INDEX OF SHEETS

STATE OF VERMONT

AGENCY OF TRANSPORTATION

PROPOSED SAFETY IMPROVEMENTS

TOWN OF HINESBURG
COUNTY OF CHITTENDEN
VT 116 (MINOR ARTERIAL)
AT CHARLOTTE ROAD (MAJOR T.H. COLLECTOR)

0 2000 4000
SCALE IN FEET

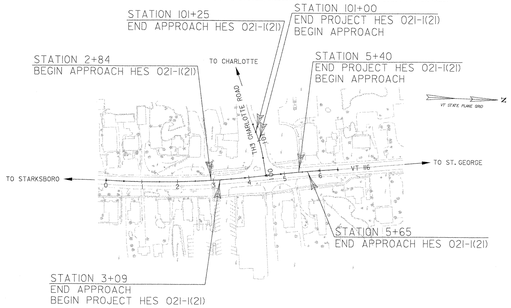
BEGINNING ON VT 116 AT A POINT APPROXIMATELY 130 FT. SOUTH OF CHARLOTTE ROAD AND EXTENDING NORTHERLY ALONG VT 116 FOR 231FT.

LENGTH OF ROADWAY: 231FT = 0.044 MILES
LENGTH OF PROJECT: 231FT = 0.044 MILES

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES REHABILITATION OF VT 116 AND CHARLOTTE RD. INTERSECTION, WITH SOME MINOR WIDENING AND SIDEWALK RECONSTRUCTION, PAVEMENT MARKINGS AND SIGNS, AND THE ADDITION OF A TRAFFIC SIGNAL SYSTEM, INCLUDING THE INSTALLATION OF PEDESTRIAN SIGNALS.

STANDARDS

C-1	1/3/00	E-106	3/1/04	E-162	5/20/99
C-3A	9/1/04	E-107	6/30/03	E-163	5/20/99
C-3B	9/1/04	E-107A	8/8/95	E-164	5/20/99
D-1	6/1/94	E-111	3/11/97	E-170	1/4/99
D-8	1/3/00	E-119	3/1/04	E-171A	8/9/95
D-11	6/1/94	E-121	8/8/95	E-171B	8/9/95
D-13	1/3/00	E-123	3/16/04	E-171C	8/9/95
D-15	6/1/94	E-140	8/30/96	E-172	8/9/95
E-100	1/2/04	E-143	6/15/04	E-173	8/9/95
E-100A	1/2/04	E-145A	12/23/94	E-175	6/17/93
E-101	5/30/03	E-146	9/20/95	E-191	2/1/99
E-102	6/30/03	E-160	5/20/99	E-192	10/12/00
E-102A	5/1/04	E-161	8/8/95	J-3	8/7/95



TRAFFIC DATA

VT 116		TH3	
ADT 2007 = 12,600	ADT 2027 = 15,700	ADT 2007 = 2,500	ADT 2027 = 3,100
2007 DHV = 1,300	2027 DHV = 1,600	2007 DHV = 280	2027 DHV = 350
2007 ADTT = 980	2027 ADTT = 1,900	2007 ADTT = 210	2027 ADTT = 380
2007 %D = 71	2027 %D = 71	2007 %D = 59	2027 %D = 59
2007 %T = 6.8	2027 %T = 10.9	2007 %T = 6.6	2027 %T = 9.9
DESIGN SPEED = 25 MPH		DESIGN SPEED = 35 MPH	
POSTED SPEED = 25 MPH		POSTED SPEED = 25 MPH	
2007-2027 ESAL'S = 7,151,000		2007-2027 ESAL'S = 1,027,000	
2007-2047 ESAL'S = 18,961,000		2007-2047 ESAL'S = 2,535,000	

RECORD PLANS

CONTRACTOR: DON WESTON EXCAVATING, INC. – WILLISTON, VT
RESIDENT ENGINEER: TOM MANCINI
CONSTRUCTION BEGAN: AUGUST 6, 2007
CONSTRUCTION COMPLETE: NOVEMBER 1, 2008
RECORD PLANS BY: TOM MANCINI & N. GARRACIK

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

BY _____ RESIDENT ENGINEER

DATE 3/21/09

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

CONVENTIONAL SIGNS

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

AERIAL SURVEY BY: COL-EAST, INC.
SURVEYED DATE: 2004

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83

0 100 200
SCALE IN FEET

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

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

VHB Vanasse Hangen Brustlin, Inc.

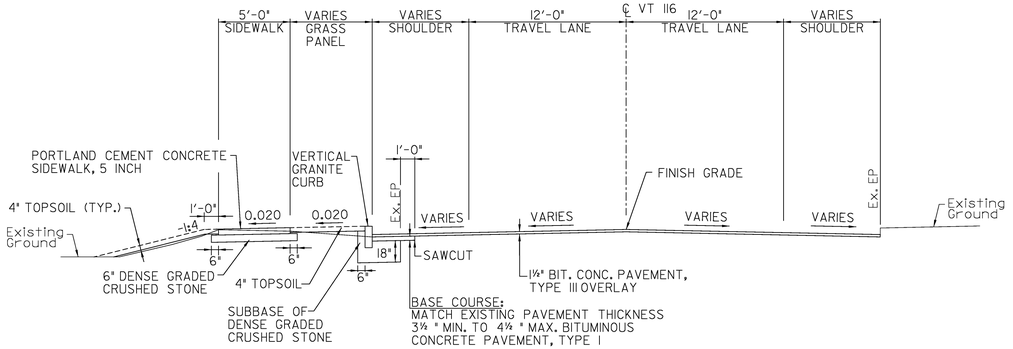
APPROVED _____ DATE 5-08-09
D. DIRECTOR OF PROGRAM DEVELOPMENT

PROJECT HINESBURG
HES 021-1(21)

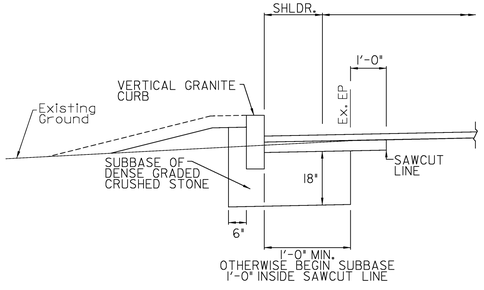
MATERIAL TOLERANCES	
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH)	3/6"
SUBBASE	1-3/16"

TYPICAL SECTIONS

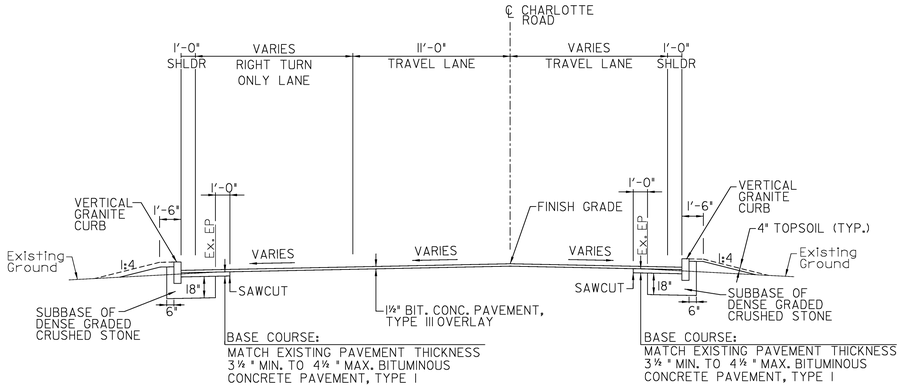
1 1/2" BITUMINOUS CONCRETE PAVEMENT - TYPE III (PG 58-28)
3 1/2"-4 1/2" BITUMINOUS CONCRETE PAVEMENT - TYPE I (PG 58-28) (1 LIFT)
18" SUBBASE OF DENSE GRADED CRUSHED STONE



VT 116
NOT TO SCALE



VERTICAL GRANITE CURB INSTALLATION
NOT TO SCALE



CHARLOTTE ROAD
NOT TO SCALE

SEEDING FORMULA
URBAN AREAS

% WT.	LBS./A.	NAME	PUR %	GERM %
42.5	34.0	CREEPING RED FESCUE	98	85
10.0	8.0	PERENNIAL RYE GRASS	95	90
42.5	34.0	KENTUCKY BLUE GRASS	85	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.00	80.0			

GENERAL NOTES

SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.

SEED: TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.

FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

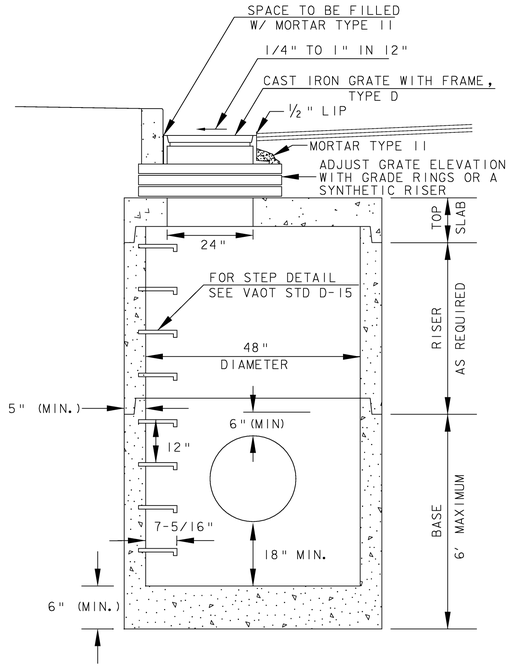
TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

NOTES

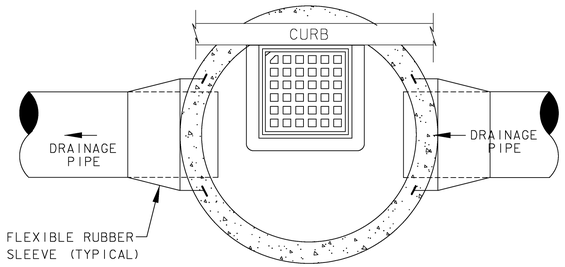
1. ALL NEW CURB SHALL HAVE A FINAL INSTALLED REVEAL OF SEVEN (7) INCHES.
2. THE PROPOSED PAVEMENT OVERLAYS AND PAVEMENT WIDENINGS SHALL MATCH THE EXISTING ROADWAY CROSS SLOPES.
3. PROPOSED DRIVE APRONS SHALL INCLUDE 1½" COLD PLANED PAVEMENT MATCH.
4. TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.025 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.
5. MARKER POSTS: TO BE PLACED AS INDICATED OR AS DIRECTED BY THE ENGINEER.
6. SIDEWALK RAMP DETECTABLE WARNING SURFACES SHALL BE TRUNCATED DOME DETECTABLE WARNING PLATES MANUFACTURED BY NEENAH FOUNDRY OR ANOTHER EQUAL CAST IRON PRODUCT FROM THE AGENCY'S APPROVED PRODUCTS LIST.
7. SAWCUT OF EXISTING PAVEMENT SHALL BE SUBSIDIARY TO COMMON EXCAVATION (ITEM 203.15).

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	HES 021-1(21)
FILE NAME: z04bB208typ.dgn	PLOT DATE: 5/4/2007
PROJECT LEADER: G. BAKOS	DRAWN BY: D. PECK
DESIGNED BY: D. PECK	CHECKED BY: G. BAKOS
TYPICAL SECTIONS	SHEET 2 OF 19



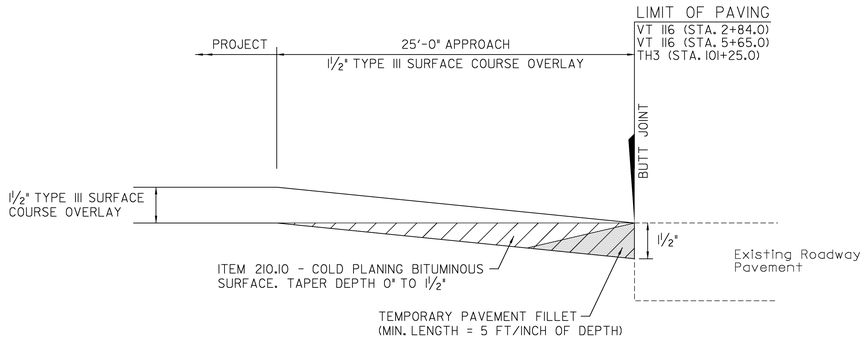
ELEVATION VIEW



DROP INLET PLAN VIEW

TYPICAL PRECAST DROP INLET INSTALLED IN ROADWAY

NOT TO SCALE

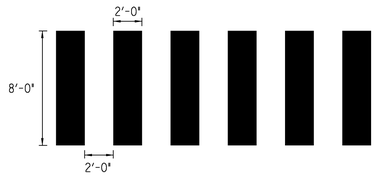


OVERLAY PAVEMENT MATCH TRANSITION DETAIL

NOT TO SCALE

PRECAST CONCRETE DROP INLET AND MANHOLE NOTES:

1. PRECAST CONCRETE SECTIONS SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND ASTM C-478.
2. MINIMUM CONCRETE COMPRESSIVE STRENGTH: 4,000 PSI AT 28-DAYS
3. STEEL REINFORCING SHALL CONFORM TO ASTM A185 OR A82 FOR HS25 LOADING.
4. MANHOLE STEPS SHALL BE 14" WIDE STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC CONFORMING TO ASTM C-478 AND SHALL BE CAST INTO MANHOLE SECTIONS BY THE PRECAST CONCRETE MANUFACTURER.
5. FACE OF PIPE SHALL NOT PROJECT MORE THAN 2" OR LESS THAN 1" FROM INSIDE WALL OF STRUCTURE.
6. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF OUTSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS-SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.
7. FITTING FRAME TO FINAL GRADE MAY BE DONE WITH A SYNTHETIC RISER OR WITH PRECAST CONCRETE GRADE RINGS OF APPROPRIATE THICKNESS (3 COURSES MAX).
8. ALL PIPE INVERTS AND PENETRATION ANGLES SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
9. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT AND BE ASSEMBLED USING A BUTYL RUBBER OR APPROVED EQUAL SEALANT.
10. PROVIDE FLEXIBLE RUBBER SLEEVES CONFORMING TO ASTM C-923, RESILIENT, OF SIZE REQUIRED, FOR EACH PIPE CONNECTING TO STRUCTURE. SLEEVES SHALL BE CAST INTO PRECAST STRUCTURE BY THE MANUFACTURER FOR ALL PIPE PENETRATIONS.
11. DROP INLET GRATE ORIENTATION SHALL BE IN ACCORDANCE WITH STANDARD DRAWING D-15 FOR TYPE D GRATES.
12. INSTALLATION OF DROP INLETS OVER EXISTING PIPES SHALL INCLUDE CLEAN CUTTING OF EXISTING PIPES, PROVIDING AN EXTENSION PIPE OF SIMILAR MATERIAL AND SIZE AS THE EXISTING PIPE, COUPLINGS REQUIRED FOR THE CONNECTION BETWEEN THE EXTENSION PIPE AND THE EXISTING PIPE, AND INSTALLING FLEXIBLE RUBBER SLEEVES AS SHOWN IN DETAILS PROVIDED ON THIS SHEET.
13. PAYMENT FOR INSTALLATION OF THE DROP INLETS SHALL BE MADE UNDER THE PRECAST REINFORCED CONC. DROP INLET WITH CAST IRON GRATE (ITEM 604.18).



