

Vermont Gas Systems, Inc. - Addison Natural Gas Project- Phase I
 Vermont Wetland Permit Amendment
 Williston to Middlebury, Vermont
 Adjoining Property Owners
 Prepared by: VHB
 December 20, 2012
 Last Revised: December 16, 2015



Line List Number	Parcel Location (Town)	Property Owner	Mailing Address	City	State	Zip
135	Monkton	Keith E. Mayo	842 Rotax Road	North Ferrisburgh	VT	05473
138	Monkton	Beverly D. Latreille, Raymond Latreille, Claudette Latreille	789 Rotax Road	North Ferrisburgh	VT	05473
140	Monkton	Vermont Gas Systems, Inc.	85 Swift Street	South Burlington	VT	05403
181	Monkton	Herrick Hurlburt; Charlotte Hurlburt	78 Parks Hurlburt Road	New Haven	VT	05472

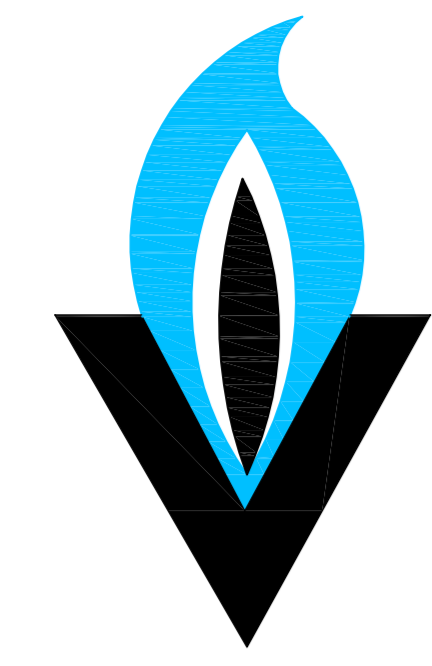
Note: Property owner information supplied by CHA, VCGL, Town Clerk of New Haven, Town Clerk of Ferrisburgh

VGS Addison Natural Gas Project (ANGP) - Phase I
Summary of Project Revisions for Vermont Wetland Permit Amendment
Prepared by VHB
December 16, 2015

Description of Change	Wetland Feature ID	Town	VHB Natural Resource Map Series #	CHA EPSC Sheet #	Revised Impact Exhibit #	Landowners (s) (LLN #)	Wetland Impacts			Wetland Buffer Impacts		
							Previously Permitted Wetland Impact Area (sq. ft.)	Proposed Amendment Wetland Impact Area (sq. ft.)	Change in Wetland Impact Area (sq. ft.)	Previously Permitted Wetland Buffer Impact Area (sq. ft.)	Proposed Amendment Wetland Buffer Impact Area (sq. ft.)	Change in Wetland Buffer Impact Area (sq. ft.)
Realign approximately 3,400 feet of pipeline from station 1266+55 to 1301+00 using open trench construction for the entire distance in the vicinity of Rotax Road	2013-CM-3	Monkton	21, 22	ANGP-EPSC-051	-	134 (Norris), 134.05 (Palmer), 137 (Town of Monkton)	7,423	0	-7,423	7,804	0	-7,804
	2014-CM-3	Monkton	22	ANGP-EPSC-051	82 through 84	138 (Latreille), 140 (Bailey)	2,786	2,167	-619	1,693	1,759	66
	2015-CM-3	Monkton	21, 22	ANGP-EPSC-050	78	135 (Mayo)	0	532	532	0	5,452	5,452
Adjust pipeline route along Old Stage Road to align with surveyed road ROW.	2012-JB-12	Monkton	25	ANGP-EPSC-061A	97	181 (Hurlburt)	267	318	51	920	902	-18
Remove Access Road AL. Modify ATWS adjacent to corridor. Add Access Road BK. Replace approximated natural resource data with field delineated data.	Previous ID 2013-AW-RS-29 Feature ID 2015-MJ-1	Monkton	27	ANGP-EPSC-065	-	196, 197 & 197.01 (Lichtenburg & Delictii)	1,514	0	-1,514	907	0	-907
							Summary of Class II Wetland Impact Change (sq. ft.)		-8,973	Summary of Wetland Buffer Impact Change (sq. ft.)		-3,211

Cumulative Impact Totals	Wetland Impacts (sq. ft.)	Buffer Impacts (sq. ft.)
Permit # 2012-184	161,825	255,412
Amendment 1 (Permit # 2015-464)	163,713	260,726
Amendment 2 (Permit # Not Assigned)	154,740	257,515

Note: Latest GIS impact analysis for the Request for Permit Amendment conducted using limits of disturbance created from the CHA CAD-based design drawing: June 28, 2013 and updated based on September 20, 2013, February 4, 2014, June 10, 2015, October 23, 2015, November 6, 2015, and December 8, 2015 revisions to select areas.



Vermont Gas

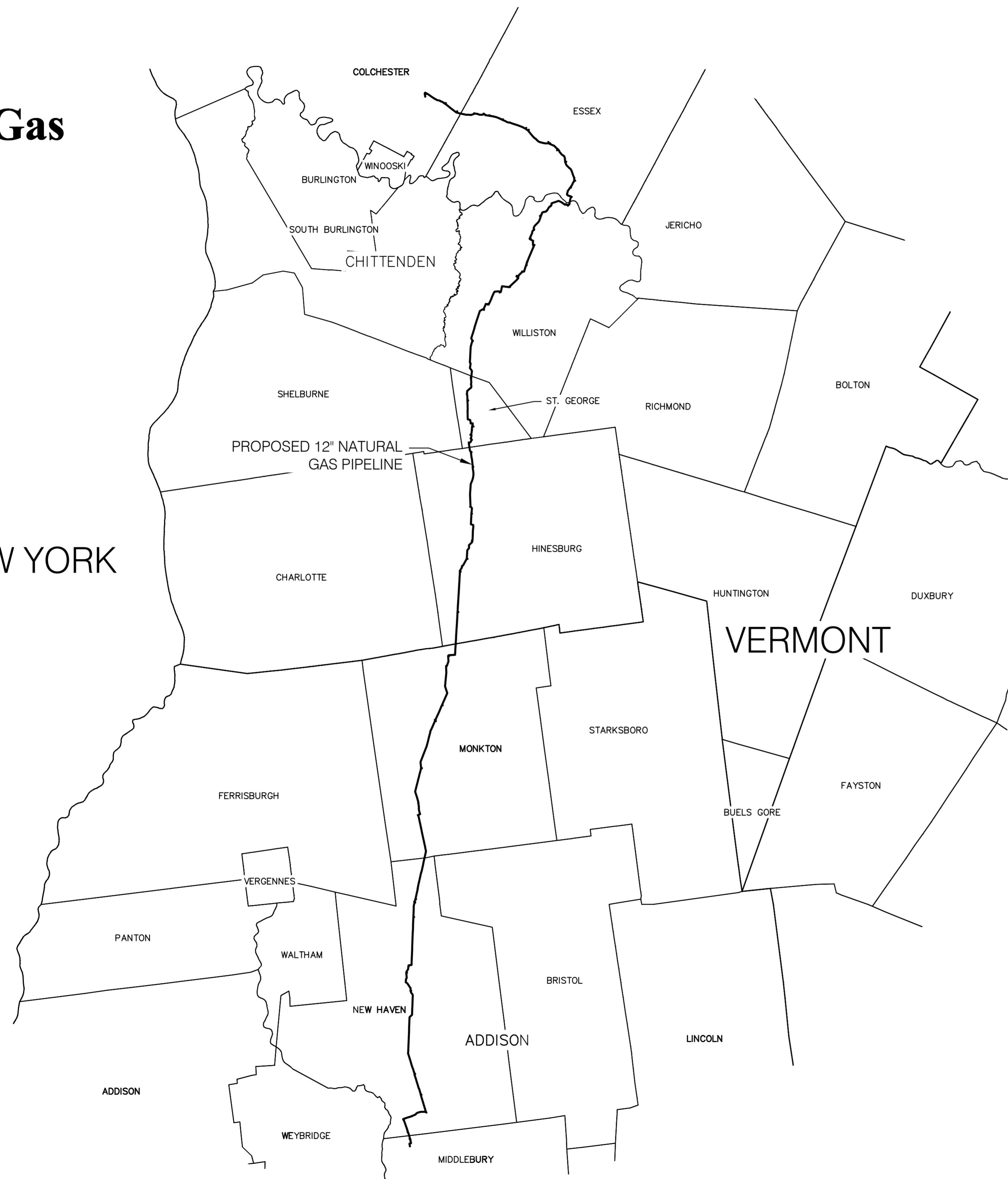
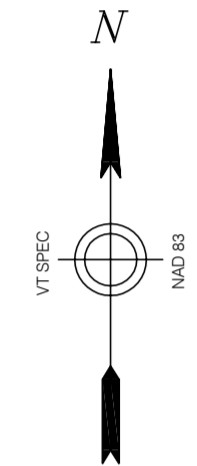
ADDISON NATURAL GAS PROJECT TRANSMISSION MAINLINE

CHITTENDEN AND ADDISON COUNTIES
VERMONT

NOT FOR CONSTRUCTION

DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE
ANGP-T-G-001	COVER SHEET
ANGP-T-G-002	INDEX SHEET
ANGP-T-G-003	LEGEND & NOTES
ANGP-T-G-004 TO 006	CONSTRUCTION CONFIGURATION DETAILS
ANGP-T-G-007 TO 010	ACCESS ROAD DETAILS
ANGP-T-G-011	EPSC NOTES
ANGP-T-G-012 TO 020	CONSTRUCTION DETAILS
ANGP-T-G-021	STATION AND VALVE DETAILS
ANGP-T-G-022	WILLISTON PIPEYARD
ANGP-T-G-023	PLANK ROAD PIPEYARD



SCALE 1" = 12,000'

