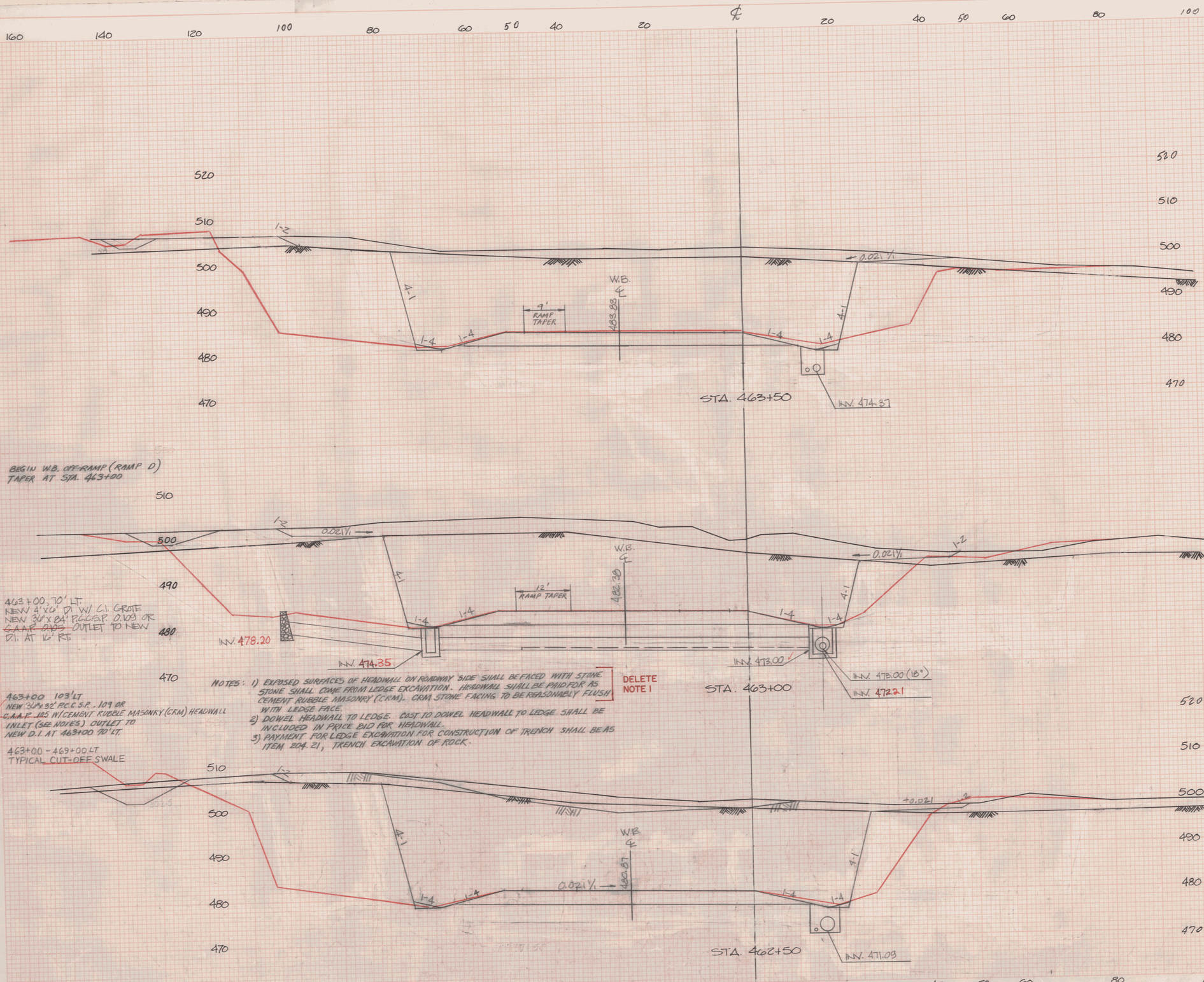
VERMONT ROUTE 289

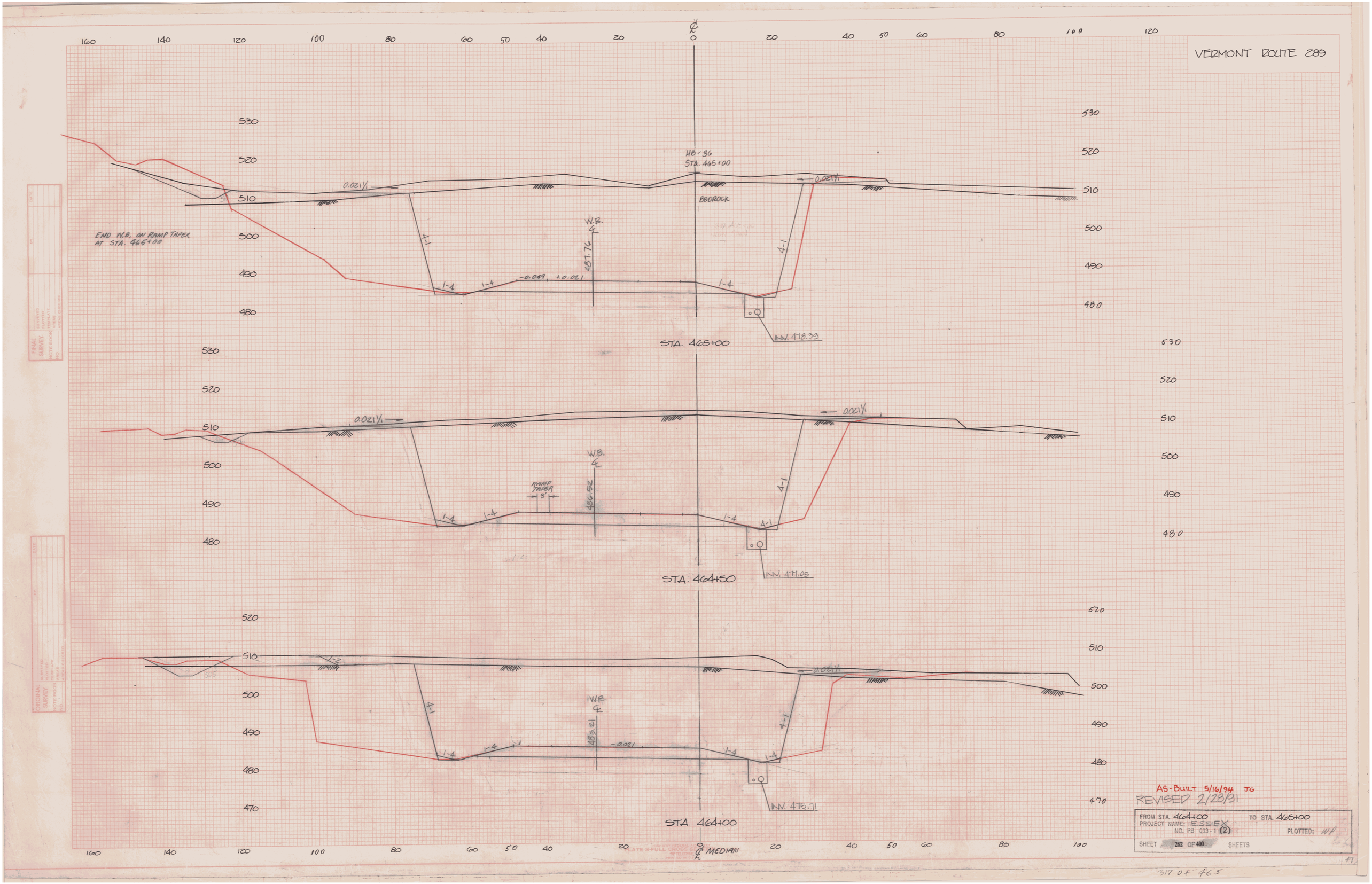


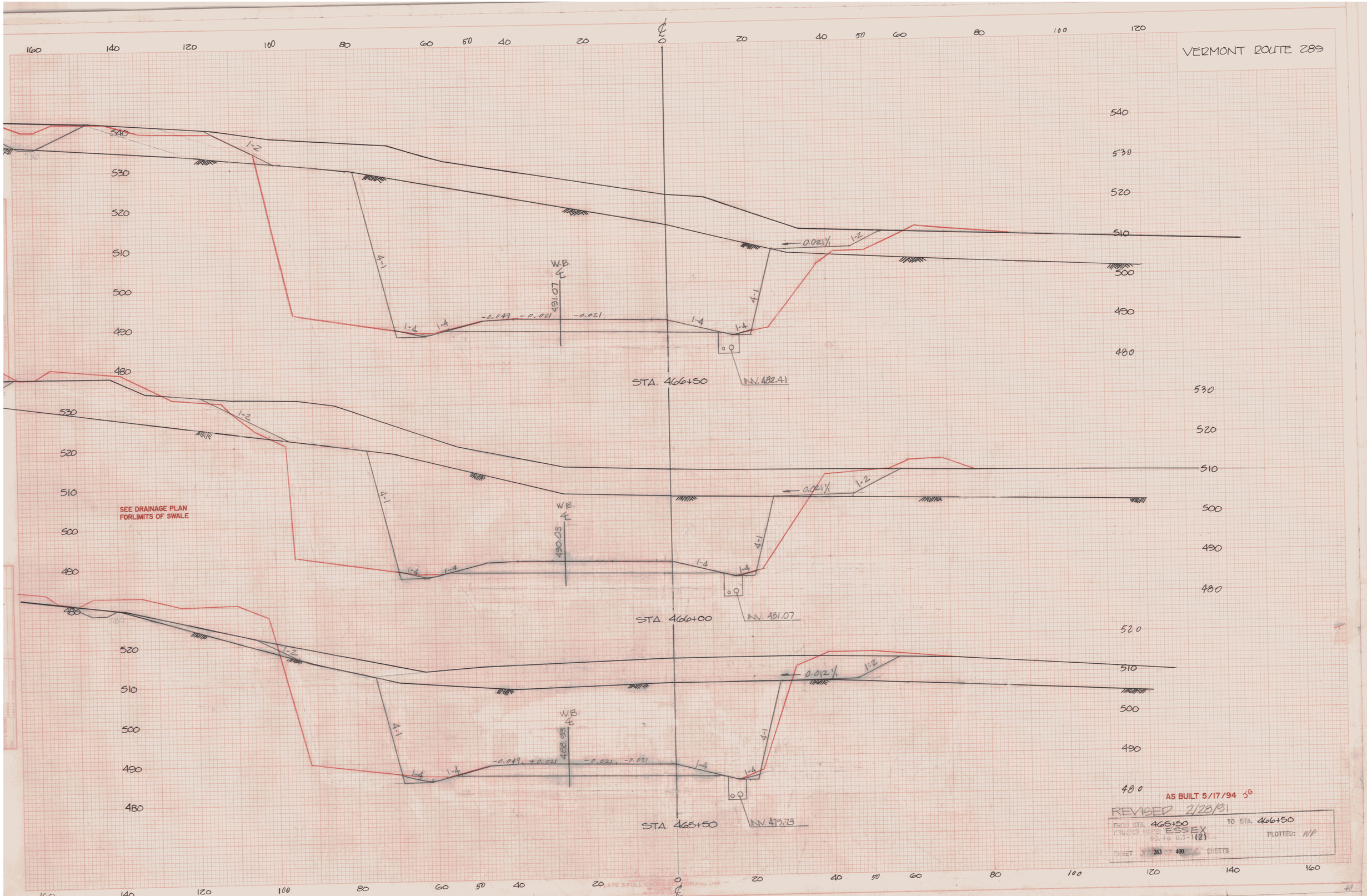
AS BUILT 5/16/94 JG

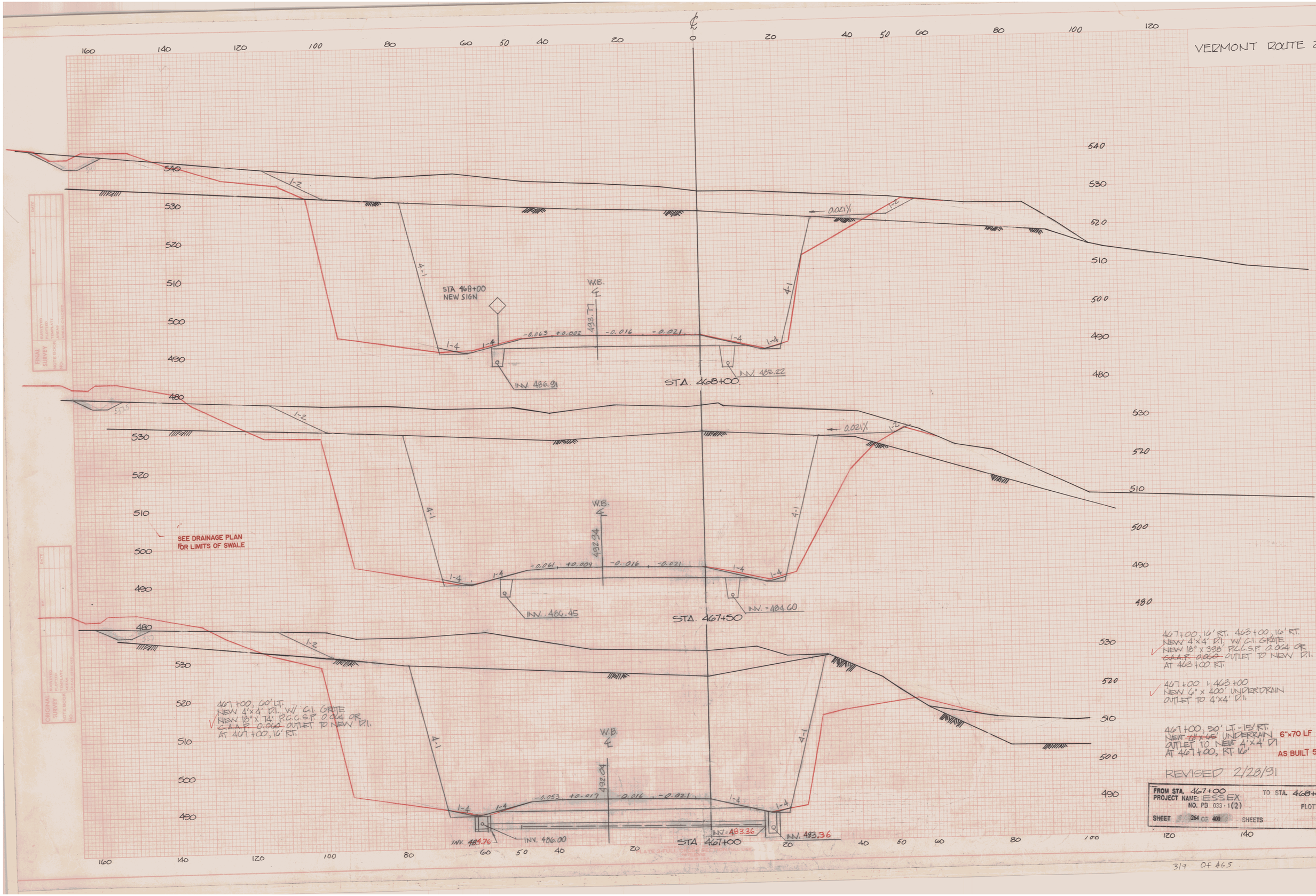
REVISED 2/28/91

FROM STA. 462+50 TO STA. 463+50
PROJECT NAME: ESSEX
NO. FS 033-1(2) PLOTTED: N/P
SHEET 261 OF 400 SHEETS

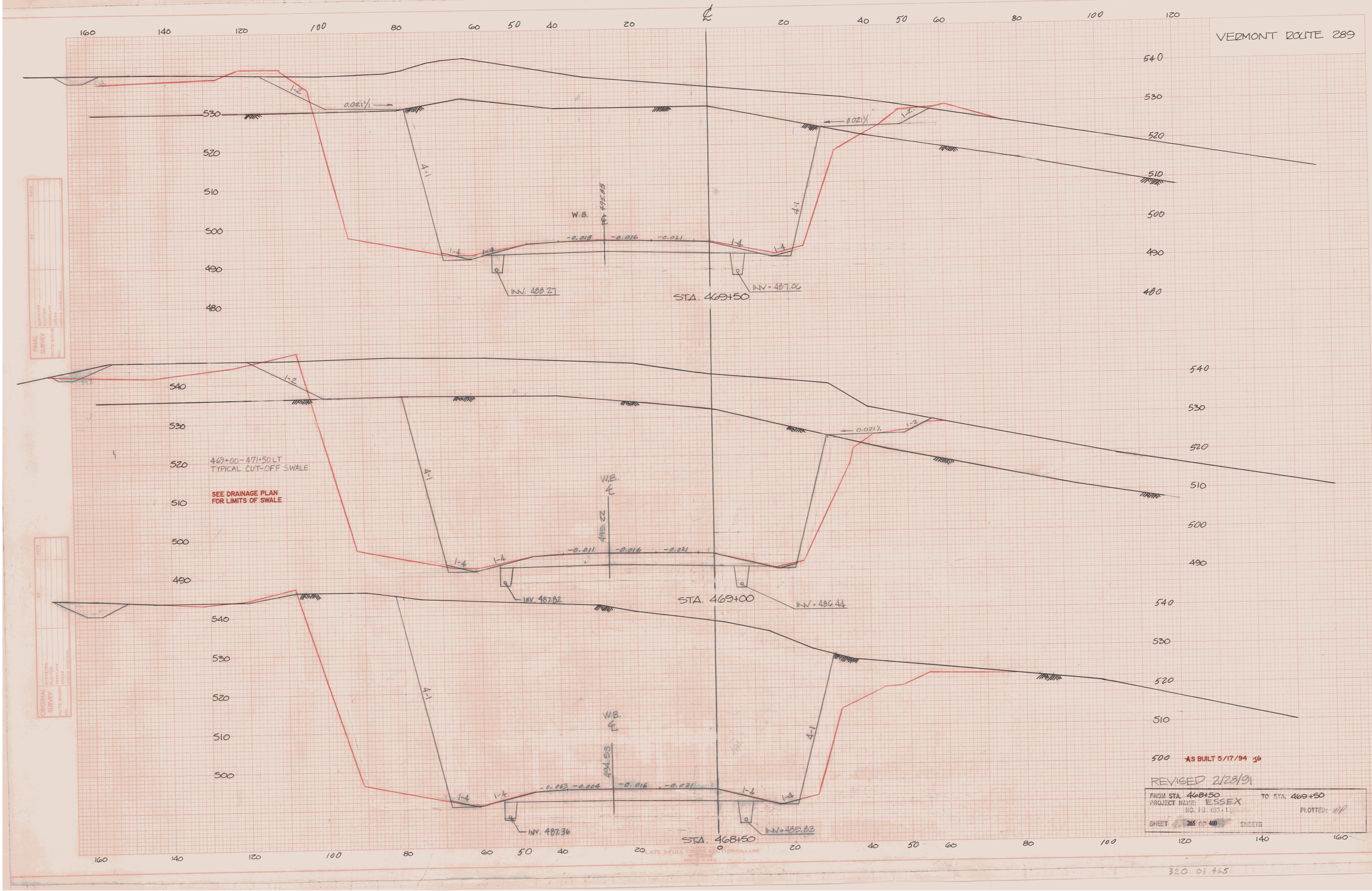
316 OF 463


VERMONT ROUTE 289
END W.B. ON RAMP TAPER AT STA. 465+00
HB-36 STA. 465+00
BEDROCK
0.021 1/1
W.B. ℄
487.76
-0.049
+0.021
1-4
4-1
INV. 478.39
STA. 465+00
RAMP TAPER 3'
486.52
INV. 477.05
STA. 464+50
485.21
-0.021
INV. 475.71
STA. 464+00
℄ MEDIAN
AS-BUILT 5/16/94 JG
REVISED 2/28/91
FROM STA. 464+00 TO STA. 465+00
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED: WP
SHEET 262 OF 400 SHEETS
317 of 465


VERMONT ROUTE 289
STA. 466+50
INV. 482.41
STA. 466+00
INV. 481.07
STA. 465+50
INV. 479.73
W.B. ℄
491.07
490.03
488.93
-0.049
-0.021
0.021 1/1
0.012 1/1
1-2
1-4
4-1
SEE DRAINAGE PLAN
FORLIMITS OF SWALE
AS BUILT 5/17/94
REVISED 2/28/91
FROM STA. 465+50
TO STA. 466+50
PROJECT NAME: ESSEX
PLOTTED: WP
SHEET 263 OF 400 SHEETS
318 of 465


VERMONT ROUTE 289
STA 468+00
NEW SIGN
W.B.
493.77
-0.063 +0.002 -0.016 -0.021
INV. 486.91
INV. 485.22
STA. 468+00
0.021%
SEE DRAINAGE PLAN
FOR LIMITS OF SWALE
492.94
-0.061 +0.009 -0.016 -0.021
INV. 486.45
INV. = 484.60
STA. 467+50
467+00, 60' LT.
NEW 4'x4' D.I. W/ C.I. GRATE
NEW 18" x 74' P.C.C.S.P. 0.064 OR
~~C.A.A.P. 0.060~~ OUTLET TO NEW D.I.
AT 467+00, 16' RT.
492.04
-0.053 +0.017 -0.016 -0.021
INV. 484.76
INV. 486.00
INV. 483.36
INV. 483.36
STA. 467+00
467+00, 16' RT. 463+00, 16' RT.
NEW 4'x4' D.I. W/ C.I. GRATE
NEW 18" x 398' P.C.C.S.P. 0.064 OR
~~C.A.A.P. 0.060~~ OUTLET TO NEW D.I.
AT 463+00 RT.
467+00 + 463+00
NEW 6" x 400' UNDERDRAIN
OUTLET TO 4'x4' D.I.
467+00, 50' LT. - 15' RT.
NEW ~~6"x65'~~ UNDERRAIN 6"x70 LF
OUTLET TO NEW 4'x4' D.I.
AT 467+00, RT. 16'
AS BUILT 5/17/94
REVISED 2/28/91
FROM STA. 467+00 TO STA. 468+00
PROJECT NAME: ESSEX
NO. PB 033-1(2)
PLOTTED: WD
SHEET 264 OF 400 SHEETS
FINAL SURVEY
ORIGINAL SURVEY
PLATE 3 FULL CROSS SECTION FULL LINE
3/9 Of 465

VERMONT ROUTE 289



FINAL SURVEY — SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED / NOTE BOOK / NO. / DATE / BY

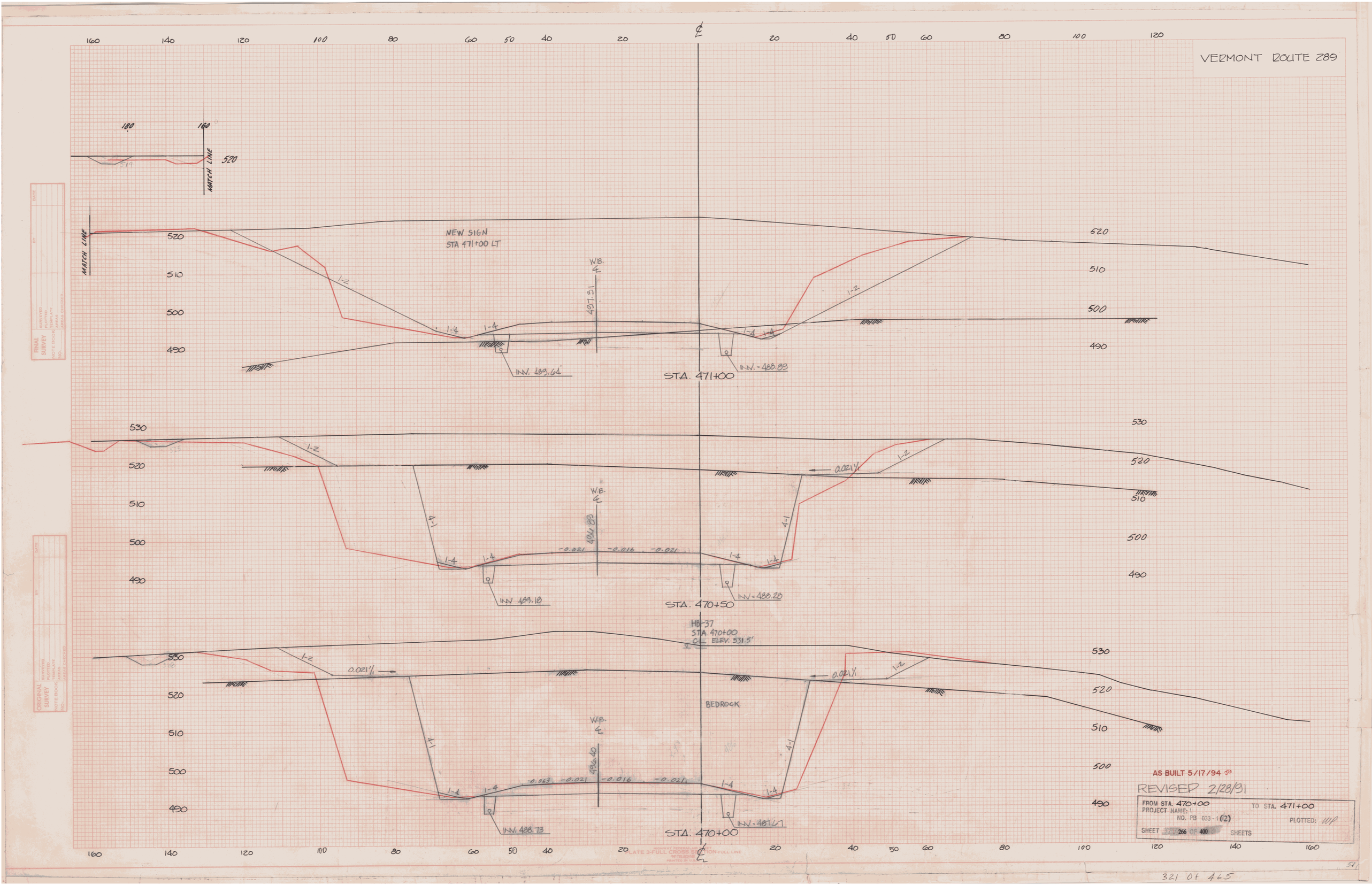
ORIGINAL SURVEY — SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED / NOTE BOOK / NO. / DATE / BY

AS BUILT 5/17/94 JG

REVISED 2/28/91

FROM STA. 468+50 TO STA. 469+50
PROJECT NAME: ESSEX
NO. FB 033+1 PLOTTED: WP
SHEET 265 OF 400 SHEETS

PLATE 3-FULL CROSS SECTION-FULL LINE


VERMONT ROUTE 289
MATCH LINE
NEW SIGN
STA 471+00 LT
W.B. ℄
497.31
INV. 489.64
INV. = 488.89
STA. 471+00
496.89
INV 489.18
INV = 488.28
STA. 470+50
HB-37
STA 470+00
CL ELEV. 531.5'
BEDROCK
496.40
INV. 488.73
INV = 487.67
STA. 470+00
0.021'/'
-0.021
-0.016
-0.063
1-2
1-4
4-1
AS BUILT 5/17/94
REVISED 2/28/91
FROM STA. 470+00
TO STA. 471+00
PROJECT NAME:
NO. PB 033-1(2)
PLOTTED: WP
SHEET 266 OF 400 SHEETS

321 of 465

VERMONT ROUTE 289

160 140 120 100 80 60 50 40 20 ℄ 20 40 50 60 80 100 120

520 510 500 490

473+00 – 484+00 LT
SPECIAL DITCH
W/EROSION MATTING & SEEDING

473+00 – 484+00 LT
TYPICAL CUT-OFF SWALE

SEE DRAINAGE PLANS
FOR LIMITS OF SWALE

473+00 – 471+50 LT
NEW 6"x150' UNDERDRAIN
OUTLET TO 4'x4' D.I

W.B. ℄ 498.75

1-2 4-1 1-4 1-4 -0.021 -0.016 -0.021 1-4 1-4 1-2

INV. 490.40

STA. 473+00

INV. 488.19

473+00 – 480+00 RT
SPECIAL DITCH
W/EROSION MATTING & SEEDING

473+00 – 471+50 RT
NEW 6"x150' UNDERDRAIN
OUTLET TO 4'x4' D.I.

W.B. ℄ 498.39

1-2 1-4 1-4 -0.021 -0.016 -0.021 1-4 1-4 1-2

INV. 491.00 BACK

STA. 472+50

INV. 488.71

W.B. ℄ 498.04

1-2 1-4 1-4 -0.021 -0.016 -0.021 1-4 1-4 1-2

INV. 490.54

STA. 472+00

INV. 488.23

471+50 60' LT.
NEW 4'x6' D.I. W/ C.I. GRATE
NEW 6" x 74' P.C.L.S.P. 0.109
~~C.A.A.P. 0.105~~ OUTLET TO NEW D.I. AT 16' RT.

471+50 ~~71' LT.~~ 91' LT
32' NEW 30" x ~~39'~~ P.C.L.S.P. 0.109 ~~OR C.A.A.P. 0.105~~ W/ CEMENT RUBBLE
MASONRY HEADWALL INLET (SEE NOTES/ SAME AS NOTES STA. 463+00)
OUTLET TO NEW D.I. 471+50 60' LT. NATIVE STONE FACING DELETED

471+50, 16' RT.
NEW 4'x6' D.I. W/ C.I. GRATE
38' NEW 42" x ~~42'~~ P.C.L.S.P. 0.109 OR
~~C.A.A.P. 0.105~~ OUTLET TO NEW D.I.
60' RT.

471+50, 60' RT.
NEW 4'x6' D.I. W/ C.I. GRATE
NEW 42" x 275' P.C.L.S.P. 0.109 OR
~~C.A.A.P. 0.105~~ OUTLET TO NEW
42" C.S.P.E.S. 0.109 OR ~~C.A.A.P.E.S.~~
~~0.105~~ W/ STONE FILL TYPE II
OUTLET PAD (6' X 14' X 2')
STA. 478+45, 264 RT.

STA 471+50 – 60'LT
NEW 36"x73' P.C.C.S.P.
NEW 4'x6' D.I. AT 16'RT

4'x6' D.I.
36 & 42"
INV 486.09

471+50 – 467+00 LT
NEW 6"x450' UNDERDRAIN
OUTLET TO 4'x6' DI

471+50 – 473+00 LT
TYPICAL CUT-OFF SWALE

W.B. ℄ 497.68

1-2 1-4 1-4 -0.063 -0.021 -0.016 -0.021 1-4 1-4 -0.021 1-3 1-4

INV 486.36.

INV. 486.86 (N)
INV. 486.50 (S)

INV. 490.03 (BACK)
INV. 489.20 (AHEAD)

STA. 471+50

INV. 489.50 (BACK)

INV. 487.78 (E)
INV. 485.78 (N & S)

INV. 485.50 (N & S)

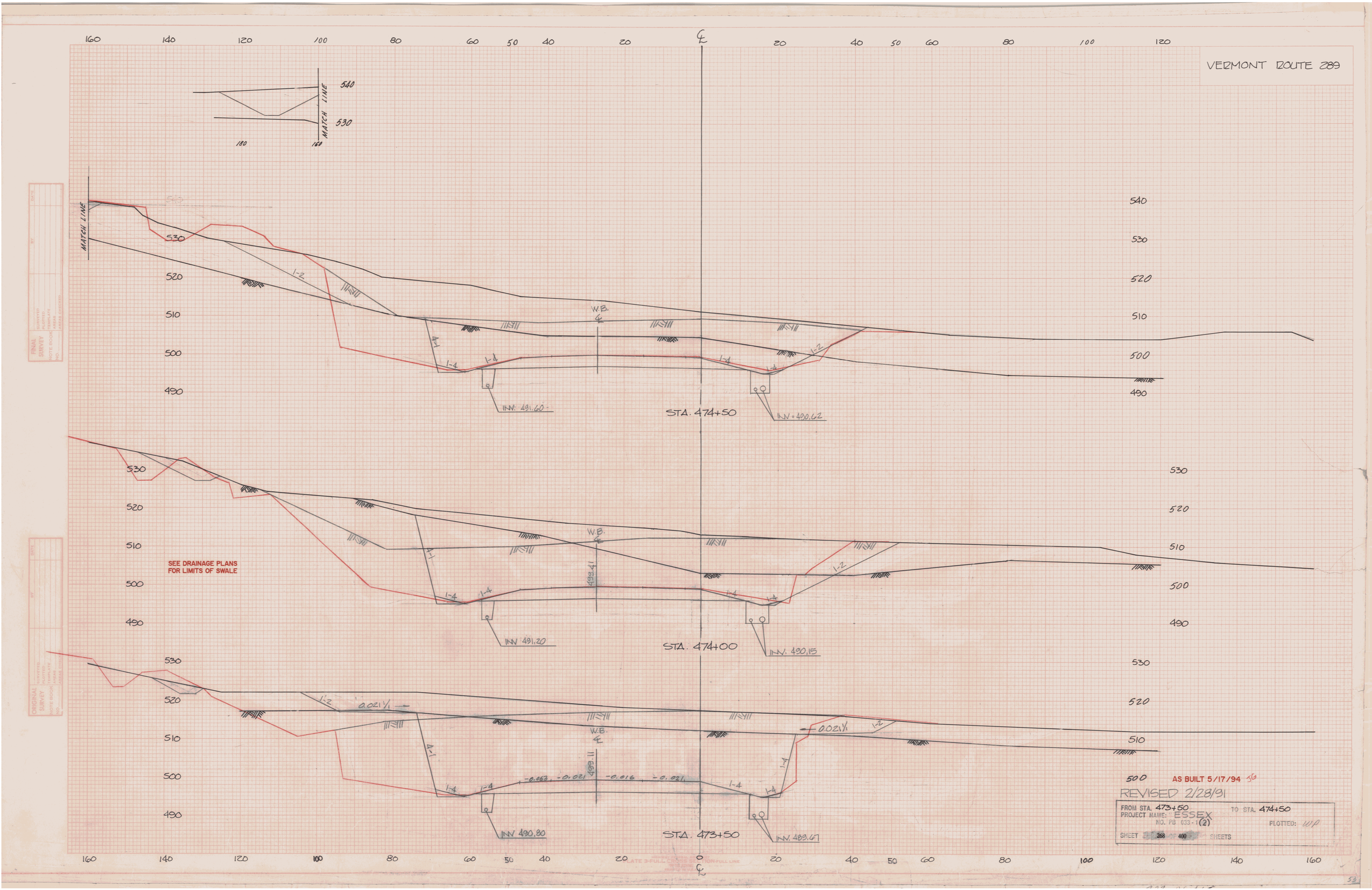
471+50 – 467+00 RT.
62' NEW 6" x ~~450'~~ UNDERDRAIN
OUTLET TO 4'x4' D.I.

160 150 140 120 100 80 60 50 40 20 ℄ 20 40 50 60 80 100

REVISED 2/28/91 AS BUILT 5/17/94 JG

FROM STA. 471+50 TO STA. 473+00
PROJECT NAME: ESSEX
NO. PB 033-1 (2) PLOTTED: WP
SHEET 267 OF 400 SHEETS 150

322 of 465


VERMONT ROUTE 289
MATCH LINE
540
530
180
160
W.B.
1-2
1-4
4-1
INV. 491.60
INV. 490.62
STA. 474+50
499.41
INV 491.20
INV. 490.15
STA. 474+00
0.021 1/1
499.11
-0.063
-0.021
-0.016
-0.021
INV 490.80
INV. 489.67
STA. 473+50
SEE DRAINAGE PLANS
FOR LIMITS OF SWALE
AS BUILT 5/17/94 JG
REVISED 2/28/91
FROM STA. 473+50
TO STA. 474+50
PROJECT NAME: ESSEX
NO. PB 033-1(2)
PLOTTED: WP
SHEET 268 OF 400 SHEETS
FINAL SURVEY
ORIGINAL SURVEY

VERMONT ROUTE 289

160 140 120 100 80 60 50 40 20 ℄ 20 40 50 60 80 100 120

560 550 540 530 520 510 500 490

1-4 1-4 4-1 W.B. ℄ 500.30 INV. 493.80 STA. 476+00 INV. 492.06

SEE DRAINAGE PLANS FOR LIMITS OF SWALE

1-4 1-4 4-1 W.B. ℄ 500.55 INV. 492.20 STA 475+50 INV. 491.58

1-2 HB-38 STA. 476+00 W.B. ℄ 500.10 SILT & A 1-4 -0.063 -0.021 -0.016 -0.021 BEDROCK 1-4 1-4 1-2 INV. 492.00 STA 475+00 ℄ 491.10

AS BUILT 5/17/94

REVISED 2/28/01

FROM STA. 475+00 TO STA. 476+00

PROJECT NAME: ESSEX

NO. F 033-1(2) PLOTTED: WP

SHEET 269 OF 400 SHEETS

FINAL SURVEY SURVEYED DRAWN TRACED NOTE BOOK AREAS AREAS CHECKED NO DATE

ORIGINAL SURVEY SURVEYED DRAWN TRACED NOTE BOOK AREAS AREAS CHECKED NO DATE

VERMONT ROUTE 289



FINAL SURVEY — SURVEYED, PLOTTED, TRACED, TEMPLATE, NOTE BOOK, AREAS, AREAS CHECKED, NO., DATE, BY

ORIGINAL SURVEY — SURVEYED, PLOTTED, TRACED, TEMPLATE, NOTE BOOK, AREAS, AREAS CHECKED, NO., DATE, BY

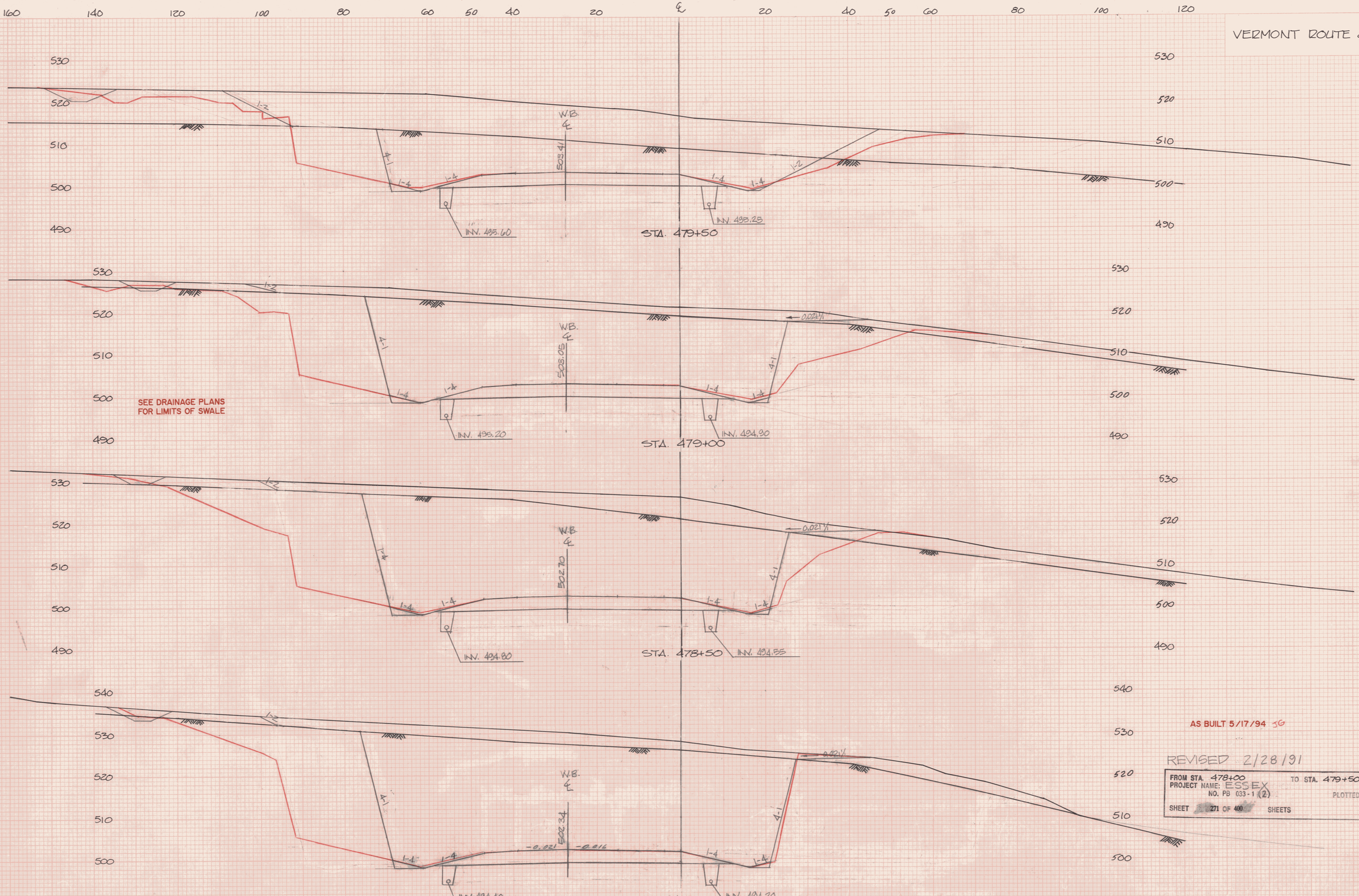
AS BUILT 5/17/94 JG

REVISED 2/28/91

FROM STA. 476+50 TO STA. 477+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2) PLOTTED: WP
SHEET 270 OF 400 SHEETS

PLATE S-FULL CROSS SECTION-FULL LINE
PRINTED IN U.S.A.

VERMONT ROUTE 289

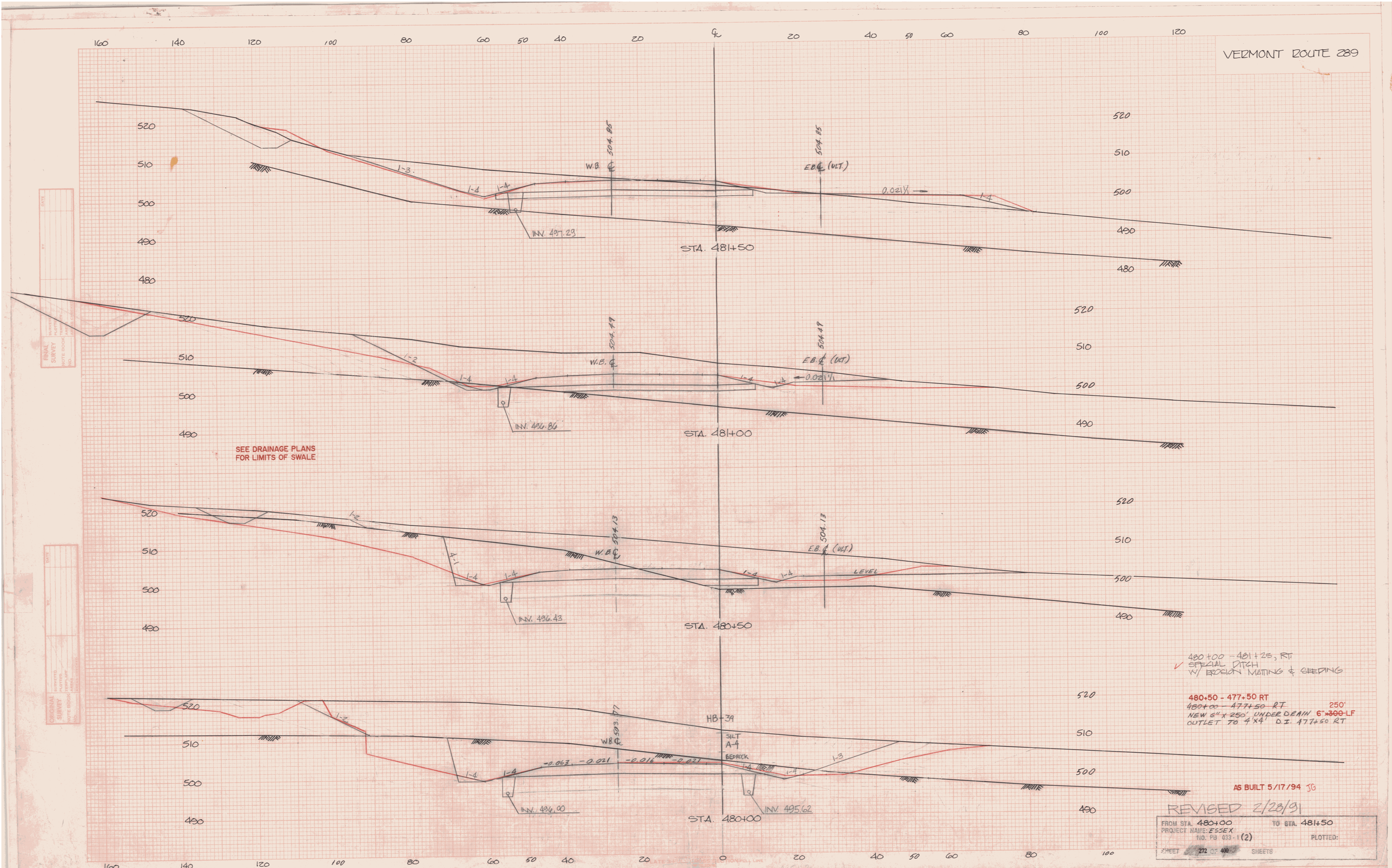


SEE DRAINAGE PLANS FOR LIMITS OF SWALE

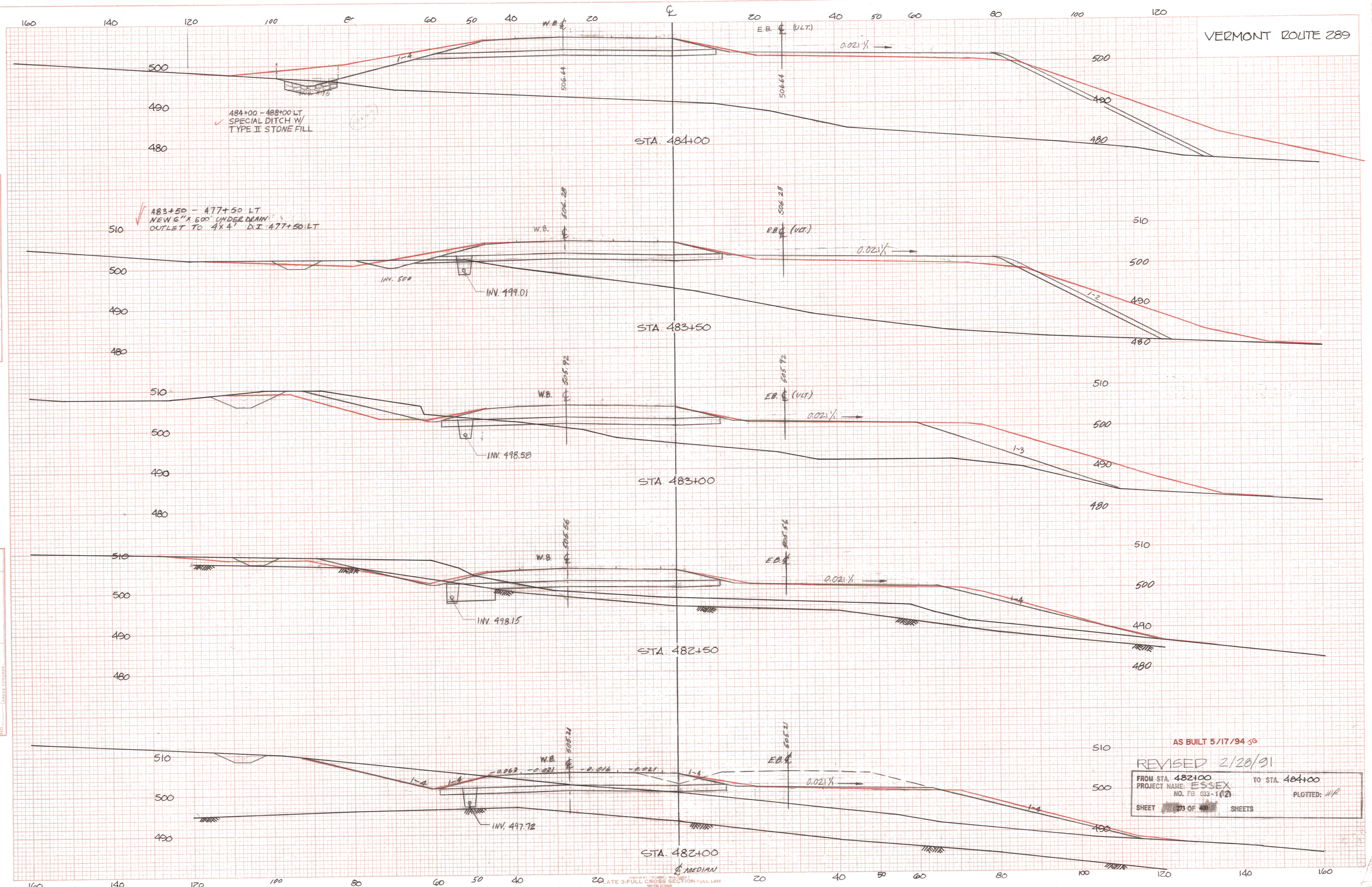
AS BUILT 5/17/94 JG

REVISED 2/28/91

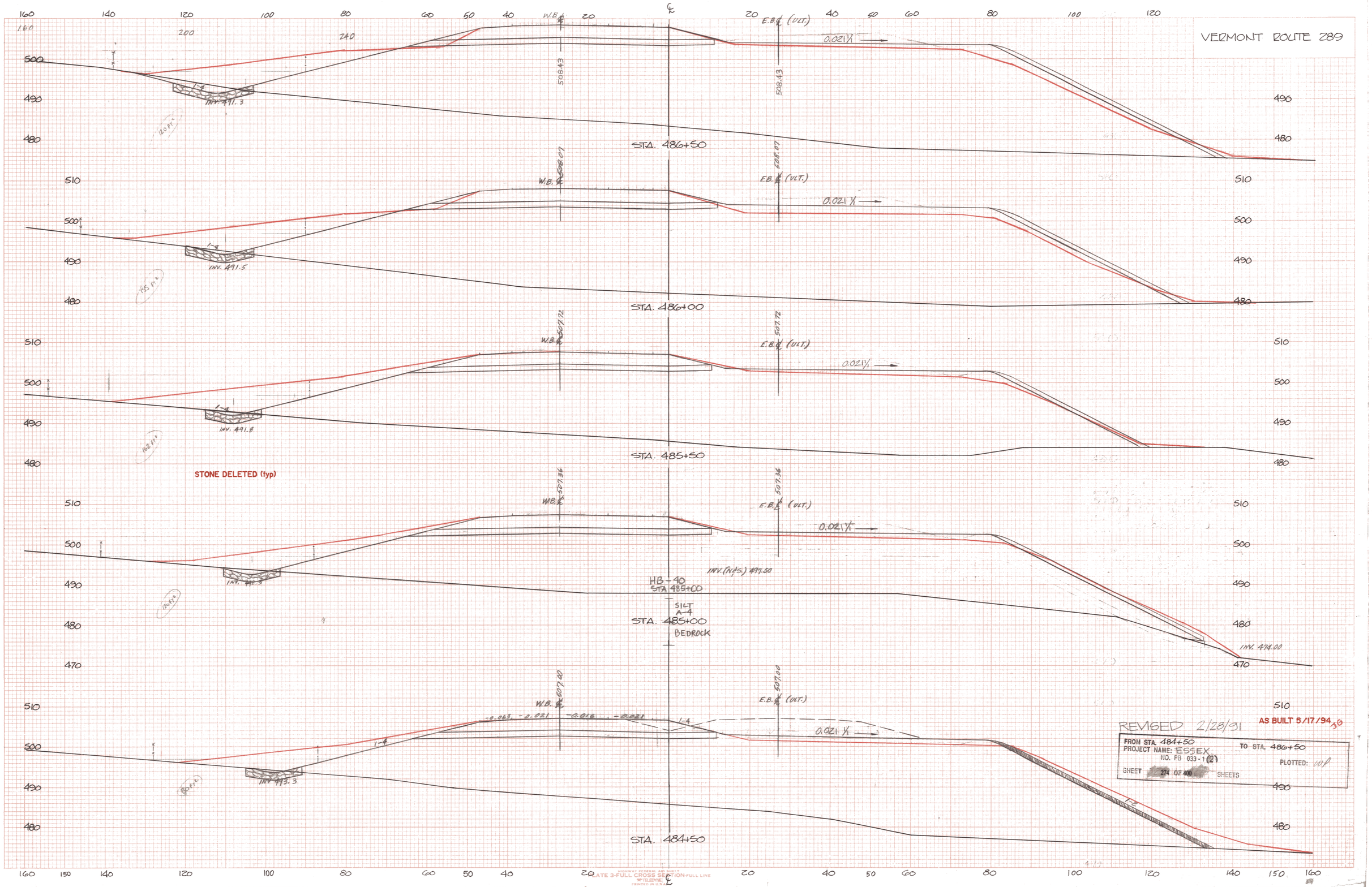
FROM STA. 478+00 TO STA. 479+50
PROJECT NAME: ESSEX
NO. PB 033-1(2) PLOTTED: WP
SHEET 271 OF 400 SHEETS

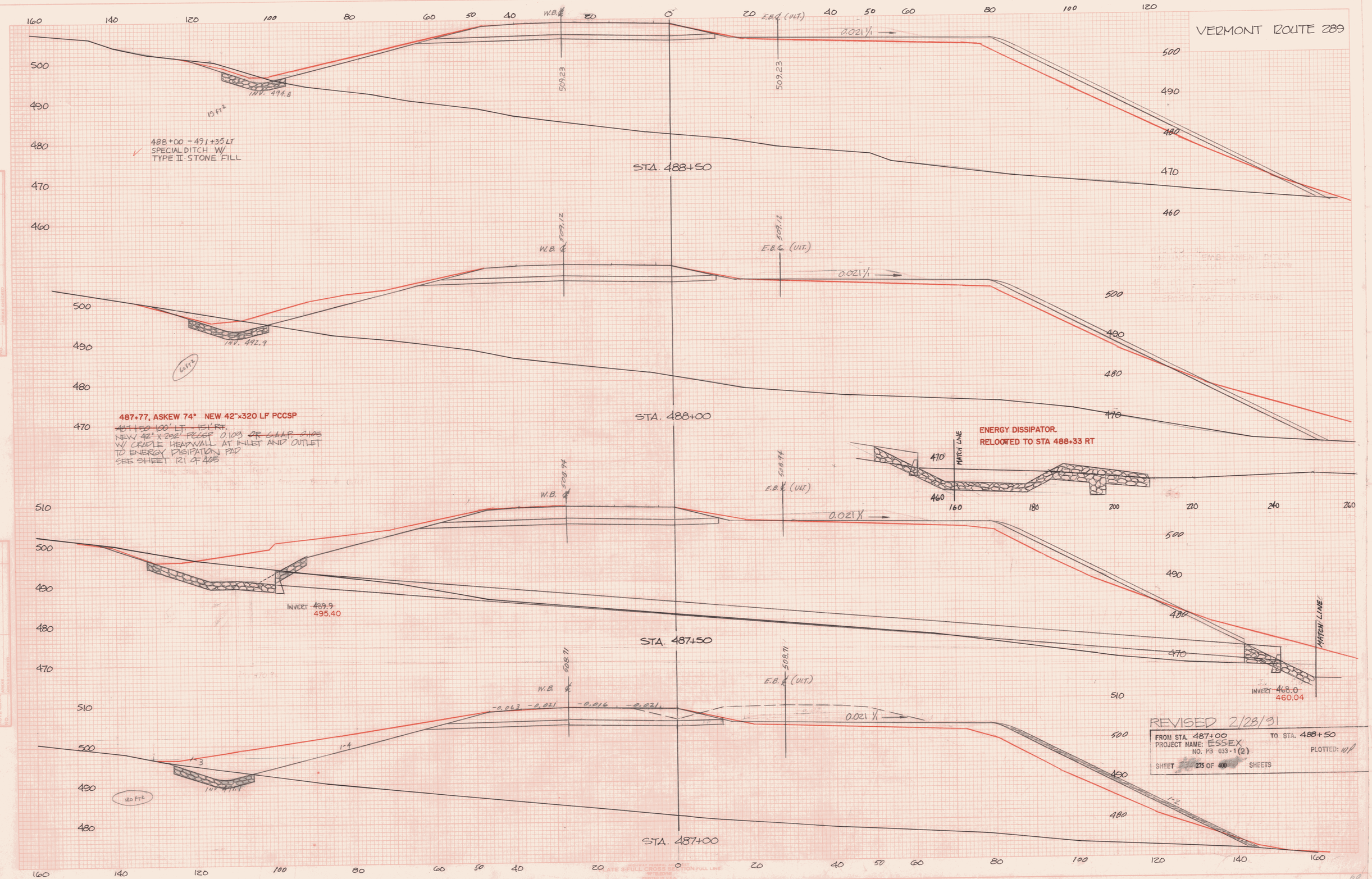

VERMONT ROUTE 289
W.B. ℄
504.85
E.B. ℄ (ULT.)
0.021 1/1
1-3
1-4
INV. 497.29
STA. 481+50
W.B. ℄
504.49
E.B. ℄ (ULT.)
0.021 1/1
1-2
INV. 496.86
STA. 481+00
SEE DRAINAGE PLANS
FOR LIMITS OF SWALE
W.B. ℄
504.13
E.B. ℄ (ULT.)
LEVEL
INV. 496.43
STA. 480+50
W.B. ℄
503.77
HB-39
SILT
A-4
BEDROCK
-0.063
-0.021
-0.016
-0.021
INV. 496.00
INV. 495.62
STA. 480+00
480+00 - 481+25, RT
SPECIAL DITCH
W/ EROSION MATTING & SEEDING
480+50 - 477+50 RT
~~480+00 - 477+50 RT~~
NEW 6" x ~~250'~~ UNDERDRAIN 6" x ~~300~~ 250' LF
OUTLET TO 4'x4' D.I. 477+50 RT
AS BUILT 5/17/94 JG
REVISED 2/28/91
FROM STA. 480+00
TO STA. 481+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED:
SHEET 272 OF 400 SHEETS
FINAL SURVEY
ORIGINAL SURVEY

327 of 465


VERMONT ROUTE 289
484+00 - 488+00 LT
SPECIAL DITCH W/
TYPE II STONE FILL
STA. 484+00
483+50 - 477+50 LT
NEW 6" x 600' UNDER DRAIN
OUTLET TO 4'x4' D.I. 477+50 LT
INV. 500
INV. 499.01
STA. 483+50
INV. 498.58
STA. 483+00
INV. 498.15
STA. 482+50
INV. 497.72
STA. 482+00
W.B.
E.B.
(ULT.)
0.021 1/1
506.64
506.28
505.92
505.56
505.21
1-4
1-2
1-3
-0.063
-0.021
-0.016
℄ MEDIAN
AS BUILT 5/17/94
REVISED 2/28/91
FROM STA. 482+00
TO STA. 484+00
PROJECT NAME: ESSEX
NO. PB 033-1(12)
PLOTTED: WP
SHEET 273 OF 400 SHEETS
FINAL SURVEY
ORIGINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.
BY
DATE
PLATE 3-FULL CROSS SECTION FULL LINE
HIGHWAY FEDERAL AID SHEET
PRINTED IN U.S.A.

328 of 465

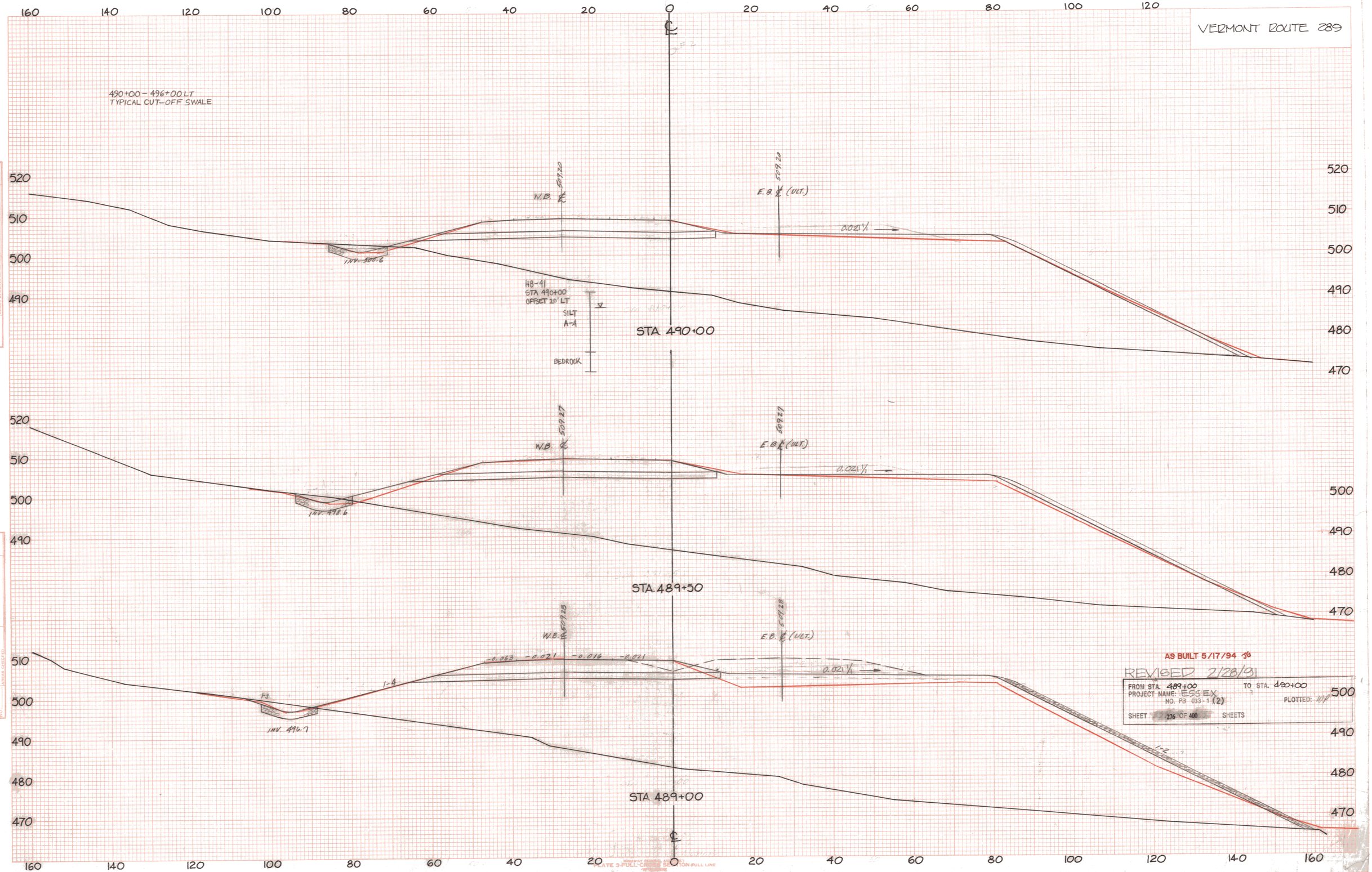

VERMONT ROUTE 289
STA. 486+50
STA. 486+00
STA. 485+50
STA. 485+00
STA. 484+50
W.B. ℄
E.B. ℄ (ULT.)
508.43
508.07
507.72
507.36
507.00
0.021 1/1
INV. 491.3
INV. 491.5
INV. 491.8
INV. 493.3
INV. (N&S) 497.50
INV. 474.00
HB-40
STA 485+00
SILT
A-4
BEDROCK
STONE DELETED (typ)
-0.063
-0.021
-0.016
-0.021
1-4
1-2
REVISED 2/28/91
AS BUILT 5/17/94
FROM STA. 484+50
TO STA. 486+50
PROJECT NAME: ESSEX
NO. PB 033-1(2)
PLOTTED: WP
SHEET 274 OF 400 SHEETS
FINAL SURVEY
ORIGINAL SURVEY
HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-FULL LINE
TELEDYNE
PRINTED IN U.S.A.


VERMONT ROUTE 289
W.B. ℄
E.B. ℄ (ULT.)
0.021 1/1
509.23
INV. 494.8
15 FT²
488+00 - 491+35 LT
SPECIAL DITCH W/
TYPE II STONE FILL
STA. 488+50
509.12
INV. 492.9
60 FT²
STA. 488+00
487+77, ASKEW 74° NEW 42"x320 LF PCCSP
~~487+50 100' LT. - 151' RT.~~
NEW ~~42" x 252' PCCSP~~ 0.109 ~~OR C.A.A.P. 0.105~~
W/ CRADLE HEADWALL AT INLET AND OUTLET
TO ENERGY DISIPATION PAD
SEE SHEET 121 OF 465
ENERGY DISSIPATOR.
RELOCATED TO STA 488+33 RT
MATCH LINE
508.94
INVERT ~~489.9~~
495.40
STA. 487+50
508.71
-0.063
-0.021
-0.016
-0.021
1-3
1-4
1-2
INV. 471.1
120 FT²
INVERT ~~468.0~~
460.04
STA. 487+00
REVISED 2/28/91
FROM STA. 487+00 TO STA. 488+50
PROJECT NAME: ESSEX
NO. PB 033-1(2)
PLOTTED: WP
SHEET 275 OF 400 SHEETS

330 OF 465

VERMONT ROUTE 289

490+00 – 496+00 LT
TYPICAL CUT–OFF SWALE



AS BUILT 5/17/94 JB
REVISED 2/28/91

FROM STA. 489+00 TO STA. 490+00
PROJECT NAME: ESSEX
NO. P3 033-1 (2) PLOTTED: 4/7
SHEET 276 OF 400 SHEETS

PLATE 3-FULL CROSS SECTION-FULL LINE

-331 of 465

VERMONT ROUTE 289

160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

520 510 500 490 480

491+00 – 499+00 LT.
TYPICAL CUT-OFF SWALE

491+00 – 495+00 LT
NEW 6" x 400' UNDERDRAIN
OUTLET TO 4'x4' D.I.

USE STANDARD DITCH (W.B.)
STA. 491+50 AND AHEAD

INV. 501.00

STA 491+50
NEW SIGN

W.B. ℄ 508.63

E.B. ℄ (ULT.) 508.63

0.021'/'

STA. 491+50

STA 491+00
NEW SIGN

W.B. ℄ 508.88

E.B. ℄ (ULT.) 508.88

0.021'/'

INV 504.0

INV. 501.00

STA. 491+00

W.B. ℄ 509.07

E.B. ℄ (ULT.) 509.07

-0.063 -0.021 -0.016 -0.021

0.021'/'

INV 502.5

STA. 490+50

℄

AS BUILT 5/17/94

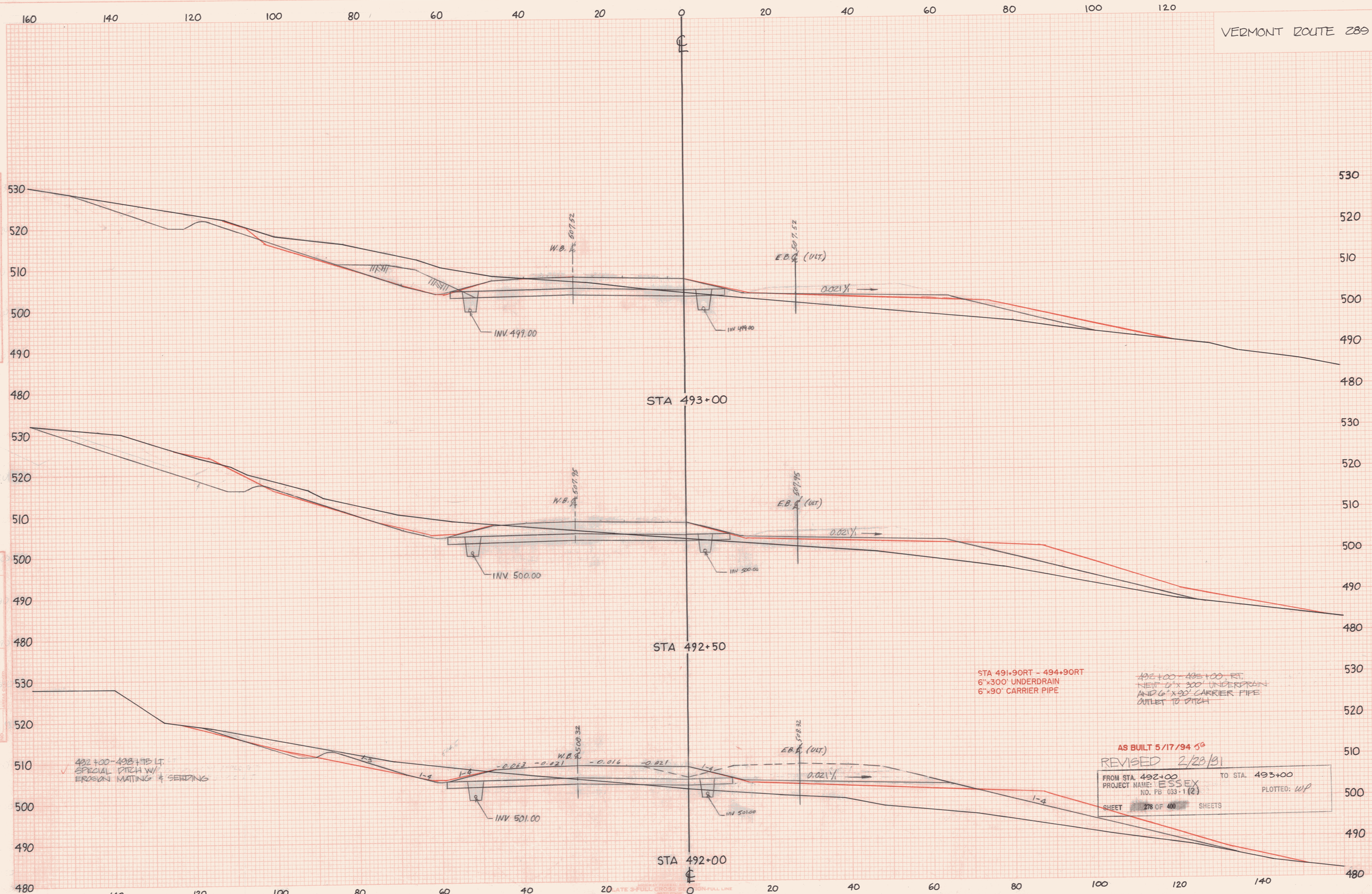
REVISED 2/28/91

FROM STA. 490+50 TO STA. 491+50
PROJECT NAME: ESSEX
NO. PB 033-1(2)
PLOTTED: WP
SHEET 277 OF 400 SHEETS

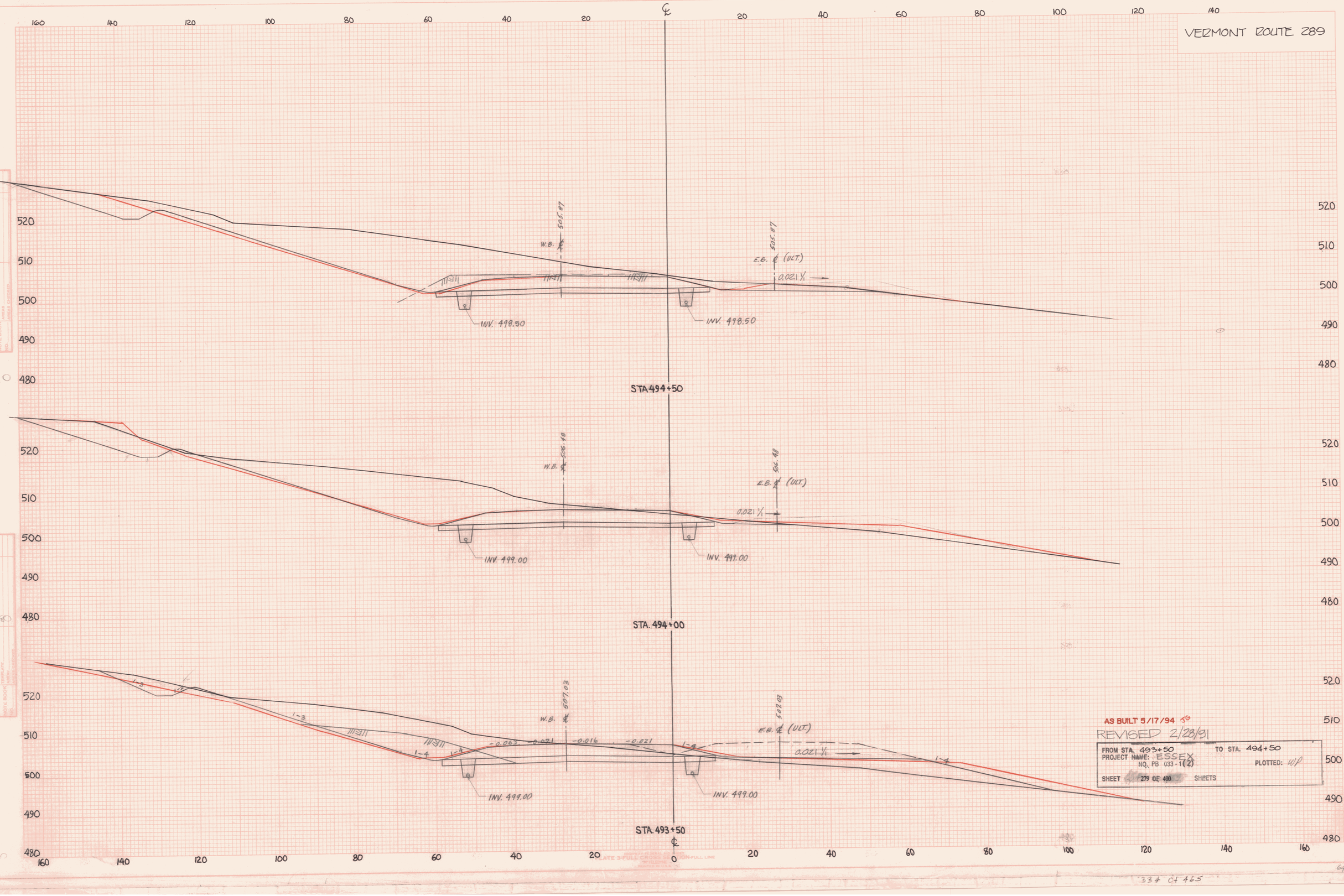
PLATE 3-FULL CROSS SECTION-FULL LINE

62

332 of 465


VERMONT ROUTE 289
STA 493+00
W.B. ℄ 507.52
E.B. ℄ (ULT.) 507.52
0.021 1/1
INV. 499.00
INV 499.00
STA 492+50
W.B. ℄ 507.95
E.B. ℄ (ULT.) 507.95
0.021 1/1
INV. 500.00
INV 500.00
STA 492+00
W.B. ℄ 508.32
E.B. ℄ (ULT.) 508.32
0.021 1/1
-0.063
-0.021
-0.016
-0.021
1-3
1-4
INV. 501.00
INV 501.00
492+00-498+75 LT.
SPECIAL DITCH W/
EROSION MATTING & SEEDING
STA 491+90RT - 494+90RT
6"x300' UNDERDRAIN
6"x90' CARRIER PIPE
~~492+00 - 495+00, RT.~~
~~NEW 6"x 300' UNDERDRAIN~~
~~AND 6"x 90' CARRIER PIPE~~
~~OUTLET TO DITCH~~
AS BUILT 5/17/94 JG
REVISED 2/28/91
FROM STA. 492+00
TO STA. 493+00
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED: WP
SHEET 278 OF 400 SHEETS
FINAL SURVEY
ORIGINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

VERMONT ROUTE 289



AS BUILT 5/17/94 JG

REVISED 2/28/91

FROM STA. 493+50 TO STA. 494+50

PROJECT NAME: ESSEX

NO. PB 033-1(2) PLOTTED: WP

SHEET 279 OF 400 SHEETS

334 OF 465

VERMONT ROUTE 289

160 140 120 100 80 60 40 20 0 ℄ 20 40 60 80 100 120

520 510 500 490

592.82 W.B. ℄ 592.82 E.B. ℄ (ULT.)
8' C.L. TAPER
INV. 495.00 INV. 495.00
STA. 496+50

503.68 W.B. ℄ 503.68 E.B. ℄ (ULT.)
9' C.L. TAPER
INV. 496.00 INV. 496.00
STA. 496+00

STA 495+60
NEW SIGN
494.17 W.B. ℄ 494.17 E.B. ℄ (ULT.)
10' C.L. TAPER
INV. 497.00 INV. 497.00
STA. 495+50

STA 495+00
NEW SIGN
505.20 W.B. ℄ 505.20 E.B. ℄ (ULT.)
11' FULL WIDTH CLIMBING LANE
INV. 498.00 INV. 498.00
BEDROCK
STA. 495+00

495+00, 60' LT.
NEW 4'x4' DI W/ CI. GRATE
NEW 18"X 150' R.C.S.P. 0.064
OR S.A.A.P. 0.060 OUTLET TO DITCH
STONE FILL OUTLET PAD W/ TYPE I STONE (14'x4'x1')
9'x17'x1'
60 LT.
495+00 - 499+50 LT.
460' NEW 6" X 490' UNDERDRAIN
AND 6"x 35' CARRIER PIPE
OUTLET TO SPECIAL DITCH
IN. 497.00 INV 498.00

INV. 496.00
OUTLET UNDERDRAIN TO
STONE FILL OUTLET PAD

499+75
495+25 - 500+00, RT.
SPECIAL DITCH
W/ EROSION MATTING & SEEDING

499+25
495+00 - 500+00, RT.
454' NEW 6"X 500' UNDERDRAIN
AND 6"X 100' CARRIER PIPE
OUTLET TO DITCH

END OF CLIMBING LANE.
BEGIN 550' CLIMBING LANE TAPER
BETWEEN STA 495+00 AND STA 500+50.

