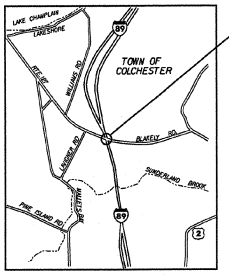
STATE OF VERMONT
AGENCY OF TRANSPORTATION

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3	QUANTITY SHEET
4	BASELINE TIES
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10	PLAN AND ELEVATION
10A	BORING INFORMATION SHEET
10B	BORING DETAIL SHEET
11	EROSION AND SEDIMENT CONTROL SHEET
12	GENERAL NOTES
13	TYPICAL BRIDGE DETAILS
14	ABUTMENT 1 AND 2 PLAN
15	ABUTMENTS, WING WALLS 1 AND 3 ELEVATION AND SECTIONS
16	ABUTMENT 1 AND 2 FOOTING PLAN AND DETAILS
17	PIER ELEVATION AND REINFORCING DETAILS
18	WING WALLS 2 AND 4 PLAN AND SECTIONS
19	MISCELLANEOUS DETAILS
19A	INSTALLATION OF PERMANENT SNOW FENCE
20	REINFORCING STEEL SCHEDULE
21	TYPICAL SECTIONS
22	TYPICAL SECTIONS
23	BLOCK WALL ELEVATIONS AND AT WING WALLS 1 AND 3
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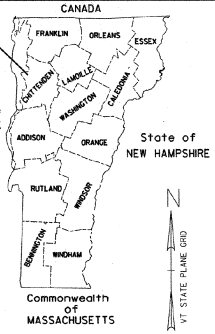
VAOT STANDARDS

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C-1	CURB DETAILS	01-03-00
C-2A	CURB AND SIDEWALK DETAILS	01-03-00
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E-102	CONSTRUCTION SIGN DETAILS	08-08-95
E-102A	CONSTRUCTION SIGN DETAILS	08-08-95
E-103	MAINLINE TRAFFIC CONTROL DIVIDED HIGHWAY ONE LANE CLOSED	09-23-98
E-106	TRAFFIC CONTROL MISCELLANEOUS DETAILS	08-08-95
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F-2	CHAIN LINK FENCE (TYPE I)	06-01-94
T-1	TEMPORARY EROSION CONTROL PLANS	06-01-94
T-2	TEMPORARY EROSION CONTROL PLANS	06-01-94



VICINITY MAP
(NOT TO SCALE)

PROJECT
IM 089-3(33)
STP EH 99(8)



PROPOSED IMPROVEMENT
TOWN OF COLCHESTER
COUNTY OF CHITTENDEN
BLAKELY ROAD PEDESTRIAN BRIDGE
OVER INTERSTATE 89

LENGTH OF BRIDGE 267 ± FEET = 0.050 MILES
LENGTH OF PROJECT 1422 ± FEET = 0.270 MILES
BEGINNING AT A POINT APPROXIMATELY 0.146 MILES EAST OF THE BLAKELY ROAD/I-89 INTERSECTION AND EXTENDING WEST 0.123 MILES.

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES CONSTRUCTION OF A PARALLEL PEDESTRIAN BRIDGE AND RELATED APPROACH WORK AND GUARDRAIL MODIFICATIONS IN THE I-89 MEDAIN

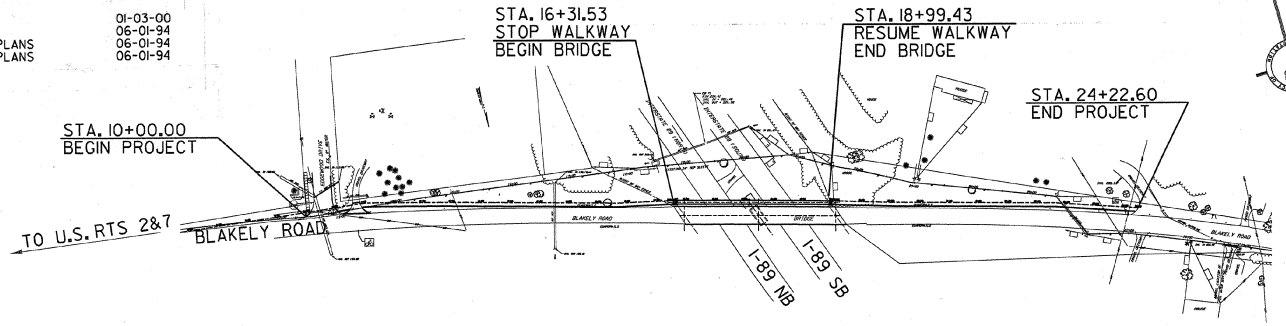
RECORD PLANS

CONTRACTOR: CONTRACTOR'S CRANE SERVICE. - MORRISVILLE VT.
RESIDENT ENGINEER: R. STANCLIFF.
CONSTRUCTION BEGAN: SEPTEMBER 23, 2002
CONSTRUCTION COMPLETE:
RECORD PLANS BY: R. RICHERT

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

BY Donald L. Stancliff RESIDENT ENGINEER
DATE June 20, 2003

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found on microfilm in Central Files.



SITE PLAN

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE CHIEF ENGINEER.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON MARCH 15, 1990 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

STATE OF VERMONT
MARK W. OLSON
No. 5822
REGISTERED PROFESSIONAL ENGINEER

BY _____ 8-24-01

CONVENTIONAL SIGNS

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

DATUM
VERTICAL ASSUMED
HORIZONTAL N/A

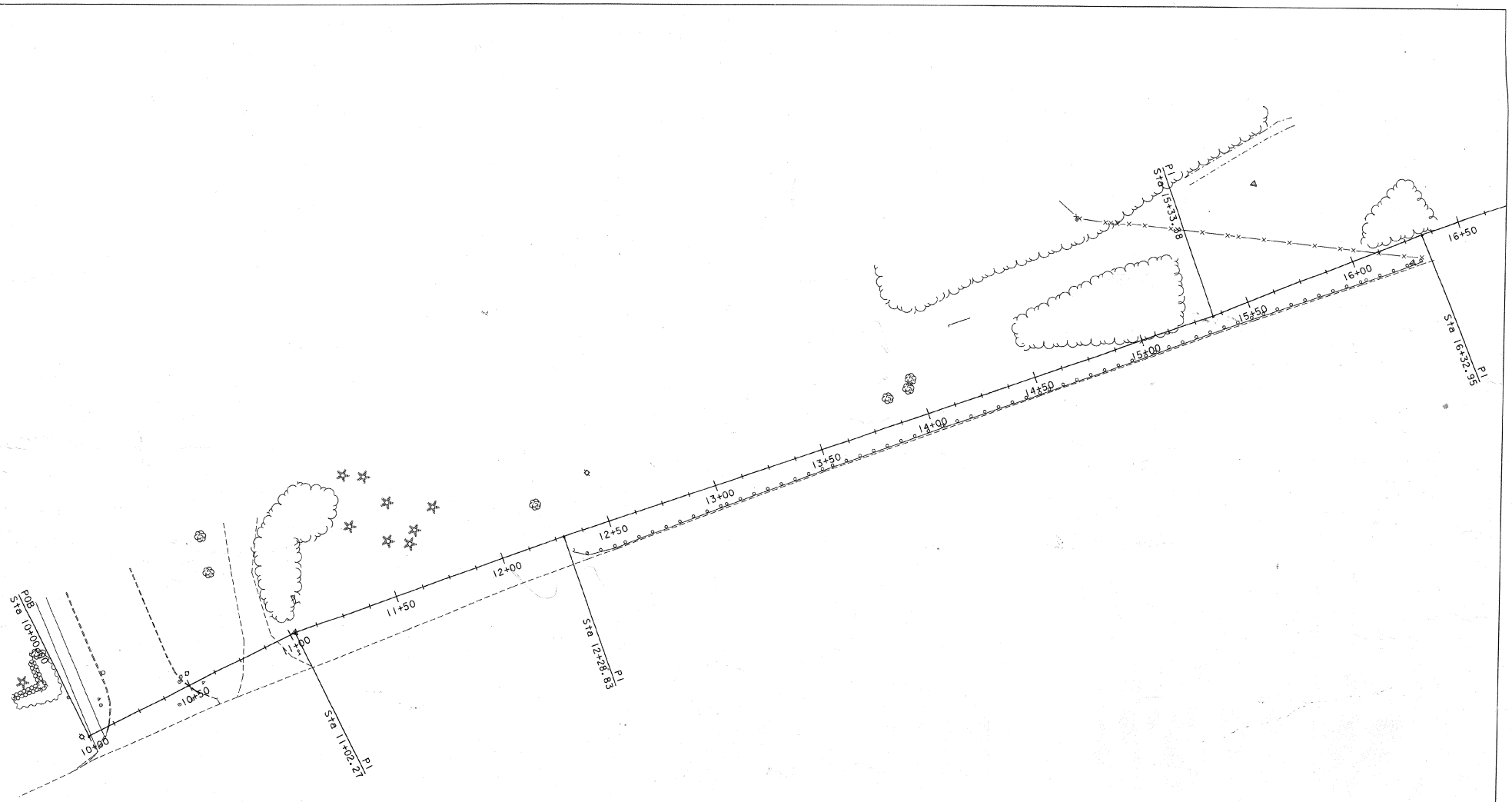
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED _____ DATE _____
DIVISION ADMINSTRATOR

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED _____ DATE 9/14/01
DIRECTOR OF PROJECT DEVELOPMENT

PROJECT MANAGER:
SHERWARD G. FARNSWORTH

CHA CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
11 WINNERS CIRCLE ALBANY, NEW YORK, 12205

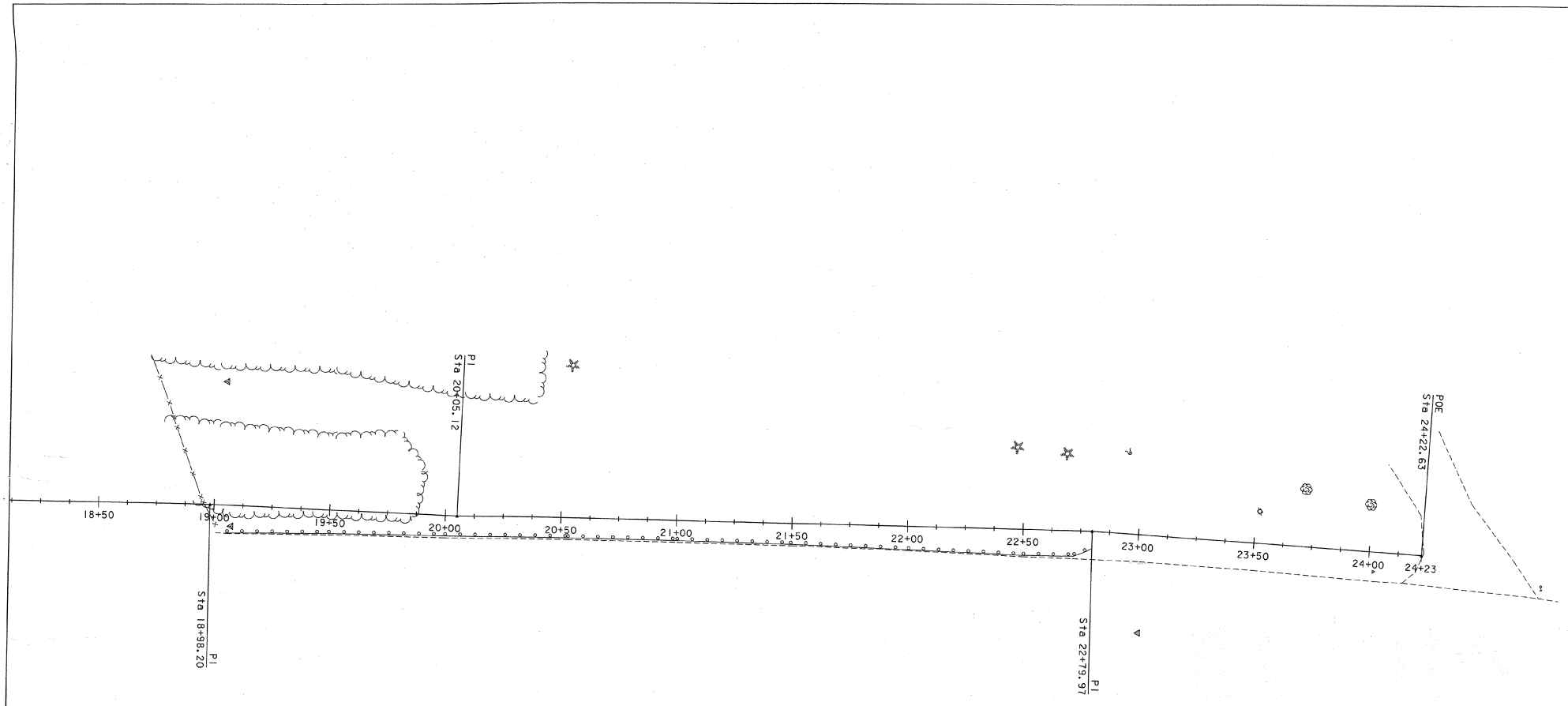
COLCHESTER
PROJECT: IM-089-3(33)
STP EH 99(8)
SHEET 1 OF 23 SHEETS



0 20 40
SCALE IN FEET

STAKED AS PER CHA & CONTRACT PLAN SHEET 5 OF 23 DATED 7/2001. SGF 8-2-2002

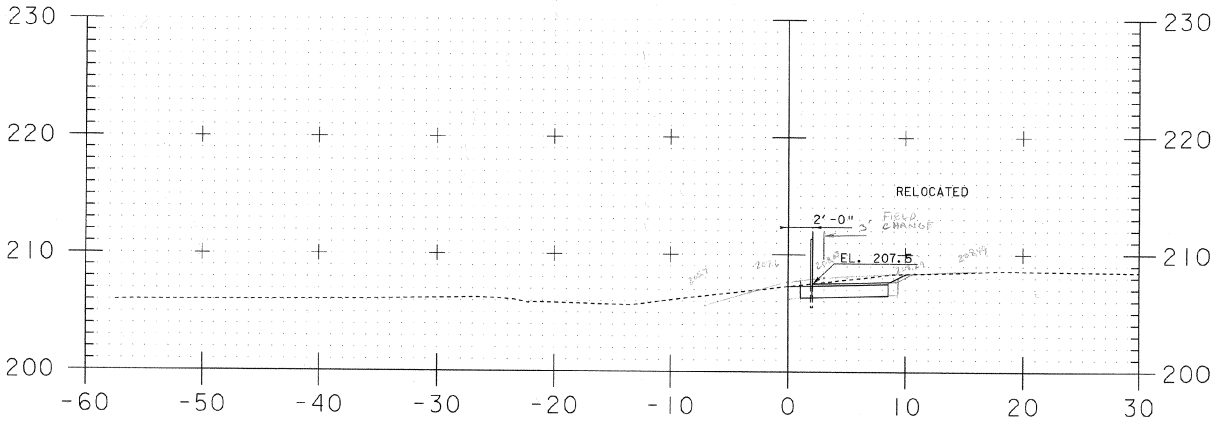
PROJECT NAME:	Cochester
PROJECT NUMBER:	STP EH 99 (8)
FILE NAME: 99f300/survey/xf300sv.dgn	PLOT DATE: 30-JUL-2002
PROJECT LEADER: S. FARNSWORTH	DRAWN BY: R. Bullock
DESIGNED BY:	CHECKED BY:
	SHEET 1A OF 11



0 20 40
SCALE IN FEET

STAKED AS PER CHA & CONTRACT PLAN SHEETS 5 & 6 OF 23 DATED 7/2001. SLF 8-2-2002

PROJECT NAME:	Colchester
PROJECT NUMBER:	STP EH99 (8)
FILE NAME: 99f300/survey/xf300sv.dgn	PLOT DATE: 30-JUL-2002
PROJECT LEADER: S. FARNSWORTH	DRAWN BY: R. Bullock
DESIGNED BY:	CHECKED BY:
	SHEET 18 OF 11

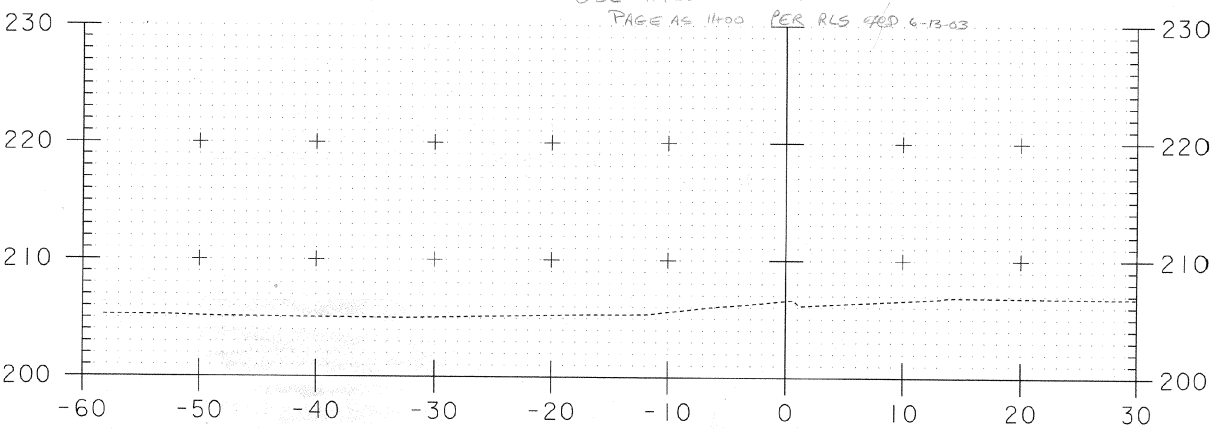


11+00

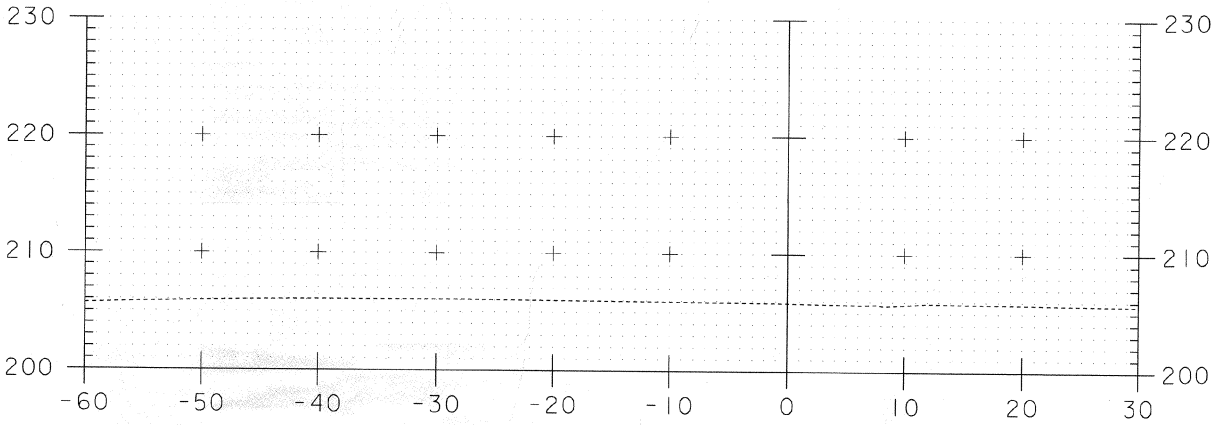
SUBBASE GRAVEL

207.6	208.03	207.79	206.5	206.2
0	3	9.5	9.5	0

USE 11+00.27 ON NEXT PAGE AS 11+00 PER RLS FAX 6-13-03



10+50

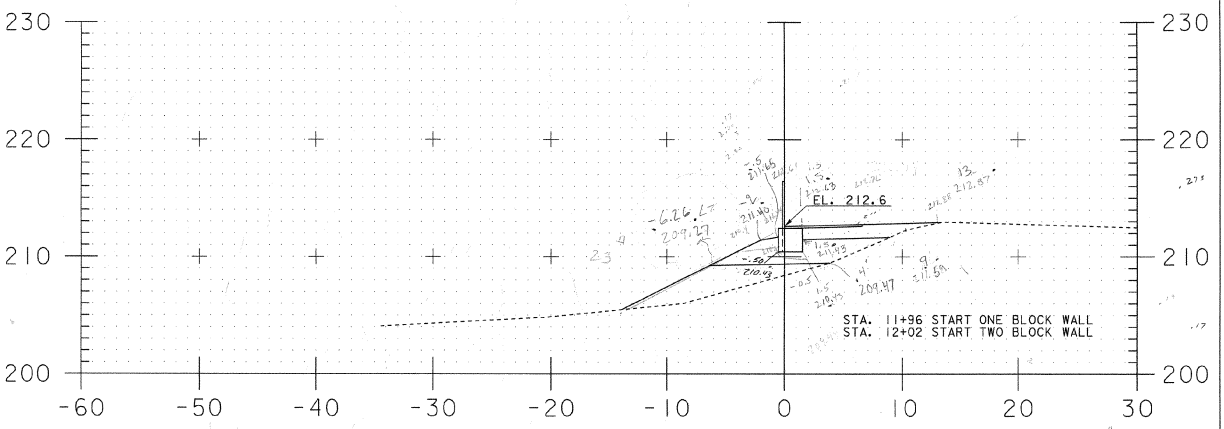


10+00

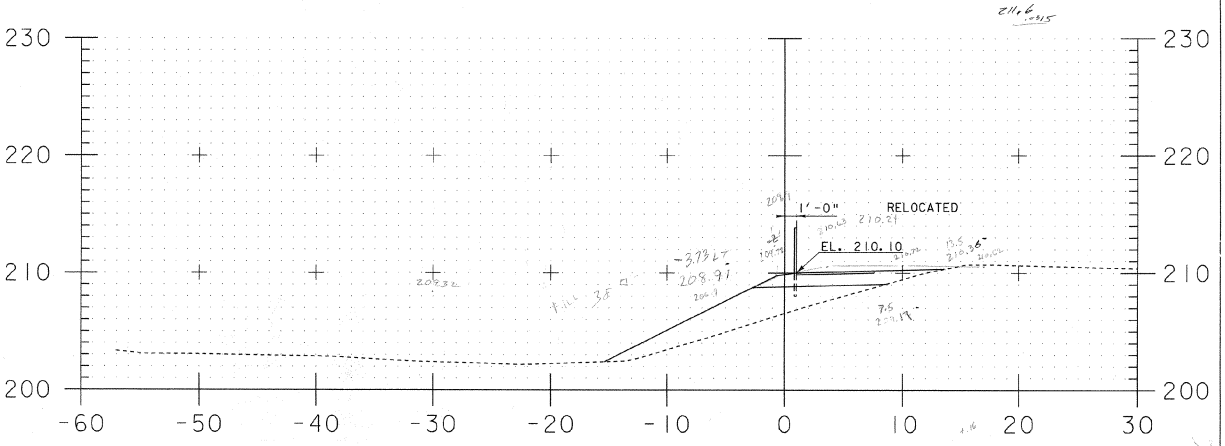
PROJECT NAME: Colchester
PROJECT NUMBER: STP EH99 (8)
FILE NAME: 99r300/survey/x-r300wrk.dgn
PROJECT LEADER: S. Parks Worthy
DESIGNED BY:
PLOT DATE: 07-AUG-2002
DRAWN BY: R. Bullock
CHECKED BY:
SHEET 1C OF 11

SCALE 1"-5'-0
5 0 5

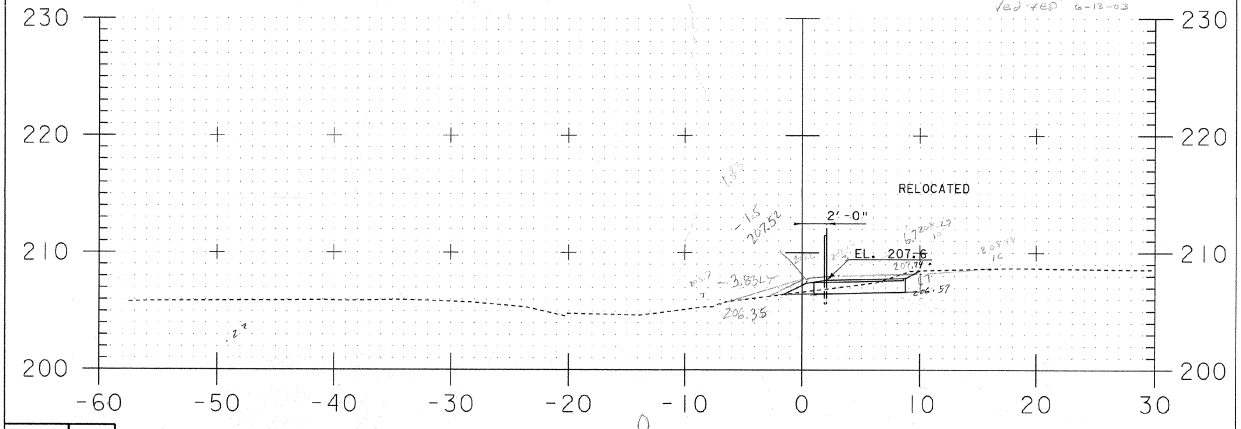
Calculations by R L Standiff
August 2002



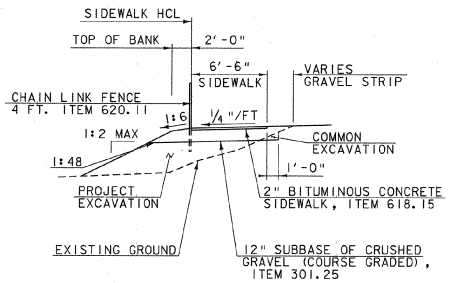
12+00



11+50



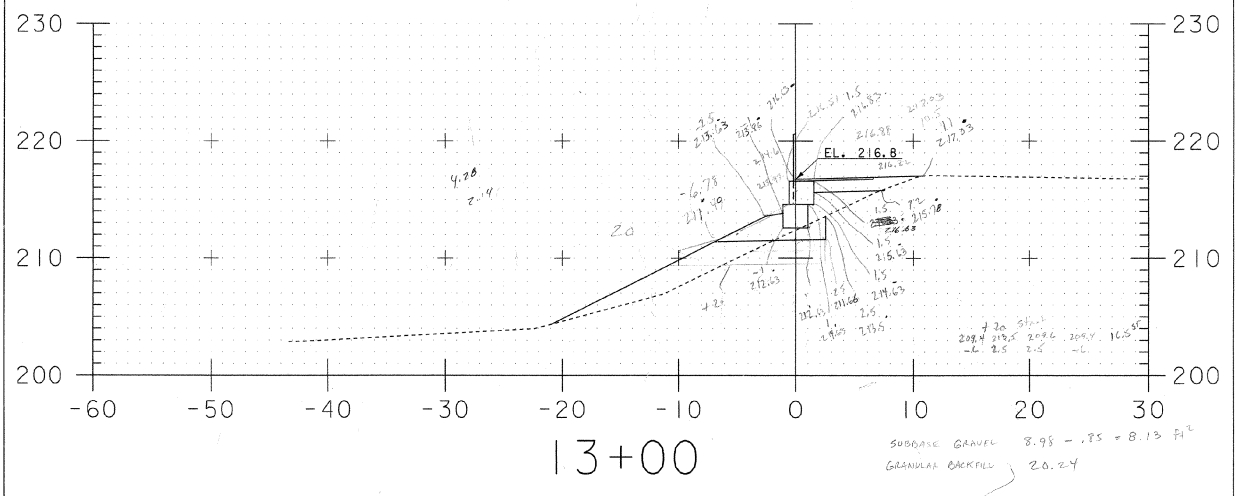
11+02.27



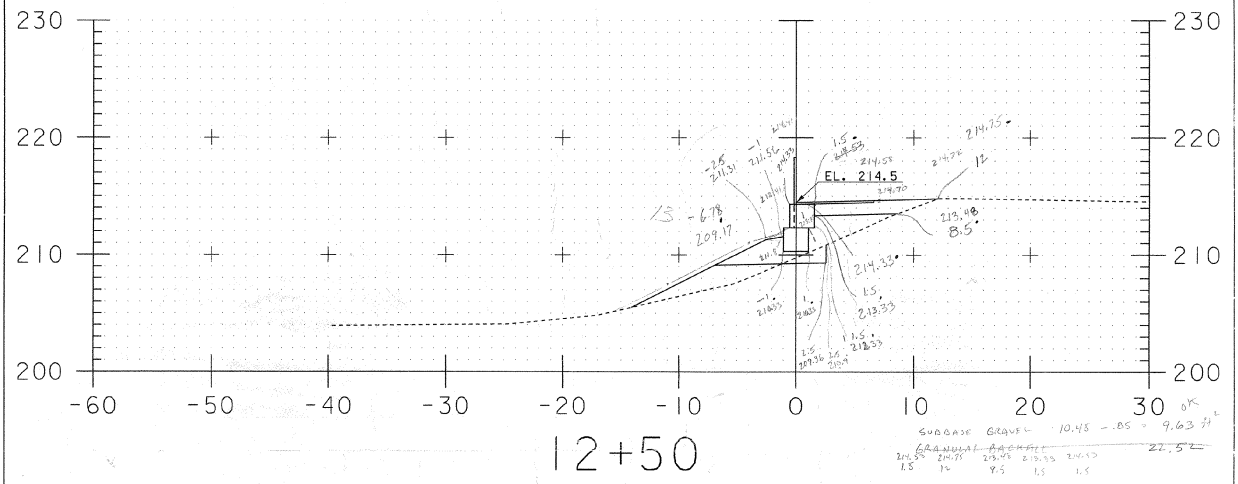
TYPICAL SECTION AT GRADE

SCALE 1"-5'-0

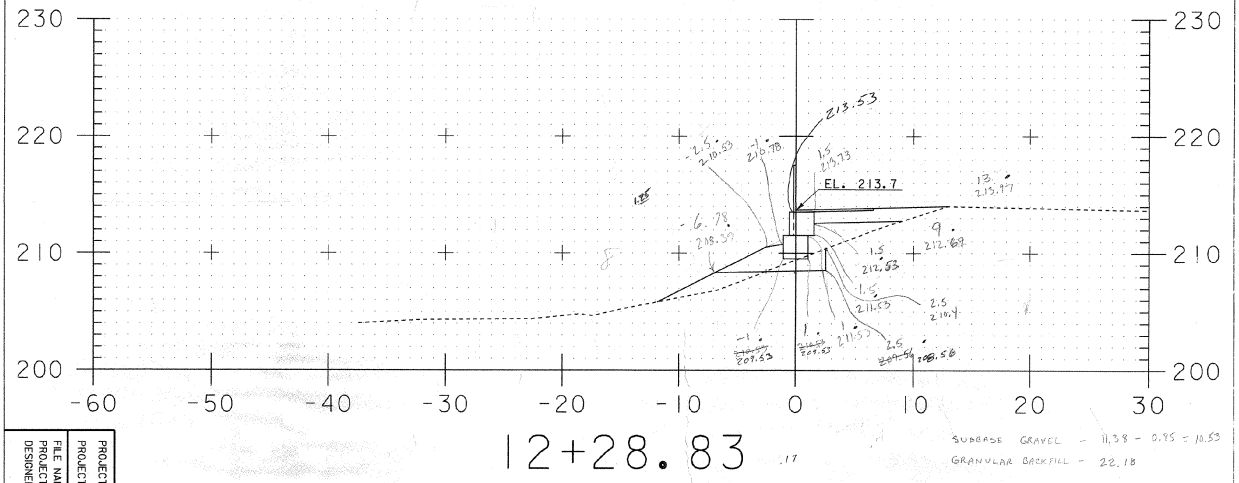
PROJECT NAME: Colchester
PROJECT NUMBER: STP EH99 (8)
FILE NAME: 99f300/survey/xf300wrk.dgn
PROJECT LEADER: S. Fitzpatrick
DESIGNED BY:
DRAWN BY: R. Bullock
CHECKED BY:
PLOT DATE: 07-AUG-2002
SHEET 2 OF 11



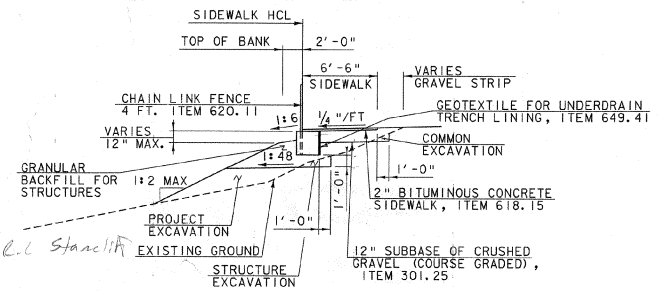
SUBBASE GRAVEL 8.95 − .85 = 8.13 FT²
GRANULAR BACKFILL 20.24



SUBBASE GRAVEL 10.45 − .85 = 9.63 FT²
GRANULAR BACKFILL 27.5 CY



SUBBASE GRAVEL − 11.38 − 0.85 = 10.53
GRANULAR BACKFILL − 22.18



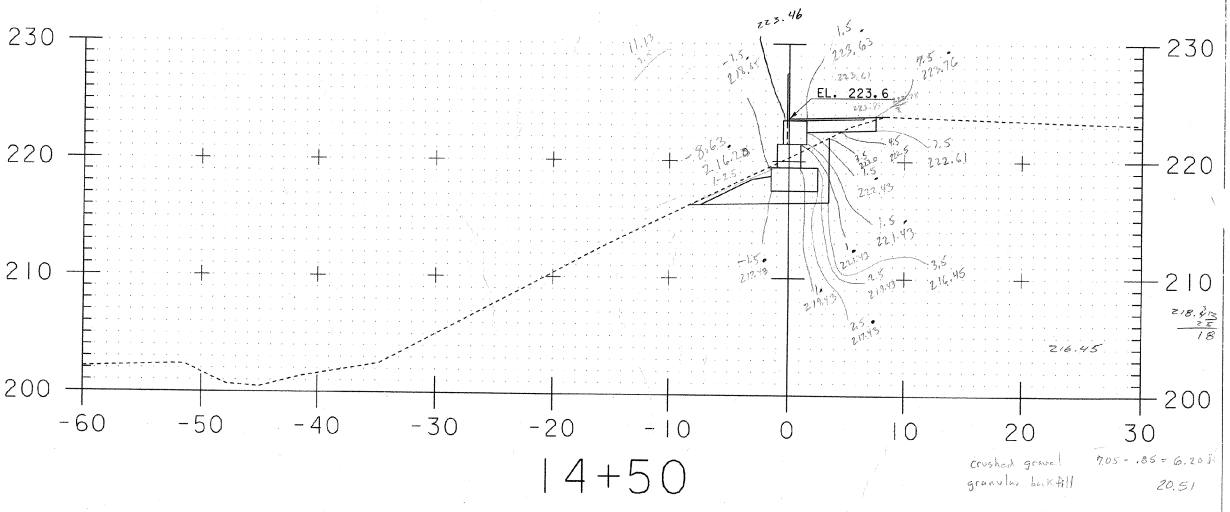
Calculations by R.L Stanclift Aug 2002

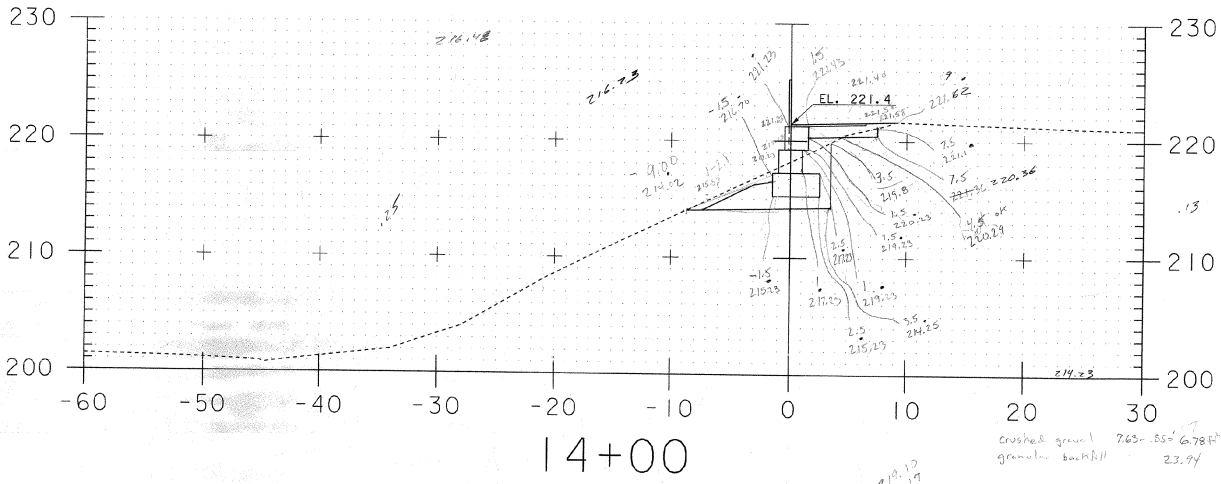
TYPICAL SECTION ONE BLOCK RETAINING WALL

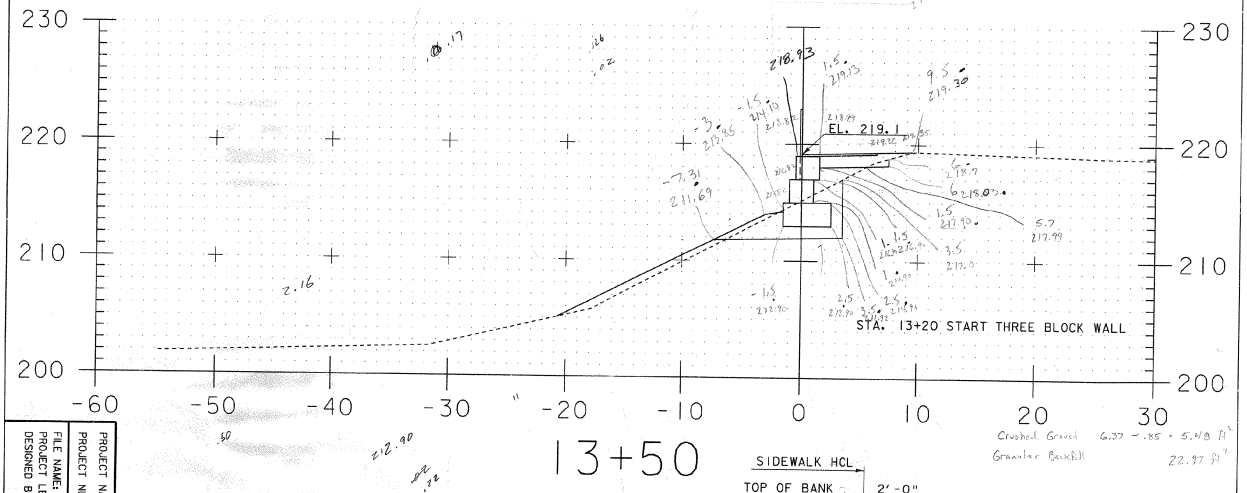
SCALE 1" = 5'-0"

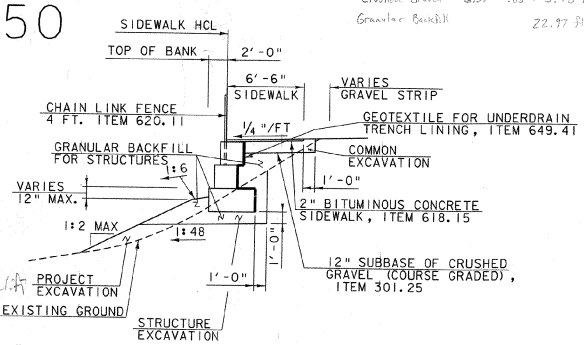
PROJECT NAME: Colchester
PROJECT NUMBER: STP EH99 (8)

FILE NAME: 99f300/survey/xf300wrk.dgn
PROJECT LEADER: S. Fitzgerald
DESIGNED BY:
DRAWN BY: R. Bullock
CHECKED BY:
PLOT DATE: 07-AUG-2002
SHEET 3 OF 11







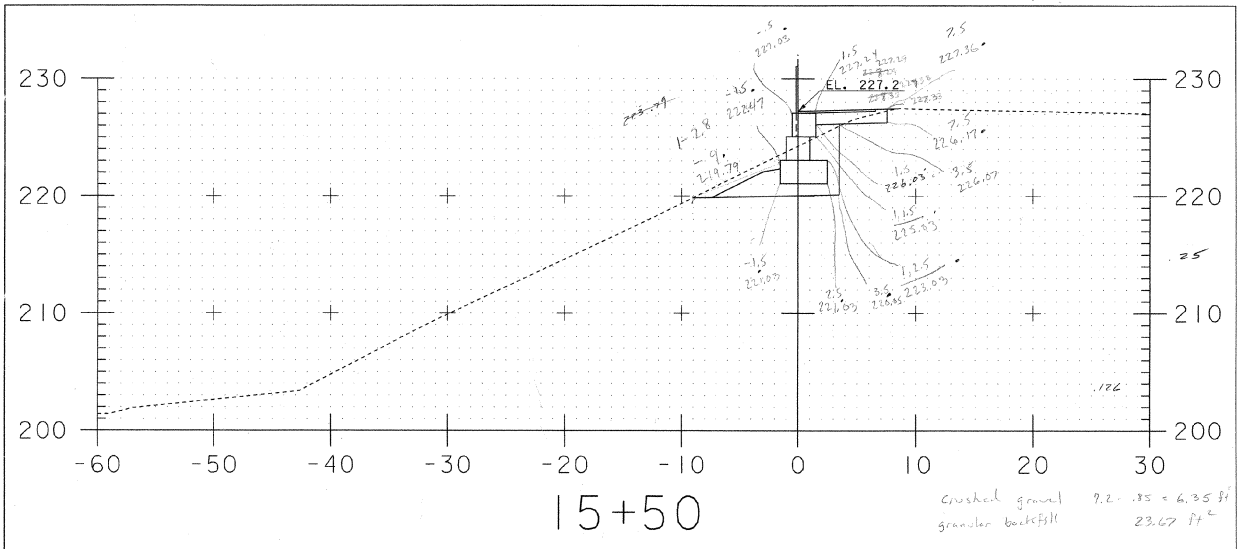


TYPICAL SECTION WITH THREE BLOCK RETAINING WALL

Calculations by RC Standiff Aug 2002

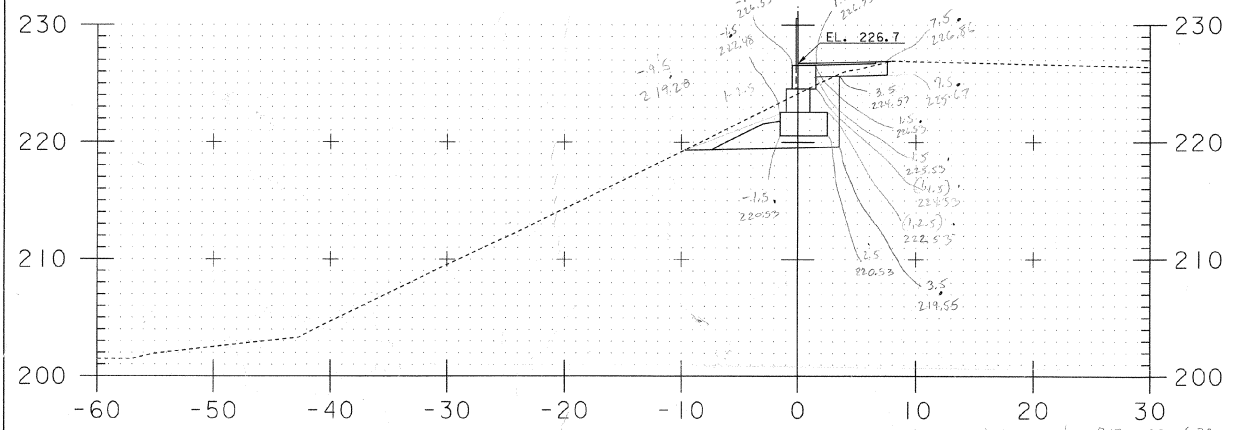
SCALE 1" = 5'-0"