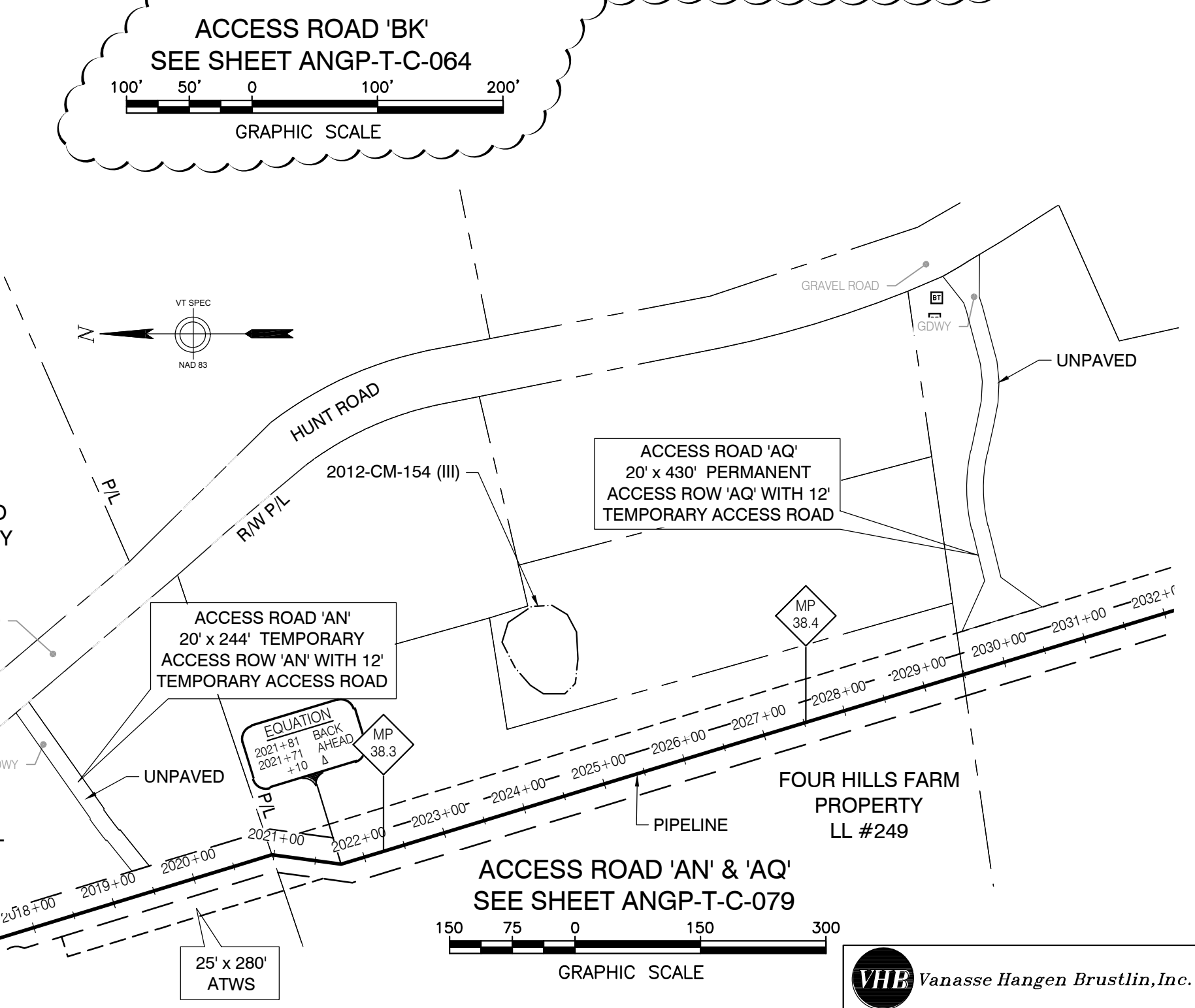
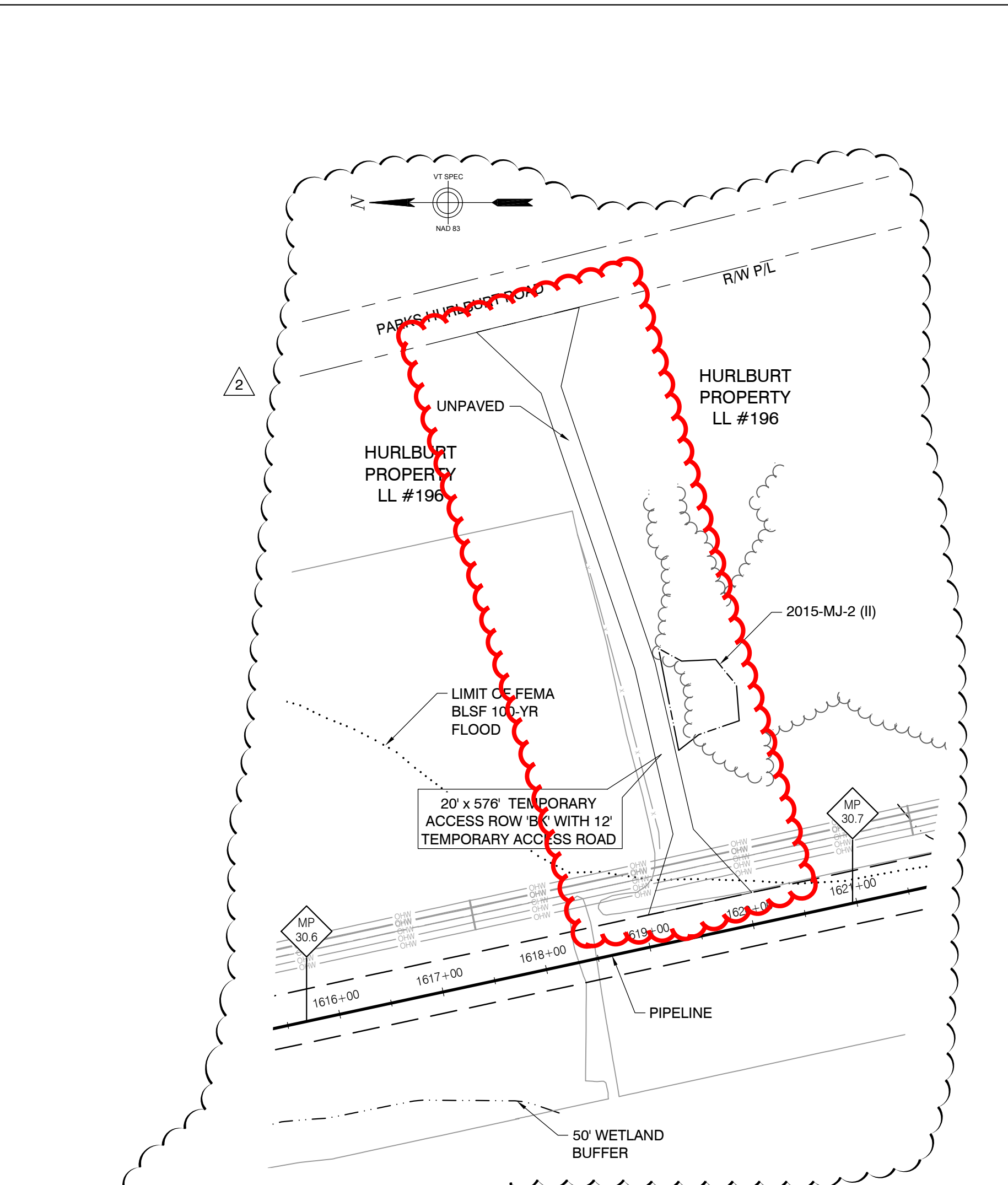
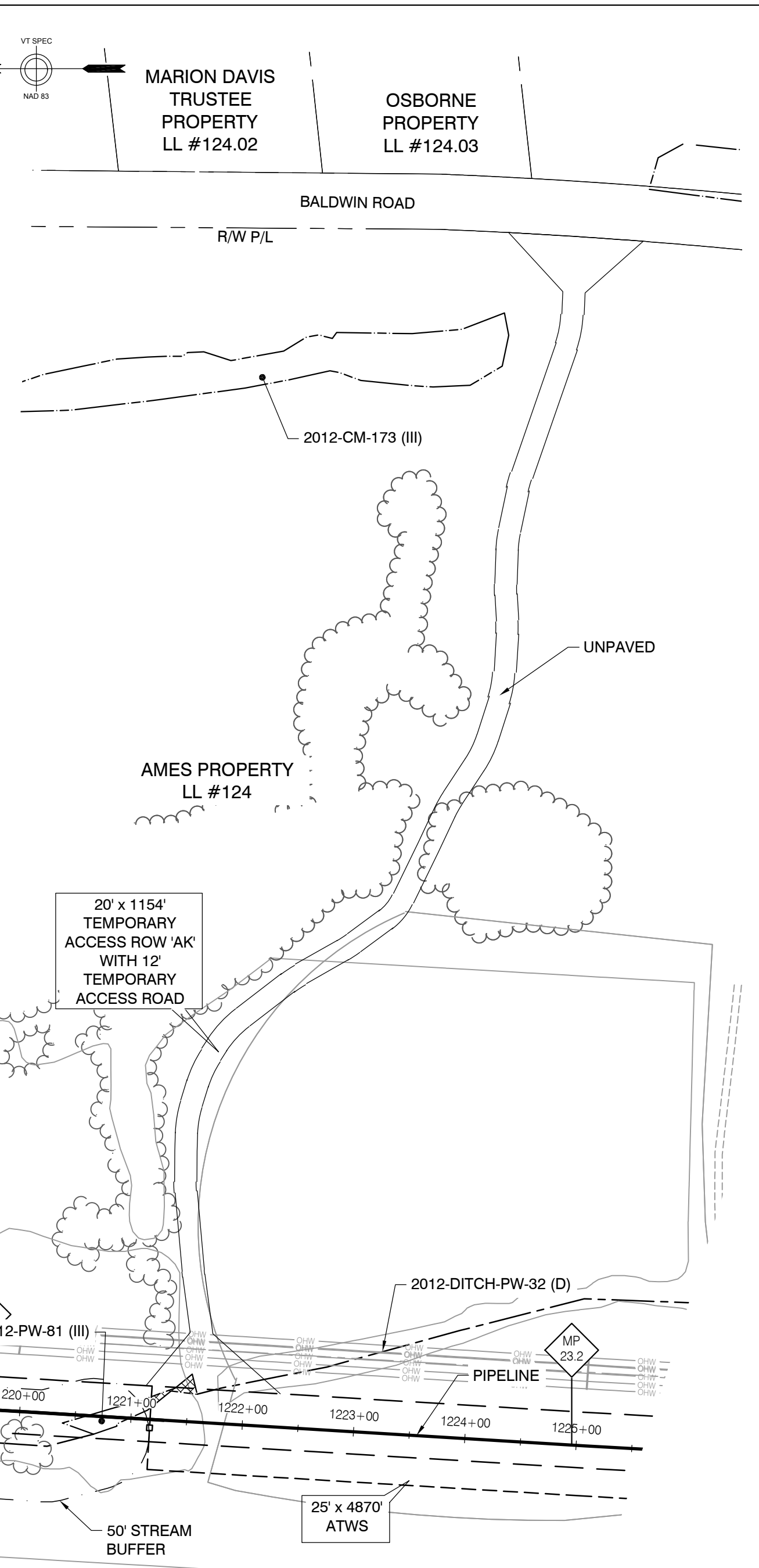
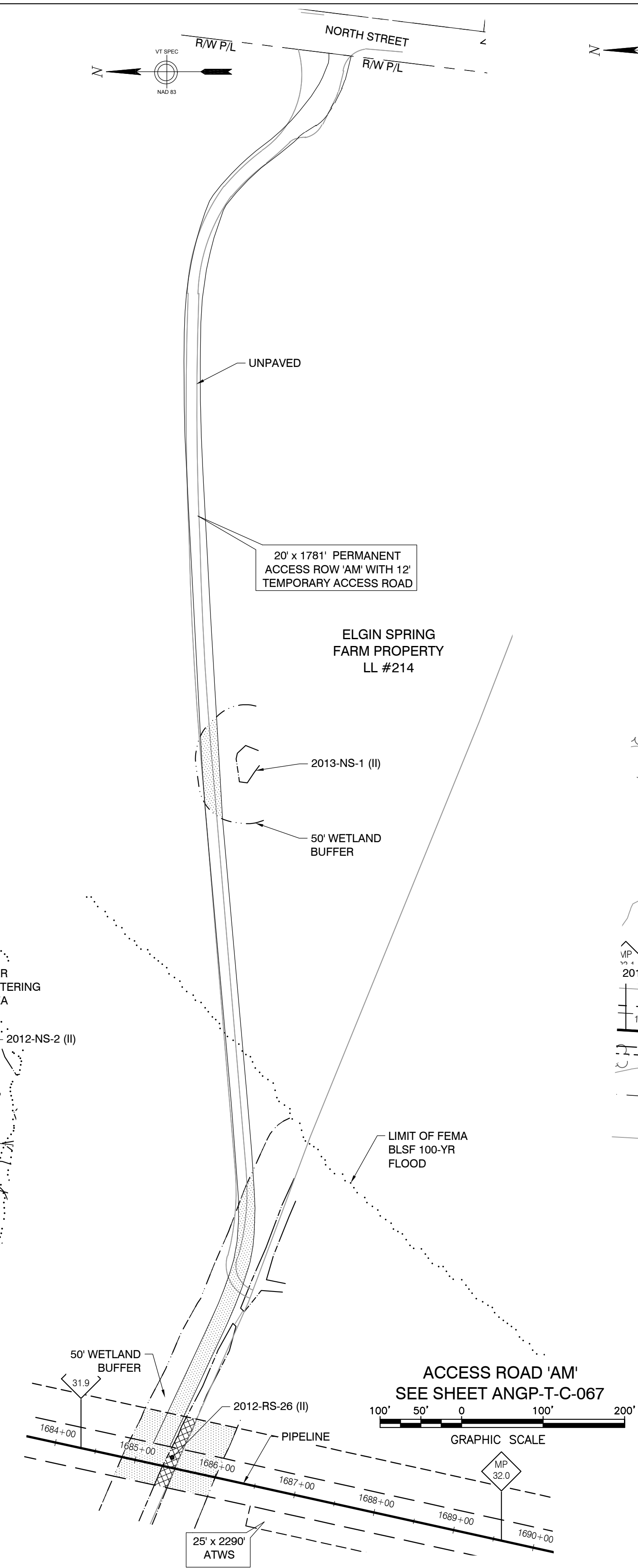
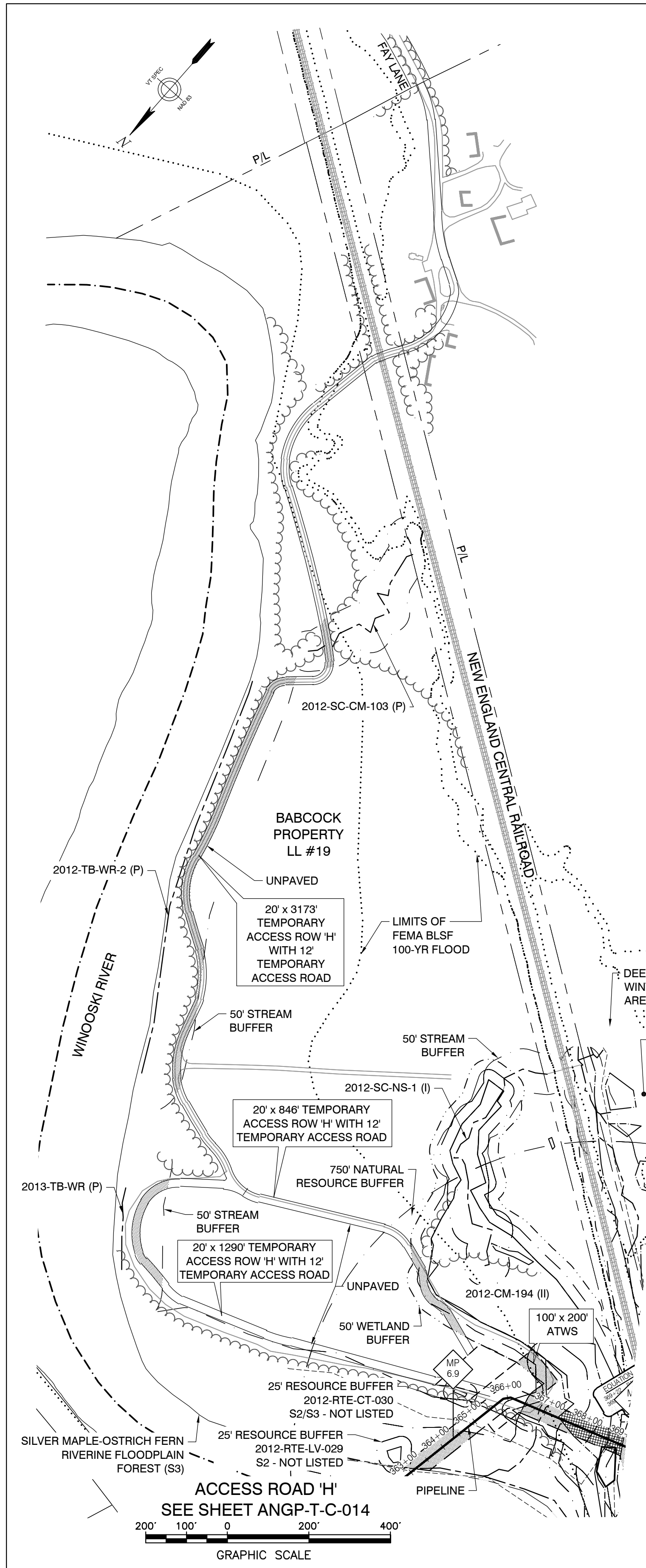
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ANGP-EPSC-001A	0	EPSC PLAN	ANGP-EPSC-045	0	EPSC PLAN
ANGP-EPSC-001B	0	EPSC PLAN	ANGP-EPSC-046	0	EPSC PLAN
ANGP-EPSC-002	1	EPSC PLAN	ANGP-EPSC-047	0	EPSC PLAN
ANGP-EPSC-003	1	EPSC PLAN	ANGP-EPSC-048	0	EPSC PLAN
ANGP-EPSC-004	0	EPSC PLAN	ANGP-EPSC-049	0	EPSC PLAN
ANGP-EPSC-005	1	EPSC PLAN	ANGP-EPSC-050	0	EPSC PLAN
ANGP-EPSC-006	0	EPSC PLAN	ANGP-EPSC-051	1	EPSC PLAN
ANGP-EPSC-007	0	EPSC PLAN	ANGP-EPSC-052	0	EPSC PLAN
ANGP-EPSC-008	0	EPSC PLAN	ANGP-EPSC-053	0	EPSC PLAN
ANGP-EPSC-009	0	EPSC PLAN	ANGP-EPSC-054	0	EPSC PLAN
ANGP-EPSC-010	0	EPSC PLAN	ANGP-EPSC-055	0	EPSC PLAN
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ANGP-EPSC-031	1	EPSC PLAN	ANGP-EPSC-075	2	EPSC PLAN
ANGP-EPSC-032	1	EPSC PLAN	ANGP-EPSC-076	1	EPSC PLAN
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ANGP-EPSC-035	0	EPSC PLAN	ANGP-EPSC-079	2	EPSC PLAN
ANGP-EPSC-036	0	EPSC PLAN	ANGP-EPSC-080	0	EPSC PLAN
ANGP-EPSC-037	0	EPSC PLAN	ANGP-EPSC-081	0	EPSC PLAN
ANGP-EPSC-038	0	EPSC PLAN	ANGP-EPSC-082A	0	EPSC PLAN
ANGP-EPSC-039	0	EPSC PLAN	ANGP-EPSC-082B	0	EPSC PLAN
ANGP-EPSC-040	1	EPSC PLAN	ANGP-EPSC-083A	0	EPSC PLAN
ANGP-EPSC-041	1	EPSC PLAN	ANGP-EPSC-083B	0	EPSC PLAN
ANGP-EPSC-042	1	EPSC PLAN	ANGP-EPSC-084A	0	EPSC PLAN
ANGP-EPSC-043	1	EPSC PLAN	ANGP-EPSC-084B	1	EPSC PLAN
ANGP-EPSC-044	0	EPSC PLAN	ANGP-EPSC-085	0	EPSC PLAN

NOTE:
STATIONING ON THE PIPE ALIGNMENT UTILIZES STATION EQUATIONS IN SEVERAL LOCATIONS. STATION EQUATION CALL-OUTS NOTED ON THE PLAN VIEWS INDICATE THE CORRECT "BACK" AND "AHEAD" STATIONS AS WELL AS THE CHANGE IN DISTANCE OF EACH STATION EQUATION. THE CONSTRUCTION MANAGEMENT TEAM AND THE CONTRACTOR SHOULD PROPERLY DOCUMENT WORK THAT SPANS OVER STATION EQUATIONS IN ORDER TO PROVIDE ACCURATE FIELD RECORDS FOR THE OWNER.

ENVIRONMENTAL		JLS	06/28/13	JLS	04/02/15	VERMONT GAS PROPOSED 12" PIPELINE ADDISON NATURAL GAS PROJECT COVER SHEET			
DRAFTING DESIGNER		GIL	06/28/13	GIL	04/02/15	LOC. CHITTENDEN & ADDISON COUNTIES			
DRAFTING SUPERVISOR		BZD	06/28/13	BCK	04/02/15	YEAR: 2015	W.O.	SCALE: NOTED	DWG. ANGP-T-G-001
DESIGN ENGINEER		MDF	06/28/13	TDB	04/02/15	REV. 2			
DESIGN MANAGER		SAB	06/28/13	JEO	04/02/15				
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION	INITIALS	DATE	INITIALS	DATE
		2	GJM	TDB	PLAN SET ISSUED FOR COLLATERAL PERMIT AMENDMENTS (6/30/15)				
		1	BCK	TDB	COMPLETE PLAN SET RE-ISSUE (6/15/15)				

VHB Vanasse Hangen Brustlin, Inc.

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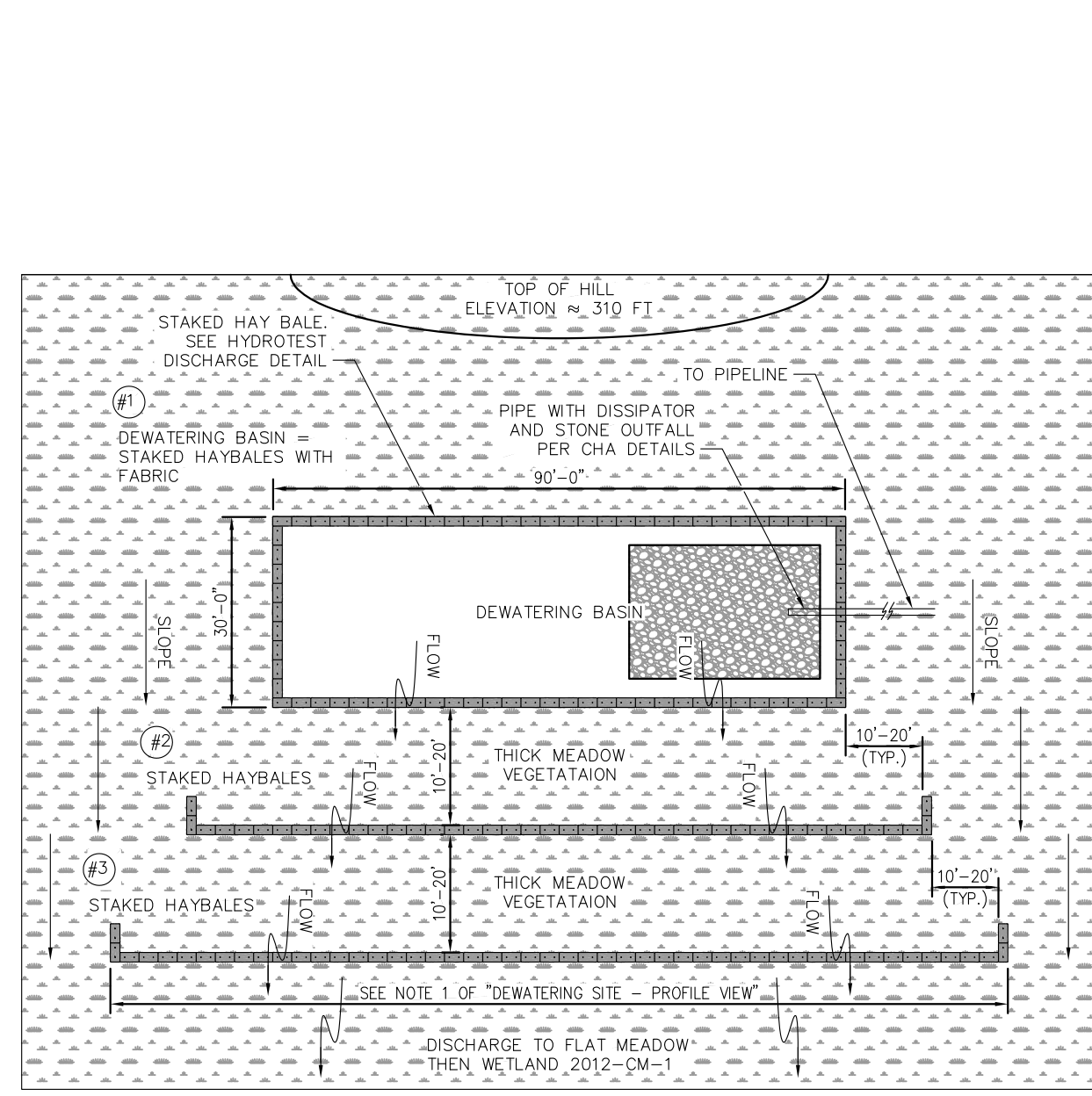
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION	INITIALS	DATE	INITIALS	DATE	YEAR:	W.O.	SCALE:	DWG.	REV.
		2	VGS	VGS	ACCESS ROAD "BK" ADDED (11/13/15)					2015		AS NOTED	ANGP-T-G-007B	2
		1	BCK	TDB	VHB EDITS (6/09/15)									

ENVIRONMENTAL	BID	CONSTRUCTION	VERMONT GAS PROPOSED 12" PIPELINE ADDISON NATURAL GAS PROJECT ACCESS ROAD DETAILS		
JLS 06/28/13	JLS 04/02/15	JLS 04/02/15	LOC.	CHITTENDEN & ADDISON COUNTIES	Vermont Gas
GIL 06/28/13	GIL 04/02/15	GIL 04/02/15	YEAR:	2015	W.O.
BZD 06/28/13	BCK 04/02/15	BCK 04/02/15	SCALE:	AS NOTED	DWG.
MDF 06/28/13	TDB 04/02/15	TDB 04/02/15			ANGP-T-G-007B
SAB 06/28/13	JEO 04/02/15	JEO 04/02/15			REV.