AS BUILT 5/17/94 JG

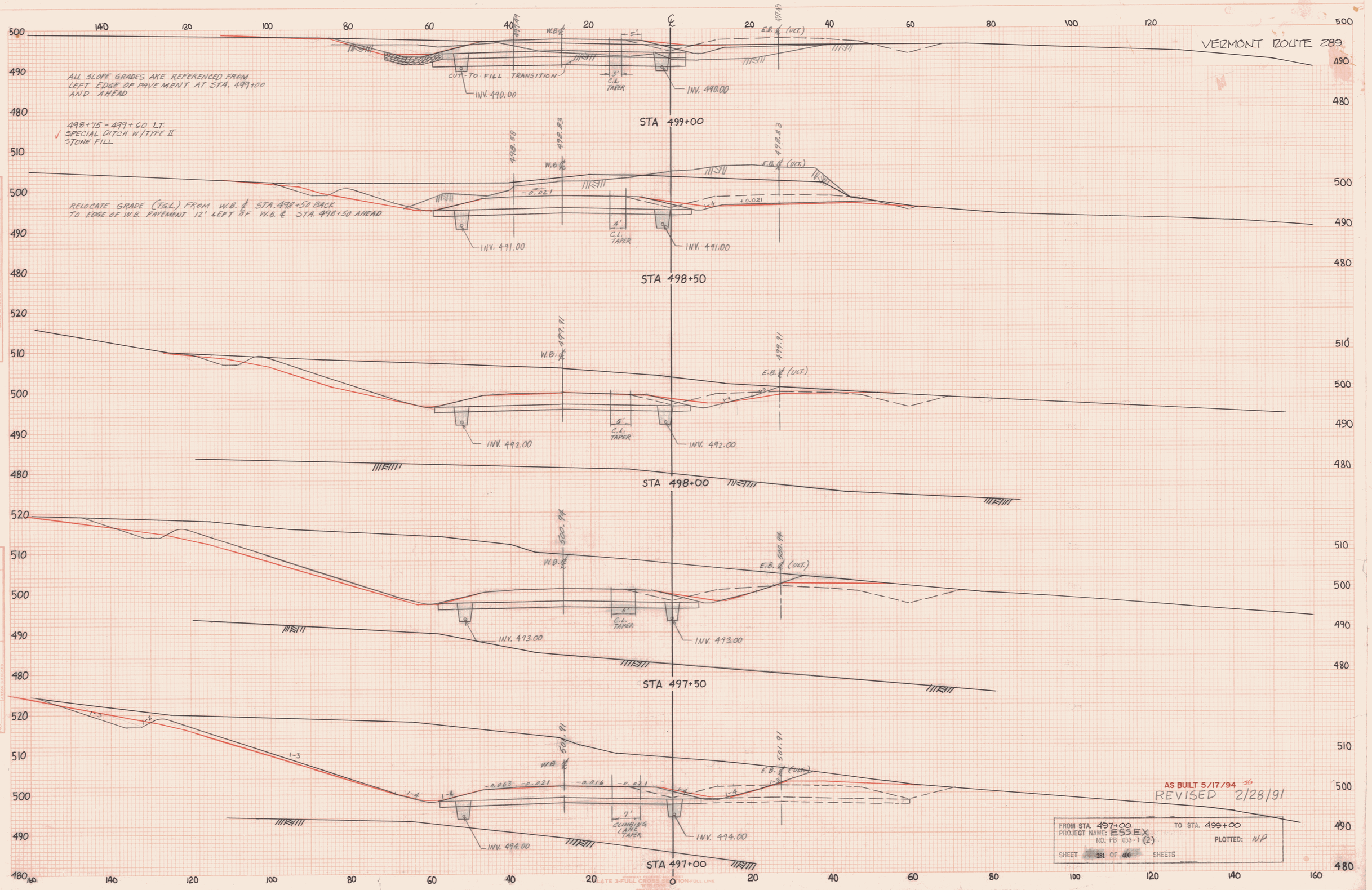
REVISED 2/28/91

FROM STA. 495+00 TO STA. 496+50
PROJECT NAME: ESSEX
NO. FB 033-1(2) PLOTTED: H/P
SHEET 280 OF 400 SHEETS

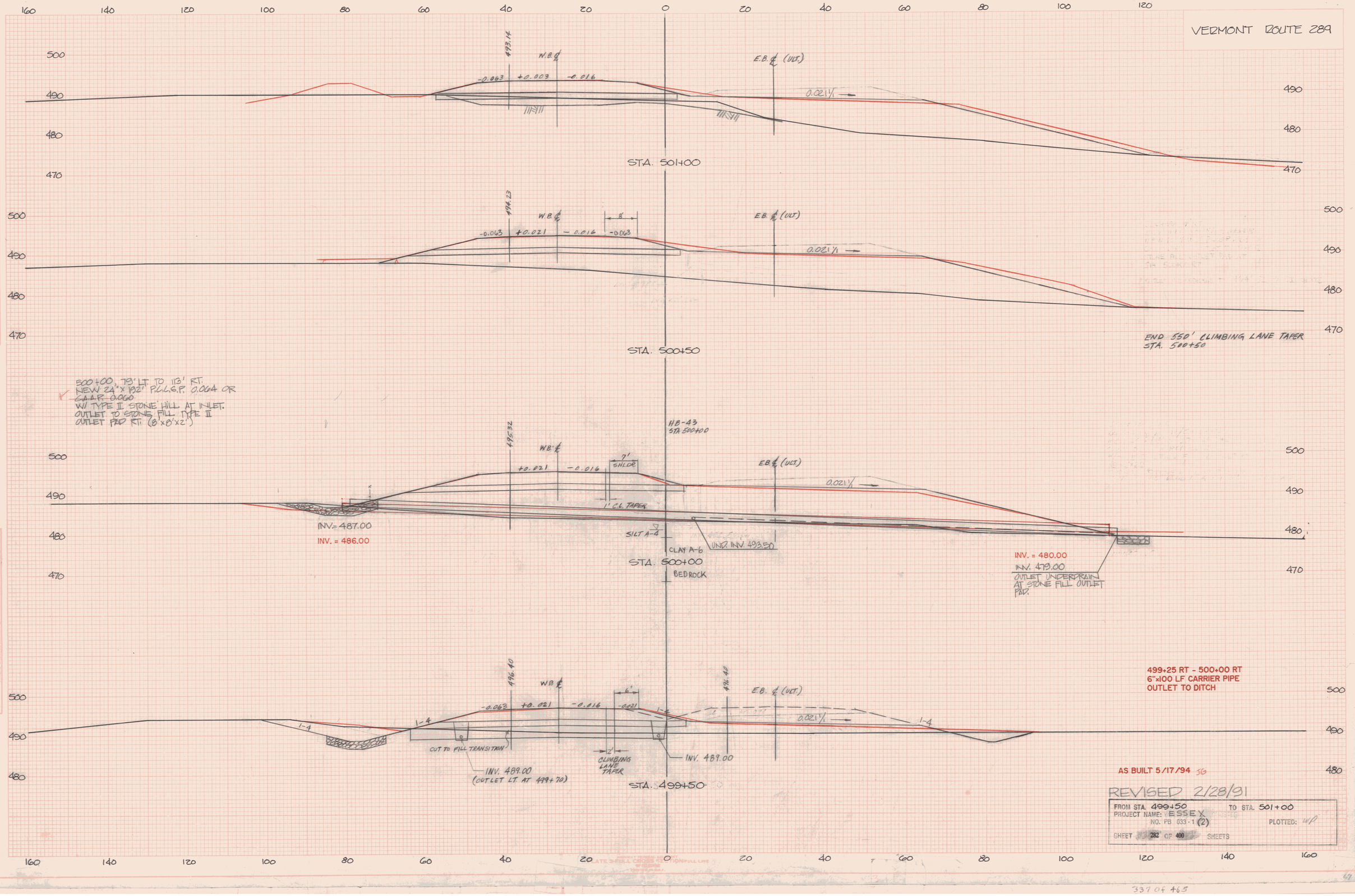
FINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TEMPLATE, AREAS, CROSS CHECKED, NOTE BOOK, NO.

ORIGINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TEMPLATE, AREAS, CROSS CHECKED, NOTE BOOK, NO.

490 490 480 480


VERMONT ROUTE 289
ALL SLOPE GRADES ARE REFERENCED FROM LEFT EDGE OF PAVEMENT AT STA. 499+00 AND AHEAD
498+75 - 499+60 LT. SPECIAL DITCH W/TYPE II STONE FILL
RELOCATE GRADE (T.G.L.) FROM W.B. ℄ STA. 498+50 BACK TO EDGE OF W.B. PAVEMENT 12' LEFT OF W.B. ℄ STA. 498+50 AHEAD
CUT-TO-FILL TRANSITION
INV. 490.00
INV. 491.00
INV. 492.00
INV. 493.00
INV. 494.00
STA 499+00
STA 498+50
STA 498+00
STA 497+50
STA 497+00
W.B. ℄
E.B. ℄ (ULT.)
C.L. TAPER
CLIMBING LANE TAPER
AS BUILT 5/17/94
REVISED 2/28/91
FROM STA. 497+00 TO STA. 499+00
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED: WP
SHEET 281 OF 400 SHEETS

VERMONT ROUTE 289



AS BUILT 5/17/94 SG

REVISED 2/28/91

FROM STA. 499+50 TO STA. 501+00
PROJECT NAME: ESSEX
NO. PB 033-1 (2) PLOTTED: WP
SHEET 282 OF 400 SHEETS

337 of 465

VERMONT ROUTE 289

503+00 - 512+00 LT
SPECIAL DITCH W/
EROSION MATTING
& SEEDING

STA 502+50
NEW SIGN

STA 502+50
NEW SIGN

W.B. ℄ (ULT.)
℄ TRANSITION PAVEMENT
E.B. ℄ (ULT.)
-0.040 -0.030
25.85'
0.021'/'
489.87
EOP LINE
W.B ℄
STA 503+00
E.B. ℄ (ULT.)
-0.047 -0.023 -0.023 -0.063
0.021'/'
26.75'
℄ of TRANSITION
489.96
EOP LINE
STA. 502+50

FROM STA. 501+21 TO STA. 524+36
TRANSITION CENTERLINE IS THE INITIAL BASELINE OF CONSTRUCTION.
MEDIAN CENTERLINE (ULT.) IS REFERENCE FOR FOUR LANE (ULTIMATE) CONSTRUCTION.
EMBANKMENT WILL BE PLACED TO SATISFY REQUIREMENTS FOR ULTIMATE FOUR LANE CONSTRUCTION.
THE ENHANCED SCREENING EMBANKMENT (W.B. SIDE) WILL BEGIN AND END A.O.B.E. SO AS TO PROVIDE SUITABLE FOUNDATION FOR VISUAL SCREENING OF ROAD AND VEHICLES FROM ANY POINT ON NATION ROAD. IT WILL VARY A.O.B.E. TO PRESENT TO THE VIEWER A NON-UNIFORM SHAPE AND PROFILE AND WILL BE PLACED TO AVOID DISTURBANCE OF ESTABLISHED COVER DURING ULTIMATE CONSTRUCTION.
THE OFFSET DIMENSION SHOWN ON CROSS SECTIONS STA 502+50 AND AHEAD WILL ASSIST IN FIXING THE RELATIVE LATERAL POSITION OF THE INITIAL PAVEMENT ON THE ULTIMATE EMBANKMENT.

STA 502+25 LT-RT
15'-6" SNOWMOBILE CULVERT
REFER TO SHEET 63 of 400
FOR RELOCATION.

502+00 - 503+00 LT
SPECIAL DITCH W/
EROSION MATTING
& SEEDING

TRANSITION
W.B. ℄
E.B. ℄ (ULT.)
-0.056 -0.014 -0.016 -0.063
0.021'/'
491.19
EOP LINE
STA. 502+00
W.B. ℄
E.B. ℄ (ULT.)
-0.063 -0.005 -0.016 -0.063
0.021'/'
492.13
E.O.P.
STA. 501+50
℄ MEDIAN (ULT.)

ULTIMATE W.B. PAVEMENT
ULTIMATE E.B. PAVEMENT
(INITIAL 2-LANE PAVEMENT)
INITIAL (TEMPORARY) 2-LANE PAVEMENT AND HORIZONTAL CONTROL BASELINE
STA 524+36.41
END OF CROSSOVER TRANSITION
T.S. STA. 501+17.78 BACK =
STA. 501+21.47 AHEAD
BEGIN CROSSOVER TRANSITION GRADE
STA 498+50
CHANGE LOCATION OF GRADE FROM ℄ PAVEMENT TO LEFT EDGE OF PAVEMENT
ULTIMATE MEDIAN AND HORIZONTAL CONTROL BASELINE
ULTIMATE E.B. PAVEMENT
NEW PAVEMENT GRADE

AS BUILT 5/17/94 AS

REVISED 2/28/91

FROM STA. 501+50 TO STA. 503+00
PROJECT NAME: ESSEX
NO. PB 033-1(2)
PLOTTED: WP
SHEET 283 OF 400 SHEETS

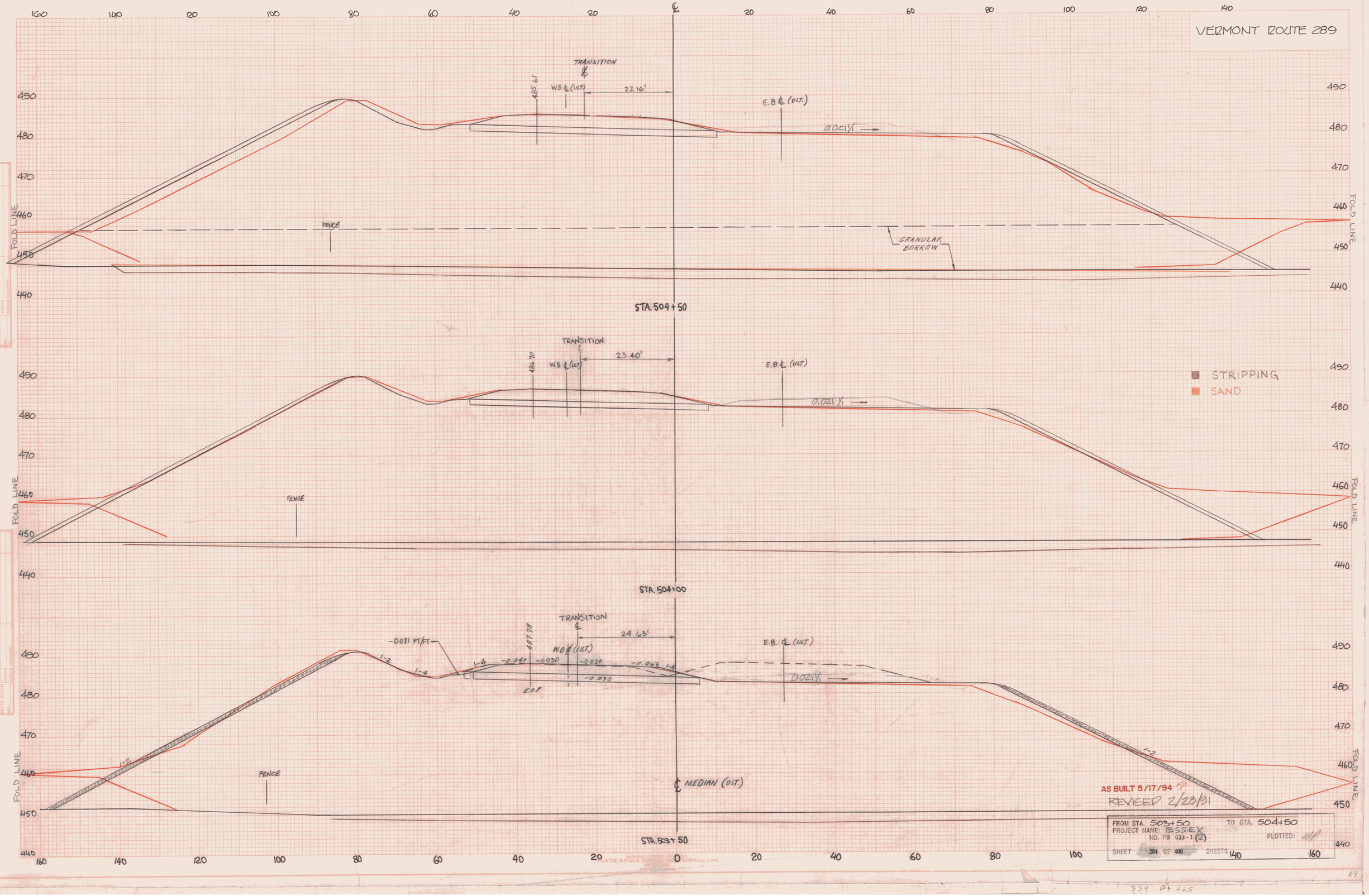
FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, NOTE BOOK, TITLE AREAS, NO., AREAS CHECKED, BY, DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, NOTE BOOK, TITLE AREAS, NO., AREAS CHECKED, BY, DATE

HIGHWAY FEDERAL AID PROJECT
LATE 3-FULL CROSS SECTION-FULL LINE
PRINTED IN U.S.A.

338 01 12.5

VERMONT ROUTE 289

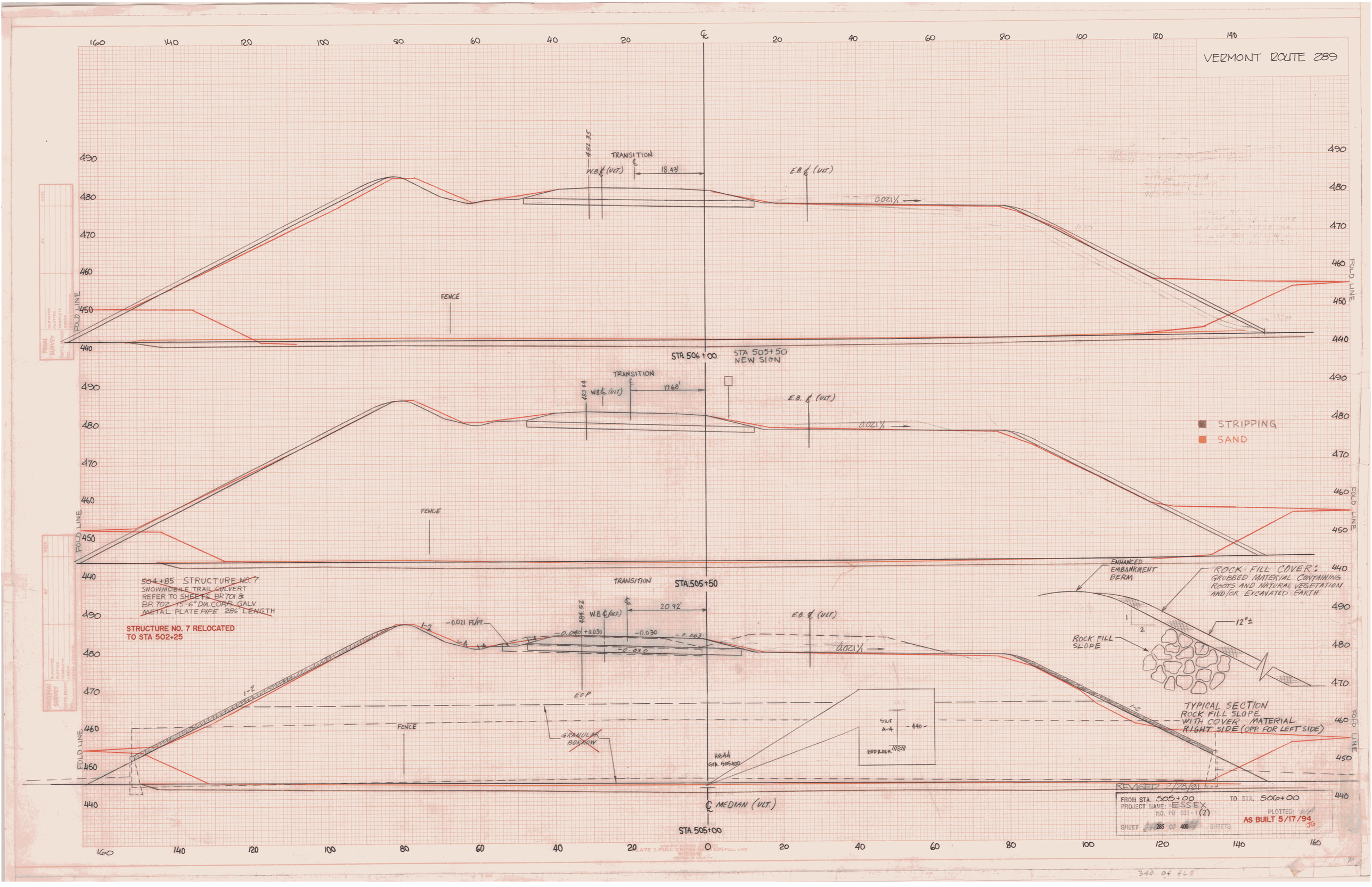


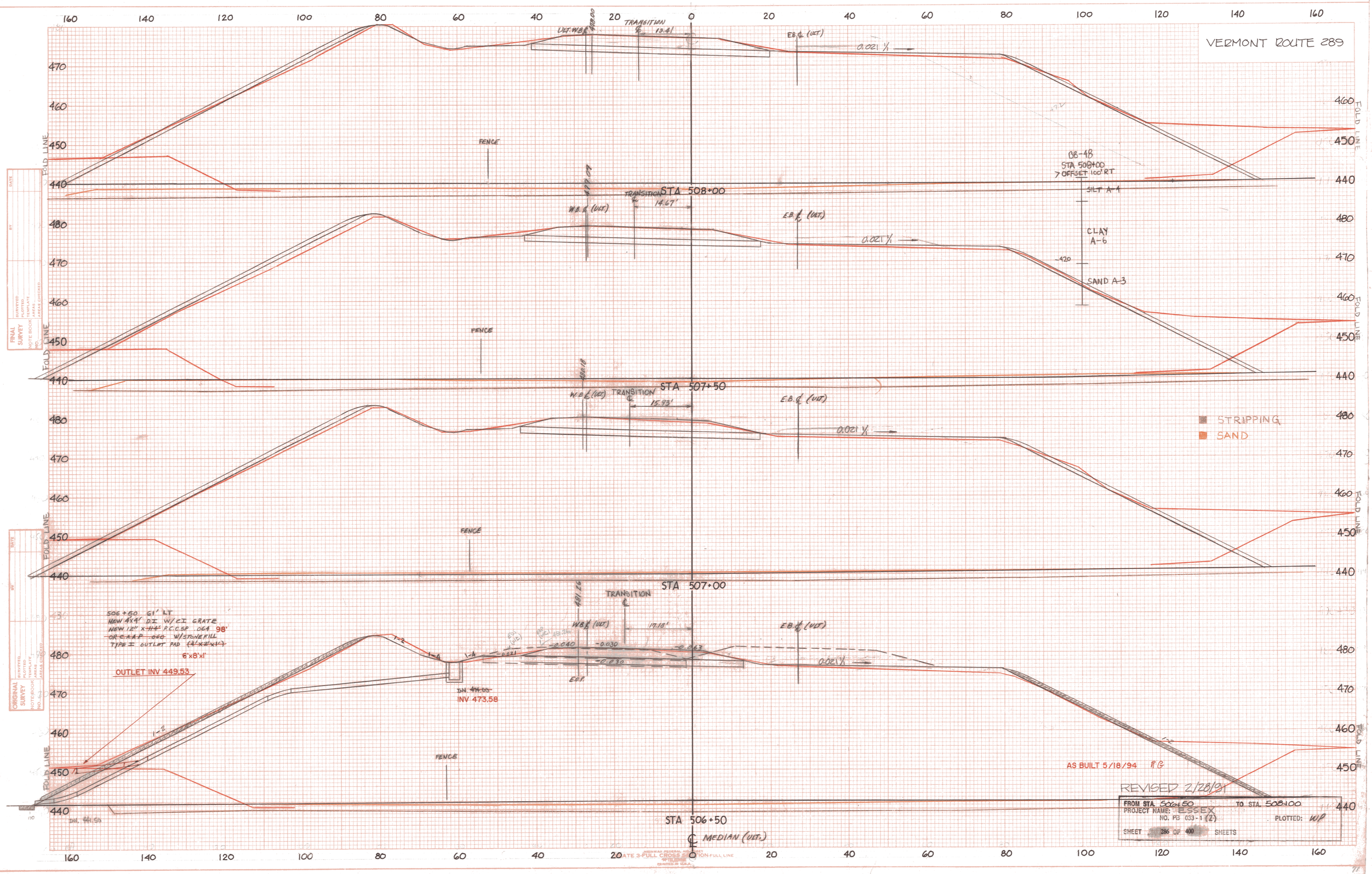
AS BUILT 5/17/94 SP
REVISED 2/28/91

FROM STA. 503+50 TO STA. 504+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED: WP
SHEET 284 OF 400 SHEETS

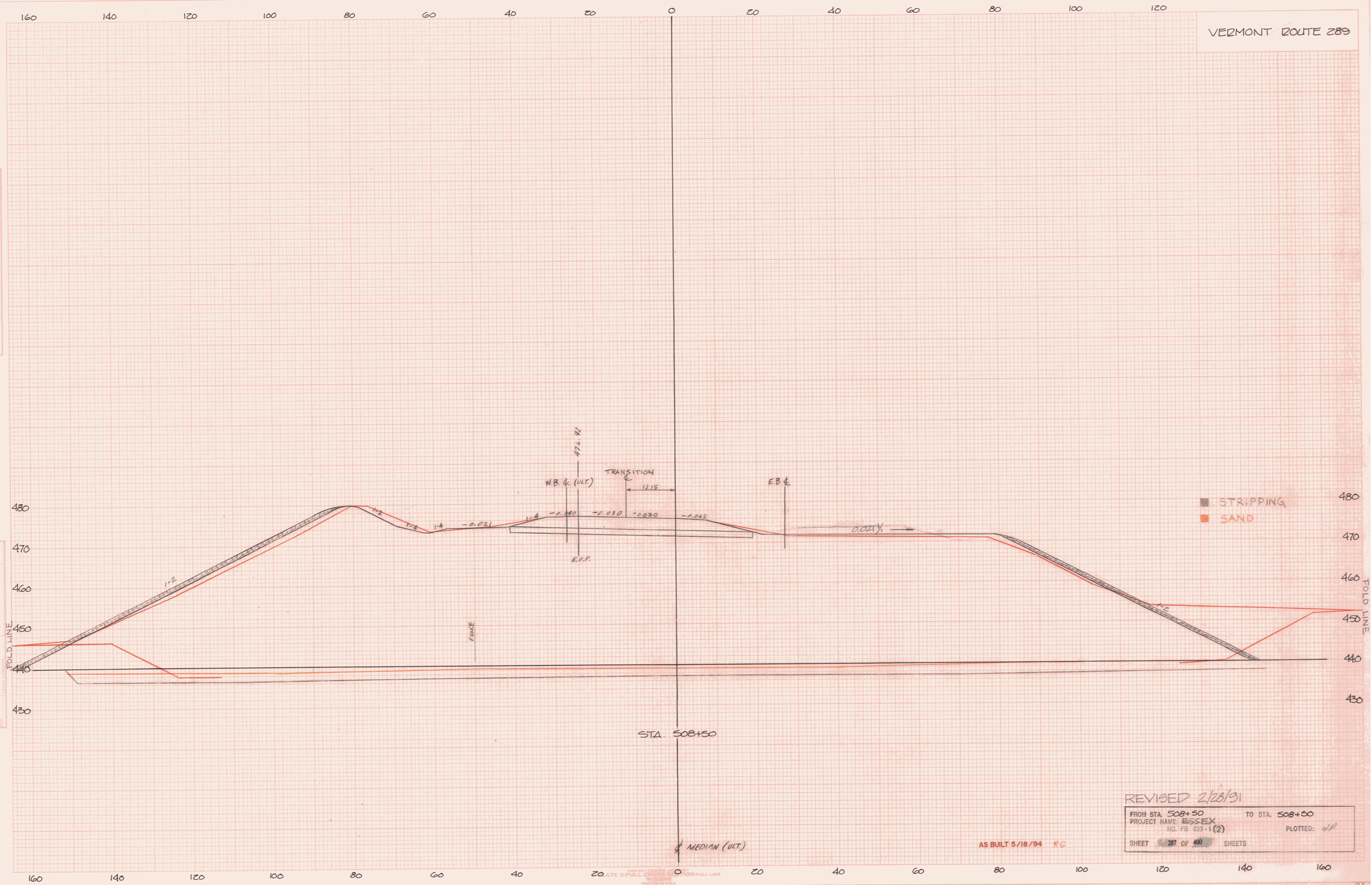
PLATE 3-FULL CROSS SECTION-FULL LINE

339 of 465


VERMONT ROUTE 289
TRANSITION
W.B. ℄ (ULT.)
E.B. ℄ (ULT.)
0.021 1/1
FENCE
STA 506+00
STA 505+50
NEW SIGN
STRIPPING
SAND
504+85 STRUCTURE NO. 7
SNOWMOBILE TRAIL CULVERT
REFER TO SHEETS BR 701 &
BR 702 15-6" DIA. CORR. GALV.
METAL PLATE PIPE 286' LENGTH
STRUCTURE NO. 7 RELOCATED
TO STA 502+25
STA. 505+50
ENHANCED
EMBANKMENT
BERM
ROCK FILL COVER:
GRUBBED MATERIAL CONTAINING
ROOTS AND NATURAL VEGETATION
AND/OR EXCAVATED EARTH
12"±
ROCK FILL
SLOPE
TYPICAL SECTION
ROCK FILL SLOPE
WITH COVER MATERIAL
RIGHT SIDE (OPP. FOR LEFT SIDE)
EOP
GRANULAR
BORROW
SILT
A-4
BEDROCK
℄ MEDIAN (ULT.)
STA 505+00
FOLD LINE
REVISED 2/28/91
FROM STA. 505+00
TO STA. 506+00
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED:
AS BUILT 5/17/94
SHEET 285 OF 400 SHEETS
340 OF 465


VERMONT ROUTE 289
STA 508+00
STA 507+50
STA 507+00
STA 506+50
TRANSITION
FENCE
0.021 1/1
BB-48
STA 508+00
7 OFFSET 100' RT
SILT A-4
CLAY A-6
SAND A-3
STRIPPING
SAND
506+50 61' LT
NEW 4'x4' DI W/CI GRATE
NEW 12" x 114' P.C.C.SP .064 98'
OR C.A.A.P .060 W/STONEFILL
TYPE I OUTLET PAD (4'x2'x1')
6'x8'x1'
OUTLET INV 449.53
INV 473.58
AS BUILT 5/18/94
REVISED 2/28/91
FROM STA. 506+50 TO STA. 508+00
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED: WP
SHEET 286 OF 400 SHEETS
FOLD LINE
MEDIAN (ULT.)

341 Of 465


VERMONT ROUTE 289
STRIPPING
SAND
W.B. ℄ (ULT.)
TRANSITION ℄
12.15
E.B. ℄
476.92
E.O.P.
1-2
1-4
-0.021
-0.040
-0.030
-0.030
-0.063
0.021 1/1
FENCE
FOLD LINE
STA. 508+50
℄ MEDIAN (ULT.)
AS BUILT 5/18/94 RG
REVISED 2/28/91
FROM STA. 508+50 TO STA. 508+50
PROJECT NAME: ESSEX
NO. PB 033-1(2)
PLOTTED: WP
SHEET 287 OF 400 SHEETS

342 OF 465

VERMONT ROUTE 289

160 140 120 100 80 60 40 20 0 20 40 60 80 100 120

480 470 460 450 440

FOLD LINE

STA 510+20
NEW SIGN

W.B. ℄ (ULT.)

479.66

TRANSITION ℄

8.35'

STA 510+20
NEW SIGN

E.B. ℄ (ULT)

0.021 ↘

SILT
A-4

430

CLAY
A-6

410

SAND A3
BEDROCK

HB-45
STA. 510+00

STA. 510+00

STRIPPING

SAND

W.B. ℄ (ULT)

479.74

TRANSITION ℄

9.63'

E.B. ℄ (ULT.)

0.021 ↘

STA. 509+50

TRANSITION ℄

10.88'

475.83

W.B. ℄ (ULT)

E.B. ℄ (ULT.)

-0.040 -0.030 -0.030 -0.063

-0.021

1-2 1-4 1-4 1-4 1-2

0.021 ↘

1-2

E.O.P.

STA. 509+00

℄ MEDIAN (ULT.)

AS BUILT 5/18/94 RG

REVISED 2/28/91

FROM STA. 509+00 TO STA. 510+00

PROJECT NAME: ESSEX

NO. FG 033-1(2) PLOTTED: N/A

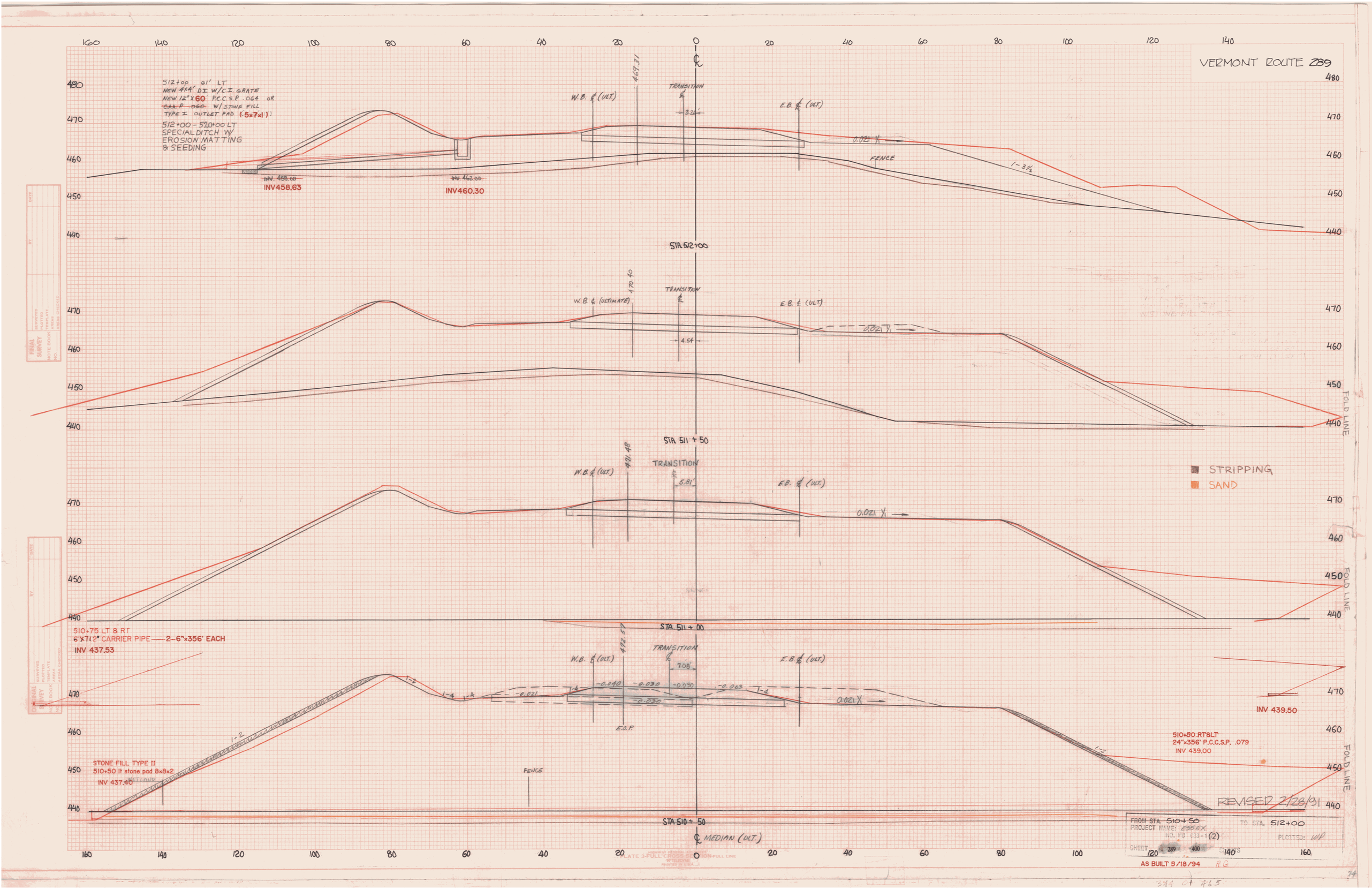
SHEET 288 OF 400 SHEETS

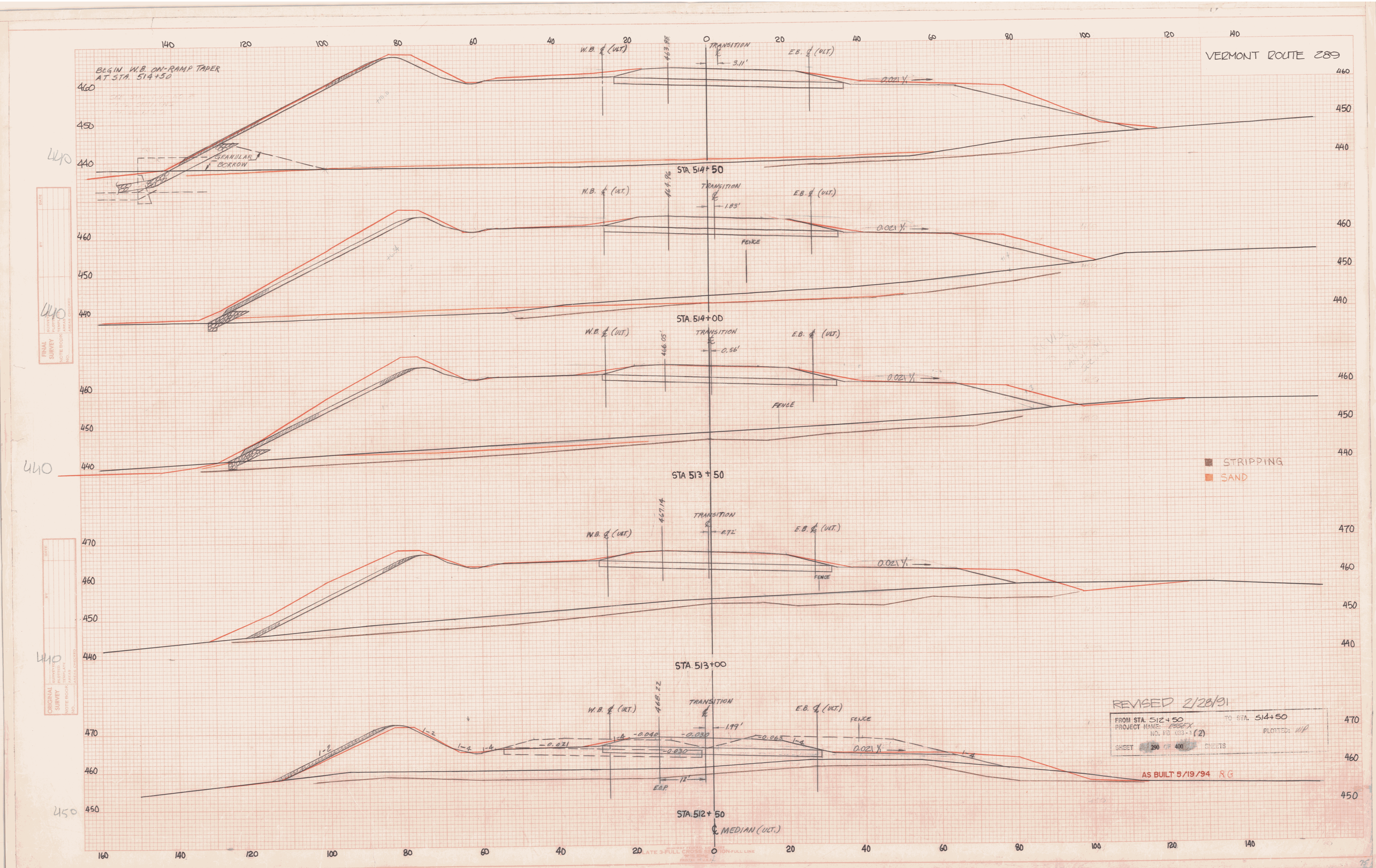
FINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
NOTE BOOK
NO.
AREAS CHECKED
BY
DATE

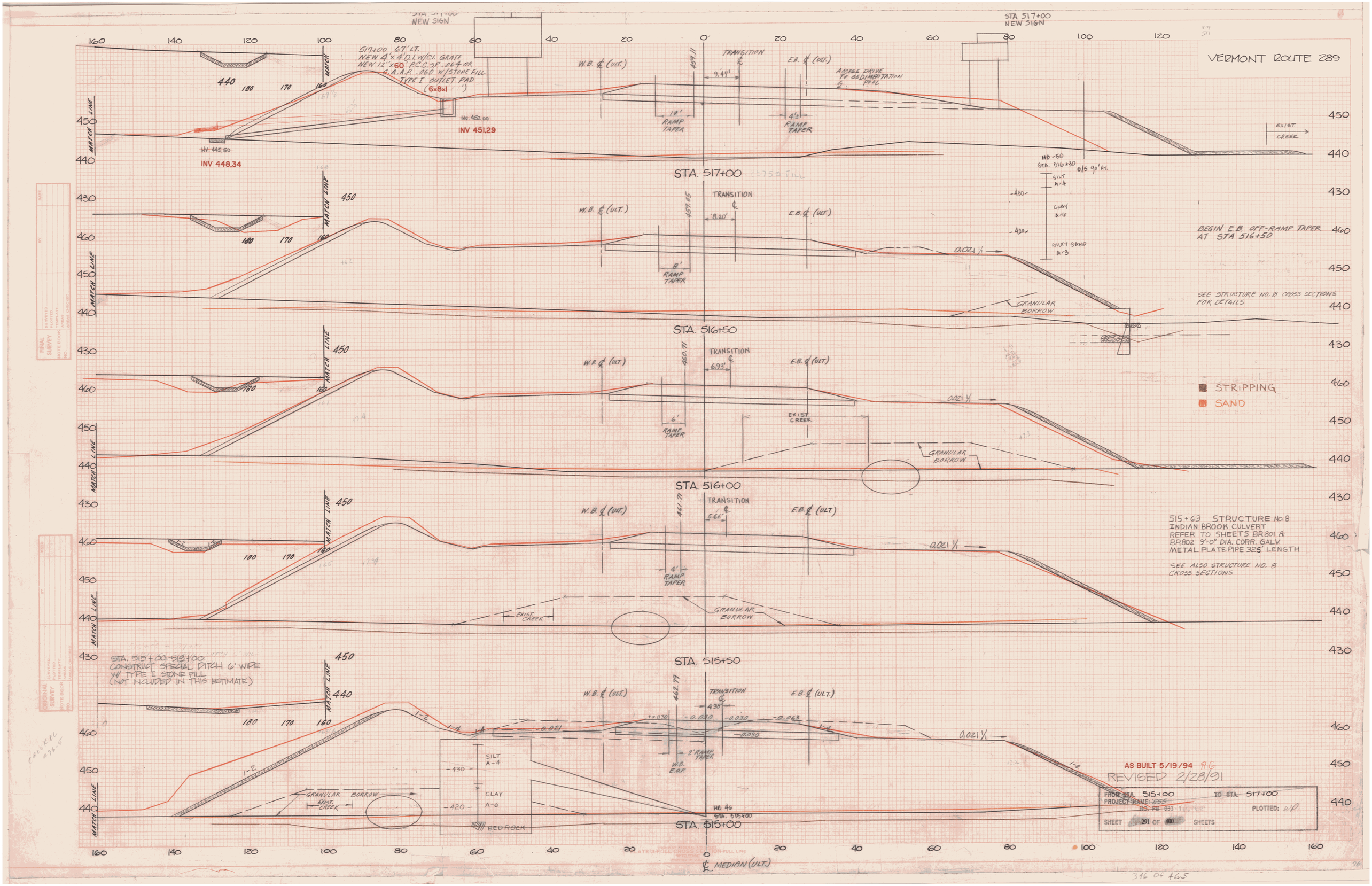
ORIGINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
NOTE BOOK
NO.
AREAS CHECKED
BY
DATE

HIGHWAY FEDERAL AID SERIES
PLATE 3-FULL CROSS SECTION-FULL LINE
TELEDYNE
PRINTED IN U.S.A.

73


VERMONT ROUTE 289
512+00 61' LT
NEW 4X4' DI W/C.I. GRATE
NEW 12" X 60' P.C.C.S.P. .064 OR
~~CAA P .060~~ W/STONE FILL
TYPE I OUTLET PAD (5x7x1)
512+00 - 520+00 LT
SPECIAL DITCH W/
EROSION MATTING
& SEEDING
W.B. ℄ (ULT.)
469.31
TRANSITION ℄
3.26'
E.B. ℄ (ULT.)
0.021 1/1
FENCE
1-3 1/2
INV 458.00
INV458.63
INV 462.00
INV460.30
STA 512+00
W.B. ℄ (ULTIMATE)
470.40
TRANSITION ℄
4.54
E.B. ℄ (ULT)
0.021 1/1
STA 511+50
W.B. ℄ (ULT.)
471.48
TRANSITION ℄
5.81'
E.B. ℄ (ULT.)
0.021 1/1
STRIPPING
SAND
510+75 LT & RT
6'X712' CARRIER PIPE — 2-6"x356' EACH
INV 437.53
STA 511+00
W.B. ℄ (ULT.)
472.57
TRANSITION ℄
7.08'
E.B. ℄ (ULT.)
1-2
1-4
-0.021
-0.040
-0.030
-0.030
-0.063
-0.030
0.021 1/1
E.O.P.
INV 439.50
510+50 RT&LT
24"x356' P.C.C.S.P. .079
INV 439.00
STONE FILL TYPE II
510+50 lt stone pad 8x8x2
INV 437.40
WETLAND
FENCE
STA 510+50
℄ MEDIAN (ULT.)
FOLD LINE
REVISED 2/28/91
FROM STA. 510+50
TO STA. 512+00
PROJECT NAME: ESSEX
NO. FB 033-1(2)
PLOTTED: WP
SHEET 289 400
AS BUILT 5/18/94
FINAL SURVEY
ORIGINAL SURVEY


VERMONT ROUTE 289
BEGIN W.B. ON-RAMP TAPER AT STA. 514+50
GRANULAR BORROW
W.B. ℄ (ULT.)
E.B. ℄ (ULT.)
TRANSITION ℄
3.11'
0.021 ½
STA. 514+50
1.83'
FENCE
STA. 514+00
0.56'
STA 513+50
0.72'
STA. 513+00
1.99'
E.O.P.
12'
STA. 512+50
℄ MEDIAN (ULT.)
STRIPPING
SAND
REVISED 2/28/91
FROM STA. 512+50 TO STA. 514+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED: WP
SHEET 290 OF 400 SHEETS
AS BUILT 5/19/94 RG
FINAL SURVEY
ORIGINAL SURVEY
345 of 465



VERMONT ROUTE 289
STA 517+00 NEW SIGN
517+00 6'7' LT.
NEW 4'x4' D.I. W/C.I. GRATE
NEW 12'x60' P.C.C.SP. .064 OR
C.A.A.P. .060 W/STONE FILL
TYPE I OUTLET PAD
(6x8x1 ')
INV 451.29
INV 448.34
INV 452.00
INV 445.50
W.B. ℄ (ULT.)
E.B. ℄ (ULT.)
TRANSITION ℄
9.47'
10' RAMP TAPER
4'± RAMP TAPER
ACCESS DRIVE TO SEDIMENTATION POOL
EXIST CREEK
STA. 517+00
HB-50 STA. 516+30 O/S 90' RT.
SILT A-4
CLAY A-6
SILTY SAND A-3
BEGIN E.B. OFF-RAMP TAPER AT STA 516+50
8.20'
8' RAMP TAPER
0.021 1/1
GRANULAR BORROW
SEE STRUCTURE NO. 8 CROSS SECTIONS FOR DETAILS
STA. 516+50
6.93'
6' RAMP TAPER
STRIPPING
SAND
STA. 516+00
5.66'
4' RAMP TAPER
515+63 STRUCTURE No. 8
INDIAN BROOK CULVERT
REFER TO SHEETS BR801 & BR802 9'-0" DIA. CORR. GALV. METAL PLATE PIPE 325' LENGTH
SEE ALSO STRUCTURE NO. 8 CROSS SECTIONS
STA. 515+50
STA. 515+00-519+00
CONSTRUCT SPECIAL DITCH 6' WIDE W/ TYPE I STONE FILL
(NOT INCLUDED IN THIS ESTIMATE)
2' RAMP TAPER
W.B. E.O.P.
SILT A-4
CLAY A-6
BEDROCK
HB 46 STA. 515+00
STA. 515+00
MATCH LINE
℄ MEDIAN (ULT.)
AS BUILT 5/19/94 RG
REVISED 2/28/91
FROM STA. 515+00 TO STA. 517+00
PROJECT NAME: ESS
NO. PB 033-1
PLOTTED: WP
SHEET 291 OF 400 SHEETS

346 of 465

VERMONT ROUTE 289

160 140 120 100 80 60 40 20 0 20 40 60 80 100 120

STA. 519+50 1516 ℄ CUT

5197+00 – 520+00 LT.
CONSTRUCT SPECIAL DITCH 4' WIDE

MATCH LINE 470 460 450 — 1-2½ — 1-3 — 1-4 — 1-2 — 1-4

W.B. ℄ (ULT.) — 457.45 — TRANSITION ℄ — E.B. ℄ (ULT.) — 15.80'

FILL TO CUT TRANSITION (SEE PROFILE)

STA 519+15 LT&RT
48"x175' UTILITY SLEEVE
INV IN 440.19
INV OUT 439.19

STA 519+00 WESTERLY END OF FULL WIDTH 12' DECELERATION LANE – E.B. OFF RAMP

STA. 519+00 411 ℄ CUT 137 ℄ FILL

MATCH LINE 470 460 450 — 180 170 160 — 1-4 — 1-4

W.B. ℄ (ULT.) — 457.52 — TRANSITION ℄ — E.B. ℄ (ULT.) — 14.54

FILL TO CUT TRANSITION (SEE PROFILE)

STA. 518+50 3 ℄ CUT 1245 ℄ FILL

MATCH LINE 460 450 440 — 180 170 160 — 1-2 — 1-4

W.B. ℄ (ULT.) — 457.72 — TRANSITION ℄ — E.B. ℄ (ULT.) — 13.28'

11½' RAMP TAPER

STA. 518+00 1423 ℄ FILL

MATCH LINE 460 450 440 — 180 170 160 — 1-2 — 1-4

W.B. ℄ (ULT.) — 458.06 — TRANSITION ℄ — E.B. ℄ (ULT.) — 12.01'

10' RAMP TAPER

POOL ELEV. 443.0 (POSITION)

STA. 517+50 1423 ℄ FILL

MATCH LINE 460 450 440 — 180 170 160 — 1-2 — 1-4

W.B. ℄ (ULT.) — 458.52 — TRANSITION ℄ — E.B. ℄ (ULT.) — 10.74'

12' W.B. RAMP (ULT.) — +0.030 — +0.030 — +0.030 — -0.030 — -0.021 — 12' W.B. RAMP — W.B. E.O.F. — 7' RAMP TAPER

FENCE

AS BUILT 5/19/94 RG

STA. 419+50
WESTERLY END OF FULL WIDTH 12' ACCELERATION LANE FOR W.B. ON RAMP

160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160

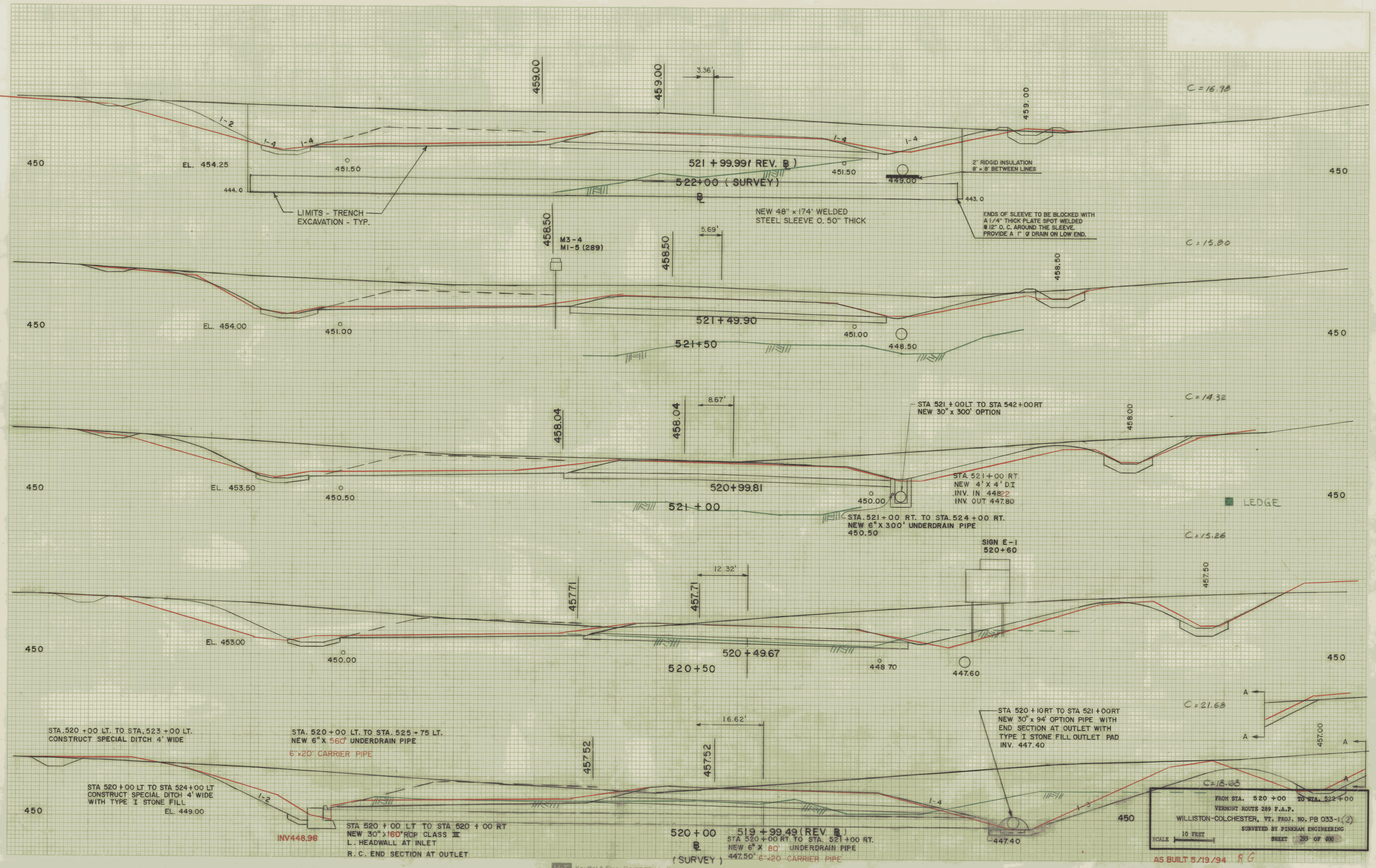
℄ MEDIAN (ULT.)

STRIPPING
LEDGE

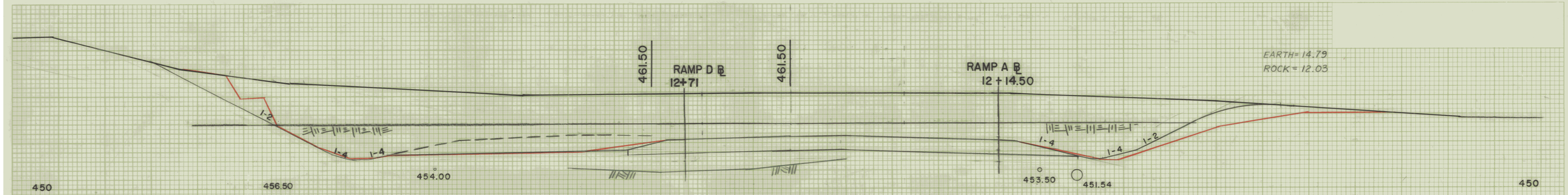
EXIST. CREEK

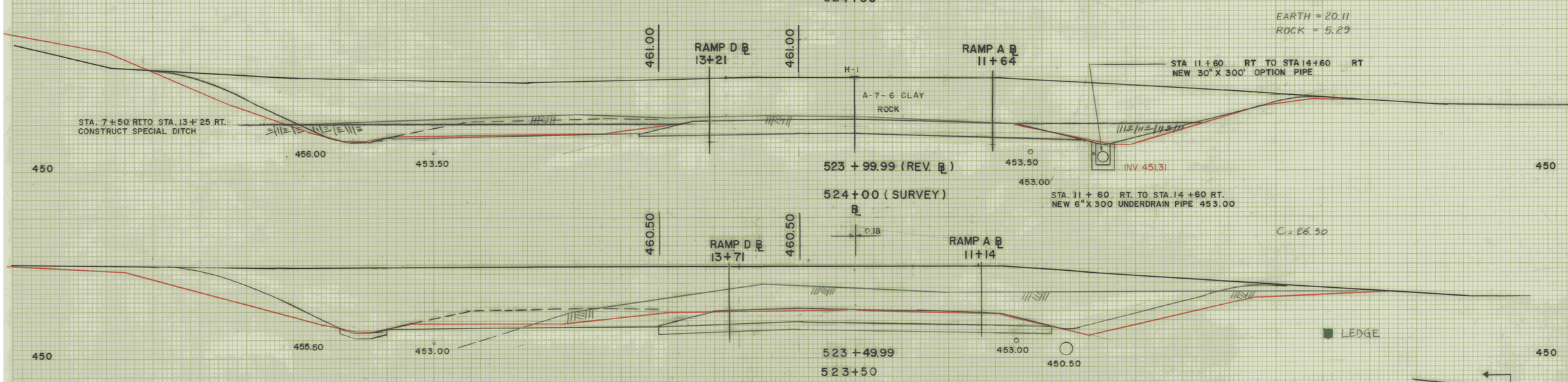
FROM STA. 517+50 TO STA. 519+50
PROJECT NAME: F0207(7)
NO. PB USE: (7)
PLOTTED: 1449
SHEET 292 OF 400 SHEETS

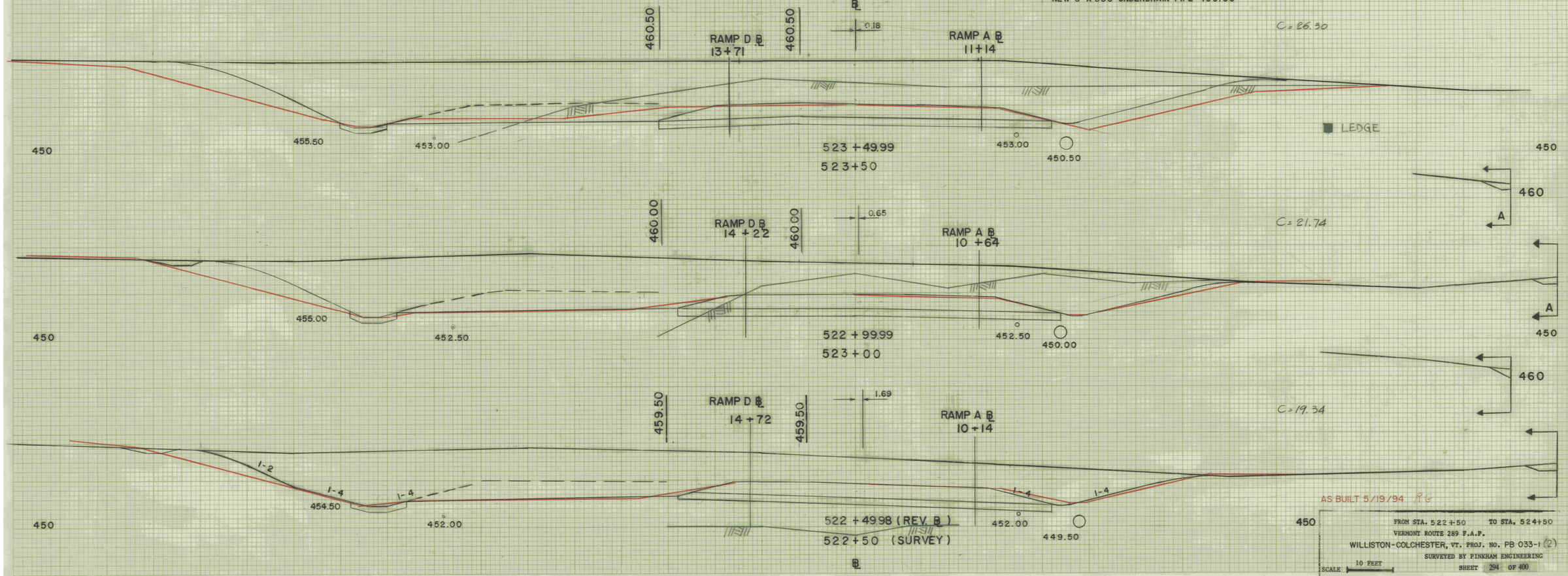
347 OF 465



C = 16.98
459.00
459.00
3.36'
459.00
1-2
1-4
1-4
1-4
1-4
450
EL. 454.25
451.50
521 + 99.99 (REV. ℄)
451.50
2" RIDGID INSULATION
8' x 8' BETWEEN LINES
449.00
450
444.0
522+00 (SURVEY)
℄
443.0
LIMITS - TRENCH
EXCAVATION - TYP.
NEW 48" x 174' WELDED
STEEL SLEEVE 0.50" THICK
ENDS OF SLEEVE TO BE BLOCKED WITH
A 1/4" THICK PLATE SPOT WELDED
@ 12" O. C. AROUND THE SLEEVE.
PROVIDE A 1" Ø DRAIN ON LOW END.
C = 15.80
458.50
M3-4
M1-5 (289)
458.50
5.69'
458.50
450
EL. 454.00
451.00
521 + 49.90
451.00
448.50
450
521+50
C = 14.32
8.67'
458.04
458.04
STA 521 + 00LT TO STA 542 + 00RT
NEW 30" x 300' OPTION
458.00
450
EL. 453.50
450.50
520+99.81
450.00
STA. 521 + 00 RT.
NEW 4' X 4' D.I
INV. IN 448.22
INV. OUT 447.80
450
521 + 00
LEDGE
STA. 521 + 00 RT. TO STA. 524 + 00 RT.
NEW 6" X 300' UNDERDRAIN PIPE
450.50
C = 15.26
SIGN E-1
520+60
12.32'
457.71
457.71
457.50
450
EL. 453.00
450.00
520 + 49.67
448.70
447.60
450
520+50
C = 21.68
A
A
STA. 520 + 00 LT. TO STA. 523 + 00 LT.
CONSTRUCT SPECIAL DITCH 4' WIDE
STA. 520 + 00 LT. TO STA. 525 + 75 LT.
NEW 6" X 560' UNDERDRAIN PIPE
6"x20' CARRIER PIPE
16.62'
457.52
457.52
STA 520 + 10RT TO STA 521 + 00RT
NEW 30" x 94' OPTION PIPE WITH
END SECTION AT OUTLET WITH
TYPE I STONE FILL OUTLET PAD
INV. 447.40
457.00
A
A
C = 18.68
STA 520 + 00 LT TO STA 524 + 00 LT
CONSTRUCT SPECIAL DITCH 4' WIDE
WITH TYPE I STONE FILL
EL. 449.00
1-2
1-4
1-3
450
INV448.96
STA 520 + 00 LT TO STA 520 + 00 RT
NEW 30" x 160' RCP CLASS III
L. HEADWALL AT INLET
R. C. END SECTION AT OUTLET
520 + 00
℄
(SURVEY)
519 + 99.49 (REV. ℄)
STA 520 + 00 RT. TO STA. 521 + 00 RT.
NEW 6" X 80' UNDERDRAIN PIPE
447.50' 6"x20' CARRIER PIPE
447.40
450
FROM STA. 520 + 00 TO STA. 522 + 00
VERMONT ROUTE 289 F.A.P.
WILLISTON-COLCHESTER, VT. PROJ. NO. PB 033-1 (2)
SURVEYED BY PINKHAM ENGINEERING
SCALE 10 FEET
SHEET 293 OF 400
AS BUILT 5/19/94 RG
Keuffel & Esser Company







Keuffel & Esser Company Made in U.S.A. PLATE 3. CROSS SECTION 487072

185 of 370

RAMP D ℄
10+69

P.T.H.

RAMP A ℄
14+14

EARTH = 9.35
ROCK = 12.05

1-2

4-1

463.50

463.50

459.25

459.20

455.50

452.71

1-4

1-2

450

450

526+50

RAMP D ℄
11+20

P.T.H.

RAMP A ℄
13+64

EARTH = 3.02
ROCK = 14.24

463.00

463.00

458.95

459.00

526+00

455.00

452.42

LEDGE

450

450

STA. 5+0 RT TO STA. 11+28 RT.
STA. 5+20 RT. TO STA. 11+20 RT.
NEW 6" X 632' UNDERDRAIN PIPE

RAMP D ℄
11+71

P.T.H.

RAMP A ℄
13+14

BACK { EARTH = 14.05 / ROCK = 21.05
AHEAD { EARTH = 4.34 / ROCK = 9.96

FLUSH BASIN
STA 11+40 RT

R3-1(L)

462.50

458.70

455.00

454.50

452.13

450

450

525+50

RAMP D ℄
12+20

RAMP A ℄
12+64.5

EARTH = 13.56
ROCK = 17.08

1-2

4-1

462.00

462.00

454.50

457.75

454.00

451.93

1-4

1-2

450

450

525+00

℄

FROM STA. 525+00 TO STA. 526+50
VERMONT ROUTE 289 F.A.P.
WILLISTON-COLCHESTER, VT. PROJ. NO. PB 033-1(2)
SURVEYED BY PINKHAM ENGINEERING
SCALE 10 FEET
SHEET 295 OF 400

AS BUILT 5/19/94 RG

K&E Keuffel & Esser Company Made in U.S.A.

PLATE 3, CROSS SECTION 487072

FOLD LINE

RAMP D ℄ 8+16.50

P.T.H.

466.00

466.00

P.T.H.

RAMP A ℄ 16+64

1-2

1-4

1-4

1-4

1-4

1-2

EARTH = 14.84
ROCK = 3.50

460

462.45

460.50

458.50

529+00

458.00

458.00

455.50

460

8+66?

RAMP D ℄ 8+51

P.T.H.

465.50

465.50

P.T.H.

RAMP A ℄ 16+14

EARTH = 12.61
ROCK = 5.21

460

461.95

460.25

458.00

458.25

STA. 528+50 RT. TO STA. 529+50 RT.
NEW 6" X 100' UNDERDRAIN PIPE

457.50

455.00

460

RTE 15 - RAMP A
STA 15+75 RT & LT
6"x39.5' PVC UTILITY SLEEVE

528+50

RAMP D ℄ 9+17

P.T.H.

465.00

465.00

P.T.H.

527+89
H-3

A-4 CLAYEY SILT

ROCK

RAMP A ℄ 15+64.50

EARTH = 12.01
ROCK = 6.05

460

461.45'

460.00

457.50

528+00

457.00

454.50

LEDGE

460

527+62
H-4

A-4 SANDY SILT

ROCK

RAMP D ℄ 9+68

P.T.H.

464.50

464.50

W4-1

P.T.H.

E5-1a

HI-2

RAMP A ℄ 15+14

1-4

EARTH = 8.79
ROCK = 7.51

460

460.20

459.75

457.00

527+50

456.50

454.00

460

STA. 527+00 RT.
NEW 4' X 4' D.I.
INV. IN 454.72
INV. OUT 454.52

STA 14+60 RT TO STA. 17+14 RT.
NEW 24" X 250' OPTION PIPE

STA 14+60 RT. TO STA. 7+14 RT.
NEW 6" X 250' UNDERDRAIN PIPE

RAMP D ℄ 10+19

P.T.H

P.T.H.

RAMP A ℄ 14+58

1-2

P-1

1-4

1-4

464.00

464.00

STA. 527+00 LT. TO STA. 530+50 LT.
NEW 6" X 350' UNDERDRAIN PIPE

1-4

1-4

1-4

1-2

STA 14+60 RT (RAMP A)
NEW 4'X4' D.I.
INV. IN 454.00 (18") 453.46
INV. IN 453.50 (24")
INV. OUT 453.00 (30")
REVISED 12/28/90

BACK { EARTH = 9.59 ROCK = 16.40
AHEAD { EARTH = 4.88 ROCK = 8.63

460

459.50

459.70

527+00

456.50

455.50

460

STA 527+00 LT
NEW 4'X4' D.I.
INV OUT 455.50
INV 455.08

STA 527+00 LT TO RAMP A STA 14+60 RT
NEW 18" x 100' RCP CLASS III

FROM STA. 527+00 TO STA. 529+00
VERMONT ROUTE 289 F.A.P.
WILLISTON-COLCHESTER, VT. PROJ. NO. PB 033-1 (2)
SURVEYED BY PINKHAM ENGINEERING
SCALE 10 FEET
SHEET 296 OF 400

AS BUILT 5/20/94

Keuffel & Esser Company Made in U.S.A.

PLATE 3, CROSS SECTION 487073

137 OF 270

RAMP D ℄ 5+66

RAMP A ℄ 19+13

1-2 | 1-4 | 1-4 | 1-4 | 1-4 | 1-4 | 1-4 | 1-4

472.48 | 468.50 | 472.0 | 476.0 | 472.50

460 | 460

531+50

RAMP D ℄ 6+17 | P.T.H. | P.T.H. | RAMP A ℄ 18+64

EARTH = 6.75

1-4 | 1-4 | 1-4 | FUTURE CONST.

469.87 | 466.25 | 469.8 | 471.0 | 469.81

460 | 460

531+00

EARTH = 16.75

RAMP D ℄ 6+67 | P.T.H. | P.T.H. | RAMP A ℄ 18+13

1-4 | 1-4 | GRADE TO DRAIN | 1-4

467.44 | 464.00 | 465.5 | 460.00 | 466.2 | 460.00 | 467.01

460 | 460

530+50

EARTH = 16.93

RAMP D ℄ 7+17 | P.T.H. | P.T.H. | RAMP A ℄ 17+64

H-5

A-7-6 CLAY

FUTURE CONST. | GRADE TO DRAIN | A-2-4 SILTY SAND | 1-4

465.05' | 462.38 | 464.5 | 459.50 | ROCK | 459.50 | 465.0 | 464.32

460 | 460

530+00

EARTH = 14.02
ROCK = 4.92

STA. 17+13 LT. TO STA. 20+50, LT.
CONSTRUCT SPECIAL DITCH
1' DEPTH W/ TYPE I STONE FILL

STA 17+13 RT TO STA 19+13 RT
NEW 6" X 200' UNDER DRAIN PIPE
461.52

RAMP D ℄ 7+68 | P.T.H. | P.T.H. | RAMP A ℄ 17+13

1-2 | 1-4 | 1-4 | GRADE TO DRAIN | 1-4 | 1-4 | 1-4 | 1-2

462.95 | 460.75 | 459.00 | 457.75 | 456.50

460 | 460

465.75

STA 529+50 LT
NEW D.I. 4'X4'
INV. OUT 460.5'

STA 529+50 LT TO
STA 529+50 RT.
NEW 18" X 98' RCP CLASS III
18"×100'

STA 529+50 RT TO STA 530+50 RT
NEW 6" X 100' UNDER DRAIN PIPE
459.00
DONE BY OTHERS

STA 529+50 RT TO STA. 17+13 RT
NEW 24" X 56' RCP CLASS III

STA 529+50 RT
NEW 4'X4' D.I.
INV. IN 457.50
INV. OUT 457.00

STA 7+13 RT
NEW 4'X4' D.I.
INV. IN 456.50 (24")
INV. OUT 456.00 (24") 456.24

REVISED 12/28/30

460

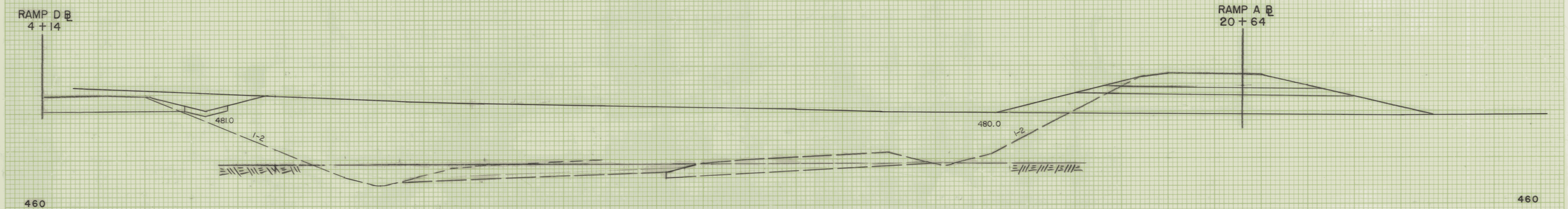
FROM STA. 529+50 TO STA. 531+50
VERMONT ROUTE 289 F.A.P.
WILLISTON - COLCHESTER, VT. PROJ. NO. PB 033-1 (2)
SURVEYED BY PINKHAM ENGINEERING
SCALE 10 FEET
SHEET 297 OF 400

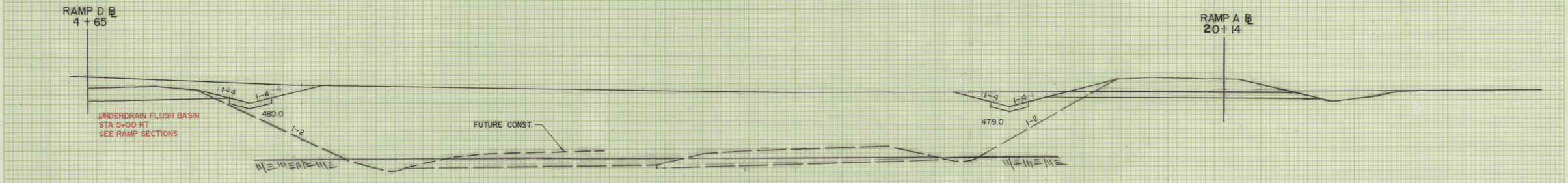
AS BUILT 5/20/94 MG

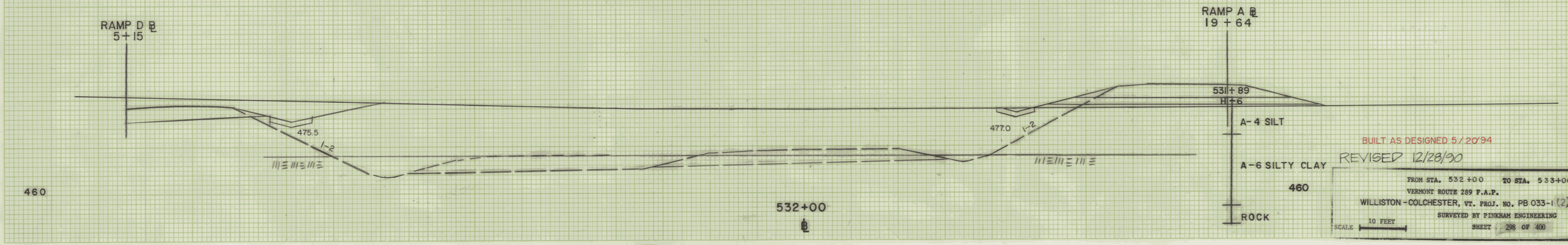
FOLD LINE

Keuffel & Esser Company Made in U.S.A.

PLATE 3, CROSS SECTION 487072







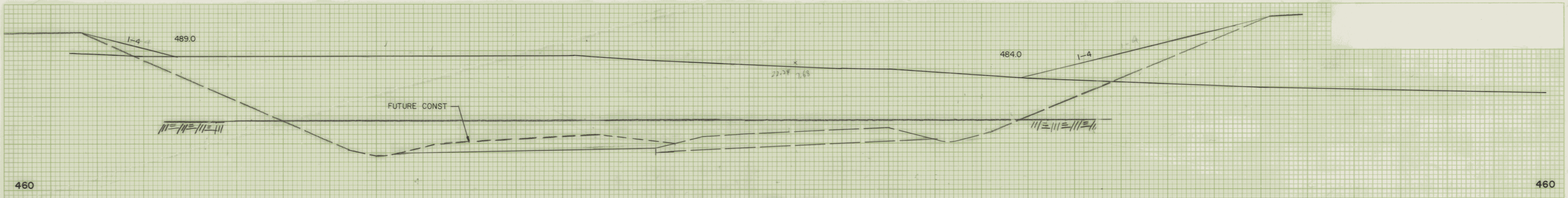
BUILT AS DESIGNED 5/20/94
REVISED 12/28/90

FROM STA. 532+00 TO STA. 533+00
VERMONT ROUTE 289 F.A.P.
WILLISTON - COLCHESTER, VT. PROJ. NO. PB 033-1 (2)
SURVEYED BY PINKHAM ENGINEERING
SHEET 298 OF 400

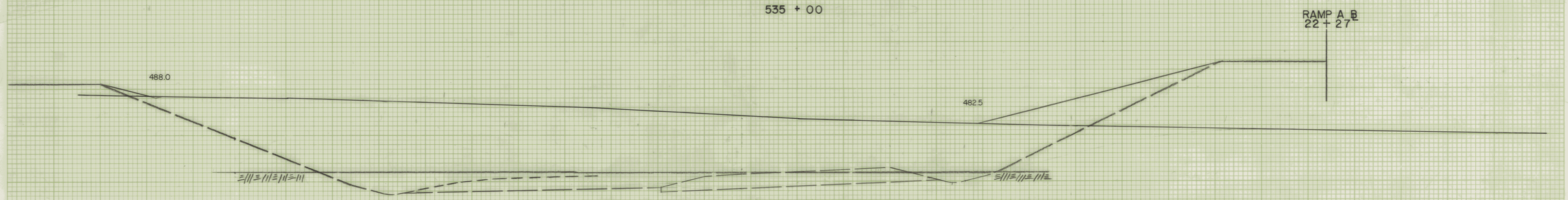
SCALE 10 FEET

Keuffel & Esser Company Made in U.S.A.
PLATE 3. CROSS SECTION 487072

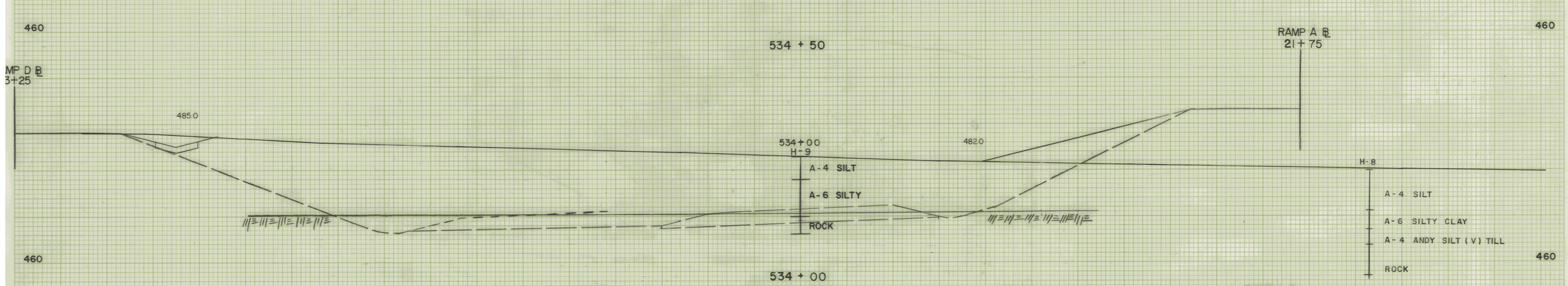
189 of 370



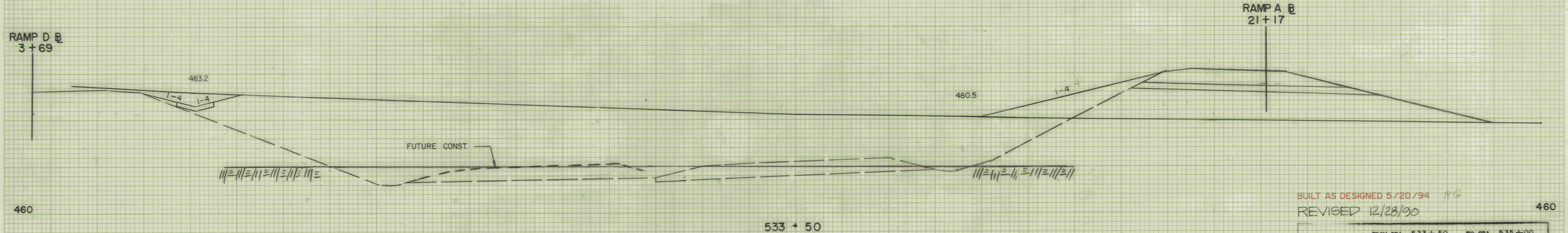
535 + 00



534 + 50



534 + 00



533 + 50

℄

BUILT AS DESIGNED 5/20/94 RG

REVISED 12/28/90

FROM STA. 533+50 TO STA. 535+00
VERMONT ROUTE 289 F.A.P.
WILLISTON-COLCHESTER, VT. PROJ. NO. PB 033-1(2)
SURVEYED BY PINKHAM ENGINEERING
SCALE 10 FEET
SHEET 299 OF 400

Keuffel & Esser Company Made in U.S.A.

PLATE 3, CROSS SECTION 487072

EARTH = 15.54
ROCK = 17.45

536+96
B-16

536+90
B+15

P.T.H.

A-2-4 SILTY SAND

A-2-4 SILTY SAND

A-4 SANDY SILT

ROCK

ROCK

474.00

474.00

P T H

1-2

1-4

12" SUBBASE

465.50

STA 537+10 LT NEW 4'X4' D.I. (CAPPED)
INV. IN 465.88
INV. OUT 465.68

STA 537+00 RT
NEW 4'X4' D.I.
INV. IN 465.43
INV. OUT 465.18

STA 537+10 LT TO STA 537+00 RT
NEW 18" X 56' RCP CLASS III

460

460

537 + 00

EARTH = 12.87
ROCK = 13.26

NOT TO BE BUILT
UNDER THIS CONTRACT

GRANULAR BORROW

536+32
B-13

P.T.H.

