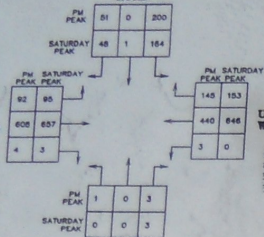


**SHATTUCK HILL ROAD**

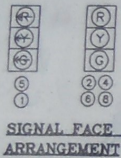


US 5 EASTBOUND

US 5 WESTBOUND

**BANK PARKING (FUTURE CRAWFORD ROAD)**

YEAR 2006 AVERAGE HOURLY VOLUMES WITH PROJECT TRAFFIC  
**TURNING MOVEMENT VOLUMES**

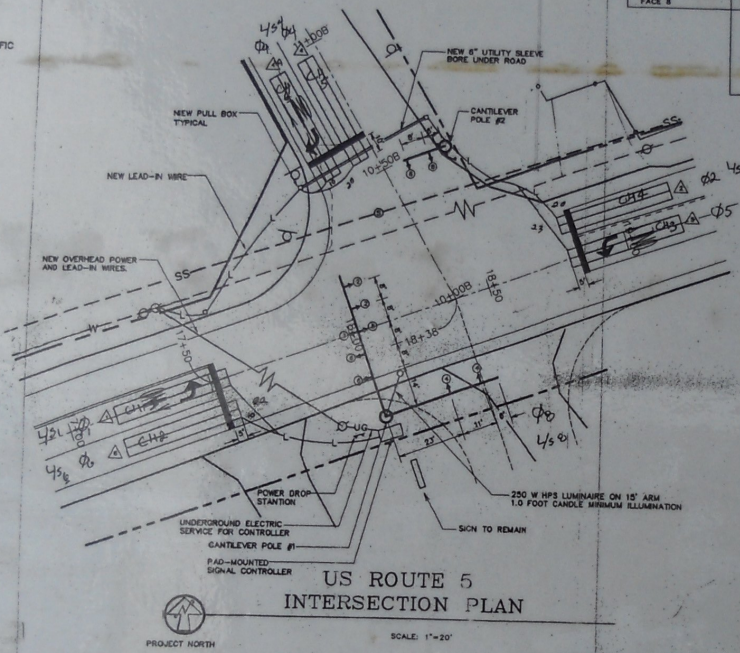
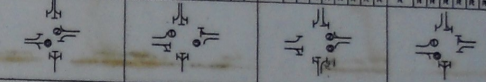


LOOP #	LANE	CALL PHASE	SIZE	TYPE	# OF TURNS	MODE	INDUCTANCE CALC.	RESISTANCE ACT.	RESISTANCE CALC.	LEAKAGE TO GROUND	AMP TYPE
1	EB L	1 & 5	8' X 40'	LONG	2	PRES	354mH	0.77 Ω			STD.
2	WB LTR	2 & 6	8' X 40'	LONG	2	PRES	414mH	1.55 Ω			STD.
4	SB LTR	4 & 8	8' X 40'	LONG	2	PRES	380mH	1.23 Ω			STD.
0	WB L	1 & 5	8' X 40'	LONG	2	PRES	417mH	1.58 Ω			STD.
8	EB TR	2 & 6	8' X 40'	LONG	2	PRES	352mH	0.74 Ω			STD.

**VEHICLE LOOP DETECTOR SCHEDULE**

FULLY ACTIVATED DRILL PHASE 1/2	PHASE 2/5 US5 THRU				PHASE 1/5 US 5 EB LEFTS & WB LEFTS				PHASE 2/5 US 5 WB LEFTS & THRU				PHASE 1/5 US 5 EB LEFTS & WB LEFTS				PHASE 4/5 SHATTUCK HILL ROAD & BANK DRIVE			
	R/W	CLEAR TO	R/W	CLEAR TO	R/W	CLEAR TO	R/W	CLEAR TO	R/W	CLEAR TO	R/W	CLEAR TO	R/W	CLEAR TO	R/W	CLEAR TO	R/W	CLEAR TO		
VEH EXTENSION	2		2		2		2		2		2		2		2		2			
MAX. GREEN	35	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2		
MIN. GREEN	15	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2		
MAX. GREEN	25	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2		
MIN. GREEN	15	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2		
MAX. GREEN	35	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2		
MIN. GREEN	15	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2		
MAX. GREEN	25	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2		
MIN. GREEN	15	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2	4 2		
FACE 1	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		
FACE 2	G	Y	R	Y	R	Y	R	Y	R	Y	R	Y	R	Y	R	Y	R	Y		
FACE 4	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		
FACE 5	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		
FACE 6	G	Y	R	Y	R	Y	R	Y	R	Y	R	Y	R	Y	R	Y	R	Y		
FACE 8	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		