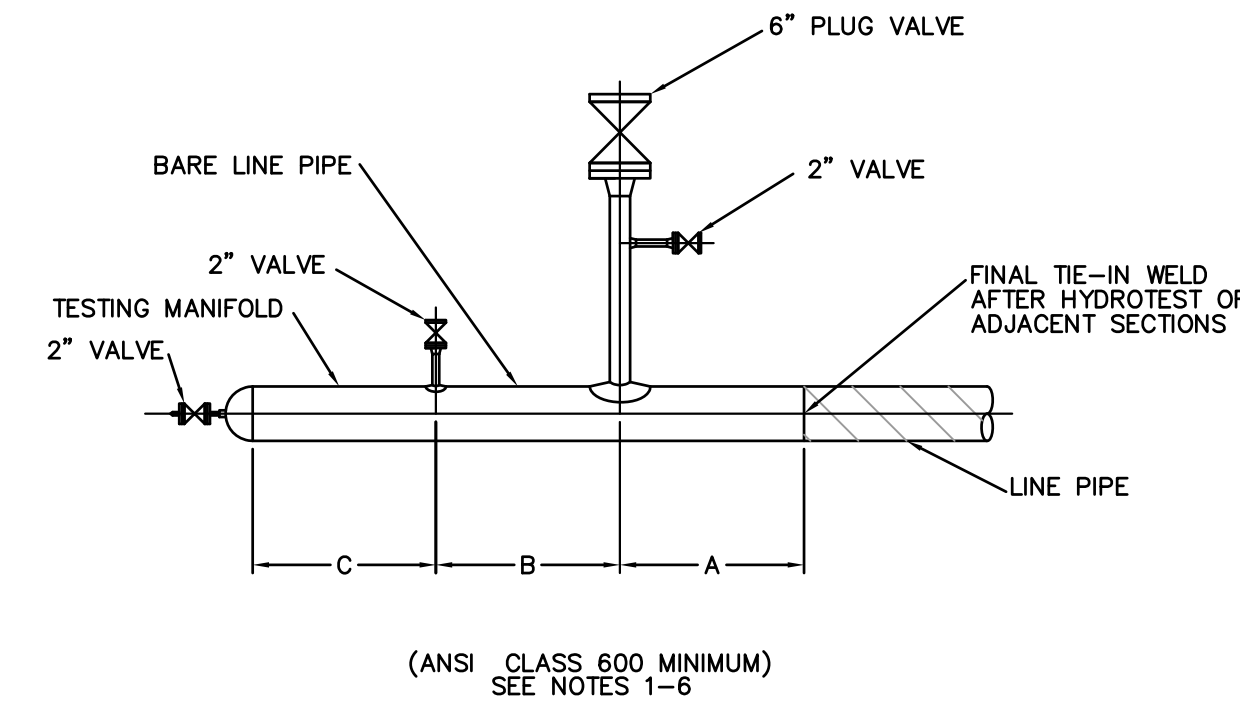
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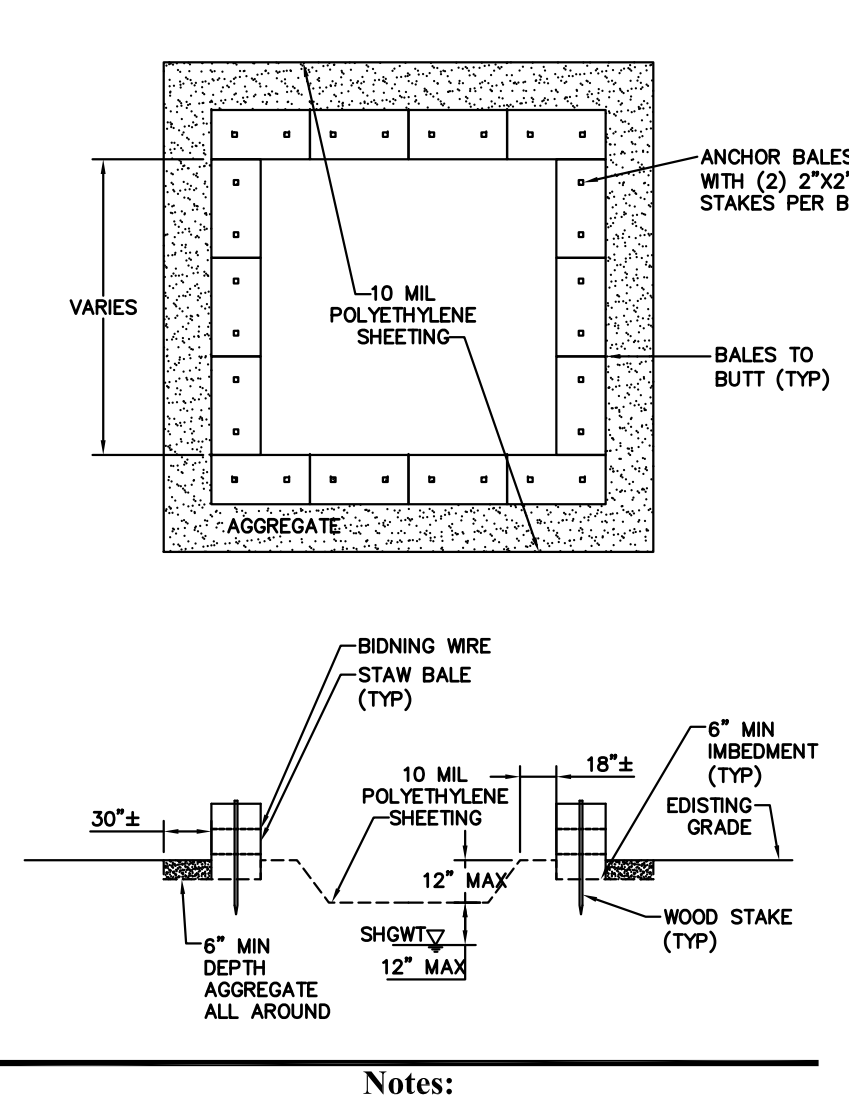


1 Dewatering Site - Plan View 09/13
N.T.S. Source: VHB



- (ANSI CLASS 800 MINIMUM)
SEE NOTES 1-6
- NOTES:**
- DIMENSIONS A, B & C ARE DEPENDENT ON PIPE DIAMETER & PIG LENGTH AND ARE TO BE DETERMINED BY CONTRACTOR.
 - FOR MANIFOLD TEST LOCATIONS & DISCHARGE LOCATIONS REFER TO EM&CP DRAWINGS.
 - TEST WATER SHALL BE TRANSFERRED BY PUMPING FROM ONE TEST SECTION TO THE NEXT ADJACENT TEST SECTION THROUGH THE 6" PIPE BRANCH AND MAKE-UP PIPING BETWEEN TEST SECTIONS. USE OF "HARD PIPING" & UNIONS IS RECOMMENDED.
 - FINAL TIE-IN WELD(S) BETWEEN TEST SECTIONS TO BE 100% RADIOGRAPHED.
 - TAP AND BRANCH SIZES AND VALVES FOR MANIFOLD ARE CONCEPTUAL AND SHALL BE DESIGNED BY CONTRACTOR TO BE COMPATIBLE WITH TEST EQUIPMENT AND PIPING.

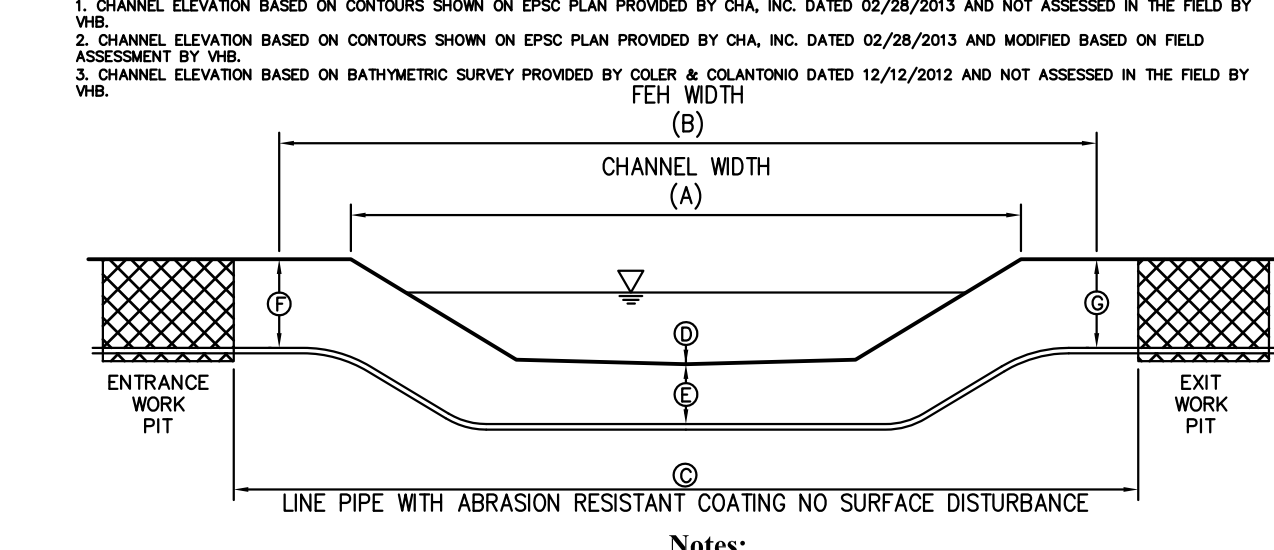
2 Typical Hydrastatic Test Manifold 12/12
N.T.S. Source: CHA LD



- Notes:**
- CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
 - CONTAINMENT DEVICES MUST BE SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
 - WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
 - WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
 - ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
 - AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.
 - PLACE 50' FROM RIVER OR STREAM.

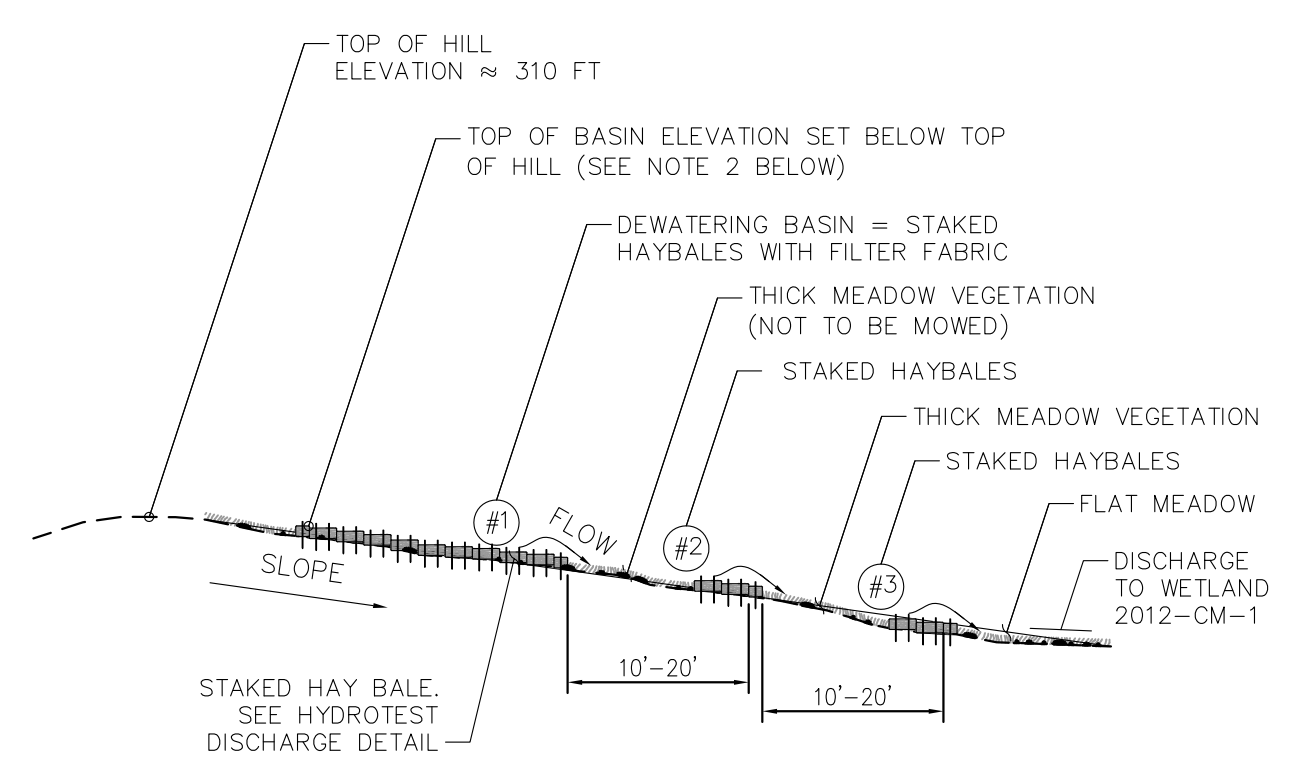
3 Concrete Washout Area 12/12
N.T.S. Source: VHB LD

MILEPOST	STREAM NAME	CHANNEL WIDTH (A)	FEH WIDTH (B)	HDD LENGTH (C)	CHANNEL ELEV. (D)	ELEV. BELOW CHANNEL (E)	ENTRY ELEV. (F)	EXIT ELEV. (G)
0.99	INDIAN BROOK	4	100	2,339	208 ¹	< 198	< 208	< 208
1.52	INDIAN BROOK	15	125	1,530	188 ²	< 178	< 188	< 188
6.75	WNOOSKI RIVER (SECTION 10 WATERS)	320	N/A (1,195)	900	263 ³	< 238	< 275	< 275
19.47	LAPLATE RIVER	30	360	640	317 ²	< 307	< 317	< 317
22.86	LEWIS CREEK	80	435	2,500	310 ¹	< 300	< 310	< 310
32.30	LITTLE OTTER CREEK	35	240	1,680	267 ¹	< 260	< 267	< 267
35.85	UNNAMED TRIB. TO LITTLE OTTER CREEK	4	640	1,010	303 ²	< 293	< 303	< 303
39.30	NEW HAVEN RIVER	120	785	530	245 ²	< 235	< 245	< 245
DISTRIBUTION MAIN 30+00	UNNAMED TRIB TO LITTLE OTTER CREEK	8	N/A (108)	300	261 ¹	< 254	< 261	< 261



- Notes:**
- THIS CONFIGURATION IS FOR HORIZONTAL DIRECTIONAL DRILL OF STREAM CROSSINGS AS SHOWN ON PROJECT PLANS. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
 - TOP OF PIPELINE MUST BE AT LEAST AS DEEP AS THE CHANNEL BOTTOM (DIMENSION D) THROUGHOUT THE FLUVIAL EROSION HAZARD (FEH) CORRIDOR.
 - MINIMUM SEPARATION BETWEEN THE TOP OF PIPELINE AND THE CHANNEL BOTTOM (DIMENSION E) MUST BE AT LEAST 7 FEET.
 - ELEVATIONS PROVIDED ARE BASED ON APPROXIMATE NAVD 88 DATUM AND MUST BE FIELD VERIFIED PRIOR TO INSTALLATION OF PIPELINE.
 - FEH CORRIDOR IS LISTED AS NOT APPLICABLE (N/A) WHERE THE STREAM CROSSES OR IS ADJACENT TO AN EXISTING ROADWAY OR OTHER INFRASTRUCTURE THAT RESULTS IN RIVER MANAGEMENT CONSTRAINTS AT THAT LOCATION. FEH CORRIDOR WIDTHS AT THESE LOCATIONS ARE SHOWN FOR INFORMATION PURPOSES ONLY.

4 Horizontal Directional Drill (HDD) Stream Crossing - Typical Section 4/13
N.T.S. SOURCE LD



- NOTES:**
- THE DEWATERING SITE SHALL CONSIST OF THREE ROWS OF STAKED HAYBALES. THE TOP ROW SHALL BE ENCLOSED TO ACT AS A BASIN WITH FILTER FABRIC AND STONE OUTFALL AT THE DISCHARGE OUTLET. EACH DOWNSLOPE ROW OF HAYBALES SHALL BE CONSECUTIVELY LONGER THAN THE ROW UPSLOPE OF IT AS PER THE PLAN VIEW DETAIL. THE BOTTOM ROW IS TO EXTEND ACROSS THE ENTIRE WIDTH OF THE DENSELY VEGETATED MEADOW.
 - THE HIGHEST ELEVATION OF THE TOP ROW OF HAY BALES SHALL BE LOWER THAN THE ELEVATION AT THE TOP OF THE HILL TO ENSURE DISCHARGE DOES NOT FLOW OVER THE HILL.
 - DURING TESTING, THE CONTRACTOR SHALL HAVE ADDITIONAL STONE, HAYBALES, AND STAKES ON SITE FOR USE IF ADDITIONAL EPSC MEASURES ARE NEEDED.
 - SEE HYDROTEST DISCHARGE DETAIL FOR DEWATERING BASIN INSTALLATION SPECIFICATIONS.
 - SEE HAY BALE BARRIER DETAIL FOR STAKED HAYBALE INSTALLATION SPECIFICATIONS.
 - MEADOW IS NOT TO BE MOWED PRIOR TO USE FOR FILTERING FLOW.

5 Dewatering Site - Profile View 09/13
N.T.S. Source: VHB

PRODUCT DESCRIPTION	MATERIAL COMPOSITION	LONGEVITY (MONTHS)	SLOPE APPLICATIONS*		CHANNEL APPLICATIONS*	MINIMUM TENSILE STRENGTH ¹ kN/m (lbs/ft)
			MAXIMUM GRADIENT (H:V)	C FACTOR ^{2,3}		
MULCH CONTROL NETS	MESH OR WOVEN BIODEGRADABLE NATURAL FIBER NETTING.	3	5:1	≤ 0.10	12 (0.25)	0.73 (5)
		12	5:1	≤ 0.10	12 (0.25)	0.73 (5)
		24	5:1	≤ 0.10	12 (0.25)	0.36 (25)
NETLESS ROLLED EROSION CONTROL BLANKETS	NATURAL FIBERS MECHANICALLY INTERLOCKED TOGETHER TO FORM A RECP.	3	4:1	≤ 0.10	24 (0.5)	0.73 (5)
		12	4:1	≤ 0.10	24 (0.5)	0.73 (5)
SINGLE-NET EROSION CONTROL BLANKETS	PROCESSED BIODEGRADABLE NATURAL FIBERS MECHANICALLY BOUND TOGETHER BY A SINGLE NATURAL FIBER NETTING OF PROCESSED NATURAL YARNS OR TWINES WOVEN INTO A CONTINUOUS MATRIX.	3	3:1	≤ 0.15	72 (1.5)	0.73 (50)
		12	3:1	≤ 0.15	72 (1.5)	0.73 (50)
DOUBLE-NET EROSION CONTROL BLANKETS	PROCESSED BIODEGRADABLE NATURAL FIBERS MECHANICALLY BOUND TOGETHER BETWEEN TWO NATURAL FIBER NETTING OF PROCESSED NATURAL YARNS OR TWINES WOVEN INTO A CONTINUOUS MATRIX.	3	2:1	≤ 0.20	84 (1.75)	1.09 (75)
		12	2:1	≤ 0.20	84 (1.75)	1.09 (75)
		24	1.5:1	≤ 0.25	96 (2.00)	1.45 (100)
		36	1:1	≤ 0.25	108 (2.25)	1.82 (125)

- * "C" FACTOR AND SHEAR STRESS FOR MULCH CONTROL NETTINGS MUST BE OBTAINED WITH NETTING USED IN CONJUNCTION WITH PRE-APPLIED MATERIAL.
- MINIMUM AVERAGE ROLL VALUES, MACHINE DIRECTION USING EROSION CONTROL TECHNOLOGY COUNCIL (ECTC) MOD. ASTM D 5035.
 - "C" FACTOR CALCULATED AS RATIO OF SOIL LOSS FROM RECP PROTECTED SLOPE (TESTED AT SPECIFIED OR GREATER GRADIENT, H:V) TO RATIO OF SOIL LOSS FROM UNPROTECTED (CONTROL) PLOT IN LARGE-SCALE TESTING. THESE PERFORMANCE TEST VALUES SHOULD BE SUPPORTED BY PERIODIC BENCH SCALE TESTING UNDER SIMILAR TEST CONDITIONS AND FAILURE CRITERIA USING ECTC TEST METHOD #2.
 - REQUIRED MINIMUM SHEAR STRESS RECP (UNVEGETATED) CAN SUSTAIN WITHOUT PHYSICAL DAMAGE OR EXCESS EROSION (> 12.7mm (0.5 IN) SOIL LOSS) DURING A 30-MINUTE FLOW EVENT IN LARGE-SCALE TESTING. THESE PERFORMANCE TEST VALUES SHOULD BE SUPPORTED BY PERIODIC BENCH SCALE TESTING UNDER SIMILAR TEST CONDITIONS AND FAILURE CRITERIA USING ECTC TEST METHOD #3.
 - THE PERMISSIBLE SHEAR STRESS LEVELS ESTABLISHED FOR EACH PERFORMANCE CATEGORY ARE BASED ON HISTORICAL EXPERIENCE WITH PRODUCTS CHARACTERIZED BY MANNINGS ROUGHNESS COEFFICIENTS IN THE RANGE OF 0.01 - 0.05.
 - ACCEPTABLE LARGE SCALE TEST METHODS MAY INCLUDE ASTM D 6459, ECTC TEST METHOD #2 OR OTHER INDEPENDENT TESTING DEEMED ACCEPTABLE BY THE DEC.
 - RECOMMENDED ACCEPTABLE LARGE-SCALE TESTING PROTOCOL MAY INCLUDE ASTM D 6440, ECTC TEST METHOD #3 OR OTHER INDEPENDENT TESTING DEEMED ACCEPTABLE BY THE DEC.

