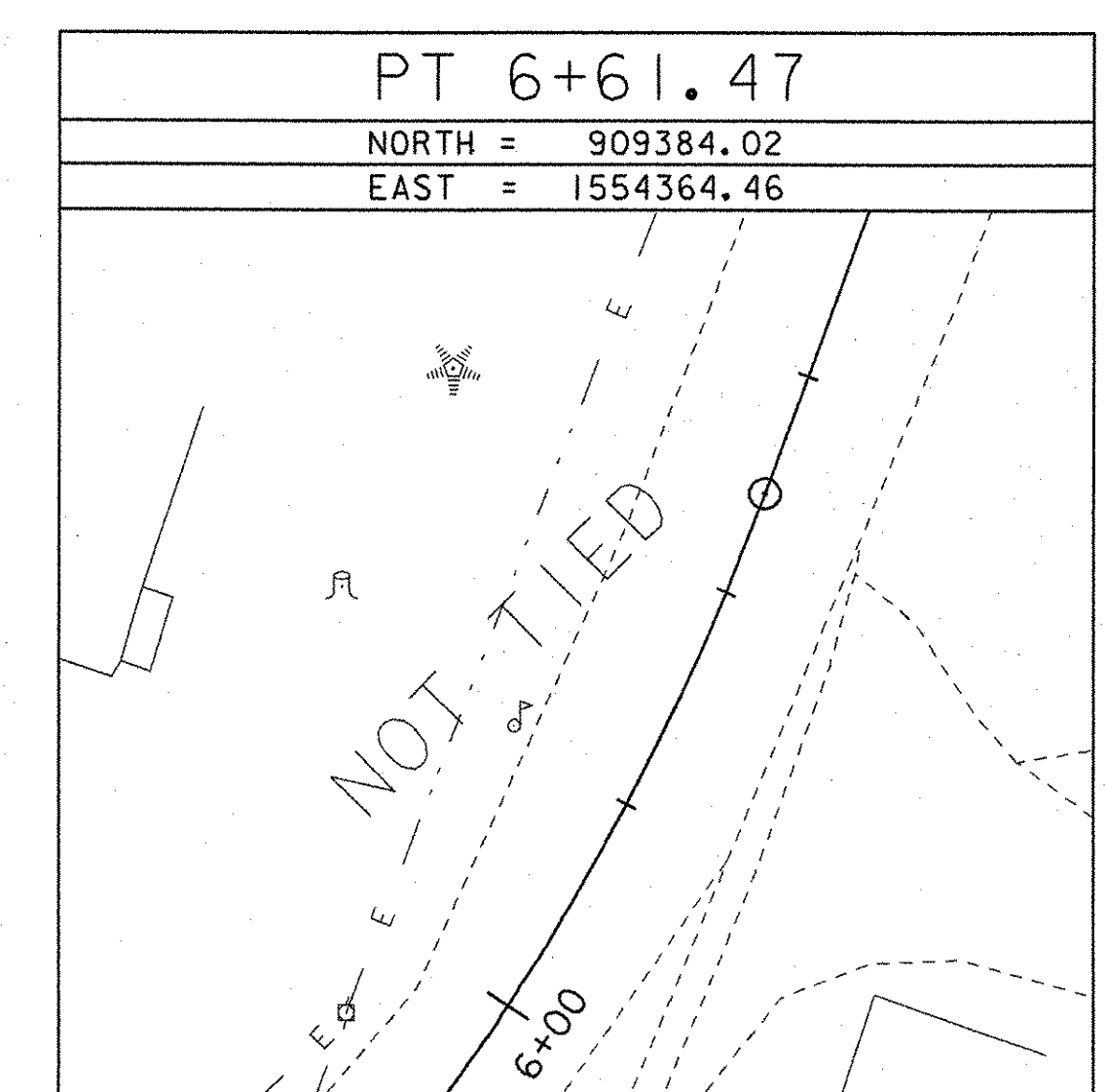
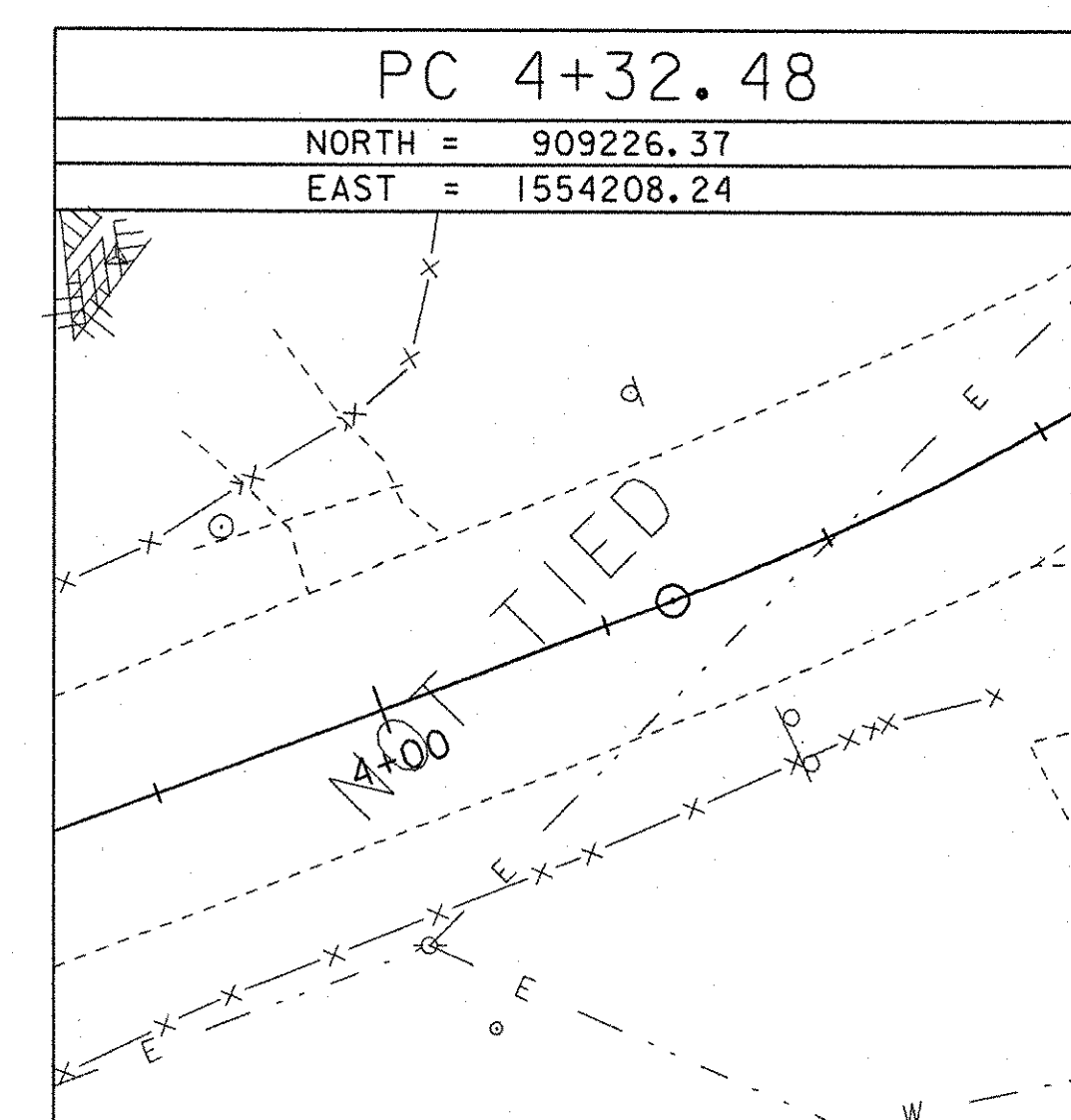
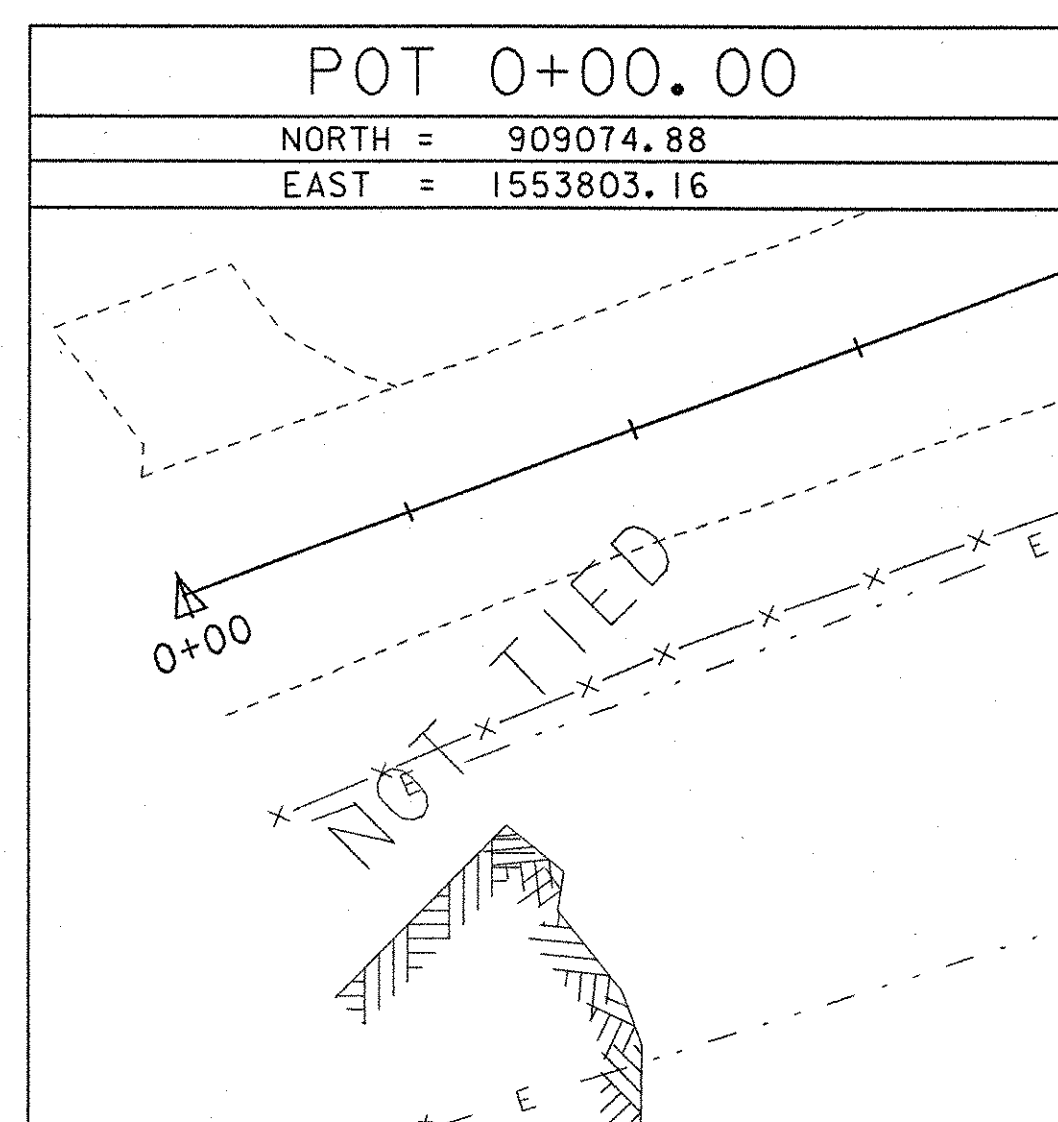
Franklin
Northing 909262.34
Easting 1554149.96
Elev: 473.52

To reach from the Intersection of VT route 120 (Lake Road) and VT route 236 (State Park Road), go southwest along route 120 for 164 ft to the site of the mark on the right. The mark is set in the top of the south end of a 24.5 ft x 1.5 ft rock outcrop which projects 1 ft above ground surface. It is 54 ft north of and about .5 ft higher than the centerline of route 120, 155.5 ft northwest of the centerline of route 236, 89.3 ft west southwest of the south corner of a barn, 70.9 ft southwest of the west corner of the barn, 287 ft east of a wire fence and 181.5 ft west of pole #38F/18/11/E with meter and lumen.