BLOCK STYLE CROSSWALK MARKING DETAIL

NOT TO SCALE

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	HES 021-1(21)
FILE NAME: z04bB208det.dgn	PLOT DATE: 5/4/2007
PROJECT LEADER: G. BAKOS	DRAWN BY: D. PECK
DESIGNED BY: D. PECK	CHECKED BY: G. BAKOS
DETAILS SHEET	SHEET 3 OF 19

QUANTITY SUMMARY SHEET

SUMMARY OF ESTIMATED QUANTITIES

TRAINEESHIP	FULL E&C ITEMS	EROSION CONTROL	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
			100	100	CY	COMMON EXCAVATION	203.15	8.4
			18	18	CY	EXCAVATION OF SURFACES & PAVEMENTS	203.28	0.2
			12	12	CY	EARTH BORROW	203.30	EST.
			18	18	CY	TRENCH EXCAVATION OF EARTH	204.20	0.2
			14	14	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	0.5
			410	410	SY	COLD PLANING - BITUMINOUS PAVEMENT	210.10	2.3
			60	60	CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	6.9
			4	4	CWT	EMULSIFIED ASPHALT	404.65	0.1
			190	190	TON	BITUMINOUS CONCRETE PAVEMENT (PG 58-28)	406.25	9.9
			15	15	LF	12" PCCSP 0.064(2-2/3 X 1/2)	601.0405	-
			1	1	EACH	PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE	604.18	-
			2	2	EACH	CHANGING ELEV. OF DI'S CB'S OR MANHOLES	604.40	-
			1	1	EACH	CAST IRON COVER WITH FRAME	604.55	-
			60	60	MGAL	DUST CONTROL WITH WATER	609.10	6.2
			240	240	LF	VERTICAL GRANITE CURB	616.21	2.6
			1	1	EACH	RELOCATE MAILBOX, SINGLE SUPPORT	617.10	-
			100	100	SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10	10.69
			45	45	SF	DETECTABLE WARNING SURFACE	618.30	1.5
			2	2	EACH	YIELDING MARKER POSTS	619.17	-
			50	50	LF	REMOVING AND RESETTING FENCE	620.50	2.0
			100	100	HR	UNIFORMED TRAFFIC OFFICERS	630.10	-
			100	100	HR	FLAGGERS	630.15	-
	1			1	LS	TESTING EQUIPMENT - CONCRETE	631.16	-
	1			1	LS	TESTING EQUIPMENT - BITUMINOUS	631.17	-
			1	1	LS	MOBILIZATION / DEMOBILIZATION	635.11	-
			1	1	LS	TRAFFIC CONTROL	641.10	-
			700	700	LF	DURABLE 4 INCH WHITE LINE, THERMOPLASTIC	646.402	8.0
			500	500	LF	DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC	646.412	6.4
			80	80	LF	DURABLE 8 INCH WHITE LINE, THERMOPLASTIC	646.442	2.8
			80	80	LF	DURABLE 24 INCH STOP BAR, THERMOPLASTIC	646.482	2.0
			10	10	EACH	DURABLE LETTER OR SYMBOL, THERMOPLASTIC	646.492	-
			150	150	LF	DURABLE CROSSWALK MARKING, THERMOPLASTIC	646.502	5.0
			150	150	LF	TEMPORARY 4 INCH YELLOW LINE	646.610	-
			50	50	LF	TEMPORARY CROSSWALK MARKING	646.700	-
			65	65	EACH	LINE STRIPING TARGETS	646.76	4

SUMMARY OF ESTIMATED QUANTITIES

TRAINEESHIP	FULL E&C ITEMS	EROSION CONTROL	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
		150		150	SY	GEOTEXTILE FOR SILT FENCE	649.51	8.0
		4		4	LB	SEED	651.15	0.1
		25		25	LB	FERTILIZER	651.18	0.7
		0.10		0.10	TON	AGRICULTURAL LIMESTONE	651.20	-
		0.10		0.10	TON	HAY MULCH	651.25	-
		30		30	CY	TOPSOIL	651.35	4.8
			330	330	LF	PROJECT DEMARCATION FENCE	653.55	4.0
			40	40	SF	TRAFFIC SIGNS, TYPE A	675.20	0.49
						*** BEGIN SIGN POST OPTION ***		
			90	90	LF	FLANGED CHANNEL SIGN POST	675.301	-
			90	90	LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	-
						*** END SIGN POST OPTION ***		
			8	8	EACH	REMOVING SIGNS	675.50	-
			1	1	EACH	ERECTING SALVAGED SIGNS	675.60	-
			1	1	EACH	TRAFFIC CONTROL SIGNAL SYSTEM - INTERSECTION	678.15	-
			15	15	LF	ELECTRICAL CONDUIT (2") (PVC)	678.21	-
			610	610	LF	VEHICLE LOOP DETECTOR	678.22	2
			400	400	LF	WIRED CONDUIT (2") (PVC)	678.23	29
			75	75	LF	WIRED CONDUIT (2-1/2") (PVC)	678.23	5
			165	165	LF	ELECTRICAL CONDUIT SLEEVE (6") (PVC)	678.30	4

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		BITUMINOUS CONCRETE PAVEMENT
155.0	TON	TYPE III SURFACE COURSE - VT 116 & CHARLOTTE ROAD
8.5	TON	TYPE III SURFACE COURSE - DRIVES
16.6	TON	TYPE I BASE COURSE - VT 116 & CHARLOTTE ROAD
9.9	TON	ROUNDING
190		TOTAL

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HINESBURG
PROJECT NUMBER: HES 021-1(21)

FILE NAME: z04b208qty.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
QUANTITY SUMMARY SHEET

PLOT DATE: 5/4/2007
DRAWN BY: D. PECK
CHECKED BY: G. BAKOS
SHEET 4 OF 19

DRAINAGE DETAIL SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STATION	STATION	POS.	DRAINAGE NOTE	INLET/OUTLET TYPE		DITCH		ELLIPTICAL PIPE			ROUND PIPE		ALLOWABLE OPTIONS						MH	ES	CB	PRCCDI	DI	CONC CLASS B	REINF STEEL	GRATE	CHAN ELEV	CRM	TRENCH EXCAVATION		COMM EXC	UNC CHAN EXC	STRUCT EXCAV	GRAN BKFILL STRUCT	GRAN BORR	EROS MATT	STONE FILL		MARKER POSTS		REMARKS
				INLET	OUTLET	IN	OUT	SPAN IN	RISE IN	L FT	D IN	L FT	PCCSP TH	CAAP TH	RCP CL	CSP PI	CPEP SL	PCCSP PI TH	EA	EA	EA	I	EA	CY	LBS	TYPE	EA	CY	EARTH CY	ROCK CY	CY	CY	CY	CY	CY	CY	CY	TYPE	LT ea	RT ea	
VT 116 AT SILVER STREET																																								
3+77.3	3+87.8	LT	1	CB	MH						12	15.0	.064										1			D			17.8					13.5							CONNECT TO EXISTING STRUCTURE
4+21.3		RT	2	CB																							1												1		ADJUST GRATE ELEVATION
3+87.8		LT	3	MH																						MH	1													REMOVE DI GRATE AND FRAME
																																								NEW MH COVER AND FRAME
3+92.0		LT																																					1		EXISTING FIRE HYDRANT
SHEET SUBTOTAL											12	15.0	.064										1				2		17.8					13.5					2		

PROJECT NAME: HINESBURG
PROJECT NUMBER: HES 021-1(21)

FILE NAME: z04b208qty.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
DRAINAGE DETAIL SHEET

PLOT DATE: 5/4/2007
DRAWN BY: D. PECK
CHECKED BY: G. BAKOS
SHEET 5 OF 19

VHB Vanasse Hangen Brustlin, Inc.

POB 0+00.00 PC 0+50.00

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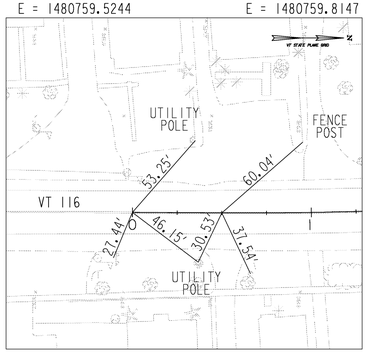

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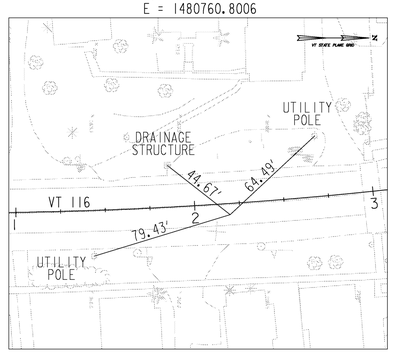

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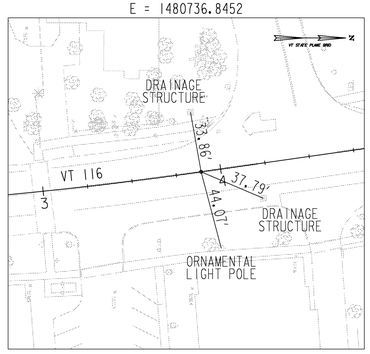

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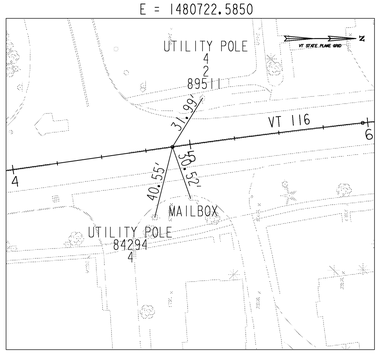

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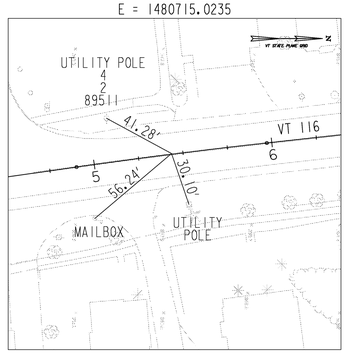

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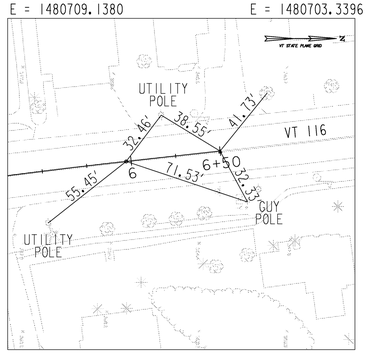

POB 100+00.00

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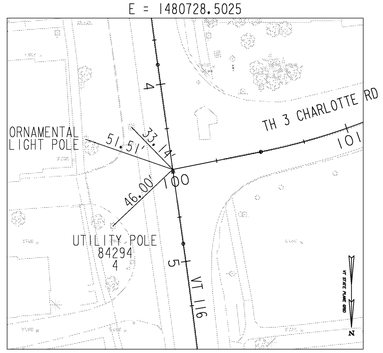

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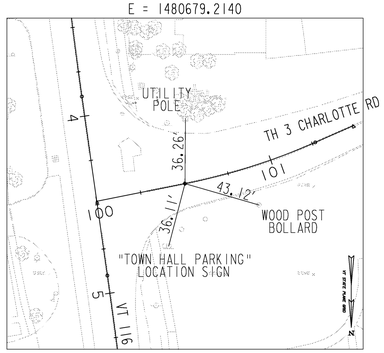

PI 100+88.69

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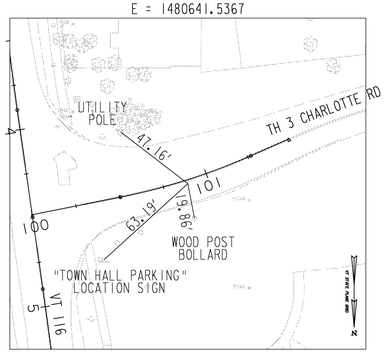

PT 101+26.81

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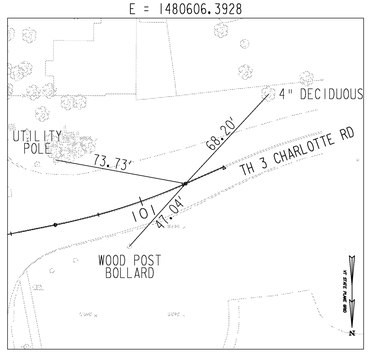
E = 1480606.3928



POE 101+50.00

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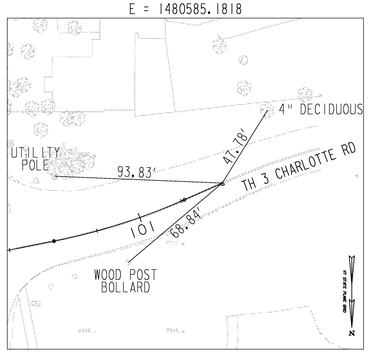


PROJECT NAME:	HINESBURG
PROJECT NUMBER:	HES 021-1(21)

FILE NAME: z04b208tie.dgn	PLOT DATE: 5/4/2007
PROJECT LEADER: G. BAKOS	DRAWN BY: D. PECK
DESIGNED BY: D. PECK	CHECKED BY: G. BAKOS
TIE SHEET	SHEET 6 OF 19

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA±	AREA±	TYPE	(T)/(P)	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
1	WALKER, DONA H.	5	3+00.05 LT	4+06.98 LT	3569 SF		ALL R. T. & I.					HINESBURG			VT RTE 116 AND T.H. 3 HWY EASE
	WALKER, DAPHNE		3+10 LT												DRIVE 16' GRAVEL MM 0454
	WALKER, DAVID N.		3+70 LT	3+83 LT			CONST	T	129 SF						INCLUDE PDF & EC
			3+77 LT	3+83 LT			SLOPE	T	5 SF						
			3+21 LT	3+70 LT											EXCEPT & RESERVE FENCE
2	BUSIER, BRIAN L. & KATHY H.	5	2+88.22 RT	4+61.48 RT	0.13 AC		ALL R. T. & I.					HINESBURG			VT RTE 116 HWY EASE, 5747 SF
			2+90 RT	2+97 RT			INSTALL	T	90 SF						PDF & EC
			2+97 RT	3+02 RT			REMOVE	T	64 SF						SIDEWALK ADD TOPSOIL & SEED
			3+02 RT	3+09 RT			INSTALL	T	96 SF						PDF & EC
			3+29 RT				DRIVE	T							24' PAVED COMM. MM 0454
			3+71 RT	3+78 RT			INSTALL	T	68 SF						PDF & EC
			3+75 RT	3+90 RT			WALK	T	220 SF						CONSTRUCT 5' SIDEWALK
			3+87 RT	3+96 RT			INSTALL	T	73 SF						PDF & EC
			4+29 RT	4+61.48 RT			INSTALL & MAINTAIN	P							TRAFFIC SIGNALIZATION SYSTEM
			4+41 RT				INSTALL & MAINTAIN	P							SIGN
			4+43.1 RT	4+60.1 RT			INSTALL & MAINTAIN	P							PAVEMENT MARKINGS
			4+58 RT												DRIVE 34' PAVED COMM. MM 0457
3	MEAD, EMMA E.	5	4+61.48 RT	5+30.22 RT	2284 SF		ALL R. T. & I.					HINESBURG			VT RTE 116 HWY EASE
			4+61 RT	4+76 RT			INSTALL & MAINTAIN	P							TRAFFIC SIGNALIZATION SYSTEM
			4+63 RT				INSTALL & MAINTAIN	P							SIGN
			4+75 RT	4+77 RT			INSTALL & MAINTAIN	P							UNDERGROUND ELECTRIC & CONDUIT
			5+20 RT				DRIVE	T							20' PAVED MM 0458
4	TOWN OF HINESBURG	5	3+83.29 LT	6+16.31 LT	0.18 AC		ALL R. T. & I.					HINESBURG			VT RTE 116 AND TH3 HWY EASE, 7700 SF
			3+83.29 LT	TH3 101+25 LT			CONST	T	751 SF						INCLUDE PDF & EC
			3+87.8 LT				REMOVE & REPLACE	T							REMOVE CB GRATE / REPLACE WITH MANHOLE COVER
			4+07 LT				INSTALL	T							SIGN
			TH3 100+33.05 CL	TH3 101+25 CL			APPROACH	T							TOWN HIGHWAY 3
			TH3 100+47 LT				REMOVE	T							SIGN
			TH3 100+99 LT				INSTALL	T							SIGN
			TH3 100+33 LT	TH3 100+71 LT			INSTALL & MAINTAIN	P							TRAFFIC SIGNAL CONTROL
			TH3 100+31 RT	TH3 101+25 CL			INSTALL	T							PAVEMENT MARKINGS
			TH3 100+31 RT				INSTALL & MAINTAIN	P							TRAFFIC SIGNALIZATION SYSTEM
			TH3 101+25 RT	5+38 LT			CONST	T	1358 SF						INCLUDE PDF & EC
			4+80 LT	5+22 LT			SLOPE	T	348 SF						
			5+03 LT	5+22 LT			WALK	T	40 SF						CONSTRUCT 5' SIDEWALK
5	GREEN MOUNTAIN POWER CORPORATION														UTILITY - ELECTRIC
6	TOWN OF HINESBURG														WATER & SEWER
7	WAITSFIELD - FAYSTON TELEPHONE COMPANY, INCORPORATED														UTILITY - POWER & CABLE
	MAINTENANCE AGREEMENT ZONE #1	5	TH3 100+18.29 CL	TH3 100+33.05 CL											LENGTH = 14.76'

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE

PLAN LEGEND

- EXISTING RIGHT-OF-WAY
- TAKING WITH ACCESS
- TAKING WITHOUT ACCESS
- CLEAR ZONE (CZ)
- PROPERTY LINE (P/L)
- TOE OF SLOPE
- TOP OF CUT
- SLOPE RIGHT (SR (P))
- CONSTRUCTION RIGHT (CONST.(T))
- PROJECT DEMARCATION FENCE (PDF)

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

APPROVED: _____ DATE: _____
CHIEF, PLANS & TITLES

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	HES 021-1(21)
FILE NAME:	r04b208DTL.xls
PROJECT LEADER:	G. BAKOS
DESIGNED BY:	D. PECK
RIGHT-OF-WAY DETAIL SHEET	
PLOT DATE:	1/9/2007
DRAWN BY:	M. WILLIAMS
CHECKED BY:	D. PECK
SHEET	7 OF 19

CONSTRUCT DRIVES

STA. 3+10, LT. - 16' WIDE, GRAVEL
STA. 3+29, RT. - 24' WIDE, PAVED COMM.
STA. 4+58, RT. - 34' WIDE, PAVED COMM.
STA. 5+20, RT. - 20' WIDE PAVED

VT ROUTE 116		TH3
CURVE #1 DATA	CURVE #2 DATA	CURVE #3 DATA
Δ = 8°26'37.63"	Δ = 1°48'21.94"	Δ = 12°31'48.77"
D = 2°29'28.04"	D = 1°41'6.61"	D = 16°22'12.80"
R = 2300'	R = 3400'	R = 350'
T = 169.79'	T = 53.59'	T = 38.42'
L = 338.96'	L = 107.18'	L = 76.54'
E = 6.26'	E = 0.42'	E = 2.10'

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES P/L ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE STATE OF VERMONT'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

VT STATE PLANE GRID
N
N/F DAMERON
N/F MONACELLA
TOWN OF HINESBURG TH3 HWY EASE 47.21' MEASURED
N67°14'38"E 93.55'
PROPOSED TOWN HIGHWAY RIGHT-OF-WAY
TOWN OF HINESBURG
END R.O.W. PROJECT 6+16.31 32.70' LT
STA. 101+25 END APPROACH
STA. 101+00 END CONSTRUCTION BEGIN APPROACH
R=375.00' L=82.01'
CONSTRUCT GRAVEL DRIVE APPROACH. REMOVE EXIST. CONCRETE SIDEWALK
END MAINT. AGREE. ZONE #1 TH3 100+33.05 CL LENGTH=14.76'
BEGIN MAINT. AGREE. ZONE #1 TH3 100+18.29 CL
N/F CARROLL
WALKER, DONA H., DAPHNE, & DAVID N.
Sta 100+88.69 (CURVE #3)
RECONST. SIDEWALK
COORDINATE SIDEWALK LOCATION WITH NEW SIDEWALK TO BE BUILT BY OTHERS.
N/F GRILLO
POB Sta 0+00.00
PC Sta 0+50.00
PI Sta 5+43.62 (CURVE #2)
POE Sta 6+50.00
STA. 5+65 END APPROACH
REMOVE SIDEWALK CONST. 4" TOPSOIL AND SEED
STA. 3+09 BEGIN PROJECT END APPROACH
STA. 2+84 BEGIN APPROACH
N0°19'57.77"E
N8°6'39.86"W
N6°18'17.93"W
VT 116
STATE OF VT. HWY. EASE. 4 RODS
BEGIN R.O.W. PROJECT 2+88.22 32.49'RT
Sta 2+19.79 (CURVE #1) PI
SAWCUT LINE
CONST. DRIVE APPROACH
CONST. 5' SIDEWALK
STA. 5+40 END PROJECT BEGIN APPROACH
Sta 5+97.20 PT
Sta 4+90.03 PC
N/F K B REAL ESTATE LLC
MEAD, EMMA E.
BUSIER, BRIAN L. & KATHY H.
N/F RUSSELL
CONST. DRIVE APPROACH. MATCH EXISTING ELEV. AT R.O.W.
ML POT 4+48.08 = CHARLOTTE RD. POT 100+00
DO NOT BLOCK DRIVE
DO NOT ENTER
STOP HERE ON RED
NO TURN ON RED

NOTE: THE DRAINAGE STRUCTURE RIM AND INVERT ELEVATIONS ARE BASED ON SURVEY INFORMATION FROM AERIAL SURVEY, AND CONTRACTOR SHALL SET ACTUAL RIM ELEVATIONS ONE INCH BELOW FINISHED PAVEMENT ELEVATIONS, AND CONTRACTOR SHALL FIELD CHECK PROPOSED PIPE INVERTS BEFORE ORDERING DRAINAGE STRUCTURES.