536+27
B-14

A-2-4 SILTY SAND

A-2-4 SILTY SAND

GRANULAR BACKFILL

A-7-6 SILTY CLAY

ROCK

ROCK

STRUCTURE EXCAVATION

473.50

473.50

12" SUBBASE

465.00

464.78

536+60
B-10

GRANULAR BORROW

536+53
B-9

P.T.H.

A-2-4 SILTY SAND

A-4 SANDY SILT

A-4 SANDY SILT

ROCK

GRANULAR BACKFILL

ROCK

STRUCTURE EXCAVATION

460

460

NOT TO BE BUILT
UNDER THIS CONTRACT

536 + 50

1-4

FUTURE CONST.

535+95
B+11

P.T.H.

535+87
B-12

A-7-6 SILTY CLAY

ROCK

A-7-6 SILTY CLAY

A-4 SANDY SILT

ROCK

460

460

BRIDGE WORK
NOT TO BE BUILT
UNDER THIS CONTRACT

536 + 00

1-4

489.0

484.0

1-4

460

460

535 + 50

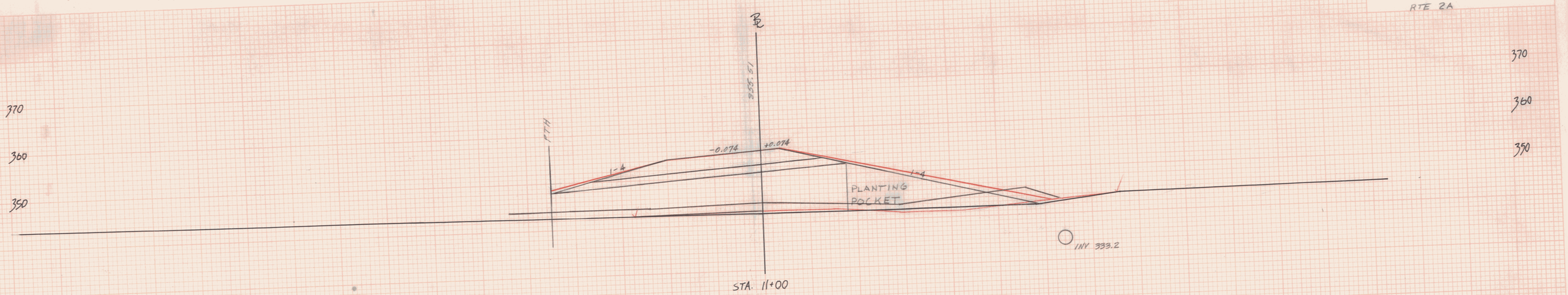
REVISED 12/28/90

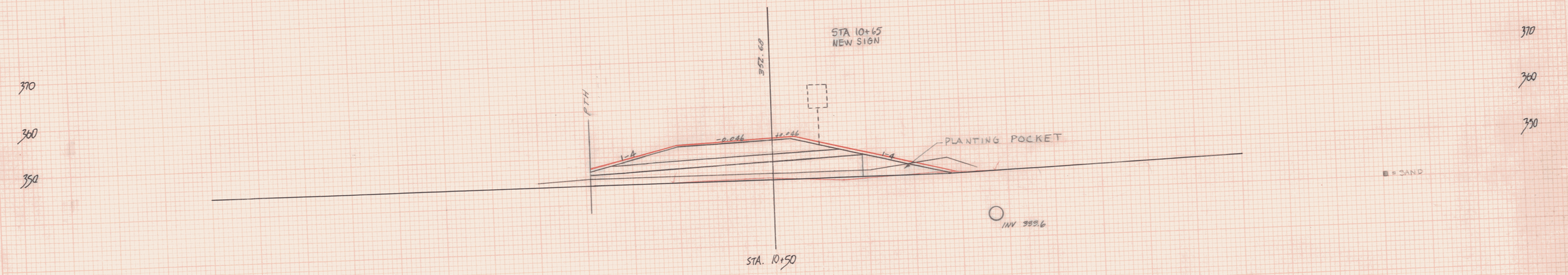
FROM STA. 535+50 TO STA. 537+00
VERMONT ROUTE 289 F.A.P.
WILLISTON-COLCHESTER VT. PROJ. NO. PB 033-1(2)
SURVEYED BY PINKHAM ENGINEERING
SCALE 10 FEET
SHEET 300 OF 400

Keuffel & Esser Company Made in U.S.A.

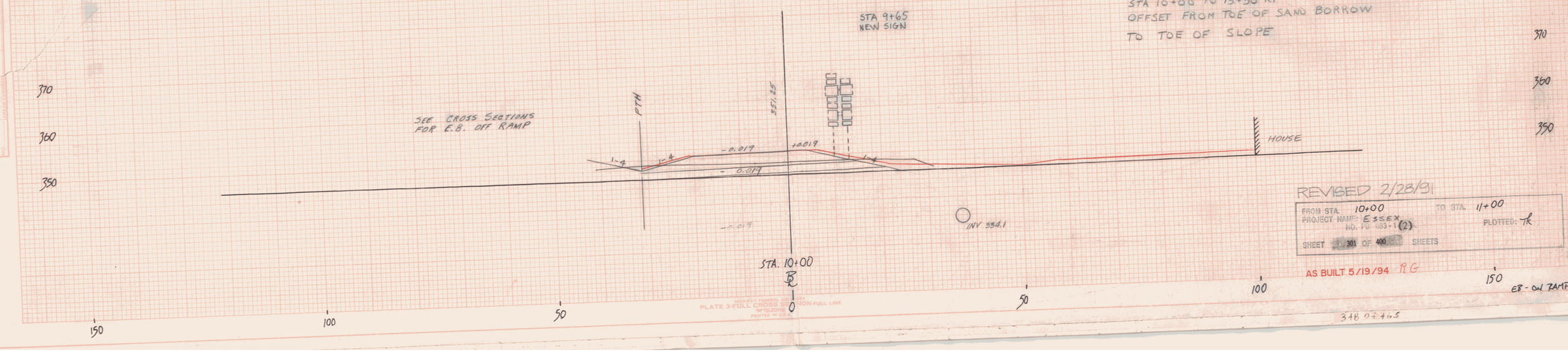
191 of 270

RAMP A
RTE 2A





PLANTING POCKET
STA 10+00 TO 13+50 RT
OFFSET FROM TOE OF SAND BORROW
TO TOE OF SLOPE



REVISED 2/28/91

FROM STA. 10+00 TO STA. 11+00
PROJECT NAME: ESSEX
NO. PB 083+1 (2)
PLOTTED: TK
SHEET 301 OF 400 SHEETS

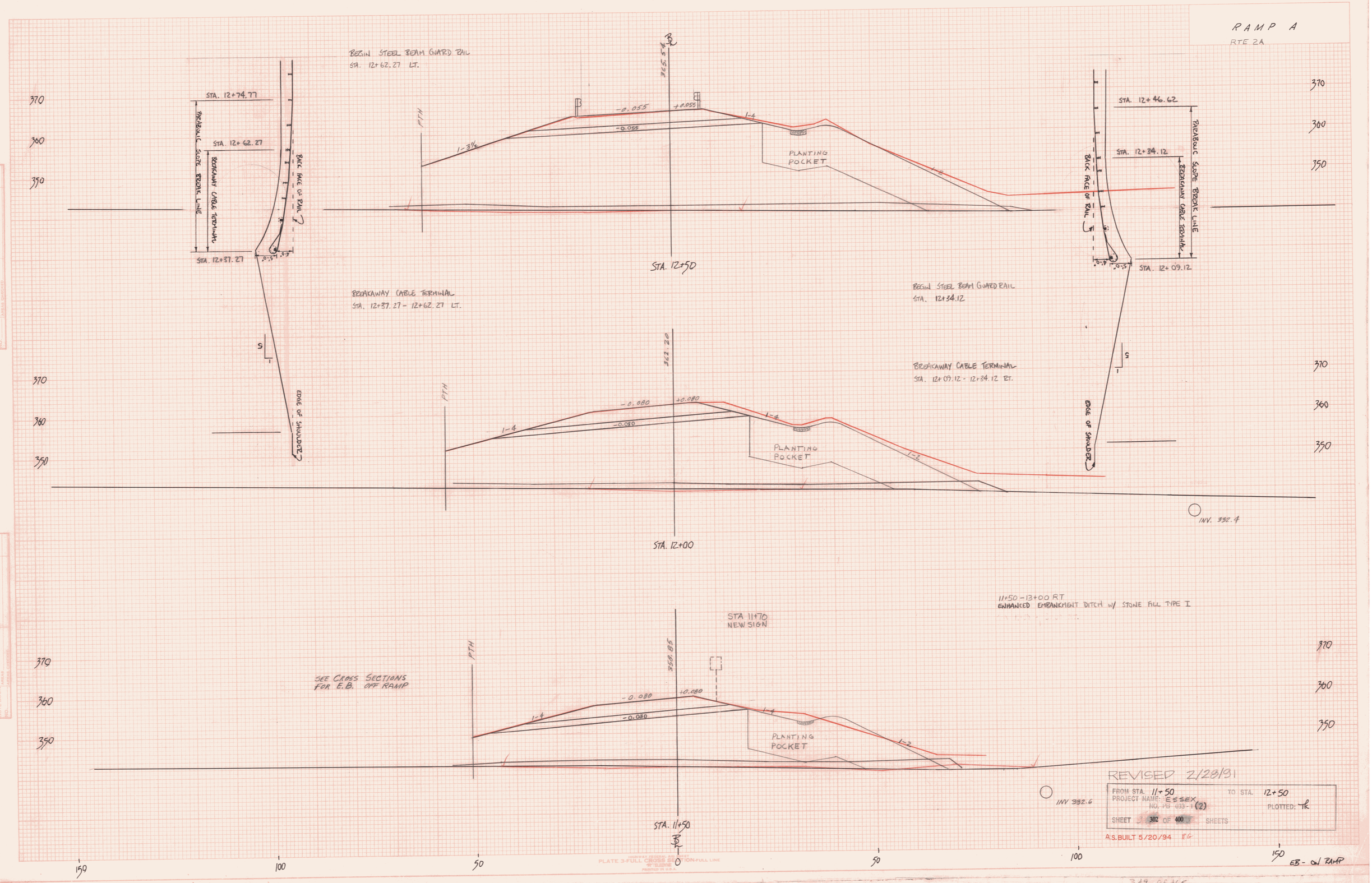
AS BUILT 5/19/94 RG

348 07 465

HIGHWAY FEDERAL AID SERIES
PLATE 3-FULL CROSS SECTION-FULL LINE
INTERSTATE
PRINTED IN U.S.A.

FINAL SURVEY
SURVEYED:
PLOTTED:
TRIPLATE:
NOTE BOOK:
AREA:
AREA CHECKED:
DATE:
BY:

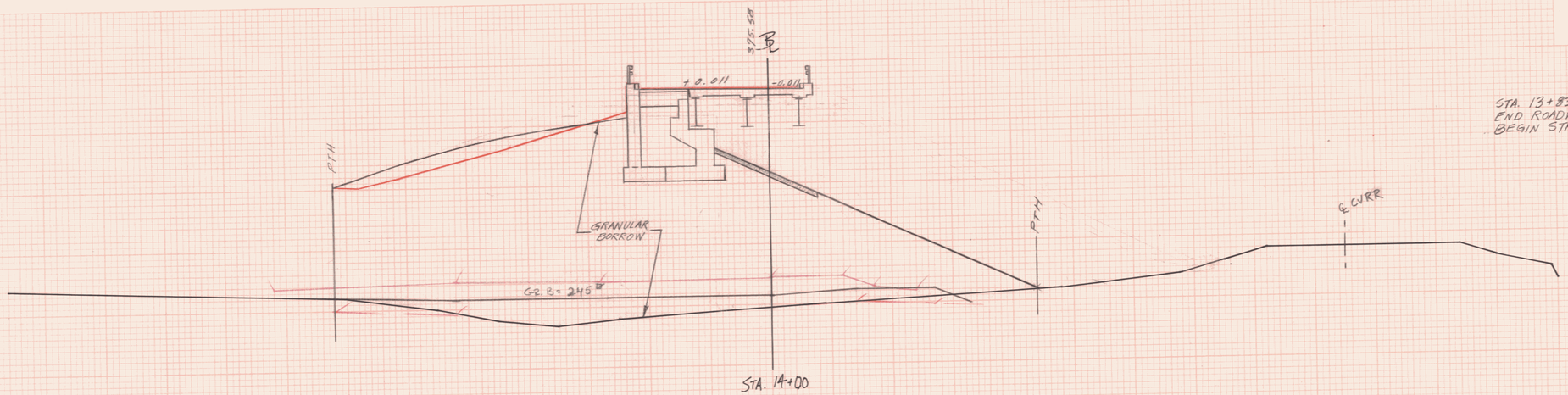
ORIGINAL SURVEY
NOTE BOOK:
NO.


RAMP A
RTE 2A
BEGIN STEEL BEAM GUARD RAIL
STA. 12+62.27 LT.
STA. 12+74.77
STA. 12+62.27
STA. 12+37.27
PARABOLIC SLOPE BREAK LINE
BREAKAWAY CABLE TERMINAL
BACK FACE OF RAIL
PTH
365.54
-0.055
+0.055
1-3½
1-4
PLANTING POCKET
STA. 12+50
STA. 12+46.62
STA. 12+34.12
STA. 12+09.12
BREAKAWAY CABLE TERMINAL
STA. 12+37.27 - 12+62.27 LT.
BEGIN STEEL BEAM GUARD RAIL
STA. 12+34.12
BREAKAWAY CABLE TERMINAL
STA. 12+09.12 - 12+34.12 RT.
EDGE OF SHOULDER
362.20
-0.080
+0.080
1-2
INV. 332.4
STA. 12+00
11+50 - 13+00 RT
ENHANCED EMBANKMENT DITCH w/ STONE FILL TYPE I
STA 11+70
NEW SIGN
SEE CROSS SECTIONS FOR E.B. OFF RAMP
358.85
INV 332.6
STA. 11+50
370
360
350
150
100
50
0
EB - ON RAMP
REVISED 2/28/91
FROM STA. 11+50
TO STA. 12+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED: TK
SHEET 302 OF 400 SHEETS
A.S. BUILT 5/20/94
349 of 465

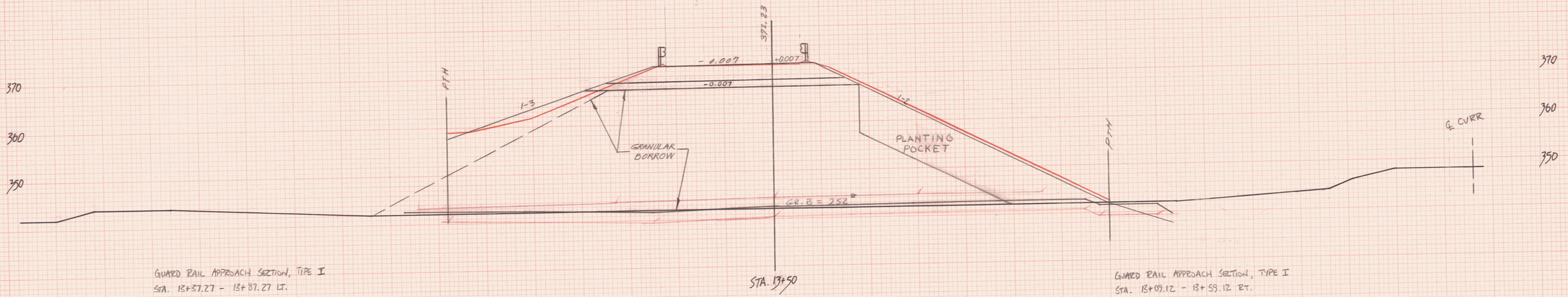
RAMP A

RTE 2A

STA. 13+83.92
END ROADWAY
BEGIN STRUCTURE # G



STA. 14+00

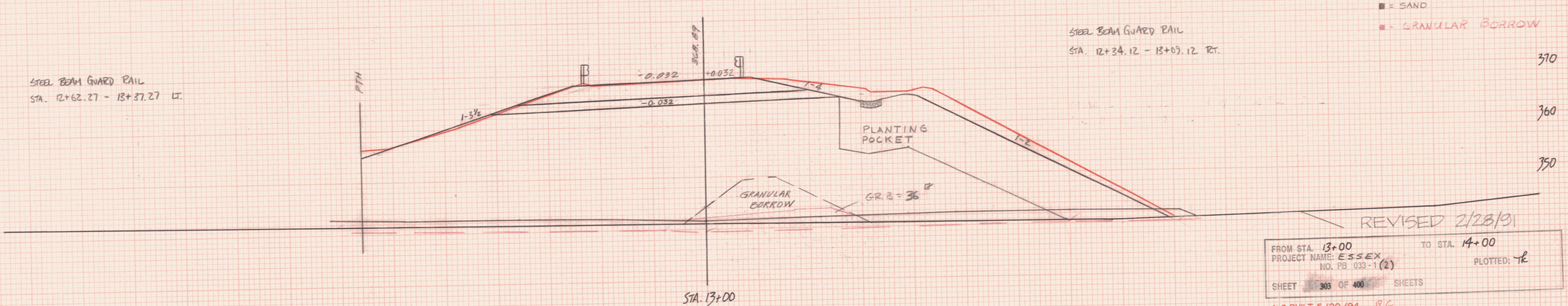


GUARD RAIL APPROACH SECTION, TYPE I
STA. 13+37.27 - 13+87.27 LT.

STA. 13+50

GUARD RAIL APPROACH SECTION, TYPE I
STA. 13+09.12 - 13+59.12 RT.

STEEL BEAM GUARD RAIL
STA. 12+62.27 - 13+37.27 LT.



STEEL BEAM GUARD RAIL
STA. 12+34.12 - 13+09.12 RT.

■ = STRIPPING
■ = SAND
■ = GRANULAR BORROW

STA. 13+00

REVISED 2/28/91

FROM STA. 13+00 TO STA. 14+00
PROJECT NAME: ESSEX
NO. PB 033-1(2) PLOTTED: TR
SHEET 303 OF 400 SHEETS

AS BUILT 5/20/94 RG

150 100 50 0 50 100 150

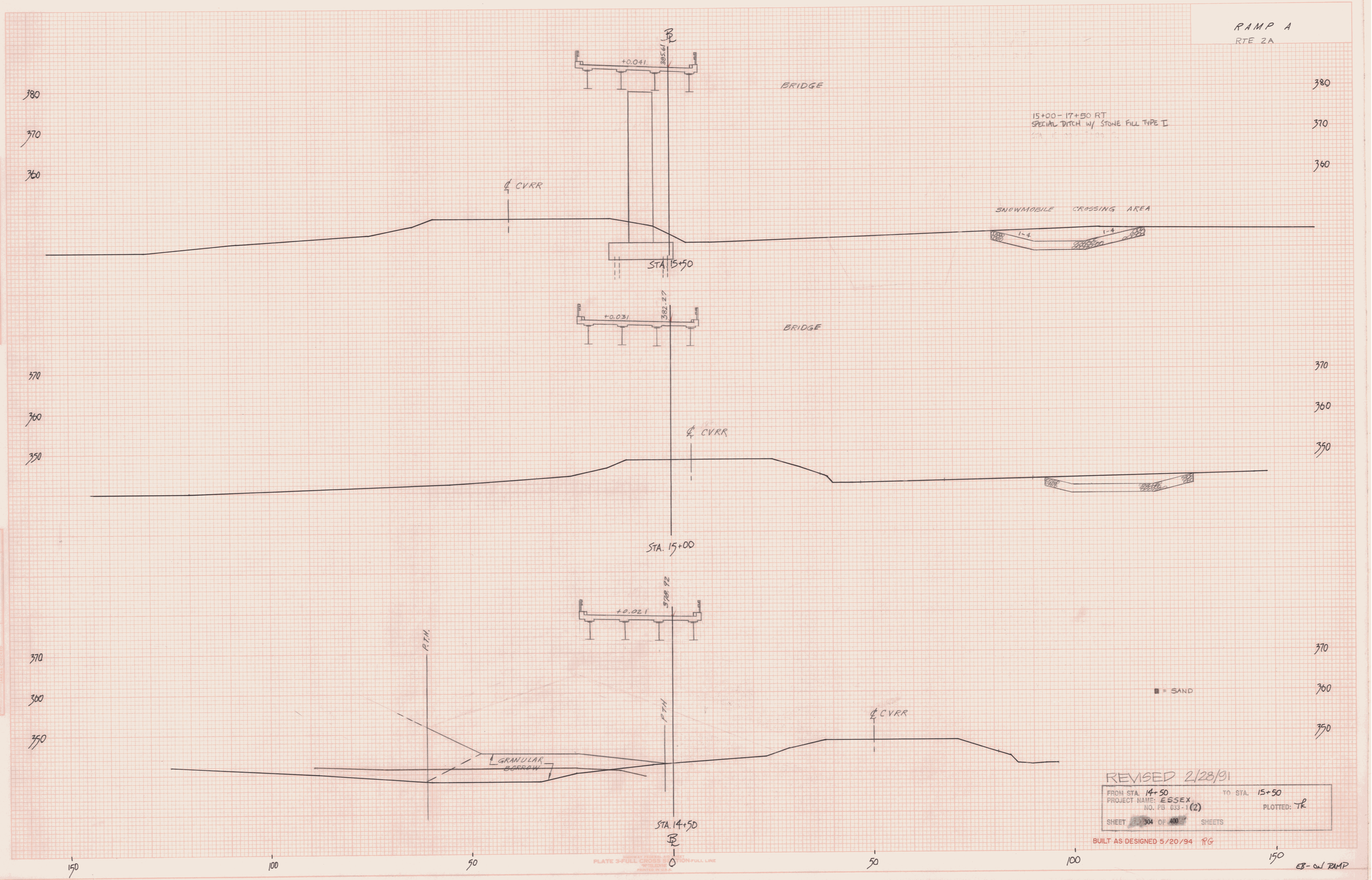
EB- ON RAMP

PLATE 3-FULL CROSS SECTION-FULL LINE

350 OF 465

PRINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TEMPLATE, PAGE, NOTE BOOK, AREAS CHECKED, NO.

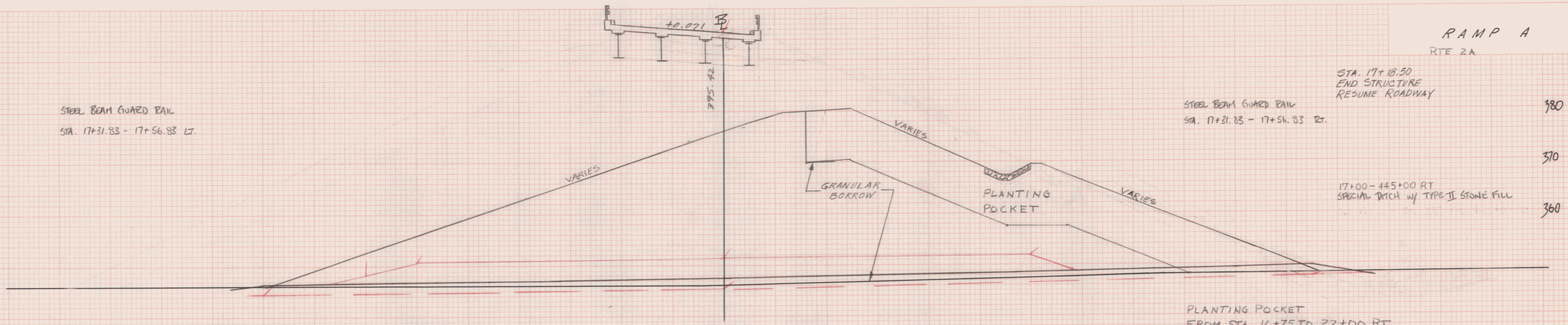
ORIGINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TEMPLATE, PAGE, NOTE BOOK, AREAS CHECKED, NO.


RAMP A
RTE 2A
BRIDGE
+0.041
385.61
15+00 - 17+50 RT
SPECIAL DITCH W/ STONE FILL TYPE I
℄ CVRR
SNOWMOBILE CROSSING AREA
1-4
1-4
STA. 15+50
+0.031
382.27
BRIDGE
℄ CVRR
STA. 15+00
+0.021
378.92
P.T.H.
P.T.H.
℄ CVRR
GRANULAR BORROW
■ = SAND
STA. 14+50
380
370
360
350
150
100
50
0
50
100
150
REVISED 2/28/91
FROM STA. 14+50
TO STA. 15+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED: TK
SHEET 304 OF 400 SHEETS
BUILT AS DESIGNED 5/20/94 RG
EB-ON RAMP

RAMP A

RTE. 2A

STEEL BEAM GUARD RAIL
STA. 17+31.83 - 17+56.83 LT.



STA. 17+00

GUARD RAIL APPROACH SECTION, TYPE II
STA. 17+19.33 - 17+31.83 LT.

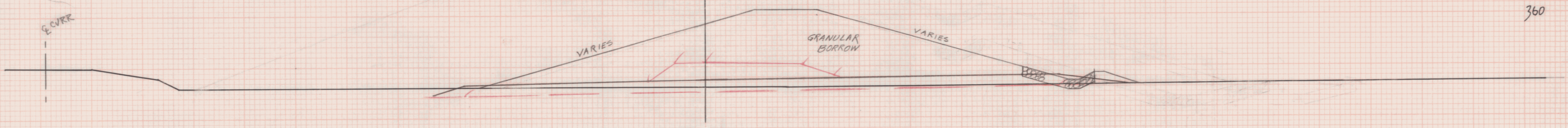
STA. 17+18.50
END STRUCTURE
RESUME ROADWAY

STEEL BEAM GUARD RAIL
STA. 17+31.83 - 17+56.83 RT.

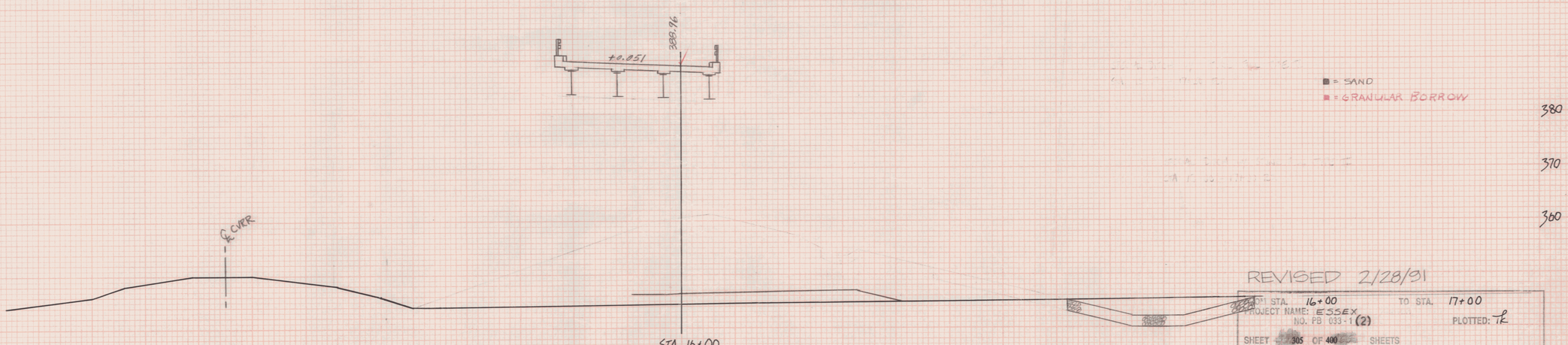
17+00 - 445+00 RT
SPECIAL DITCH W/ TYPE II STONE FILL

PLANTING POCKET
FROM STA 16+75 TO 22+00 RT
OFFSET FROM TOE OF SAND BORROW
TO TOE OF SLOPE

GUARD RAIL APPROACH SECTION, TYPE II
STA. 17+19.33 - 17+31.83 RT.



STA. 16+50



STA. 16+00

REVISED 2/28/91

FROM STA. 16+00 TO STA. 17+00
PROJECT NAME: ESSEX
NO. PB 033-1 (2) PLOTTED: TR
SHEET 305 OF 400 SHEETS

BUILT AS DESIGNED 5/20/94 TG

PLATE 3-FULL CROSS SECTION-FULL LINE

EB - ON RAMP

RAMP A
RTE 2A

PLANTING POCKET
FROM STA 17+25 TO 19+50 LT
OFFSET FROM TOE OF SAND BORROW
TO 75' LEFT

17+25 - 21+60 LT
SPECIAL DITCH W/
TYPE I STONE FILL
(MRTE 289 - RAMP A GORE)

BREAKAWAY CABLE TERMINAL
STA. 17+56.83 - 17+81.83 LT.

END STEEL BEAM GUARD RAIL
STA. 17+56.83 LT.

17+50 - 22+50 RT
ENHANCED EMBANKMENT DITCH
W/ EROSION MATTING & SEEDING

BREAKAWAY CABLE TERMINAL
STA. 17+56.83 - 17+81.83 RT.

END STEEL BEAM GUARD RAIL
STA 17+56.83 RT.

TYPICAL NOTE
GRADE BENCH TO DRAIN WITH 0.021 FT/FT SLOPE
BENCH ROUNDINGS SHALL BE 10 FT RADIUS

REVISED 2/28/91

FROM STA. 17+50 TO STA. 18+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED: TE
SHEET 306 OF 400 SHEETS AS BUILT 5/20/94 BG

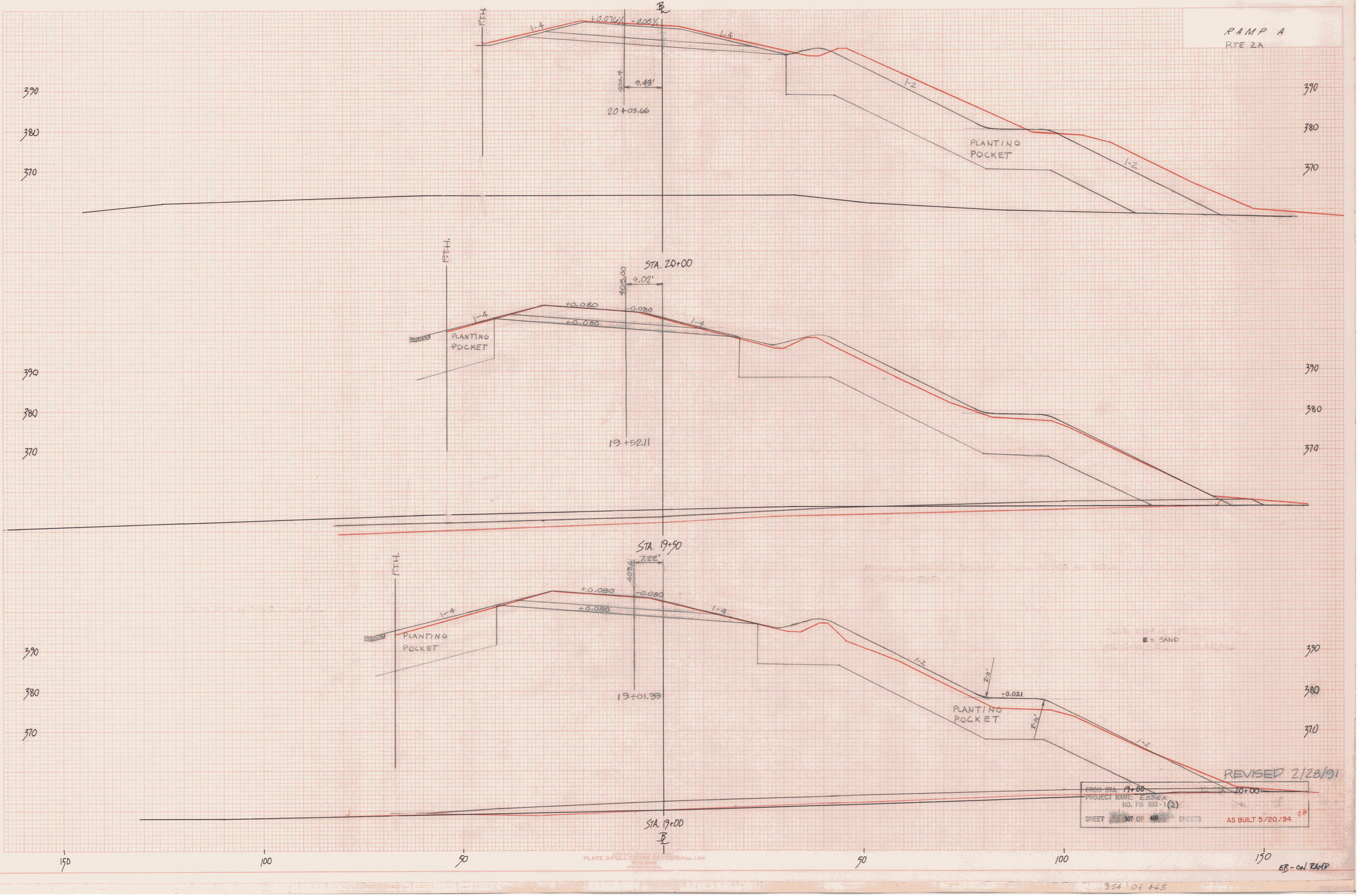
INV. 346.0

EB - ON RAMP

PLATE 3-FULL CROSS SECTION-FULL LINE

353 OF 465

RAMP A
RTE 2A



REVISED 2/28/91

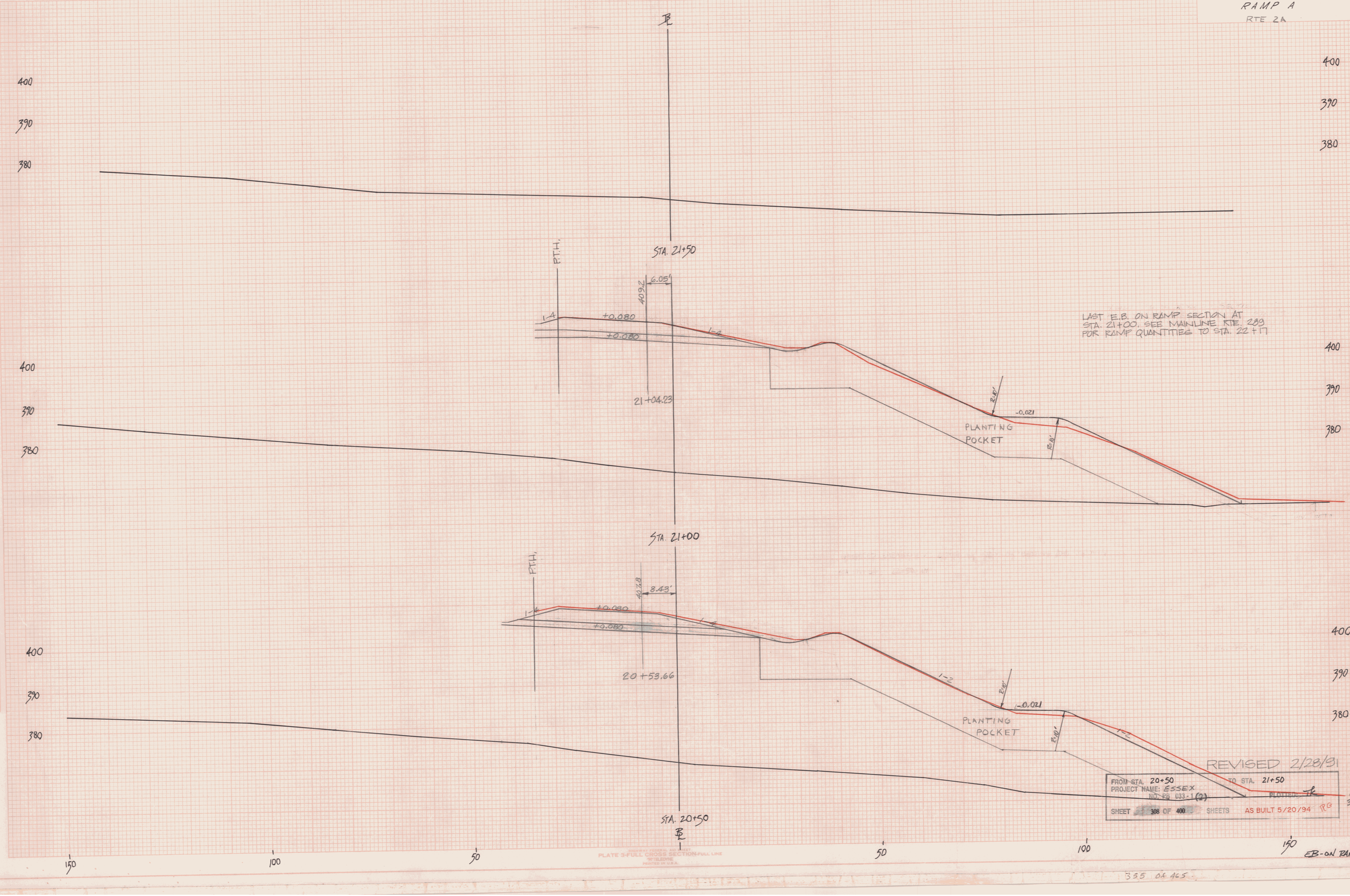
FROM STA. 19+00 TO STA. 20+00
PROJECT NAME: ESSEX
NO. FB 033-1(2)
SHEET 307 OF 400 SHEETS
AS BUILT 5/20/94

FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, NOTE BOOK, NO., AREAS CHECKED, BY, DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, NOTE BOOK, NO., AREAS CHECKED, BY, DATE

HIGHWAY FEDERAL AID SERIES
PLATE 3-FULL CROSS SECTION-FULL LINE
WILLDING
PRINTED IN U.S.A.

RAMP A
RTE 2A



LAST E.B. ON RAMP SECTION AT STA. 21+00. SEE MAINLINE RTE. 289 FOR RAMP QUANTITIES TO STA. 22+17

REVISED 2/28/91

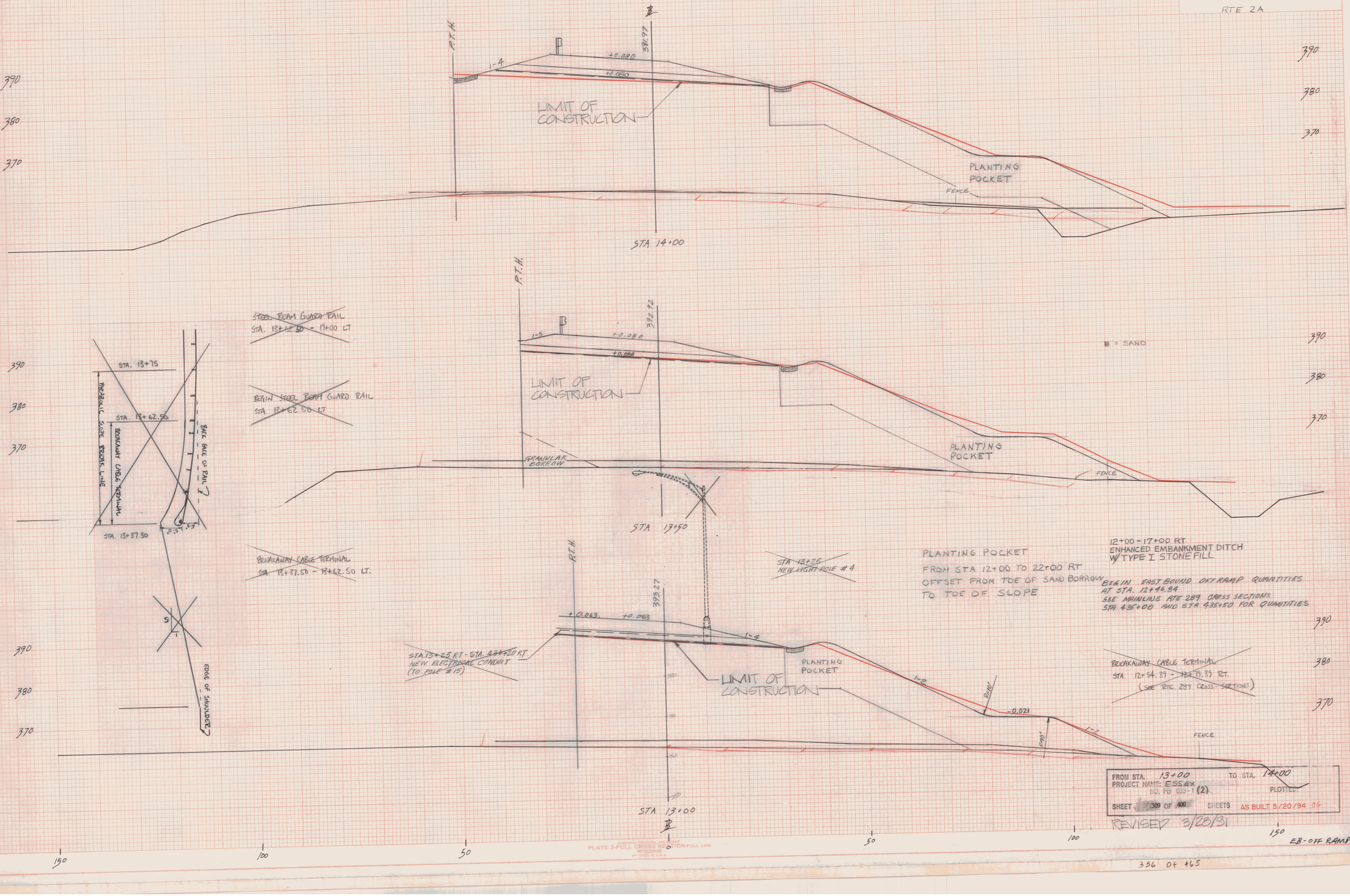
FROM STA. 20+50 TO STA. 21+50
PROJECT NAME: ESSEX
NO.: FB 033-1(2) PLOTTED: TK
SHEET 308 OF 400 SHEETS AS BUILT 5/20/94 RG

INV 352.0

EB-ON RAMP

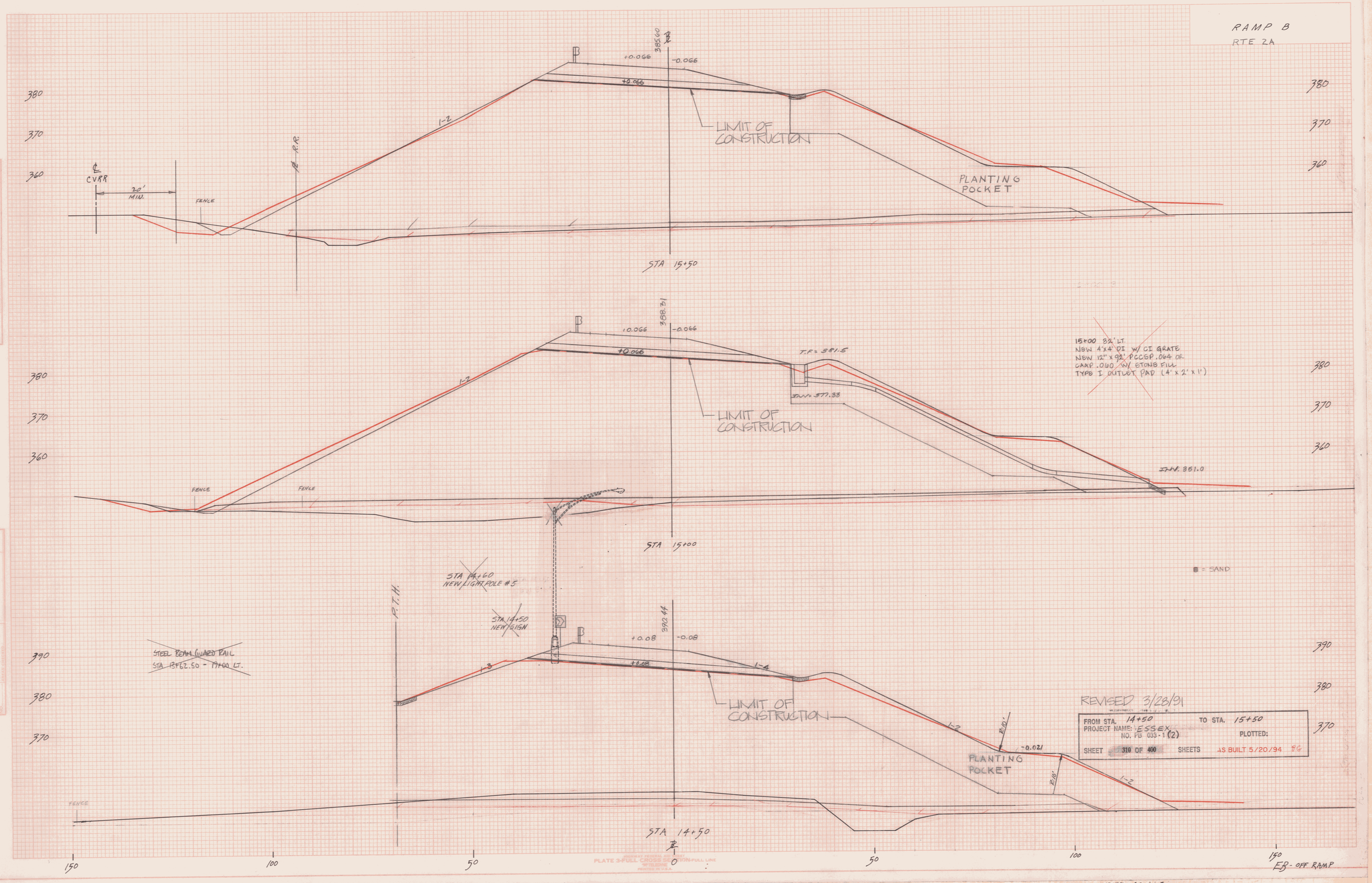
PLATE 3-FULL CROSS SECTION-FULL LINE

RAMP B
RTE 2A



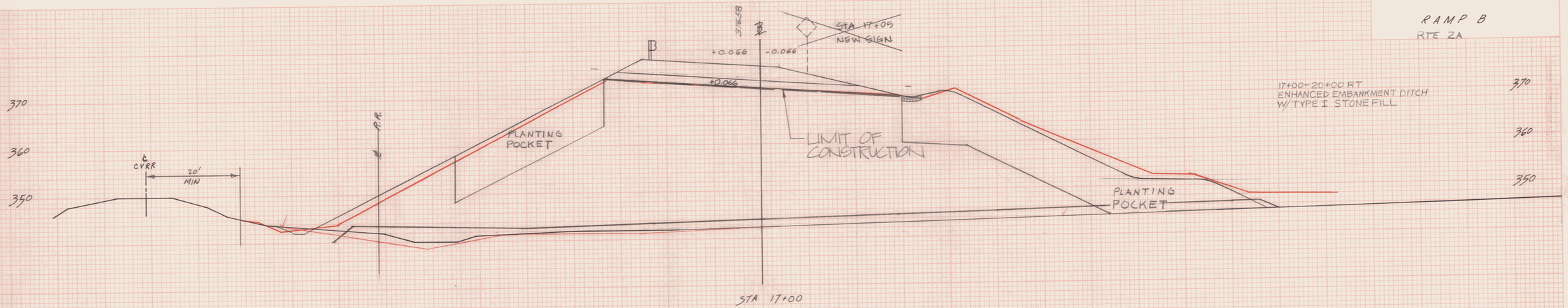
FROM STA. 13+00 TO STA. 14+00
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED:
SHEET 309 OF 400 SHEETS AS BUILT 5/20/94 ITS
REVISED 3/28/91

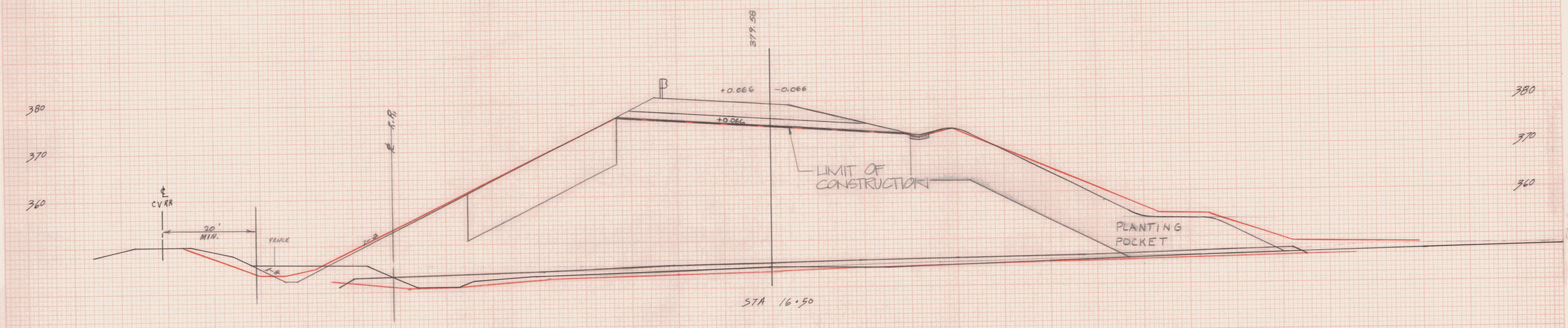
PLATE 3-FULL CROSS SECTION-FULL LINE


RAMP B
RTE 2A
385.60
+0.066
-0.066
+0.066
1-2
LIMIT OF CONSTRUCTION
PLANTING POCKET
℄ CVRR
20' MIN.
FENCE
℄ R.R.
STA 15+50
388.31
+0.066
-0.066
+0.066
T.F.= 381.5
INV.= 377.33
15+00 32' LT.
NEW 4'x4' DI W/ CI GRATE
NEW 12" x 92' PCCSP .064 OR
CAAP .060 W/ STONE FILL
TYPE I OUTLET PAD (4' x 2' x 1')
INV. 351.0
STA 15+00
STA 14+60
NEW LIGHT POLE #5
STA 14+50
NEW SIGN
P.T.H.
390.44
+0.08
-0.08
+0.08
1-3
1-4
STEEL BEAM GUARD RAIL
STA 13+62.50 - 19+00 LT.
LIMIT OF CONSTRUCTION
-0.021
PLANTING POCKET
STA 14+50
= SAND
REVISED 3/28/91
FROM STA. 14+50 TO STA. 15+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED:
SHEET 310 OF 400 SHEETS
AS BUILT 5/20/94
EB - OFF RAMP
PLATE 3-FULL CROSS SECTION-FULL LINE
FINAL SURVEY
ORIGINAL SURVEY
357 Of 465

RAMP B
RTE 2A

17+00 - 20+00 RT
ENHANCED EMBANKMENT DITCH
W/ TYPE I STONE FILL

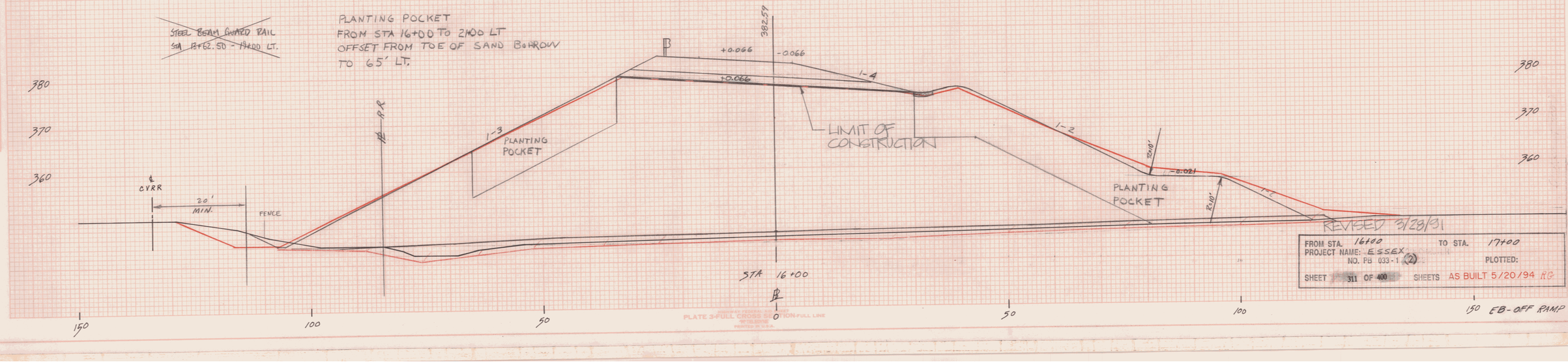




■ = SAND

STEEL BEAM GUARD RAIL
STA 12+62.50 - 13+00 LT.

PLANTING POCKET
FROM STA 16+00 TO 21+00 LT
OFFSET FROM TOE OF SAND BORROW
TO 65' LT.



REVISED 3/28/91

FROM STA. 16+00 TO STA. 17+00
PROJECT NAME: ESSEX
NO. FB 033-1 (2) PLOTTED:
SHEET 311 OF 400 SHEETS AS BUILT 5/20/94 RC

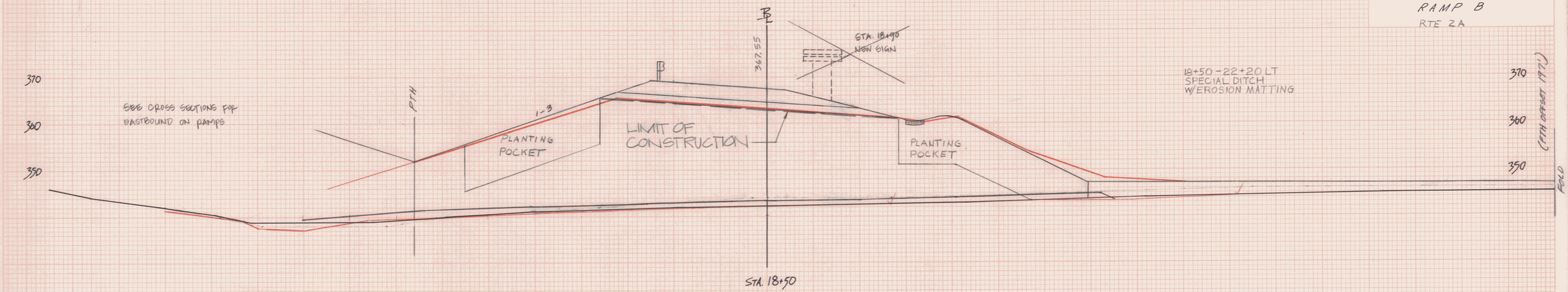
150 100 50 0 50 100 150 EB-OFF RAMP

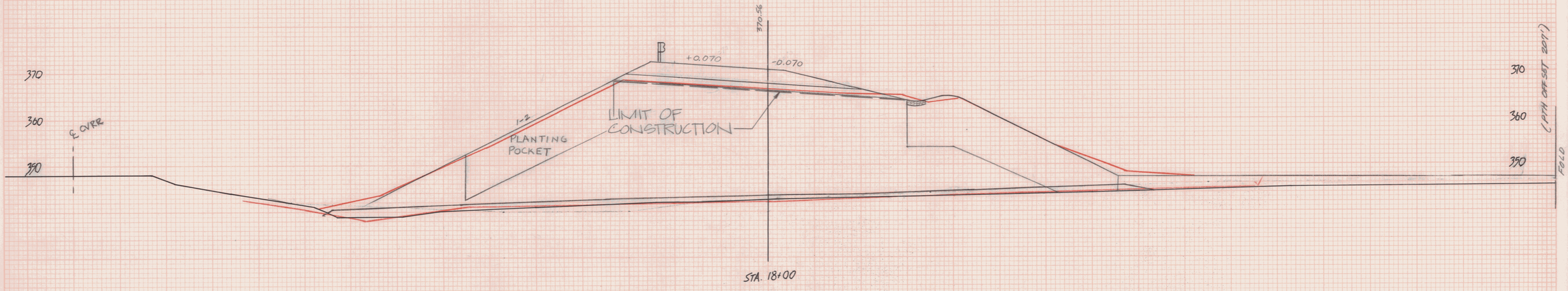
PLATE 3-FULL CROSS SECTION-FULL LINE

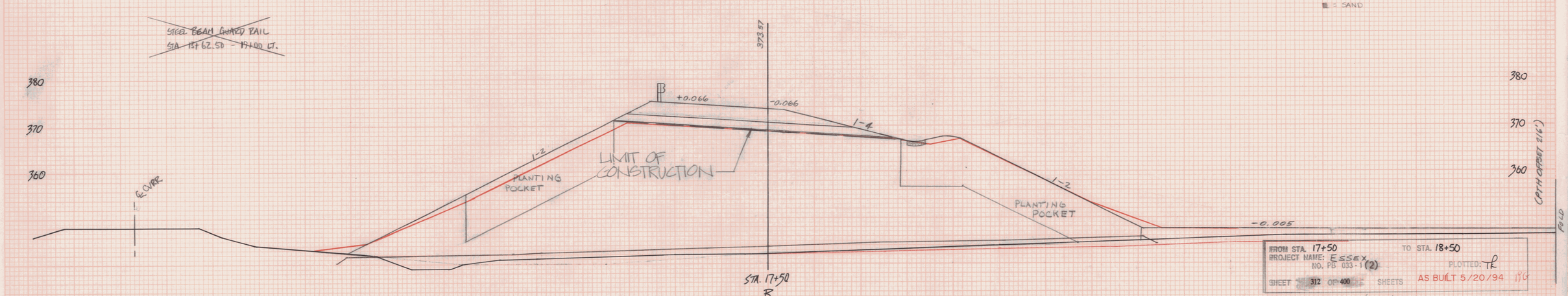
FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE AREAS, FINAL CHECKED, DATE, BY, NOTE BOOK, NO.

ORIGINAL SURVEY — PLOTTED, TEMPLATE AREAS, FINAL CHECKED, DATE, BY, NOTE BOOK, NO.

RAMP B
RTE 2A







= SAND

FROM STA. 17+50 TO STA. 18+50
PROJECT NAME: ESSEX
NO. PB 033-1(2) PLOTTED: TR
SHEET 312 OF 400 SHEETS AS BUILT 5/20/94 TR

REVISED 3/28/91

PLATE 3-FULL CROSS SECTION-FULL LINE

RAMP B
RTE 2A

STA. 20+17
PAVEMENT WIDTH BEGINS TO INCREASE ON A 160' TAPER ALONG THE LEFT EDGE FROM 16' TO 24' AT STA. 21+85

EB-ON STA. 12+65
EL. 366.54

P.T.H.

℄ 358.53

1-3½

+0.070

1-4

PLANTING POCKET

LIMIT OF CONSTRUCTION

PLANTING POCKET

1-4

P.T.H.

360
350
340

STA. 20+00

EB-ON STA. 13+25
EL. 470.56

1-3

P.T.H.

℄ 361.53

+0.070

1-4

1-4

1-3

EDGE OF SHOULDER

PLANTING POCKET

LIMIT OF CONSTRUCTION

370
360
350

BREAKAWAY CABLE TERMINAL
STA 19+00 - 19+25 LT.

1
5

STA. 19+50

EB-ON-RAMP STA. 13+84
EL 374.51

1-3

STA. 19+25

5'-0"

4'-0"

PARABOLIC SLOPE BREAK LINE

BREAKAWAY CABLE TERMINAL

P.T.H.

℄ 364.54

BACK FACE OF RAIL

STA. 19+00

STA. 18+87.50

+0.070

+0.070

1-4

PLANTING POCKET

LIMIT OF CONSTRUCTION

PLANTING POCKET

1-2

-0.005

END STEEL BEAM GUARD RAIL
STA 19+00 LT.

380
370
360
350

■ = SAND

REVISED 3/28/91

FROM STA. 19+00 TO STA. 20+00
PROJECT NAME: ESSEX (2)
NO. FS 033-1 PLOTTED: PE
SHEET 313 OF 400 SHEETS

AS BUILT 5/20/94

STA. 19+00
℄

150 100 50 0 50 100 150

EB- OFF RAMP

(PTH OFFSET 182')

FOLD

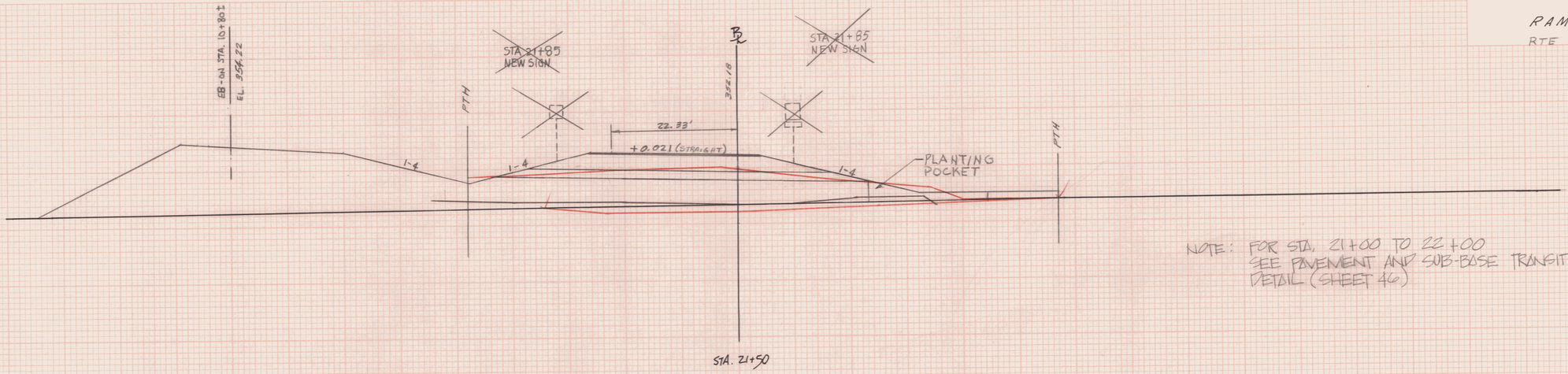
PLATE 3-FULL CROSS SECTION-FULL LINE

360 of 465

FINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TEMPLATE, AREAS, NOTE BOOK, NO., AREAS CHECKED

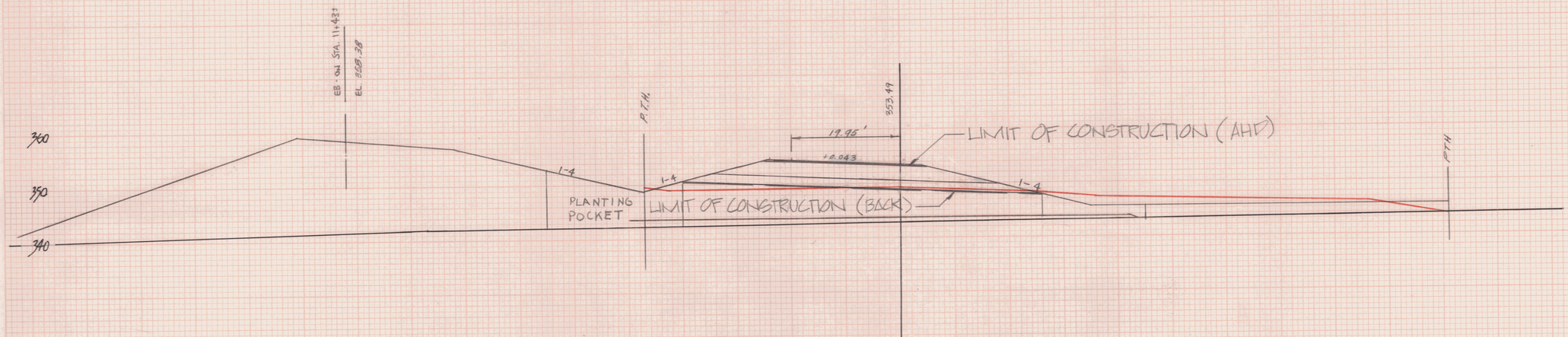
ORIGINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TEMPLATE, AREAS, NOTE BOOK, NO., AREAS CHECKED

RAMP B
RTE 2A

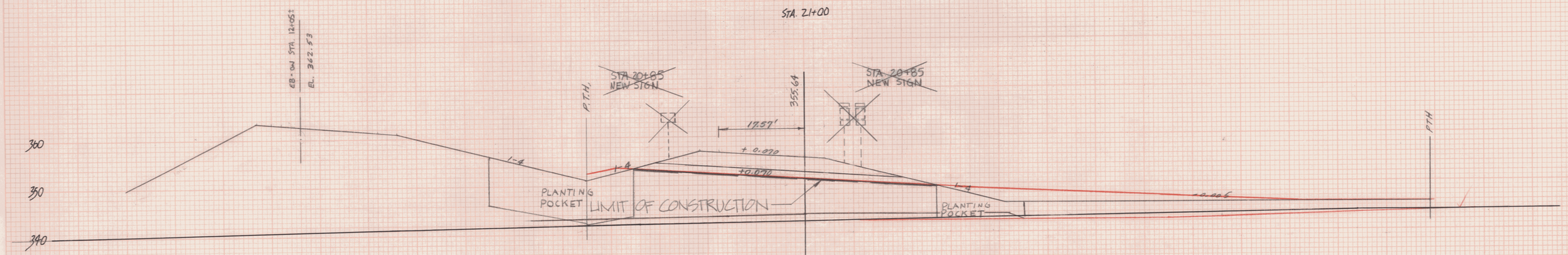


NOTE: FOR STA. 21+00 TO 22+00
SEE PAVEMENT AND SUB-BASE TRANSITION
DETAIL (SHEET 46)

STA. 21+50



STA. 21+00



℄ = SAND

STA. 20+50

150 100 50 0 50 100 150

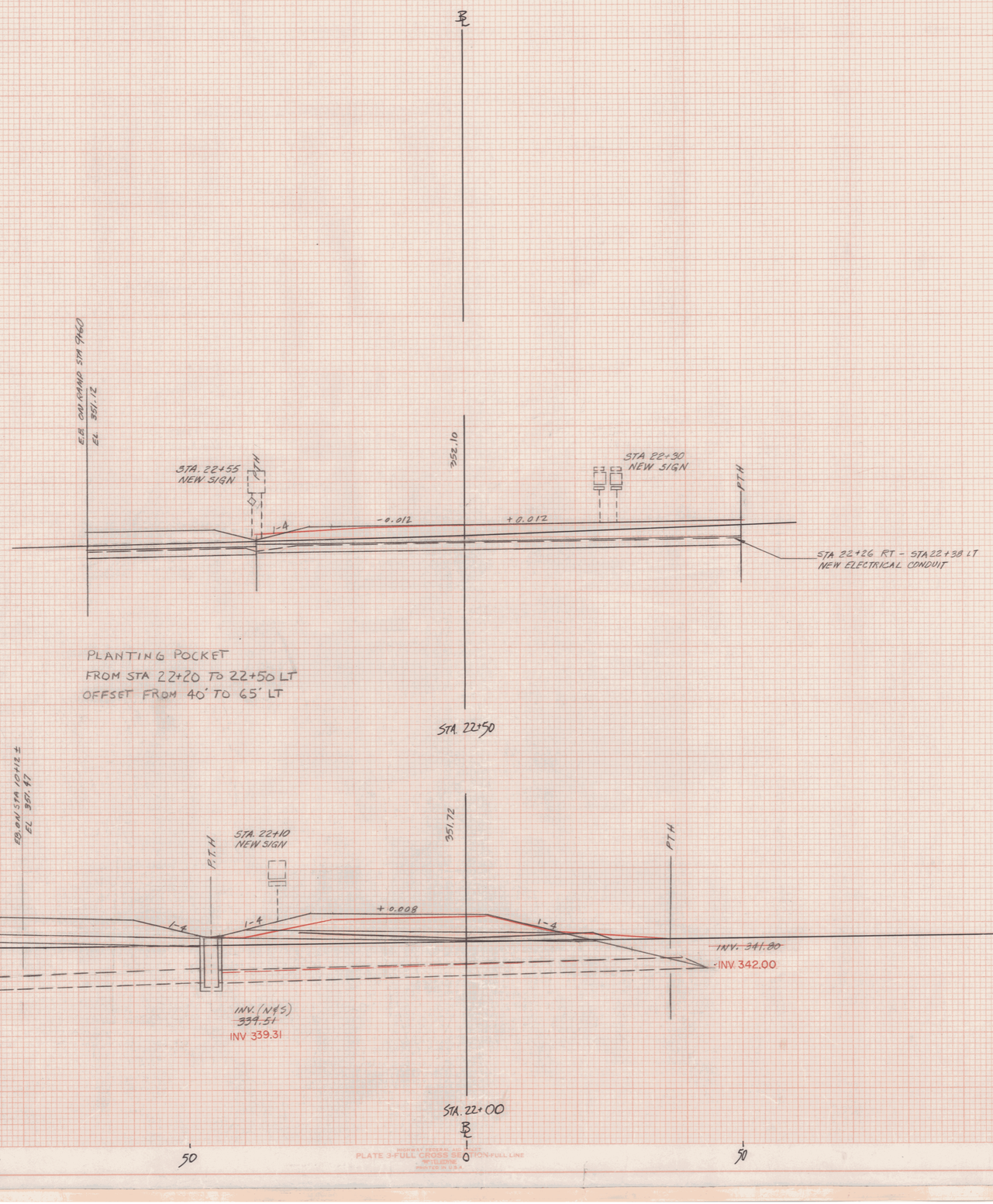
EB-OFF RAMP

REVISED 3/28/91

FROM STA. 20+50 TO STA. 21+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED: TR
SHEET 314 OF 400 SHEETS
AS BUILT 5/20/94 RB

PLATE 3-FULL CROSS SECTION-FULL LINE

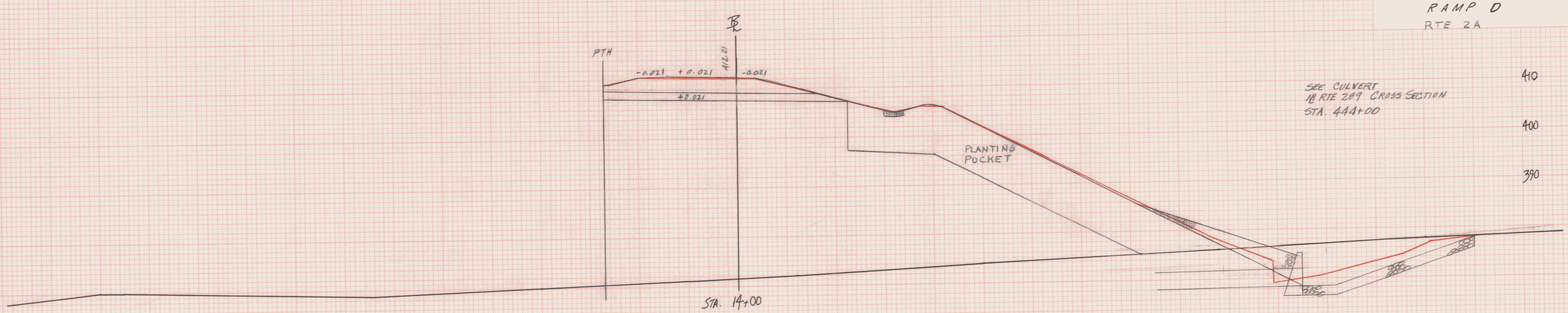
RAMP B
RTE 2A



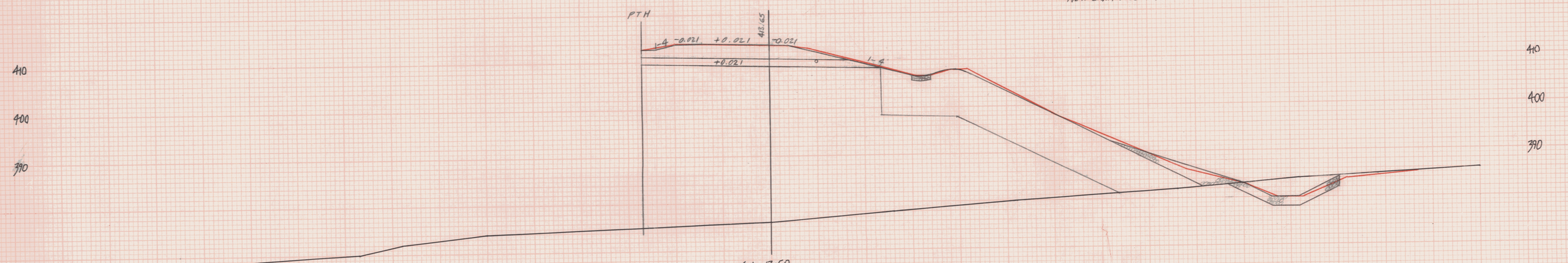
FROM STA. 22+00 TO STA. 22+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2) PLOTTED: TR
SHEET 315 OF 400 SHEETS AS BUILT 5/20/94 TR

PLATE 3-FULL CROSS SECTION-FULL LINE
MIDWAY FEDERAL AID PROJECT
RITTLEDINE
PRINTED IN U.S.A.

