

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
AIRPORT PROJECT

ON-SITE WASTEWATER
DISPOSAL SYSTEM

SCHEDULE B - SITE 2 ONLY

SITE 1 NOT CONSTRUCTED IN
THIS CONTRACT

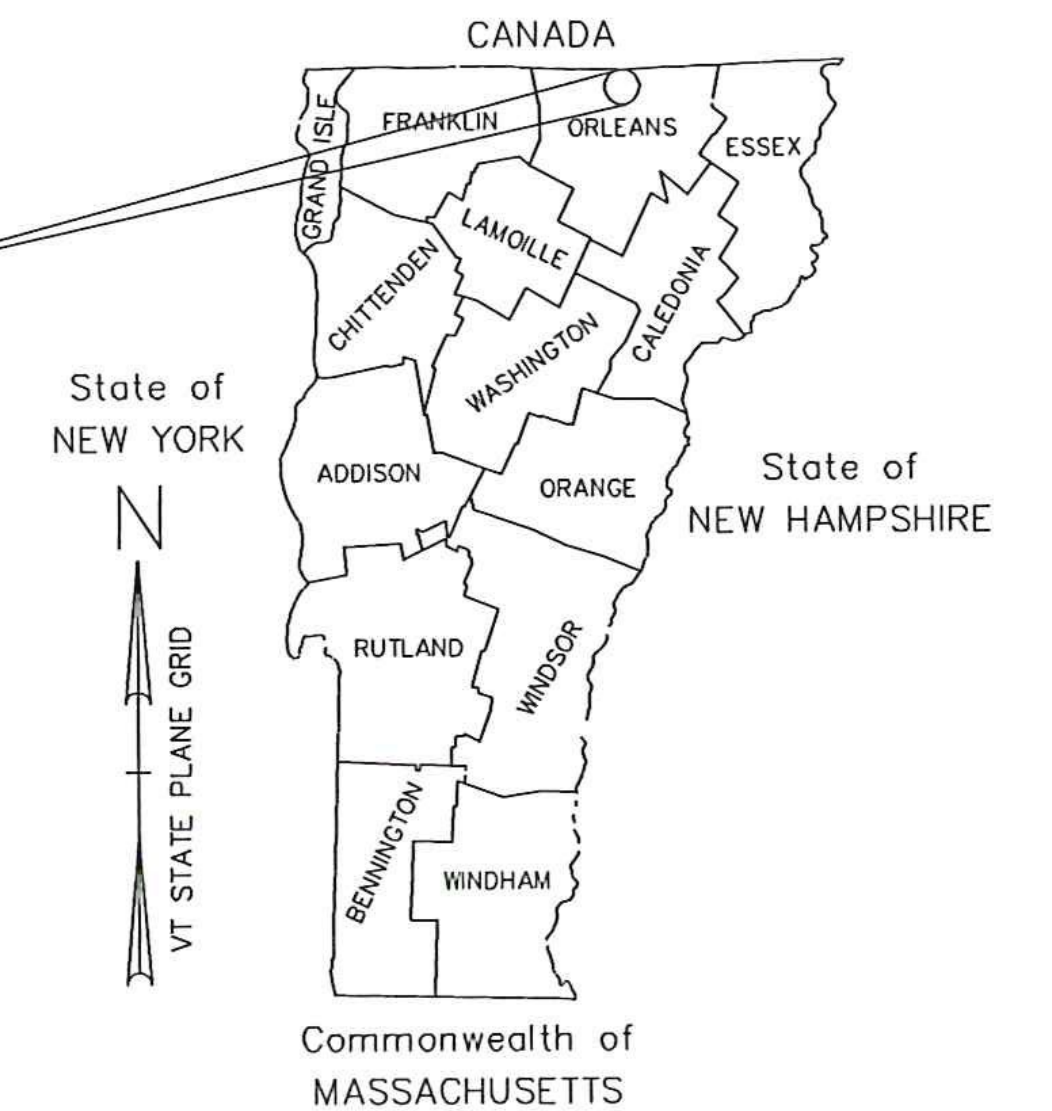
NEWPORT STATE AIRPORT

TOWN OF COVENTRY

COUNTY OF ORLEANS

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SITE 1 SYSTEM
INCLUDED FOR
REFERENCE ONLY.
NOT PART OF
SCHEDULE B FOR
THIS CONTRACT.



PROJECT LOCATION

REDLING ASBUILTS BY
CASSELLA CONSTRUCTION, INC.
3/12/18 (DWG FILE ALSO COMPLETED
WITH SURVEYED ASBUILT LOC. OF PIPES)

PREPARED BY:



McFarland Johnson

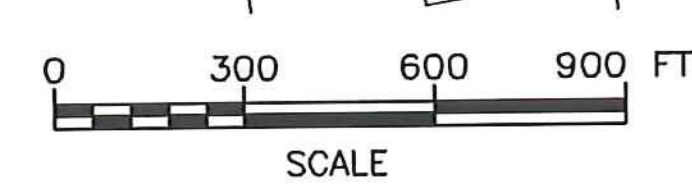
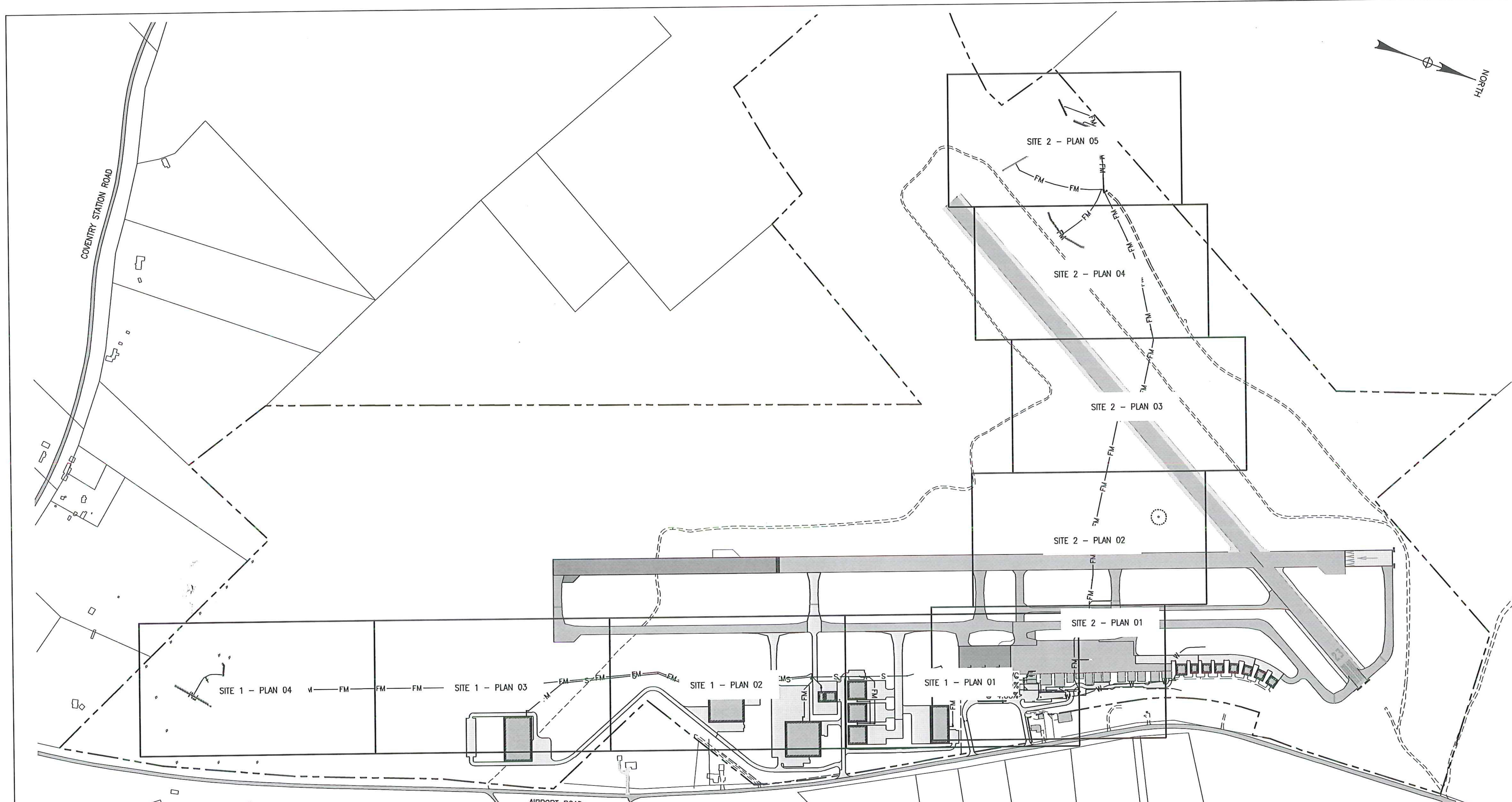
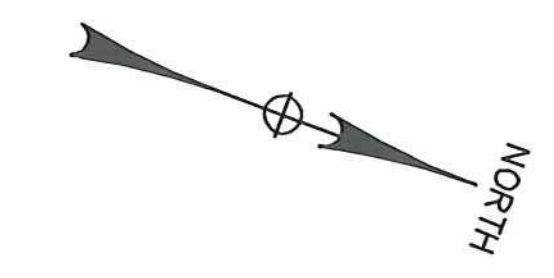
53 REGIONAL DRIVE
CONCORD, NEW HAMPSHIRE 03301
PHONE: 603-225-2978
FAX: 603-225-0095

SCHEDULE B - WASTEWATER SYSTEM - BID SET

VTRANS PROJECT #AVI157046-301

JUNE 2016

BY: JTC



SCHEDULE B - WASTEWATER SYSTEM - BID SET
 VTRANS PROJECT #AVI157046-301
 JUNE 2016

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECT DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING PROFESSIONAL, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

- LEGEND:**
- PROPERTY LINE
 - AIRPORT PERIMETER ROAD
 - FM — FM — PROPOSED FORCE MAIN
 - S — S — S — PROPOSED GRAVITY SEWER



REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

NEWPORT STATE AIRPORT
 COVENTRY, VERMONT
 NEWPORT WASTEWATER

KEY PLAN

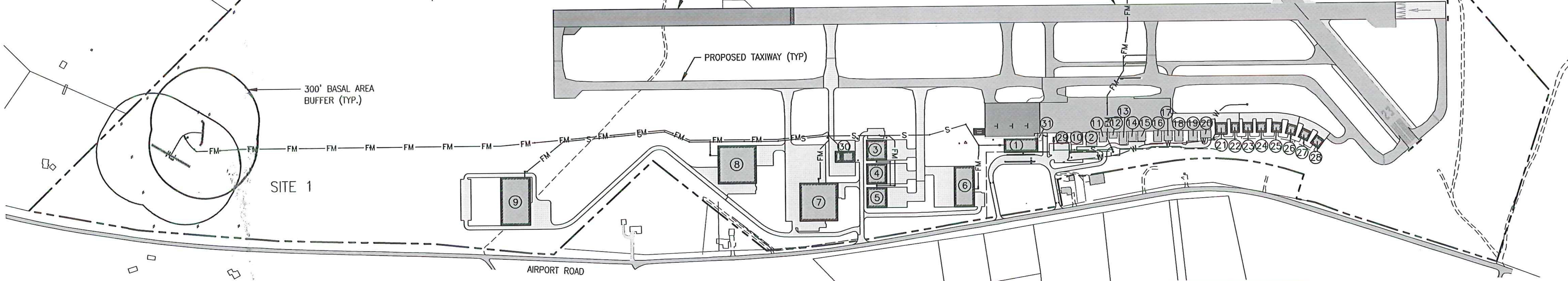
McFarland Johnson
 53 REGIONAL DRIVE
 CONCORD, NH 03301

SCALE: 1" = 300'	DESIGN: TCB	G-00 1 OF 36
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	

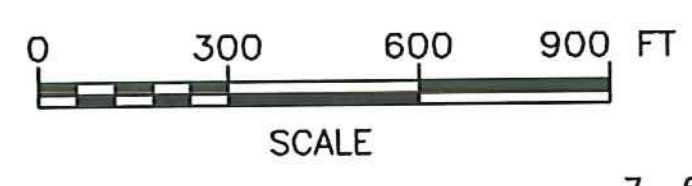
SITE 1 PROPOSED CONDITIONS							
BLDG	USE	FTE EMPLOYEES	VISITORS	FLOWS (GPD)	VT CODE FLOW (GPD) WITHOUT WATER SAVING	VT CODE FLOW (GPD) WITH WATER SAVING	ASSUMPTIONS
1	AIRPORT TERMINAL	24	500	15/EMPLOYEE 5/VISITOR	2860	2574	10% WATER SAVING REDUCTION
1	CATERING	1	-	15/EMPLOYEE 100/SITE	115	115	DELI-STYLE TAKE OUT FOOD PREP
30	SRE/ARFF	1	-	50/EMPLOYEE	50	45	3 TOTAL PERSONNEL, 1 FTE, 10% WATER SAVING REDUCTION
3	CORPORATE HANGAR	1	-	15/EMPLOYEE	15	13.5	10% WATER SAVING REDUCTION
4	CORPORATE HANGAR	1	-	15/EMPLOYEE	15	13.5	10% WATER SAVING REDUCTION
5	CORPORATE HANGAR	1	-	15/EMPLOYEE	15	13.5	10% WATER SAVING REDUCTION
6	MAINTENANCE FACILITY	5	5	15/EMPLOYEE 5/VISITOR	100	90	NO PROCESS WATER (INDUSTRIAL WASTE), 10% WATER SAVING REDUCTION
7	AIRCRAFT MANUFACTURER	36	-	15/EMPLOYEE	540	486	NO PROCESS WATER (INDUSTRIAL WASTE), 10% WATER SAVING REDUCTION
8	WAREHOUSE	10	-	15/EMPLOYEE	150	135	NO PROCESS WATER (INDUSTRIAL WASTE), 10% WATER SAVING REDUCTION
9	WAREHOUSE	24	-	15/EMPLOYEE	360	324	24/7 SECURITY, 10% WATER SAVING REDUCTION
TOTAL					3,810		

SITE 2 PROPOSED CONDITIONS							
BLDG	USE	FTE EMPLOYEES	VISITORS/SEATS	FLOWS (GPD)	VT CODE FLOW (GPD) WITHOUT WATER SAVING	VT CODE FLOW (GPD) WITH WATER SAVING	ASSUMPTIONS
29	RESTAURANT	-	100 SEATS	45/SEAT	4,500	4,050	BREAKFAST, LUNCH, & DINNER; 10% WATER SAVING REDUCTION
TOTAL					4,050		

OTHER FACILITIES							
BLDG	USE	FTE EMPLOYEES	VISITORS	FLOWS (GPD)	VT CODE FLOW (GPD)	ASSUMPTIONS	
2,10-20	EXISTING HANGARS	-	-	-	-	NO WATER; NO SEWER	
21-28	BOX HANGARS	-	-	-	-	NO WATER; NO SEWER	
31	EXISTING ADMIN. BLDG.	-	-	40	-	USING EXISTING WASTEWATER SYSTEM. TO BE REMOVED	



- LEGEND:**
- PROPERTY LINE
 - ===== AIRPORT PERIMETER ROAD
 - FM FM PROPOSED FORCE MAIN
 - S S S PROPOSED GRAVITY SEWER
 - PROPOSED STRUCTURE
 - EXISTING STRUCTURE
 - ① BUILDING NUMBER



SCHEDULE B - WASTEWATER SYSTEM - BID SET
 VTRANS PROJECT #AV1157046-301
 JUNE 2016

REV	DATE	DESCRIPTION	BY
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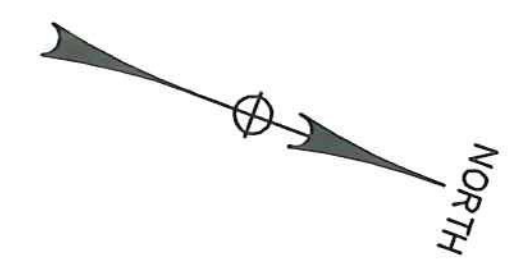
McFarland Johnson
 53 REGIONAL DRIVE
 CONCORD, NH 03301

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NEWPORT STATE AIRPORT
 COVENTRY, VERMONT
 NEWPORT WASTEWATER

OVERALL PLAN

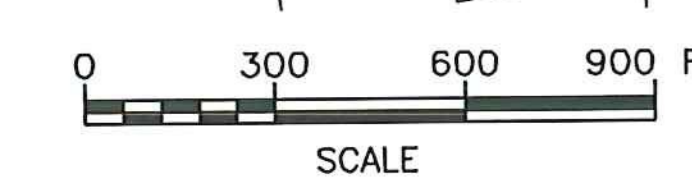
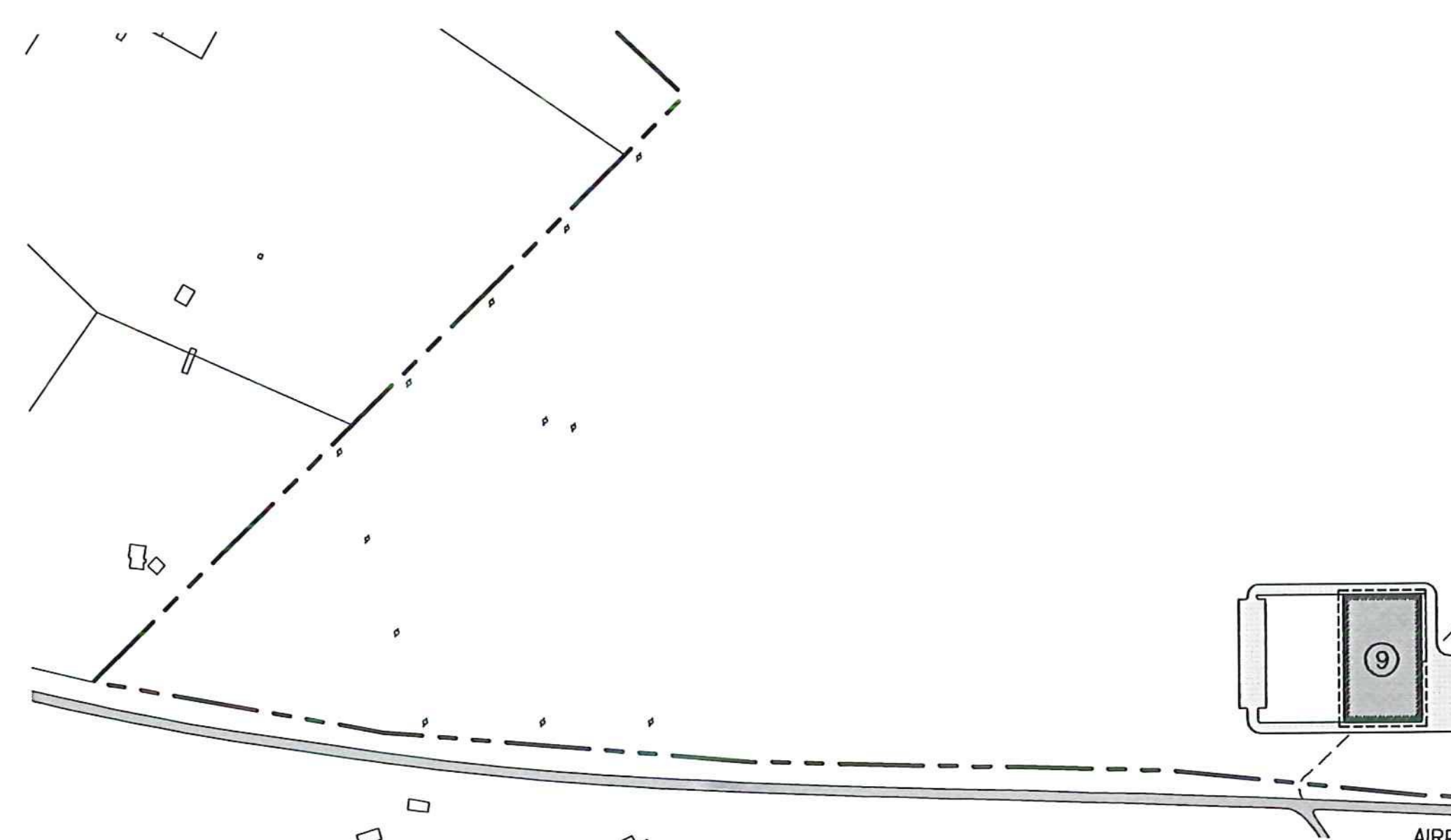
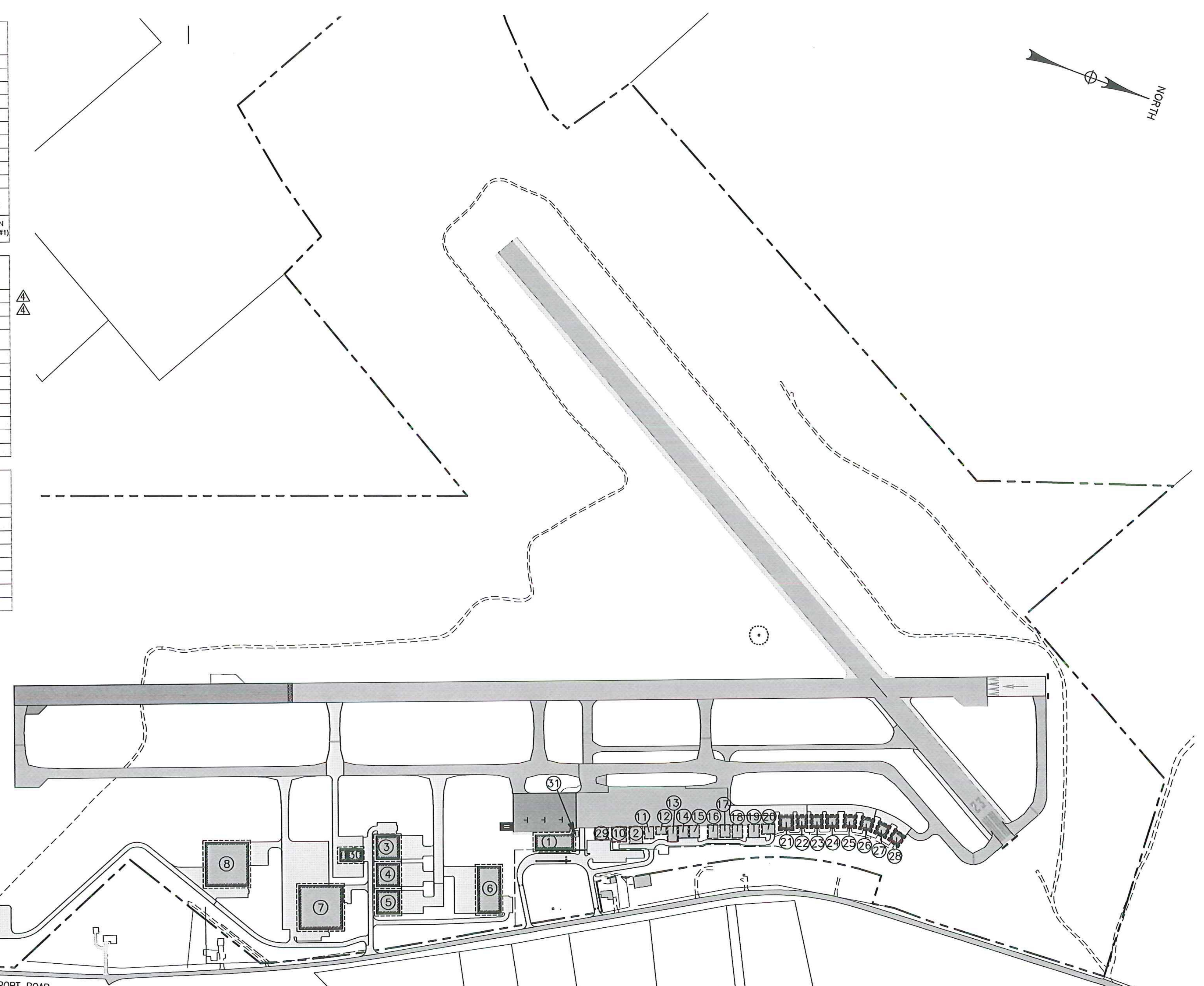
SCALE: 1" = 300'	DESIGN: TCB	G-01 2 of 36
DRAWN: MIF	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	



BLDG #	USE	STRUCTURE OWNER/LESSEE	LEASE AREA (SF)	SEWER DISPOSAL SITE	SEWER ALLOCATION (GALS)	WATER ALLOCATION (GALS)	COMMENTS
1	PROPOSED AIRPORT TERMINAL	Unknown	22,000	SITE 1	2,574	2,574	
1	PROPOSED CATERING IN TERMINAL	Unknown	N/A	SITE 1	115	115	
30	PROPOSED SRE/ARFF	VTrans	11,500	SITE 1	45	45	
3	PROPOSED CORPORATE HANGAR	Unknown	19,600	SITE 1	14	14	
4	PROPOSED CORPORATE HANGAR	Unknown	19,600	SITE 1	14	14	
5	PROPOSED CORPORATE HANGAR	Unknown	19,600	SITE 1	14	14	
6	PROPOSED MAINTENANCE FACILITY	Unknown	36,400	SITE 1	90	90	
7	PROPOSED AIRCRAFT MANUFACTURER	Unknown	59,540	SITE 1	486	486	
8	PROPOSED WAREHOUSE	Unknown	59,540	SITE 1	135	135	
9	PROPOSED WAREHOUSE	Unknown	59,630	SITE 1	324	324	
29	EXISTING RESTAURANT	VTrans/Parker Pie	4,400	SITE 2	4,050	4,050	CURRENTLY LIMITED TO 25 SEATS EXPANDS TO 100 SEAT WITH SITE 2 SYSTEM
31	EXISTING ADMIN. BUILDING	VTrans/FBO (QResorts)	1,250	EXISTING SYSTEM	40	40	BLDG. TO BE REMOVED WITH CONSTRUCTION OF NEW AIRPORT TERMINAL BUILDING (BLDG. #1)

BLDG #	USE	STRUCTURE OWNER/LESSEE	LEASE AREA (SF)	SEWER DISPOSAL SITE	SEWER ALLOCATION (GALS)	WATER ALLOCATION (GALS)	COMMENTS
10	EXISTING HANGAR	EFK Hangars, LLC (David Windmiller)	5,930	N/A	NO SEWER	NO WATER	POST-JULY 1, 2007 LEASE
2	EXISTING HANGAR	AOT/FBO (QResorts)	6,240	N/A	NO SEWER	NO WATER	POST-JULY 1, 2007 LEASE
11	EXISTING HANGAR	James & Eileen Sullivan	3,130	N/A	NO SEWER	NO WATER	PRE-JULY 1, 2007 LEASE - EXEMPT
12	EXISTING HANGAR	Newport Executive Air, Inc. (Robt. E. Smith)	2,310	N/A	NO SEWER	NO WATER	PRE-JULY 1, 2007 LEASE - EXEMPT
13	EXISTING HANGAR	Den Gaurin / David Bouffard	4,210	N/A	NO SEWER	NO WATER	PRE-JULY 1, 2007 LEASE - EXEMPT
14	EXISTING HANGAR	Jean Paul Fournier	3,420	N/A	NO SEWER	NO WATER	PRE-JULY 1, 2007 LEASE - EXEMPT
15	EXISTING HANGAR	Peter & Beverly Gage	3,480	N/A	NO SEWER	NO WATER	PRE-JULY 1, 2007 LEASE - EXEMPT
16	EXISTING HANGAR	Den Gaurin	3,790	N/A	NO SEWER	NO WATER	PRE-JULY 1, 2007 LEASE - EXEMPT
17	EXISTING HANGAR	Michael & Jacqueline Hamblett	3,620	N/A	NO SEWER	NO WATER	PRE-JULY 1, 2007 LEASE - EXEMPT
18	EXISTING HANGAR	Luc & Rhonda Oulfron	3,840	N/A	NO SEWER	NO WATER	PRE-JULY 1, 2007 LEASE - EXEMPT
19	EXISTING HANGAR	Bruce MacFarlane	4,100	N/A	NO SEWER	NO WATER	PRE-JULY 1, 2007 LEASE - EXEMPT
20	EXISTING HANGAR	Dan's Plette	3,660	N/A	NO SEWER	NO WATER	PRE-JULY 1, 2007 LEASE - EXEMPT

BLDG #	USE	STRUCTURE OWNER/LESSEE	LEASE AREA (SF)	SEWER DISPOSAL SITE	SEWER ALLOCATION (GALS)	WATER ALLOCATION (GALS)	COMMENTS
21	PROPOSED BOX HANGAR	Nat Simms	6,400	N/A	NO SEWER	NO WATER	LEASE PENDING
22	PROPOSED BOX HANGAR	Nat Simms	4,340	N/A	NO SEWER	NO WATER	LEASE PENDING
23	PROPOSED BOX HANGAR	QResorts	4,900	N/A	NO SEWER	NO WATER	LEASE PENDING
24	PROPOSED BOX HANGAR	Unknown	4,900	N/A	NO SEWER	NO WATER	
25	PROPOSED BOX HANGAR	Unknown	4,900	N/A	NO SEWER	NO WATER	
26	PROPOSED BOX HANGAR	Unknown	4,900	N/A	NO SEWER	NO WATER	
27	PROPOSED BOX HANGAR	Unknown	4,900	N/A	NO SEWER	NO WATER	
28	PROPOSED BOX HANGAR	Unknown	4,900	N/A	NO SEWER	NO WATER	