PROJECT NAME: Colchester
PROJECT NUMBER: STP EH99 (8)
FILE NAME: 99F300/survey/xf300wrk.dgn
PROJECT LEADER: S. Fitzpatrick
DESIGNED BY:
DRAWN BY: R. Bullock
CHECKED BY:
PLOT DATE: 07-AUG-2002
SHEET 4 OF 11



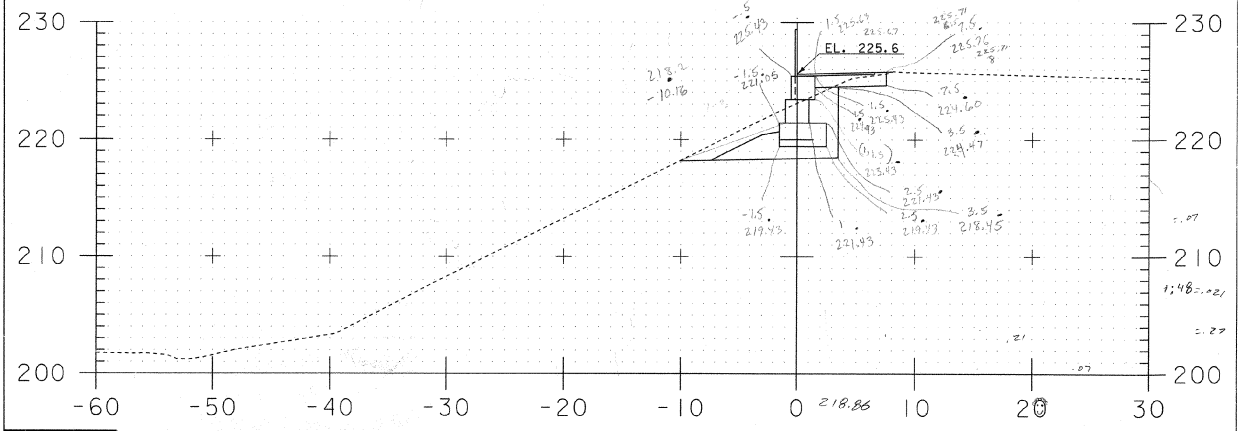
15+50

Crushed gravel granular backfill 9.2 - .85 = 6.35 ft
23.67 ft²



15+33.38

Crushed gravel granular backfill 7.17 - .85 = 6.32
25.43



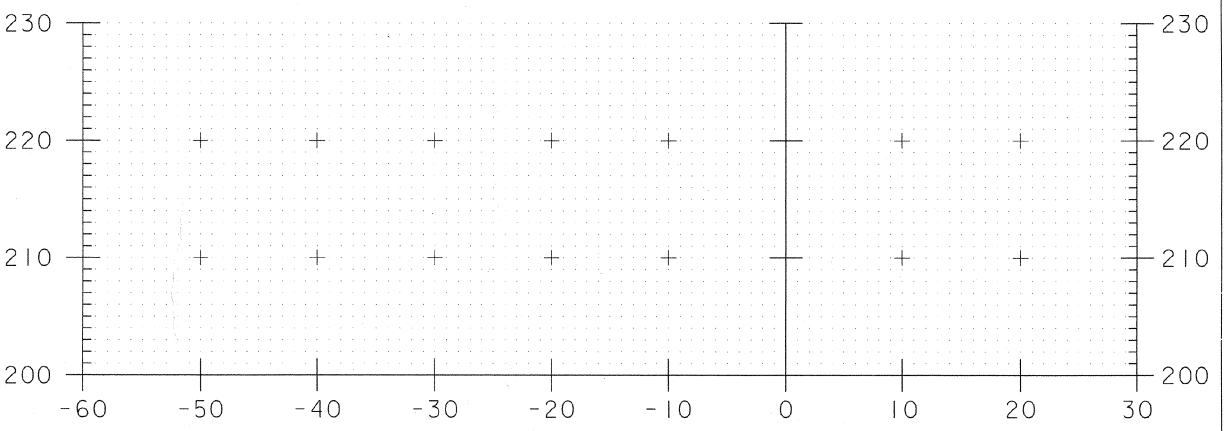
15+00

Crushed gravel granular backfill 7.08 - .85 = 6.23 ft
25.82 ft²

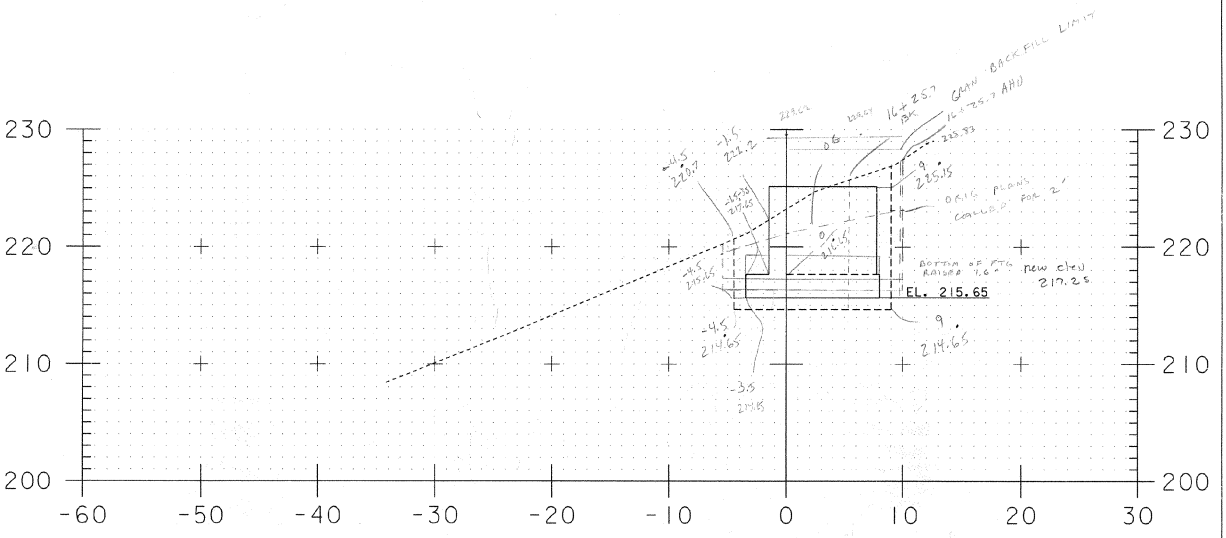
Calculations by Ron Stancliff
Aug 2002

PROJECT NAME: Colchester
PROJECT NUMBER: STP EH99 (8)
FILE NAME: 99f300/survey/xs300work.dgn
PROJECT LEADER: S. Fahrbach
DESIGNED BY:
PLOT DATE: 07-AUG-2002
DRAWN BY: R. Bullock
CHECKED BY:
SHEET 5 OF 11

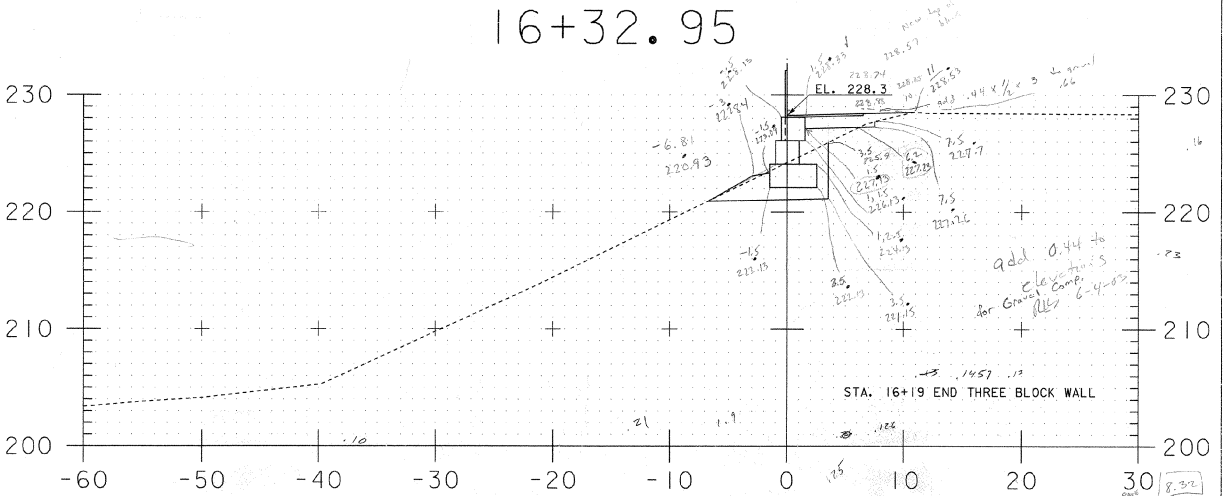
SCALE 1" = 5'-0
5 0 5



16+50



16+32.95



16+00

crushed gravel 8.51 - .85 = 7.66 ft²
granular backfill 22.32 ft²

Calculations by Ron Stancliff
Aug 2002

PROJECT NAME: Colchester
PROJECT NUMBER: STP EH99 (8)

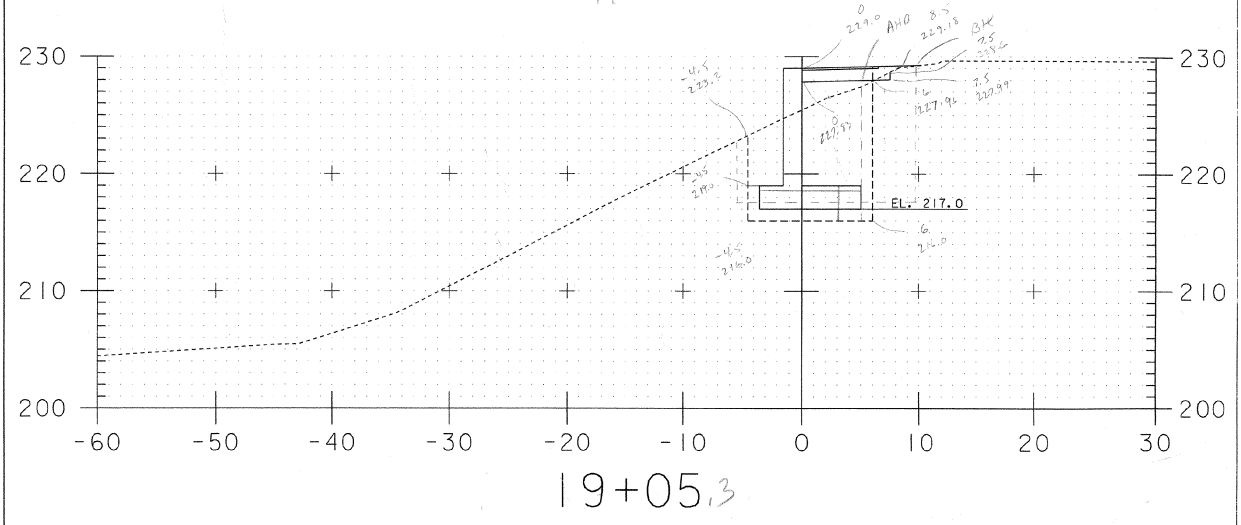
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PROJECT LEADER: S. Fabiszewski
DESIGNED BY:

PLOT DATE: 07-AUG-2002
DRAWN BY: R. Bullock
CHECKED BY:

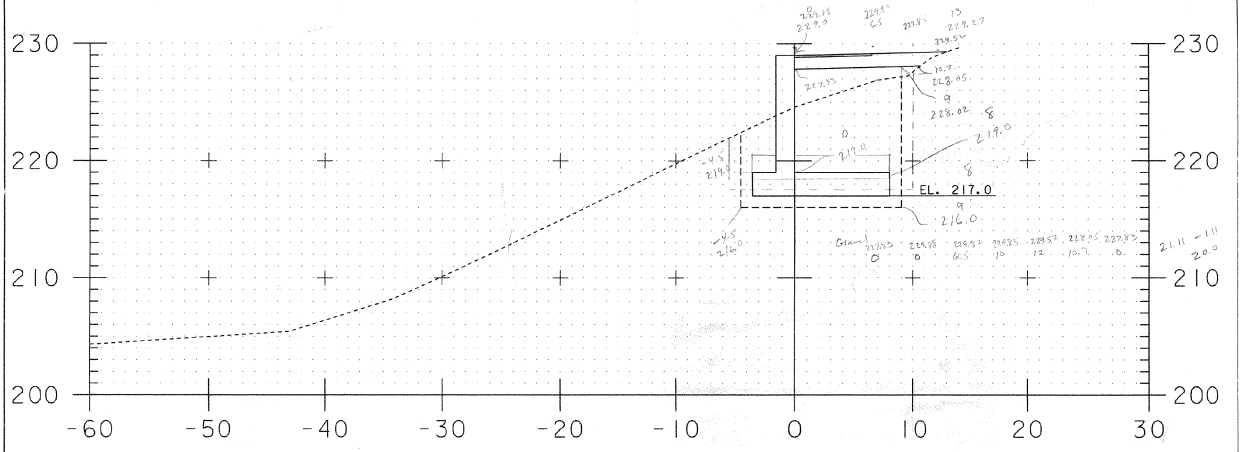
SHEET 6 OF 11

SCALE 1" = 5'-0
5 0 5

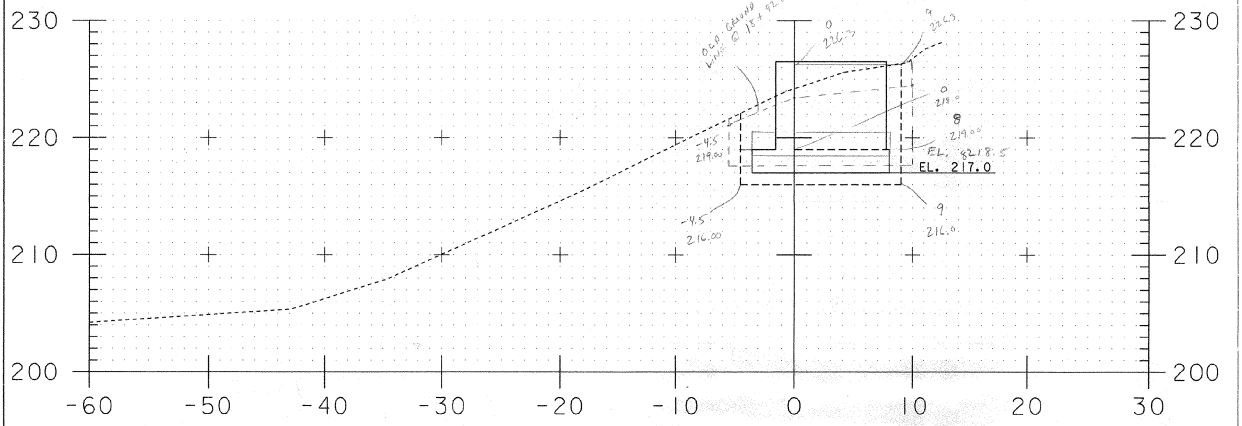
19+14 end Struct for Abut #2



19+05.3



19+00



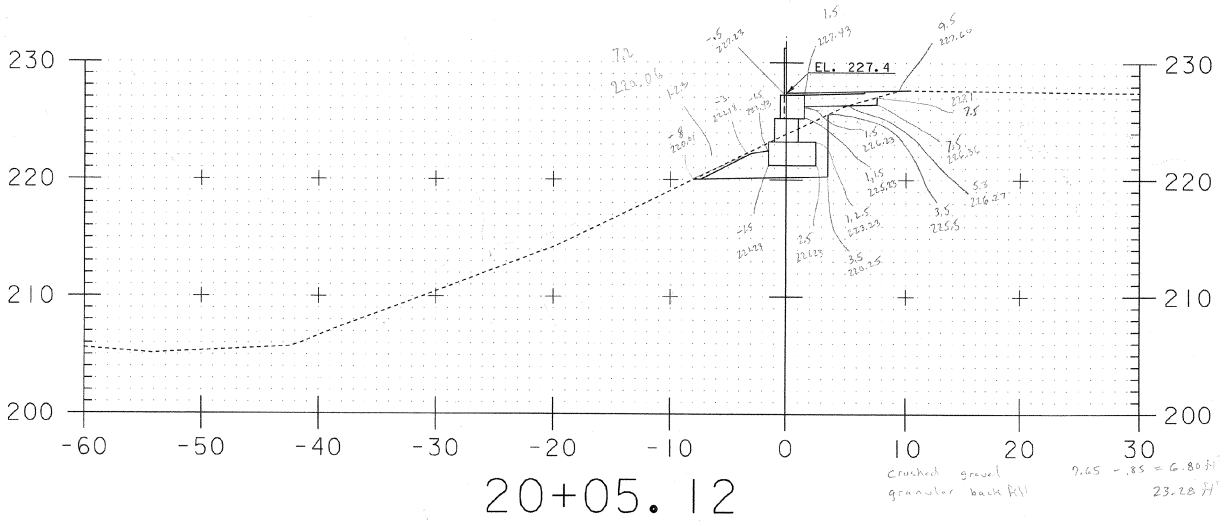
18+98.20

18+92.8 Begin Struct

Calculations by Ron Standcliff
Aug 2002

PROJECT NAME: Colchester
PROJECT NUMBER: STP EH99 (8)
FILE NAME: 99f300/survey/xf300wrk.dgn
PROJECT LEADER: S. Faraisakeeny
DESIGNED BY:
PLOT DATE: 07-AUG-2002
DRAWN BY: R. Bullock
CHECKED BY:
SHEET 7 OF 11

SCALE 1" = 5'-0
5 0 5

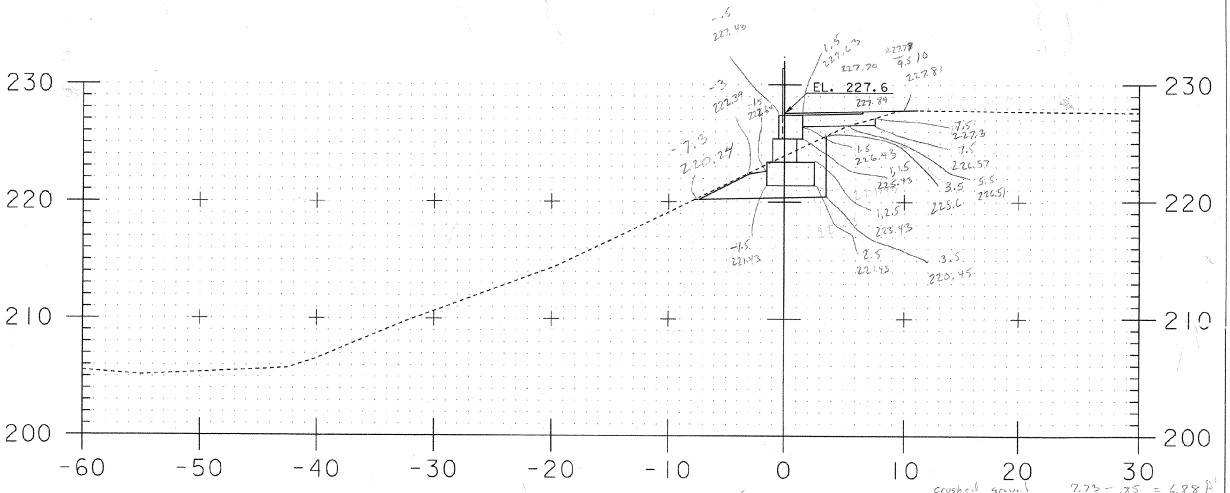


20+05.12

crushed gravel granular backfill

7.65 - .85 = 6.80 ft²

23.28 ft²

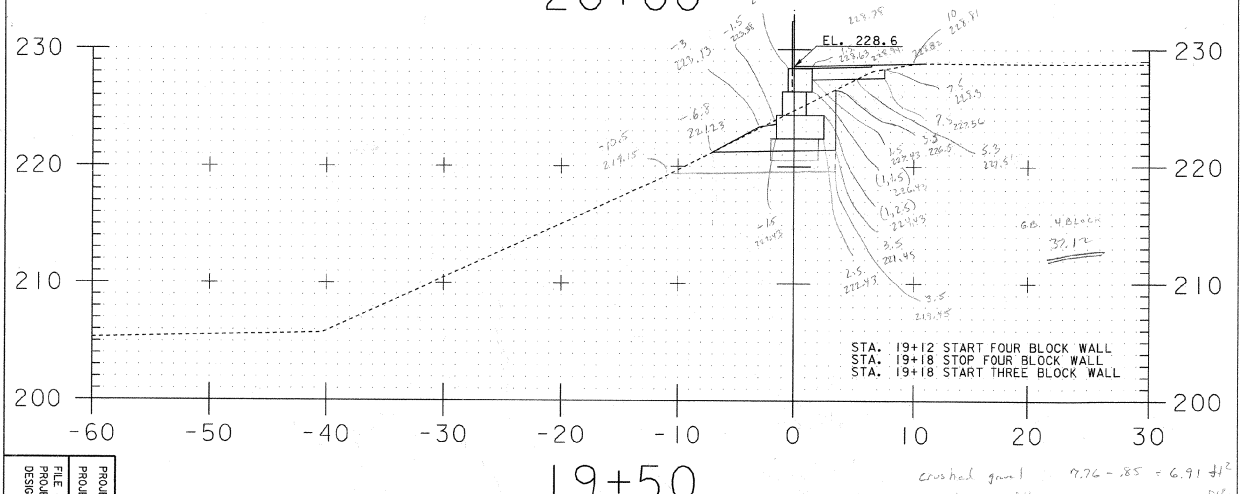


20+00

crushed gravel granular backfill

7.73 - .85 = 6.88 ft²

22.76



19+50

crushed gravel granular backfill

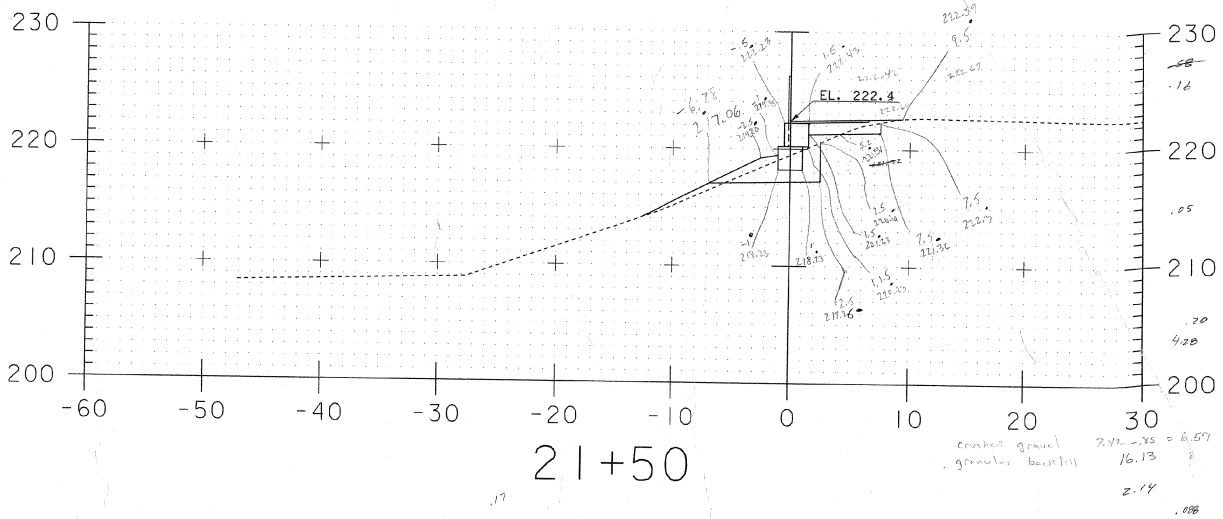
7.76 - .85 = 6.91 ft²

21.43 ft²

Calculations by Ron Stancliff
Aug 2002

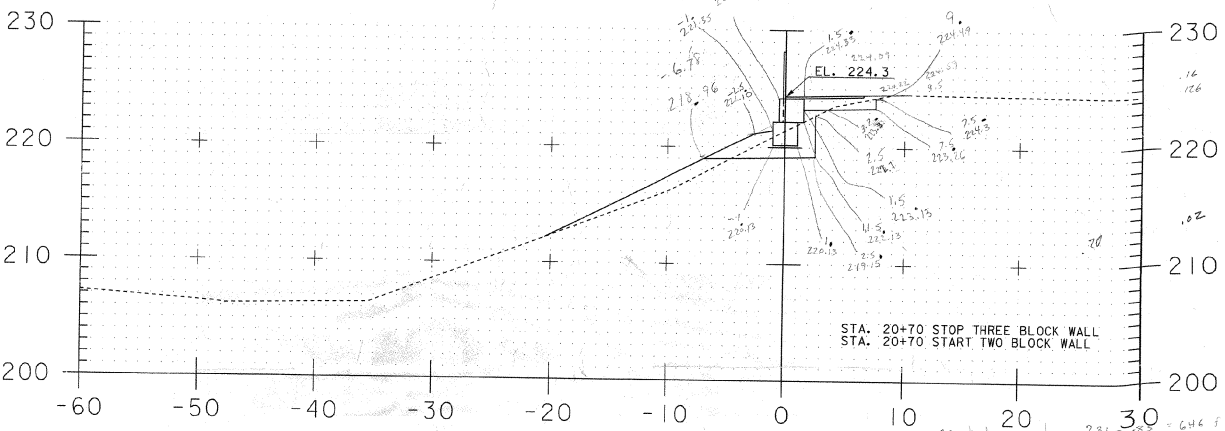
PROJECT NAME: Colchester
PROJECT NUMBER: STP EH99 (8)
FILE NAME: 99r500/survey/xt500wrk.dgn
PROJECT LEADER: S. FAUCHER
DESIGNED BY:
DRAWN BY: R. Bullock
CHECKED BY:
PLOT DATE: 07-AUG-2002
SHEET 8 OF 11

SCALE 1" = 5'-0"
5 0 5



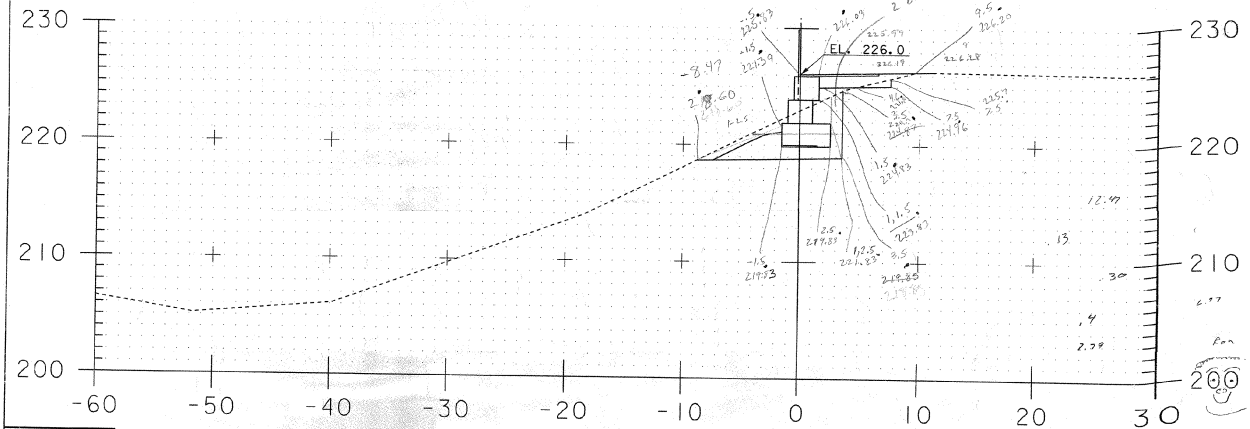
21+50

crushed gravel granular backfill 7.42 - .85 = 6.57 ft 16.13



21+00

crushed gravel granular backfill 2.31 - .85 = 6.46 ft 15.53



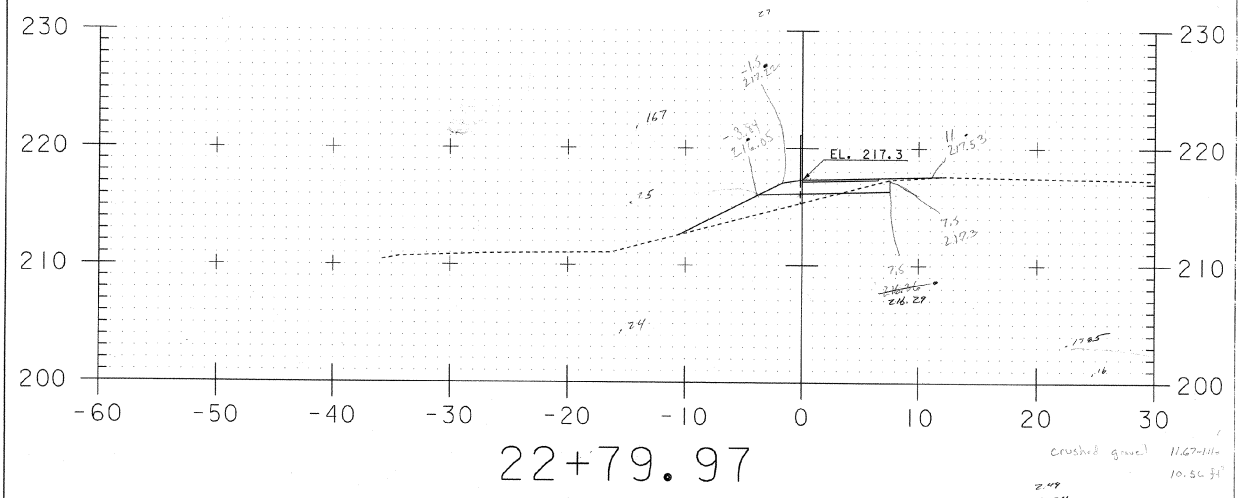
20+50

crushed gravel granular backfill 7.65 - .85 = 6.80 19.71

Calculations by Ron Standiff
Aug 2002

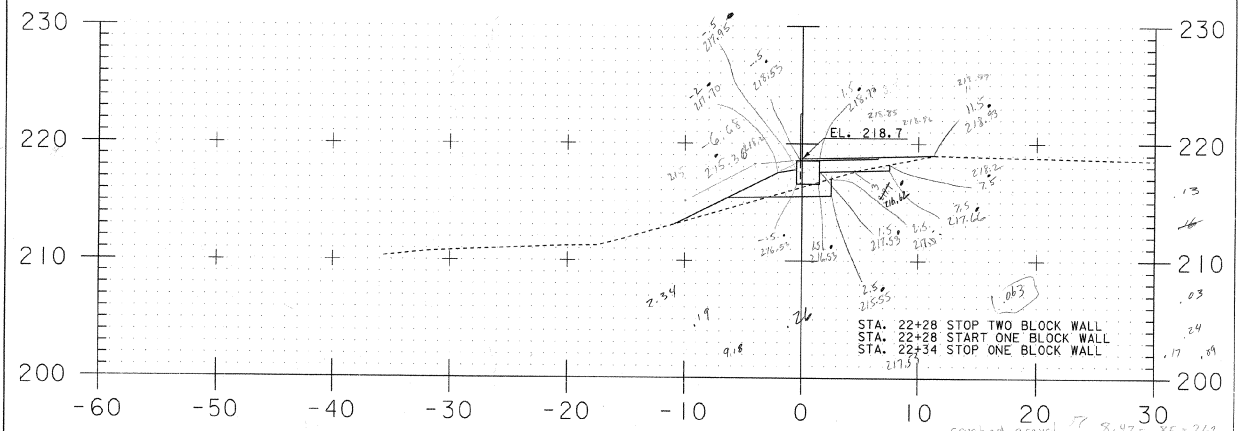
PROJECT NAME: Colchester
PROJECT NUMBER: STP EH99 (8)
FILE NAME: 99t300/survey/xt300wrk.dgn
PROJECT LEADER: S. Patrick Sheriff
DESIGNED BY:
PLOT DATE: 07-AUG-2002
DRAWN BY: R. Bullock
CHECKED BY:
SHEET 9 OF 11

SCALE 1"=5'-0
5 0 5



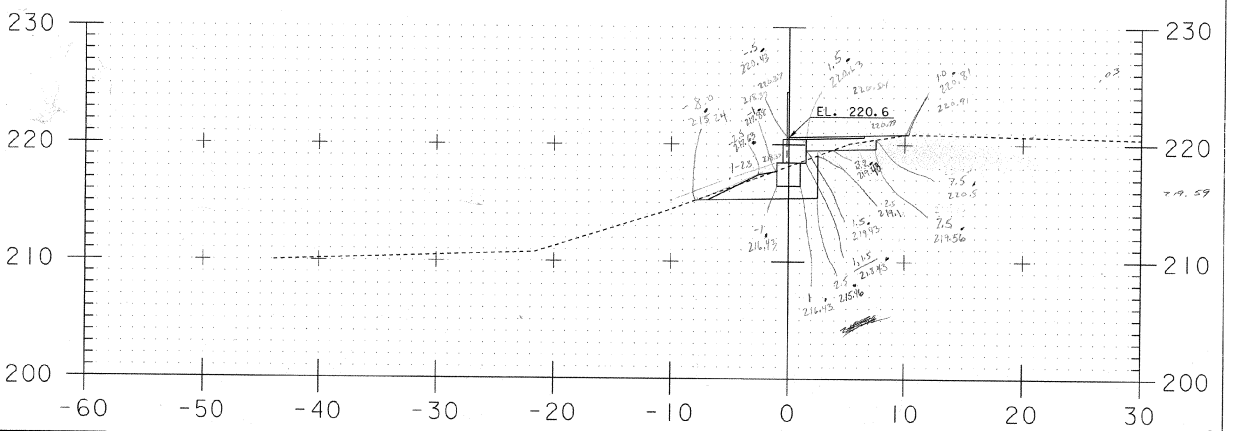
22+79.97

crushed gravel 11.67 - 1.11 = 10.56 ft²



22+50

crushed gravel 8.47 - .85 = 7.62
granular backfill ? 13.03



22+00

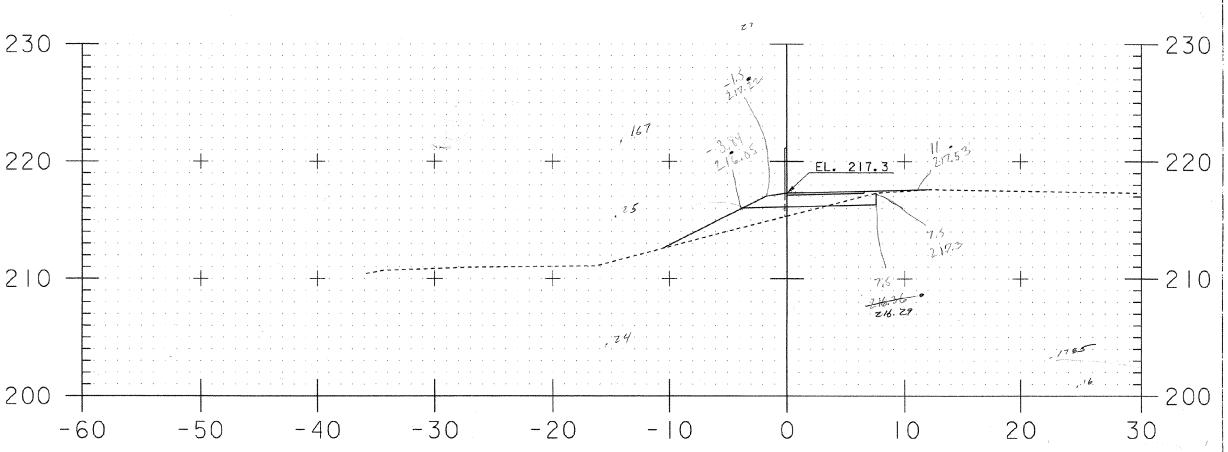
crushed gravel 7.51 - .85 = 6.66 ft²
granular backfill 17.67 ft²

215.43

Calculations by Ron Stancliff
Aug 2002

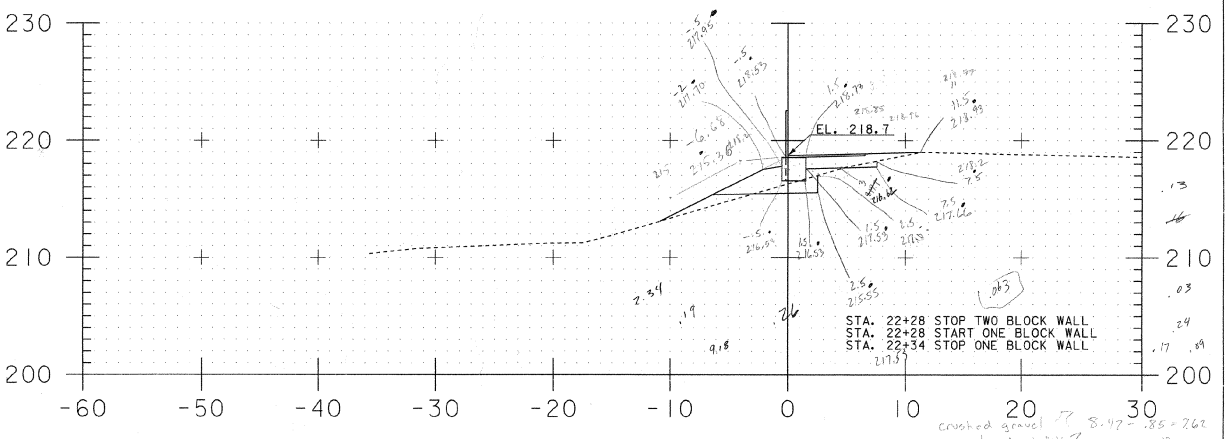
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PROJECT NUMBER:	STP EH99 (8)
FILE NAME: 99F300/survey/xf300wrk.dgn	PLOT DATE: 07-AUG-2002
PROJECT LEADER: S. Parkes	DRAWN BY: R. Bullock
DESIGNED BY:	CHECKED BY:
	SHEET 10 OF 11

SCALE 1" = 5'-0
5 0 5



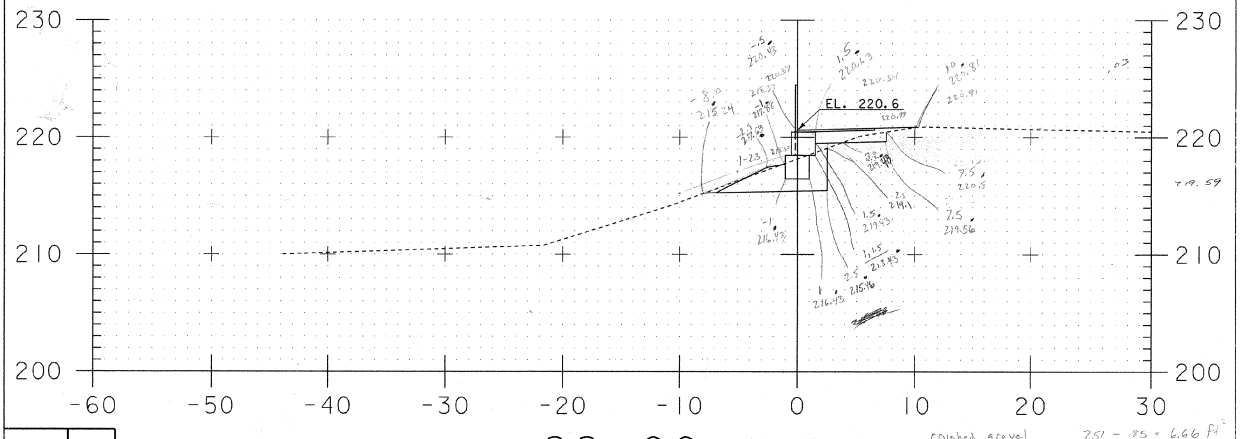
22+79.97

crushed gravel 11.69-1.14 = 10.56 ft²



22+50

crushed gravel 8.47 - .85 = 7.62
granular backfill ? 13.03



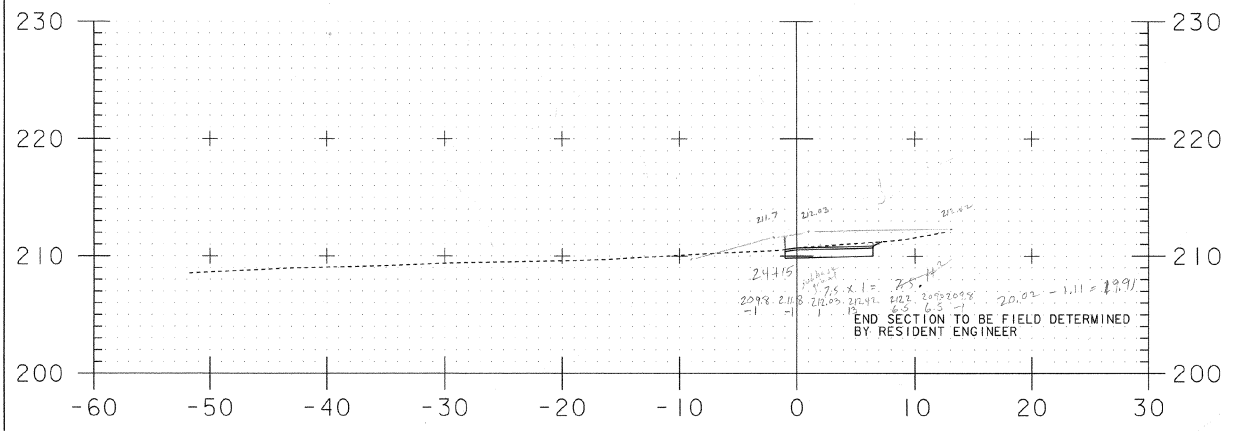
22+00

crushed gravel 7.51 - .85 = 6.66 ft²
granular backfill 17.67 ft²

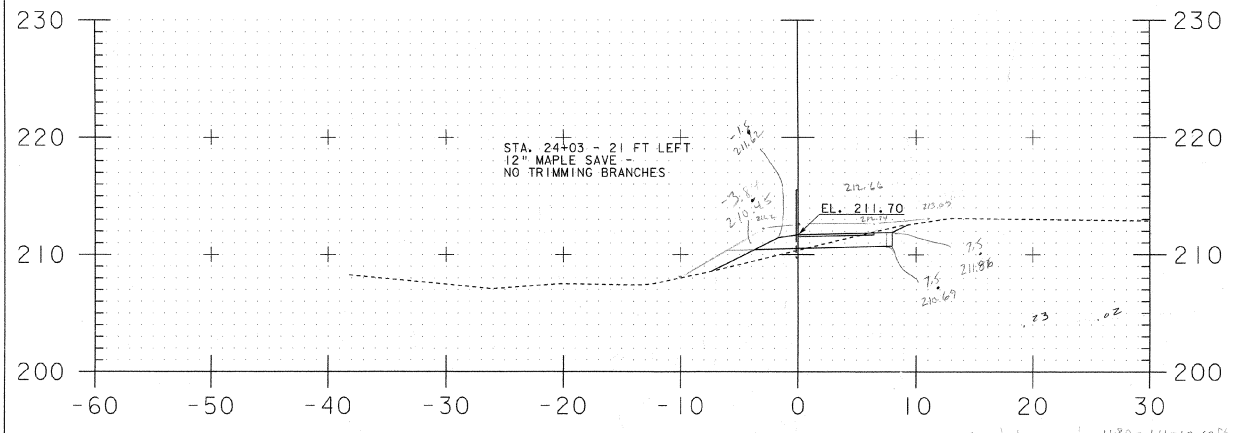
Calculations by Ron Stanecliff
Aug 2002

PROJECT NAME: Colchester
PROJECT NUMBER: STP EH99 (8)
FILE NAME: 99f300/survey/xf300wrk.dgn
PROJECT LEADER: S. Fairbrother
DESIGNED BY:
PLOT DATE: 07-AUG-2002
DRAWN BY: R. Bullock
CHECKED BY:
SHEET 10 OF 11