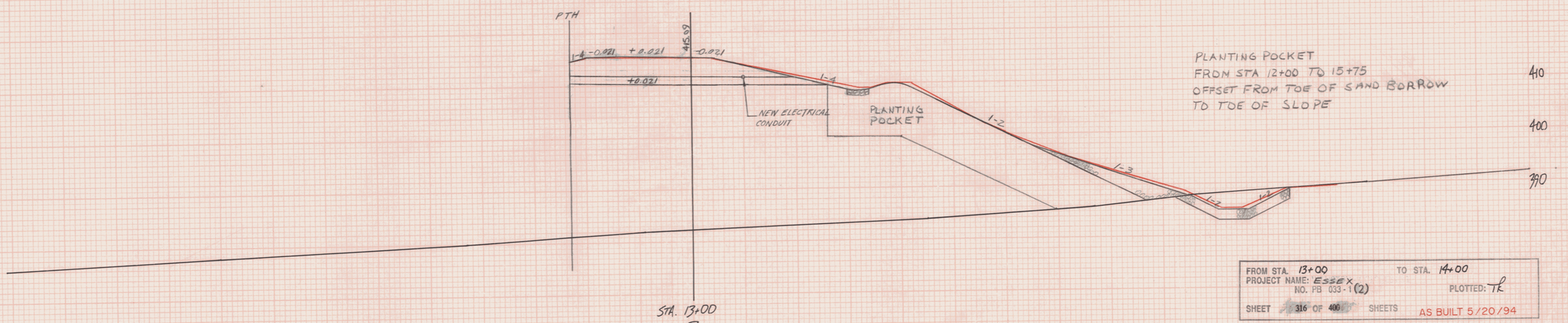
RAMP D
RTE 2A



NOTE: SEE RTE. 289 STA 444+50
RAMP D STA 13+40
NEW LIGHT POLE #7



RTE 2A - RAMP D
STA 13+50 RT-LT
6"x36' PVC UTILITY SLEEVE



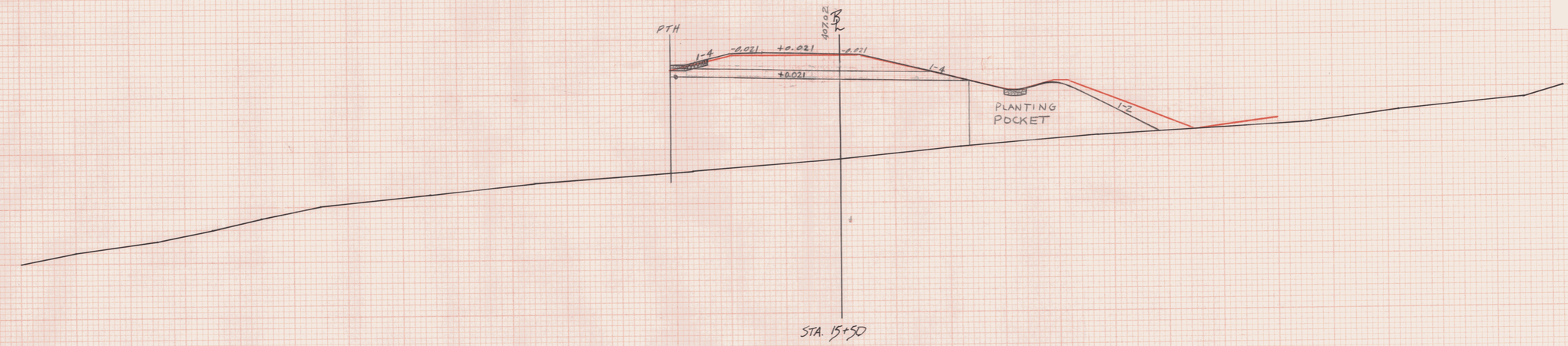
PLANTING POCKET
FROM STA 12+00 TO 15+75
OFFSET FROM TOE OF SAND BORROW
TO TOE OF SLOPE

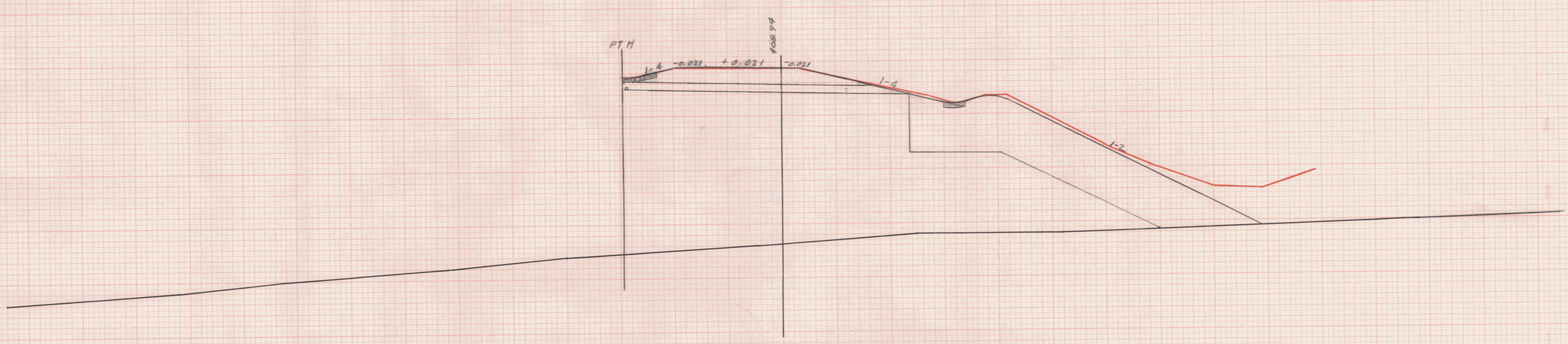
FROM STA. 13+00 TO STA. 14+00
PROJECT NAME: ESSEX
NO. PB 033-1 (2) PLOTTED: TR
SHEET 316 OF 400 SHEETS AS BUILT 5/20/94

150 100 50 0 50 100 150 WB - OFF RAMP

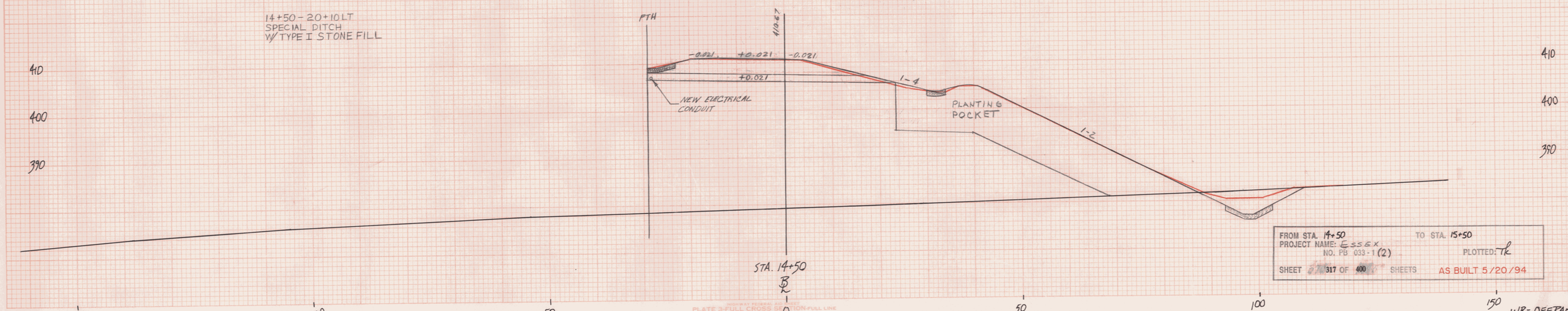
PLATE 3-FULL CROSS SECTION-FULL LINE

RAMP D
RTE 2A





14+50 - 20+10 LT
SPECIAL DITCH
W/ TYPE I STONE FILL



FROM STA. 14+50 TO STA. 15+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2) PLOTTED: TK
SHEET 317 OF 400 SHEETS AS BUILT 5/20/94

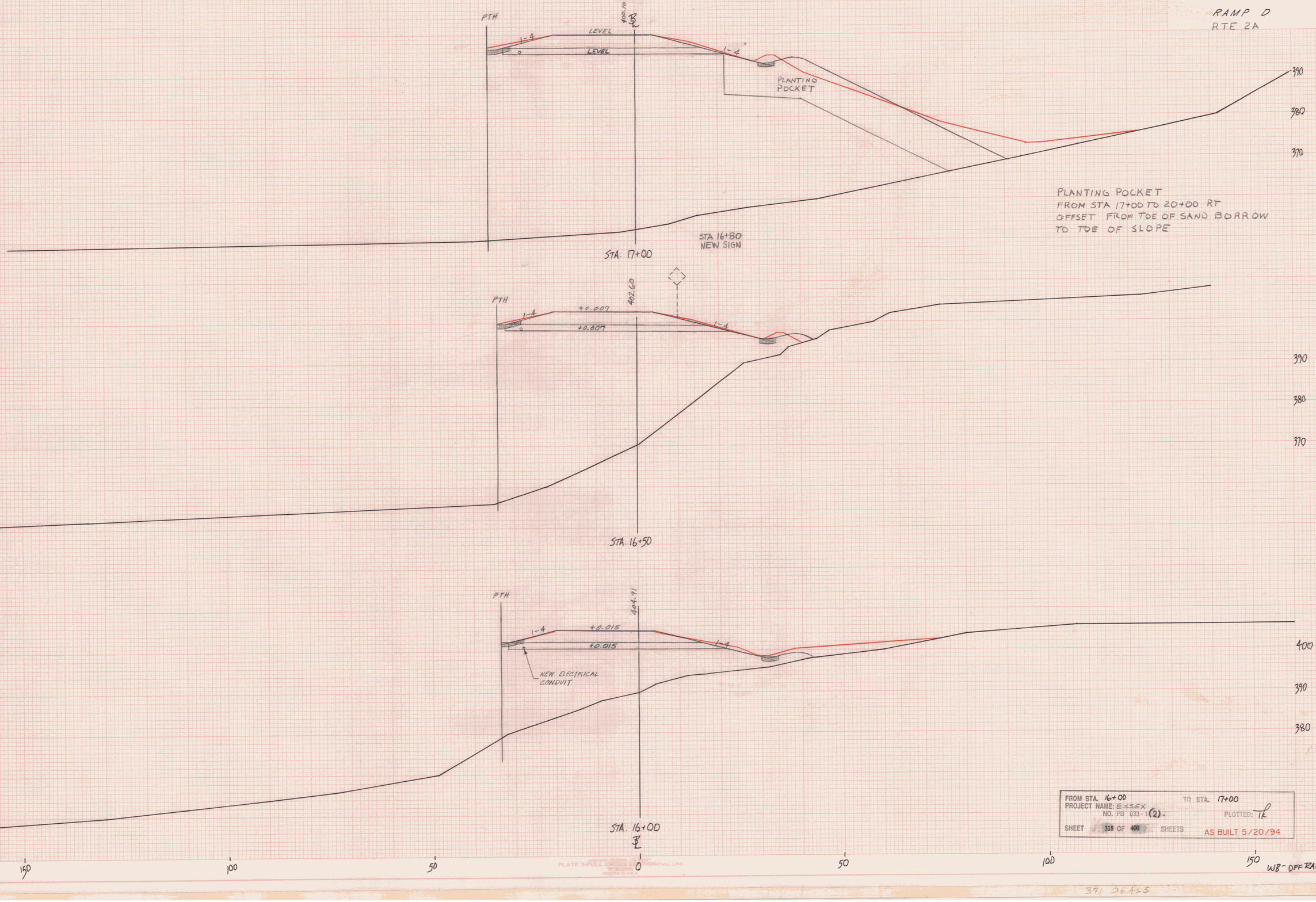
WB-OFFRAMP

PLATE 3-FULL CROSS SECTION-FULL LINE

FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

RAMP D
RTE 2A



PLANTING POCKET
FROM STA 17+00 TO 20+00 RT
OFFSET FROM TOE OF SAND BORROW
TO TOE OF SLOPE

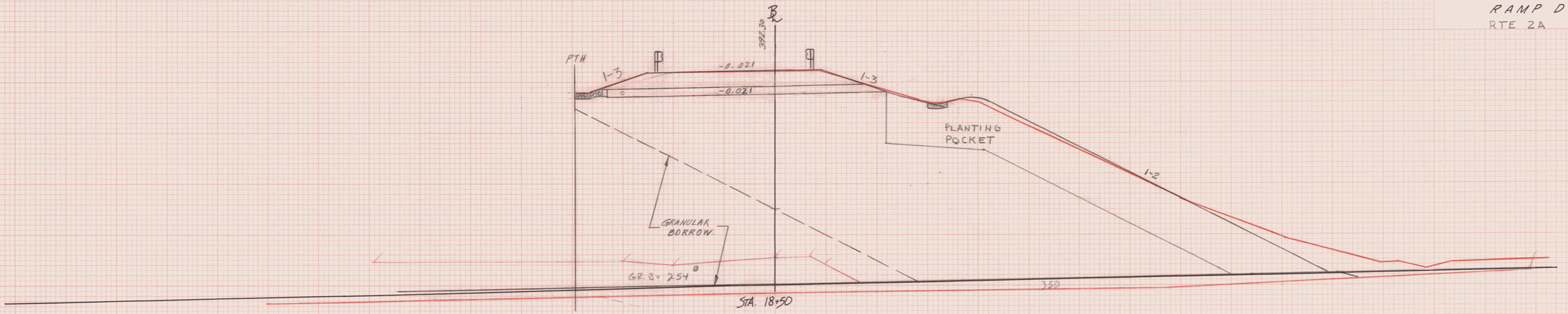
FROM STA. 16+00 TO STA. 17+00
PROJECT NAME: ESSEX
NO. FB 033-1(2)
PLOTTED: 12
SHEET 318 OF 400 SHEETS
AS BUILT 5/20/94

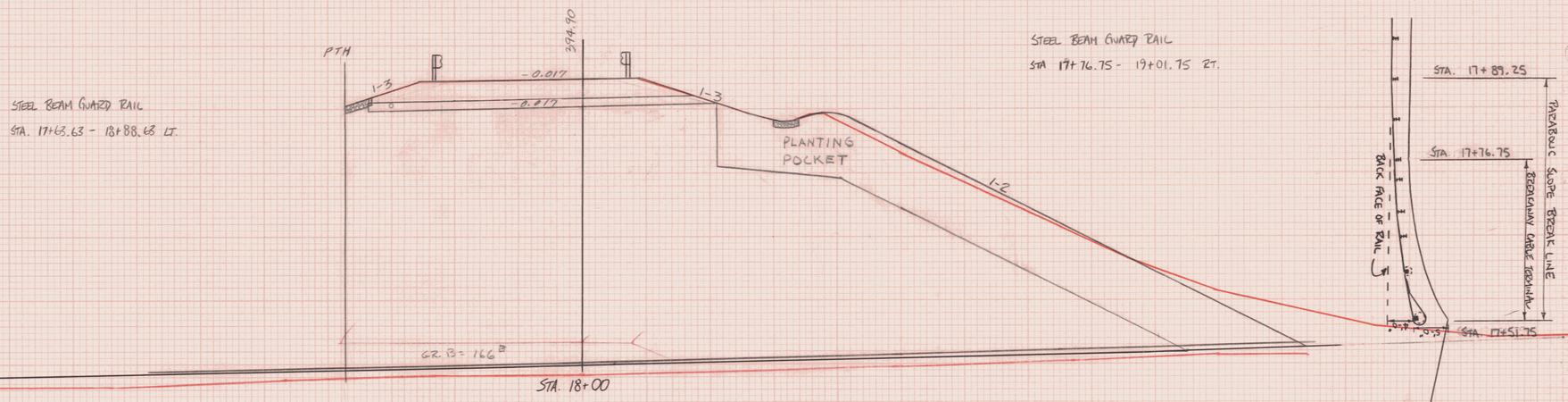
FINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TEMPLATE, AREAS, DATA CHECKED, NOTE BOOK, NO.

ORIGINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TEMPLATE, AREAS, DATA CHECKED, NOTE BOOK, NO.

HIGHWAY FEDERAL AID SERIES
PLATE 3-FULL CROSS SECTION-FULL LINE
WITH CURB
PRINTED IN U.S.A.

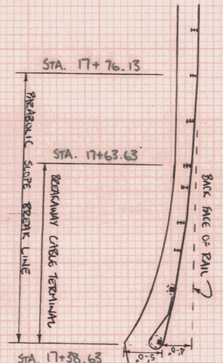
RAMP D
RTE 2A





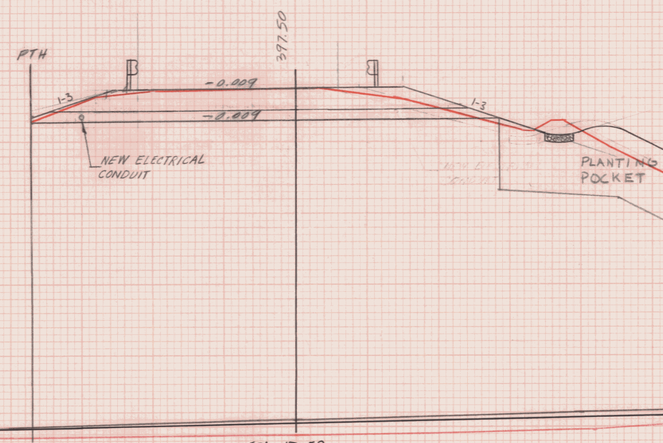
STEEL BEAM GUARD RAIL
STA. 17+63.63 - 18+88.63 LT.

STEEL BEAM GUARD RAIL
STA 17+76.75 - 19+01.75 RT.



BEGIN STEEL BEAM GUARD RAIL
STA. 17+63.63

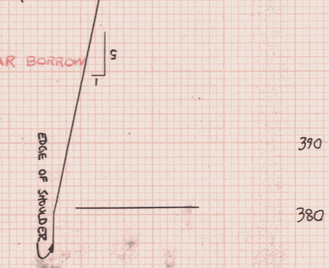
BREAKAWAY CABLE TERMINAL
STA. 17+38.63 - 17+63.63 LT.



BEGIN STEEL BEAM GUARD RAIL
STA. 17+76.75 RT

S = SAND
G = GRANULAR BORROW

BREAKAWAY CABLE TERMINAL
STA 17+51.75 - 17+76.75 RT.



FROM STA. 17+50 TO STA. 18+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED: TR
SHEET 319 OF 400 SHEETS
AS BUILT 5/20/94

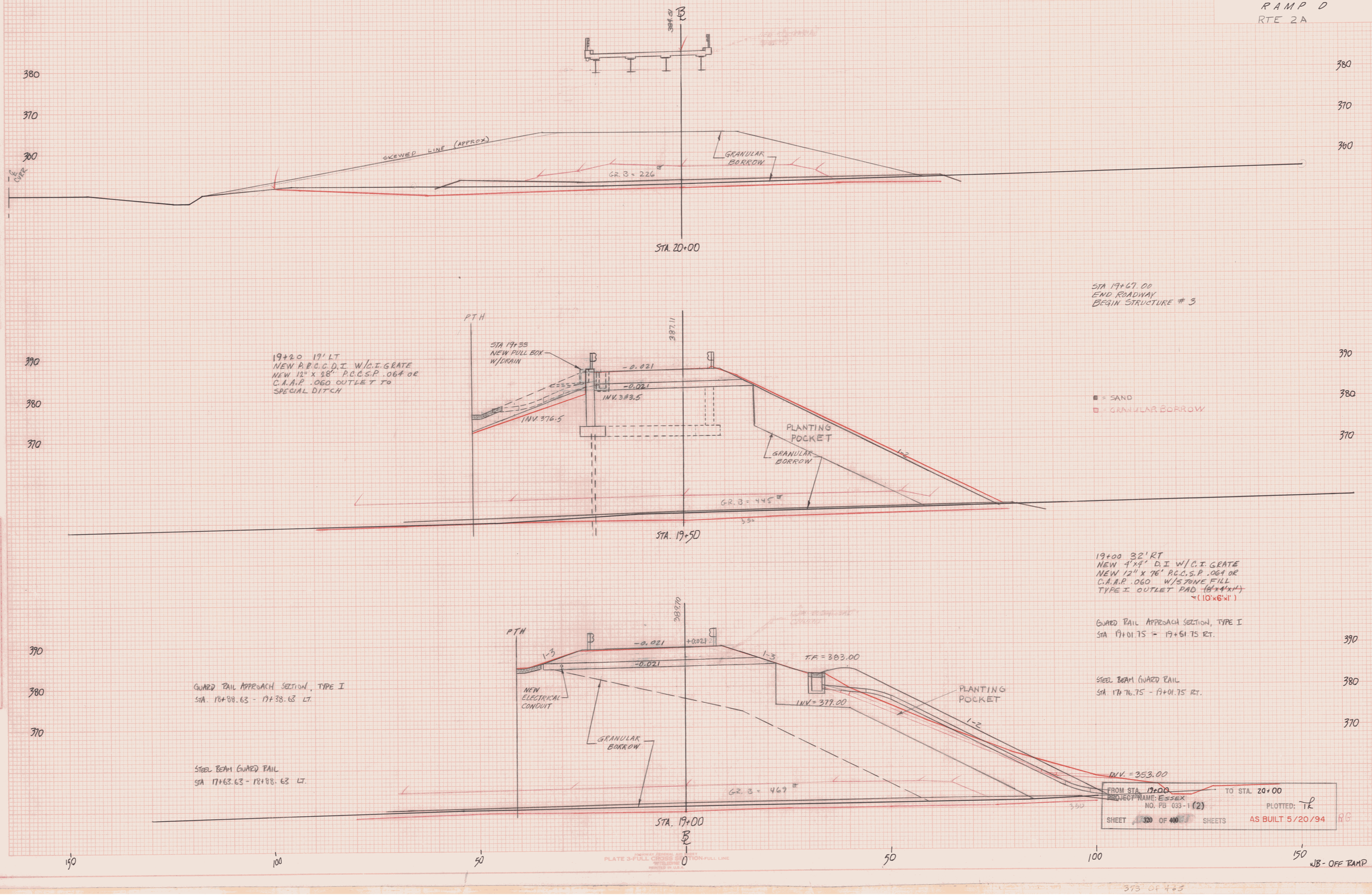
150 100 50 0 50 100 150

WB - OFF RAMP

PLATE 3-FULL CROSS SECTION-FULL LINE

372 of 425

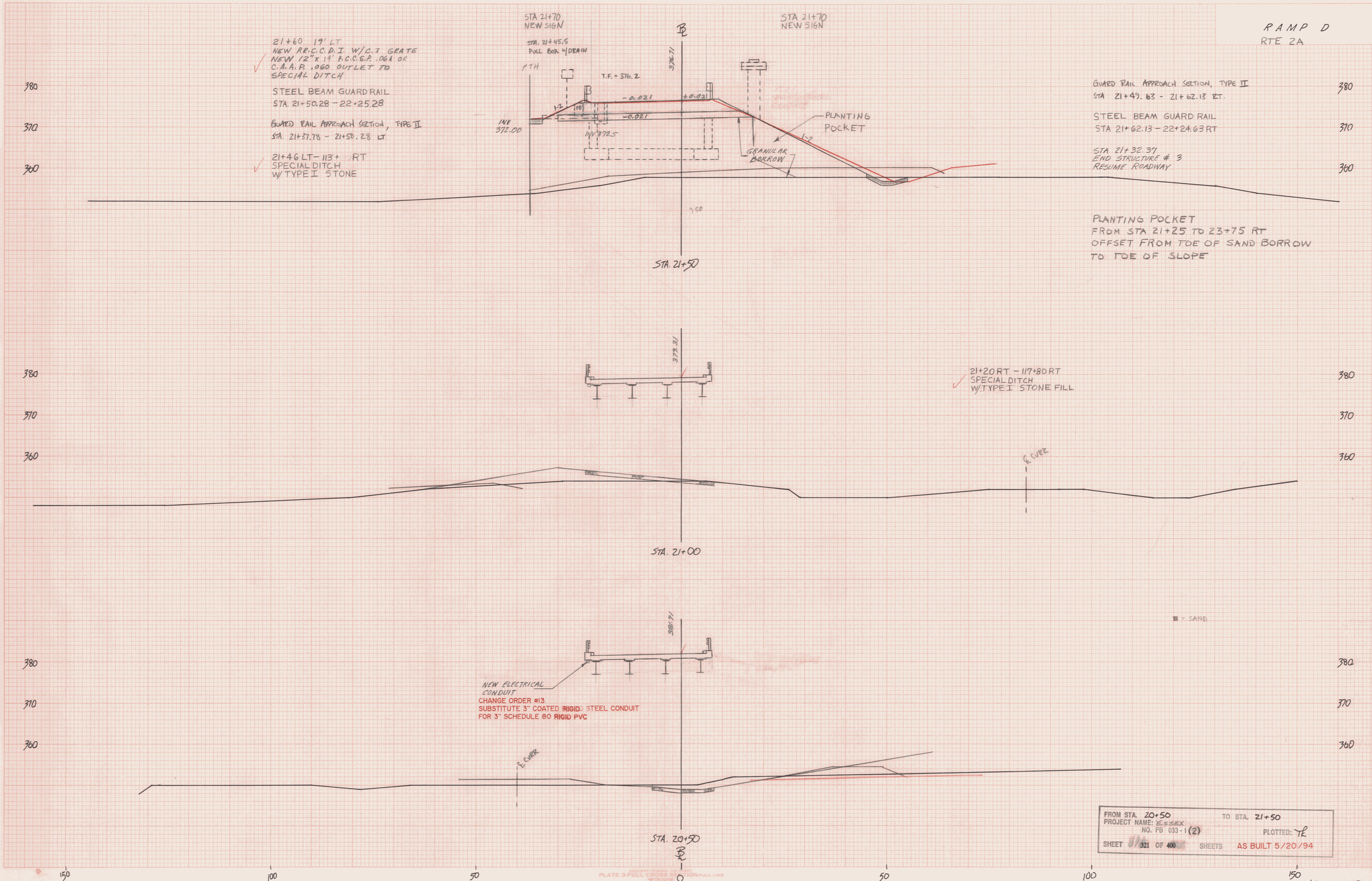
RAMP D
RTE 2A



FROM STA. 17+00 TO STA. 20+00
PROJECT NAME: Essex
NO. PB 033-1 (2) PLOTTED: TL
SHEET 320 OF 400 SHEETS AS BUILT 5/20/94 RG

WB - OFF RAMP

PLATE 3-FULL CROSS SECTION-FULL LINE

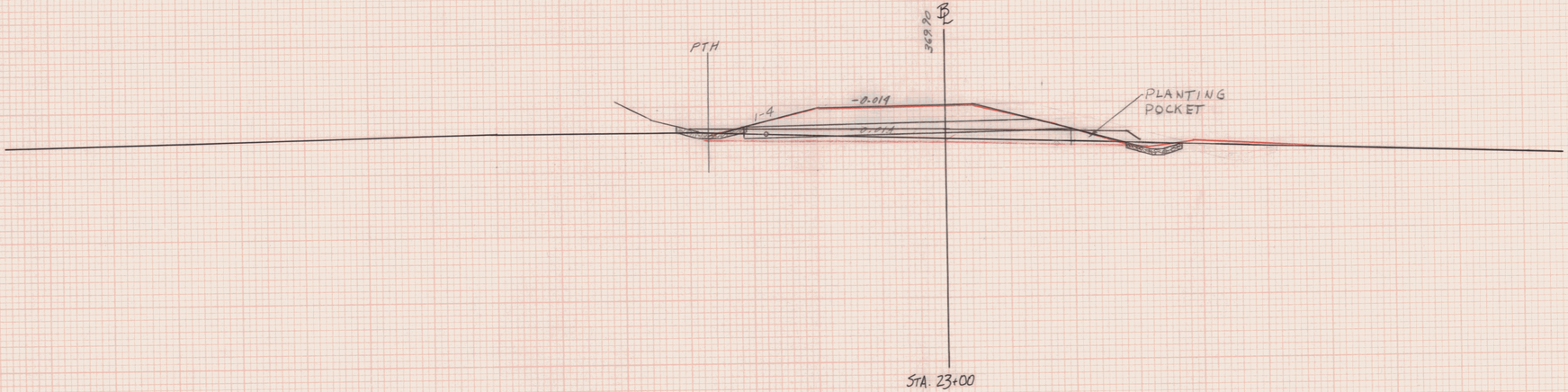


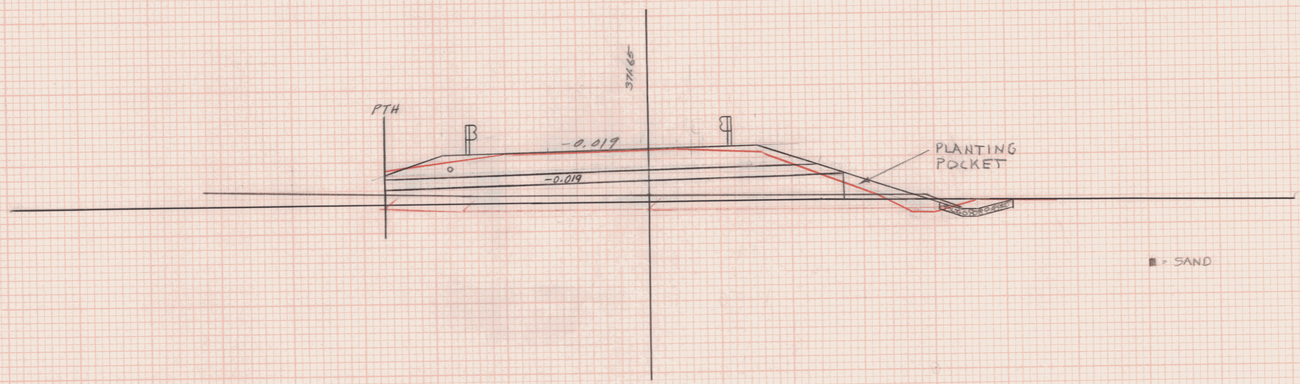
FINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.
BY
DATE

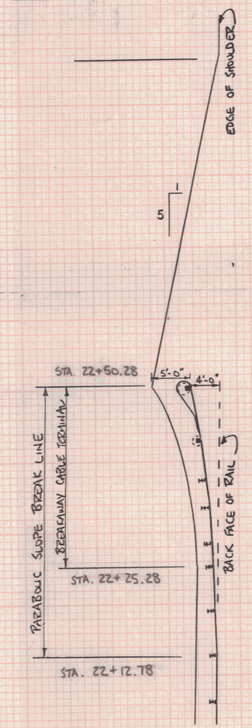
ORIGINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.
BY
DATE

PLATE 3-FULL CROSS SECTION-FULL LINE

RAMP D
RTE 2A

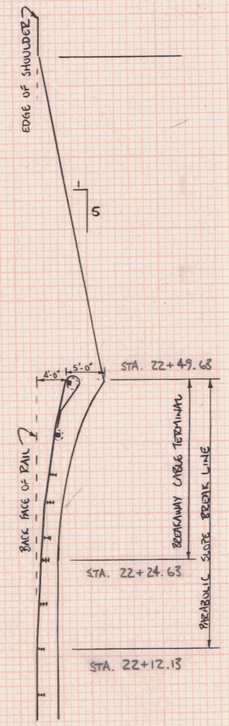






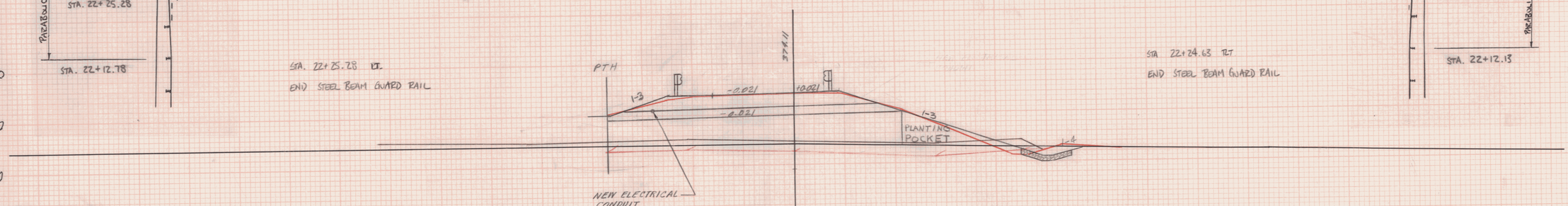
BREAKAWAY CABLE TERMINAL
STA. 22+25.28 - 22+50.28 LT.

STA. 22+25.28 LT.
END STEEL BEAM GUARD RAIL



BREAKAWAY CABLE TERMINAL
STA. 22+24.63 - 22+49.63 RT.

STA. 22+24.63 RT.
END STEEL BEAM GUARD RAIL



FROM STA. 22+00 TO STA. 23+00
PROJECT NAME: ESSEX
NO. PB 093-1 (2) PLOTTED: TR
SHEET 322 OF 400 SHEETS AS BUILT 5/20/94

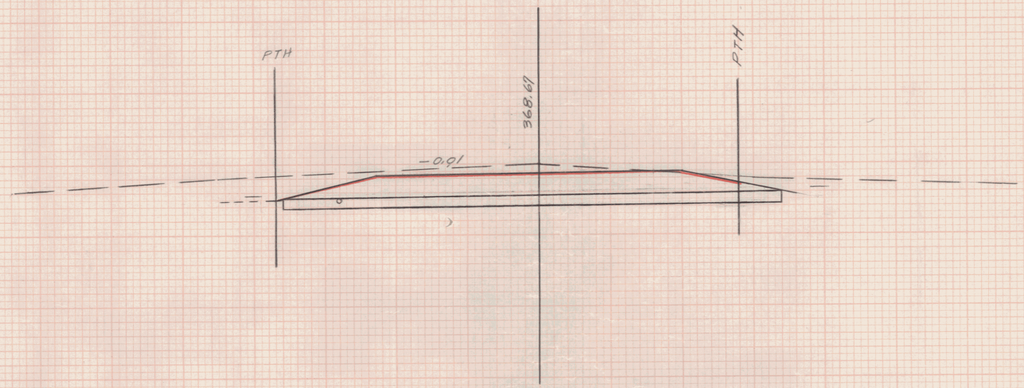
PLATE 3-FULL CROSS SECTION-FULL LINE

315 OF 465

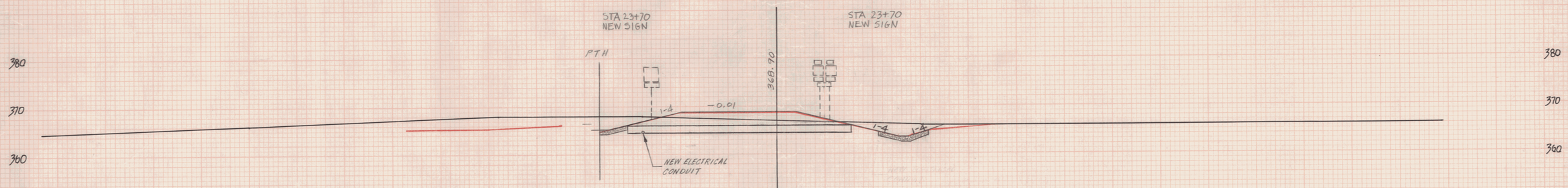
RAMP D
RTE 2A

℄

STA.



STA. 24+00



STA. 23+50
℄

150 100 50 0 50 100 150

FROM STA. 23+50 TO STA. 24+00
PROJECT NAME: ESSEX
NO. FB 033-1 (2). PLOTTED: TR
SHEET 323 OF 409 SHEETS AS BUILT 5/20/94

PLATE 3-FULL CROSS SECTION-FULL LINE

I/R-OFF RAMP

376 OF 465

D1-1a (L)
D1-1b (R)
M3-3
M1-5 (I5)
M6-1R
M3-1
M1-5 (I5)
M6-1L

1-4

FILL = 1.96

EARTH = 0.08
FILL = 0.35

EARTH = 1.84

EARTH = 3.74

EARTH = 6.10

EARTH = 8.42

EARTH = 10.03

1-2

486.77	484.27	481.77	479.27	476.77	474.27	471.77
20+50	20+00	19+50	19+00	18+50	18+00	17+50
470	470	470	470	460	460	460

P.T.H.

478.5

476.8

475.0

FUTURE CONST

470.0

466.0

464.6

AS BUILT 5/23/94 SC
REVISED 12/28/90

FROM STA. 7+50 TO STA. 10+50
VERMONT ROUTE 289 F.A.P.
WILLISTON - COLCHESTER, VT. PROJ. NO. PB 033-1(2)
SURVEYED BY PINKHAM ENGINEERING
SCALE 10 FEET
SHEET 324 OF 400

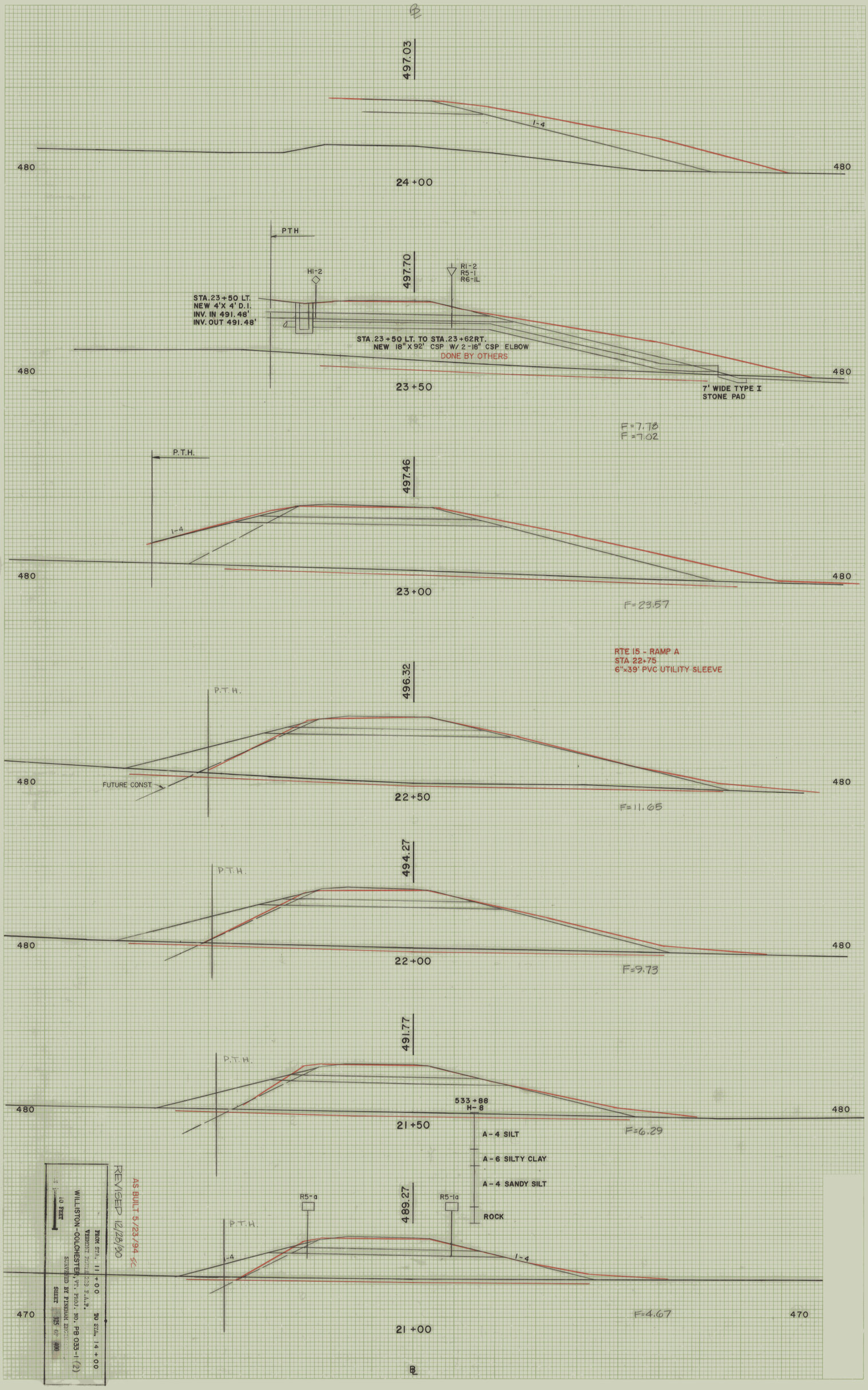
RTE 15 RAMP "A"

Keuffel & Esser Company Made in U.S.A.
PLATE 3, CROSS SECTION 487072

217 of 330

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		



AS BUILT 5/23/94 SC

REVISED 12/28/90

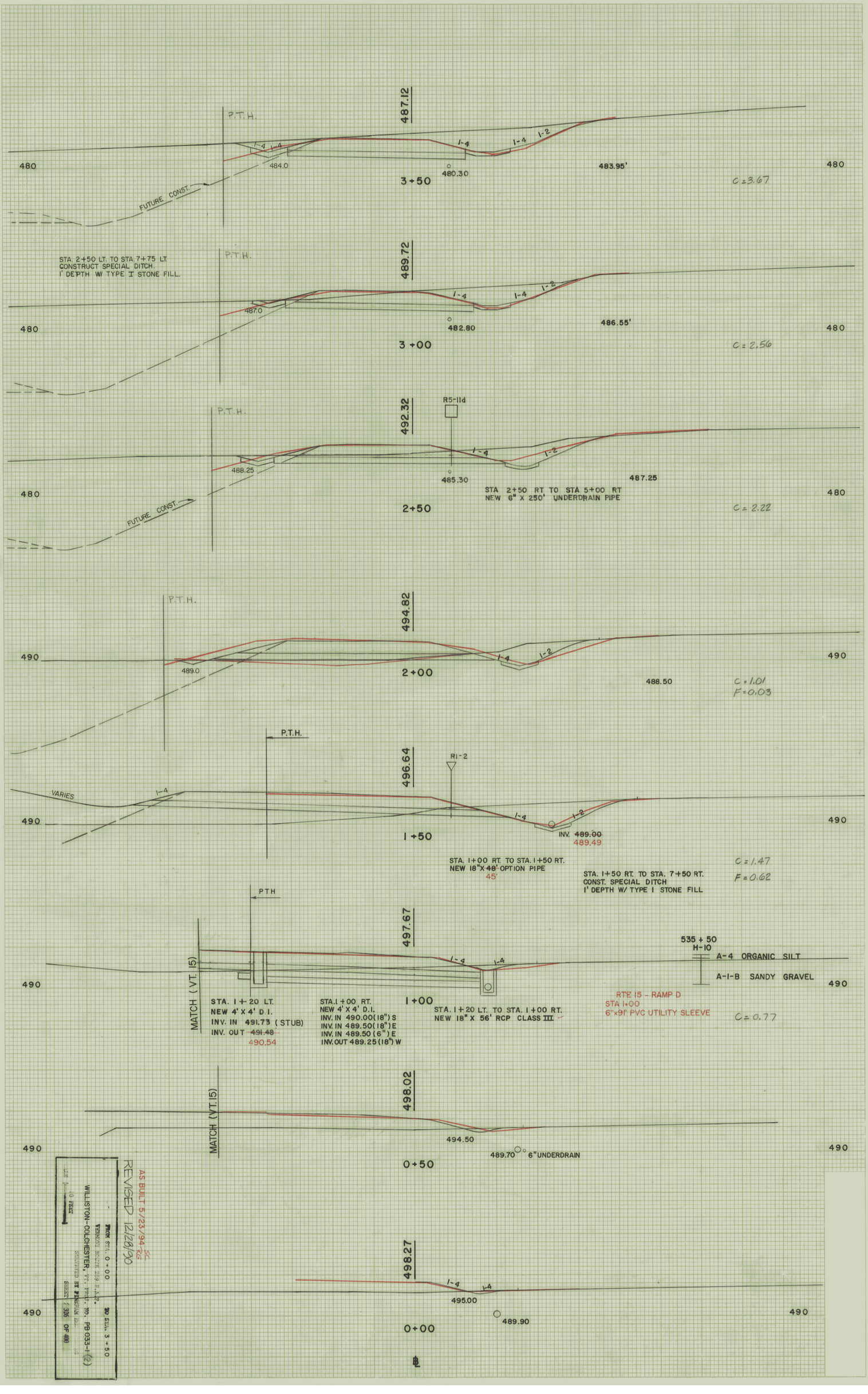
FROM STA. 11+00 TO STA. 14+00
VERMONT ROUTE 289 F.A.P.
WILLISTON-COLCHESTER, VT. PROJ. NO. PB 033-1 (2)
SURVEYED BY PINKHAM ENGINEERS
SHEET 325 OF 400

10 FEET

RTE 15 RAMP "A"

Keuffel & Esser Company

PLATE 3, CROSS SECTION 487072

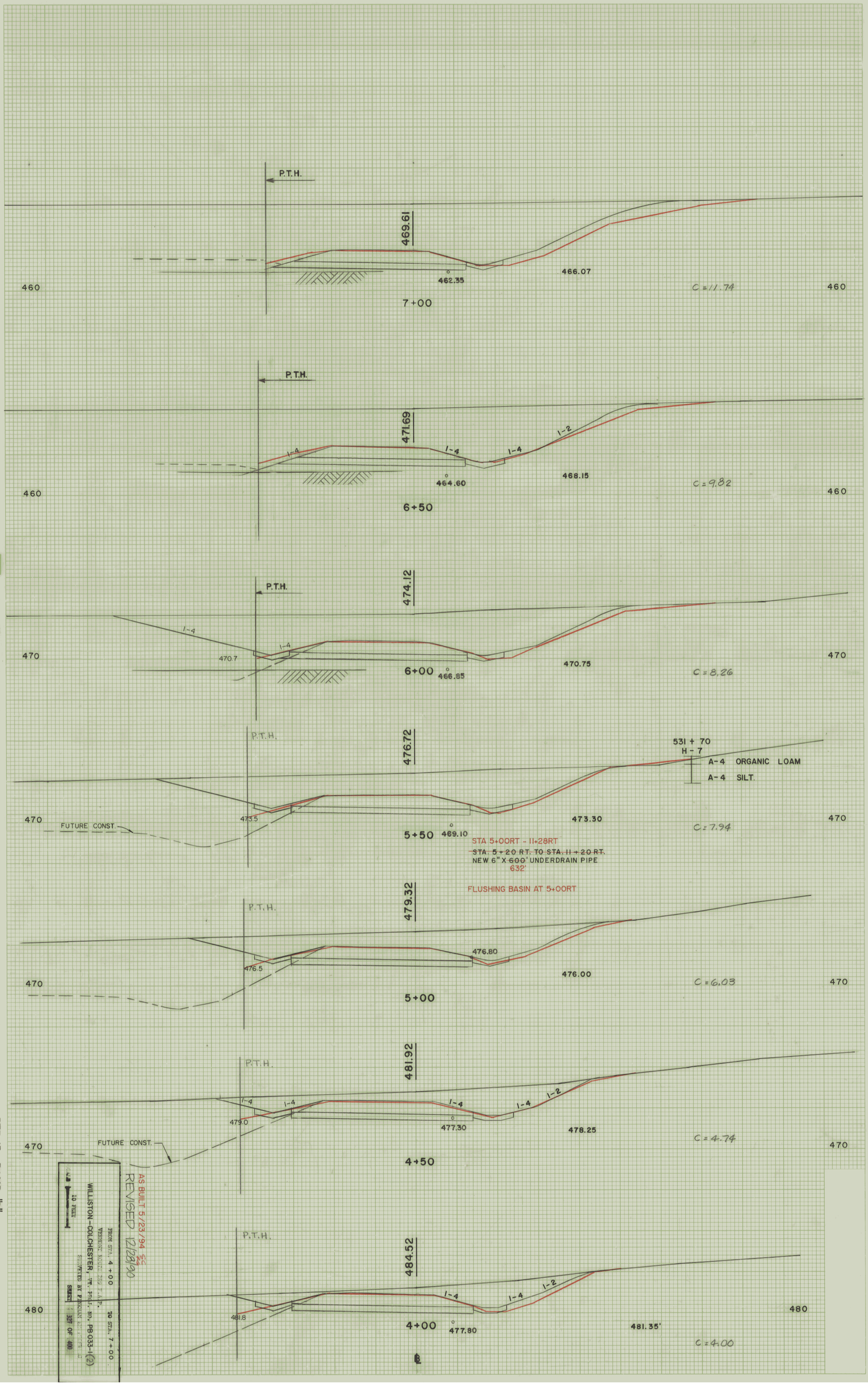


AS BUILT 5/23/94 SC RG
REVISED 12/28/90

FROM STA. 0+00 TO STA. 3+50
VERMONT ROUTE 289 F.A.P.
WILLISTON-COLCHESTER, VT. PROJ. NO. PB 033-1(2)
SUBMITTED BY FINKEPAN INC.
SHEET 306 OF 400

RTE 15 RAMP "D"

Keuffel & Esser Company
Made in U.S.A.
PLATE 3, CROSS SECTION 487072



AS BUILT 5/23/94 SC
REVISED 12/28/90

FROM STA. 4+00 TO STA. 7+00
VERMONT ROUTE 289 E.A.P.
WILLISTON-COLCHESTER, TR. PROJ. NO. PB033-1(2)
SURVEYED BY PERKINS
10 FEET
SHEET 327 OF 400

RTE 15 RAMP "D"

Keuffel & Esser Company

EARTH = 8.93
ROCK = 9.27

BOTTOM EL. 460.00

459.45

463.67

10+00

EARTH = 12.49
ROCK = 6.07

BOTTOM EL. 460.85

459.70

464.20

9+50

EARTH = 11.69
ROCK = 6.19

461.70

459.95

464.73

9+00

C = 15.56

462.00

460.20

465.43

8+50

STA. 8+50 RT. TO STA. 13+25 RT
CONSTRUCT SPECIAL DITCH 1' DEEP

LEDGE

C = 14.32

462.75

460.45

466.48

8+00

C = 14.94

463.07

461.02

467.87

7+50

P.T.H.

1-4

450

460

AS BUILT 5/23/94 SC/RB
REVISED 12/28/00

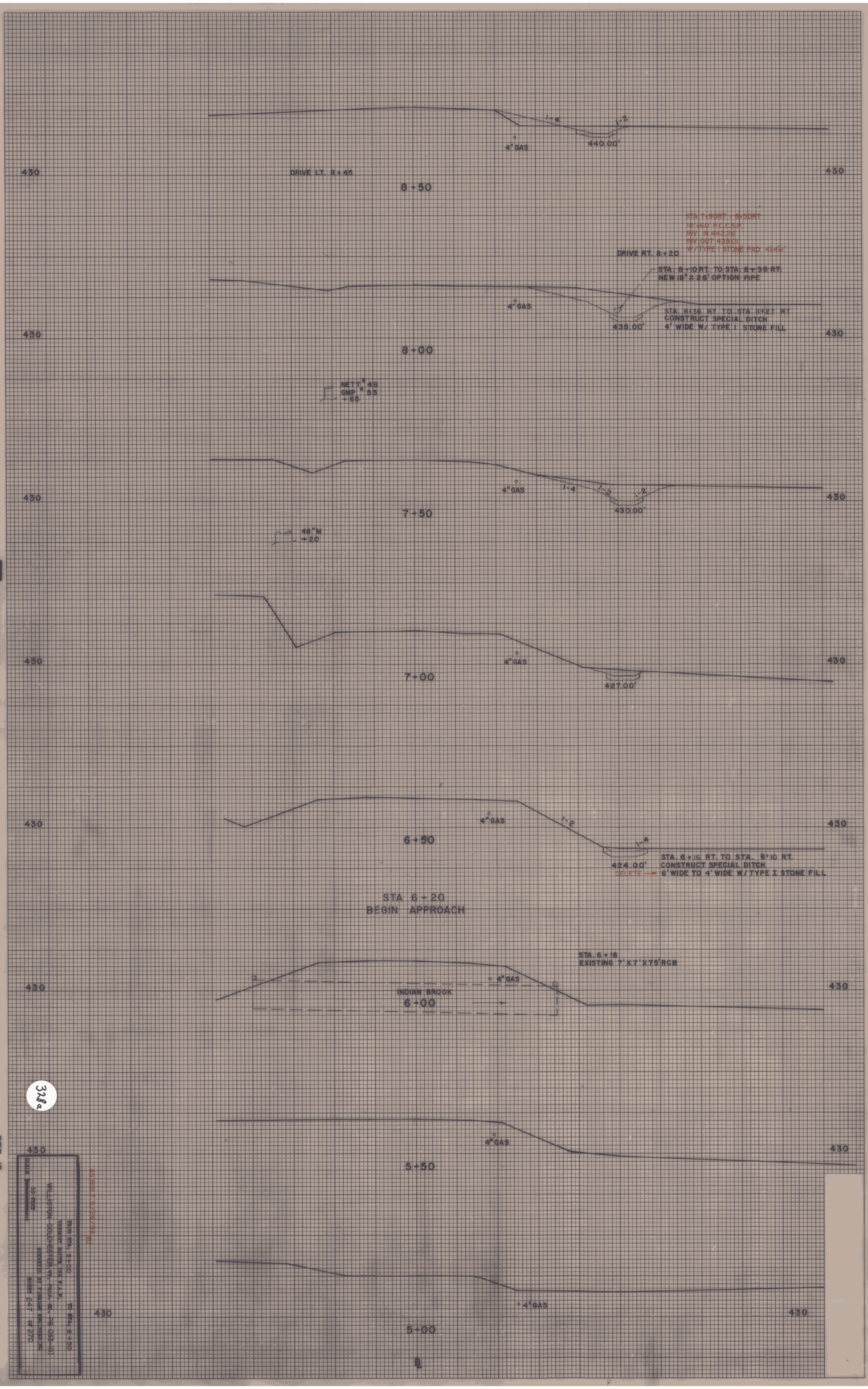
FROM STA. 7+50 TO STA. 10+00
VERMONT ROUTE 289 F.A.P.
WILLISTON-COLCHESTER, VT. PROJ. NO. PB 033-1(2)
SURVEYED BY PINKHAM ENG[illegible]
0 FEET
SHEET 328 OF 400

RTE 15 RAMP "D"

Keuffel & Esser Company Made in U.S.A.

PLATE 3, CROSS SECTION 487072

328 OF 400



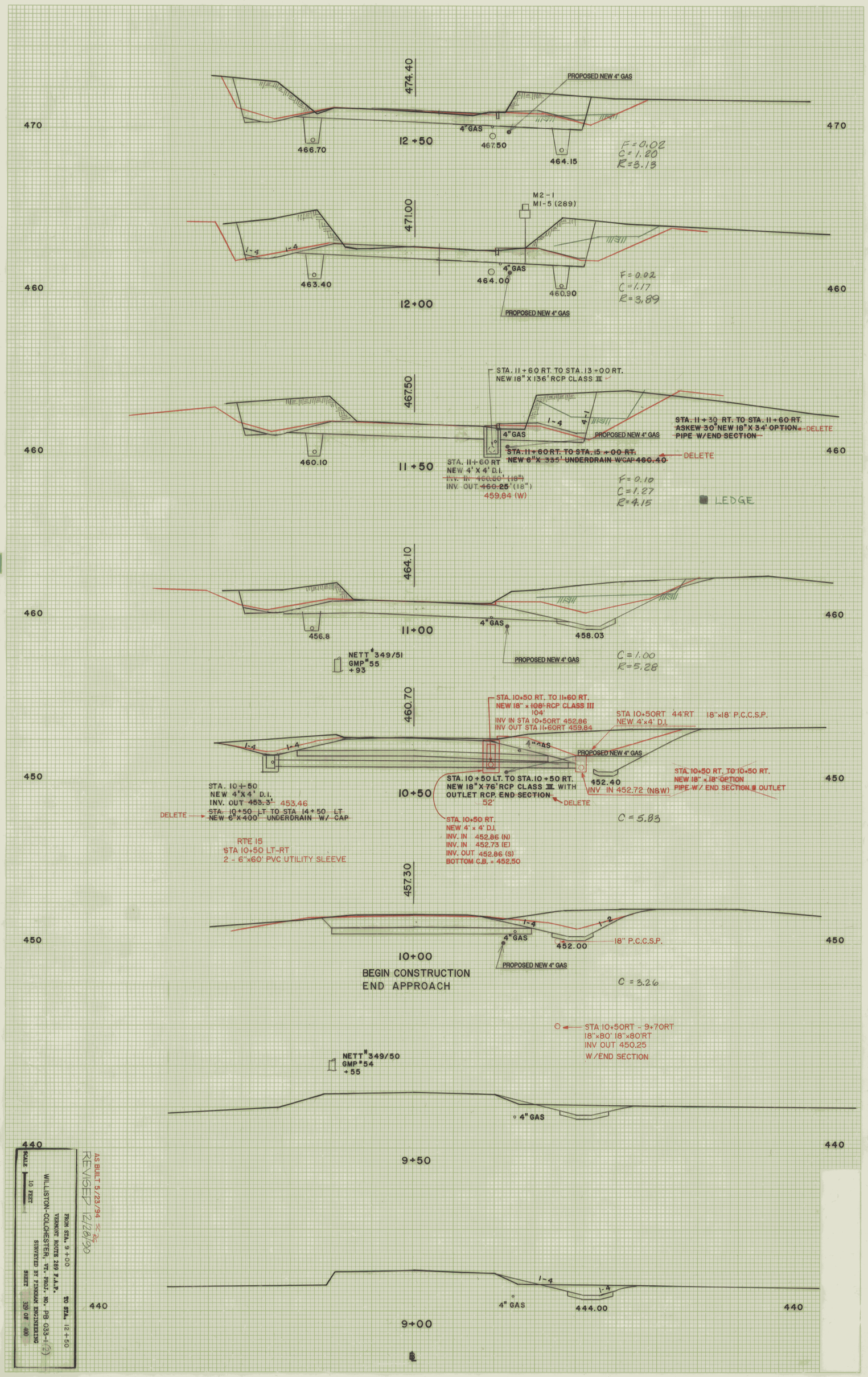
328a

AS BUILT 5/24/94

FROM STA. 5+00 TO STA. 8+50
VERMONT RIVER 750 F.A.P.
WILLISTON-COLCHESTER, VT. PROJ. NO. PB 033-(1)
SURVEYED BY FINKLEA ENGINEERING
SHEET 247 OF 270
SCALE 10 FEET

Keuffel & Esser Company Made in U.S.A. PLATE 3 CROSS SECTION 487072

RTE 15

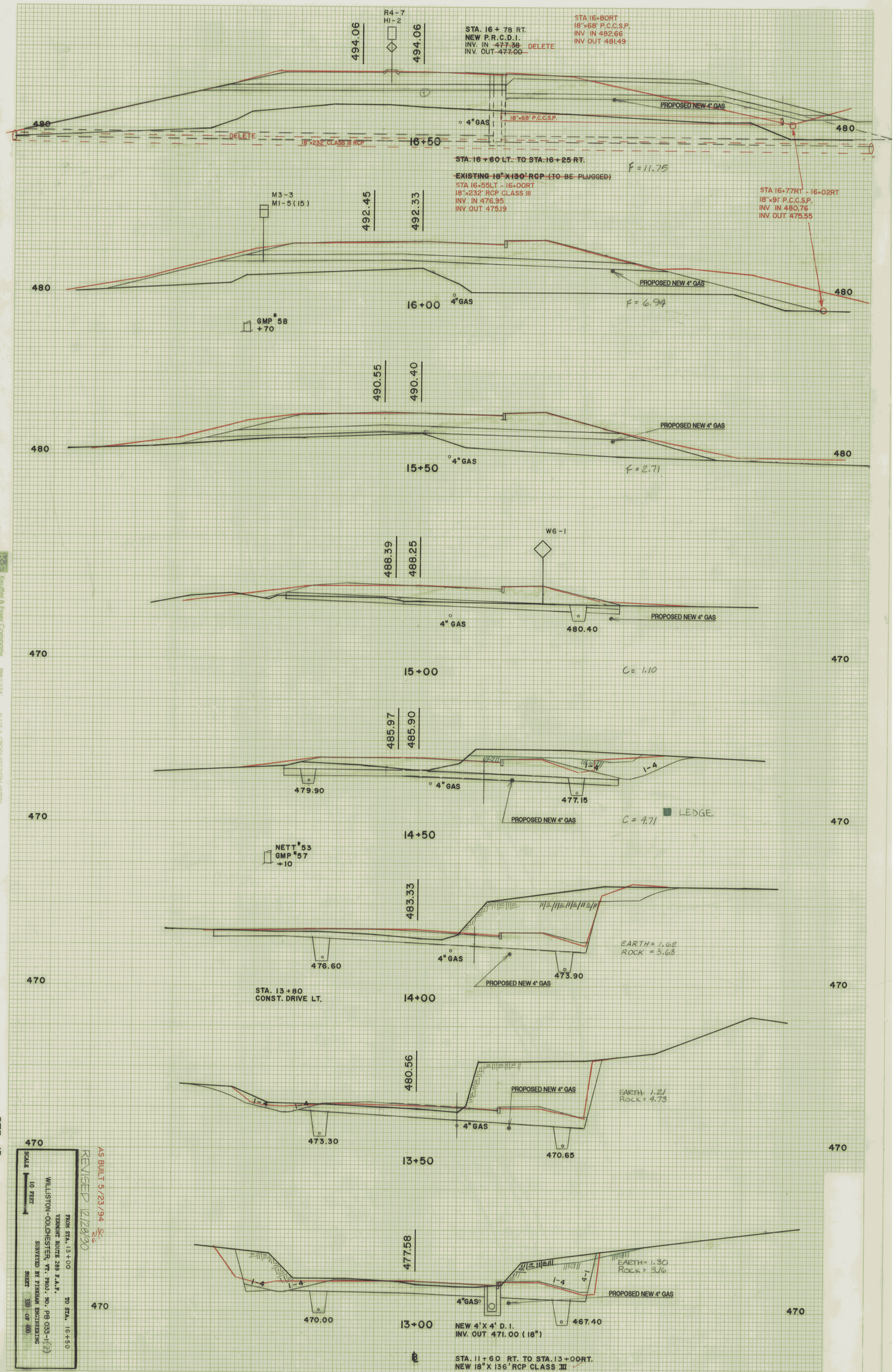


AS BUILT 5/23/94
REVISED 12/28/90

FROM STA. 9+00 TO STA. 12+50
VERMONT ROUTE 289 F.A.P.
WILLISTON-COLCHESTER, VT. PROJ. NO. PB 033-1(2)
SURVEYED BY PINKHAM ENGINEERING
SCALE 10 FEET
SHEET 339 OF 400

RTE 15

Keuffel & Esser Company
Made in U.S.A.
PLATE 3, CROSS SECTION 48702



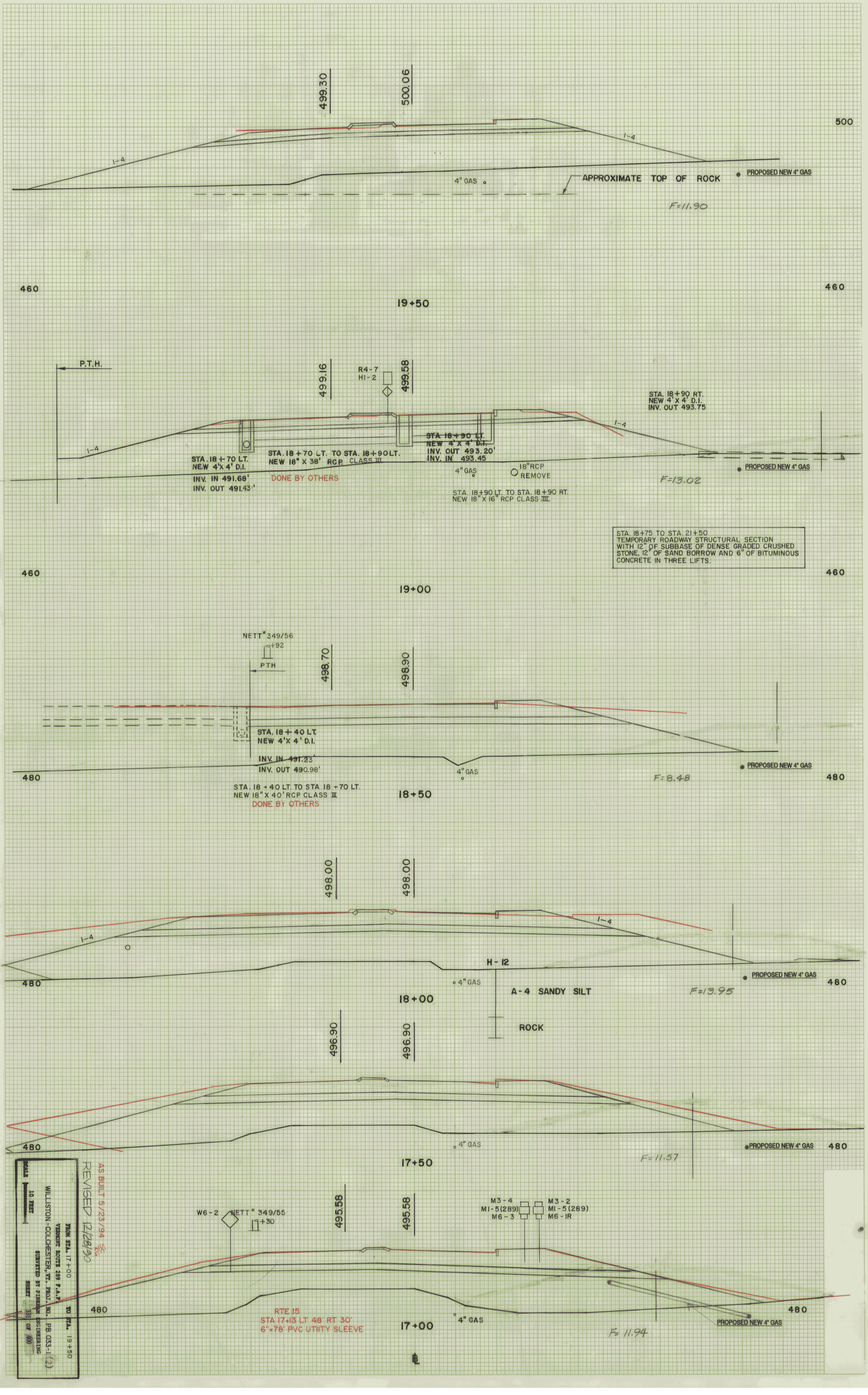
AS BUILT 5/23/94 SC
REVISED 12/28/90

FROM STA. 13+00 TO STA. 16+50
VERMONT ROUTE 289 F.A.P.
WILLISTON-COLCHESTER, VT. PROJ. NO. PB 033-1(2)
SURVEYED BY PINKHAM ENGINEERING
SHEET 330 OF 400

SCALE 10 FEET

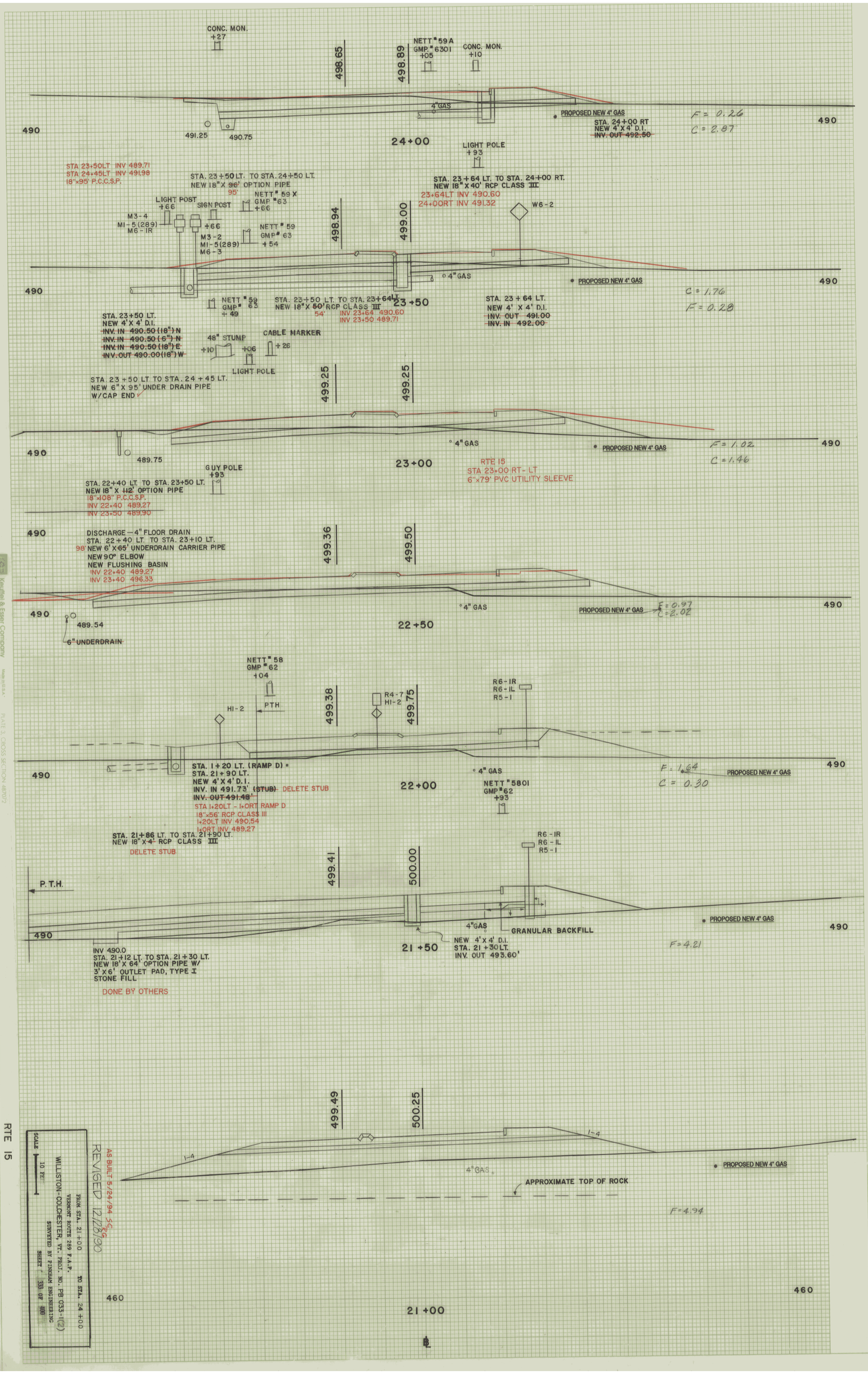
RTE 15

Keuffel & Esser Company Made in U.S.A. PLATE 3, CROSS SECTION 487072


499.30
500.06
500
1-4
1-4
4" GAS
APPROXIMATE TOP OF ROCK
PROPOSED NEW 4" GAS
F=11.90
460
460
19+50
P.T.H.
499.16
R4-7
H1-2
499.58
STA. 18+90 RT.
NEW 4' X 4' D.I.
INV. OUT 493.75
1-4
STA. 18+90 LT.
NEW 4' X 4' D.I.
INV. OUT 493.20'
INV. IN 493.45
STA. 18+70 LT.
NEW 4'X 4' D.I.
INV. IN 491.68'
INV. OUT 491.43'
STA. 18+70 LT. TO STA. 18+90 LT.
NEW 18" X 38' RCP CLASS III
DONE BY OTHERS
4" GAS
18" RCP
REMOVE
PROPOSED NEW 4" GAS
F=13.02
STA. 18+90 LT. TO STA. 18+90 RT.
NEW 18" X 16' RCP CLASS III
STA. 18+75 TO STA. 21+50
TEMPORARY ROADWAY STRUCTURAL SECTION
WITH 12" OF SUBBASE OF DENSE GRADED CRUSHED
STONE, 12" OF SAND BORROW AND 6" OF BITUMINOUS
CONCRETE IN THREE LIFTS.
460
460
19+00
NETT" 349/56
0+92
P.T.H.
498.70
498.90
STA. 18+40 LT.
NEW 4'X 4' D.I.
INV. IN 491.23'
INV. OUT 490.98'
4" GAS
PROPOSED NEW 4" GAS
F=8.48
480
480
STA. 18+40 LT. TO STA. 18+70 LT.
NEW 18" X 40' RCP CLASS III
DONE BY OTHERS
18+50
498.00
498.00
1-4
1-4
H-12
4" GAS
PROPOSED NEW 4" GAS
480
480
A-4 SANDY SILT
F=13.95
18+00
ROCK
496.90
496.90
480
4" GAS
PROPOSED NEW 4" GAS
480
F=11.57
17+50
W6-2
NETT" 349/55
17+30
495.58
495.58
M3-4
M1-5(289)
M6-3
M3-2
M1-5(289)
M6-1R
480
480
RTE 15
STA 17+13 LT 48' RT 30'
6"x78' PVC UTILITY SLEEVE
4" GAS
PROPOSED NEW 4" GAS
F= 11.94
17+00
AS BUILT 5/23/94
REVISED 12/28/90
SCALE
10 FEET
FROM STA. 17+00
TO STA. 19+50
VERMONT ROUTE 289 F.A.P.
WILLISTON-COLCHESTER, VT. PROJ. NO. PB 033-1(2)
SURVEYED BY PINKHAM ENGINEERING
SHEET 331 OF 400
RTE 15

Keuffel & Esser Company Made in U.S.A.

PLATE 3, CROSS SECTION 487072



AS BUILT 5/24/94 SC
REVISED 12/28/90

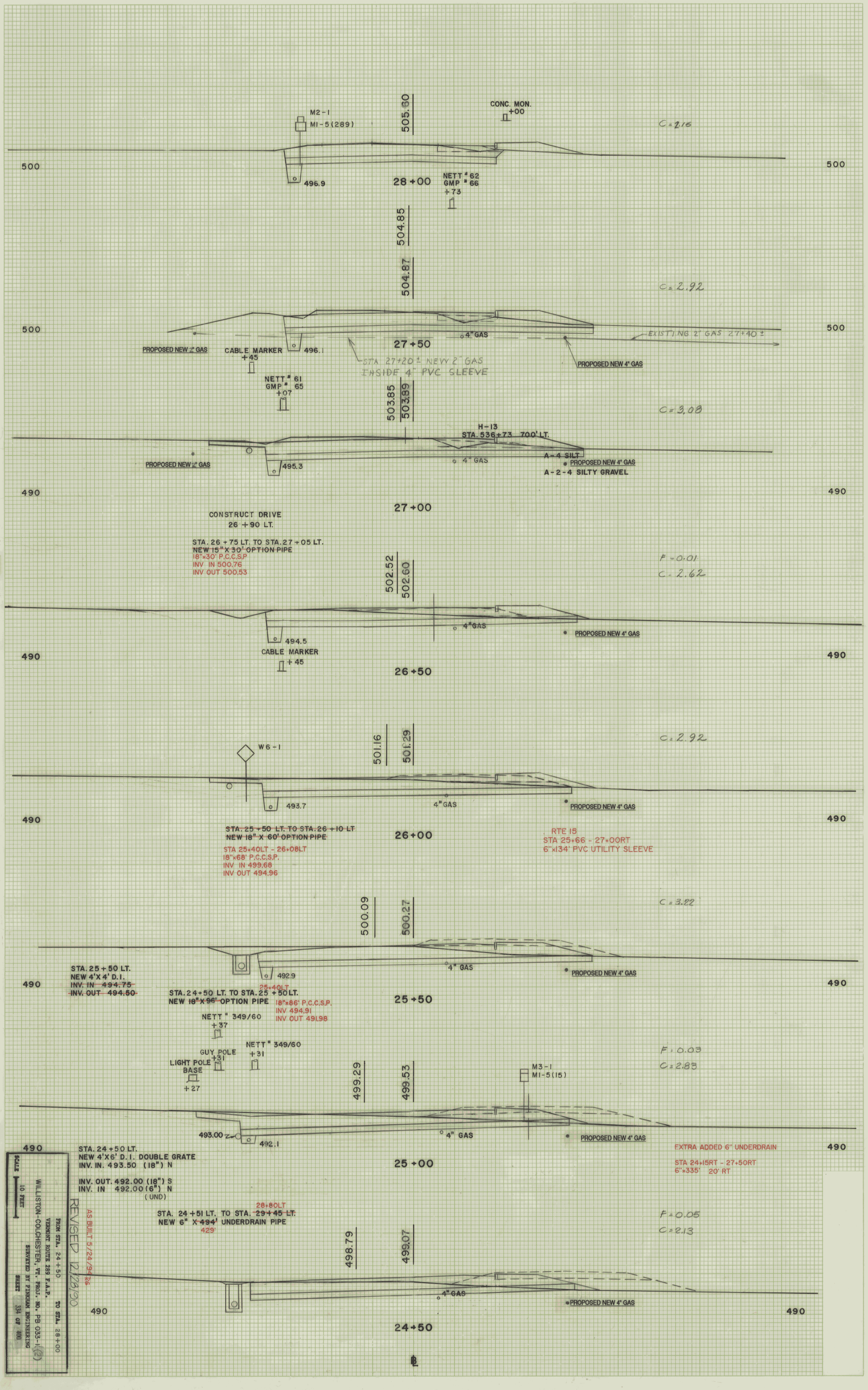
FROM STA. 21+00 TO STA. 24+00
VERMONT ROUTE 289 F.A.P.
WILLISTON-COLCHESTER, VT. PROJ. NO. PB 033-1(2)
SURVEYED BY PINKHAM ENGINEERING
SHEET 333 OF 400
SCALE 10 FEET

RTE 15

Keuffel & Esser Company
PLATE 3, CROSS SECTION 487072

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
NO.	AREAS		
	AREAS CHECKED		

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
NO.	AREAS		
	AREAS CHECKED		



ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

STA. 32+34.09 REVISED ℄ =
32+32.24 SURVEY ℄

31+85
CABLE MARKER

500 — 32+00 — C=0.04 — 500

36" MAPLE
+73

NETT" 64
GMP" 68

500 — 31+50 — C=0.16 — 500

10" DEAD M.
+00

36" POPULAR
+88

500 — 31+00 — C=0.10 — 500

20" M.
+70

14" BOX ELDER
+57

18" BOX ELDER
+49

8" DEAD ELM
+62

508.30

HOUSE
SILL ELEV
510.42

S.W.

12" CMP

F=9.02
C=1.44

500 — 30+50 — 500

NETT" 63
GMP" 67
+30

END APPROACH

18"E
+30

507.30

12"CMP

SIGN POST

500 — 30+00 — C=1.33 — 500

12" M
+78

24" M.
+50

507.00

500 — 29+50 — C=2.60 — 500

NETT" 62A
GMP" 6601
+20

10" APPLE
+22

COSTRUCT DRIVE
29+25 LT.

STA 29+03LT - 29+42LT
18"x40' P.C.C.S.P.
INV. IN 504.55
INV. OUT 504.05

STA. 29+04 LT. TO 29+42 LT.
NEW 18" X 40' OPTION PIPE

506.00

SIGN POSTS (REMOVE)

S.W.

500 — 29+00 — C=3.54 — 500

12" CMP
REMOVE

498.5

NETT" 62
GMP" 66
+66

505.94

S.W.

497.7

28+80LT
STA. 24+51 LT. TO STA. 29+45 LT.
NEW 6" X 494' UNDERDRAIN PIPE
W/CAP ON END

500 — 28+50 — C=3.74 — 500

END CONSTRUCTION
BEGIN APPROACH

CONSTRUCT DRIVE
28+25 RT

℄

AS BUILT 5/24/94
REVISED 12/28/90

FROM STA. 28+50
TO STA. 32+00
VERMONT ROUTE 289 F.A.P.
WILLISTON-COLCHESTER, VT. PROJ. NO. PB 033-1(2)
SURVEYED BY PINGRAM ENGINEERING
SHEET 335 OF 400

SCALE
10 FEET

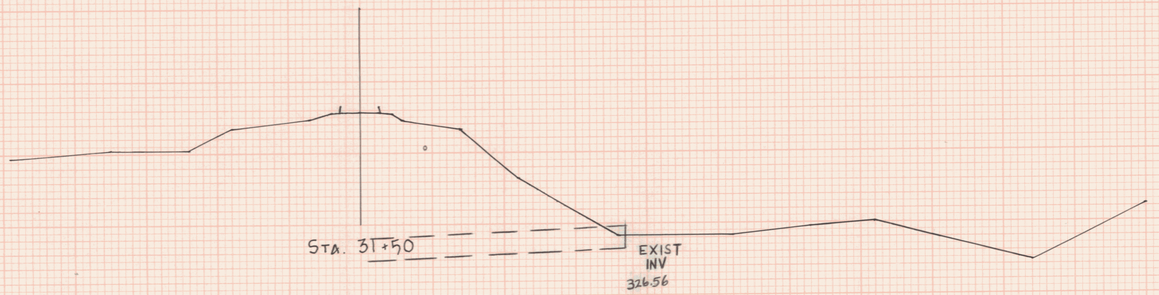
RTE 15

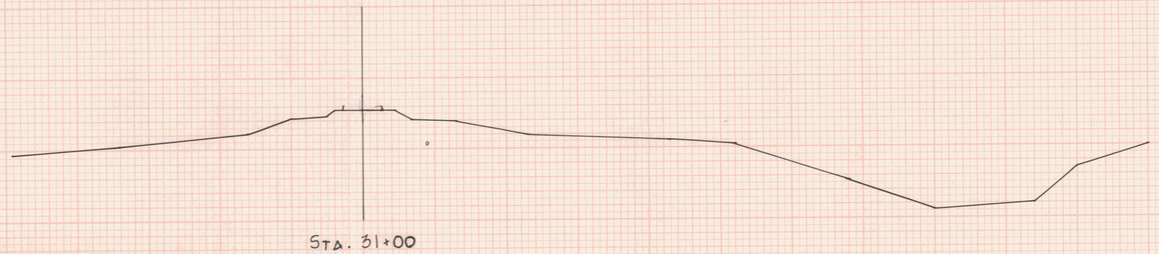
PLATE 3, CROSS SECTION 48107

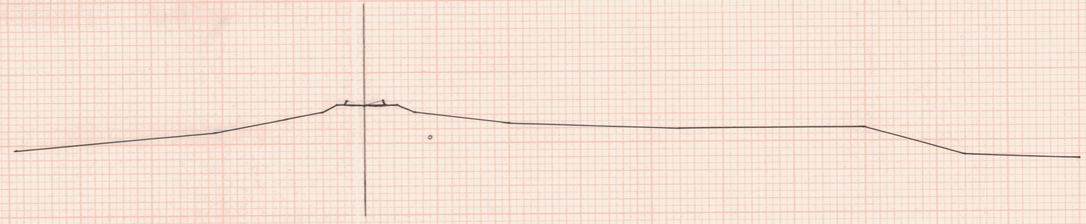
Keuffel & Esser Company

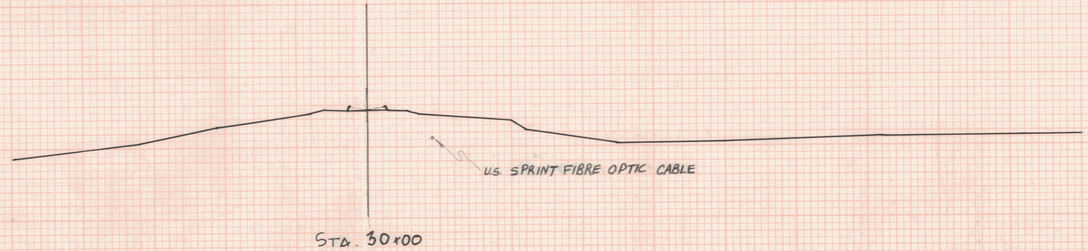
CENTRAL VERMONT RAILROAD

150 100 50 ℄ 50 100 150









BUILT AS DESIGNED 5/24/94 RG

FROM STA. 30+00 TO STA. 31+50
PROJECT NAME: ESSEX
NO. PB 033-1(2) PLOTTED:
SHEET 336 OF 400 SHEETS

150 100 50 ℄ 50 100 150

PLATE 3-FULL CROSS SECTION-FULL LINE

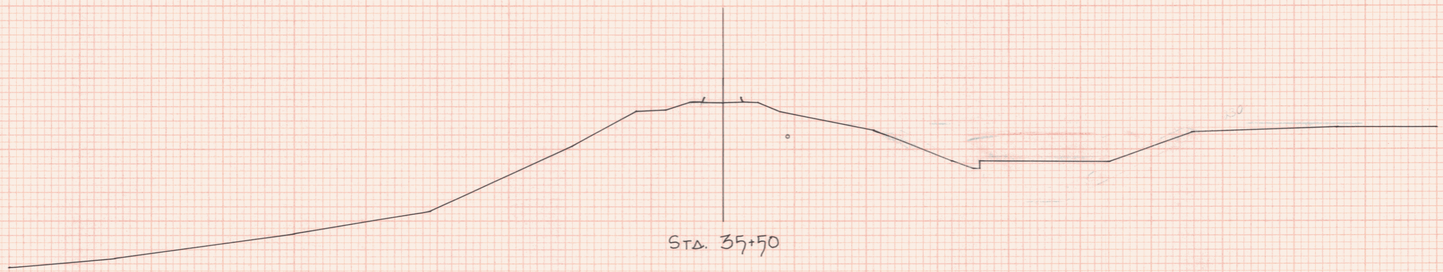
336 OF 465


CENTRAL VERMONT RAILROAD
150
100
50
℄
50
100
150
350
340
STA. 33+50
350
340
STA. 33+00
333.5
350
340
STA. 32+50
333.3
120
340
330
U.S. SPRINT
FIBRE OPTIC CABLE
EXIST.
INV.
323.54
140
333
STA. 32+00
BUILT AS DESIGNED 5/24/94
FROM STA. 32+00
TO STA. 33+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED:
SHEET 337 OF 400 SHEETS
FINAL SURVEY
ORIGINAL SURVEY
PLATE 3-FULL CROSS SECTION-FULL LINE

CENTRAL VERMONT RAILROAD

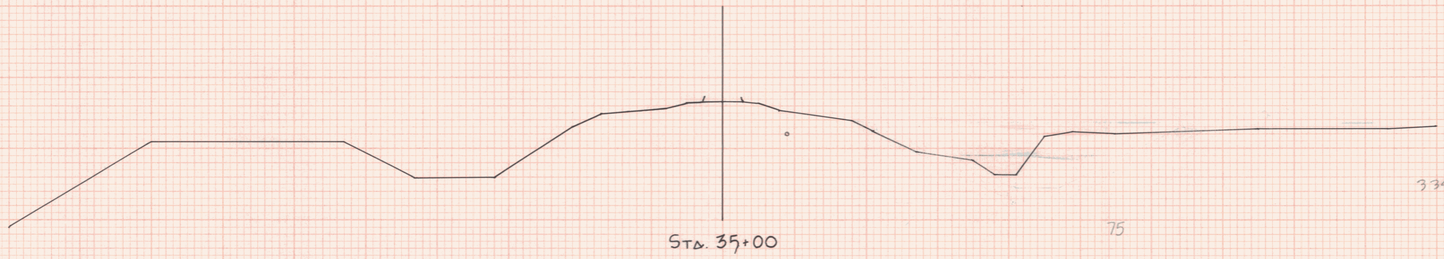
150 100 50 ℄ 50 100 150

350
340



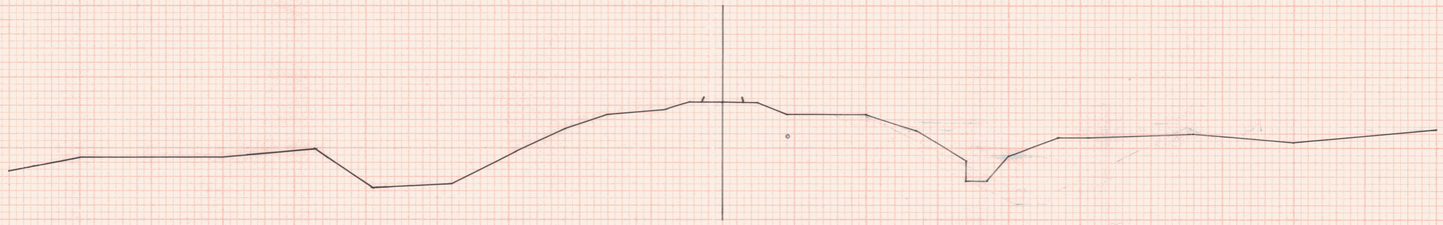
STA. 35+50

350
340



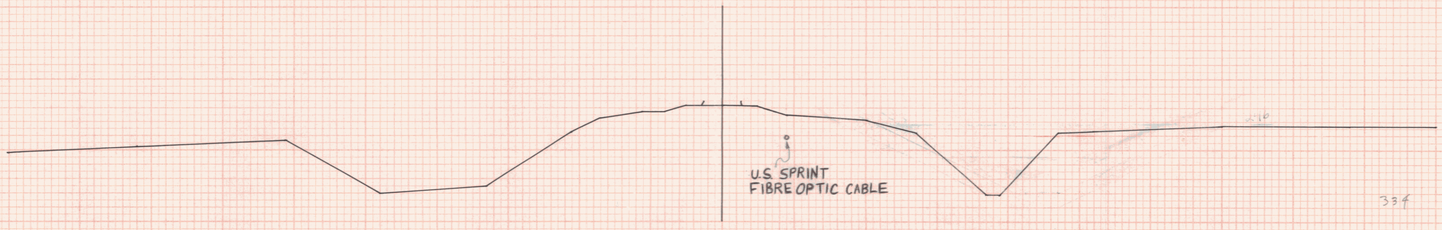
STA. 35+00

350
340



STA. 34+50

350
340



STA. 34+00

150 100 50 ℄ 50 100 150

BUILT AS DESIGNED 5/24/94

FROM STA. 34+00 TO STA. 35+50
PROJECT NAME: ESSEX
NO. PB 033-1(2) PLOTTED:
SHEET 338 OF 400 SHEETS

FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

HIGHWAY FEDERAL AID SECTION-FULL LINE
PLATE 3-FULL CROSS SECTION-FULL LINE
TELEDYNE
PRINTED IN U.S.A.