SCHEDULE B - WASTEWATER SYSTEM - BID SET
VTRANS PROJECT #AV1157046-301
JUNE 2016

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NEWPORT STATE AIRPORT
COVENTRY, VERMONT
NEWPORT WASTEWATER

WASTEWATER LEASE PLAN

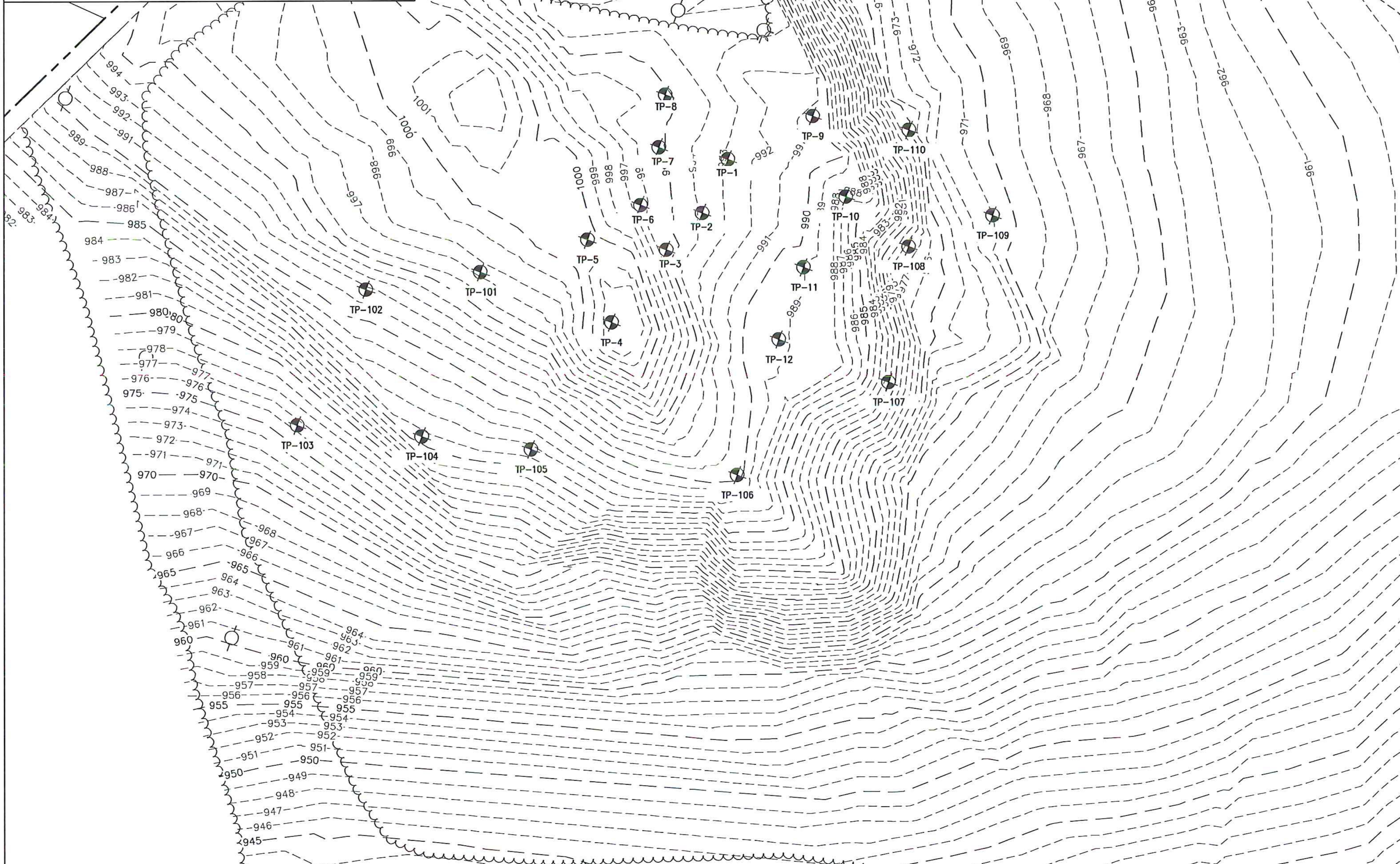
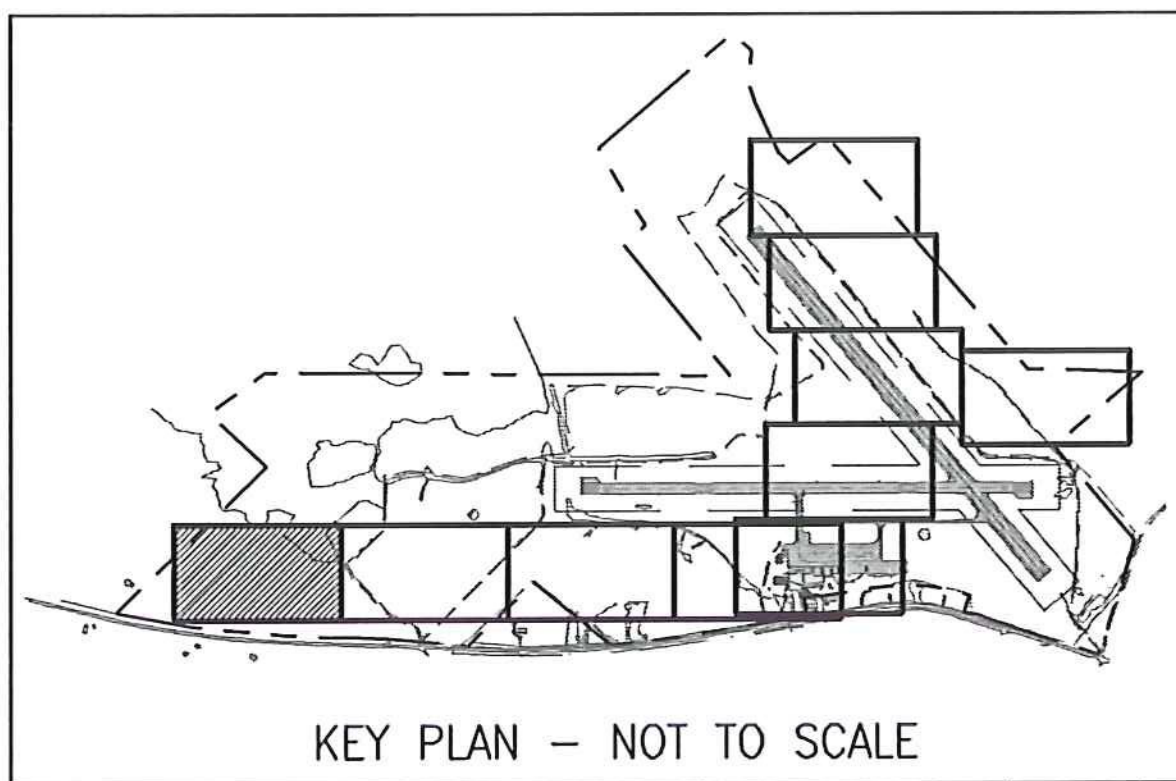
LEGEND:
 PROPERTY LINE
 LEASE LINE
 PROPOSED STRUCTURE
 EXISTING STRUCTURE
 BUILDING NUMBER



McFarland Johnson
53 REGIONAL DRIVE
CONCORD, NH 03301

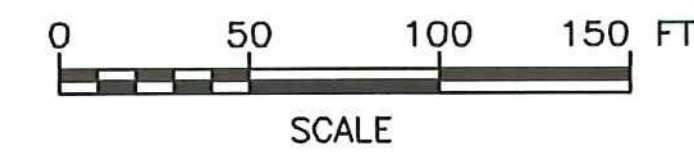
SCALE: 1" = 300'
 DESIGN: TCB
 DRAWN: BJL PROJECT: 17958.01
 CHECKED: BLS DATE: JUNE, 2014

G-02
3 of 36



LOCATION	S.H.W.T.		IMPEDING SOILS (I) TYPE	DEPTH (FT)	BEDROCK (BR) DEPTH (FT)	GROUND WATER DEPTH (FT)	LIMITING CONDITION	
	MOTTLES	DEPTH (FT)					DEPTH (FT)	TYPE
TP-1	YES	2.3	SILT LOAM, FIRM MASSIVE	1.3	4.3	>4.3	1.3	I
TP-2	YES	2.5	SILT LOAM, FIRM MASSIVE	1.3	4.2	>4.2	1.3	I
TP-3	YES	2.3	SILT LOAM, FIRM MASSIVE	1.3	4.0	>4.0	1.3	I
TP-4	YES	2.3	SILT LOAM, FIRM MASSIVE	1.3	4.2	>4.2	1.3	I
TP-5	YES	2.2	SILT LOAM, FIRM MASSIVE	1.2	3.0	>3.0	1.2	I
TP-6	YES	2.5	SILT LOAM, FIRM MASSIVE	1.5	5.0	>5.0	1.5	I
TP-7	YES	2.7	SILT LOAM, FIRM MASSIVE	1.2	3.5	>3.5	1.2	I
TP-8	YES	2.3	SILT LOAM, FIRM MASSIVE	1.2	3.0	>3.0	1.2	I
TP-9	YES	2.5	FINE SANDY LOAM, FIRM MASSIVE	2.5	4.7	>4.7	2.5	I, SWHT
TP-10	YES	2.3	SILT LOAM, FIRM MASSIVE	1.3	4.0	>4.0	1.3	I
TP-11	NO	>2.0	NONE	>2.0	2.0	>2.0	2.0	BR
TP-12	YES	2.7	FINE SANDY LOAM, FIRM MASSIVE	2.7	6.0	>6.0	2.7	I, SWHT
TP-13	YES	2.0	FINE SANDY LOAM, FIRM MASSIVE	2.0	2.5	>2.5	2.0	I, SWHT
TP-14	YES	2.0	FINE SANDY LOAM, FIRM MASSIVE	2.0	3.5	>3.5	2.0	I, SWHT
TP-101	YES	1.6	BEDROCK	>2.0	2.0	2.0	1.6	SWHT
TP-102	YES	2.2	FIRM SILT LOAM	2.2	2.2	>2.2	2.2	I, SWHT
TP-103	YES	2.4	FIRM SILT LOAM	2.4	>4.5	>4.5	2.4	I, SWHT
TP-104	YES	2.2	FIRM SILT LOAM	2.3	2.9	>2.9	2.2	SWHT
TP-105	NO	>2.2	NONE	2.2	2.2	>2.2	2.2	BR
TP-106	NO	>1.0	NONE	>1.0	1.0	>1.0	1.0	BR
TP-107	NO	>0.7	NONE	>0.7	0.7	>0.7	0.7	BR
TP-108	YES	1.3	FIRM SILT LOAM	1.5	2.2	>2.2	1.3	SWHT
TP-109	YES	1.8	FIRM SILT LOAM	1.9	>5.5	>5.5	1.8	SWHT
TP-110	NO	>2.0	NONE	>2.0	2.0	>2.0	2.0	BR
TP-111	NO	>0.3	NONE	>0.3	0.3	>0.3	0.3	BR
TP-112	NO	>0.5	NONE	>0.5	0.5	>0.5	0.5	BR

- LEGEND:**
- TEST PIT
 - EXISTING CONTOUR
 - PROPERTY LINE
 - WETLAND
 - TREE LINE



PERMIT PLANS

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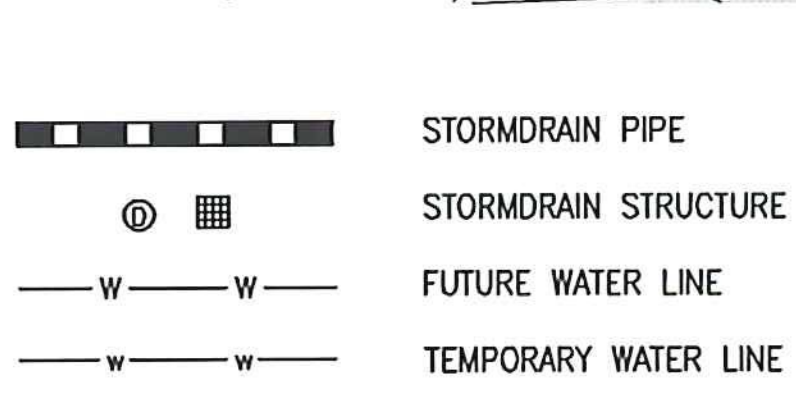
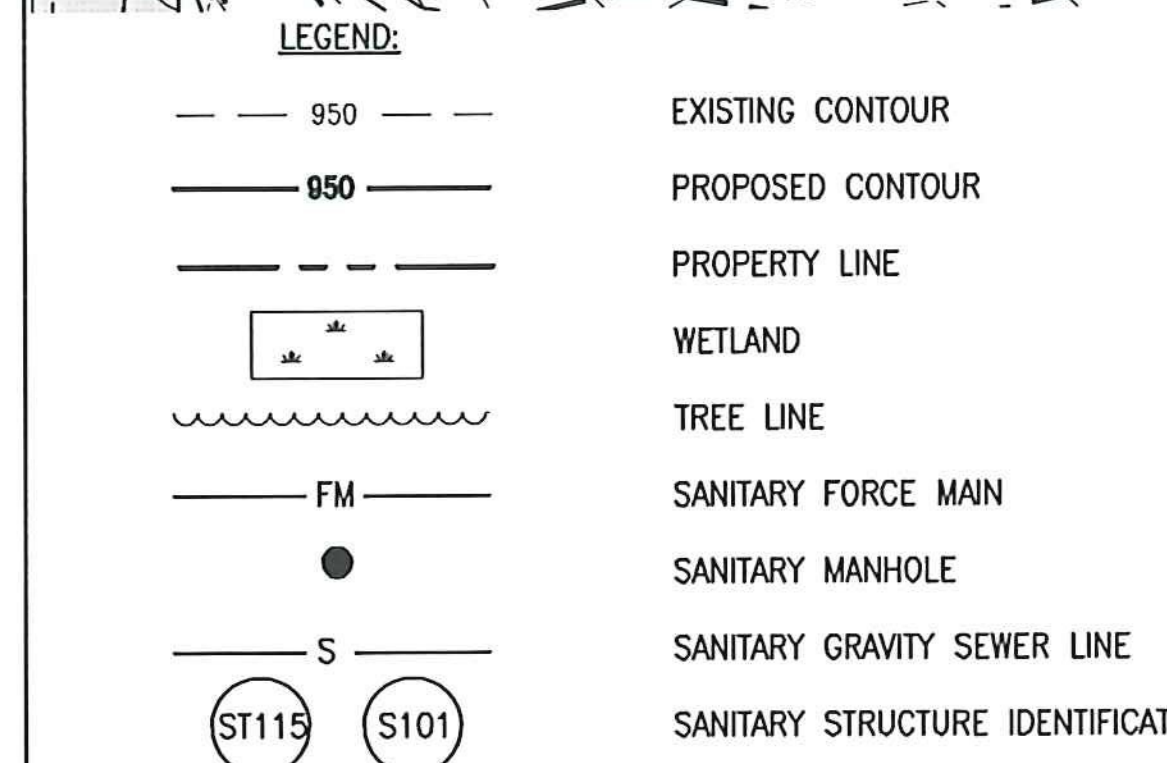
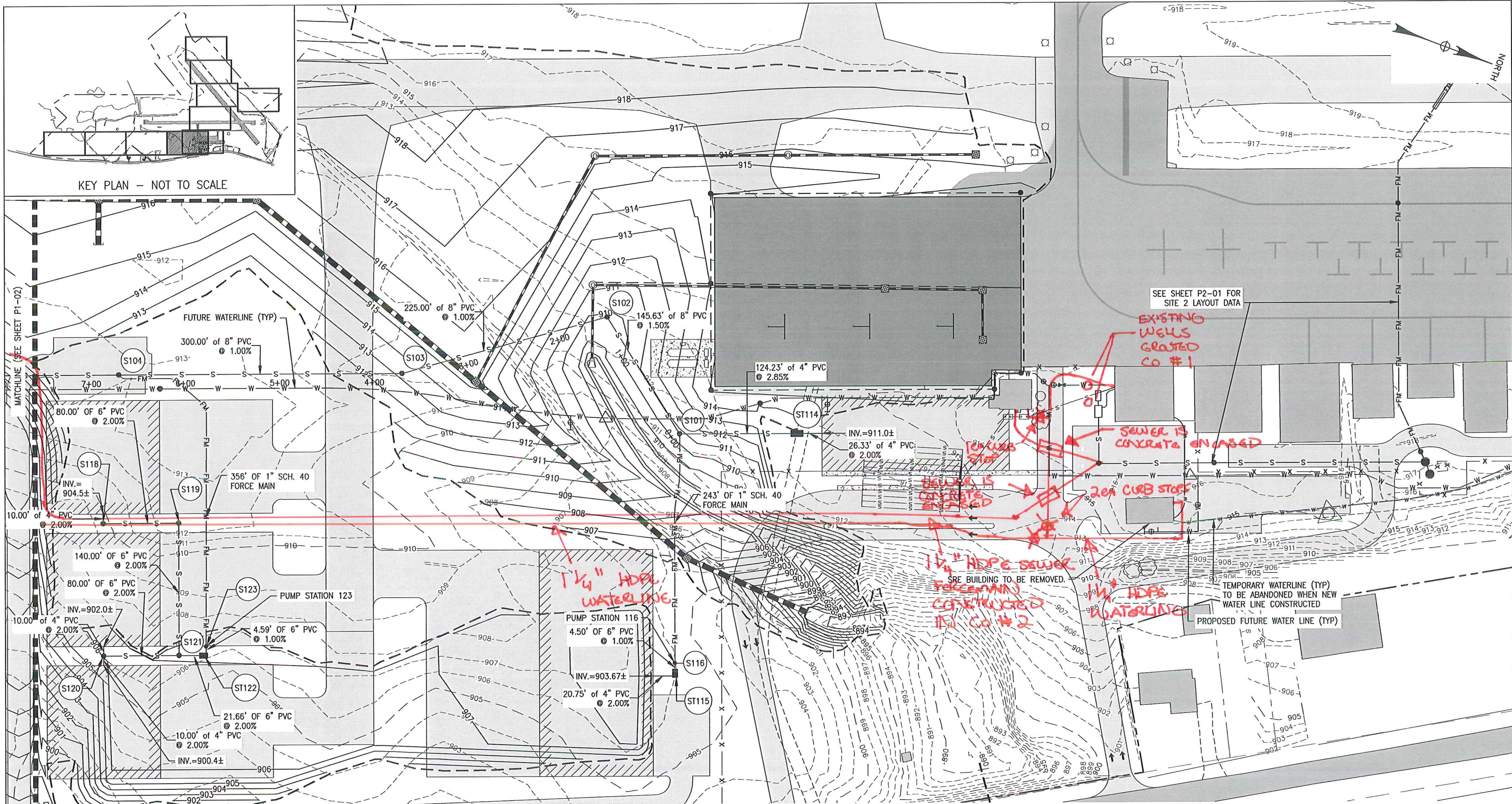


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53 REGIONAL DRIVE
CONCORD, NH 03301

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COVENTRY, VERMONT
NEWPORT WASTEWATER
SITE 1 - TEST PIT LOCATION PLAN 1

SCALE: 1" = 50'	DESIGN: TCB	TP1-01 4 of 36
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	



NOTES:

- REFER TO SHEET P1-05 FOR STRUCTURE DATA.
- REFER TO SHEET PR1-01 FOR SITE & GRAVITY SEWER PROFILE.
- REFER TO SHEET SD-01 FOR PUMP STATION S116 DETAILS.
- REFER TO SHEET SD-01 FOR PUMP STATION S123 DETAILS.



PERMIT PLANS

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5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
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2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

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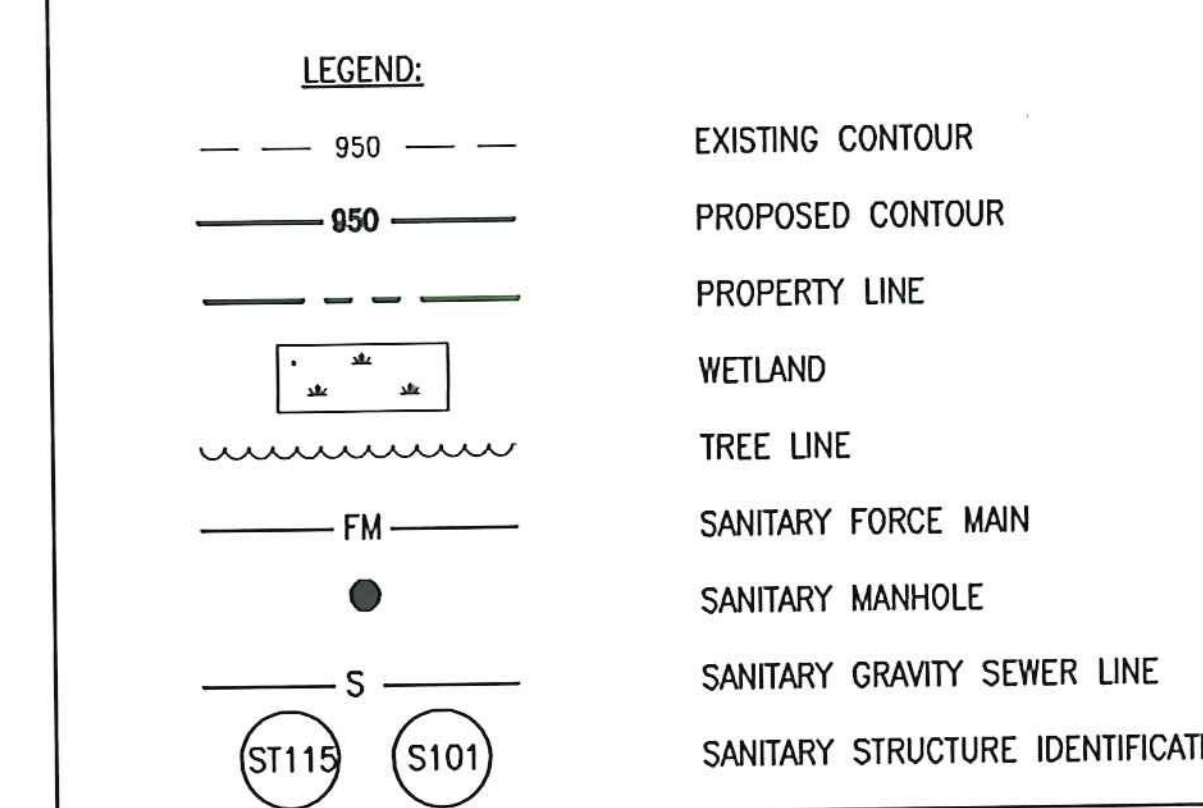
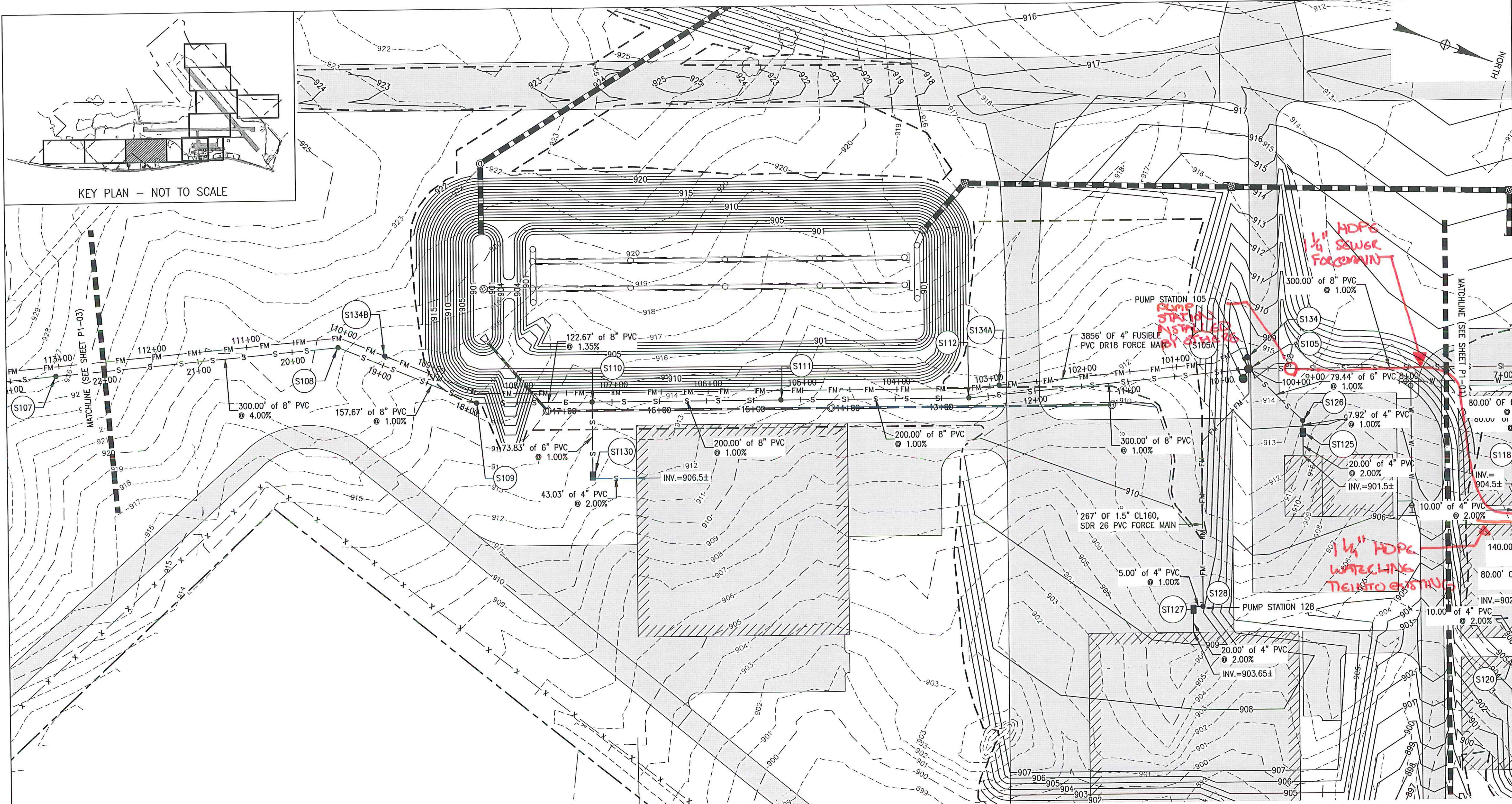
NEWPORT STATE AIRPORT
COVENTRY, VERMONT
NEWPORT WASTEWATER

SITE 1 - PIPING LAYOUT PLAN 1



McFarland Johnson
53 REGIONAL DRIVE
CONCORD, NH 03301

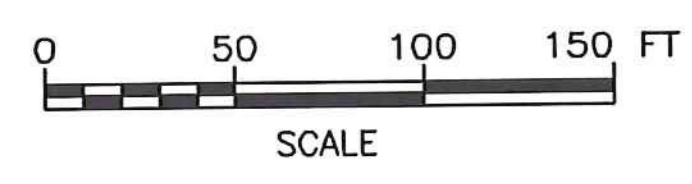
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DESIGN: TCB
DRAWN: TCB
CHECKED: BLS
PROJECT: 17958.01
DATE: JUNE, 2014
P1-01
5 of 36



LEGEND:

- 950 --- EXISTING CONTOUR
- 950 --- PROPOSED CONTOUR
- --- PROPERTY LINE
- --- WETLAND
- --- TREE LINE
- FM --- SANITARY FORCE MAIN
- SANITARY MANHOLE
- S --- SANITARY GRAVITY SEWER LINE
- (ST115) (S101) SANITARY STRUCTURE IDENTIFICATION
- --- STORMDRAIN PIPE
- ⊙ --- STORMDRAIN STRUCTURE
- W --- W --- FUTURE WATER LINE
- W --- W --- TEMPORARY WATER LINE

- NOTES:**
1. REFER TO SHEET P1-05 FOR STRUCTURE DATA.
 2. REFER TO SHEET PR1-01 AND PR1-02 FOR SITE 1 GRAVITY SEWER PROFILE INFORMATION.
 3. REFER TO SHEET PR1-03 FOR SITE 1 FORCE MAIN SEWER PROFILE.
 4. REFER TO SHEET SD-01 FOR PUMP STATION S105 DETAILS.
 5. REFER TO SHEET SD-02 FOR PUMP STATION S128 DETAILS.



PERMIT PLANS

5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH
REV	DATE	DESCRIPTION	BY



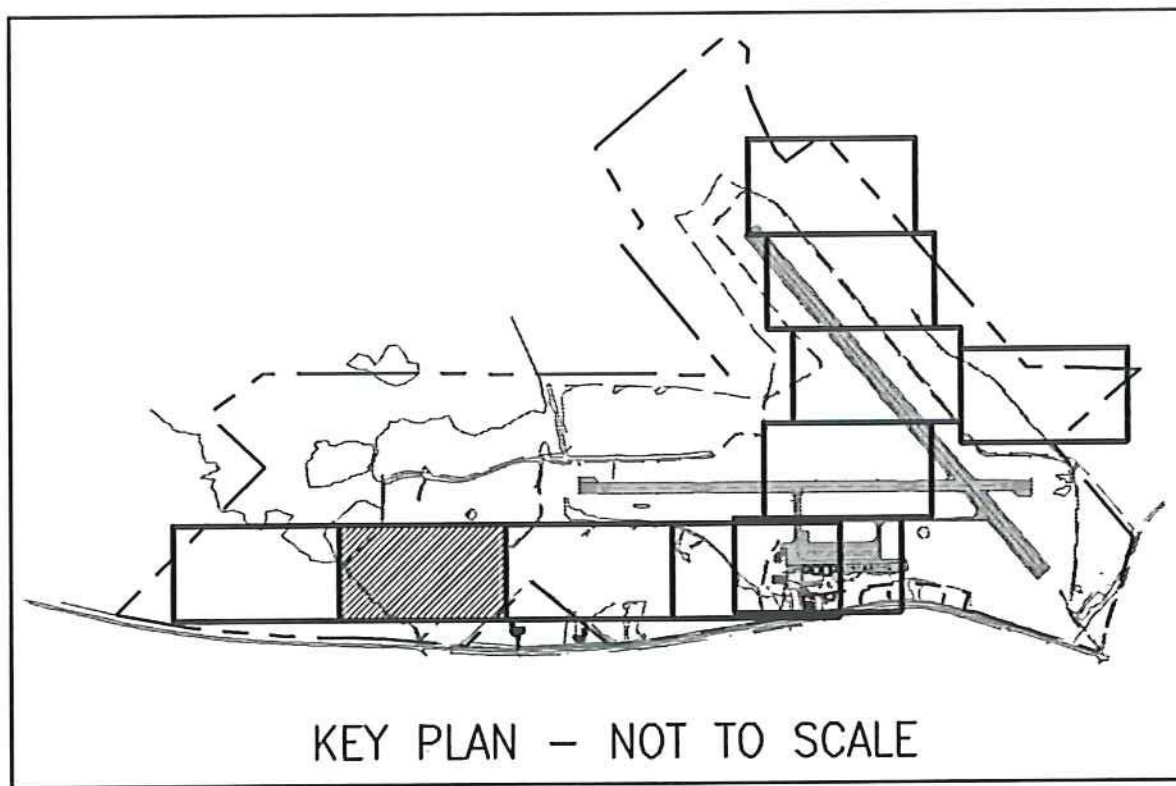
McFarland Johnson
 53 REGIONAL DRIVE
 CONCORD, NH 03301

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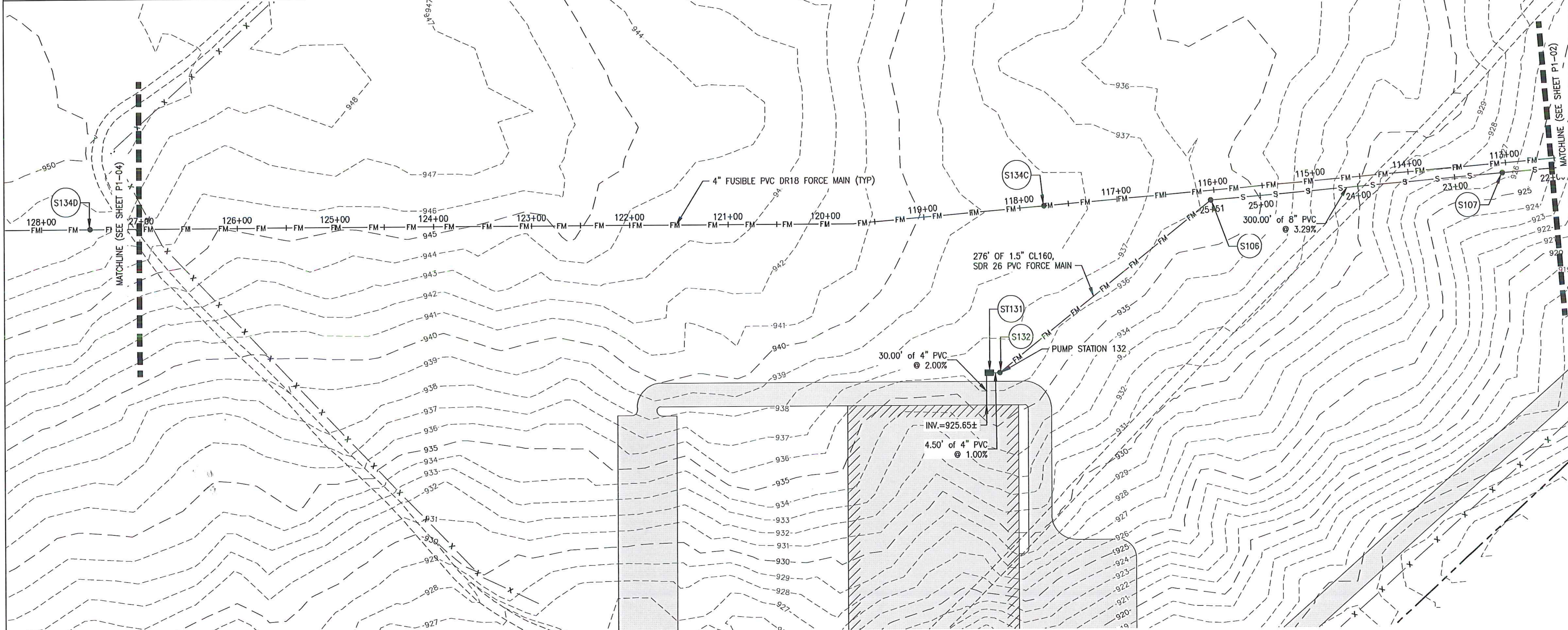
NEWPORT STATE AIRPORT
 COVENTRY, VERMONT
 NEWPORT WASTEWATER

SITE 1 - PIPING LAYOUT PLAN 2

SCALE: 1" = 50'	DESIGN: TCB	P1-02
DRAWN: TCB	PROJECT: 17958.01	6 OF 36
CHECKED: BLS	DATE: JUNE, 2014	



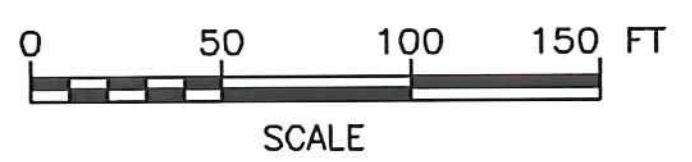
NOT CONSTRUCTED AS PART OF THIS CONTRACT.



LEGEND:

- - - 950 - - -	EXISTING CONTOUR
— 950 —	PROPOSED CONTOUR
— — — — —	PROPERTY LINE
	WETLAND
	TREE LINE
— FM —	SANITARY FORCE MAIN
●	SANITARY MANHOLE
— S —	SANITARY GRAVITY SEWER LINE

- NOTES:**
1. REFER TO SHEET P1-05 FOR STRUCTURE DATA.
 2. REFER TO SHEET PR1-02 FOR SITE 1 GRAVITY SEWER PROFILE INFORMATION.
 3. REFER TO SHEET PR1-04 FOR SITE 1 FORCE MAIN SEWER PROFILE INFORMATION.
 4. REFER TO SD-02 FOR PUMP STATION S132 DETAILS.