(1) STA. 3+77.3, LT. 18.6 - STA. 3+87.8, LT. 33.8
NEW DI, TYPE D
RIM ELEV. = 355.33
NEW 12" x 15 LF PCCSP
INV. OUT = 350.12

(2) STA. 4+21.3, RT. 19.5
ADJUST CB (TO NEW GRADE)
RIM ELEV. = 355.75

(3) STA. 3+87.8, LT. 33.8
ADJUST CB (TO NEW GRADE)
REMOVE CB GRATE & FRAME
REPLACE WITH MH COVER & FRAME
RIM ELEV. = 353.9 ±

0 20 40
SCALE IN FEET

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83

VHB Vanasse Hangen Brustlin, Inc.

RIGHT OF WAY PLAN

PROJECT: HINESBURG	PROJECT NO.: HES 021-1(21)
DESIGN FILE NAME: ...\te\planset\ROW\r04b208LAl.dgn	
IPARM FILE NAME:	PLOT DATE: 1/11/2007
SURVEYED BY: COL-EAST, Inc.	SURVEY DATE: 2004
SQUAD LEADER: G. BAKOS	DRAWN BY: D. PECK
TEXT FILE:	SHEET: 8 OF 19

CONSTRUCTION NOTES

COLD PLANING BITUMINOUS PAVEMENT

STATION 2184.0 3109.0
STATION 3+09.0 - 3+54.4, RT.
STATION 4+27.1 - 5+31.7, RT.
STATION 5+40.0 - 5+65.0
STATION 101100.0 101125.0

RELOCATE MAILBOX SINGLE SUPPORT

STATION 5+00.0, RT.

VERTICAL GRANITE CURB

STA. 3119.0 3192.9, LT.
STA. 4+02.8, LT. - TH3 STA. 100+77.4, LT.
STA. 100+29.6 - 100+85.1, RT.
STA. 5+21.6, LT. - TH3 STA. 100+24.6, RT.
STA. 3179.3 3183.3, RT.
STA. 3+88.3 - 3+92.3, RT.

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH

STA. 3+17.9 - 4+01.7, LT.
STA. 3+75.1 - 3+90.0, RT.
STA. 4174.4 5121.6, LT.

DETECTABLE WARNING SURFACE

STA. 3198, LT.
STA. 3+85, RT.
STA. 100+27, RT.

CONSTRUCT DRIVES - 1½" BCP, TYPE III

STA. 3+30, RT. - 25' WIDE
STA. 4156, RT. 34' WIDE
STA. 5+18, RT. - 21' WIDE

EXCAVATION OF SURFACES AND PAVEMENTS

STATION 2197 4102, LT.
STATION 3+00, RT.
STATION 3+75 - 3+90, RT.
STATION 4+68 - 5+22, LT.

REMOVING AND RESETTING FENCE

STATION 3120 3170, LT.

VT STATE PLANE GRID N

VT ROUTE 116		TH3
CURVE #1 DATA	CURVE #2 DATA	CURVE #3 DATA
Δ - 18°26' 37.68"	Δ - 1°48' 21.94"	Δ - 12°51' 48.77"
D - 2°29' 28.04"	D - 15°41' 6.61"	D - 16°22' 12.80"
R - 2300'	R - 3400'	R - 350'
T - 169.79'	T - 53.59'	T - 38.42'
L - 338.96'	L - 107.18'	L - 78.54'
L - 6.26'	L - 0.42'	L - 2.10'

STA. 101+25
END APPROACH

STA. 101+00
END PROJECT
BEGIN APPROACH

TH 3 CHARLOTTE RD

POE Sta 101+50.00

PT Sta 101+26.81

EXISTING WATERMAIN 18' LT., 5.5' DEEP AT STRUCTURE

CONSTRUCT GRAVEL DRIVE APPROACH.

REMOVING EXISTING CONCRETE SIDEWALK (ITEM 203.28)

REMOVE SIDEWALK CONST. 4" TOPSOIL AND SEED

BEGIN CURB

U. POLE TO REMAIN

RECONST. SIDEWALK

RETAIN LINE

PC Sta 100+50.71

STA. 3+09
END APPROACH
BEGIN PROJECT

STA. 2+84
BEGIN APPROACH

SAVE IRFE

SAWCUT LINE

SW RAMP TYPE I W/ DETECTABLE WARNING SURFACE

SW RAMP TYPE 2, WITH DETECTABLE WARNING SURFACE

CONST. CURB TIPDOWNS

CONST. 5' SIDEWALK

SAVE

PROPOSED PEDESTAL MOUNT SIGNAL

REMOVE SIDEWALK CONST. 4" TOPSOIL AND SEED

CONST. DRIVE APPROACH. MATCH EXISTING ELEV. AT R.O.W.

CONST. DRIVE APPROACH

PT END CURB Sta 3+88.96

PI Sta 100+88.69 (CURVE #3)

RECONST. SIDEWALK

RETAIN BOLLARDS

U. POLE TO REMAIN

SAWCUT LINE

40'R

35'R

60'R

SW RAMP TYPE IW/ DETECTABLL WARNING SURFACE

COORDINATE SIDEWALK LOCATION WITH NEW SIDEWALK TO BE BUILT BY OTHERS.

STA. 5+65
END APPROACH

PI Sta 5+43.62 (CURVE #2)

POE Sta 6+50.00

STA. 5+40
END PROJECT
BEGIN APPROACH

Sta 5+97.20 PT

CONST. DRIVE APPROACH

PC Sta 4+90.03

ML POT 1+18.08 = CHARLOTTE RD. POB 100+00

VT 116

N6° 18' 17.95"W

6+50

N0° 19' 57.77"E

SHK 2-19.79 (CURVE #1)

NOTES

1. THE DRAINAGE STRUCTURE RIM AND INVERT ELEVATIONS ARE BASED ON SURVEY INFORMATION FROM AERIAL SURVEY. THE CONTRACTOR SHALL SET ACTUAL RIM ELEVATIONS ONE INCH BELOW FINISHED PAVEMENT ELEVATIONS. THE CONTRACTOR SHALL FIELD CHECK PROPOSED PIPE INVERTS BEFORE ORDERING DRAINAGE STRUCTURES.
2. THE USE OF BRICK AND MORTAR TO ADJUST THE ELEVATION OF DRAINAGE STRUCTURES IS PROHIBITED. ALL ELEVATION ADJUSTMENTS SHALL BE MADE USING EITHER GRADE RINGS OR A SYNTHETIC RISER.
3. ALL CONNECTIONS BETWEEN PRECAST DRAINAGE STRUCTURES AND DRAINAGE PIPES SHALL BE A BOOTED CONNECTION.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83

(1) STA. 3177.3, LT. 18.6
NEW PRECAST DI, ~~TYPE A~~ CURB INLET, DUE TO HAVING TO SET STRUCTURE BACK BECAUSE OF EXISTING WATER MAIN.
RIM ELEV. = 355.33
NEW 12" x 15 LF PCCSP
INV. OUT = 350.12
STA. 3187.8, LT. 33.8

(2) STA. 4121.3, RT. 19.5
ADJUST CB (TO NEW GRADE)
RIM ELEV. = 355.75

(3) STA. 3187.8, LT. 33.8
ADJUST CB (TO NEW GRADE)
REMOVE CB GRATE & FRAME
REPLACE WITH MH COVER & FRAME
RIM ELEV. = 353.91

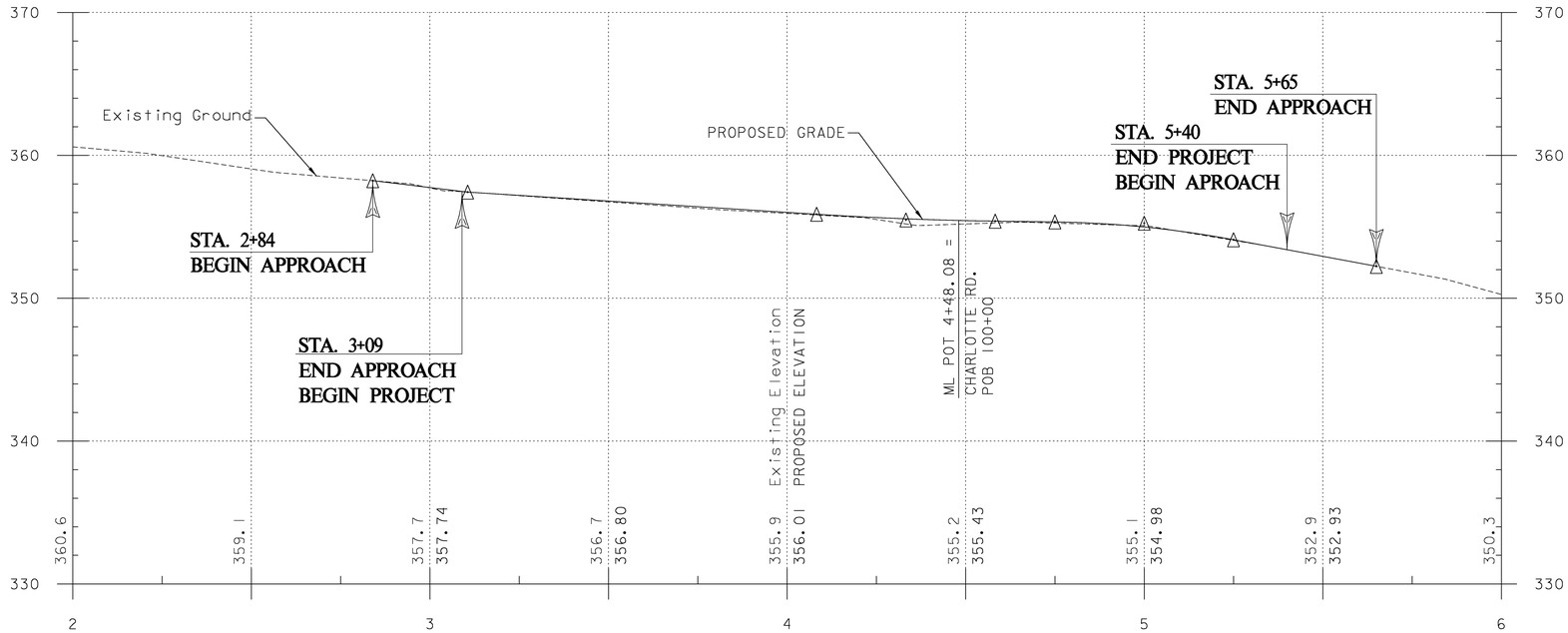
0 20 40
SCALE IN FEET

VHB Vanasse Hangen Brustlin, Inc.

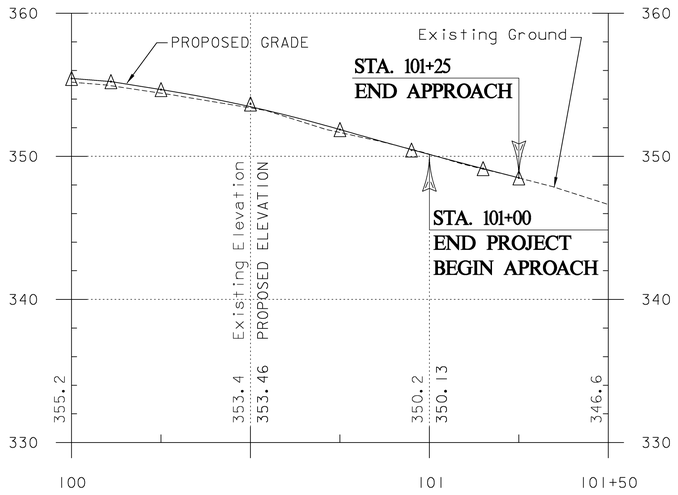
PROJECT NAME: HINESBURG
PROJECT NUMBER: HES 021-1(21)

FILE NAME: z01b208lal.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
GENERAL PLAN

PLOT DATE: 5/4/2007
DRAWN BY: D. PECK
CHECKED BY: G. BAKOS
SHEET 9 OF 19

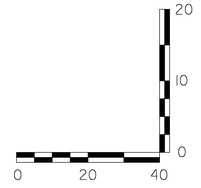


PROFILE VT RTE 116



PROFILE CHARLOTTE RD

NOTE: THESE PROFILES ARE PROVIDED FOR INFORMATION ONLY AND ARE NOT INTENDED FOR USE IN SETTING FINISHED PAVEMENT SURFACE ELEVATIONS.



HORIZONTAL SCALE = 1"=20'
VERTICAL SCALE = 1"=5'

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83

Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HINESBURG
PROJECT NUMBER: HES 021-1(21)

FILE NAME: z04b208pro.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
PROFILES

PLOT DATE: 5/4/2007
DRAWN BY: D. PECK
CHECKED BY: G. BAKOS
SHEET 10 OF 19

CONSTRUCTION NOTES

DURABLE 4 INCH WHITE LINE, THERMOPLASTIC

STA. 2+84.0 - 3+90.5, LT.
STA. 2+84.0 - 3+80.5, RT.
STA. 3+06.0 - 3+41.0, RT.
STA. 4+80.0 - 5+65.0, RT.
STA. 5+03.7 - 5+65.0, LT.
STA. 100+36.4 - 101+00.0, LT.
STA. 100+37.4 - 101+25.0, LT.
STA. 100+31.2 - 101+25.0, RT.

DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC (DOUBLE CENTER LINE)

STA. 2+84.0 - 3+80.5
STA. 5+03.7 - 5+65.0
STA. 100+36.0 - 101+25.0

DURABLE 8 INCH WHITE LINE, THERMOPLASTIC

STA. 3+06.0 - 3+41.0, RT.

DURABLE LETTER OR SYMBOL, THERMOPLASTIC

STA. 100+42.0, LT. (LEFT TURN ARROW)
STA. 100+42.0, LT. (RIGHT TURN ARROW)
STA. 100+82.0, LT. ("ONLY")
STA. 100+82.0, LT. ("ONLY")

DURABLE 24 INCH STOP BAR, THERMOPLASTIC

STA. 3+80.5, RT.
STA. 5+03.7, LT.
STA. 100+36.0, LT.
STA. 4+43.1 - 4+60.1, RT.

DURABLE CROSSWALK MARKING, THERMOPLASTIC

STA. 3+85.8, RT. - 3+98.0, LT
STA. 4143.0 - 4160.0, RT.
STA. 100+28.0, LT. - RT.

TEMPORARY 4 INCH YELLOW LINE (DOUBLE CENTER LINE)

STA. 2+84.0 - 3+09.0
STA. 5+40.0 - 5+65.0
STA. 101+00 - 101+25.0

TEMPORARY CROSSWALK MARKING

STA. 3185, RT. 3198, LT.