CENTRAL VERMONT RAILROAD
150
100
50
℄
50
100
150
350
340
R.R.
STA. 37+50
50
STA. 37+00
60
184
335.5
STA. 36+05-40+30 LT. (STRUCTURE NO. 10)
NEW 78" DIA. CORR. GALV. METAL PLATE PIPE X 425'
(REFER TO SHEETS BR10 & 1101 AND BR 10 & 1102)
STA. 36+50
60
STA. 36+00
US SPRINT
FIBRE OPTIC CABLE
335
FINAL SURVEY
ORIGINAL SURVEY
AS BUILT 5/24/94
FROM STA. 36+00
TO STA. 37+50
PROJECT NAME: ESSEX
NO. PB 033-1(2)
PLOTTED:
SHEET 339 OF 400 SHEETS
PLATE 3-FULL CROSS SECTION-FULL LINE

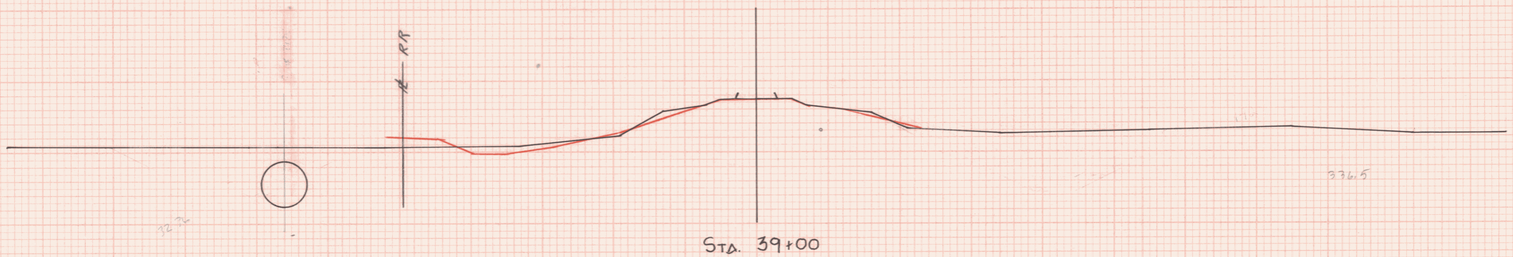
CENTRAL VERMONT RAILROAD

150 100 50 ℄ 50 100 150

350
340



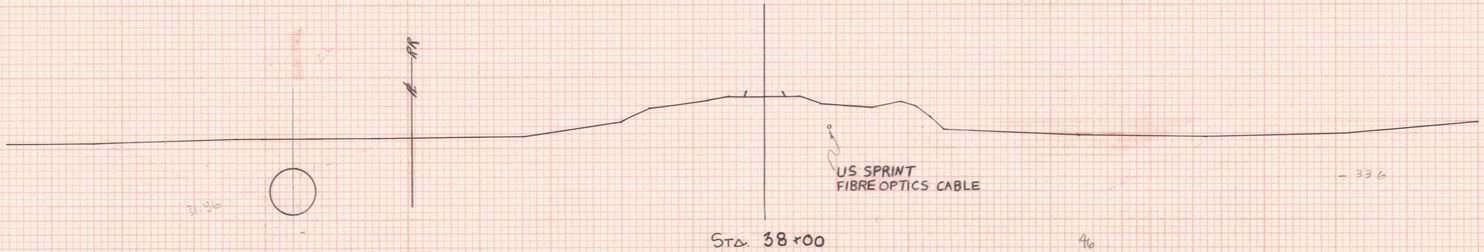
STA. 39+50



STA. 39+00



STA. 38+50



STA. 38+00

BUILT AS DESIGNED 5/24/94

FROM STA. 38+00 TO STA. 39+50
PROJECT NAME: ESSEX
NO. PB 033-1(2) PLOTTED:
SHEET 340 OF 400 SHEETS

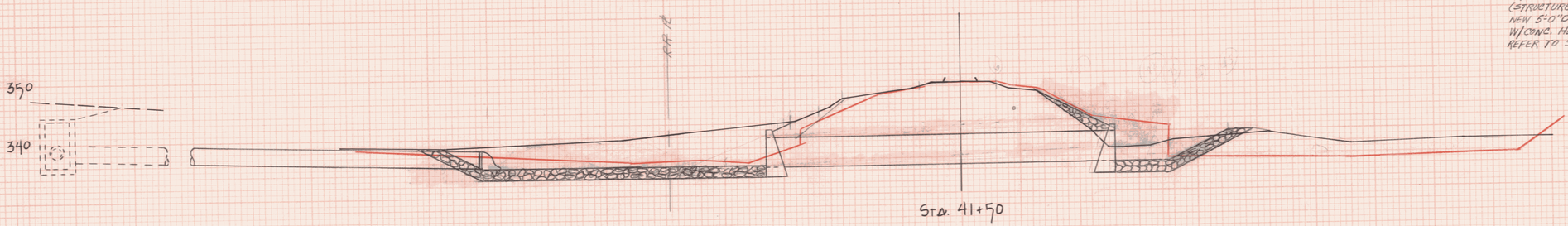
FINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TEMPLATE, NOTE BOOK, NO., AREAS CHECKED

ORIGINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TEMPLATE, NOTE BOOK, NO., AREAS CHECKED

FEDERAL HIGHWAY ADMINISTRATION
PLATE 3-FULL CROSS SECTION-FULL LINE
"R"TELEDYNE
PRINTED IN U.S.A.

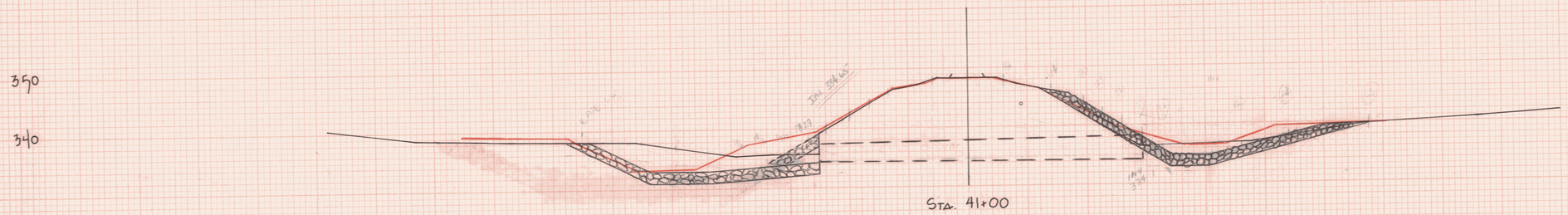
CENTRAL VERMONT RAILROAD

STA 41+50 LT-RT
(STRUCTURE NO 11)
NEW 5'-0" DIA. GALV. STR. ST. LINER PLATE PIPE X 59'
W/CONC. HEADWALLS AT INLET AND OUTLET
REFER TO SHEETS BR 10 & 1101 AND BR 10 & 1103

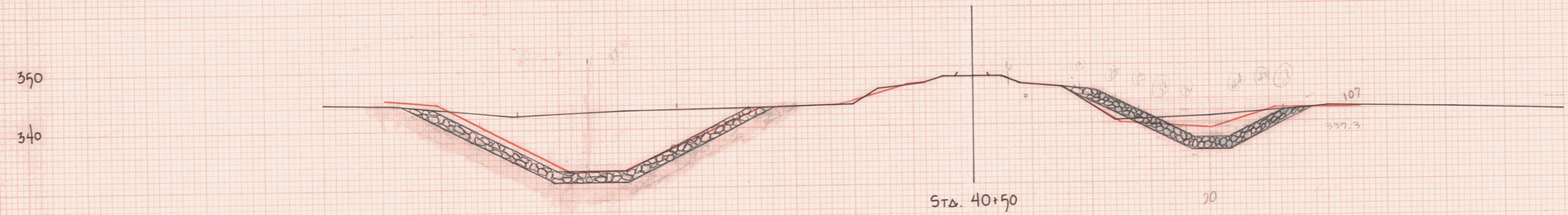


STA. 41+50

STA 41+05 LT-RT
EXISTING BOX CULVERT
TO BE CLEANED
FILLED IN AND ABANDONED



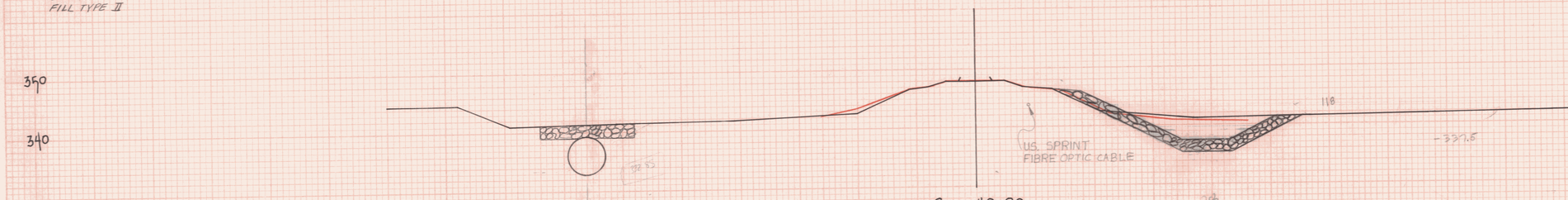
STA. 41+00



STA. 40+50

STA 40+00 - 43+30 LT.
SPECIAL DITCH W/STONE
FILL TYPE II

STA 39+75 - 44+50 RT
SPECIAL DITCH W/STONE
FILL TYPE II



STA. 40+00

AS BUILT 5/24/94

FROM STA. 40+00 TO STA. 41+50
PROJECT NAME: ESSEX
NO. FB 033-1 (2) PLOTTED:
SHEET 341 OF 400 SHEETS

PLATE 3-FULL CROSS SECTION-FULL LINE

CENTRAL VERMONT RAILROAD

150 100 50 ℄ 50 100 150

350
340

PTH

STA. 43+50

STA 43+19 - 44+47 LT
NEW 24"X 130' PCCSP - .064
OR C.A.A.P. - .060
W/ CONC. HEADWALLS AT INLET
AND OUTLET

INV IN 339.00
INV OUT 337.50

STA. 43+00

STA. 42+50

98

U.S. SPRINT
FIBRE OPTIC CABLE

STA. 42+00

AS BUILT 5/24/94

FROM STA. 42+00 TO STA. 43+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED:
SHEET 342 OF 400 SHEETS

FINAL SURVEY — SURVEYED, PLOTTED, TRACED, NOTE BOOK, AREA, CROSS SECTIONED, DATE, BY

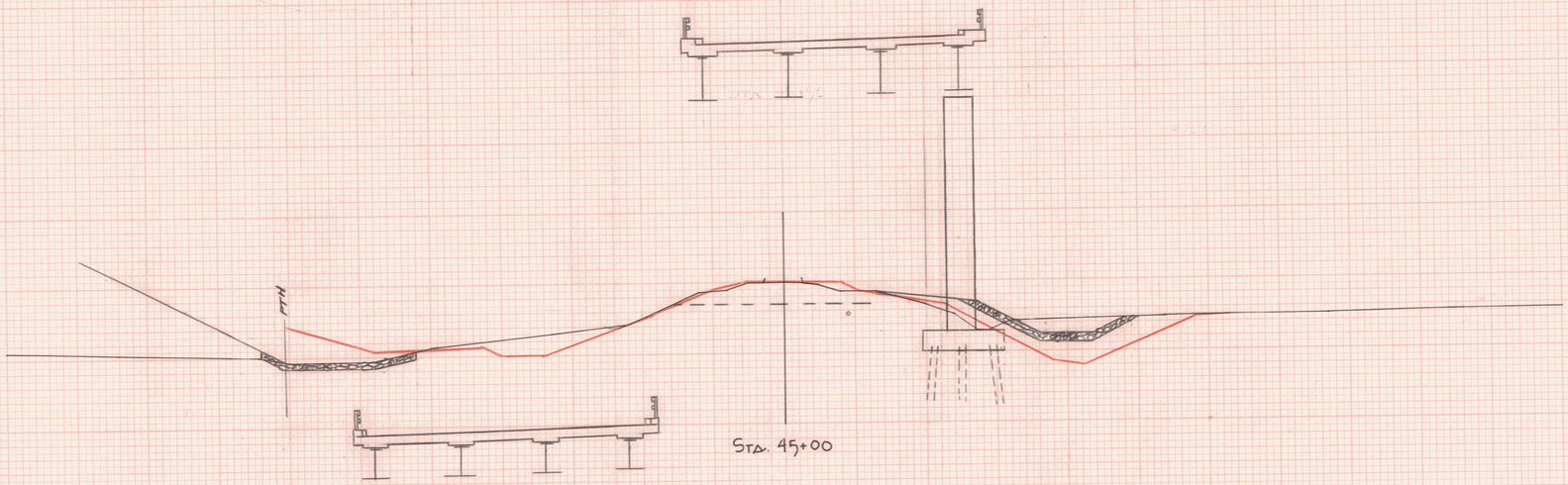
ORIGINAL SURVEY — SURVEYED, PLOTTED, TRACED, NOTE BOOK, AREA, CROSS SECTIONED, DATE, BY

PLATE 3-FULL CROSS SECTION-FULL LINE

CENTRAL VERMONT RAILROAD

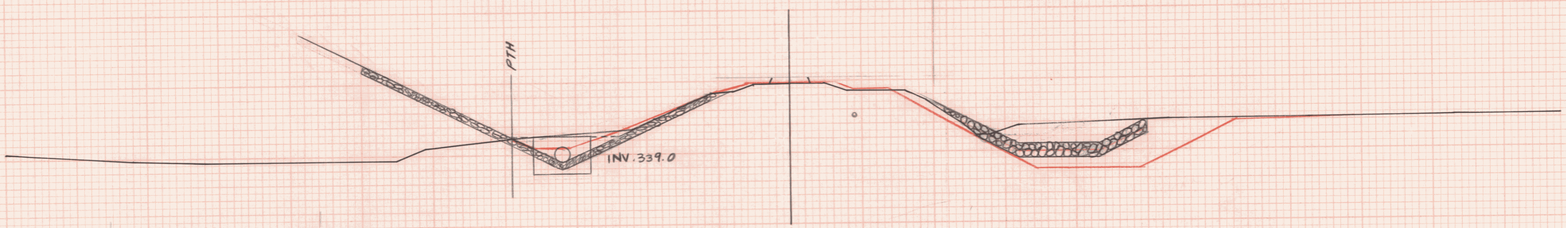
150 100 50 ℄ 50 100 150

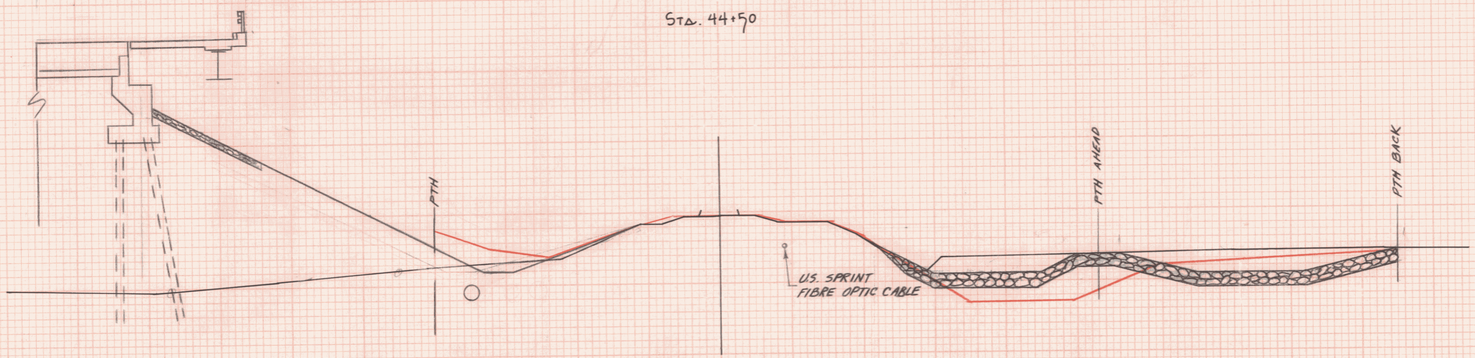
390 380 370 360 350 340



STA 44+50 - 46+50 LT.
SPECIAL DITCH WITH STONE
FILL TYPE I

STA 44+50 - 46+50 RT.
SPECIAL DITCH W/STONE
FILL TYPE I



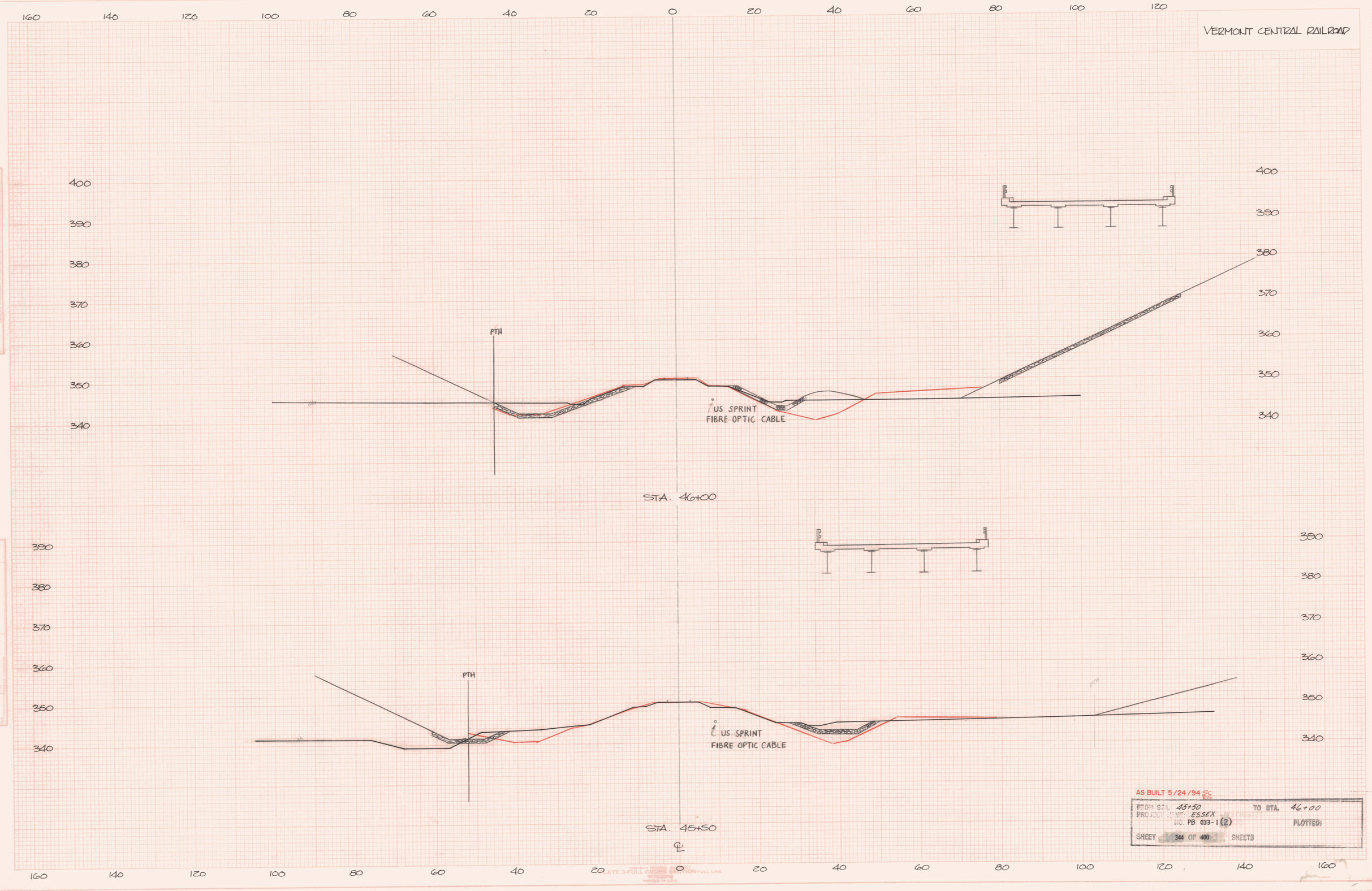


AS BUILT 5/24/94 SC RG

FROM STA. 44+00 TO STA. 45+00
PROJECT NAME: ESSEX
NO. FB 033-1 (2) PLOTTED:
SHEET 343 OF 400 SHEETS

PLATE 3-FULL CROSS SECTION-FULL LINE

384 OF 465


VERMONT CENTRAL RAILROAD
160 140 120 100 80 60 40 20 0 20 40 60 80 100 120
400 390 380 370 360 350 340
PTH
US SPRINT
FIBRE OPTIC CABLE
STA. 46+00
STA. 45+50
℄
AS BUILT 5/24/94
FROM STA. 45+50 TO STA. 46+00
PROJECT NAME: ESSEX
NO. PB 033-1(2)
PLOTTED:
SHEET 344 OF 400 SHEETS

CENTRAL VERMONT RAILROAD

150 100 50 ℄ 50 100 150

350
340

PTH

STA. 47+50

STA. 47+00

STA 46+50 - 53+50 LT
SPECIAL DITCH W/STONE
FILL TYPE I

STA 46+50 - 53+50
SPECIAL DITCH W/STONE FILL
TYPE I

US SPRINT
FIBRE OPTIC CABLE

STA. 46+50

AS BUILT 5/24/94

FROM STA. 46+50 TO STA. 47+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2) PLOTTED:
SHEET 345 OF 400 SHEETS

FINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TOPOGRAPHY, NOTE BOOK, NO., AREAS, AREAS CHECKED

ORIGINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TOPOGRAPHY, NOTE BOOK, NO., AREAS, AREAS CHECKED

HIGHWAY PEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-FULL LINE
INTERLOPE
PRINTED IN U.S.A.

150 100 50 ℄ 50 100 150

CENTRAL VERMONT RAILROAD

350
340

PTH

350
340

STA. 49+00

350
340

PTH

350
340

STA. 48+50

350
340

PTH

US SPRINT
FIBRE OPTIC CABLE

350
340

STA. 48+00

AS BUILT 5/24/94 SK RC

FROM STA. 48+00 TO STA. 49+00
PROJECT NAME: ESSEX
NO. PB 033-1(2) PLOTTED:
SHEET 346 OF 400 SHEETS

FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

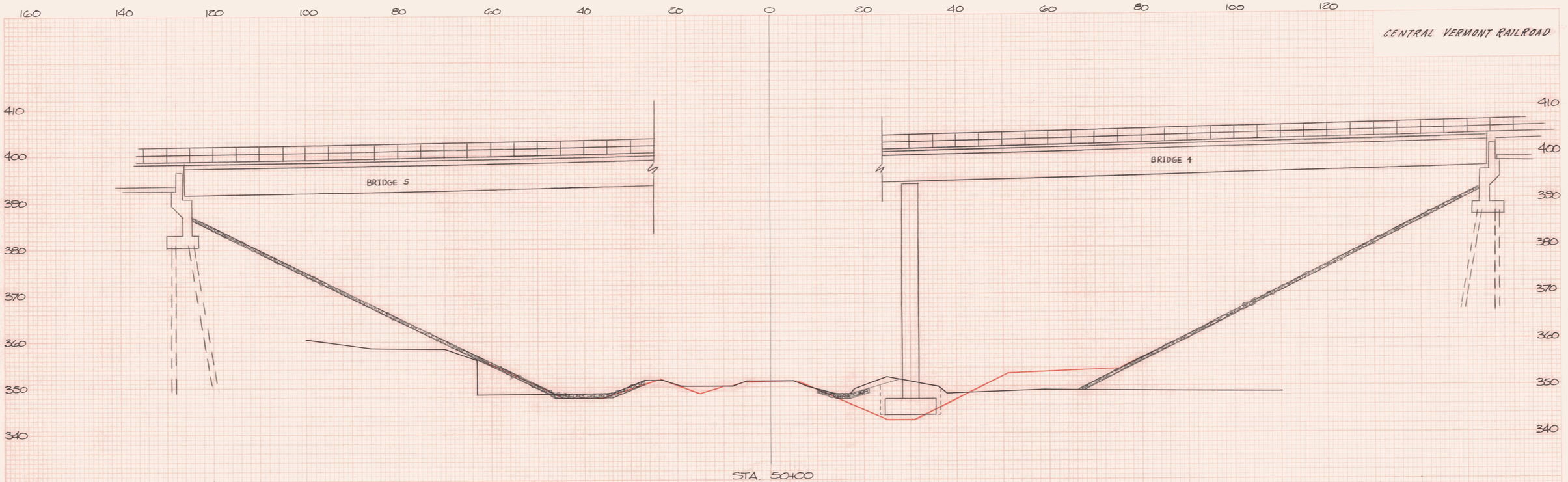
ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

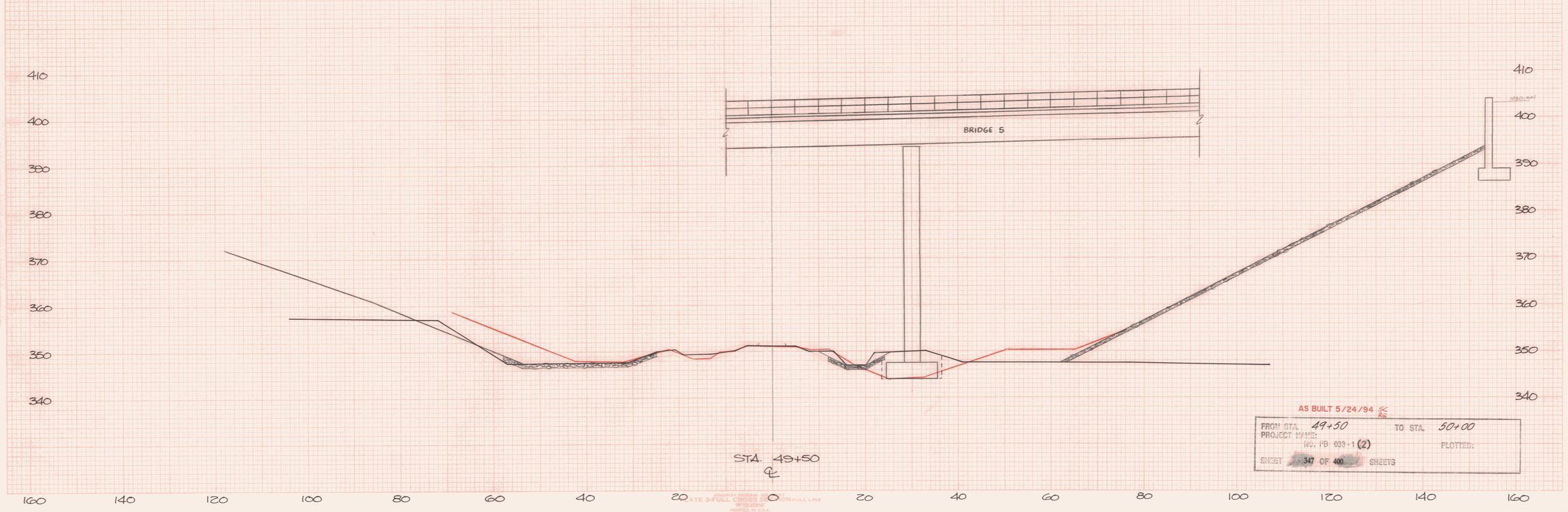
PLATE 3-FULL CROSS SECTION-FULL LINE

150 100 50 ℄ 50 100 150

SBT 07 465

CENTRAL VERMONT RAILROAD





AS BUILT 5/24/94 SC RG

FROM STA. 49+50 TO STA. 50+00
PROJECT NAME:
NO. PB 039-1 (2) PLOTTED:
SHEET 347 OF 400 SHEETS

388 OF 465



AS BUILT 5/24/94 SC RG

FROM STA. 50+50 TO STA. 50+50
PROJECT NAME:
NO. PB 033-1(2) PLOTTED:
SHEET 348 OF 400 SHEETS

CENTRAL VERMONT RAILROAD

160 140 120 100 80 60 40 20 0 20 40 60 80 100 120

400 390 380 370 360 350 340

1½

AS BUILT 5/24/94 SC RG

FROM STA. 5+00 TO STA. 5+00

PROJECT NAME:

NO. PB 033-1(2) PLOTTED:

SHEET 349 OF 400 SHEETS

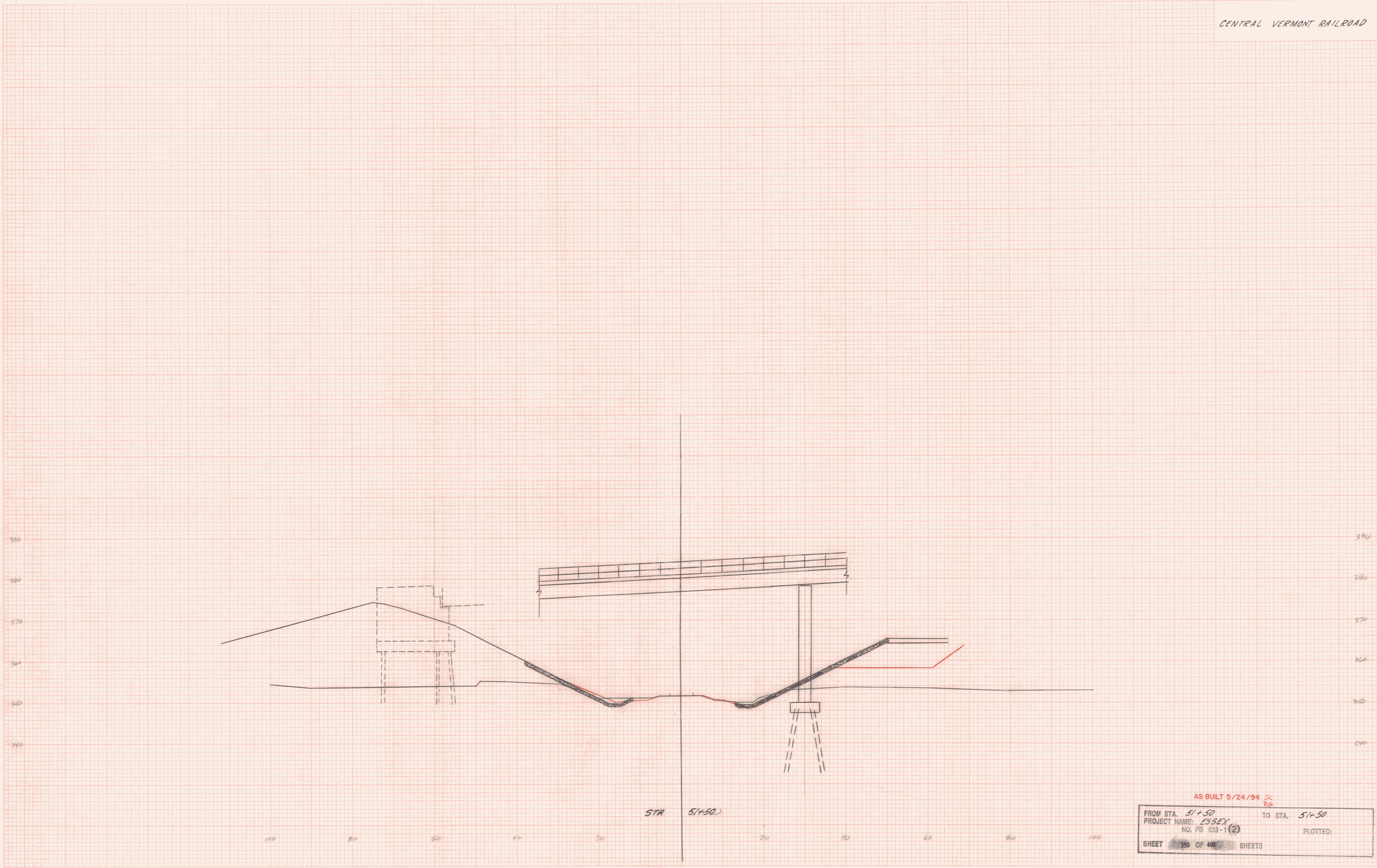
STA. 5+00

℄

160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160

PLATE 3-FULL CROSS SECTION FULL LINE

CENTRAL VERMONT RAILROAD



AS BUILT 5/24/94 SC RG

FROM STA. 51+50 TO STA. 51+50
PROJECT NAME: ESSEX
NO. PB 033-1(2)
PLOTTED:
SHEET 350 OF 400 SHEETS

HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-FULL LINE
"A" TELEDYNE
PRINTED IN U.S.A.

391 OF 465

CENTRAL VERMONT RAILROAD

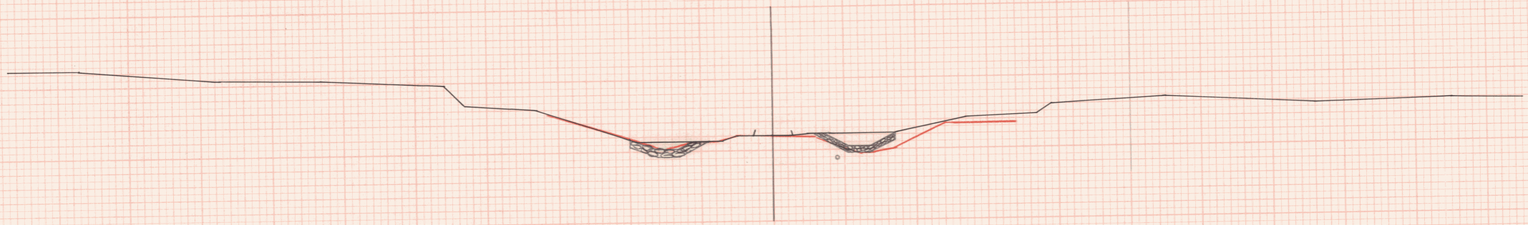
150 100 50 ℄ 50 100 150

360
350



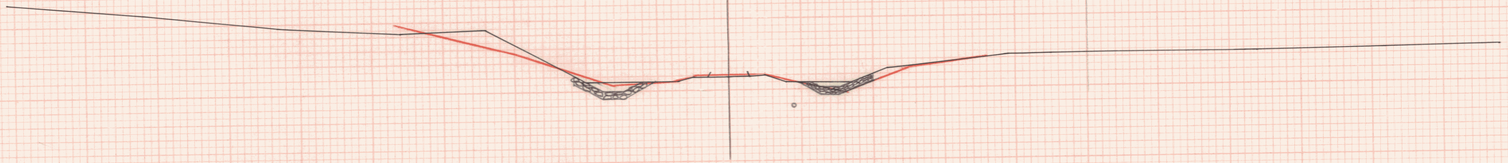
STA. 53+50

360
350



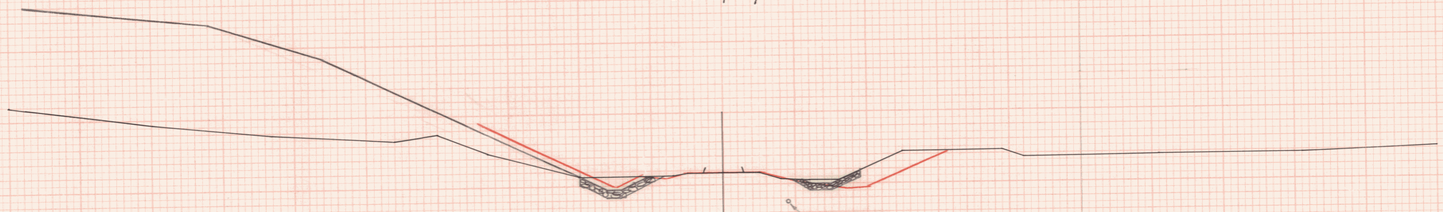
STA. 53+00

360
350



STA. 52+50

350
340



STA. 52+00

360
350

350
340

AS BUILT 5/24/94

FROM STA. 52+00 TO STA. 53+50
PROJECT NAME: ESSEX
NO. PB 033-1(2) PLOTTED:
SHEET 351 OF 400 SHEETS

150 100 50 ℄ 50 100 150

PLATE 3-FULL CROSS SECTION-FULL LINE

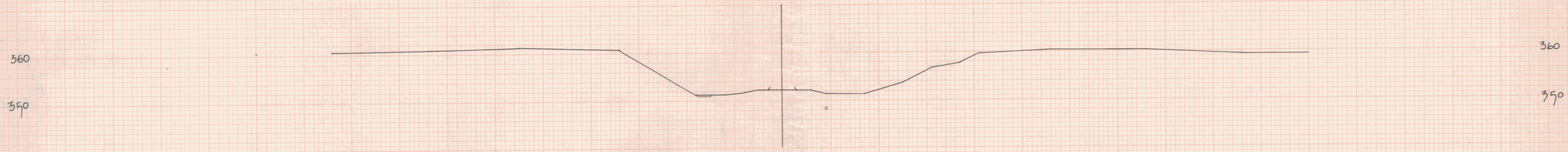
392 of 468

CENTRAL VERMONT RAILROAD

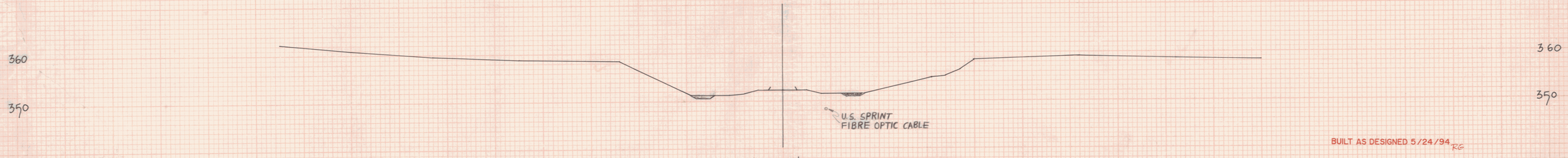
150 100 50 ℄ 50 100 150



STA. 55+00



STA. 54+50



STA. 54+00

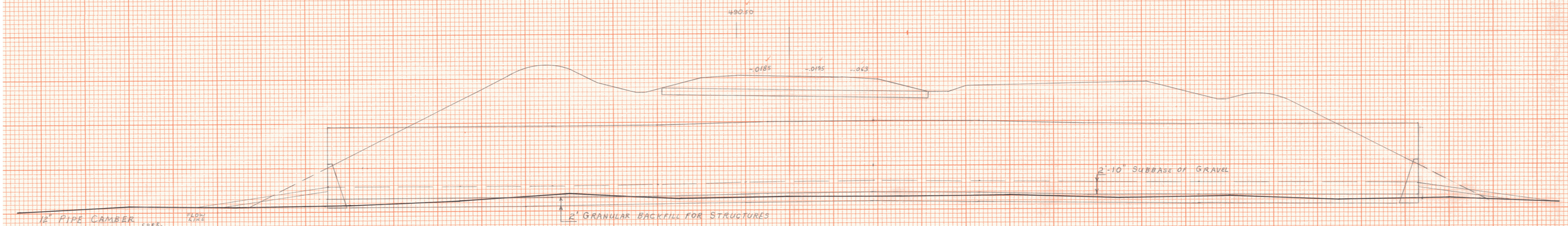
BUILT AS DESIGNED 5/24/94 RG

FROM STA. 54+00 TO STA. 55+00
PROJECT NAME: ESSEX
NO. PB 033-1(2)
PLOTTED:
SHEET 352 OF 400 SHEETS

150 100 50 ℄ 50 100 150

PLATE 3-FULL CROSS SECTION-FULL LINE

℄



12" PIPE CAMBER

	CORR.	FLOW LINE
48+95	0	463.00
49+0	0	.00
+25	0.06	.06
+50	0.20	.20
+75	0.42	.42
50+0	0.72	.72
+19	1.00'	464.00
+25	0.91	463.91
+50	0.56	.56
+75	0.30	.30
51+0	0.12	.12
+25	0.02	.02
+43	0	463.00

502+25

450

18G" x 248" CGMPP
(0.138") (16 x 2 CORR.)

AS BUILT 5/24/94 RG

REVISED 6-25-91 RJR

WILLISTON-COLCHESTER
PB 033-1(2)

CHANNEL LINE @
W.B. 502+50

DZG
L.R.S.C. 5-91

Revised 353
SHEET 400 OF 400

48+75 49 +25 +50 +75 50+0 +50 51+0 +50

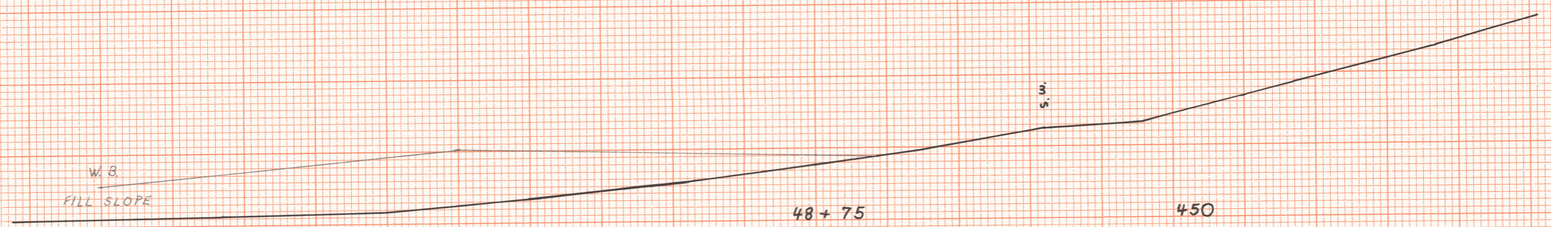
25' RT. CHAN. LINE

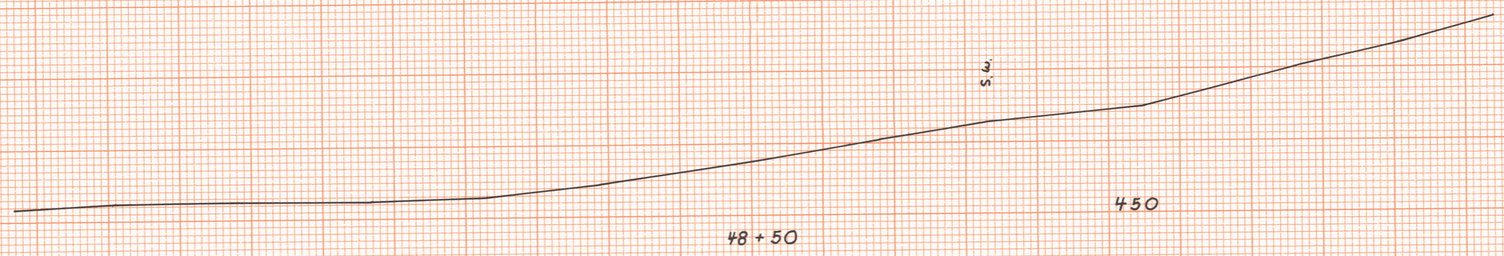
W.B ℄

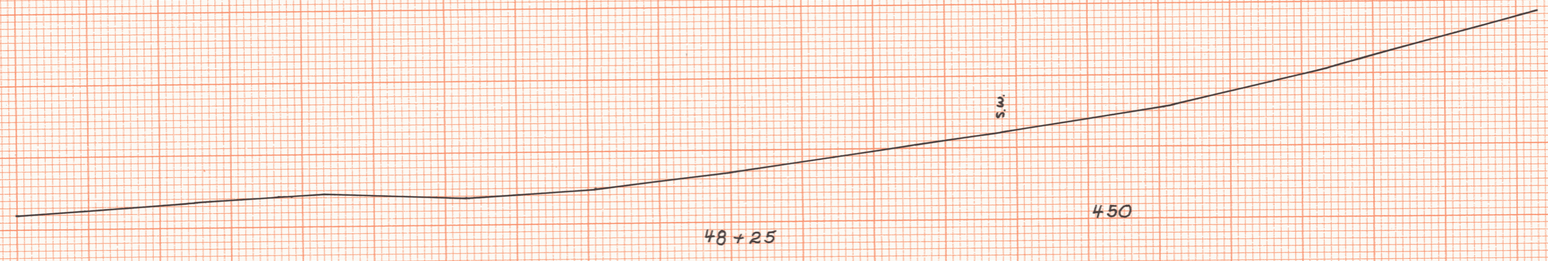
PRINTED IN U.S.A.

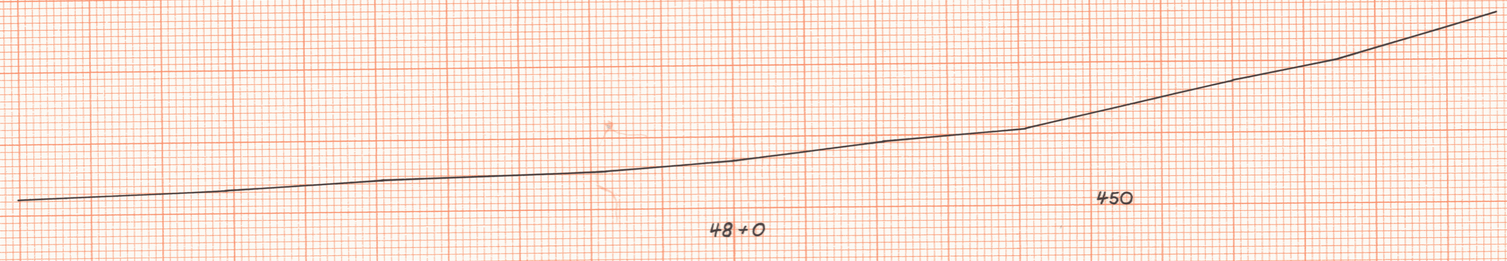
"PERFECT" CROSS SECTION
10 X 10 — ONE INCH
EUGENE DIETZGEN CO.

℄









℄

AS BUILT 5/24/94 RJR
REVISED 6-25-91 RJR

WILLISTON - COLCHESTER
PB 033-1 (2)
CHANNEL LINE @
W. B. 502 + 50

DZG
L.R.S.C. 5-91

Revised
SHEET 354 OF 400

PRINTED IN U.S.A.
"PERFECT" CROSS SECTION
10 X 10 — ONE INCH
EUGENE DIETZGEN CO.

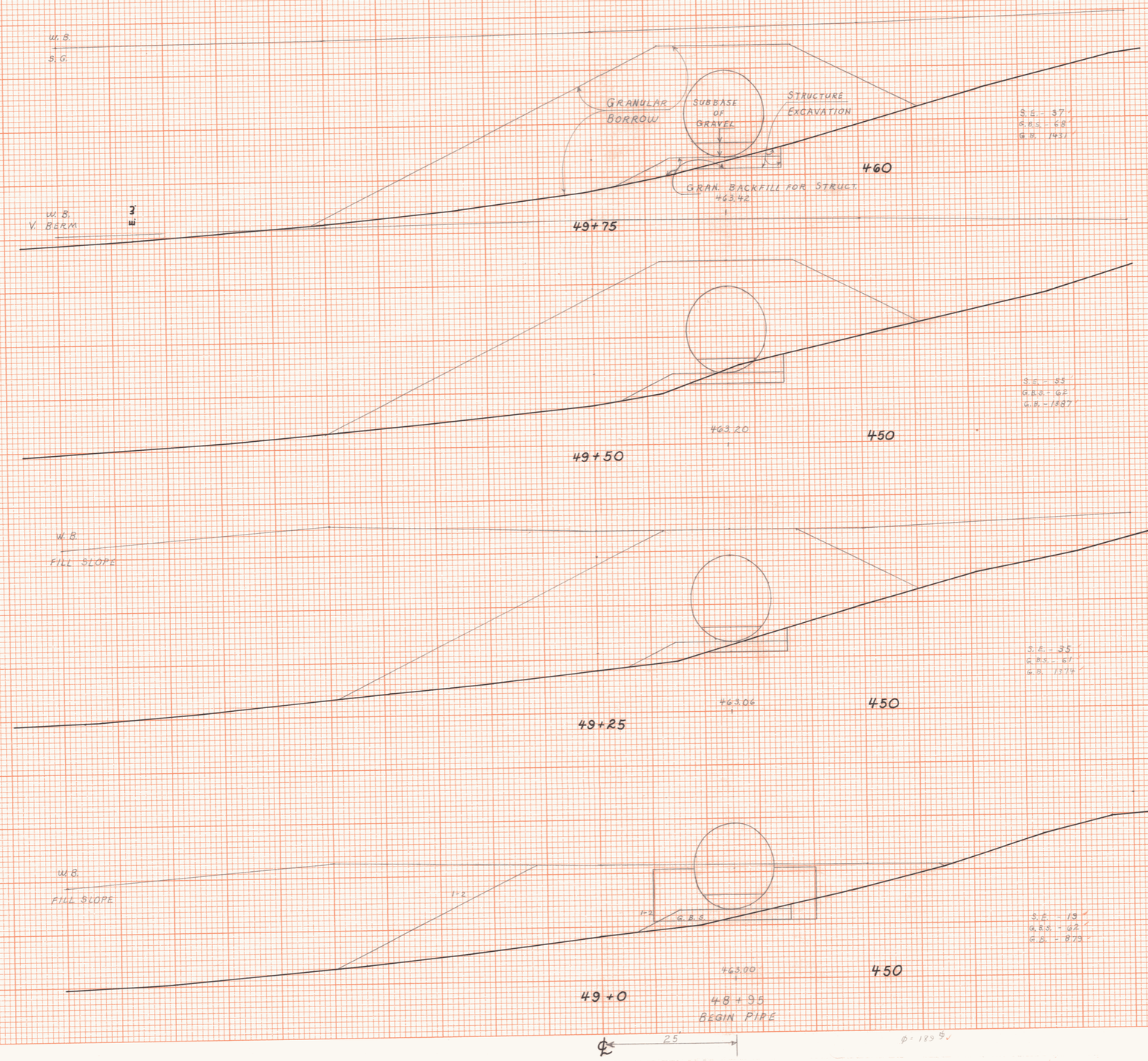
PRINTED IN U.S.A.
"PERFECT" CROSS SECTION
10 X 10 = ONE INCH
EUGENE DIETZGEN CO.

PRINTED IN U.S.A.
"PERFECT" CROSS SECTION
10 X 10 = ONE INCH
EUGENE DIETZGEN CO.

℄

PRINTED IN U.S.A.
"PERFECT" CROSS SECTION
10 X 10 = ONE INCH
EUGENE DIETZGEN CO.

46256



S.E. - 37'
G.B.S. - 68'
G.B. 1431

S.E. - 35'
G.B.S. - 67'
G.B. 1387

S.E. - 35'
G.B.S. - 61'
G.B. 1374

S.E. - 19'
G.B.S. - 62'
G.B. - 879'

	STR. EXCAV. AREA	STR. EXCAV. VOL.	GRAN. BK'FL. STRUCT. AREA	GRAN. BK'FL. STRUCT. VOL.	GRAN. BORROW AREA	GRAN. BORROW VOL.
48+98					879	
49+0	19		62			1127
+25	35	25	61	57	1374	
+50	55	42	62	57	1387	1278
+75	37	43	68	60	1431	1305
50+0	32	32	70	64	1486	1350
+25	32	30	72	66	1416	1344
+50	42	34	56	59	1306	1260
+75	34	35	52	50	1364	1231
51+0	46	37	52	48	1351	1252
+25	30	35	48	46	1133	1150
+38	31	15	51	24		381
+40					240	
		328 c.y.		531 c.y.		11,678 c.y.

STR. EXCAV. @ HDWL. 48+95

40 ft x 6.5 = 9.6 c.y.

" " " " 51+43

53 ft x 6.5 = 12.8 c.y.

4 328 c.y.

350.4 c.y.

DZG
6-3-91

AS BUILT 5/24/94 RC
REVISED 6-25-91 RJR

WILLISTON - COLCHESTER
PB 033-1 (2)
CHANNEL LINE @
W.B. 502+50

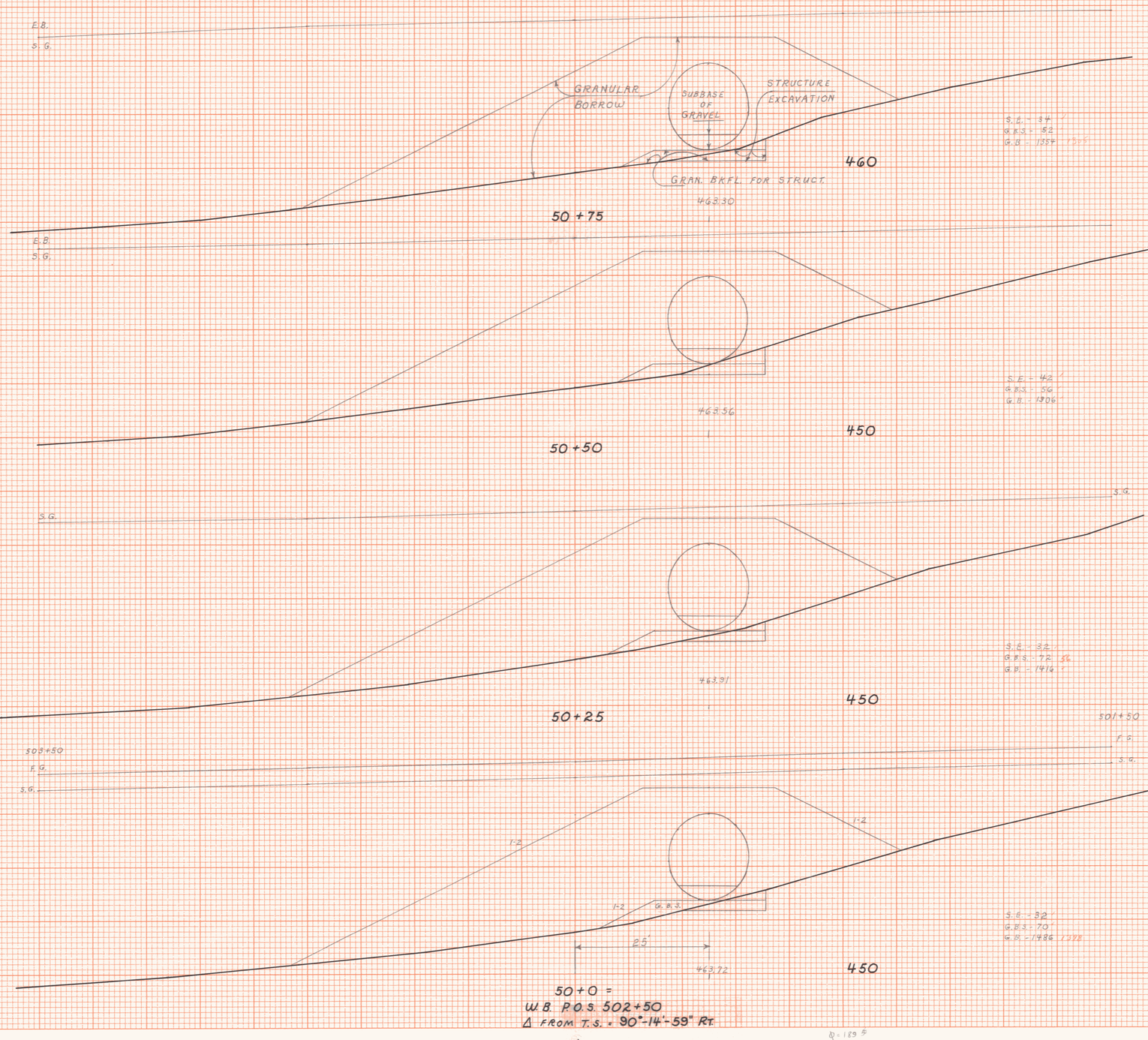
DZG
L.R.S.C. 5-91

REVISED
SHEET 355 OF 400

"PERFECT" CROSS SECTION
10 X 10 = ONE INCH
EUGENE DIETZGEN CO.

PRINTED IN U.S.A.

℄



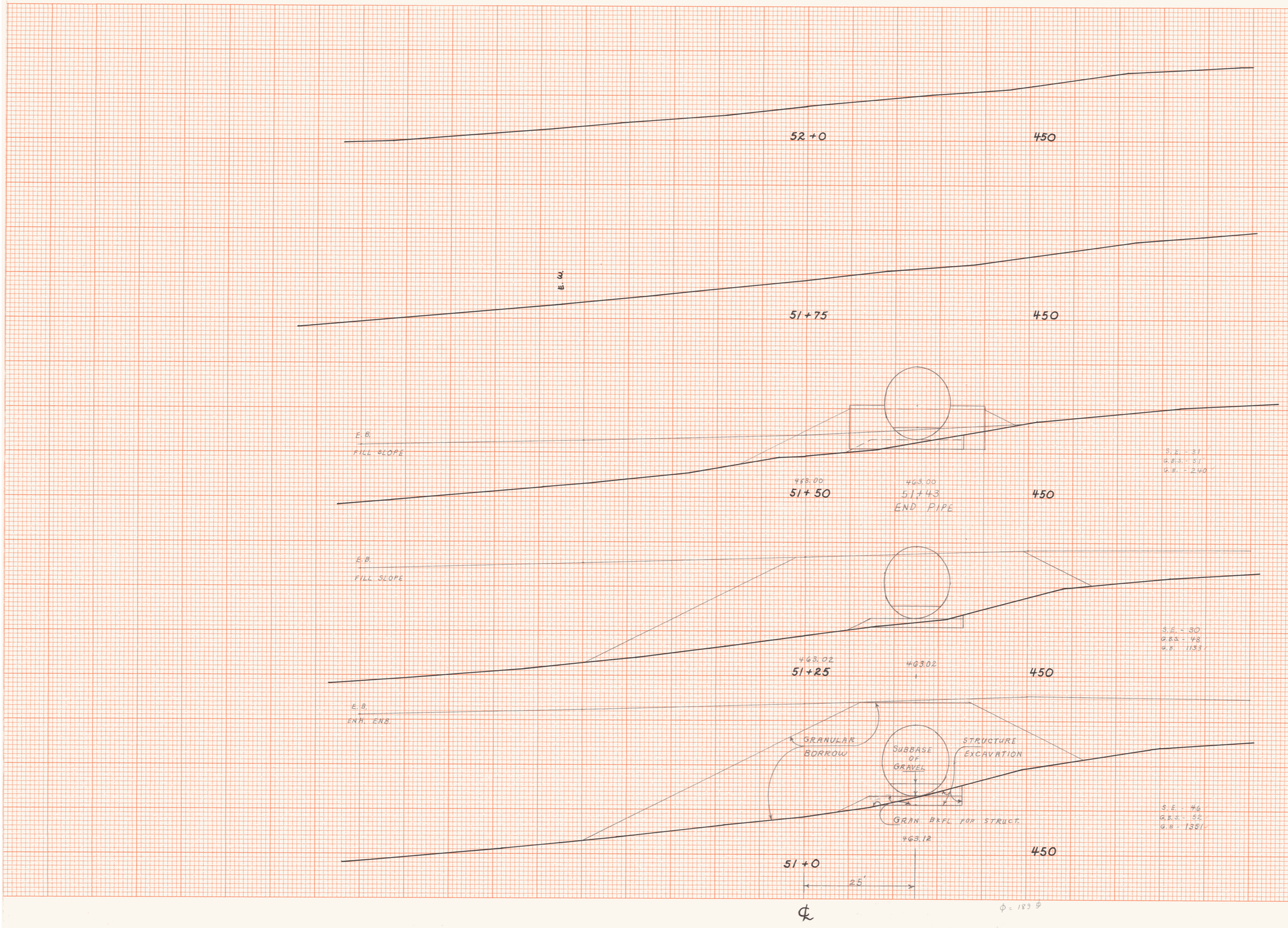
AS BUILT 5/24/94 RC
REVISED 6-25-91 RJR

WILLISTON - COLCHESTER
PB 033-1(2)
CHANNEL LINE @
W.B. 502+50

DZG
L.R.S.C. 5-91

Revised 355
SHEET 399 OF 400

℄



AS BUILT 5/24/94 RG

REVISED 6-25-91 RJR

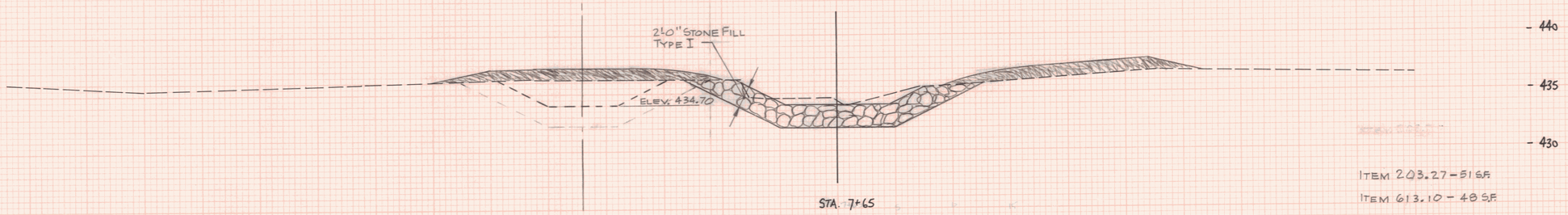
WILLISTON - COLCHESTER
PB 033-1 (2)

CHANNEL LINE @
W.B. 502+50

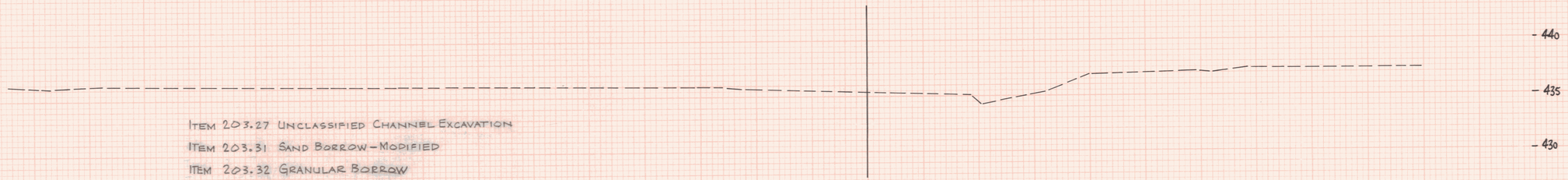
DZG
L.R.S.C. 5-91

Revised
SHEET 357 OF 400

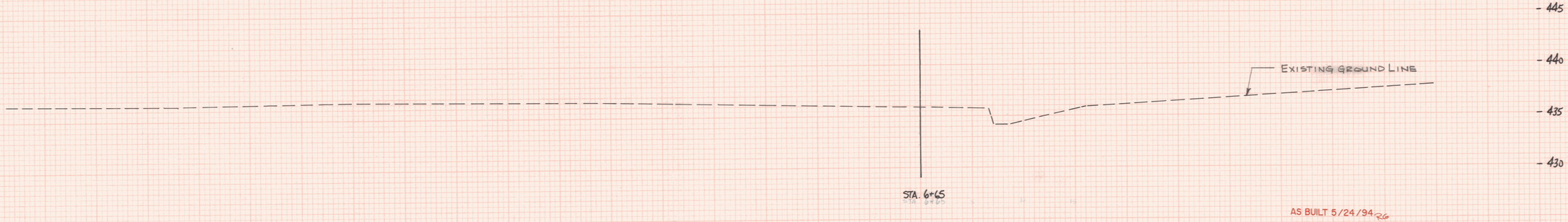
STRUCTURE NO. 8
VT. RTE. 289 OVER INDIAN BROOK
CHANNEL CROSS-SECTIONS
6+65 - 7+65 1"= 5' H:V



ITEM 203.27 - 51 S.F.
ITEM 613.10 - 48 S.F.



ITEM 203.27 UNCLASSIFIED CHANNEL EXCAVATION
ITEM 203.31 SAND BORROW-MODIFIED
ITEM 203.32 GRANULAR BORROW
ITEM 204.25 STRUCTURE EXCAVATION
ITEM 613.10 STONE FILL TYPE I
ITEM 613.16 RIP RAP - LIGHT TYPE



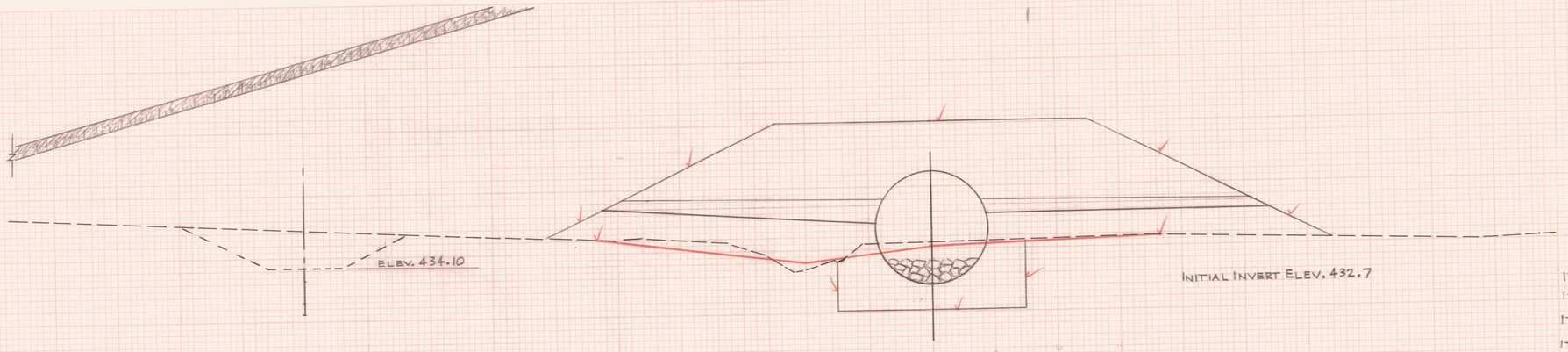
AS BUILT 5/24/94 RG

FROM STA. 6+65 TO STA. 7+65
PROJECT NAME: ESSEX
NO. PB 033-1(2) PLOTTED:
SHEET 358 OF 400 SHEETS

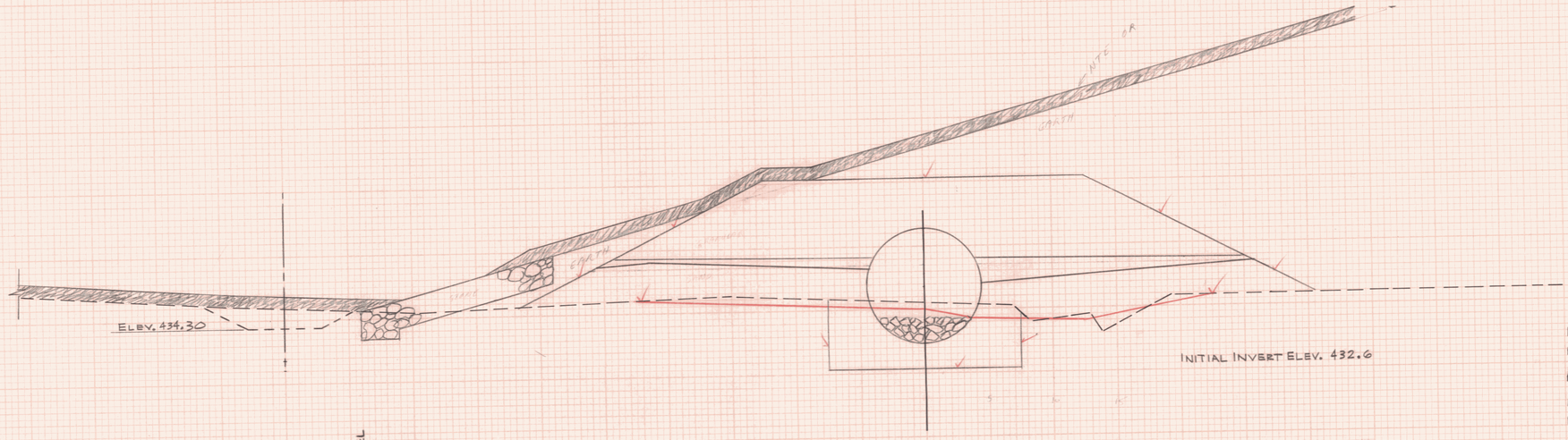
80 70 60 50 40 30 20 10 0 10 20 30 40 50
℄

FINAL SURVEY DATE BY SURVEYED COMPUTED PLOTTED TEMPLATE NOTE BOOK PAGE NO. CROSS SECTIONED
ORIGINAL SURVEY DATE BY SURVEYED COMPUTED PLOTTED TEMPLATE NOTE BOOK PAGE NO. CROSS SECTIONED
HIGHWAY GENERAL AID SHEET
PLATE 3-FULL CROSS SECTION-FULL LINE
INTELLIGENT
PRINTED IN U.S.A.

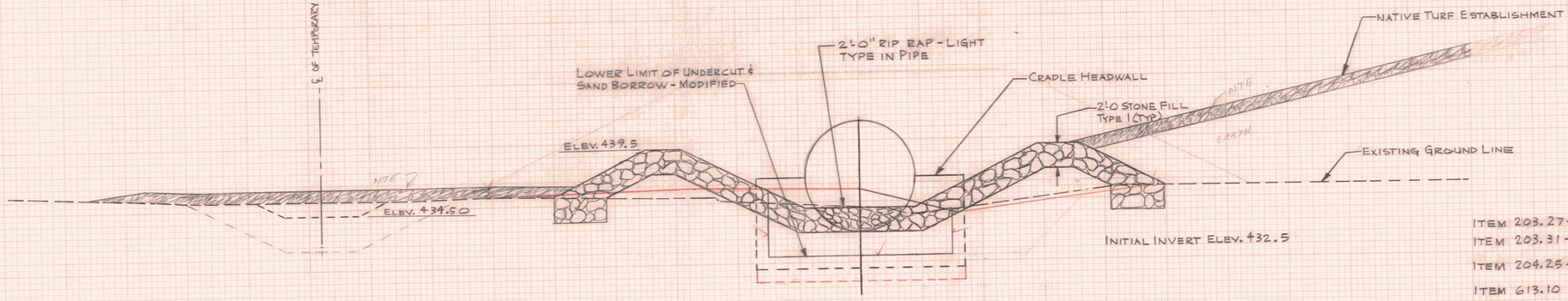
STRUCTURE NO. 8
VT. RTE. 289 OVER INDIAN BROOK
CHANNEL CROSS-SECTIONS
8+15 - 9+00 1"=5' H:V



ITEM 203.31 - 220 S.F.
ITEM 203.32 - 218 S.F.
ITEM 204.25 - 78 S.F.
ITEM 613.16 - 11 S.F.



ITEM 203.31 - 228 SF
ITEM 203.32 - 213 SF
ITEM 204.25 - 75 SF
ITEM 613.10 - 35 SF
ITEM 613.16 - 11 SF



ITEM 203.27 - 46 SF
ITEM 203.31 - 115 SF
ITEM 204.25 - 60 SF
ITEM 613.10 - 120 SF
ITEM 613.16 - 11 SF

BEGIN CULVERT STA. 8+14.50

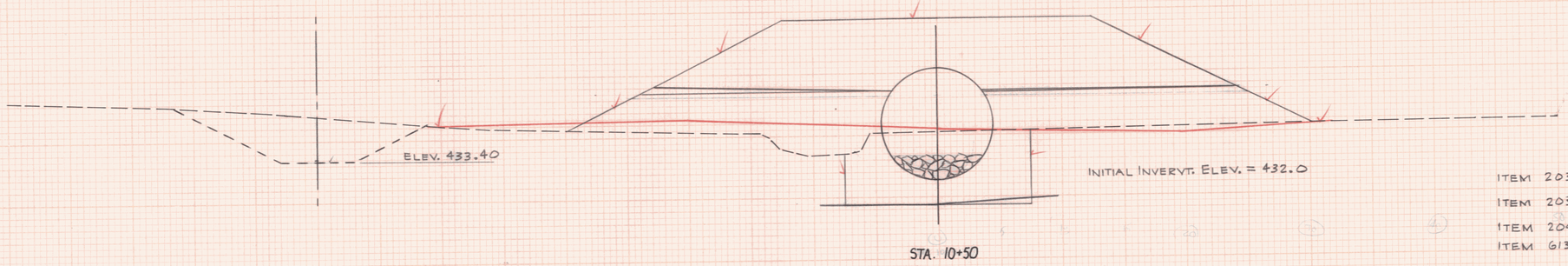
FROM STA. 8+15 TO STA. 9+00
PROJECT NAME: ESSEX
NO. PB 033-1(2) PLOTTED:
SHEET 359 OF 400 SHEETS

AS BUILT 5724794

FINAL SURVEY DATE BY SURVEYED PLOTTED TEMPLATE NOTE BOOK PAGE AREAS DISCARD NO.
ORIGINAL SURVEY DATE BY SURVEYED PLOTTED TEMPLATE NOTE BOOK PAGE AREAS DISCARD NO.
PLATE 3-FULL CROSS SECTION-FULL LINE

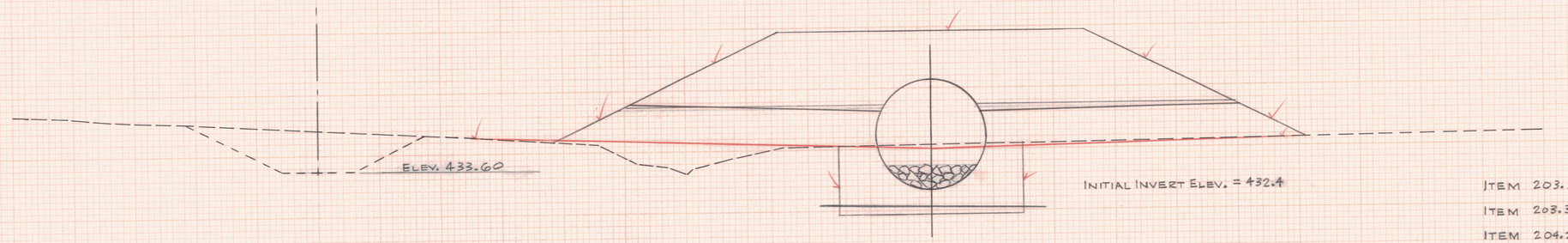
STRUCTURE NO. 8
VT. RTE. 289 OVER INDIAN BROOK
CHANNEL CROSS-SECTIONS
9+50 - 10+50 1"=5' H:V

STRUCTURE NO. 8
VT. RTE. 289 OVER INDIAN BROOK
CHANNEL CROSS-SECTIONS
9+50 - 10+50 1"=5' H:V



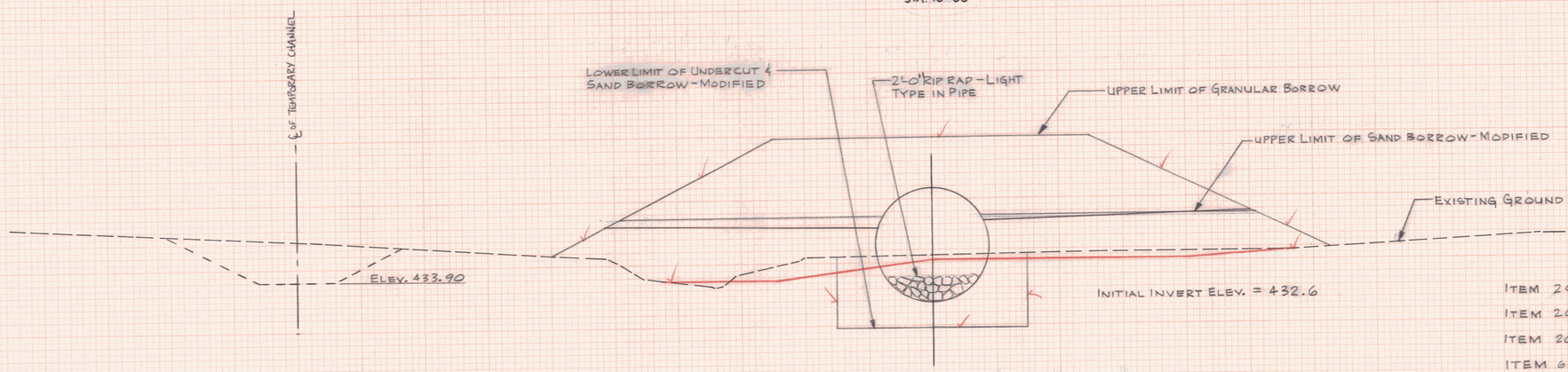
STA. 10+50

ITEM 203.31 - 218 S.F.
ITEM 203.32 - 201 S.F.
ITEM 204.25 - 85 S.F.
ITEM 613.16 - 11 S.F.



STA. 10+00

ITEM 203.31 - 228 S.F.
ITEM 203.32 - 213 S.F.
ITEM 204.25 - 83 S.F.
ITEM 613.16 - 11 S.F.



STA. 9+50

ITEM 203.31 - 230 S.F.
ITEM 203.32 - 218 S.F.
ITEM 204.25 - 85 S.F.
ITEM 613.16 - 11 S.F.