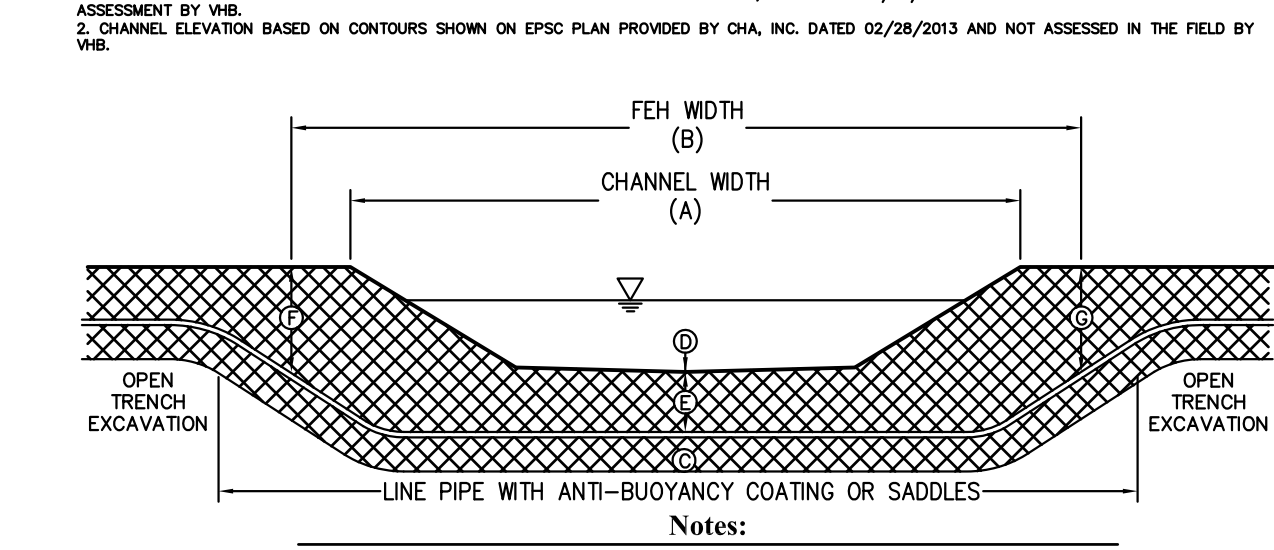
6 Specifications for Temporary RECP
N.T.S. Source: VT S+S EPSC

TYPE	PRODUCT DESCRIPTION	MATERIAL COMPOSITION	SLOPE APPLICATIONS	CHANNEL APPLICATIONS	MINIMUM TENSILE STRENGTH ^{2,3} kN/m (lbs/ft)
			MAXIMUM GRADIENT	MAXIMUM SHEAR STRESS ^{4,5} Pa(lbs/ft ²)	
A	TURF REINFORCED MAT	NON-DEGRADABLE SYNTHETIC FIBERS, FILAMENTS, NETS, WIRE MESH AND/OR OTHER ELEMENTS, PROCESSED INTO A PERMANENT THREE-DIMENSIONAL MATRIX OF SUFFICIENT THICKNESS. TRMs, WHICH MAY BE SUPPLEMENTED WITH DEGRADABLE COMPONENTS ARE DESIGNED TO IMPART IMMEDIATE EROSION PROTECTION, ENHANCED VEGETATION ESTABLISHMENT AND PROVIDE LONG-TERM FUNCTIONALITY BY PERMANENTLY REINFORCING VEGETATION DURING AND AFTER MATURATION. NOTE: TRMs ARE TYPICALLY USED IN HYDRAULIC APPLICATIONS, SUCH AS HIGH FLOW DITCHES AND CHANNELS, STEEP SLOPES, STREAM BANKS, AND SHORELINES, WHERE EROSION FORCES MAY EXCEED THE LIMITS OF NATURAL, UNREINFORCED VEGETATION OR IN AREAS WHERE LIMITED VEGETATION ESTABLISHMENT IS ANTICIPATED.	0.5:1	288 (6.0)	1.82 (125)
			0.5:1	384 (8.0)	2.19 (150)
C	TURF REINFORCED MAT		0.5:1	480 (10.0)	2.55 (175)

- PERMANENT¹ - ALL CATEGORIES OF TURF REINFORCEMENT MAT (TRM) MUST HAVE A MINIMUM THICKNESS OF 6.35mm (0.25 INCHES) PER ASTM D 6525 AND U.V. STABILITY OF 80% PER ASTM D 4355 (500 HOURS EXPOSURE)
- FOR TRMS CONTAINING DEGRADABLE COMPONENTS ALL PROPERTY VALUES MUST BE OBTAINED ON THE NON-DEGRADABLE PORTION OF THE MATTING ALONE.
 - MINIMUM AVERAGE ROLL VALUES, MACHINE DIRECTION ONLY FOR TENSILE STRENGTH DETERMINATION USING ASTM D 6818 (SUPERSEDES MOD. ASTM D 5035 FOR RECP'S).
 - FIELD CONDITIONS WITH HIGH LOADING AND/OR HIGH SURVIVABILITY REQUIREMENTS MAY WARRANT THE USE OF A TRM WITH A TENSILE STRENGTH OF 44 kN/m(3,000 lb/ft) OR GREATER.
 - REQUIRED MINIMUM SHEAR STRESS TRM (FULLY VEGETATED) CAN SUSTAIN WITHOUT PHYSICAL DAMAGE OR EXCESS EROSION (> 12.7mm (0.5 IN) SOIL LOSS) DURING A 30-MINUTE FLOW EVENT IN LARGE SCALE TESTING. THESE PERFORMANCE TEST VALUES SHOULD BE SUPPORTED BY PERIODIC BENCH SCALE TESTING UNDER SIMILAR TEST CONDITIONS AND FAILURE CRITERIA USING ECTC TEST METHOD #3.
 - ACCEPTABLE LARGE-SCALE TESTING PROTOCOL MAY INCLUDE ASTM D 6460 ECTC TEST METHOD #3 OR OTHER INDEPENDENT TESTING DEEMED ACCEPTABLE BY THE DEC.

7 Specifications for Permanent RECP
N.T.S. Source: VT S+S EPSC

MILEPOST	STREAM NAME	CHANNEL WIDTH (A)	FEH WIDTH (B)	CHANNEL ELEV. (C)	ELEV. BELOW CHANNEL (D)	ENTRY ELEV. (E)	EXIT ELEV. (F)
3.62	INDIAN BROOK	7	N/A (185)	430 ²	< 420	< 430	< 430
6.60	ALDER BROOK	35	N/A (150)	281 ¹	< 274	< 276	< 281
10.32	ALLEN BROOK	35	360	376 ²	< 366	< 376	< 376
13.79	SUCKER BROOK	15	120	371 ²	< 364	< 371	< 371
18.93	UNNAMED TRIBUTARY TO LITTLE RIVER	4	N/A (310)	328 ¹	< 321	< 328	< 328
20.45	UNNAMED TRIBUTARY TO LAPLATE RIVER	4	185	364 ²	< 357	< 364	< 364
24.40	UNNAMED TRIBUTARY TO LEWIS CREEK	6	106	437 ²	< 430	< 437	< 437
29.11	UNNAMED TRIBUTARY TO LITTLE OTTER CREEK	8	N/A (400)	364 ²	< 357	< 364	< 364
30.94	UNNAMED TRIBUTARY TO LITTLE OTTER CREEK	4	200	267 ²	< 260	< 267	< 267



- Notes:**
- THIS CONFIGURATION IS FOR OPEN TRENCH EXCAVATION OF STREAM CROSSINGS AS SHOWN ON PROJECT PLANS. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
 - TOP OF PIPELINE MUST BE AT LEAST AS DEEP AS THE CHANNEL BOTTOM (DIMENSION D) THROUGHOUT THE FLUVIAL EROSION HAZARD (FEH) CORRIDOR.
 - FIELD CONDITIONS WITH HIGH LOADING AND/OR HIGH SURVIVABILITY REQUIREMENTS MAY WARRANT THE USE OF A TRM WITH A TENSILE STRENGTH OF 44 kN/m(3,000 lb/ft) OR GREATER.
 - ELEVATIONS PROVIDED ARE BASED ON APPROXIMATE NAVD 88 DATUM AND MUST BE FIELD VERIFIED PRIOR TO INSTALLATION OF PIPELINE.
 - FEH CORRIDOR IS LISTED AS NOT APPLICABLE (N/A) WHERE THE STREAM CROSSES OR IS ADJACENT TO AN EXISTING ROADWAY OR OTHER INFRASTRUCTURE THAT RESULTS IN RIVER MANAGEMENT CONSTRAINTS AT THAT LOCATION. FEH CORRIDOR WIDTHS AT THESE LOCATIONS ARE SHOWN FOR INFORMATION PURPOSES ONLY.
 - RESTORE DISTURBED CHANNEL, STREAM BANKS, AND APPROACHES FOLLOWING PIPELINE INSTALLATION PER EPSC PLAN.

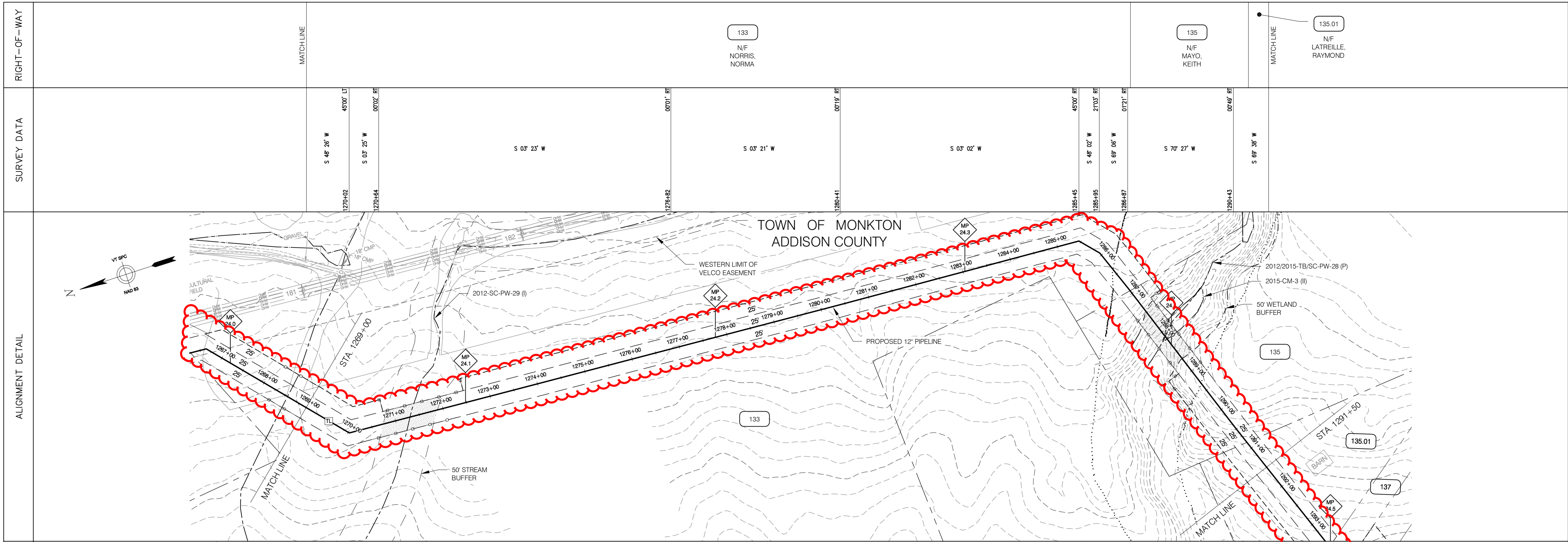
8 Open Trench Stream Crossing - Typical Section 04/13
N.T.S. Source: VHB

DWG. NO.		REFERENCE DWG.		DESCRIPTION		INITIALS		DATE		YEAR: 2015		W.O.		SCALE: NOTED		DWG. ANGP-T-G-017		REV. 2	
2	BCK	TDB	VHB EDITS (12/10/15)	1	BCK	TDB	VHB EDITS (6/09/15)												

ENVIRONMENTAL	JLS	06/28/13	JLS	04/02/15
DRAFTING DESIGNER	GIL	06/28/13	GIL	04/02/15
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	04/02/15
DESIGN ENGINEER	MDF	06/28/13	TDB	04/02/15
DESIGN MANAGER	SAB	06/28/13	JEO	04/02/15

VERMONT GAS		PROPOSED 12" PIPELINE		ADDISON NATURAL GAS PROJECT		CONSTRUCTION DETAILS	
LOC. CHITTENDEN & ADDISON COUNTIES				Vermont Gas			

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EROSION PREVENTION & SEDIMENT CONTROL	LEGEND	INSTALL CONSTRUCTION DEMARCATION: STA. 1269+00 TO 1288+89 RT - 25' FROM NEW 12" PIPE ☒ STA. 1288+89 TO 1291+50 RT - 50' FROM NEW 12" PIPE ☒ STA. 1269+00 TO 1270+78 LT - 50' FROM NEW 12" PIPE ☒	INSTALL CONSTRUCTION DEMARCATION: STA. 1270+78 TO 1272+50 LT - 25' FROM NEW 12" PIPE ☒ STA. 1272+50 TO 1287+31 LT - 50' FROM NEW 12" PIPE ☒ STA. 1287+31 TO 1291+50 LT - 25' FROM NEW 12" PIPE ☒	INSTALL REINFORCED PERIMETER CONTROL: STA. 1269+00 TO 1269+08 RT - 25' FROM NEW 12" PIPE ☒	INSTALL REINFORCED PERIMETER CONTROL: STA. 1270+14 TO 1272+24 RT - 25' FROM NEW 12" PIPE ☒ STA. 1287+17 TO 1288+89 RT - 25' FROM NEW 12" PIPE ☒ STA. 1288+89 TO 1289+19 RT - 50' FROM NEW 12" PIPE ☒	INSTALL REINFORCED PERIMETER CONTROL: STA. 1270+43 TO 1270+79 LT - 50' FROM NEW 12" PIPE ☒ STA. 1270+79 TO 1272+49 LT - 25' FROM NEW 12" PIPE ☒ STA. 1272+49 TO 1272+55 LT - 50' FROM NEW 12" PIPE ☒	INSTALL REINFORCED PERIMETER CONTROL: STA. 1286+49 TO 1287+31 LT - 50' FROM NEW 12" PIPE ☒ STA. 1287+31 TO 1289+19 LT - 25' FROM NEW 12" PIPE ☒	INSTALL MATTING: STA. 1287+90 TO 1288+19	HORIZONTAL SCALE 100 50 0 100 200 300 feet	VERTICAL SCALE 100 50 0 100 200 300 feet
	PERMANENT EASEMENT TEMPORARY WORKSPACE CENTERLINE OF STREAM TEMPORARY STREAM CROSSING WETLAND 50' WETLAND BUFFER TEMPORARY WETLAND MATTING WETLAND BUFFER WITHIN PROJECT AREA REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL	<p>1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE 'CONSTRUCTION EPSC NOTES' - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.</p> <p>2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE 'CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS' (ANGP-T-G-01), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.</p>								

CONST. TYPE	1A	2A	1A	2A	W	1A
SOIL TYPE	EIB	1/2B (PAS)	A/B (PAS)	AsD	AsC	
LC/LU	PASTURE AGRICULTURE					
STREAMS	STREAM 2012-SC-PW-29 (I) STATION 1270+74 TO 1271+88			STREAM 2012/2015-TB/SC-PW-28 (P) STATION 1287+46 TO 1288+67		
WETLANDS	MATCH LINE			WETLAND 2015-CM-3 (II) STATION 1287+46 TO 1288+67		
VERNAL POOLS	MATCH LINE					
SIGNIFICANT NATURAL COMMUNITIES	MATCH LINE					
RTE SPECIES						
NRC WILDLIFE HABITAT						
ARCHAEOLOGY SITES						

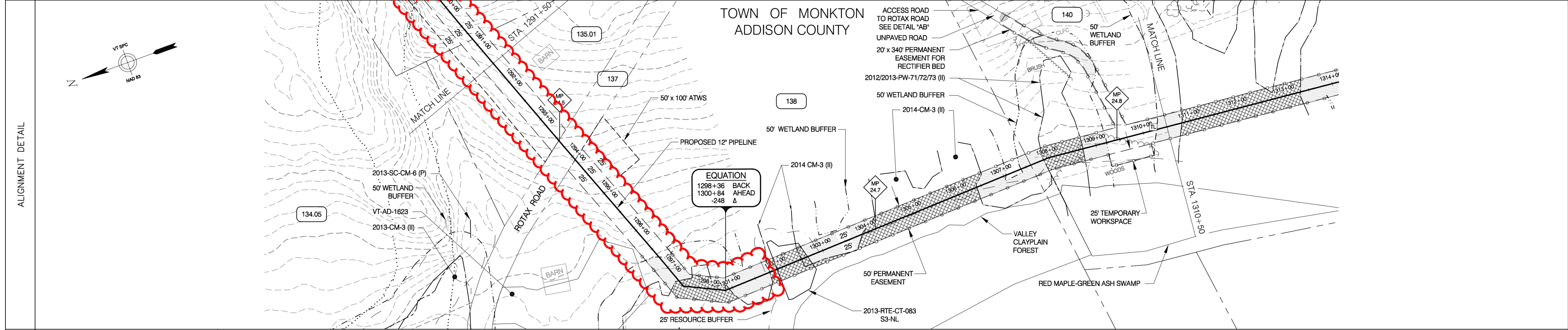
ANGP-T-C-050	ALIGNMENT SHEET	1	BCK	TDB	ROTAX ROAD REROUTE (10/26/15)	ENVIRONMENTAL	JLS	06/28/13	JLS	04/02/15	VERMONT GAS PROPOSED 12" PIPELINE ADDISON NATURAL GAS PROJECT EPSC PLAN			
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION	INITIALS	DATE	INITIALS	DATE	YEAR: 2015	W.O.	SCALE: 1" = 100'		

VHB Vanasse Hangen Brustlin, Inc.