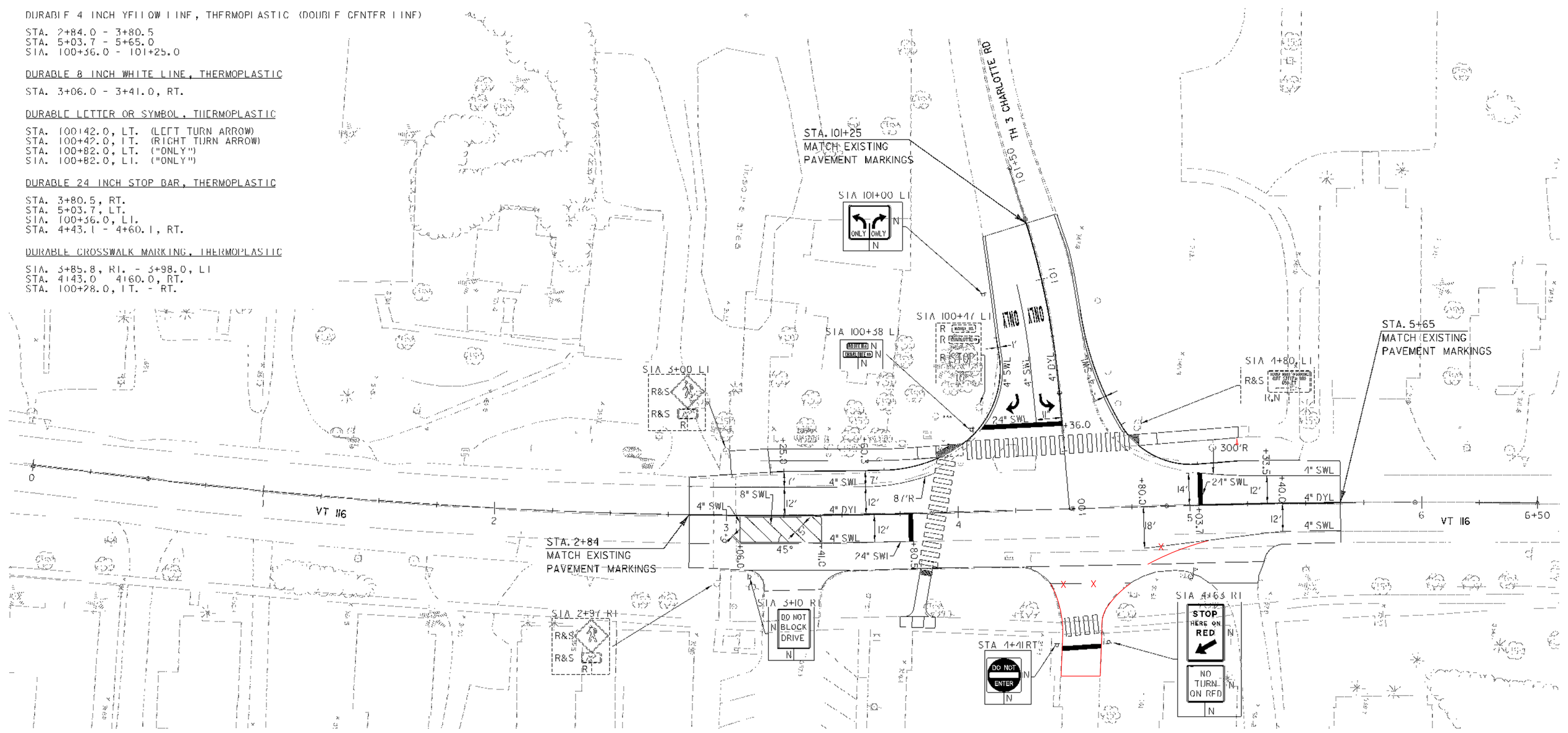
REMOVING SIGNS

STA. 2+97, RT. (2 SIGNS)
STA. 3+00, LT. (2 SIGNS)
STA. 4+80, LT.
STA. 100+47, LT. (3 SIGNS)

ERECTING SALVAGED SIGNS

STA. 4+80, LT.

VT STATE PLANE GRID N



SIGN LEGEND
N = NEW
R = REMOVE
RET = RETAIN
R&S = REMOVE & SALVAGE SIGN

STRIPING LEGEND
SWL = SINGLE WHITE LINE
DYL = DOUBLE YELLOW LINE

NOTE:
ALL SIGNS REMOVED AND NOT REUSED ON THE PROJECT WILL BE RETURNED TO THE DISTRICT 5 OFFICES, COLCHESTER, VT FOR REUSE, EXCEPT FOR SIGNS REMOVED AT STATION 100+47, LT., WHICH SHALL BE DISPOSED OF BY THE CONTRACTOR.

0 20 40
SCALE IN FEET

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HINESBURG
PROJECT NUMBER: HES 021-I(21)

FILE NAME: z01b208la2.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
SIGNING AND STRIPING PLAN

PLOT DATE: 5/4/2007
DRAWN BY: D. PECK
CHECKED BY: G. BAKOS
SHEET 11 OF 19

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILL MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS FA	WIDTH (IN)	HEIGHT (IN)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL LB/FT 1.12	2.0	3.0	SQUARE STEEL (IN) LB/FT 1.65	2.0	2.5	1.88	2.16	3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) LB/FT 3.0	4.0	4.0 MOD 1.5	1.7	1.7	TUBULAR STEEL Ø (IN) FOUNDATION	3.0	3.5	4.0	5.0 LB/FT 7.6	9.0	10.8	14.6	W SHAPE STEEL FTG. SIZE 24"	30"	WLIGHT	POST SIZE	SIGN FRAMMT REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
		OPTION ITEMS																																									
VT ROUTE 116																																												
3+10, RT	DO NOT BLOCK DRIVE	1	24	30	5.0						1			X 14'		X																								VR 656		C 140
4+41, RT	DO NOT ENTER	1	30	30	6.25						1			X 14'		X																								R5 1		C 143
4+63, RT	STOP HERE ON RED	1	24	36	6.0						1			X		X																								R10 6		C 140
	NO TURN ON RED	1	24	24	4.0									16'																										R10 11B		C 140
4+80, LT	TOWN HALL PARKING (OFF STELLA RD) 650 FT						1			1				X NO NEW POST		X																								EXISTING GUIDE SIGN. RLMOVL & RLSET ON NEW POST		
4+90, RT		1	30	30	6.25																																			R5 1 MAST ARM MOUNTED		F-143
CHARLOTTE RD																																											
100+38, LT	ROUTE 116	1	30	9	1.88						1			X 11'		X																								STREET NAME SIGNS		I 123
	CHARLOTTE RD	1	42	9	2.63																																			STREET NAME SIGNS		E-123
101+00, LT	ONLY ONLY	1	36	30	7.5						1			X 14'		X																								VR 925		L 145A
												FT	FT	FT 90 69'	FT	FT 90	FT		EA	LB	LB	LB		LB	LB	LB	LB													

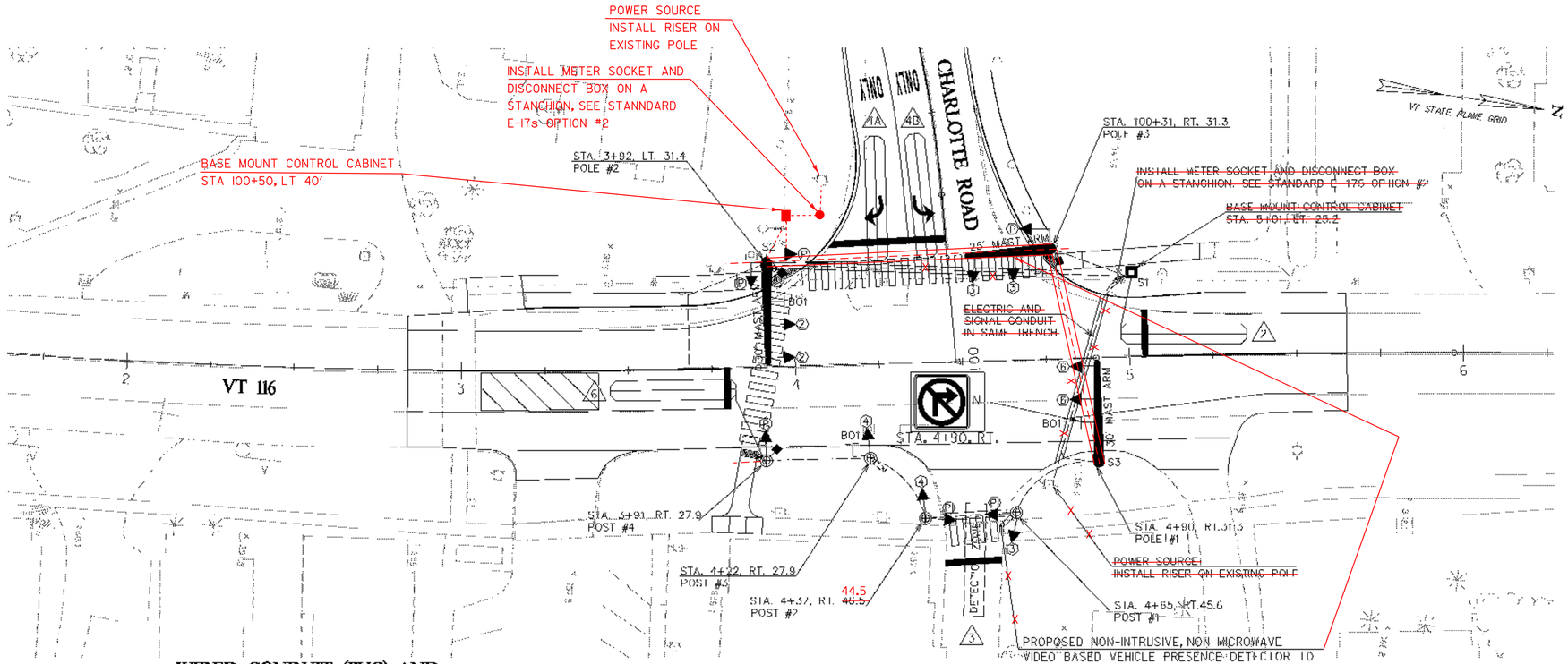
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE ROADWAY, TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

TOTALS	SF 39.51	SF	FA. 1	SF	FT 90 69'	FT 90	LB	EA.	LB	FA.	EA.	LB

AVERAGE POST LENGTH 15 FT

Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	HES 021-1(21)
FILE NAME: z01b208ts sum.dgn	PLOT DATE: 5/4/2007
PROJECT LEADER: G. BAKOS	DRAWN BY: D. PECK
DESIGNED BY: D. PECK	CHECKED BY: G. BAKOS
TRAFFIC SIGN SUMMARY SHEET	SHEET 12 OF 19



WIRED CONDUIT (PVC) AND ELECTRICAL CONDUIT SLEEVE SCHEDULE

ITEM NUMBER	678.23		678.30		
	WIRED CONDUIT		CONDUIT SLEEVE		
FROM / TO	2"	2½"	6"	8"	DESCRIPTION
POWER TO STANCHION	55~~20~~		55		POWER (INCLUDES WIRED CONDUIT FOR RISER)
STANCHION TO CABINET	16 ~~5~~				POWER
CABINET TO POLE #3	104 ~~24~~				POLE #3 WIRING
~~CABINET~~ TO POLE #1	74	~~20~~	~~*~~	64'	POLE #1, POST #1, POST #2, POST #3, POST #4, VIDEO AND LOOP 6 WIRING
POLE #1 TO POST #1 39.5	~~35~~				POST #1, POST #2, POST #3, POST #4, VIDEO AND LOOP 6 WIRING
POST #1 TO POST #2 32.3'	~~28~~		~~20~~	24.5	POST #2, POST #3, POST #4 AND LOOP 6 WIRING
POST #2 TO POST #3 35.3'	~~27~~				POST #3, POST #4 AND LOOP 6 WIRING
POST #3 TO POST #4 34.3	~~32~~				POST #4 AND LOOP 6 WIRING
CABINET TO POLE #2 24	~~20~~		~~16~~	7.1	POLE #2 AND LOOP 4A & 4B WIRING
LOOP 2 TO ~~CABINET~~ POLE 3	18~~7~~				LOOP 2 WIRING
LOOP 4A/4B TO POLE #2	12~~8~~				LOOPS 1A AND 1B WIRING
LOOP 6 TO POST #3 ~~#4~~	5				LOOP 6 WIRING
SUB-TOTALS 450	~~371~~	**70	~~161~~	159.5	
ROUNDING	~~400~~	29 5	4		
TOTALS		75	~~165~~		

* CONDUIT IN SAME SLEEVE AS POWER
** CHARLOTTE ROAD NOT WIRED (SPARE)

DETECTION SCHEDULE

ITEM 678.22

VEHICLE DETECTOR LOOPS

LOOP NO.	LANE	CALL Ø	SIZE	TYPE & NO. TURNS	DELAY OR PRESENCE	INDUCTANCE CALC.	INDUCTANCE ACT.	RESISTANCE CALC.	RESISTANCE ACT.	LEAKAGE TO GROUND	LOCKING MEMORY
2	SBTH	2	6X40	QUAD 2-4-2	PRESENCE	325	366	0.47	1.03	0	
4A	EBRT	4	6X40	QUAD 2 4 2	5 SEC DELAY	350	348	0.65	0.82	0	
4B	EBLT	4	6X40	QUAD 2-4-2	PRESENCE	350	341	0.69	0.79	0	
1	NBTH	6	6X40	QUAD 2-4-2	PRESENCE	360	426	0.73	1.67	0	

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

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83

0 20 40
SCALE IN FEET

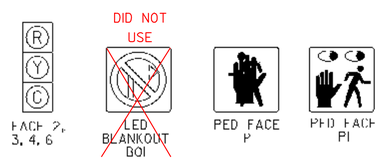
ELECTRICAL CONDUIT SCHEDULE

ITEM 678.21

I.D.	STATION	TYPE	
S1	5+01, LT 25.2	SPARE SWEEP AT CABINET (FUTURE INTERCONNECT)	12'
S2	3+68, LT 22.2	SPARE SWEEP AT POLE #2 (FUTURE INTERCONNECT)	10'
S3	4+90, RT 31.3	SPARE SWEEP AT POLE #1 (FUTURE INTERCONNECT)	7'
S4	3+91, RT. 27.9	SPARE SWEEP AT POST 4 (FUTURE INTERCONNECT)	12'-8"

SIGNAL FACE ARRANGEMENT

(12" LED LENSES)



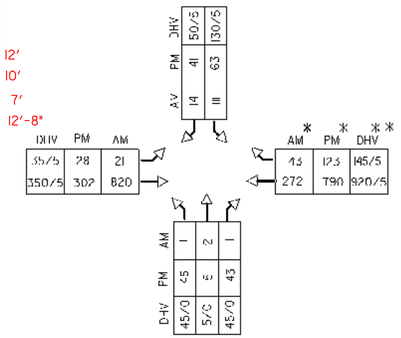
NOTE: B01 SHALL ILLUMINATE UPON PHASE 9 PEDESTRIAN ACTUATION. SEE GENERAL NOTE 4 (SHEET 11) FOR FACE 3 POSITIONING.

EQUIPMENT NOTES

(A) SEE STANDARDS E-171B, 171C, 172, 173, & 175 FOR ADDITIONAL INFORMATION.

(B) SEE TRAFFIC SIGNAL NOTE SHEET 14 AND SINGLE MAST ARM CANTILEVER/FOOTING DETAIL SHEET 15 AND MAST ARM CROSS SECTIONS SHEET 16 FOR ADDITIONAL INFORMATION.

2005 AVERAGE WEEKDAY TRAFFIC DATA



* BASE YEAR TRAFFIC FOR SIGNAL TIMING - 1ST YEAR OF OPERATION
** DESIGN HOUR VOLUME, % TRUCKS - BASE YEAR + 10 YEARS

LIST OF MAJOR EQUIPMENT

EQUIPMENT ITEM 678.15	QUANTITY
ECONOLITE TRAFFIC SIGNAL CONTROLLER	1
ECONOLITE P44 CONTROLLER CABINET WITH GENERATOR HOOKUP PLUG ON 15-INCH EXTENDED BASE, PAINTED FLAT BLACK, ON A CONC. FOUNDATION WITH ANCILLARY CONTROL EQUIPMENT.	1
FLAT BLACK PAINTED STEEL MAST ARM SIGNAL POLE WITH TWENTY-FIVE FOOT (25') SPECIAL CURVED MAST ARM.	1
FLAT BLACK PAINTED STEEL MAST ARM SIGNAL POLE WITH THIRTY FOOT (30') SPECIAL CURVED MAST ARM. FLAT BLACK PAINTED PEDESTAL POST.	2 4
ONE-WAY, 3-SECTION, 12-INCH POLYCARBONATE MAST ARM MOUNTED LED TRAFFIC SIGNAL HEAD WITH TUNNEL VISORS AND LOUVERED BACKPLATE WITH ALL PIECES PAINTED FLAT BLACK.	6
ONE-WAY, 3-SECTION, 12-INCH POLYCARBONATE POST MOUNTED LED TRAFFIC SIGNAL HEAD WITH TUNNEL VISORS AND LOUVERED BACKPLATE WITH ALL PIECES PAINTED FLAT BLACK.	3
POLE MOUNTED 16-INCH LED PEDESTRIAN SIGNAL HEAD WITH SOLID WALKING PERSON AND HAND SYMBOLS POST MOUNTED 16-INCH LED PEDESTRIAN SIGNAL HEAD WITH SOLID WALKING PERSON AND HAND SYMBOLS	3 1
POST MOUNTED 16 INCH LED PEDESTRIAN SIGNAL HEAD WITH SIDE BY SIDE WALKING PERSON, EYES AND HAND SYMBOLS	2
VTRANS SPEC ACCESSIBLE PEDESTRIAN PUSHBUTTONS (PER SPECIAL PROVISION 678 AND 752) WITH R10 4 TYPE SIGN ASSEMBLY & AUDIBLE PEDESTRIAN CROSSING INDICATORS	3
NON-INTRUSIVE, NON-MICROWAVE VIDEO BASED PRESENCE DETECTION SYSTEM, TRAFICAM OR APPROVED EQUAL	1
ASTRO BRACKETS	9
SINGLE CHANNEL WIRE LOOP DETECTOR AMPLIFIERS	3
SINGLE CHANNEL WIRE LOOP DETECTOR AMPLIFIERS WITH DELAY	1
ELEC. SERVICE CONNECTION/POWER DROP STANCHION	1
MAST ARM MOUNTED LED BLANKOUT	1
POST MOUNTED LED BLANKOUT	1

LEGEND

NEW	LEGEND
	CONTROLLER CABINET SIGNAL HEAD
	CONDUIT
	VEHICLE LOOPS PEDESTAL POST
	STANCHION
S	SPARE SWEEP
	MAST ARM AUDIBLE PEDESTRIAN INDICATOR PEDESTRIAN PUSH BUTTON
	LED BLANKOUT
	VIDEO BASED DETECTION
	OPTIONAL VIDEO LOCATION

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HINESBURG
PROJECT NUMBER: HES 021-I(21)

FILE NAME: z01b208sig.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
TRAFFIC SIGNAL PLAN

PLOT DATE: 5/4/2007
DRAWN BY: D. PECK
CHECKED BY: G. BAKOS
SHEET 13 OF 19

WITH GENERATOR HOOKUP PLUG INSTALLED. THE CABINET SHALL BE INSTALLED ON THE FOUNDATION WITH THE DOOR FACING AWAY FROM TRAFFIC.