PERMIT PLANS

REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

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NEWPORT STATE AIRPORT
COVENTRY, VERMONT
NEWPORT WASTEWATER

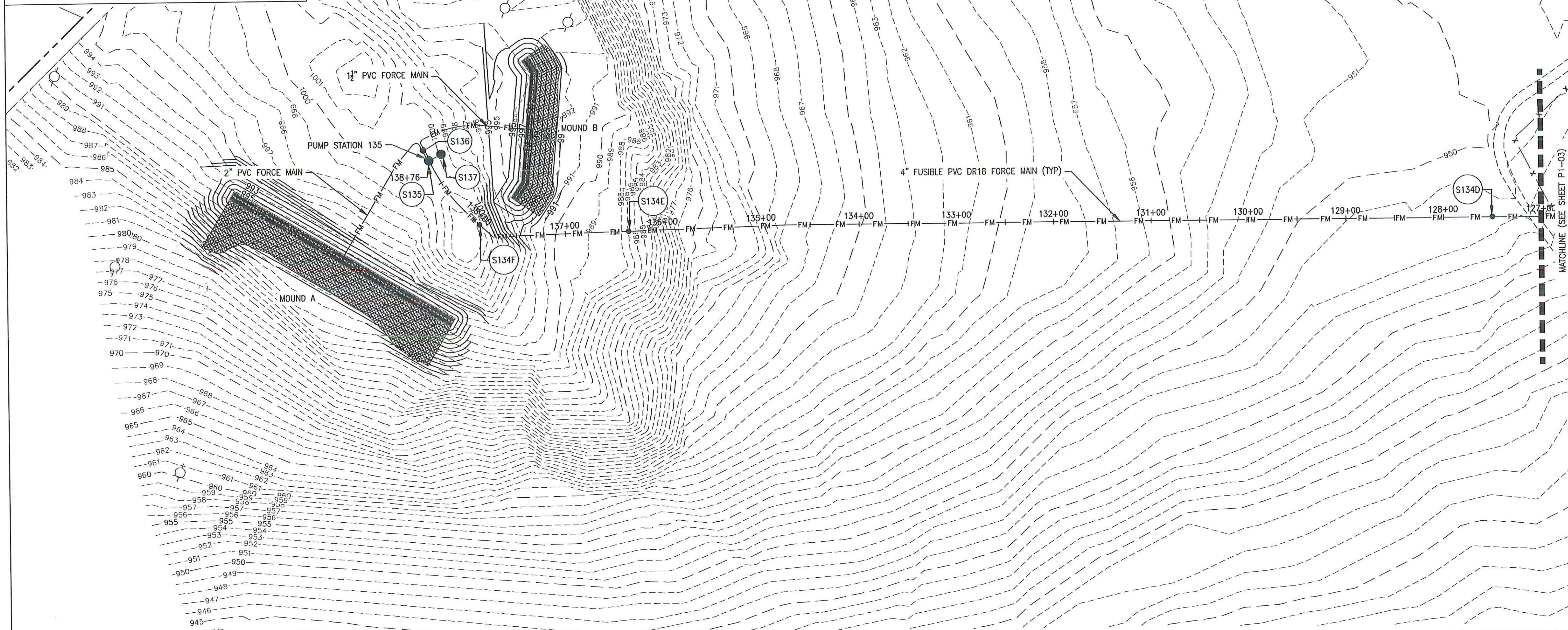
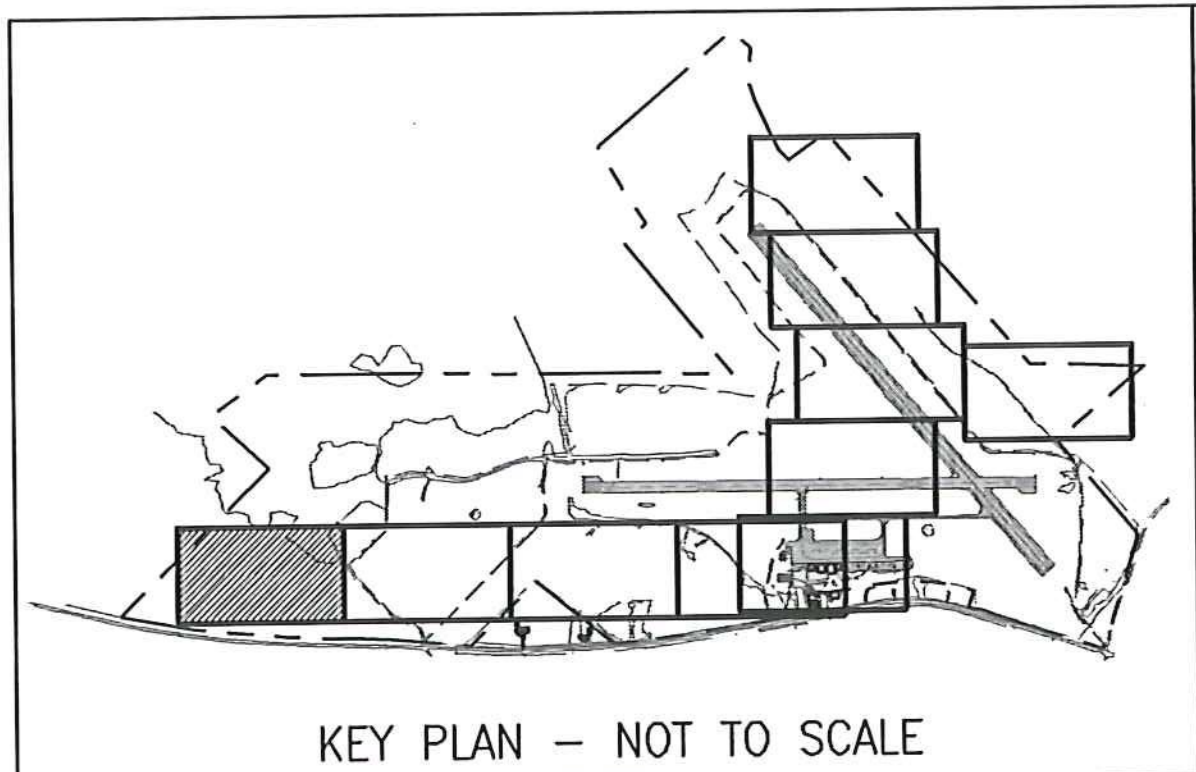
SITE 1 - PIPING LAYOUT PLAN 3



McFarland Johnson
53 REGIONAL DRIVE
CONCORD, NH 03301

SCALE: 1" = 50'	DESIGN: TCB	P1-03 7 of 36
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	

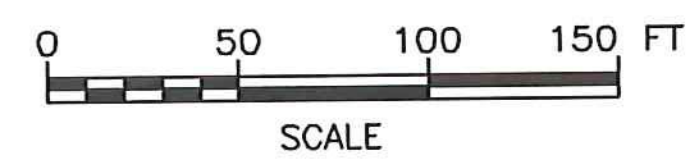
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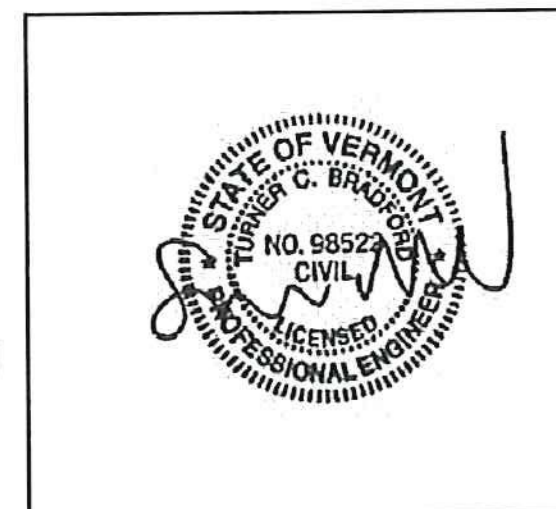
	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPERTY LINE
	WETLAND
	TREE LINE
	SANITARY FORCE MAIN
	SANITARY MANHOLE
	SANITARY GRAVITY SEWER LINE

- NOTES:**
1. REFER TO SHEET P1-05 FOR STRUCTURE DATA.
 2. REFER TO SHEET PR1-04 AND PR1-05 FOR SITE 1 FORCE MAIN SEWER PROFILE.
 3. REFER TO SHEET MD1-01 FOR MOUND A DETAILS.
 4. REFER TO SHEET MD1-02 FOR MOUND B DETAILS.
 5. REFER TO SHEET SD-02 FOR PUMP STATION S135 DETAILS.



PERMIT PLANS

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REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

NEWPORT STATE AIRPORT
COVENTRY, VERMONT
NEWPORT WASTEWATER
SITE 1 - PIPING LAYOUT PLAN 4



McFarland Johnson
53 REGIONAL DRIVE
CONCORD, NH 03301

SCALE: 1" = 50'	DESIGN: TCB	P1-04 8 OF 36
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	

STRUCTURE TABLE						
STRUCTURE	RIM	INV(S) IN	INV OUT	TYPE	NORTHING	EASTING
ST131	931.98	925.05 (E)	924.80 (N)	1000 GAL. SEPTIC TANK	867946.59	1713062.57
ST130	905.99	905.64 (N)	905.39 (W)	1000 GAL. SEPTIC TANK	868940.06	1712594.35
ST127	909.31	903.25 (E)	903.00 (N)	1000 GAL. SEPTIC TANK	869588.59	1712507.83
ST125	907.89	901.10 (E)	900.85 (W)	1000 GAL. SEPTIC TANK	869633.76	1712292.10
ST122	907.36	897.97 (S)	897.72 (W)	1000 GAL. SEPTIC TANK	870025.29	1712389.78
ST115	907.60	903.26 (S)	903.00 (W)	1000 GAL. SEPTIC TANK	870499.92	1712233.42
ST114	911.16	910.47 (N)	910.22 (S)	3000 GAL. SEPTIC TANK	870532.08	1711950.70
S137	1000.00	994.14 (SE)	-	8' I.D. EMERGENCY STORAGE MANHOLE	866002.52	1713554.60
S136	1000.01	994.42 (NE) 994.42 (NE)	994.42 (SW) 994.42 (SW)	5' I.D. VALVE PIT	865984.01	1713556.92
S135	1000.01	994.17 (NE)	994.42 (SW) 994.42 (SW) 994.17 (NW)	8' I.D. PUMP STATION	865993.25	1713565.09
S134F	1001.33	994.18 (NE)	994.22 (SW)	4' I.D. SEWER MANHOLE	866064.06	1713608.44
S134E	986.93	982.00 (N)	982.28 (S)	4' I.D. SEWER MANHOLE	866209.34	1713562.30
S134D	948.61	942.70 (N)	942.70 (S)	4' I.D. SEWER MANHOLE	867035.23	1713244.45
S134C	938.39	933.35 (NW)	933.44 (SE)	4' I.D. SEWER MANHOLE	867940.46	1712883.80
S134B	918.08	911.88 (N)	911.95 (S)	4' I.D. SEWER MANHOLE	868689.42	1712550.98
S134A	912.89	907.70 (NW)	907.70 (SE)	4' I.D. SEWER MANHOLE	869312.63	1712356.47
S134	907.92	901.97 (NE)	901.97 (SW)	5' I.D. VALVE PIT	869551.20	1712237.86
S132	931.98	924.75 (S)	926.35 (NW)	4' I.D. PUMP STATION	867957.12	1713058.60
S128	909.29	902.95 (S)	903.67 (W)	4' I.D. PUMP STATION	869597.18	1712501.56
S126	907.92	900.77 (E)	900.67 (SW)	4' I.D. SEWER MANHOLE	869629.44	1712280.64

STRUCTURE TABLE						
STRUCTURE	RIM	INV(S) IN	INV OUT	TYPE	NORTHING	EASTING
S123	908.37	897.67 (E)	902.79 (W)	3' I.D. PUMP STATION	870024.66	1712380.04
S121	907.50	899.70 (W) 898.50 (S)	898.40 (N)	4' I.D. SEWER MANHOLE	870000.94	1712398.86
S120	907.10	901.80 (W) 900.20 (E)	900.10 (N)	4' I.D. SEWER MANHOLE	869926.08	1712427.08
S119	909.70	902.60 (S)	902.50 (E)	4' I.D. SEWER MANHOLE	869951.55	1712267.86
S118	909.80	904.30 (W)	904.20 (N)	4' I.D. SEWER MANHOLE	869876.70	1712296.08
S116	907.42	902.96 (E)	901.84 (W)	3' I.D. PUMP STATION	870496.12	1712223.36
S112	912.83	900.45 (S)	900.35 (NW)	4' I.D. SEWER MANHOLE	869286.78	1712380.12
S111	912.51	902.55 (S)	902.45 (N)	4' I.D. SEWER MANHOLE	869099.64	1712450.66
S110	913.81	904.65 (S) 904.65 (E)	904.55 (N)	4' I.D. SEWER MANHOLE	868912.49	1712521.21
S109	916.52	906.41 (S)	906.31 (N)	4' I.D. SEWER MANHOLE	868797.71	1712564.48
S108	919.28	908.09 (SE)	907.99 (N)	4' I.D. SEWER MANHOLE	868640.12	1712559.40
S107	926.39	920.19 (SE)	920.09 (NW)	4' I.D. SEWER MANHOLE	868369.61	1712689.11
S106	935.72	930.05 (SE)	930.05 (NW)	4' I.D. SEWER MANHOLE	868099.11	1712818.82
S105	907.81	895.86 (N) 897.35 (S) 899.88 (NE) 897.13 (E)	901.97 (W) 900.0 (SE)	8' I.D. PUMP STATION	869556.59	1712248.95
S105A	907.8	899.95 (NW)	-	8' I.D. EMERGENCY STORAGE MANHOLE	869554.82	1712260.72
S104	913.10	898.96 (N) 900.13 (NE)	898.86 (S)	4' I.D. SEWER MANHOLE	869837.31	1712143.13
S103	913.25	902.06 (NW)	901.96 (S)	4' I.D. SEWER MANHOLE	870118.02	1712037.32
S102	909.85	904.40 (NE)	904.30 (SE)	4' I.D. SEWER MANHOLE	870300.47	1711905.64
S101	910.67	906.68 (N) 910.49 (E)	906.58 (SW)	4' I.D. SEWER MANHOLE	870415.83	1711994.52

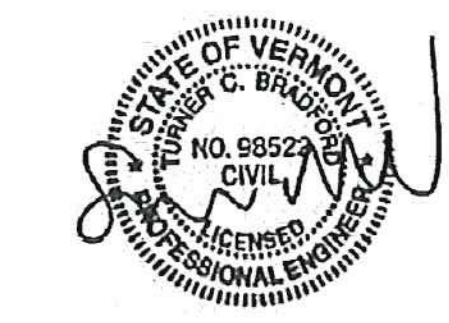
PERMIT PLANS

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REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

NEWPORT STATE AIRPORT
COVENTRY, VERMONT
NEWPORT WASTEWATER

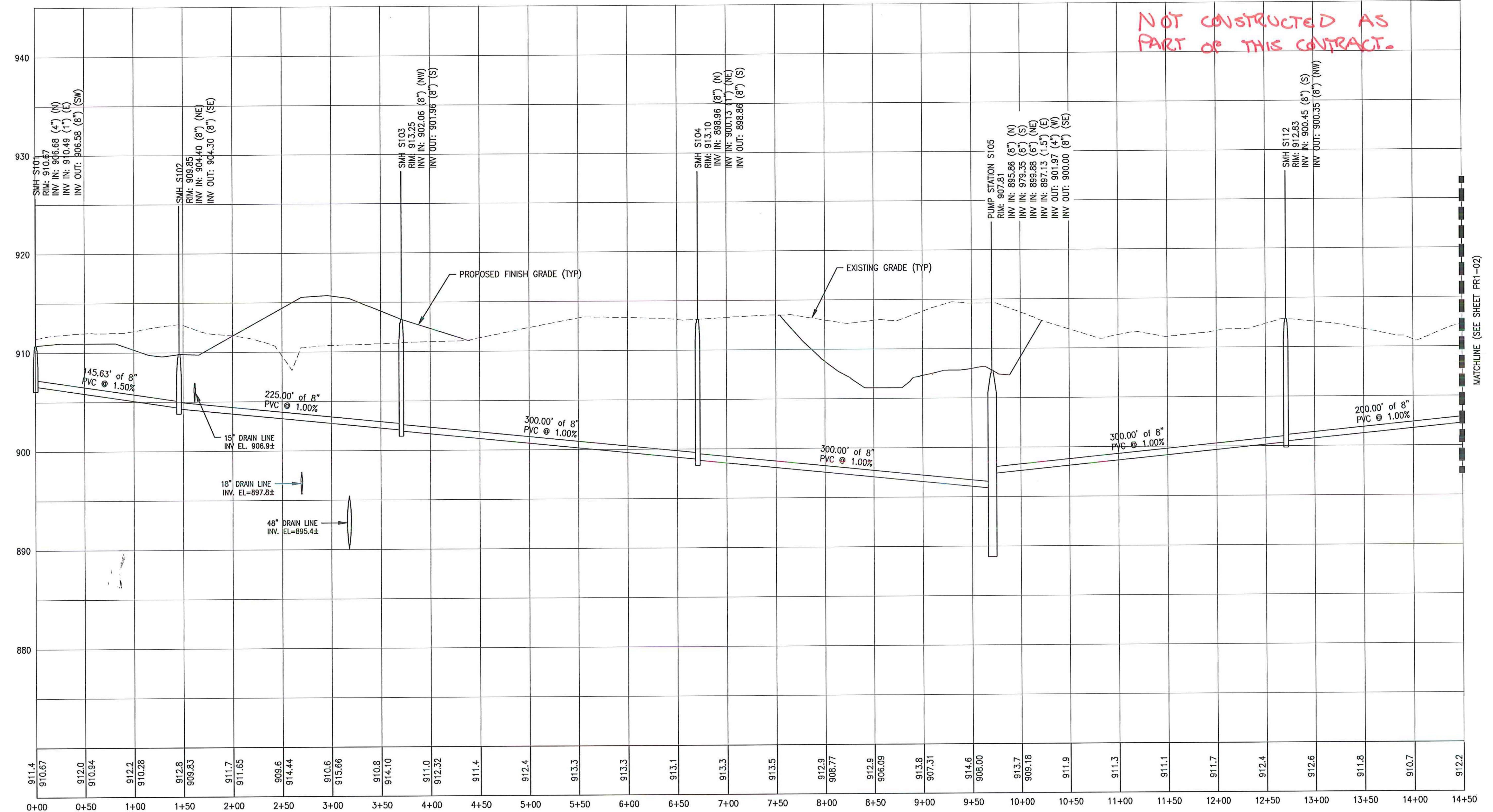
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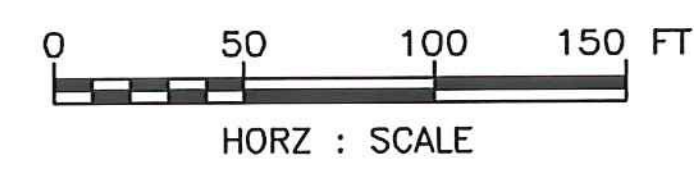
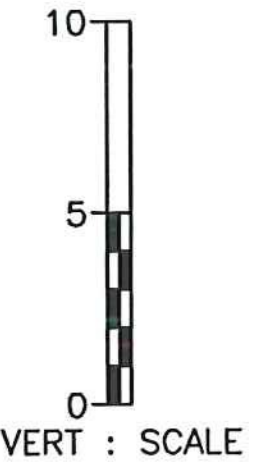
McFarland Johnson
53 REGIONAL DRIVE
CONCORD, NH 03301

SCALE: N.T.S.	DESIGN: TCB	P1-05 9 OF 36
DRAWN: MTF	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	

NOT CONSTRUCTED AS PART OF THIS CONTRACT.



MATCHLINE (SEE SHEET PR1-02)



PERMIT PLANS

5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH
REV	DATE	DESCRIPTION	BY

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NEWPORT STATE AIRPORT
COVENTRY, VERMONT
NEWPORT WASTEWATER

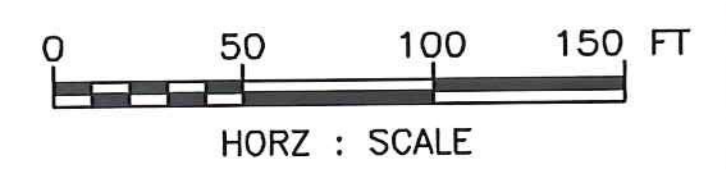
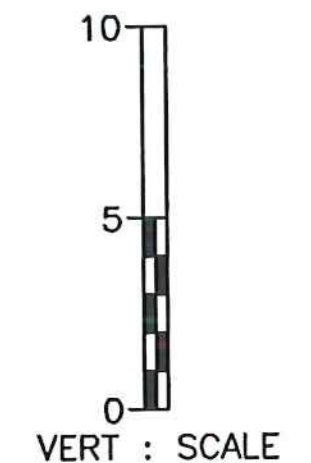
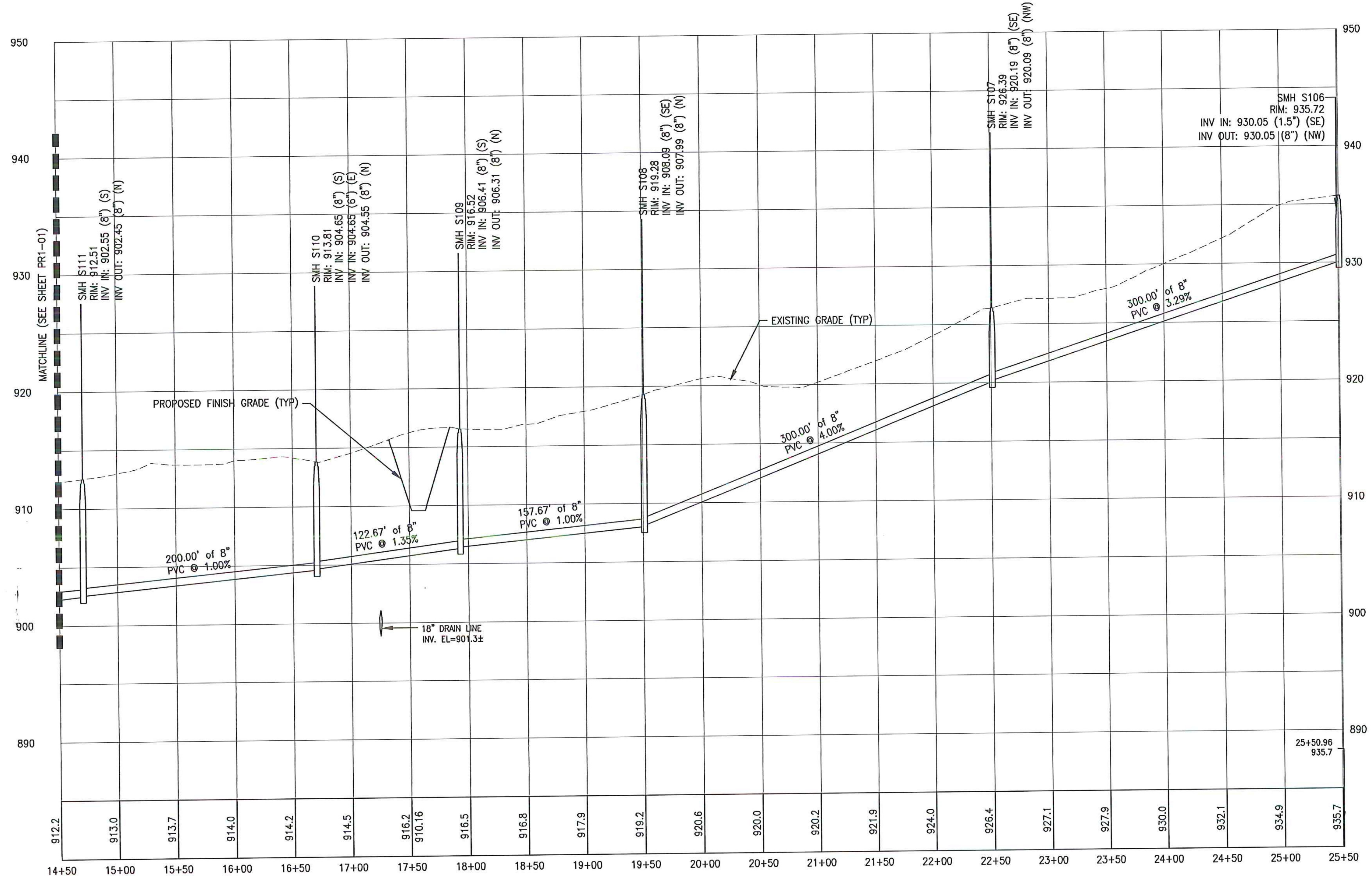
SITE 1 - SANITARY PROFILE 1



McFarland Johnson
53 REGIONAL DRIVE
CONCORD, NH 03301

SCALE: H 1:50, V 1:5	DESIGN: TCB	PR1-01 10 OF 36
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	

NOT CONSTRUCTED
AS PART OF THIS
CONTRACT.



PERMIT PLANS

REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
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NEWPORT STATE AIRPORT
COVENTRY, VERMONT
NEWPORT WASTEWATER

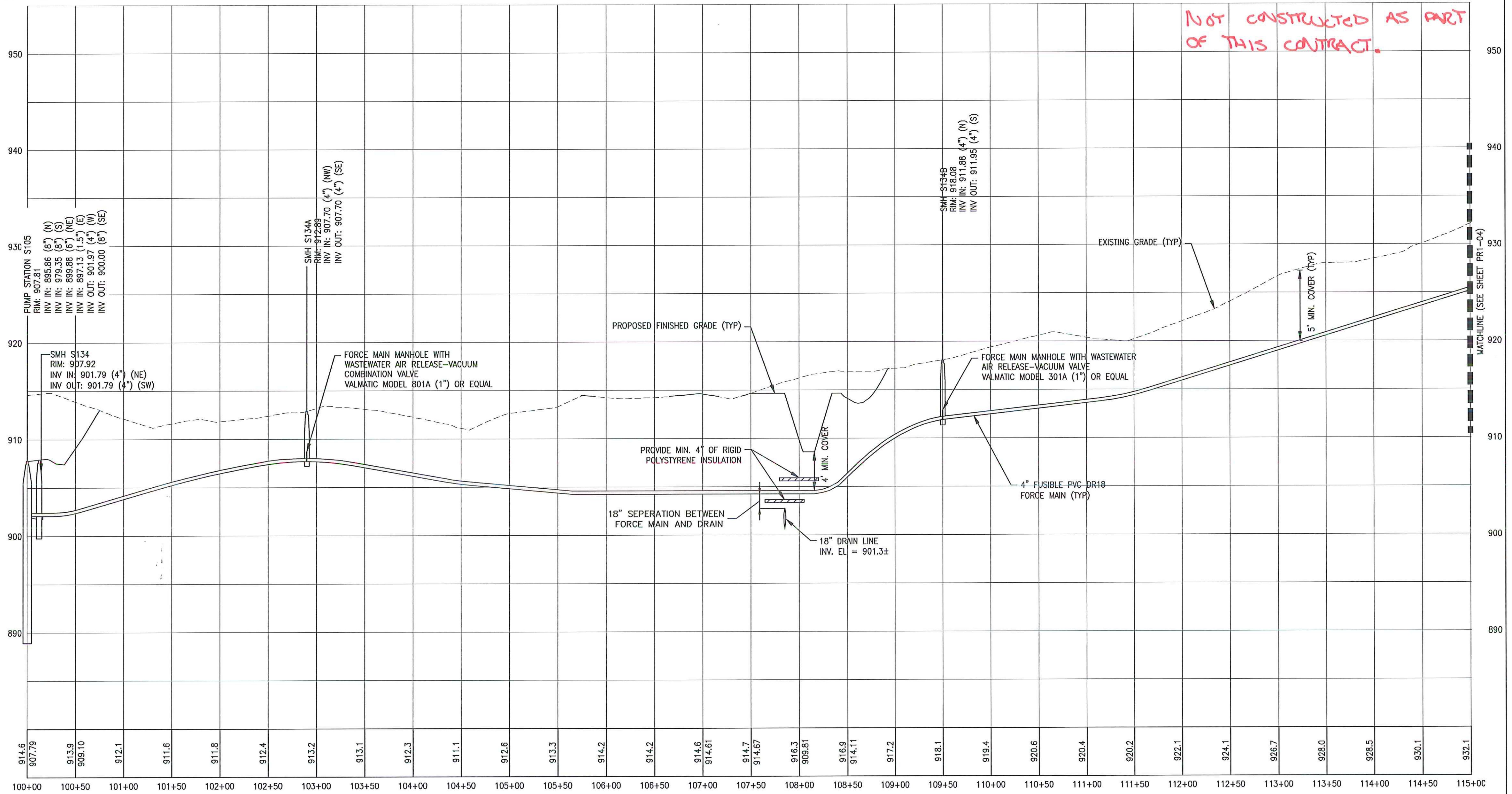
SITE 1 - SANITARY PROFILE 2



McFarland Johnson
53 REGIONAL DRIVE
CONCORD, NH 03301

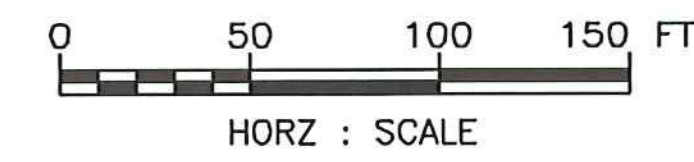
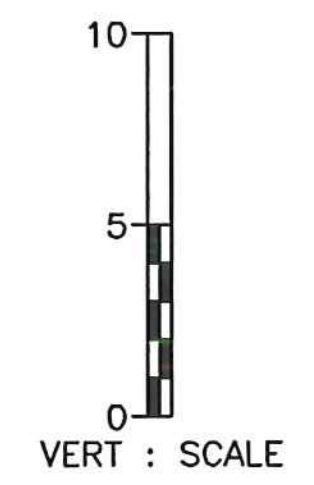
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DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	

NOT CONSTRUCTED AS PART OF THIS CONTRACT.



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PERMIT PLANS

5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH
REV	DATE	DESCRIPTION	BY

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NEWPORT STATE AIRPORT
COVENTRY, VERMONT
NEWPORT WASTEWATER

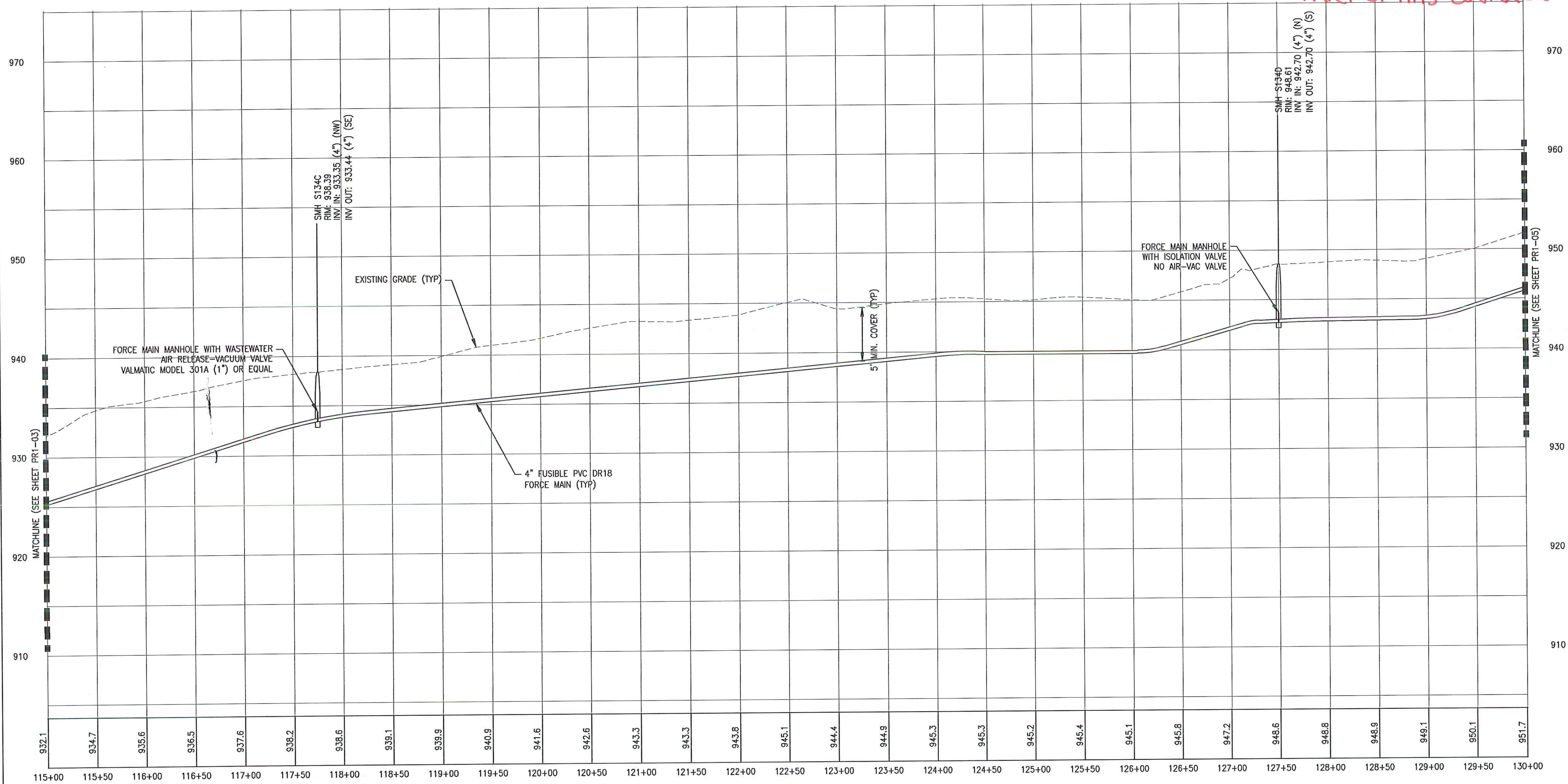
SITE 1 - SANITARY PROFILE 3



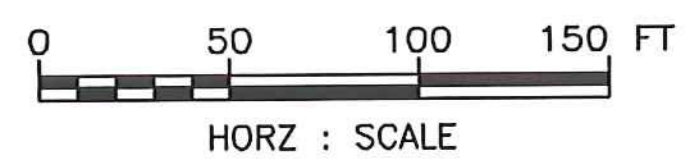
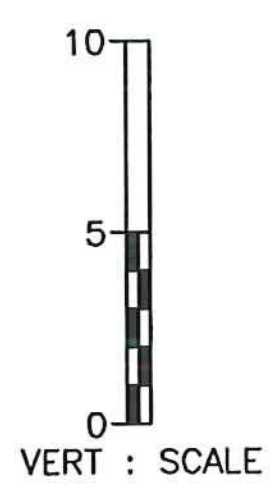
McFarland Johnson
53 REGIONAL DRIVE
CONCORD, NH 03301

SCALE: H 1:50, V 1:5	DESIGN: TCB	PR1-03 12 OF 36
DRAWN: MTF	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	

NOT CONSTRUCTED AS PART OF THIS CONTRACT.