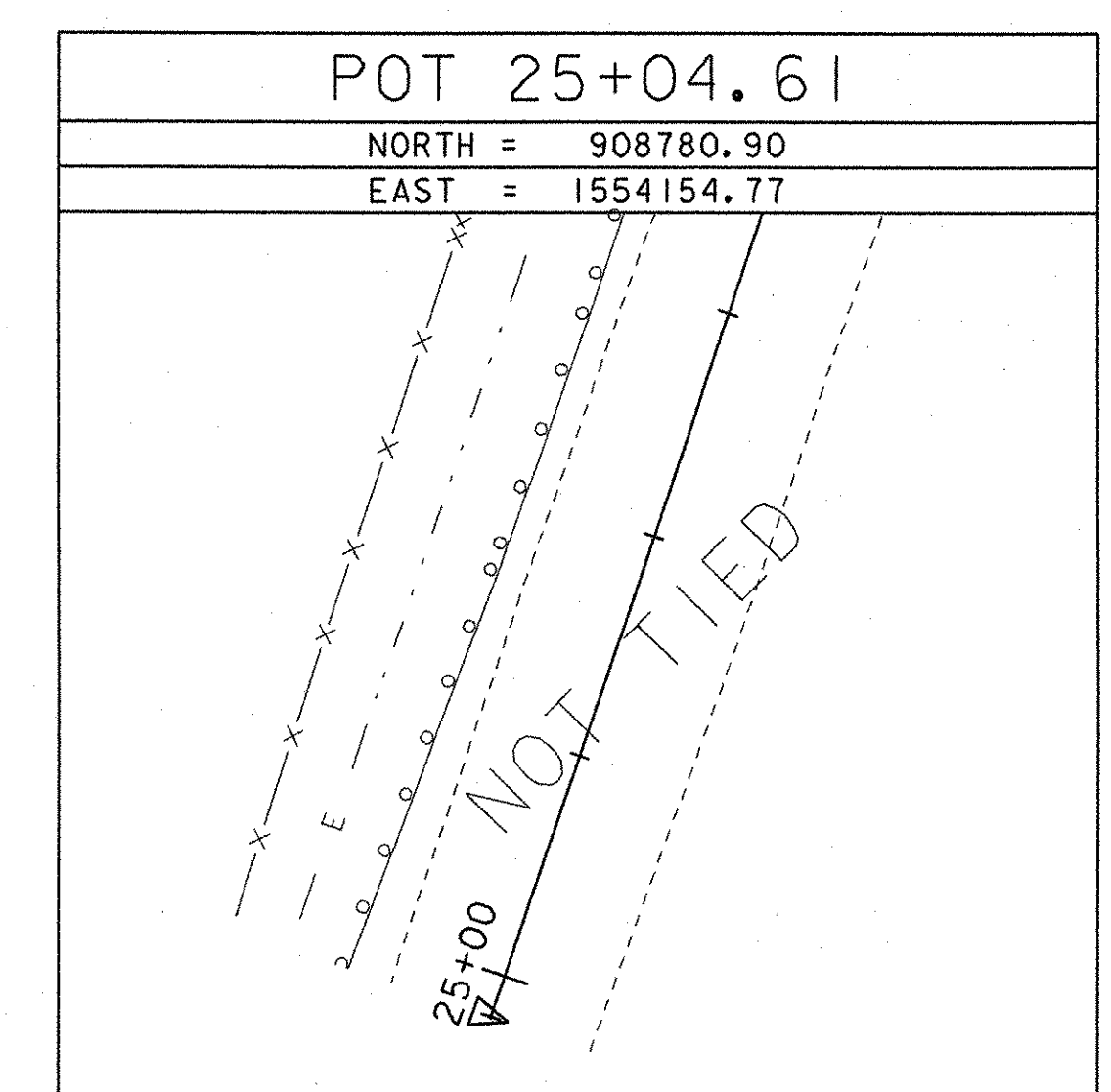
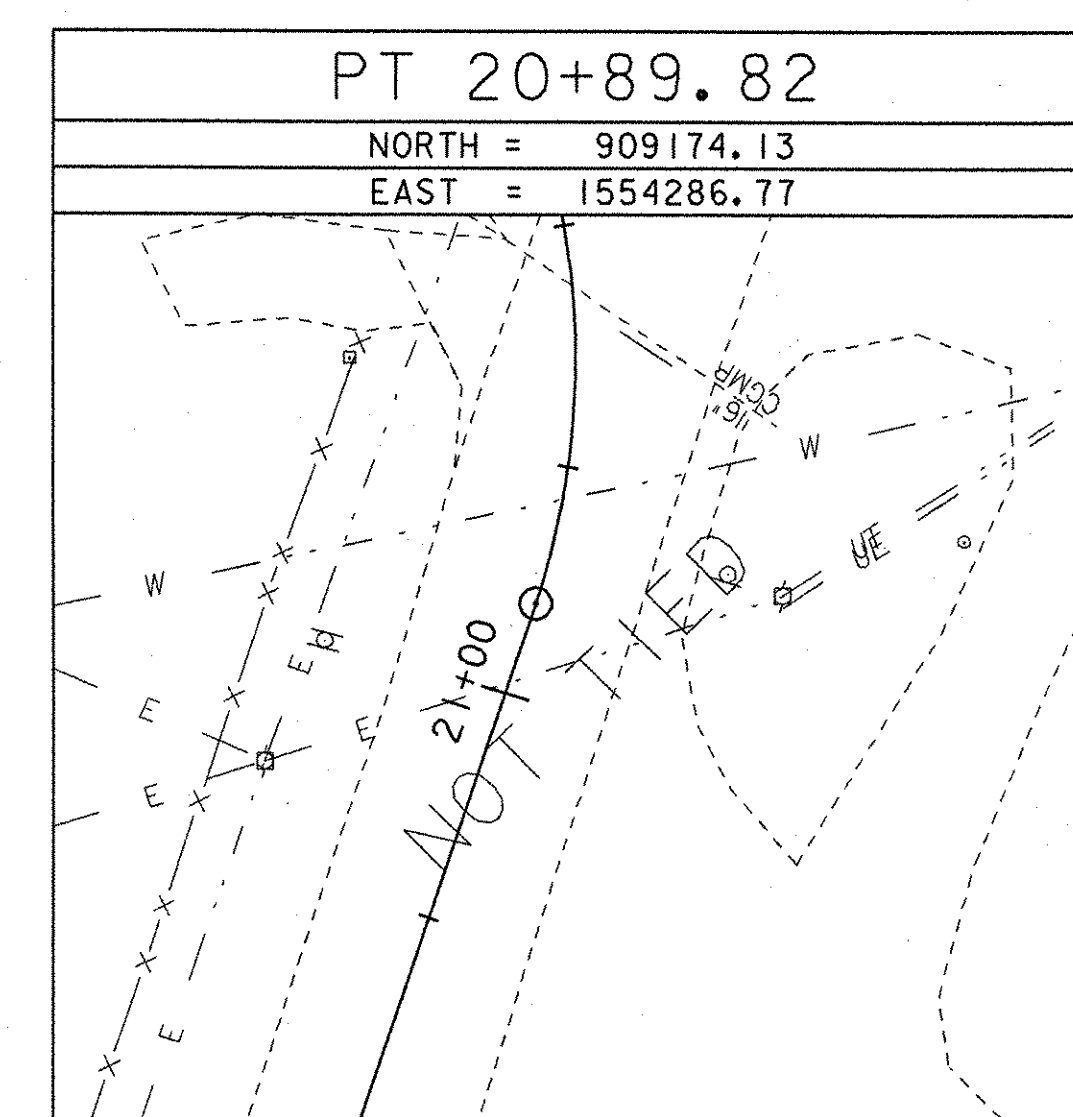
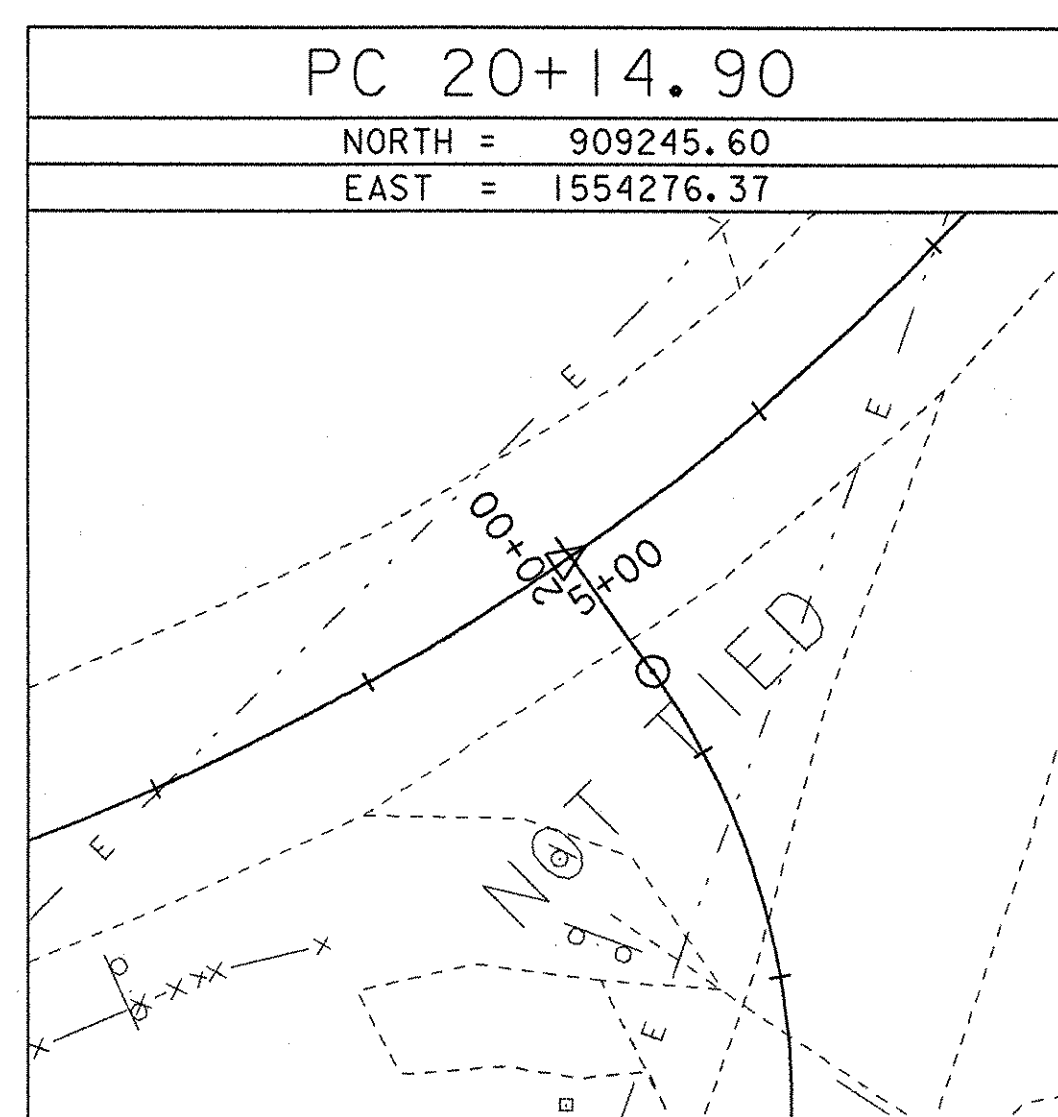
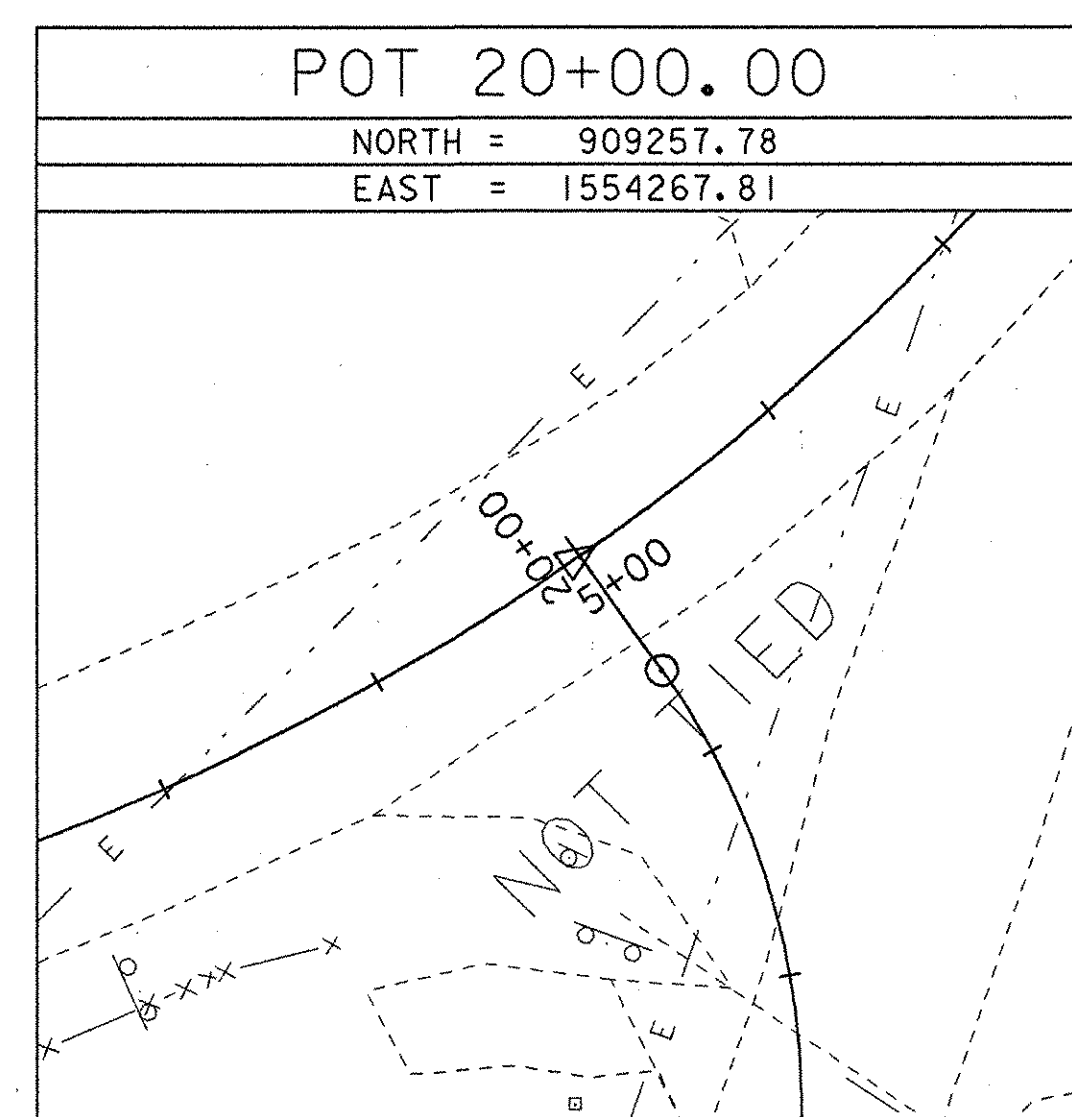
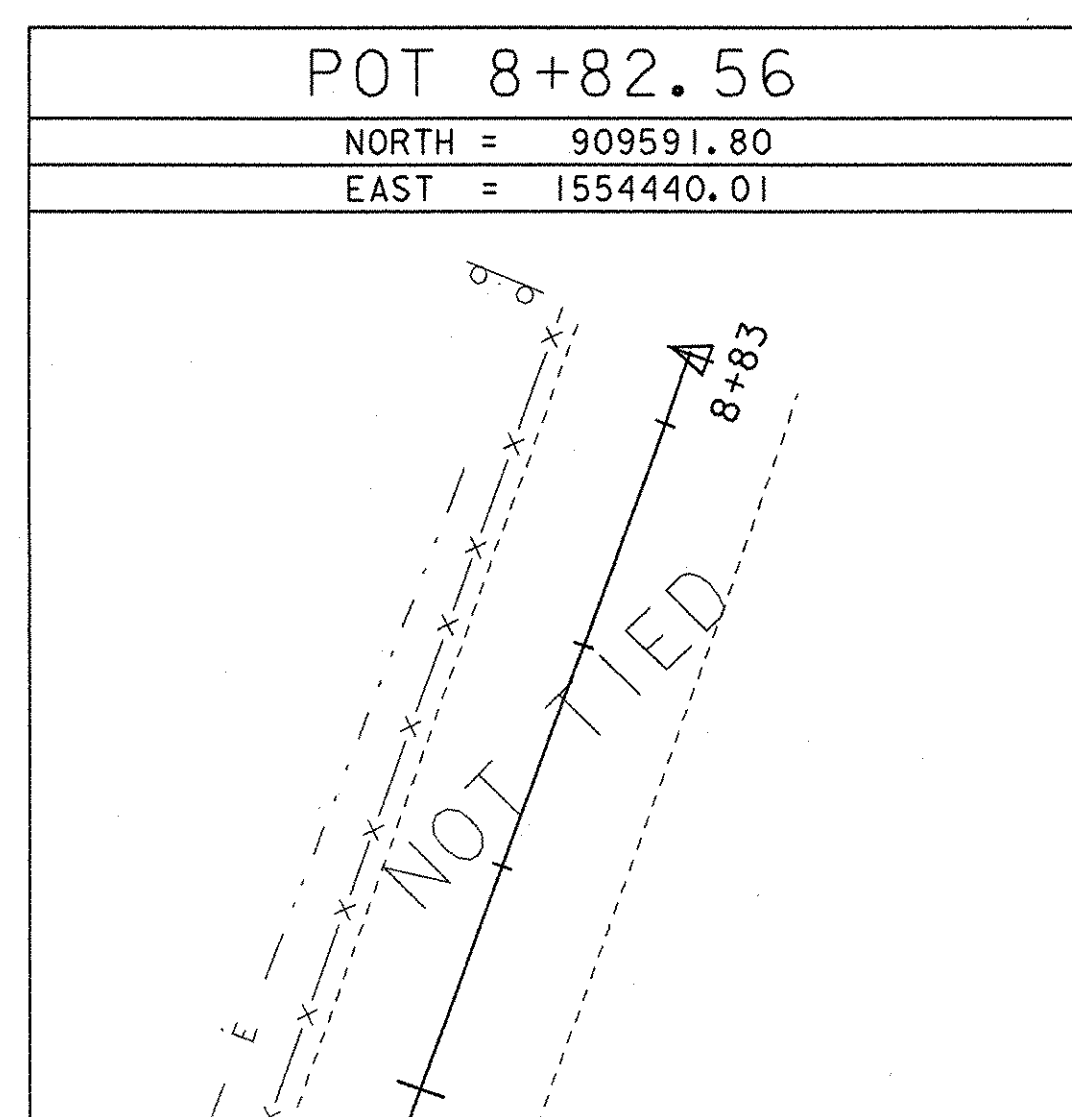
TRAVERSE TIES



ALIGNMENT TIES



ALIGNMENT TIES



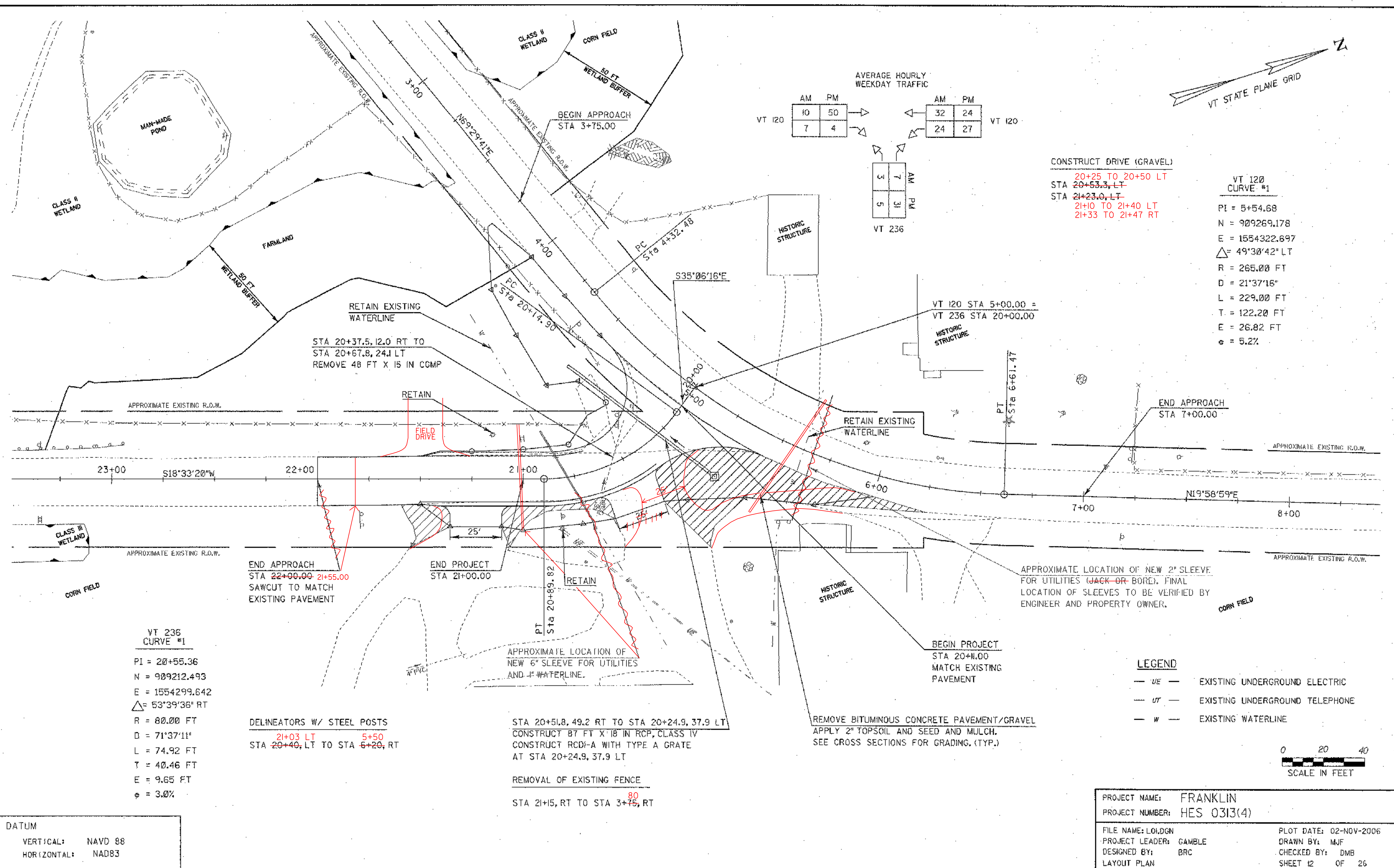
DATUM

VERTICAL: NAVD 88
HORIZONTAL: NAD83

PROJECT NAME: FRANKLIN
PROJECT NUMBER: HES 0313(4)

FILE NAME: Z04C2021.DGN
PROJECT LEADER: GAMBLE
DESIGNED BY: BRC
TIE SHEET

PLOT DATE: 11-OCT-2006
DRAWN BY: MJF
CHECKED BY: DMB
SHEET 11 OF 26



AVERAGE HOURLY WEEKDAY TRAFFIC

VT 120		VT 236	
AM	PM	AM	PM
10	50	32	24
7	4	24	27

VT 120

VT 236	
AM	PM
3	7
5	31

VT 236

CONSTRUCT DRIVE (GRAVEL)
20+25 TO 20+50 LT
20+53.3, LT
21+23.0, LT
21+10 TO 21+40 LT
21+33 TO 21+47 RT

VT 120
CURVE #1
PI = 5+54.68
N = 909269.178
E = 1554322.697
Δ = 49°30'42" LT
R = 265.00 FT
D = 21°37'16"
L = 229.00 FT
T = 122.20 FT
E = 26.82 FT
e = 5.2%

VT 236
CURVE #1
PI = 20+55.36
N = 909212.493
E = 1554299.642
Δ = 53°39'36" RT
R = 80.00 FT
D = 71°37'11"
L = 74.92 FT
T = 40.46 FT
E = 9.65 FT
e = 3.0%

DELINEATORS W/ STEEL POSTS
21+03 LT 5+50
STA 20+40, LT TO STA 6+20, RT

STA 20+51.8, 49.2 RT TO STA 20+24.9, 37.9 LT
CONSTRUCT 87 FT X 18" IN RCP, CLASS IV
CONSTRUCT RCDI-A WITH TYPE A GRATE
AT STA 20+24.9, 37.9 LT

REMOVAL OF EXISTING FENCE
STA 21+5, RT TO STA 3+15, RT

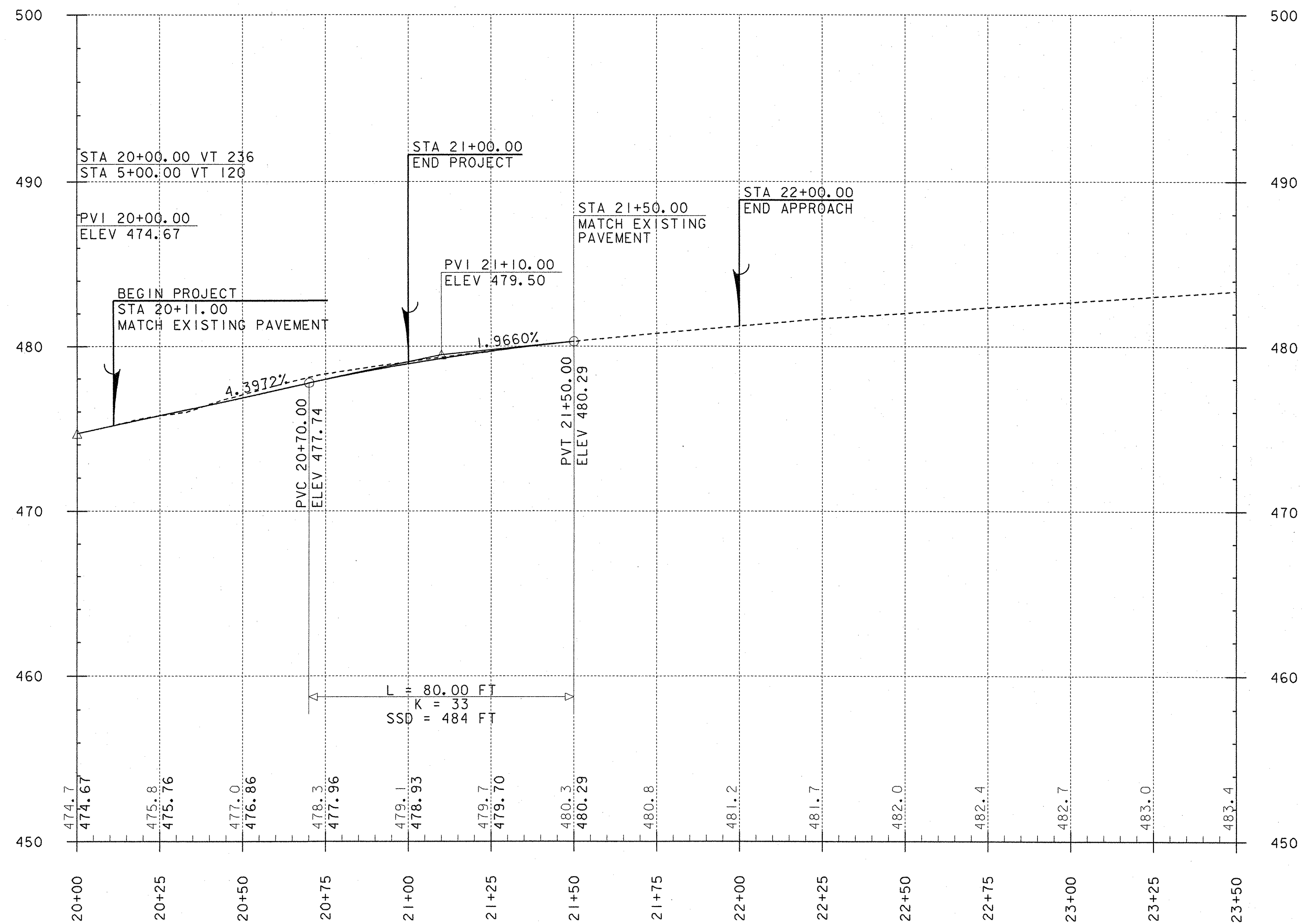
REMOVE BITUMINOUS CONCRETE PAVEMENT/GRAVEL
APPLY 2" TOPSOIL AND SEED AND MULCH.
SEE CROSS SECTIONS FOR GRADING. (TYP.)