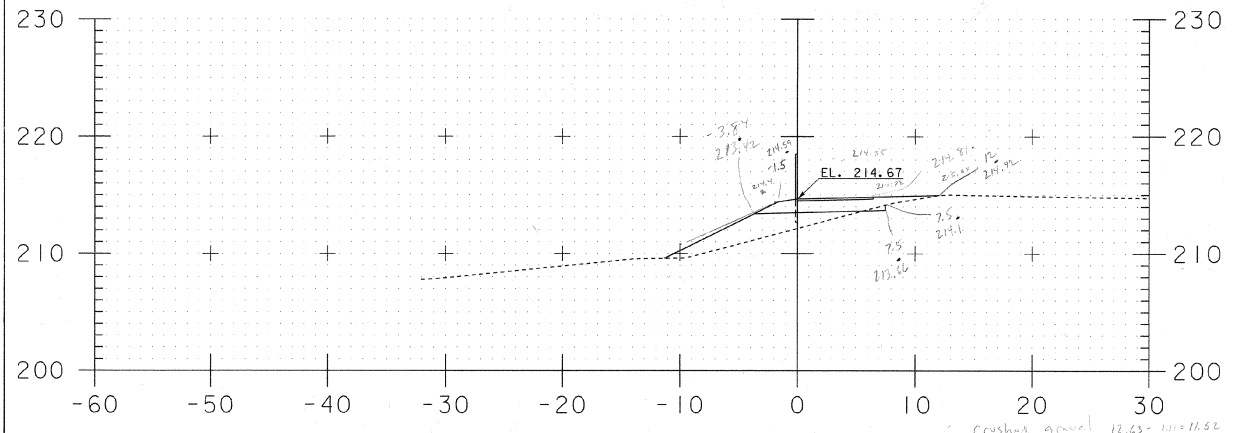
SCALE 1" = 5'-0
5 0 5



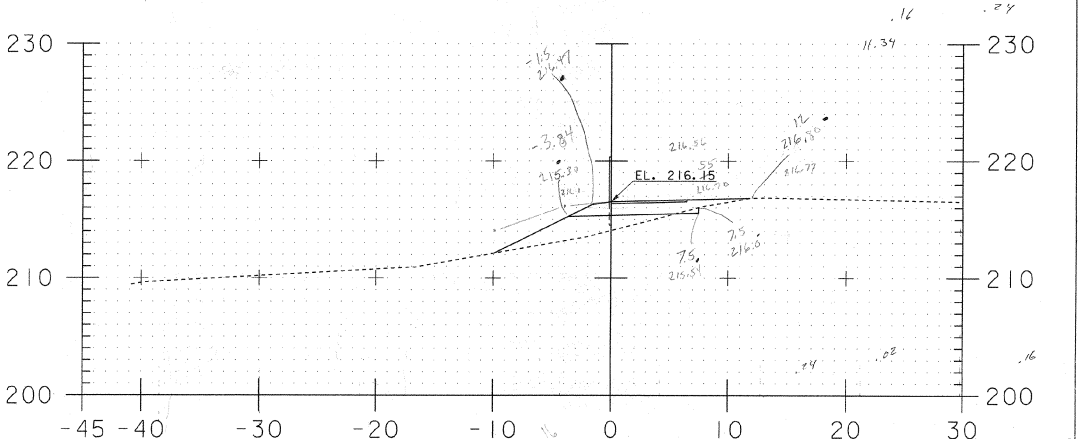
24+22.63



24+00



23+50

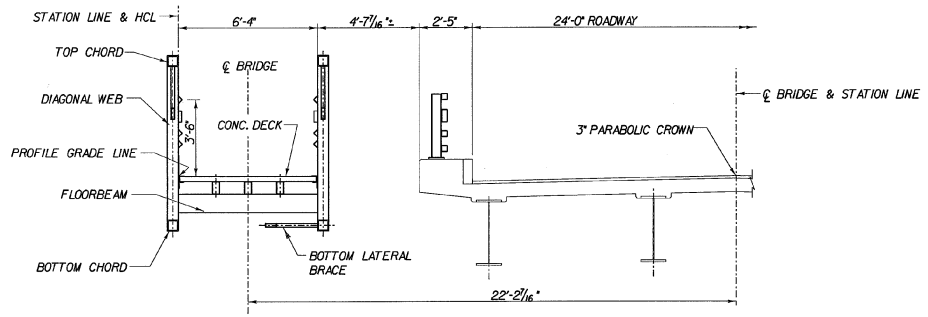


23+00

SCALE 1"-5'-0"

calculations by Ron Stancloff
Aug 2002

PROJECT NAME: Colchester
PROJECT NUMBER: STP EH99 (8)
FILE NAME: 99f300/survey/xf300wrk.dgn
PROJECT LEADER: S. Fabbisso
DESIGNED BY:
PLOT DATE: 07-AUG-2002
DRAWN BY: R. Bullock
CHECKED BY:
SHEET 11 OF 11



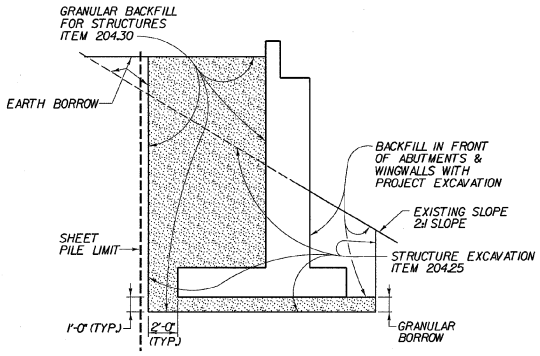
PROPOSED PEDESTRIAN BRIDGE SECTION

SCALE 3/8" = 1'-0

EXISTING BRIDGE SECTION

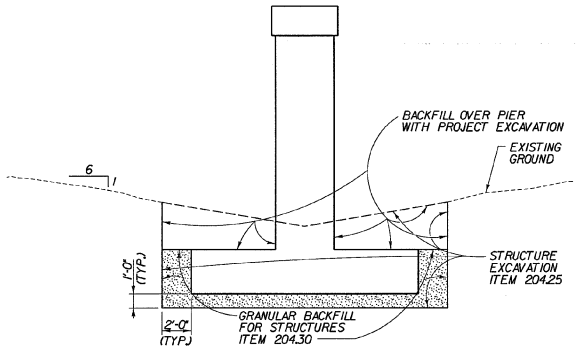
SCALE 3/8" = 1'-0

SEE SHEET #2 FOR GENERAL NOTES



TYPICAL ABUTMENT EARTHWORK DETAIL

(NOT TO SCALE)



TYPICAL PIER EARTHWORK DETAIL

(NOT TO SCALE)

FINAL HYDRAULICS REPORT

HYDROLOGIC DATA

DRAINAGE AREA: N/A

CHARACTER OF TERRAIN:

CHARACTER & TYPE OF STREAM:

NATURE OF STREAMBED:

Q2.33= Q50=

Q10= Q100=

Q25= Q500=

DATE OF FLOOD OF RECORD: ESTIMATED DISCHARGE:

WATER SURFACE ELEV.: NATURAL STREAM VELOCITY @ FLOOD OF RECORD

ICE CONDITIONS: DEBRIS:

DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY?

IS ORDINARY RISE RAPID?

IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS?

IF YES, DESCRIBE:

WATERSHED STORAGE HEADWATERS UNIFORM THROUGHOUT WATERSHED

IMMEDIATELY ABOVE SITE

EXISTING STRUCTURE

STRUCTURE TYPE: N/A YEAR BUILT:

CLEAR SPAN (NORMAL TO STREAM):

VERTICAL CLEARANCE ABOVE STREAMBED:

WATERWAY OF FULL OPENING:

DISPOSITION OF STRUCTURE:

TYPE OF MATERIAL UNDER SUBSTRUCTURE:

WATER SURFACE ELEV. @ Q2.33= VELOCITY=

Q10= " " =

Q25= " " =

Q50= " " =

Q100= " " =

LONG TERM STREAM BED CHANGES:

IS THE ROADWAY OVERTOPPED BELOW THE Q100? FREQUENCY:

RELIEF ELEVATION: DISCHARGE OVER ROAD @ Q100:

UPSTREAM STRUCTURE #1: TOWN: DISTANCE:

HIGHWAY NO.: STRUCTURE NO.:

STRUCTURE TYPE:

CLEAR SPAN: CLEAR HEIGHT:

YEAR BUILT: FULL WATERWAY:

UPSTREAM STRUCTURE #2: TOWN: DISTANCE:

HIGHWAY NO.: STRUCTURE NO.:

STRUCTURE TYPE:

CLEAR SPAN: CLEAR HEIGHT:

YEAR BUILT: FULL WATERWAY:

DOWNSTREAM STRUCTURE: TOWN: DISTANCE:

HIGHWAY NO.: STRUCTURE NO.:

STRUCTURE TYPE:

CLEAR SPAN: CLEAR HEIGHT:

YEAR BUILT: FULL WATERWAY:

PROPOSED STRUCTURE

STRUCTURE TYPE: TWO SPAN STEEL THRU TRUSS - PEDESTRIAN BRIDGE

CLEAR SPAN(NORMAL TO ROAD): 125'-11/2" (SPAN 1) 140'-11/2" (SPAN 2)

VERTICAL CLEARANCE ABOVE ROADWAY: 17'-6"

WATERWAY OF FULL OPENING: N/A

WATER SURFACE ELEV. @ Q2.33 = VELOCITY =

Q10 = " " =

Q25 = " " =

Q50 = " " =

Q100 = " " =

IS THE ROADWAY OVERTOPPED BELOW THE Q100? FREQUENCY:

RELIEF ELEVATION: DISCHARGE OVER ROAD @ Q100:

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE:

VERTICAL CLEARANCE @ Q50 =

SCOUR:

REQUIRED CHANNEL PROTECTION:

PERMIT INFORMATION

AVERAGE DAILY FLOW: N/A

ORDINARY LOW WATER: DEPTH:

ORDINARY HIGH WATER: DEPTH:

ADDITIONAL COMMENTS

ULTIMATE CONSTRUCTION GOVERNS ACTUAL VERTICAL CLEARANCE

MINIMUM VERTICAL CLEARANCE EQUALS 17'-6"

CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS
& LANDSCAPE ARCHITECTS
11 WINNERS CIRCLE ALBANY, NEW YORK 12205

DESIGN CRITERIA:

1. DESIGN LIVE LOAD AASHTO 85 PSF, H-5 TRUCK, 100 PSF SNOW LOAD
2. DESIGN SPAN 125' FT (SPAN 1) 140 FT (SPAN 2)
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL 3 KSF ON LEDGE -
4. ALLOWABLE LOAD FOR PILING TYPE ESTIMATED LENGTH
5. STRUCTURAL STEEL AASHTO M270 GRADE 50
6. REINFORCING STEEL GRADE 60
7. CONCRETE CLASS A -
   CLASS B - 3.5 KSI
   SILICA FUME - 4.0 KSI

TRAFFIC MAINTENANCE:

1. IS TRAFFIC TO BE MAINTAINED? N/A IF YES, ON EXISTING STRUCTURE - OR ON TEMPORARY BRIDGE -
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY - TRAFFIC CONTROL SIGNALS REQUIRED -
   MINIMUM CLEAR SPAN (NORMAL TO STREAM): - VERTICAL CLEARANCE ABOVE STREAMBED: -
   WATERWAY OF FULL OPENING: -
   ARE SIDEWALKS REQUIRED? - IF SO, ON WHAT SIDE? -
   STRUCTURE TYPE: -

LOAD FACTOR LOAD RATING (TONS)

LOADING LEVELS (LOAD FACTOR)	TRUCK						
	H	HS	3S2	6 AXLE	3A.STR.	4A.STR.	5A.SEMI
INVENTORY A = 2.17 B = 1.00	N/A						
POSTED A = 1.55 B = 1.40							
OPERATING A = 1.30 B = 1.67							

$$RF = \frac{\phi M_n - 1.3\,M_{DL}}{A \times M_{LL+I}}$$

$$\frac{.95\,F_y\,S_{LL+I} - M_{DL}\frac{S_{LL+I}}{S_{DL}} - M_{SDL}\frac{S_{LL+I}}{S_{SDL}}}{1.67\,M_{LL+I}}$$

PROJECTED TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	% ADTT
N/A					
2020					

20 year ESAL for flexible pavement from 2000 to 2020 = 4,825,000
40 year ESAL for flexible pavement from 2000 to 2040 = 17,225,000
Design speed: 100 KM/H

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER	Bridge No.
Highway No. I-89	Log Sta.
	Surv. Sta.

BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

PRELIMINARY INFORMATION

Designed By D. STECIAK	Drawn by K. DETRICK/J. LAGONE
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. BM-089-3(33) STP EH 99(8)
L.G.C. Info.	
Bridge Sheet No.	Sheet 2 OF 23

FILE NAME = p:\2002\maryn\15\PRELIM\PLOT
DATE/TIME = 08/29/2001 08:01
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BRIDGE AND ROADWAY QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION
STRUCTURES DIVISION

EARTHWORK

GRADES

% GDE	VERT CUR	STATION	ELEVATION ON TAN.	ELEVATION ON V.C.	CORR. V.C.	DIST.	AREA	CU.YDS.	AREA	CU.YDS.	AREA	CU.YDS.	AREA	CU. YDS.

ITEM NO.	ITEM	UNIT	QUANTITY BREAKDOWN (SEE SHEET 10 FOR PROJECT LIMITS) STP EH 99(8) ROADWAY	STP EH 99(8) EROSION	STP EH 99(8) TOTAL	IM-089-3(33) BRIDGE	IM-089-3(33) EROSION	IM-089-3(33) FULL E&C	IM-089-3(33) TOTAL	PROJECT TOTAL	FINAL
201.10	CLEARING AND GRUBBING	LS	1		1					1	
203.15	COMMON EXCAVATION	CY	230		230					230	
203.30	EARTH BORROW	CY	20		20					20	
203.40	FINE GRADING - SUBGRADE	SY	735		735	65			65	800	
204.25	STRUCTURE EXCAVATION	CY	366		366	654			654	1020	
204.30	GRANULAR BACKFILL FOR STRUCTURES	CY	221		221	397			397	618	
301.25	SUBBASE OF CRUSHED GRAVEL	CY	240		240					240	
501.22	CONCRETE,CLASS A	CY				21			21	21	
501.25	CONCRETE,CLASS B	CY				146			146	146	
505.36	TEMPORARY STEEL SHEET PILING	SF				1310			1310	1310	
507.17	EPOXY COATED REINFORCING STEEL	LB				14870			14870	14870	
514.10	WATER REPELLANT	GAL				10			10	10	
525.15	METAL HAND RAILING (MOD-2 x 6 PRESSURE TREATED TIMBER)	LF	810		810	110			110	920	
526.20	CONCRETE BIN TYPE RETAINING WALL (MOD A - SHIP 2 FOOT DEEP BLOCK)	SF				3000			3000	3000	
526.20	CONCRETE BIN TYPE RETAINING WALL (MOD B - SHIP 4 FOOT DEEP BLOCK)	SF				410			410	410	
526.20	CONCRETE BIN TYPE RETAINING WALL (MOD C - PLACE 2 FOOT DEEP BLOCK)	SF	3000		3000					3000	
526.20	CONCRETE BIN TYPE RETAINING WALL (MOD D - PLACE 4 FOOT DEEP BLOCK)	SF	410		410					410	
545.20	PREFABRICATED MULTI-MODAL BRIDGE (MOD)	LS				1			1	1	
618.15	BITUMINOUS CONCRETE SIDEWALK	TON	85		85	7			7	92	
620.11	CHAIN-LINK FENCE,4 FEET	LF	1130		1130					1130	
620.20	BRACE ASSEMBLY FOR CHAIN-LINK FENCE,4 FEET	EA	10		10					10	
620.25	WOVEN WIRE FENCE WITH STEEL POSTS	LF				50			50	50	
620.75	SNOW BARRIER (GALV.)	LF				175			175	175	
621.75	REMOVING AND RESETTING GUARDRAIL (MOD-MODIFY POSTS)	LF				120			120	120	
621.90	TEMPORARY TRAFFIC BARRIER (CONCRETE MEDIAN BARRIER)	LF				240			240	240	
630.10	UNIFORMED TRAFFIC OFFICERS	HR	50		50	120			120	170	
630.15	FLAGGERS	HR	300		300	90			90	390	
631.16	TEST EQUIPMENT FOR CONCRETE	LS						1	1	1	
635.10	MOBILIZATION	LS	0.2		0.2	0.8			0.8	1	
641.10	TRAFFIC CONTROL	LS	0.5		0.5	0.5			0.5	1	
649.41	GEOTEXTILE FOR UNDERDRAIN TRENCH LINING	SY	520		520					520	
649.51	GEOTEXTILE FOR SILT FENCE	SY		397	397		43		43	440	
651.15	SEED	LB		45	45		5		5	50	
651.18	FERTILIZER	LB		415	415		45		45	460	
651.25	HAY MULCH	TON		1	1		0.1		0.1	1.1	
651.26	HAY BALES FOR EROSION CONTROL	EA		300	300		30		30	330	
651.35	TOPSOIL	CY	30		30					30	
* 613.10	STONE FILL,TYPE I	CY	30		30					30	
* 616.28	CAST-IN-PLACE CONCRETE CURB,TYPE B	FT	20		20					20	
* 616.41	REMOVAL OF EXISTING CURB	FT	20		20					20	
* 618.10	PORTLAND CEMENT CONCRETE SIDEWALK 5 IN.	SY	10		10					10	
* 654.10	EROSION MATTING	SY	90		90					90	
675.20	TRAFFIC SIGNS (TYPE A)	SF	12		12						
675.30	FLANGED CHANNEL SIGN POSTS	LB	150		150						

* ITEMS NOT IN ORDER

BRIDGE(S) AT STATION(S) STA. 16+31.53

LOCATION(S) BLAKLEY RD. PEDESTRIAN BRIDGE OVER I-89

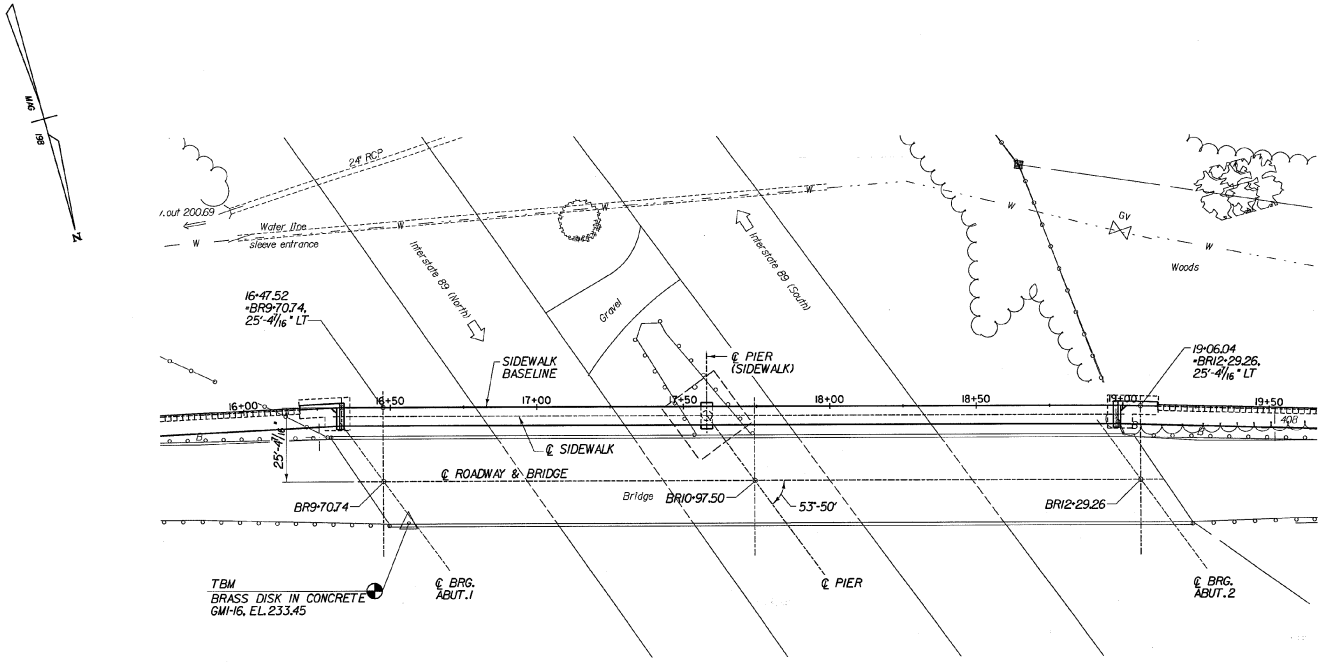
PREPARED BY: D.A.S./J.J.L. CHECKED BY:

SUPERVISOR: M.W. OLSTAD

PROJECT: COLCHESTER PROJECT NO: IM-089-3(33) & STP EH 99(8)

BR ____ OF ____ SHEET NO: 3 OF 23

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DATE/TIME = 08/24/2281
USER = BBA



BASELINE TIE

SCALE 1" = 20'-0

20 0 20

NOTE:
SIDEWALK BASELINE IS TO BE LOCATED OFF THE EXISTING ROADWAY BRIDGE AND PARALLEL TO IT.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	COLCHESTER	Bridge No.
Highway No.	I-89	Log Sta.
		Surv. Sta.

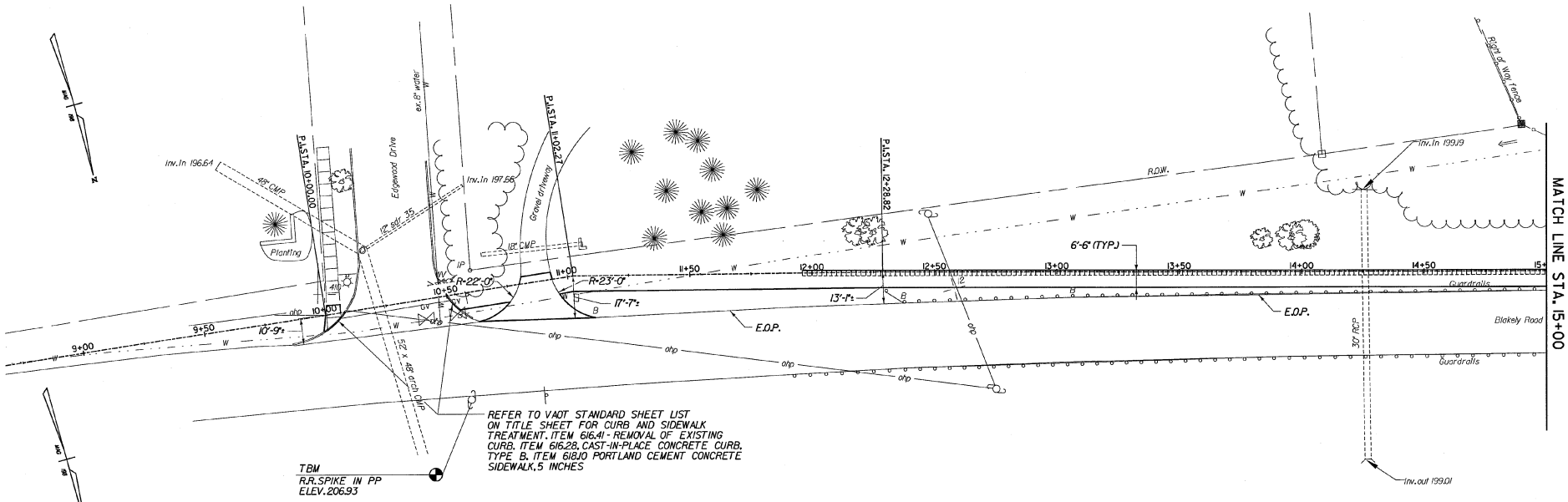
BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

BASELINE TIES

Designed By D. STECIAK	Drawn by K. DETRICK
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. IM-089-3(33) STP EH 99(8)
L.G.C. Info.	
Bridge Sheet No.	Sheet 4 OF 23

CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
11 WINNERS CIRCLE ALBANY, NEW YORK, 12205

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USER = bbk



STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	COLCHESTER	Bridge No.	
Highway No.	I-89	Log Sta.	
		Surv. Sta.	

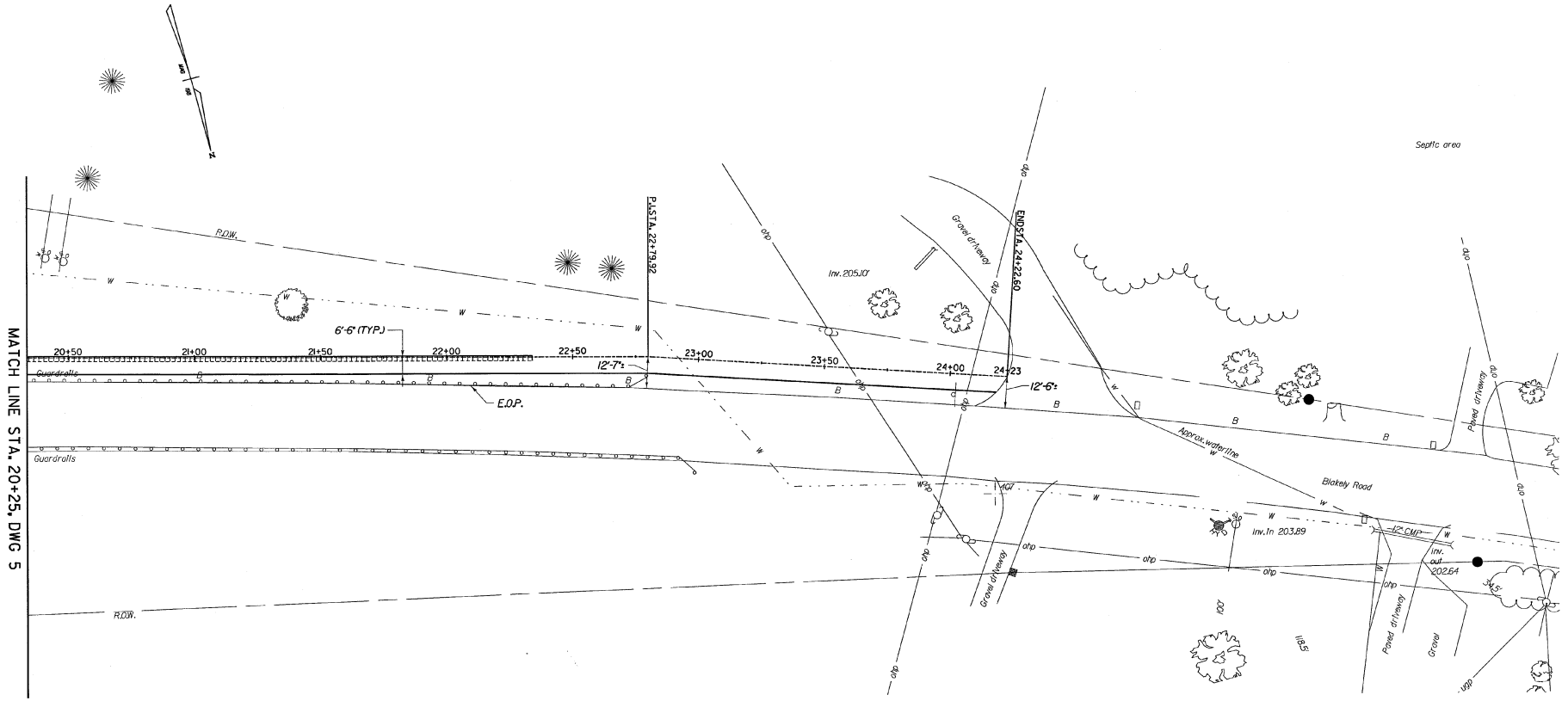
BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

GENERAL PLAN

Designed By D. STECIAK		Drawn by K. DETRICK	
Checked By M. OLSTAD	Date 7/2001	Bridge Design Supervisor M. OLSTAD	Date 7/2001
PROJECT COLCHESTER		PROJECT NO. M-089-3(33) STP EM 99(8)	
L.G.C. Info.			
Bridge Sheet No.		Sheet 5 OF 23	

CHA CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
3 WINNERS CIRCLE ALBANY, NEW YORK, 12205

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DATE/TIME = 6/26/2001 4:08:47 PM
USER = BB4



SCALE 1" - 20'-0

20 0 20

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	COLCHESTER	Bridge No.	
Highway No.	I-89	Log Sta.	
		Surv. Sta.	

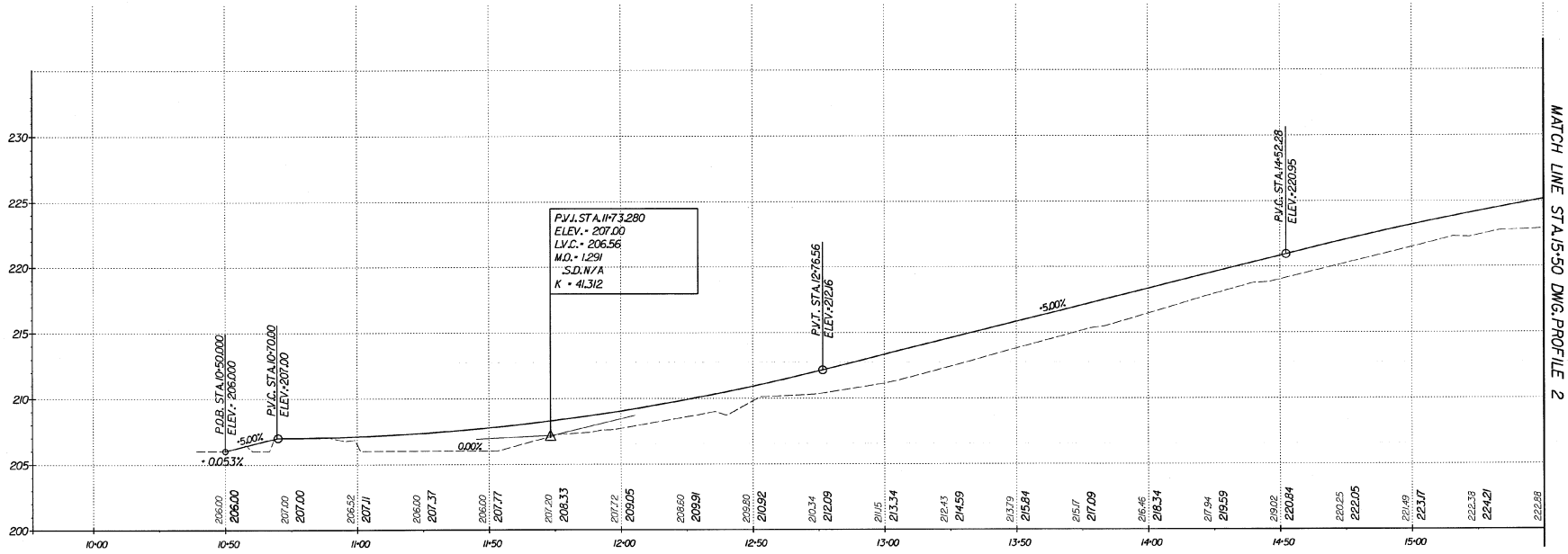
BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

GENERAL PLAN

Designed By D. STECIAK		Drawn by K. DETRICK	
Checked By M. OLSTAD	Date 7/2001	Bridge Design Supervisor M. OLSTAD	Date 7/2001
PROJECT COLCHESTER		PROJECT NO. IM-089-3(33) STP EH 99(8)	
L.G.C. Info.			
Bridge Sheet No.		Sheet 6 OF 23	

CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
8 WINNERS CIRCLE ALBANY, NEW YORK, 12205

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DATE/TIME = 08/24/2001
USER = ebk



PROFILE

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HORIZONTAL 0 20 40 60

SCALE IN FEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER	Bridge No.
Highway No. I-89	Log Sta. / Surv. Sta.

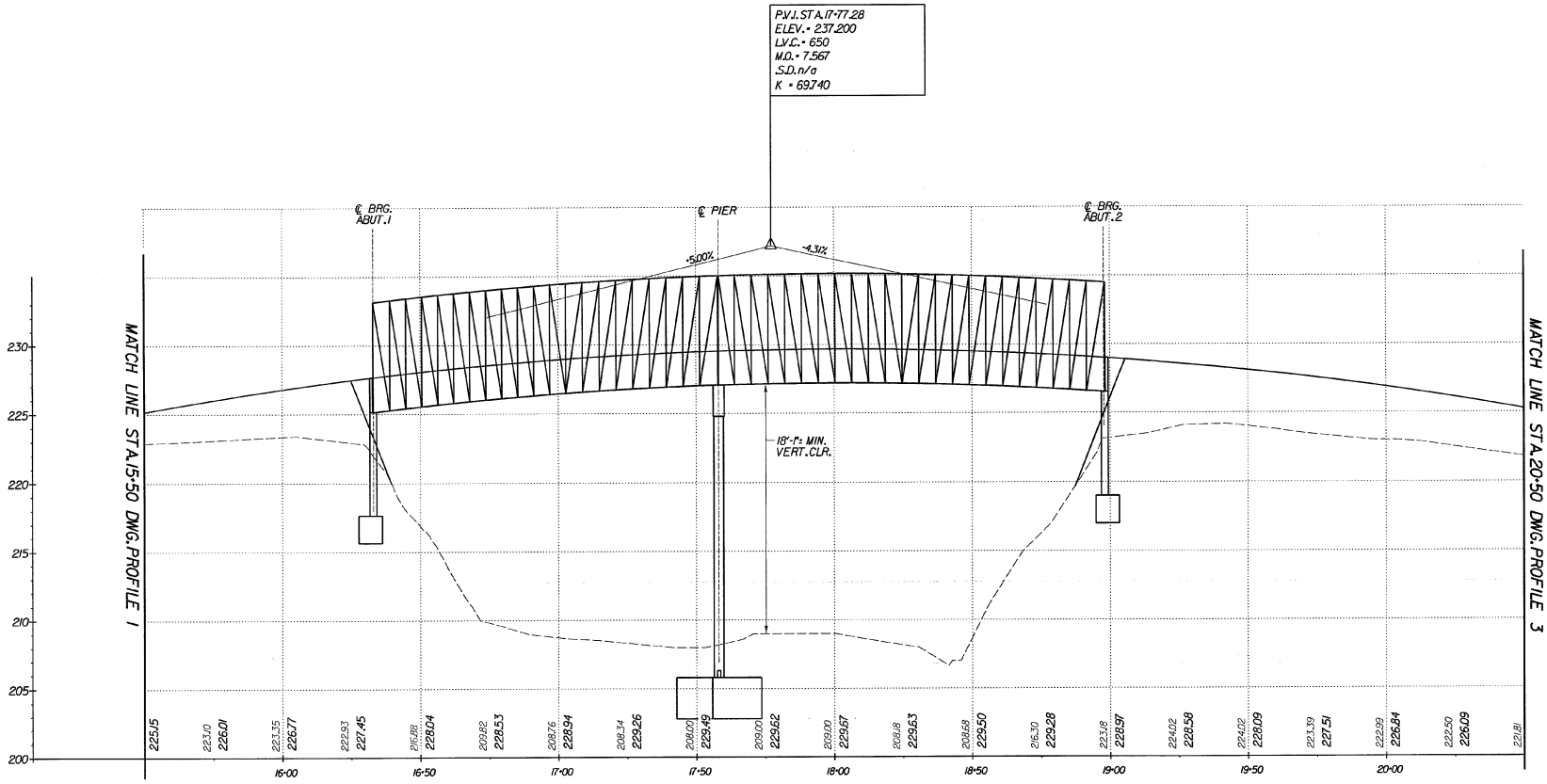
BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

PROFILE 1

Designed By D. STECIAK	Drawn by K. DETRICK
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. IM-089-3(33) STP EH 99(8)
L.G.C. Info.	
Bridge Sheet No.	Sheet 7 OF 23

CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
3 WINNERS CIRCLE ALBANY, NEW YORK 12205

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PROFILE

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HORIZONTAL 0 20 40 60

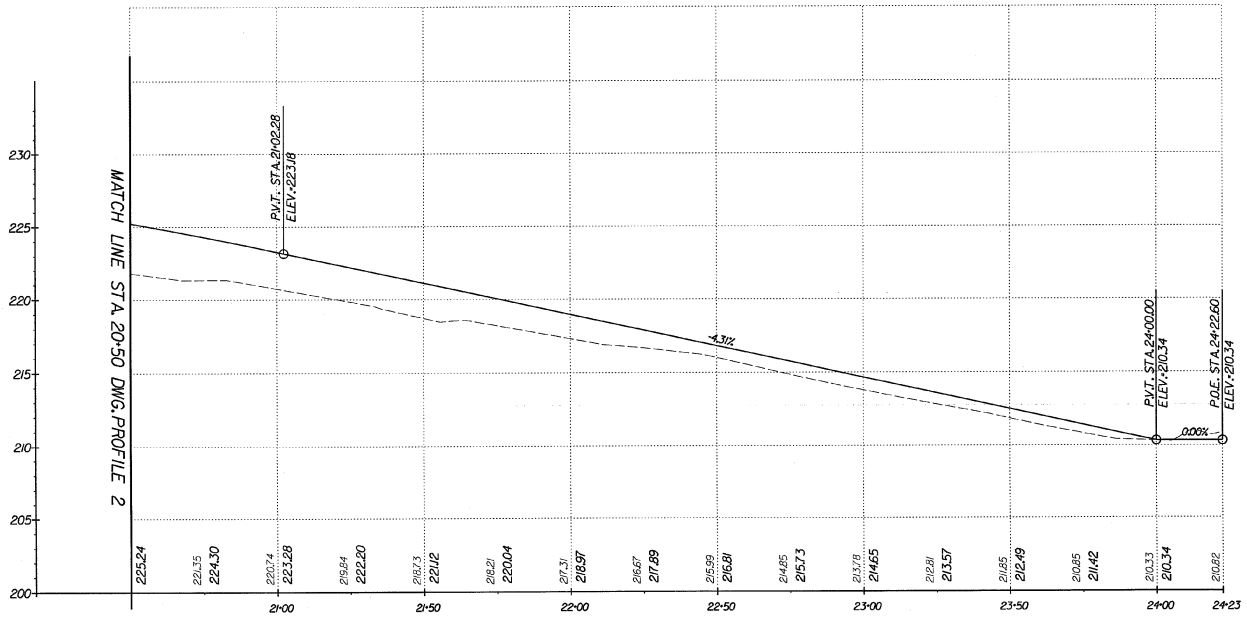
SCALE IN FEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

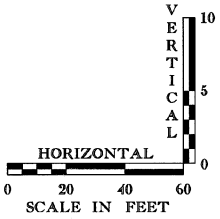
Town Of COLCHESTER	Bridge No.
Highway No. I-89	Log Sta.
	Surv. Sta.
BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89	
PROFILE 2	
Designed By D. STECIAK	Drawn by K. DETRICK/J. LAGONE
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. M-089-3(33) STP EH 99(8)
I.G.C. Info.	
Bridge Sheet No.	Sheet 8 OF 23

CHA CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
8 WINNERS CIRCLE ALBANY, NEW YORK, 12205

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PROFILE

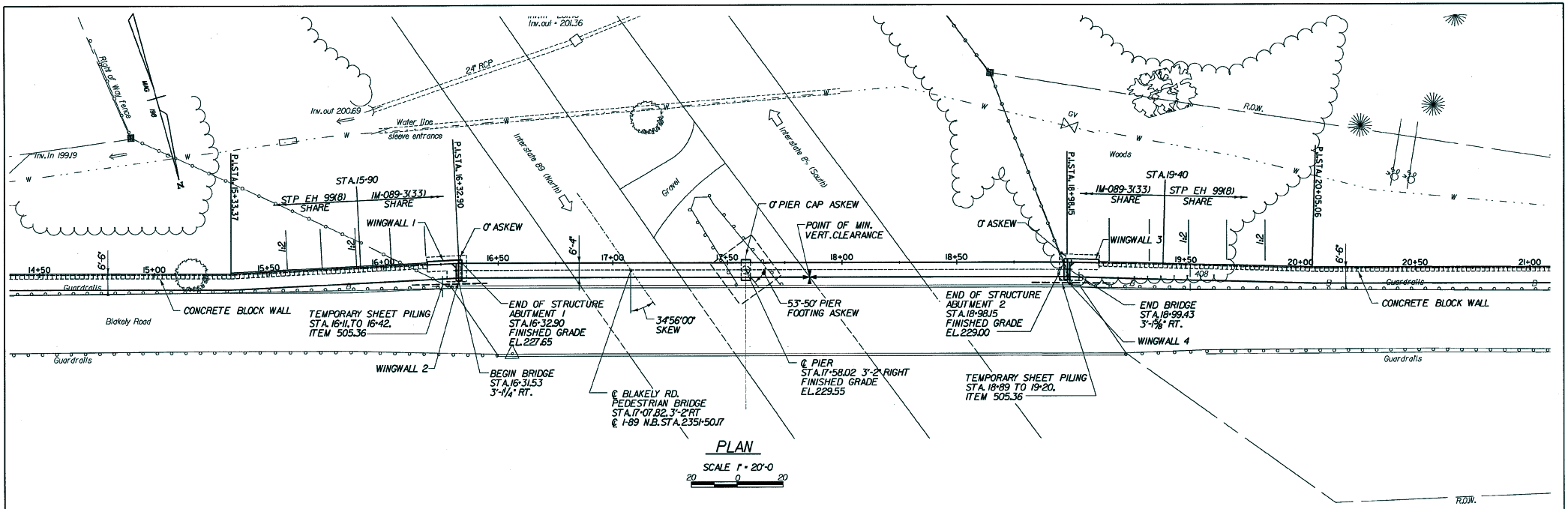


STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER	Bridge No. / Log Sta. / Surv. Sta.
Highway No. I-89	
BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89	
PROFILE 3	
Designed By D. STECIAK	Drawn by K. DETRICK
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. IM-089-3(33) STP EM 99(8)
L.G.C. Info.	
Bridge Sheet No.	Sheet 9 OF 23

CHA CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
11 WINNERS CIRCLE ALBANY, NEW YORK, 12205

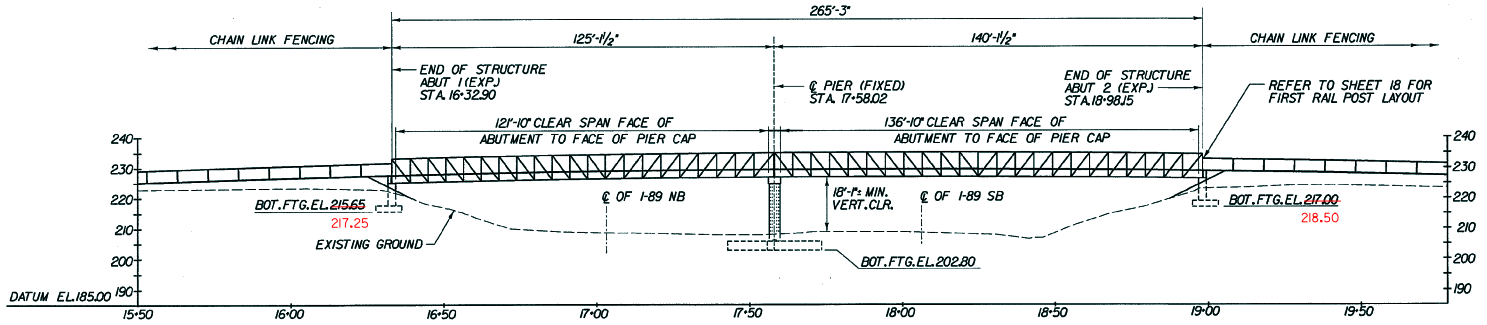
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USER = ebb



PLAN

SCALE 1" = 20'-0

20 0 20



ELEVATION

SCALE 1" = 20'-0

20 0 20

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER	Bridge No.
Highway No. I-89	Log Sta.
	Surv. Sta.

BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

PLAN AND ELEVATION

Designed By D. STECIAK	Drawn by K. DETRICK
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. IM-089-3(33) STP EH 99(8)
L.G.C. Info.	
Bridge Sheet No.	Sheet 10 OF 23

CHA CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
3 WINNERS CIRCLE ALBANY, NEW YORK, 12205

DATE/TIME = 8/24/2001 10:53:18 AM

SOIL CLASSIFICATION

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

ROCK QUALITY DESIGNATION

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

SHEAR STRENGTH

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

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

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

COMMONLY USED SYMBOLS

▼	Water Elevation
⊗	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per Foot For: 2" O.D. Sampler 1 3/8" I.D. Sampler Hammer Weight Of 140 Lbs. Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 5/8"
NX	Core Size 2 1/8"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	To Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)

COLOR

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

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.

BOULDER - A rock fragment with an average dimension > 12 inches.

COBBLE - Rock fragments with an average dimension between 3 and 12 inches.

GRAVEL - Rounded particles of rock < 3" and > 0.0787" (#10 sieve).

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

SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

VARVED - Alternate layers of silt and clay.

HARDPAN - Extremely dense soil, cemented layer, not softened when wet.

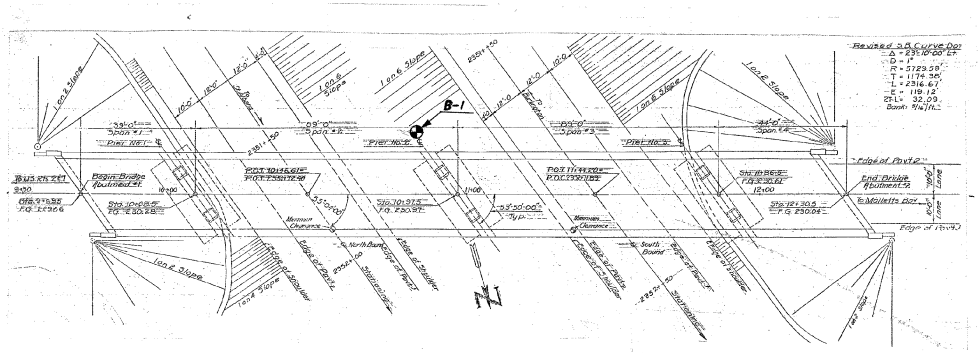
MUCK - Soft organic soil (containing > 10% organic material.

MOISTURE CONTENT - Weight of water divided by dry weight of soil.

FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.

STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.

DIP - Inclination of bed with a horizontal plane.



PLAN

SCALE 1" = 20'-0

20 0 20

BORING CHART

HOLE NO.	SURV. STATION	OFFSET	GROUND ELEV.	ELEV. TLOB
B-1	10+83.	21 LT	204.36	---

STATIONING IS BASED ON BLAKELY ROAD 1960 PLANS OF RECORD.
THIS IS APPROMATE TO NEW STRUCTURE 17+55, +/- RIGHT 4 FT.

GENERAL NOTES

1. The subsurface explorations shown herein were made between and by the Agency.
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
4. Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.
5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER	Bridge No. BR 75
Highway No. I-89	Log Sta.
	Surv. Sta.

BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

BORING INFORMATION SHEET

Designed By S.FARNSWORTH	Drawn By R.PELLETT
Checked By S.FARNSWORTH Date 11/28/0	Bridge Design Supervisor S.FARNSWORTH Date 11/28/0
PROJECT COLCHESTER	PROJECT NO. IM 089-3(33)
I.G.C. Info. G:\str6\projects\colc-sher\boring\layout.dgn	borlay1
Bridge Sheet No.	Sheet 10A of 23

PLOTTED 28-NOV-2001

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-1
SHEET 1 OF 4
DATE STARTED: 4/16/01
DATE COMPLETED: 5/01/01

PROJECT NAME: COLCHESTER
SITE NAME: BR 75
STATION: 10+83.50
GROUND EL.: 204.36

PROJECT NUMBER: IM089-3(33)
SITE NO.: Blakely Rd.
OFFSET: -21.00
G.W. DEPTH: 15.2

BORING CREW
CREW CHIEF: YOUNG
DRILLER: YOUNG
LOGGER: SOMERS

BORING RIG: SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		A-2-4, Sa, brn, Moist, Rec. = 1.66'	12	14.6	2.5	78.1	19.4		
		A-2-4, SiSa, brn, Moist, Rec. = 1.7'	10	20.2	1	76.9	22.1		
		A-2-4, SiSa, brn, MTW, Rec. = 1.75'	13	25.7	0.8	70.8	28.4		
		A-4, SaSi, gry-brn, MTW, Rec. = 1.7'	17	29.6		45.7	54.3		
		A-4, SaSi, Lt/gry, MTW, Rec. = 1.7'	7	29.3	0.2	20.1	79.7		
		A-4, SaSi, Lt/gry, MTW, Rec. = 1.6'	4	29.7		24.9	75.1		
15 ▽		A-4, SaSi, Lt/gry, MTW, Rec. = 1.5'	4	27.2	VISUAL CLASSIFICATION				
		A-4, Si, gry, MTW, Rec. = 0.5'	5	26.9	VISUAL CLASSIFICATION				
		A-4, SaSi, gry, MTW, Rec. = 0.8'		28.2	VISUAL CLASSIFICATION				
		A-4, Si, gry, MTW, Rec. = 1.5'	8	28.6	VISUAL CLASSIFICATION				
		A-4, Si, gry, MTW, Rec. = 1.7'	5	26.2	VISUAL CLASSIFICATION				
		A-4, Si, gry, MTW, Rec. = 1.5'	7	27.4	VISUAL CLASSIFICATION				
		A-4, SaSi, gry, MTW, Rec. = 1.0'	2	27.7	VISUAL CLASSIFICATION				
		A-4, Si, gry, MTW, Rec. = 1.6'	8	27.1	VISUAL CLASSIFICATION				
		A-4, Si, gry, MTW, Rec. = 1.4'	3	27.3	VISUAL CLASSIFICATION				
		A-4, Si, gry, MTW, Rec. = 1.9'	2	29.3	VISUAL CLASSIFICATION				
		A-4, Si, gry, MTW, Rec. = 1.9'	2	29.4	VISUAL CLASSIFICATION				
		A-4, Si, gry, MTW, Rec. = 1.2'	3	32.3		0.8	99.2	31	6
		A-4, Si, gry, MTW, Rec. = 2.0'	4	28.1		0.6	99.4		

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-1
SHEET 2 OF 4
DATE STARTED: 4/16/01
DATE COMPLETED: 5/01/01

PROJECT NAME: COLCHESTER
SITE NAME: BR 75
STATION: 10+83.50
GROUND EL.: 204.36

PROJECT NUMBER: IM089-3(33)
SITE NO.: Blakely Rd.
OFFSET: -21.00
G.W. DEPTH: 15.2

BORING CREW
CREW CHIEF: YOUNG
DRILLER: YOUNG .
LOGGER: SOMERS

BORING RIG: SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		A-4, Si, gry, MTW, Rec. = 2.0'	1	30.7		1.2	98.8		
55		A-4, Si, gry, MTW, Rec. = 2.0'	5	30.4		3.8	96.2	29	6
60		A-4, Si, gry, MTW, Rec. = 2.0'	7	30.2	0.3	4.1	95.6	28	6
65		A-4, Si, gry, MTW, Rec. = 2.0'	3	27.5	0.3	2.8	96.9	28	6
70		A-4, Si, gry, MTW, Rec. = 2.0'	5	29	0.1	0.9	99		
75		A-3, Sa, brn, MTW, Rec. = 2.0'	7	21.9	0.1	93.6	6.3		
80		A-4, Si, gry, MTW, Rec. = 2.0'	WH	29.8		0.4	99.6		
85		A-4, Si, gry, MTW, Rec. = 1.2'	8	28.1		1.1	98.9		
90		A-4, Si, gry, MTW, Rec. = 1.7'	8	26.3	0.3	2.8	96.9		
95		A-4, Si, gry, MTW, Rec. = 1.5'	9	27.3	0.6	2.3	97.1		

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-1
SHEET 3 OF 4
DATE STARTED: 4/16/01
DATE COMPLETED: 5/01/01

PROJECT NAME: COLCHESTER
SITE NAME: BR 75
STATION: 10+83.50
GROUND EL.: 204.36

PROJECT NUMBER: IM089-3(33)
SITE NO.: Blakely Rd.
OFFSET: -21.00
G.W. DEPTH: 15.2

BORING CREW
CREW CHIEF: YOUNG
DRILLER: YOUNG
LOGGER: SOMERS

BORING RIG: SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		A-4, Si, gry, MTW, Rec. = 0.9'	6	27.1		1.3	98.7		
105		A-4, Si, gry, MTW, Rec. = 1.1'	5	27		0.9	99.1		
110		A-2-4, SiSa, brn-gry, Moist, Rec. = 0.3'	27	18.4	1	70.7	28.3		
115		A-4, SaSi, gry, MTW, Rec. = 1.1'	36	26	0.1	22	77.9		
120		A-4, Si, gry, MTW, Rec. = 1.1'	14	25.3		2.8	97.2		
125		A-4, Si, gry, MTW, Rec. = 1.5'	12	26.3		0.6	99.4		
130		A-4, Si, gry, MTW, Rec. = 1.1'	23	22.5		5.2	94.8		
135		A-4, Si, gry, MTW, Rec. = 0.7'	24	27.7		3.4	96.6		
140		A-4, Si, gry, MTW, Rec. = 1.4'	31	28.7		3	97		

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-1
SHEET 4 OF 4
DATE STARTED: 4/16/01
DATE COMPLETED: 5/01/01

PROJECT NAME: COLCHESTER
SITE NAME: BR 75
STATION: 10+83.50
GROUND EL.: 204.36

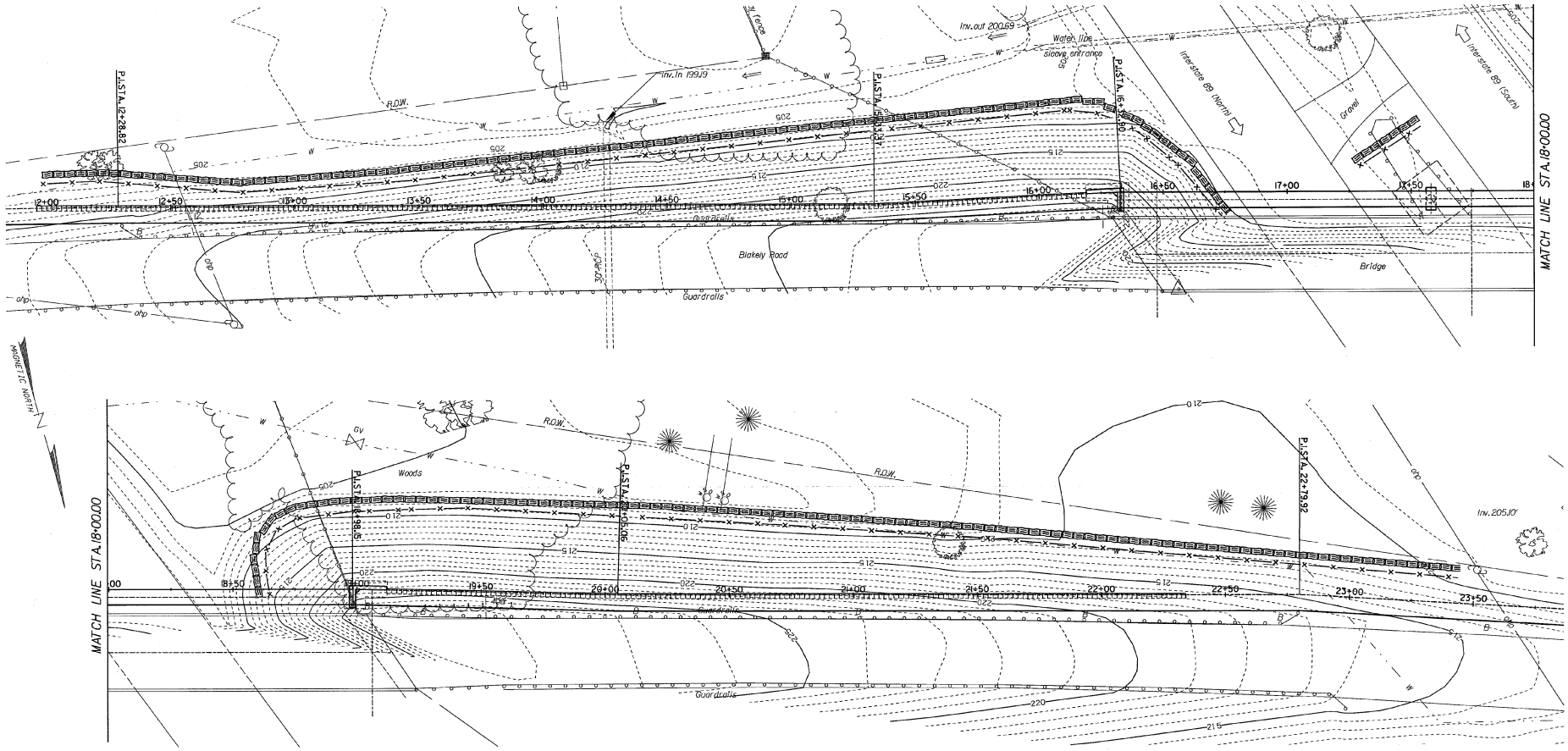
PROJECT NUMBER: IM089-3(33)
SITE NO.: Blakely Rd.
OFFSET: -21.00
G.W. DEPTH: 15.2

BORING CREW
CREW CHIEF: YOUNG
DRILLER: YOUNG
LOGGER: SOMERS

BORING RIG: SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		A-4, Si, gry, MTW, Rec. = 2.0'	21	27.7		1.7	98.3		
		Hole stopped @ 152.0'							
155									
		Drillers Notes:							
		Water @ 15.2' below ground surface 04/16/01.							
160									
165									
170									
175									
180									
185									
190									
195									

SURVEYED BY _____ DATE _____
DRAWN BY J.TOUCHETTE DATE 05/01
SQUAD LEADER C.C. BENDA
DESIGN FILE NO. gs/str6/colch-sher/ma324bor.dgn
IPARM FILE ma324bor.I DATE PLOTTED 28-NOV-2001
PROJ. NAME COLCHESTER
PROJ. NO. IM089-3(33)
SHEET 10B OF 23 SHEETS



LEGEND

HAY BALES FOR EROSION CONTROL. ITEM 651.26

GOETEXTILE FOE SILT FENCE - ITEM 649.51

TEMPORARY EROSION AND SEDIMENT CONTROL NOTES

1. ALL DISTURBED AREAS SHALL BE SEEDED AS SOON AS POSSIBLE AFTER FINAL GRADING.
2. ALL HAY BALES SHALL REMAIN IN PLACE UNTIL NEW TURF IS ESTABLISHED.

SCALE 1" = 20'-0

20 0 20

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER	Bridge No.
Highway No. I-89	Log Sta.
	Surv. Sta.

BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

EROSION & SEDIMENT CONTROL SHEET

Designed By D. STECIAK	Drawn by K. DETRICK/J. LAGONE
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. M-089-3(33) STP EH 9918
L.G.C. Info.	
Bridge Sheet No.	Sheet 11 OF 23

CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
11 WINNERS CIRCLE ALBANY, NEW YORK, 12205

FILE NAME =s:\VP618\mass\11SVERSION\PLT
DATE/TIME =08/24/2001
USER =BBH

GENERAL NOTES:

THE FOLLOWING GENERAL NOTES SHALL APPLY UNLESS OTHERWISE NOTED ON THE PLANS.

1. ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" 1990 EDITION AND ITS LATEST REVISIONS, AND AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" 16th EDITION AND ITS LATEST REVISIONS.

2. DESIGN LIVE LOADING IS TO BE APPLIED IN ACCORDANCE WITH THE PROVISIONS OF THE AASHTO GUIDE SPECIFICATIONS FOR DESIGN OF PEDESTRIAN BRIDGES, AUGUST 1997, AND FOR SNOW REMOVAL TRACTOR OF THE FOLLOWING SPECIFICATIONS:
   - TOTAL LENGTH 106"
   - TOTAL WIDTH 48"
   - WHEEL BASE 63"
   - TOTAL WEIGHT 4300 LBS (INCLUDING SNOW BLOWER)

3. ANY REFERENCE TO "LEFT" AND/OR "RIGHT" ON THE PLANS OR IN THE NOTES REFER TO THE DIRECTION OF STATIONING.

4. THE FOLLOWING TABLE OF DESIGN STRENGTHS APPLIES TO THESE PLANS FOR DESIGN PURPOSES.

   CONCRETE: f'c = 3,500 PSI

   STRUCTURAL STEEL: AASHTO M270, GR50W. Fy = 50,000 PSI

   REINFORCING STEEL: Fy = 60,000 PSI (GRADE 60)

5. ALL WELDING AND DIMENSIONAL TOLERANCES OF WELDED MEMBERS SHALL CONFORM TO THE LATEST ANSI/AASHTO/AWS BRIDGE WELDING CODE AND ITS LATEST REVISIONS.

6. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE CONCRETE REINFORCING STEEL INSTITUTE.

7. REINFORCEMENT PLACING TOLERANCES SHALL BE:
   SPACING +/- 1"
   CLEARING +/- 1/4"

8. MINIMUM COVER FOR REINFORCING STEEL (EXCEPT IN THE DECK) SHALL BE 2" IN BACK FACES OF SUBSTRUCTURES AGAINST EARTH, 4" IN PIER COLUMNS AND CAP BEAMS, AND 3" ELSEWHERE, UNLESS OTHERWISE SHOWN.

9. FLAME CUTTING OF EPOXY COATED REINFORCING STEEL SHALL NOT BE PERMITTED.

10. ALL EXPOSED EDGES OF CONCRETE IN THE SUBSTRUCTURE AND THE SUPERSTRUCTURE SHALL BE CHAMFERED 1" x 1", UNLESS OTHERWISE SHOWN.

11. IN ALL HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS, SHEAR KEYS SHALL BE FORMED AS SHOWN IN THE TYPICAL BRIDGE DETAILS, SHEET 17, AND THEY SHALL BE CONTINUED UP TO 3" FROM EACH END OF THE JOINT. THE UPWARD KEY SHALL BE PLACED INTEGRAL WITH THE CONCRETE BELOW THE JOINT.

12. HORIZONTAL AND VERTICAL CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF JOINT.

13. THE COST OF INSTALLING PVC WATERSTOPS, AS SHOWN IN THE PLANS, SHALL BE SUBSIDIARY ITEM 501.25, "CONCRETE CLASS B". THE TYPE OF PVC WATERSTOP TO BE USED SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL.

14. TEMPORARY EROSION CONTROL MEASURES SHALL INCLUDE PLACEMENT OF SILT FENCE AND HAY BALES AS DEPICTED ON THE EROSION AND SEDIMENT CONTROL SHEET OR AS DIRECTED BY THE ENGINEER.

15. THE CONTRACTOR SHALL CALL "DIG-SAFE" PRIOR TO PERFORMING ANY EXCAVATION. IN ACCORDANCE WITH DIG-SAFE'S RULES OF NOTIFICATION. THE COST OF COORDINATING WITH DIG-SAFE AND THE FOLLOWING UTILITY COMPANIES SHALL BE SUBSIDIARY TO ITEM 635.10, "MOBILIZATION". BELL ATLANTIC, GREEN MOUNTAIN POWER CORP. AND NOVA CABLE. THE COST OF ANY EXPLORATORY EXCAVATION BY THE CONTRACTOR TO ASCERTAIN UTILITY LOCATIONS SHALL BE PAID FOR UNDER ITEM 204.25, STRUCTURE EXCAVATION IN ACCORDANCE WITH THE SPECIAL PROVISIONS. ANY DAMAGE TO UTILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY AS DIRECTED BY THE RESPECTIVE UTILITY COMPANY TO THE ENGINEER AT THE CONTRACTOR'S OWN EXPENSE.

16. WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES.

17. JOINTS AND SCORE MARKS SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

18. ALL STRUCTURAL STEEL SHALL CONFORM TO AASHTO M270 GR 50W (UNPAINTED) EXCEPT AS NOTED ON THE PLANS. ALL STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).

19. DECK CONCRETE SHALL BE "CONCRETE, CLASS A". ALL OTHER CONCRETE SHALL BE "CONCRETE, CLASS B". 3/4 INCH STONE SHALL BE USED AS THE COARSE AGGREGATE IN THE CONCRETE, CLASS B, USED IN THE PIER PLACEMENT.

20. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL WITH A CONSTRUCTION TOLERANCE OF 0.005 RADIANS. OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 1/2" PER FOOT. ABUTMENT SEATS SHALL BE SLOPED FULL WIDTH TOWARD CENTER SPAN. THE ENTIRE BRIDGE
21. SEAT SURFACE SHALL BE SMOOTH STEEL TROWEL FINISHED.

    ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES F.

FOUNDATION:

22. SPREAD FOOTING SHALL BE CONSTRUCTED ON A 1'-0" THICK MAT OF GRANULAR BACKFILL FOR STRUCTURES, ITEM 204.30.

23. GRANULAR BACKFILL SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DRY DENSITY.

24. TEMPORARY STEEL SHEET PILING TO BE DESIGNED BY CONTRACTOR.

SURVEY INFORMATION:

25. THESE PLANS ARE BASED ON THE ORIGINAL BLAKELY ROAD BRIDGE DRAWINGS AND A RECENT SURVEY SUPPLIED TO THE V.A.O.T. BY OTHERS. PERTINENT INFORMATION, SUCH AS R.O.W. LINES AND SITE ELEVATIONS ARE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK. THE LOCATION OF THE EXISTING BLAKELY ROAD PIER 2 FOOTING IS TO BE FIELD VERIFIED BEFORE LAYING OUT SUBSTRUCTURES.

TRAFFIC CONTROL:

26. TRAFFIC IS TO BE CONTROLLED AND MAINTAINED AT ALL TIMES PER THE APPLICABLE V.A.O.T. SPECIFICATIONS IN ITEM 527.10, SECTION 104.04, AND THE STANDARD SHEETS LISTED ON THE TITLE SHEET.

27. THE COST OF ARROW BOARDS OR CHANGEABLE MESSAGE SIGNS IS TO BE INCLUDED IN THE TRAFFIC CONTROL, ITEM 641.10.

MISCELLANEOUS:

28. GALVANIZED COATED CHAIN LINK FENCE - ITEM 620.11 IS TO BE ERECTED ON THE PEDESTRIAN BRIDGE WINGWALLS AND THE CONCRETE BIN TYPE RETAINING WALLS. SNOW BARRIER (GALV.), ITEM 620.75 SHALL BE USED TO EXTEND THE EXISTING SNOW BARRIER ON THE SOUTH SIDE OF BLAKELY ROAD BRIDGE, OVER THE BRIDGES FULL LENGTH .

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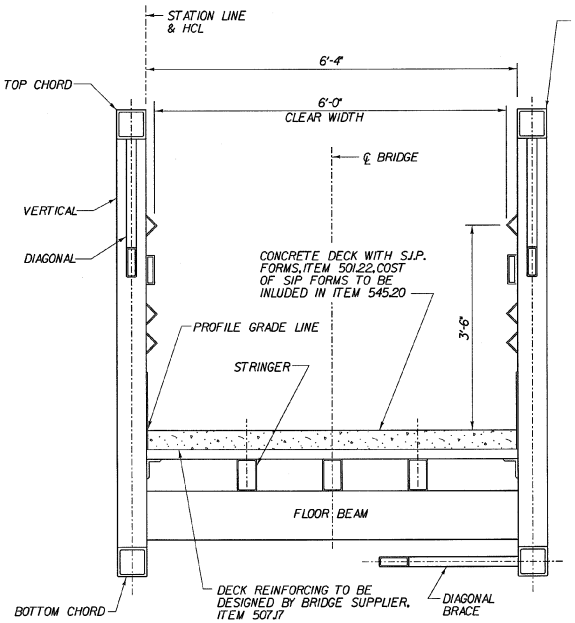
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Highway No. I-89	Log Sta.
	Surv. Sta.

BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

GENERAL NOTES

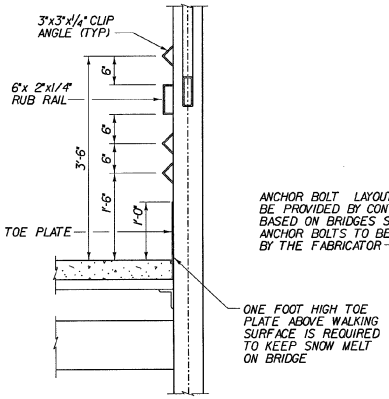
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Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT	PROJECT NO. BM-089-3(33) STP EH 99(8)
I.G.C. Info.	
Bridge Sheet No.	Sheet 12 OF 23

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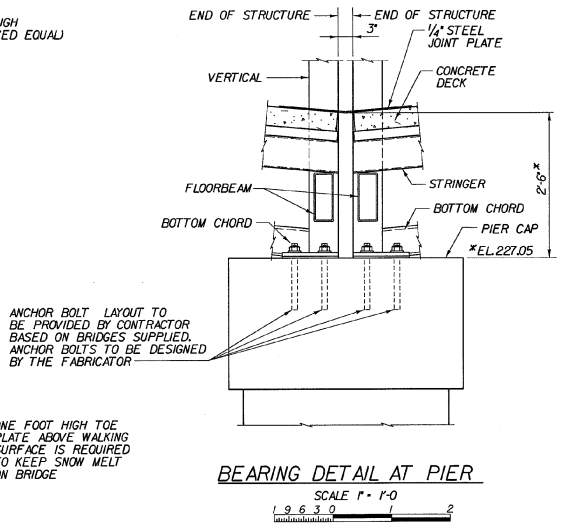
TYPICAL BRIDGE SECTION

SCALE 1" = 1'-0



TYPICAL RAIL DETAIL

SCALE 1" = 1'-0

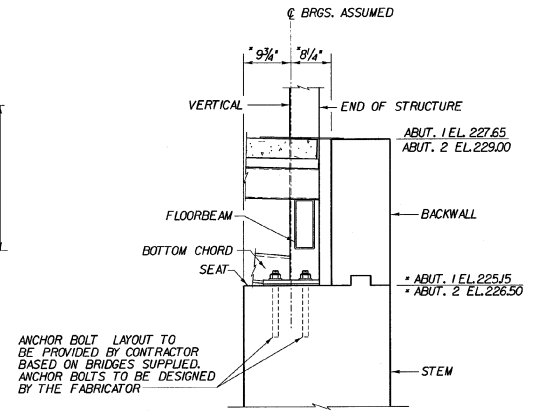


BEARING DETAIL AT PIER

SCALE 1" = 1'-0

* NOTE:

TOP OF PIER ELEVATION SET ON ASSUMPTION THAT TOP OF DECK TO BOTTOM OF PREFABRICATED PEDESTRIAN BRIDGE BEARINGS IS 2'-6". ELEVATION IS TO BE SET BY THE CONTRACTOR TO FIT ACTUAL BRIDGE SUPPLIED BY ADJUSTING COLUMN HEIGHT.



TYPICAL BEARING DETAIL AT ABUTMENTS

SCALE 1" = 1'-0

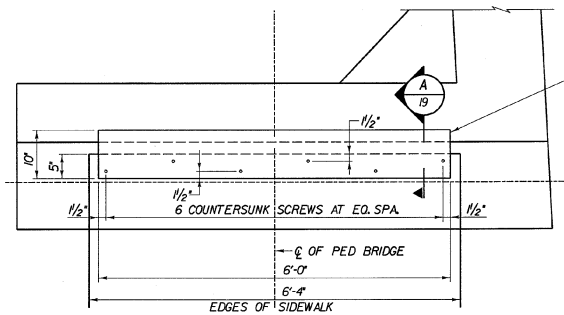
* NOTE:

SEAT ELEVATION SET ON ASSUMPTION THAT TOP OF DECK TO BOTTOM OF PREFABRICATED PEDESTRIAN BRIDGE BEARINGS IS 2'-6". ELEVATION IS TO BE SET BY THE CONTRACTOR TO FIT ACTUAL BRIDGE SUPPLIED BY ADJUSTING SEAT ELEVATION. CENTERLINE OF BEARINGS TO BE SET BY CONTRACTOR ALSO.

LOAD TABLE

SPAN LENGTH (FT)	MANUFACTURER	MODEL	DL REACTION (k)	LL REACTION (k)	SNOW LOAD REACTION (k)
125	CONTINENTAL	HI-SQ	20.1	16.8	19.8
140	CONTINENTAL	HI-SQ	25.8	18.8	22.2
125	STEADFAST		15.0	13.3	18.8
140	STEADFAST		17.8	13.4	21.0

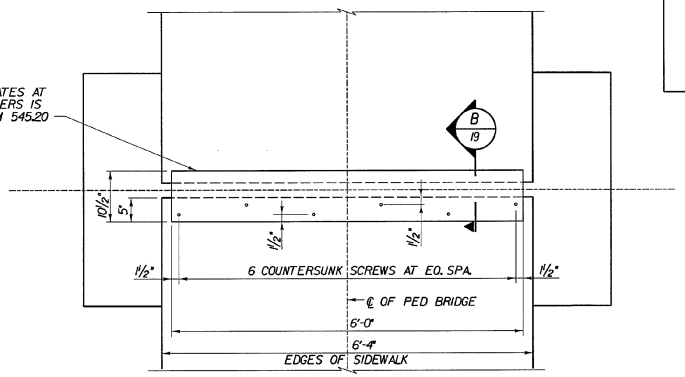
NOTE: REACTIONS ARE PER BEARING



TYPICAL ABUT. JOINT PLATE PLAN

(TYPICAL AT EACH ABUTMENT)

SCALE 1" = 1'-0



JOINT PLATE PLAN AT PIER

SCALE 1" = 1'-0

STATE OF VERMONT
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	Surv. Sta.

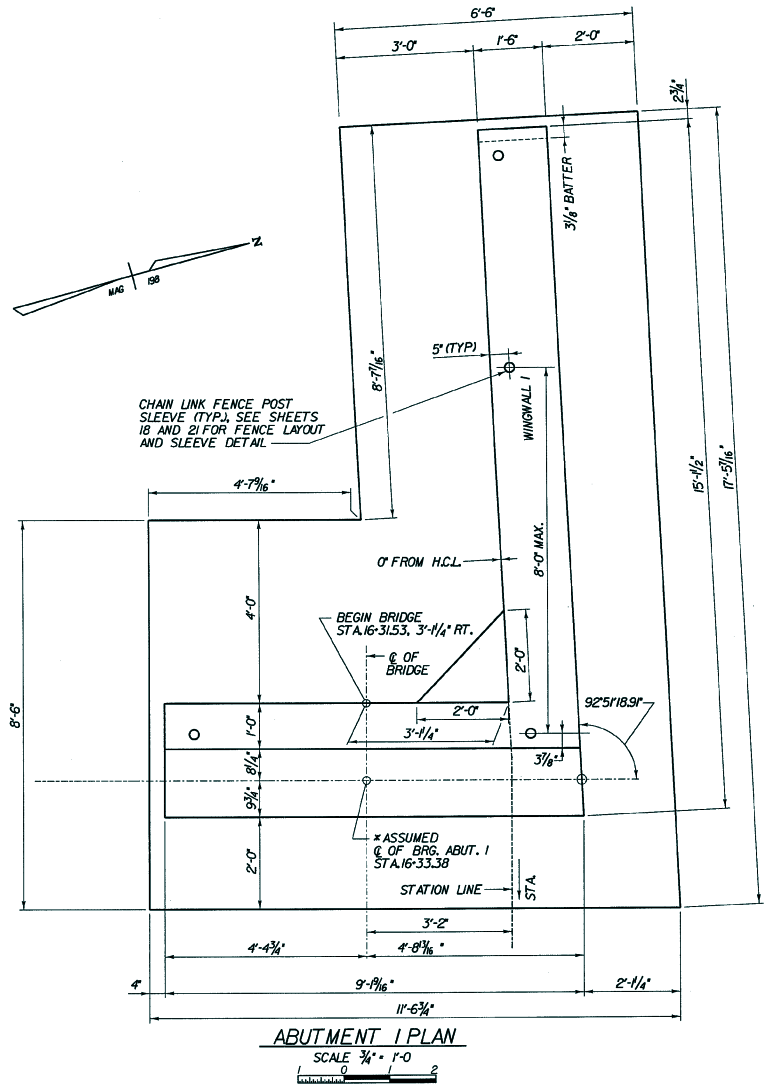
BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

TYPICAL BRIDGE DETAILS

Designed By D. STECIAK	Drawn by J. LAGONE
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. IM-089-3(33) STP EH 99(8)
L.G.C. Info.	
Bridge Sheet No.	Sheet 13 OF 23

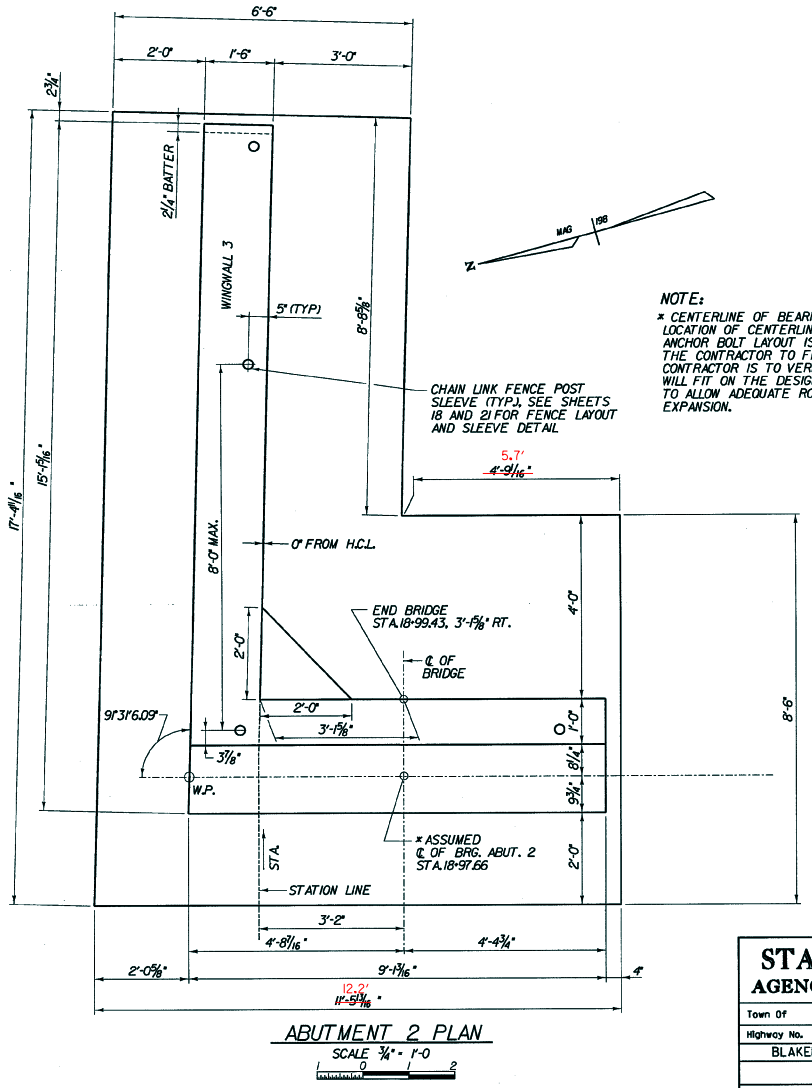
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ABUTMENT 1 PLAN

SCALE ¾" = 1'-0



ABUTMENT 2 PLAN

SCALE ¾" = 1'-0

NOTE:

* CENTERLINE OF BEARING STATION IS ASSUMED. LOCATION OF CENTERLINE OF BEARINGS AND ANCHOR BOLT LAYOUT IS TO BE DETERMINED BY THE CONTRACTOR TO FIT ACTUAL BRIDGE SUPPLIED. CONTRACTOR IS TO VERIFY THAT ACTUAL BRIDGE SUPPLIED WILL FIT ON THE DESIGNED ABUTMENT SEAT CONFIGURATION TO ALLOW ADEQUATE ROOM FOR BEARINGS AND THERMAL EXPANSION.

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	Surv. Sta.

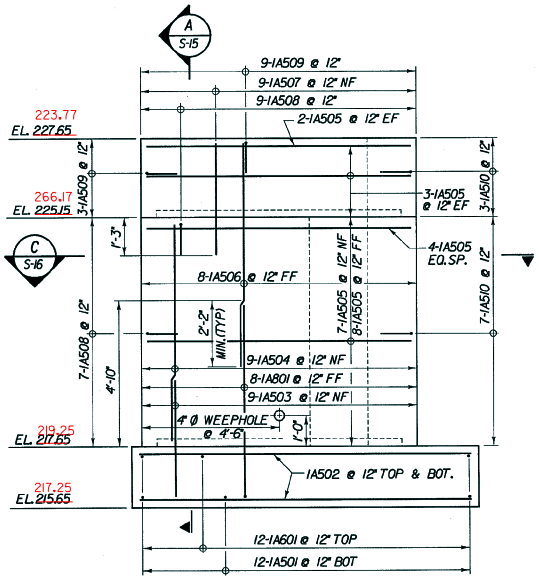
BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

ABUTMENT 1 & 2 PLAN

Designed By D. STECIAK	Drawn by K. DETRICK/J. LAGONE
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. M-089-3(33) STP EH 99(8)
L.G.C. Info.	
Bridge Sheet No.	Sheet 14 OF 23

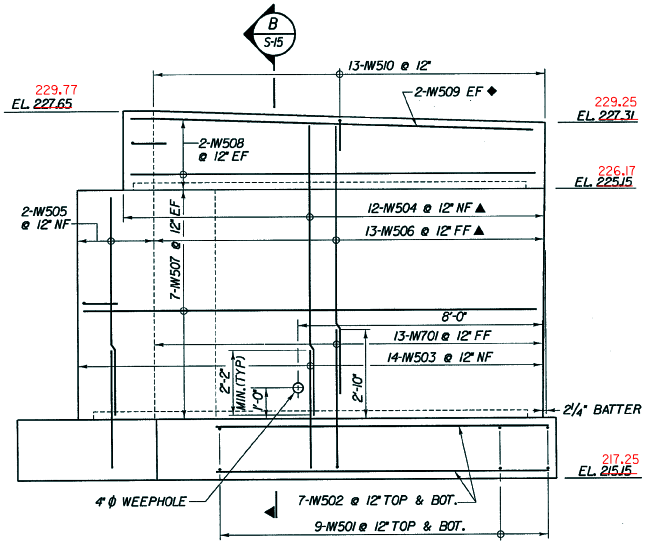
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ELEVATION - ABUTMENT 1

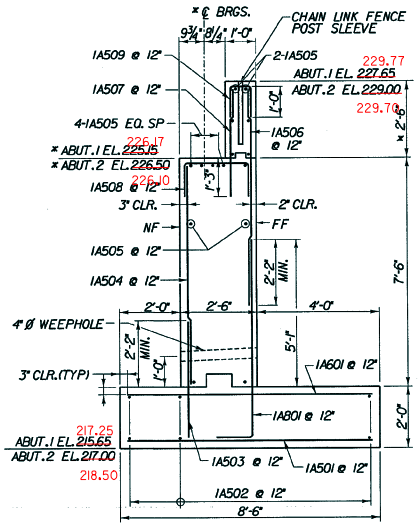
SCALE ½" = 1'-0



ELEVATION - WINGWALL 1

SCALE ½" = 1'-0

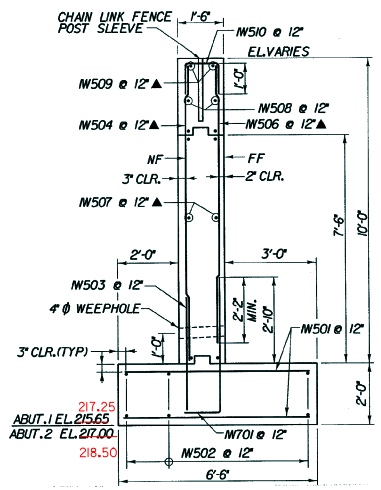
× - ASSUMED TOP OF DECK TO BOTTOM OF PREFABRICATED PEDESTRIAN BRIDGE BEARINGS. DIMENSIONS AND SEAT ELEVATIONS ARE TO BE ADJUSTED BY CONTRACTOR TO FIT ACTUAL BRIDGE SUPPLIED.