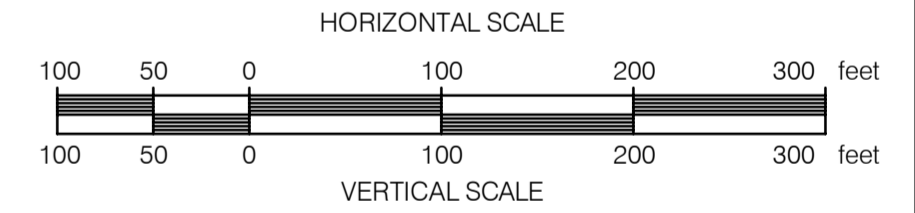
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RIGHT-OF-WAY									
SURVEY DATA									



EROSION PREVENTION & SEDIMENT CONTROL	LEGEND	INSTALL CONSTRUCTION DEMARCATION: STA. 1291+50 TO 1293+57 RT - 50' FROM NEW 12" PIPE € STA. 1294+09 TO 1309+22 RT - 25' FROM NEW 12" PIPE € STA. 1309+22 TO 1310+10 RT - 50' FROM NEW 12" PIPE € STA. 1310+10 TO 1310+50 RT - 25' FROM NEW 12" PIPE €	INSTALL CONSTRUCTION DEMARCATION: STA. 1291+50 TO 1293+57 LT - 25' FROM NEW 12" PIPE € STA. 1294+09 TO 1294+88 LT - 100' FROM NEW 12" PIPE € STA. 1294+88 TO 1296+68 LT - 50' FROM NEW 12" PIPE € STA. 1296+68 TO 1310+50 LT - 25' FROM NEW 12" PIPE €	INSTALL REINFORCED PERIMETER CONTROL: STA. 1296+15 TO 1309+22 RT - 25' FROM NEW 12" PIPE € STA. 1309+22 TO 1310+10 RT - 50' FROM NEW 12" PIPE € STA. 1310+10 TO 1310+50 RT - 25' FROM NEW 12" PIPE €	INSTALL REINFORCED PERIMETER CONTROL: STA. 1296+24 TO 1296+68 LT - 50' FROM NEW 12" PIPE € STA. 1296+68 TO 1309+49 LT - 25' FROM NEW 12" PIPE € STA. 1309+73 TO 1310+50 LT - 25' FROM NEW 12" PIPE €	INSTALL MATTING: STA. 1297+25 TO 1300+92	INSTALL MATTING: STA. 1301+81 TO 1303+60	INSTALL MATTING: STA. 1303+72 TO 1306+57	INSTALL MATTING: STA. 1307+87 TO 1308+73	
		<p>1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE 'CONSTRUCTION EPSC NOTES' - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.</p> <p>2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE 'CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS' (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.</p>								

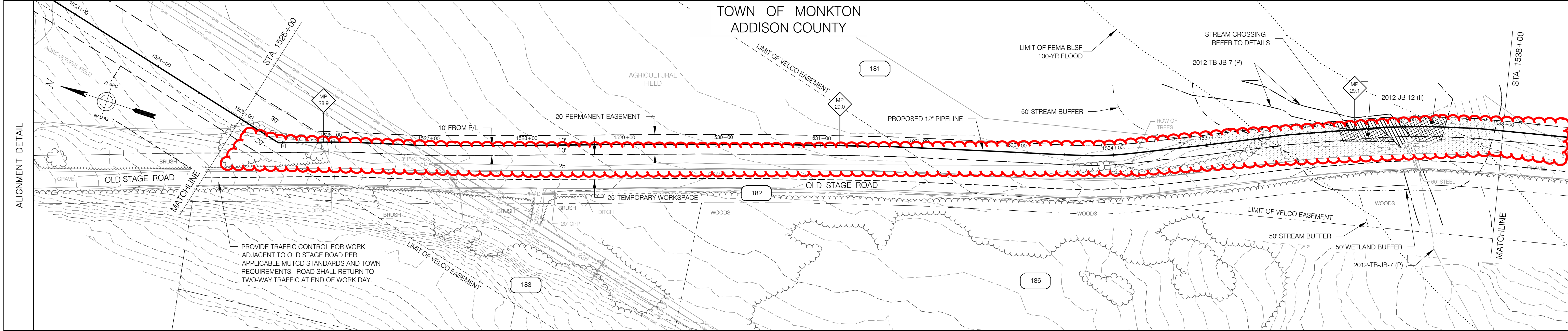


CONST. TYPE		(1A)	(11)	(1A)	(W)	(W)	(2A)	(W)	(W)	(1A)	(2A)
SOIL TYPE		Asc		Lk		Gw (PAS)		Rsb (PAS)		Mv	
LC/LU		PASTURE	● UNPAVED			PASTURE					
STREAMS											
WETLANDS						WETLAND 2014-CM-3 STATION 1296+63 TO 1307+21 CLASS II		WETLAND 2012/2013-PW-71/72/73 STATION 1307+21 TO 1309+22 CLASS II		WETLAND 2012/2013-PW-71/72/73 STATION 1310+30 TO 1310+50 CLASS II	
VERNAL POOLS											
SIGNIFICANT NATURAL COMMUNITIES											
RTE SPECIES						2013-RTE-CT-083 S3-NL					
NRC WILDLIFE HABITAT											
ARCHAEOLOGY SITES											

ANGP-T-G-07-010	ACCESS ROAD DETAILS	2	BCK	TDB	ROTAX ROAD REROUTE (10/26/15)	ENVIRONMENTAL	JLS	06/28/13	JLS	04/02/15	VERMONT GAS PROPOSED 12" PIPELINE ADDISON NATURAL GAS PROJECT EPSC PLAN	LOC. ADDISON COUNTY, VERMONT	YEAR: 2015	W.O.	SCALE: 1" = 100'	DWG. ANGP-EPSC-051	REV. 2
ANGP-T-C-051	ALIGNMENT SHEET	1	BCK	TDB	ADDED ARCH. SITE AND ENV. EDITS (6/08/15)	DRAFTING DESIGNER	GIL	06/28/13	GIL	04/02/15							
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION	DRAFTING SUPERVISOR	BZD	06/28/13	BCK	04/02/15							

VERMONT GAS
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RIGHT-OF-WAY	MATCHLINE		181 N/F HURLBURT, HERRICK & CHARLOTTE		MATCHLINE	
	MATCHLINE		182 OLD STAGE ROAD		MATCHLINE	
SURVEY DATA	S 14° 22' W 32.95' LT 1525+46		S 18° 36' E 00' 44" RT 1525+02		S 17° 52' E 02' 31" RT 1531+72	
	S 19° 21' E 09' 34" LT 1533+78		S 24° 55' E 12' 00" RT 1537+23		S 12° 55' E 12' 00" RT 1537+23	



EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
 STA. 1525+00 TO 1525+83 LT - 30' FROM NEW 12" PIPE €
 STA. 1525+83 TO 1538+00 LT - 10' FROM NEW 12" PIPE €
 STA. 1525+00 TO 1538+00 RT - WIDTH VARIES FROM NEW 12" PIPE €

INSTALL REINFORCED PERIMETER CONTROL:
 STA. 1533+71 TO 1536+12 LT - 10' FROM NEW 12" PIPE €
 STA. 1536+88 TO 1538+00 LT - 10' FROM NEW 12" PIPE €

INSTALL MATTING:
 STA. 1536+32 TO 1536+44
 STA. 1536+97 TO 1537+40

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
 2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 50'

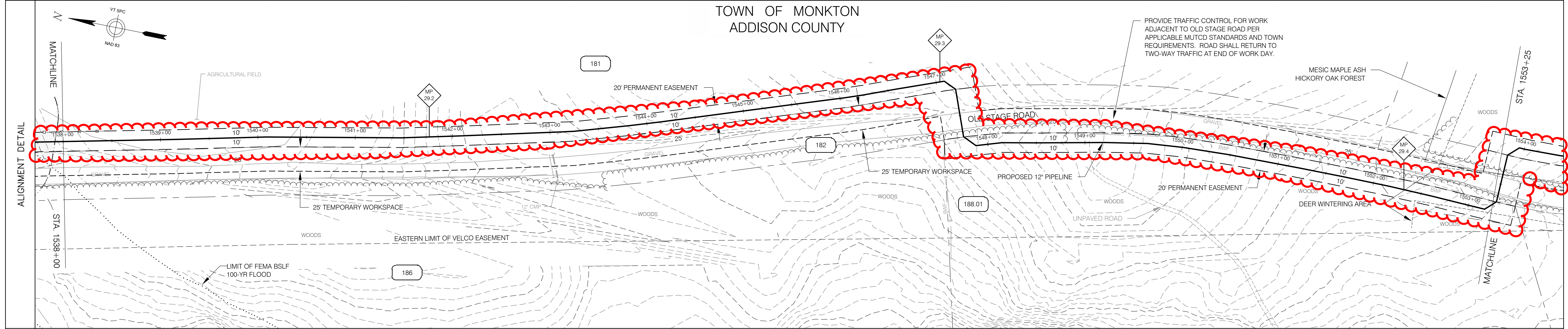
CONST. TYPE	(2D)	(4A)	(7)	(W)	(4A)
SOIL TYPE	AmC (PAS)	Cw (PAS)	Vgc (PAS)	Cv (PAS)	
LC/LU	FORESTED AGRICULTURAL	PASTURE	TRAVEL	WATER	PASTURE
STREAMS				STREAM 2012-TB-JB-7 - (P) STATION 1536+10 TO 1537+04	
WETLANDS				WETLAND 2012-JB-12 - STATION 1536+31 TO 1537+42 CLASS II	
VERNAL POOLS					
SIGNIFICANT NATURAL COMMUNITIES					
RTE SPECIES					
NRC WILDLIFE HABITAT					
ARCHAEOLOGY SITES					

ANGP-T-C-061A	ALIGNMENT SHEET	1	VGS	VGS	OLD STAGE ROAD RE-ROUTE (11/13/15)	ENVIRONMENTAL	JLS	06/28/13	JLS	04/02/15	VERMONT GAS PROPOSED 12" PIPELINE ADDISON NATURAL GAS PROJECT EPSC PLAN	Vermont Gas	 38 Eastwood Drive, Suite 105 South Burlington, VT 05403 Main: (802) 735-0372 • www.chacompanies.com		
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION	DRAFTING DESIGNER	GIL	06/28/13	GIL	04/02/15					
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	04/02/15	LOC. ADDISON COUNTY, VERMONT				
						DESIGN ENGINEER	MDF	06/28/13	TDB	04/02/15	YEAR: 2015	W.O.	SCALE: 1" = 50'	DWG. ANGP-EPSC-061A	REV. 1
						DESIGN MANAGER	SAB	06/28/13	JEO	04/02/15					

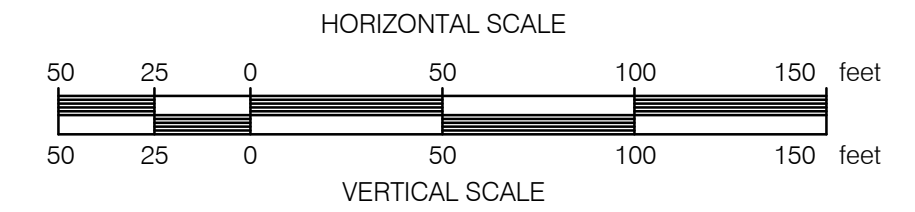
VHB Vanasse Hangen Brustlin, Inc.

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RIGHT-OF-WAY	MATCHLINE	181 N/F HURLBURT, HERRICK & CHARLOTTE	182 OLD STAGE ROAD	188.01 N/F VERMONT GAS SYSTEMS, INC.	MATCHLINE
SURVEY DATA		S 12° 55' E	S 18° 47' E	S 02° 19' E	S 00° 44' E
		01°56' RT 1540+08	05°12' LT 1543+25	01°35' RT 1550+96	45°00' LT 1553+17



EROSION PREVENTION & SEDIMENT CONTROL	LEGEND	INSTALL CONSTRUCTION DEMARCATION: STA. 1538+00 TO 1547+09 LT - 10' FROM NEW 12" PIPE € STA. 1538+00 TO 1547+00 RT - WIDTH VARIES FROM NEW 12" PIPE €	INSTALL CONSTRUCTION DEMARCATION: STA. 1547+00 TO 1547+88 RT - WIDTH VARIES FROM NEW 12" PIPE € STA. 1547+88 TO 1553+17 RT - 10' FROM NEW 12" PIPE € STA. 1547+09 TO 1548+00 LT - WIDTH VARIES FROM NEW 12" PIPE € STA. 1548+00 TO 1553+25 LT - WIDTH VARIES FROM NEW 12" PIPE €	INSTALL CONSTRUCTION DEMARCATION: STA. 1553+17 TO 1553+25 RT - WIDTH VARIES FROM NEW 12" PIPE €
	<ul style="list-style-type: none"> PERMANENT EASEMENT TEMPORARY WORKSPACE CENTERLINE OF STREAM TEMPORARY STREAM CROSSING WETLAND 50' WETLAND BUFFER TEMPORARY WETLAND MATTING WETLAND BUFFER WITHIN PROJECT AREA REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL 	INSTALL REINFORCED PERIMETER CONTROL: STA. 1538+00 TO 1538+44 LT - 10' FROM NEW 12" PIPE €	<p>1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.</p> <p>2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.</p>	



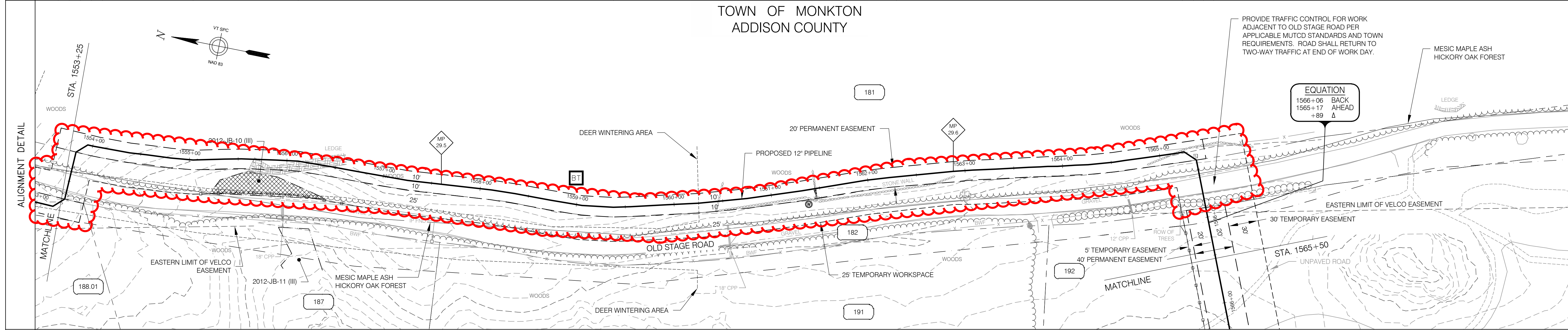
CONST. TYPE		4A	11	4B
SOIL TYPE	Cv (PAS)	VgB (PAS)	VgD	VgB (PAS)
LC/LU		PASTURE	TRAVEL	TRAVEL FORESTED
STREAMS				
WETLANDS				
VERNAL POOLS				
SIGNIFICANT NATURAL COMMUNITIES				MESIC MAPLE ASH HICKORY OAK FOREST
RTE SPECIES				
NRC WILDLIFE HABITAT				DEER WINTERING AREA
ARCHAEOLOGY SITES				

ANGP-T-C-061B	ALIGNMENT SHEET	1	VGS	VGS	OLD STAGE ROAD RE-ROUTE (11/13/15)	DESCRIPTION	INITIALS	DATE	INITIALS	DATE	YEAR: 2015	W.O.	SCALE: 1" = 50'	DWG. ANGP-EPSC-061B	REV. 1
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ENVIRONMENTAL		JLS	06/28/13	JLS	04/02/15	VERMONT GAS PROPOSED 12" PIPELINE ADDISON NATURAL GAS PROJECT EPSC PLAN		
DRAFTING DESIGNER		GIL	06/28/13	GIL	04/02/15			
DRAFTING SUPERVISOR		BZD	06/28/13	BCK	04/02/15			
DESIGN ENGINEER		MDF	06/28/13	TDB	04/02/15			
DESIGN MANAGER		SAB	06/28/13	JEO	04/02/15			
BID				CONSTRUCTION				

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RIGHT-OF-WAY	MATCHLINE	188.01	N/F VERMONT GAS SYSTEMS, INC.	181	N/F HULBURT, HERRICK & CHARLOTTE	182	OLD STAGE ROAD	192	N/F HERRICK JR; MICHAEL, DAVID & HURLBURT, JOSHUA	MATCHLINE														
	SURVEY DATA	1553+31	S 42° 44' E 45'00" LT	1553+81	S 87° 44' E 45'00" RT	1553+95	S 42° 44' E 45'00" RT	1554+01	S 02° 16' W 05'55" LT	1555+04	S 03° 39' E 05'41" LT	1556+11	S 09° 20' E 04'29" RT	1559+38	S 04° 51' E 14'26" LT	1562+30	S 19° 17' E 04'48" RT	1565+19	S 27° 28' E 07'59" LT	1565+25	S 42° 44' E 45'00" RT	1565+40	S 27° 32' W 45'00" RT	1565+50



EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
 STA. 1553+25 TO 1554+40 RT - WIDTH VARIES FROM NEW 12" PIPE
 STA. 1553+40 TO 1565+75 RT - WIDTH VARIES FROM NEW 12" PIPE
 STA. 1553+25 TO 1553+95 LT - WIDTH VARIES FROM NEW 12" PIPE
 STA. 1553+95 TO 1565+26 LT - 10' FROM NEW 12" PIPE

INSTALL REINFORCED PERIMETER CONTROL:
 STA. 1555+06 TO 1556+81 RT - 35' FROM NEW 12" PIPE

INSTALL MATTING:
 STA. 1555+20 TO 1556+46

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
 STA. 1565+90

INSTALL REINFORCED PERIMETER CONTROL:
 STA. 1565+75 TO 1565+50 RT - 25' FROM NEW 12" PIPE
 STA. 1565+26 TO 1565+41 LT - WIDTH VARIES FROM NEW 12" PIPE
 STA. 1565+41 TO 1565+50 LT - 50' FROM NEW 12" PIPE

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.