LEGEND
— UE — EXISTING UNDERGROUND ELECTRIC
— UT — EXISTING UNDERGROUND TELEPHONE
— W — EXISTING WATERLINE



DATUM
VERTICAL: NAVD 88
HORIZONTAL: NAD83

PROJECT NAME: FRANKLIN
PROJECT NUMBER: HES 0313(4)
FILE NAME: LOLDGN
PROJECT LEADER: GAMBLE
DESIGNED BY: BRC
LAYOUT PLAN
PLOT DATE: 02-NOV-2006
DRAWN BY: MJF
CHECKED BY: DMB
SHEET 12 OF 26



VT 236

DATUM
 VERTICAL: NAVD 88
 HORIZONTAL: NAD83

PROJECT NAME: FRANKLIN
 PROJECT NUMBER: HES 0313(4)

FILE NAME: PROFOLDGN	PLOT DATE: 11-OCT-2006
PROJECT LEADER: GAMBLE	DRAWN BY: MJF
DESIGNED BY: BRC	CHECKED BY: DMB
PROFILE - VT 236	SHEET 13 OF 26

EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE RECONFIGURATION OF THE INTERSECTION OF VERMONT ROUTE 120 AND ROUTE 236 LOCATED IN THE TOWN OF FRANKLIN. THE VT 236 LEG WILL BE REALIGNED TO CREATE A 90 DEGREE INTERSECTION. THE PORTION OF VT 236 THAT WILL BE REALIGNED WILL BE CONSTRUCTED USING A FULL DEPTH OF SUBBASE. THE TOTAL ROADWAY WORK IS APPROXIMATELY 150 FEET. NATURAL RESOURCES NEAR THE PROJECT AREA HAVE BEEN CLEARLY IDENTIFIED AND SHOWN ON THE EXISTING CONDITIONS SITE PLAN SHEET.

IT IS ANTICIPATED THAT THIS PROJECT WILL BE COMPLETED IN ONE CONSTRUCTION SEASON WITH NO WORK BEING DONE OUTSIDE THE PLANTING SEASON.

TOTAL DISTURBED AREA (EXCLUDING WASTE AND BORROW AREAS):
14,100 SF (0.33 ACRES)
THE TOTAL DISTURBED AREA IS AN ESTIMATE . ALL ON-SITE AND OFF-SITE WASTE AND BORROW AREAS AND HAUL ROADS NEED PRIOR WRITTEN CLEARANCE BY VTRANS ENVIRONMENTAL SECTION PRIOR TO THE BEGINNING OF CONSTRUCTION.

SITE INVENTORY AND ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS:

THE AREA SURROUNDING THE PROJECT SITE DRAINS FROM THE NORTHEAST TO THE SOUTHWEST. STORMWATER SHEET FLOWS OVER THE FARMLAND AND IS COLLECTED IN EITHER ROADSIDE DITCHES OR IS INTERCEPTED BY A WATERCOURSE LOCATED TO THE WEST. THE WATERCOURSE DRAINS FROM THE SOUTH TO THE NORTH. DRAINAGE FROM THE ROADWAY SURFACE IS COLLECTED IN ROADSIDE DITCHES AND CONVEYED TO AN EXISTING WATERCOURSE LOCATED TO THE WEST. THE SURROUNDING AREA CONSISTS OF FARMLAND AND CROP GROWING AREAS.

DRAINAGE, WATERWAYS, BODIES OF WATER:

THERE IS AN EXISTING WATERCOURSE THAT EXISTS SOUTHWEST OF A MAN-MADE POND LOCATED BETWEEN VT 120 AND VT 236. THIS WATERCOURSE FLOWS FROM THE SOUTH TO THE NORTH. IT PASSES UNDER VT 236 THROUGH AN 18' CULVERT AND UNDER VT 120 THROUGH AN EXISTING CULVERT. A CLASS IIWETLAND EXISTS ADJACENT TO THIS WATERCOURSE AND IS SHOWN ON THE EXISTING CONDITIONS PLAN. A MAN-MADE POND LOCATED EAST OF THE WATERCOURSE IS THE ONLY BODY OF WATER LOCATED NEAR THE PROJECT AREA.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:

THE TOPOGRAPHY OF THE AREA NEAR THE PROJECT SITE IS SLOPING DOWN TO THE SOUTHWEST. THERE IS A HIGH POINT ON VT 120 LOCATED AT THE EXISTING INTERSECTION. NORTH OF THE HIGH POINT, THE ROADWAY SLOPES DOWN TO THE NORTH. THE LAND BECOMES STEEPER NEAR THE MAN-MADE POND. BOTH VT 120 AND VT 236 ARE RURAL MAJOR COLLECTORS WITH PAVED SURFACES. THERE IS AN EXISTING HOME LOCATED TO THE WEST OF THE INTERSECTION AND AN EXISTING BARN LOCATED TO THE EAST OF THE INTERSECTION. OVERHEAD UTILITY LINES EXIST ADJACENT TO BOTH VT 120 AND VT 236. OVERHEAD UTILITIES WILL NOT BE IMPACTED AS PART OF THIS PROJECT.

VEGETATION:

THE VEGETATION LOCATED BETWEEN VT 236 AND VT 120 IN THE AREA OF THE PROJECT CONSISTS OF MAINLY FARMLAND. VEGETATION LOCATED EAST OF VT 236 IS PRIMARILY CORNFIELD. VEGETATION LOCATED WEST OF VT 120 IS ALSO PREDOMINANTLY CORNFIELD.

DURING CONSTRUCTION, DISTURBED AREAS WILL BE SEEDED AND MULCHED. FOLLOWING CONSTRUCTION, ANY DISTURBED AREAS ADJACENT TO THE ROADWAY WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

SOILS:

THE SOILS IN THE AREA CONSIST OF A WESTBURY STONY FINE SANDY LOAM. WESTBURY HAS A 'K' VALUE OF 0.28. THIS TYPE OF SOIL IS CONSIDERED TO HAVE MODERATE ERODABILITY POTENTIAL.

SENSITIVE RESOURCE AREAS:

HISTORICAL AND ARCHAEOLOGICAL AREAS ARE LOCATED NEAR THE PROJECT AREA. A CLASS IIWETLAND AND BUFFER ARE ALSO LOCATED NEAR THE PROJECT AREA. ALL OF THE SENSITIVE AREAS ARE LOCATED IN CLOSE PROXIMITY TO THE PROJECT. EACH OF THESE AREAS IS CLEARLY MARKED ON THE PLANS. TEMPORARY EROSION CONTROL MEASURES WILL BE USED TO MINIMIZE THE EFFECT OF CONSTRUCTION ACTIVITIES ON ANY SENSITIVE RESOURCE AREAS.

THERE HAVE BEEN NO THREATENED AND ENDANGERED SPECIES IDENTIFIED WITHIN THE PROJECT LIMITS.

PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES:

THE DISTURBANCE OF SOIL NEAR NATURAL OR MAN-MADE WATER FEATURES WILL BE NECESSARY TO RECONSTRUCT THE INTERSECTION. THE DISTURBED AREAS WILL BE STABILIZED WITH STANDARD SEED AND MULCH PRACTICES DURING CONSTRUCTION AND ONCE CONSTRUCTION IS COMPLETE.

TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL

TEMPORARY EROSION PREVENTION MEASURES TO BE UTILIZED INCLUDE:

PROJECT DEMARCATION FENCING (ITEM 620.70 - SNOW FENCE (MOD. - PDF)), DENOTED -PDF-PDF- ON THE PLANS, SHALL DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION. PDF MAY BE LOCATED IN CLOSE PROXIMITY TO THE PROPOSED SLOPE LINE IN ORDER TO KEEP CONSTRUCTION ACTIVITY OUT OF SENSITIVE AREAS.

MULCHING WILL BE UTILIZED ON A REGULAR BASIS. ANY SOIL TO BE EXPOSED FOR SEVERAL DAYS PRIOR TO FINAL GRADING SHALL BE MULCHED. SOIL SHALL BE STABILIZED WITHIN 48 HOURS PRIOR TO FORECASTED RAIN.

SEEDING AND MULCHING SHALL BE UTILIZED TO STABILIZE SOIL. SOIL SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE AND/OR DURING INTERMITTENT PHASES OF CONSTRUCTION.

SILT FENCE WILL BE INSTALLED AT THE TOE OF FILL SLOPES TO PREVENT SEDIMENT TRANSPORT TO DOWN GRADIENT AREAS. EACH LINE OF SILT FENCE WILL BE PLACED ALONG THE CONTOUR WITH THE LOWER EDGE BURIED 6' TO PREVENT UNDERFLOW AND ENDS TURNED SLIGHTLY UP GRADE TO CREATE A PONDING EFFECT. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UPSLOPE EARTHWORK. SILT FENCE SHALL BE PLACED AS SHOWN ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN.

INLETS SHALL BE SURROUNDED BY STONE CHECK DAMS OR SILT FENCE TO LIMIT THE AMOUNT OF SEDIMENT THAT ENTERS THE INLET. INLET PROTECTION SHALL BE PLACED AS SHOWN ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN AND PER THE DETAIL SHOWN IN THE PLANS. THIS MEASURE SHALL BE INSTALLED ONCE THE GRADE ADJACENT TO THE INLET IS WITHIN SIX INCHES OF FINAL GRADE. INLETS SHALL BE CLEANED WHEN THE SUMP BECOMES FILLED WITH SEDIMENT AND AT THE COMPLETION OF CONSTRUCTION.

STONE CHECK DAMS WILL BE INSTALLED IN DITCH LINES TO FORCE STORMWATER TO POND AND LIMIT SEDIMENT TRANSPORT. STONE CHECK DAMS SHALL BE PLACED AS SHOWN ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN AND PER THE DETAIL SHOWN IN THE PLANS.

AT LOCATIONS WHERE CONSTRUCTION VEHICLES WILL BE ENTERING OR LEAVING THE CONSTRUCTION SITE/STAGING AREAS, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED TO LIMIT THE AMOUNT OF SEDIMENT THAT IS TRANSPORTED OFF OF THE SITE BY CONSTRUCTION VEHICLES. STONE WILL BE USED TO REMOVE SEDIMENT FROM THE TIRES OF CONSTRUCTION VEHICLES. IF SEDIMENT IS STILL BEING TRACKED ONTO PUBLIC ROADS, THE LENGTH OF THE PAD SHALL BE EXTENDED OR VEHICLES SHALL BE RINSED WITH A HOSE PRIOR TO LEAVING THE SITE.

TEMPORARY EROSION CONTROL MEASURES SHALL BE REGULARLY INSPECTED AND MAINTAINED FOR LIMITING SEDIMENT BUILD-UP. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE CONTROL MEASURE. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE SUCH THAT IT WILL NOT BE SUBJECT TO EROSION.

THE STAGING AREA LOCATION IS SHOWN ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN. ANY CHANGES TO THIS LOCATION MUST BE APPROVED BY THE RESIDENT ENGINEER AND VTRANS ENVIRONMENTAL SECTION.

PERMANENT EROSION CONTROL MEASURES

PERMANENT EROSION CONTROL MEASURES TO BE UTILIZED INCLUDE:

ALL DISTURBED SOIL SHALL BE STABILIZED WITH SEED AND MULCH.

GENERAL EROSION AND SEDIMENT CONTROL GUIDELINES

THE CONSTRUCTION SEASON SHALL BE FROM MAY 1 TO OCTOBER 15. IF ANY EARTHWORK IS TO BE PERFORMED OUTSIDE THE CONSTRUCTION SEASON, A WINTER EROSION AND SEDIMENT CONTROL PLAN DESCRIBING ALTERNATIVE STABILIZATION METHODS SHALL BE SUBMITTED TO THE RESIDENT ENGINEER PRIOR TO AUGUST 15 FOR APPROVAL.

THE CONTRACTOR SHALL STOCKPILE MATERIAL WITHIN THE STAGING AREA ONLY. STOCKPILES SHALL BE STABILIZED WITHIN 48 HOURS PRIOR TO FORECASTED RAIN.

FUELING AND MAINTENANCE OF CONSTRUCTION VEHICLES SHALL BE LIMITED TO THE STAGING AREAS AND SHALL BE DONE BY QUALIFIED PERSONNEL.

THE EROSION CONTROL PLANS ARE MEANT TO BE A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT TO CONTROL EROSION AND MINIMIZE THE SEDIMENTATION OF RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORMWATER CONTROLS, AND OTHER POLLUTION PREVENTION CONTROLS.

COORDINATE THE INSTALLATION, USE, AND REMOVAL OF EROSION AND SEDIMENT CONTROL MEASURES WITH CONSTRUCTION ACTIVITIES TO ENSURE ECONOMICAL, EFFECTIVE, AND CONTINUOUS EROSION AND SEDIMENT CONTROL. EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS. THE CONTRACTOR SHALL USE ADDITIONAL EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION, FIELD CONDITIONS, AND AS DIRECTED BY THE ENGINEER OR ONSITE COORDINATOR. SEE SECTION 105.23 OR THE VERMONT AOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001.

INSTALL EROSION AND SEDIMENT CONTROLS MEASURES AS SHOWN IN THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN OR AS DIRECTED BY THE ENGINEER OR ONSITE COORDINATOR. DO NOT MODIFY THE TYPE, SIZE, OR LOCATION OF ANY CONTROL OR PRACTICE WITHOUT APPROVAL OF THE ENGINEER OR ONSITE COORDINATOR. ANY CHANGES SHALL BE NOTED ON THE PLANS, IN THE WEEKLY INSPECTION REPORT, AND REPORTED TO THE APPROPRIATE AUTHORITY IN A TIMELY MANNER. INSPECT ALL CONTROL MEASURES WEEKLY AND AFTER EACH RAINFALL EVENT THAT PRODUCES RUNOFF FROM THE PROJECT SITE. REPAIR MEASURES PROMPTLY ONCE DAMAGE IS DISCOVERED.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. THEREFORE, STABILIZE ALL DISTURBED AREAS PROMPTLY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY VEGETATION SHALL BE ESTABLISHED IF THE AREA IS TO BE WITHOUT CONSTRUCTION ACTIVITY FOR A PERIOD OF 14 DAYS. PERIMETER CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY. INSTALL OTHER TEMPORARY CONTROLS IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS.

MAINTAINING VEGETATED BUFFERS ALONG THE STREAM BANKS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE EMPLOYED WHENEVER POSSIBLE.

CONTROL ONLY SEDIMENT LADEN STORMWATER RUNOFF GENERATED BY THE PROJECT SITE. COLLECT AND ROUTE CLEAN STORMWATER AROUND THE PROJECT SITE WHENEVER POSSIBLE USING DIVERSION BERMS, CHANNELS, CULVERTS, OR TEMPORARY PIPES.

DO NOT ALLOW CONSTRUCTION EQUIPMENT TO OPERATE OUTSIDE OF PERIMETER CONTROL MEASURES.

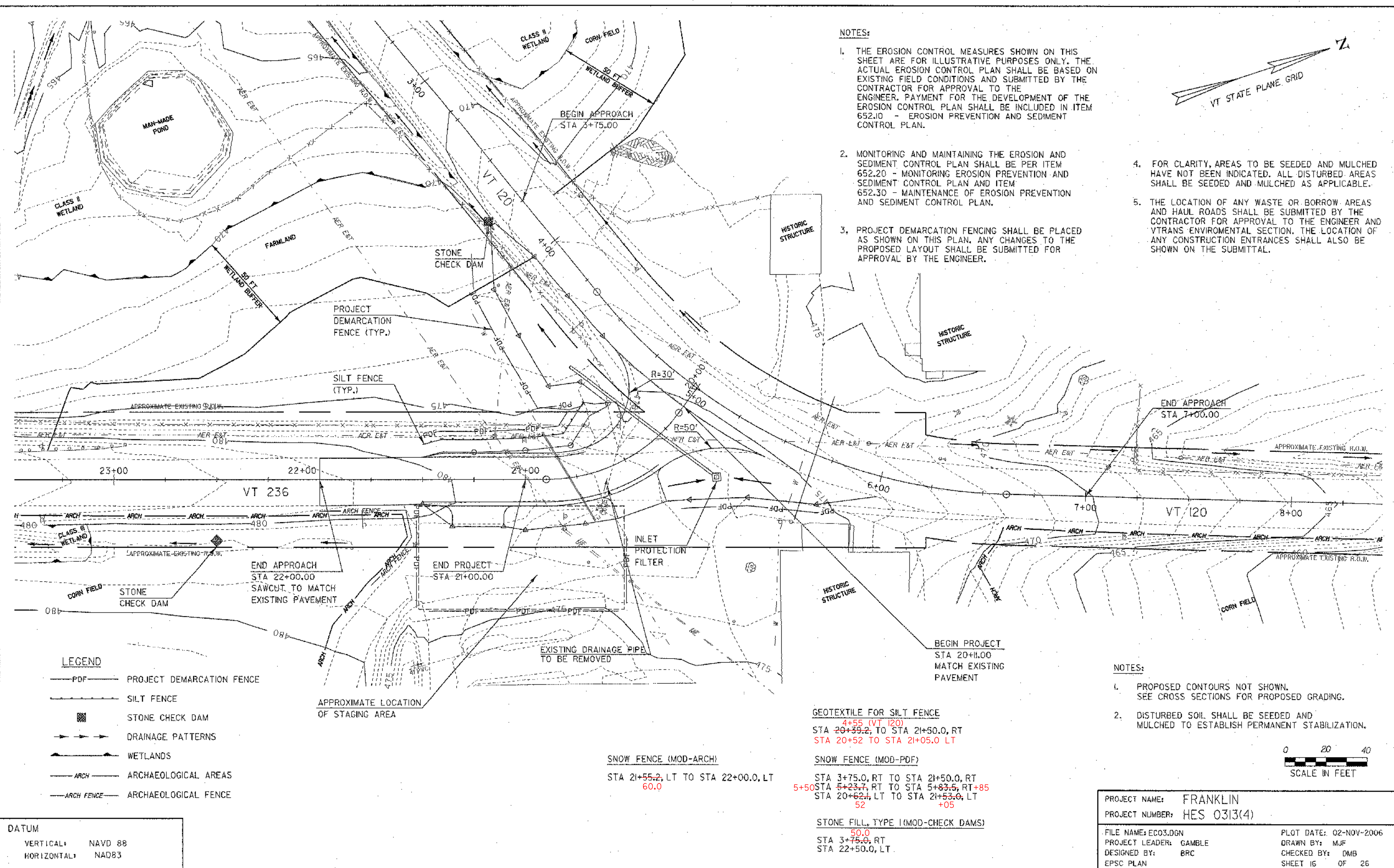
DATUM

VERTICAL: NAVD 88
HORIZONTAL: NAD83

PROJECT NAME: FRANKLIN
PROJECT NUMBER: HES 0313(4)

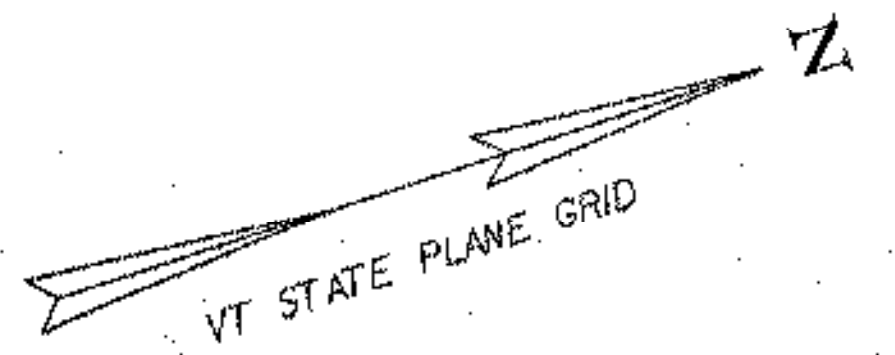
FILE NAME: ECO1.DGN
PROJECT LEADER: GAMBLE
DESIGNED BY: BRC
EROSION CONTROL NARRATIVE

PLOT DATE: 11-OCT-2006
DRAWN BY: MJF
CHECKED BY: DMB
SHEET 14 OF 26



NOTES:

1. THE EROSION CONTROL MEASURES SHOWN ON THIS SHEET ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL EROSION CONTROL PLAN SHALL BE BASED ON EXISTING FIELD CONDITIONS AND SUBMITTED BY THE CONTRACTOR FOR APPROVAL TO THE ENGINEER. PAYMENT FOR THE DEVELOPMENT OF THE EROSION CONTROL PLAN SHALL BE INCLUDED IN ITEM 652.10 - EROSION PREVENTION AND SEDIMENT CONTROL PLAN.
2. MONITORING AND MAINTAINING THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE PER ITEM 652.20 - MONITORING EROSION PREVENTION AND SEDIMENT CONTROL PLAN AND ITEM 652.30 - MAINTENANCE OF EROSION PREVENTION AND SEDIMENT CONTROL PLAN.
3. PROJECT DEMARCATION FENCING SHALL BE PLACED AS SHOWN ON THIS PLAN. ANY CHANGES TO THE PROPOSED LAYOUT SHALL BE SUBMITTED FOR APPROVAL BY THE ENGINEER.
4. FOR CLARITY, AREAS TO BE SEEDED AND MULCHED HAVE NOT BEEN INDICATED. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AS APPLICABLE.
5. THE LOCATION OF ANY WASTE OR BORROW AREAS AND HAUL ROADS SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL TO THE ENGINEER AND VTRANS ENVIROMENTAL SECTION. THE LOCATION OF ANY CONSTRUCTION ENTRANCES SHALL ALSO BE SHOWN ON THE SUBMITTAL.