932.1 934.7 935.6 936.5 937.6 938.2 938.6 939.1 939.9 940.9 941.6 942.6 943.3 943.3 943.8 945.1 944.4 944.9 945.3 945.3 945.2 945.4 945.1 945.8 947.2 948.6 948.8 948.9 949.1 950.1 951.7



PERMIT PLANS

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECT DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH
REV	DATE	DESCRIPTION	BY

NEWPORT STATE AIRPORT
COVENTRY, VERMONT
NEWPORT WASTEWATER

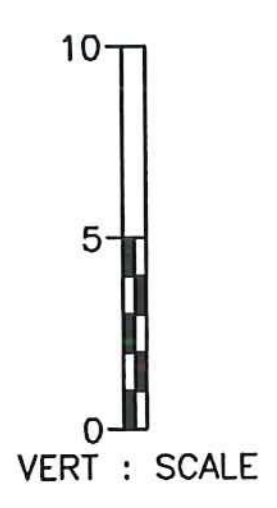
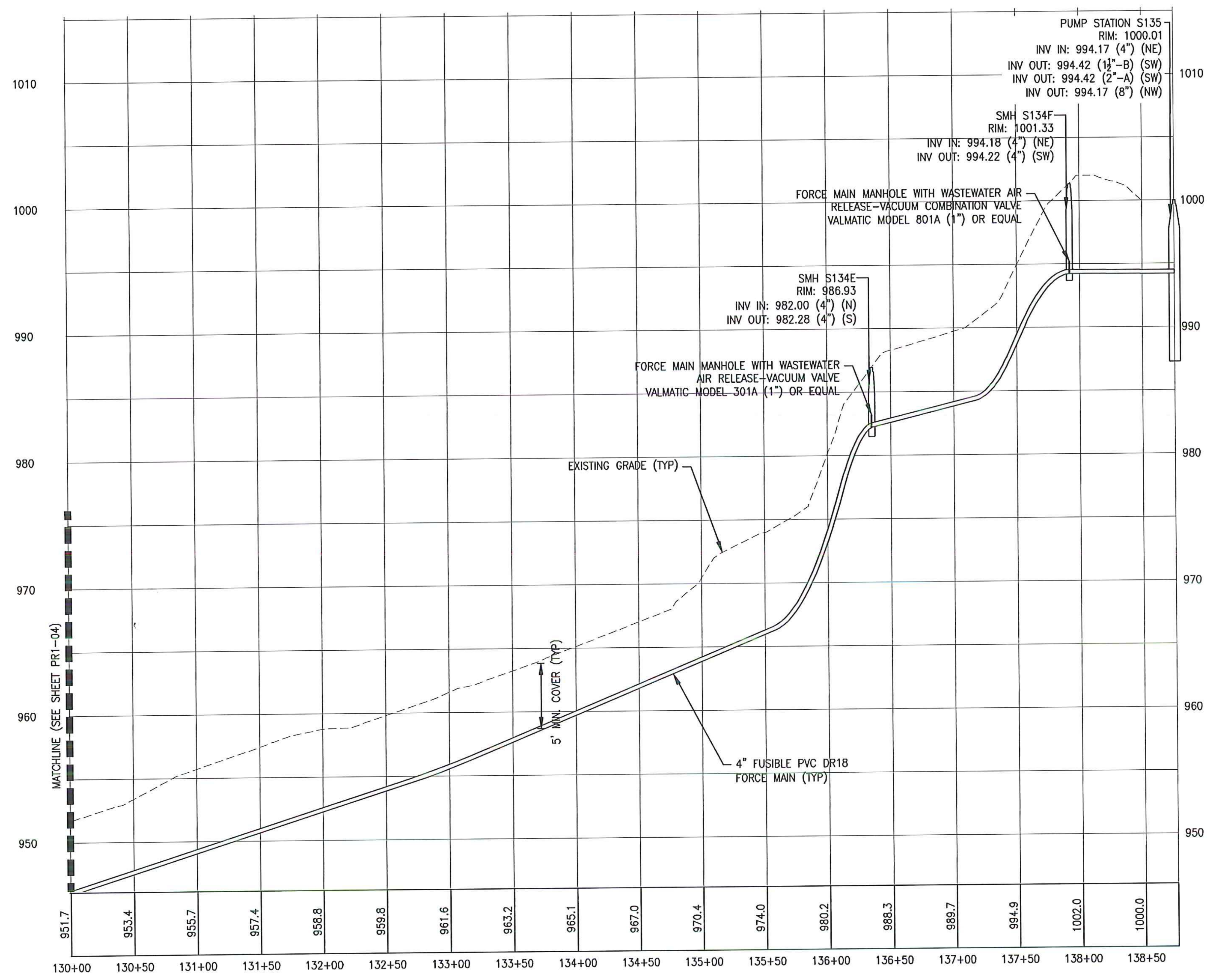
SITE 1 - SANITARY PROFILE 4



McFarland Johnson
53 REGIONAL DRIVE
CONCORD, NH 03301

SCALE: H 1:50, V 1:5	DESIGN: TCB	PR1-04 13 OF 36
DRAWN: MTF	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	

NOT CONSTRUCTED AS
PART OF THIS CONTRACT.



PERMIT PLANS

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REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

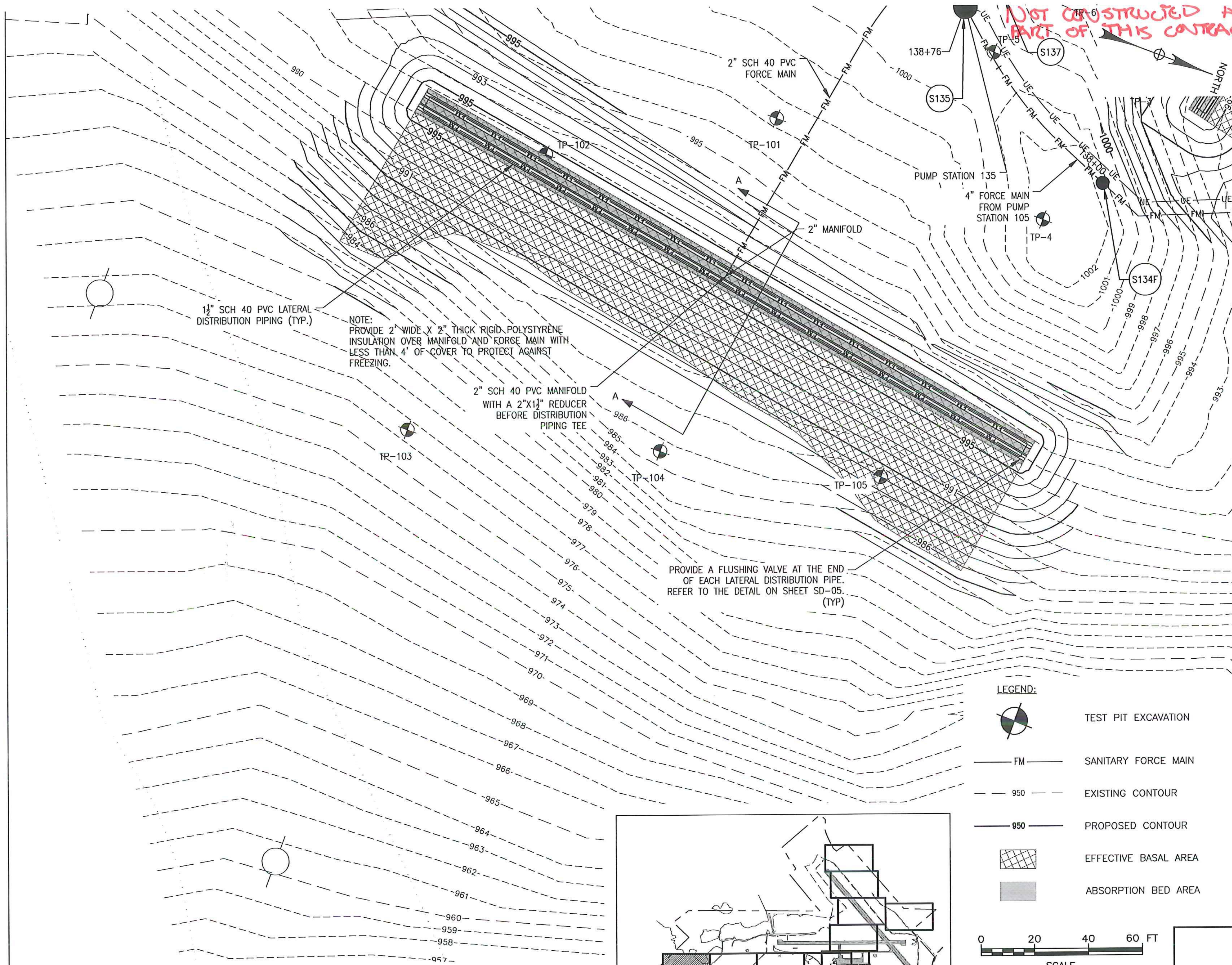
NEWPORT STATE AIRPORT
COVENTRY, VERMONT
NEWPORT WASTEWATER
SITE 1 - SANITARY PROFILE 5



McFarland Johnson
53 REGIONAL DRIVE
CONCORD, NH 03301

SCALE: H 1:50, V 1:5	DESIGN: TCB	PR1-05 14 OF 36
DRAWN: MTF	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	

NOT CONSTRUCTED AS PART OF THIS CONTRACT.



MOUND A:

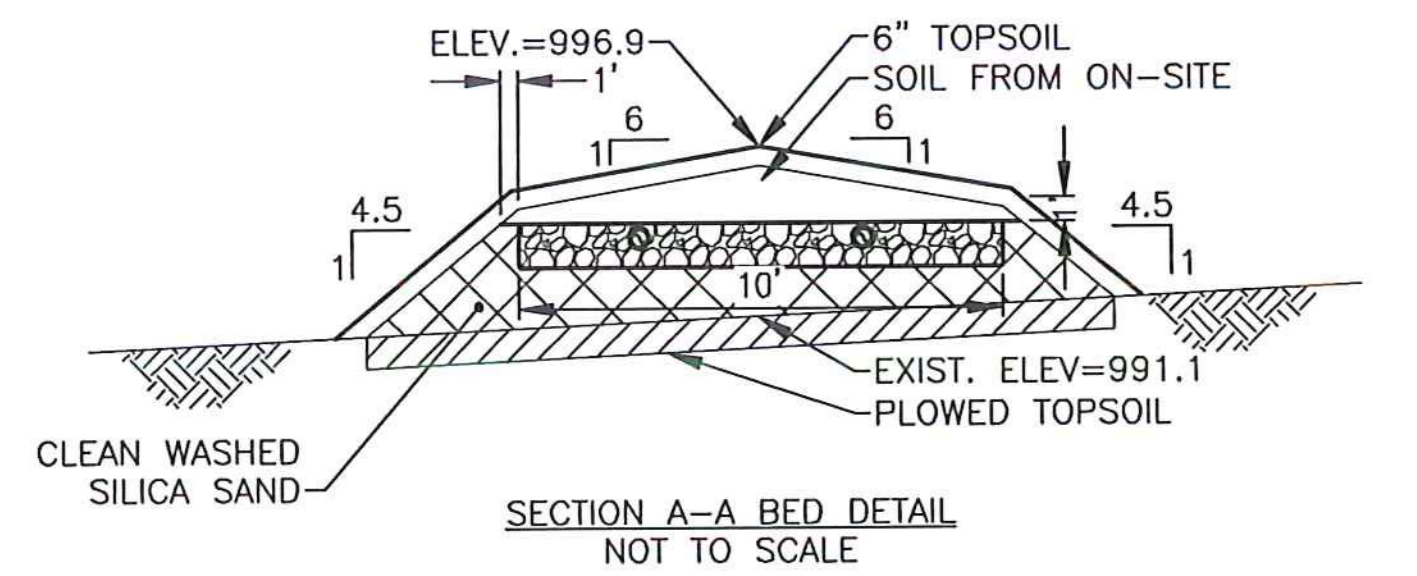
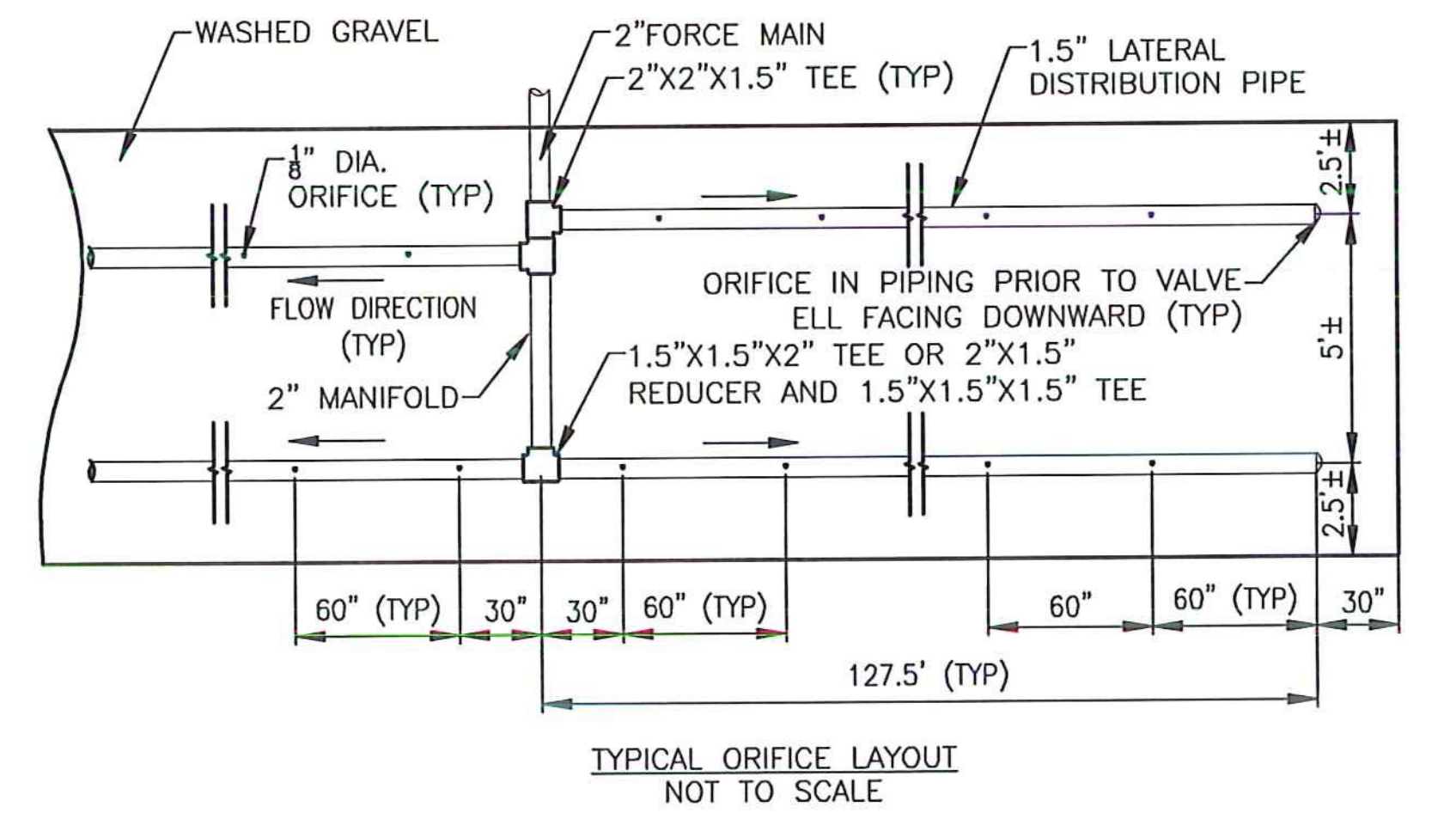
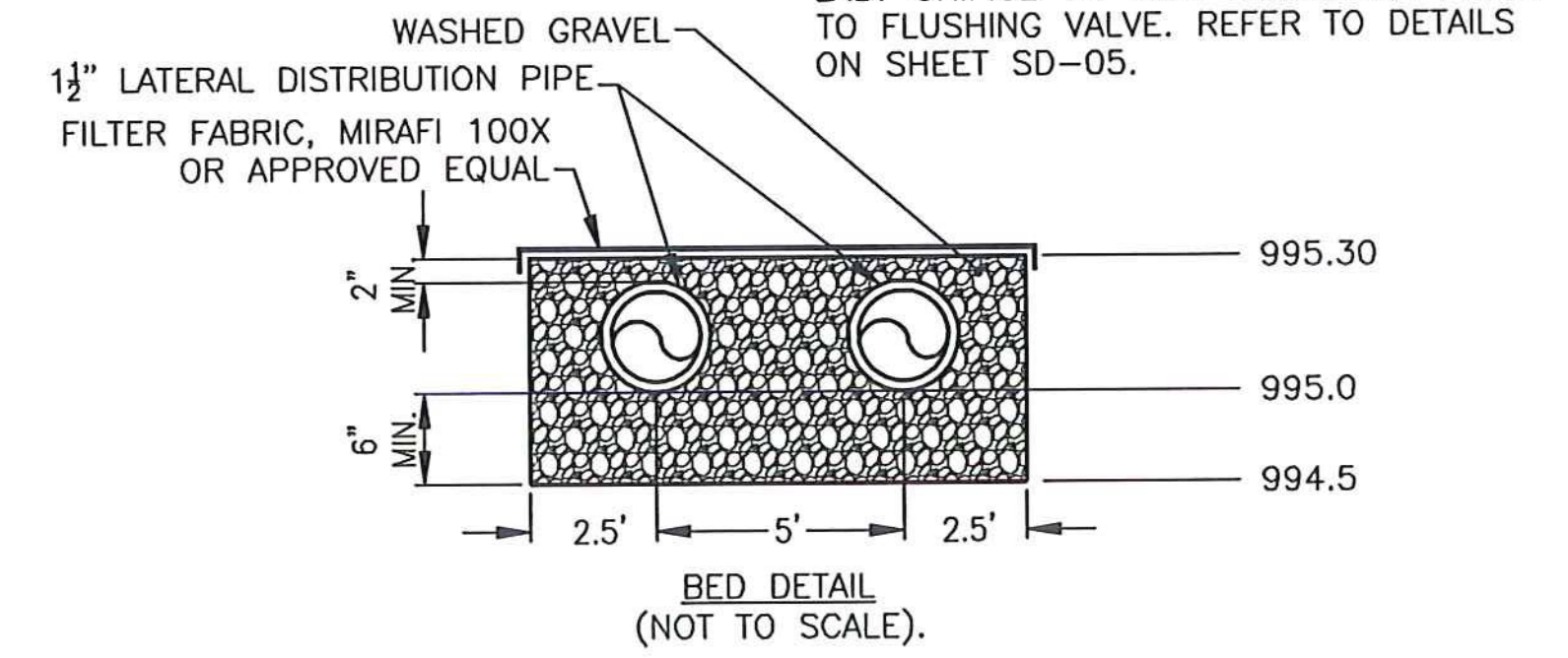
Q = 2,600 GAL/DAY
 MIN. BASAL AREA = 10,833 SF
 APPLICATION RATE = 0.24 GPD/SF
 AREA PROVIDED = 11,828 SF

BED:
 LENGTH = 260'
 WIDTH = 10'
 AREA = 2,600 SF

LATERAL PIPING & ORIFICES:
 PROVIDE 1/2" HOLES @ 60" SPACING TO PROVIDE MAX 25SF PER ORIFICE.
 TOTAL NUMBER OF ORIFICES = 104 (26 PER LATERAL)

MOST ORIFICES TO FACE UPWARD WITH ORIFICE SHIELD. PROVIDE DOWNWARD ORIFICE EVERY 4± ORIFICES TO ALLOW FOR DRAINAGE OF THE SYSTEM.

LAST ORIFICE TO FACE DOWNWARD PRIOR TO FLUSHING VALVE. REFER TO DETAILS ON SHEET SD-05.

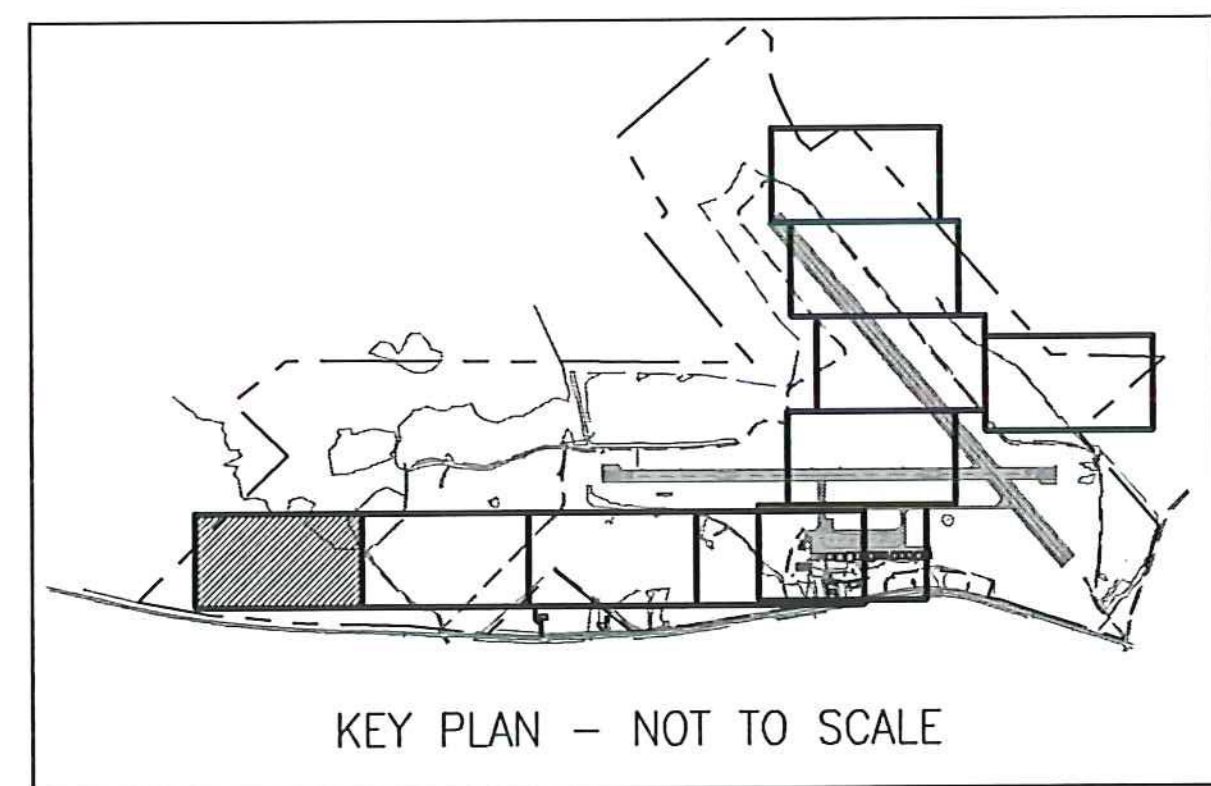
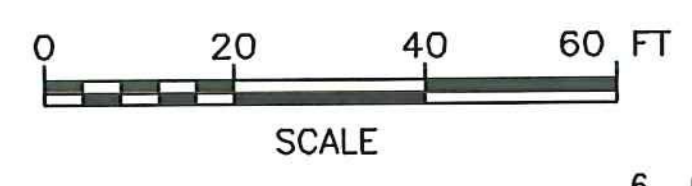


WASHED GRAVEL:
 WASHED GRAVEL SHALL MEET THE REQUIREMENTS OF THE STATE OF VERMONT, AGENCY OF NATURAL RESOURCES', ENVIRONMENTAL PROTECTION RULES, CHAPTER 1, WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES DEFINITION OF "CRUSHED STONE"; CLEAN DURABLE STONE 3/4" < DIAMETER < 1-1/2"

CLEAN WASHED SILICA SAND:
 CLEAN WASHED SILICA SAND SHALL MEET THE REQUIREMENTS OF THE STATE OF VERMONT, AGENCY OF NATURAL RESOURCES', ENVIRONMENTAL PROTECTION RULES, CHAPTER 1, WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES, SECTION 1-913(C).

LEGEND:

- TEST PIT EXCAVATION
- FM SANITARY FORCE MAIN
- 950 EXISTING CONTOUR
- 950 PROPOSED CONTOUR
- EFFECTIVE BASAL AREA
- ABSORPTION BED AREA



LOCATION	S.H.W.T.		IMPEDING SOILS (I)		BEDROCK (BR)	GROUND WATER	LIMITING CONDITION	
	MOTTLES	DEPTH (FT)	TYPE	DEPTH (FT)	DEPTH (FT)	DEPTH (FT)	DEPTH (FT)	TYPE
TP-4		2.3	SILT LOAM, FIRM MASSIVE	1.3	4.2	>4.2	1.3	I
TP-5	YES	2.2	SILT LOAM, FIRM MASSIVE	1.2	3.0	>3.0	1.2	I
TP-101	YES	1.6	BEDROCK	>2.0	2.0	2.0	1.6	SWHT
TP-102	YES	2.2	FIRM SILT LOAM	2.2	2.2	>2.2	2.2	I, SWHT
TP-103	YES	2.4	FIRM SILT LOAM	2.4	>4.5	>4.5	2.4	I, SWHT
TP-104	YES	2.2	FIRM SILT LOAM	2.3	2.9	>2.9	2.2	SWHT
TP-105	NO	>2.2	NONE	2.2	2.2	>2.2	2.2	BR



PERMIT PLANS

6	6/15/15	INSULATION CHANGES	BLS
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH
REV	DATE	DESCRIPTION	BY

McFarland Johnson
 53 REGIONAL DRIVE
 CONCORD, NH 03301

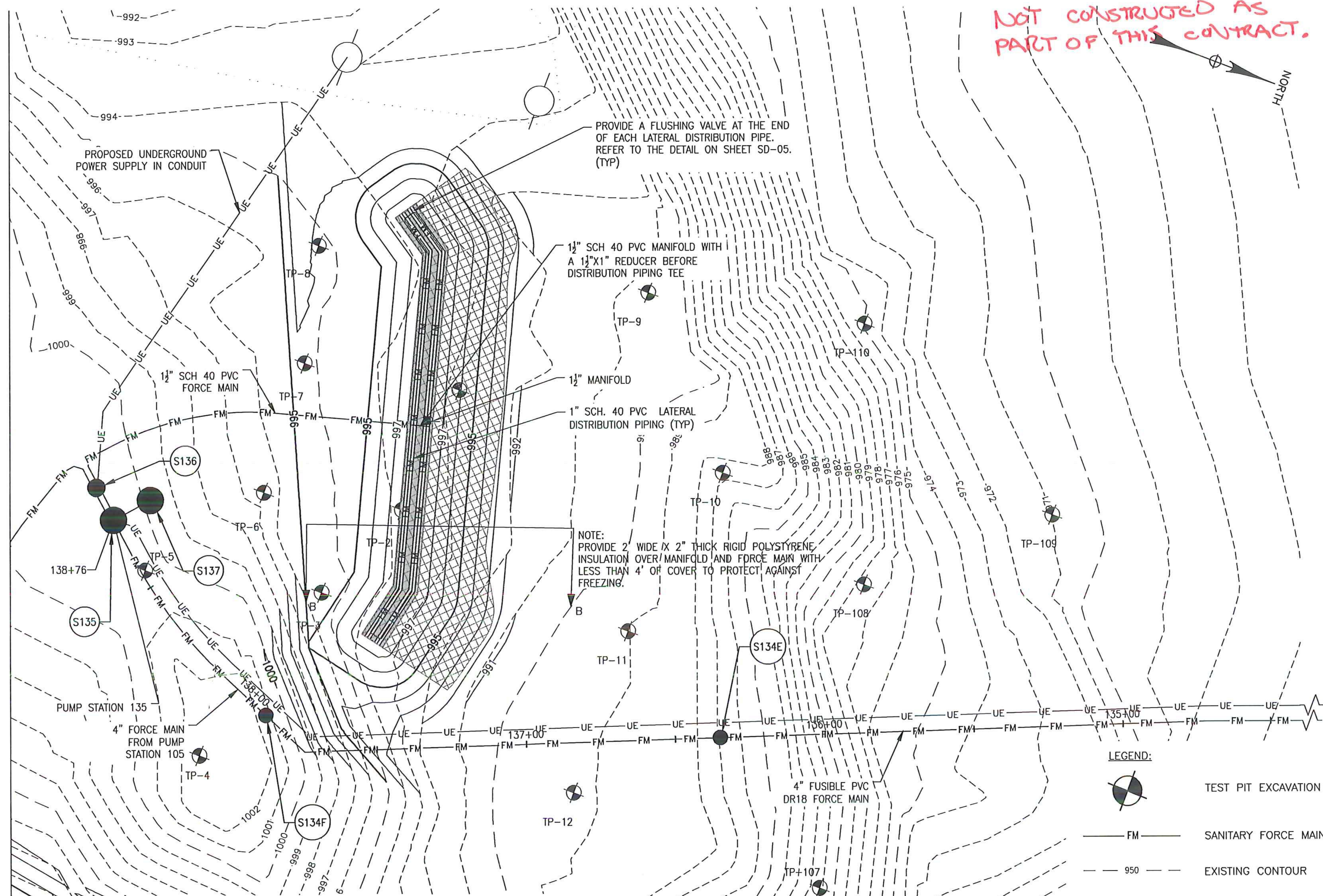
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NEWPORT STATE AIRPORT
 COVENTRY, VERMONT
 NEWPORT WASTEWATER

SITE 1 - MOUND A DETAIL

SCALE: 1" = 20'	DESIGN: TCB	MD1-01 15 of 36
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	

NOT CONSTRUCTED AS PART OF THIS CONTRACT.