A S-15 TYPICAL ABUTMENT SECTION

(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)

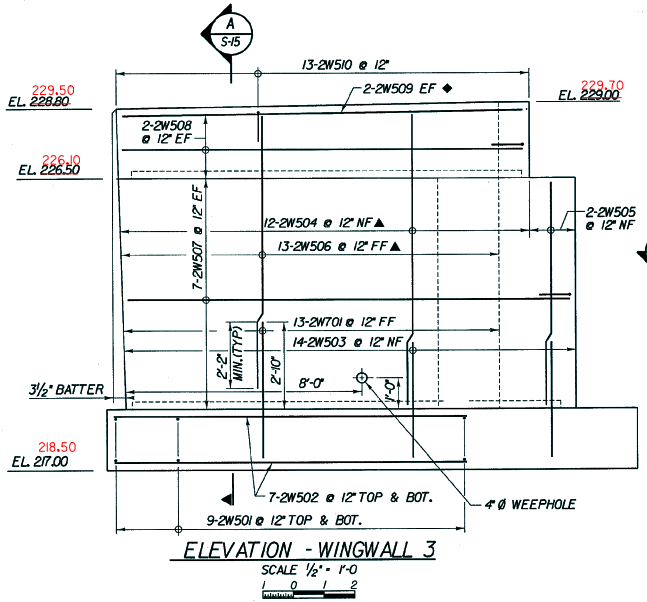
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B S-15 TYPICAL WINGWALL SECTION

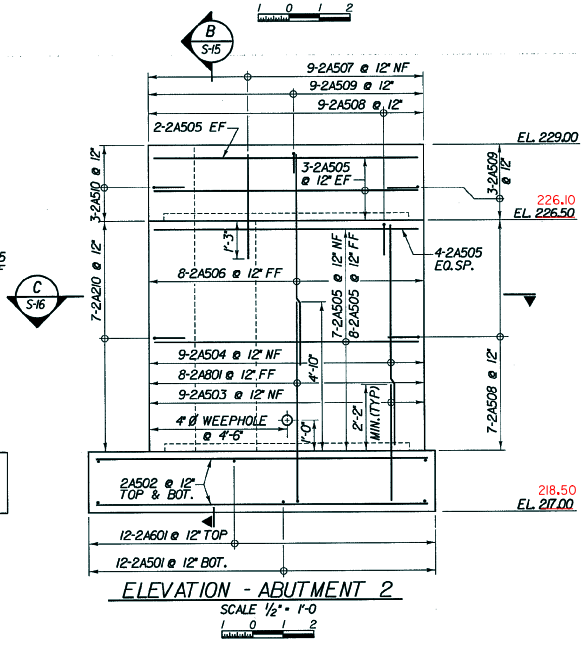
(WINGWALL 1 SHOWN, WINGWALL 2 SIMILAR)

SCALE ½" = 1'-0



ELEVATION - WINGWALL 3

SCALE ½" = 1'-0



ELEVATION - ABUTMENT 2

SCALE ½" = 1'-0

KEY:

NF - NEAR FACE
FF - FAR FACE
EF - EACH FACE
◆ - FIELD BEND
▲ - CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

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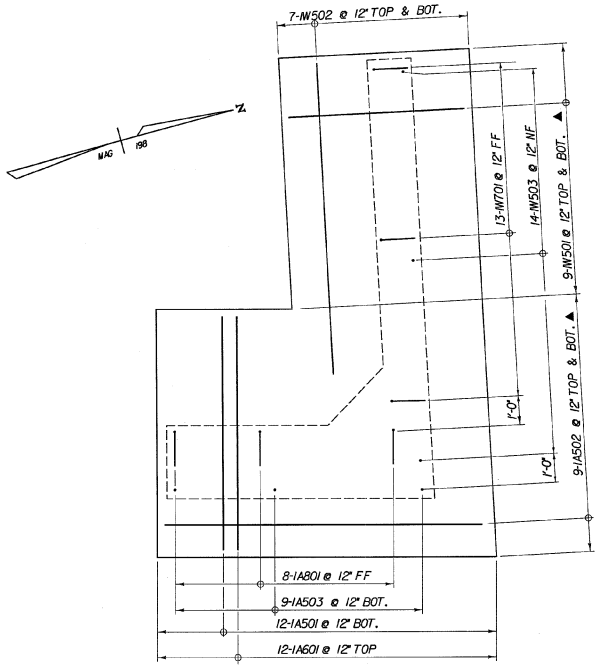
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BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

ABUTMENTS, WINGWALLS 1&3 ELEVATIONS & SECTIONS

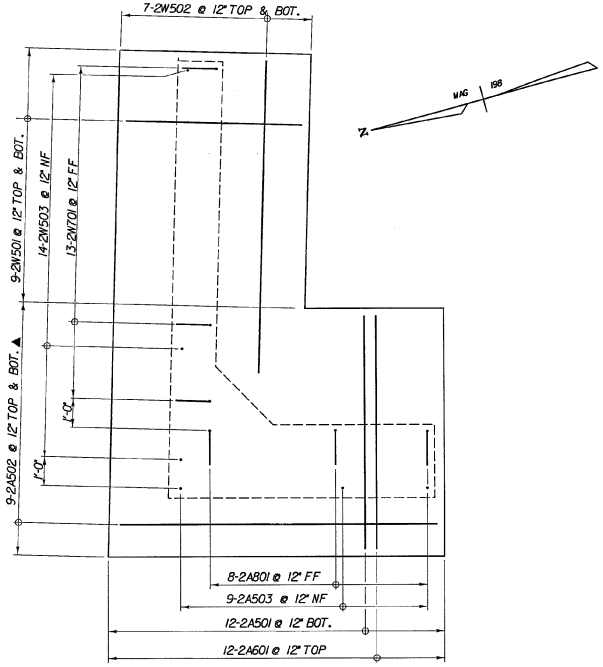
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Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. (M-089-3(33)) STP EH 3968)
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Bridge Sheet No.	Sheet 15 OF 23

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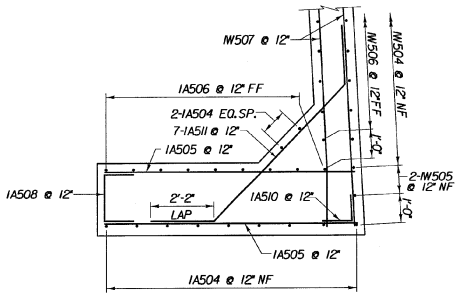
ABUTMENT 1 FOOTING REINFORCING PLAN

SCALE ½" = 1'-0



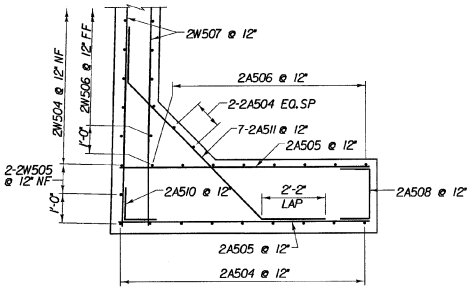
ABUTMENT 2 FOOTING REINFORCING PLAN

SCALE ½" = 1'-0



C S-15 ABUT.1 CORNER & FILLET DETAILS

SCALE ½" = 1'-0



C S-15 ABUT.2 CORNER & FILLET DETAILS

SCALE ½" = 1'-0

KEY:

NF = NEAR FACE
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EF = EACH FACE
▲ = CUT TO FIT IN FIELD

3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

2'-2" MINIMUM LAP (TYP)

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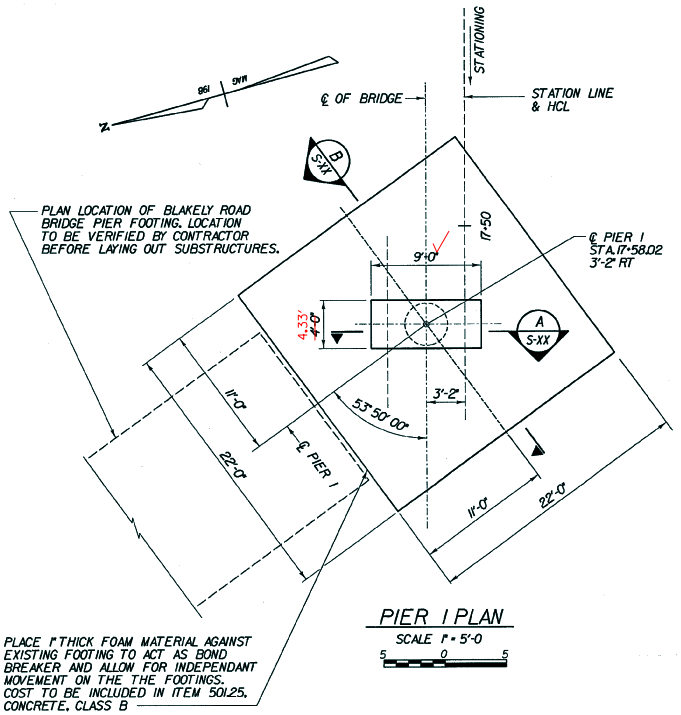
BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

ABUTMENT 1& 2 FOOTING PLAN & DETAILS

Designed By D. STECIAK	Drawn by K. DETRICK/J. LAGONE
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. IM-089-3(33) STP EH 99(8)
L.G.C. Info.	
Bridge Sheet No.	Sheet 16 OF 23

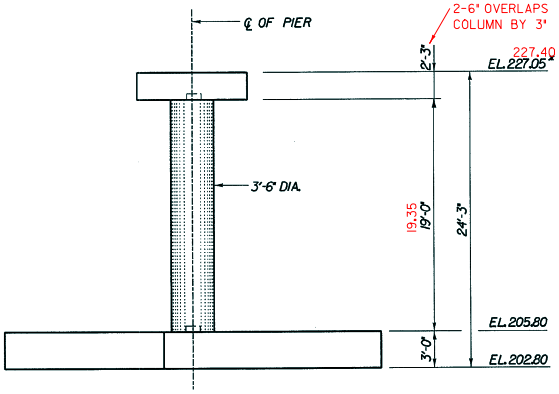
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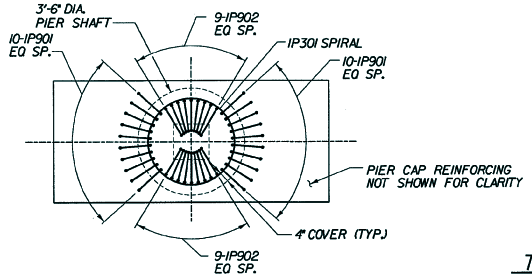
PIER 1 PLAN

SCALE 1" = 5'-0



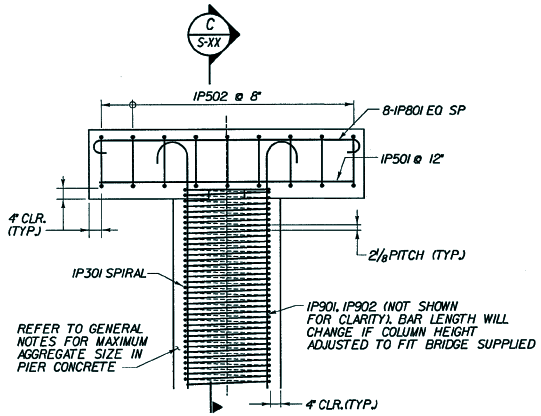
PIER 1 ELEVATION

SCALE 1" = 5'-0



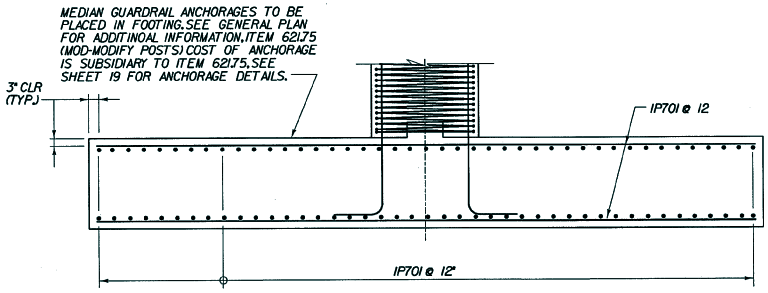
PLAN CAP

SCALE ½" = 1'-0



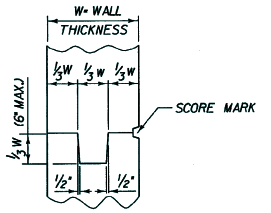
A BRxxx PIER REINFORCING SECTION

SCALE ½" = 1'-0



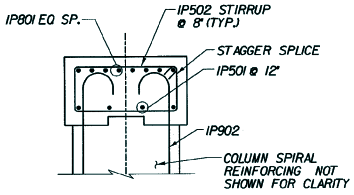
B BRxxx PIER REINFORCING SECTION

SCALE ½" = 1'-0



TYPICAL CONCRETE CONSTRUCTION JOINT

(NOT TO SCALE)



C BRxxx PIER CAP REINFORCING SECTION

SCALE ½" = 1'-0

NOTE:

* TOP OF PIER ELEVATION SET ON ASSUMPTION THAT TOP OF DECK TO BOTTOM OF PREFABRICATED PEDESTRIAN BRIDGE BEARINGS IS 2'-6". ELEVATION IS TO BE ADJUSTED BY THE CONTRACTOR TO FIT ACTUAL BRIDGE SUPPLIED BY ADJUSTING COLUMN HEIGHT.

KEY:

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STATE OF VERMONT
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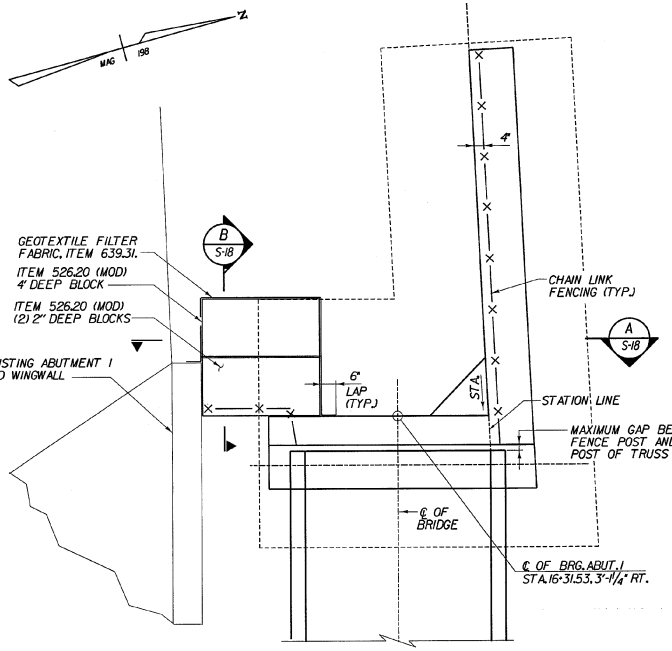
BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

PIER ELEVATION AND REINFORCING DETAILS

Designed By D. STECIAK	Drawn by J. LAGONE
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. IM-089-3(33) STP EH '99(8)
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Bridge Sheet No.	Sheet 17 OF 23

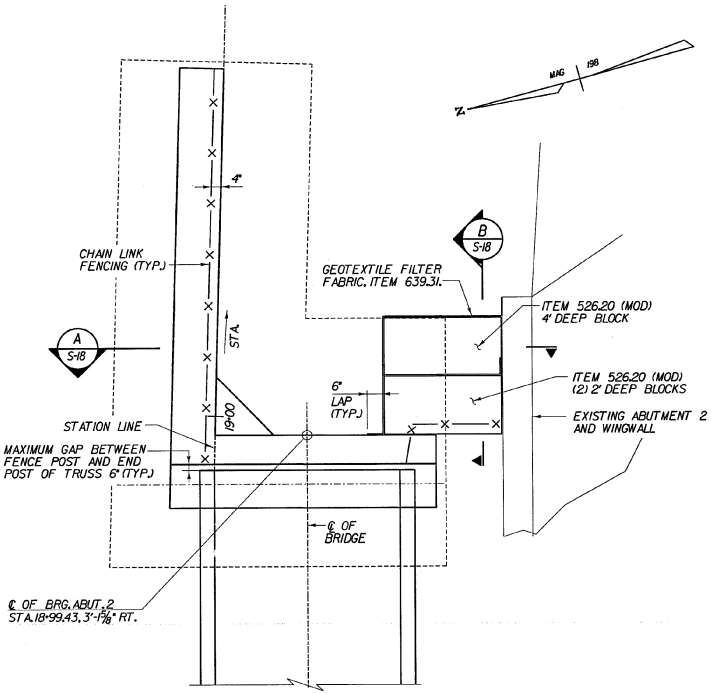
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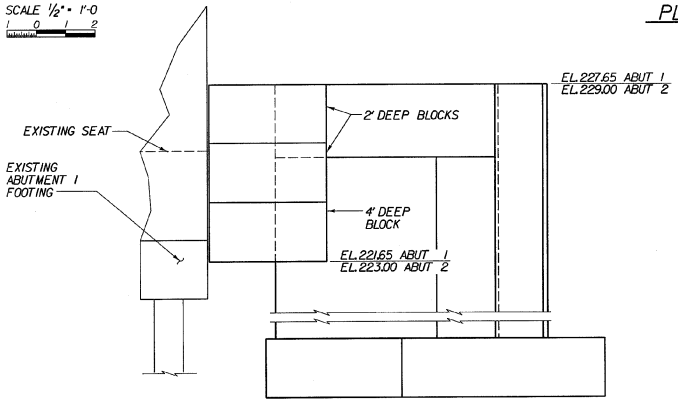
PLAN WINGWALL 2

SCALE 1/2" = 1'-0



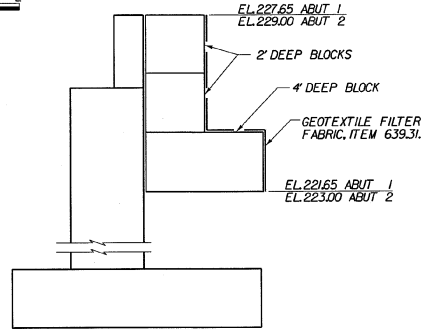
PLAN WINGWALL 4

SCALE 1/2" = 1'-0



A S-18 SECTION (ABUTMENT 1 SHOWN, ABUT. 2 SIMI.)

SCALE 1/2" = 1'-0



B S-18 SECTION (ABUTMENT 1 SHOWN, ABUT. 2 SIMI.)

SCALE 1/2" = 1'-0

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER	Bridge No.
Highway No. I-89	Log Sta.
	Surv. Sta.

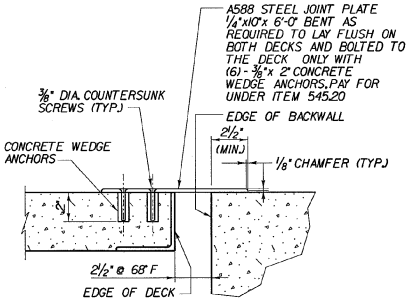
BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

WINGWALLS 2 & 4 PLAN AND SECTIONS

Designed By D. STECIAK	Drawn by J. LAGONE
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. M-089-3(33) STP EH 99(8)
L.G.C. Info.	
Bridge Sheet No.	Sheet 18 OF 23

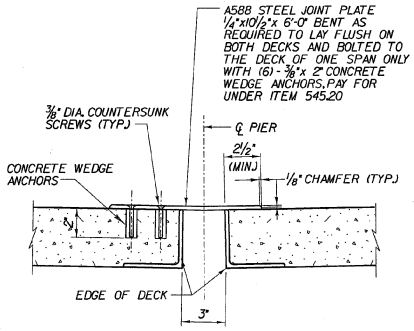
CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
11 WINNERS CIRCLE ALBANY, NEW YORK, 12205

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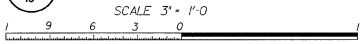
A/13 TYPICAL ABUT. JOINT PLATE SECTION

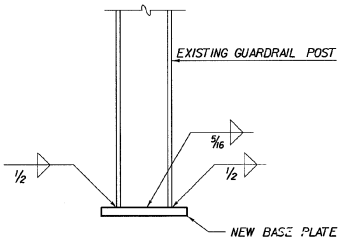
SCALE 3" = 1'-0



B/13 PIER JOINT PLATE SECTION

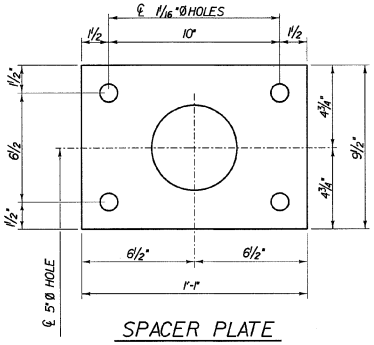
SCALE 3" = 1'-0





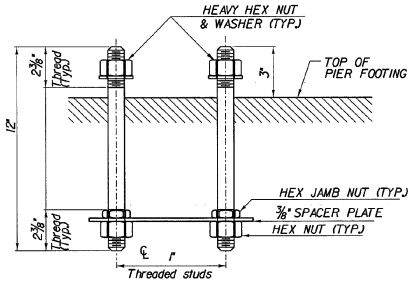
BASE WELD DETAIL

(NOT TO SCALE)



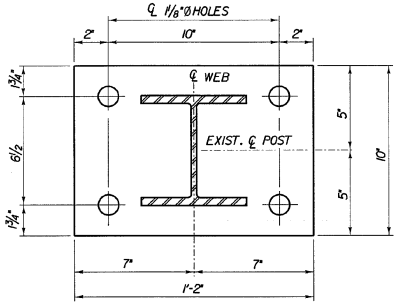
SPACER PLATE

(NOT TO SCALE)



RAIL POST ANCHORAGE

(NOT TO SCALE)



POST & BASE PLATE

(NOT TO SCALE)

NOTES

1. All work and materials shall conform to the provisions of Section 525 - Railings of the Standard Specifications for Construction.
2. Rail posts shall be set normal to grade.
3. All parts shall be galvanized after fabrication in accordance with AASHTO M111, except that hardware shall meet the requirements of AASHTO M232. Parts shall be blast - cleaned prior to galvanizing in accordance with SSPC - SP6.
4. Rail posts anchoring nuts shall be tightened to a snug fit and given an additional 45 degree turn.
5. Rail bars may be attached using M16 AASHTO M164M (Type 1) or M20 ASTM F568M, Class 4.6 round head bolts inserted through the face of the bar. Holes in posts shall be 1/16" larger than the bolt size.
6. Holes in rails for rail bar attachment may be field - drilled. Holes shall be coated with an approved zinc - rich paint prior to erection.
7. If there is a conflict between these Standard Details and the Design Drawings, the requirements of the Design drawings shall be followed.
8. Weld base plates to bottom of existing median rail, which conflicts with proposed Pedestrian Pier Footing (7 locations). Drill new rail mounting holes in posts and reset existing rail. Cut off posts flush with top of posts. Coat top of posts and base plate weld with approved zinc-rich paint.
9. Cost of rail post anchorages is subsidiary to Item 621.75 removing and resetting guardrail (mod-mody posts).

MATERIALS

Rail bars.....ASTM A500, Grade B or ASTM A501
Rail posts.....ASTM A709/A709M, Grade 50
All other shapes & plates.....ASTM A709/A709M, Grade 36
Anchor studs.....ASTM F568M, Class 8.8
All other bolts (unless noted).....AASHTO M164M, Type 1

Nuts for ASTM F568M, Class 4.6 bolts, Class 8.8 studs, and AASHTO M164M Type 1 bolts shall comply with AASHTO M291M.

Washers shall comply with ASTM F436M specification.

3 mm pad shall comply with standard specification subsection 731.01 or 731.02.

Set screws for delineation devices shall conform to ASTM F880M, Class A1-70, Condition CW, Alloy Type 304.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER	Bridge No.
Highway No. I-89	Log Sta.
	Surv. Sta.

BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

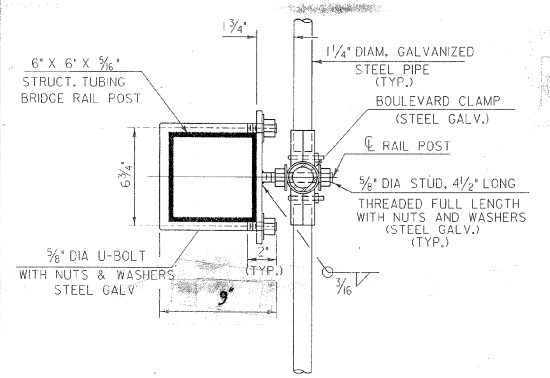
MISCELLANEOUS DETAILS

Designed By D. STECIAK	Drawn by J. LAGONE
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. IM-089-3(33) STP EH 99(8)
L.G.C. Info.	
Bridge Sheet No.	Sheet 19 OF 23

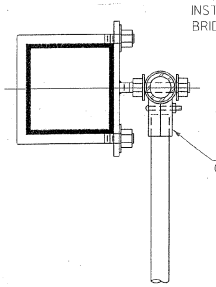
CHA CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
11 WINNERS CIRCLE ALBANY, NEW YORK 12205

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DATE/TIME = 08/07/2001
USER = BEA

SNOW FENCE DETAILS



SECTION A-A



PLAN VIEW AT END POST

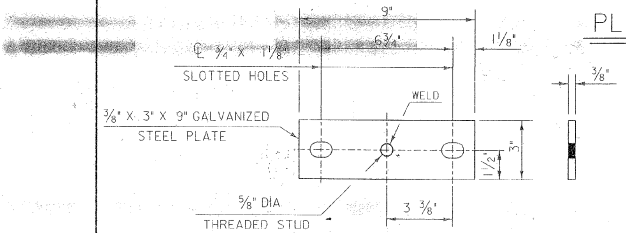
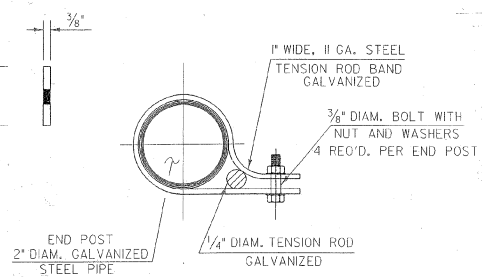
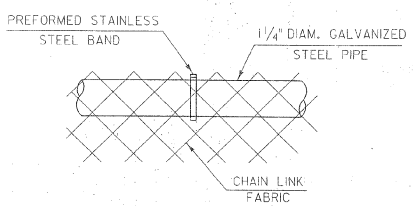


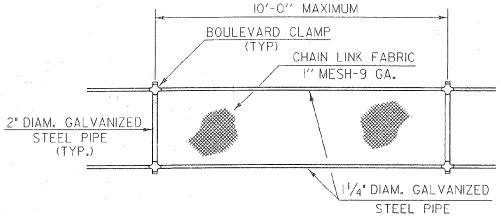
PLATE DETAILS



TENSION ROD BAND

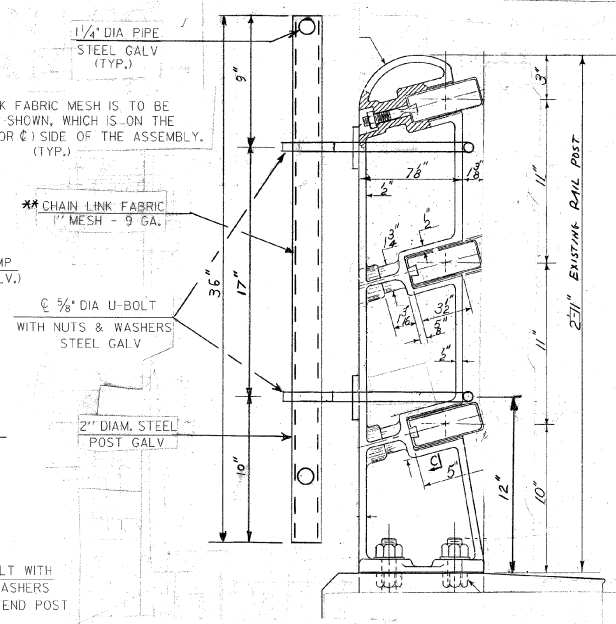


DETAIL A

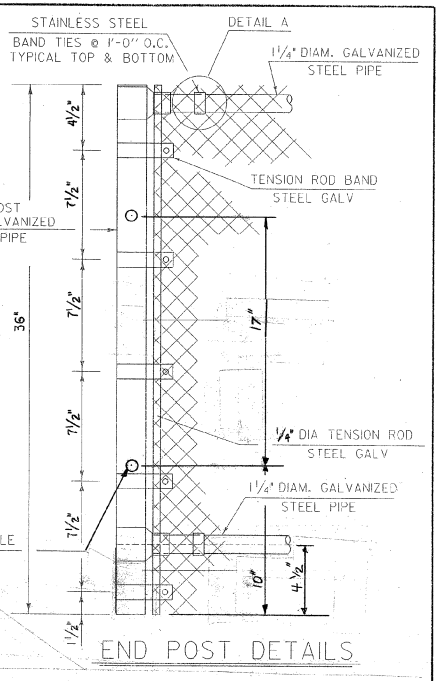


ELEVATION SNOW BARRIER

DETAILS ON THIS SHEET NOT TO SCALE
ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED



TYPICAL SECTION



END POST DETAILS

GENERAL NOTES

1. THREADS OF STUDS AND U-BOLTS TO BE 5/8-11 UNC.
2. ALL CONNECTION PLATES TO BE GALVANIZED AFTER FABRICATION.
3. 1¼" PIPE LENGTH SHALL BE FIELD CUT TO FIT POST SPACING.
4. CHAIN LINK FABRIC TO BE KNUCKLED TOP AND BOTTOM.
5. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE SPECIFICATIONS FOR ASTM A307.
6. ALL STEEL PLATES SHALL CONFORM TO THE SPECIFICATION FOR AASHTO M270 GRADE 36.
7. ALL GALVANIZING SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-181 WITH HARDWARE AND FITTINGS CONFORMING TO THE REQUIREMENTS OF AASHTO M-111 OR AASHTO M-232 WHICHEVER IS APPLICABLE. ALL BOLTS, NUTS AND WASHERS SHALL BE EITHER HOT-DIP GALVANIZED IN ACCORDANCE WITH THE ABOVE AASHTO REQUIREMENTS OR MECHANICALLY GALVANIZED USING A MECHANICALLY DEPOSITED PROCESS CONFORMING TO THE REQUIREMENTS OF AASHTO M-298, CLASS 110.
8. GALVANIZED CHAIN-LINK FABRIC SHALL BE TYPE I (ZINC) CLASS D AS SPECIFIED IN AASHTO M-181.
9. SNOW BARRIER SHALL BEGIN AT THE BRIDGE RAIL POST WHICH WILL PROVIDE A MIN. DISTANCE OF 20' (AS SHOWN) OR AS DIRECTED BY THE ENGINEER.
10. ALL REFERENCES TO THE DIAMETERS OF GALVANIZED STEEL PIPE SHALL REFER TO THE OUTSIDE DIAMETER (O. D.).

ADDITIONAL NOTES

1. **THE EXISTING BRIDGE RAIL IS 3 INCHES WIDE.**
2. **THE 5/8" DIAMETER U-BOLT IS DETAILED FOR SIX INCH WIDE POST. THE CONTRACTOR MAY DECREASE THIS FOR A 3 INCH WIDE POST.**
3. **SHOP DRAWINGS ARE TO BE SENT TO THE VTRANS STRUCTURES PROJECT MANAGER FOR REVIEW.**

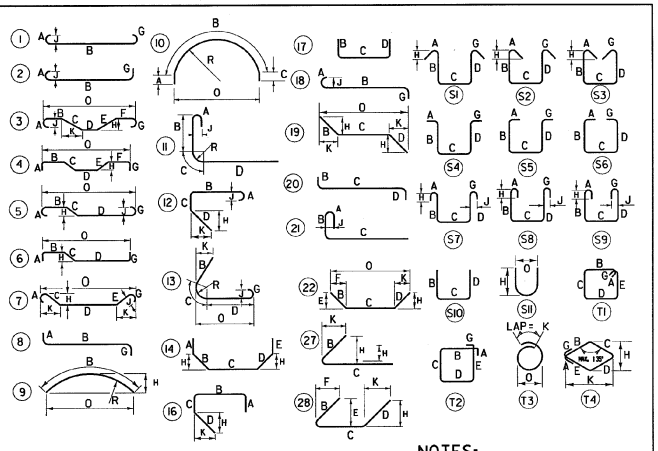
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER	Bridge No. 75
Highway No. BLAKELY ROAD	Log Sta. / Surv. Sta.
INSTALLATION OF PERMANENT SNOW FENCE ON BRIDGES WITH CLEAR VIEW RAIL	
Designed By G. Newbury	Drawn By J. Gruchacz / D. Newton
Checked By / Date	Bridge Design Supervisor S. FARNSWORTH
PROJECT COLCHESTER	PROJECT NO. IM 089-3(33)
I.G.C. Info. /struct/std/snofenceidgn snofens2i	
Bridge Sheet No.	Sheet 19A of 23

PLOTTED 11-JUL-1996

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
1	ABUTMENT 1																
2	12	5	8'-0	1A501	STR												
3	18	5	10'-10	1A502	STR												
4	9	5	3'-11	1A503	STR												
5	12	5	7'-3	1A504	STR												
6	27	5	8'-6	1A505	STR												
7	9	5	7'-2⅝	1A506 ✳	STR												
8	9	5	3'-7¼	1A507	STR												
9	16	5	4'-1	1A508	S10		1'-0	2'-1	1'-0								
10	12	5	2'-7	1A509	S10		1'-0	7	1'-0								
11	10	5	2'-0	1A510	S10		1'-0	1'-0									
12	7	5	11'-4⅛	1A511	22		2'-2	6'-11¾	2'-2	1'-6⅛	1'-6		1'-6⅛		1'-6		9'-4⅜
13	13	6	8'-0	1A601 ✳	STR												
14	8	7	7'-11½	1A801	8		6'-11½					1'-2					
15																	
16	WINGWALL 1																
17	18	5	6'-0	1W501	STR												
18	14	5	10'-8¾	1W502	STR												
19	14	5	3'-11	1W503	STR												
20	12	5	9'-9	1W504 ▲	STR												
21	2	5	7'-3	1W505	STR												
22	13	5	9'-2¼	1W506	STR												
23	16	5	14'-9½	1W507	STR												
24	4	5	13'-2½	1W508	STR												
25	2	5	13'-2½	1W509 ◆	STR												
26	14	5	3'-1	1W510	S10		1'-0	1'-1	1'-0								
27	13	7	5'-9	1W701	8		4'-7					1'-2					
28																	
29	PIER 1																
30	4	5	8'-4	1P501	STR												
31	93	6	23'-6	1P701 ✳	STR												
32	8	8	8'-4	1P801	1	11	8'-4					11		8			
33	1	3	1000'-0	1P301	T3												2'-10
34	14	5	11'-0	1P502	T1	7	3'-4	1'-7	3'-4	1'-7		7					
35	21	9	28'-3	1P901 ✳	2	1'-3	23'-5					1'-7		11¾			
36	18	9	28'-3	1P902	18	1'-3	23'-5					1'-7		11¾			
37																	
38	ABUTMENT 2																
39	12	5	8'-0	2A501	STR												
40	18	5	10'-10	2A502	STR												
41	9	5	3'-11	2A503	STR												
42	12	5	7'-3	2A504	STR												
43	27	5	8'-6	2A505	STR												
44	9	5	7'-2⅝	2A506 ✳	STR												
45	9	5	3'-7¼	2A507	STR												
46	16	5	4'-1	2A508	S10		1'-0	2'-1	1'-0								
47	12	5	2'-7	2A509	S10		1'-0	7	1'-0								
48	10	5	2'-0	2A510	S10		1'-0	1'-0									
49	7	5	11'-8¼	2A511	22		2'-2	7'-4¼	2'-2	1'-6⅜	1'-6⅛		1'-6⅜	1'-6⅛			10'-4½
50	13	6	8'-0	2A601 ✳	STR												
51	8	7	7'-11½	2A801	8		6'-9½					1'-2					
52																	
53	WINGWALL 3																
54	18	5	6'-0	2W501	STR												
55	14	5	10'-8¾	2W502	STR												
56	14	5	3'-11	2W503	STR												
57	12	5	9'-9	2W504 ▲	STR												
58	2	5	7'-3	2W505	STR												
59	13	5	9'-2¼	2W506	STR												
60	16	5	14'-9½	2W507	STR												
61	2	5	13'-2½	2W508	STR												
62	2	5	13'-2½	2W509 ◆	STR												
63	14	5	3'-1	2W510	S10	1'-0	1'-1	1'-0									
64	13	7	5'-9	2W701	8		4'-7				1'-2						
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ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
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NOTES:

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-51). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. ◆ DENOTES BARS TO BE BENT IN FIELD.
10. ✳ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
11. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
12. "E" IN PREFIX DENOTES EPOXY COATED REINFORCING STEEL.

ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	CROSS SECTIONAL AREA SQ. INCHES	PERIMETER INCHES
#3	.376	.375	.11	1.178
#4	.668	.500	.20	1.571
#5	1.043	.625	.31	1.963
#6	1.502	.750	.44	2.356
#7	2.044	.875	.60	2.749
#8	2.670	1.000	.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER	Bridge No.
Highway No. I-89	Log Sta.
	Surv. Sta.

BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

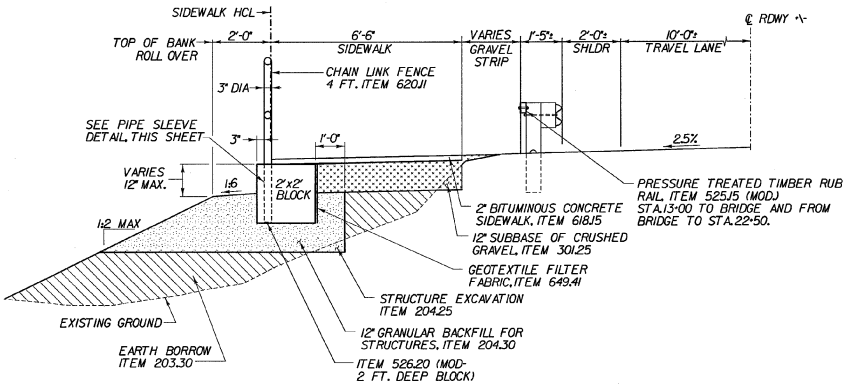
REINFORCING STEEL SCHEDULE

Designed By D. STECIAK	Drawn by K. DETRICK/J. LAGONE
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. IM-089-3(33) STP EH 99(8)
I.G.C. Info.	
Bridge Sheet No.	Sheet 20 OF 23

CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
3 WINNERS CIRCLE ALBANY, NEW YORK, 12205

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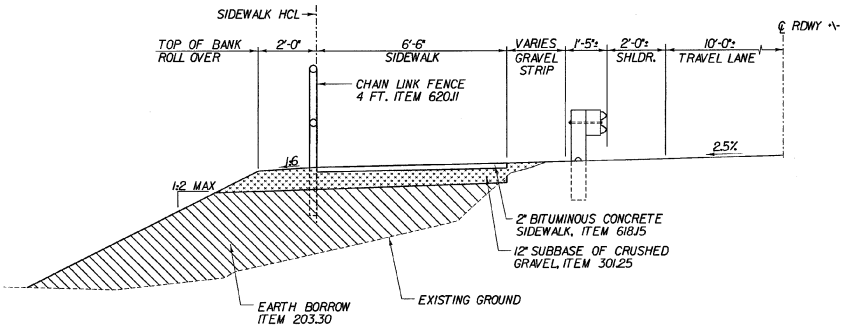
TYPICAL SECTIONS



TYPICAL SECTION WITH BLOCK RETAINING WALL

(NOT TO SCALE)

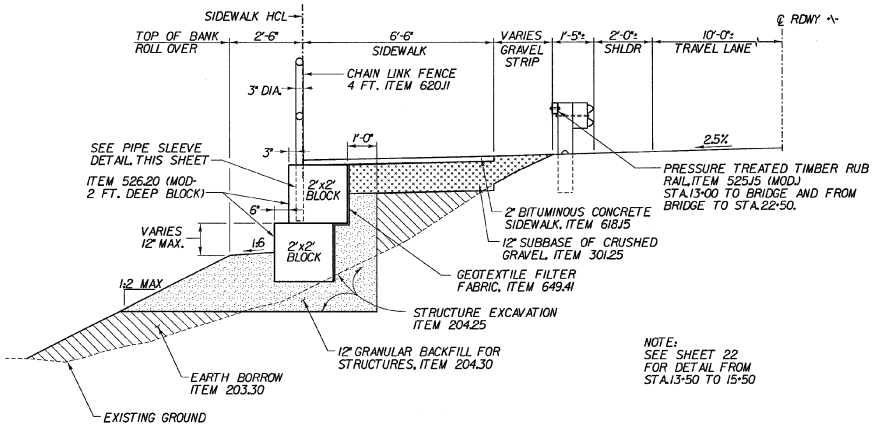
STA.11+96± TO STA.12+00±
STA.22+30± TO STA.22+34±



TYPICAL SECTION AT GRADE

(NOT TO SCALE)

STA.10+50 TO STA.11+96±
STA.23+96± TO STA.24+22.60

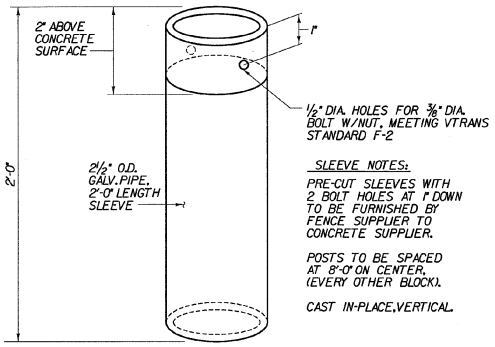


NOTE:
SEE SHEET 22
FOR DETAIL FROM
STA.13+50 TO 15+50

TYPICAL SECTION WITH BLOCK RETAINING WALL

(NOT TO SCALE)

STA.12+00± TO STA.15+90±
STA.20+70± TO STA.22+30±



SLEEVE NOTES:

PRE-CUT SLEEVES WITH 2 BOLT HOLES AT 1" DOWN TO BE FURNISHED BY FENCE SUPPLIER TO CONCRETE SUPPLIER.

POSTS TO BE SPACED AT 8'-0" ON CENTER. (EVERY OTHER BLOCK).

CAST IN-PLACE, VERTICAL.

DETAIL-SLEEVE FOR CHAIN LINK POST ATTACHMENT

(NOT TO SCALE)

NOTES:

1. THE EXISTING EMBANKMENT IS TO BE UNDERCUT ONE FOOT BELOW BOTTOM OF BLOCKS USING THE ITEM 204.25 "STRUCTURE EXCAVATION". THE ITEM 204.30 "GRANULAR BACKFILL FOR STRUCTURES" IS TO BE USED UNDER AND BEHIND THE CONCRETE BLOCKS UP TO ONE FOOT BELOW ITEM 618.15 "BITUMINOUS CONCRETE SIDEWALK".
2. ONE FOOT OF THE ITEM 301.25 "SUBBASE OF CRUSHED GRAVEL" IS TO EXTEND FROM THE EXISTING SLOPE, AFTER THE EXISTING TOP SOIL IS REMOVED, TO THE NEW BLOCKS.
3. THE COST OF FURNISHING STEEL PIPE SLEEVES AND DRILLING THE CHAIN LINK SLEEVES INTO THE CONCRETE BLOCKS SHALL BE SUBSIDIARY TO THE ITEM 620.11 "CHAIN LINK FENCE - 4 FEET".
4. MOUNTING HARDWARE AND ANY REQUIRED MODIFICATION OF EXISTING GUARDRAIL POSTS IS SUBSIDIARY TO ITEM 525.15 METAL HAND RAILING (MOD- 2 x 6 PRESSURE TREATED TIMBER).