LEGEND

- PDF PROJECT DEMARCATION FENCE
- SILT FENCE
- STONE CHECK DAM
- DRAINAGE PATTERNS
- WETLANDS
- ARCH ARCHAEOLOGICAL AREAS
- ARCH FENCE ARCHAEOLOGICAL FENCE

DATUM
VERTICAL: NAVD 88
HORIZONTAL: NAD83

SNOW FENCE (MOD-ARCH)
STA 21+55.2, LT TO STA 22+00.0, LT
60.0

GEOTEXTILE FOR SILT FENCE
4+55 (VT 120)
STA 20+59.2, TO STA 21+50.0, RT
STA 20+52 TO STA 21+05.0 LT

SNOW FENCE (MOD-PDF)
STA 3+75.0, RT TO STA 21+50.0, RT
5+50 STA 5+23.7, RT TO STA 5+83.5, RT+85
STA 20+62.1, LT TO STA 21+53.0, LT
52 +05

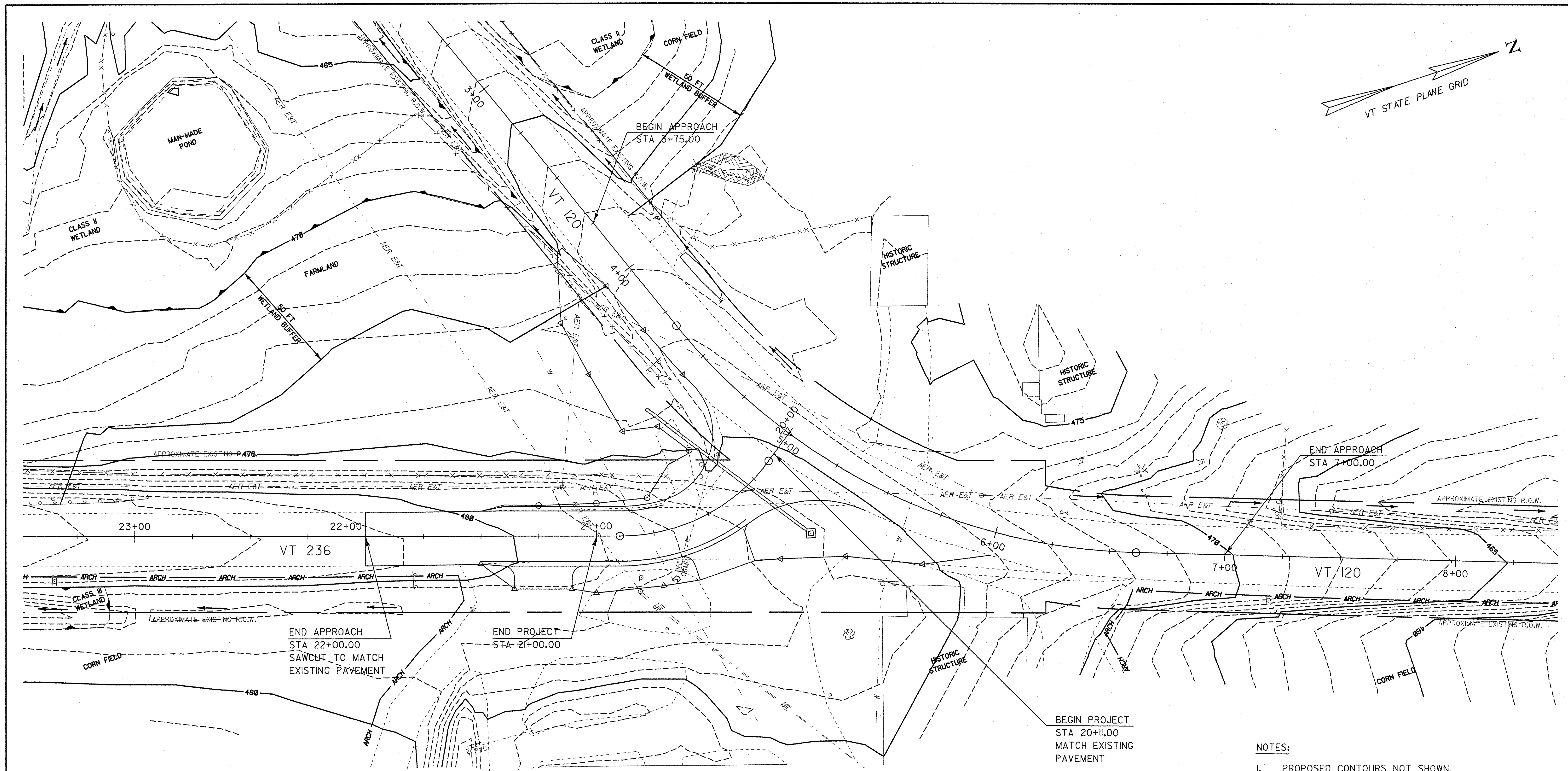
STONE FILL, TYPE I (MOD-CHECK DAMS)
50.0
STA 3+75.0, RT
STA 22+50.0, LT

NOTES:

1. PROPOSED CONTOURS NOT SHOWN. SEE CROSS SECTIONS FOR PROPOSED GRADING.
2. DISTURBED SOIL SHALL BE SEEDED AND MULCHED TO ESTABLISH PERMANENT STABILIZATION.



PROJECT NAME: FRANKLIN	
PROJECT NUMBER: HES 0313(4)	
FILE NAME: EC03.DGN	PLOT DATE: 02-NOV-2006
PROJECT LEADER: GAMBLE	DRAWN BY: MJF
DESIGNED BY: BRC	CHECKED BY: DMB
EPSC PLAN	SHEET 16 OF 26



FINAL CONDITIONS SITE PLAN

NOTES:

1. PROPOSED CONTOURS NOT SHOWN.
SEE CROSS SECTIONS FOR PROPOSED GRADING.
2. DISTURBED SOIL SHALL BE SEEDED AND
MULCHED TO ESTABLISH PERMANENT STABILIZATION.

0 20 40
SCALE IN FEET

DATUM
VERTICAL: NAVD 88
HORIZONTAL: NAD83

PROJECT NAME: FRANKLIN
PROJECT NUMBER: HES 0313(4)

FILE NAME: ECO4.DGN
PROJECT LEADER: GAMBLE
DESIGNED BY: BRC
FINAL CONDITIONS SITE PLAN

PLOT DATE: 11-OCT-2006
DRAWN BY: MJF
CHECKED BY: DMB
SHEET 17 OF 26

SILT FENCE

APPLICATION NOTES:

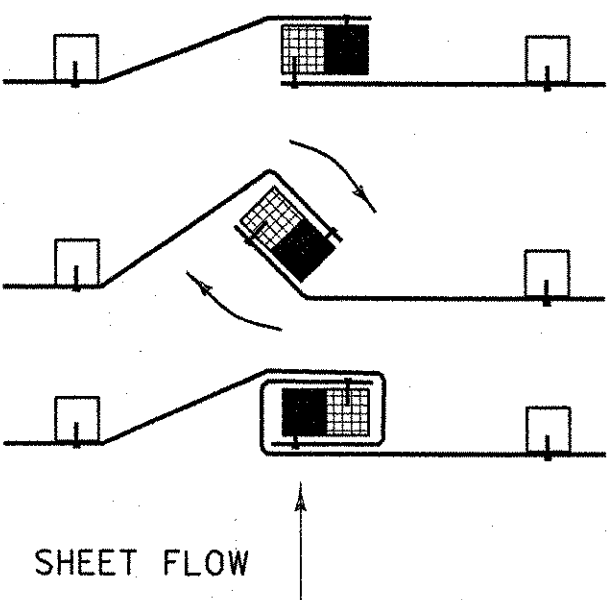
- A. THE PRIMARY PURPOSE OF SILT FENCE IS TO REDUCE RUNOFF VELOCITY AND TRAP SEDIMENT. VELOCITY IS REDUCED, WATER IS IMPOUNDED BEHIND THE MEASURE, AND SEDIMENT FALLS OUT OF SUSPENSION.
- B. SILT FENCE SHALL BE INSTALLED ON A LINE OF EQUAL ELEVATION (CONTOUR). IT MAY BE INSTALLED AT INTERMEDIATE POINTS UP SLOPES AS WELL AS AT THE BOTTOM, AS SHOWN IN THE DETAIL.
- C. SILT FENCE SHALL NOT BE USED ACROSS CONCENTRATED FLOW.

GENERAL NOTES:

- 1. SILT FENCE SHALL GENERALLY BE PLACED A MINIMUM OF 5 FEET BEYOND TOE OF SLOPE, 10 FEET PREFERRED, TO PROVIDE ADEQUATE AREA FOR SEDIMENT STORAGE AND FACILITATE MAINTENANCE OF SEDIMENT CONTAINMENT AREA.
- 2. ALL ENDS SHALL BE "J" HOOKED TO TRAP SEDIMENT.
- 3. IN AREAS WITH TWO SLOPES, SILT FENCE SHALL BE USED TO ERECT A DAM AND TRAP SEDIMENT AT THE BASE OF THE STEEPER SLOPE.
- 4. THE BOTTOM EDGE OF SILT FENCE SHALL BE BURIED A MINIMUM OF 6 INCHES BELOW GROUND, AND KEYED IN 4 INCHES. THE FENCE SHALL BE INSTALLED WITH THE POSTS ON THE DOWNSTREAM SIDE OF THE FABRIC.
- 5. MAXIMUM DRAINAGE AREA TRIBUTARY TO 100 FEET OF SILT FENCE SHALL BE 0.25 ACRES.
- 6. THE FOLLOWING ARE MAXIMUM SLOPE LENGTHS FOR THESE MEASURES:

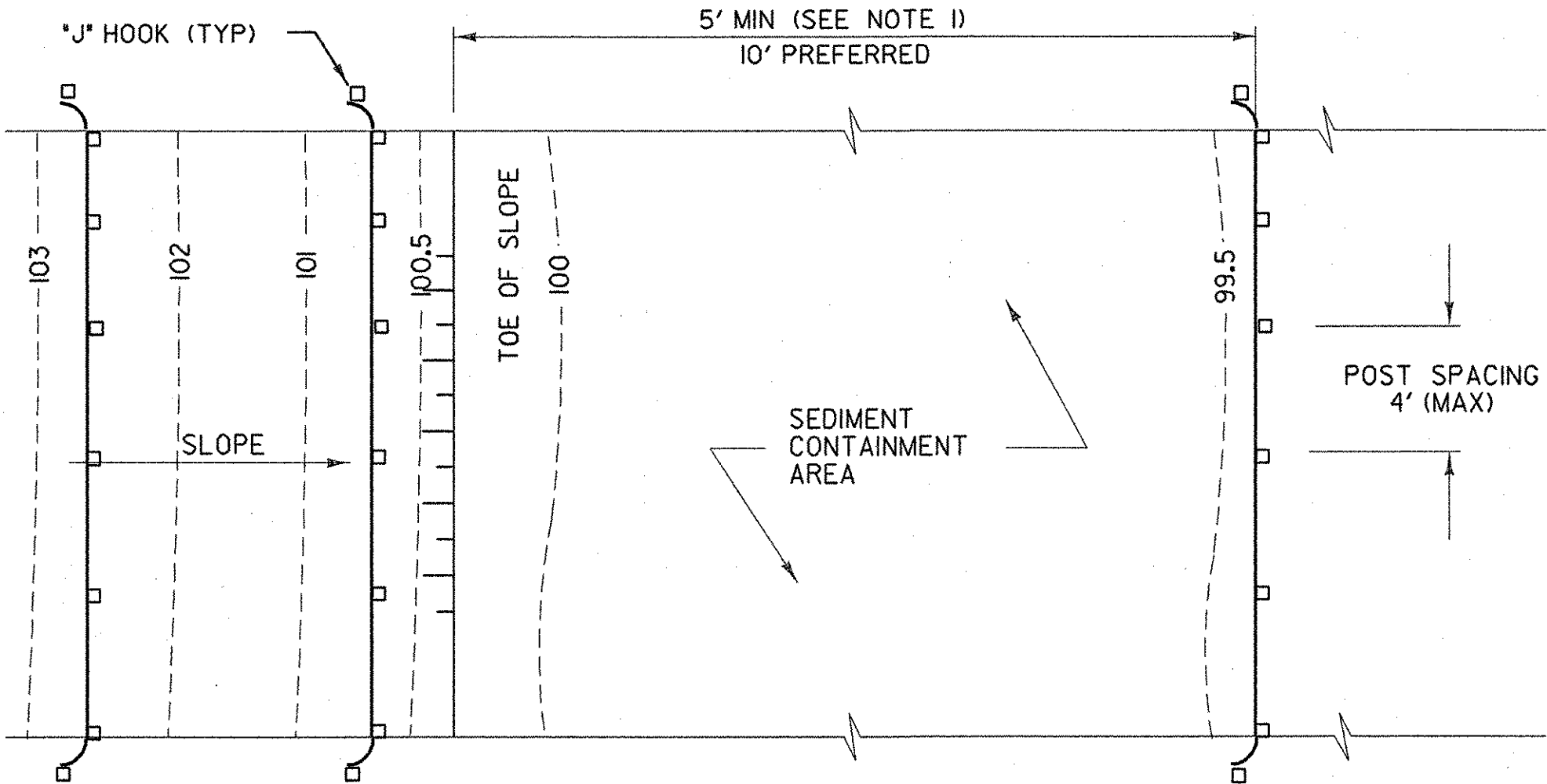
CONSTRUCTED SLOPE	SLOPE LENGTH (LS) FT	HORIZONTAL LENGTH (LH) FT
3 : 1	80	75
4 : 1	130	125
5 : 1	200	200
> 5 : 1	250	250

- 7. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
- 8. MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
- 9. SILT FENCE SHALL BE REMOVED WHEN THE AREA HAS BEEN STABILIZED. AT TIME OF REMOVAL OF THE SILT FENCE, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
- 10. PAYMENT FOR INSTALLATION AND REMOVAL OF SILT FENCE SHALL BE MADE UNDER THE GEOTEXTILE FOR SILT FENCE ITEM.
- 11. PAYMENT FOR MONITORING SILT FENCE SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
- 12. PAYMENT FOR MAINTAINING SILT FENCE SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.

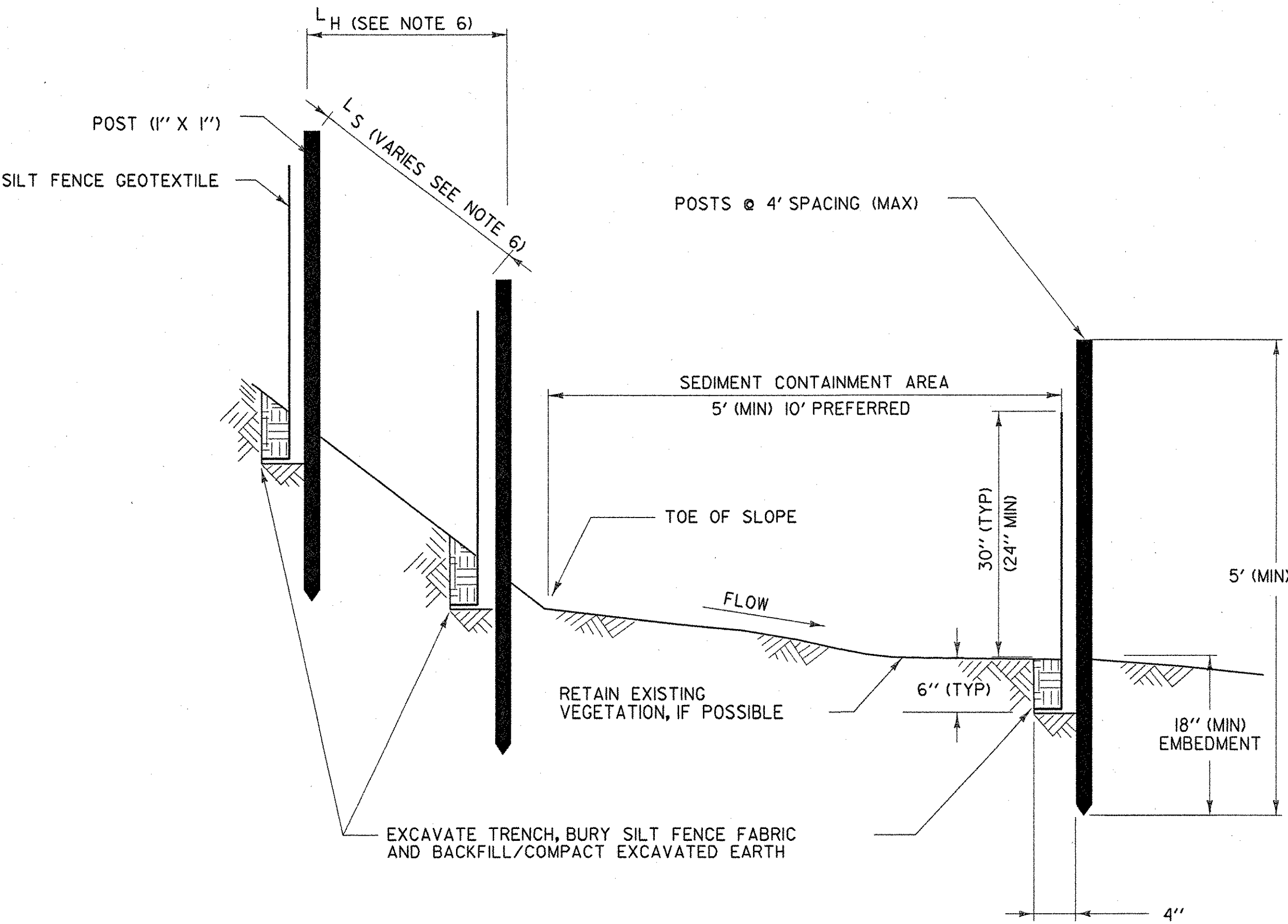


- 1. PLACE THE END POST OF ONE FENCE INSIDE THE END POST OF THE OTHER FENCE.
- 2. ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL
- 3. DRIVE BOTH POSTS 18 INCHES INTO THE GROUND AND BURY THE FLAP IN THE TRENCH.