2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE: 1" = 50' (0 to 150 feet)

VERTICAL SCALE: 1" = 50' (0 to 150 feet)

CONST. TYPE	11	W	4A	11	1H
SOIL TYPE	VgB (PAS)	VgC (PAS)	VgD	VgB (PAS)	FaC
LC/LU	FORRESTED TRAVEL			AGRICULTURAL	
STREAMS	STREAM 2013-AS-SC-RS-1 (I) - STATION 1565+26 TO 1565+50				
WETLANDS	WETLAND 2012-JB-10 - STATION 1555+20 TO 1556+46 CLASS III				
VERNAL POOLS	MATCHLINE				
SIGNIFICANT NATURAL COMMUNITIES	MATCHLINE				
RTE SPECIES	MATCHLINE				
NRC WILDLIFE HABITAT	DEER WINTERING AREA				
ARCHAEOLOGY SITES	MATCHLINE				

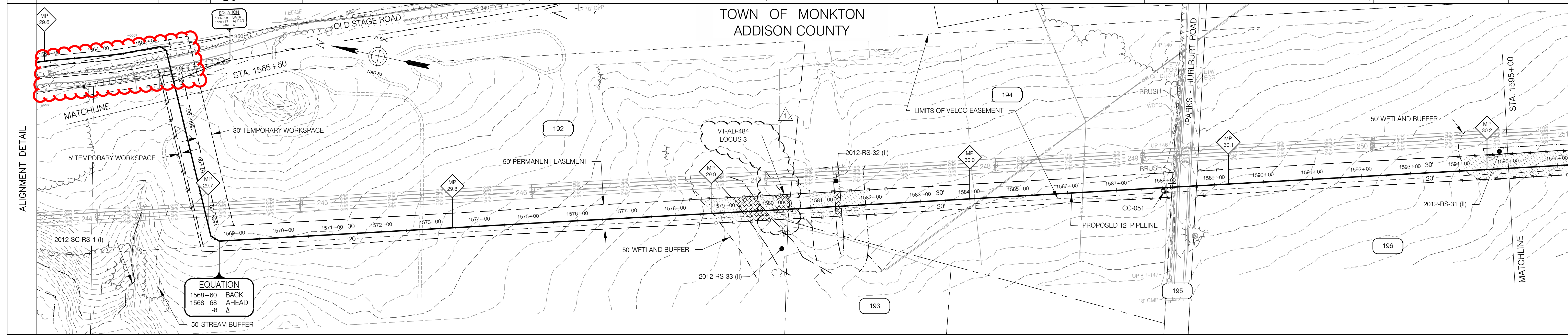
ANGP-T-C-062	ALIGNMENT SHEET	1	VGS	VGS	OLD STAGE ROAD RE-ROUTE (11/13/15)	ENVIRONMENTAL	JLS	06/28/13	JLS	04/02/15	VERMONT GAS PROPOSED 12" PIPELINE ADDISON NATURAL GAS PROJECT EPSC PLAN	Vermont Gas	38 Eastwood Drive, Suite 105 South Burlington, VT 05403 Main: (802) 735-0372 • www.chacompanies.com
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION	DRAFTING DESIGNER	GIL	06/28/13	GIL	04/02/15			
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	04/02/15	YEAR: 2015	W.O.	REV. 1
						DESIGN ENGINEER	MDF	06/28/13	TDB	04/02/15			
						DESIGN MANAGER	SAB	06/28/13	JEO	04/02/15			

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RIGHT-OF-WAY				192 N/F HURLBURT, HERRICK & CHARLOTTE		194 N/F GRACE, LAWRENCE JR. & SANDRA L.		195 PARKS - HURLBURT ROAD		196 N/F HURLBURT, HERRICK & CHARLOTTE		
SURVEY DATA												



EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
 STA. 1565+50 TO 1568+40 RT - 25' FROM NEW 12" PIPE €
 STA. 1565+50 TO 1568+30 LT - 50' FROM NEW 12" PIPE €

INSTALL REINFORCED PERIMETER CONTROL:
 STA. 1565+50 TO 1566+00 RT - 25' FROM NEW 12" PIPE €

INSTALL CONSTRUCTION DEMARCATION:
 STA. 1568+40 TO 1568+68 RT - WIDTH VARIES FROM NEW 12" PIPE €
 STA. 1568+30 TO 1568+99 LT - WIDTH VARIES FROM NEW 12" PIPE €
 STA. 1568+68 TO 1588+11 RT - 20' FROM NEW 12" PIPE €
 STA. 1568+99 TO 1588+16 LT - 30' FROM NEW 12" PIPE €

INSTALL REINFORCED PERIMETER CONTROL:
 STA. 1578+39 TO 1582+38 RT - 20' FROM NEW 12" PIPE €
 STA. 1578+01 TO 1582+37 LT - 30' FROM NEW 12" PIPE €

INSTALL MATTING:
 STA. 1579+15 TO 1579+97 STA. 1581+26 TO 1581+37

INSTALL CONSTRUCTION DEMARCATION:
 STA. 1588+61 TO 1595+00 RT - 20' FROM NEW 12" PIPE €
 STA. 1588+66 TO 1595+00 LT - 30' FROM NEW 12" PIPE €

INSTALL REINFORCED PERIMETER CONTROL:
 STA. 1587+61 TO 1588+11 RT - 20' FROM NEW 12" PIPE €
 STA. 1587+66 TO 1588+16 LT - 30' FROM NEW 12" PIPE €
 STA. 1588+61 TO 1589+11 RT - 20' FROM NEW 12" PIPE €
 STA. 1588+66 TO 1589+16 LT - 30' FROM NEW 12" PIPE €

INSTALL MATTING:
 STA. 1594+54 TO 1595+00

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
 STA. 1588+15 TO 1588+65

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.

2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE
 1" = 100'

VERTICAL SCALE
 1" = 30'

CONST. TYPE		(1H)			(2D)					(11)		(2D)
SOIL TYPE		VgB (PAS)		VgC (PAS)		VgB (PAS)				Civ (PAS)		VgB (PAS)
LC/LU			PASTURE		AGRICULTURAL	WETLAND	WETLAND		PASTURE	UNPAVED TRAVEL		PASTURE
STREAMS												
WETLANDS						WETLAND 2012-RS-33 - STATION 1578+51 TO 1580+62 CLASS II	WETLAND 2012-RS-32 - STATION 1580+76 TO 1581+88 CLASS II					WETLAND 2012-RS-31 - STATION 1594+02 TO 1595+00 CLASS II
VERNAL POOLS												
SIGNIFICANT NATURAL COMMUNITIES												
RTE SPECIES												
NRC WILDLIFE HABITAT												
ARCHAEOLOGY SITES												

ANGP-T-C-063	ALIGNMENT SHEET	1	VGS	VGS	ARCH SITE ADDED (11/13/15)													
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION	INITIALS	DATE	INITIALS	DATE	YEAR: 2015	W.O.	SCALE: 1" = 100'	DWG. ANGP-EPSC-063	REV. 1				

BID	CONSTRUCTION	ENVIRONMENTAL DRAFTING DESIGNER DRAFTING SUPERVISOR DESIGN ENGINEER DESIGN MANAGER	JLS	06/28/13	JLS	04/02/15
			GIL	06/28/13	GIL	04/02/15
			BZD	06/28/13	BCK	04/02/15
			MDF	06/28/13	TDB	04/02/15
			SAB	06/28/13	JEO	04/02/15

VERMONT GAS

PROPOSED 12" PIPELINE

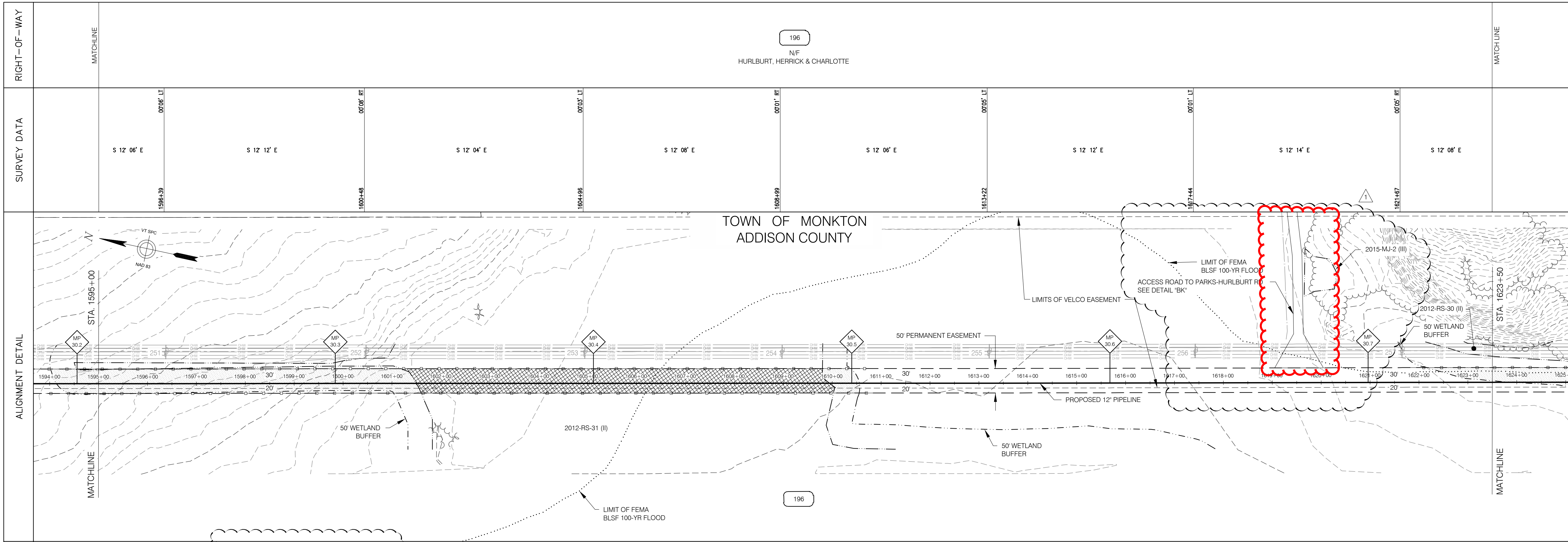
ADDISON NATURAL GAS PROJECT

EPSC PLAN

LOC. ADDISON COUNTY, VERMONT

YEAR: 2015 W.O. SCALE: 1" = 100' DWG. ANGP-EPSC-063 REV. 1

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EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
 STA. 1595+00 TO 1623+50 RT - 20' FROM NEW 12" PIPE
 STA. 1595+00 TO 1619+03 LT - 30' FROM NEW 12" PIPE
 STA. 1620+03 TO 1623+50 LT - 30' FROM NEW 12" PIPE

INSTALL REINFORCED PERIMETER CONTROL:
 STA. 1595+00 TO 1611+05 RT - 20' FROM NEW 12" PIPE
 STA. 1595+00 TO 1610+88 LT - 30' FROM NEW 12" PIPE

INSTALL MATTING:
 STA. 1601+18 TO 1610+07

INSTALL REINFORCED PERIMETER CONTROL:
 STA. 1621+67 TO 1623+50 LT - 30' FROM NEW 12" PIPE

CONSTRUCTION ENTRANCE:
 STA. 1619+50

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
 2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE: 1" = 100'

VERTICAL SCALE: 1" = 10'

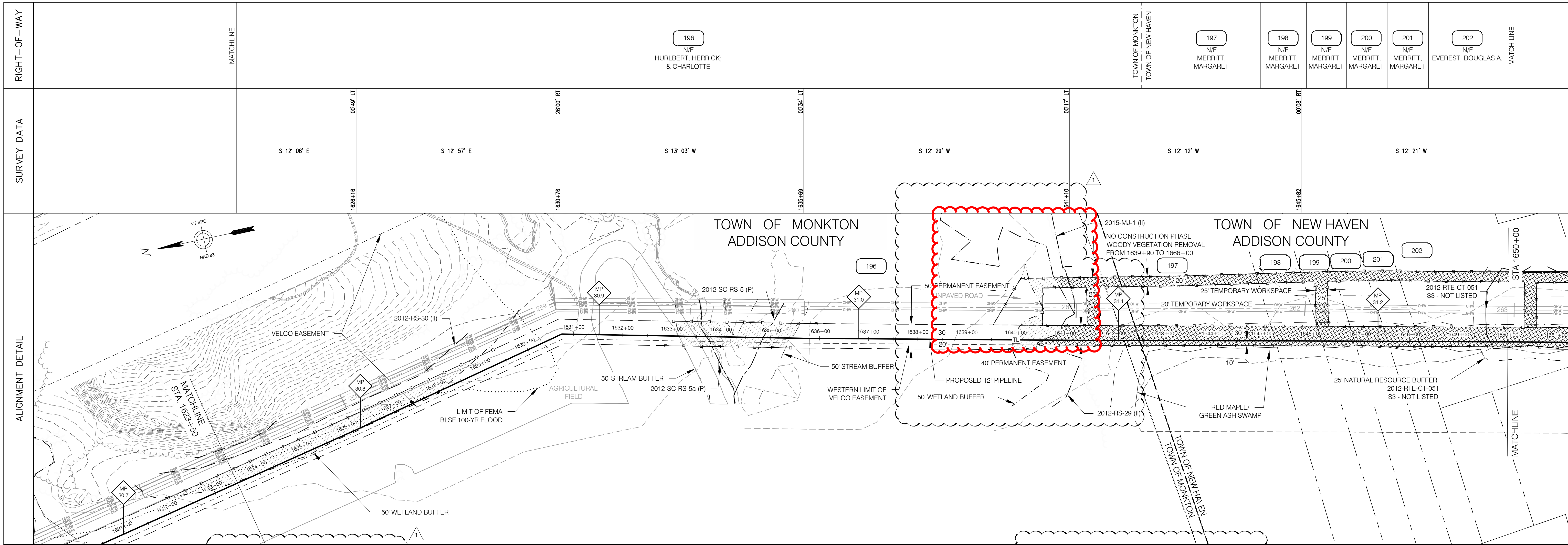
CONST. TYPE					(W)	(2D)					
SOIL TYPE	VgB (PAS)	Ow (PAS)	VgC (PAS)	Ow (PAS)	Lh				AmB (PAS)		
LC/LU	WETLAND				AGRICULTURAL				PASTURE	WETLAND	
STREAMS											
WETLANDS	WETLAND 2012-RS-31 - STATION 1595+00 TO 1610+57 CLASS II										WETLAND 2012-RS-30 - STATION 1622+16 TO 1623+50 CLASS II
VERNAL POOLS											
SIGNIFICANT NATURAL COMMUNITIES											
RTE SPECIES											
NRC WILDLIFE HABITAT											
ARCHAEOLOGY SITES											

ANGP-T-C-064	ALIGNMENT SHEET	1	VGS	VGS	ACCESS ROAD "BK" ADDED (11/13/15)	ENVIRONMENTAL	JLS	06/28/13	JLS	04/02/15	VERMONT GAS PROPOSED 12" PIPELINE ADDISON NATURAL GAS PROJECT EPSC PLAN			
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION	INITIALS	DATE	INITIALS	DATE	YEAR: 2015	W.O.	SCALE: 1" = 100'		

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EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
 STA. 1623+50 TO 1640+42 RT - 20' FROM NEW 12" PIPE
 STA. 1623+50 TO 1639+52 LT - 30' FROM NEW 12" PIPE

INSTALL REINFORCED PERIMETER CONTROL:
 STA. 1623+50 TO 1629+55 LT - 30' FROM NEW 12" PIPE

INSTALL REINFORCED PERIMETER CONTROL:
 STA. 1632+73 TO 1635+81 RT - 20' FROM NEW 12" PIPE
 STA. 1632+59 TO 1636+11 LT - 30' FROM NEW 12" PIPE

INSTALL REINFORCED PERIMETER CONTROL:
 STA. 1639+43 TO 1640+42 RT - 20' FROM NEW 12" PIPE

INSTALL REINFORCED PERIMETER CONTROL:
 STA. 1640+42 TO 1650+00 RT - 10' FROM NEW 12" PIPE
 STA. 1640+51 TO 1641+44 LT - 30' FROM NEW 12" PIPE
 STA. 1641+69 TO 1646+10 LT - 30' FROM NEW 12" PIPE
 STA. 1646+35 TO 1650+00 LT - 30' FROM NEW 12" PIPE

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
 STA. 1640+00

INSTALL MATTING:
 STA. 1640+42 TO 1650+00

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.

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HORIZONTAL SCALE: 1" = 100'
 VERTICAL SCALE: 1" = 10'

CONST. TYPE		2D		7		2D	W
SOIL TYPE		Rk	AriB (PAS)		W0 (PAS)	Cw (PAS)	Lk
LC/LU		PASTURE AGRICULTURE				FORESTED POWERLINE	
STREAMS		STREAM 2012-SC-RS-5a (P) - STATION 1633+09 TO 1634+30		STREAM 2012-SC-RS-5 (P) - STATION 1634+30 TO 1635+61			
WETLANDS		WETLAND 2012-RS-30 - STATION 1623+50 TO 1629+05 CLASS II			WETLAND 2012-RS-29 - STATION 1639+92 TO 1650+00 CLASS II		
VERNAL POOLS							
SIGNIFICANT NATURAL COMMUNITIES							
RTE SPECIES		2012-RTE-CT-051					
NRC WILDLIFE HABITAT							
ARCHAEOLOGY SITES							

ANGP-T-G-07-010	ACCESS ROAD DETAILS																				
ANGP-T-C-065	ALIGNMENT SHEET		1	VGS	VGS	ACCESS ROAD "AL" REMOVED (11/13/15)															
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION	INITIALS	DATE	INITIALS	DATE	YEAR: 2015	W.O.	SCALE: 1" = 100'	DWG. ANGP-EPSC-065	REV. 1							

ENVIRONMENTAL		JLS	06/28/13	JLS	04/02/15	VERMONT GAS PROPOSED 12" PIPELINE ADDISON NATURAL GAS PROJECT EPSC PLAN		
DRAFTING DESIGNER		GIL	06/28/13	GIL	04/02/15			
DRAFTING SUPERVISOR		BZD	06/28/13	BCK	04/02/15			
DESIGN ENGINEER		MDF	06/28/13	TDB	04/02/15			
DESIGN MANAGER		SAB	06/28/13	JEO	04/02/15			

VERMONT GAS
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Document Tracking Table - Vermont Wetland Permit Application