TRAFFIC SIGNAL NOTES

A. NEW EQUIPMENT

1. ALL SIGNAL HEADS MOUNTED ON CANTILEVER ARMS SHALL BE POLY-CARBONATE. BACKPLATES SHALL BE REQUIRED ON ALL HEADS.

2. CONTROLLER SHALL BE ECONOLITE ASC/3S-2100 (TS2, TYPE 2) AND THE CABINET SHALL BE ECONOLITE GROUND MOUNTED P44 WITH A BASE EXTENSION WITH GENERATOR HOOKUP PLUG INSTALLED. THE CABINET SHALL BE INSTALLED ON THE FOUNDATION WITH THE DOOR FACING AWAY FROM TRAFFIC.

3. A DISCONNECT BREAKER FOR EACH CIRCUIT SHALL BE INSTALLED IN A RAINPROOF (NEMA 3R), LOCKED CABINET ON A STANCHION NEXT TO OR BELOW THE METER SOCKET. RECOMMENDED OPTION #2 ON STD E-175.

B. SIGNAL OPERATION

1. UPON STARTUP THE SIGNAL TIMING SHOWN ON THE PLANS MAY REQUIRE FINE-TUNING IN THE FIELD BASED ON TRAFFIC OBSERVATION.

2. THE TRAFFIC SIGNALS SHALL NOT BE OPERATED BEFORE PAVEMENT MARKINGS AND SIGNAL RELATED SIGNING IS IN PLACE.

3. ALL SIGNALS SHALL DWELL ON THE VT 116 THRU MOVEMENT PHASES (2+6).

4. VT 116 THRU PHASES 2+6 SHALL BE USED FOR THE START-UP PHASE FOLLOWING FLASHING OPERATION.

C. TRAFFIC SIGNAL CONDUIT

1. ALL TRAFFIC SIGNAL CONDUIT SHALL BE PVC.

2. MINIMUM CONDUIT SIZES SHALL BE:
   A) 1-1/2'' FOR LOOP LEAD-INS,
   B) 2'' FOR ALL OTHERS.

3. WHEN CONDUIT IS PLACED BELOW THE ROADWAY OR ACROSS SIDE ROADS, IT SHALL BE PLACED IN A PVC ELECTRICAL CONDUIT SLEEVE, SIZE AS SHOWN ON THE PLANS (6 '' MINIMUM).

D. VEHICLE DETECTOR LOOP - SEE STD E-172

1. ALL LOOP DETECTORS SHALL BE LABELED WITH THE PHASE NUMBER, APPROACH DIRECTION AND MOVEMENT CONTROLLED BY THE UNIT (I.E. PHASE 2, SB)

2. ALL LOOP DETECTORS SHALL BE A TYPE THAT FAIL IN THE "ON" MODE.

E. VIDEO DETECTION

1. PHASE 3 DETECTION SHALL BE A NON-INTRUSIVE, NON-MICROWAVE, VIDEO BASED, VEHICLE PRESENCE SYSTEM WITH 2.5MM OPTICS, TRAFICAM OR APPROVED EQUAL.

2. THE VIDEO DETECTION UNIT HAS BEEN RECOMMENDED FOR MOUNTING ABOVE THE POST MOUNTED PEDESTRIAN AND SIGNAL HEAD ASSEMBLY. THE CONTRACTOR MAY OPTIONALLY INSTALL THE UNIT BEHIND SIGNAL HEAD 4 (AS SHOWN ON THE TRAFFIC SIGNAL LAYOUT) IF BETTER VISUAL ACUITY CAN BE OBTAINED. THIS DECISION CAN BE MADE IN THE FIELD WITH APPROVAL BY THE ENGINEER. VIDEO DETECTION EQUIPMENT AND INSTALLATION IS INCIDENTAL TO THE TRAFFIC SIGNAL INSTALLATION, ITEM 678.15.

F. GENERAL

1. THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS AND MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY COMPANY TO PROVIDE A PERMANENT POWER SUPPLY TO THE SIGNAL AND STREET LIGHTING EQUIPMENT.

2. SEE SUPPLEMENTAL SPECIFICATIONS FOR SECTIONS 678, 679, 752 & 753 FOR ADDITIONAL INFORMATION.

3. THE CONTRACTOR SHALL REFERENCE SECTION 678 OF THE STANDARD SPECIFICATIONS FOR FURNISHING AND INSTALL PEDESTRIAN SIGNAL EQUIPMENT. NOTE THAT NO AUDIBLE EQUIPMENT OR PEDESTRIAN PUSHBUTTONS SHALL BE REQUIRED FOR THE PEDESTAL POST CONTROLLING PEDESTRIAN MOVEMENT ACROSS THE RETAIL DRIVEWAY GIVEN THAT THESE PEDESTRIAN SIGNALS SHALL BE ON RECALL WITH ALL PHASES EXCEPT PHASE 3.

4. THE CONTRACTOR SHALL NOTE THAT POLE #3 IS TO BE LOCATED BEHIND EXISTING OVERHEAD UTILITY LINES. THE CONTRACTOR SHALL POSITION AND INSTALL THE FACE 3 SIGNAL HEADS SO THAT ALL LENSES ARE VISIBLE FROM THE ADJACENT APPROACH WHILE CONFORMING TO MUTCD AND VTRANS VERTICAL HEIGHT CRITERIA. IF FULL VIEW OF ALL THREE (RED, YELLOW, AND GREEN) LENSES IS FOUND INFEASIBLE, THE CONTRACTOR SHALL OPTIONALLY POLE MOUNT THE NORTHERN MOST SIGNAL HEAD ON POLE #3 (SEE SHEET 13 FOR ADDITIONAL INFORMATION).

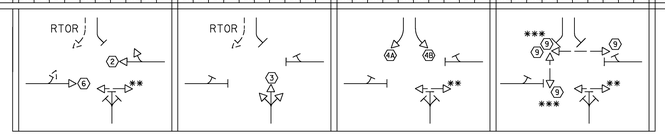
5. DUE TO THE PRESENCE OF MANY EXISTING OVERHEAD UTILITIES IN THE VICINITY OF THE VT116 AND CHARLOTTE ROAD INTERSECTION, THE CONTRACTOR SHALL FIELD VERIFY AND ADJUST AS NECESSARY THE FINAL LOCATION OF THE SIGNAL STRUCTURES TO ENSURE ALL APPLICABLE CRITERIA IN THE NATIONAL ELECTRICAL CODE (NEC) AND NATIONAL ELECTRICAL SAFETY CODE (NESC) IS MET. TO ASSIST IN MEETING THIS CRITERIA, SPECIAL CURVED MAST ARM POLES HAVE BEEN PROPOSED WITH A 16-FOOT VERTICAL MAST MOUNTING AND A 10-FOOT MINIMUM HORIZONTALLY CURVED MAST ARM BEFORE THE 20 FOOT VERTICAL MAST ARM HEIGHT IS ACHIEVED; HOWEVER, THE 10-FOOT HORIZONTAL CURVED SECTION CAN BE MODIFIED PER MANUFACTURERS RECOMMENDATION WITH APPROVAL OF THE ENGINEER UPON SUBMISSION OF SHOP DRAWINGS.

6. SEE THE CONTROLLER ID PLAQUE DETAIL ON THIS SHEET.

TIMING AND PHASING

		PHASE 2+6 (DWELL)									PHASE 3									PHASE 4									PED PHASE 9									
		R/W	CLEAR TO								R/W	CLEAR TO								R/W	CLEAR TO								R/W	CLEAR TO								
			Ø 3			Ø 4			PED Ø9			Ø 4			PED Ø9		Ø 2+6			PED Ø9		Ø 2+6		Ø 3						Ø 2+6		Ø 3			Ø 4			
AM PEAK 7-9 AM	VEHICLE	4									2									2																		
	MINIMUM	8	4	2		4	2		4	2	5	4	2		4	2		4	2	8	4	2		4	2		4	2										
	MAXIMUM																																					
	MAXIMUM2	40	4	2		4	2		4	2	12	4	2		4	2		4	2	15	4	2		4	2		4	2										
	PED ACT																												7	17	3	1		3	1		3	1
OFF PEAK REST OF DAY	VEHICLE	4									2									2																		
	MINIMUM	8	4	2		4	2		4	2	5	4	2		4	2		4	2	8	4	2		4	2		4	2										
	MAXIMUM	25	4	2		4	2		4	2	7	4	2		4	2		4	2	12	4	2		4	2		4	2										
	MAXIMUM2																																					
	PED ACT																												7	17	3	1		3	1		3	1
PM PEAK 3:00-6:00 PM	VEHICLE	4									2									2																		
	MINIMUM	8	4	2		4	2		4	2	5	4	2		4	2		4	2	8	4	2		4	2		4	2										
	MAXIMUM																																					
	MAXIMUM2	40	4	2		4	2		4	2	12	4	2		4	2		4	2	15	4	2		4	2		4	2										
	PED ACT																												7	17	3	1		3	1		3	1
	FACE 2	G	Y	R		Y	R		Y	R	R	R	R		R	R		R	R	R	R	R		R	R		R	R	R	R	R		R	R		R	R	FY
	FACE 3	R	R	R		R	R		R	R	G	Y	R		Y	R		Y	R	R	R	R		R	R		R	R	R	R	R		R	R		R	R	FR
	FACE 4A	R	R	R		R	R		R	R	R	R	R		R	R		R	R	G	Y	R		Y	R		Y	R	R	R	R		R	R		R	R	FR
	FACE 4B	R	R	R		R	R		R	R	R	R	R		R	R		R	R	G	Y	R		Y	R		Y	R	R	R	R		R	R		R	R	FR
	FACE 6	G	Y	R		Y	R		Y	R	R	R	R		R	R		R	R	R	R	R		R	R		R	R	R	R	R		R	R		R	R	FY
	PED 9	DW	DW	DW		DW	DW		DW	DW	DW	DW	DW		DW	DW		DW	DW	DW	DW	DW		DW	DW		DW	DW	W	FD	FD		DW	DW		FD	DW	B
	CONC PED	W	FD	DW		W	W		W	W	DW	DW	DW		DW	DW		DW	DW	W	W	W		W	W		FD	DW	W	W	W		FD	DW		W	W	B

FLASHING OPERATION



W = WALK, FD = FLASHING DON'T WALK, DW = DON'T WALK, B = BLANK
*= FACE NUMBERS ARE BASED ON NEMA PHASES (2,4,6 & 8 FOR THRU/RIGHTS)
**= A CONCURRENT PEDESTRIAN PHASE ACROSS LANTMANS DRIVE SHALL BE PROGRAMMED FOR ALL VEHICLE PHASES EXCEPT PHASE 3
***= LED BLANKOUT B02 SHALL BE ILLUMINATED WITH EXCLUSIVE PEDESTRIAN PHASE 9. LED BLANKOUT B01 SHALL BE ILLUMINATED DURING ALL HOURS OF THE DAY.

PROGRAM PERIODS OF OPERATION

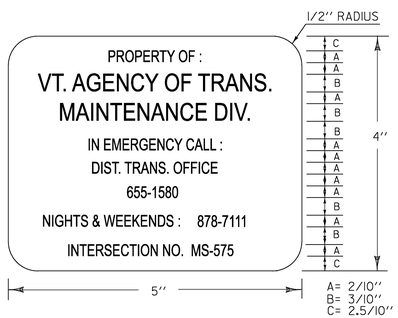
	1 2 3 4 5 6 7 8 9 10 11 12 AM	1 2 3 4 5 6 7 8 9 10 11 12 PM	AM
SUNDAY	1		
MONDAY	1	2 1 2	1
TUESDAY	1	2 1 2	1
WEDNESDAY	1	2 1 2	1
THURSDAY	1	2 1 2	1
FRIDAY	1	2 1 2	1
SATURDAY	1		

NOTES:

PLAN 1 - OFFPEAK (MAXIMUM 1): MIDNIGHT TO 7:00 AM, M-F
9:00 AM TO 3:00 PM, M-F
6:00 PM TO MIDNIGHT, M-F
ALL DAY SATURDAY AND SUNDAY

PLAN 2 - RUSH HOUR PEAK (MAXIMUM 2): 7:00 AM TO 9:00 AM, M-F
3:00 PM TO 6:00 PM, M-F

CONTROLLER IDENTIFICATION PLAQUE



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

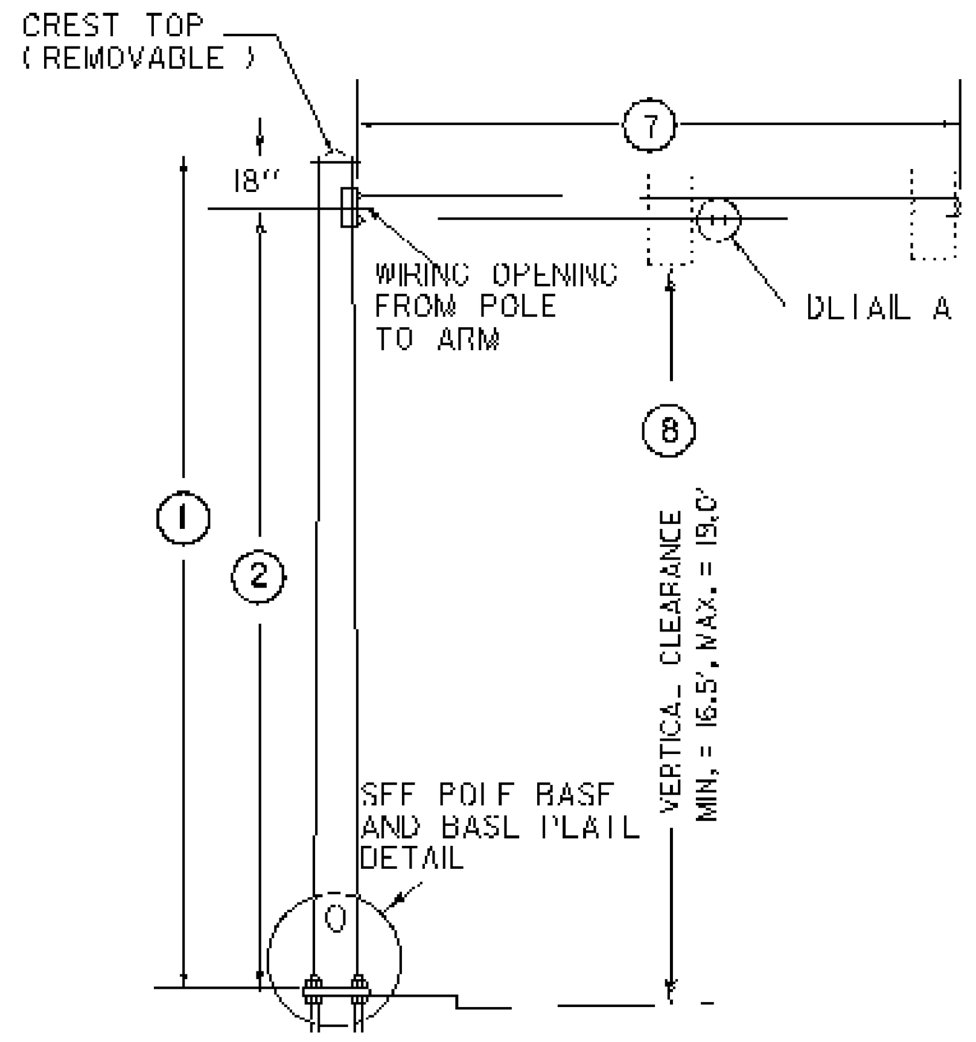
NOTES:
1.) THE PLAQUE SHALL BE MOUNTED ON ALL TRAFFIC SIGNAL CONTROLLER CABINETS. IT SHALL BE FASTENED TO THE CONTROLLER CABINET IN SUCH A MANNER AS TO BE NOT EASILY REMOVED, SUCH AS WELDED, RIVETED OR BOLTED WITH VANDAL PROOF BOLTS.
2.) THE LETTERS SHALL BE PUNCHED OR STAMPED, SUCH STAMPING SHALL PENETRATE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

VHB Vanasse Hangen Brustlin, Inc.