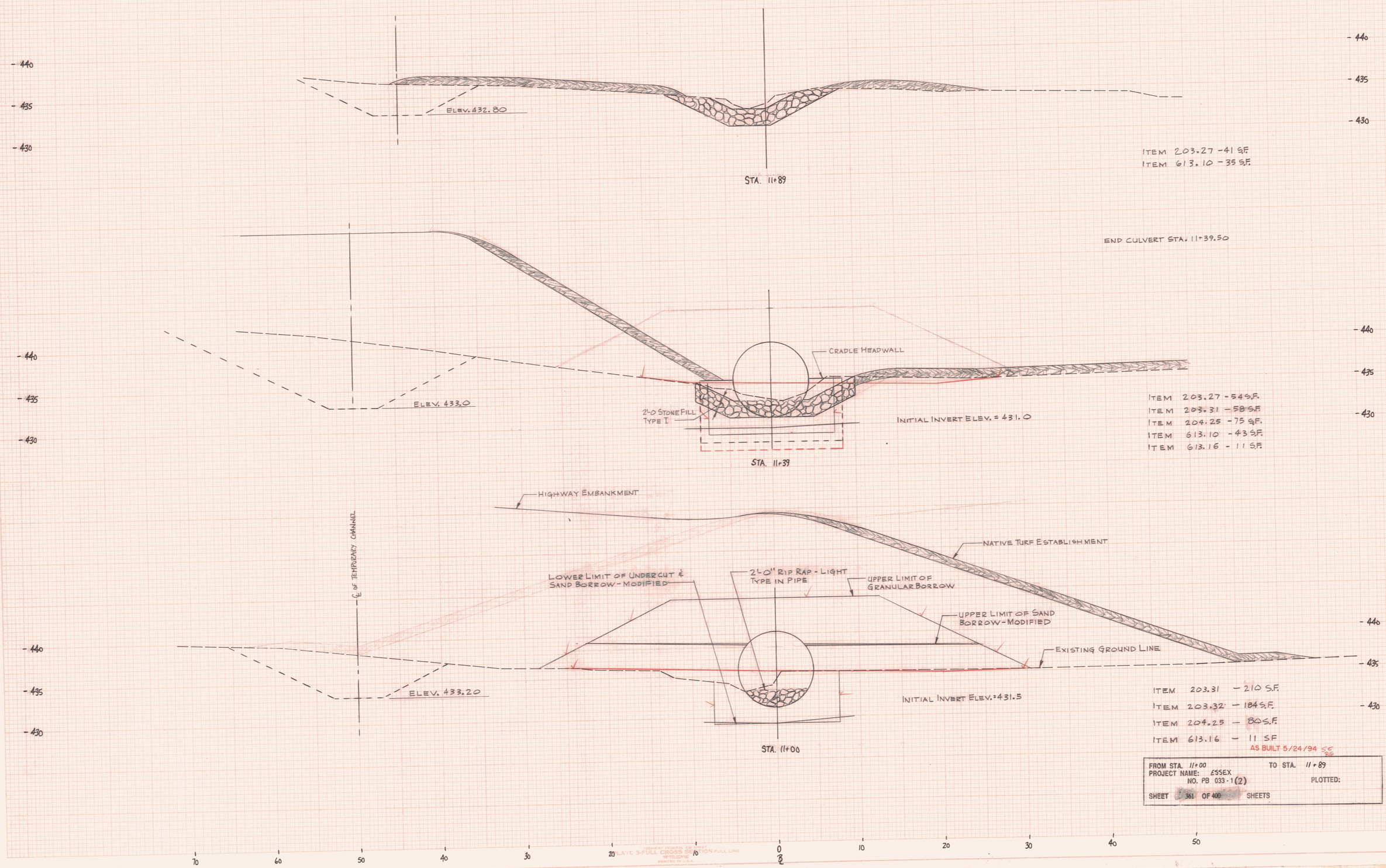
AS BUILT 5/24/94 SC RC

FROM STA. 9+50 TO STA. 10+50
PROJECT NAME: ESSEX
NO. PB 033-1 (2) PLOTTED:
SHEET 360 OF 400 SHEETS

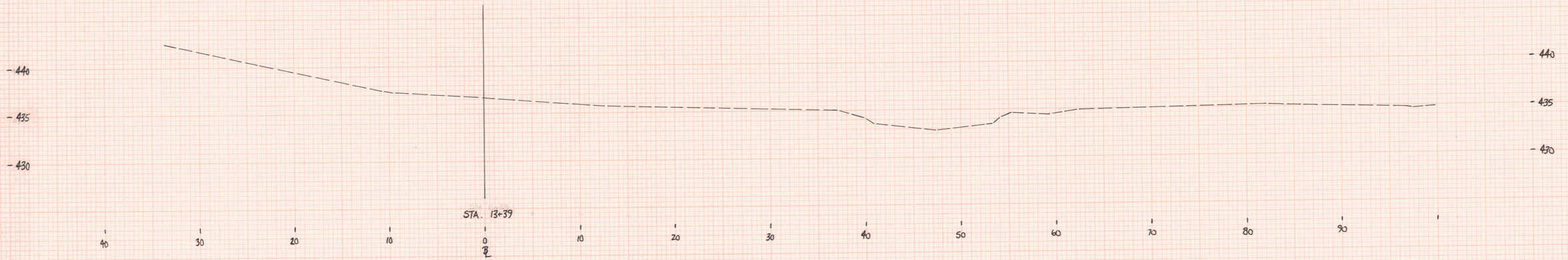
60 50 40 30 20 10 0 10 20 30 40 50
℄

PLATE 3-FULL CROSS SECTION-FULL LINE
PRINTED IN U.S.A.

STRUCTURE No. 8
VT. RTE. 289 OVER INDIAN BROOK
CHANNEL CROSS-SECTIONS
11+00 - 11+89 1"=5' H:V



STRUCTURE NO. 8
VT. RTE. 289 OVER INDIAN BROOK
CHANNEL CROSS-SECTIONS
12+39 - 13+39 1"=5' H:V



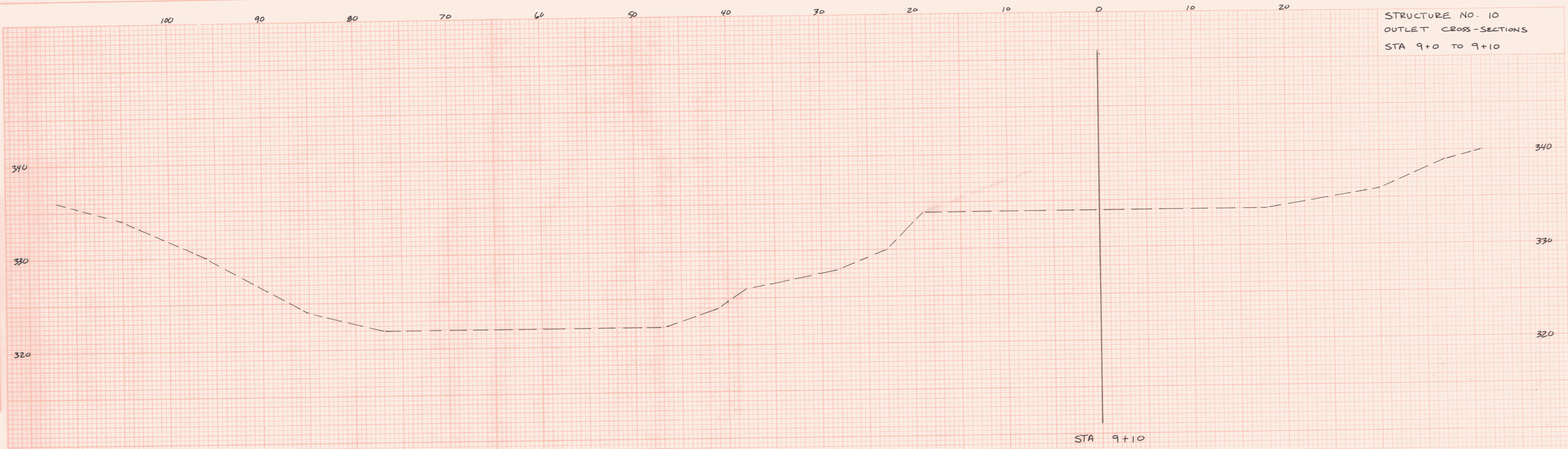


BUILT AS DESIGNED 5/24/94 RG

FROM STA. 12+39 TO STA. 13+39
PROJECT NAME: ESSEX
NO. PB 033-1(2) PLOTTED:
SHEET 362 OF 400 SHEETS

FINAL SURVEY
ORIGINAL SURVEY
SURVEYED
PLOTTED
TRIPLATE
NOTE BOOK
AREA
NO.
DATE
BY

STRUCTURE NO. 10
OUTLET CROSS-SECTIONS
STA 9+0 TO 9+10



FINAL SURVEY
DATE
BY
SURVEYED
PLOTTED
TRACED
NOTE BOOK
AREAS CHECKED
NO.

ORIGINAL SURVEY
DATE
BY
SURVEYED
PLOTTED
TRACED
NOTE BOOK
AREAS CHECKED
NO.

BUILT AS DESIGNED 5/24/94 RG

FROM STA. 9+00	TO STA. 9+10
PROJECT NAME: ESSEX	
NO. PB 033-1(2)	PLOTTED:
SHEET 363 OF 400 SHEETS	

HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-FULL LINE
W-TELEDYNE
PRINTED IN U.S.A.

STRUCTURE NO. 10
OUTLET CROSS-SECTIONS
STA 9+20 TO 9+30



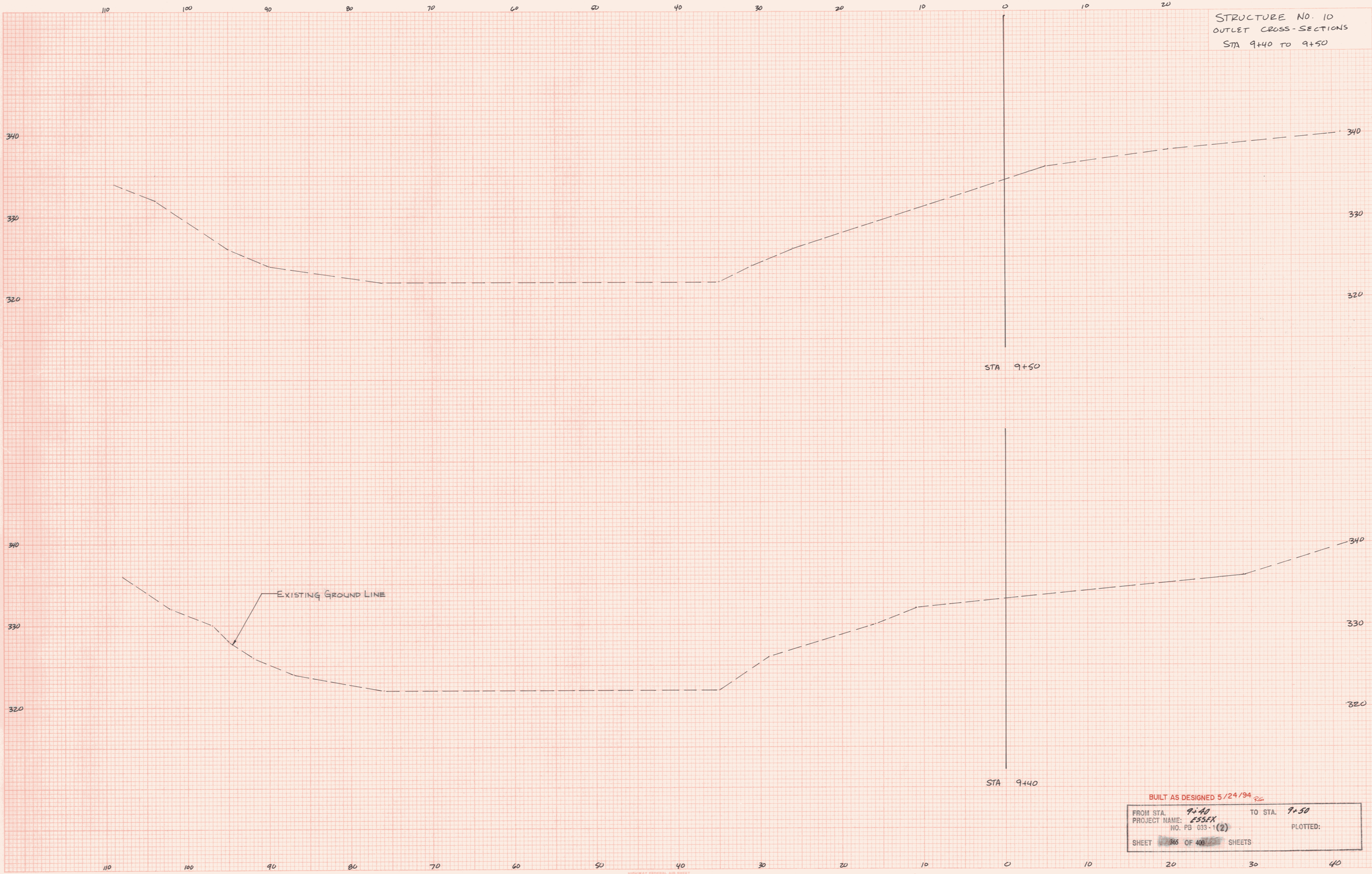
FINAL SURVEY
DATE
BY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.

ORIGINAL SURVEY
DATE
BY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.

BUILT AS DESIGNED 5/24/94 RG

FROM STA. 9+20 TO STA. 9+30
PROJECT NAME: ESSEX
NO. PB 033-1(2)
SHEET 364 OF 400 SHEETS
PLOTTED:

PLATE 3-FULL CROSS SECTION-FULL LINE
"R" TELEDYNE
PRINTED IN U.S.A.



BUILT AS DESIGNED 5/24/94 RG

FROM STA. 9+40 TO STA. 9+50
PROJECT NAME: ESSEX
NO. PB 033-1(2) PLOTTED:
SHEET 365 OF 400 SHEETS

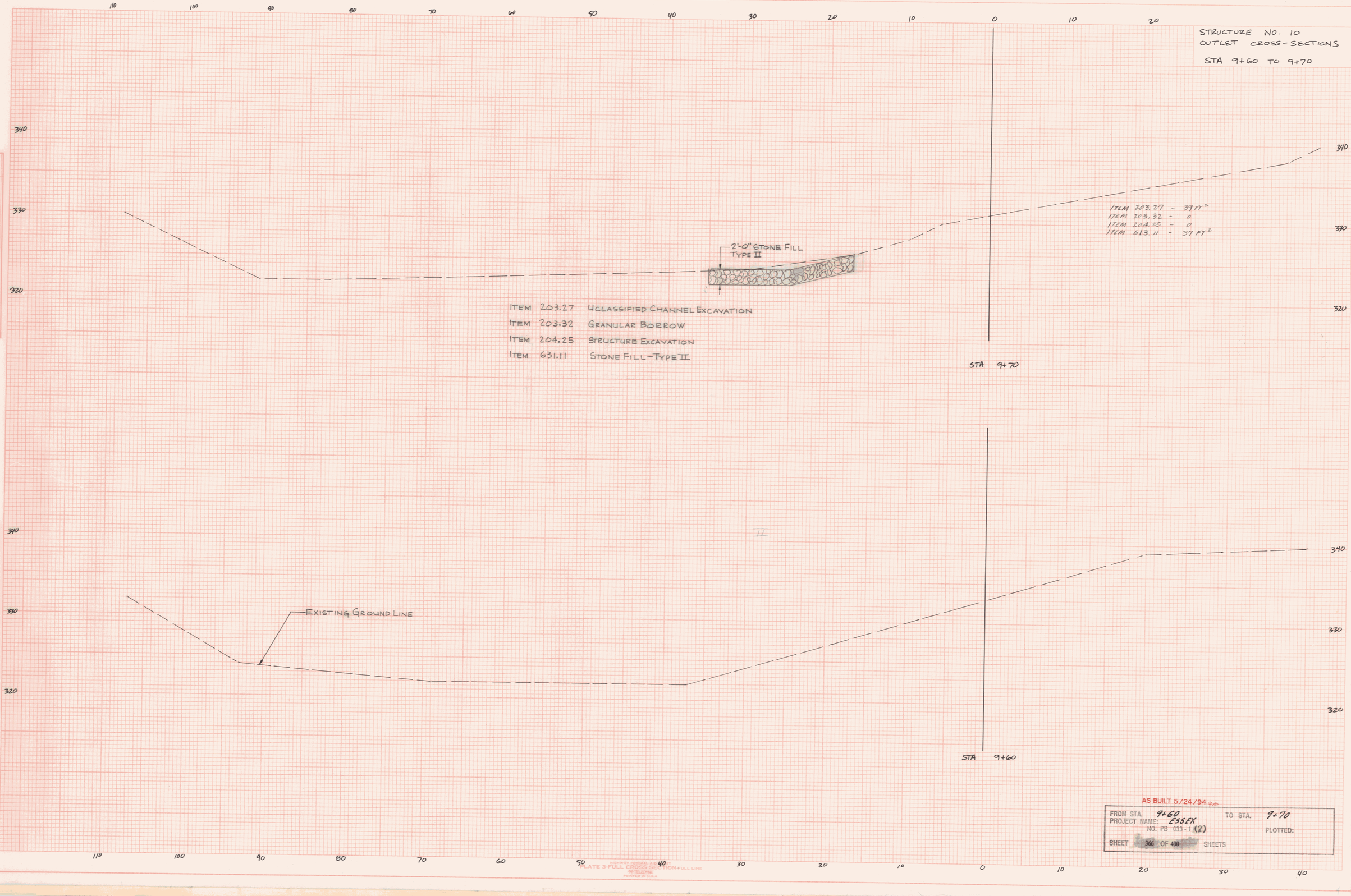
FINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK NO.
BY
DATE

ORIGINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK NO.
BY
DATE

HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-FULL LINE
WHITELEDGE
PRINTED IN U.S.A.

STRUCTURE NO. 10
OUTLET CROSS-SECTIONS

STA 9+60 TO 9+70



ITEM 203.27 UCLASSIFIED CHANNEL EXCAVATION
ITEM 203.32 GRANULAR BORROW
ITEM 204.25 STRUCTURE EXCAVATION
ITEM 631.11 STONE FILL-TYPE II

AS BUILT 5/24/94 RC

FROM STA. 9+60 TO STA. 9+70
PROJECT NAME: ESSEX
NO. PB 033-1 (2) PLOTTED:
SHEET 366 OF 400 SHEETS

FINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK, NO.

ORIGINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK, NO.

HIGHWAY DESIGN AID
PLATE 3-FULL CROSS SECTION-FULL LINE
MITELDYNE
PRINTED IN U.S.A.

STRUCTURE NO. 10
OUTLET CROSS-SECTIONS
STA 9+80 TO 9+90



AS BUILT 5/24/94 RG

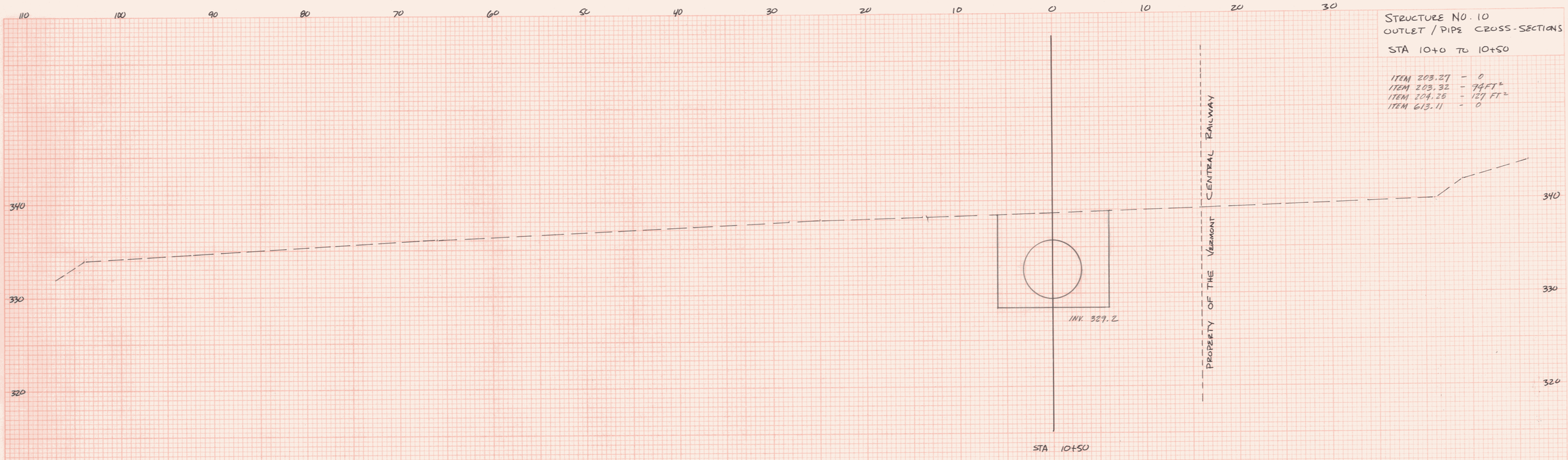
FROM STA. 9+80 TO STA. 9+90
PROJECT NAME: ESSEX
NO. PB 033-1(2) PLOTTED:
SHEET 367 OF 400 SHEETS

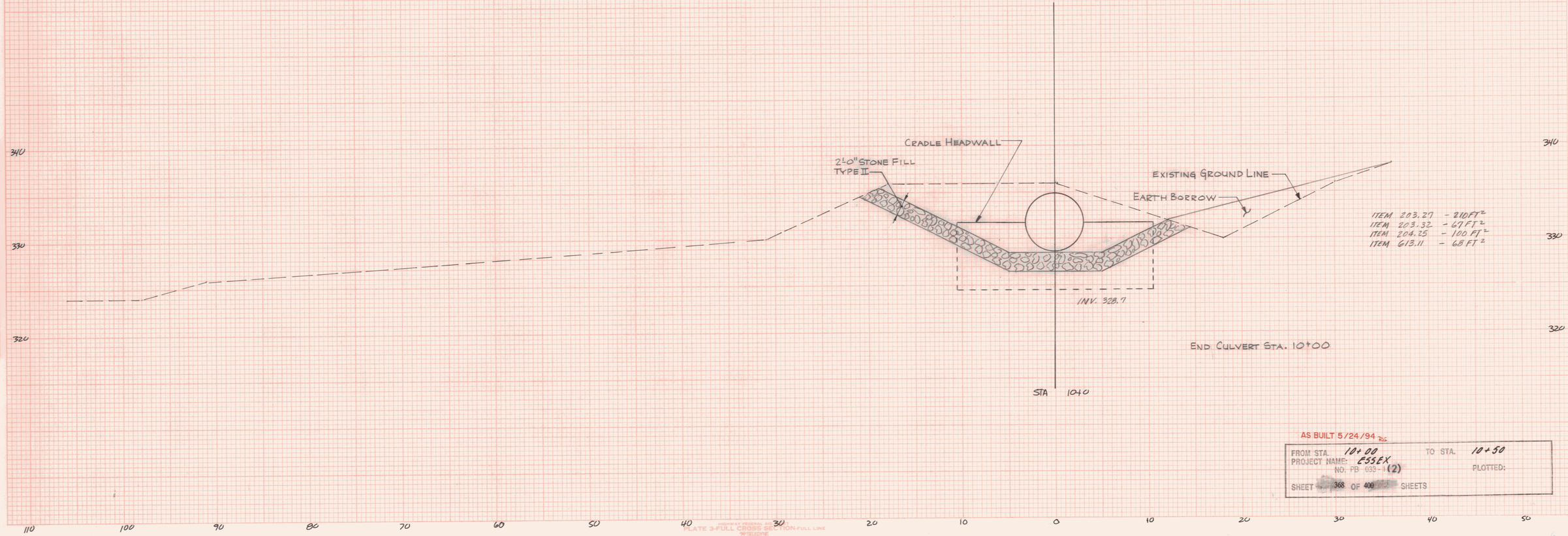
PLATE 3-FULL CROSS SECTION-FULL LINE

STRUCTURE NO. 10
OUTLET / PIPE CROSS-SECTIONS

STA 10+0 TO 10+50

ITEM 203.27 - 0
ITEM 203.32 - 74 FT²
ITEM 204.25 - 127 FT²
ITEM 613.11 - 0





ITEM 203.27 - 210 FT²
ITEM 203.32 - 67 FT²
ITEM 204.25 - 100 FT²
ITEM 613.11 - 68 FT²

END CULVERT STA. 10+00

AS BUILT 5/24/94 RG

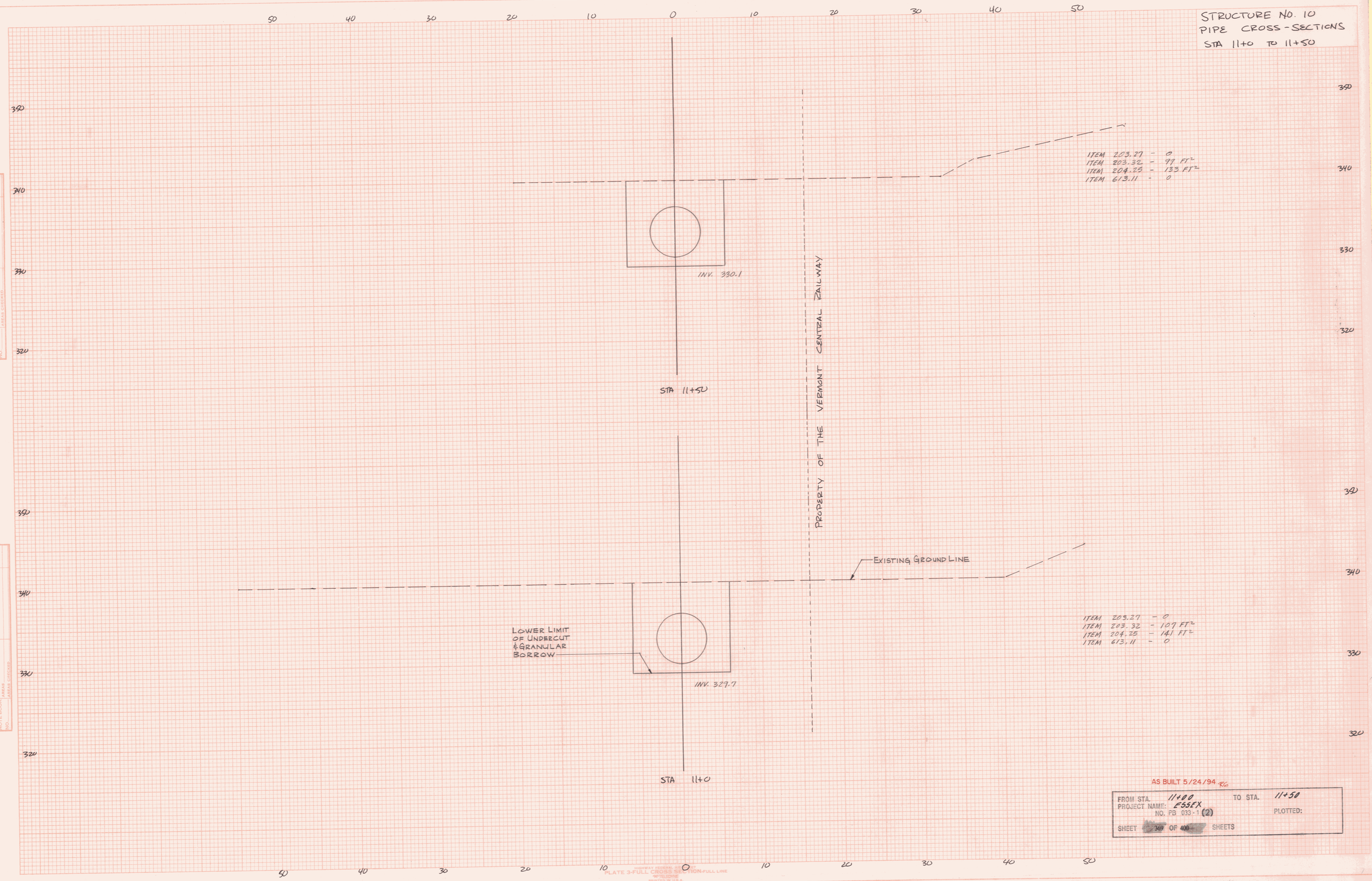
FROM STA. 10+00 TO STA. 10+50
PROJECT NAME: ESSEX
NO. FB 033-1(2) PLOTTED:
SHEET 368 OF 400 SHEETS

FINAL SURVEY — DATE / BY / SURVEYED / PLOTTED / NOTE BOOK / TEMPLATE / AREAS / AREAS CHECKED / NO.

ORIGINAL SURVEY — DATE / BY / SURVEYED / PLOTTED / NOTE BOOK / TEMPLATE / AREAS / AREAS CHECKED / NO.

HIGHWAY FEDERAL AID
PLATE 3-FULL CROSS SECTION-FULL LINE
"B"TELEDYNE
PRINTED IN U.S.A.

STRUCTURE NO. 10
PIPE CROSS-SECTIONS
STA 11+0 TO 11+50



FINAL SURVEY — DRAWN, PLOTTED, TEMPLATE, AREAS, CROSS CHECKED, NOTE BOOK, NO., BY, DATE

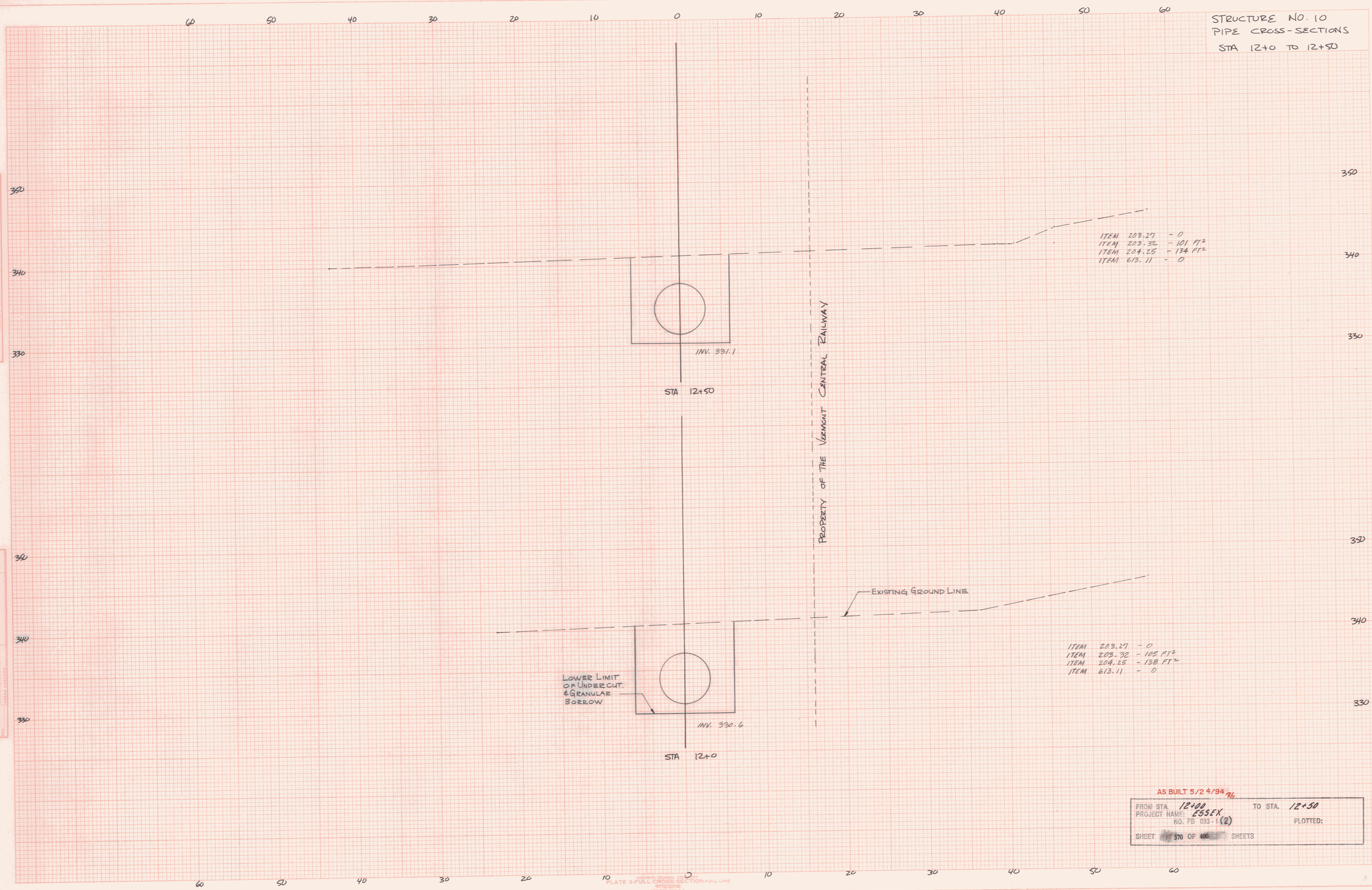
ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, CROSS CHECKED, NOTE BOOK, NO., BY, DATE

AS BUILT 5/24/94 RG

FROM STA. 11+00		TO STA. 11+50	
PROJECT NAME: ESSEX			PLOTTED:
NO. PB 033-1 (2)			
SHEET 369 OF 400 SHEETS			

HIGHWAY FEDERAL AID
PLATE 3-FULL CROSS SECTION-FULL LINE
KEUFFEL & ESSER CO.
PRINTED IN U.S.A.

STRUCTURE NO. 10
PIPE CROSS-SECTIONS
STA 12+0 TO 12+50



FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, NOTE BOOK, AREAS, AREAS CHECKED, NO., BY, DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, NOTE BOOK, AREAS, AREAS CHECKED, NO., BY, DATE

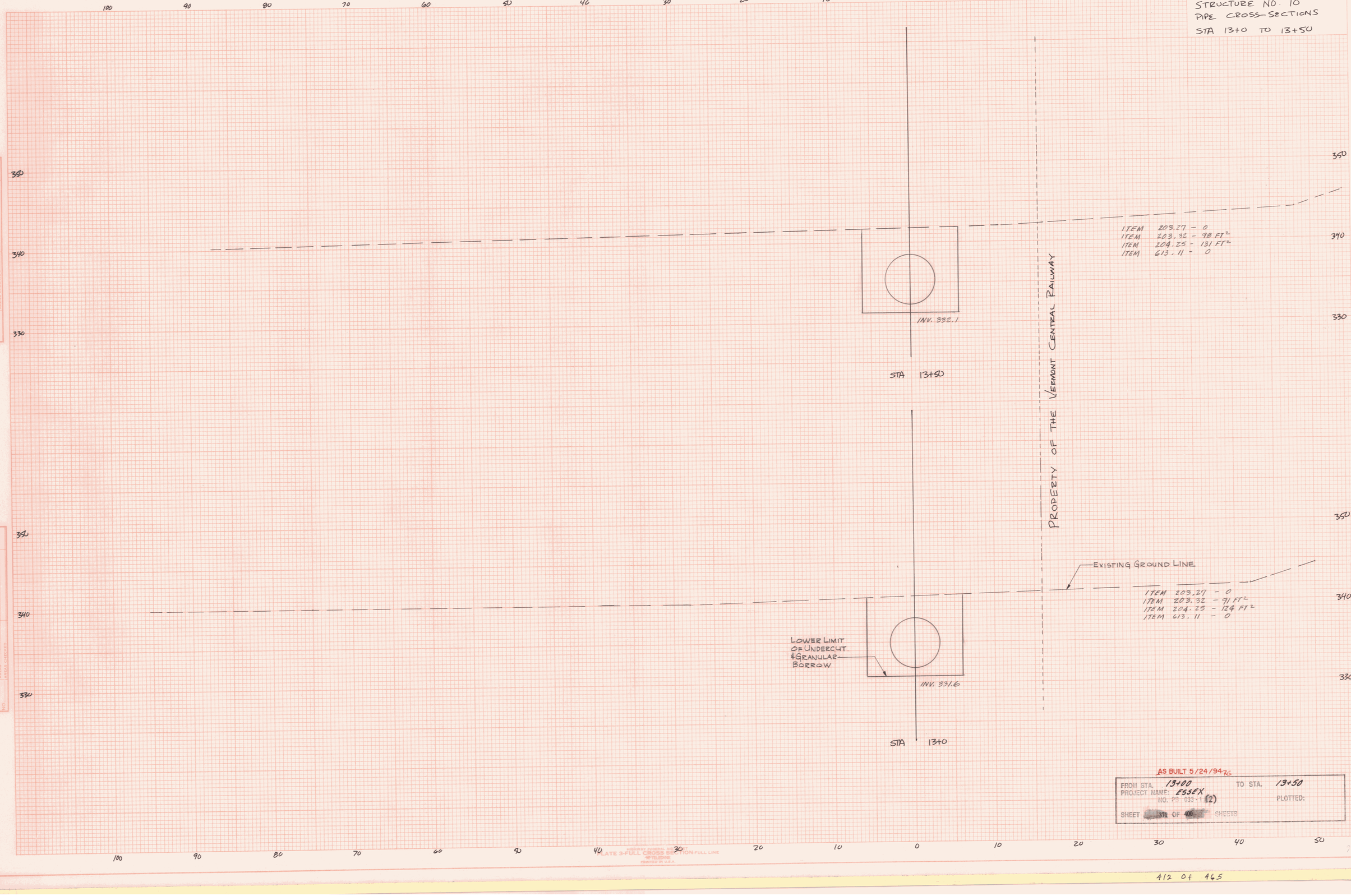
AS BUILT 5/24/94 RL

FROM STA. 12+00 TO STA. 12+50
PROJECT NAME: ESSEX
NO. PB 033-1(2) PLOTTED:
SHEET 370 OF 400 SHEETS

PLATE 3-FULL CROSS SECTION-FULL LINE

All Of 465

STRUCTURE NO. 10
PIPE CROSS-SECTIONS
STA 13+0 TO 13+50



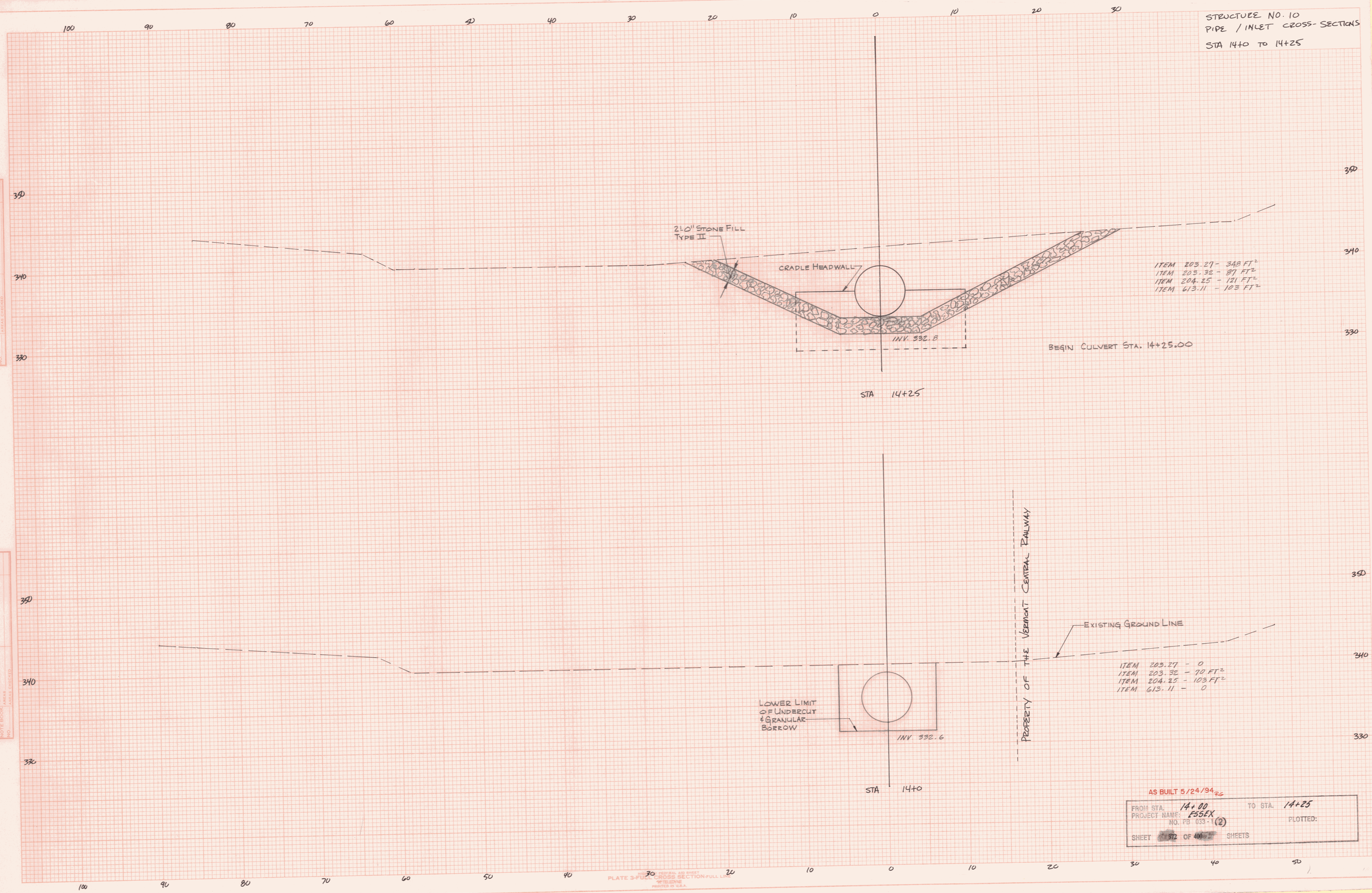
FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

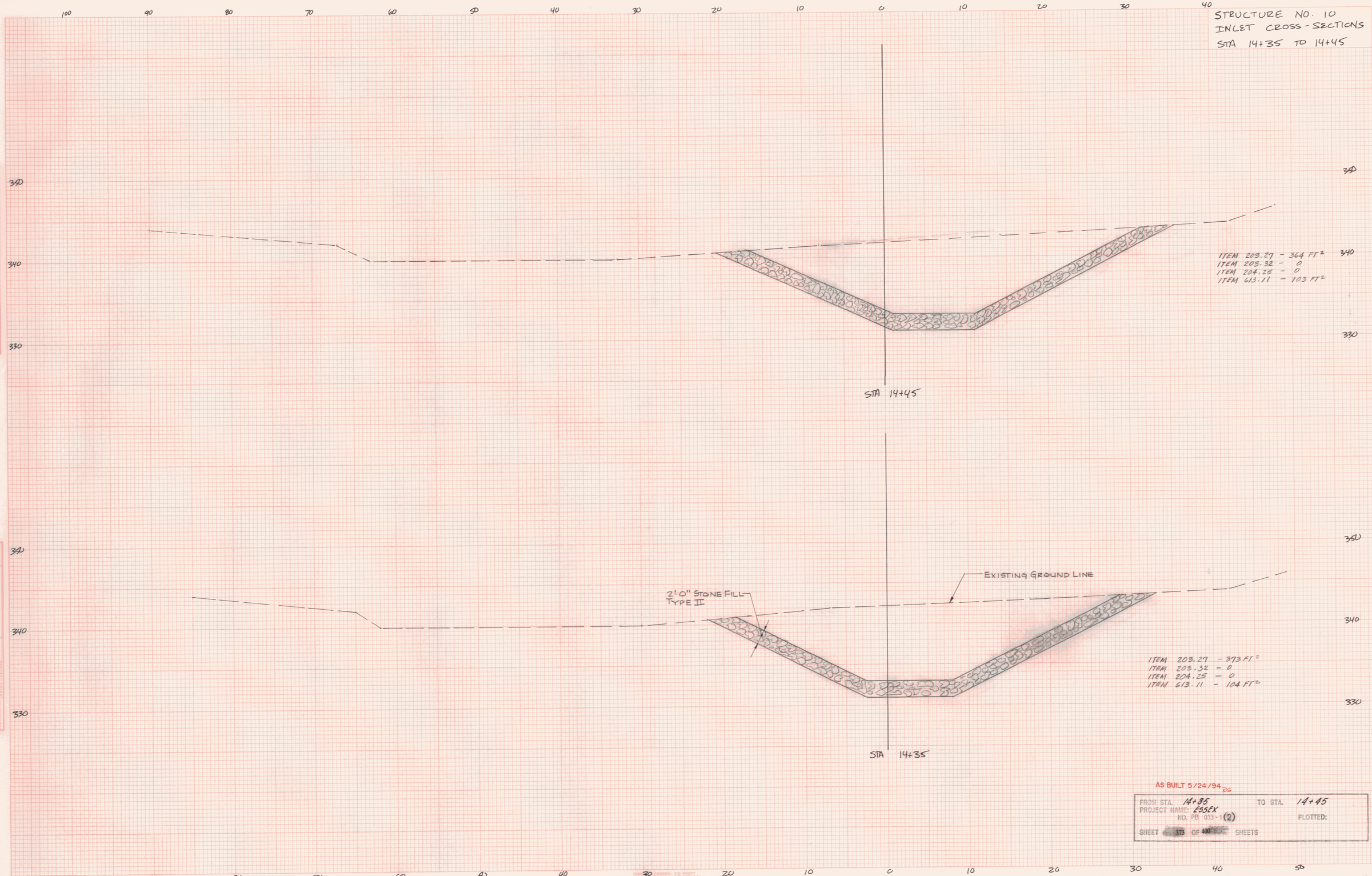
ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

AS BUILT 5/24/94 RG

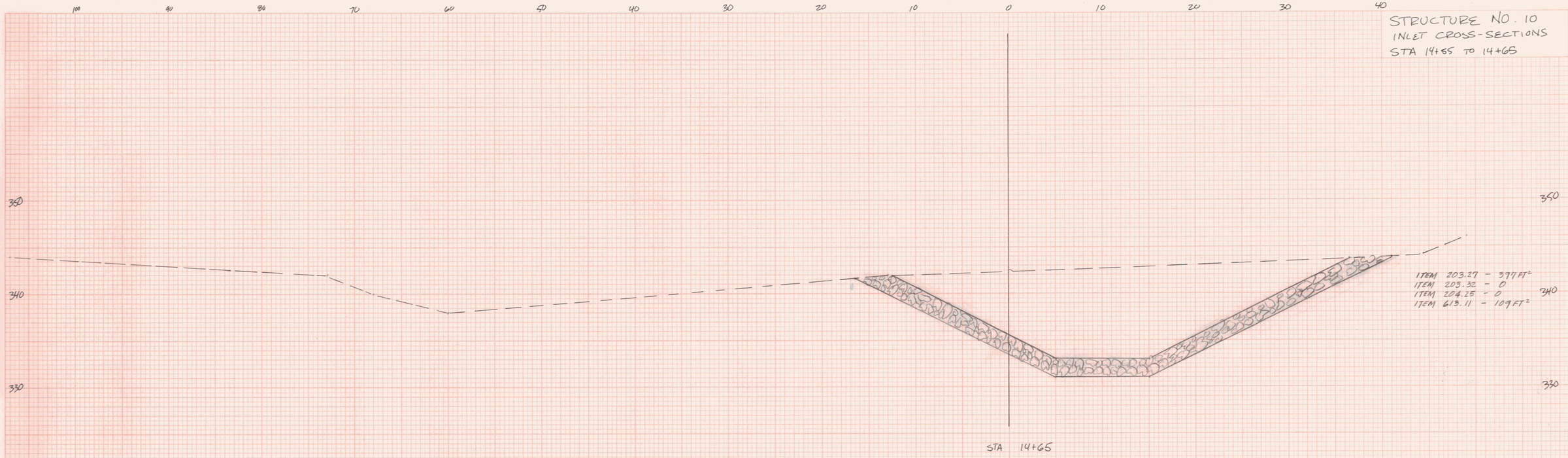
FROM STA. 13+00 TO STA. 13+50
PROJECT NAME: ESSEX
NO. PR 033-1 (2)
PLOTTED:
SHEET 371 OF 400 SHEETS

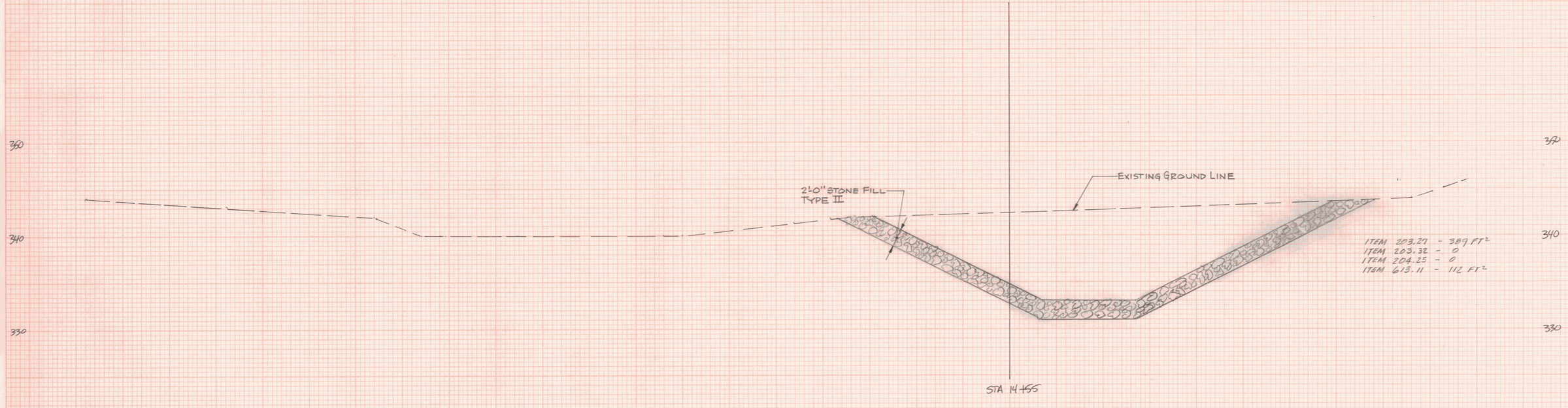
HIGHWAY FEDERAL AID PROJECT
PLATE 3-FULL CROSS SECTION-FULL LINE
MITELDINE
PRINTED IN U.S.A.


STRUCTURE NO. 10
PIPE / INLET CROSS-SECTIONS
STA 14+0 TO 14+25
2'-0" STONE FILL TYPE II
CRADLE HEADWALL
INV. 332.8
ITEM 203.27 - 348 FT²
ITEM 203.32 - 87 FT²
ITEM 204.25 - 121 FT²
ITEM 613.11 - 103 FT²
BEGIN CULVERT STA. 14+25.00
STA 14+25
PROPERTY OF THE VERMONT CENTRAL RAILWAY
EXISTING GROUND LINE
ITEM 203.27 - 0
ITEM 203.32 - 70 FT²
ITEM 204.25 - 103 FT²
ITEM 613.11 - 0
LOWER LIMIT OF UNDERCUT & GRANULAR BORROW
INV. 332.6
STA 14+0
AS BUILT 5/24/94
FROM STA. 14+00 TO STA. 14+25
PROJECT NAME: ESSEX
NO. PB 033-1(2)
PLOTTED:
SHEET 572 OF 400 SHEETS
FINAL SURVEY
ORIGINAL SURVEY
PLATE 3-FULL CROSS SECTION-FULL LINE


STRUCTURE NO. 10
INLET CROSS-SECTIONS
STA 14+35 TO 14+45
ITEM 203.27 - 364 FT²
ITEM 203.32 - 0
ITEM 204.25 - 0
ITEM 613.11 - 103 FT²
STA 14+45
EXISTING GROUND LINE
2'-0" STONE FILL
TYPE II
ITEM 203.27 - 373 FT²
ITEM 203.32 - 0
ITEM 204.25 - 0
ITEM 613.11 - 104 FT²
STA 14+35
AS BUILT 5/24/94
FROM STA. 14+35
TO STA. 14+45
PROJECT NAME: ESSEX
NO. PB 033-1(2)
PLOTTED:
SHEET 373 OF 400 SHEETS
FINAL SURVEY
ORIGINAL SURVEY
PLATE 3-FULL CROSS SECTION-FULL LINE

STRUCTURE NO. 10
INLET CROSS-SECTIONS
STA 14+65 TO 14+65





AS BUILT 5/24/94 RC

FROM STA. 14+55 TO STA. 14+65
PROJECT NAME: ESSEX
NO. PB 033-1(2) PLOTTED:
SHEET 374 OF 400 SHEETS

PLATE 3-FULL CROSS SECTION-FULL LINE


STRUCTURE NO. 10
INLET CROSS-SECTIONS
STA 14+75 TO 14+85
ITEM 203.27 - 246 FT²
ITEM 203.32 - 0
ITEM 204.25 - 0
ITEM 613.11 - 93 FT²
STA 14+85
2'-0" STONE FILL
TYPE II
EXISTING GROUND LINE
ITEM 203.27 - 336 FT²
ITEM 203.32 - 0
ITEM 204.25 - 0
ITEM 613.11 - 108 FT²
STA 14+75
AS BUILT 5/24/94 RG
FROM STA. 14+75 TO STA. 14+85
PROJECT NAME: ESSEX
NO. PB 033-(2)
PLOTTED:
SHEET 375 OF 400 SHEETS
FINAL SURVEY
ORIGINAL SURVEY
PLATE 3-FULL CROSS SECTION-FULL LINE


STRUCTURE NO. 10
INLET CROSS SECTIONS
STA 14+95 TO 15+05
ITEM 203.27 - 62 FT.²
ITEM 203.32 - 0
ITEM 204.25 - 0
ITEM 613.11 - 70 FT²
STA 15+05
EXISTING GROUND LINE
2'-0" STONE FILL TYPE II
ITEM 203.27 - 139 FT²
ITEM 203.32 - 0
ITEM 204.25 - 0
ITEM 613.11 - 88 FT²
STA 14+95
AS BUILT 5/24/94
FROM STA. 14+95 TO STA. 15+05
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED:
SHEET 376 OF 400 SHEETS
FINAL SURVEY
ORIGINAL SURVEY
PLATE 3-FULL CROSS SECTION-FULL LINE

STRUCTURE NO. 10
INLET CROSS-SECTIONS
STA 15+15 TO 15+25



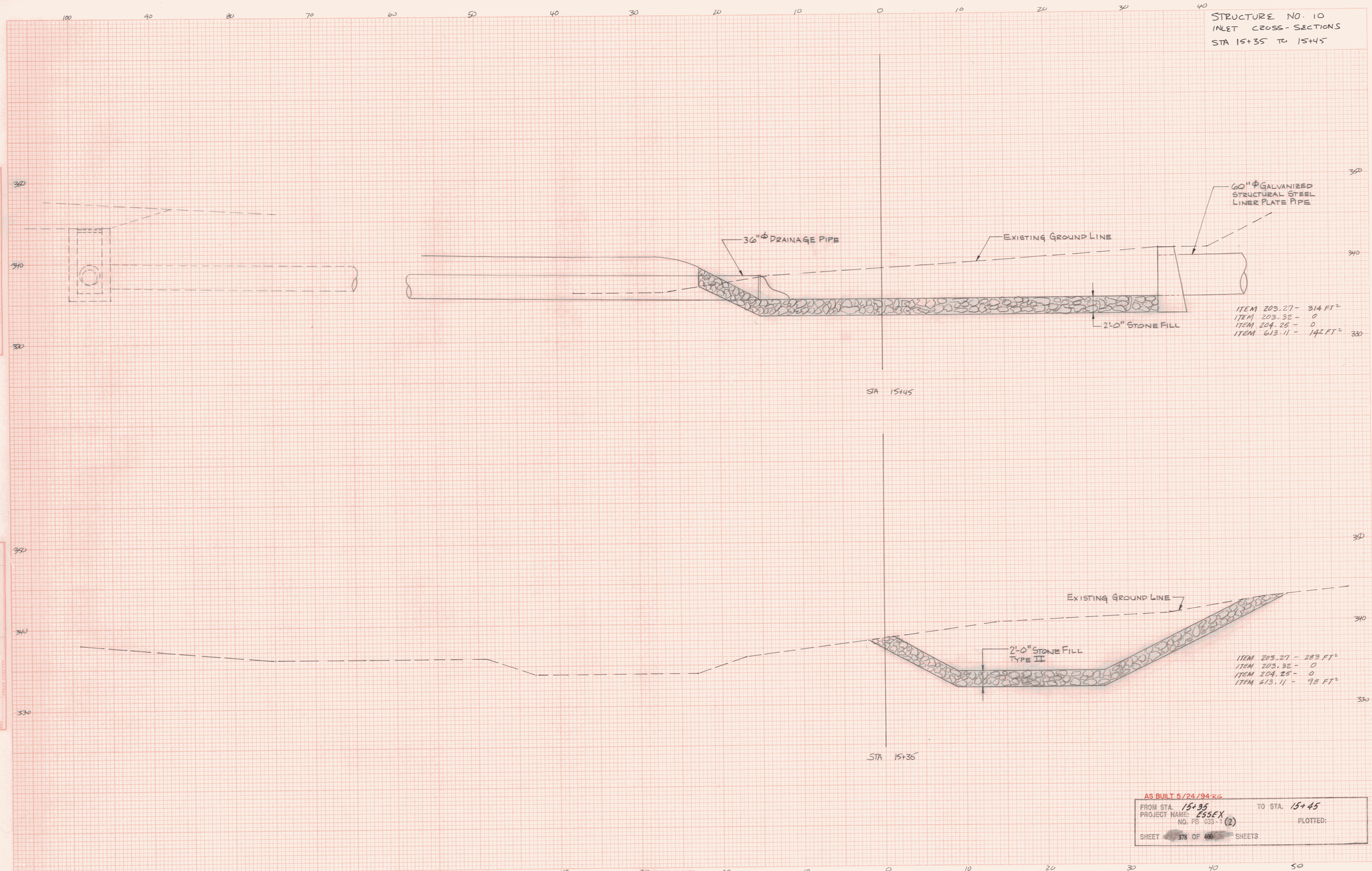
FINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK, NO.

ORIGINAL SURVEY — DATE, BY, SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK, NO.

AS BUILT 5/24/94 RBC

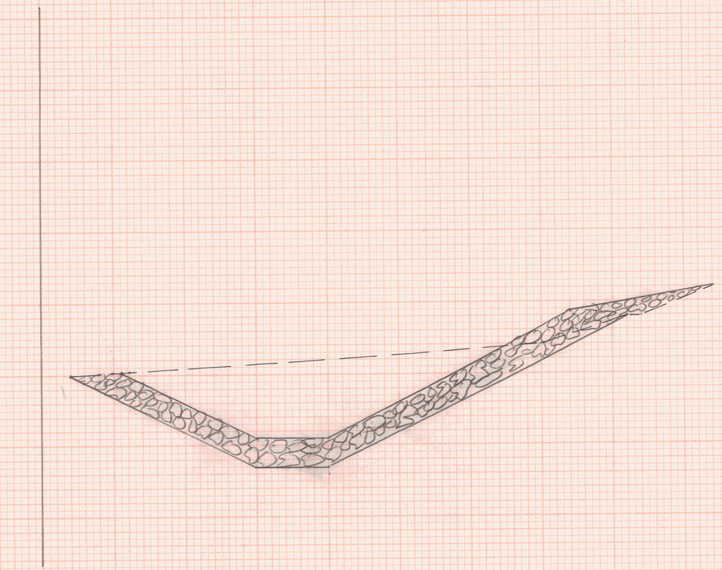
FROM STA. 15+15 TO STA. 15+25
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED:
SHEET 377 OF 400 SHEETS

HIGHWAY FEDERAL AID
PLATE 3-FULL CROSS SECTION-FULL LINE
W-TELEDYNE
PRINTED IN U.S.A.

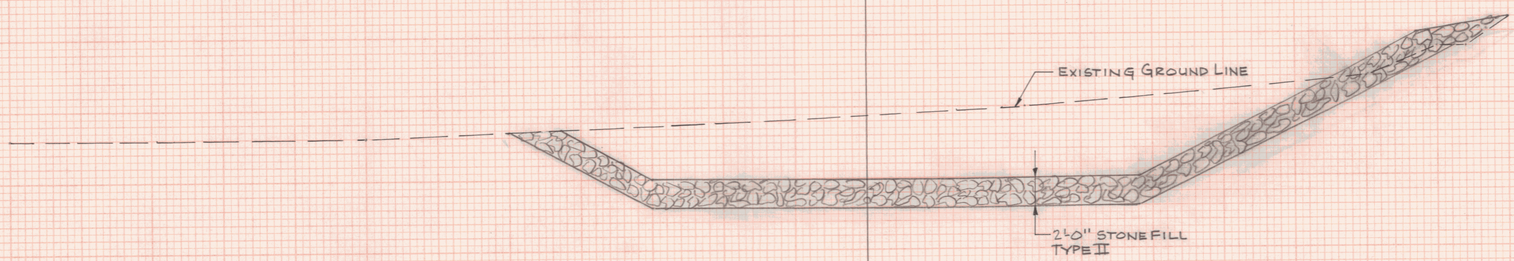

STRUCTURE NO. 10
INLET CROSS-SECTIONS
STA 15+35 TO 15+45
60" Φ GALVANIZED STRUCTURAL STEEL LINER PLATE PIPE
36" Φ DRAINAGE PIPE
EXISTING GROUND LINE
2'-0" STONE FILL
ITEM 203.27 - 314 FT²
ITEM 203.32 - 0
ITEM 204.25 - 0
ITEM 613.11 - 142 FT²
STA 15+45
EXISTING GROUND LINE
2'-0" STONE FILL TYPE II
ITEM 203.27 - 283 FT²
ITEM 203.32 - 0
ITEM 204.25 - 0
ITEM 613.11 - 98 FT²
STA 15+35
AS BUILT 5/24/94 RG
FROM STA. 15+35 TO STA. 15+45
PROJECT NAME: ESSEX
NO. PB 033-1 (2)
PLOTTED:
SHEET 378 OF 400 SHEETS
PLATE 3-FULL CROSS SECTION-FULL LINE

419 of 465

STRUCTURE NO. 10
INLET CROSS-SECTIONS
STA 15+55 TO 15+65



STA 15+65



STA 15+55

ITEM 203.27 – 329 FT²
ITEM 203.32 – 0
ITEM 204.25 – 0
ITEM 613.11 – 137 FT²

AS BUILT 5/24/94 RG

FROM STA. 15+55 TO STA. 15+65
PROJECT NAME: ESSEX
NO. PB 033-1 (2) PLOTTED:
SHEET 379 OF 400 SHEETS

PLATE 3-FULL CROSS SECTION-FULL LINE
TELEDYNE

CVRR MITIGATION SITE

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

CONSTR. ENG.	EROSION CONTROL	UTILITIES	ROADWAY	GRAND TOTAL	UNIT	ITEM	ITEM NO.
			1	1	LS	CLEARING & GRUBBING (5 ACRES)	201.10
			11,700	11,700	CY	COMMON EXCAVATION	203.15
			2,250	2,250	CY	TRENCH EXCAVATION OF EARTH	204.20
			550	550	CY	STONE FILL, TYPE II	613.11
	1,200			1,200	SY	GEOTEXTILE FABRIC FOR SILT FENCE	649.20
			4,500	4,500	SY	GEOTEXTILE FABRIC FOR FILTERS	649.20
			50	50	LBS	SEED MIX	651.15
	50			50	EA	HAY BALES FOR EROSION CONTROL	651.26

APPROXIMATE SUMMARY OF QUANTITIES

ITEMS

QUANTITY	UNIT	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	CONTAINER	ITEM NO.
			CONIFEROUS TREES					656.20
16	EACH	LL	LARIX LARICINA	EASTERN LARCH	1 ½"– 2" CAL.	15' OC	B & B	

ITEMS

QUANTITY	UNIT	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	CONTAINER	ITEM NO.
			DECIDUOUS TREES					656.30
15	EACH	AR	ACER RUBRUM	RED MAPLE	1 ½"– 2" CAL.	25' OC	B & B	
12	EACH	AC	AMELANCHIER CANADENSIS	SHAD BUSH	1 ½" CAL.	15' OC	B & B	

ITEMS

QUANTITY	UNIT	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	CONTAINER	ITEM NO.
			DECIDUOUS SHRUBS					656.35
224	EACH	AA	ARONIA ARBUTIFOLIA	RED CHOKEBERRY	24"–30" HT.	3' OC	CONTAINER	
206	EACH	CS	CORNUS STOLINIFERA	RED OSIER DOGWOOD	24"–30" HT.	3' OC	CONTAINER	
166	EACH	IV	ILEX VERTICILLATA	WINTERBERRY	24"–30" HT.	3' OC	CONTAINER	
98	EACH	SC	SAMBUCUS CANADENSIS	ELDERBERRY	24"–30" HT.	3' OC	CONTAINER	
146	EACH	VD	VIBURNUM DENTATUM	ARROW WOOD	24"–30" HT.	3' OC	CONTAINER	
88	EACH	VC	VACCINIUM CORYMBOSUM	HIGH BUSH BLUEBERRY	24"–30" HT.	3' OC	CONTAINER	
26	EACH	CA	CORNUS AMOMUM	SILKY DOGWOOD	24"–30" HT.	3' OC	CONTAINER	

ITEMS

QUANTITY	UNIT	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	CONTAINER	ITEM NO.
			GROUND COVER AND VINES					656.40
5000	EACH	LO	LEERSIA ORYZOIDES	RICE CUT GRASS	2" PEAT POTS	1'–6" OC	PEAT POTS	
8000	EACH	SE	SPARGANIUM EURYCARPUM	BURREED	LARGE ROOTS	1'–6" OC	BARE ROOT	
1250	EACH	SL	SAGITTARIA LATIFOLIA	DUCK POTATO	LARGE TUBERS	1'–6" OC	BARE ROOT	
1250	EACH	SA	SCIRPUS AMERICANUS	COMMON THREE SQUARE	LARGE TUBERS	1'–6" OC	BARE ROOT	

SEED MIX

% WT.	lbs/A		NAME	PUR %	GERM %
35	8	BIRDS FOOT TREFOIL	*LOTUS CONICULATUS VAR. 'EMPIRE'*	98	85
35	8	ALSIKE CLOVER	*TRIFOLIUM HYBRIDUM*	96	90*
10	2	RED TOP	*AGROSTIS ALBA*	92	85
5	1	CANADA BLUEJOINT GRASS	*CALAMAGROSTIS CANADENSIS*	95	80**
5	1	FOX SEDGE	*CAREX VULPINOIDES*	95	80**
5	1	NEW ENGLAND ASTER	*ASTER NOVAE-ANGLIAE*	95	80**
5	1	DARK GREEN BULRUSH	*SCIRPUS ATROVIRENS*	95	80**
100	22				

* WITH 10% OR LESS GERMINATION OF HARD SEED.
** GERMINATION OVER TWO YEAR PERIOD FOR WETLAND SEEDS.

THE SEEDING MIXTURE SHALL HAVE A WEED CONTENT NOT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE FROM ALL NOXIOUS WEED SEED. HAY MULCH, TO BE PLACED ON ALL EARTH SLOPES AT THE RATE OF 2.0 TONS PER ACRE, OR AS DIRECTED BY THE ENGINEER. COSTS FOR HAY MULCH TO BE INCLUDED IN PRICE OF ITEM 651.15.

LEGUME AID INNOCULANTS ARE TO BE USED IMMEDIATELY BEFORE SEEDING FOR CLOVER AND TREFOIL SEED AT TWO TIMES THE RECOMMENDED RATE OF THE MANUFACTURER. ALSIKE CLOVER SEED SHALL BE INNOCULATED WITH AN ALFALFA/CLOVER INNOCULANT. BIRDSFOOT TREFOIL SHALL BE INNOCULATED WITH A BIRDSFOOT TREFOIL INNOCULANT. MIXING THE INNOCULANT WITH A STICKY LIQUID BINDER SUCH AS SODA POP WILL HELP IT TO ADHERE TO THE SEEDS.

EARTHWORK SUMMARY

QUANTITY	UNIT	ITEM
		FILL MATERIAL
485	CY	FILL MATERIAL LESS TOPSOIL DISPLACEMENT
		FACTOR (1.15)
560	CY	TOTAL FILL INCLUDING FACTOR
		MATERIAL AVAILABLE FOR FILL
11,700	CY	COMMON EXCAVATION
2,250	CY	TRENCH EXCAVATION OF EARTH
13,950	CY	TOTAL MATERIAL INCLUDING TOPSOIL
2,000	CY	LESS TOPSOIL DISPLACEMENT
11,950	CY	TOTAL MATERIAL AVAILABLE FOR FILL
		FACTOR (0.95)
11,355	CY	TOTAL MATERIAL AVAILABLE FOR FILL
		INCLUDING FACTOR
11,355	CY	TOTAL MATERIAL AVAILABLE FOR FILL
560	CY	TOTAL FILL MATERIAL
10,795	CY	TOTAL EXCESS MATERIAL

LANDSCAPE AND WETLAND SPECIES NOTES

1. PLANTS LISTED IN THE QUANITY SHEET AS GROUND COVER AND VINES SHALL BE REFERRED TO AS HERBACEOUS WETLAND SPECIES IN THE FOLLOWING NOTES.
2. THE CONTRACTOR SHOULD PLACE ORDERS FOR HERBACEOUS WETLAND SPECIES AS EARLY AS POSSIBLE TO ENSURE SUPPLY. THE FOLLOWING IS A LIST OF POTENTIAL SUPPPLIERS OF WETLAND PLANTS AND FOR WETLAND SEEDS.

PLANT SOURCE LIST

KESTER'S WILD GAME FOOD NURSERIES, INC.
P.O. BOX 516
OMRO, WI 54963
(414) 685–2929

ENVIRONMENTAL CONCERN, INC.
P.O. BOX P
ST. MICHAELS, MD 21663
(301) 745–9620

WILDLIFE NURSERIES
P.O. BOX 2724
OSHKOSH, WI 54903
(414) 231–3780

ENVIRENS, INC.
1927 YORK RD.
TIMONIUN, MD 21093
(301) 560–2280

SEED SOURCE LIST

COUNTRY WETLANDS NURSERY, LTD.
BOX 156 SUNSET AVENUE
MILTON, VERMONT 05468
(802) 893–1241
IN VT. 1–800–244–4268

L.D. OLIVER SEED CO., INC.
BOX 126
MUSKEGO, WI 53150
(414) 679–1268

3. THE TWO FOLLOWING HERBACEOUS WETLAND SPECIES SHALL BE PLANTED SEPARATELY, 1'–6" ON CENTER, IN AN ALTERNATING PATTERN SO BOTH TYPES OF PLANTS WILL BE EQUALLY DISTRIBUTED THROUGHOUT.

SCIRPUS AMERICANUS	COMMON THREE SQUARE
SAGITTARIA LATIFOLIA	DUCK POTATO

THE FOLLOWING HERBACEOUS WETLAND SPECIES SHALL BE PLANTED SEPARATELY, 1'–6" ON CENTER IN OFFSET ROWS:

LEERSIA ORYZOIDES	RICE CUT GRASS
SPARGANIUM EURYCARPUM	BURREED

4. PLANTS IN PEAT POTS SHALL BE PLANTED IN OFFSET ROWS IN THEIR POTS, WITH THE TOPS OF THE POTS LEVEL WITH THE EXISTING GROUND SURFACE. ROOTS AND TUBERS ARE TO BE PUSHED GENTLY INTO THE SOIL SO THAT THE SOIL JUST COVERS THEM AND THEY WILL BE HELD IN PLACE AND NOT FLOAT. ALL WETLAND SPECIES SHALL BE HAND PLANTED TAKING CARE NOT TO DAMAGE TENDER GROWING TIPS OR ROOTS. DUCK POTATO TUBERS SHALL BE PLANTED AT A DEPTH OF 1"–3".
5. ALL AREAS DISTURBED DURING INSTALLATION OF PLANTS SHALL BE REGRADED AND RESEEDED USING THE RECOMMENDED SEED MIX TO EXISTING CONDITIONS BY CONTRACTOR.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULL GERMINATION AND THRIVING GROWTH OF ALL PLANT SPECIES FOR A PERIOD OF ONE YEAR FOLLOWING COMPLETION OF PLANTING.
7. ALL EXCAVATION FOR PLANTING, ALL MULCHING, TOPSOIL, WEED CONTROL FABRIC, PLANTING MIX AND RESEEDING SHALL BE INCLUDED IN THE PLANT COST.
8. NO FERTILIZER SHALL BE USED THROUGHOUT THE SITE.
9. HAY MULCH SHALL BE APPLIED FOLLOWING CONSTRUCTION AT A RATE OF 1/2 TON/ACRE. FOLLOWING DORMANT SEEDING, HAY MULCH SHALL BE APPLIED ON ALL SEEDED AND RESEEDED AREAS AT A RATE OF 2 TONS/ACRE.

FALL PLANTING (PHASE ONE)

10. PLANTING OF ALL SHRUBS AND TREES SHALL BE COMPLETED BETWEEN AUGUST 15 AND OCTOBER 15.
11. DORMANT SEEDING
ALL SEEDING SHALL BE COMPLETED BETWEEN NOVEMBER 1 AND DECEMBER 15. (SEE NOTE 9 FOR HAY MULCH SCHEDULE)

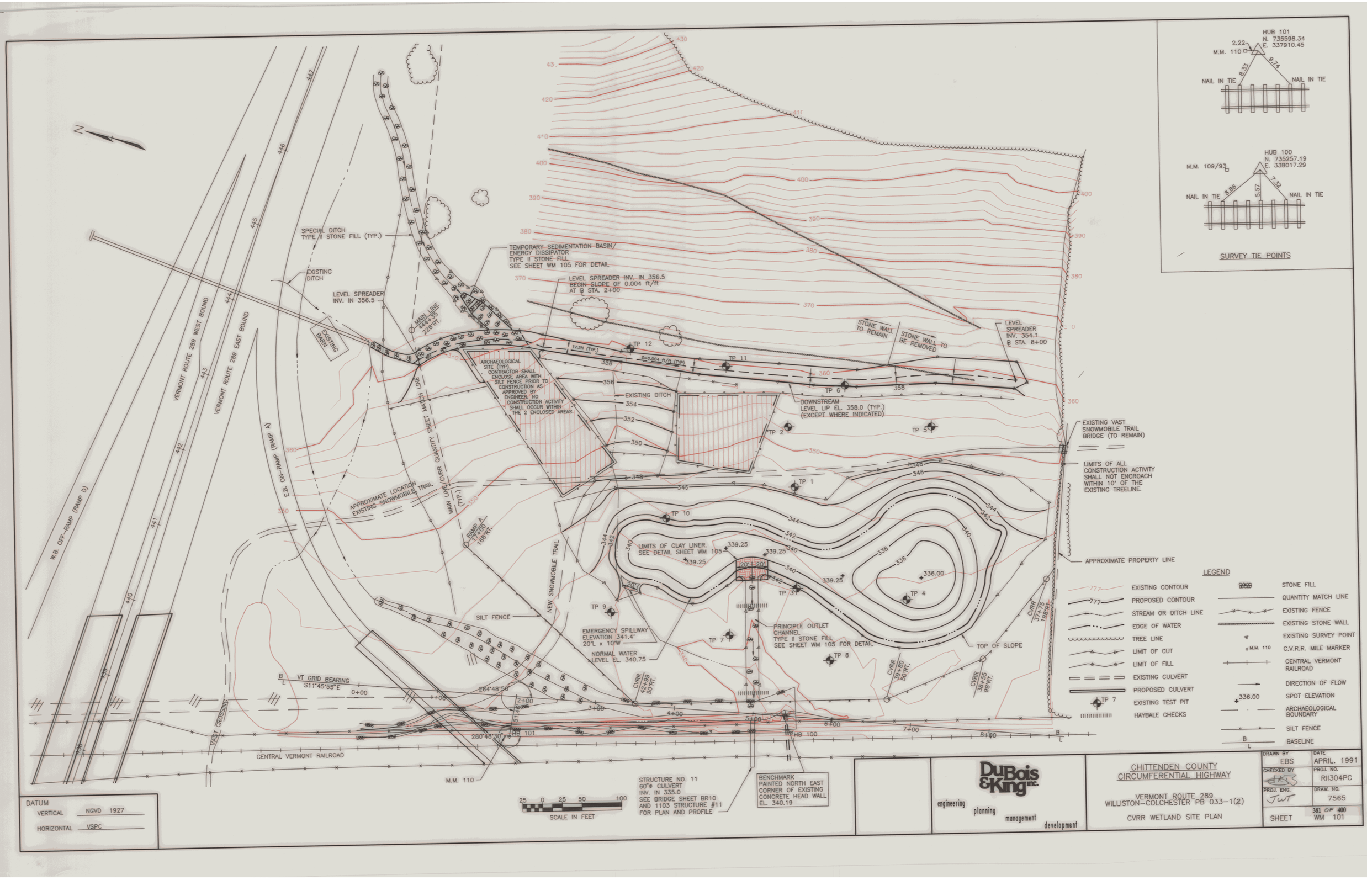
SPRING PLANTING (PHASE TWO)

12. PLANTING OF ALL HERBACEOUS WETLAND SPECIES DUCK POTATO (SAGITARIA LATIFOLIA) COMMON THREE SQUARE (SCIRPUS AMERICANUS), RICE CUT GRASS (LEERSIA ORYZOIDES) AND BURREED (SAGITARIA LATIFOLIA) SHALL BE COMPLETED FROM APRIL 15, TO JUNE 15.