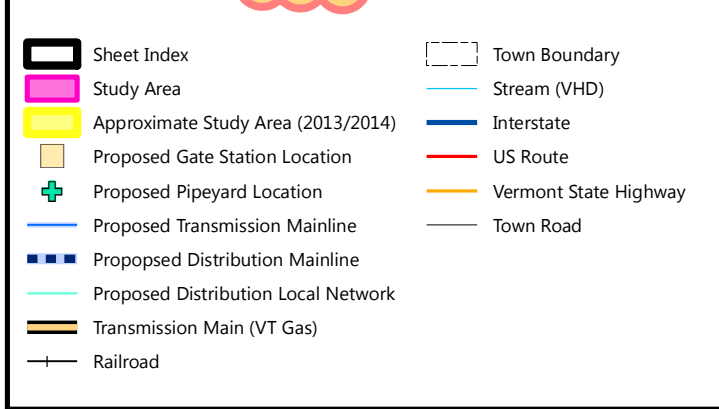
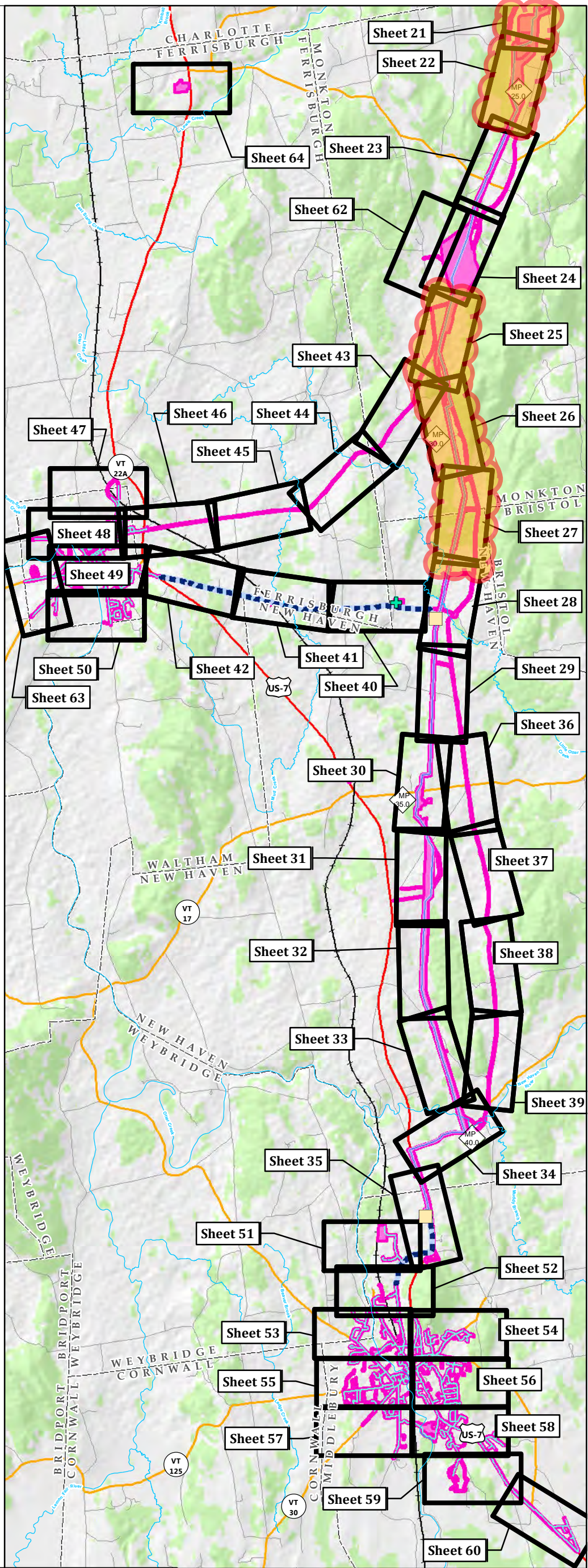
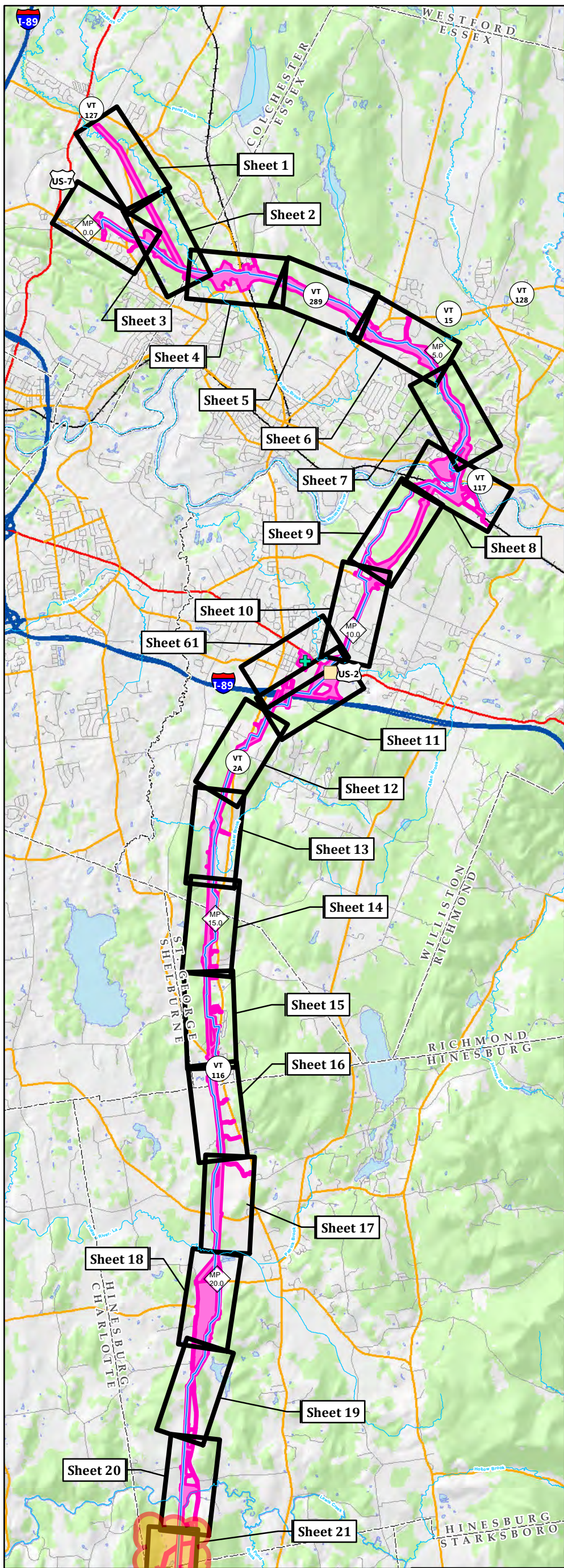
VGS Addison Natural Gas Project (ANGP) Phase I

Prepared by VHB

June 29, 2015

Revised: December 16, 2015

Application Component	Location	Document Title	Preparer	Filing Date (12/16/2015)
Cover Letters and Forms		Cover Letter, Vermont Gas Systems Inc. Addison Natural Gas Project- Phase I- Vermont Wetland Permit-Amendment Request	VHB	12/16/2015
		Vermont Wetland Section - Wetland Application Database Form	VHB	12/16/2015
		Vermont Wetland Permit Application/Determination Petition	VHB	12/16/2015
		Section 7 and 8 of the Application/Determination Petition	VHB	12/16/2015
		Sections 14-25 Wetland Function Summary	VHB	12/16/2015
Attachment 3		ANGP EPSC Site plans	C&C/CHA	6/30/2015 (Selected sheets revised 10/26/15, 11/13/15 and 12/10/15) (Transmission Mainline Only)
Attachment 4		VGS-ANGP-Phase I Class II Wetland and Buffer Impact Analysis	VHB	12/16/2015
		VGS-ANGP-Phase I-Class II Wetland and Buffer Impact Exhibits	VHB	12/16/2015
Attachment 5		Addison Natural Gas Project – Phase I Natural Resource Studies Supplemental Memorandum	VHB	12/16/2015
Attachment 7		Adjoining Property Owners (Summary Table)	VHB	12/16/2015
Additional Materials		Project Revisions for Vermont Wetland Permit Application (Summary Table)	VHB	12/16/2015
		Supplemental Request - Annotated EPSC Plans - Cover Sheet ANGP-T-G-07B, 017 and Sheets ANGP-EPSC-049 to 051, 061A(only)	CHA/VHB	10/26/15, 11/13/15 and 12/10/15
		Document Tracking Table - Vermont Wetland Permit Application VGS-ANGP Phase I	VHB	12/16/2015
		Supplemental Request - Annotated Natural Resource Series - Index and Sheets 21, 22, 25, 26 & 27 (only)	VHB	12/9/2015

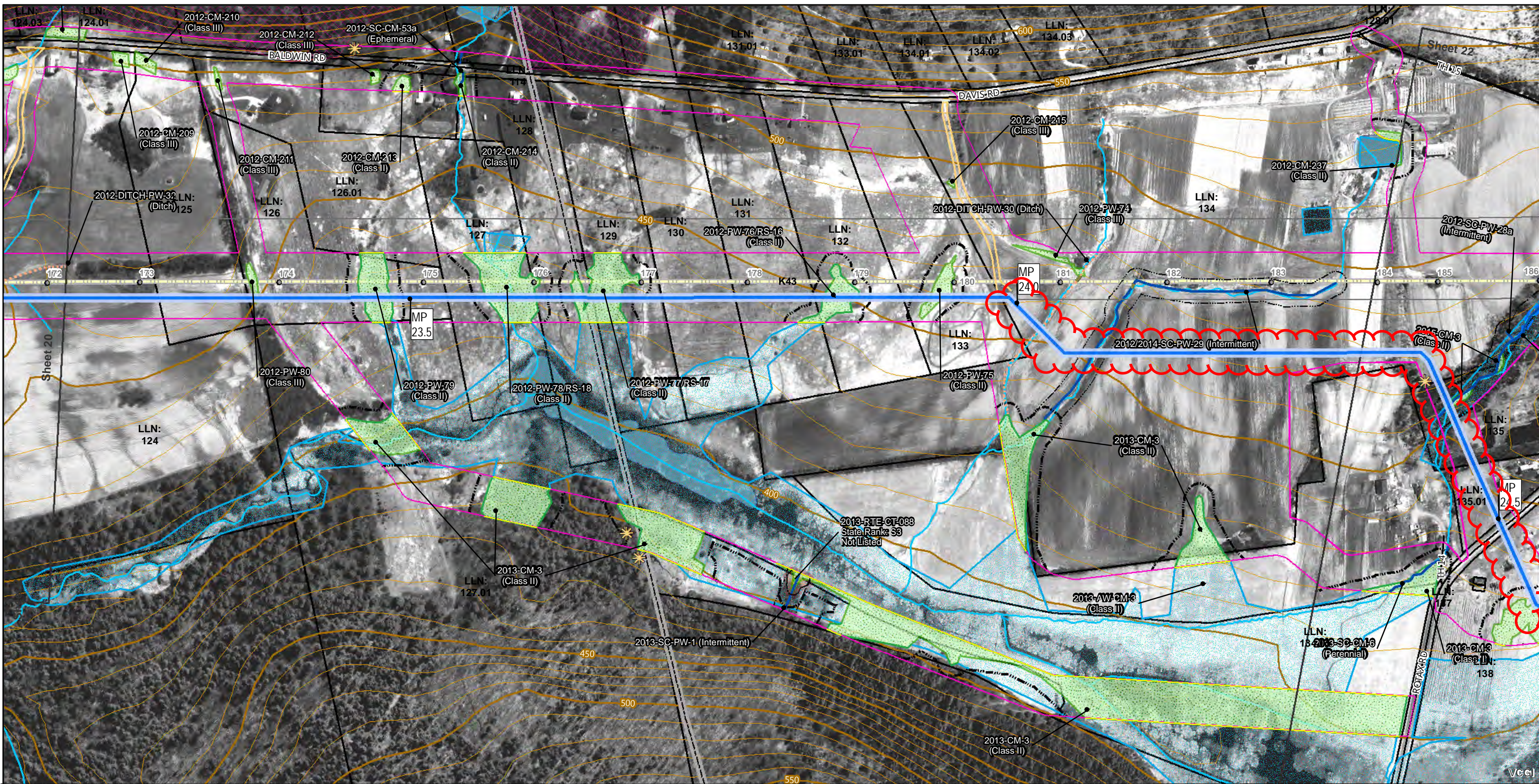


**Vermont Gas - ANGP Phase I
Chittenden and Addison
Counties, VT
Natural Resource Series Index**

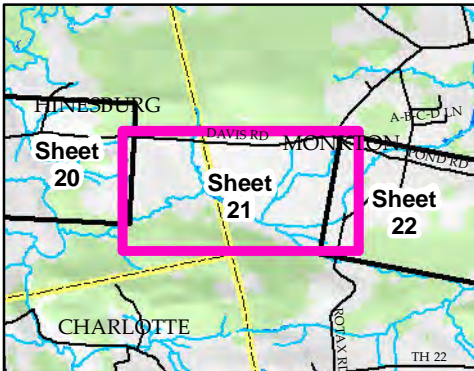
December 13, 2012
Last Revised: December 9, 2015

1 0.5 0 1 Miles

Sources: Land Cover Land Use and Hillshade background provided by VCGI (2002); Statewide datasets from VCGI (2010) include: Roads by VTrans (2015), Town Boundaries by VCGI (2008); Proposed Gate Station locations, pipeyard locations, transmission mainline, distribution mainline, and local networks by CHA (2012-2015); Study Areas by VHB (2012-2015).

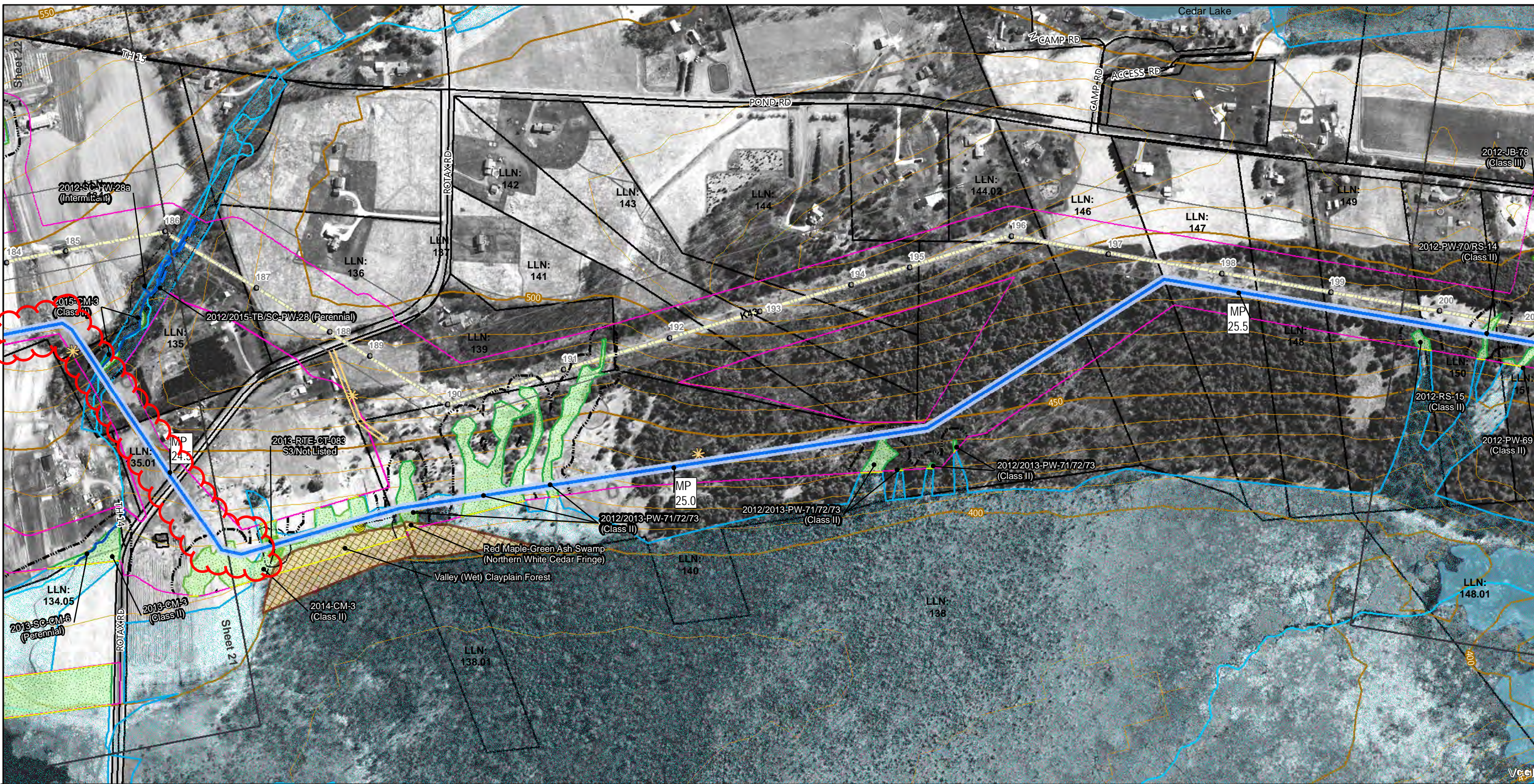


Sources: Background By VMP (2011); Study Areas by VHB (2012-2015); Delineated Wetlands and Streams, Vernal Pools, Ordinary High Water, & Bridge/Culverts by VHB (2011-2015); RTE Species, Veg. Nat. Communities, & Bat Trees surveyed by Gilman & Briggs (2012-2015); WDP Element Occurrences by ANR (2013); VSWI Wetlands by ANR (2014); Deer Wintering Areas by VHB (2012/13); 10' Contours generated by VHB from HydroDEM by VCGI (2008); Statewide datasets from VCGI (2010) include: Roads by VTrans (2015), Town and County Boundaries by VCGI (2008), Streams and Waterbodies by VHD (2008), Railroads by VTrans (2003), Parcel Boundaries provided by CHA (2015); VELCO Structures from VELCO (2012); Proposed Transmission/Distribution/Network by CHA (2012-2015).