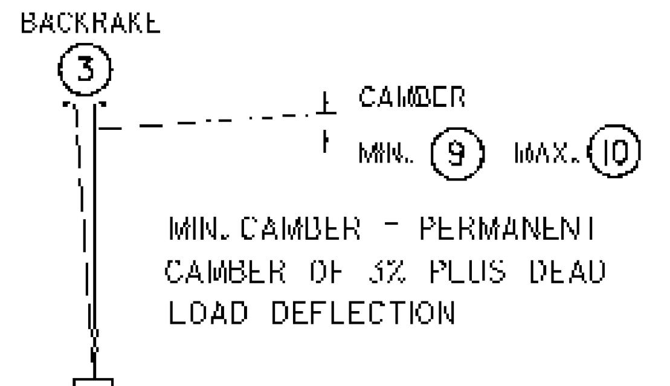
PROJECT NAME: HINESBURG
PROJECT NUMBER: HES 021-1(21)

FILE NAME: z04b208ts notes.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
TRAFFIC SIGNAL NOTES

PLOT DATE: 5/4/2007
DRAWN BY: D. PECK
CHECKED BY: G. BAKOS

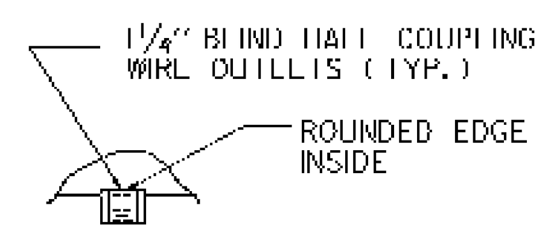


TYPE A

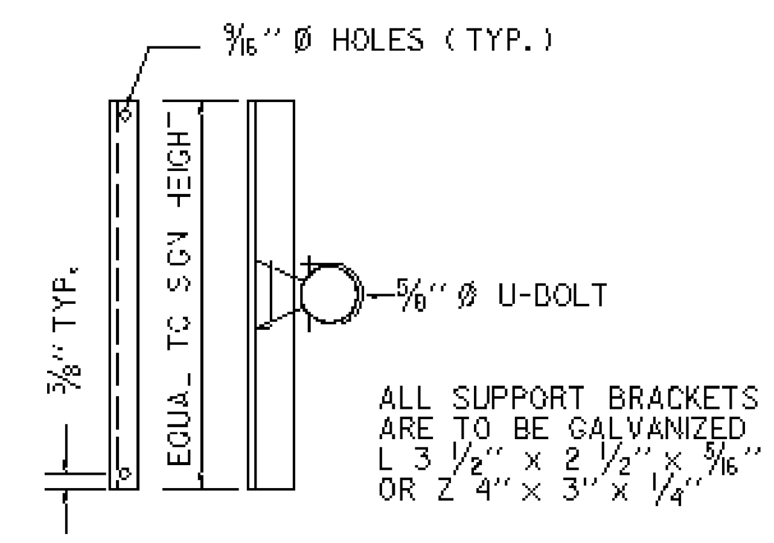


CAMBER AND BACKRAKE DATA

POLE BASE DIAMETER (4)
POLE GAUGE (5)
POLE TAPER RATE (6)
ARM DIAMETER (11)
ARM GAUGE (12)
ARM TAPER RATE (13)



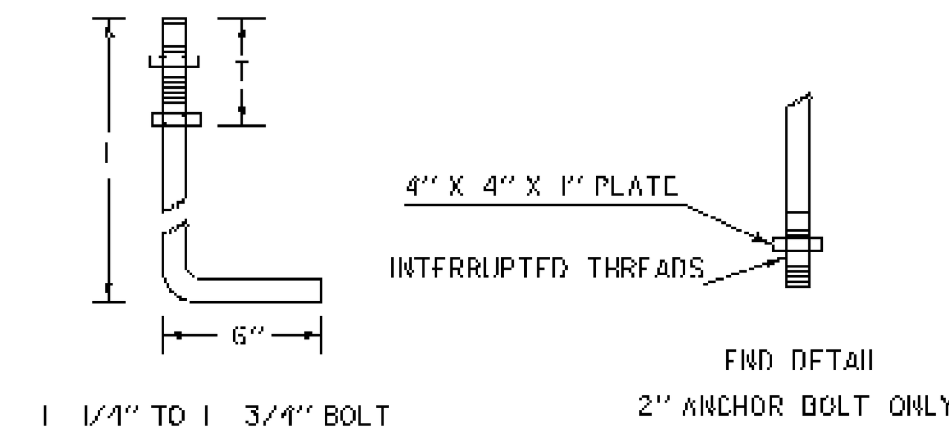
DETAIL A



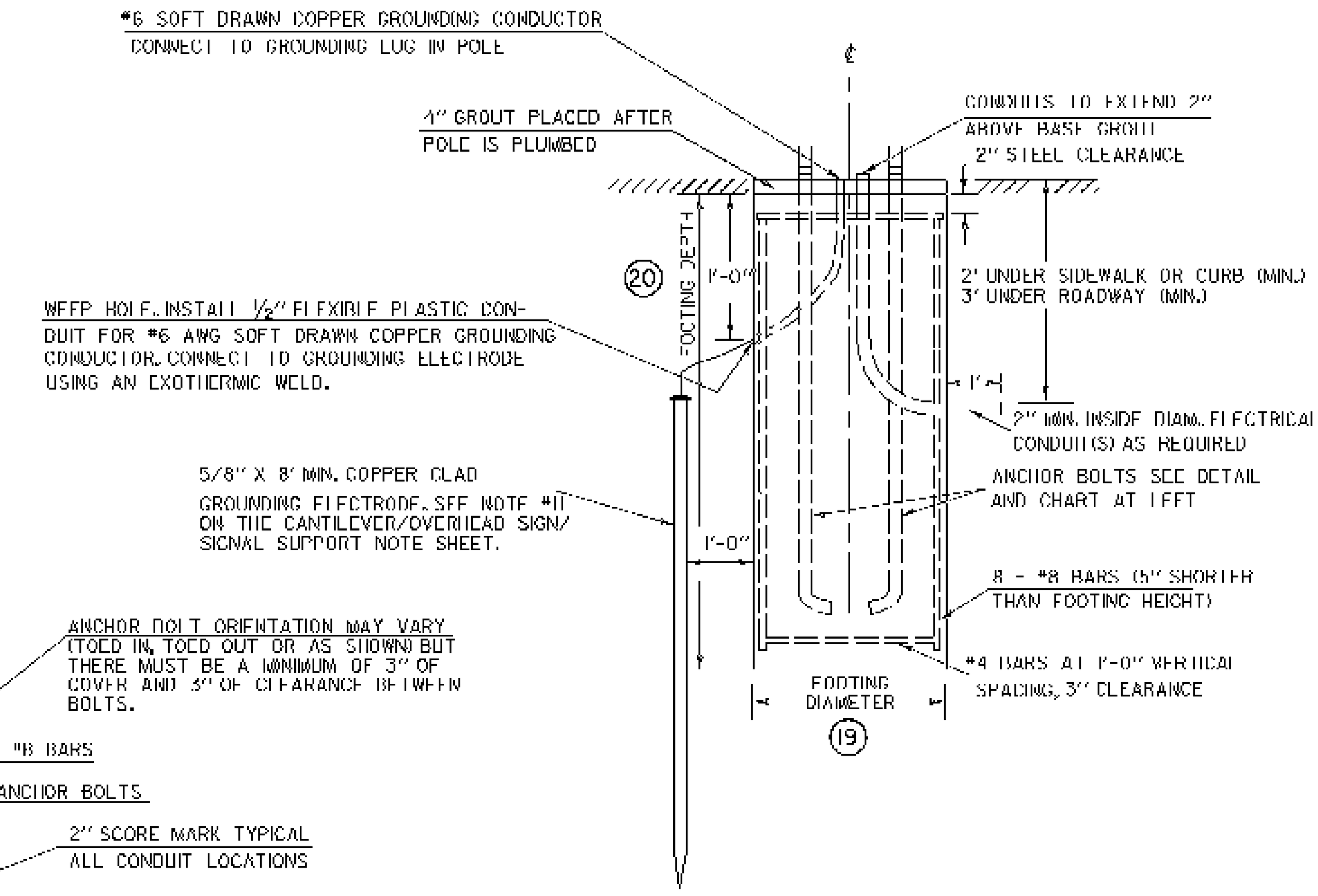
SIGN ON SINGLE
MAST ARM

SIGN BRACKET DETAILS

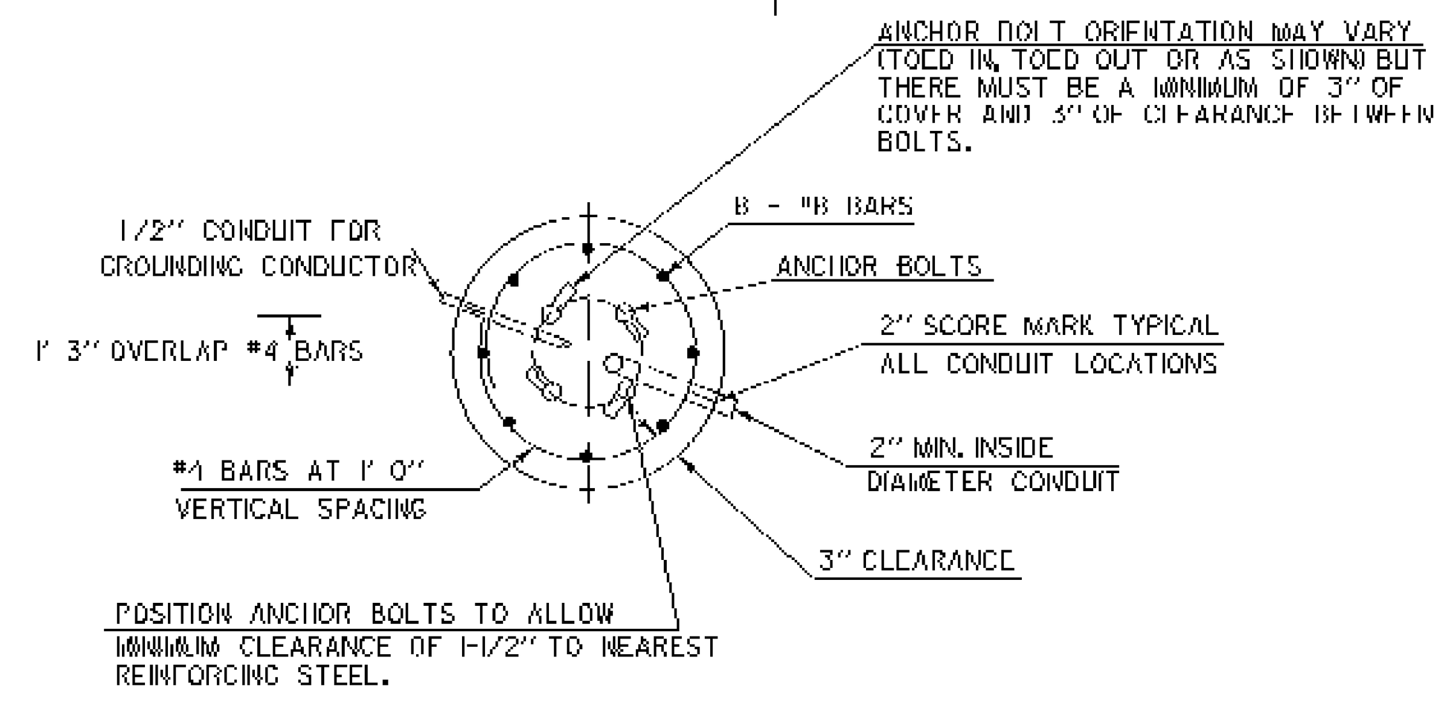
ANCHOR BOLT DETAIL		
SIZE	L (IN)	T (IN)
1- 1/4'' X 48''	42	8
1- 1/2'' X 60''	54	9
1- 3/4'' X 90''	84	9
2'' X 96''	96	9