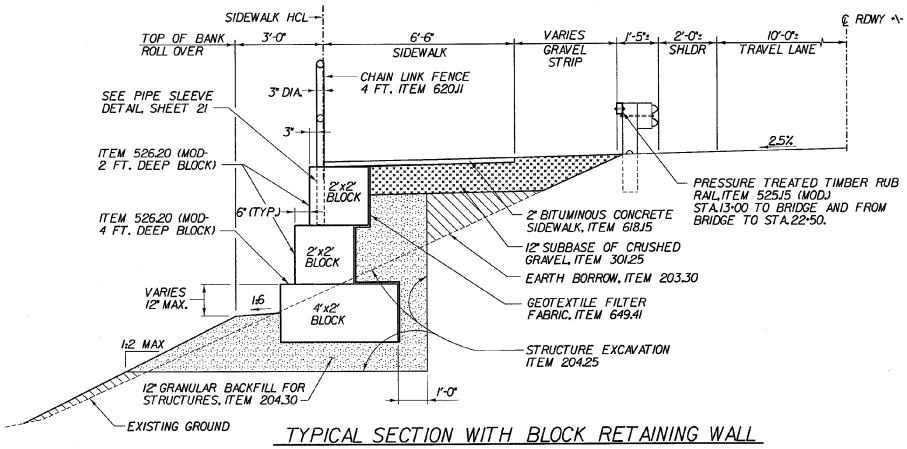
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER	Bridge No.
	Log Sta.
Highway No. I-89	Surv. Sta.
BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89	
TYPICAL SECTIONS	
Designed By D. STECIAK	Drawn by K. DETRICK/J. LAGONE
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. IM-089-3(33) STP EH 99(8)
L.G.C. Info.	
Bridge Sheet No.	Sheet 21 OF 23

CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
ALBANY, NEW YORK, 12205

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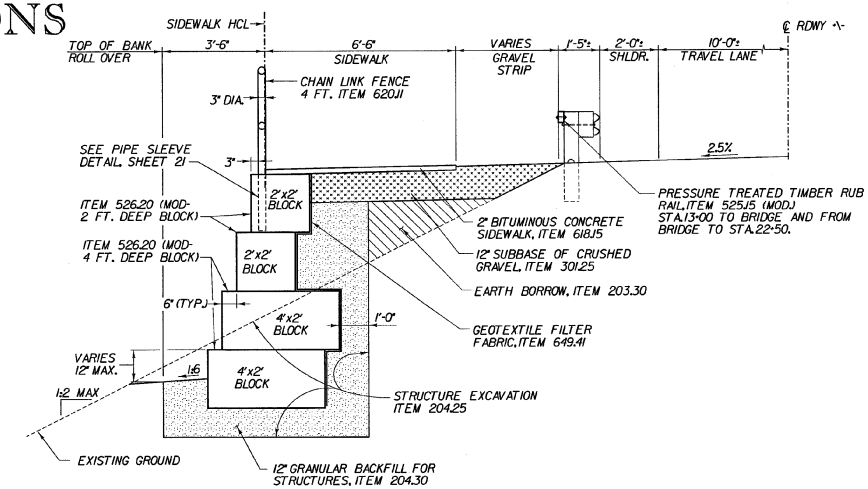
TYPICAL SECTIONS



TYPICAL SECTION WITH BLOCK RETAINING WALL

(NOT TO SCALE)

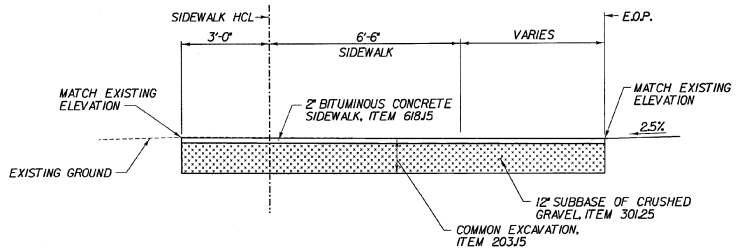
STA.15+90± TO STA.16+19±
STA.19+20± TO STA.20+70±



TYPICAL SECTION WITH BLOCK RETAINING WALL

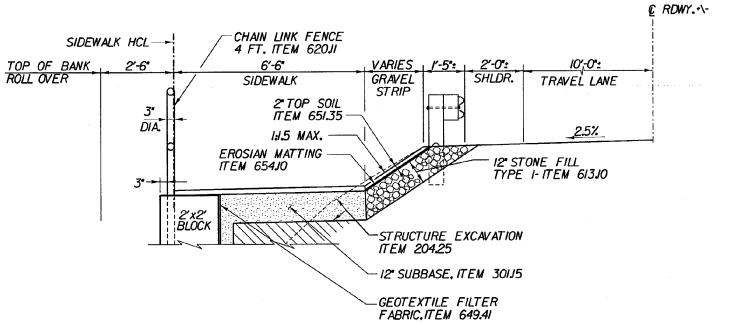
(NOT TO SCALE)

STA.19+12± TO STA.19+20±



TYPICAL ℄ DRIVEWAY SECTION STA.10+87.00

(NOT TO SCALE)



TYPICAL SECTION WITH BLOCK RETAINING WALL

(NOT TO SCALE)

STA.13+50± TO STA.15+50±

NOTES:

1. THE EXISTING EMBANKMENT IS TO BE UNDERCUT ONE FOOT BELOW BOTTOM OF BLOCKS USING THE ITEM 204.25 "STRUCTURE EXCAVATION". THE ITEM 204.30 "GRANULAR BACKFILL FOR STRUCTURES" IS TO BE USED UNDER AND BEHIND THE CONCRETE BLOCKS UP TO ONE FOOT BELOW ITEM 618.15 "BITUMINOUS CONCRETE SIDEWALK".
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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER	Bridge No.
Highway No. I-89	Log Sta.
	Surv. Sta.

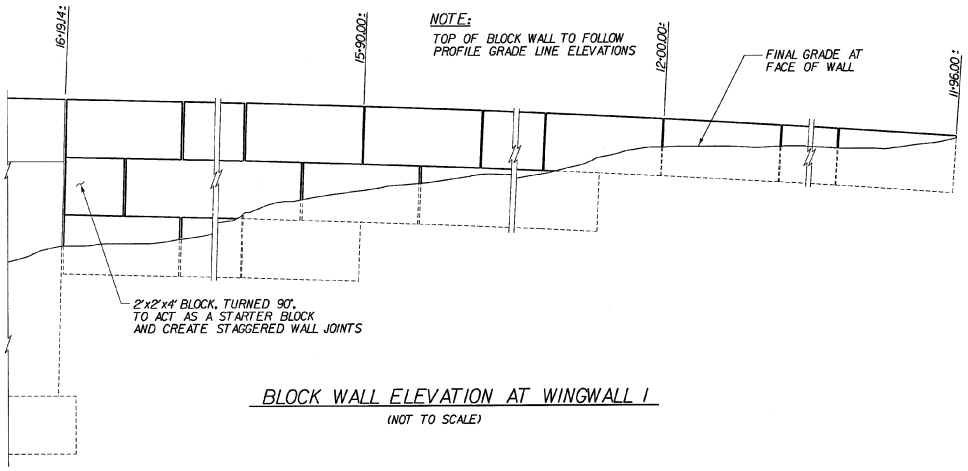
BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

TYPICAL SECTIONS

Designed By D. STECIAK	Drawn by K. DETRICK/J. LAGONE
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. IM-089-3(33) STP EH 99(8)
L.G.C. Info.	
Bridge Sheet No.	Sheet 22 OF 23

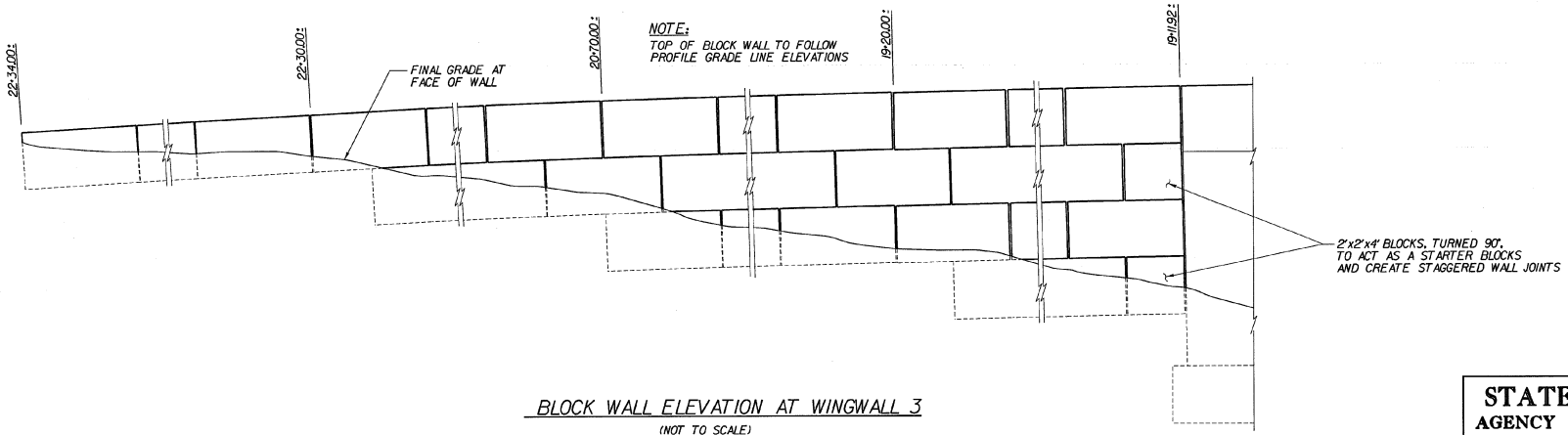
CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
13 WINNERS CIRCLE ALBANY, NEW YORK, 12205

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BLOCK WALL ELEVATION AT WINGWALL 1

(NOT TO SCALE)



BLOCK WALL ELEVATION AT WINGWALL 3

(NOT TO SCALE)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	COLCHESTER	Bridge No.	
Highway No.	I-89	Log Sta.	
		Surv. Sta.	

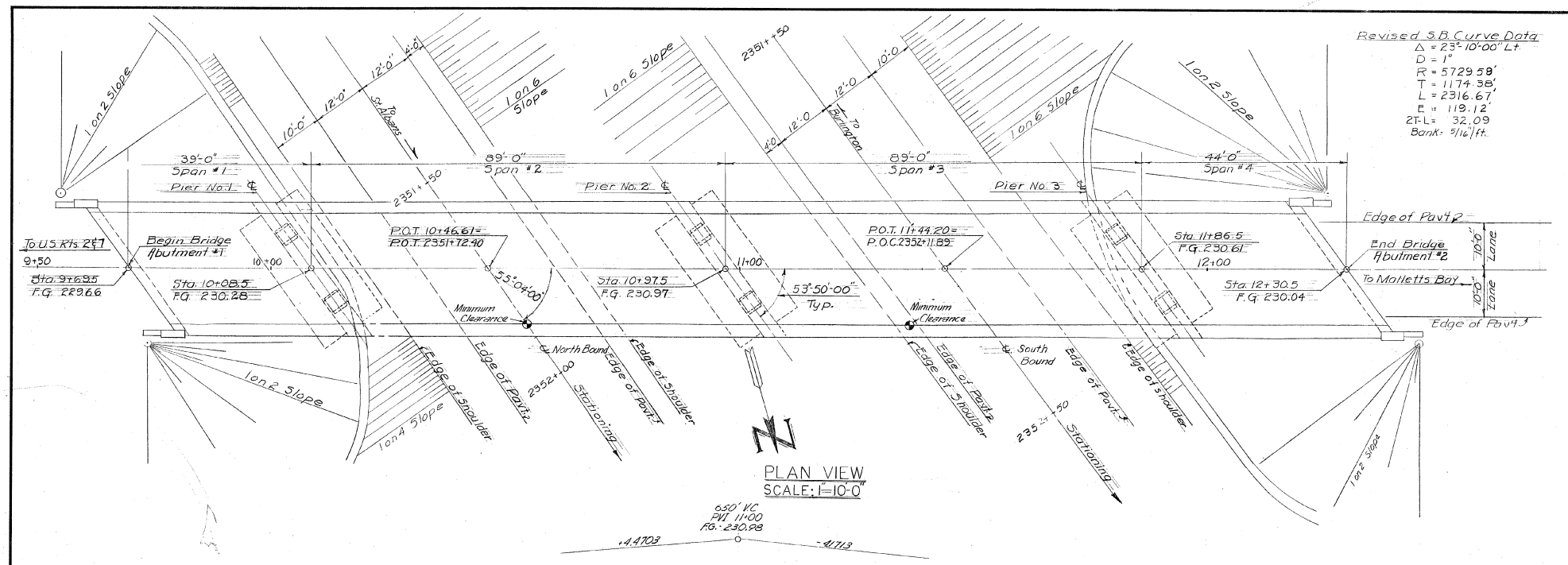
BLAKELY RD. PEDESTRIAN BRIDGE OVER I-89

BLOCK WALL ELEVATIONS AT WINGWALLS 1 AND 3

Designed By D. STECIAK	Drawn by J. LAGONE
Checked By M. OLSTAD Date 7/2001	Bridge Design Supervisor M. OLSTAD Date 7/2001
PROJECT COLCHESTER	PROJECT NO. IM-089-3(33) STP EH 99(8)
I.G.C. Info.	
Bridge Sheet No.	Sheet 23 OF 23

CHA CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
11 WINNERS CIRCLE ALBANY, NEW YORK 12205

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COLCHESTER IM 089-3(33)
I-89, BRIDGE 75
This sheet for information only

SHEET 23A OF 23

Stage II Construction

BR. 3 OF 27

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF COLCHESTER

ROUTE No. TOWN RD. #23 OVER I 89

PLAN & ELEVATION

SCALE 1"=10'-0"

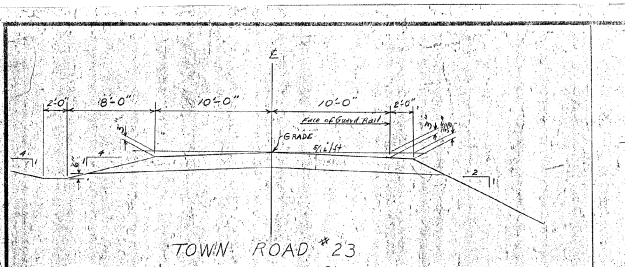
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DRAWN BY G.V.K. CHECKED BY VOL

PROJECT No. I 89-3(29)

SHEET 76 OF 265

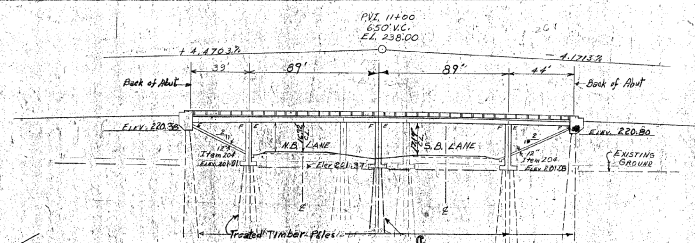
CONT. NO. I ## 71 (19)



TOWN ROAD #23

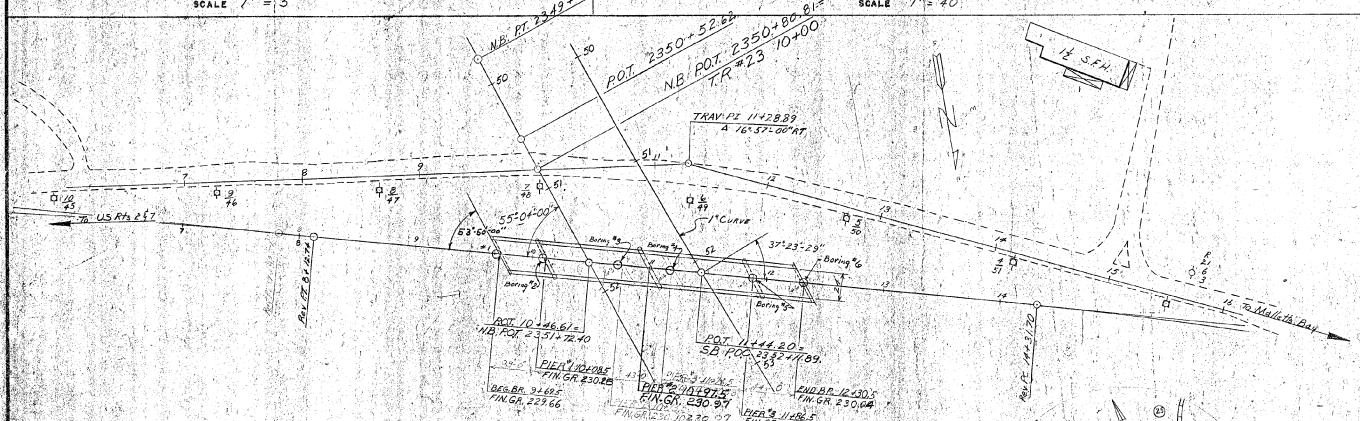
NEW HIGHWAY SECT. STA. 9+40 TO STA. 13+40

SCALE 1" = 5'



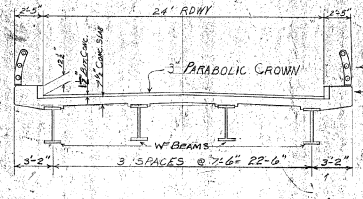
NEW HIGHWAY PROFILE ALONG ℄

SCALE 1" = 40'



PLAN

SCALE 1" = 50'



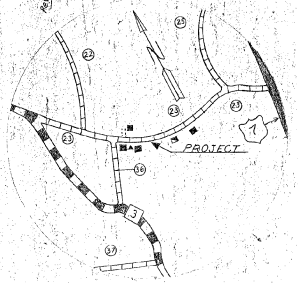
TYPICAL BRIDGE SECTION

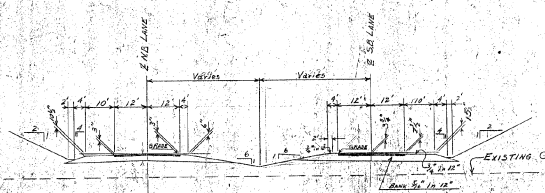
FOR DESIGN LOAD H-15 S12-44

SCALE 1" = 5'

Railing as Per SB-26-62

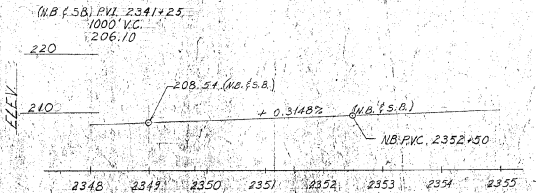
FOR W BEAM SUPERSTRUCTURE DETAILS SEE SCB-24-62





SECTION INTERSTATE STA. 2352±

SCALE 1" = 20'



PROFILE INTERSTATE

~~PROFILE OF PROPOSED STREAM CHANNEL~~

SCALE

HIGHWAY NO. Town Road #23 NAME OF HIGHWAY

STRUCTURE NO. COUNTY Chittenden TOWN COLCHESTER

PROJECT NO. F 89-3(19) LOCATION M.L. Sta. 2352 ± Town Road #23 Over Interstate

EXISTING STRUCTURE

1 RATED LOADING OF EXISTING STRUCTURE N/A

2 TYPE OF EXISTING STRUCTURE None

3 UNDERCLEARANCE ELEVATION OF EXISTING STRUCTURE

4 WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE COST OF REMOVAL

5 SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE

6 SHOULD NEW TEMPORARY STRUCTURE BE BUILT

7 ORDINARY HIGH WATER SURFACE ELEV. AT EXISTING STRUCTURE WATERWAY TO ORDINARY H.W.

8 EXTREME HIGH WATER AT EXISTING STRUCTURE

9 SPAN OF EXISTING BRIDGE UPSTREAM WATERWAY TO EXTREME H.W.
SPAN OF EXISTING BRIDGE DOWNSTREAM WATERWAY TO EXTREME H.W.

10 TYPE OF FOUNDATION UNDER EXISTING ABUTMENTS

11 DOES ALL WATER AT FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE

12 IF NOT AT WHAT ELEVATION IS RELIEF AFFORDED

13 ADDITIONAL WATERWAY AREA PROVIDED

NEW STRUCTURE

1 RECOMMENDED TYPE OF STRUCTURE Prestressed Concrete or WF Beam Bridge

2 RECOMMENDED CLEAR SPAN OR SPANS 39'-89'-89'-44'
MEASURED PARALLEL TO ℄ NEW HIGHWAY 39'-89'-89'-44'
MEASURED AT RIGHT ANGLES TO ℄ STREAM Interstate 31.48-71.85-71.85-35.52

3 ARE THERE OBJECTIONS TO A PIER IN THE STREAM, ANSWER YES OR NO N/A

4 ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE N/A

5 EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE SOURCE OF INFORMATION

6 IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE? N/A

7 DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? N/A IF ORDINARY RISE RAPID?

8 LOW WATER ELEVATION AT NEW STRUCTURE N/A

9 DRAINAGE AREA IN ACRES ABOVE STRUCTURE N/A CHARACTER OF TERRAINE N/A

10 IS STREAM EVER DRY? N/A

11 VELOCITY OF STREAM AT HIGH WATER STAGE N/A ESTIMATED DISCHARGE N/A

12 AREA FULL OPENING N/A AREA BELOW ORDINARY H.W. N/A

13 CHARACTER OF SCOUR N/A DRIFT N/A ICE N/A

14 ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE

15 VERTICAL CLEARANCE ABOVE FLOOD ELEVATION N/A

16 ARE SIDEWALKS REQUIRED, IF SO ON WHAT SIDE NO BOTH SIDES N/A

17 RECOMMENDED TYPE OF PAVEMENT Bit. Concrete

18 TRAFFIC TO BE MAINTAINED UNDER ITEM NO. ONE OR TWO WAYS PROBABLE COST

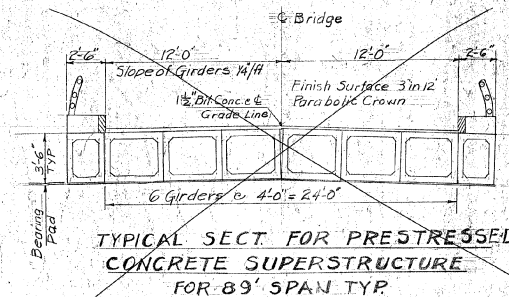
19 PROBABLE COST OF CLEARING AND GRUBBING STREAM CHANNEL AT STRUCTURE SITE N/A

20 SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES?

21 ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 20 Tons/Pile SHOULD PILES BE USED? YES (YES OR NO) EST. 15TH Aug. 12 25 Piles @ 55 V.C.F. Piles @ 55

FOUNDATION INFORMATION

OBTAINED FOR DESIGN PURPOSES ONLY, AND THE STATE ASSUMES NO RESPONSIBILITY WHATSOEVER FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN. BOULDERS MAY BE ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION.



TYPICAL SECT. FOR PRESTRESSED CONCRETE SUPERSTRUCTURE FOR 89' SPAN TYP.

STEEL ALTERNATE WAS BUILT

COLCHESTER IM 089-3(33)
I-89, BRIDGE 75
This sheet for information only

SHEET 23B OF 23

BR. 4 OF 27

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN ROAD #23 IN THE TOWNS OF COLCHESTER

ROUTE NO. I 89 STA. 2352 ±

TOWN ROAD #23 OVER INTERSTATE

CONTRACT NO. I-089-2(72)(19)

DRAWN BY ALC | TRACED BY | CHECKED BY EAE | SCALE AS SHOWN

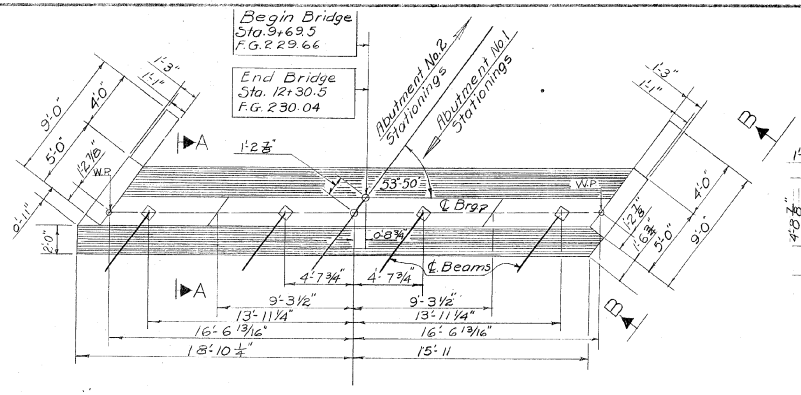
IN CHARGE | DATE

Stage II Construction | PROJECT NO. F 89-3(19) | SHEET 77 OF 265

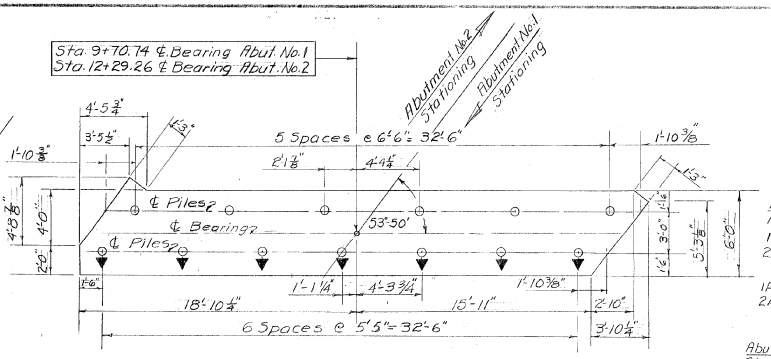
CORRECT 12/13/60 Thompson
BRIDGE ENGINEER

APPROVED
CHIEF ENGINEER

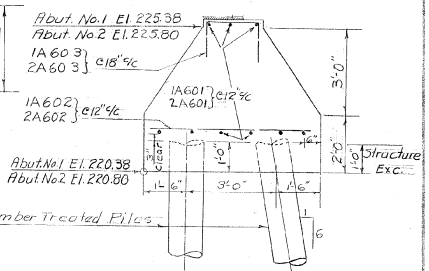
APPROVED
ASSISTANCE CHIEF ENGINEER



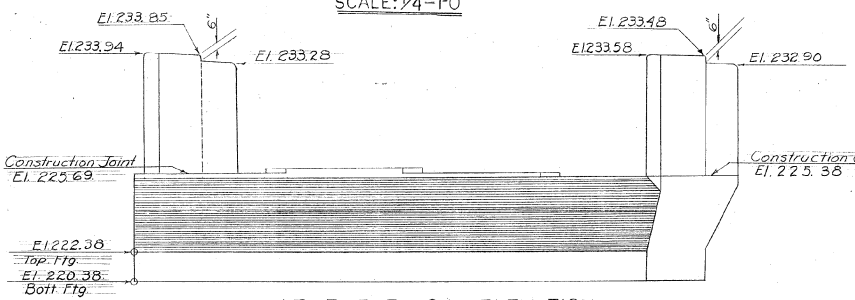
ABUTMENT NO. 1 & 2
PLAN VIEW
SCALE: 1/4"=1'-0"



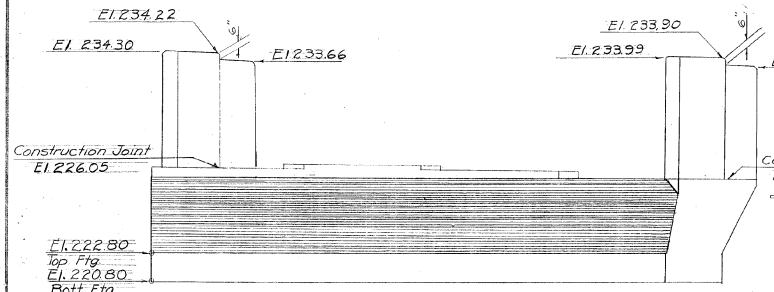
FOOTING PLAN LAYOUT
ABUTMENT NO. 1 & 2
SCALE: 1/4"=1'-0"



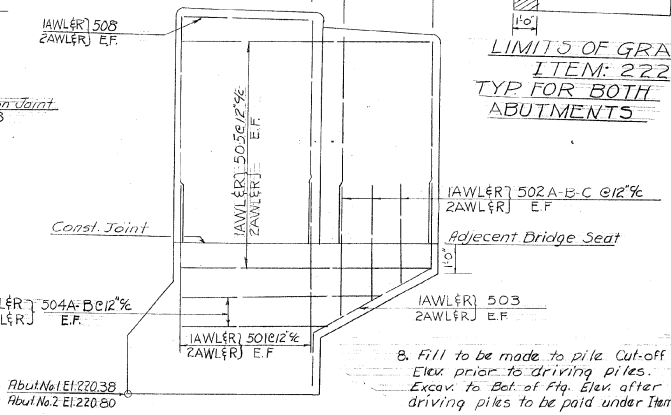
SECT. A-A
TYP. ABUT. DETAIL
SCALE: 1/2"=1'-0"

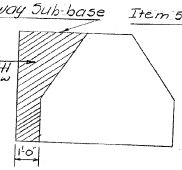


ABUTMENT NO. 1 ELEVATION
SCALE: 1/4"=1'-0"



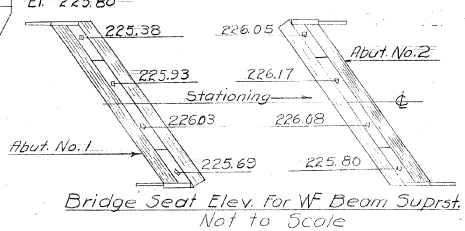
ABUTMENT NO. 2 ELEVATION
SCALE: 1/4"=1'-0"





LIMITS OF GRAVEL-BACKFILL
ITEM: 222
TYP. FOR BOTH ABUTMENTS

ELEV. VIEW END POSTS
SECT. B-B
SCALE: 1/2"=1'-0"



Bridge Seat Elev. For WF Beam Suprst.
Not to Scale

Notes

1. For General notes see BR.1 of 27.
2. The 1A601, 1A602, 2A601 & 2A602 bars are to be cut in field to fit skew ends.
3. For Reinforcing steel schedule see BR.15 of 27.
4. Wing walls shall be poured monolithic with abutment stem up to adjecent beam seat elevation.
5. Estimated lengths of piles are 80 ft for both abutments. Front row of piles to be battered 1 on 6. Test piles driven to 90. Order 90' piles.
6. Details shown on this sheet are typical for either superstructure, except as follows:
   Plan view - location of bridge seats are for the WF beam Superstructure.
   Elevation view - Bridge seats are shown for WF beam superstructure.
   Bridge Seat Elevation - are for WF Beam Superstructure.
7. All the concrete in Abutments shall be Concrete class 'B' (mod.) Item 401-B
8. Fill to be made to pile Cut-off Elev. prior to driving piles. Excav. to Bot. of Ftg. Elev. after driving piles to be paid under Item 107.

See Sheet 2 of 27 for Final Quantities

ITEM NO.	ITEM	UNIT	NET	OVERRUN	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C.Y.				
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
106-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.				
401-B	CONC. CLASS B (MOD.)	C.Y.				
402	REINF. STEEL	LBS.				
407	ASPHALTIC [illegible] COATING	S.Y.				
502-B	TREATED TIMBER PILING	L.F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L.F.				
502-A	UNTREATED TIMBER PILING	L.F.				

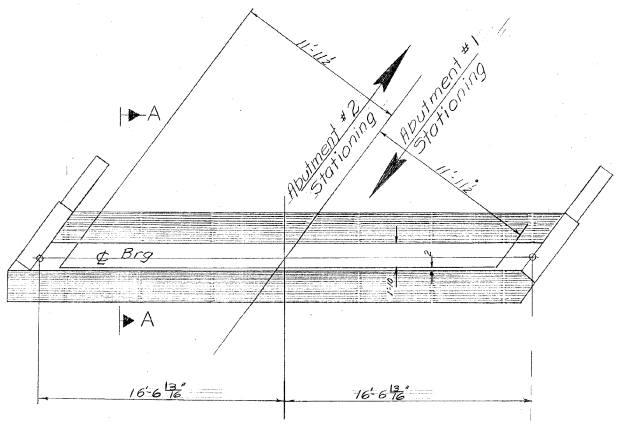
COLCHESTER IM 089-3(33)
I-89, BRIDGE 78
This sheet for information only
SHEET 23C OF 23

BR.10 OF 27 Stage I Const.

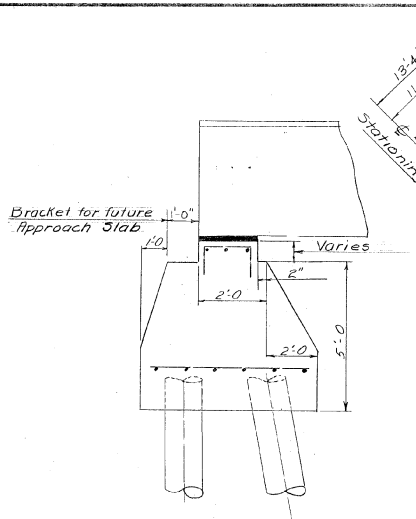
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF COLCHESTER
ROUTE No. TOWN RD. "23" OVER I89
ABUTMENT NO. 1 & 2 DETAILS FOR WF BEAM SUPERSTRUCTURE
SCALE AS SHOWN
SURVEYED BY BRUCE
DRAWN BY G.V.K. CHECKED BY A.B.K.
PROJECT No. I-89-3(19)
SHEET 78 OF 265

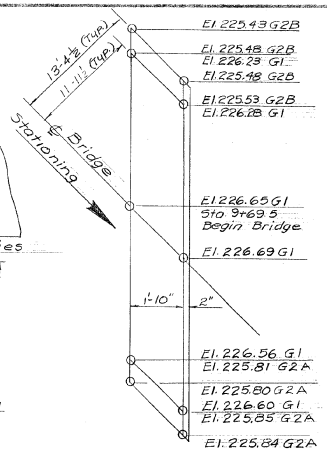
CONT. NO 1.



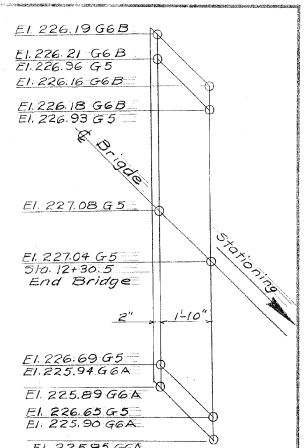
ABUTMENT NO. 1 & 2
PLAN VIEW
SCALE: 1/4"=1'-0"



SECT. A A
TYP. ABUT. DETAIL
FOR PRESTRESSED SUPERSTRUCTURE
SCALE: 1/2"=1'-0"



ABUTMENT NO. 1

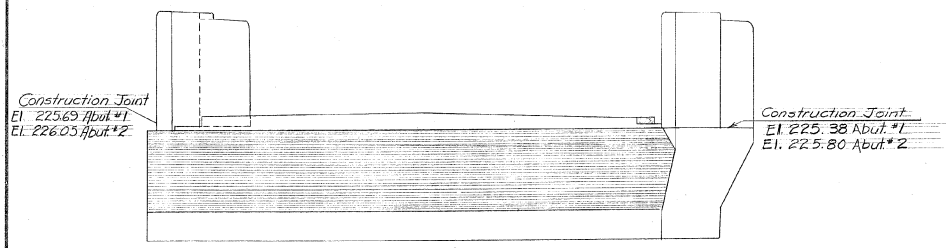


ABUTMENT NO. 2

BRIDGE SEAT ELEVATIONS

Notes

1. For General notes See BR. 1 of 27.
2. For additional dimensions & elevations, pile plan layout, and other details see Br. 10 of 27.
3. The end posts above low bridge seat elev. shall not be poured untill superstructure is in place.



ABUTMENT NO. 1 & 2. ELEVATION
SCALE: 1/4"=1'-0"

See Sheet 2 of 27 for Final Quantities

ITEM NO.	ITEM	UNIT	NET	OVERRUN	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C.Y.				
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
106-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.				
401-B	CONC. CLASS B (MOD.)	C.Y.				
402	REINF. STEEL	LBS.				
407	ASPHALTIC-ASB. COATING	S.Y.				
502-B	TREATED TIMBER PILING	L.F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L.F.				
502-A	UNTREATED TIMBER PILING	L.F.				

COLCHESTER IM 089-3(33)
I-89, BRIDGE 75
This sheet for information only

SHEET 23D OF 23

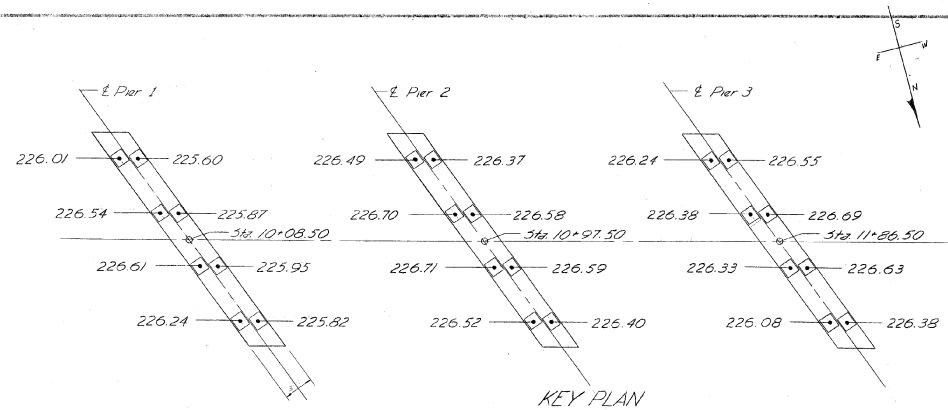
Stage I Construction

BR. 11 OF 27

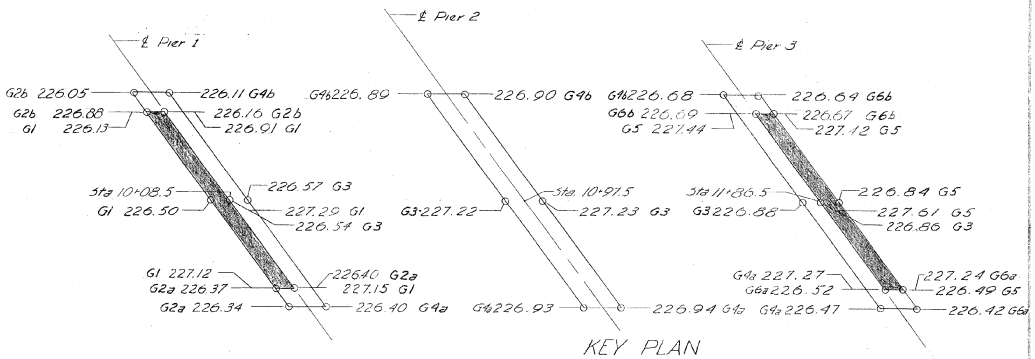
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF COLCHESTER
ROUTE NO. TOWN ROAD #23 OVER I89
ABUTMENT NO 1&2 DETAILS FOR PRESTRESSED SUPERSTRUCTURE
SCALE AS SHOWN
SURVEYED BY BRUCE
DRAWN BY G.V.K. CHECKED BY VOL
PROJECT NO. I 89-3(19)
SHEET 79 OF 265

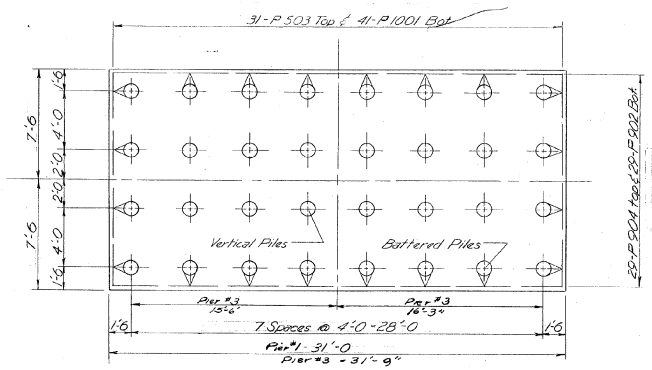
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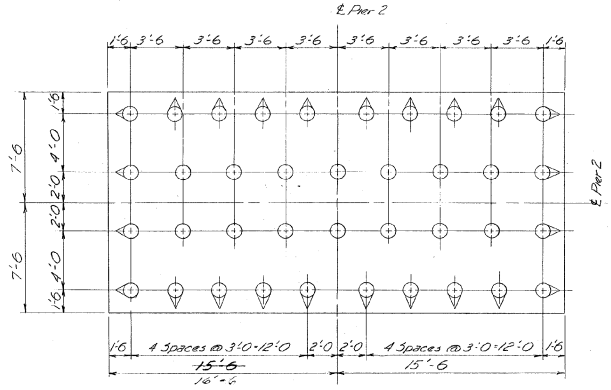
KEY PLAN
Steel Superstructure



KEY PLAN
Prestressed Superstructure



Footing Plan - Pier 1 & Pier 3
SCALE 1/4" = 1'-0



Footing Plan - Pier 2
SCALE 1/4" = 1'-0

NOTES

1. For general notes see BR.1 of 27.
2. The estimated length of piles is 60' for all piers. All edge piles shall be battered away from the footing - 1 on 6.
3. The AT superstructure expansion plates and drain troughs shall be as indicated on SCB-03-62 - Type B (drain over the side of the pier cap).

See Sheet 2 of 27 for Final Quantities

ITEM NO.	ITEM	UNIT	NET	OVERRUN	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C.Y.				
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
106-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.				
401-B	CONC. CLASS B (MOD.)	C.Y.				
402	REINF. STEEL	LBS.				
407	ASPHALTIC-A&B. COATING	S.Y.				
502-B	TREATED TIMBER PILING	L.F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L.F.				
502-A	UNTREATED TIMBER PILING	L.F.				