DuBois & King inc.
engineering planning management development

CHITTENDEN COUNTY
CIRCUMFERENTIAL HIGHWAY
VERMONT ROUTE 289
WILLISTON–COLCHESTER PB 033–1(2)
QUANTITY SHEET

DRAWN BY	DATE
DJS/TJD	APRIL 1991
CHECKED BY	PROJ. NO.
JKS	R11304PC
PROJ. ENG.	DRAW. NO.
JWT	7564
SHEET	380 OF 400
	WM 100



HUB 101
N. 735598.34
E. 337910.45
M.M. 110
2.22
8.33
9.74
NAIL IN TIE
NAIL IN TIE
HUB 100
N. 735257.19
E. 338017.29
M.M. 109/93
8.86
5.57
7.32
NAIL IN TIE
NAIL IN TIE
SURVEY TIE POINTS
SPECIAL DITCH
TYPE II STONE FILL (TYP.)
EXISTING DITCH
LEVEL SPREADER
INV. IN 356.5
EXISTING BARN
TEMPORARY SEDIMENTATION BASIN/
ENERGY DISSIPATOR
TYPE II STONE FILL
SEE SHEET WM 105 FOR DETAIL
LEVEL SPREADER INV. IN 356.5
BEGIN SLOPE OF 0.004 ft/ft
AT ℄ STA. 2+00
MAIN LINE
444+35
226'RT.
ARCHAEOLOGICAL
SITE (TYP).
CONTRACTOR SHALL
ENCLOSE AREA WITH
SILT FENCE PRIOR TO
CONSTRUCTION AS
APPROVED BY
ENGINEER. NO
CONSTRUCTION ACTIVITY
SHALL OCCUR WITHIN
THE 2 ENCLOSED AREAS.
EXISTING DITCH
1V:3H (TYP.)
S=0.004 ft/ft (TYP)
TP 12
TP 11
TP 6
TP 2
TP 5
TP 1
TP 10
TP 3
TP 4
TP 9
TP 7
TP 8
STONE WALL
TO REMAIN
STONE WALL TO
BE REMOVED
LEVEL
SPREADER
INV. 354.1
℄ STA. 8+00
DOWNSTREAM
LEVEL LIP EL. 358.0 (TYP.)
(EXCEPT WHERE INDICATED)
EXISTING VAST
SNOWMOBILE TRAIL
BRIDGE (TO REMAIN)
LIMITS OF ALL
CONSTRUCTION ACTIVITY
SHALL NOT ENCROACH
WITHIN 10' OF THE
EXISTING TREELINE.
APPROXIMATE PROPERTY LINE
LIMITS OF CLAY LINER.
SEE DETAIL SHEET WM 105
339.25
336.00
20'
20'
PRINCIPLE OUTLET
CHANNEL
TYPE II STONE FILL
SEE SHEET WM 105 FOR DETAIL
TOP OF SLOPE
EMERGENCY SPILLWAY
ELEVATION 341.4'
20'L x 10'W
NORMAL WATER
LEVEL EL. 340.75
SILT FENCE
NEW SNOWMOBILE TRAIL
APPROXIMATE LOCATION
EXISTING SNOWMOBILE TRAIL
MAIN LINE/CVRR QUANTITY SHEET MATCH LINE (TYP.)
RAMP A
17+00
168'RT.
VERMONT ROUTE 289 WEST BOUND
VERMONT ROUTE 289 EAST BOUND
E.B. ON-RAMP (RAMP A)
W.B. OFF-RAMP (RAMP D)
VAST CROSSING
VT GRID BEARING
S11°45'55"E
264°48'56"
280°48'30"
HB 101
HB 100
CVRR
42+99
50'RT.
CVRR
39+80
50'RT.
CVRR
38+55
98'RT.
CVRR
37+75
198'RT.
CENTRAL VERMONT RAILROAD
M.M. 110
STRUCTURE NO. 11
60"ø CULVERT
INV. IN 335.0
SEE BRIDGE SHEET BR10
AND 1103 STRUCTURE #11
FOR PLAN AND PROFILE
BENCHMARK
PAINTED NORTH EAST
CORNER OF EXISTING
CONCRETE HEAD WALL
EL. 340.19
SCALE IN FEET
25 0 25 50 100
LEGEND
EXISTING CONTOUR
PROPOSED CONTOUR
STREAM OR DITCH LINE
EDGE OF WATER
TREE LINE
LIMIT OF CUT
LIMIT OF FILL
EXISTING CULVERT
PROPOSED CULVERT
EXISTING TEST PIT
HAYBALE CHECKS
STONE FILL
QUANTITY MATCH LINE
EXISTING FENCE
EXISTING STONE WALL
EXISTING SURVEY POINT
C.V.R.R. MILE MARKER
CENTRAL VERMONT RAILROAD
DIRECTION OF FLOW
SPOT ELEVATION
ARCHAEOLOGICAL BOUNDARY
SILT FENCE
BASELINE
DATUM
VERTICAL NGVD 1927
HORIZONTAL VSPC
DuBois & King inc.
engineering planning management development
CHITTENDEN COUNTY
CIRCUMFERENTIAL HIGHWAY
VERMONT ROUTE 289
WILLISTON-COLCHESTER PB 033-1(2)
CVRR WETLAND SITE PLAN
DRAWN BY EBS
DATE APRIL. 1991
CHECKED BY
PROJ. NO. RII304PC
PROJ. ENG. JWT
DRAW. NO. 7565
SHEET 381 OF 400 WM 101



DATUM
VERTICAL NGVD 1927
HORIZONTAL VSPC

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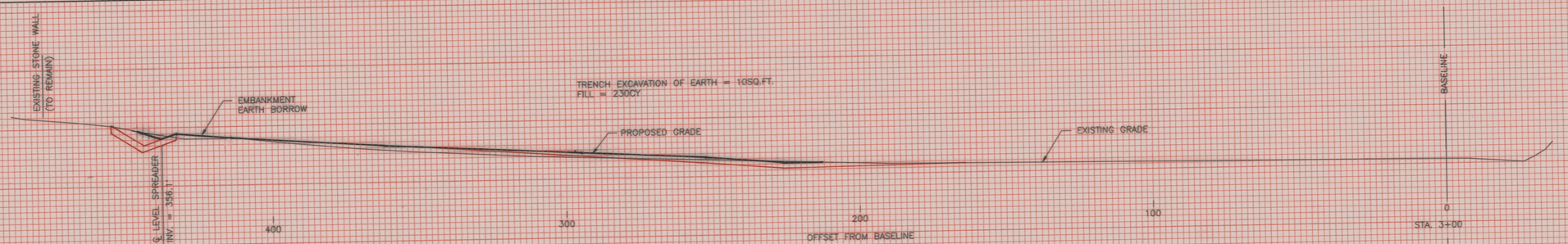
engineering planning management development

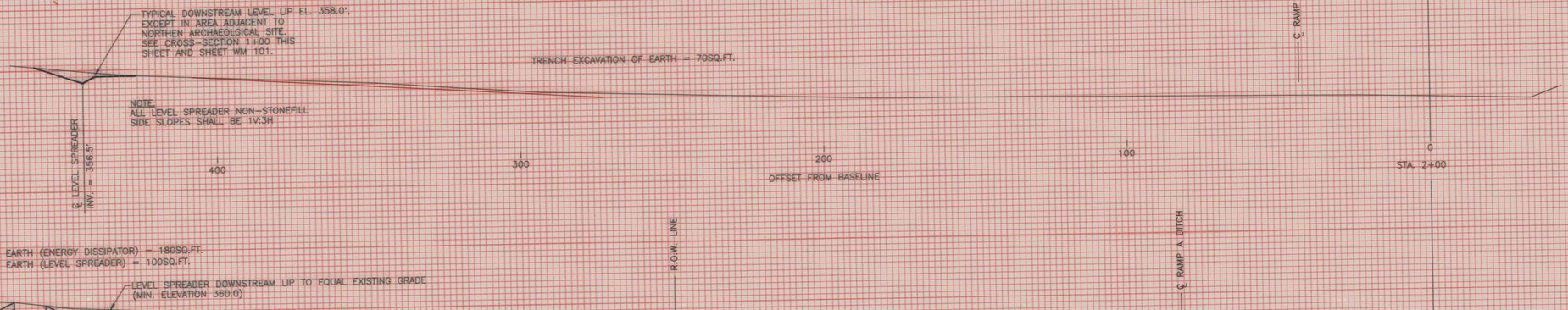
CHITTENDEN COUNTY CIRCUMFERENTIAL HIGHWAY

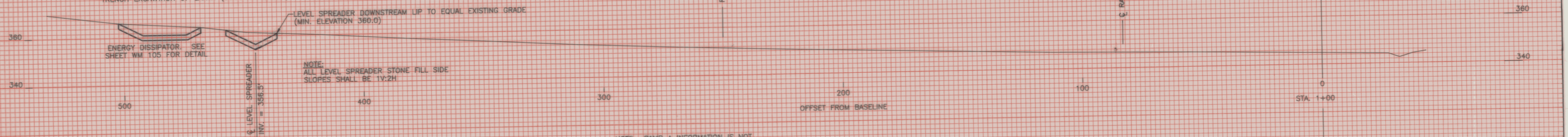
VERMONT ROUTE 289
WILLISTON–COLCHESTER PB 033–1(2)

CVRR LANDSCAPE PLAN

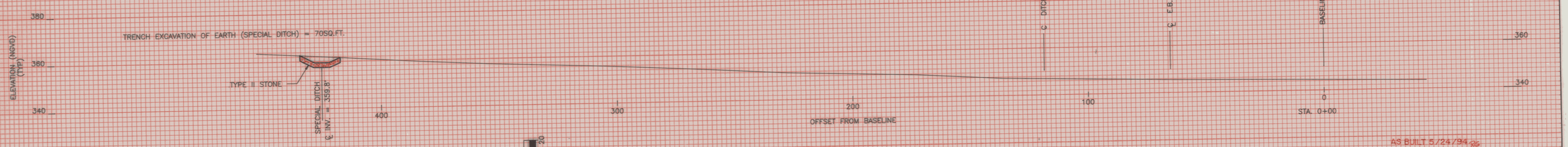
DRAWN BY EBS	DATE APRIL. 1991
CHECKED BY	PROJ. NO. RII304PC
PROJ. ENG. JWT	DRAW. NO. 7566
SHEET	382 OF 400 MW 102

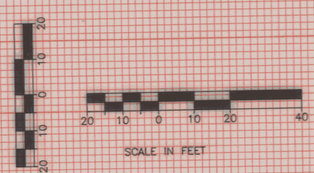






NOTE: RAMP A INFORMATION IS NOT ILLUSTRATED ON THESE CROSS-SECTIONS. REFER TO MAIN LINE CROSS-SECTIONS FOR ALL APPROPRIATE RAMP AND MAINLINE INFORMATION





AS BUILT 5/24/94 RG

DATUM
VERTICAL NGVD 1929
HORIZONTAL

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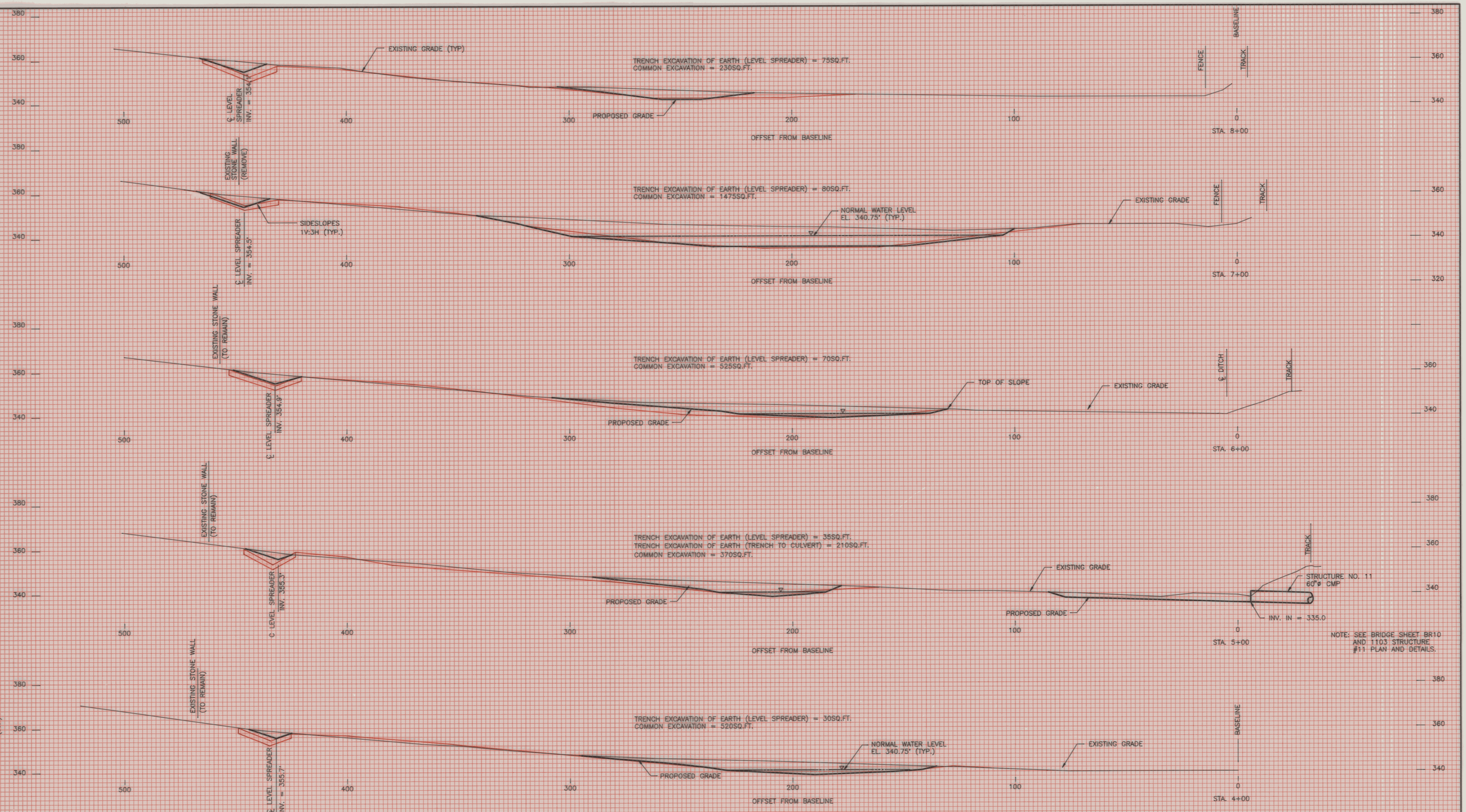
CHITTENDEN COUNTY CIRCUMFERENTIAL HIGHWAY
VERMONT ROUTE 289
WILLISTON–COLCHESTER PB 033-1(2)
CVRR WETLAND CROSS SECTIONS

DRAWN BY	DATE
TJD	APRIL 1991
CHECKED BY	PROJ. NO.
HKB	R11304PC
PROJ. ENG.	DRAW. NO.
TWT	7567
SHEET	383 OF 400 WM 103



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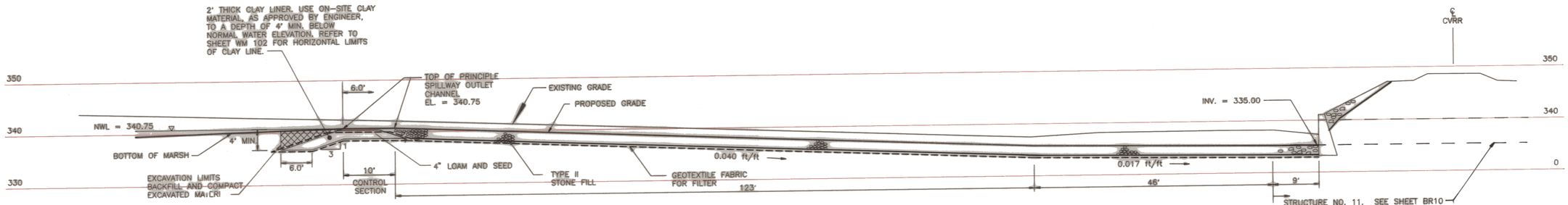
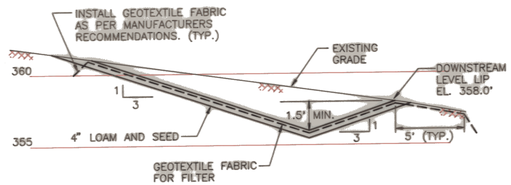
CHITTENDEN COUNTY
CIRCUMFERENTIAL HIGHWAY

VERMONT ROUTE 289
WILLISTON–COLCHESTER PB 033–1(2)
CVRR WETLAND CROSS SECTIONS

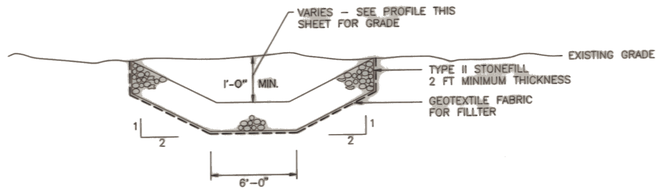
DRAWN BY EBS	DATE APRIL 1991
CHECKED BY	PROJ. NO. R11304PC
PROJ. ENG. JWT	DRAW. NO. 7568
SHEET	384 OF 400 WM 104



PRINCIPLE OUTLET CHANNEL PROFILE
SCALE: 1"=10'



LEVEL SPREADER TYPICAL CROSS-SECTION
NOT TO SCALE



PRINCIPLE SPILLWAY OUTLET CHANNEL TYPICAL CROSS-SECTION
SCALE: 1"=5'

CONSTRUCTION AND EROSION CONTROL NOTES

1. THE CVRR WETLAND SITE SHALL BE CONSTRUCTED IN 2 PHASES OVER A 2 YEAR PERIOD. CONSTRUCTION OF THE SITE SHALL BEGIN PRIOR TO, OR COMMENCING WITH, MAIN LINE CONSTRUCTION BETWEEN STA. 433+52 AND 536+40. THE PURPOSE OF THE PHASED CONSTRUCTION IS TO ALLOW STABILIZATION OF THE WETLAND SITE PRIOR TO THE DIVERSION OF OFF-SITE RUNOFF INTO THE AREA.

   A. PHASE I SHALL BE COMPLETED DURING THE FIRST YEAR OF MAIN LINE HIGHWAY CONSTRUCTION. PHASE I SHALL CONSIST OF CONSTRUCTING THE LEVEL SPREADER, THE MARSH, TEMPORARY SEDIMENTATION BASIN, ALL ASSOCIATED EARTH WORK, TREES AND SHRUBS AND SEEDING OF DISTURBED AREAS. (REFER TO SHEET WM 101 LANDSCAPE QUANTITY SHEET, FOR REQUIRED SEED MIX). PHASE I CONSTRUCTION SHALL BE PERFORMED DURING THE DRY SEASON (JULY-AUGUST). ALL SEEDING AND PLANTING (EXCEPT PHASE II WORK) SHALL BE COMPLETED BY OCTOBER 15, UNLESS OTHERWISE APPROVED BY ENGINEER.

   B. PHASE II SHALL BE COMPLETED DURING THE SPRING OF THE FOLLOWING YEAR. PHASE II SHALL CONSIST OF INSTALLING ALL WETLAND PLANT SPECIES AND ANY REGRADING AND RESEEDING AS DIRECTED BY ENGINEER. ALL PLANTING WORK (INCLUDING PHASE I TREES, SHRUBS AND SEEDING) SHALL BE IN ACCORDANCE WITH SPECIFICATIONS OF SHEET WM 101 LANDSCAPE QUANTITY SHEET.

   C. THE CONTRACTOR CAN SUBMIT AN ALTERNATE CONSTRUCTION SCHEDULE FOR THE PHASED WORK TO THE ENGINEER FOR REVIEW AND APPROVAL.

2. CONTRACTOR SHALL ENCLOSE ARCHAEOLOGICAL SITE AREAS WITH SILT FENCE PRIOR TO CONSTRUCTION, AS APPROVED BY ENGINEER. NO CONSTRUCTION ACTIVITY SHALL OCCUR WITHIN THE ENCLOSED AREAS SEE SHEET WM 101.

3. TEMPORARY EROSION CONTROL MEASURES ARE REQUIRED THROUGHOUT THE CONSTRUCTION PERIOD AND MUST BE MAINTAINED UNTIL SEEDED AREAS AND OTHER PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED. ALL EROSION AND SILTATION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE VERMONT AGENCY OF TRANSPORTATION STANDARDS. SITE PLAN WM 102 INDICATES MINIMUM EROSION CONTROL METHODS.

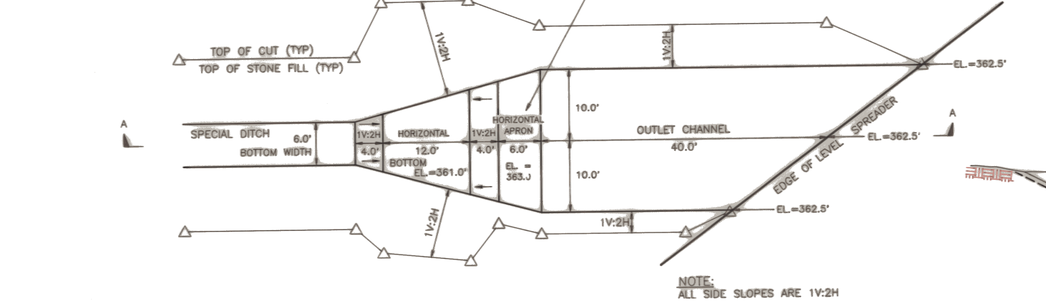
4. THE TEMPORARY SEDIMENTATION BASIN SHALL BE MAINTAINED UNTIL ALL UPSTREAM PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED. UPON ESTABLISHMENT OF THESE MEASURES, AND AS DIRECTED BY THE ENGINEER, ACCUMULATED SEDIMENTATION AND THE TEMPORARY BERM SHALL BE REMOVED.

5. ALL STRIPPED TOPSOIL SHALL BE STOCKPILED ON-SITE AND REUSED. TOPSOIL STOCKPILE TIME SHALL NOT EXCEED 8 WEEKS. TOPSOIL SHALL BE REPLACED IN THE FOLLOWING MANNER: i) PLACE AND SPREAD A MINIMUM OF 6" OF TOPSOIL WITHIN THE LIMITS OF THE MARSH, FROM ELEVATION 342.0 TO 338.0; ii) PLACE AND SPREAD A MINIMUM OF 4" OF TOPSOIL IN ALL OTHER DISTURBED AREAS. SILT FENCES SHALL BE INSTALLED ALONG THE TOE OF SLOPE OF ALL STOCKPILED TOPSOIL.

6. EXCESS MATERIAL SHALL NOT BE DISPOSED OF WITHIN THE CVRR WETLAND AREA. (AREA BOUNDED BY CVRR RAILROAD, RAMP A AND MAINLINE, SOUTHERN PROPERTY LINE, AND THE FIELD EAST OF THE LEVEL SPREADER.)

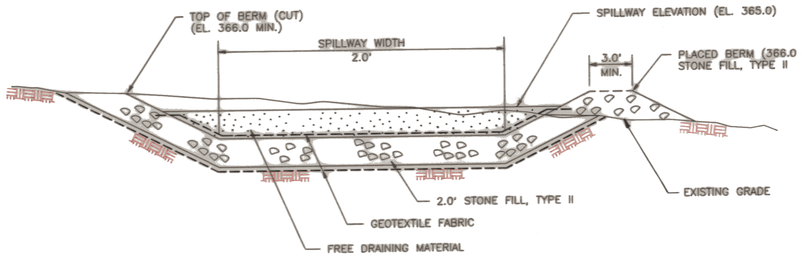
7. ALL TOPSOIL STRIPPING, STOCKPILING AND REPLACE MENT SHALL BE PAID FOR UNDER ITEM 203.15, COMMON EXCAVATION.

8. THE TEMPORAY SEDIMENTATION BERM MATERIALS (FREE DRAINING STONE, GEOTEXTTILE FABRIC, ECT) SHALL BE PAID FOR UNDER ITEM 613.11, STONEFILL TYPE II.

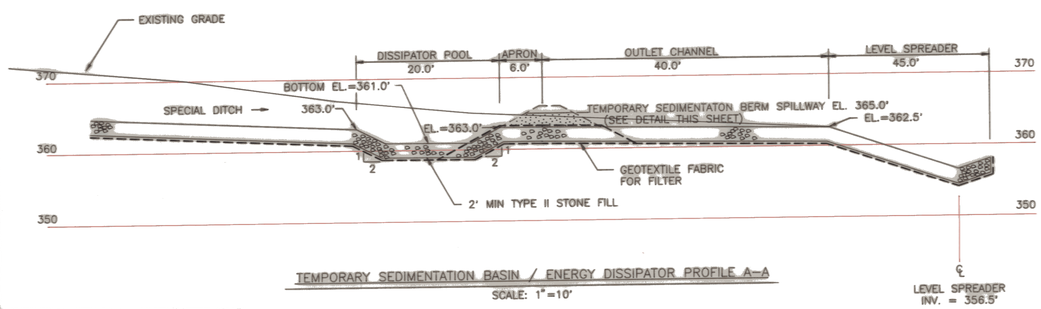


NOTE:
ALL SIDE SLOPES ARE 1V:2H

ENERGY DISSIPATOR PLAN
SCALE: 1"=10'

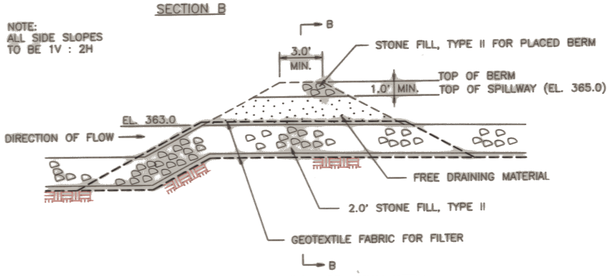


SECTION B



TEMPORARY SEDIMENTATION BASIN / ENERGY DISSIPATOR PROFILE A-A
SCALE: 1"=10'

NOTE:
ALL SIDE SLOPES TO BE 1V : 2H



TEMPORARY SEDIMENTATION SPILLWAY DETAIL
NOT TO SCALE

GRADATION TABLE		
	STEVE DESIGNATION	PERCENT BY WEIGHT
FREE DRAINING MATERIAL, DENSE GRADED CRUSHED STONE (MODIFIED)	1 INCH	100
	3/4 INCH	90-100
	3/8 INCH	20-55
	NO. 4	0-10
	NO. 8	0-5

DATUM
VERTICAL NGVD 1927
HORIZONTAL VSCP

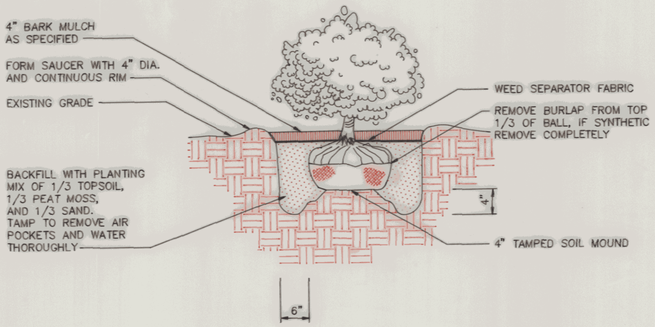
DuBois & King inc.
engineering planning management development

CHITTENDEN COUNTY CIRCUMFERENTIAL HIGHWAY
VERMONT ROUTE 289
WILLISTON-COLCHESTER PB 033-1(2)
CVRR WETLAND DETAILS & NOTES

DRAWN BY	DATE
TJD	APRIL 1991
CHECKED BY	PROJ. NO.
	R11304PC
PROJ. ENG.	DRAW. NO.
	7569
SHEET	385 OF 400 WM 105

NOTES

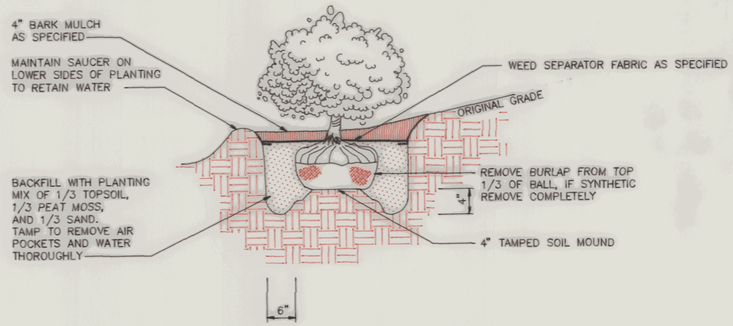
1. PLANT SO THAT SHRUBS ARE AT SAME LEVEL AS THEY WERE PREVIOUSLY GROWN AT THE NURSERY.



SHRUB PLANTING DETAIL
NOT TO SCALE

NOTES

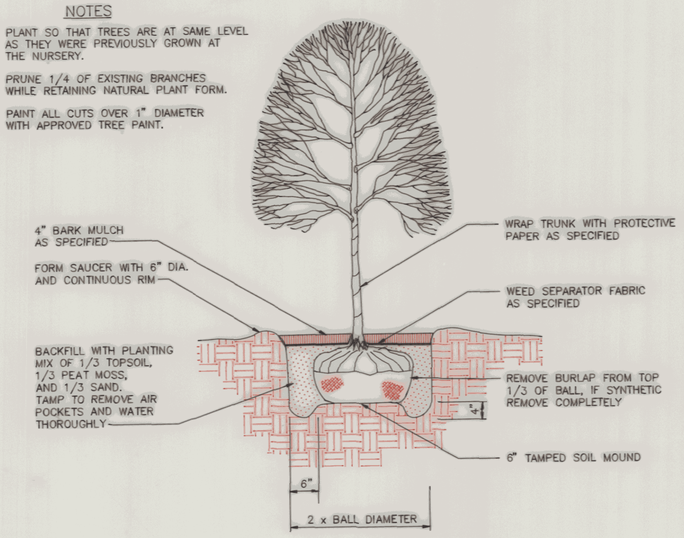
1. PLANT SO THAT SHRUBS ARE AT SAME LEVEL AS THEY WERE PREVIOUSLY GROWN AT THE NURSERY.



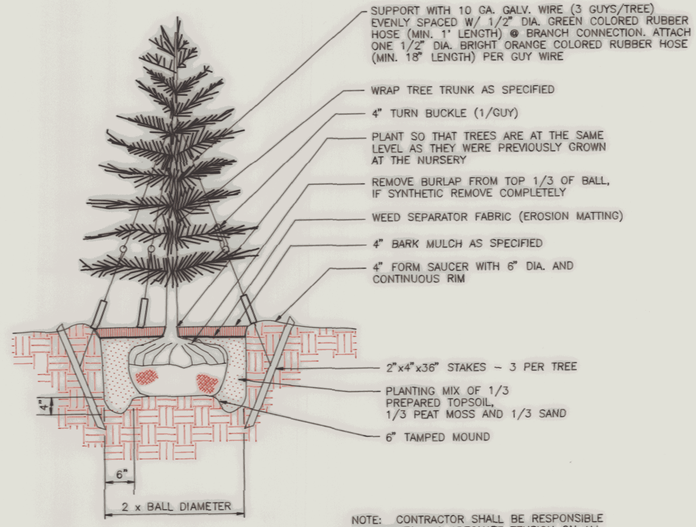
SHRUB PLANTING ON SLOPES DETAIL
NOT TO SCALE

NOTES

1. PLANT SO THAT TREES ARE AT SAME LEVEL AS THEY WERE PREVIOUSLY GROWN AT THE NURSERY.
2. PRUNE 1/4 OF EXISTING BRANCHES WHILE RETAINING NATURAL PLANT FORM.
3. PAINT ALL CUTS OVER 1" DIAMETER WITH APPROVED TREE PAINT.



TREE PLANTING DETAIL
NOT TO SCALE



TREE PLANTING DETAIL
NOT TO SCALE

NOTE: CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE TENSION ON ALL GUY WIRES FOR TREE PLANTINGS FOR SPECIFIED GUARANTEE PERIOD.

DATUM
VERTICAL _____
HORIZONTAL _____

DuBois & King inc.
engineering planning management development

CHITTENDEN COUNTY
CIRCUMFERENTIAL HIGHWAY

VERMONT ROUTE 289
WILLISTON–COLCHESTER PB 033–1(2)

CVRR WETLAND LANDSCAPE DETAILS

DRAWN BY	DATE
DJS/GPF	APRIL 1991
CHECKED BY	PROJ. NO.
JWT	R11304PC
PROJ. ENG.	DRAW. NO.
JWT	7570
SHEET	386 OF 400 WM 106

New England Telephone
A NYNEX Company

Work Order Plan

129BP
4-89

Exchange Of Notice No.		Tel. Co.		El. Co.		CATV			
Electric Co. Name									
Type Voltage System		MGN		Delta		Other			
Phase To Phase	KV	Phase To Ground	KV			Other	KV		
Designed Ckts. Involved	☐ Yes ☐ No	Advice Memo Processed	☐ Yes ☐ No	Redesign	☐ Yes ☐ No				
R/W Required	☐ Yes ☐ No	☐ Private Property ☐ Municipality ☐ State		Obtained By					
Cable Press	Under Press ☐ Yes ☐ No	Buffer	☐ Yes ☐ No	Manifold Location Mh					

Survey For Safety	
Prepared By	
Checked By	
Cable Plat	
Conduit Plat	
Precost	☐ Yes ☐ No
Date Sent	

Exceptions	
District	
General Manager Area	
Municipality Code	
Exchange Code	
Taxable Aerial Plant On Private Property	☐ None ☐ All ☐ Partial

Date		
Order No.	135404	
Mod/Rev	Issue Date	Plans Issue Date

PROPOSED POLES ●
BURIED CABLE XXX
CABLE IN CONDUIT

PI CURVE # 1
STA 12+77.24 BACK=
STA 12+73.25 AHEAD

P5D
NETT #349/51
GMP #55
Ledge
PCC
H-11
R=6000'
STA 15+43.79
E 346,000
MATCH LINE
P51
P52
Shed
RELOCATE MAILBOX
STA 10+00
IN CONSTRUCTION
TS 10+09.70
SC 11+58.70
STA 11+60 RT TO STA 13+00 RT
NEW 18"x136' RCP CLASS III
13+59.42 BEGIN SB PGL
CS 13+93.79
FUTURE SIDEWALK
MATCH LINE
STA 11+30 RT TO STA 11+60 RT
NEW 18"x34' OPTION PIPE W/ END SECTION
2 Sty. Brick House
1 Sty. W.F.
STA 11+60 RT TO STA 15+00 RT
NEW 18"x136' UNDERDRAIN W/CAP END
2 Sty. Stucco
Garage
Bit. Conc.
Well
Silo
Foundation
Guy Wires
NETT #53
GMP #57
NETT Line
1 Sty. Wood
Gravel
Well
N73° 75'W

GMP #58
NETT Line
NETT #349/55
R=6000'
PT N57°19'11"E
PC
STA 15+43.79
FUTURE SIDEWALK
CABLE BURIED BEHIND SIDEWALK
P54
PC 1+24.00
R=100.00'
PT 1+84.63
P54-1
18" RCP
Gravel
CURVE B-1
Δ = 38°11'
R = 15'
T = 5.26'
STA 0+62.24 AHEAD
STA 0+71.91 BACK=
PI CURVE # B-1
18+60.23 RT
STA 1+15 RT TO STA 1+45 RT
NEW 18"x42' CSP WITH 2 45° ELBOWS, 1 STONE FILL PAD
24+94.87 RAMP B BACK=
18+60.23 RT
15
RAMP B AHEAD=
NB
STA 1+30 RT TO STA 1+60 RT
NEW 18"x34' OPTION PIPE W/ END SECTION
P54-2
STA 18+70 LT TO STA
NEW 18"x38' RCP CLA
3 S 69°29'
9.82' E
4
STRUCTI
STA 537+10 LT TO ST
18"x56' RCP CLA
539
538
85-HB-1C
ROUTE 289
NEW
18"x56'
P54-3
STA 534+00 RT TO STA 537+00 RT
NEW 18"x300' OPTION PIPE
EDGE OF RAIL
ANCHOR FOR STEEL GUARD RAIL (SEE STDG-1D)
PC 1+23.74
R=100'
B-10
B-9
B-8
B-7
B-6
B-5
B-4
B-3
B-2
B-1
NEW DI CAPPED
RELOCATED BY OTHERS
2 Sty. Wood
Gravel
STA 1+15 RT
H-14
STA 21+30
PC 21+42.27 AHEAD
PI CURVE # 2
Δ = 47°52'
T = 42.27'
BACK
STA 21+42.27
PC 9+20.84
P54-4
N 42° 16' 02.16" W
STA 6+00 RT
NEW 6"x20' CAP END
PI CURVE # C-2
STA 10+33.05 AHEAD
STA 9+77.20 BACK
Bit. Conc.
STA 23+50 LT TO STA 23+45 LT
NEW 18"x60' RCP CLASS III
STA 24+45 LT TO STA 24+50 LT
NEW 6"x94' UNDERDRAIN W/CAP END
STA 24+75 RT TO STA 24+50 LT
NEW 18"x62' RCP CLASS III
CURVE C-2 DA
Δ = 57°11'42"
D = 96°55'
R = 100.00'
T = 56.57'
L = 112.21'
STA 24+81 LT TO STA 29+45 LT
NEW 6"x494' UNDERDRAIN W/CAP END
FUTURE SIDEWALK
MATCH LINE
STA 26+00
P54-6
P54-5
MH
Underground Tanks
Bit Conc
NETT #349/60
Guy Poles
CSM
L.P.
ROUTE 15
H-13
NETT #59X GMP #63
NETT #58 GMP #62
NETT #5801 GMP #62
NETT #57X GMP #63
NETT #349/57
R=2844.79
R=5000'
48" Stump
PC 10+69.41=
22+93.00
OH-15
PC 0+00.00=
768 41.76 LT
Concrete Survey Monument
Underground Cable Marker
Guy Poles
APPROACH SECTION STD. SP-RAB-82
EDGE OF RAIL
Gravel
BACK = AHEAD = NB
+23.37 = 309.19 LT
NETT #349/55
NETT #349/56
B-11
B-12
B-13
B-14
B-15
B-16
536
537
538
539
PC
PT
PI
CURVE
TANGENT
STRUCTURE
MH
GMP
NETT
CSM
L.P.
ACSM
Line
Guy Poles
Gravel
Well
Underground Tanks
Bit Conc
Guy Poles
Gravel
Well
Foundation
Silo
Garage
Bit. Conc.
2 Sty. Stucco
Well
Shed
Ledge
Ledge
Guy Wires
NETT #53
GMP #57
NETT Line
1 Sty. Wood
Gravel
Well
Concrete Survey Monument
Underground Cable Marker Guy Poles
Gravel
2 Sty. Wood
Gravel
Bit Conc
Gravel
Well
Foundation
Silo
Garage
Bit. Conc.
2 Sty. Stucco
Well
Shed
Ledge
Ledge
Guy Wires
NETT #53
GMP #57
NETT Line
1 Sty. Wood
Gravel
Well
Concrete Survey Monument
Underground Cable Marker Guy Poles
Gravel
2 Sty. Wood
Gravel
Bit Conc
Gravel
Well

N.E.T. RELOCATION PLANS

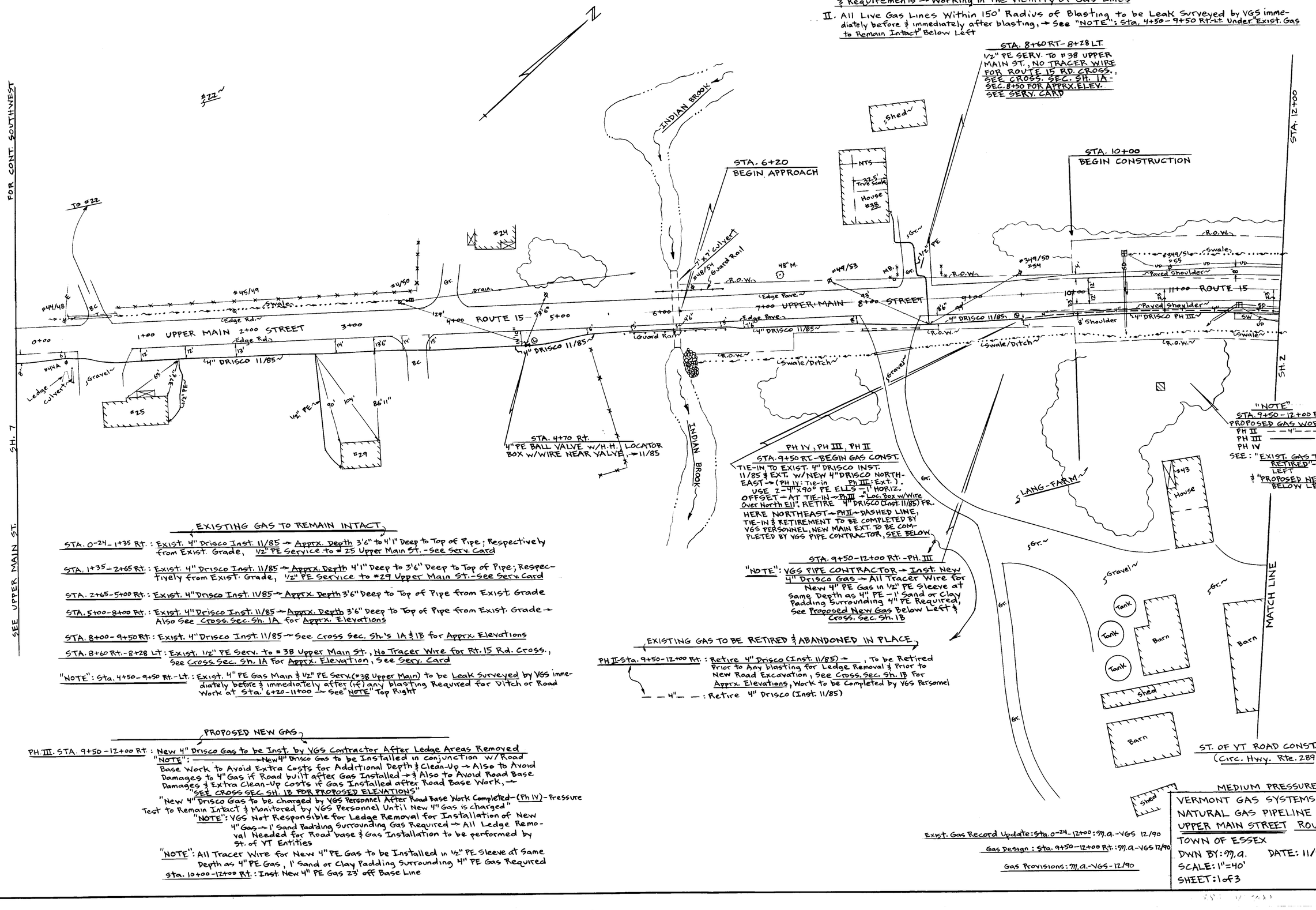
DRAWN BY
TRACED BY T.R.
DATE
DATE 5/91

VERMONT ROUTE 289 (F.A.P.)
TOWN OF ESSEX

PROJECT NUMBER WILLISTON–COLCHESTER PB 033-1(2)

SHEET 387 OF 400 SHEETS

"NOTE": ST. OF VT CONTRACTORS & UTILITY CONTRACTORS:
I. Any Contractor or Excavator Working near Gas Lines to Conform to "VGS Specifications & Requirements → Working in the Vicinity of Gas Lines"
II. All Live Gas Lines Within 150' Radius of Blasting to be Leak Surveyed by VGS immediately before & immediately after blasting, → See "NOTE": Sta. 4+50 - 9+50 Rt.-Lt. Under "Exist. Gas to Remain Intact" Below Left



EXISTING GAS TO REMAIN INTACT

STA. 0-24 - 1+35 Rt.: Exist. 4" Drisco Inst. 11/85 → Apprx. Depth 3'6" to 4'1" Deep to Top of Pipe; Respectively from Exist. Grade, 1/2" PE Service to #25 Upper Main St. - See Serv. Card

STA. 1+35 - 2+65 Rt.: Exist. 4" Drisco Inst. 11/85 → Apprx. Depth 4'1" Deep to 3'6" Deep to Top of Pipe; Respectively from Exist. Grade, 1/2" PE Service to #29 Upper Main St. - See Serv. Card

STA. 2+65 - 5+00 Rt.: Exist. 4" Drisco Inst. 11/85 → Apprx. Depth 3'6" Deep to Top of Pipe from Exist. Grade

STA. 5+00 - 8+00 Rt.: Exist. 4" Drisco Inst. 11/85 → Apprx. Depth 3'6" Deep to Top of Pipe from Exist. Grade → Also See Cross. Sec. Sh. 1A. for Apprx. Elevations

STA. 8+00 - 9+50 Rt.: Exist. 4" Drisco Inst. 11/85 → See Cross Sec. Sh.'s 1A & 1B for Apprx. Elevations

STA. 8+60 Rt. - 8+28 Lt.: Exist. 1/2" PE Serv. to #38 Upper Main St., No Tracer Wire for Rt. 15 Rd. Cross., See Cross. Sec. Sh. 1A for Apprx. Elevation, See Serv. Card

"NOTE": Sta. 4+50 - 9+50 Rt. - Lt.: Exist. 4" PE Gas Main & 1/2" PE Serv. (#38 Upper Main) to be Leak Surveyed by VGS immediately before & immediately after (if) any blasting Required for Ditch or Road Work at Sta. 6+20 - 11+00 → See "NOTE" Top Right

EXISTING GAS TO BE RETIRED & ABANDONED IN PLACE

PH II Sta. 9+50 - 12+00 Rt.: Retire 4" Drisco (Inst. 11/85) → , To be Retired Prior to Any blasting for Ledge Removal & Prior to New Road Excavation, See Cross. Sec. Sh. 1B For Apprx. Elevations, Work to be Completed by VGS Personnel

— — 4" — — : Retire 4" Drisco (Inst. 11/85)

PROPOSED NEW GAS

PH III. STA. 9+50 - 12+00 Rt.: New 4" Drisco Gas to be Inst. by VGS Contractor After Ledge Areas Removed

"NOTE": → New 4" Drisco Gas to be Installed in conjunction w/ Road Base Work to Avoid Extra Costs for Additional Depth & Clean-Up → Also to Avoid Damages to 4" Gas if Road built after Gas Installed → & Also to Avoid Road Base Damages & Extra Clean-Up costs if Gas Installed after Road Base Work, → "SEE CROSS SEC SH. 1B FOR PROPOSED ELEVATIONS"

"New 4" Drisco Gas to be charged by VGS Personnel After Road Base Work Completed - (PH IV) - Pressure Test to Remain Intact & Monitored by VGS Personnel Until New 4" Gas is charged"

"NOTE": VGS Not Responsible for Ledge Removal for Installation of New 4" Gas → 1' Sand Padding Surrounding Gas Required → All Ledge Removal Needed for Road base & Gas Installation to be performed by St. of VT Entities

"NOTE": All Tracer Wire for New 4" PE Gas to be Installed in 1/2" PE Sleeve at Same Depth as 4" PE Gas, 1' Sand or Clay Padding Surrounding 4" PE Gas Required

Sta. 10+00 - 12+00 Rt.: Inst. New 4" PE Gas 23' off Base Line

Exist. Gas Record Update: Sta. 0-24 - 12+00: 99.a.-VGS 12/90

Gas Design: Sta. 9+50 - 12+00 Rt.: 99.a.-VGS 12/90

Gas Provisions: 99.a.-VGS - 12/90

MEDIUM PRESSURE

VERMONT GAS SYSTEMS INC.
NATURAL GAS PIPELINE
UPPER MAIN STREET ROUTE 15
TOWN OF ESSEX
DWN BY: 99.a. DATE: 11/90
SCALE: 1"=40'
SHEET: 1 of 3

STA 15+47 48' LT. - PH. IV

RECONNECT EXIST. 1/2" PE SERV. TO #48 UPPER MAIN ST. TO NEW 2" PE MAIN ~ RETIRE 1/2" PE SERV. SECTION 5. EAST OF HERE W/4" DRISCO (Inst. 11/85) → "PH V" → SEE (C) UNDER "EXIST. GAS TO BE RETIRED" BELOW RIGHT, SEE #48 UPPER MAIN SERV. CARD, SEE DETAIL SH. 2A, SEE CROSS SEC. SH. 2A - SEC. 15+50

PH. III
STA. 15+44-15+55 48' LT.

INST. NEW 2" DRISCO MAIN SEE "PROPOSED NEW GAS" BELOW, SEE DETAIL SH. 2A

PH. III
STA. 15+50 47' RT.-48' LT.

INST. NEW 2" DRISCO RD. CROSS - 54' IN 4" SCH. 40 PVC CASING UNDER RT. 15 - LOCATOR WIRE IN 1/2" PE SLEEVE ALSO THRU CASING (22' RT.-32' LT.) SEE "PROPOSED NEW GAS" BELOW, SEE DETAIL SH. 2A, SEE CROSS SEC. SH. 2A - SEC. 15+50

"NOTE": STA 16+78 RT
Exist. 4" PE Gas to be Exposed by ST. of VT Contractor During New D.I. Culvert - VGS Personnel to be Present During Excavation Here → 4" Gas to be Relocated if Necessary. This Main to be Retired During Ph V Gas Work → See "Exist Gas to be Retired" below Left. See "Gas Estimate" for cost Details.

"NOTE" STA. 14+50-16+50 RT. SEE DETAIL SH. 2A FOR ADDITIONAL INFO

"FUTURE" BRIDGE ABUTMENT FIXED

"FUTURE" BRIDGE ABUTMENT W/ EXPE

"FUTURE" ROUTE 15 BRIDGE OVER UPPER MAIN ST. OVER CIRC. HWY. RT. 289

MATCH LINE

Enlecs Mobil #70

Underground Fuel Tanks

UPPER MAIN ST.

ROUTE 15

ROUTE 289 CIRC. HWY (future)

RTE. 289 (future) CIRC. HWY.

CIRCUMFERENTIAL HWY. (future) RTE. 289 (future)

ENTRANCE RAMP #2

EXIT RAMP

ENTRANCE RAMP (FUTURE)

EXIT RAMP (FUTURE)

Paved Shoulder

Guard Rail

Bridge Rail

Edge Fence

Curb

Swale

Apron Slab

Sidewalk

Shed

House #48

Garage

Septic

Well

Pond

Foundation

Barn

Silo

Gravel

Culvert

LANG-FARM

House #53

#53

#58

#53/57

#349/55

#63

#59

#60

#61

#62

R.O.W.

ROW

4" DRISCO Ph I

4" DRISCO Ph II

4" DRISCO Ph III

4" DRISCO Ph IV

4" DRISCO Ph V

1/2" PE

2" PE

4" PE

18" RCP

STA. 24+00

STA. 12+00

PH. II
STA. 14+80 63' RT.- 15+46 11.2' RT.

INST. NEW 1/2" DRISCO SERV. SECTION FOR #53 UPPER MAIN ST., RECONNECT EXIST 1/2" PE SERV. AT STA. 14+80 63' RT. - "RETIRE 1/2" PE SERV. SECTION N. WEST OF HERE W/ 4" DRISCO (Inst. 11/85) → "PH II" → SEE (A) UNDER "EXIST. GAS TO BE RETIRED" - FAR RIGHT.

STA. 14+80 63' RT - 15+08 47' RT: Permanent Loc. (2): STA. 15+09 47' RT. - 15+46 11.2' RT: Temp. Loc. - To be Retired-PH V. → See "Proposed New Gas" & "Retirements" - Far Right. SEE DETAIL SH. 2A, CROSS SEC. SH. 2A - Sec.'s 15+00 / 15+50 & #53 Upper Main Serv. Card.

PH. III
STA. 16+00 47' RT.

INST. NEW 4" PE BALL VALVE W/H.H.

PH. III
STA. 15+05 23' RT.-47' RT.

INST. NEW 24'-4" DRISCO HORIZ. OFFSET, USE 2-4"x90° PE ELLS, LOCATOR BOXES (2) W/WIRE OVER ELLS, SEE DETAIL SH. 2A, SEE "PROPOSED NEW GAS" BELOW, SEE CROSS SEC. SH. 2A SEC. 15+00

"NOTE": STA 15+05-17+00 RT-PH III
VGS CONTRACTOR NOT RESPONSIBLE FOR SUBBASE MATERIAL & COMPACTION REQUIREMENTS DURING GAS CONST. → SUBBASE MATERIAL & COMPACTION TO BE THE RESPONSIBILITY OF ST. OF VT CONTRACTOR DURING GAS CONST. HERE

PH. III & (IV) - STA. 17+00 47' RT-80' RT.
PH III "INST. NEW 33'-4" DRISCO HORIZ. OFFSET, USE 2-4"x90° PE ELLS, LOCATOR BOXES (2) W/WIRE OVER ELLS, SEE CROSS SEC. SH. 2A - SEC. 17+00, PH IV: Tie-in Ph. III to Ph I → See "Proposed New Gas Below"

"NOTE": ST. OF VT CONTRACTORS/UTILITY CONTRACTORS

I. Any Contractor or Excavator Working near Gas Lines to Conform to "VGS Specifications & Requirements" → Working in the Vicinity of Gas Lines"
II. All Live Gas Lines Within 150' of Blasting to be Leak Surveyed by VGS immediately before & immediately after blasting
III. VGS not responsible for Ledge Removal for Installation of New Gas - All Ledge Removal Required (if Any) for Gas Installation to be performed by ST. of VT Entities

"NOTE"
STA. 12+00 - 24+00
PROPOSED GAS WORK
PH I ———
PH II ———/— — —
PH III ———
PH IV ———
PH V : — — — —
SEE: "PROPOSED NEW GAS" - TO THE RIGHT
"EXIST. GAS LATERALS TO BE RECONNECTED" - BELOW
& "EXIST. GAS TO BE RETIRED" - FAR RIGHT

EXIST. GAS LATERALS TO BE RECONNECTED

PH. II - STA 14+80 63' RT: Reconnect Exist. 1/2" PE Serv. to "53 Upper Main St. "See Detail Sh. 2A" & Cross Sec. Sh. 2A - Sec. 15+00, See Serv. Card

PH. IV - STA. 15+47 48' LT.: Reconnect Exist. 1/2" PE Serv. to #48 Upper Main St. to New 2" PE Main "See Detail Sh. 2A" & Cross Sec. Sh. 2A - Sec. 15+50, See Serv. Card

PROPOSED NEW GAS - STA 12+00 - 24+00 RT.

PH. III. - STA. 12+00 - 15+05 RT.: New 4" Drisco Gas to be Inst. by VGS Contractor After Ledge Areas Removed.

"NOTE": → New 4" Drisco Gas to be Installed in conjunction w/ Road Base Work to Avoid Extra Costs for Additional Depth & Clean-Up → Also to Avoid Damages to 4" Gas if Road built after Gas Installed → & Also to Avoid Road Base Damages & Extra Clean-Up Costs if Gas Installed after Road Base Work, → "SEE CROSS SEC. SH.'s 1B & 2A FOR PROPOSED ELEV."

"New 4" PE Gas to be charged by VGS Personnel After Road Base Work Completed - (PH IV), → Pressure Test to Remain Intact & Monitored by VGS Personnel Until New 4" Gas is charged"

"NOTE": VGS not Responsible for Ledge Removal for Installation of New 4" Gas → 1' Sand Padding Surrounding Gas Required → All Ledge Removal Needed for Road base & Gas Installation to be performed by St. of VT Entities

Sta. 12+00 - 15+05 23' Rt. Sta. 15+05 23' Rt. - 47' Rt.

"NOTE": All Tracer Wire for New 4" PE Gas to be Installed in 1/2" PE Sleeve at Same Depth as 4" PE Gas, 1' Sand or Clay Padding Surrounding 4" PE Gas Required

"NOTE": Also See Detail Sh. 2A

PH. III - STA. 15+05 - 17+00 RT.: New 4" Drisco Gas to be Inst. by VGS Contractor After New Rd. Const. by St. of VT Contractor Completed Here → See "Notes 1 & 2" Directly Below

"NOTE 1": 1' Sand or Clay Padding Surrounding 4" PE Gas Required

"NOTE 2": VGS Strongly suggests that a Maximum 3'6" of Fill cover be provided by St. of VT Contractor Here to Avoid Extra Costs for Additional Gas Depth, → "SEE CROSS SEC. SH.'s 2A & 2B FOR PROPOSED ELEV."

"New 4" PE Gas to be charged by VGS Personnel From Exist. & Ph. I Gas" - "Ph IV" - Pressure Test to Remain Intact & Monitored by VGS Personnel Until New 4" Gas Charged

"NOTE": All Tracer Wire for New 4" PE Gas to be Inst. in 1/2" PE Sleeve at Same Depth as 4" PE Gas

"NOTE": Also See Detail Sh. 2A

Sta. 15+05 - 17+00 47' RT STA. 17+00 47' RT - 80' RT.

PH. I - STA. 17+00 80' RT. - 24+00 37' RT.: New 4" Drisco Gas to be Inst. by VGS Contractor Prior to Any New Rd. Const. Here

"NOTE": Tracer Wire direct burried 6" to 1' Above New 4" PE Gas Here, 1' Sand or Clay Padding Surrounding 4" PE Gas Required

"SEE CROSS SEC. SH.'s 2B, 2C, & 2D FOR PROPOSED ELEV."

"New 4" PE Gas to be charged by VGS Personnel Prior to Any New Rd. Const. - (PH I)"

Sta. 17+00 - 19+50 80' RT. - 21+50 70' RT. - 22+50 60' RT. - 23+00 45' RT. Sta. 23+00 45' RT - 24+00 37' RT.

"NOTE": Sta. 17+50 - 22+50 RT.: Future Relocation for Rt. 289 & Rt. 15 Bridge

PROPOSED NEW GAS STA 15+44-15+55 48' LT.

PH. III - STA. 15+44-15+55 48' LT: New 2" Drisco Gas to be Inst by VGS Contractor After New Rd. Base Work by St. of VT contractor completed → "2" Gas to be charged by VGS Personnel" → "PH IV" - Pres. Test to Remain Intact Until 2" PE Charged.

"NOTE": All Loc. Wire to be Inst. in 1/2" PE Sleeve at Same depth as New 2" PE Gas - 1' Sand or Clay Padding Surrounding New 2" PE Gas Required.

"NOTE": See Detail Sh. 2A & Cross Sec. Sh. 2A - Sec. 15+50

EXIST. GAS TO BE RETIRED - STA. 12+00 - 24+00

PH. II - STA. 12+00 - 15+45 RT.: - - - 4" - - - : VGS Personnel to Retire 4" Drisco (Inst. 11/85) → To be Retired after "Ph I & II" - New Gas - Sta. 14+80 - 24+00 Rt." has been Inst./Energized & Ph. II "Exist. Gas Reconnection" - Sta. 14+80 63' Rt. has been completed/Energized "To be Retired Prior to Any Blasting for Ledge Removal & Prior to New Rd. Work." "See Cross Sec. Sh. 1B & 2A "See Detail Sh. 2A"

PROPOSED NEW GAS - STA. 14+80-15+55

PH. II - STA. 14+80 63' RT. - 15+46 11.2' RT.: New 1/2" Drisco Serv. Section to #53 Upper Main St. to be Inst. & Charged by VGS Personnel Prior to New Rd. Const. → "Do Not Inst. Flow Lim. at Exist. 4" PE (Inst. 11/85) - Sta. 15+46 11.2' Rt."

Sta. 14+80 63' Rt. - 15+08 47' Rt.: Permanent Loc. - New 1/2" PE Gas to be Reconnected to Exist. 1/2" PE Gas at Sta. 14+80 63' Rt. → N. West of here - See (A) Under "Exist. Gas to be Retired" - To the Right "New 1/2" PE Gas to be Reconnected to New 4" PE Live Gas at Sta. 15+08 47' Rt. by VGS Personnel" → "PH IV"

(2) Sta. 15+09 47' Rt. - 15+46 11.2' Rt.: Temp. Loc.: "New 1/2" PE Gas to be Retired w/ 4" PE Main (Inst. 11/85) → "PH V" → See "Exist Gas to be Retired" Above"

"NOTE": See Detail Sh. 2A & Cross Sec. Sh. 2A - Sec.'s 15+00 & 15+50 for Additional Details Refer to #53 Upper Main Serv. Card

PH. III - STA. 15+50 47' Rt - 48' Lt.: New 2" Drisco Rd. Cross - 54' 10 4" Sch. 40 PVC Casing Under Rt. 15 - Locator Wire in 1/2" PE Sleeve thru 4" PVC Casing (22' Rt - 32' Lt)

22' Rt - 32' Lt: 4" Drisco Casing to be Inst. by St. of VT Contractor during New Rd. Base Const. → VGS to Supply Casing Materials → See VGS Casing Detail (8 1/2" x 11" Sh.) for installation Instructions

Ph. III: 47' Rt. - 48' Lt.: 2" Drisco Gas w/ 1/2" PE Sleeved Loc. Wire to be Inst. by VGS Contractor After New Rd. Base/Grading & Casing Installation completed. "2" PE Gas to be charged by VGS Personnel" → "PH IV" → Pres. Test to Remain Intact Until charged

"NOTE": 47' Rt - 48' Lt: All Loc. Wire in 1/2" PE Sleeve at Same Depth as New 2" PE Gas. 1' Sand or Clay Padding surrounding New 2" PE Gas / 4" PVC Casing Required

"NOTE": See Detail Sh. 2A & Cross Sec. Sh. 2A - Sec. 15+50

PH. II - A - STA. 14+80 63' Rt. - 14+82 11.2 Rt: See Detail Sh. 2A

PH V - B - STA. 15+45 11.5' Rt.: See Detail Sh. 2A

PH V - C - STA. 15+47 11' Rt. - 48' Lt.: See Detail Sh. 2A

PH V - D - STA. 15+58 9.5' Rt: Retire 4" PE Valve: See Detail Sh. 2A

Misc. Retirement: PH V - E - STA. 15+09 47' Rt - 15+46 11.2' Rt: See Detail Sh. 2A

ST. OF VT. ROAD CONST. 1991
(Circ. Hwy. - Rte. 289)

Exist. Gas Record Update: Sta. 12+00 - 24+00: 7/91 - VGS 12/90

MEDIUM PRESSURE

VERMONT GAS SYSTEMS INC.
NATURAL GAS PIPELINE
UPPER MAIN ST. ROUTE 15
TOWN OF ESSEX
DWN. BY: 7/7.9. DATE: 11/90
SCALE: 1" = 40'
SHEET: 2 of 3
GAS DESIGN: Sta. 12+00 - 24+00: 7/7.9. - VGS - 1/91
Gas Design Revisions - 5/91 - 7/7.9. - VGS

STA 26+82-26+85 53' LT. - PH I

END NEW 2" PE MAIN w/2" PURGE PT. CAP-LOCATOR BOX W/WIRE OVER END → 3' NORTHEAST OF END → RECONNECT EXIST. 1/2" PE SERV. TO # 74 UPPER MAIN ST. TO NEW 2" PE MAIN → → RETIRE 1/2" PE SERV. SECTION SOUTHEAST OF HERE W/4" DRISCO (Inst. 11/85)" → "PH V" → SEE (A) UNDER "EXIST. GAS TO BE RETIRED" BELOW RIGHT, SEE # 74 UPPER MAIN SERV. CARD, SEE CROSS SEC. SH. 3A-SEC. 27+00

STA. 27+20-27+25 53' LT. - PH I

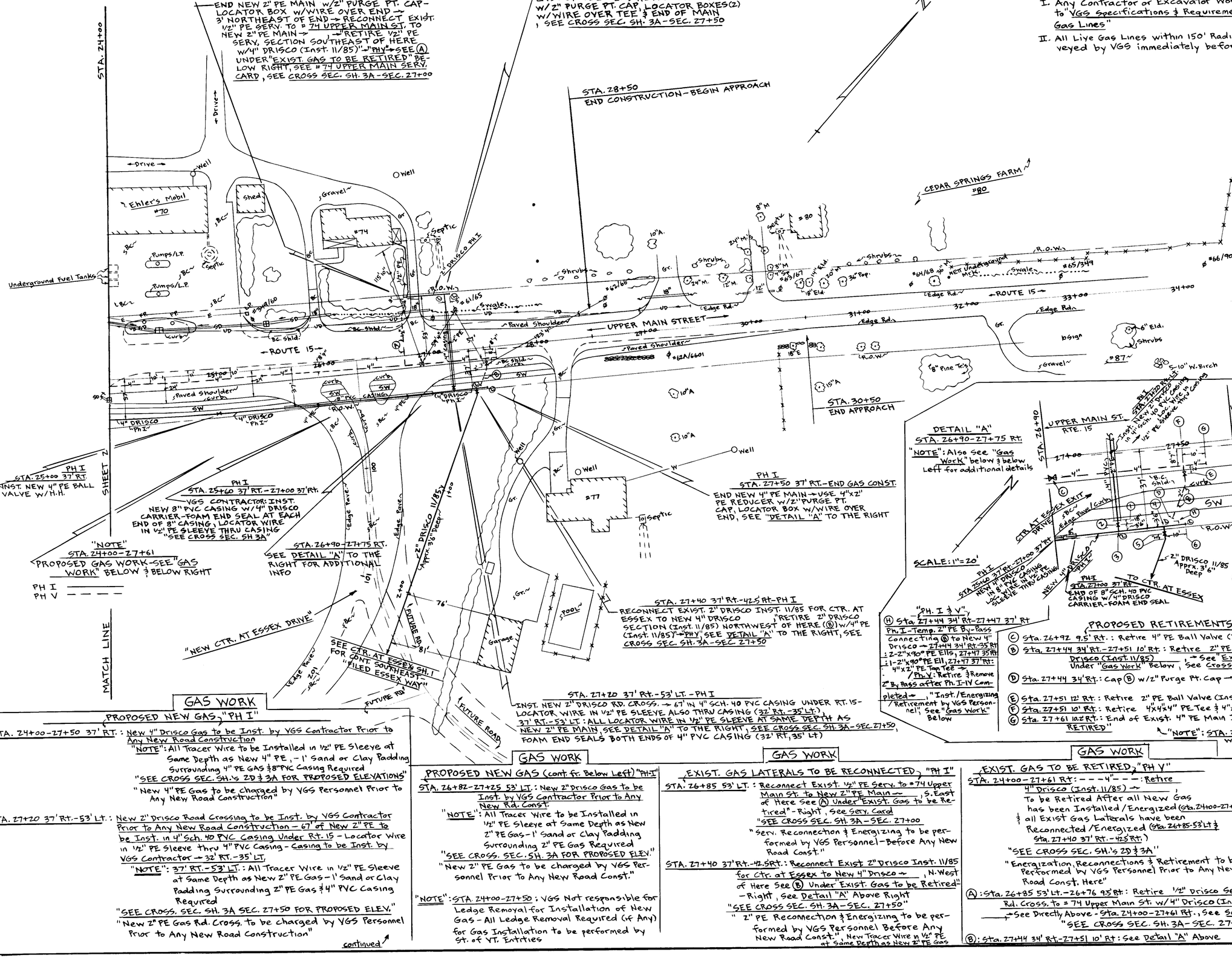
INST. NEW 2"x2"x2" PE TEE, 5' NORTH-EAST OF TEE → END NEW 2" PE MAIN W/2" PURGE PT. CAP, LOCATOR BOXES(2) W/WIRE OVER TEE & END OF MAIN, SEE CROSS SEC. SH. 3A-SEC. 27+50

STA. 28+50
END CONSTRUCTION - BEGIN APPROACH

"NOTE": STATE OF VERMONT CONTRACTORS/UTILITY CONTRACTORS

I. Any Contractor or Excavator Working near Gas Lines to Conform to "VGS Specifications & Requirements → Working in the Vicinity of Gas Lines"

II. All Live Gas Lines within 150' Radius of Blasting to be Leak Surveyed by VGS immediately before and immediately after Blasting



STA. 25+00 37' RT.
PH I
INST. NEW 4" PE BALL VALVE W/H.H.

PH I
STA. 25+60 37' RT. - 27+00 37' RT.
VGS CONTRACTOR: INST. NEW 8" PVC CASING W/4" DRISCO CARRIER-FOAM END SEAL AT EACH END OF 8" CASING, LOCATOR WIRE IN 1/2" PE SLEEVE THRU CASING "SEE CROSS SEC. SH 3A"

"NOTE"
STA. 24+00-27+61
PROPOSED GAS WORK-SEE "GAS WORK" BELOW & BELOW RIGHT
PH I
PH V

STA. 26+90-27+75 RT.
SEE DETAIL "A" TO THE RIGHT FOR ADDITIONAL INFO

"NEW CTR. AT ESSEX DRIVE"

SEE CTR. AT ESSEX SH. I FOR CONT. SOUTHEAST "FILED ESSEX WAY"

STA. 27+40 37' RT.-42.5 RT.-PH I
RECONNECT EXIST. 2" DRISCO INST. 11/85 FOR CTR. AT ESSEX TO NEW 4" DRISCO, RETIRE 2" DRISCO SECTION (Inst. 11/85) NORTHWEST OF HERE (B) w/4" PE (Inst. 11/85) → PH V, SEE DETAIL "A" TO THE RIGHT, SEE CROSS SEC. SH. 3A-SEC 27+50

STA. 27+20 37' RT.-53' LT. - PH I
INST. NEW 2" DRISCO RD. CROSS. → 67' IN 4" SCH. 40 PVC CASING UNDER RT. 15-LOCATOR WIRE IN 1/2" PE SLEEVE ALSO THRU CASING (32' RT. -35' LT.) 37' RT.-53' LT: ALL LOCATOR WIRE IN 1/2" PE SLEEVE AT SAME DEPTH AS NEW 2" PE MAIN, SEE DETAIL "A" TO THE RIGHT, SEE CROSS SEC. SH. 3A-SEC. 27+50, FOAM END SEALS BOTH ENDS OF 4" PVC CASING (32' RT, 35' LT)

PH I
STA. 27+50 37' RT.-END GAS CONST.
END NEW 4" PE MAIN → USE 4"x2" PE REDUCER W/2" PURGE PT. CAP, LOCATOR BOX W/WIRE OVER END, SEE "DETAIL "A" TO THE RIGHT

DETAIL "A"
STA. 26+90-27+75 RT.
"NOTE": Also see "Gas Work" below & below Left for additional details

SCALE: 1"=20'

"PH. I & V"
(H) Sta. 27+44 34' Rt-27+47 37' Rt
Ph. I-Temp. 2" PE By-Pass Connecting (B) to New 4" Drisco → 27+44 34' Rt-35 Rt
: 2-2"x90° PE Ells, 27+47 35 Rt
: 1-2"x90° PE Ell, 27+47 37' Rt:
: 4"x2" PE Tap Tee →
: PH V: Retire & Remove 2" By Pass after Ph. I-IV Completed → "Inst./Energizing/Retirement by VGS Personnel" See "Gas Work" Below

NEW MATERIALS "PH I"
(1) Sta. 27+20 32' Rt: End of 4" Sch. 40 PVC Casing w/2" Drisco Carrier → Foam End Seal at End of Casing
(2) Sta. 27+20 33.5' Rt: 2" PE Ball Valve w/H.H.
(3) Sta. 27+20 37' Rt: 4"x4"x4" PE Tee Fused to a 4"x2" PE Reducer Headed N. West, Locator Box w/Wire Over Tee
(4) Sta. 27+40 37' Rt: 4"x4"x4" PE Tee Fused to a 4"x2" PE Reducer Headed S. East, Locator Box w/Wire Over Tee
(5) Sta. 27+40 40.5' Rt-42.5' Rt: 2" PE Ball Valve w/H.H. → 2' S. East of Valve (42.5 Rt) - Reconnect Exist. 2" Drisco Inst. 11/85 For Ctr. at Essex w/Butt Fusion
(6) Sta. 27+50 37' Rt.: END GAS CONST.: End New 4" PE Drisco Main w/4"x2" PE Reducer Fused to a 2" Purge Pt. Cap-Locator Box w/Wire Over End Also See (H)

"NOTE": See "Proposed New Gas" & "Exist. Gas Laterals to be Reconnected" Under "Gas Work" Below Left for All of the Above Items (1) thru (6)

PROPOSED RETIREMENTS "PH V"
(C) Sta. 26+92 9.5' Rt.: Retire 4" PE Ball Valve (Inst. 11/85) - TIES
(B) Sta. 27+44 34' Rt.-27+51 10' Rt.: Retire 2" PE Main Section (Inst. 11/85 for Ctr. at Essex) w/4" Drisco (Inst. 11/85) Under "Gas Work" Below, → See "Exist. Gas to be Retired - Sta. 24+00-27+61 Rt."
(D) Sta. 27+44 34' Rt.: Cap (B) w/2" Purge Pt. Cap → "RETIRE CAP w/(B)", Also See (H)
(E) Sta. 27+51 12' Rt.: Retire 2" PE Ball Valve (Inst. 11/85) w/(B) - TIES
(F) Sta. 27+51 10' Rt.: Retire 4"x4"x4" PE Tee & 4"x2" PE Red. (Both Inst 11/85) w/(B)
(G) Sta. 27+61 10.2 Rt.: End of Exist. 4" PE Main Inst. 11/85 → 4"x2" Red. w/2" P. Pt. Cap → "TO BE RETIRED"

"NOTE": STA. 26+90-27+61 Rt.: (B), (C), (D), (E), (F), (G) to be Retired w/4" Drisco (Inst. 11/85) → See "Exist. Gas to be Retired - Sta. 24+00-27+61 Rt." Under "Gas Work" To the Left

GAS WORK

PROPOSED NEW GAS "PH I"

STA. 24+00-27+50 37' RT.: New 4" Drisco Gas to be Inst. by VGS Contractor Prior to Any New Road Construction
"NOTE": All Tracer Wire to be Installed in 1/2" PE Sleeve at Same Depth as New 4" PE, - 1' Sand or Clay Padding Surrounding 4" PE GAS & 8" PVC Casing Required
"SEE CROSS SEC. SH.'s 2D & 3A FOR PROPOSED ELEVATIONS"
"New 4" PE Gas to be charged by VGS Personnel Prior to Any New Road Construction"

STA. 27+20 37' RT.-53' LT.: New 2" Drisco Road Crossing to be Inst. by VGS Contractor Prior to Any New Road Construction - 67' of New 2" PE to be Inst. in 4" Sch. 40 PVC Casing Under Rt. 15 - Locator Wire in 1/2" PE Sleeve thru 4" PVC Casing - Casing to be Inst. by VGS Contractor → 32' RT.-35' LT.
"NOTE": 37' RT.-53' LT.: All Tracer Wire in 1/2" PE Sleeve at Same Depth as New 2" PE Gas - 1' Sand or Clay Padding Surrounding 2" PE Gas & 4" PVC Casing Required
"SEE CROSS. SEC. SH. 3A SEC. 27+50 FOR PROPOSED ELEV."
"New 2" PE Gas Rd. Cross. to be charged by VGS Personnel Prior to Any New Road Construction"

continued

PROPOSED NEW GAS (cont. fr. Below Left) "PH I"

STA. 26+82-27+25 53' LT.: New 2" Drisco Gas to be Inst. by VGS Contractor Prior to Any New Rd. Const.
"NOTE": All Tracer Wire to be Installed in 1/2" PE Sleeve at Same Depth as New 2" PE Gas - 1' Sand or Clay Padding Surrounding 2" PE Gas Required
"SEE CROSS. SEC. SH. 3A FOR PROPOSED ELEV."
"New 2" PE Gas to be charged by VGS Personnel Prior to Any New Road Const."

"NOTE": STA. 24+00-27+50: VGS Not responsible for Ledge Removal for Installation of New Gas - All Ledge Removal Required (if Any) for Gas Installation to be performed by St. of VT. Entities

EXIST. GAS LATERALS TO BE RECONNECTED "PH I"

STA. 26+85 53' LT.: Reconnect Exist. 1/2" PE Serv. to #74 Upper Main St. to New 2" PE Main →, S. East of Here See (A) Under "Exist. Gas to be Retired" - Right, See Serv. Card
"SEE CROSS SEC. SH. 3A - SEC. 27+00
"Serv. Reconnection & Energizing to be performed by VGS Personnel - Before Any New Road Const."

STA. 27+40 37' Rt.-42.5 Rt.: Reconnect Exist. 2" Drisco Inst. 11/85 for Ctr. at Essex to New 4" Drisco →, N. West of Here See (B) Under "Exist. Gas to be Retired" - Right, See Detail "A" Above Right
"SEE CROSS SEC. SH. 3A - SEC. 27+50"
" 2" PE Reconnection & Energizing to be performed by VGS Personnel Before Any New Road Const.", New Tracer Wire in 1/2" PE at Same Depth as New 2" PE Gas

EXIST. GAS TO BE RETIRED "PH V"

STA. 24+00-27+61 Rt: - - - 4" - - - : Retire 4" Drisco (Inst. 11/85) →, To be Retired After all New Gas has been Installed/Energized (Sta. 24+00-27+50) & all Exist Gas Laterals have been Reconnected/Energized (Sta. 26+85-53' Lt & Sta. 27+40 37' Rt. - 42.5 Rt.)
"SEE CROSS SEC. SH.'s 2D & 3A"
"Energization, Reconnections & Retirement to be Performed by VGS Personnel Prior to Any New Road Const. Here"

(A): Sta. 26+85 53' Lt.-26+76 93' Rt: Retire 1/2" Drisco Serv. Rd. Cross. to # 74 Upper Main St. w/4" Drisco (Inst. 11/85) → See Directly Above - Sta. 24+00-27+61 Rt., See Serv. Card
"SEE CROSS SEC. SH. 3A - SEC. 27+00"

(B): Sta. 27+44 34' Rt.-27+51 10' Rt: See Detail "A" Above

ST. OF VT. ROAD CONST. 1991
(CIRC. HWY. - RTE. 289)

Exist. Gas Record Update: Sta. 24+00-27+61: WJG-VGS-12/90

MEDIUM PRESSURE

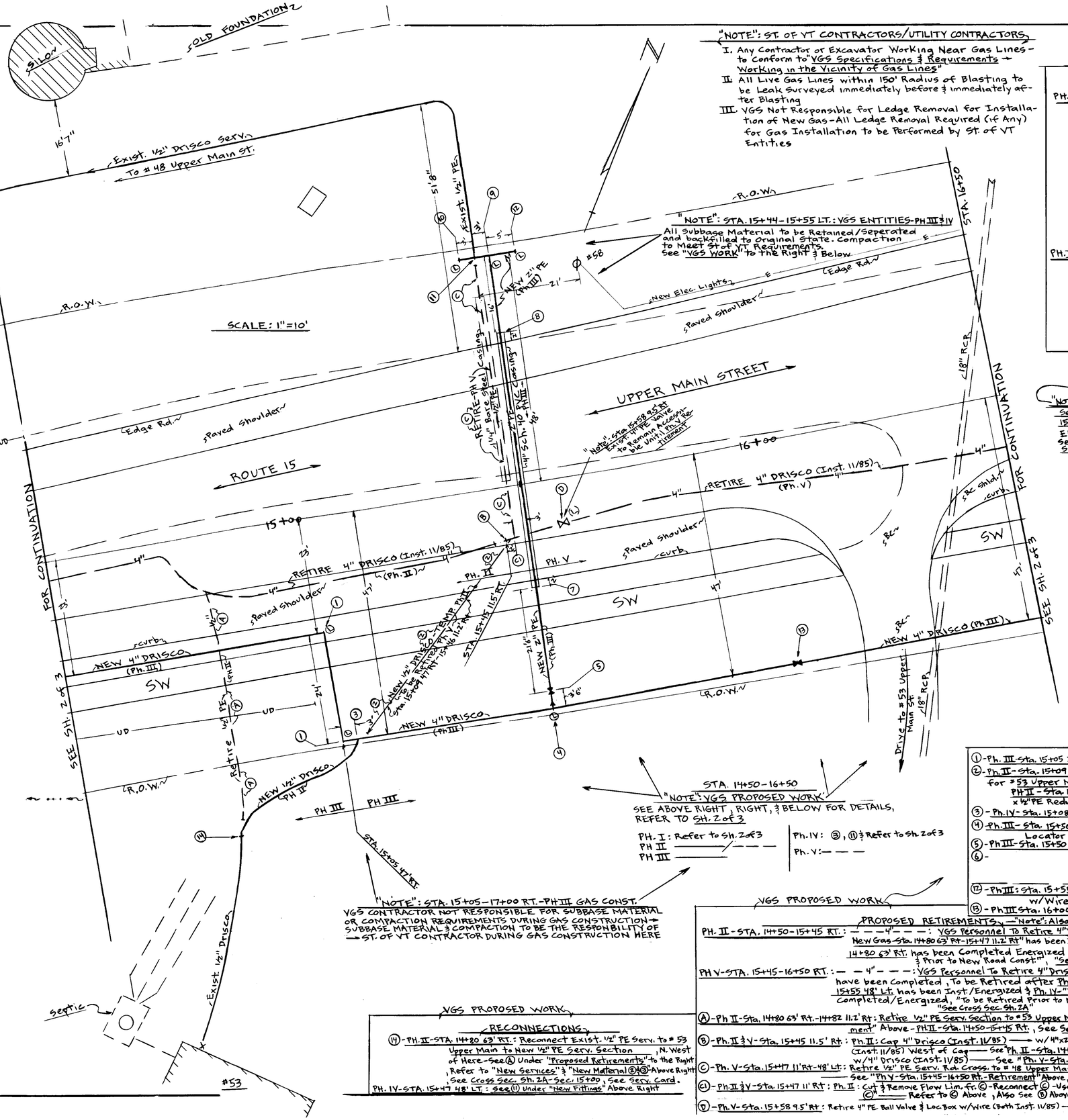
VERMONT GAS SYSTEMS INC.
NATURAL GAS PIPELINE
UPPER MAIN ST. ROUTE 15
TOWN OF ESSEX
DWN. BY: WJG DATE: 11/90
SCALE: 1"=40'
SHEET: 3 of 3
GAS DESIGN: Sta. 24+00-27+61: WJG-VGS-12/90-1/91-2/91

"NOTE": ST. OF VT CONTRACTORS/UTILITY CONTRACTORS

I. Any Contractor or Excavator Working Near Gas Lines - to Conform to "VGS Specifications & Requirements → Working in the Vicinity of Gas Lines"

II. All Live Gas Lines within 150' Radius of Blasting to be Leak Surveyed immediately before & immediately after Blasting

III. VGS Not Responsible for Ledge Removal for Installation of New Gas - All Ledge Removal Required (if Any) for Gas Installation to be Performed by St. of VT Entities



VGS PROPOSED WORK - STA. 14+50-16+50

NEW MAIN/SERVICES/MATERIALS

PH. III - STA. 14+50-15+05 RT.: New 4" Drisco to be Inst. by VGS Contractor after Ledge Areas Removed by St. of VT Contractor "SEE CROSS SEC. SH. 2A"

"New 4" Gas to be Energized by VGS Personnel after Rd. Base Work Completed - (PH. IV) - Pressure Test to Remain Intact & Monitored by VGS Personnel Until New 4" Gas Energized".