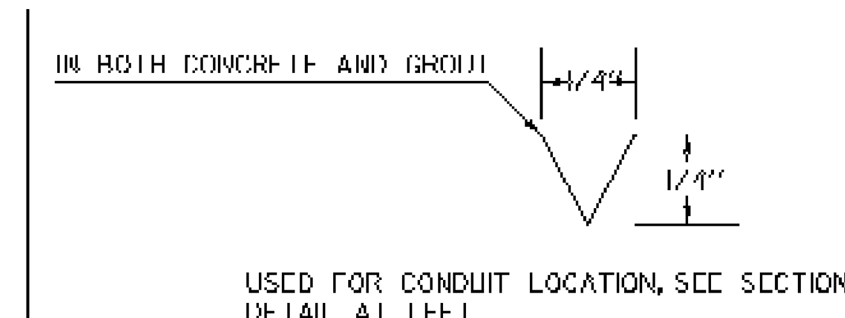
ANCHOR BOLT DETAIL



ELEVATION

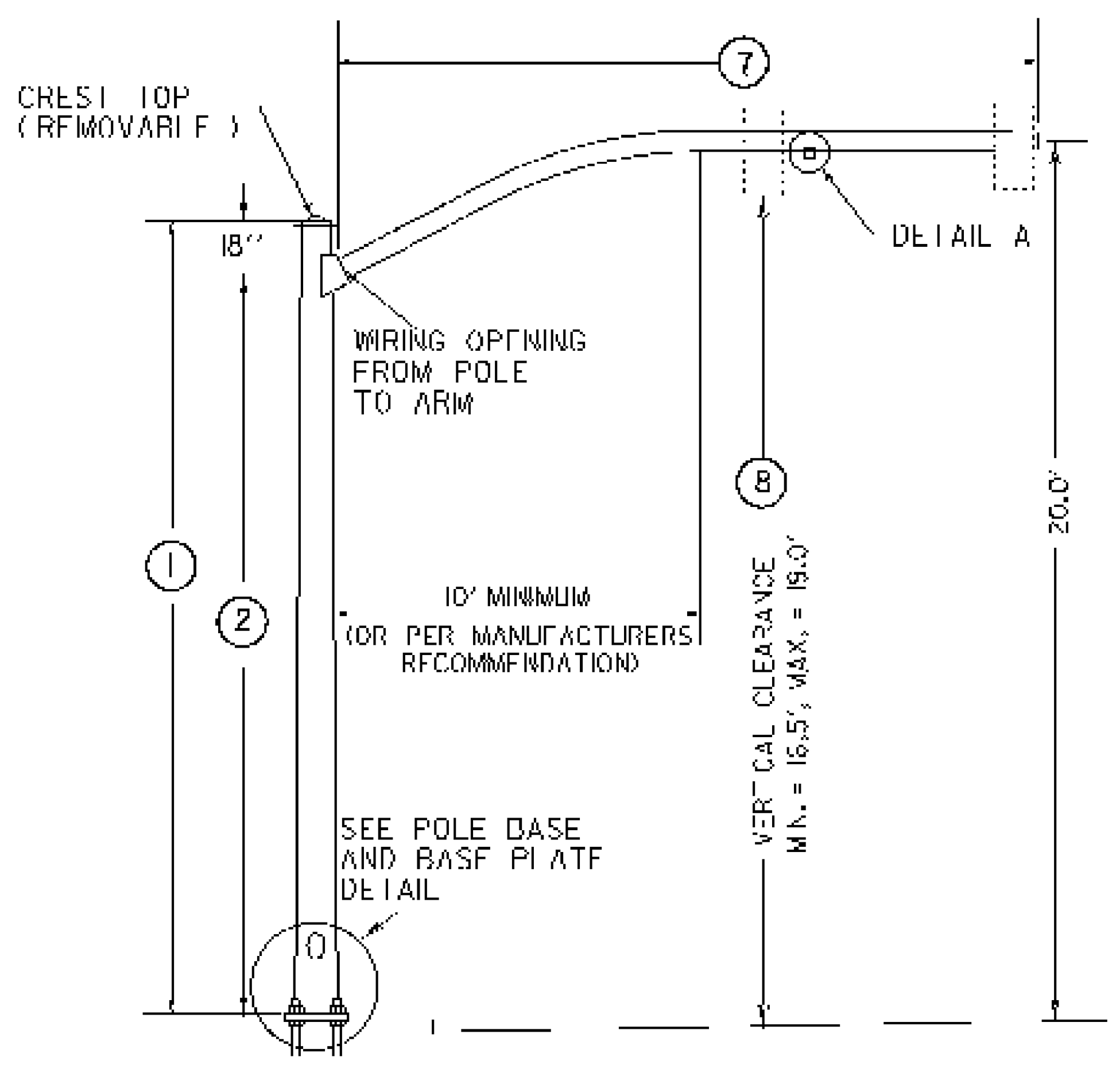


SECTION

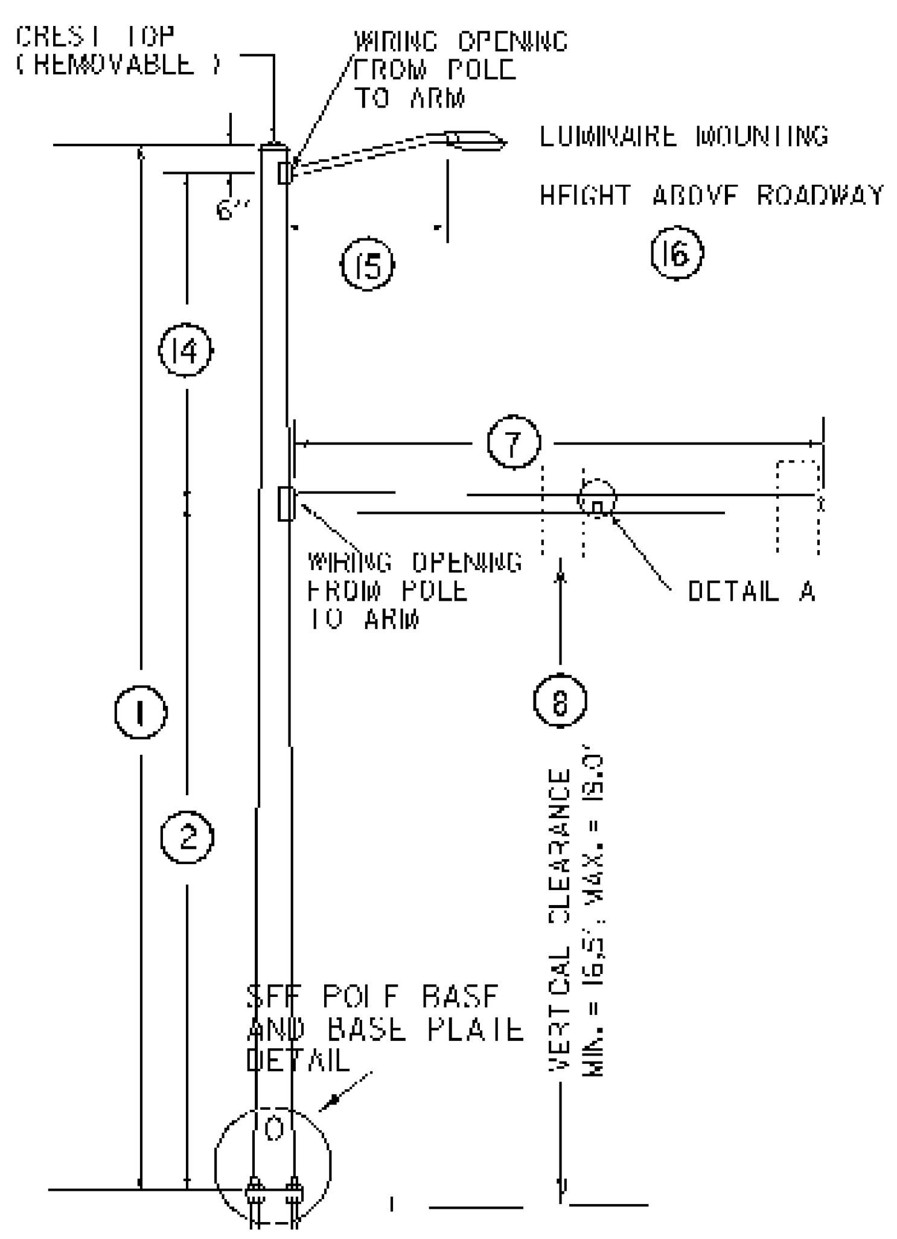


2'' SCORE MARK DETAIL

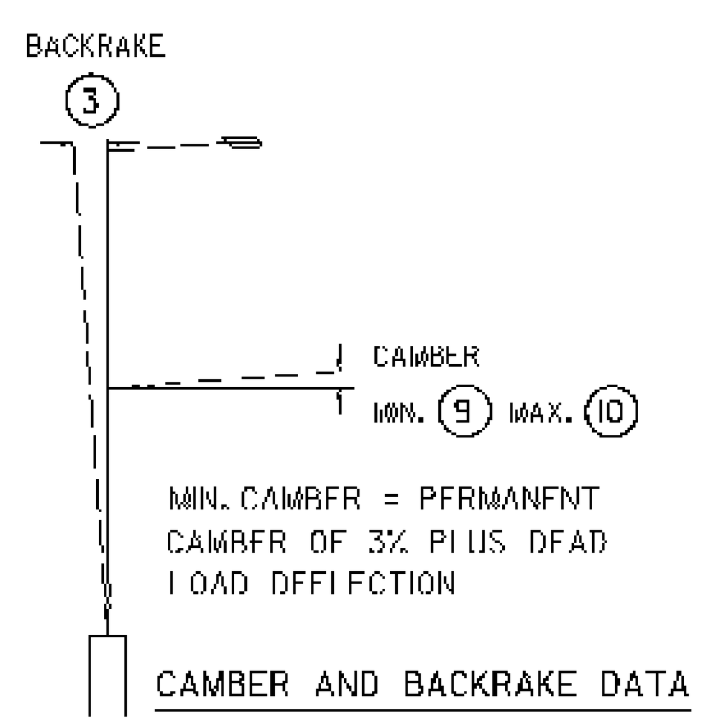
CANTILEVER FOOTING DETAIL
(SPREAD FOOTINGS OR PILES ARE OPTIONAL)



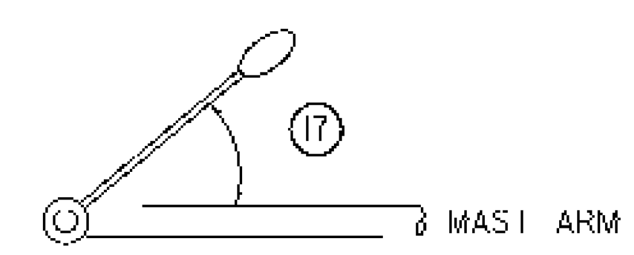
TYPE A1
(SPECIAL CURVED MAST ARM)



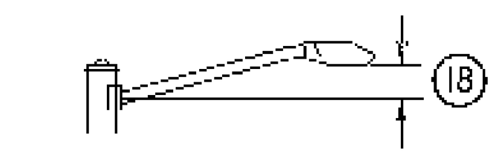
TYPE B



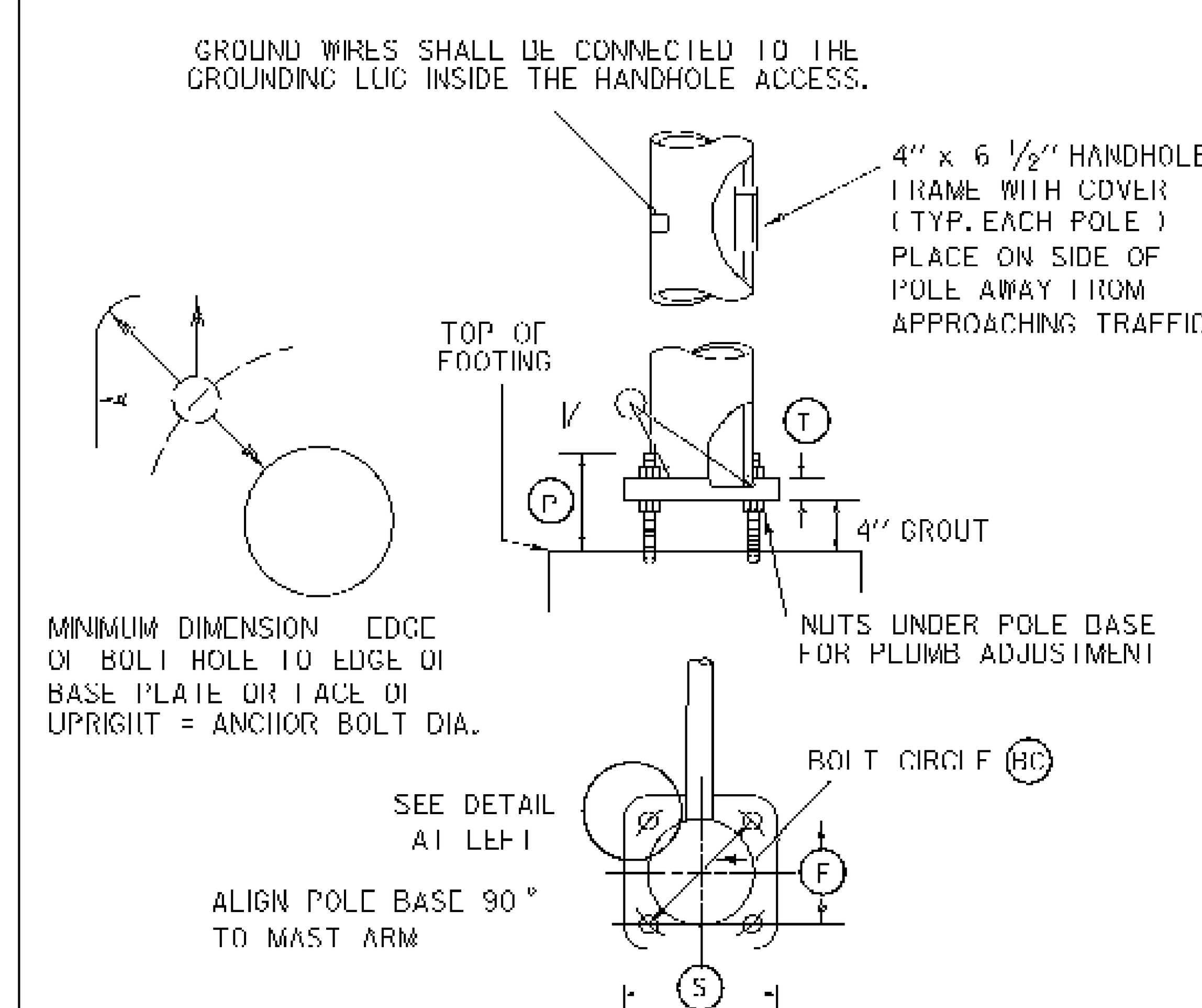
CAMBER AND BACKRAKE DATA



LUMINAIRE ORIENTATION



LUMINAIRE ARM RISE



POLE BASE AND BASE PLATE DETAIL

STRUCTURL DIMLNSIONS

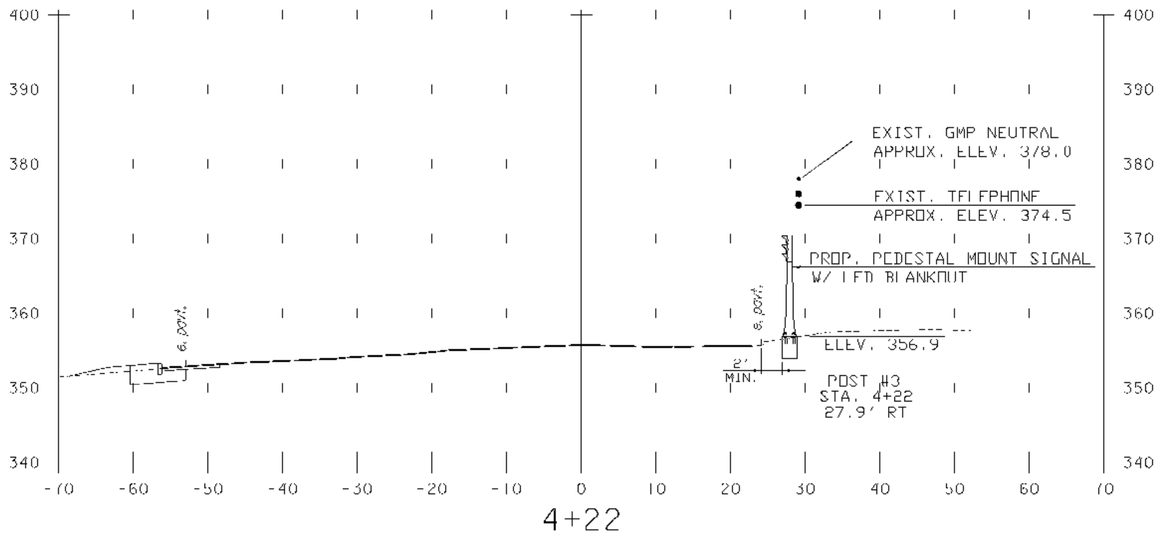
		POLE DATA						ARM DATA							LIGHTING DATA					FOOTING DATA		BASE PLATE / BOLT DATA					
POLE	TYPE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(BC)	(F)	(S)	(T)	(P)	ANCHOR BOLT SIZE
#1	A1	17.5'	16'	0	12"	7	0.14 IN/FT	30'	19'	18°		8"	7	0.14 IN/FT						3'	3.5'	16"	11 5/16"	16"	1.25"	4.5"	1x 36
#2	A1	17.5'	16'	0	12"	7	0.14 IN/FT	30'	17.5'	18°		8"	7	0.14 IN/FT						3'	3.5'	16"	11 5/16"	16"	1.25"	4.5"	1x 36
#3	A1	17.5'	16'	0	10.5	7	0.14 IN/FT	25'	18'	26°		7"	7	0.14 IN/FT						3'	3.5'	14"	9 7/8"	14.5"	1"	4.25"	1x 36

/trof/forms/cantlvr.dgn
cantsarm.l
PLOTTED:5/4/2007

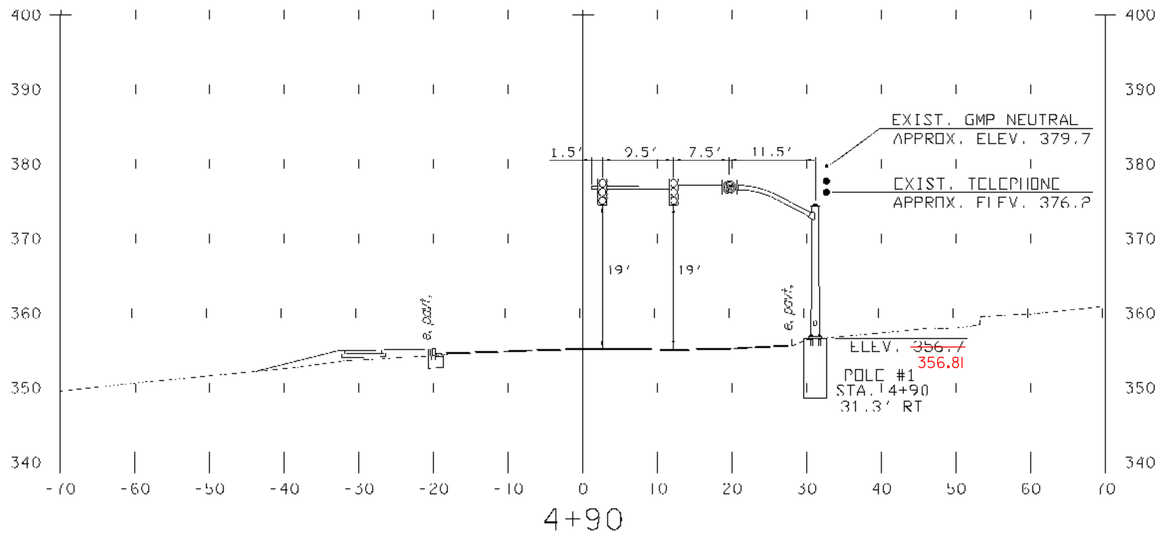
NOTE:
DETAILS
NTS

SINGLE MAST ARM CANTILEVER / FOOTING DETAIL SHEET

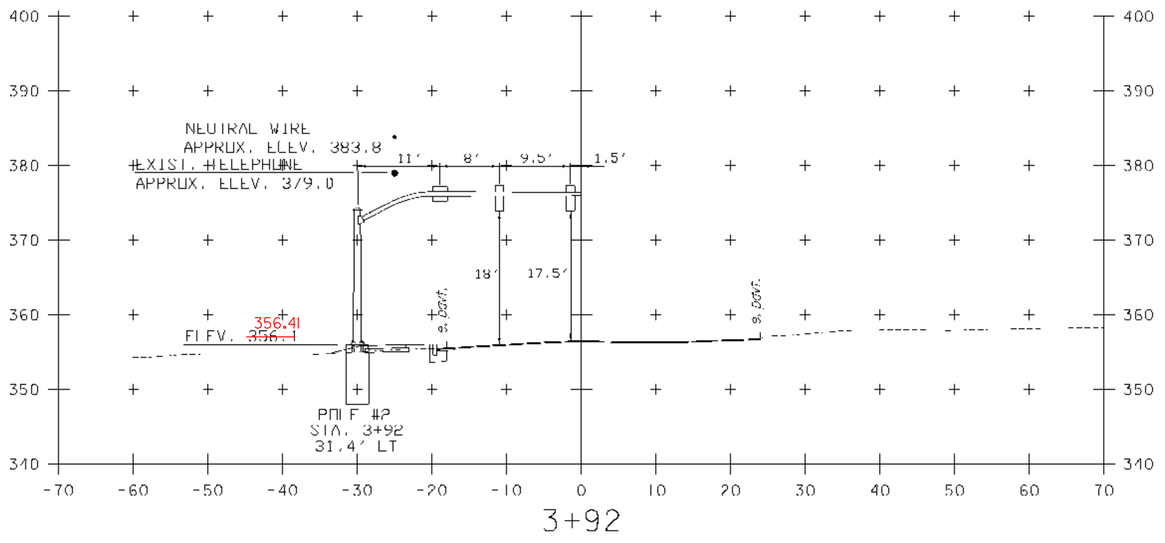
PREPARED BY JAR DATE 08/01/06
CHECKED BY CMB DATE 08/01/06
DESIGN SUPERVISOR ______ DATE ______
PROJECT NAME: HINESBURG
PROJECT NUMBER: HES 021-1(21)
TRAFFIC SHEET NO. 3 OF 4
SHEET 15 OF 19 SHEETS