COLCHESTER IM 089-3(33)
I-89, BRIDGE 75
This sheet for information only
SHEET 23E OF 23

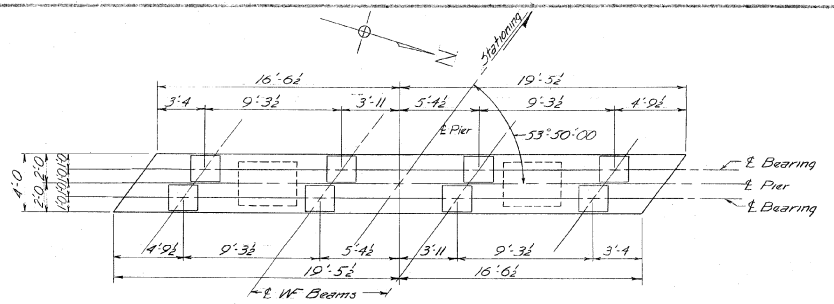
Stage I Construction
BR.12 of 27

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

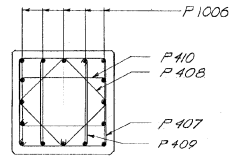
TOWN OF COLCHESTER
ROUTE NO. T.R. #23 Over I-89
PIER DETAILS

SCALE AS SHOWN
SURVEYED BY
DRAWN BY VOL. CHECKED BY G.V.K.
PROJECT NO. I 89-3(5)
SHEET 80 OF 265

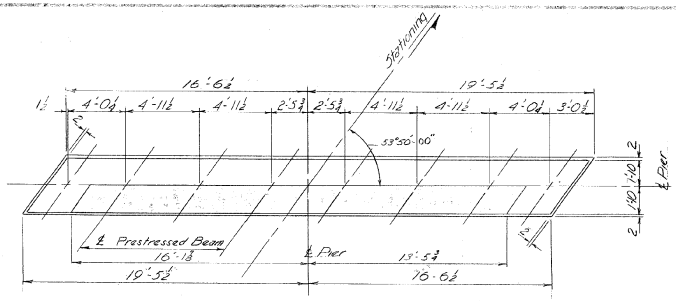
CONT. NO. 1



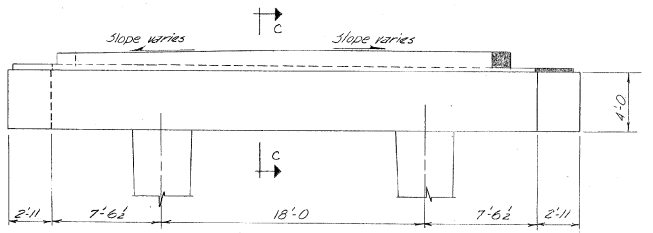
PLAN (WF Beams)
SCALE 1/4" = 1'-0



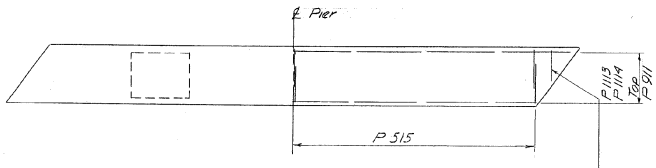
SECTION B-B
SCALE ½" = 1'-0



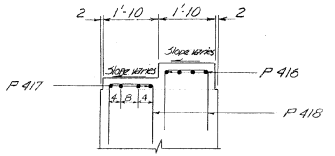
PLAN (Prestressed Beams)
TYPICAL PIER NO 1



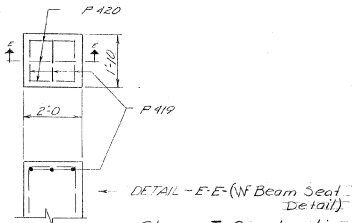
Elevation Section (Prestressed Beam Seats)
Note: Dimensions shown apply for both designs.



Cap Beam Reinforcement

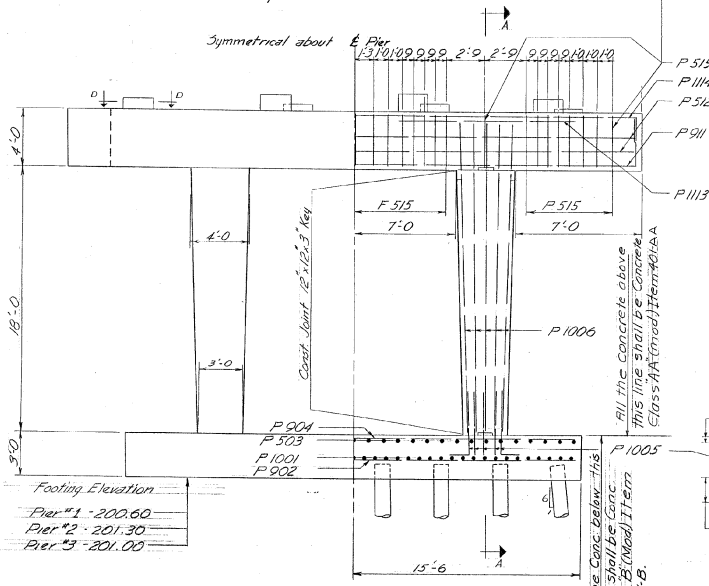


SECTION C-C
SCALE ½" = 1'-0
(Prestressed Beam Seats)

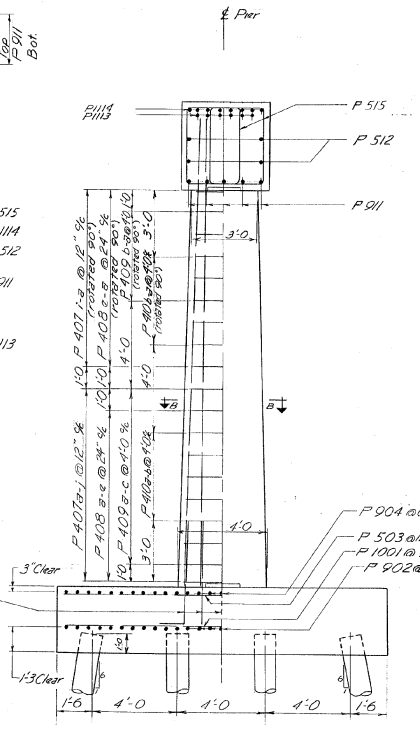


DETAIL - E-E - (WF Beam Seat Detail)
Stage I Construction

SECTION D-D
SCALE ½" = 1'-0



ELEVATION
SCALE ¼" = 1'-0



SECTION A-A
SCALE ⅜" = 1'-0

For notes see sheet BR 1 of 27

ITEM NO.	ITEM	UNIT	NET	OVERRUN	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C.Y.				
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
106-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.				
401-B	CONC. CLASS B (MOD.)	C.Y.				
402	REINF. STEEL	LBS.				
407	ASPHALTIC-ASB. COATING	S.Y.				
502-B	TREATED TIMBER PILING	L.F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L.F.				
502-A	UNTREATED TIMBER PILING	L.F.				

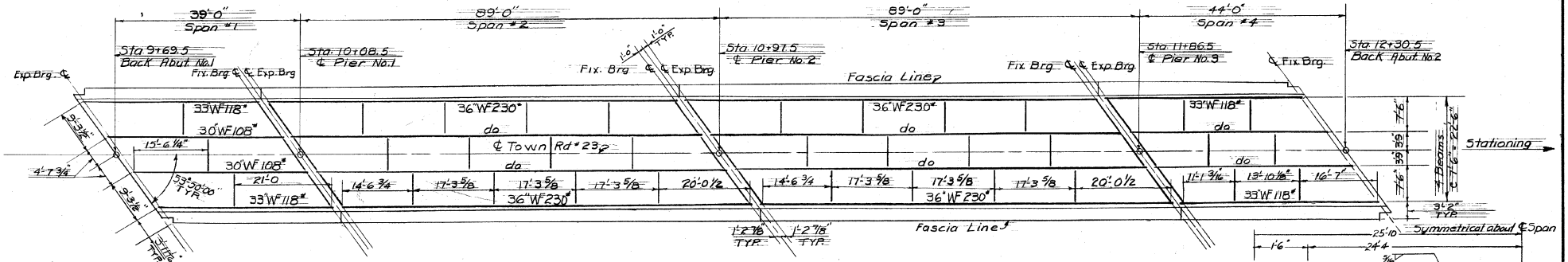
COLCHESTER IM 089-3(33)
I-89, BRIDGE 78
This sheet for information only
SHEET 23F OF 23

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
BRIDGE : S1-82

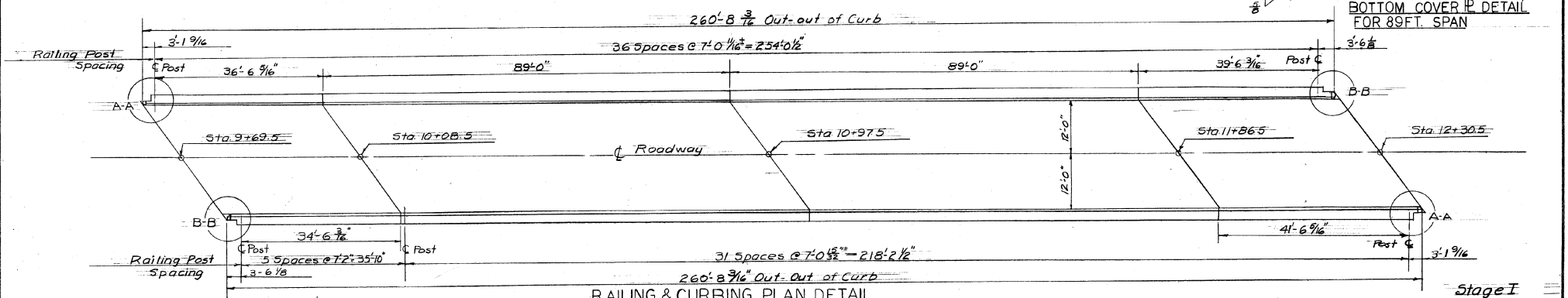
TOWN OF COLCHESTER
ROUTE NO. T.H. #23 over I-89
PIER DETAILS - 1, 2, & 3
PRESTRESSED & WF BEAM
SCALE AS SHOWN
TRACED BY
DRAWN BY VOL CHECKED BY G.V.K. 1/62
PROJECT NO. I-89-3(5)
SHEET 81 OF 265

BR.13 of 27

CONT. NO. 1

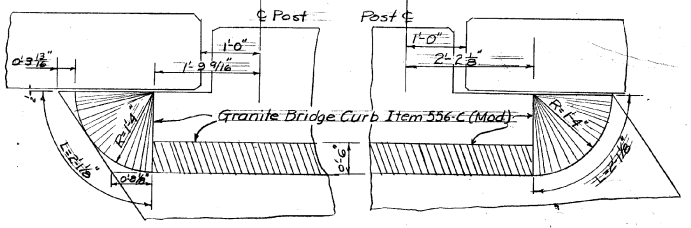


FRAMING PLAN
SCALE: 1"=10'-0"



RAILING & CURBING PLAN DETAIL
SCALE: 1"=10'-0"

Notes
1. For General Notes See Br 1 of 27
2. For additional details see standard: SCB-24-62, SCB-D1, D3, D6, D7, D8 & D9-62; SB-5G-62



END CURBING DETAILS
SCALE: 1"=1'-0"

ITEM NO.	I.T.E.M	UNIT	NET	OVERRUN	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C.Y.				
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
106-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.				
401-B	CONC. CLASS B (MOD.)	C.Y.				
402	REINF. STEEL	LBS.				
407	ASPHALTIC-ASB. COATING	S.Y.				
502-B	TREATED TIMBER PILING	L.F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L.F.				
502-A	UNTREATED TIMBER PILING	L.F.				

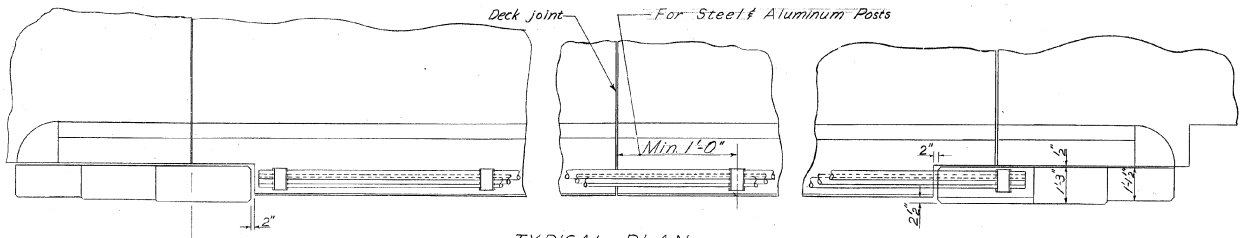
COLCHESTER IM 089-3(33)
I-89, BRIDGE 75
This sheet for information only
SHEET 236 OF 236

Stage I
BR.14 OF 27 Construction

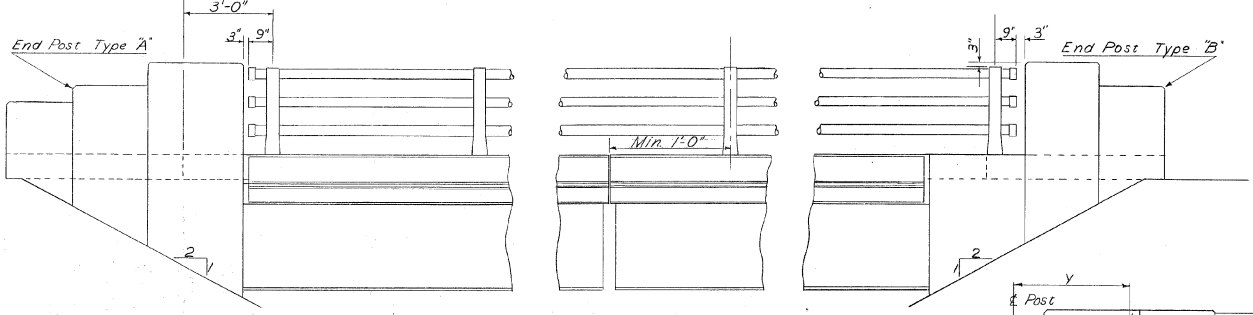
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF COLCHESTER
ROUTE No. TOWN RD. #23 OVER I-89
FRAMING-RAILING & CURBING PLAN DETAILS
SCALE AS SHOWN
SURVEYED BY BRUCE
DRAWN BY G.V.K. CHECKED BY VOL
PROJECT No. I-89-3(19)
SHEET 82 OF 265

CONT. NO. 1

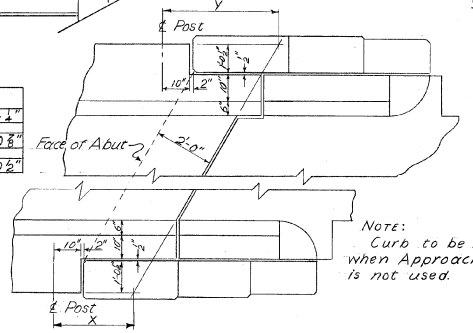


TYPICAL PLAN



TYPICAL ELEVATION

SKEW	X	Y
15°	2'-9½"	3'-4"
30°	2'-8½"	3'-10⅜"
45°	2'-9½"	4'-10½"



NOTE:
Curb to be modified when Approach Slab is not used.

PLAN FOR SKEWED ENDS

GENERAL RAILING NOTES

All posts to be set normal to the grade.

Prior to fabrication of the railing, shop drawings shall be submitted to the Highway Department for approval.

One anchor bolt template shall be supplied for each type of post.

Tubular rails, rail posts, box section inserts, wedges, end caps, anchor bolts, nuts, washers, anchor bolt templates, shims & all labor, tools, equipment and incidentals necessary to complete the acceptable railing installation shall be included in the Unit Price bid for Item 572.

All bolts, nuts & washers shall be galvanized to A.S.T.M-A-153-61.

GALVANIZED METAL RAILING

Intermediate Three Tube Post - Malleable Iron Casting - A.S.T.M. A-47 GR. 35018, galvanize to A.S.T.M. A-123-59.

Maximum post spacing shall be 10'-0".

Except for end sections and panels over expansion joints, all rails shall run continuous through two consecutive posts. Rails shall be so arranged, that no more than two splices will be adjacent to any given post. (In effect stagger joints as much as is practical.)

ALUMINUM RAILING

Posts shall meet A.A.S.H.O. Designation M-193-61. Rails shall meet A.S.T.M. - Specification B 235-61 Alloy-6061 Cond. T-6.

Maximum post spacing shall be 7'-2".

Aluminum railing posts are to be set on pads $\frac{1}{8}$" thick of a non-conductive material meeting the approval of the Engineer and the edges are to be sealed with an Aluminum Impregnated Caulking Compound.

Except for end sections all rails shall run continuous through three consecutive railing spans. With the exclusion of the end posts, the joints shall be placed so that there will be no more than one rail splice at each post.

GALVANIZED METAL RAILING (CONTINUED)

All rail splices and end caps shall be tested after galvanizing to assure proper clearances for field erection.

COLCHESTER IM 089-3(33)
I-89, BRIDGE 75
This sheet for information only

SHEET 23H OF 23

REVISIONS & CORRECTIONS
Note added for testing rail splices after galvanizing. 9/29/64 WMS.

Drawn By: XX Date: Dec. 1 1962
Traced By: XX Date: Dec. 1 1962
Checked By: EEP WMS RSH Date: Dec. 1 1962
Recommended [signature] 12/7/62
For Approval Bridge Engineer Date
Recommended [signature] 1/4/63
For Approval Assist. Chief Engineer Date
Approved By [signature] 1/4/63
Chief Engineer Date

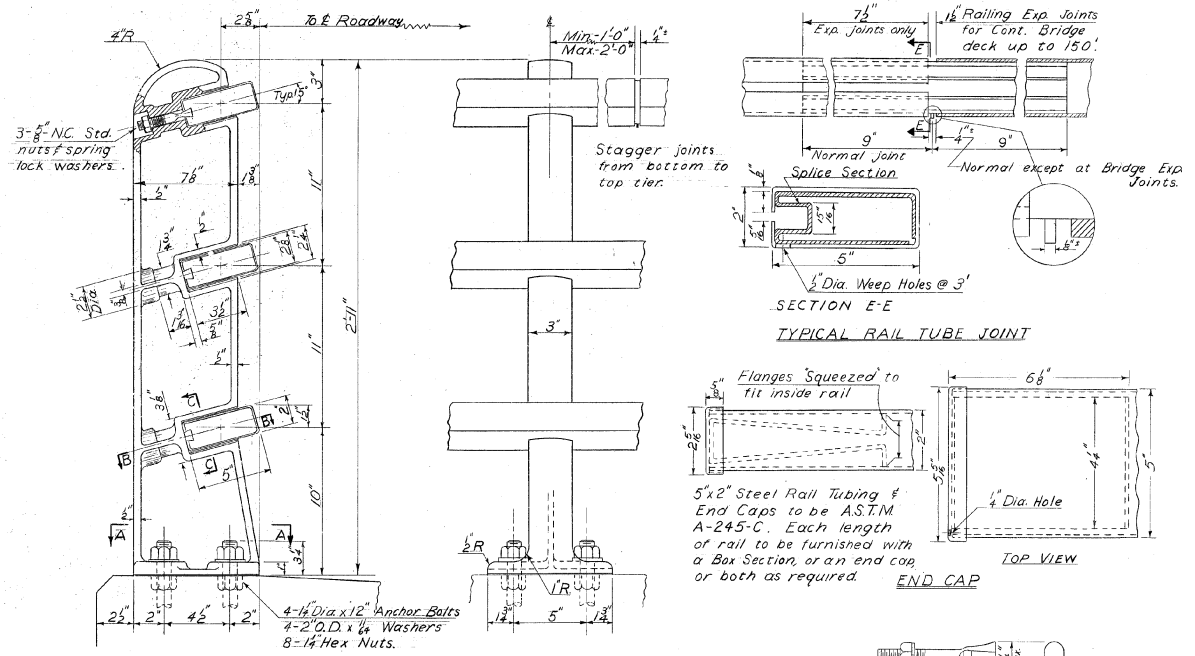
DETAILS OF BRIDGE RAILING
PLAN & ELEVATION

EITHER ALUMINUM OR GALVANIZED METAL RAILING MAY BE USED

VERMONT
DEPARTMENT OF HIGHWAYS
STRUCTURE STANDARDS

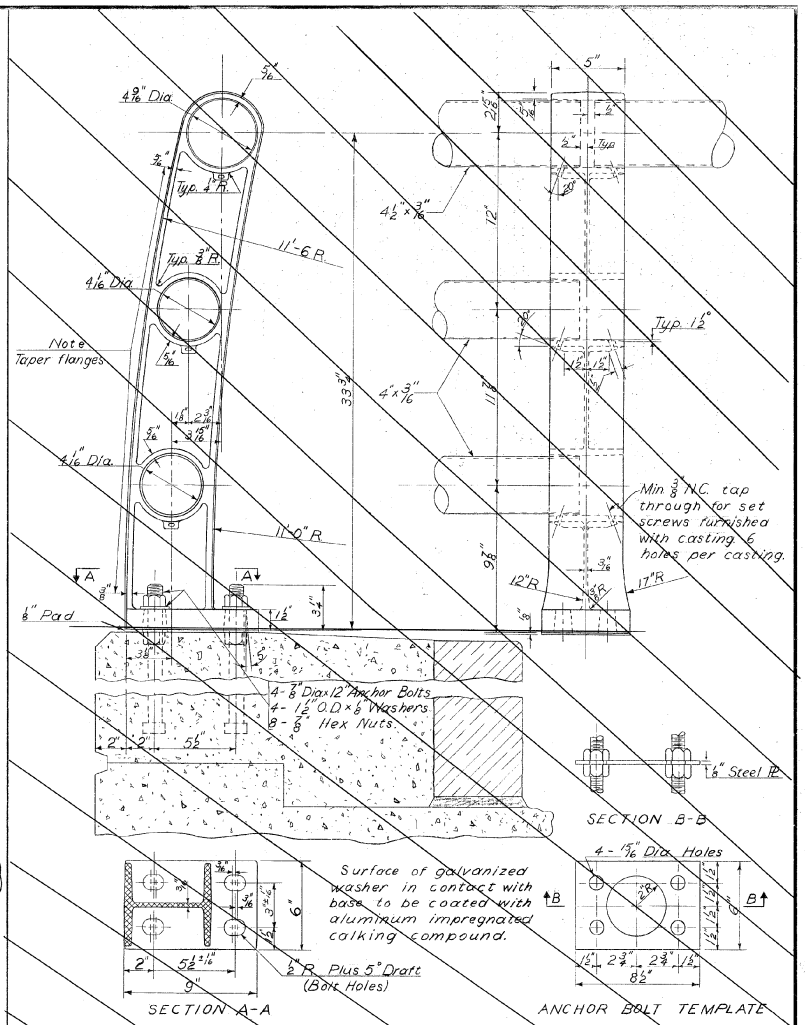
SB-5G-62

SHEET 1 OF 2



GALVANIZED METAL BRIDGE RAILING

Ⓐ



ALUMINUM BRIDGE RAILING

Ⓑ

REVISIONS & CORRECTIONS
Revised size of nuts on Anchor Bolts & size of holes Anchor Bolt Template Detail A. 6/21/63 WK

Drawn By: WK	Date: Dec. 1 1962	
Traced By: WK	Date: Dec. 1 1962	
Checked By: F.E.P. W.M.S. R.S.H.	Date: Dec. 1 1962	
Recommended For Approval	Bridge Engineer	12/7/62 Date
Recommended For Approval	Asst. Chief Engineer	11/4/63 Date
Approved By	Chief Engineer	11/4/63 Date

DETAILS OF BRIDGE RAILING

Ⓐ GALVANIZED METAL RAILING DETAILS

Ⓑ ALUMINUM RAILING DETAILS

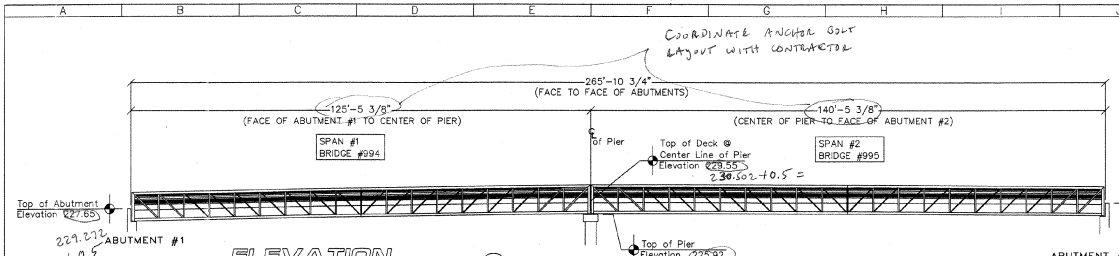
VERMONT DEPARTMENT OF HIGHWAYS STRUCTURE STANDARDS

SB-5G-62

SHEET 2 OF 2

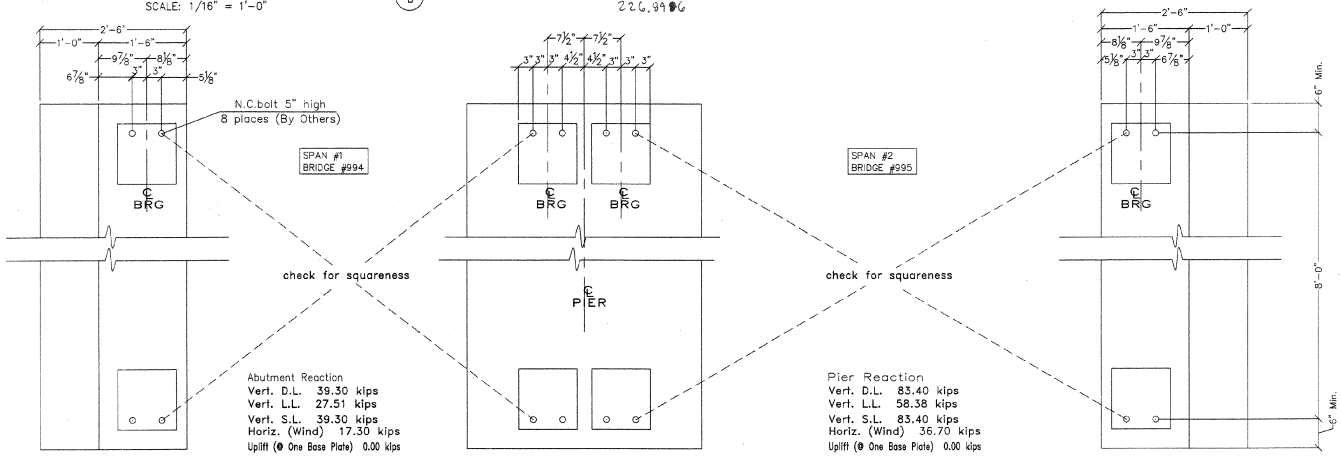
COLCHESTER IM 089-3(33)
I-89, BRIDGE 75
This sheet for information only

SHEET 23I OF 23



ELEVATION ①

SCALE: 1/16" = 1'-0"



Abutment Reaction
Vert. D.L. 39.30 kips
Vert. L.L. 27.51 kips
Vert. S.L. 39.30 kips
Horiz. (Wind) 17.30 kips
Uplift (@ One Base Plate) 0.00 kips

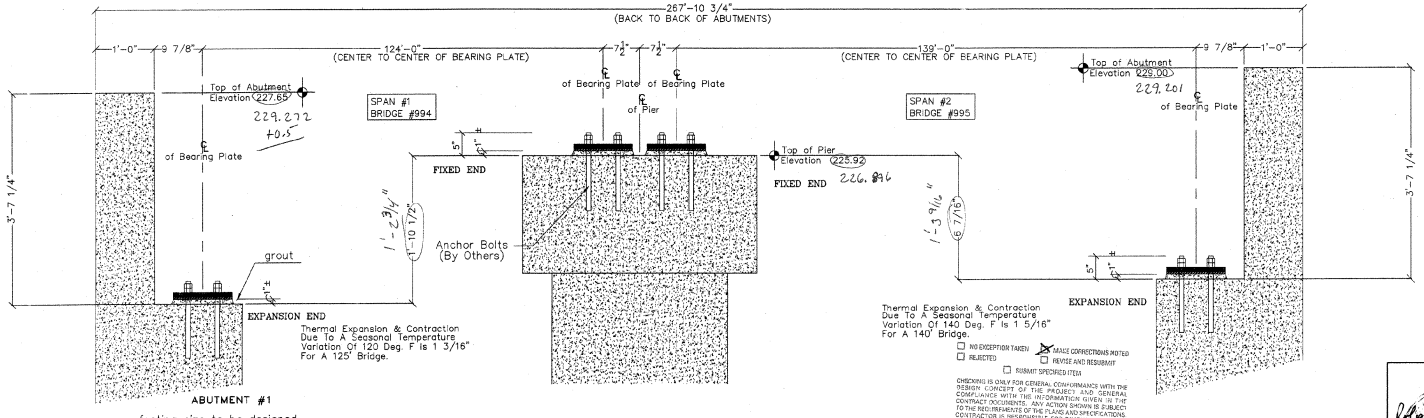
Pier Reaction
Vert. D.L. 83.40 kips
Vert. L.L. 58.38 kips
Vert. S.L. 83.40 kips
Horiz. (Wind) 36.70 kips
Uplift (@ One Base Plate) 0.00 kips

Abutment Reaction
Vert. D.L. 44.10 kips
Vert. L.L. 30.87 kips
Vert. S.L. 44.10 kips
Horiz. (Wind) 19.40 kips
Uplift (@ One Base Plate) 0.00 kips

CONTRACTOR NOTE:
Bridge design may require foundations to differ from contract drawings.

ABUTMENT PLAN ②

N. T. S.



footing size to be designed by owner based on soil condition

Note:
Abutments and Pier sizes to be designed by owner based on soil condition.

ABUTMENT SECTION ③

SCALE: N.T.S.

NO EXCEPTION TAKEN
MAKE CORRECTIONS NOTED
REVISE AND RESUBMIT
REJECTED
SUBMIT SPECIFIED ITEM

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CLOUGH HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS
ARCHITECTS

DATE 9-30-02 BY MWD

GENERAL NOTES

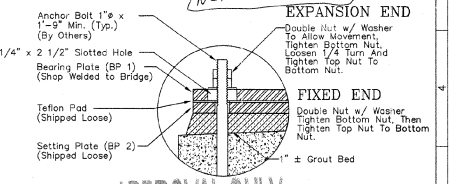
1. All design stresses are in accordance with the specification of THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION and AASHTO.
2. Welding to conform with the AMERICAN WELDING SOCIETY D1.1 latest revision. Welding to be performed by experienced welders qualified in accordance with A.W.S. procedures. Welding electrodes to be ASTM E-80XX series. Weld process to be FCAW.
3. All structural steel to be 'WEATHERING STEEL' with a minimum yield strength of 50,000 psi.
4. Structural welds will be a minimum of 3/16" fillet unless shown otherwise. Minimum weld does not apply to seal welds.
5. Anchor bolts to be ASTM A-307 or threaded A-36 steel rods. Where noted 'Expansion', nuts on anchor bolts should be loosely 'hand tightened' so as to allow the bearing plates to slide on the setting plates or teflon pads. Place setting plate & teflon pads on shims, set bridge, and then grout under setting plates. If required Field splice connection bolts shall be ASTM A325 TYPE 3 and shall be tighten by the turn of the nut method to obtain proper torque.
6. Exposed steel surfaces to be sandblasted to STEEL STRUCTURES PAINTING COUNCIL #6 'commercial sandblast Finish'. After cleaning, care shall be taken to keep surfaces free of oil, grease, concrete and any foreign matter to allow the weathering steel to rust evenly.
7. Concrete to be 3500 psi lightweight (120pcf), poured and finished on the job site. The bridge shall be delivered, formed with 2" deep 22 gage, galvanized composite floor deck. No construction or control joints. Contractor to furnish reinforcement.
8. Reinforcing steel shall be deformed bars conforming to ASTM A615 Grade 60 unless noted. Welded fabric shall conform to ASTM A185 (Flat sheets only).
9. Hand rails and all other accessible surfaces to be ground smooth with no sharp edges or corners.
10. Length of anchor bolts and foundation details are for general arrangement purposes only. Actual foundation and substructure design, railing, camber, and slope requirements, electrical grounding, and clearances (flood plain, roadway, and waterway) are the responsibility of others.

THIS BRIDGE IS DESIGNED BASED ON THE FOLLOWING CRITERIA.
(1) Dead load of 100psf plus an evenly distributed live load of 85 psf as per AASHTO Guide Specifications for Pedestrian Bridges.
(2) Dead load plus an evenly distributed snow load of 100 psf.
(3) Dead load + concentrated load of 10,000 pounds + impact.
(4) Wind load (approx. 120 mph.) calculated on the entire vertical surface as though fully enclosed.

COLCHESTER
I-89
BR #74-2
IM 089-3(33)
NEXT TO DR-75

BLAKLEY ROAD PED OVER I-89

EXPANSION END



APPROVAL ONLY

Rev	DESCRIPTION	BY/DATE	CHK'D BY
A	Released For Approval		

Robert N. Haslam, III
Gen. V. III
0007336
REGISTERED
9/4/02

STEADFAST BRIDGES®
A DIVISION OF BILTOLAST PRODUCTS INC.
4021 GAULT AVENUE
FORT PAYNE, AL 35967-8139
1-800-749-7515
ACTIVE MEMBER

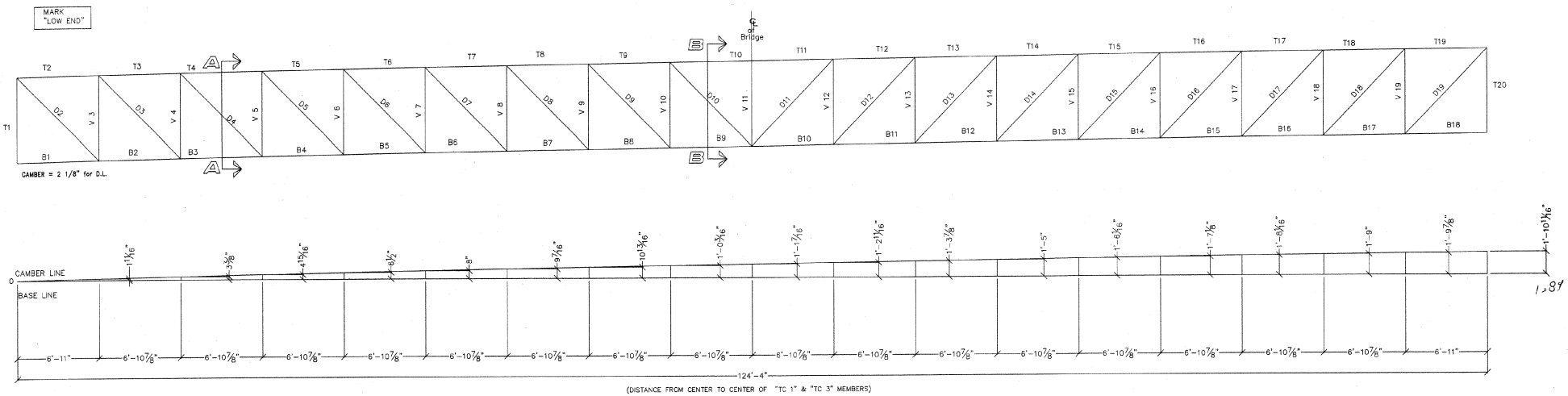
JOB:	BLACKLEY ROAD OVER I-89
FOR:	COLCHESTER, VT
ADDRESS:	CONTRACTOR CRANE SERVICE
	136 MUNSON AVENUE
	MORRISVILLE, VT 05661
ARCHITECT:	Plans By Owner
CONTRACTOR:	CONTRACTOR CRANE SERVICE
DESCRIPTION:	BRIDGE #994 & 995
	6 x 125 - 6 x 140 "CONNECTOR" BRIDGE
DRAWN BY:	TTS 8/21/02
APP'D BY:	
CHECKED BY:	JET

STEADFAST BRIDGES
PEDESTRIAN TRAFFIC
LIGHT VEHICLE
MAXIMUM LOAD
4 TONS

BILTOLAST PRODUCTS INC
TOP PANEL ALIGNS
DATE OF MANUFACTURE
MARK #1

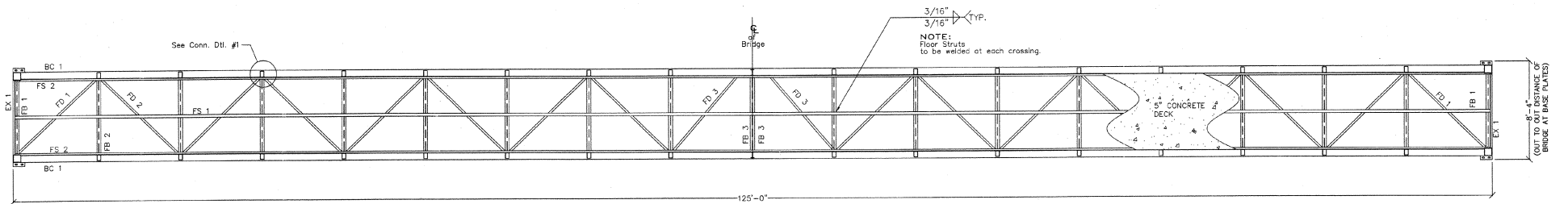
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DRAWING # 021627 1/9 SHEET REV. A



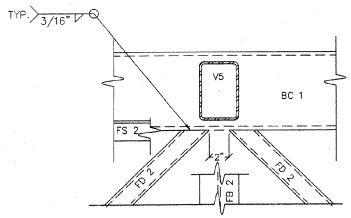
ELEVATION @ BRIDGE #994 (4)

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



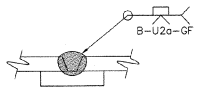
FLOOR PLAN @ BRIDGE #994 (5)

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



CONN. DTL. #1

SCALE: 2" = 1'-0"



TOP & BTM. CHORD SHOP SPLICE DTL.