SPLICING DETAIL



PLAN

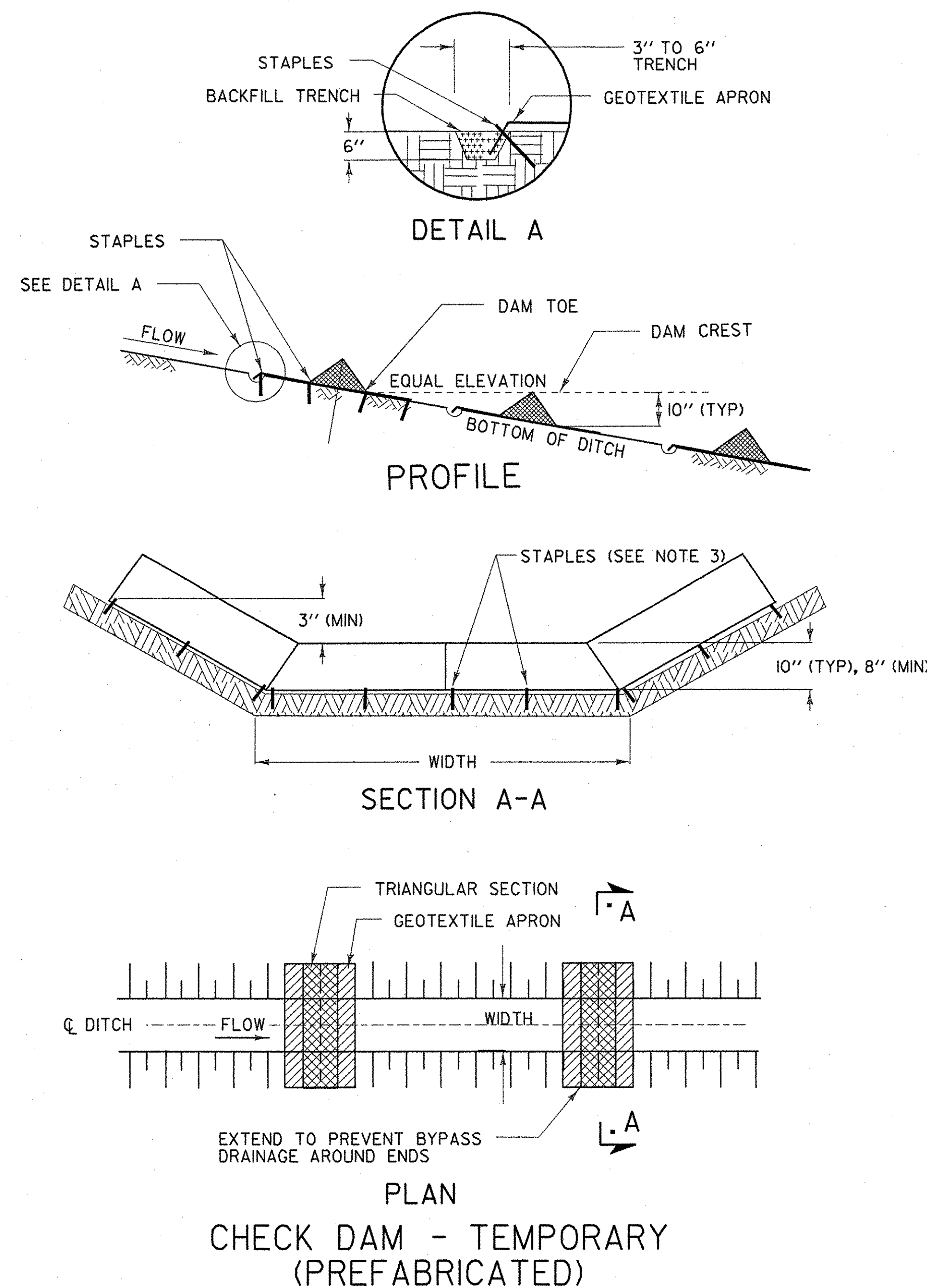


SECTION
SILT FENCE - TEMPORARY

DATUM
VERTICAL: NAVD 88
HORIZONTAL: NAD83

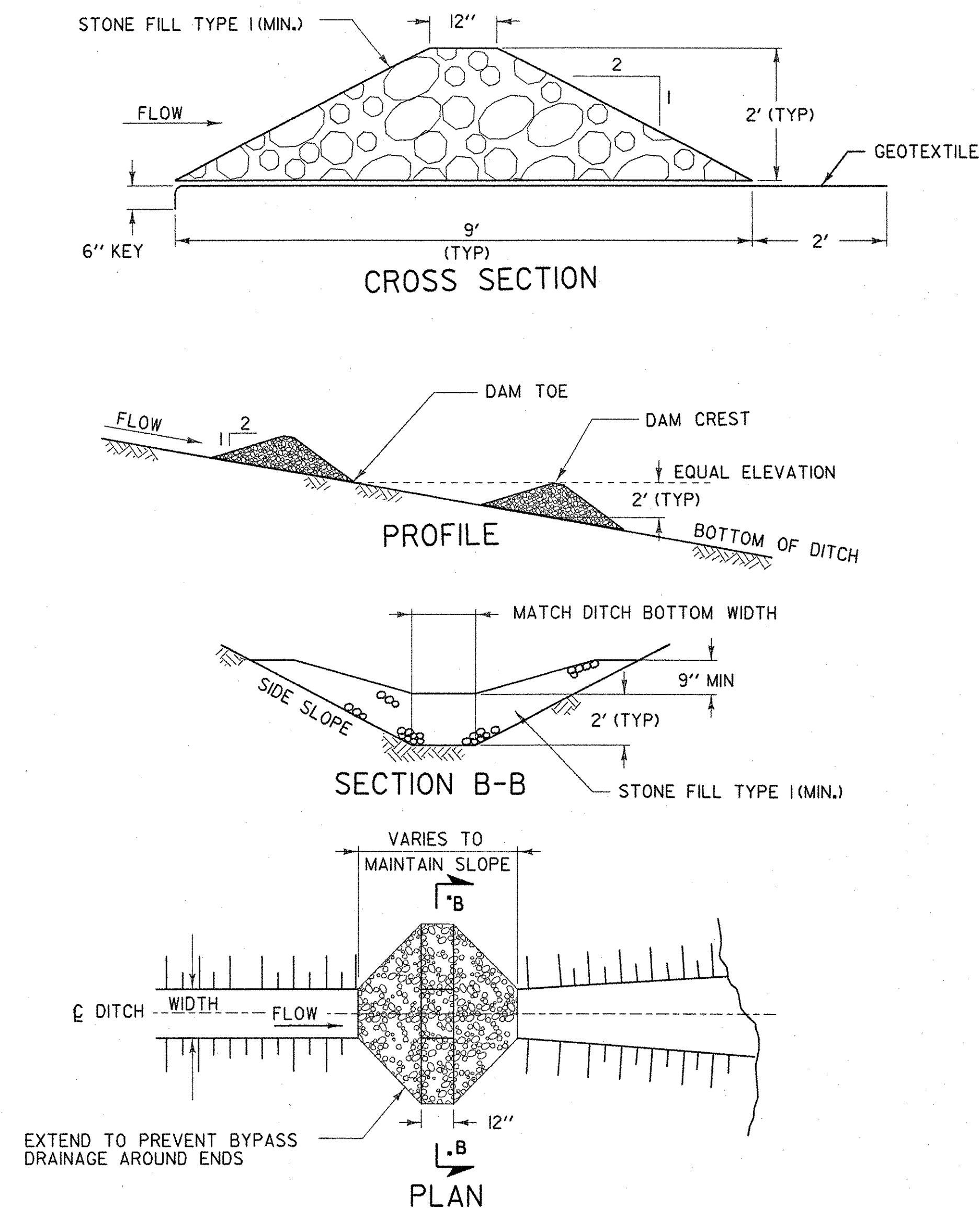
PROJECT NAME: FRANKLIN
PROJECT NUMBER: HES 0313(4)

FILE NAME: EPSC-I.DGN
PROJECT LEADER: GAMBLE
DESIGNED BY: BRC
EPSC DETAILS
PLOT DATE: 11-OCT-2006
DRAWN BY: MJF
CHECKED BY: DMB
SHEET 18 OF 26



PREFABRICATED CHECK DAM PLACEMENT INTERVAL	
DITCH SLOPE	PLACEMENT INTERVAL **
1 %	50 FT
2 %	40 FT
3 %	25 FT
4 %	20 FT
5 %	15 FT

** BASED ON 10" TYPICAL HEIGHT



STONE CHECK DAM PLACEMENT INTERVAL	
DITCH SLOPE	PLACEMENT INTERVAL **
1 %	200 FT
2 %	100 FT
3 %	65 FT
4 %	50 FT
5 %	40 FT
6 %	30 FT
8 %	25 FT
10 %	20 FT

** BASED ON 2' TYPICAL HEIGHT

CHECK DAMS

APPLICATION NOTES:

- THE PRIMARY PURPOSE OF A CHECK DAM IS TO REDUCE EROSION IN A CHANNEL BY REDUCING FLOW VELOCITY.
- CHECK DAMS WILL CAPTURE SEDIMENT THAT FALLS OUT OF SUSPENSION BEHIND THE CHECK DAM DUE TO DECREASED VELOCITY.
- CHECK DAMS ARE NOT INTENDED TO FILTER SEDIMENT FROM TURBID WATER.
- DETAILS SHOWN SHALL BE USED FOR TEMPORARY INSTALLATION ONLY.
- PREFABRICATED DAMS ARE NOT TO BE USED ON SLOPES GREATER THAN 5% OR PER MANUFACTURER'S SPECIFICATIONS.
- PREFABRICATED DAM SPECIFICATIONS SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL PRIOR TO USE.

GENERAL NOTES:

- GEOTEXTILE SHALL BE INSTALLED UNDER STONE FILL. IT SHALL BE KEYED IN ON THE UP HILL END AND SHALL EXTEND 2 FEET BEYOND THE STONE ON THE DOWN HILL END.
- CORE MATERIAL FOR THE STONE CHECK DAM SHALL MEET THE GRADATION REQUIREMENTS OF STONE FILL TYPE I (MIN.). STONE SIZE SHOULD BE INCREASED WITH INCREASED SLOPE AND VELOCITY.
- THE UPHILL END OF THE APRON FOR THE PREFABRICATED CHECK DAM SHALL BE STAPLED AND BURIED AS SHOWN IN DETAIL 'A' OR AS RECOMMENDED BY THE MANUFACTURER'S LITERATURE.
- MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
- MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
- AT TIME OF REMOVAL OF THE CHECK DAMS, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
- PAYMENT FOR INSTALLATION AND REMOVAL OF CHECK DAMS SHALL BE MADE UNDER APPLICABLE ITEM 613.10 - STONE FILL, TYPE I (MOD. - CHECK DAM)
- PAYMENT FOR MONITORING CHECK DAMS SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
- PAYMENT FOR MAINTAINING CHECK DAMS SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.

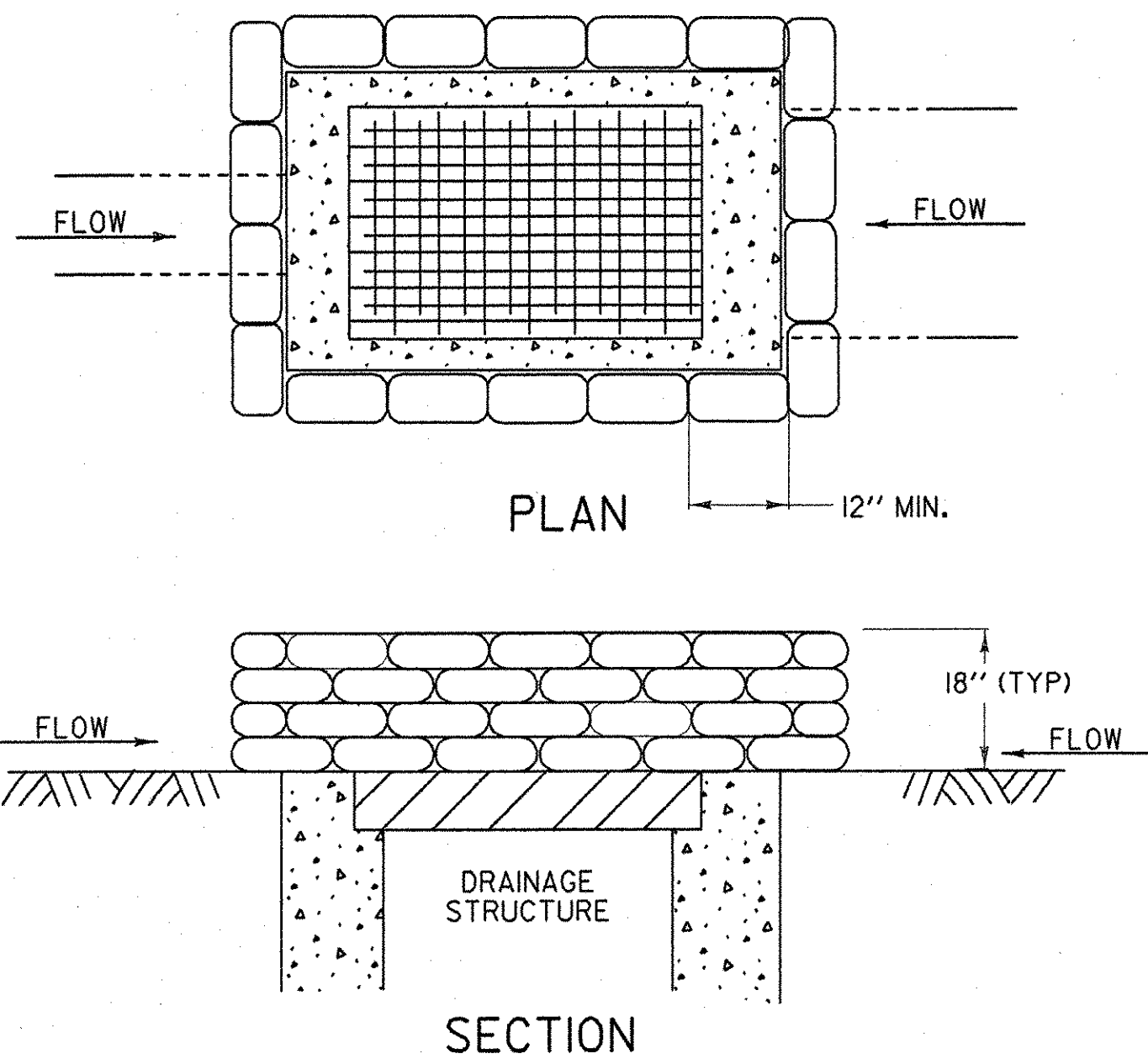
DATUM

VERTICAL: NAVD 88
HORIZONTAL: NAD83

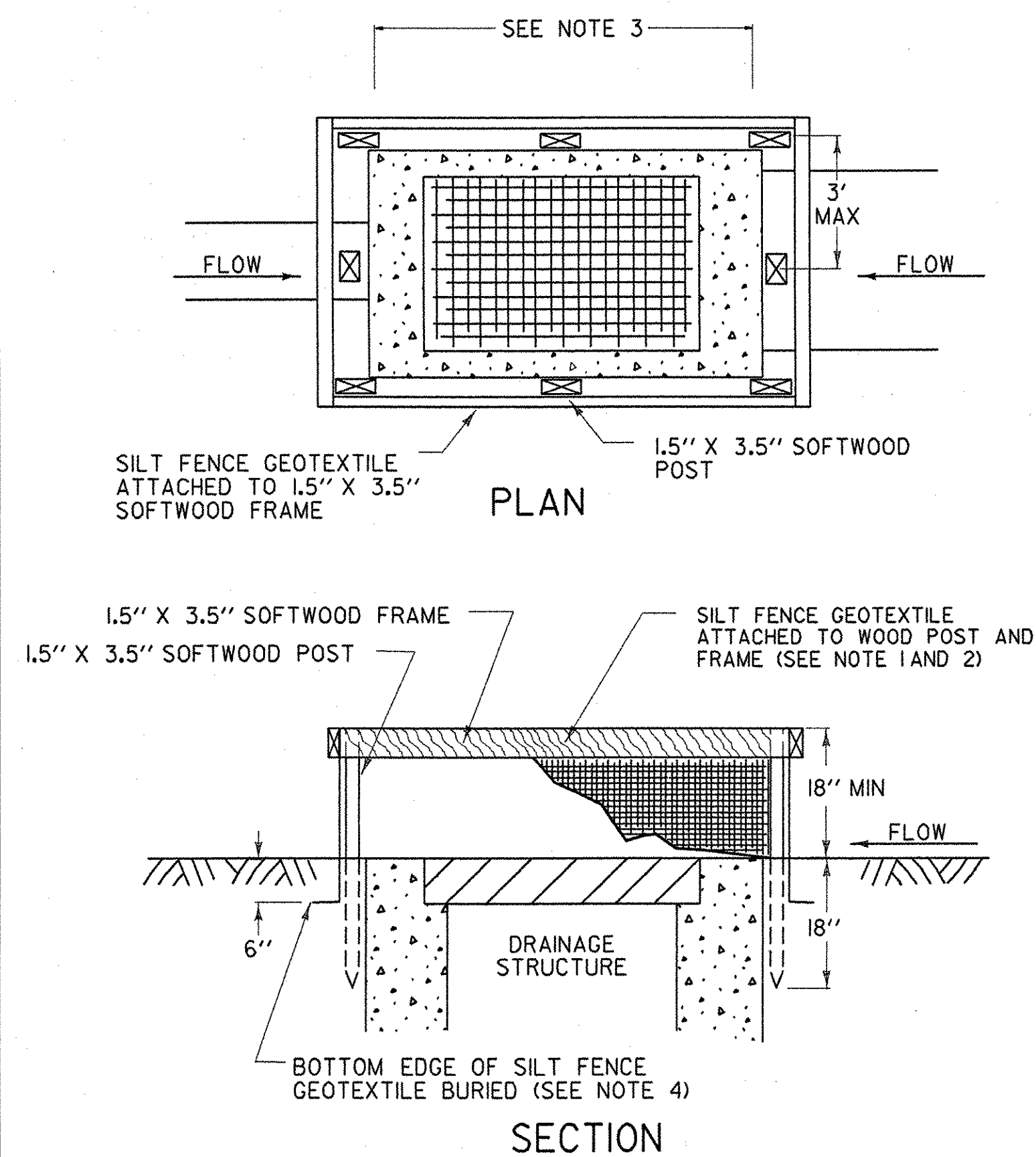
PROJECT NAME: FRANKLIN
PROJECT NUMBER: HES 0313(4)