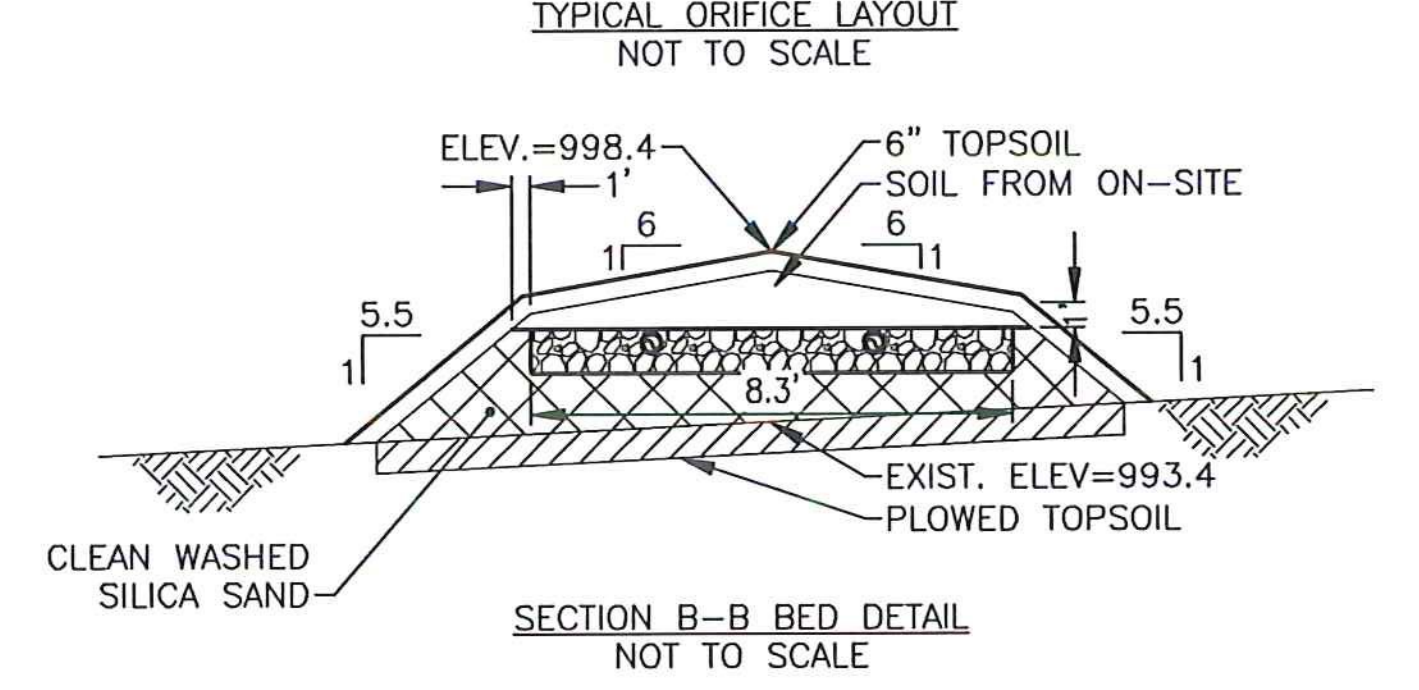
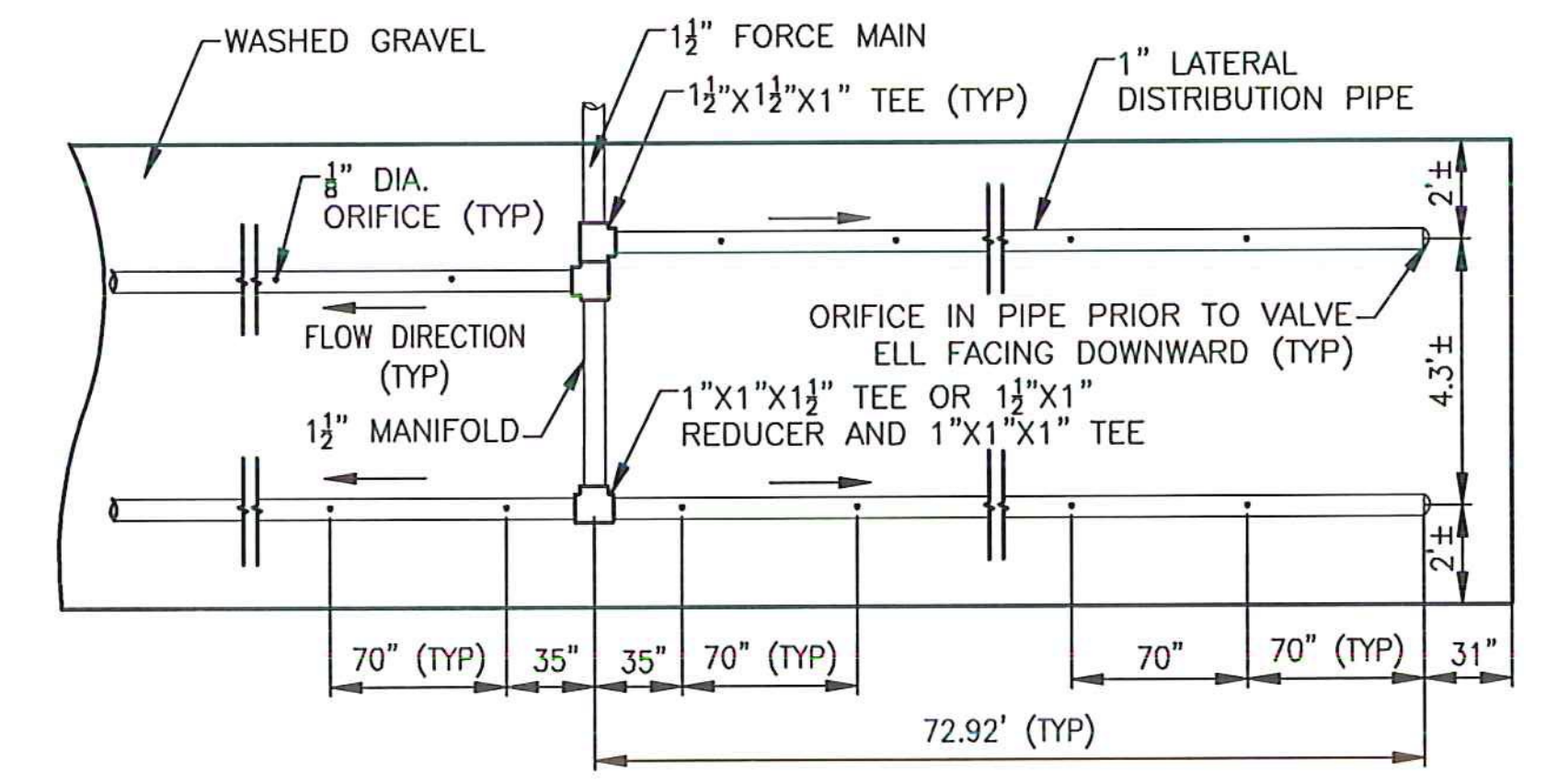
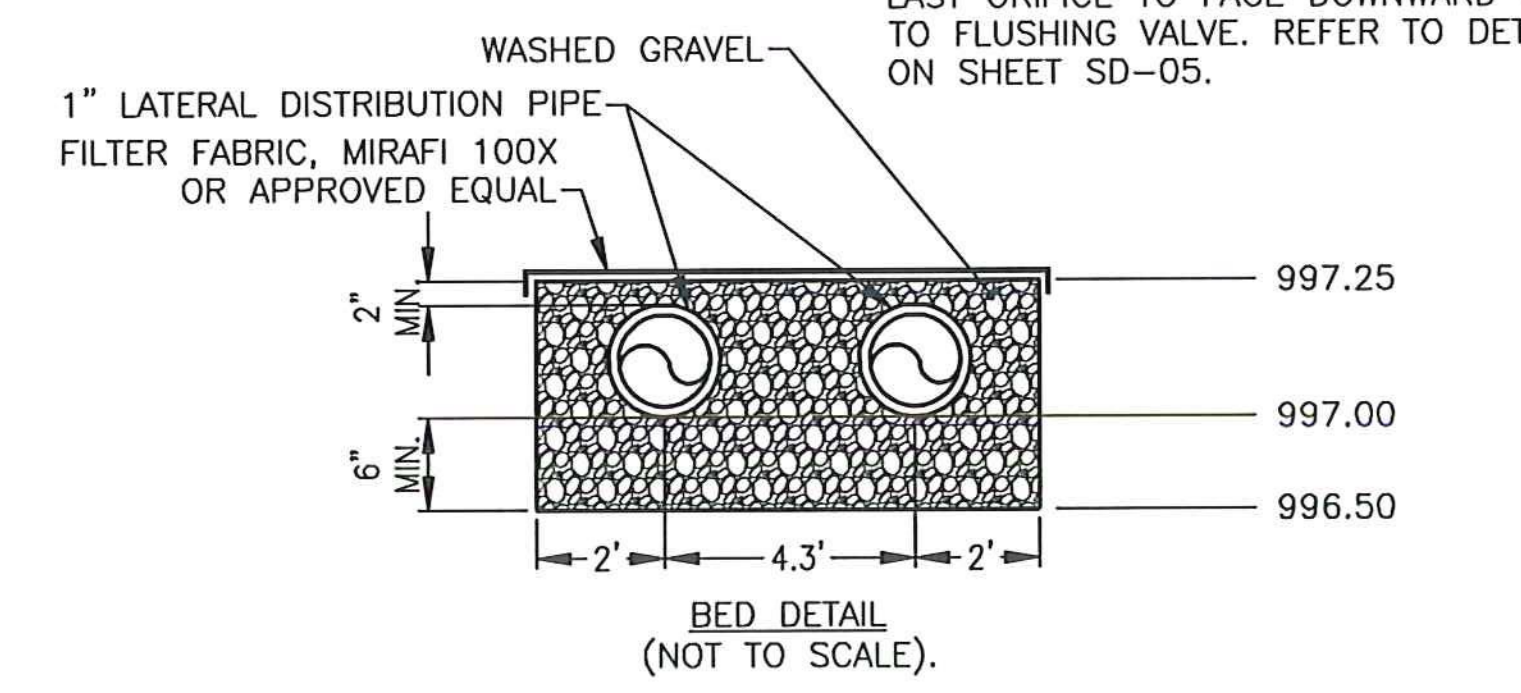
MOUND B:
 Q = 1,210 GAL/DAY
 MIN. BASAL AREA = 5,042 SF
 APPLICATION RATE = 0.24 GPD/SF
 AREA PROVIDED = 5,171 SF

BED:
 LENGTH = 151'
 WIDTH = 8.3'
 AREA = 1,253 SF

LATERAL PIPING & ORIFICES:
 PROVIDE 1/8" HOLES @ 70" SPACING TO PROVIDE MAX 25SF PER ORIFICE.
 TOTAL NUMBER OF ORIFICES = 52 (13 PER LATERAL)

MOST ORIFICES TO FACE UPWARD WITH ORIFICE SHIELD. PROVIDE DOWNWARD ORIFICE EVERY 4± ORIFICES TO ALLOW FOR DRAINAGE OF THE SYSTEM.

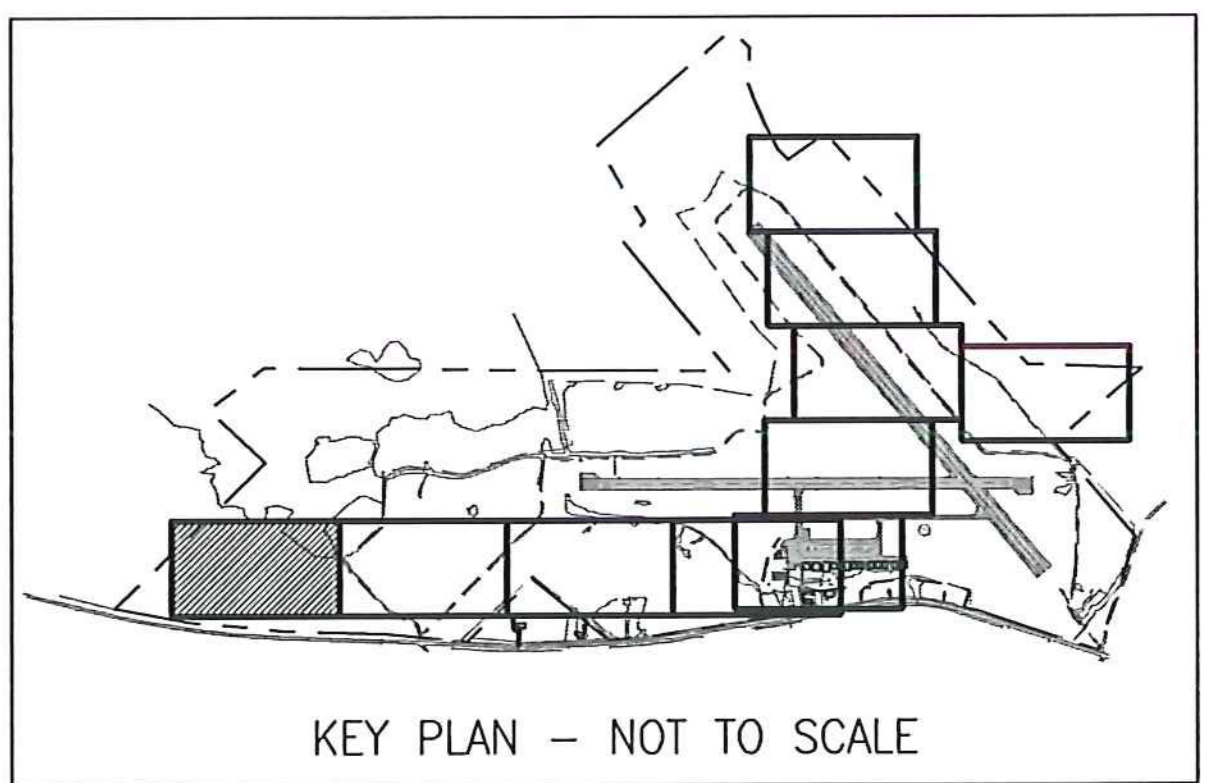
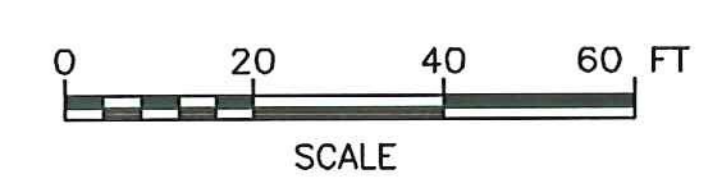
LAST ORIFICE TO FACE DOWNWARD PRIOR TO FLUSHING VALVE. REFER TO DETAILS ON SHEET SD-05.



WASHED GRAVEL:
 WASHED GRAVEL SHALL MEET THE REQUIREMENTS OF THE STATE OF VERMONT, AGENCY OF NATURAL RESOURCES', ENVIRONMENTAL PROTECTION RULES, CHAPTER 1, WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES DEFINITION OF "CRUSHED STONE"; CLEAN DURABLE STONE 3/4" < DIAMETER < 1-1/2"

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 CLEAN WASHED SILICA SAND SHALL MEET THE REQUIREMENTS OF THE STATE OF VERMONT, AGENCY OF NATURAL RESOURCES', ENVIRONMENTAL PROTECTION RULES, CHAPTER 1, WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES, SECTION 1-913(C).

- LEGEND:**
- TEST PIT EXCAVATION
 - SANITARY FORCE MAIN
 - EXISTING CONTOUR
 - PROPOSED CONTOUR
 - EFFECTIVE BASAL AREA
 - ABSORPTION BED AREA



LOCATION	S.H.W.T.		IMPEDING SOILS (I)		BEDROCK (BR)	GROUND WATER	LIMITING CONDITION	
	MOTTLES	DEPTH (FT)	TYPE	DEPTH (FT)			DEPTH (FT)	DEPTH (FT)
TP-1	YES	2.3	SILT LOAM, FIRM MASSIVE	1.3	4.3	>4.3	1.3	I
TP-2	YES	2.5	SILT LOAM, FIRM MASSIVE	1.3	4.2	>4.2	1.3	I
TP-3	YES	2.3	SILT LOAM, FIRM MASSIVE	1.3	4.0	>4.0	1.3	I
TP-4	YES	2.3	SILT LOAM, FIRM MASSIVE	1.3	4.2	>4.2	1.3	I
TP-5	YES		SILT LOAM, FIRM MASSIVE	1.2	3.0	>3.0	1.2	I
TP-6	YES	2.5	SILT LOAM, FIRM MASSIVE	1.5	5.0	>5.0	1.5	I
TP-7	YES	2.7	SILT LOAM, FIRM MASSIVE	1.2	3.5	>3.5	1.2	I
TP-8	YES	2.3	SILT LOAM, FIRM MASSIVE	1.2	3.0	>3.0	1.2	I
TP-9	YES	2.5	FINE SANDY LOAM, FIRM MASSIVE	2.5	4.7	>4.7	2.5	I, SWHT
TP-10	YES	2.3	SILT LOAM, FIRM MASSIVE	1.3	4.0	>4.0	1.3	I
TP-11	NO	>2.0	NONE	>2.0	2.0	>2.0	2.0	BR
TP-12	YES	2.7	FINE SANDY LOAM, FIRM MASSIVE	2.7	6.0	>6.0	2.7	I, SWHT
TP-107	NO	>0.7	NONE	>0.7	0.7	>0.7	0.7	BR
TP-108	YES	1.3	FIRM SILT LOAM	1.5	2.2	>2.2	1.3	SWHT
TP-109	YES	1.8	FIRM SILT LOAM	1.9	>5.5	>5.5	1.8	SWHT
TP-110	NO	>2.0	NONE	>2.0	2.0	>2.0	2.0	BR
TP-111	NO	>0.3	NONE	>0.3	0.3	>0.3	0.3	BR
TP-112	NO	>0.5	NONE	>0.5	0.5	>0.5	0.5	BR

PERMIT PLANS

6	6/15/15	INSULATION CHANGES	BLS
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH
REV	DATE	DESCRIPTION	BY

McFarland Johnson
 53 REGIONAL DRIVE
 CONCORD, NH 03301

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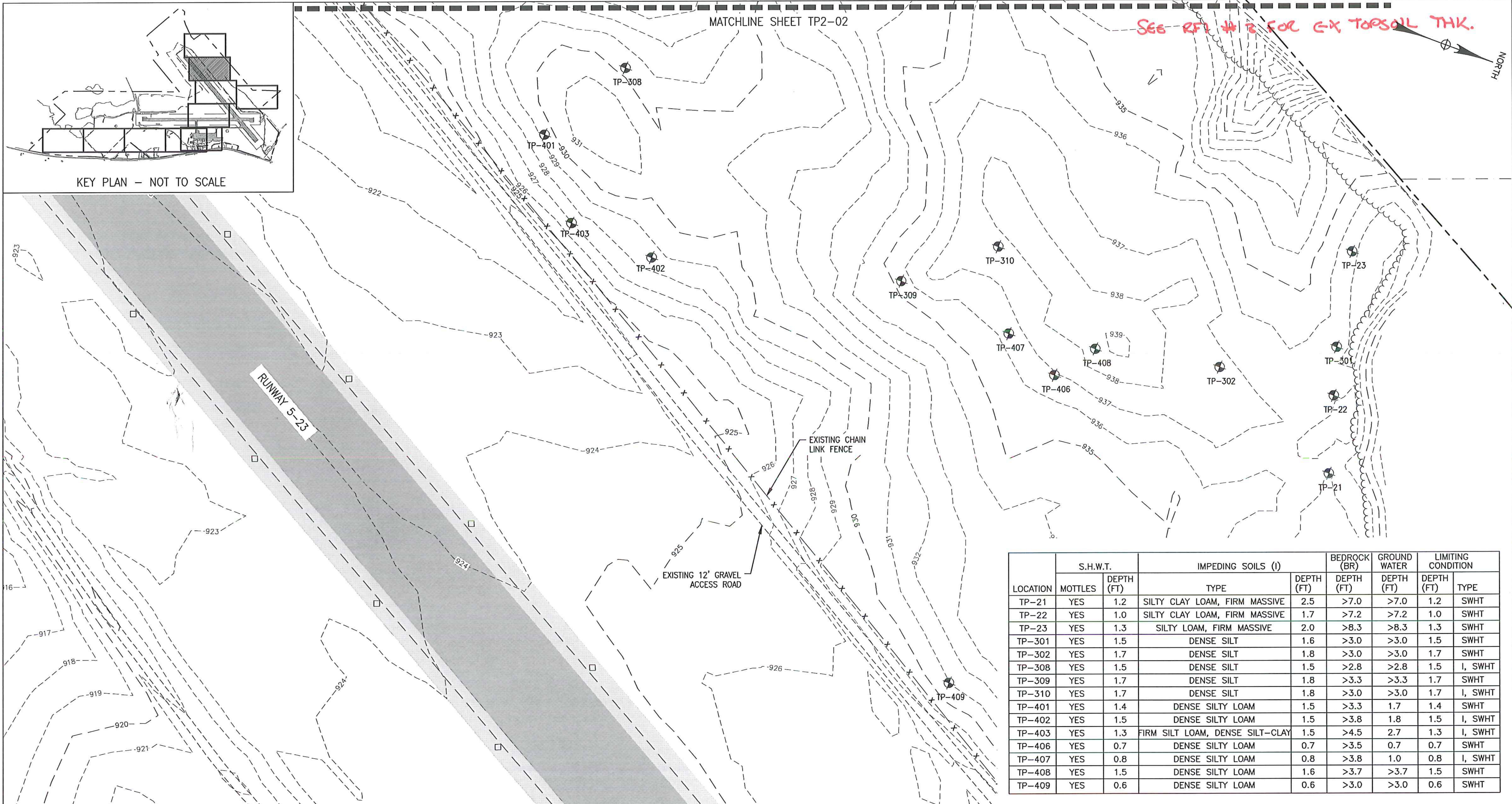
NEWPORT STATE AIRPORT
 COVENTRY, VERMONT
 NEWPORT WASTEWATER

SITE 1 - MOUND B DETAIL

SCALE: 1" = 20'	DESIGN: TCB	MD1-02
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	

16 OF 36





LOCATION	S.H.W.T.		IMPEDING SOILS (I)		BEDROCK (BR)	GROUND WATER	LIMITING CONDITION	
	MOTTLES	DEPTH (FT)	TYPE	DEPTH (FT)	DEPTH (FT)	DEPTH (FT)	DEPTH (FT)	TYPE
TP-21	YES	1.2	SILTY CLAY LOAM, FIRM MASSIVE	2.5	>7.0	>7.0	1.2	SWHT
TP-22	YES	1.0	SILTY CLAY LOAM, FIRM MASSIVE	1.7	>7.2	>7.2	1.0	SWHT
TP-23	YES	1.3	SILTY LOAM, FIRM MASSIVE	2.0	>8.3	>8.3	1.3	SWHT
TP-301	YES	1.5	DENSE SILT	1.6	>3.0	>3.0	1.5	SWHT
TP-302	YES	1.7	DENSE SILT	1.8	>3.0	>3.0	1.7	SWHT
TP-308	YES	1.5	DENSE SILT	1.5	>2.8	>2.8	1.5	I, SWHT
TP-309	YES	1.7	DENSE SILT	1.8	>3.3	>3.3	1.7	SWHT
TP-310	YES	1.7	DENSE SILT	1.8	>3.0	>3.0	1.7	I, SWHT
TP-401	YES	1.4	DENSE SILTY LOAM	1.5	>3.3	1.7	1.4	SWHT
TP-402	YES	1.5	DENSE SILTY LOAM	1.5	>3.8	1.8	1.5	I, SWHT
TP-403	YES	1.3	FIRM SILT LOAM, DENSE SILT-CLAY	1.5	>4.5	2.7	1.3	I, SWHT
TP-406	YES	0.7	DENSE SILTY LOAM	0.7	>3.5	0.7	0.7	SWHT
TP-407	YES	0.8	DENSE SILTY LOAM	0.8	>3.8	1.0	0.8	I, SWHT
TP-408	YES	1.5	DENSE SILTY LOAM	1.6	>3.7	>3.7	1.5	SWHT
TP-409	YES	0.6	DENSE SILTY LOAM	0.6	>3.0	>3.0	0.6	SWHT

SCHEDULE B - WASTEWATER SYSTEM - BID SET
 VTRANS PROJECT #AV1157046-301
 JUNE 2016

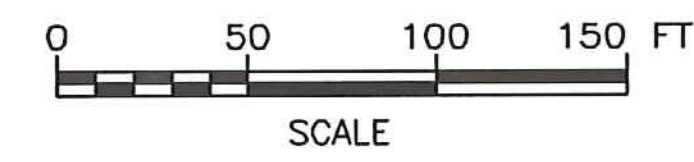
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REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

NEWPORT STATE AIRPORT
 COVENTRY, VERMONT
 NEWPORT WASTEWATER
 SITE 2 - TEST PIT LOCATION PLAN 1

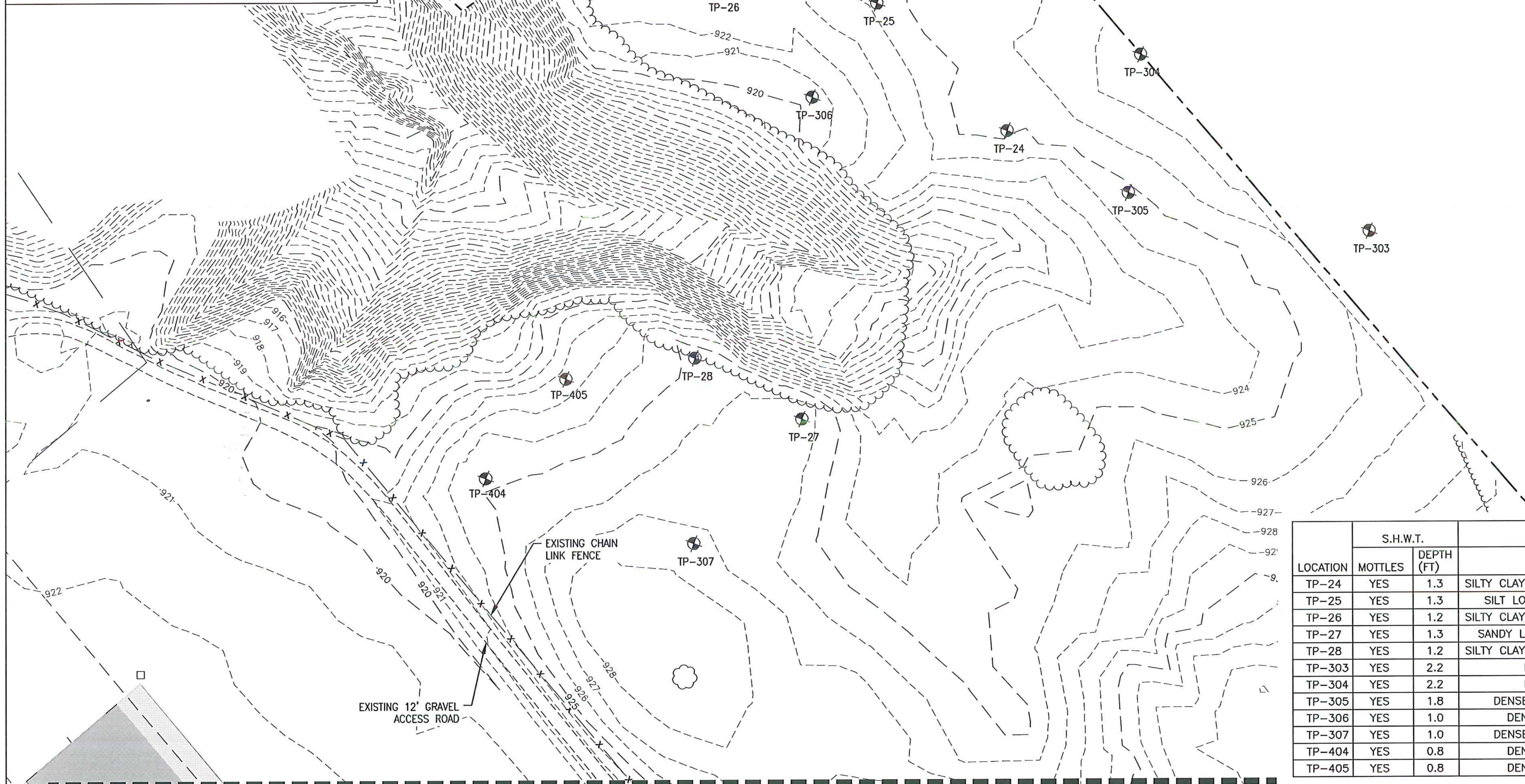
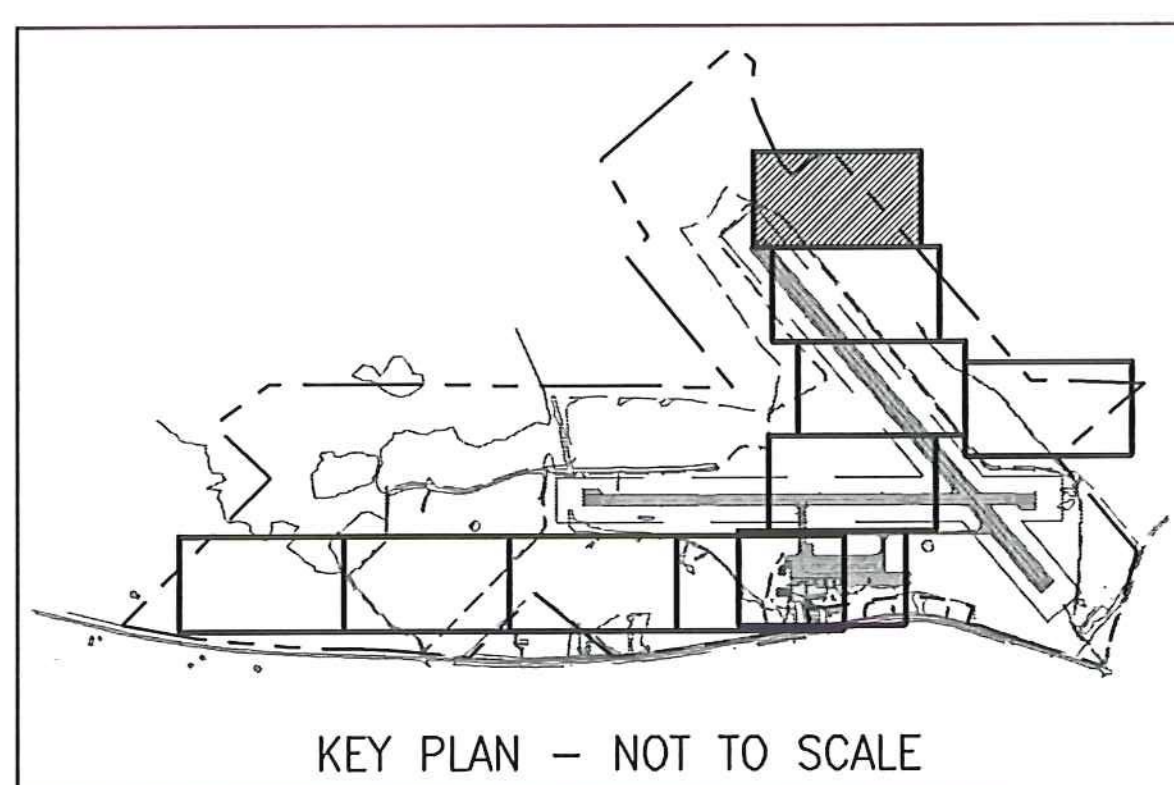
SCALE: 1" = 50'
 DRAWN: TCB
 CHECKED: BLS
 DESIGN: TCB
 PROJECT: 17958.01
 DATE: JUNE, 2014
 TP2-01
 17 OF 36

- LEGEND:
- TEST PIT
 - EXISTING CONTOUR
 - PROPERTY LINE
 - WETLAND
 - TREE LINE



McFarland Johnson
 53 REGIONAL DRIVE
 CONCORD, NH 03301

SEE RFI #3 FOR EX. TOPSOIL THK.