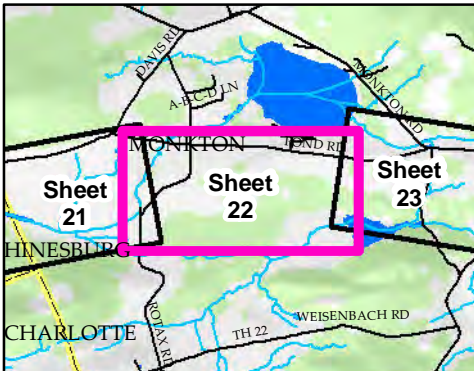


- | | | | |
|--|--|---|--|
| <ul style="list-style-type: none"> □ VHB Study Area — Proposed Transmission Mainline — Existing Gas Transmission Main — Proposed Distribution Mainline — Proposed Distribution Local Network ■ Wetland (Proposed Class) — Stream (Proposed Type) — Stream Centerline — Stream Top of Bank or Slope — Ditch | <ul style="list-style-type: none"> ■ Vernal Pool □ Potential Vernal Pool ■ RTE Plant Area (G&B) ■ RTE Plant Location (G&B) ✱ Surveyed Potential Bat Tree ✱ Potential Bat Tree ■ Deer Wintering Area (VHB) □ 50 ft. Class II Wetland Buffer □ Natural Resource Buffer | <ul style="list-style-type: none"> □ Veg. Natural Community (G&B) □ Natural Resource Feature Continues □ Mitigation Plant Sites PreExisting ■ RTE Species/Communities ● VELCO Structure Location □ Transmission Lines (VELCO) □ Deer Wintering Area (ANR) ■ VSWI Wetland | <ul style="list-style-type: none"> □ Bridge □ Culvert — Railroad (VTrans) — Roads (VTrans) — 10' Contour — 50' Contour — Stream (VHD) — Proposed Access Road |
|--|--|---|--|

Vermont Gas - ANGP Phase I
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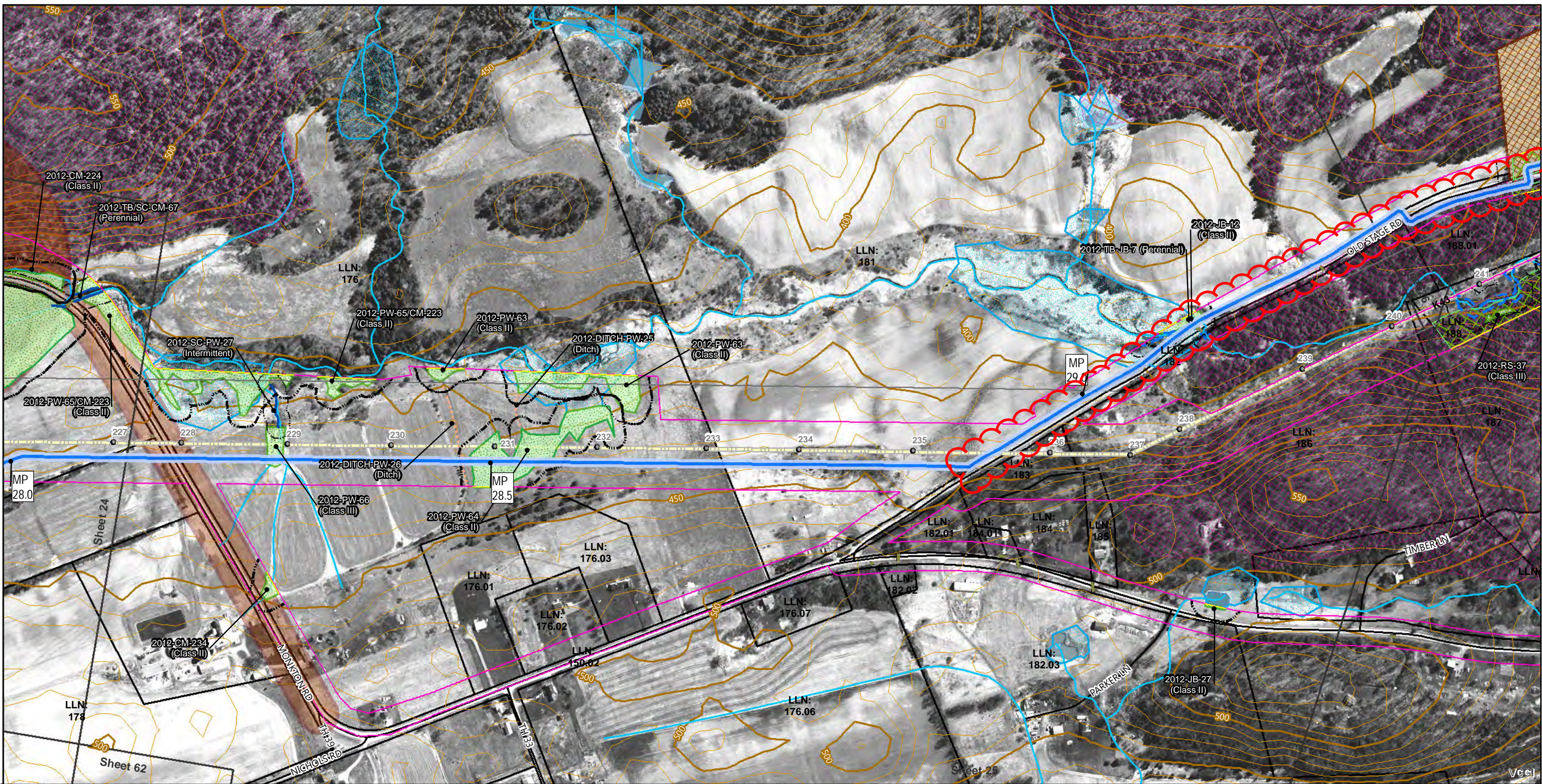
Sources: Background By VMP (2011); Study Areas by VHB (2012-2015); Delineated Wetlands and Streams, Vernal Pools, Ordinary High Water, & Bridge/Culverts by VHB (2011-2015); RTE Species, Veg. Nat. Communities, & Bat Trees surveyed by Gilman & Briggs (2012-2015); WDP Element Occurrences by ANR (2013); VSWI Wetlands by ANR (2014); Deer Wintering Areas by VHB (2012/13); 10' Contours generated by VHB from HydroDEM by VCGI (2008); Statewide datasets from VCGI (2010) include: Roads by VTrans (2015), Town and County Boundaries by VCGI (2008), Streams and Waterbodies by VHD (2008), Railroads by VTrans (2003), Parcel Boundaries provided by CHA (2015); VELCO Structures from VELCO (2012); Proposed Transmission/Distribution/Network by CHA (2012-2015).



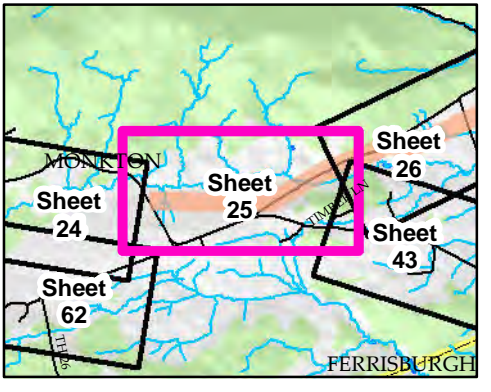
- | | | | |
|---|--|---|--|
| <ul style="list-style-type: none"> VHB Study Area Proposed Transmission Mainline Existing Gas Transmission Main Proposed Distribution Mainline Proposed Distribution Local Network Wetland (Proposed Class) Stream (Proposed Type) Stream Centerline Stream Top of Bank or Slope Ditch | <ul style="list-style-type: none"> Vernal Pool Potential Vernal Pool RTE Plant Area (G&B) RTE Plant Location (G&B) ✱ Surveyed Potential Bat Tree ✱ Potential Bat Tree Deer Wintering Area (VHB) 50 ft. Class II Wetland Buffer Natural Resource Buffer | <ul style="list-style-type: none"> Veg. Natural Community (G&B) Natural Resource Feature Continues Mitigation Plant Sites PreExisting RTE Species/Communities ● VELCO Structure Location Transmission Lines (VELCO) Deer Wintering Area (ANR) VSWI Wetland | <ul style="list-style-type: none"> Bridge Culvert Railroad (VTrans) Roads (VTrans) 10' Contour 50' Contour Stream (VHD) Proposed Access Road |
|---|--|---|--|

Vermont Gas - ANGP Phase I
Chittenden and Addison
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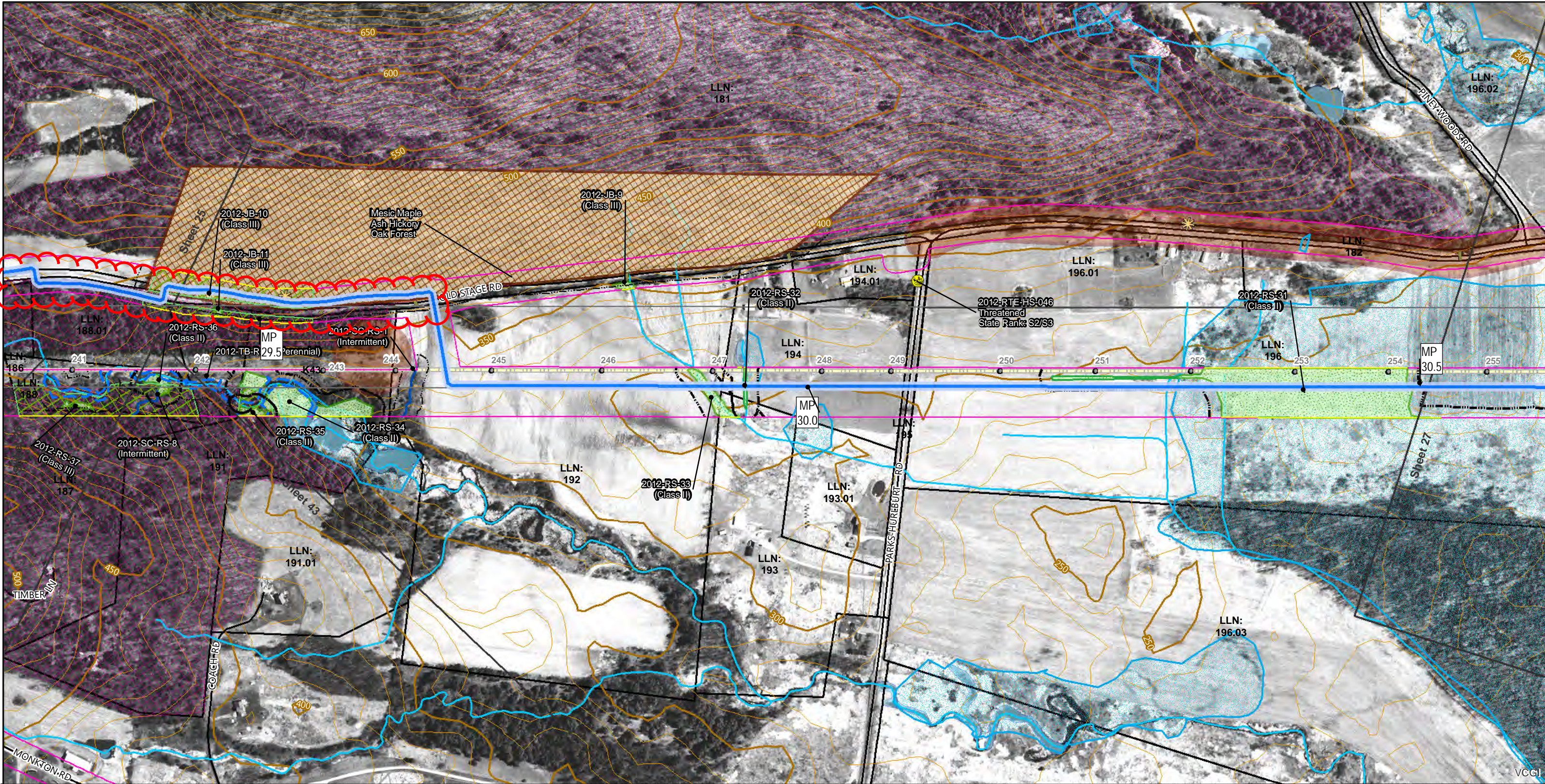


Sources: Background By VMP (2011); Study Areas by VHB (2012-2015); Delineated Wetlands and Streams, Vernal Pools, Ordinary High Water, & Bridge/Culverts by VHB (2011-2015); RTE Species, Veg. Nat. Communities, & Bat Trees surveyed by Gilman & Briggs (2012-2015); WDP Element Occurrences by ANR (2013); VSWI Wetlands by ANR (2014); Deer Wintering Areas by VHB (2012/13); 10' Contours generated by VHB from HydroDEM by VCGI (2008); Statewide datasets from VCGI (2010) include: Roads by VTrans (2015), Town and County Boundaries by VCGI (2008), Streams and Waterbodies by VHD (2008), Railroads by VTrans (2003), Parcel Boundaries provided by CHA (2015); VELCO Structures from VELCO (2012); Proposed Transmission/Distribution/Network by CHA (2012-2015).

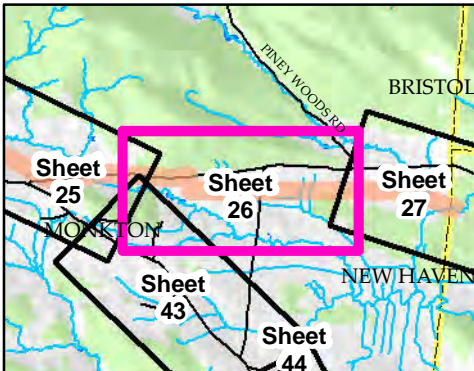


<ul style="list-style-type: none"> VHB Study Area Proposed Transmission Mainline Existing Gas Transmission Main Proposed Distribution Mainline Proposed Distribution Local Network Wetland (Proposed Class) Stream (Proposed Type) Stream Centerline Stream Top of Bank or Slope Ditch 	<ul style="list-style-type: none"> Vernal Pool Potential Vernal Pool RTE Plant Area (G&B) RTE Plant Location (G&B) ✿ Surveyed Potential Bat Tree ✿ Potential Bat Tree Deer Wintering Area (VHB) 50 ft. Class II Wetland Buffer Natural Resource Buffer 	<ul style="list-style-type: none"> Veg. Natural Community (G&B) Natural Resource Feature Continues Mitigation Plant Sites PreExisting RTE Species/Communities VELCO Structure Location Transmission Lines (VELCO) Deer Wintering Area (ANR) VSWI Wetland 	<ul style="list-style-type: none"> Bridge Culvert Railroad (VTrans) Roads (VTrans) 10' Contour 50' Contour Stream (VHD) Proposed Access Road
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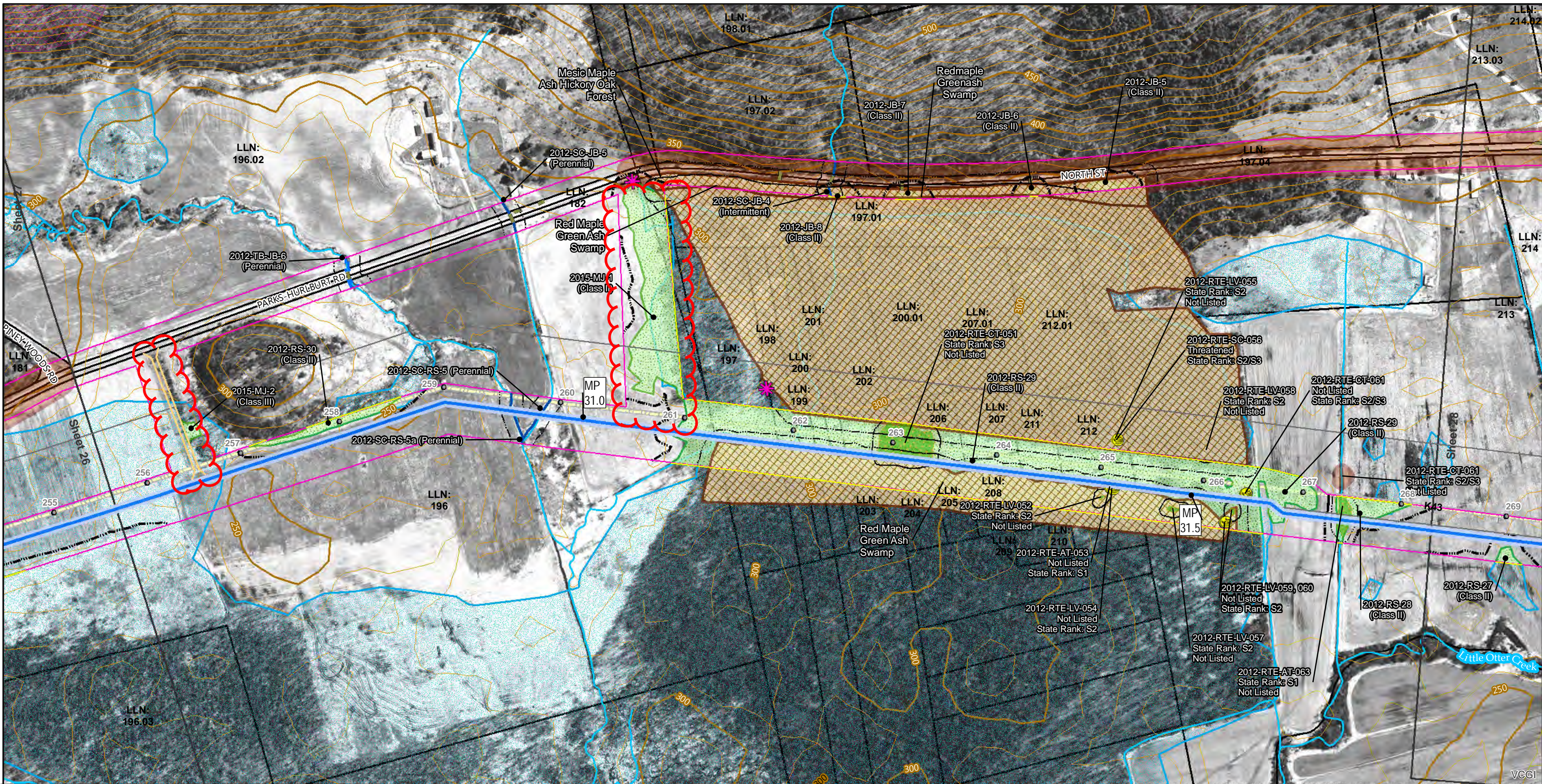
Sources: Background By VMP (2011); Study Areas by VHB (2012-2015); Delineated Wetlands and Streams, Vernal Pools, Ordinary High Water, & Bridge/Culverts by VHB (2011-2015); RTE Species, Veg. Nat. Communities, & Bat Trees surveyed by Gilman & Briggs (2012-2015); WDP Element Occurrences by ANR (2013); VSWI Wetlands by ANR (2014); Deer Wintering Areas by VHB (2012/13); 10' Contours generated by VHB from HydroDEM by VCGI (2008); Statewide datasets from VCGI (2010) include: Roads by VTrans (2015), Town and County Boundaries by VCGI (2008), Streams and Waterbodies by VHD (2008), Railroads by VTrans (2003), Parcel Boundaries provided by CHA (2015); VELCO Structures from VELCO (2012); Proposed Transmission/Distribution/Network by CHA (2012-2015).



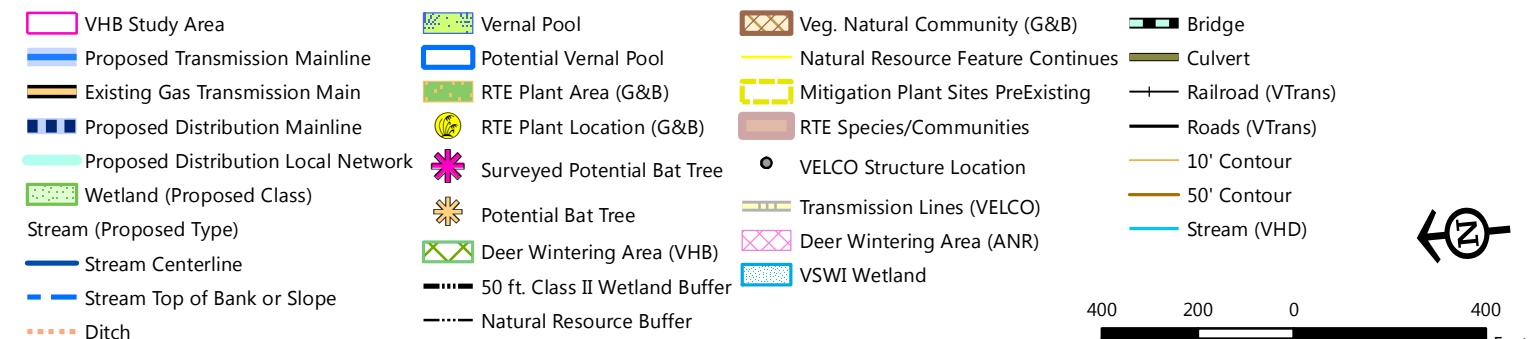
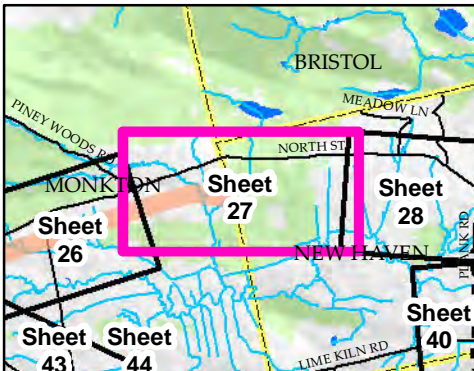
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