FILE NAME: EPSC-2.DGN
PROJECT LEADER: GAMBLE
DESIGNED BY: BRC
EPSC DETAILS

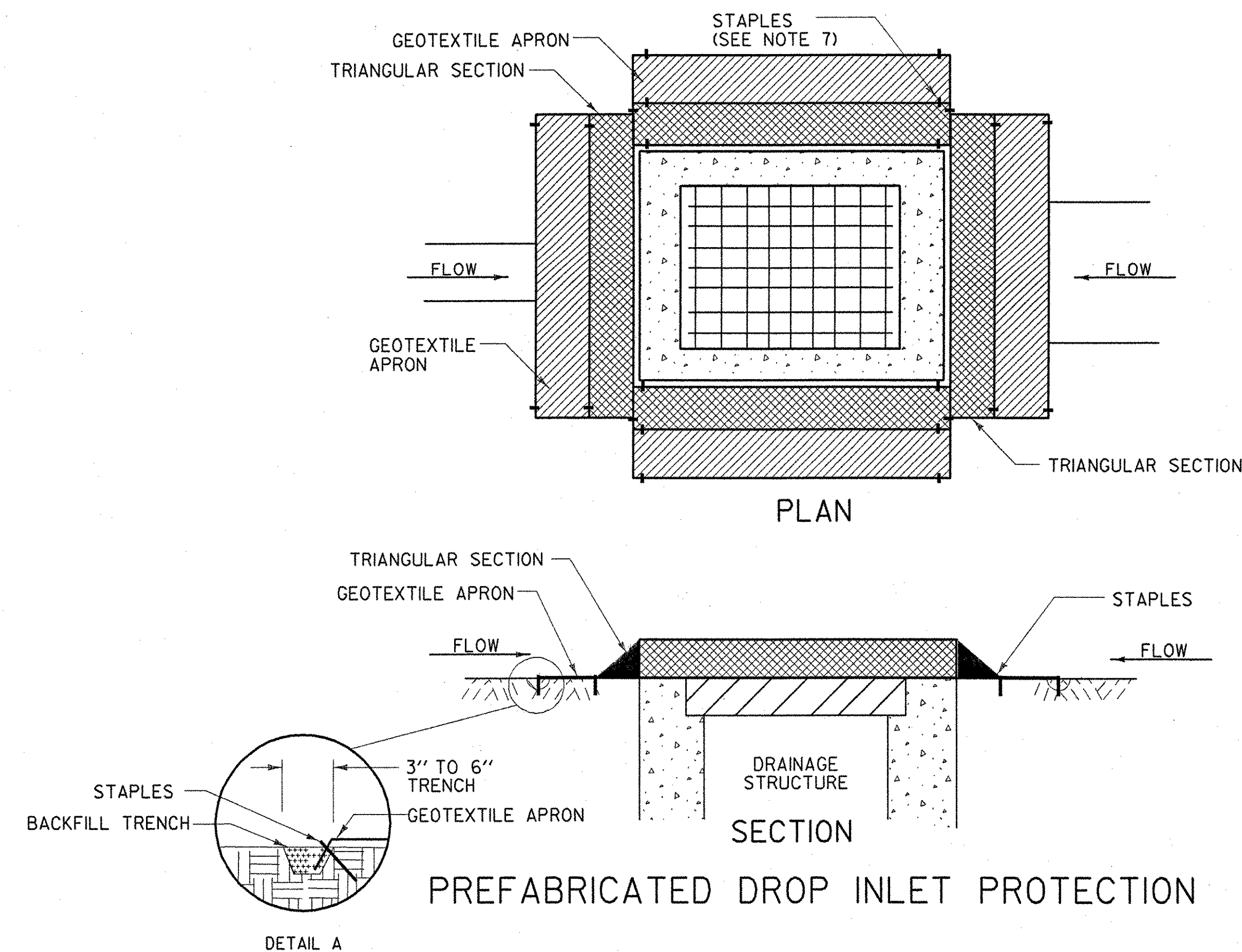
PLOT DATE: 11-OCT-2006
DRAWN BY: MJF
CHECKED BY: DMB
SHEET 19 OF 26



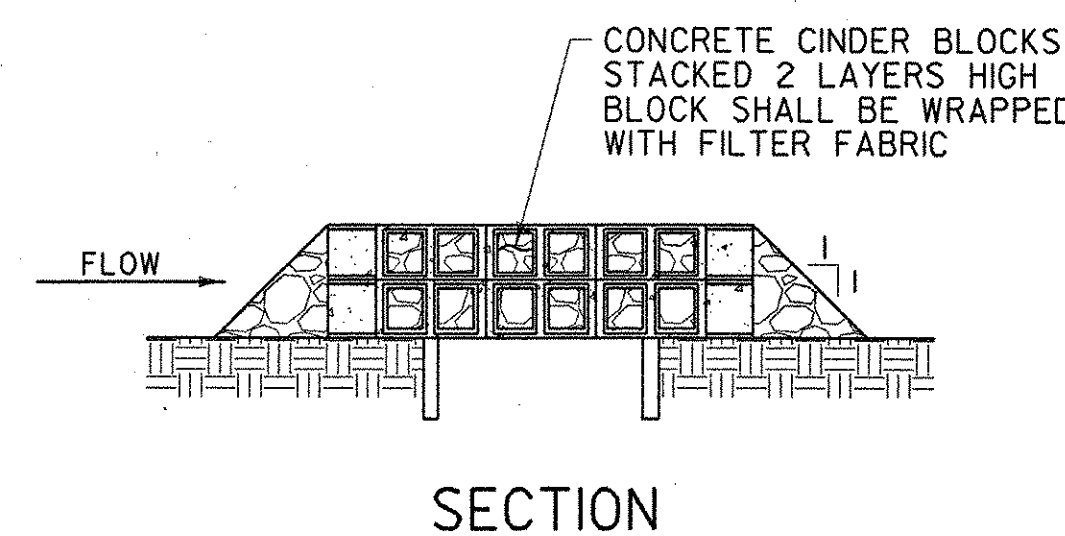
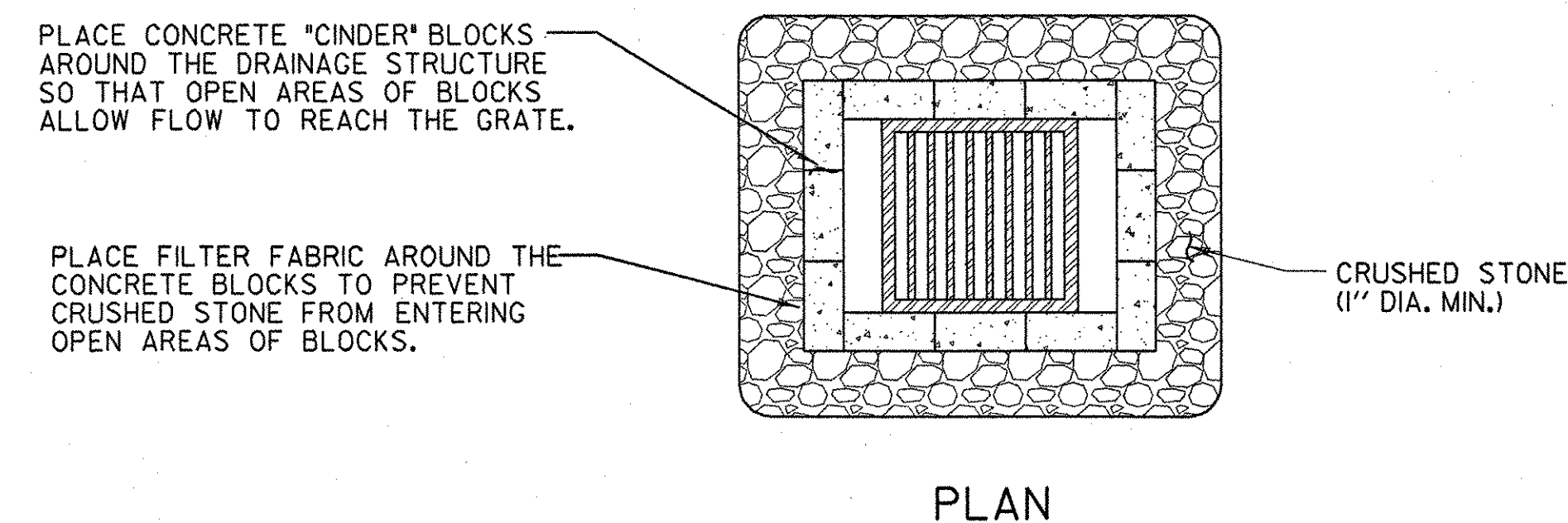
GRAVEL BAG DROP INLET PROTECTION



SILT FENCE DROP INLET PROTECTION



PREFABRICATED DROP INLET PROTECTION



ROCK BARRIER DROP INLET PROTECTION
TEMPORARY PAVED AREAS

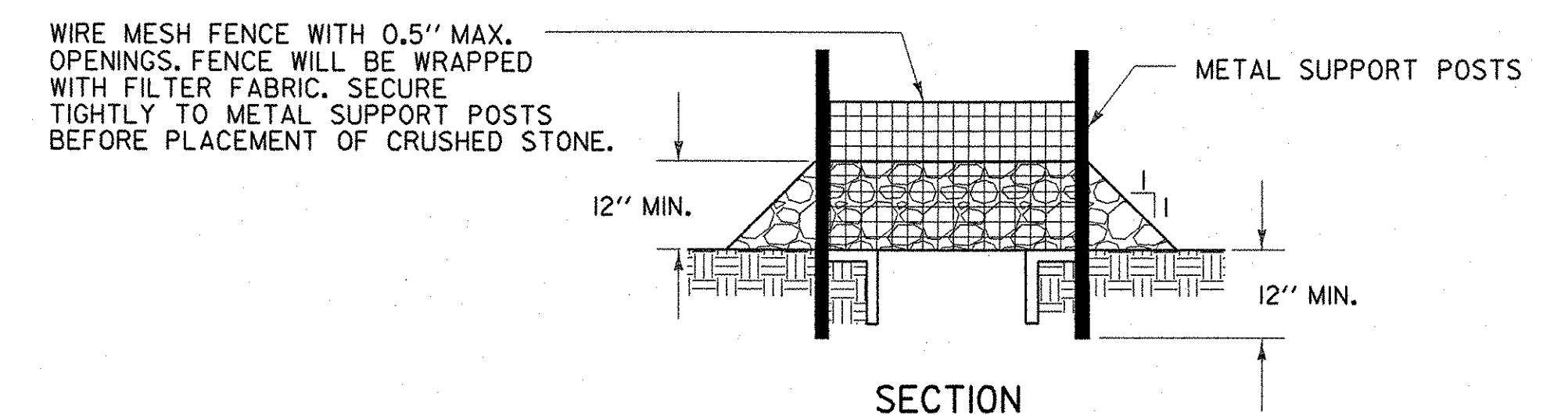
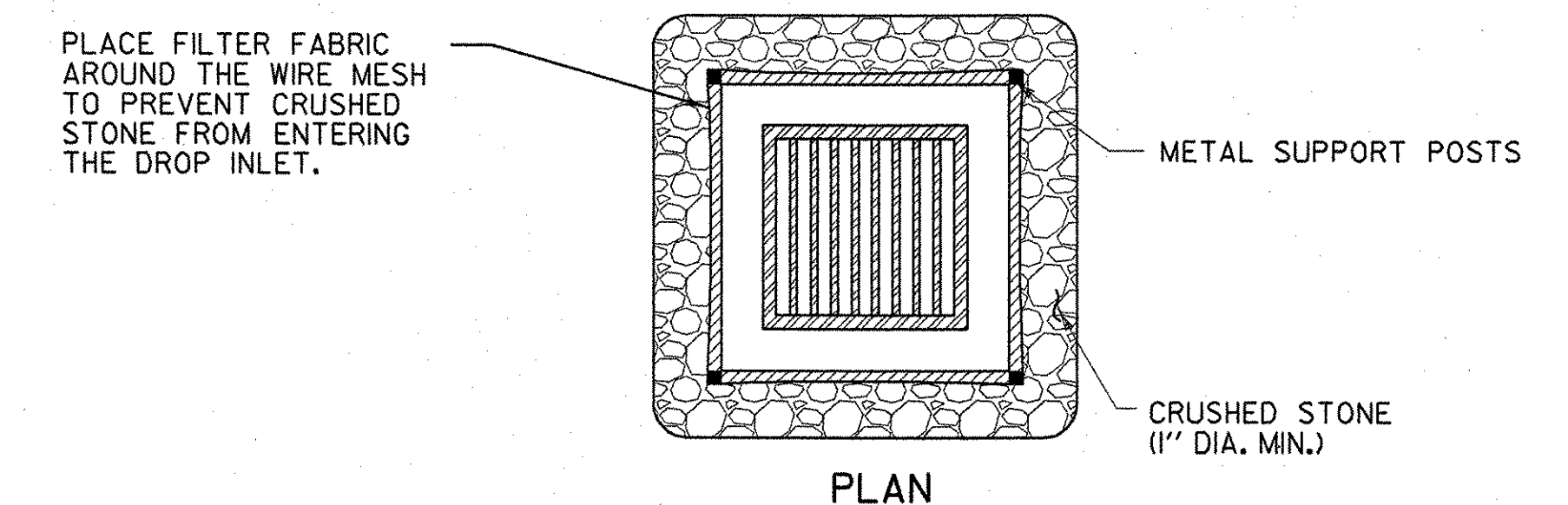
DROP INLET PROTECTION

APPLICATION NOTES:

- THE PRIMARY PURPOSE OF DRAINAGE STRUCTURE INLET PROTECTION IS TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM BY PONDING WATER WHICH ALLOWS SEDIMENT TO FALL OUT OF SUSPENSION.
- THESE EXAMPLES OF DROP INLET PROTECTION ARE NOT INTENDED FOR USE ON GRADES. ON GRADE THEY MAY CAUSE WATER TO BYPASS THE STRUCTURE, CREATING ADDITIONAL EROSION OR FLOODING.
- POSSIBLE MODIFICATIONS FOR USE ON GRADE INCLUDE ADDING A BERM DOWNSTREAM OF THE INLET TO CREATE PONDING. CHECK DAMS MAY ALSO BE USED UPSTREAM OF THE INLET TO SLOW VELOCITIES.
- PREFABRICATED DROP INLET PROTECTION SPECIFICATIONS SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL PRIOR TO USE.

GENERAL NOTES:

- THE TOP OF THE INLET PROTECTION SHALL BE SET AT THE MAXIMUM DESIRED WATER LEVEL, BASED ON FIELD LOCATION AND CONDITIONS.
- SILT FENCE GEOTEXTILE SHALL BE A SINGLE CONTINUOUS PIECE TO ELIMINATE JOINTS.
- SPACE SILT FENCE POSTS EVENLY AROUND INLET WITH A MAXIMUM SPACING OF 3 FEET. DRIVE POSTS A MINIMUM OF 18 INCHES INTO GROUND. WIRE MESH MAY BE REQUIRED BEHIND GEOTEXTILE TO PROVIDE SUPPORT.
- SILT FENCE GEOTEXTILE SHALL BE EMBEDDED A MINIMUM OF 6 INCHES AND BACKFILLED. GEOTEXTILE SHALL BE SECURELY FASTENED TO POSTS AND FRAME.
- GRAVEL BAGS SHALL BE FILLED WITH CLEAN STONE, RATHER THAN SAND, TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM IF BAGS ARE DAMAGED DURING USE.
- GRAVEL BAGS SHALL BE INDIVIDUALLY TIED, DOUBLE BAGGED AND INVERSELY INSERTED. GRAVEL BAGS SHALL LAP THE JOINTS BETWEEN THE BAGS IN THE LAYER BELOW.
- SECURE THE ENDS OF THE APRON FOR THE PREFABRICATED DRAINAGE STRUCTURE INLET PROTECTION WITH STAPLES AS DETAILED IN THE PLAN VIEW OR AS RECOMMENDED BY THE MANUFACTURERS LITERATURE.
- MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
- MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
- PAYMENT OF INLET PROTECTION SHALL BE MADE UNDER ITEM 613.10 - STONE FILL, TYPE 1 (MOD. - INLET PROTECTION).
- PAYMENT FOR MONITORING INLET PROTECTION SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
- PAYMENT FOR MAINTAINING INLET PROTECTION SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.



ROCK BARRIER INLET PROTECTION
TEMPORARY UNPAVED AREAS

DATUM
VERTICAL: NAVD 88
HORIZONTAL: NAD83

PROJECT NAME: FRANKLIN
PROJECT NUMBER: HES 0313(4)

FILE NAME: EPSC-3.DGN
PROJECT LEADER: GAMBLE
DESIGNED BY: BRC
EPSC DETAILS

PLOT DATE: 11-OCT-2006
DRAWN BY: MJF
CHECKED BY: DMB
SHEET 20 OF 26

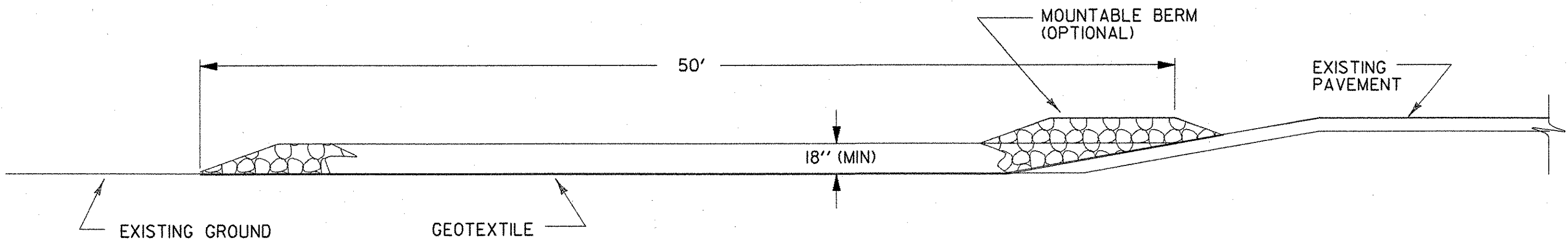
STABILIZED CONSTRUCTION ENTRANCE

APPLICATION NOTES:

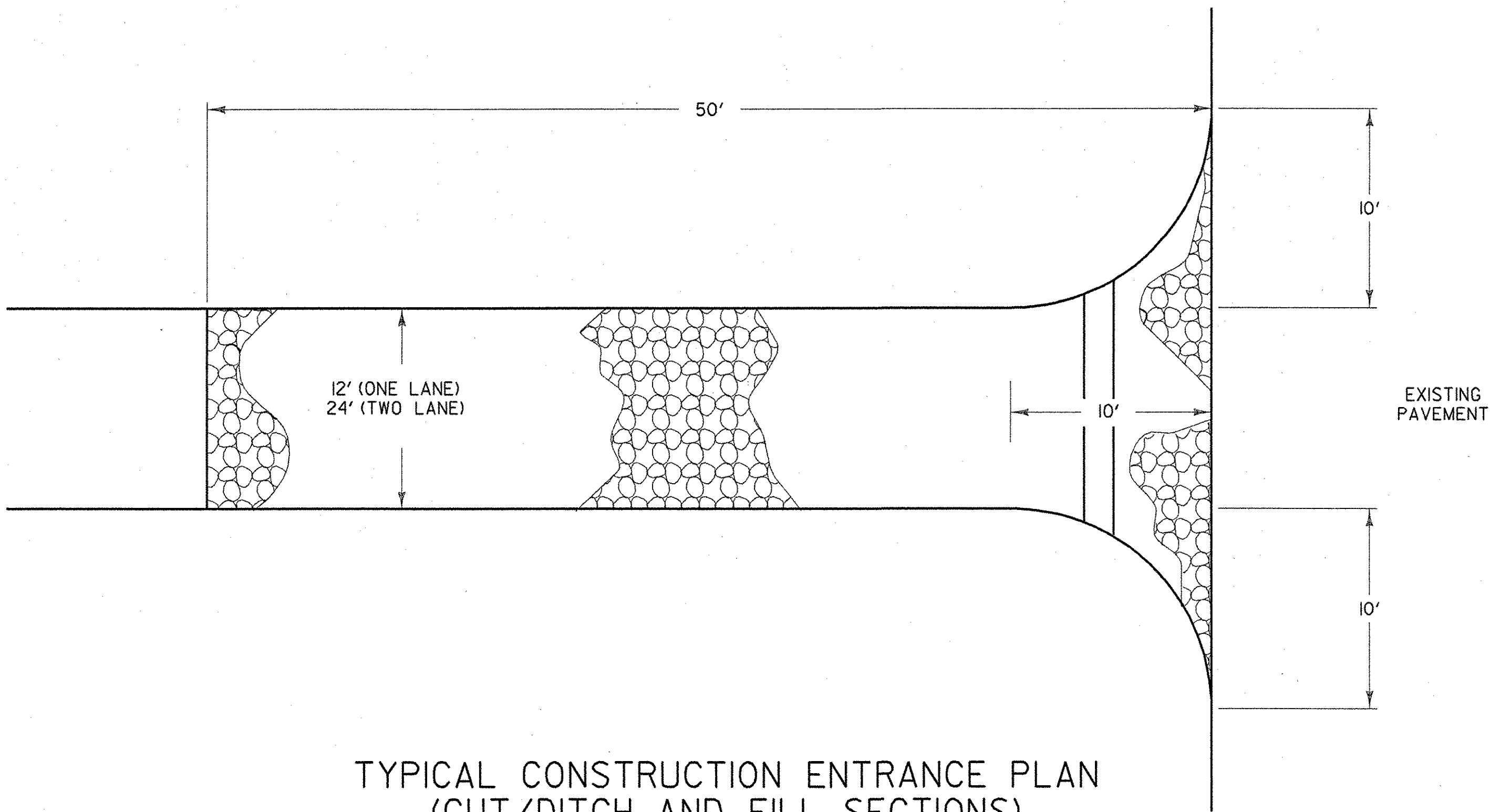
A. THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY OR STREETS.