SCALE: NONE

X NO EXCEPTION TAKEN ☐ MAKE CORRECTIONS NOTED
☐ REJECTED ☐ REVISE AND RESUBMIT
☐ SUBMIT SPECIFIED ITEM

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CLOUDER HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
DATE 9-30-02 BY MWD

APPROVAL ONLY

Rev	DESCRIPTION	BY/DATE	CHK'D BY
A	Released For Approval		

STEADFAST BRIDGES®
PLACARD ATTACHED ON RIGHT SIDE NEAR LEAD END OF BRIDGE
STEADFAST BRIDGES
PEDESTRIAN TRAFFIC
LIGHT VEHICLE
MAXIMUM LOAD
5 TONS
BILTOLAST PRODUCTS INC
FORT PAYNE, ALABAMA
DATE OF MANUFACTURE
SERIAL #

A DIVISION OF
BILTOLAST PRODUCTS INC.
4021 GAULT AVENUE
FORT PAYNE, AL 35967-8139
1-800-749-7515

AISC ACTIVE MEMBER

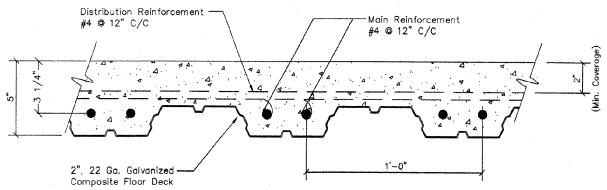
JOB: BLACKLEY ROAD OVER I-89
FOR: COLCHESTER, VT
ADDRESS: CONTRACTOR CRANE SERVICE
138 MUNSON AVENUE
MORRISVILLE, VT 05661
ARCHITECT: Plans By Owner
CONTRACTOR: CONTRACTOR CRANE SERVICE
DESCRIPTION:
BRIDGE #994
6 x 125 "CONNECTOR" BRIDGE

DRAWN BY: TTS 8/21/02
APP'D BY: CM
CHECKED BY: JET

Robert H. Hickam, III
ROBERT H. HICKAM III
007036
REGISTERED PROFESSIONAL ENGINEER
9/4/02

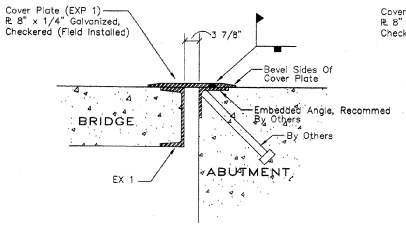
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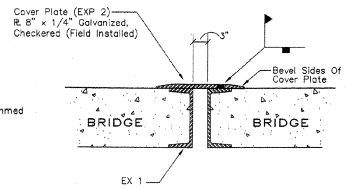
DRAWING # 021627 2/9 SHEET REV. A



CONC. DECK REINFORCEMENT

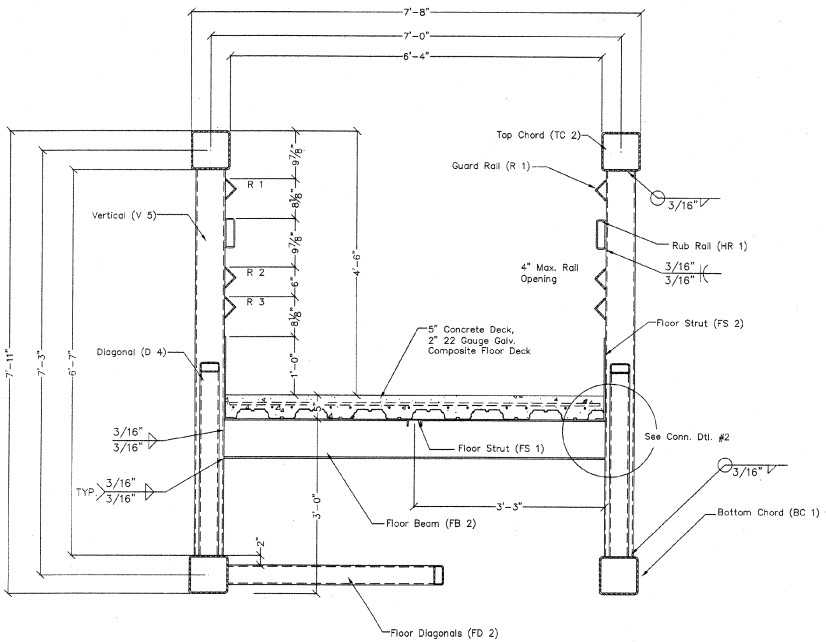
SCALE: 3" = 1'-0"





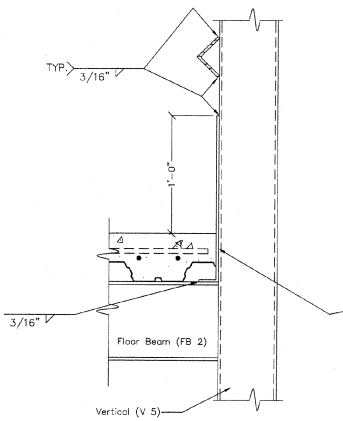
COVER PLATE DETAIL

SCALE: 3" = 1'-0"



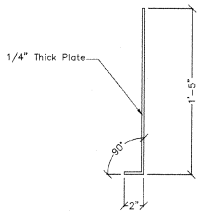
SECTION "A - A" @ BRIDGE #994

SCALE: 1" = 1'-0"



CONN. DTL. #2

SCALE: 2" = 1'-0"



DETAIL OF FS 2

SCALE: 2" = 1'-0"

BILL OF MATERIALS

JOB: 021627 FOR: COLCHESTER, VT 6X125"CONNECTOR

STEEL ASTM WF-A588 or A242 C&L- A588 or A242 TUBE- A847 or A500 PLATE-A588 or A242

SHOP No.	MARK	DESCRIPTION	FEET	INCHES	WEIGHT PER/FOOT	TOTAL	TOTAL LENGTH
2	TC 1	HSS 8 x 8 x 3/8	7	10 13/16	37.69	604	16
4	TC 2	HSS 8 x 8 x 3/8	62	6 1/8	37.69	9,460	251
2	TC 3	HSS 8 x 8 x 3/8	7	11 1/8	37.69	604	16
4	BC 1	HSS 8 x 8 x 1/4	61	10 1/8	25.82	6,404	248
16	V3-V10	HSS 6 x 4 x 1/4	6	7	15.62	1,656	106
16	V12-V19	HSS 6 x 4 x 1/4	6	7	15.62	1,656	106
4	V 11	C 6 x 8.2	6	7	8.20	222	27
4	D2-D3	HSS 4 x 4 x 1/4	9	2 1/2	12.21	452	37
14	D4-D10	HSS 4 x 2 x 1/4	9	2 3/4	8.81	1,146	130
14	D11-D17	HSS 4 x 2 x 1/4	9	4 3/8	8.81	1,166	132
4	D18-D19	HSS 4 x 4 x 1/4	9	4 1/4	12.21	464	38
2	FB 1	W 10 x 33	8	4	33.00	429	13
16	FB 2	W 8 x 15	6	6	15.00	1,560	104
2	FB 3	C 8 x 11.5	6	6	11.50	150	13
2	FD 1	HSS 4 x 2 x 1/4	9	3	8.81	168	19
14	FD 2	HSS 4 x 2 x 1/4	9	3	8.81	1,146	130
2	FD 3	HSS 4 x 2 x 1/4	8	5 5/8	8.81	150	17
1	FS 1	C 3 x 4.1	125	0 3/16	4.10	517	126
2	FS 2	PL 19 x 1/4 ("L" SHAPED)	125	0 3/16	16.15	4,070	252
2	EX 1	C 5 x 6.2	6	4	6.20	81	13
2	HR 1	HSS 6 x 2 x 1/4	125	0 3/4	12.21	1,539	126
6	R1-R3	L 3 x 3 x 1/4	125	0 3/4	4.90	3,680	751
18	DECK	2" 22 GAUGE COMP (36")	21	0	6.00	2,268	378
4	BP 1	PL 12 x 3/4	1	0 1/2	30.60	153	5
8	SP 1	PL 6 1/2 x 1/2	2	2	11.10	200	18
8	SP 2	PL 6 1/2 x 1/2	2	6	11.10	222	20
8	SP 3	PL 3 x 1/2	0	4	5.10	15	3
8	CONN.	BOLT ASTM 325 3/4"	0	2 1/2		2	
128	CONN.	BOLT ASTM 325 7/8"	0	2 1/2		36	
16	CONN.	BOLT ASTM 325 3/4"	0	1 3/4		5	

SUB TOTAL 40,233#

ITEMS TO SHIP LOOSE WITH BRIDGE

4	BP 2	PL 12 x 1/2	1	0 1/2	20.40	102	5
4		FRICTIONLESS PADS 11 x 1/8	1	0 1/2	0	1	3

TOTAL LIFTING WEIGHT: 40,328#

APPROVAL ONLY

Rev.	DESCRIPTION	BY/DATE	CHK'D BY
A	Released For Approval		

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CLOUGH HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS

DATE 9-30-02 BY

Robert D. Hickman, III
ROBERT D. HICKMAN, III
GRADUATE
0007036
LICENSED PROFESSIONAL ENGINEER
9/4/02

A DIVISION OF
BILTOLAST PRODUCTS INC.
4021 GAULT AVENUE
FORT PAYNE, AL 35967-8139
1-800-749-7515

ACTIVE MEMBER

STEADFAST BRIDGES®

PLACARD ATTACHED ON RIGHT END POST AT EXIT END OF BRIDGE

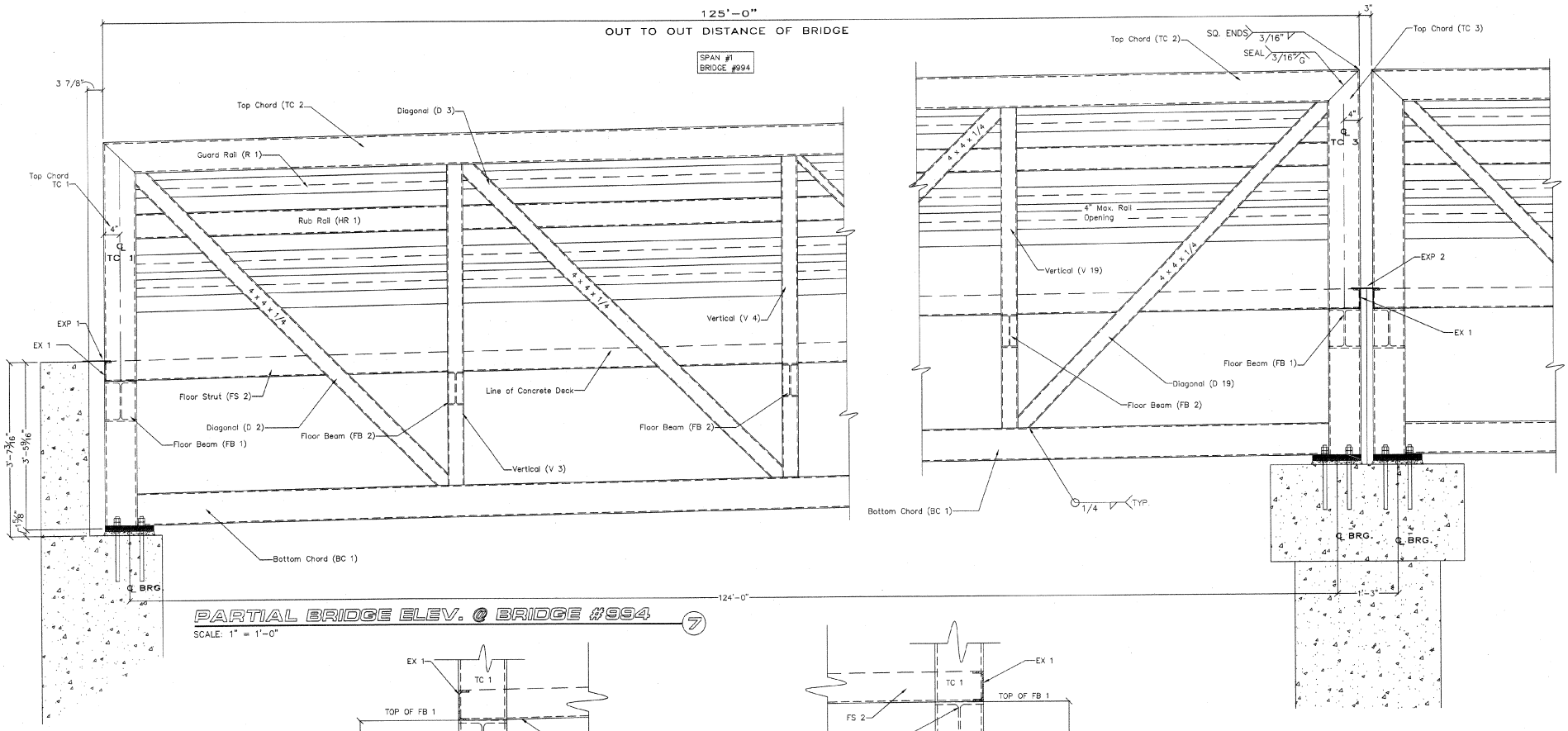
STEADFAST BRIDGES
PEDESTRIAN TRAFFIC
LIGHT VEHICLE
MAXIMUM LOAD
5 TONS
BILTOLAST PRODUCTS INC
FORT PAYNE, ALABAMA
DATE OF MANUFACTURE
NO. 1

JOB BLACKLEY ROAD OVER I-89
FOR: COLCHESTER, VT
ADDRESS: CONTRACTOR CRANE SERVICE
138 MUNSON AVENUE
MORRISVILLE, VT 05661
ARCHITECT: Plans By Owner
CONTRACTOR: CONTRACTOR CRANE SERVICE
DESCRIPTION:
BRIDGE #994
6 x 125 "CONNECTOR" BRIDGE

DRAWN BY: TTS 8/21/02
APP'D BY:
CHECKED BY: JE

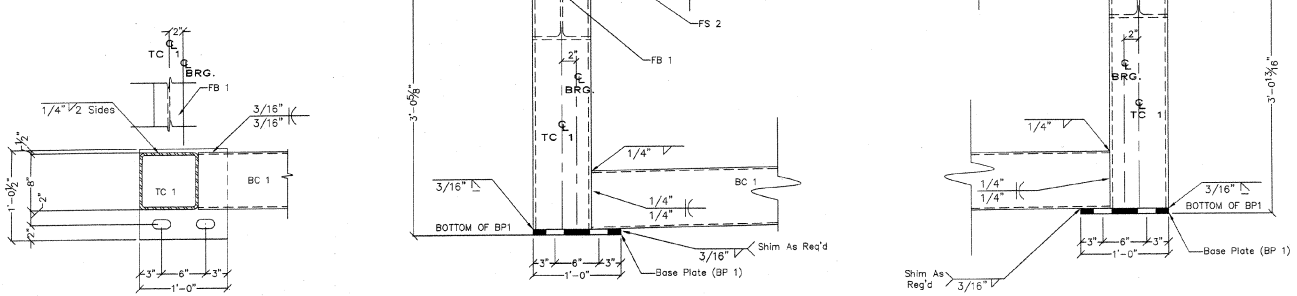
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DRAWING # 021627 SHEET 3/9 REV. A



PARTIAL BRIDGE ELEV. @ BRIDGE #994 (7)

SCALE: 1" = 1'-0"



BRG. ASSEMBLY AND BRG. PLATES (8)

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

☒ NO EXCEPTION TAKEN ☐ MAKE CORRECTIONS NOTED
☐ REJECTED ☐ REVISE AND RESUBMIT
☐ SUBMIT SPECIFIED ITEM

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CLOUGH HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS
& LANDSCAPE ARCHITECTS
DATE 9-30-02 BY MWD

APPROVAL ONLY

Rev	DESCRIPTION	BY/DATE	CHK'D BY
A	Relecsed For Approval		

STEADFAST BRIDGES®

A DIVISION OF
BILTOLAST PRODUCTS INC.
4021 GAULT AVENUE
FORT PAYNE, AL 35967-8139
1-800-749-7515

ACTIVE MEMBER

PLEASE CONTACT US BEFORE YOU BEGIN CONSTRUCTION

STEADFAST BRIDGES
PEDESTRIAN TRAFFIC
LIGHT VEHICLE
MAXIMUM LOAD
5 TONS

BILTOLAST PRODUCTS INC.
FORT PAYNE, ALABAMA
DATE OF MANUFACTURE
SERIAL #

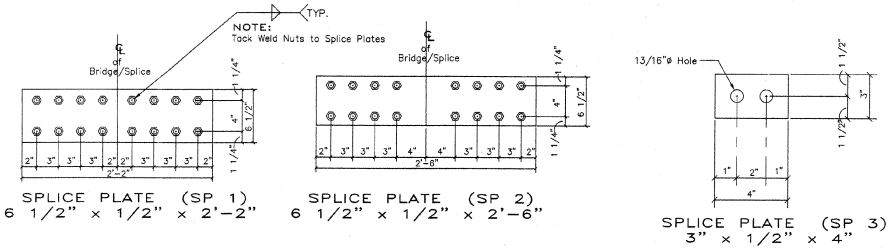
JOB: BLACKLEY ROAD OVER I-85
FOR: COLCHESTER, VT
ADDRESS: CONTRACTOR CRANE SERVICE
138 MUNSON AVENUE
MORRISVILLE, VT 05661
ARCHITECT: Plans By Owner
CONTRACTOR: CONTRACTOR CRANE SERVICE
DESCRIPTION:
BRIDGE #994
6 x 125 "CONNECTOR" BRIDGE

DRAWN BY: TTS 8/21/02
APP'D BY:
CHECKED BY: JET

ROBERT G. GRAHAM, III 0007036 REGISTERED
9/9/02

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DRAWING # 021627 4/9 SHEET REV. A



SPLICE PLATE (SP 1)
6 1/2" x 1/2" x 2'-2"

SPLICE PLATE (SP 2)
6 1/2" x 1/2" x 2'-6"

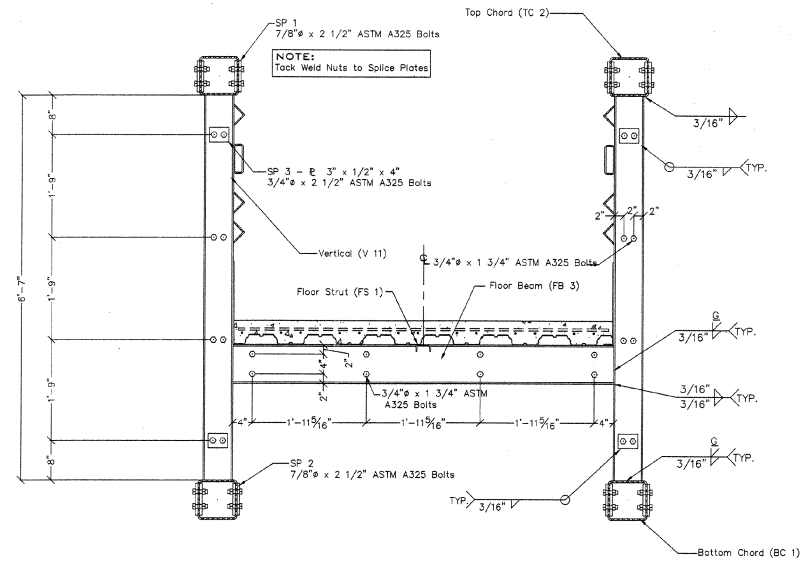
SPLICE PLATE (SP 3)
3" x 1/2" x 4"

NOTE:
15/16"ø HOLES AT BOTTOM CHORD SPLICE
AND 15/16"ø HOLES AT TOP CHORD SPLICE

SPLICE PLATES

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

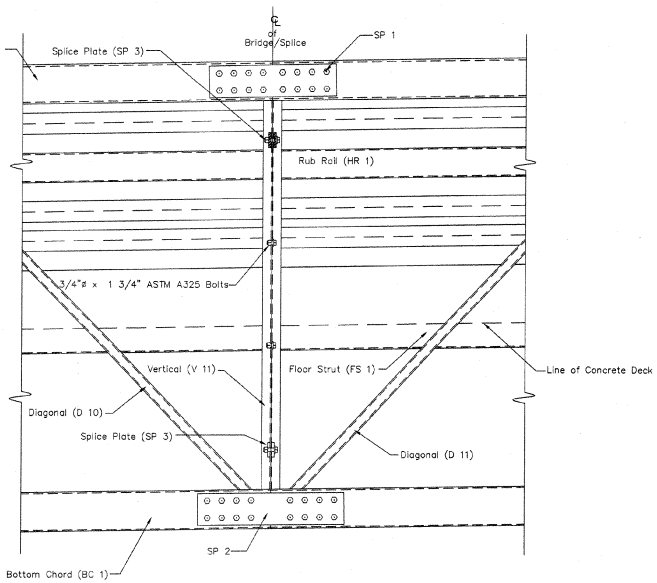
9



SECT. "B - B" @ SPLICE @ BRIDGE #994

SCALE: 1" = 1'-0"

10



ELEVATION @ SPLICE BRIDGE #994

SCALE: 1" = 1'-0"

11

☒ NO EXCEPTION TAKEN ☐ MAKE CORRECTIONS NOTED
☐ REJECTED ☐ REVISE AND RESUBMIT
☐ SUBMIT SPECIFIED ITEM

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CLOUGH HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS
& LANDSCAPE ARCHITECTS
DATE 9-30-02 BY mwo

APPROVAL ONLY

Rev	DESCRIPTION	BY/DATE	CHK'D BY
A	Released For Approval		

A DIVISION OF
BILTOLAST PRODUCTS INC.
4021 GAULT AVENUE
FORT PAYNE, AL 35967-8139
1-800-749-7515

ACTIVE MEMBER

STEADFAST BRIDGES

PLACARD ATTACHED ON RIGHT SIDE FRONT AT EACH END OF BRIDGE

STEADFAST BRIDGES
PEDESTRIAN TRAFFIC
LIGHT VEHICLE
MAXIMUM LOAD
5 TONS

BILTOLAST PRODUCTS INC
FORT PAYNE, ALABAMA
DATE OF MANUFACTURE
SERIAL #

Robert A. Makar III
ROBERT A. MAKAR III
GRAPHIC IS
00.7.06

9/4/02

JOB:	BLACKLEY ROAD OVER I-89
FOR:	COLCHESTER, VT
ADDRESS:	CONTRACTOR CRANE SERVICE 138 MUNSON AVENUE MORRISVILLE, VT 05661
ARCHITECT:	Plans By Owner
CONTRACTOR:	CONTRACTOR CRANE SERVICE
DESCRIPTION:	BRIDGE #994 6 x 125 "CONNECTOR" BRIDGE
DRAWN BY:	TTS 8/21/02
APP'D BY:	LJM
CHECKED BY:	JET

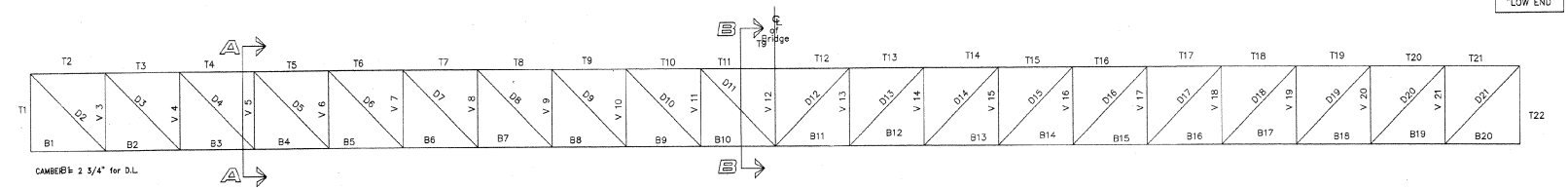
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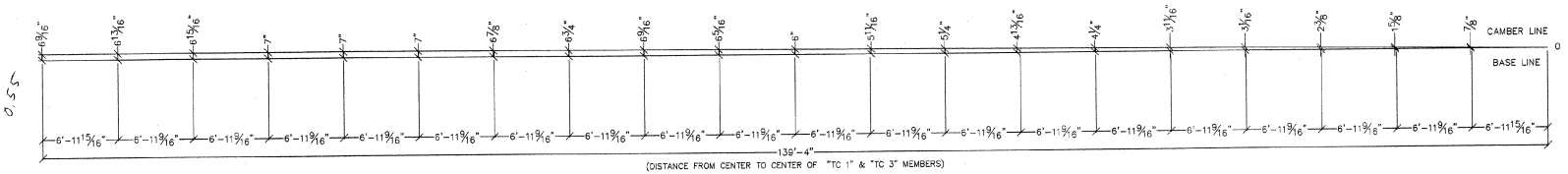
DRAWING #	SHEET	REV.
021627	5/9	A

MARK "HIGH END"

VERTICAL SKEW = 5/16" @ Center of Bridge

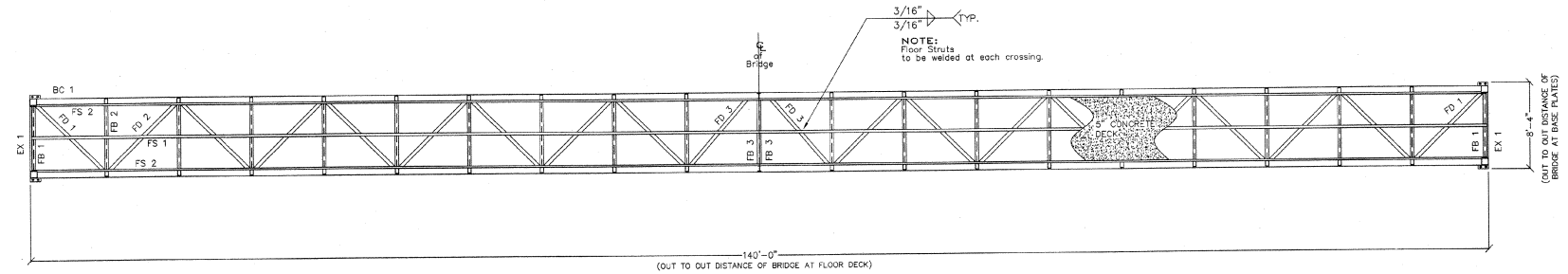
MARK "LOW END"





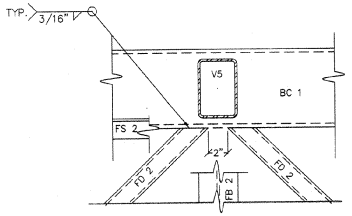
ELEVATION @ BRIDGE #995 (12)

SCALE: 3/16" = 1'-0"



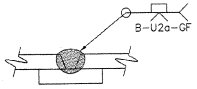
FLOOR PLAN @ BRIDGE #995 (13)

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



CONN. DTL. #1

SCALE: 2" = 1'-0"



TOP & BTM. CHORD SHOP SPLICE DTL.

SCALE: NONE

X NO EXCEPTION TAKEN ☐ MAKE CORRECTIONS NOTED
☐ REJECTED ☐ REVISE AND RESUBMIT
☐ SUBMIT SPECIFIED ITEM

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CLOUGH HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
DATE 9-30-02 BY mwo

APPROVAL ONLY

Rev	DESCRIPTION	BY/DATE	CHK'D BY
A	Released For Approval		

STEADFAST BRIDGES

A DIVISION OF BILTOLAST PRODUCTS INC.
4021 GAULT AVENUE
FORT PAYNE, AL 35967-8139
1-800-749-7515

ACTIVE MEMBER

JOB:	BLACKLEY ROAD OVER I-89
FOR:	COLCHESTER, VT
ADDRESS:	CONTRACTOR CRANE SERVICE
	138 MUNSON AVENUE
	MORRISVILLE, VT 05661
ARCHITECT:	Plans By Owner
CONTRACTOR:	CONTRACTOR CRANE SERVICE
DESCRIPTION:	BRIDGE #995
	6 x 140 "CONNECTOR" BRIDGE

DRAWN BY: TTS 8/21/02
APP'D BY: L.W.M.
CHECKED BY: JET

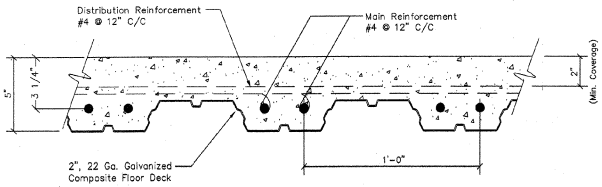
PEDESTRIAN TRAFFIC LIGHT VEHICLE MAXIMUM LOAD 5 TONS

BILTOLAST PRODUCTS INC. FORT PAYNE, ALABAMA
DATE OF MANUFACTURE:
HEAT #:
ID:

Robert G. Pinkham III
ROBERT G. PINKHAM, III
NO. 0007036
REGISTERED PROFESSIONAL ENGINEER
9/4/02

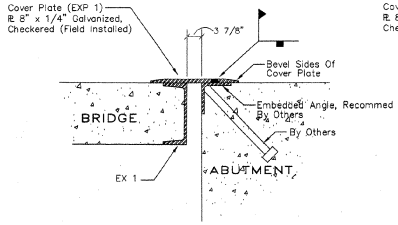
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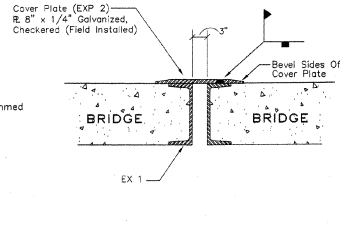
DRAWING # 021627 6/9 SHEET REV. A



CONC. DECK REINFORCEMENT

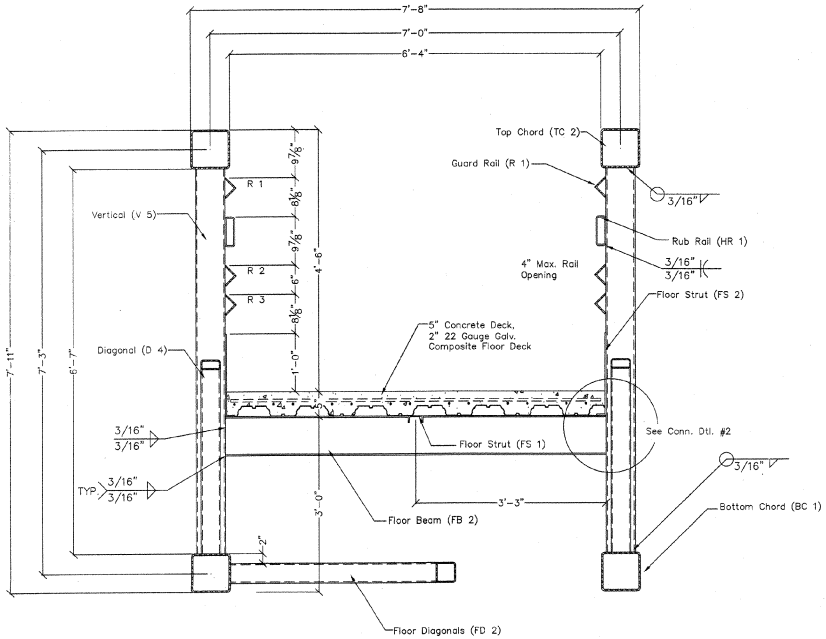
SCALE: 3" = 1'-0"





COVER PLATE DETAIL

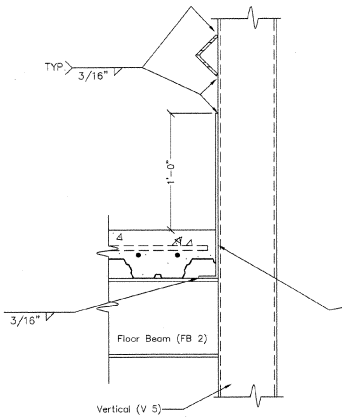
SCALE: 3" = 1'-0"



SECTION "A - A" @ BRIDGE #995

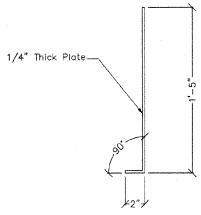
(14)

SCALE: 1" = 1'-0"



CONN. DTL. #2

SCALE: 2" = 1'-0"



DETAIL OF FS 2

SCALE: 2" = 1'-0"

BILL OF MATERIALS

JOB: 021627 FOR: COLCHESTER,VT 6X140"CONNECTOR

STEEL ASTM WF-A588 or A242, C&L- A588 or A242; TUBE- A847 or A606, PLATE- A588 or A242

SHOP MARK No.	MARK	DESCRIPTION	FEET	INCHES	WEIGHT PER/FOOT	TOTAL	TOTAL LENGTH
2	TC 1	HSS 8 x 8 x 3/8	7	11 1/8	37.69	604	16
4	TC 2	HSS 8 x 8 x 3/8	70	0	37.69	10,554	280
2	TC 3	HSS 8 x 8 x 3/8	7	10 15/16	37.69	604	16
4	BC 1	HSS 8 x 8 x 3/8	69	4	37.69	10,479	278
18	V3-V11	HSS 6 x 4 x 1/4	6	7	15.62	1,859	119
18	V13-V21	HSS 6 x 4 x 1/4	6	7	15.62	1,859	119
4	V 12	C 6 x 8.2	6	7	8.20	222	27
4	D2-D3	HSS 4 x 4 x 1/4	9	4	12.21	464	38
16	D4-D11	HSS 4 x 2 x 1/4	9	4 5/16	8.81	1,322	150
16	D12-D19	HSS 4 x 2 x 1/4	9	3 7/8	8.81	1,322	150
4	D20-D2	HSS 4 x 4 x 1/4	9	3 9/16	12.21	464	38
2	FB 1	W 10 x 33	6	4	33.00	429	13
18	FB 2	W 8 x 15	6	6	15.00	1,755	117
2	FB 3	C 8 x 11.5	6	6	11.50	150	13
2	FD 1	HSS 4 x 4 x 1/4	9	3 13/16	12.21	232	19
16	FD 2	HSS 4 x 4 x 1/4	9	3 9/16	12.21	1,820	149
2	FD 3	HSS 4 x 4 x 1/4	8	7 1/4	12.21	220	18
1	FS 1	C 3 x 4.1	140	0	4.10	574	140
2	FS 2	PL 19 x 1/4 ("L" SHAPED)	140	0	16.15	4,620	280
2	EX 1	C 5 x 6.2	6	4	6.20	81	13
2	HR 1	HSS 6 x 2 x 1/4	140	0	12.21	3,420	280
6	R1-R3	L 3 x 3 x 1/4	140	0	4.90	4,116	840
21	DECK	2" 22 GAUGE COMP (36")	21	0	6.00	2,646	441
4	BP 1	PL 12 x 3/4	1	0 1/2	30.60	153	5
8	SP 1	PL 6 1/2 x 1/2	2	2	11.10	200	18
8	SP 2	PL 6 1/2 x 1/2	2	6	11.10	222	20
8	SP 3	PL 3 x 1/2	0	4	5.10	15	3
8	CONN.	BOLT ASTM 325 3/4"	0	2 1/2		2	
128	CONN.	BOLT ASTM 325 7/8"	0	2 1/2		36	
			0				
16	CONN.	BOLT ASTM 325 3/4"	0	1 3/4		5	

SUB TOTAL 50,449#

	ITEMS TO SHIP LOOSE WITH BRIDGE					
4	BP 2 PL 12 x 1/2	1	0 1/2	20.40	102	5
4	FRICTIONLESS PADS 11 x 1/8	1	0 1/2	0	1	3
2	EXP 1 PL 8 x 1/4	6	3 1/2	6.81	89	13
1	EXP 2 PL 8 x 1/4	6	3 1/2	6.81	48	7

TOTAL LIFTING WEIGHT: 50,689#

APPROVAL ONLY

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☐ REJECTED ☐ REVISE AND RESUBMIT
☐ SUBMIT SPECIFIED ITEM

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CLOUGH HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS
& LANDSCAPE ARCHITECTS
DATE 9-30-02 By mwd

Rev	DESCRIPTION	BY/DATE	CHK'D BY
A	Released For Approval		

STEADFAST BRIDGES®

A DIVISION OF
BILTOLAST PRODUCTS INC.
4021 GAULT AVENUE
FORT PAYNE, AL 35967-8139
1-800-749-7515

AISC ACTIVE MEMBER

BILTOLAST PRODUCTS INC. FORT PAYNE, ALABAMA
DATE OF MANUFACTURE
SHEET 1 OF

JOB BLACKLEY ROAD OVER I-89
FOR: COLCHESTER, VT
ADDRESS: CONTRACTOR CRANE SERVICE
138 MUNSON AVENUE
MORRISVILLE, VT 05661
ARCHITECT: Plans By Owner
CONTRACTOR: CONTRACTOR CRANE SERVICE
DESCRIPTION:
BRIDGE #995
6 x 140 "CONNECTOR" BRIDGE

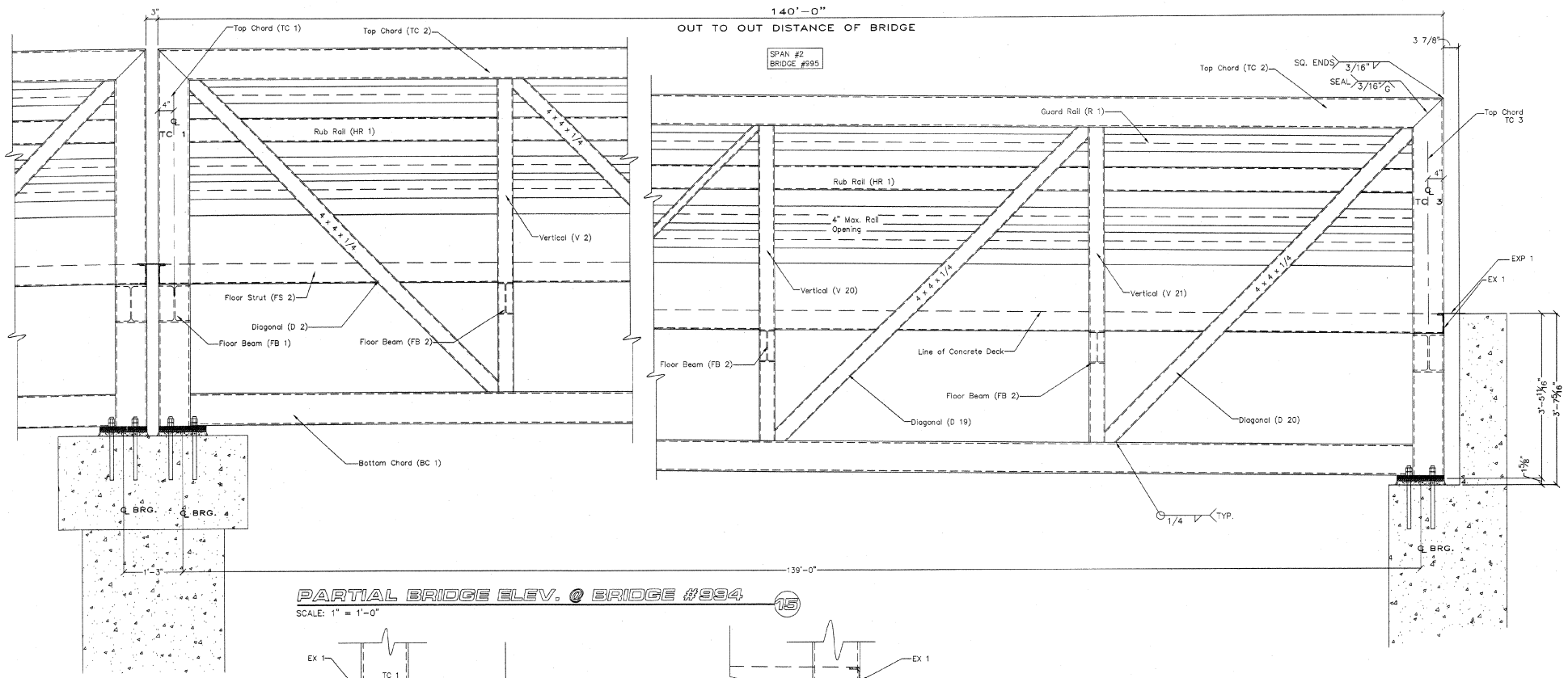
DRAWN BY: TTS 8/21/02
APP'D BY: CUM
CHECKED BY: JET

STEADFAST BRIDGES
PEDESTRIAN TRAFFIC
LIGHT VEHICLE
MAXIMUM LOAD
5 TONS

Robert G. Graham, III
ROBERT G. GRAHAM III
0007036
VERMONT
REGISTERED
PROFESSIONAL
ENGINEER
9/4/02

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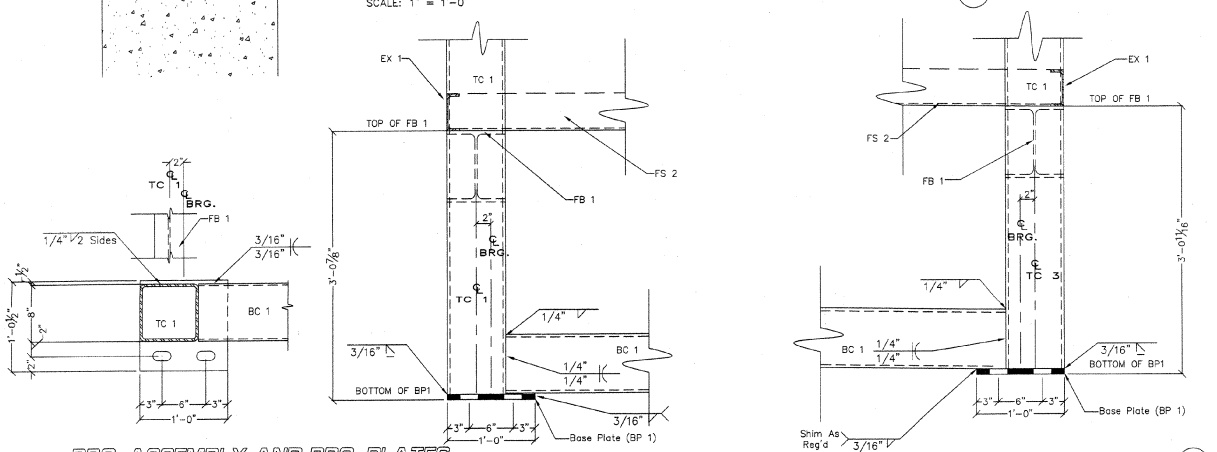
DRAWING # 021627 7/9 SHEET REV. A



PARTIAL BRIDGE ELEV. @ BRIDGE #994

15

SCALE: 1" = 1'-0"



BRG. ASSEMBLY AND BRG. PLATES

16

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

NO EXCEPTION TAKEN ☐ MAKE CORRECTIONS NOTED ☐ REJECTED ☐ REVISE AND RESUBMIT ☐ SUBMIT SPECIFIED ITEM

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CLOUGH HARBOUR & ASSOCIATES LLP
ENGINEERING, SURVEYING, PLANNING & LANDSCAPE ARCHITECTURE

DATE 9-30-02 BY mwo

APPROVAL ONLY

Rev	DESCRIPTION	BY/DATE	CHK'D BY
A	Released For Approval		

STEADFAST BRIDGES®

A DIVISION OF BILTOLAST PRODUCTS INC.
4021 GAULT AVENUE
FORT PAYNE, AL 35967-8139
1-800-749-7515

ACTIVE MEMBER

PLACARD ATTACHED IN RIGHT AND FRONT AT EACH END OF BRIDGE
STEADFAST BRIDGES
PEDESTRIAN TRAFFIC LIGHT VEHICLE MAXIMUM LOAD 3 TONS
BILTOLAST PRODUCTS INC
FORT PAYNE, ALABAMA
DATE OF MANUFACTURE
SERIAL #

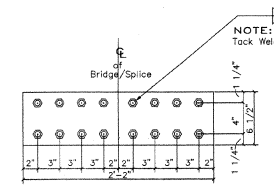
JOB: BLACKLEY ROAD OVER I-89
FOR: COLCHESTER, VT
ADDRESS: CONTRACTOR CRANE SERVICE
138 MUNSON AVENUE
MORRISVILLE, VT 05661
ARCHITECT: Plans By Owner
CONTRACTOR: CONTRACTOR CRANE SERVICE
DESCRIPTION: BRIDGE #995
6 x 140 "CONNECTOR" BRIDGE

DRAWN BY: TTS 8/21/02
APPD BY: CLM
CHECKED BY: JET

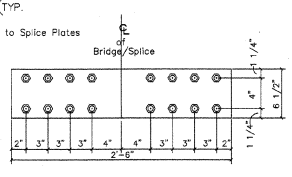
ROBERT G. [illegible] GRADUATE ENGINEER 0007036
9/9/02

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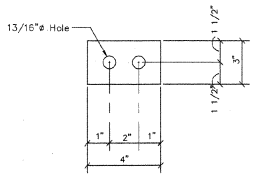
DRAWING # 021627 SHEET 8/9 REV. A



SPLICE PLATE (SP 1)
6 1/2" x 1/2" x 2'-2"



SPLICE PLATE (SP 2)
6 1/2" x 1/2" x 2'-6"

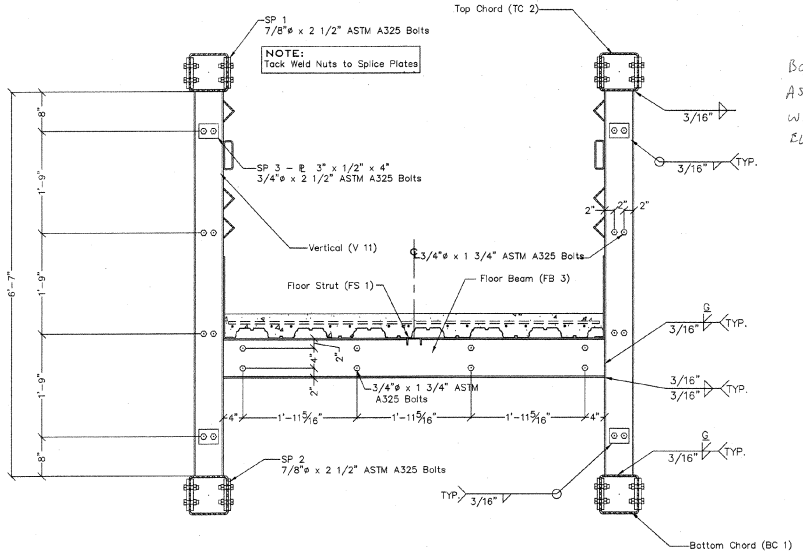


SPLICE PLATE (SP 3)
3" x 1/2" x 4"

NOTE:
15/16"ø HOLES AT BOTTOM CHORD SPLICE
AND 15/16"ø HOLES AT TOP CHORD SPLICE

SPLICE PLATES (17)

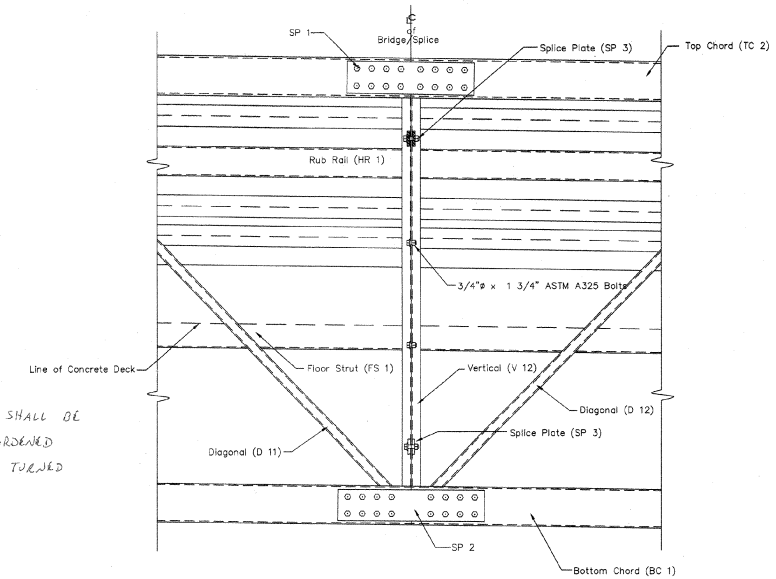
SCALE: 1 1/2"" = 1'-0"



SECT. "B - B" @ SPLICE @ BRIDGE #995 (18)

SCALE: 1" = 1'-0"

BOLTED CONNECTIONS SHALL BE ASSEMBLED WITH A HARDENED WASHER UNDER THE TURNED ELEMENT (TYP.)



ELEVATION @ SPLICE BRIDGE #995 (19)

SCALE: 1" = 1'-0"

☐ NO EXCEPTION TAKEN ☒ MAKE CORRECTIONS NOTED
☐ REJECTED ☐ REVISE AND RESUBMIT
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CLOUGH HARBOUR & ASSOCIATES LLP
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DATE 9-30-02 By MWO

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A	Released For Approval		

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FORT PAYNE, AL 35967-8139
1-800-749-7515
ACTIVE MEMBER

PLACARD ATTACHED ON RIGHT SIDE OF EACH END OF BRIDGE
STEADFAST BRIDGES
PEDESTRIAN TRAFFIC
LIGHT VEHICLE
MAXIMUM LOAD
5 TONS
BILTOLAST PRODUCTS INC
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CONTRACTOR: CONTRACTOR CRANE SERVICE
DESCRIPTION:
BRIDGE #995
6 x 140 "CONNECTOR" BRIDGE

DRAWN BY: TTS 8/21/02
APP'D BY: CHM
CHECKED BY: JET

Robert G. Hoban, III
ROBERT G. HOBAN III
GRADUATE ENGINEER
9/4/02

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DRAWING # 021627 9/9
SHEET
REV. A