LOCATION	S.H.W.T.		IMPEDING SOILS (I)		BEDROCK	GROUND WATER	LIMITING CONDITION	
	MOTTLES	DEPTH (FT)	TYPE	DEPTH (FT)	DEPTH (FT)	DEPTH (FT)	DEPTH (FT)	TYPE
TP-24	YES	1.3	SILTY CLAY LOAM, FIRM MASSIVE	2.2	>4.5	>4.5	1.3	SWHT
TP-25	YES	1.3	SILT LOAM, FIRM MASSIVE	2.0	>7.0	>7.0	1.3	SWHT
TP-26	YES	1.2	SILTY CLAY LOAM, FIRM MASSIVE	1.8	>1.8	>1.8	1.2	SWHT
TP-27	YES	1.3	SANDY LOAM, FIRM MASSIVE	1.8	>7.0	>7.0	1.3	SWHT
TP-28	YES	1.2	SILTY CLAY LOAM, FIRM MASSIVE	1.8	>7.2	>7.2	1.2	SWHT
TP-303	YES	2.2	DENSE SILT	2.3	>3.5	>3.5	2.2	SWHT
TP-304	YES	2.2	DENSE SILT	2.3	>3.5	>3.5	2.2	SWHT
TP-305	YES	1.8	DENSE SILT AND CLAY	1.8	>4.0	>4.0	1.8	I, SWHT
TP-306	YES	1.0	DENSE SILT LOAM	1.2	>4.0	>4.0	1.0	SWHT
TP-307	YES	1.0	DENSE SILT AND CLAY	1.0	>2.0	>2.0	1.0	I, SWHT
TP-404	YES	0.8	DENSE SILT LOAM	0.8	>4.0	1.2	0.8	I, SWHT
TP-405	YES	0.8	DENSE SILT LOAM	0.8	>4.0	2.5	0.8	I, SWHT

SCHEDULE B - WASTEWATER SYSTEM - BID SET
VTRANS PROJECT #AV1157046-301
JUNE 2016

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REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

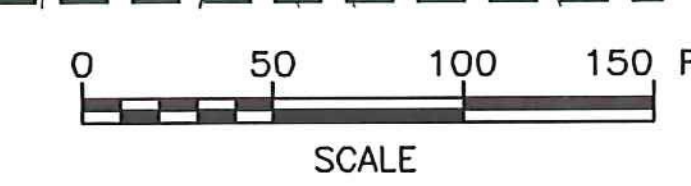
NEWPORT STATE AIRPORT
COVENTRY, VERMONT
NEWPORT WASTEWATER

SITE 2 - TEST PIT LOCATION PLAN 2

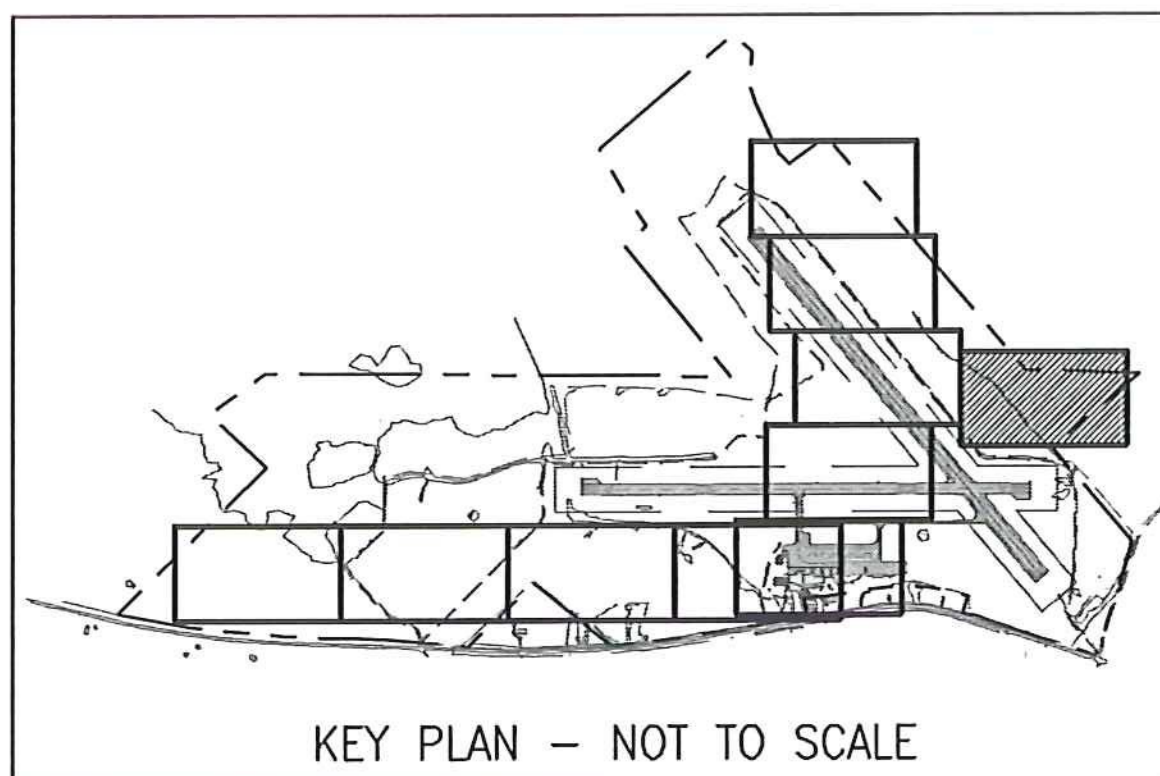
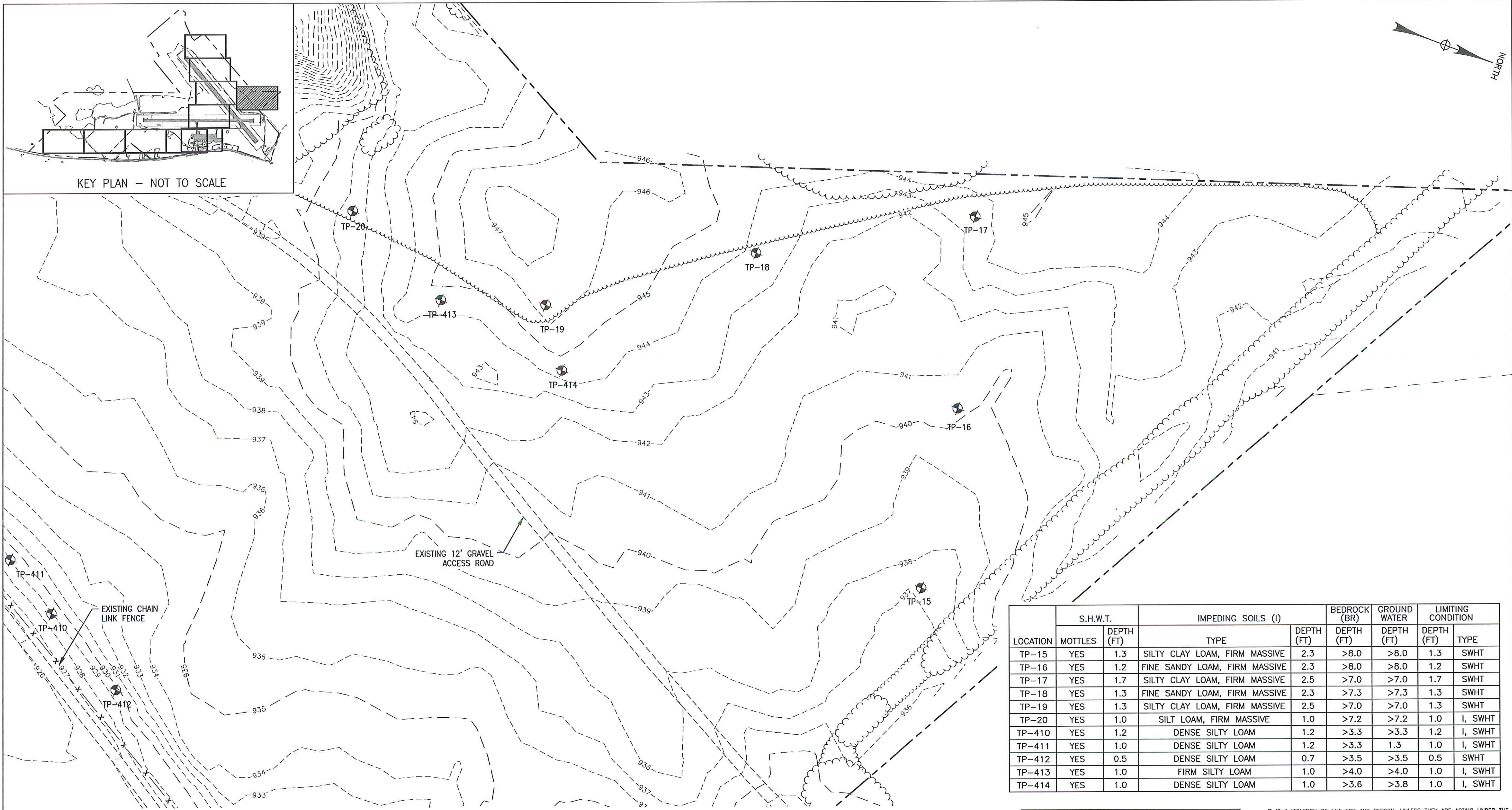
SCALE: 1" = 50'	DESIGN: TCB	TP2-02 18 OF 36
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	

- LEGEND:**
- TEST PIT
 - EXISTING CONTOUR
 - PROPERTY LINE
 - WETLAND
 - TREE LINE

MATCHLINE SHEET TP2-01



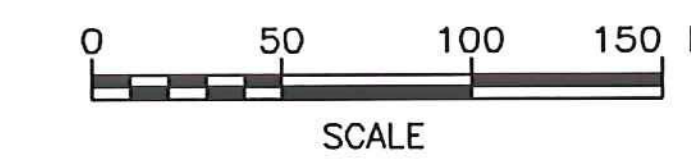
McFarland Johnson
53 REGIONAL DRIVE
CONCORD, NH 03301



LEGEND:

- TEST PIT
- EXISTING CONTOUR
- PROPERTY LINE
- WETLAND
- TREE LINE

LOCATION	S.H.W.T.		IMPEDING SOILS (I)		BEDROCK (BR)	GROUND WATER	LIMITING CONDITION	
	MOTTLES	DEPTH (FT)	TYPE	DEPTH (FT)	DEPTH (FT)	DEPTH (FT)	DEPTH (FT)	TYPE
TP-15	YES	1.3	SILTY CLAY LOAM, FIRM MASSIVE	2.3	>8.0	>8.0	1.3	SWHT
TP-16	YES	1.2	FINE SANDY LOAM, FIRM MASSIVE	2.3	>8.0	>8.0	1.2	SWHT
TP-17	YES	1.7	SILTY CLAY LOAM, FIRM MASSIVE	2.5	>7.0	>7.0	1.7	SWHT
TP-18	YES	1.3	FINE SANDY LOAM, FIRM MASSIVE	2.3	>7.3	>7.3	1.3	SWHT
TP-19	YES	1.3	SILTY CLAY LOAM, FIRM MASSIVE	2.5	>7.0	>7.0	1.3	SWHT
TP-20	YES	1.0	SILT LOAM, FIRM MASSIVE	1.0	>7.2	>7.2	1.0	I, SWHT
TP-410	YES	1.2	DENSE SILTY LOAM	1.2	>3.3	>3.3	1.2	I, SWHT
TP-411	YES	1.0	DENSE SILTY LOAM	1.2	>3.3	1.3	1.0	I, SWHT
TP-412	YES	0.5	DENSE SILTY LOAM	0.7	>3.5	>3.5	0.5	SWHT
TP-413	YES	1.0	FIRM SILTY LOAM	1.0	>4.0	>4.0	1.0	I, SWHT
TP-414	YES	1.0	DENSE SILTY LOAM	1.0	>3.6	>3.8	1.0	I, SWHT



SCHEDULE B - WASTEWATER SYSTEM - BID SET
 VTRANS PROJECT #AV1157046-301
 JUNE 2016

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECT DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

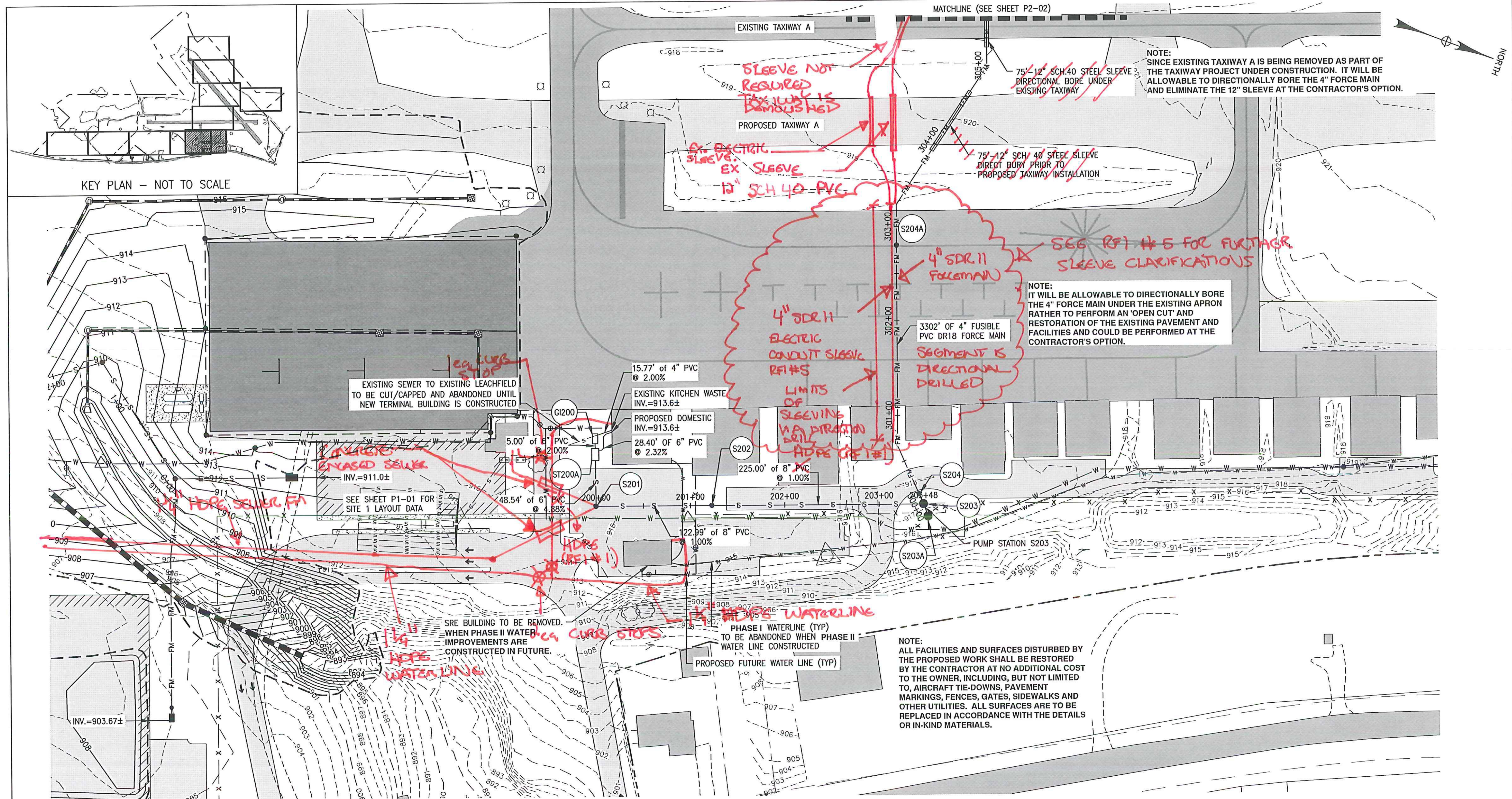
NEWPORT STATE AIRPORT
 COVENTRY, VERMONT
 NEWPORT WASTEWATER

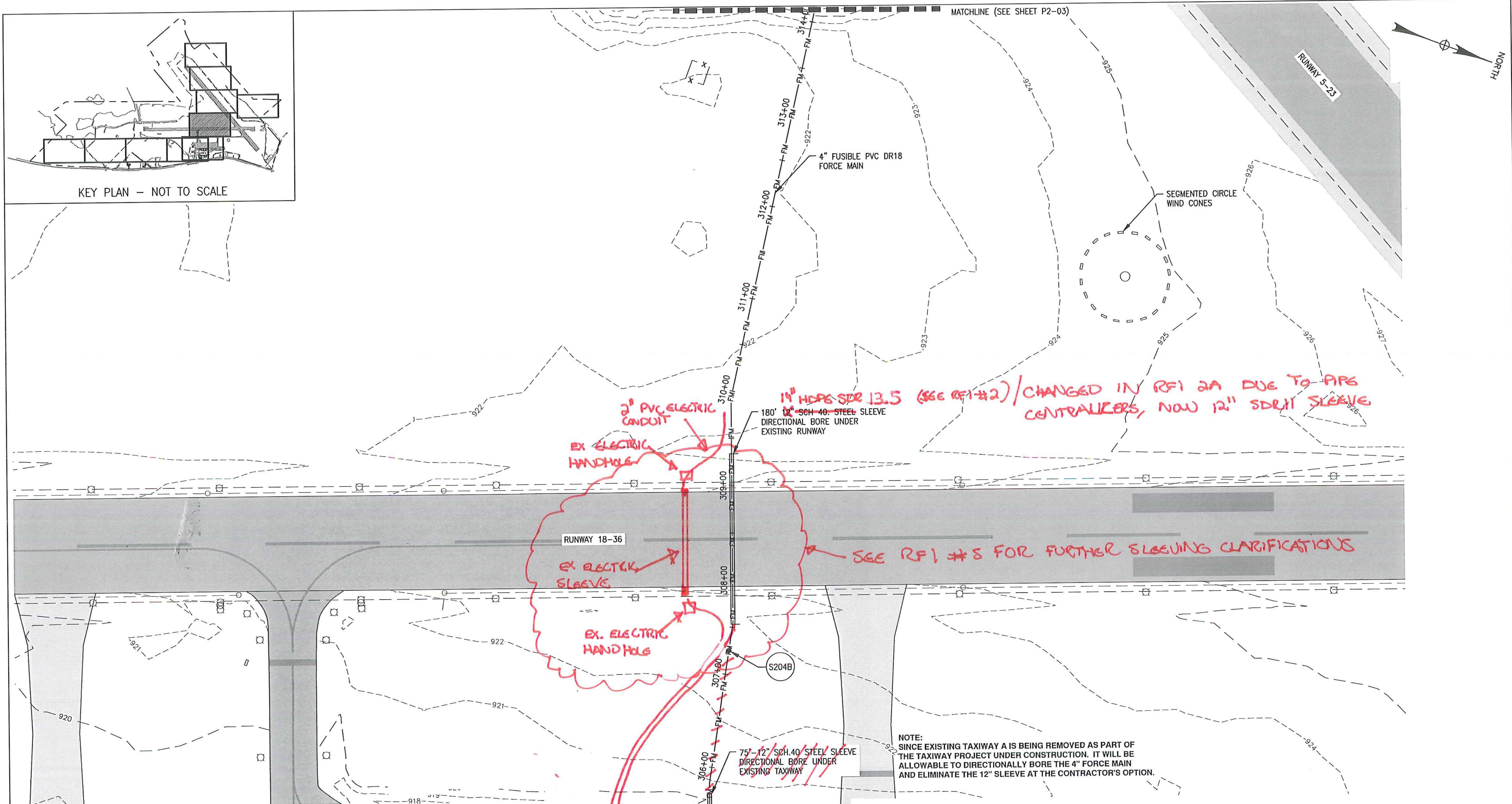
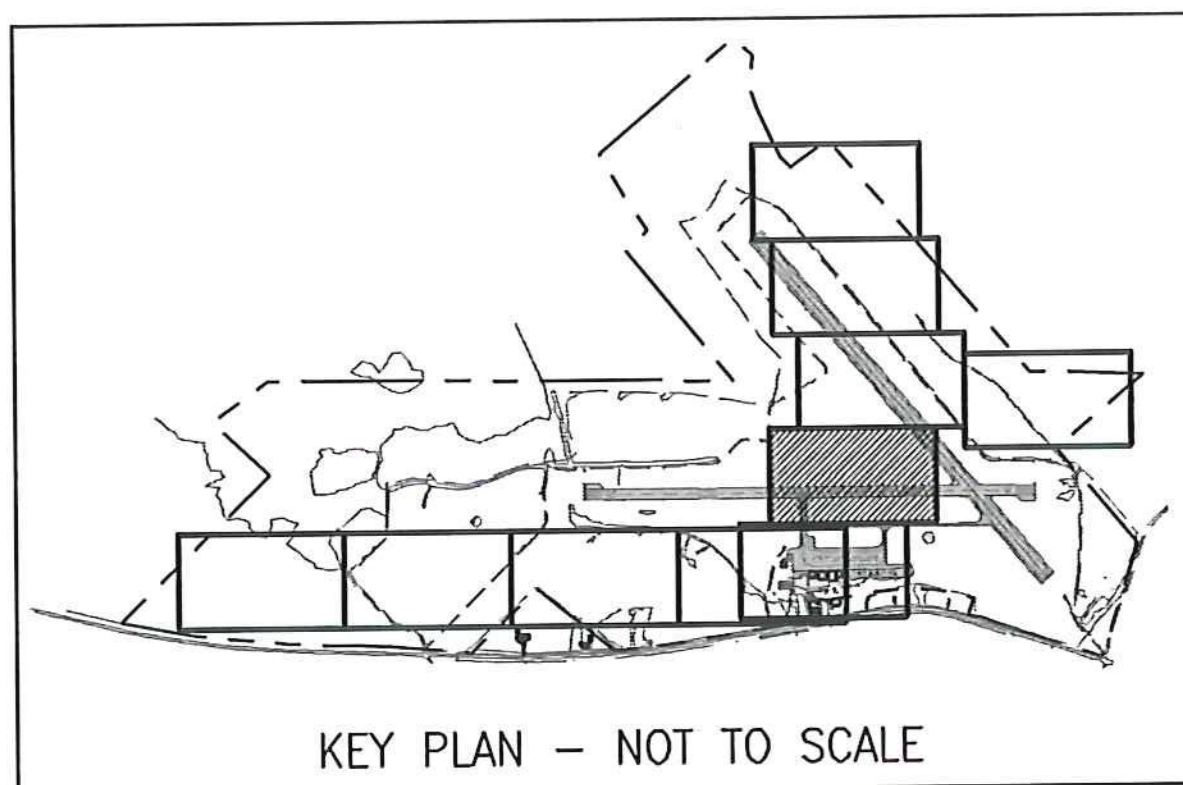


McFarland Johnson
 53 REGIONAL DRIVE
 CONCORD, NH 03301

SITE 2 - TEST PIT LOCATION PLAN 3

SCALE: 1" = 50'	DESIGN: TCB	TP2-03 19 OF 36
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	

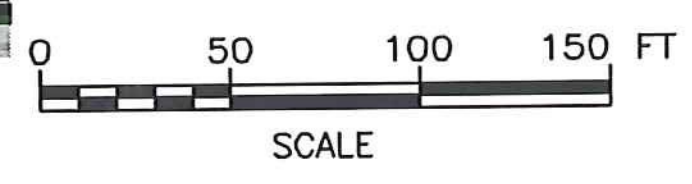




LEGEND:

--- 950 ---	EXISTING CONTOUR
— 950 —	PROPOSED CONTOUR
---	PROPERTY LINE
	WETLAND
~~~~~	TREE LINE
— FM —	SANITARY FORCE MAIN
●	SANITARY MANHOLE
○ ST115 ○ S101	SANITARY STRUCTURE IDENTIFICATION

- NOTES:**
- REFER TO SHEET P2-05 FOR STRUCTURE DATA.
  - REFER TO SHEET PR2-01 AND PR2-02 FOR SITE 2 FORCE MAIN SEWER PROFILE.
  - CARRYING PIPE INSIDE SLEEVES SHALL USE CASCADE WATERWORKS MFG. CASING SPACERS MODEL CCS OR EQUAL. ENDS OF SLEEVES SHALL USE CASCADE END SEALS MODEL CCES OR EQUAL.



SCHEDULE B - WASTEWATER SYSTEM - BID SET  
VTRANS PROJECT #AV1157046-301  
JUNE 2016

REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH



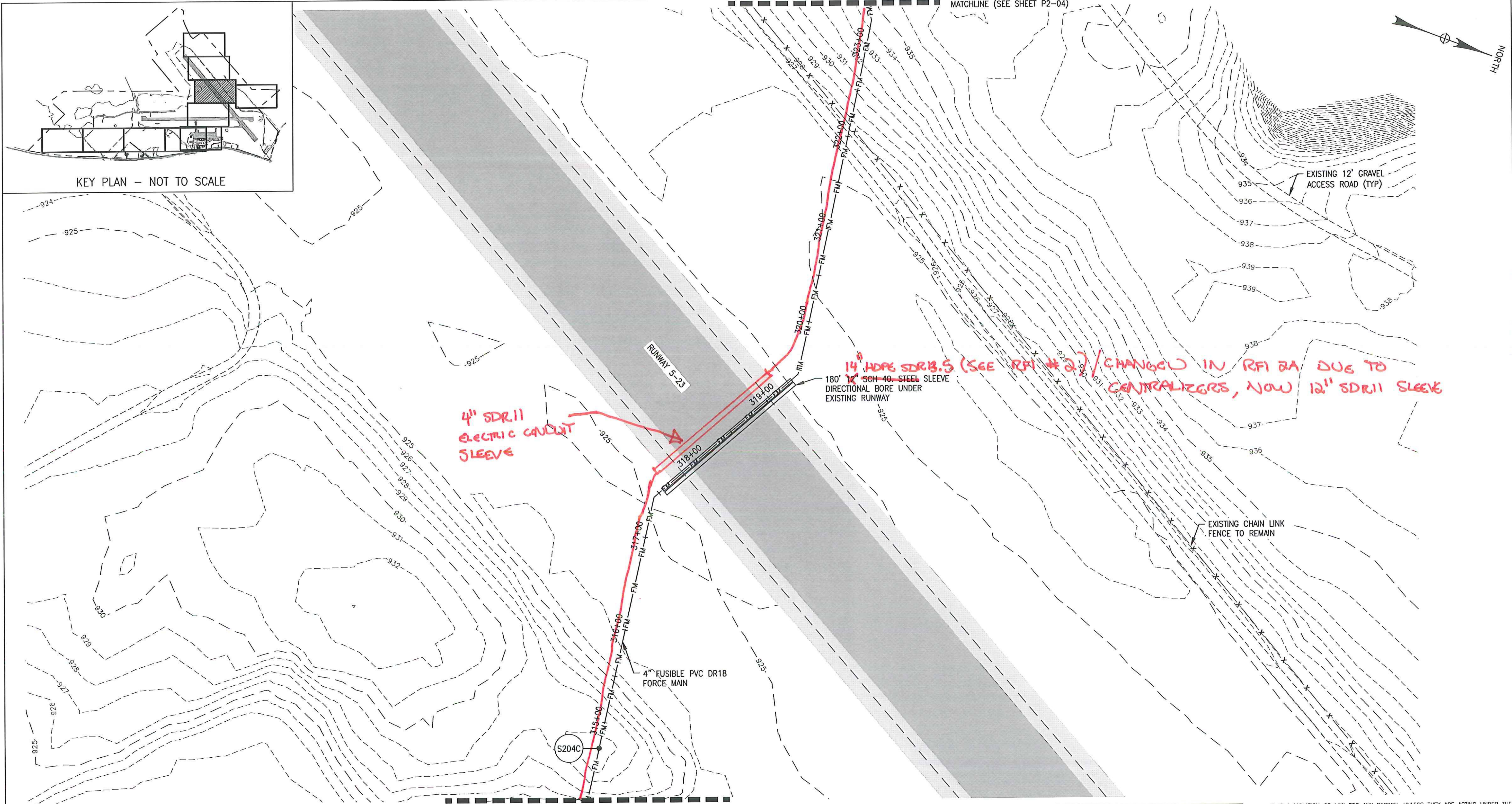
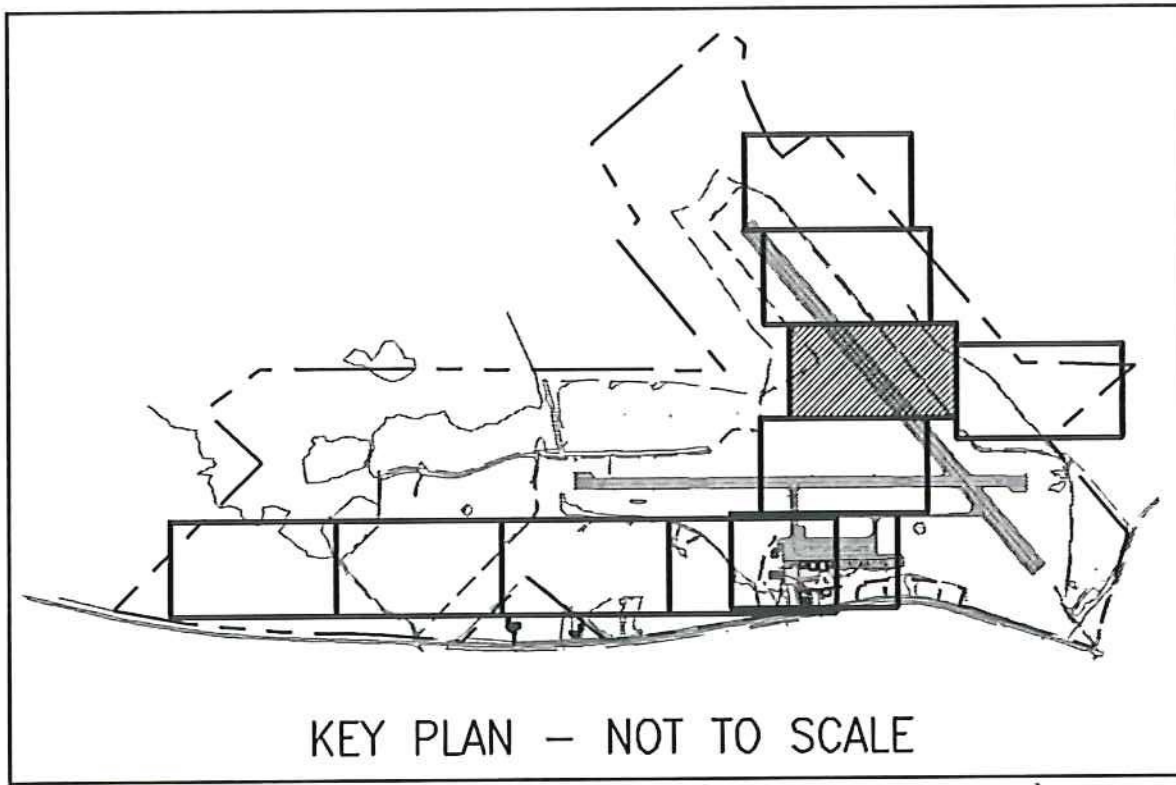
**McFarland Johnson**  
53 REGIONAL DRIVE  
CONCORD, NH 03301

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NEWPORT STATE AIRPORT  
COVENTRY, VERMONT  
NEWPORT WASTEWATER

SITE 2 - PIPING LAYOUT PLAN 2

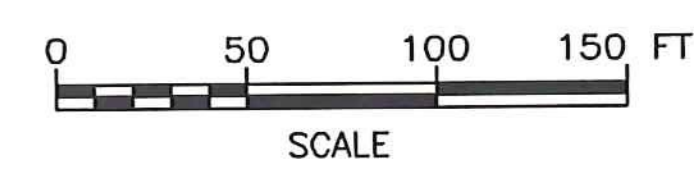
SCALE: 1" = 50'	DESIGN: TCB	P2-02 21 of 36
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	



**LEGEND:**

--- 950 ---	EXISTING CONTOUR
— 950 —	PROPOSED CONTOUR
---	PROPERTY LINE
	WETLAND
	TREE LINE
— FM —	SANITARY FORCE MAIN
●	SANITARY MANHOLE
○ ST115 ○ S101	SANITARY STRUCTURE IDENTIFICATION

- NOTES:**
- REFER TO SHEET P2-05 FOR STRUCTURE DATA.
  - REFER TO SHEET PR2-01 AND PR2-02 FOR SITE 2 FORCE MAIN SEWER PROFILE.
  - CARRYING PIPE INSIDE SLEEVES SHALL USE CASCADE WATERWORKS MFG. CASING SPACERS MODEL CCS OR EQUAL. ENDS OF SLEEVES SHALL USE CASCADE END SEALS MODEL CCES OR EQUAL.



SCHEDULE B - WASTEWATER SYSTEM - BID SET  
VTRANS PROJECT #AV1157046-301  
JUNE 2016

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REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

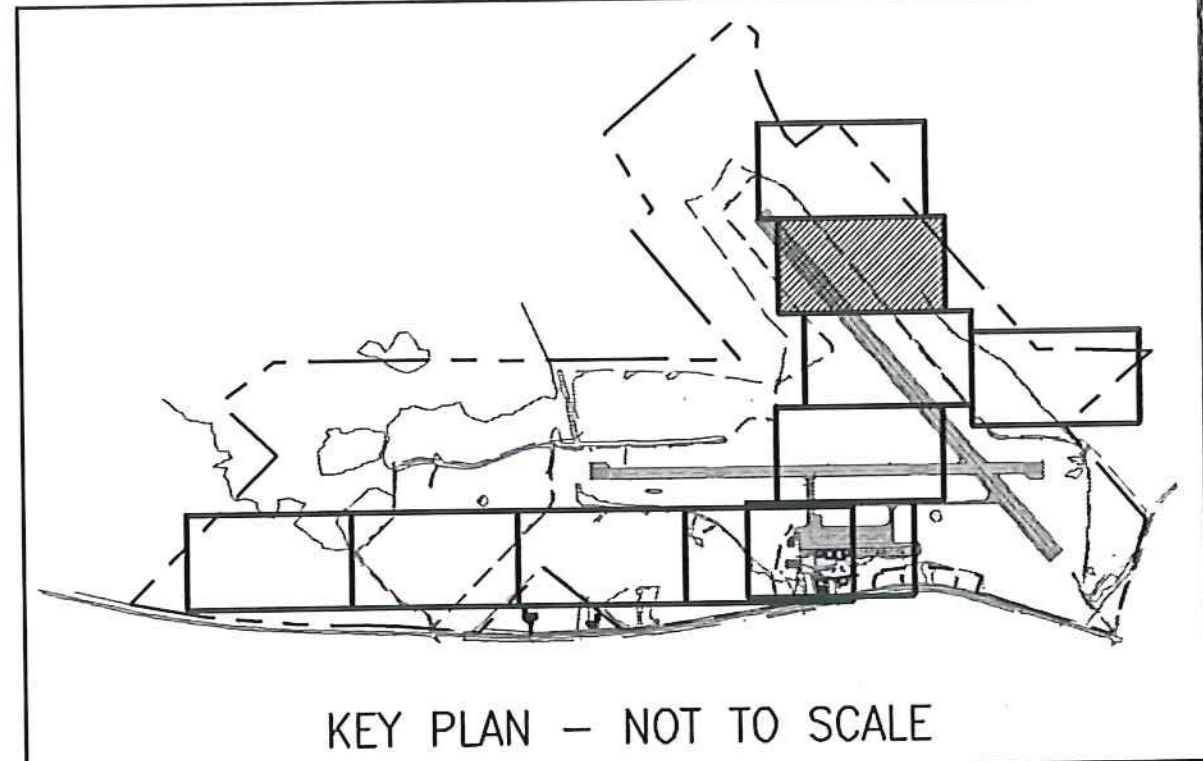
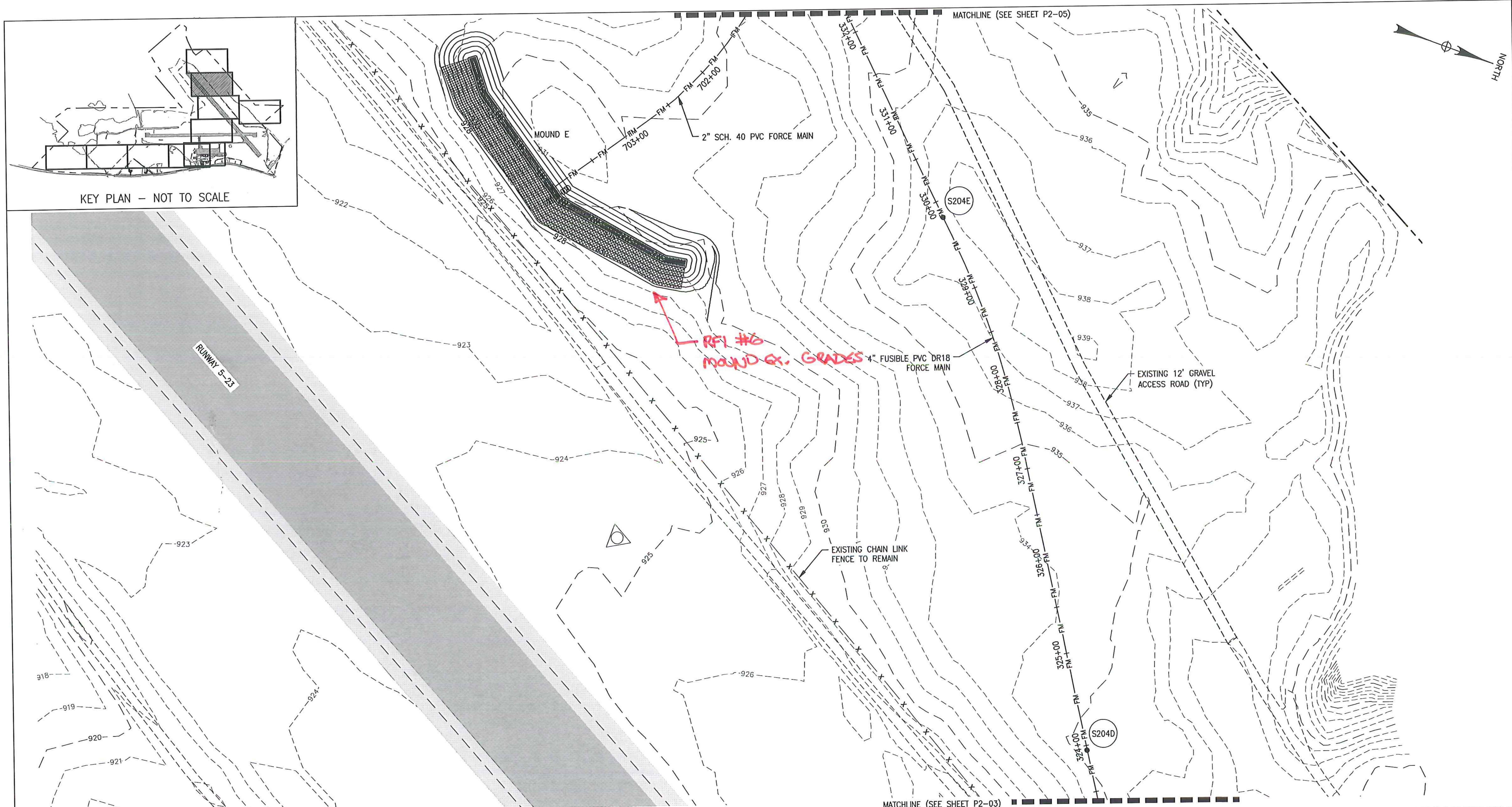
NEWPORT STATE AIRPORT  
COVENTRY, VERMONT  
NEWPORT WASTEWATER

SITE 2 - PIPING LAYOUT PLAN 3



**McFarland Johnson**  
53 REGIONAL DRIVE  
CONCORD, NH 03301

SCALE: 1" = 50'	DESIGN: TCB	P2-03 22 of 36
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	

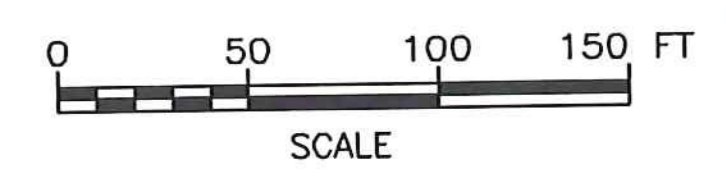


KEY PLAN - NOT TO SCALE

**LEGEND:**

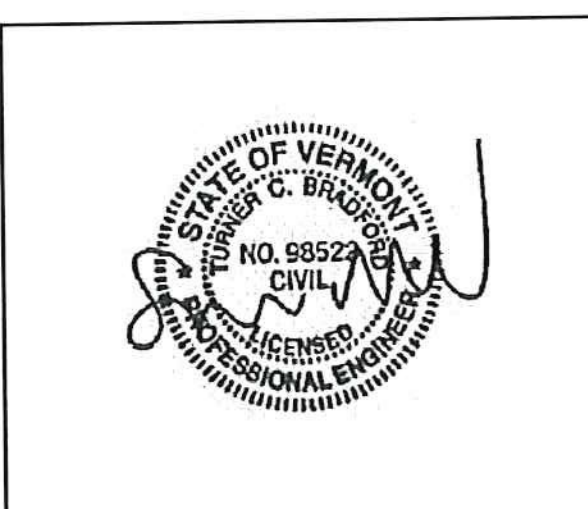
	950	EXISTING CONTOUR
	950	PROPOSED CONTOUR
		PROPERTY LINE
		WETLAND
		TREE LINE
	FM	SANITARY FORCE MAIN
		SANITARY MANHOLE
	ST115 S101	SANITARY STRUCTURE IDENTIFICATION

- NOTES:**
1. REFER TO SHEET P2-05 FOR STRUCTURE DATA.
  2. REFER TO SHEET PR2-02 AND PR2-03 FOR SITE 2 FORCE MAIN SEWER PROFILE.
  3. REFER TO SHEET MD2-02 FOR MOUND E DETAILS.



SCHEDULE B - WASTEWATER SYSTEM - BID SET  
 VTRANS PROJECT #AV1157046-301  
 JUNE 2016

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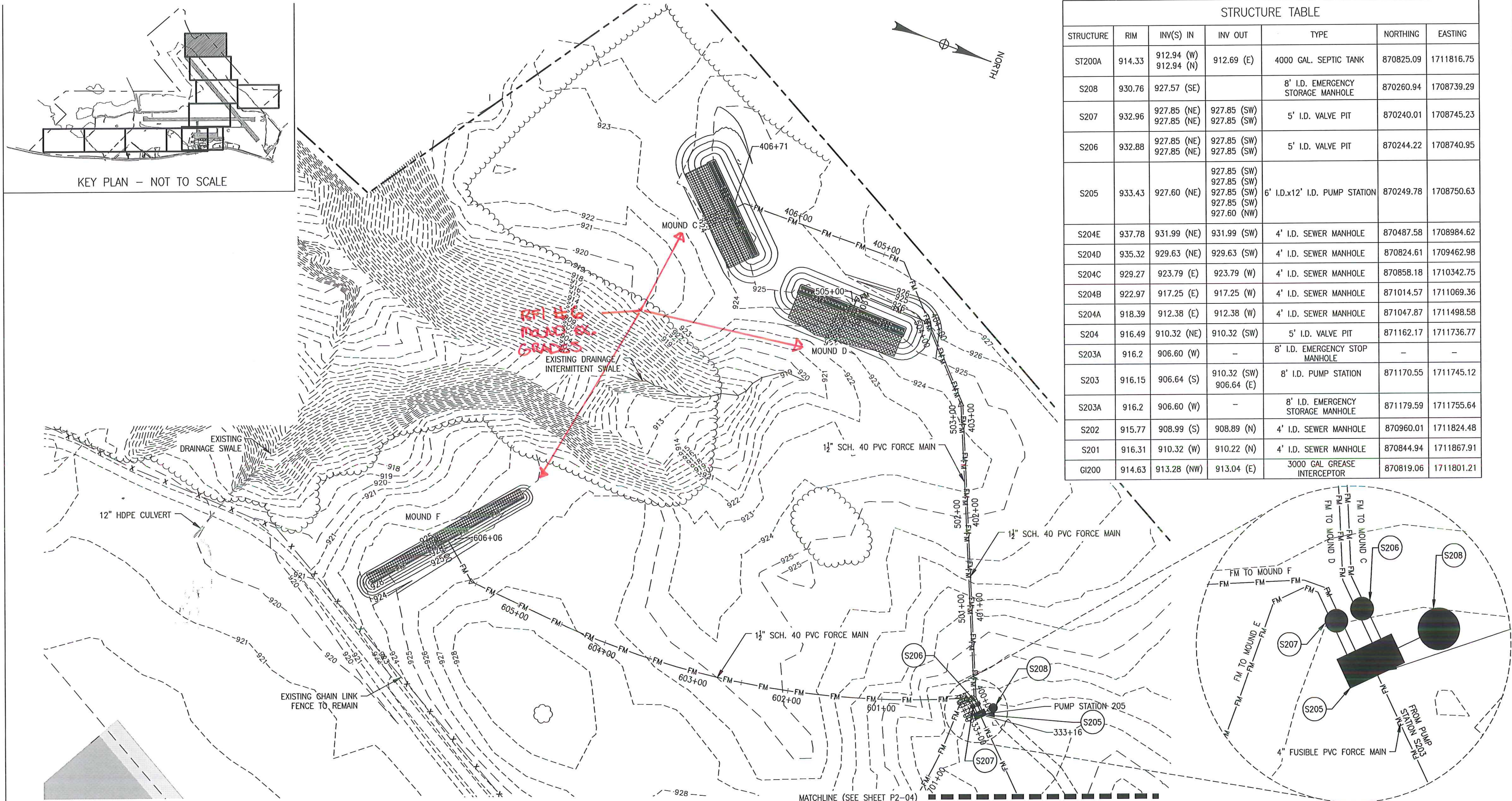
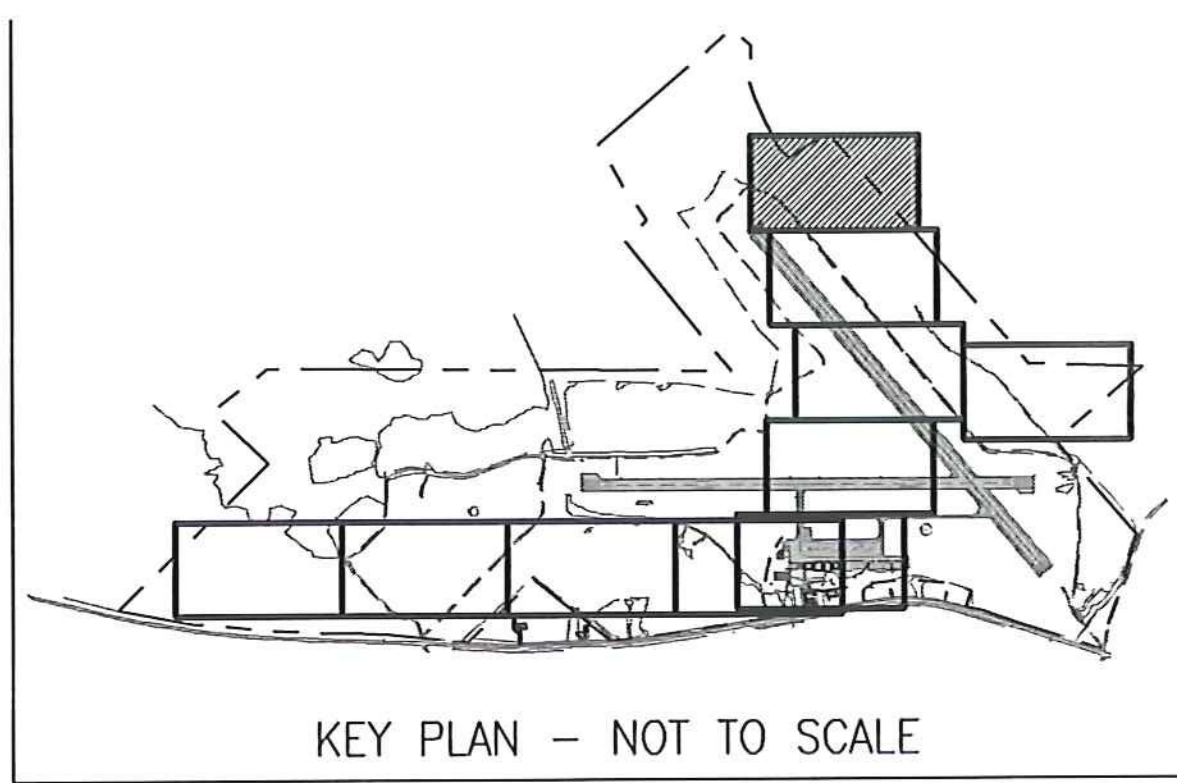


REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

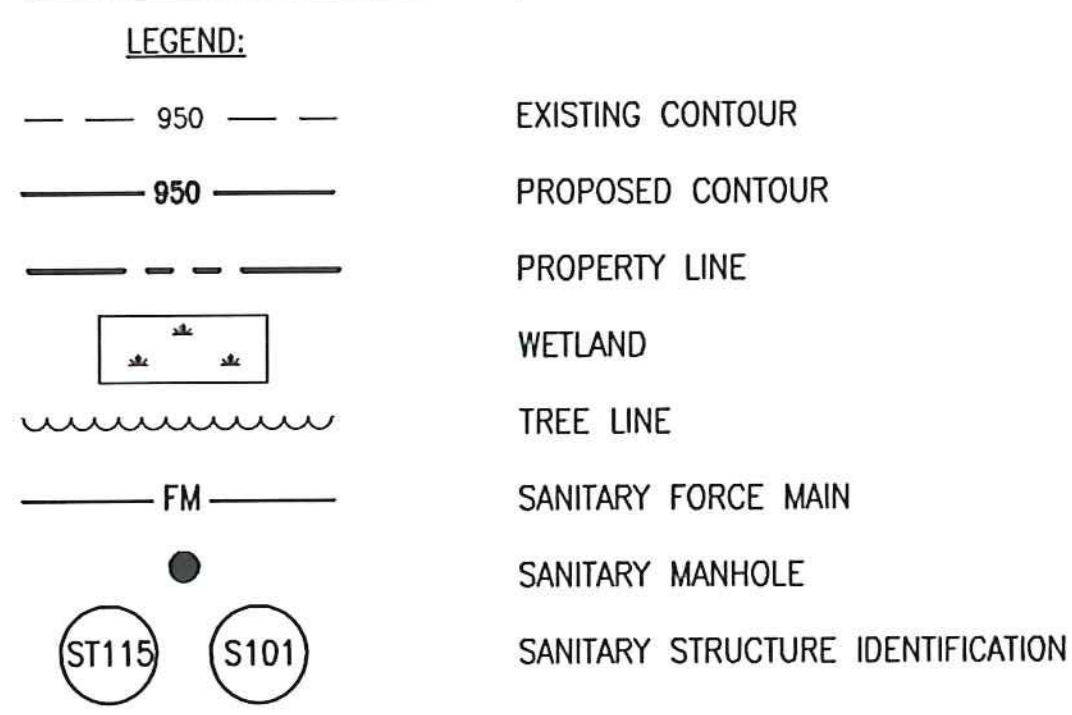
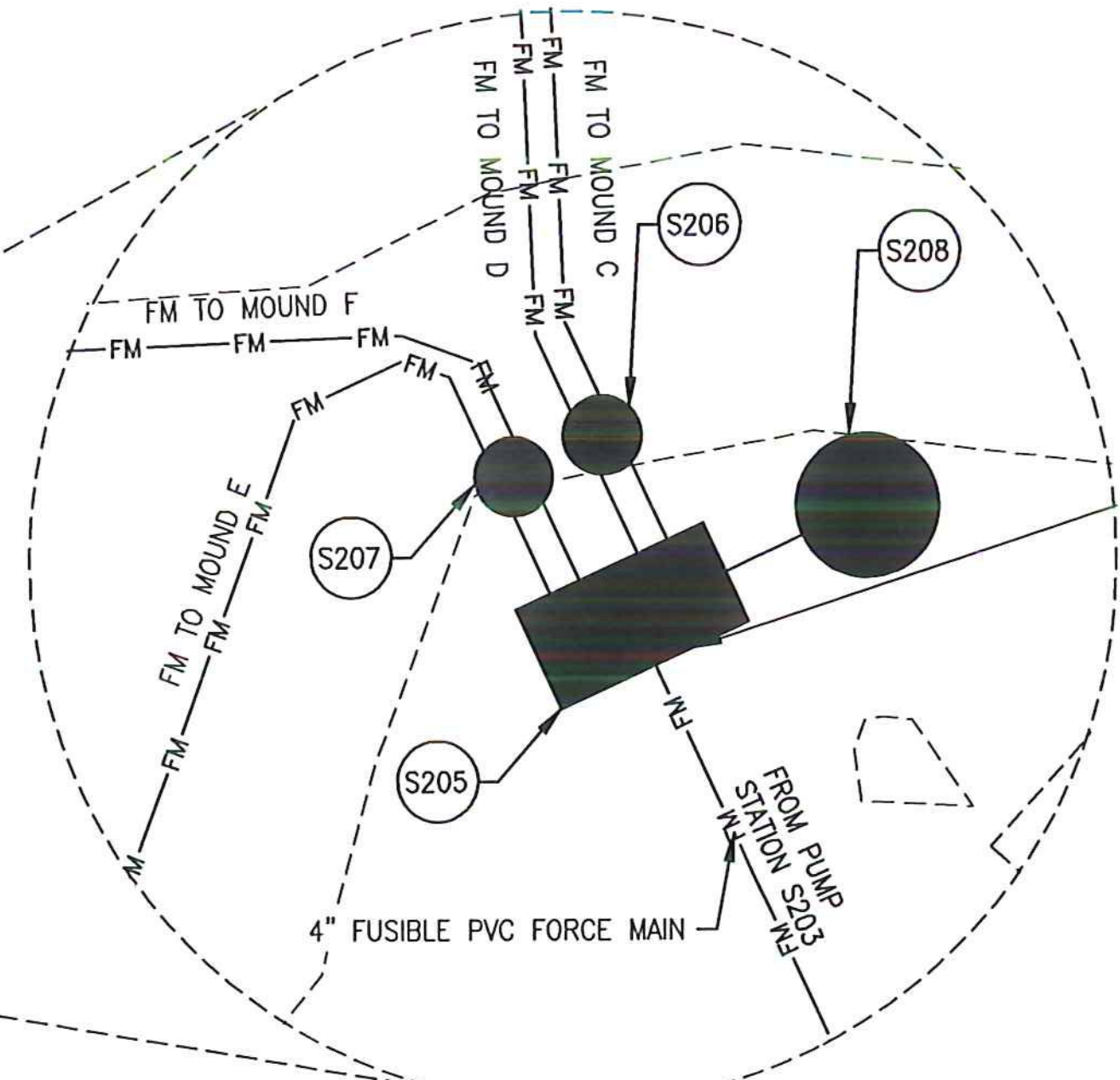
**McFarland Johnson**  
 53 REGIONAL DRIVE  
 CONCORD, NH 03301

NEWPORT STATE AIRPORT  
 COVENTRY, VERMONT  
 NEWPORT WASTEWATER  
 BY SITE 2 - PIPING LAYOUT PLAN 4

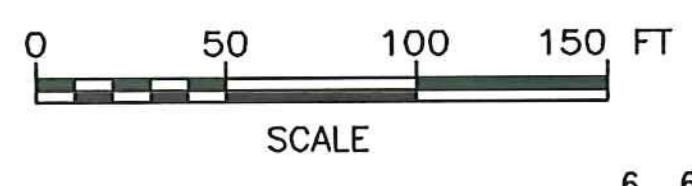
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DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	



STRUCTURE TABLE						
STRUCTURE	RIM	INV(S) IN	INV OUT	TYPE	NORTHING	EASTING
ST200A	914.33	912.94 (W) 912.94 (N)	912.69 (E)	4000 GAL. SEPTIC TANK	870825.09	1711816.75
S208	930.76	927.57 (SE)		8' I.D. EMERGENCY STORAGE MANHOLE	870260.94	1708739.29
S207	932.96	927.85 (NE) 927.85 (NE)	927.85 (SW) 927.85 (SW)	5' I.D. VALVE PIT	870240.01	1708745.23
S206	932.88	927.85 (NE) 927.85 (NE)	927.85 (SW) 927.85 (SW)	5' I.D. VALVE PIT	870244.22	1708740.95
S205	933.43	927.60 (NE)	927.85 (SW) 927.85 (SW) 927.85 (SW) 927.85 (SW) 927.60 (NW)	6' I.D.x12' I.D. PUMP STATION	870249.78	1708750.63
S204E	937.78	931.99 (NE)	931.99 (SW)	4' I.D. SEWER MANHOLE	870487.58	1708984.62
S204D	935.32	929.63 (NE)	929.63 (SW)	4' I.D. SEWER MANHOLE	870824.61	1709462.98
S204C	929.27	923.79 (E)	923.79 (W)	4' I.D. SEWER MANHOLE	870858.18	1710342.75
S204B	922.97	917.25 (E)	917.25 (W)	4' I.D. SEWER MANHOLE	871014.57	1711069.36
S204A	918.39	912.38 (E)	912.38 (W)	4' I.D. SEWER MANHOLE	871047.87	1711498.58
S204	916.49	910.32 (NE)	910.32 (SW)	5' I.D. VALVE PIT	871162.17	1711736.77
S203A	916.2	906.60 (W)	-	8' I.D. EMERGENCY STOP MANHOLE	-	-