GENERAL NOTES:

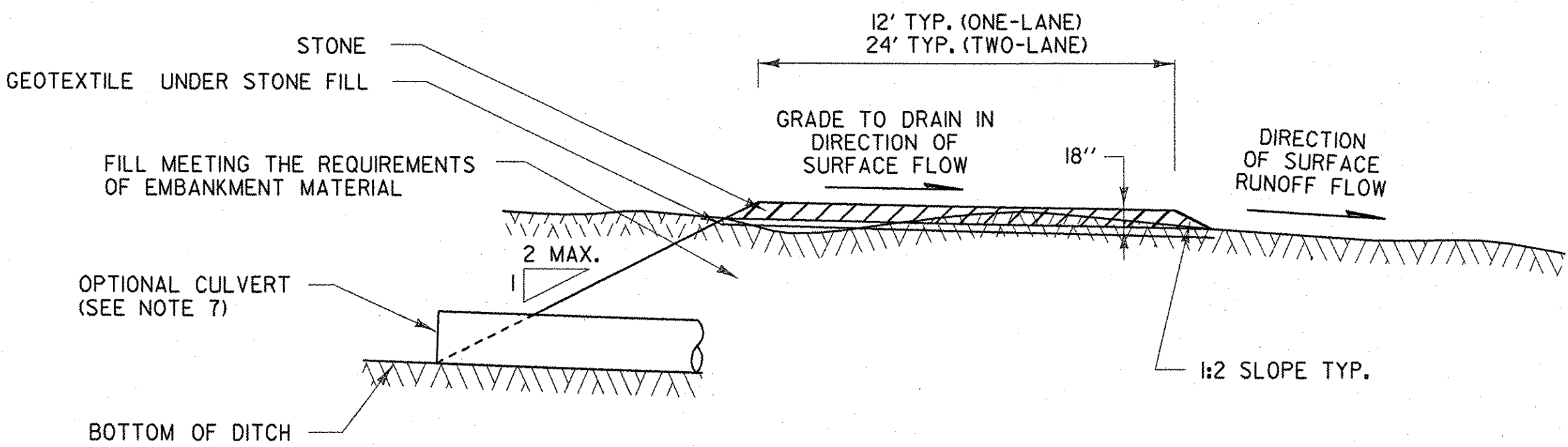
1. STONE SIZE - USE CLEAN STONE WITH GRADATION BETWEEN 2 INCHES AND 4 INCHES .
2. LENGTH - 50 FEET (MIN)
3. THICKNESS - 18 INCHES (MIN)
4. WIDTH - 12 FEET (MIN)
5. GEOTEXTILE UNDER STONE WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE AS DIRECTED BY THE ENGINEER. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. PROPOSED DRAINAGE PIPES SHALL BE SIZED WITH SUFFICIENT CAPACITY TO CARRY DITCH FLOWS. ALTERNATIVE WAYS OF TRANSPORTING DITCH DRAINAGE ACROSS CONSTRUCTION ENTRANCES MAY BE PROPOSED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER.
8. WHEN WASHING OF VEHICLE IS NECESSARY, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
10. 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.
11. AT THE TIME OF REMOVAL OF THE STABILIZED CONSTRUCTION ENTRANCE THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
12. PAYMENT OF THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MADE UNDER ITEM 613.10 - STONE FILL, TYPE I, (MOD. - CONSTRUCTION ENTRANCE)
13. PAYMENT FOR MONITORING STABILIZED CONSTRUCTION ENTRANCES SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
14. PAYMENT FOR MAINTAINING THE CONSTRUCTION ENTRANCE SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.



TYPICAL CONSTRUCTION ENTRANCE PROFILE
(CUT AND DITCH SECTIONS)



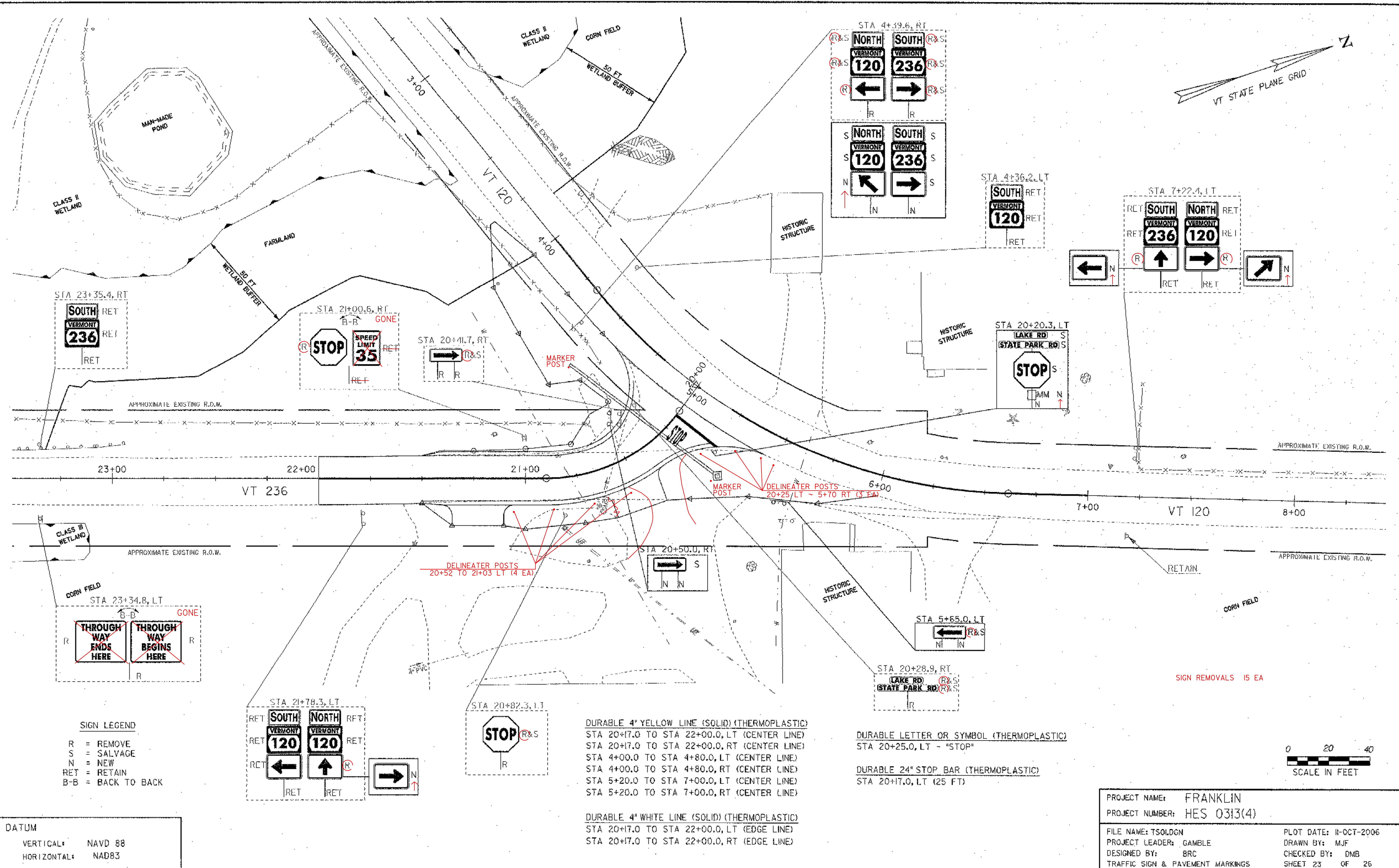
TYPICAL CONSTRUCTION ENTRANCE PLAN
(CUT/DITCH AND FILL SECTIONS)



TYPICAL CONSTRUCTION ENTRANCE SECTION

DATUM	
VERTICAL:	NAVD 88
HORIZONTAL:	NAD83

PROJECT NAME: FRANKLIN	
PROJECT NUMBER: HES 0313(4)	
FILE NAME: EPSC-4.DGN	PLOT DATE: 11-OCT-2006
PROJECT LEADER: GAMBLE	DRAWN BY: MJF
DESIGNED BY: BRC	CHECKED BY: DMB
EPSC DETAILS	SHEET 21 OF 26



SIGN LEGEND

- R = REMOVE
- S = SALVAGE
- N = NEW
- RET = RETAIN
- B-B = BACK TO BACK

DATUM
VERTICAL: NAVD 88
HORIZONTAL: NAD83

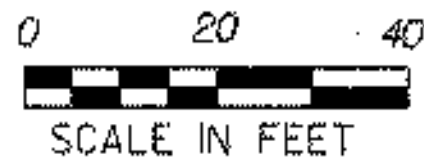
DURABLE 4" YELLOW LINE (SOLID) (THERMOPLASTIC)
STA 20+17.0 TO STA 22+00.0, LT (CENTER LINE)
STA 20+17.0 TO STA 22+00.0, RT (CENTER LINE)
STA 4+00.0 TO STA 4+80.0, LT (CENTER LINE)
STA 4+00.0 TO STA 4+80.0, RT (CENTER LINE)
STA 5+20.0 TO STA 7+00.0, LT (CENTER LINE)
STA 5+20.0 TO STA 7+00.0, RT (CENTER LINE)

DURABLE 4" WHITE LINE (SOLID) (THERMOPLASTIC)
STA 20+17.0 TO STA 22+00.0, LT (EDGE LINE)
STA 20+17.0 TO STA 22+00.0, RT (EDGE LINE)

DURABLE LETTER OR SYMBOL (THERMOPLASTIC)
STA 20+25.0, LT - "STOP"

DURABLE 24" STOP BAR (THERMOPLASTIC)
STA 20+17.0, LT (25 FT)

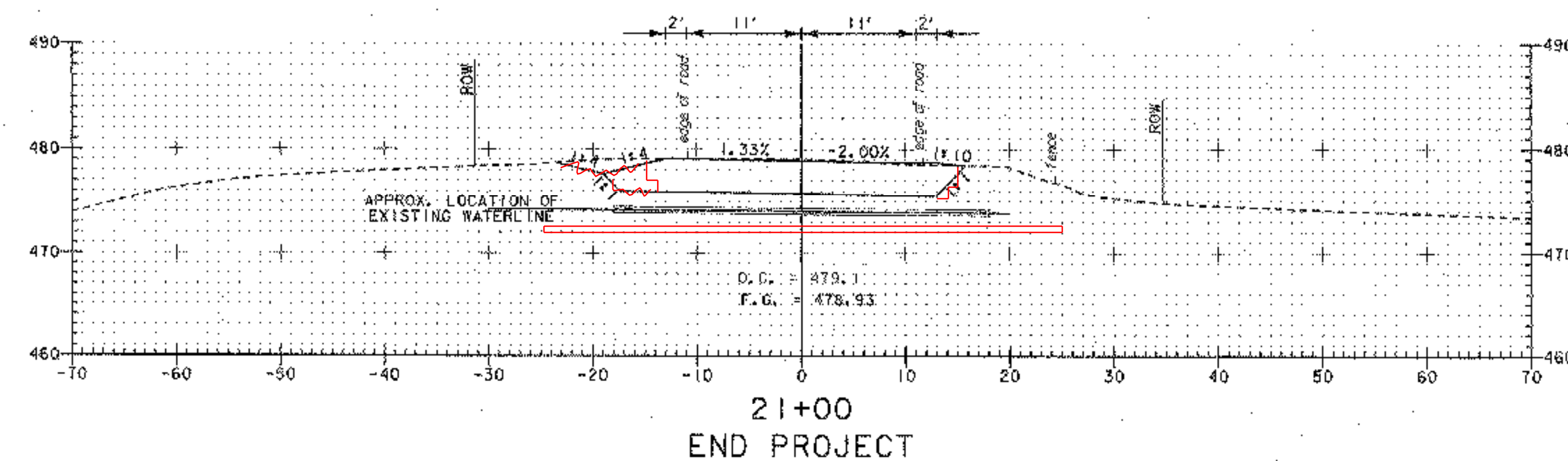
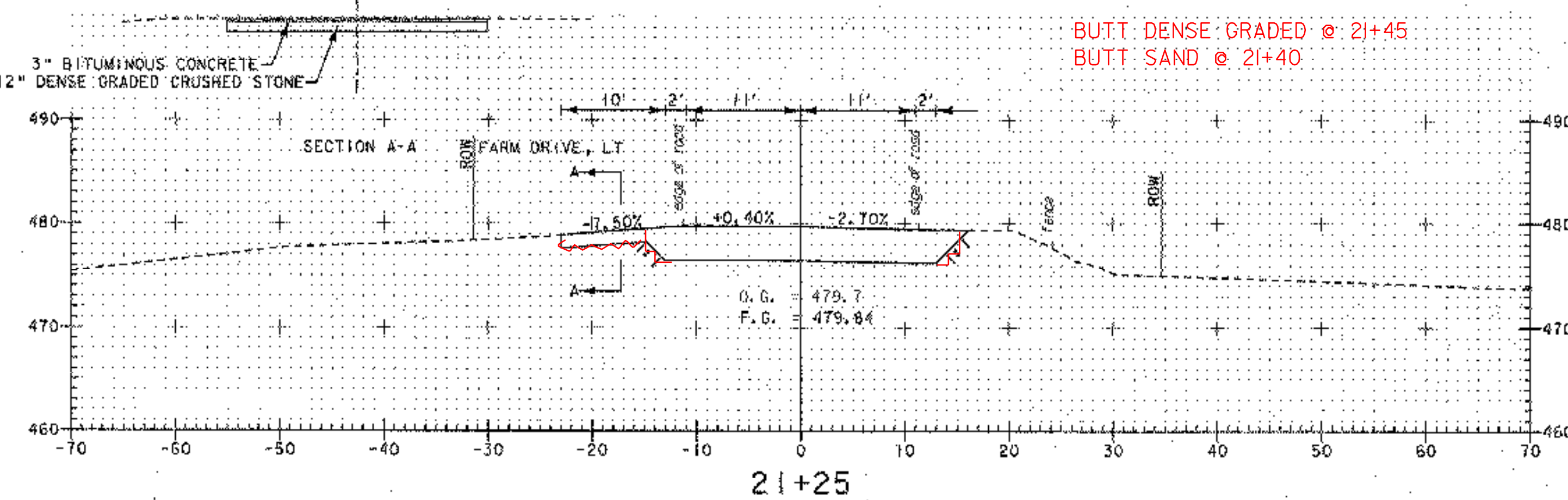
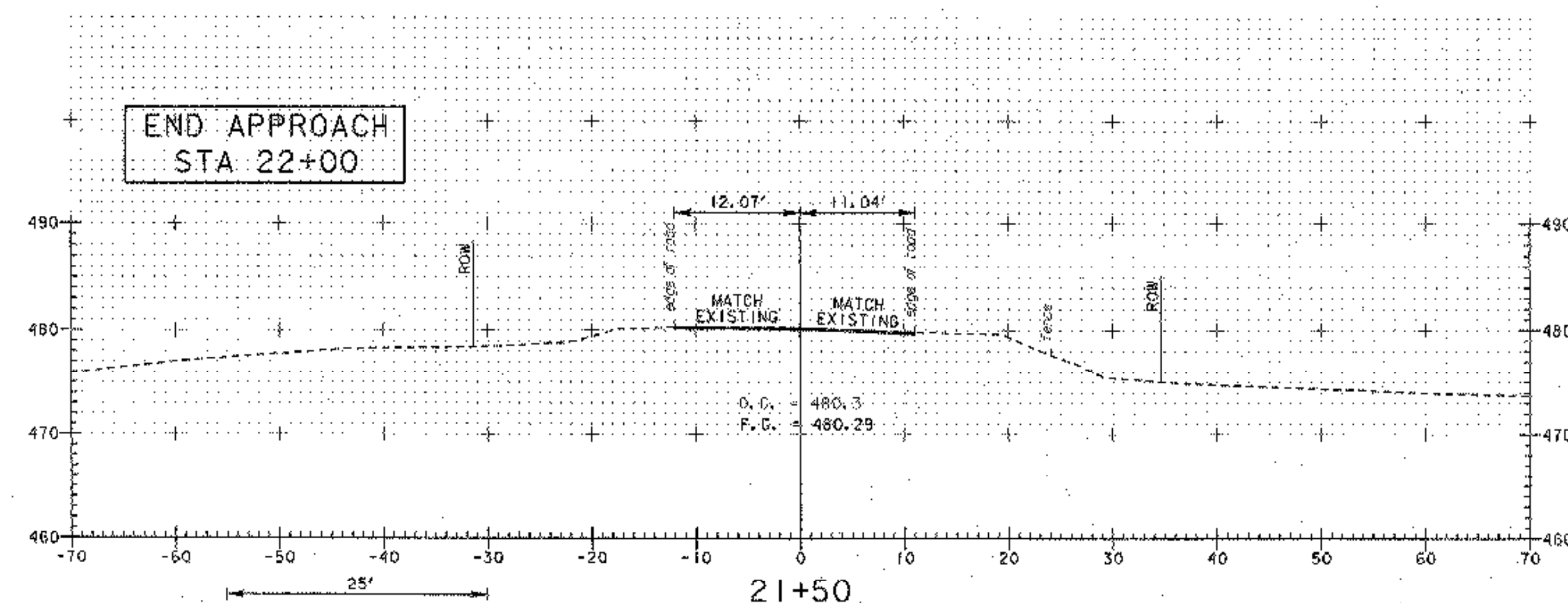
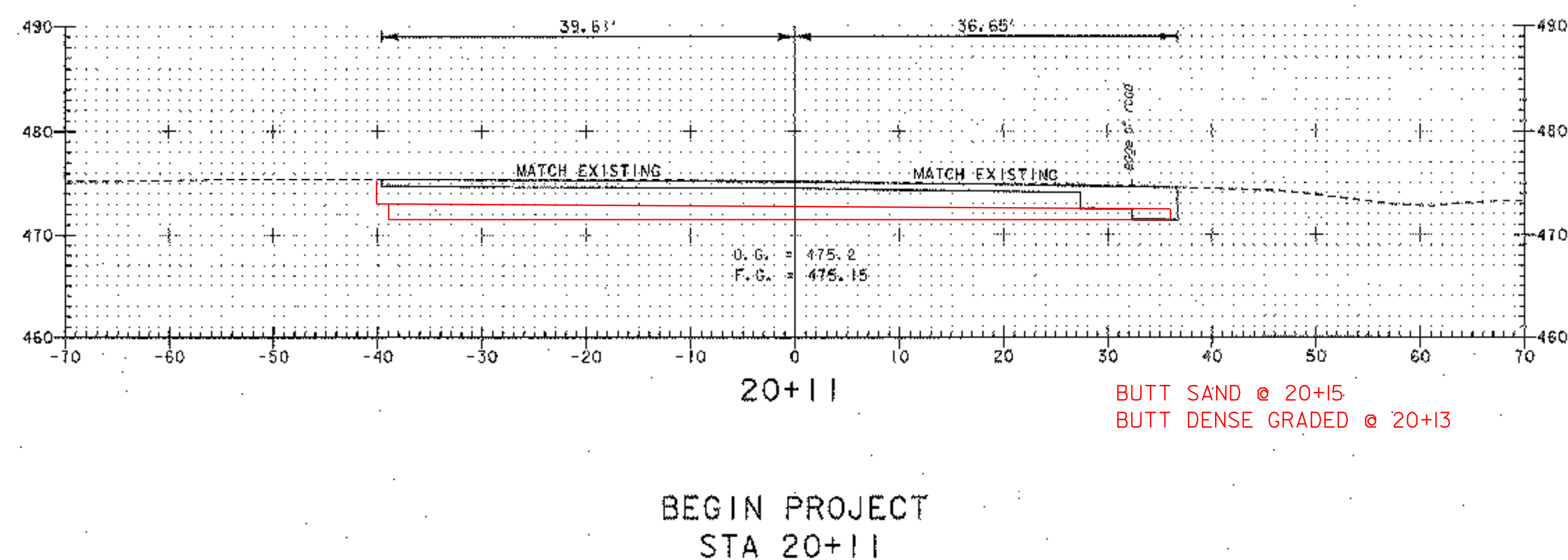
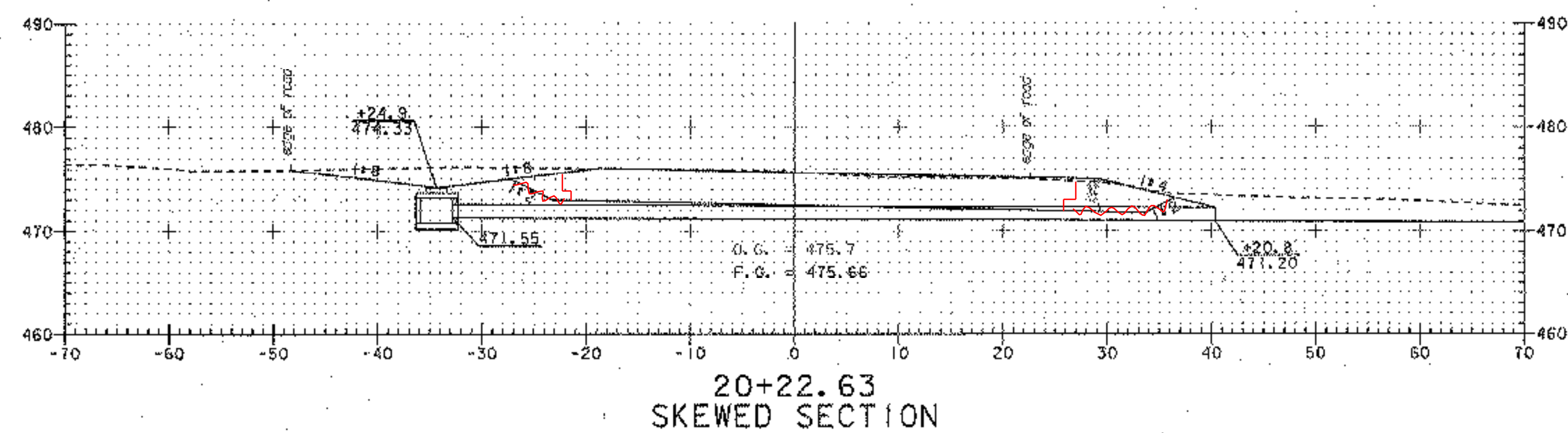
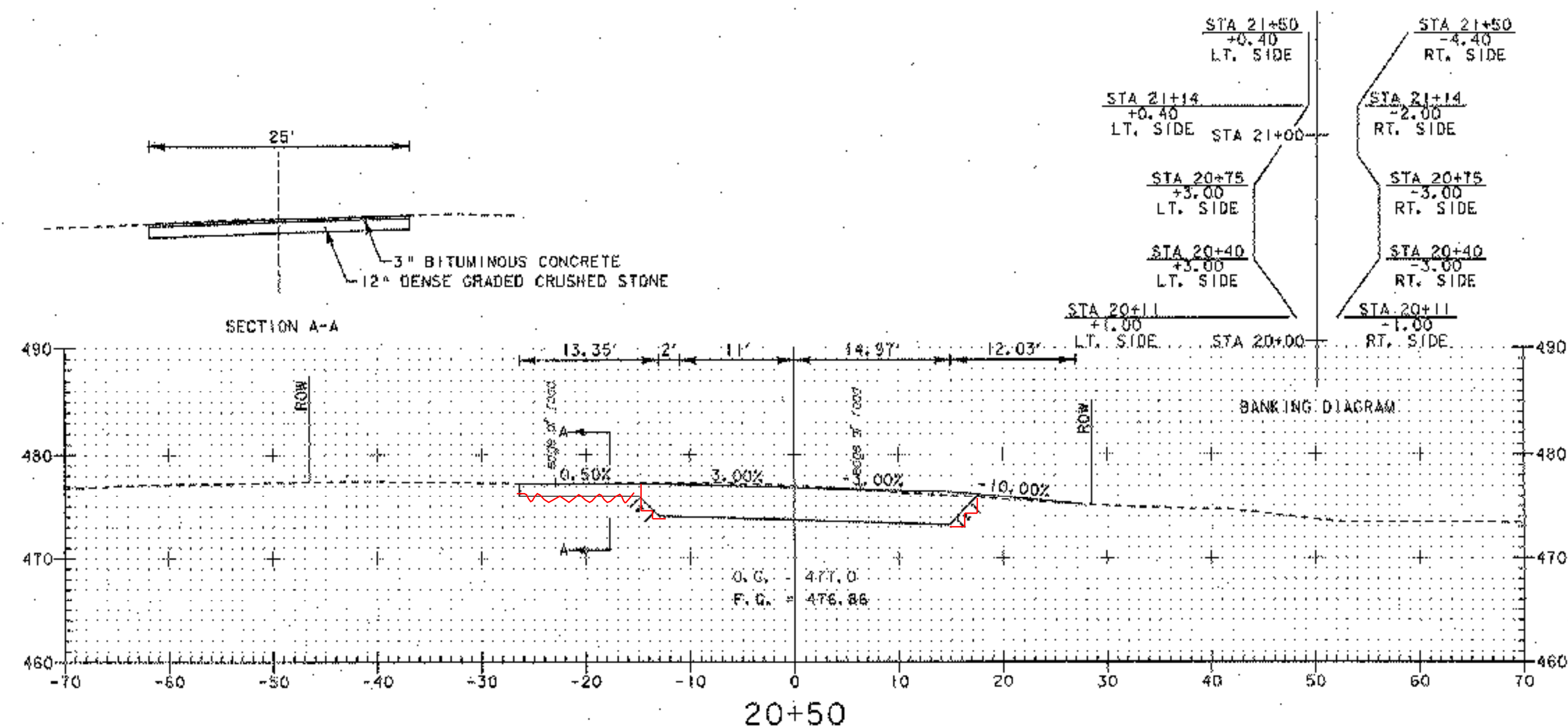
SIGN REMOVALS 15 EA



PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	HES 0313(4)
FILE NAME:	TSOLDGN
PROJECT LEADER:	GAMBLE
DESIGNED BY:	BRC
TRAFFIC SIGN & PAVEMENT MARKINGS	
PLOT DATE:	11-OCT-2006
DRAWN BY:	MJF
CHECKED BY:	DMB
SHEET	23
OF	26

TRAFFIC SIGN SUMMARY SHEET

TO BOOK #1 TO BOOK #1
PAGE 97 PAGE 109



DATUM

VERTICAL: NAVD 88

HORIZONTAL: NAD83

0 10 20
SCALE IN FEET

PROJECT NAME: FRANKLIN

PROJECT NUMBER: HES 0313(4)

FILE NAME: XS VT236.DGN

PROJECT LEADER: GAMBLE

DESIGNED BY: BRC

VT 236 CROSS SECTIONS

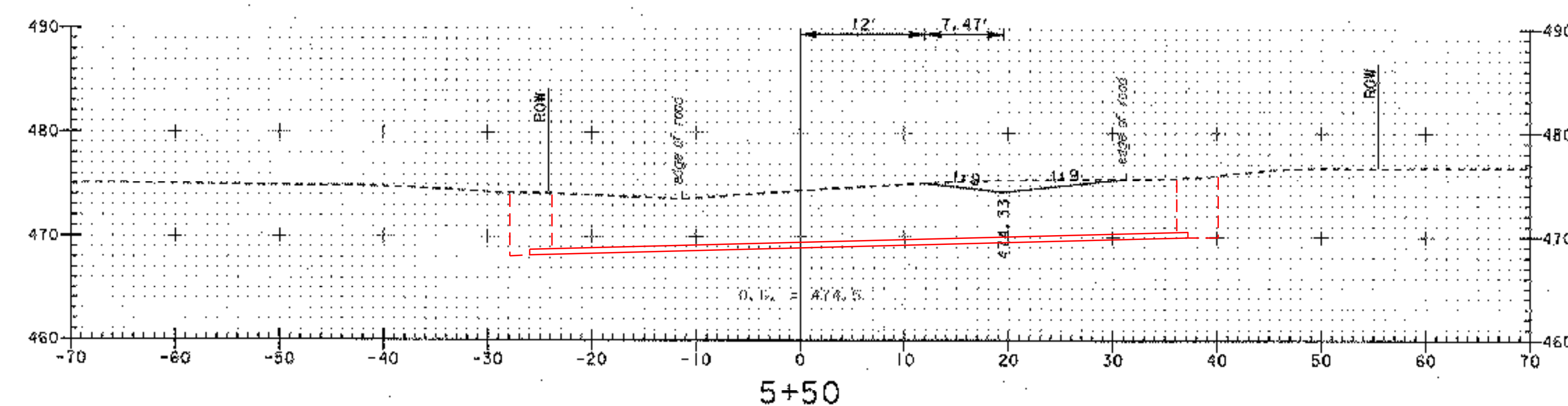
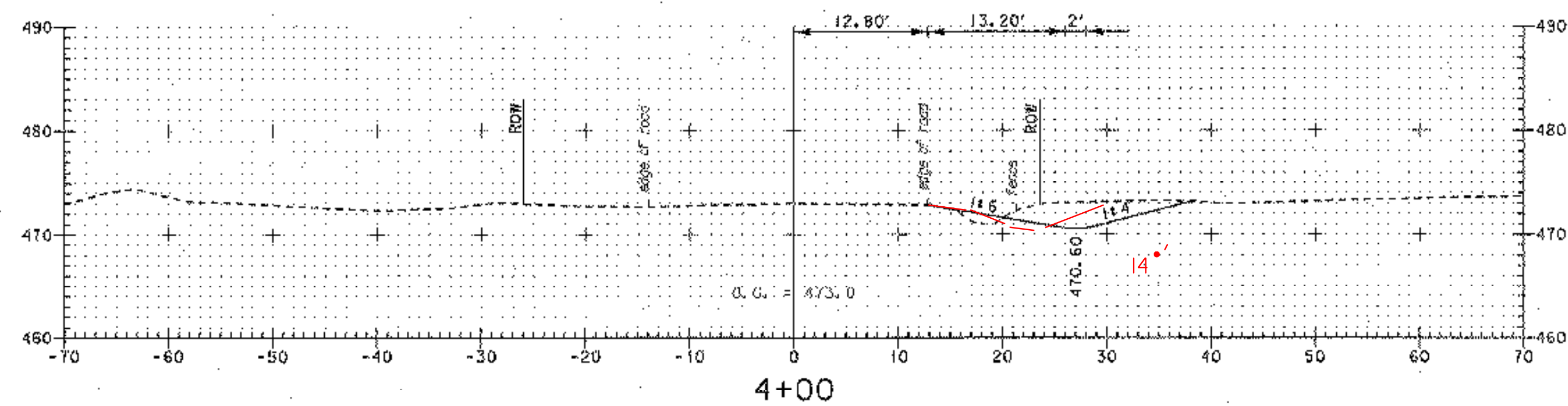
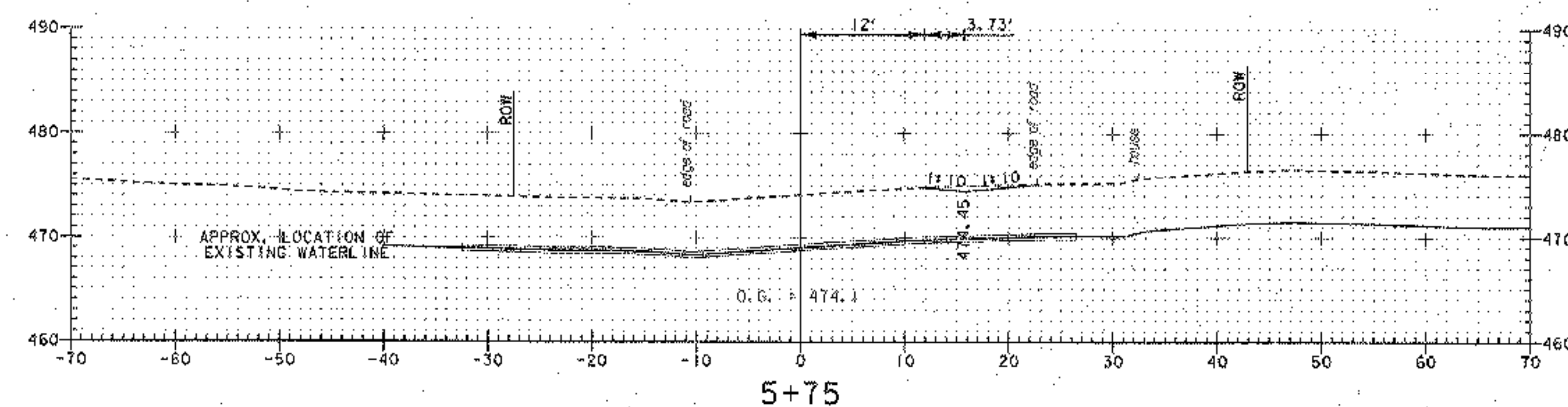
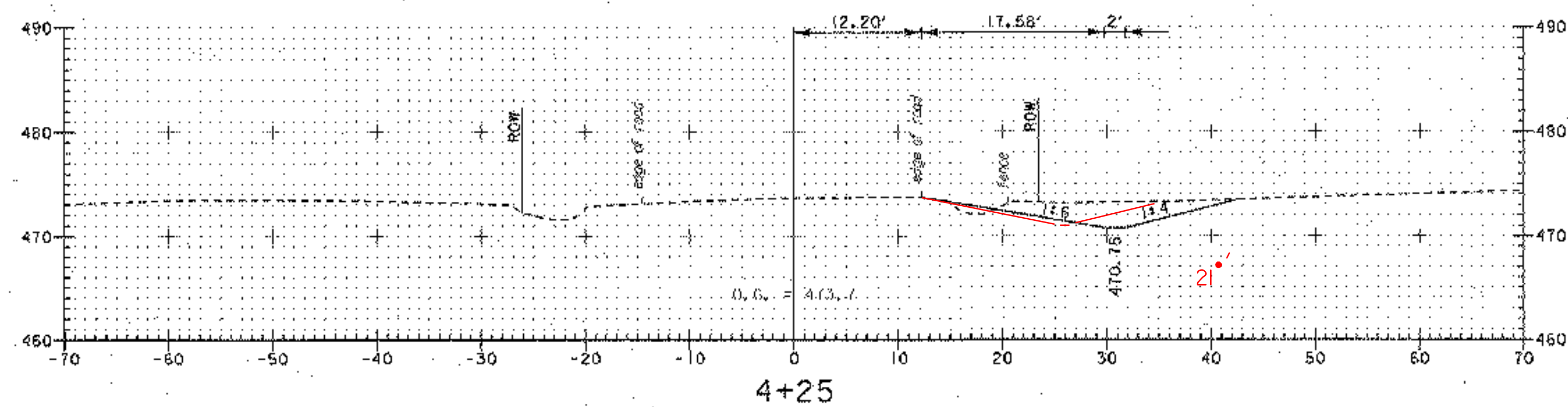
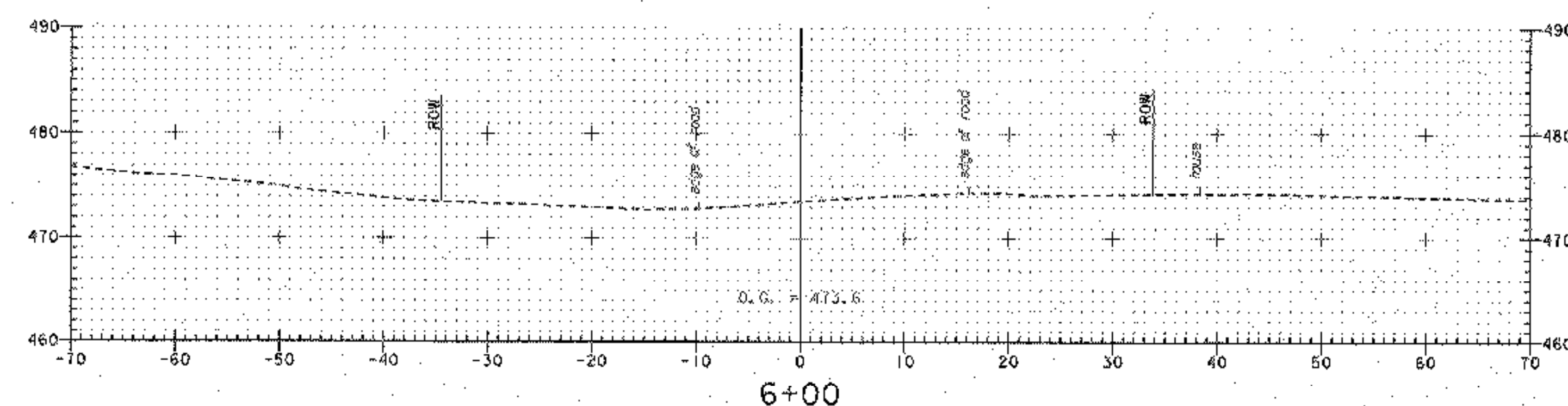
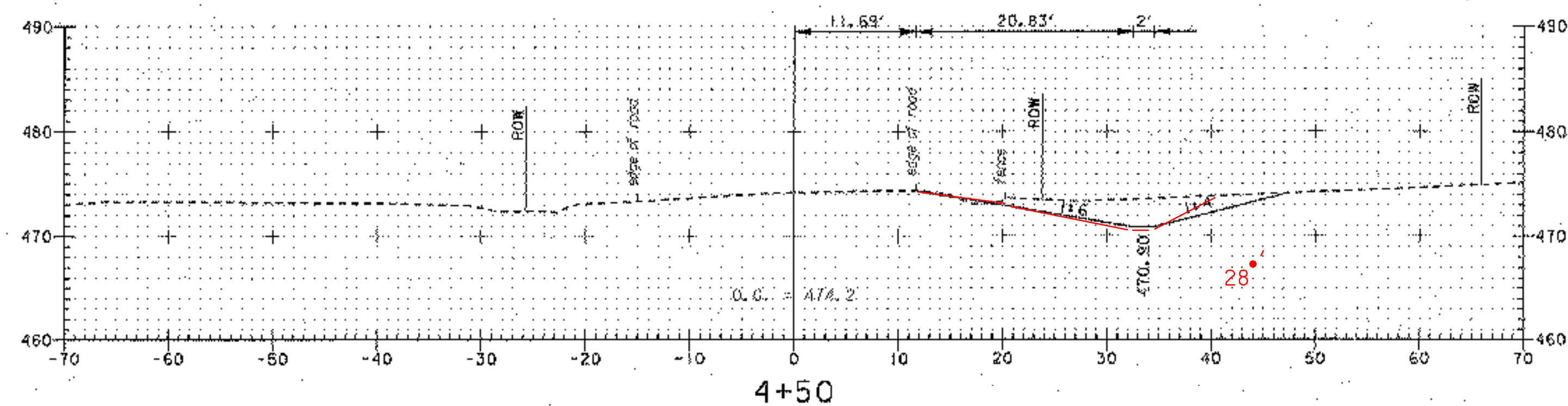
PLOT DATE: 11-OCT-2006

DRAWN BY: MJF

CHECKED BY: DMB

SHEET 25 OF 26

4+62 - SAME COMMON AS 4+50
(END OF CULVERT)



3+75 ZERO COMMON EXC. - DITCH

DATUM
VERTICAL: NAVD 88
HORIZONTAL: NAD83

0 10 20
SCALE IN FEET

PROJECT NAME: FRANKLIN
PROJECT NUMBER: HES 0313(4)

FILE NAME: XS VT120.DGN
PROJECT LEADER: GAMBLE
DESIGNED BY: BRC
VT 120 CROSS SECTIONS

PLOT DATE: 11-OCT-2006
DRAWN BY: MJF
CHECKED BY: DMB
SHEET 26 OF 26