Sta. 14+50-15+05 23' Rt. Sta. 15+05 23' Rt. -47' Rt.: See Cross Sec. Sh. 2A-Sec. 15+00

"NOTE": All Tracer Wire in ½" PE Sleeve at Same Depth as New 4" PE Gas, 1' Sand or Clay Padding Surrounding New 4" PE Gas Required

"NOTE": Also See Sh. 2 of 3 - "Proposed New Gas" for additional details

PH. III STA. 15+05-16+50 47' RT.: New 4" Drisco Gas to be Inst. by VGS Contractor after New Rd. Const. by St. of VT Contractor completed Here → See "Notes" (2) Directly Below "SEE CROSS SEC. SH. 2A"

"New 4" PE Gas to be charged by VGS Personnel from Exist. & Ph. I Gas" → "PH IV" → Pressure Test to Remain Intact & Monitored by VGS Personnel Until New 4" PE Charged.

"NOTE": All Tracer Wire in ½" PE Sleeve at Same Depth as New 4" PE Gas - 1' Sand or Clay Padding Surrounding New 4" PE Gas Required

"NOTE": Also See Sh. 2 of 3 - "Proposed New Gas" for Additional details

PH II - STA. 14+80 63' RT. - 15+46 11.2' RT.: New ½" Drisco Serv. Section for #53 Upper Main St. to be Inst. & charged by VGS Personnel Prior to New Rd. Const. → "Do Not Inst. Flow Lim. at Exist. 4" PE Main (Inst. 11/85) - Sta. 15+46 11.2' RT."

"NOTE": See Cross Sec. Sh 2A-Sec's 15+00 & 15+50 For Elev. & Add. Details, See #53 Upper Main Serv. Card

Sta. 14+80 63' Rt. - 15+08 47' Rt.: Permanent Loc. → New ½" PE Gas to be Reconnected to Exist. ½" PE Gas at Sta. 14+80 63' Rt. → See (11) "New ½" PE Gas to be Reconnected to New 4" PE Live Gas Main at Sta. 15+08 47' Rt. by VGS Personnel" → "PH IV" → See (3)

Sta. 15+09 47' Rt. - 15+46 11.2' Rt.: Temporary Loc. → "New ½" PE Gas to be Retired w/ 4" PE Main (Inst. 11/85)" → "Ph. V" → See "Proposed Retirements" & (2) Below

PH III - STA 15+50 47' Rt. - 48' Lt.: New 2" Drisco Rd. Cross. - 54' in 4" Sch. 40 PVC Casing Under Rt 15 - Locator Wire in ½" PE Sleeve thru 4" PVC Casing (22' Rt - 32' Lt)

22' Rt. - 32' Lt.: 4" Sch. 40 PVC casing to be Inst. by St. of VT Contractor during New Rd. Base Work → VGS to supply Casing Materials → See VGS Casing Detail (8½" x 11" Sh.) For Installation Instructions

Ph III: 47' Rt - 48' Lt: 2" Drisco Gas w/ ½" PE Sleeved Loc. Wire to be Inst. by VGS Contractor After New Rd. Base/Grading & Gas Casing Installation completed Here. → "2" Gas to be charged by VGS Personnel" → "PH IV" → Pres. Test to Remain Intact Until charged

"NOTE": 47' Rt. - 48' Lt: All Tracer Wire in ½" PE Sleeve at S..... Depth as New 2" PE Gas - 1' Sand or Clay Padding Surrounding New 2" PE Gas & 4" PVC Casing Required

"SEE CROSS SEC. SH. 2A - SEC. 15+50

PH III - STA. 15+44-15+55 48' LT.: New 2" Drisco Gas to be Inst. by VGS Contractor After New Rd. Base Work by St. of VT Contractor completed Here. → "2" Gas to be charged by VGS Personnel" → "PH IV" → Pres. Test to Remain Intact Until 2" PE Charged

"NOTE": All Tracer Wire to be Inst. in ½" PE Sleeve at same Depth as New 2" PE Gas - 1' Sand or Clay Padding Surrounding New 2" PE Gas Required "SEE CROSS SEC. SH. 2A - SEC. 15+50

NEW FITTINGS/MATERIALS - "NOTE": See Above for Info relating to Items (1) thru (13) below

(1) - Ph. III - Sta. 15+05 23' RT & 47' RT: 4" x 90° PE Ell - Loc Box w/Wire Over Ell

(2) - Ph. II - Sta. 15+09 47' RT - 15+46 11.2' RT: Temp. ½" Drisco Serv. Section for #53 Upper Main St → To BE RETIRED - PH V - SEE "NEW SERVICES - PH II - Sta. 14+80 63' RT - 15+46 11.2' RT" Above. New 4" x 1" PE Tap Tee w/1" x ½" PE Reducer at Sta. 15+46 11.2' RT - To be Retired - Ph. V

(3) - Ph. IV - Sta. 15+08 47' RT: 4" x ½" PE Tap Tee w/Flow Limiter by VGS Personnel

(4) - Ph. III - Sta. 15+50 47' RT: 4x4x4" PE Tee Fused to a 4" x 2" PE Reducer, Locator Box w/Wire Over Tee

(5) - Ph. III - Sta. 15+50 43.5' Rt.: 2" PE Ball Valve w/H.H.

(6) -

(7) - Ph. III: Sta. 15+50 22' Rt: End of 4" Sch. 40 PVC Casing - Foam End Seal

(8) - Ph. III: Sta. 15+50 32' LT: End of 4" Sch. 40 PVC Casing - Foam End Seal

(9) - Ph. III: Sta. 15+50 48' Lt.: 2" x 2" x 2" PE Tee - Locator Box w/Wire Over Tee

(10) - Ph. III: Sta. 15+44 48' Lt.: End New 2" PE Main w/2" P. Pt. Cap, Loc. Box w/Wire Over End

(11) - Ph IV: Sta. 15+47 48' Lt.: Reconnect Exist. ½" PE Serv. to #48 Upper Main to New 2" PE Main w/New 2" x ½" PE Tap Tee & Flow Lim. → , S. East of Here → See (C) - Under "Proposed Retirements" Below Left, See Cross Secs. Sh. 2A - Sec. 15+50, See Serv. Card

(12) - Ph. III: Sta. 15+55 48' Lt.: End New 2" PE Main w/2" P. Pt. Cap, Loc. Box w/Wire Over End

(13) - Ph III Sta. 16+00 47' Lt: 4" PE Ball Valve w/H.H.

"NOTE": STA. 14+50-16+50 VGS PROPOSED WORK

SEE ABOVE RIGHT, RIGHT, & BELOW FOR DETAILS, REFER TO SH. 2 OF 3

PH. I: Refer to Sh. 2 of 3
PH II ———
PH III ———

Ph. IV: (3), (11) & Refer to Sh. 2 of 3
Ph. V: — — —

"NOTE": STA. 15+05-17+00 RT. - PH III GAS CONST. VGS CONTRACTOR NOT RESPONSIBLE FOR SUBBASE MATERIAL OR COMPACTION REQUIREMENTS DURING GAS CONSTRUCTION → SUBBASE MATERIAL & COMPACTION TO BE THE RESPONSIBILITY OF → ST. OF VT CONTRACTOR DURING GAS CONSTRUCTION HERE

VGS PROPOSED WORK

PROPOSED RETIREMENTS - "NOTE": Also Refer to (2) Above

PH. II - STA. 14+50-15+45 RT.: — — — 4" — — —: VGS Personnel to Retire 4" Drisco (Inst. 11/85) → , To be Retired after "Ph II → New Gas - Sta. 14+80 63' Rt - 15+47 11.2' Rt" has been Inst/Energized & Ph. II "Exist. Gas Reconnection (11)" - Sta. 14+80 63' Rt. has been Completed Energized, "To be Retired Prior to Any Blasting for Ledge Removal & Prior to New Road Const.", "See Cross Sec. Sh. 2A"

PH V - STA. 15+45-16+50 RT.: — — 4" — — —: VGS Personnel To Retire 4" Drisco (Inst. 11/85) → , To be Retired after Ph's I-IV have been Completed, To be Retired after Ph III - "New Gas" - Sta. 15+50 47' Rt - 48' Lt. / Sta. 15+44-15+55 48' Lt. has been Inst/Energized & Ph. IV - "Exist. Gas Reconnection (11)" - Sta. 15+47 48' Lt. has been Completed/Energized, "To be Retired Prior to New Road Const. at Sta. 18+50 → N. East & Beyond" - See Sh. 2 of 3, "See Cross Sec. Sh. 2A"

(A) - Ph II - Sta. 14+80 63' Rt. - 14+82 11.2' Rt: Retire ½" PE Serv. Section to #53 Uppers Main w/4" Drisco (Inst. 11/85) → See "Proposed Retirement" Above - PH II - Sta. 14+50-15+45 Rt., See Serv. Card, See Cross. Sec. Sh. 2A - Sec. 15+00

(B) - Ph. II & V - Sta. 15+45 11.5' Rt.: Ph. II: Cap 4" Drisco (Inst. 11/85) → w/4" x 2" Red. & 2" P. Pt. Cap - See (C) Below - Retire 4" Drisco (Inst. 11/85) West of Cap ——— See "Ph. II - Sta. 14+50-15+45 Rt - Retirement" Above, Ph V: "RETIRE CAP" w/4" Drisco (Inst. 11/85) ——— See "Ph. V - Sta. 15+45-16+50 - Retirement" Above

(C) - Ph. V - Sta. 15+47 11' Rt - 48' Lt: Retire ½" PE Serv. Rd. Cross. to #48 Upper Main (1' Lt - 40' Lt in 1¼" Bare steel Casing) w/4" Drisco (Inst. 11/85) ——— See "Ph V - Sta. 15+45-16+50 Rt. - Retirement" Above, See (C) Below, See Cross. Sec. Sh. 2A - Sec. 15+50, See Serv. Card

(C') - Ph II & V - Sta. 15+47 11' Rt: Ph. II: Cut & Remove Flow Lim. fr. (C) - Reconnect (C) - Use 1" x ½" PE Red. & 1' of ½" PE Pipe J Ph. V: "RETIRE (C)" ——— Refer to (C) Above, Also See (B) Above

(D) - Ph. V - Sta. 15+58 9.5' Rt: Retire 4" PE Ball Valve & Loc Box w/Wire (Both Inst. 11/85) ——— See "Ph V - Sta. 15+45-16+50 Rt. - Retirement" Above

VGS PROPOSED WORK

RECONNECTIONS

(14) - PH. II - STA. 14+80 63' RT.: Reconnect Exist. ½" PE Serv. to #53 Upper Main to New ½" PE Serv. Section, N. West of Here - See (A) Under "Proposed Retirements" to the Right, Refer to "New Services" & "New Material (2) (3) Above Right, See Cross Sec. Sh. 2A - Sec. 15+00, See Serv. Card.

PH. IV - STA. 15+47 48' LT.: See (11) Under "New Fittings" Above Right

ST. OF VT. ROAD CONSTRUCTION 1991

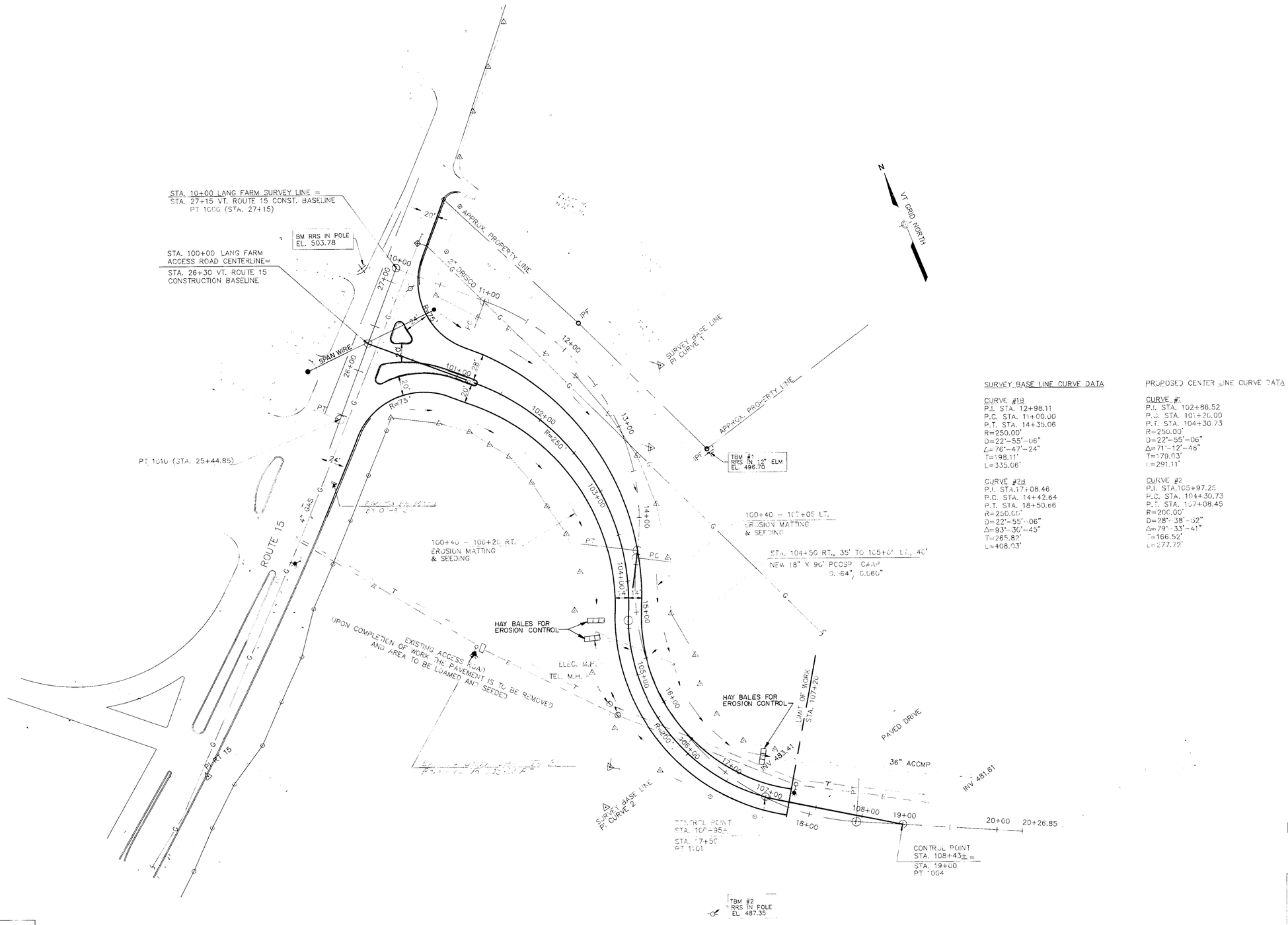
(Circ. Hwy - Route 289)

Gas Design: M.A. - VGS - 1/91 → Revised 5/91 by M.A. Also Refer to Sh. 2 of 3

MEDIUM PRESSURE

VERMONT GAS SYSTEM INC.
NATURAL GAS PIPELINE
UPPER MAIN ST. ROUTE 15

"DETAIL SHEET": STA. 14+50-16+50
TOWN OF ESSEX
DWN. BY: M.A. DATE: 1/91
SCALE: 1"=10' SHEET: 2A



SURVEY BASE LINE CURVE DATA

CURVE #1a
P.I. STA. 12+98.11
P.C. STA. 11+00.00
P.T. STA. 14+35.06
R=250.00'
D=22°-55'-06"
Δ=76°-47'-24"
T=198.11'
L=335.06'

CURVE #2a
P.I. STA.17+08.46
P.C. STA. 14+42.64
P.T. STA. 18+50.66
R=250.00'
D=22°-55'-06"
Δ=93°-30'-45"
T=265.82'
L=408.03'

PROPOSED CENTER LINE CURVE DATA

CURVE #1
P.I. STA. 102+86.52
P.C. STA. 101+20.00
P.T. STA. 104+30.73
R=250.00'
D=22°-55'-06"
Δ=71°-12'-46"
T=179.03'
L=291.11'

CURVE #2
P.I. STA.105+97.25
P.C. STA. 104+30.73
P.T. STA. 107+08.45
R=200.00'
D=28°-38'-32"
Δ=79°-33'-41"
T=166.52'
L=277.72'

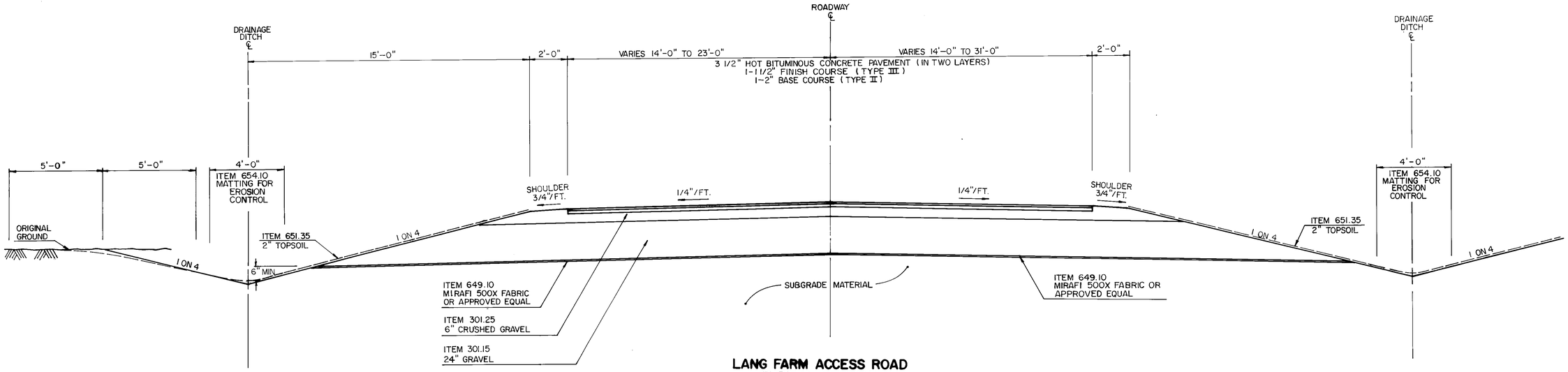
DATUM
VERTICAL
HORIZONTAL

50 0 25 50 100 200
SCALE IN FEET

LANG FARM ACCESS ROAD PLAN

SURVEYED BY R. BELL DATE 10/90
DRAWN BY M.S. POISSON DATE 2/91
TRACED BY M.S. POISSON DATE 2/91

PROJ. PB 033-1(2)
SHEET 391 OF 400



LANG FARM ACCESS ROAD TYPICAL SECTION

APPROX. SCALE: 3/8"=1'-0"

LANG FARM ACCESS ROAD PROFILE

STA. 26+30 VT. RTE 15 ℄ =
STA. 100+00 LANG FARM ACCESS RD. ℄

PROPOSED LIMIT OF WORK
STA.: 107+20

P.I. STA. 106+50
ELEV. 488.21
V.C. = 90
A = 1.26
K = 71

PROPOSED GRADE

Original ground

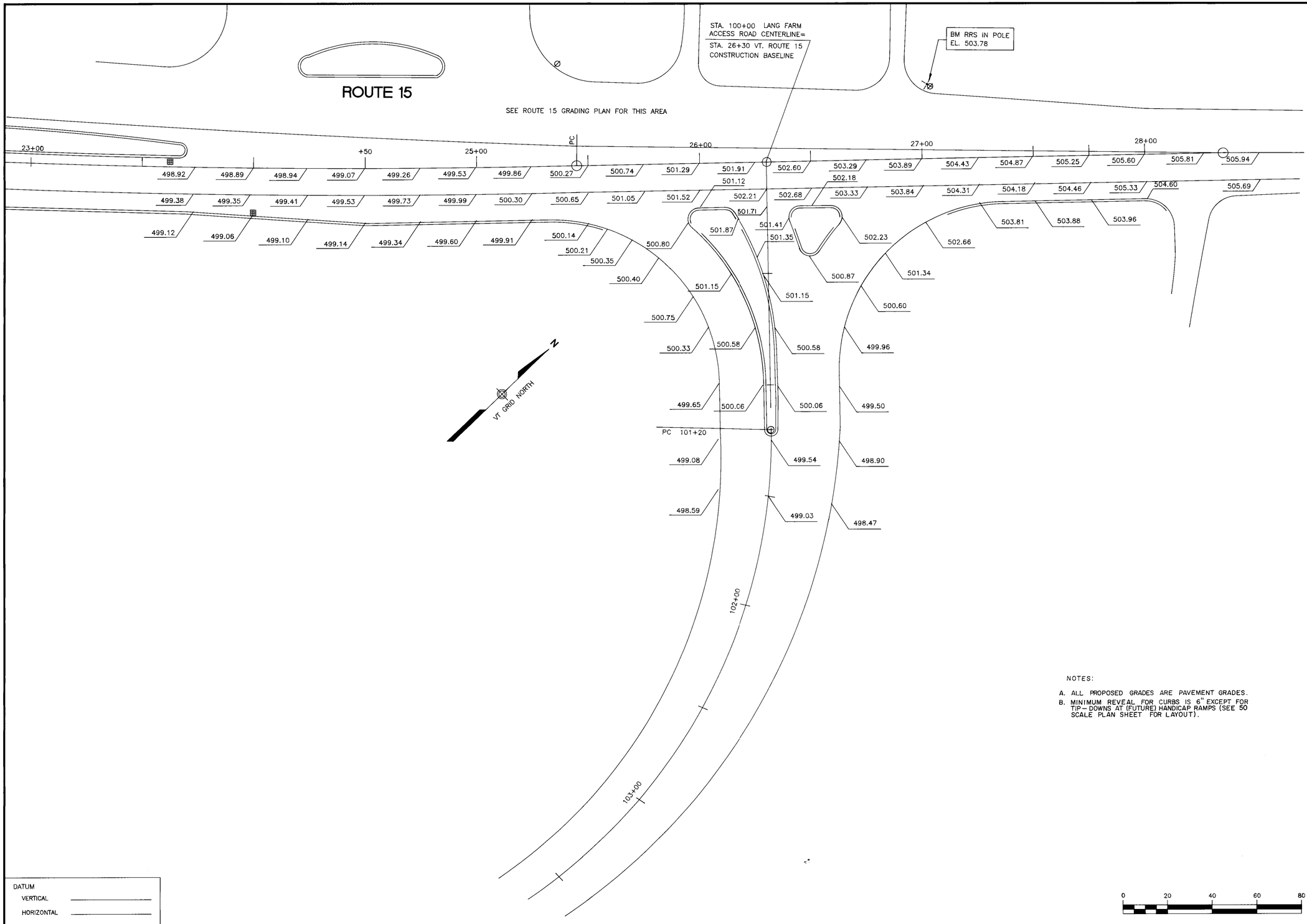
2.06%

0.80%

INV. 487.0 (RT.)

INV. = 486.0 (LT.)

| | | |



NOTES:

A. ALL PROPOSED GRADES ARE PAVEMENT GRADES.
B. MINIMUM REVEAL FOR CURBS IS 6" EXCEPT FOR TIP-DOWNS AT (FUTURE) HANDICAP RAMPS (SEE 50 SCALE PLAN SHEET FOR LAYOUT).

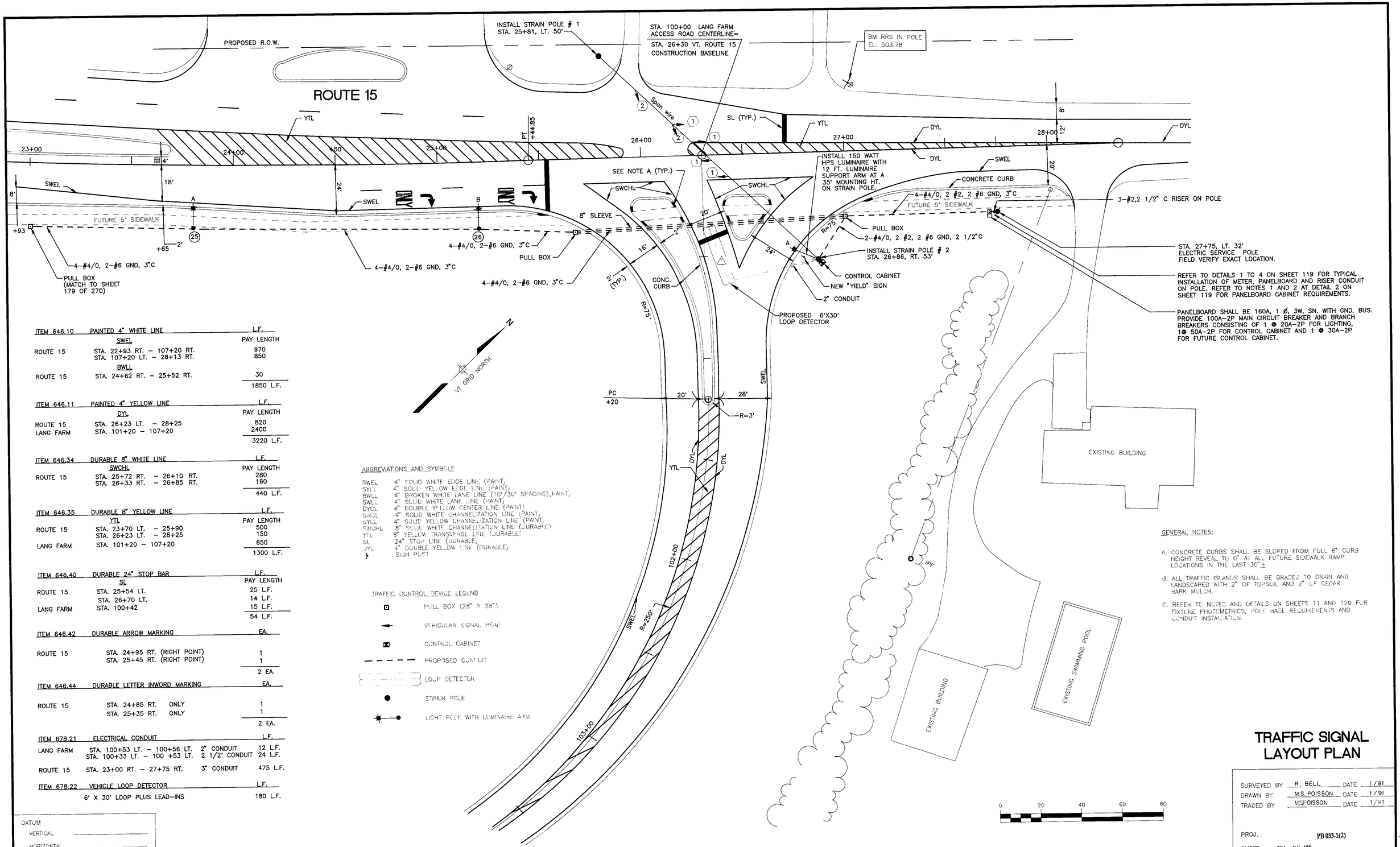
DATUM
VERTICAL _____
HORIZONTAL _____

LANG FARM GRADING PLAN

SURVEYED BY R. BELL DATE 10/90
DRAWN BY M.S. POISSON DATE 2/91
TRACED BY M.S. POISSON DATE 2/91

PROJ. PB 033-1(2)
SHEET 393 OF 400

3/10



ITEM 646.10	PAINTED 4" WHITE LINE	L.F.
	SWEL	PAY LENGTH
ROUTE 15	STA. 22+93 RT. – 107+20 RT.	970
	STA. 107+20 LT. – 28+13 RT.	850
	BWLL	
ROUTE 15	STA. 24+62 RT. – 25+52 RT.	30
		1850 L.F.

ITEM 646.11	PAINTED 4" YELLOW LINE	L.F.
	DYL	PAY LENGTH
ROUTE 15	STA. 26+23 LT. – 28+25	820
LANG FARM	STA. 101+20 – 107+20	2400
		3220 L.F.

ITEM 646.34	DURABLE 8" WHITE LINE	L.F.
	SWCHL	PAY LENGTH
ROUTE 15	STA. 25+72 RT. – 26+10 RT.	280
	STA. 26+33 RT. – 26+85 RT.	160
		440 L.F.

ITEM 646.35	DURABLE 8" YELLOW LINE	L.F.
	YTL	PAY LENGTH
ROUTE 15	STA. 23+70 LT. – 25+90	500
	STA. 26+23 LT. – 28+25	150
LANG FARM	STA. 101+20 – 107+20	650
		1300 L.F.

ITEM 646.40	DURABLE 24" STOP BAR	L.F.
	SL	PAY LENGTH
ROUTE 15	STA. 25+54 LT.	25 L.F.
	STA. 26+70 LT.	14 L.F.
LANG FARM	STA. 100+42	15 L.F.
		54 L.F.

ITEM 646.42	DURABLE ARROW MARKING	EA.
ROUTE 15	STA. 24+95 RT. (RIGHT POINT)	1
	STA. 25+45 RT. (RIGHT POINT)	1
		2 EA.

ITEM 646.44	DURABLE LETTER INWORD MARKING	EA.
ROUTE 15	STA. 24+85 RT. ONLY	1
	STA. 25+35 RT. ONLY	1
		2 EA.

ITEM 678.21	ELECTRICAL CONDUIT		L.F.
LANG FARM	STA. 100+53 LT. – 100+56 LT.	2" CONDUIT	12 L.F.
	STA. 100+33 LT. – 100 +53 LT.	2 1/2" CONDUIT	24 L.F.
ROUTE 15	STA. 23+00 RT. – 27+75 RT.	3" CONDUIT	475 L.F.

ITEM 678.22	VEHICLE LOOP DETECTOR	L.F.
	6' X 30' LOOP PLUS LEAD-INS	180 L.F.

ABBREVIATIONS AND SYMBOLS

SWEL	4" SOLID WHITE EDGE LINE (PAINT)
SYEL	4" SOLID YELLOW EDGE LINE (PAINT)
BWLL	4" BROKEN WHITE LANE LINE (10'/30' SPACING)(PAINT)
SWLL	4" SOLID WHITE LANE LINE (PAINT)
DYDL	4" DOUBLE YELLOW CENTER LINE (PAINT)
SWCL	4" SOLID WHITE CHANNELIZATION LINE (PAINT)
SYCL	4" SOLID YELLOW CHANNELIZATION LINE (PAINT)
SWCHL	8" SOLID WHITE CHANNELIZATION LINE (DURABLE)
YTL	8" YELLOW TRANSVERSE LINE (DURABLE)
SL	24" STOP LINE (DURABLE)
DYL	4" DOUBLE YELLOW LINE (DURABLE)
⊢	SIGN POST

TRAFFIC CONTROL DEVICE LEGEND

- PULL BOX (28" X 28")
- VEHICULAR SIGNAL HEAD
- CONTROL CABINET
- PROPOSED CONDUIT
- LOOP DETECTOR
- STRAIN POLE
- LIGHT POLE WITH LUMINAIRE ARM

GENERAL NOTES:

A. CONCRETE CURBS SHALL BE SLOPED FROM FULL 6" CURB HEIGHT REVEAL TO 0" AT ALL FUTURE SIDEWALK RAMP LOCATIONS IN THE LAST 30"±

B. ALL TRAFFIC ISLANDS SHALL BE GRADED TO DRAIN AND LANDSCAPED WITH 2" OF TOPSOIL AND 2" OF CEDAR BARK MULCH.

C. REFER TO NOTES AND DETAILS ON SHEETS 11 AND 120 FOR FIXTURE PHOTOMETRICS, POLE BASE REQUIREMENTS AND CONDUIT INSTALLATION.

DATUM
VERTICAL
HORIZONTAL

TRAFFIC SIGNAL LAYOUT PLAN

SURVEYED BY R. BELL DATE 1/91
DRAWN BY M.S. POISSON DATE 1/91
TRACED BY MSPOISSON DATE 1/91

PROJ. PB 033-1(2)
SHEET 394 OF 400

LIST OF MAJOR ITEMS REQUIRED	QUANTITY
TRAFFIC SIGNAL CONTROLLER (8-PHASE)	1
TIME BASED COORDINATION UNIT	1
STRAIN POLES	2
NEW 12" TRAFFIC SIGNAL HEADS WITH TUNNEL VISORS, DISCONNECT HANGERS AND MOUNTING HARDWARE	
SPAN WIRE MOUNTED ONE WAY – 3 SECTION	4
SPAN WIRE MOUNTED TWO WAY – 3 SECTION	1
WIRE LOOP DETECTOR AMPLIFIER	1
SERVICE CONNECTION	1
STRAIN POLE MOUNTED LUMINAIRE ARMS	1

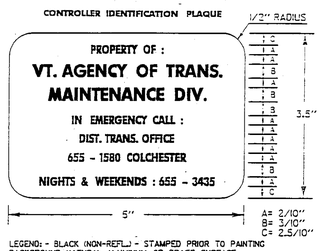
NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPTMENT REQUIRED TO COMPLETE THE INSTALLATION.

NOTES:

1. SIGNAL TIMING IS SHOWN FOR INITIAL SETTING. FINAL TIMING TO BE ADJUSTED IN THE FIELD.
2. OFFSETS ARE MEASURED FROM ZERO DATUM LINE TO BEGINNING OF PHASE A.
3. CONTROLLER SHALL HAVE THE CAPACITY AND WIRING FOR FUTURE PEDESTRIAN PHASE.

COORDINATION CHART			
DIAL	CYCLE	HOURS OF OPERATION	OFFSET %
1	60 SEC.	6:00 A.M. – 9:00 A.M.	0
2	60 SEC.	3:00 P.M. – 6:00 P.M.	0
3	60 SEC.	9:00 A.M. – 3:00 P.M. 6:00 P.M. – 11:00 P.M.	0
4			
FLASHING OPERATION		11:00 P.M. – 6:00 A.M.	–

CONTROLLER IDENTIFICATION PLAQUE



LEGEND: - BLACK (NON-REFL.) - STAMPED PRIOR TO PAINTING BACKGROUND: NATURAL ALUMINUM OR BRASS SURFACE.

NOTES:

1.) THE PLAQUE SHALL BE MOUNTED ON ALL TRAFFIC SIGNAL CONTROLLER CABINETS. IT SHALL BE FASTENED TO THE CONTROLLER CABINET IN SUCH A MANNER AS TO BE NOT EASILY REMOVED, SUCH AS WELDED, RIVETED OR BOLTED WITH VANDAL PROOF BOLTS.
2.) THE LETTERS SHALL BE PUNCHED OR STAMPED. SUCH STAMPING SHALL PENETRATE AT LEAST 1/2 THE BASE MATERIAL THICKNESS.
3.) THE BASE MATERIAL FOR THE PLAQUE SHALL BE BRASS OR ALUMINUM WITH A MINIMUM THICKNESS OF 0.100 INCHES.

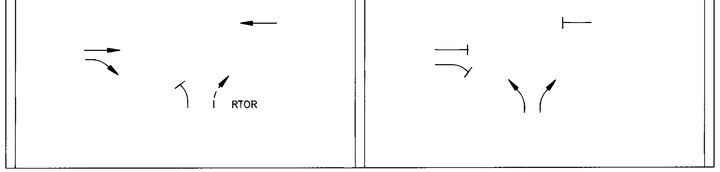
VEHICLE LOOP DETECTORS							
LANE	LOOP NO.	SIZE	TYPE	NO. TURNS	CALL ø	MODE	AMP
LANG FARM LEFT	⚠	6' X 30'	QUAD	2	ø B	PRESENCE	DELAY

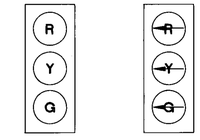
TEST RESULTS					
INDUCTANCE (uh)		RESISTANCE Ω @ 77° F		(meg Ω)	
CALCULATED	MEASURED	CALCULATED	MEASURED	LEAKAGE TO	GROUND

ALL CALCULATED VALUES ARE AT THE CONTROLLER
MEASURED VALUES MUST BE FILLED IN PRIOR TO TEST PERIOD

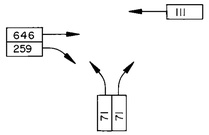
TIMING AND PHASING

		PHASE A (DWELL) R/W	PHASE A (DWELL) CLEAR TO	PHASE B R/W	PHASE B CLEAR TO	FLASHING OPERATION
			ø B		ø A	11:00 P.M. – 6:00 A.M. (OR AS LATER DETERMINED)
A.M. PEAK	INITIAL					
	VEHICLE					
	MINIMUM					
	MAX 1					
	MAX 2					
OFF PEAK REST OF DAY	INITIAL					
	VEHICLE					
	MINIMUM					
	MAX 1					
	MAX 2					
P.M. PEAK	INITIAL					
	VEHICLE					
	MINIMUM					
	MAX 1	38 4 2		10 4 2		
	MAX 2					
	FACE 1	G Y R		R R R		FY
	FACE 2	~~R~~ ~~R~~ ~~R~~		~~G~~ ~~R~~ ~~R~~		FR

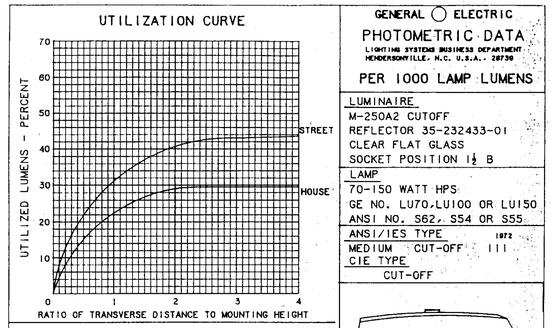




SIGNAL FACE ARRANGEMENT



1991 P.M. PEAK HOUR DESIGN VOLUMES



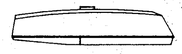
GENERAL ELECTRIC
PHOTOMETRIC DATA
LIGHTING SYSTEMS BUSINESS DEPARTMENT
HENDERSONVILLE, N.C. U.S.A. - 28739

PER 1000 LAMP LUMENS

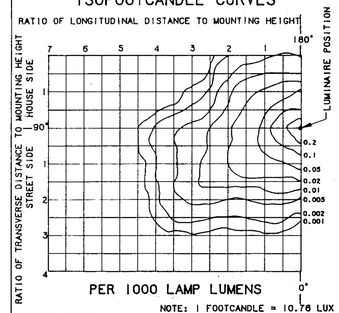
LUMINAIRE
M-250A2 CUTOFF
REFLECTOR 35-232433-01
CLEAR FLAT GLASS
SOCKET POSITION 1½ B

LAMP
70-150 WATT HPS
GE NO. LU70, LU100 OR LU150
ANSI NO. S62, S54 OR S55

ANSI/IES TYPE 1972
MEDIUM CUT-OFF III
CIE TYPE
CUT-OFF



ISOFOOTCANDLE CURVES



PER 1000 LAMP LUMENS

NOTE: 1 FOOTCANDLE = 10.76 LUX

MOUNTING HEIGHT CORRECTION FACTORS FOR OTHER THAN 30 FEET

USE TABLE BELOW OR FACTOR = $\frac{900}{(\text{ACTUAL MH})^2}$

MOUNTING HEIGHT-FEET	20	25	30	35	40	45	50
FACTOR	2.25	1.44	1.00	0.73	0.56	0.44	0.36

GENERAL INFORMATION

TEST DISTANCE	7.0 METERS
MAX CANDELA	337.3
MAX CONE	72.5
MAX VERTICAL PLANE	57.5/ 302.5
MAX CANDELA AT 90°	1.2
MAX CANDELA AT 80°	18.5
NADIR FOOTCANDLES	0.2780
NADIR CANDELA	250.3

MULTIPLY ALL LUMEN, CANDELA, AND FOOTCANDLE VALUES BY THIS RATIO

RATIO = $\frac{\text{ACTUAL LAMP LUMENS}}{1000}$

PHOTOMETRIC TEST IN ACCORDANCE WITH IES GUIDE

LIGHT FLUX VALUES

	LUMENS	PERCENT OF LAMP
DOWNWARD STREET SIDE	413	41.3
UPWARD STREET SIDE	0	0.0
DOWNWARD HOUSE SIDE	286	28.6
UPWARD HOUSE SIDE	0	0.0
TOTAL	699	69.9

TESTED _____ DATE _____
APPROVED _____ DATE _____
_____ DATE _____

DRAWING NO. 35-177285 SHEET REVISION

TRAFFIC SIGNAL DETAILS

PREPARED BY SJS DATE 2/91
DRAWN BY MSP, ATC DATE 2/91
DESIGNED BY LDW DATE 2/91

PROJ. PB 033-1(2)

SHEET 395 OF 400

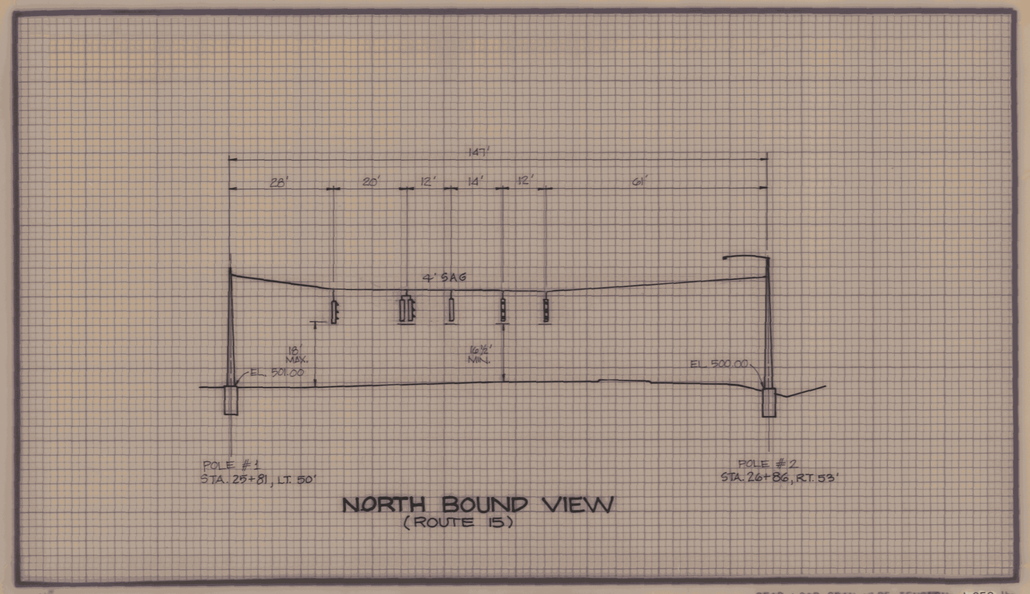
5/10

POLE NO.	POLE LENGTH GAGE & DIAMETER	B.C.	S	T	BASE DEPTH	BASE DIA.	ANCHOR BOLTS	POLE BKRK
1	33', 0 GA., 12"	18"	20"	1 3/4	8'	60"	1 34"X90°	
2	36', 0 GA., 12"	18"	20"	1 3/4	8'	60"	1 34"X90°	

NOTE: ANCHOR BOLTS, BASE PLATE, AND FOOTING DIMENSIONS ARE BASED ON DESIGN POLE DIMENSIONS AND YIELD STRENGTH SHOWN. POLES SUPPLIED OF DIFFERENT SIZE OR STRENGTH MAY REQUIRE CHANGES IN THE DIMENSIONS.
BACKRAKE (BKRK) SHOWN IS AS MEASURED AT THE TOP OF THE POLE.

DESIGN CRITERIA USED:
POLE FY = 48,000 p.s.i
BASE PLATE FY = 36,000 p.s.i
ANCHOR BOLTS FY = 55,000 p.s.i

STRAIN POLE



NORTH BOUND VIEW
(ROUTE 15)

(SEE SHEET(S) FOR LOCATION PLAN)

DEAD LOAD SPAN WIRE TENSION= 1,250 lbs.
DEAD LOAD & LIVE LOAD SPAN WIRE TENSION= 3,830 lbs.
SCALE 1" = 20'

SPAN WIRE CROSS SECTION

GENERAL NOTES

1) ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND AASHTO'S STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGN, LUMINAIRES AND TRAFFIC SIGNALS, 1985. SEE SPECIFICATION BOOK FOR REVISED ALLOWABLE BENDING STRESS.

2) TRAFFIC CONTROL SIGNAL STRAIN POLES SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 752.02, STRAIN POLES AND SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH SECTION 678 - TRAFFIC CONTROL SIGNALS.

3) STEEL POLE CAPS SHALL BE PROVIDED WITH A 2-INCH BUSHED (BLIND) ELECTRICAL ENTRANCE WHEN APPLICABLE. STRAIN POLES SHALL BE PROVIDED WITH A 2-INCH (BLIND) HALF COUPLING FOR SIGNAL CABLE, LOCATED 6 INCHES BELOW THE SPANWIRE ATTACHMENT HEIGHT.

4) FOUR STAINLESS STEEL ANCHOR BOLTS WITH TWO HEXAGON NUTS PER BOLT SHALL BE FURNISHED WITH EACH POLE. ANCHOR BOLTS AND WASHERS SHALL BE AN AUSTENITIC GRADE OF STAINLESS STEEL CONFORMING TO THE CHEMISTRY OF ASTM A276 TYPE 304 WITH THE FOLLOWING PHYSICAL PROPERTIES:

(A) TENSILE STRENGTH, MINIMUM	80,000 psi
(B) YIELD STRENGTH, MINIMUM	55,000 psi
(C) ELONGATION IN 2 INCHES, MINIMUM	25%
(D) ROCKWELL B HARDNESS, MINIMUM	86
OR CHARPY V-NOTCH (AASHTO T243 USING H FREQUENCY OF TESTING),	15 ft.-lbs. @ 40° F

NUTS FOR THE ANCHOR BOLTS SHALL BE THE HEAVY HEX TYPE CONFORMING TO THE REQUIREMENTS OF ASTM A-194 GRADE B

5) BOLTS AND BASES SHALL BE OF ADEQUATE SIZE TO RESIST THE FULL BENDING MOMENT OF THE POLE AT YIELD STRENGTH STRESS.

6) ADDITIONAL DESIGN CRITERIA:
CONCRETE - f'c = 1,400 P.S.I. f'c = 3,500 P.S.I.
WIND LOAD - 25 LBS PER SQUARE FOOT (MIN.) ON THE EXPOSED POLE SURFACE.
REINFORCING STEEL = 24,000 psi (GRADE 60)

7) CONCRETE FOR FOOTINGS SHALL CONFORM TO REQUIREMENTS OF CONCRETE CLASS 'B' SECTION 501. STRUCTURAL CONCRETE.

8) BACKFILL MATERIAL PLACED ADJACENT TO THE FOOTINGS SHALL MEET THE REQUIREMENTS FOR GRANULAR BACKFILL FOR STRUCTURES. SUBSECTION 704.08.

9) WHEN THE DESIGN DEPTH OF A FOOTING CANNOT BE OBTAINED DUE TO UNFORESEEN FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OBTAIN A REVISED FOOTING DETAIL FROM THE ENGINEER.

10) EACH METAL POLE SUPPORTING EITHER VEHICLE OR PEDESTRIAN TRAFFIC SIGNAL SHALL BE GROUNDED. RESISTANCE OF MADE ELECTRODES. A SINGLE ELECTRODE CONSISTING OF A GROUND ROD WHICH DOES NOT HAVE A RESISTANCE TO GROUND OF 25 OHMS OR LESS SHALL BE AUGMENTED BY AT LEAST ONE ADDITIONAL ELECTRODE. THEY SHALL BE AT LEAST 6 FEET APART.

11) STRAIN POLE BASE PLATES SHALL BE STAMPED WITH POLE DIAMETER, HEIGHT, YIELD STRENGTH, AND GAGE. ALTERNATELY, THE INFORMATION MAY BE STAMPED ON A METAL TAG ATTACHED TO THE POLE NEAR THE HANDHOLE.

12) ALL DESIGN DETAILS, WORKMANSHIP, PROCEDURES AND INSPECTION OF WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AWS D.1.1.- 80 AS MODIFIED BY THE LATEST EDITION OF AASHTO STANDARD STEEL SPECIFICATIONS FOR WELDING OF STRUCTURAL HIGHWAY BRIDGES. THE SHEILDED METAL ARC WELDING (SMAW) OR SUBMERGED ARC WELDING (SAW) PROCESSES SHALL BE USED FOR ALL WELDING UNLESS OTHER PROCESSES ARE APPROVED, ON A PROJECT BY PROJECT BASIS, FROM ACCEPTABLE RESULTS OF PROCEDURE QUALIFICATION TESTS. WHERE WELDMENTS ARE TO BE GALVANIZED AFTER WELDING, A TYPE OF FILLER METAL WHICH WILL DEPOSIT WELD METAL WITH A SILICON CONTENT LESS THAN 0.4 PERCENT SHALL BE USED. ALL WELDS SHALL BE AT LEAST AS STRONG AS THE MATERIAL(S) BEING WELDED.

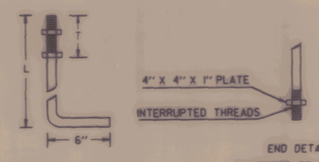
13) IN ACCORDANCE WITH SUBSECTION 105.03, SHOP DRAWINGS (6 COPIES OF EACH; 1 - TRAFFIC & SAFETY, 1 - PRIME CONTR., 1 - SUB CONTR., 3 - CONST.) SHALL BE SUBMITTED TO THE VERMONT AGENCY OF TRANSPORTATION FOR APPROVAL PRIOR TO FABRICATION. THE SUBMITTAL SHALL INCLUDE THE FOLLOWING INFORMATION:
A) DETAILED DRAWING OF EACH COMPONENT OF THE STRAIN POLE.
B) MATERIAL SPECIFICATIONS FOR EACH COMPONENT OF THE STRAIN POLE BY COMPLETE SPECIFICATIONS OR BY REFERENCE TO APPLICABLE ASTM STANDARDS.
C) NOTATION OF PROJECT NAME, PROJECT NUMBER, ROUTE NUMBER, AND STRAIN POLE STATIONING. (TO BE INCLUDED ON EACH SHEET INCLUDING STANDARD SHEETS AND SPECIFICATION SHEETS).
D) DETAILS FOR LOCATION OF LUMINAIRE ARM(S) ON STRAIN POLE(S).
E) ALL ELEVATIONS AND DIMENSIONS NECESSARY TO PROVIDE A COMPLETE SET OF RECORD PLANS. (POLE HEIGHT, SPAN WIRE ATTACHMENT HEIGHT, POLE DIAMETER (TOP AND BOTTOM), POLE GAGE, HANDHOLE (SIZE AND LOCATION), BASE PLATE, BOLT CIRCLE, ANCHOR BOLT SIZE)
F) POLE BASE STAMPING DETAIL.
G) DEAD LOAD DEFLECTION INFORMATION.
H) WELDING DETAILS AND PROCEDURES ARE REQUIRED FOR ALL WELDS. PROCEDURES SHALL BE SUBMITTED FOR APPROVAL WITH REFERENCE TO EACH WELD IDENTIFIED ON THE SHOP DRAWINGS. (SEE SUBSECTION 506.10) THE FOLLOWING INFORMATION WILL BE REQUIRED FOR ALL WELDED JOINTS (ALUMINUM OR STEEL):
(a) PROCEDURE SPECIFICATIONS PER AWS D1.1 APPENDIX E FORM E1
(b) PROCESS AND PROCEDURE QUALIFICATION TESTS PER AWS D1.1 APPENDIX E FORM E2
(c) CERTIFICATE OF CONFORMANCE TO SPECIFICATIONS FOR FILLER MATERIAL. WHEN USING ANY GMAW OR FCAW WELDING PROCESS (WITH PRIOR APPROVAL AS NOTED ABOVE), THE FOLLOWING WILL ALSO BE REQUIRED: A MANUFACTURER'S CERTIFICATE THAT THE GAS OR GAS MIXTURE IS SUITABLE FOR THE INTENDED APPLICATION AND MEETS THE DEW POINT REQUIREMENTS. REFERENCE-ASSHTO MODIFICATION OF AWS D1.1 SEC. 4.18

IN BOTH CONCRETE AND GROUT — 1/4" — 1/4"

USED FOR CONDUIT LOCATION, SEE AT RIGHT 'SECTION' DETAIL.

2" SCORE MARK DETAIL

ANCHOR BOLT DETAIL		
SIZE	L	T
1 - 1/4" X 48"	42	8
1 - 1/2" X 60"	54	9
1 - 3/4" X 90"	84	9
2" X 96"	96	9



ANCHOR BOLT DETAIL

T = BASE PLATE THICKNESS

S=SQUARE

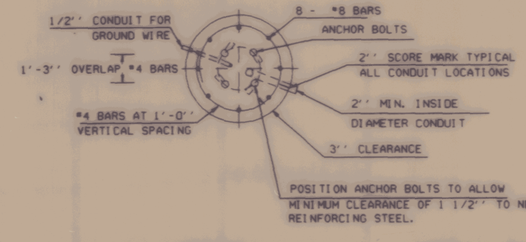
B.C. = BOLT CIRCLE

90°

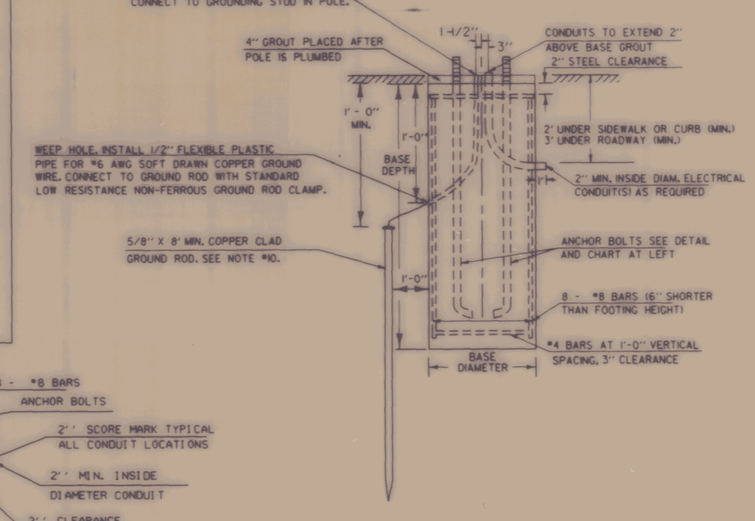
ALIGN POLE BASE 90° TO SPAN WIRE

SPAN WIRE TENSION

BASE PLATE DETAIL



SECTION



ELEVATION

STRAIN POLE FOOTING

STRAIN POLE/FOOTING DETAIL SHEET

SIGNAL #

PREPARED BY MSP DATE 2/91
CHECKED BY SJS DATE 2/91
DESIGN SUPERVISOR LDW DATE 2/91
PROJ. PB 033-1(2)
TRAFFIC SHEET NO. ____ OF ____
SHEET 396 OF 400 SHEETS

TDM2

TRAFFIC SIGNAL NOTES

1. NEW EQUIPMENT

A. TRAFFIC SIGNAL HEADS

1. ALL TRAFFIC SIGNAL HEADS SHALL HAVE 12" LENSES. ALL HEADS MOUNTED ON SPAN WIRES SHALL BE POLYCARBONATE. ALL OTHER HEADS SHALL BE HEAVY DUTY ALUMINUM. ALL HOUSINGS SHALL BE FEDERAL YELLOW WITH FLAT BLACK DOORS & VISORS. ALL TRAFFIC SIGNALS SHALL HAVE DISCONNECT HANGERS WITH NON-ALUMINUM BALANCE ADJUSTER FITTINGS OR TERMINAL COMPARTMENTS.

B. TRAFFIC SIGNAL CONTROLLER & CABINET

1. THE UNIT SHALL BE AN ECONOLITE, EAGLE OR TCT BRAND CONTROLLER CAPABLE OF PRODUCING THE TIMING AND COORDINATION AS SHOWN ON THE PLANS. ALL CONTROLLERS SHALL HAVE A MINIMUM OF 8 PHASES. EACH PHASE (USED OR UNUSED) SHALL HAVE A LOAD SWITCH AND ALL NECESSARY FLASH TRANSFER RELAYS. EACH INSTALLATION SHALL INCLUDE TIME CLOCKS WITH BATTERY BACKUP, MINIMUM 12 CHANNEL CONFLICT MONITOR WITH STOP TIMING FUNCTION, LED DISPLAY LOAD SWITCHES (INPUT SIDE), REMOTE FLASHER, VEHICLE DETECTOR AMPLIFIERS. UNIFORM CODE FLASH UNIT (PER M.U.T.C.D.), RADIO INTERFERENCE FILTERS, SURGE PROTECTION, LAMP RECEPTACLE AND CONVENIENCE OUTLET WITH GROUND FAULT INTERRUPTION. ALL CONTROLLERS SHALL HAVE ALL NECESSARY HARDWARE & SOFTWARE FOR TIME-BASED COORDINATION (BACKUP), HARDWIRE COORDINATION (BACKUP). THERE SHALL BE A WATERPROOF PLASTIC ENVELOPE ATTACHED TO THE CABINET INTERIOR FOR STORAGE OF THE CONTROLLER MANUAL AND PLAN SHEETS. THE CONTROLLERS/TBC SHALL BE SHIPPED FROM THE MANUFACTURER PRESET AND A REPRESENTATIVE OF THE MANUFACTURER SHALL BE ON THE PROJECT SITE FOR TURN ON OF THE UNIT. IN ADDITION TO EQUIPMENT FURNISHED TO PROVIDE A FUNCTIONAL SIGNAL SYSTEM. THE CONTRACTOR SHALL SUPPLY THE FOLLOWING SPARE PARTS; ONE LOAD SWITCH AND ONE TRANSFER RELAY PER INTERSECTION. THIS EQUIPMENT MAY BE USED DURING THE CONSTRUCTION PERIOD TO REPLACE MALFUNCTIONING EQUIPMENT BUT MUST BE REPLACED OR MAINTAINED IN THE CABINET PRIOR TO COMPLETION. THE CONTROLLER CABINET SHALL HAVE A POLISHED ALUMINUM NATURAL FINISH AND BE PROVIDED WITH A #2 LOCK. A PADLOCK (MASTER WITH A #3220 KEY) AND A STANDARD POLICE DOOR LOCK. EACH LOCK SHALL HAVE 2 KEYS. EACH CABINET SHALL INCLUDE A 120' - 170' FAN/ THERMOSTAT (INITIALLY SET AT120'). THE CABINET DOOR SHALL BE SUPPLIED WITH TEST SWITCHES FOR EACH PHASE.
ANY DOOR MOUNTED TOGGLE SWITCHES SHALL BE PROTECTED FROM ACCIDENTAL BUMPING. EACH CABINET SHALL HAVE A METAL PLATE ATTACHED TO THE OUTSIDE INIDICATING OWNERSHIP AND EMERGENCY PHONE NUMBERS (SEE DETAIL). A MAIN DISCONNECT BREAKER SHALL BE INSTALLED IN A RAIN TIGHT LOCKED CABINET EXTERNAL TO THE CONTROLLER. ALL CONFLICT MONITORS SHALL BE CAPABLE OF RECORDING AND STORING A MINIMUM OF 9" EVENTS". ALL LOAD SWITCHES SHALL BE LABELED ON THE CABINET WALL.

C. TRAFFIC SIGNAL CONDUIT

1. ALL TRAFFIC SIGNAL CONDUIT SHALL BE PVC WITH A 2" MINIMUM DIAMETER OR LARGER AS REQUIRED BY THE ELCTRICAL CODE. PAYMENT SHALL BE UNDER ITEM 678.21, ELECTRICAL CONDUIT.

2. THE MINIMUM DEPTH BELOW GROUND FOR THE PLACEMENT OF CONDUIT SHALL BE 3 FEET.

3. SIX INCH WIDE YELLOW PLASTIC MARKING TAPE SHALL BE PLACED IN THE EXCAVATED TRENCH 6 TO 12 INCHES BELOW THE FINISHED GRADE FOR ALL CONDUIT RUNS. PAYMENT SUBSIDIARY TO THE CONDUIT.

D. ALL EQUIPMENT SHALL MEET OR EXCEED NEMA STANDARDS AND IMSA OR ITE SPECIFICATIONS. WHERE APPLICABLE.

E. THE ELECTRIC CABLE SHALL BE ATTACHED TO THE SPAN WIRE WITH A STAINLESS ALLOY 430 LASHING (SPINNING) WIRE.

F. STRANDED WIRE SHALL BE USED FOR ALL UNSUPPORTED AND SPAN WIRE SUPPORTED WIRE.

G. NEW STRAIN POLES SHALL BE DESIGNED USING THE LATEST REVISION OF AASHTO'S" STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS. LUMINAIRES AND TRAFFIC SIGNALS". DIAMETER, HEIGHT, YIELD STRENGTH AND GAGE SHALL BE STAMPED ON THE POLE BASE PLATE OR ON AN ATTACHED METAL TAG. LUMINAIRE ARMS SHALL MATCH THEIR PARENT STRUCTURE.

2. REMOVAL OF EXISTING OR REUSE OF SALVAGED EQUIPMENT

A. ALL REMOVED AND NOT REUSED EQUIPMENT (HEADS, CONTROLLERS, CABINETS, POLES, ETC.) SHALL BE RETURNED TO THE STATE OF VERMONT IMMEDIATELY FOLLOWING ITS REMOVAL UNLESS OTHERWISE NOTED. REMOVAL OF EQUIPMENT SHALL INCLUDE REMOVAL OF CONCRETE BASES (DISPOSAL BY CONTRACTOR) AND BACKFILL OF THE HOLES, WHERE APPLICABLE. ANY EQUIPMENT THAT IS DAMAGED BY THE CONTRACTOR DURING REMOVAL SHALL BE REPAIRED OR REPLACED, TO THE SATISFACTION OF THE STATE AT THE CONTRACTORS EXPENSE. ANY EQUIPMENT NOT WANTED BY THE STATE SHALL BE DISPOSED OF BY THE CONTRACTOR.

3. SIGNAL OPERATION

A. SIGNAL TIMING AND OFFSETS SHOWN ON THE PLANS MAY REQUIRE FINE-TUNING IN THE FIELD BASED ON TRAFFIC OBSERVATION. (COST OF ADJUSTMENTS SHALL BE SUBSIDIARY TO OTHER ITEMS).

B. THE TRAFFIC SIGNALS SHALL NOT OPERATE WITHOUT THE PAVEMENT MARKINGS AND SIGNAL RELATED SIGNING IN PLACE.

C. ALL SIGNALS SHALL DWELL ON THE MAIN LINE THRU MOVEMENT UNLESS OTHERWISE NOTED.

4. VEHCILE LOOP DETECTORS

A. ALL LOOP DETECTORS SHALL BE LABELED WITH PHASE NUMBER, APPROACH DIRECTION AND MOVEMENT CONTROLLED BY THE UNIT. (I.E. PHASE 1, NB LT.)

B. ALL LOOP AMPS SHALL BE OF A TYPE THAT FAIL ON.

C. EACH LOOP SHALL HAVE ITS OWN AMP.

D. SEE STANDARD E-172 FOR ADDITIONAL NOTES.

E. # 12 WIRE SHALL BE USED FOR ALL LOOPS & LEAD-INS.

5. STREET LIGHTING

A. ALL STREET LIGHTS ON STRAIN POLES SHALL USE THE SAME POWER (DIFFERENT CIRCUIT) AS SIGNALS. WIRING OF THE LUMINAIRES SHALL BE BY THE SIGNAL SUBCONTRACTOR.

B. THE LUMINAIRES SHALL BE DESIGNED FOR STREET LIGHTING AND THE INDICATED LIGHT DISTRIBUTION. THEY SHALL INCLUDE AN ALUMINUM HOUSING WITH EASY ACCESS TO THE BALLAST ASSEMBLY, PHOTOELECTRIC CONTROL, FILTERED OPTICAL ASSEMBLY, AND REGULATOR BALLAST FOR 120 VOLT LAMPS. THE BALLAST SHALL BE MATCHED TO ITS STARTING CIRCUIT. WIRING SHALL BE NEAT. BUNDLED, AND KEPT AWAY FROM EXCESS HEAT. THE INSTALLED LUMINAIRE LIGHT UTILIZATION AND MINIMUM FOOTCANDLES SHALL BE AT LEAST AS GREAT AS ON THE INDICATED PHOTOMETRIC DATA SHEET. THE LUMINAIRES SHALL BE INSTALLED AS SHOWN ON THE PLANS.

6. GENERAL

A. ALL ELECTRICAL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL OF THE STATE ELECTRICAL INSPECTOR. ALL WORK MUST MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.

B. AFTER PROJECT ACCEPTANCE, THE TRAFFIC SIGNAL INSTALLATIONS SHALL BECOME THE PROPERTY AND RESPONSIBILITY OF THE STATE OF VERMONT.

C. THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERITS AND MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY COMPANY TO PROVIDE A PERMANENT POWER SUPPLY TO THE SIGNAL.

D. THE REQUIRED 30-DAY TEST PERIOD FOR THE SIGNAL EQUIPMENT SHALL NOT BEGIN UNTIL ALL CONSTRUCTION IS COMPLETE AND ALL PAPERWORK HAS BEEN DONE TO THE SATISFACTION OF THE AGENCY.

SUBMITTAL OF SHOP DRAWINGS

I. THE MANUFACTURER SHALL SUBMIT, FOR APPROVAL, SHOP DRAWINGS FOR TRAFFIC SIGNAL EQUIPMENT. THE SUBMITTAL SHALL CONTAIN A MINIMUM OF THE FOLLOWING INFORMATION.

A. TRAFFIC SIGNAL CONTROLLER

TYPE OF CONTROLLER, MANUFACTURER, MODEL, NUMBER OF PHASES AND FUNCTIONS, ASSURANCE OF CONFORMANCE TO THE LATEST NEMA STANDARDS. BENCH TESTING (MINIMUM OF 7 DAYS) WILL BE REQUIRED. COPIES OF THE TEST RESULTS SHALL BE SUBMITTED AS DISCUSSED IN THE STANDARD SPECS SECTION 752.06. THE TEST RESULTS SHALL CONTAIN THE BEGIN AND END TIME AND DATE. ALL CONTROLLER AND TIME-BASED COORDINATOR SETTINGS USED, EQUIPMENT SERIAL NUMBERS, SIGNATURE OF THE PERSON PERFORMING THE TEST AND SIGNATURE OF A WITNESS WHO SHALL BE EITHER A REGISTERED ELECTRICAL ENGINEER OR A LICENSED MASTER ELECTRICIAN.

B. TRAFFIC SIGNAL HEADS

SIZE, MANUFACTURER, MODEL, LAMP WATTAGE, OPTICS, WIRING, HOUSING (MATERIAL AND COLOR), VISORS, AND BACK PLATES, IF REQUIRED. THE SIGNAL HEADS SHALL MEET THE LATEST ITE STANDARDS.

C. CONTROLLER CABINET

SIZE, MANUFACTURER, ACCESSORIES, MATERIALS, AND FINISH.

D. AUXILIARY EQUIPMENT (FLASHERS), VEHICLE DETECTORS, CONFLICT MONITOR, CLOCK(S), ETC.

MANUFACTURER, MODEL, FUNCTIONS, ASSURANCE OF CONFORMANCE TO THE LATEST NEMA STANDARDS, WHERE APPLICABLE.

E. STRAIN POLES, PEDESTAL POSTS AND CANTILEVERS.

1. DIMENSIONS - POLE/POST HEIGHT,SPAN WIRE ATTACHMENT HEIGHT,POLE/POST DIAMETER (TOP AND BOTTOM),POLE GUAGE, HANDHOLE (SIZE AND LOCATION), BASE PLATE, BOLT CIRCLE,

2. MATERIAL SPECIFICATIONS FOR EACH COMPONENT.

3. ANCHOR BOLTS AND WASHERS SHALL BE AN AUSTENTIC GRADE OF STAINLESS STEEL CONFORMING TO THE CHEMISTRY OF ASTM A276 TYPE 304 WITH THE FOLLOWING PHYSICAL PROPERTIES:

A) TENSILE STRENGTH, MINIMUM	80,000 PSI
B) YEILD STRENGTH, MINIMUM	55,000 PSI
C) ELONGATION IN 2 INCHES, MINIMUM	25%
D) ROCKWELL B HARDNESS, MINIMUM	86
OR CHARPY V-NOTCH (ASSHTO T243 USING H	15 FT.-LBS
FREQUENCY OF TESTING) MINIMUM	@40° F

NUTS FOR THE ANCHOR BOLTS SHALL BE THE HEAVY HEX TYPE CONFORMING TO THE REQUIREMENTS OF ASTM A-194 GRADE 8.

4. WELDING INFORMATION FOR ALL WELDED CONNECTIONS (SEE SUBSECTION 506.10). THE FOLLOWING INFORMATION WILL BE REQUIRED FOR ALL WELDED JOINTS (ALUMINUM OR STEEL):

A). PROCEDURE SPECIFICATIONS PER AWS DI.I APPENDIX E FROM E1
B) PROCESS AND PROCEDURE QUALIFICATION TESTS PER AWS DI. APPENDIX E FORM E2.
C). CERTIIFICATE OR CONFORMANCE TO SPECIFICATIONS FOR FILLER MATERIAL, WHEN USING ANY GMAW OR FCAW WELDING PROCESS THE FOLLOWING WILL ALSO BE REQUIRED:
A MANUFACTURER'S CERTIFICATE THAT THE GAS OR GAS MIXTURE IS SUITABLE FOR THE INTENDED APPLICATION AND MEETS THE DEW POINT REQUIREMENTS.
REFERENCE - AASHTO MODIFICATION OF AWS DI.I SEC.4.18

5. POLE/BASE PLATE STAMPING DETAIL

6. SPECIAL FEATURES AS INDICATED ON THE PLANS SUCH AS FINISH OR COLOR.

II. THE MANUFACTURER SHALL SUBMIT, FOR APPROVAL, SHOP DRAWING FOR THE STREET LIGHT LUMINAIRE THE SUBMITTAL SHALL CONTAIN, AT A MINIMUM, THE FOLLOWING INFORMATION:

A) LUMINAIRES

1. FIXTURES

A) VOLTAGE RATING
B) WATTAGE AND LAMP TYPE
C) BALLAST TYPE
D) PHOTO CELL
E) ANY OTHER FEATURES SPECIFIED ON THE PLANS SUCH AS FINISH SPECIAL WIRE ACCESS, ETC.

2. PHOTOMETRIC DATA

A) IES DISTRIBUTION TYPE
B) UTILIZATION CURVE
C) ISO - FOOT - CANDLE CURVES
D) MOUNTING HEIGHT FACTOR
E) MAINTENANCE FACTOR

B) WIRING

CONDUCTOR MATERIAL, INSULATION TYPE, VOLTAGE RATING, AND TEMPERATURE RATINGS, SHALL CONFORM TO THE NATION ELECTRIC CODE USE AND SIZE AND BE COLOR CODED.

III. IN I AND II ABOVE, THE INFORMATION SUPPLIED SHALL EITHER MATCH OR BE EQUIVALENT TO THE DETAILS SPECIFIED ON THE PLANS OR ON THE STD. SHEETS. IF EQUIVALENT, THE CONTRACTOR MAY BE ASKED TO SUPPLY PROOF OF EQUIVALENCY. COPIES OF CATALOGUE SHEETS ARE ACCEPTABLE IF ALL THE APPROPRIATE INFORMATION IS INCLUDED.

TRAFFIC SIGNAL
&
SHOP DRAWING NOTES

PREPARED BY JAS DATE 2/91
CHECKED BY LDW DATE 2/91
DESIGN SUPERVISOR LDW DATE 2/91

PROJ. PB 033-1(2)
SHEET 397 OF 400

7/10

LANG FARM ACCESS ROAD
CROSS SECTIONS
BUILT AS DESIGNED 5/24/94 RS

G=1.86 G=1.75 G=1.69 G=1.51 G=1.72 G=2.15

102+43.90 102+04.76 101+68.13 101+33.41 101+00 100+50

CONST. ℄

SURVEY ℄

56.45' 67.40' 75.92' 82.04' 85.02' 85.01'

13+00 12+50 12+00 11+50 11+00 10+50

TRAFFIC TO LAND TO BE LIMED AND MULCHED

100±40 - 104±20 RT.
EROSION MATTING AND SEEDING

100±40 - 101±05 LT.
EROSION MATTING AND SEEDING

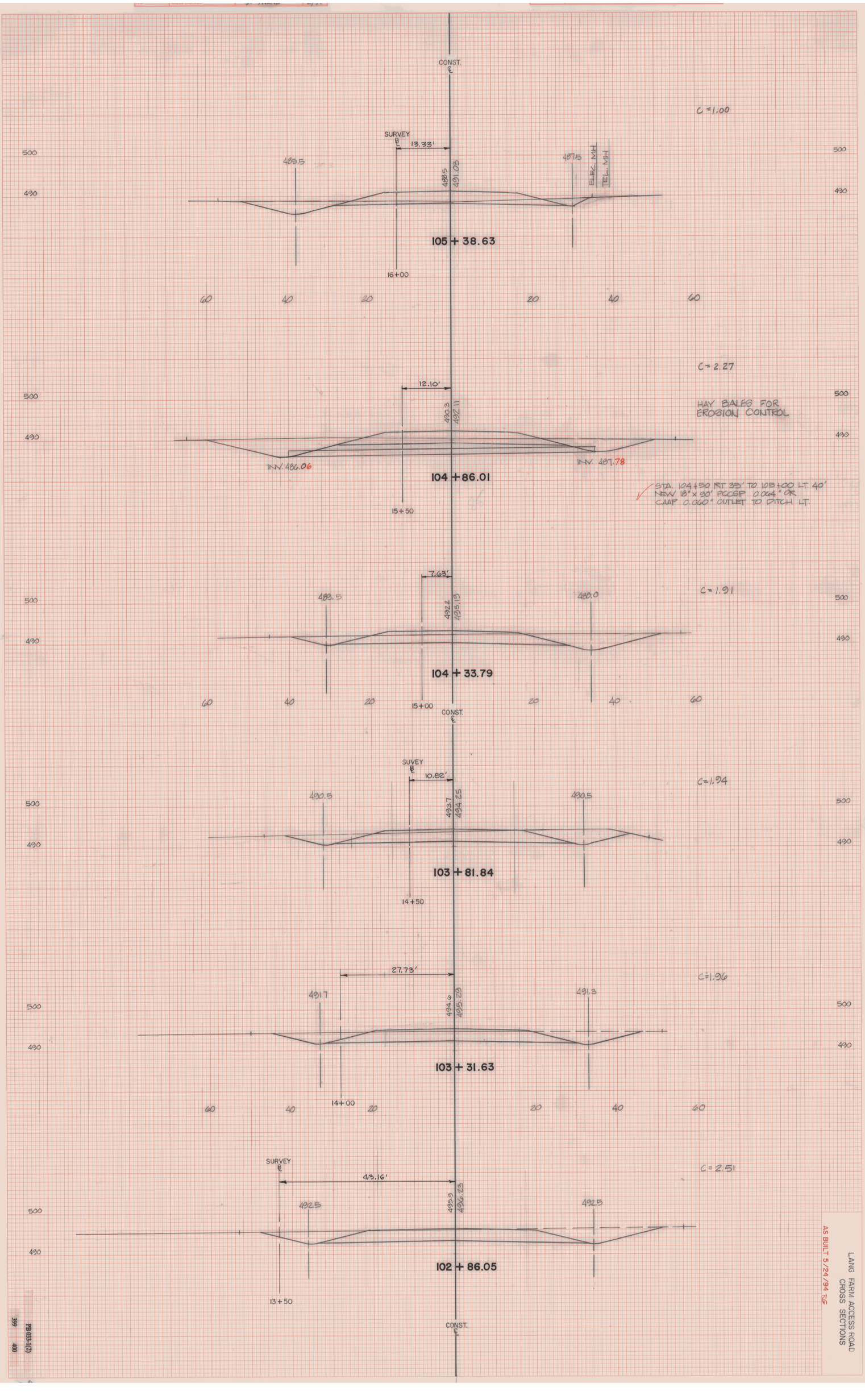
STRAIN POLE #2

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD

PB 033-1(2)

398 OF 400

9/10

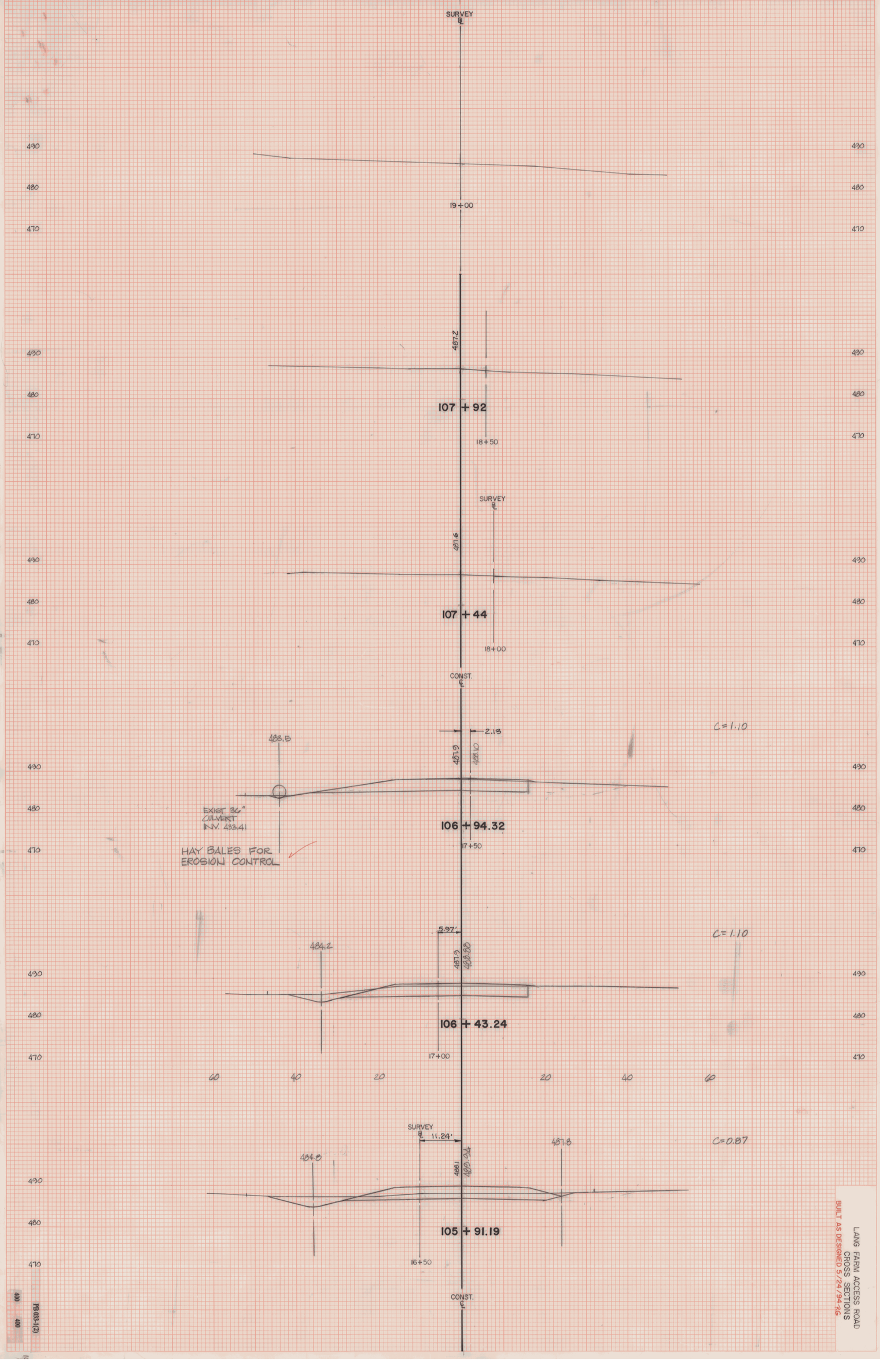


LANG FARM ACCESS ROAD
CROSS SECTIONS

AS BUILT 5/24/94 RG

PB 033-1(2)

399 400



LANG FARM ACCESS ROAD
CROSS SECTIONS
BUILT AS DESIGNED 5/24/94 RG

PB 033-1(2)
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