**SIGNAL TIMING SEQUENCE DIAGRAM**



LIST OF MAJOR EQUIPMENT	
EQUIPMENT	QUANTITY
NEW 12" TRAFFIC SIGNAL HEADS W/ TURNING VISION DISCONTINUED HANGERS & MOUNTING HARDWARE BACKPLATES FOR ALL HEADS	8-ONE WAY, 3 SECTION 1-TWO WAY, 3 SECTION
CONTINUED DISCONTINUED (PARTIAL) TRAFFIC SIGNAL HEADS W/ TURNING VISION DISCONTINUED (LUMINAIRE ARM) (HEADS)	1
SIGNAL CONTROLLER, W/ CABINET	1
POWER DROP STATION	1
VEHICLE DETECTOR LOOPS	5
MISC. HARDWARE EQUIPMENT, ETC. TO COMPLETE INSTALLATION	SEE NOTE BELOW

NOTE: THE QUANTITIES LISTED ABOVE ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY. MISCELLANEOUS (UNLISTED) WIRE, CABLES, HARDWARE, ETC. ARE REQUIRED TO PROVIDE FOR A FUNCTIONING TRAFFIC SIGNAL SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF THE NUMBER OF ITEMS AND THE TYPES OF EQUIPMENT REQUIRED.

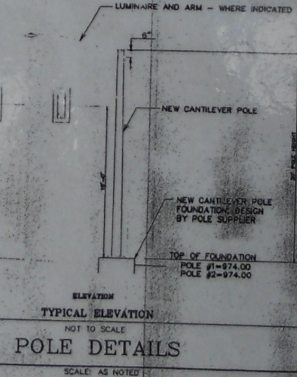
**LUMINAIRE NOTES**

TYPE:	250 WATTS
DISTRIBUTION:	TYPE III
DESIGN ILLUMINATION:	1.0 FOOT CANDLES
DESIGN HEIGHT:	8 FT
APPLICABLE STANDARDS:	E-180A, E-180B

**POLE/MAST ARM DESIGN NOTES**

CANTILEVER POLE DESIGN SHALL FOLLOW ALL APPLICABLE VERMONT AGENCY OF TRANSPORTATION DESIGN STANDARDS

WINDLOAD: TO MPH, WTB 1.3 BUXT FACTOR  
ICE LOAD: 3 POUNDS PER SQUARE FOOT  
HEADS: POLYCARBONATE, WITH BACKPLATES  
POLES AND ARMS: GALVANIZED STEEL



**NOTES:**

- CONTRACTOR SHALL ALLOW FOR EVALUATION AND PHASING CHANGES DURING INITIAL OPERATION PER ADT SPECIFICATIONS.
- SIGNAL HEADS SHALL BE POLYCARBONATE WITH 12" LENSES AND LEAD LAMPS.
- RELATED VT AGENCY OF TRANSPORTATION STANDARDS, AS APPLICABLE:
  - E-142 REGULATORY SIGN DETAILS
  - E-145A REGULATORY SIGN DETAILS
  - E-191 PAVEMENT MARKING DETAILS
  - E-192 PAVEMENT MARKING DETAILS
  - E-193 PAVEMENT MARKING DETAILS
  - E-170 TRAFFIC CONTROL SIGNALS, PEDESTAL MOUNTED
  - E-171A TRAFFIC CONTROL SIGNALS, GENERAL NOTES & DETAILS
  - E-171B TRAFFIC CONTROL SIGNALS, MISC. DETAILS
  - E-171C TRAFFIC CONTROL SIGNALS, CANTILEVER MOUNTING DETAILS
  - E-172 VEHICLE DETECTOR LOOP DETAILS
  - E-173 FOLLOWERS & JUNCTION BOXES
  - E-191 PAVEMENT MARKING DETAILS
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES SHOWN OR NOT SHOWN ON THIS PLAN PRIOR TO THE START OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED, IN WRITING, OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE TAKEN BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD BEFORE COMMENCING CONSTRUCTION AND NOTIFY THE ENGINEER, IN WRITING, OF ANY DISCREPANCY FOUND.
- LOCATION OF NEW AND/OR RELOCATED SIGNAGE SHALL BE COORDINATED WITH THE PROPER VERMONT AGENCY OF TRANSPORTATION OFFICIALS PRIOR TO INSTALLATION.

JULY 15, 2004: ISSUED FOR VITREANS REVIEW AND PERMITTING  
 DERBY PROPERTIES LLC.  
 ST. JOHNSBURY, VERMONT  
 Proposed Intersection Improvements  
 U.S. Route 5 Derby, Vermont  
 INTERSECTION  
 I-2  
 SHEET 2 OF 3

CROSS CONSULTING ENGINEERS INC.  
 103 CANTON STREET  
 ST. JOHNSBURY, VT 05490  
 DATE: 07/15/04  
 DRAWN: SD  
 CHECKED: PNC  
 APPROVED: PNC  
 SCALE: 1" = 20'