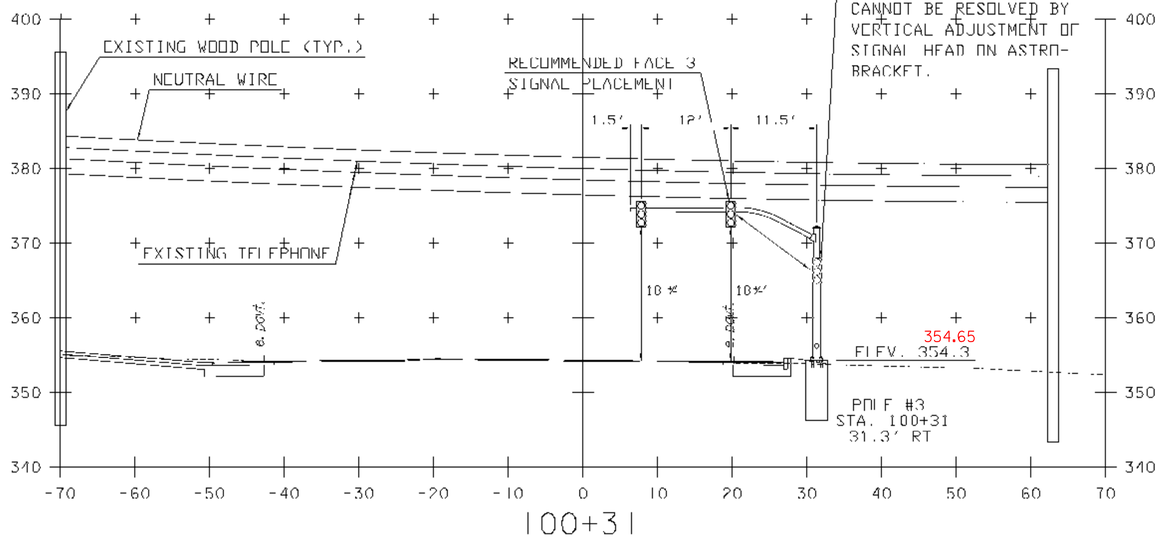
4+22



4+90



3+92



100+31

0 10 70

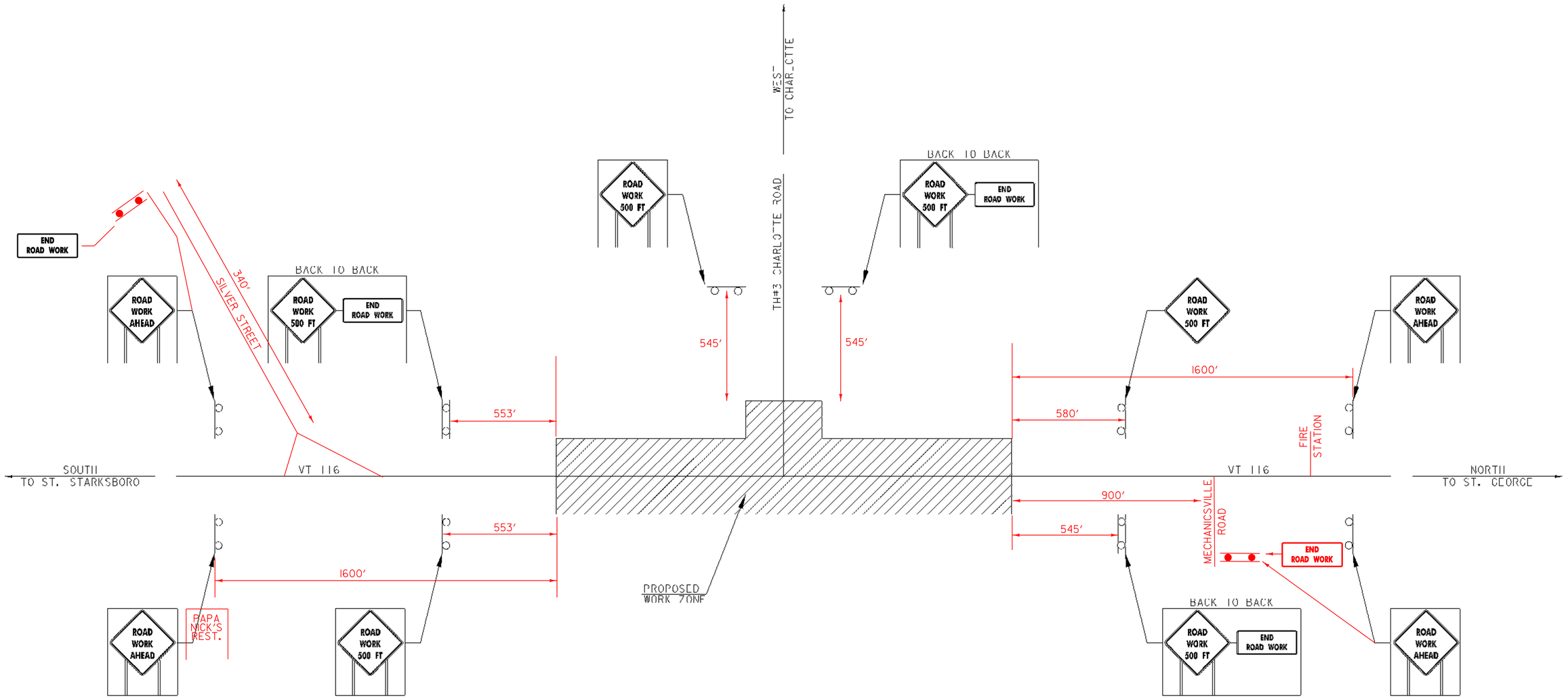
HORIZONTAL SCALE 1" = 10'

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HINESBURG
PROJECT NUMBER: HES 021-I(21)

FILE NAME: z01b208ts xs.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
MAST ARM CROSS SECTIONS

PLOT DATE: 5/4/2007
DRAWN BY: D. PECK
CHECKED BY: G. BAKOS
SHEET 16 OF 19



NOTES:

1. CONSTRUCTION APPROACH SIGNING SHALL NOT INTERFERE OR BLOCK VISIBILITY OF EXISTING TRAFFIC CONTROL DEVICES.
2. PAYMENT FOR CONSTRUCTION APPROACH SIGNING WILL BE MADE UNDER PAY ITEM 641.10
3. SEE VTRANS STD. F-100 FOR SIGN PLACEMENT.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HINESBURG
PROJECT NUMBER: HES 021-K(21)

FILE NAME: z01b208cons.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
CONSTRUCTION APPROACH SIGNING

PLOT DATE: 5/4/2007
DRAWN BY: D. PECK
CHECKED BY: G. BAKOS
SHEET 17 OF 19

VT STATE PLANE GRID

N

N/F DAMERON

N/F MONACELLA

PROPOSED TOWN HIGHWAY RIGHT-OF-WAY

TOWN OF HINESBURG

TH 3 CHARLOTTE RD

101+50

101

END MAINT. AGREE. ZONE #1
TH3 100+33.05 CL
LENGTH=14.76'
BEGIN MAINT. AGREE. ZONE #1
TH3 100+18.29 CL

N/F CARROLL

WALKER, DONA H., DAPHNE, & DAVID N.

N/F GRILLO

0 1 VT 116 2 3 4 5 6 6+50 VT 116

N/F K B REAL ESTATE LLC

BUSIER, BRIAN L. & KATHY H.

MEAD, EMMA E.

N/F RUSSELL

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83

0 20 40
SCALE IN FEET

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HINESBURG
PROJECT NUMBER: HES 021-1(21)

FILE NAME: z04b208erl.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
EXISTING CONDITIONS PLAN

PLOT DATE: 5/4/2007
DRAWN BY: D. PECK
CHECKED BY: G. BAKOS
SHEET 18 OF 19

VT STATE PLANE GRID

N

N/F DAMERON P L

N/F MONACELLA P L

P L

WALKER, DONA H., DAPHNE, & DAVID N.

TH 3 CHARLOTTE RD

101+50

PROPOSED TOWN HIGHWAY RIGHT-OF-WAY

TOWN OF HINESBURG

END MAINT. AGREE. ZONE #1
TH3 100+33.05 CL
LENGTH=14.76'
BEGIN MAINT. AGREE. ZONE #1
TH3 100+18.29 CL

N/F CARROLL

N/F GRILLO

RETAIN FENCE

SAVE TREE

SAVE

0 1 2 3 4 5 6 6+50

VT 116

VT 116

N/F K B REAL ESTATE LLC

BUSIER, BRIAN L. & KATHY H.

MEAD, EMMA E.

N/F RUSSELL

LEGEND

- TOE OF FILL SLOPE
- TOP OF CUT SLOPE
- SILT FENCE
- PDF PDF PROJECT DEMARCATION FENCE DEFINING LIMITS OF DISTURBANCE

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83

0 20 40
SCALE IN FEET

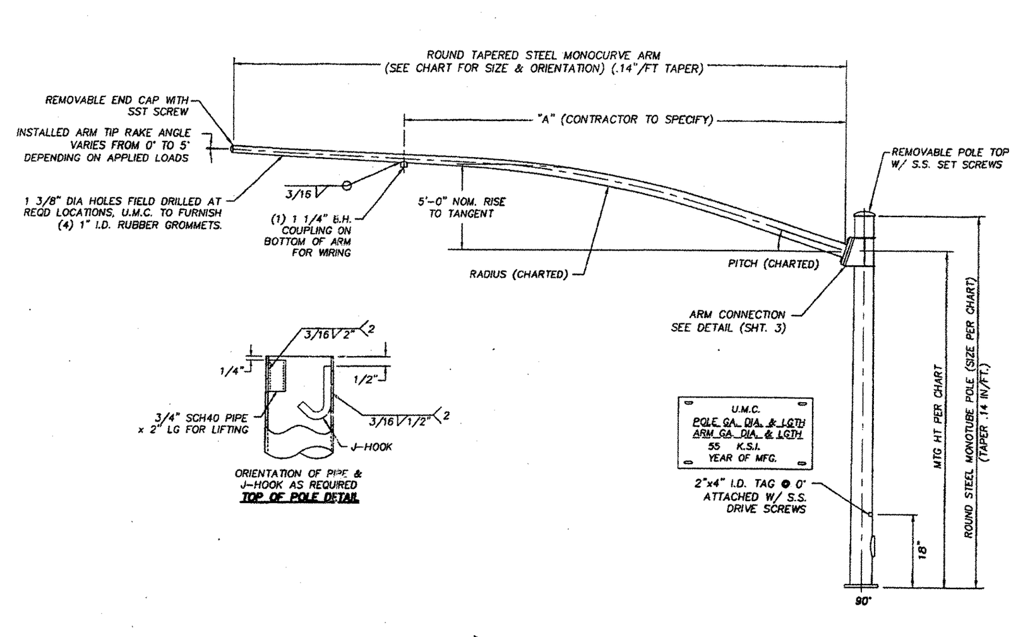
VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: HINESBURG
PROJECT NUMBER: HES 021-1(21)

FILE NAME: z04b208er2.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
EPSC PLAN

PLOT DATE: 5/4/2007
DRAWN BY: D. PECK
CHECKED BY: G. BAKOS
SHEET 19 OF 19

QTY.	U.M.C. DESIGN NUMBER	POLE TUBE SIZE	ARM SPREAD	ARM TUBE SIZE	MTG HT	ARM ORIENT.	RADIUS	PITCH	ARM CONNECTION DATA X	Y	W	H	APL	PPL	BOLT ø	G	BASE CONNECTION DATA B.C.	S	F	P	T	ANC. BOLT (QTY.) & SIZE
1	50600-B180-Y1	7E-10.50x8.05x17'-6"	25'-0"	7E-7.00x3.36x26'-0"	16'-0"	180°	26'-0"	26°	3 1/2	10	12	15 1/2	1 1/4	1	1	3/16	14	14 1/2	9 7/8	4 1/4	1	(4) 1x36x4
2	50600-B180-Y2	7E-12.00x9.55x17'-6"	30'-0"	7E-8.00x3.70x30'-9"	16'-0"	180°	60'-0"	18°	6 1/2	14	13	18	1 1/4	1	1	3/16	16	16	11 5/16	4 1/2	1 1/4	(4) 1x36x4



DESIGN CRITERIA:

1. DESIGNED IN ACCORDANCE WITH 2001 AASHTO STANDARD SPECIFICATIONS WITH 2002 & 2003 INTERIM REVISIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS"
   THE DESIGN PARAMETERS INCLUDE:
   90 MPH WIND ZONE
   25 YEAR STRUCTURE DESIGN LIFE
   FATIGUE CATEGORY II CONSIDERATION FOR:
   NATURAL WIND GUSTS
   TRUCK INDUCED GUST (35 MPH VEHICLE SPEED)
2. ANCHOR BOLTS ANALYZED FOR STEEL STRENGTH ONLY. THE ANCHOR BOLT EMBEDMENT LENGTH SHOWN ON THIS DRAWING SHALL BE VERIFIED BY THE FOUNDATION ENGINEER.
3. THE EXPOSED LENGTH OF THE ANCHOR BOLT BETWEEN THE TOP OF THE FOUNDATION AND THE BOTTOM OF THE LEVELING NUT SHOULD NOT EXCEED ONE BOLT DIAMETER.
4. CONTRACTOR TO SPECIFY ARM COUPLING LOCATION (DIMENSION "A")
5. ANCHOR BOLTS BY OTHERS

MATERIAL SPECIFICATION	
MONOTUBES	ASTM-A595 GR A
PLATES	ASTM-A36
ANCHOR BOLTS	ASTM-A276 M55 TYPE 304
HANDHOLE FRAME	ASTM-A529 GR 50 (PREFERRED) or ASTM-A572 GR 50 or ASTM-A709 GR 50
HANDHOLE COVER	ASTM A1011 GR 55
POLE TOP	ASTM B26 (319F)
STAINLESS STEEL HARDWARE	AISI-300 SERIES (18-8)
ARM CONNECTION BOLTS	ASTM-A325
ARM CONNECTION NUTS	ASTM-A563 GR DH
FLAT WASHERS	ASTM-F436
STRUCTURE FINISH	PER SALES ORDER
HARDWARE FINISH	HD GALV TO ASTM-A153

STATE OF VERMONT
DAVID N. FRITZ
No. 8694
Structural I
LICENSED PROFESSIONAL ENGINEER
7/5/07

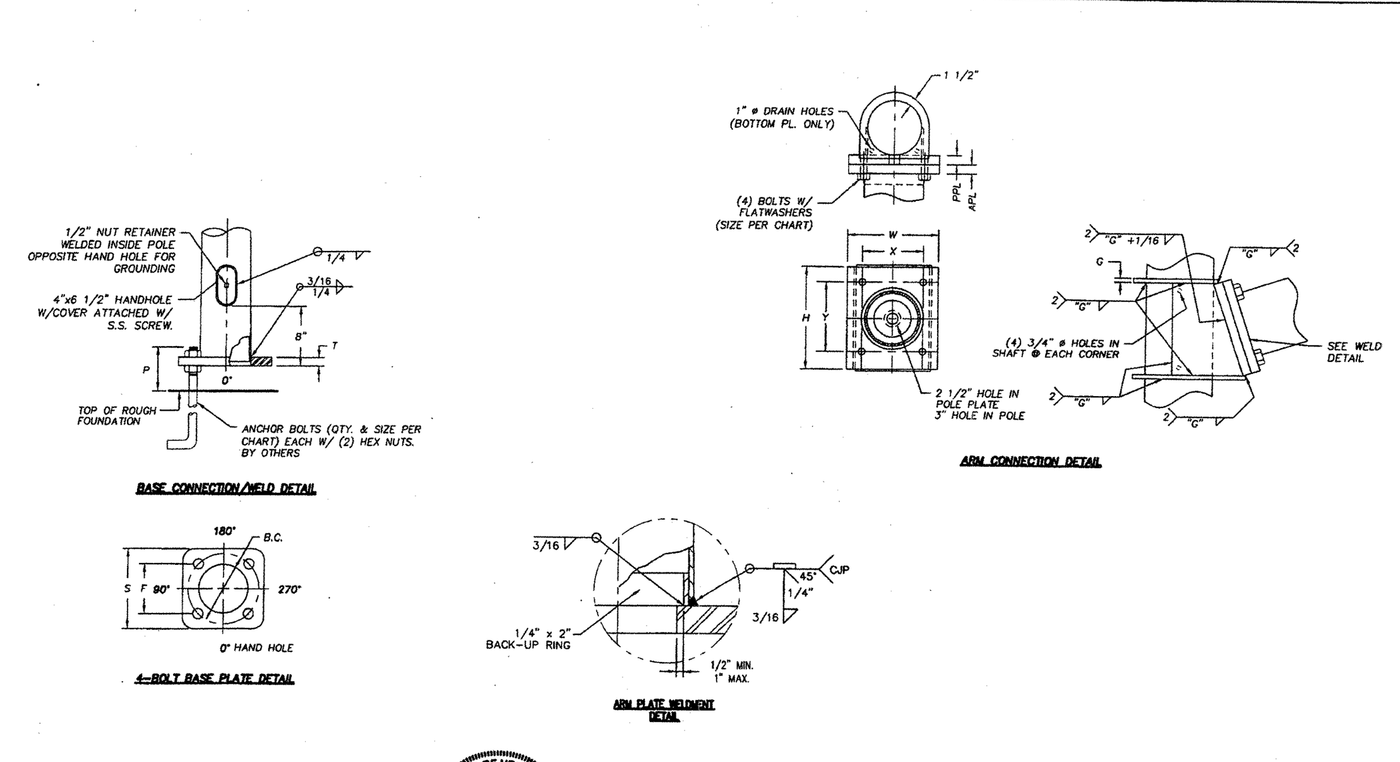
STATE: VERMONT	REQ# / SO# : 20068-1	REV	DESCRIPTION	DATE	REV BY	CK BY
PROJECT NAME: HINESBURG, VT		REVISIONS				

STEEL TRAFFIC POLES
HINESBURG, VERMONT

Union Metal Corporation

DESIGNED BY	CHECKED BY	DATE	SCALE	ENG REF
NMG	[illegible]	7/2/07	--	50600-B178
50600-B180			REVISION R0	SHEET 1 OF 2

020



STATE OF VERMONT
DAVID N. FRITZ
No. 8694
Structural I
LICENSED PROFESSIONAL ENGINEER
7/5/07

STATE: VERMONT	REQ# / SO# : 20068-1	REV	DESCRIPTION	DATE	REV BY	CK BY
PROJECT NAME: HINESBURG, VT		REVISIONS				

STEEL TRAFFIC POLES
HINESBURG, VERMONT

Union Metal Corporation

DESIGNED BY	CHECKED BY	DATE	SCALE	ENG REF
NMG		7/2/07	--	50600-B178
50600-B180			REVISION R0	SHEET 2 OF 2

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