S203	916.15	906.64 (S)	910.32 (SW) 906.64 (E)	8' I.D. PUMP STATION	871170.55	1711745.12
S203A	916.2	906.60 (W)	-	8' I.D. EMERGENCY STORAGE MANHOLE	871179.59	1711755.64
S202	915.77	908.99 (S)	908.89 (N)	4' I.D. SEWER MANHOLE	870960.01	1711824.48
S201	916.31	910.32 (W)	910.22 (N)	4' I.D. SEWER MANHOLE	870844.94	1711867.91
GI200	914.63	913.28 (NW)	913.04 (E)	3000 GAL GREASE INTERCEPTOR	870819.06	1711801.21



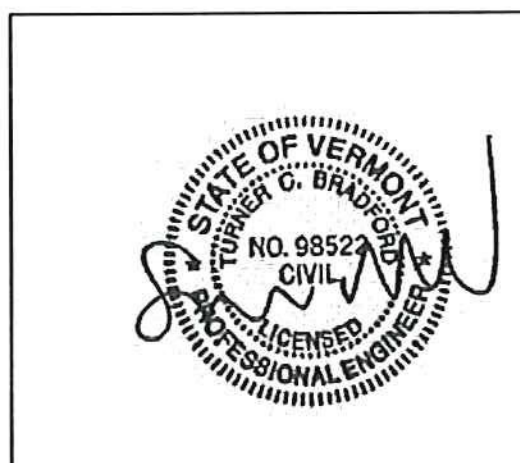
- NOTES:**
1. REFER TO SHEET PR2-03 FOR SITE 2 FORCE MAIN SEWER PROFILE.
  2. REFER TO SHEET MD2-01 FOR MOUND C & D DETAILS.
  3. REFER TO SHEET MD2-03 FOR MOUND F DETAILS



SCHEDULE B - WASTEWATER SYSTEM - BID SET  
 VTRANS PROJECT #AV1157046-301  
 JUNE 2016

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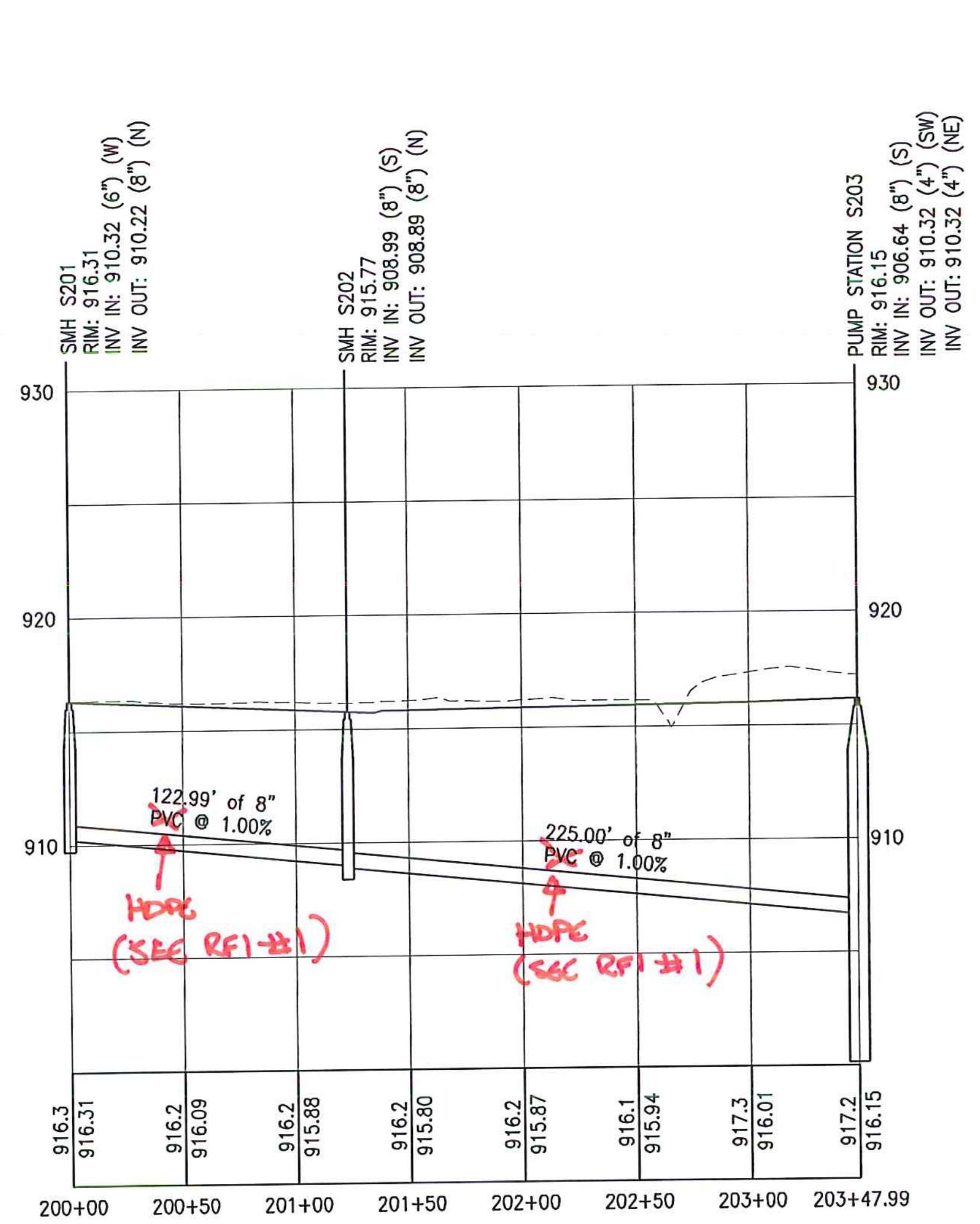
REV	DATE	DESCRIPTION	BY
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5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH



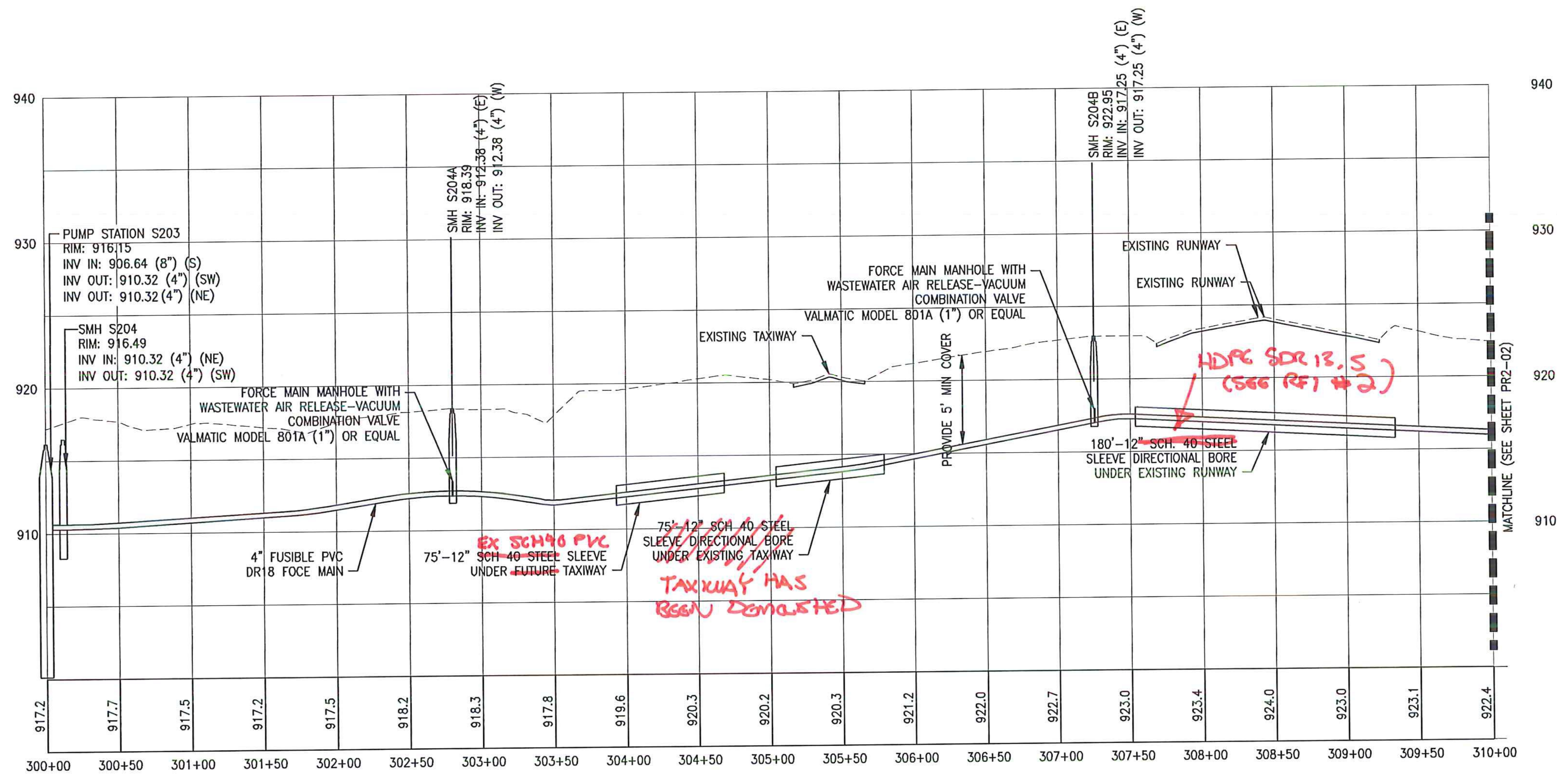
**McFarland Johnson**  
 53 REGIONAL DRIVE  
 CONCORD, NH 03301

NEWPORT STATE AIRPORT  
 COVENTRY, VERMONT  
 NEWPORT WASTEWATER  
 SITE 2 - PIPING LAYOUT PLAN 5

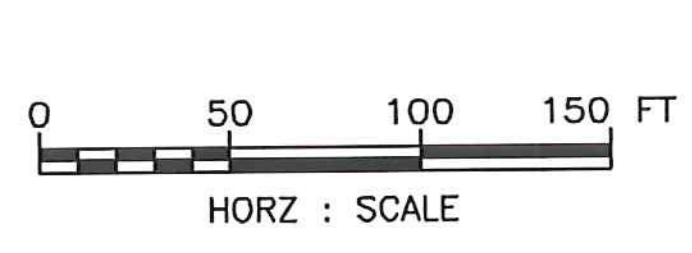
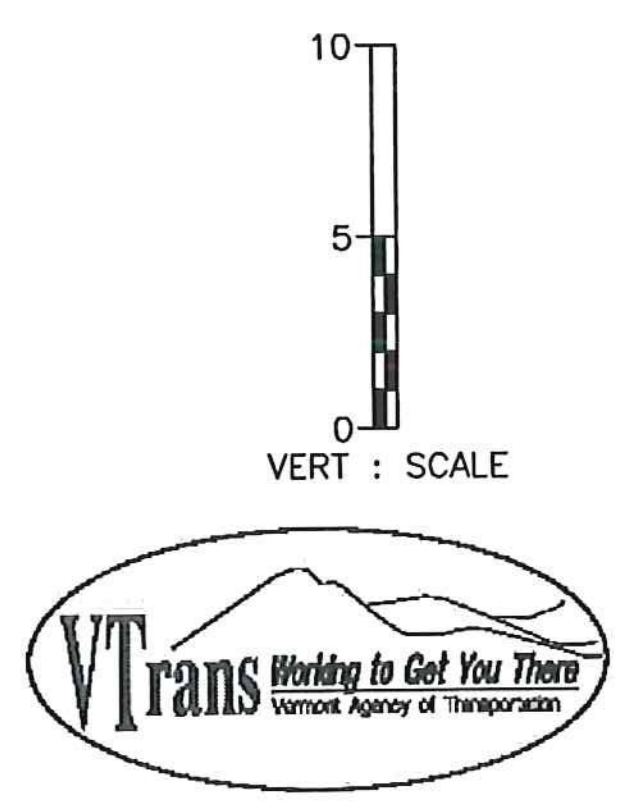
SCALE: 1" = 50'	DESIGN: TCB	P2-05 24 OF 36
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	



NOTE: BASED ON PERMIT CONDITION WITH REGARD TO INFILTRATION, COLLECTION GRAVITY SEWER PIPE SHALL BE BUTT FUSED PVC.



NOTE: FORCE MAIN PIPE MAY BE EITHER FUSIBLE PVC DR 18 (C-900 FPVC) OR FUSIBLE HDPE DR9 (C-906).



SCHEDULE B - WASTEWATER SYSTEM - BID SET  
VTRANS PROJECT #AV1157046-301  
JUNE 2016

REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

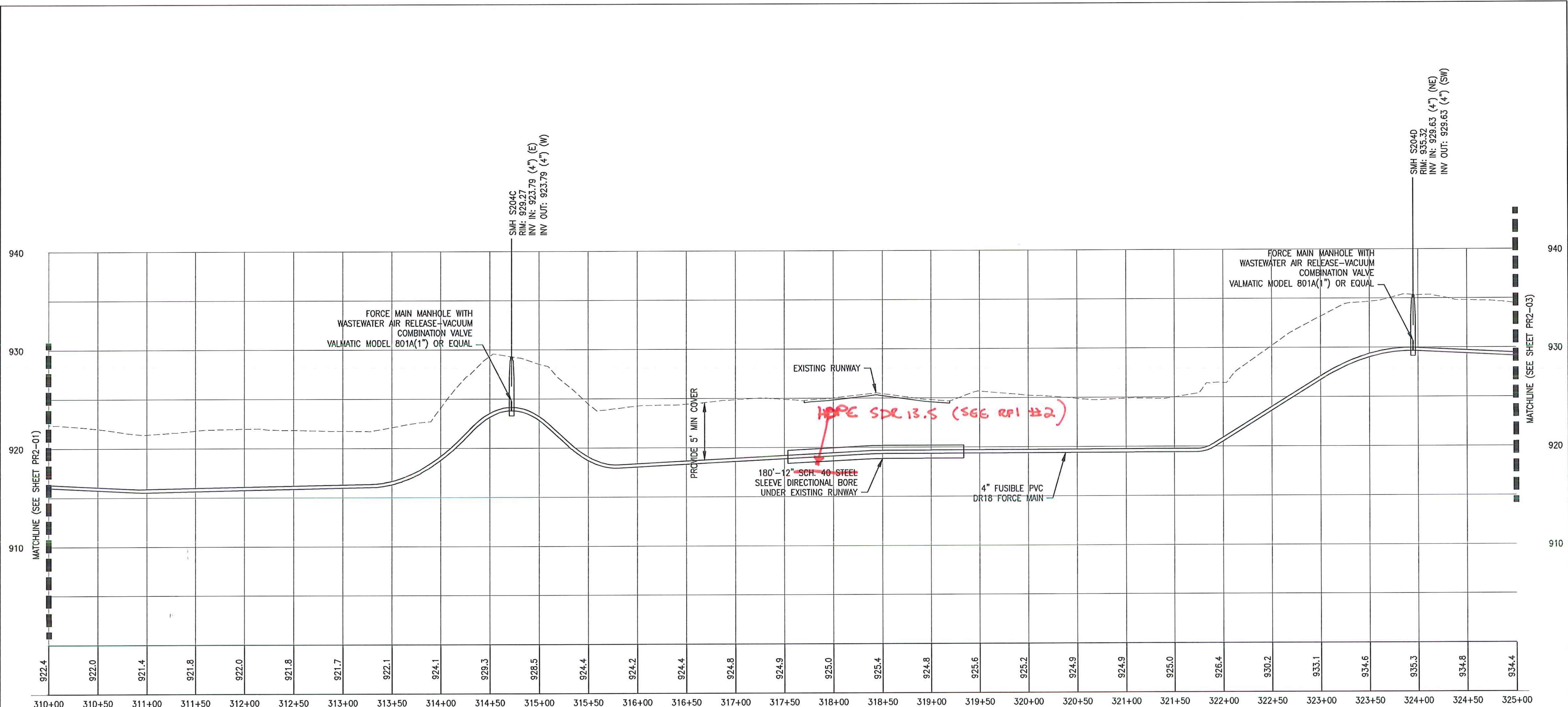
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NEWPORT STATE AIRPORT  
COVENTRY, VERMONT  
NEWPORT WASTEWATER

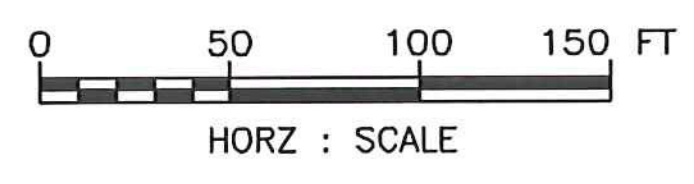
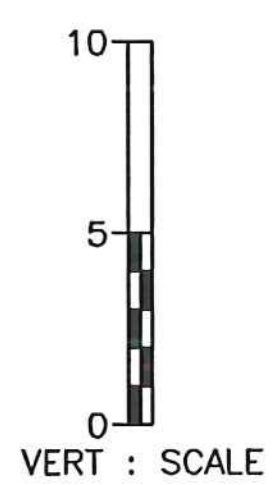
SITE 2 - SANITARY PROFILE 1

**McFarland Johnson**  
53 REGIONAL DRIVE  
CONCORD, NH 03301

SCALE: H 1:50, V 1:5	DESIGN: TCB	PR2-01 25 OF 36
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	



NOTE: FORCE MAIN PIPE MAY BE EITHER FUSIBLE PVC DR 18 (C-900 FPVC) OR FUSIBLE HDPE DR9 (C-906).



SCHEDULE B - WASTEWATER SYSTEM - BID SET  
 VTRANS PROJECT #AV1157046-301  
 JUNE 2016

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5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH
REV	DATE	DESCRIPTION	BY

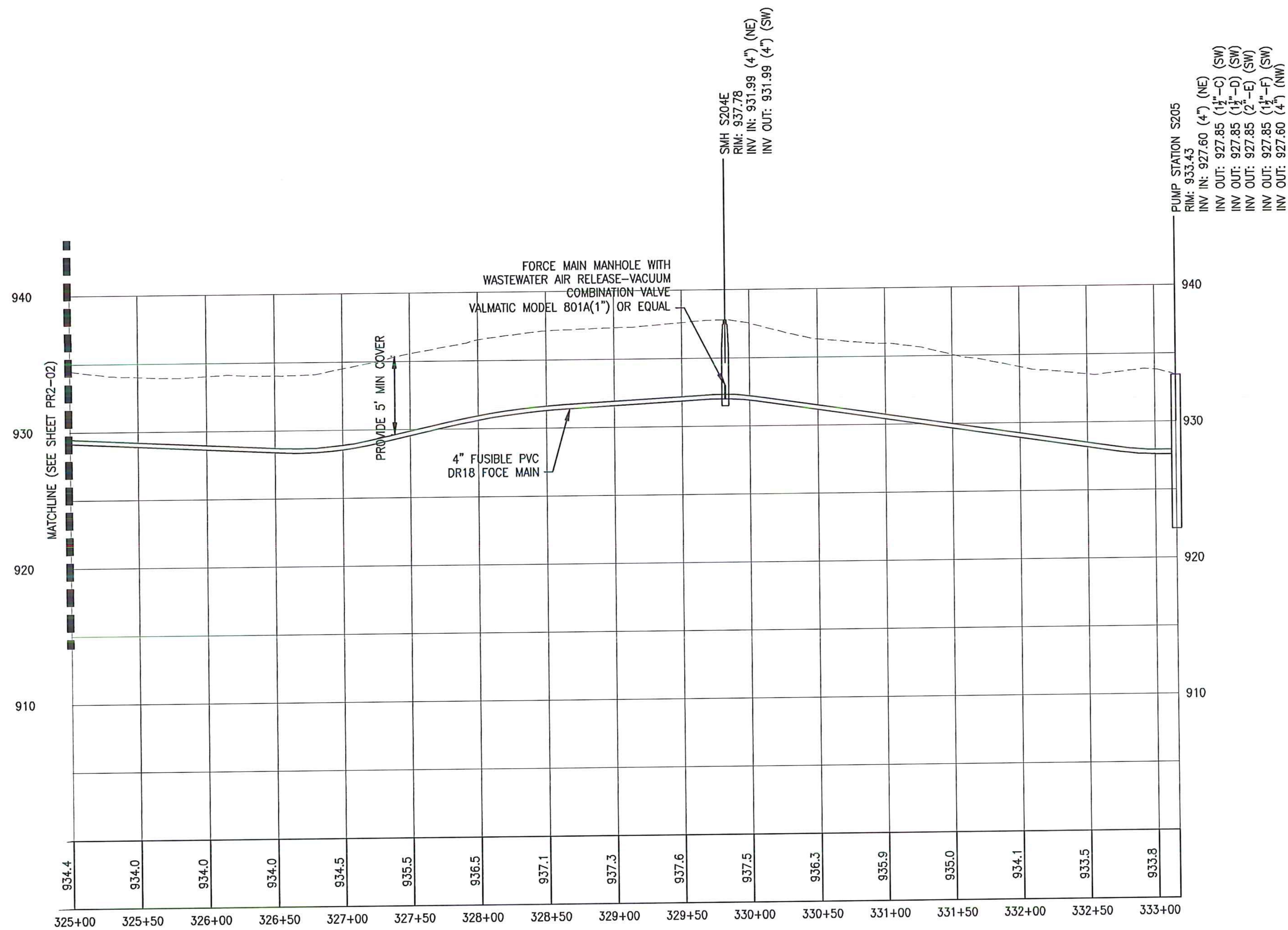
NEWPORT STATE AIRPORT  
 COVENTRY, VERMONT  
 NEWPORT WASTEWATER

SITE 2 - SANITARY PROFILE 2

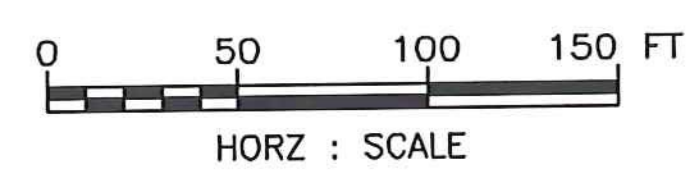
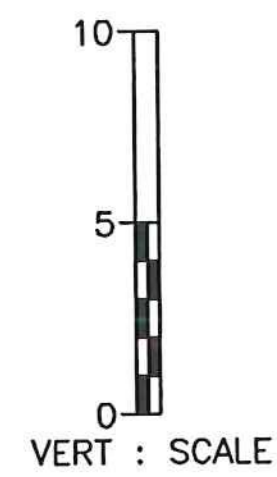


**McFarland Johnson**  
 53 REGIONAL DRIVE  
 CONCORD, NH 03301

SCALE: H 1:50, V 1:5	DESIGN: TCB	PR2-02 26 of 36
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	



NOTE: FORCE MAIN PIPE MAY BE EITHER FUSIBLE PVC DR 18 (C-900 FPVC) OR FUSIBLE HDPE DR9 (C-906).



SCHEDULE B - WASTEWATER SYSTEM - BID SET  
 VTRANS PROJECT #AV1157046-301  
 JUNE 2016

REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECT DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

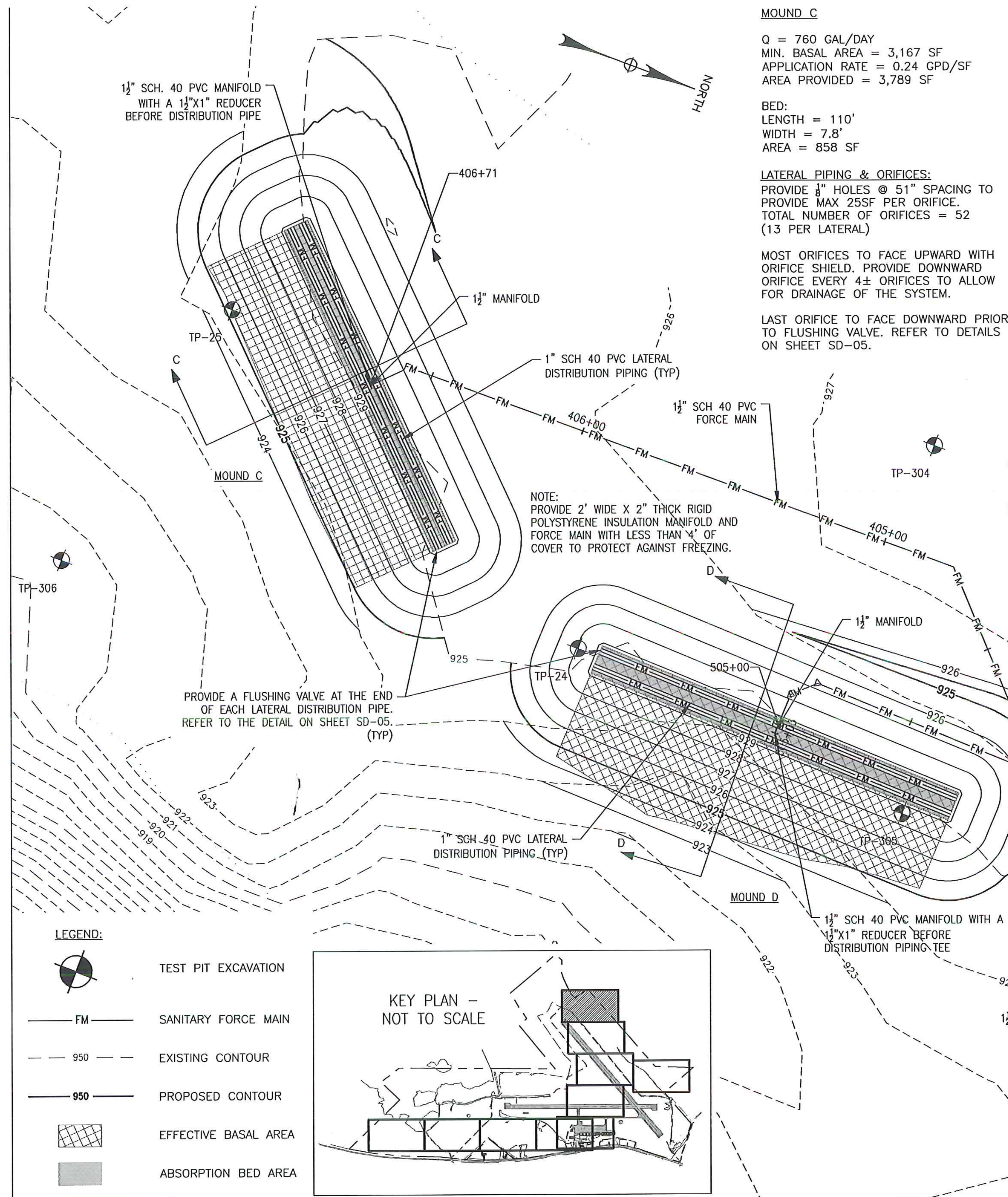
NEWPORT STATE AIRPORT  
 COVENTRY, VERMONT  
 NEWPORT WASTEWATER

SITE 2 - SANITARY PROFILE 3



**McFarland Johnson**  
 53 REGIONAL DRIVE  
 CONCORD, NH 03301

SCALE: H 1:50, V 1:5	DESIGN: TCB	PR2-03 27 OF 36
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	



**MOUND C**  
 Q = 760 GAL/DAY  
 MIN. BASAL AREA = 3,167 SF  
 APPLICATION RATE = 0.24 GPD/SF  
 AREA PROVIDED = 3,789 SF

BED:  
 LENGTH = 110'  
 WIDTH = 7.8'  
 AREA = 858 SF

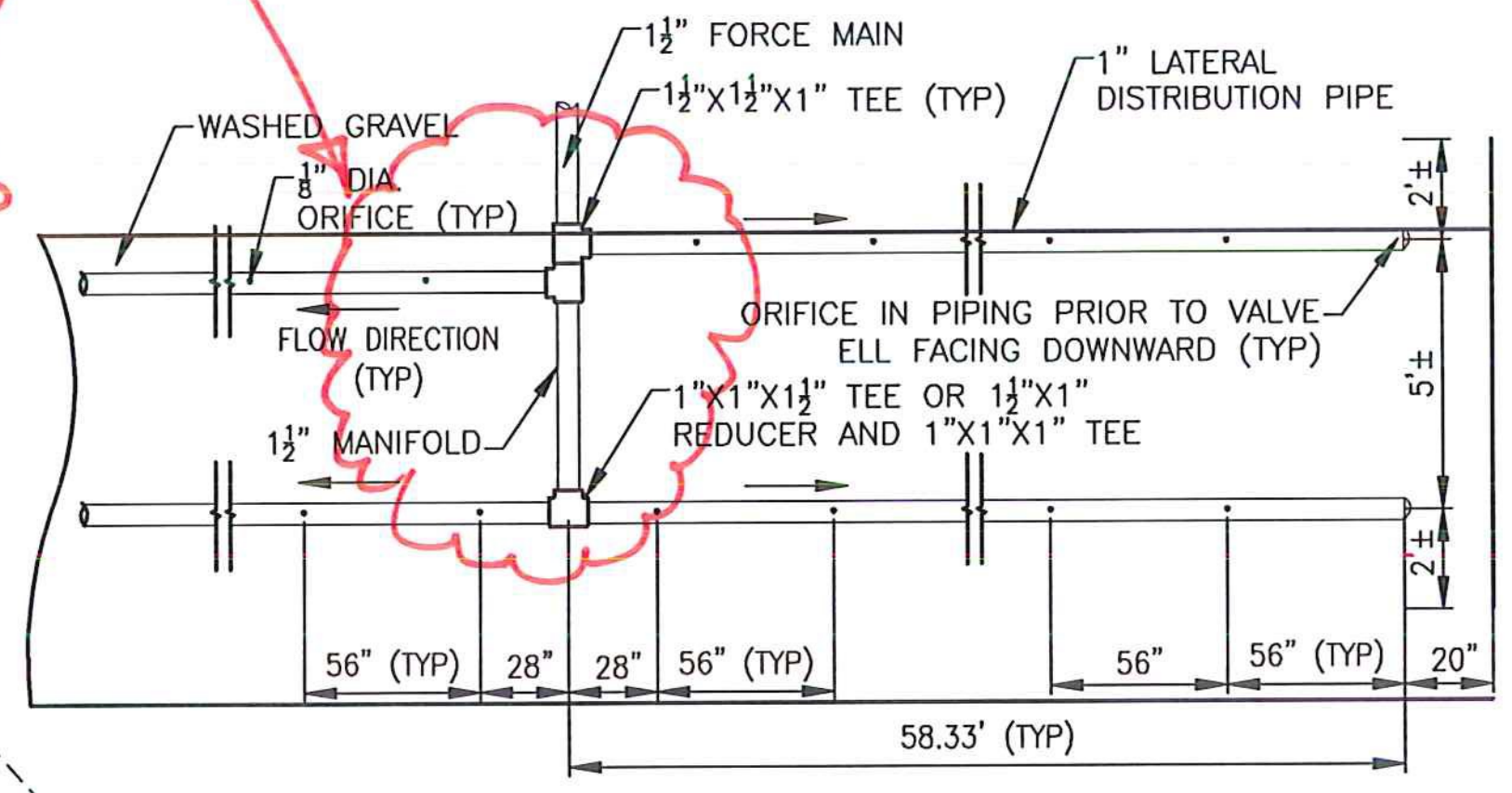
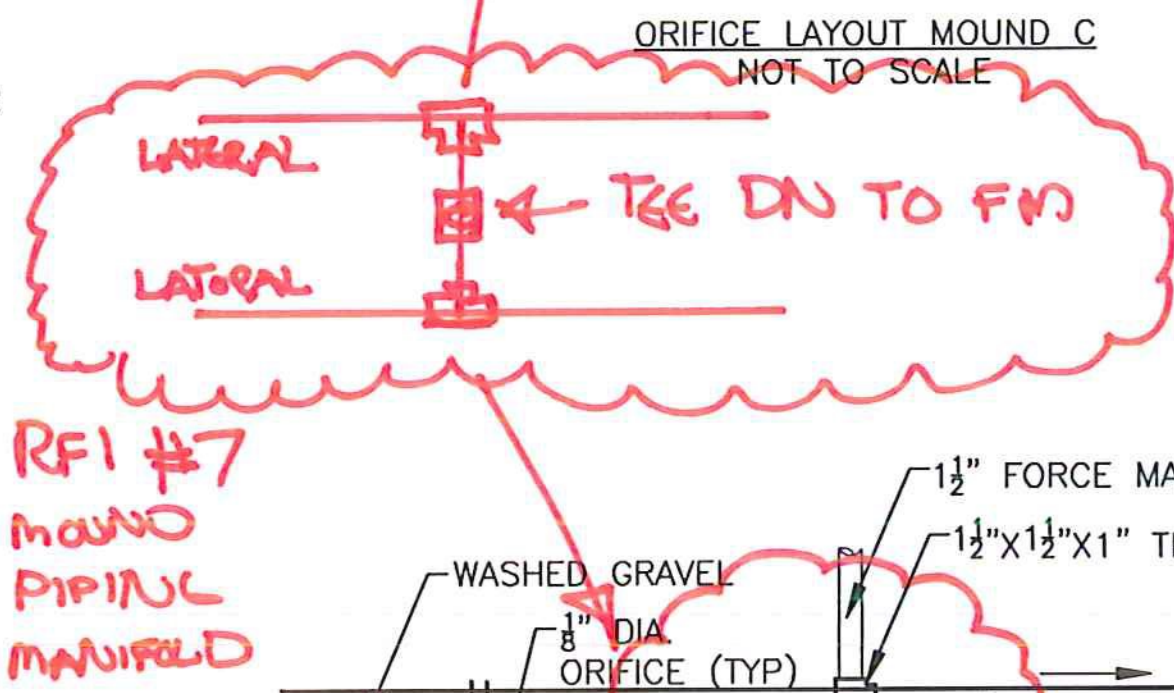
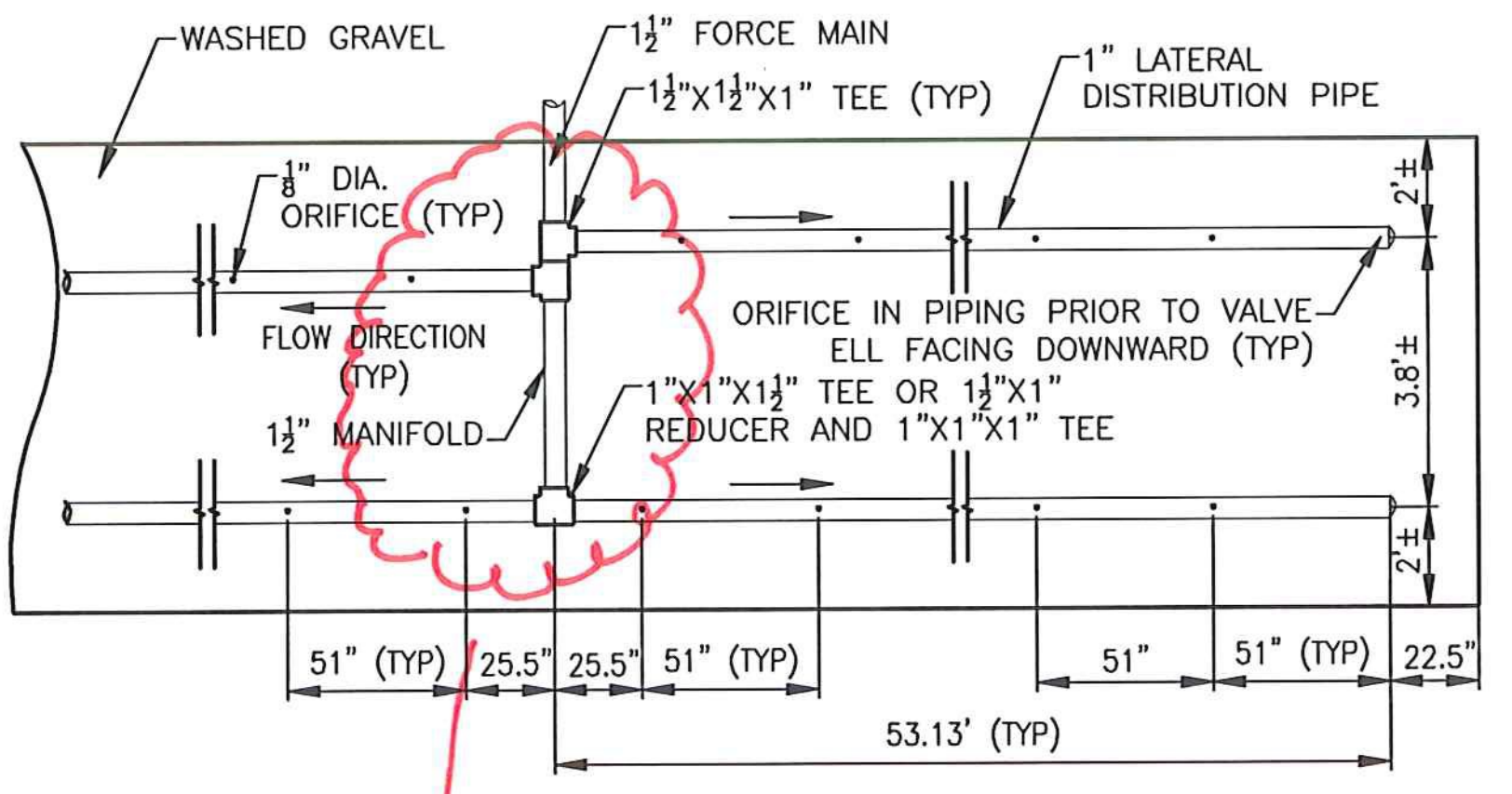
**LATERAL PIPING & ORIFICES:**  
 PROVIDE 1/8" HOLES @ 51" SPACING TO PROVIDE MAX 25SF PER ORIFICE. TOTAL NUMBER OF ORIFICES = 52 (13 PER LATERAL)

MOST ORIFICES TO FACE UPWARD WITH ORIFICE SHIELD. PROVIDE DOWNWARD ORIFICE EVERY 4± ORIFICES TO ALLOW FOR DRAINAGE OF THE SYSTEM.

LAST ORIFICE TO FACE DOWNWARD PRIOR TO FLUSHING VALVE. REFER TO DETAILS ON SHEET SD-05.

NOTE: PROVIDE 2' WIDE X 2" THICK RIGID POLYSTYRENE INSULATION MANIFOLD AND FORCE MAIN WITH LESS THAN 4' OF COVER TO PROTECT AGAINST FREEZING.

PROVIDE A FLUSHING VALVE AT THE END OF EACH LATERAL DISTRIBUTION PIPE. REFER TO THE DETAIL ON SHEET SD-05. (TYP)



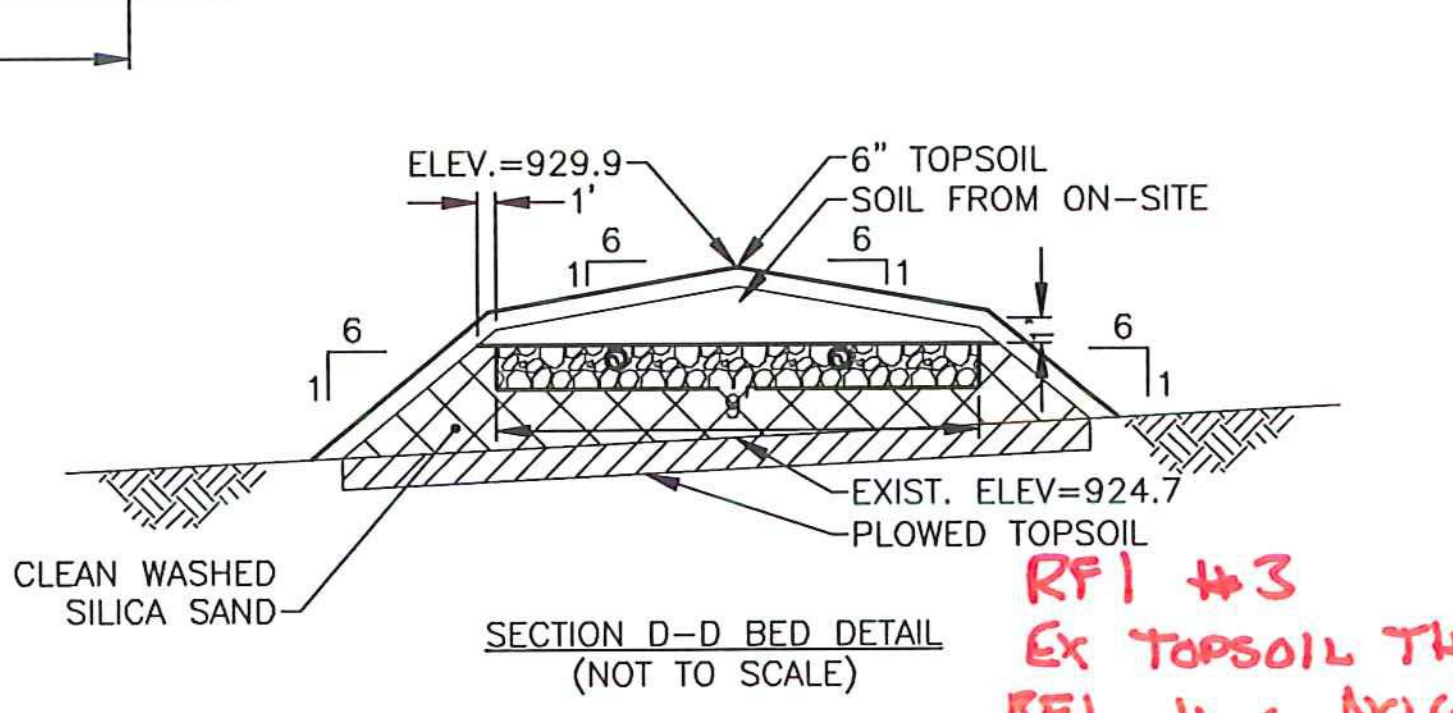
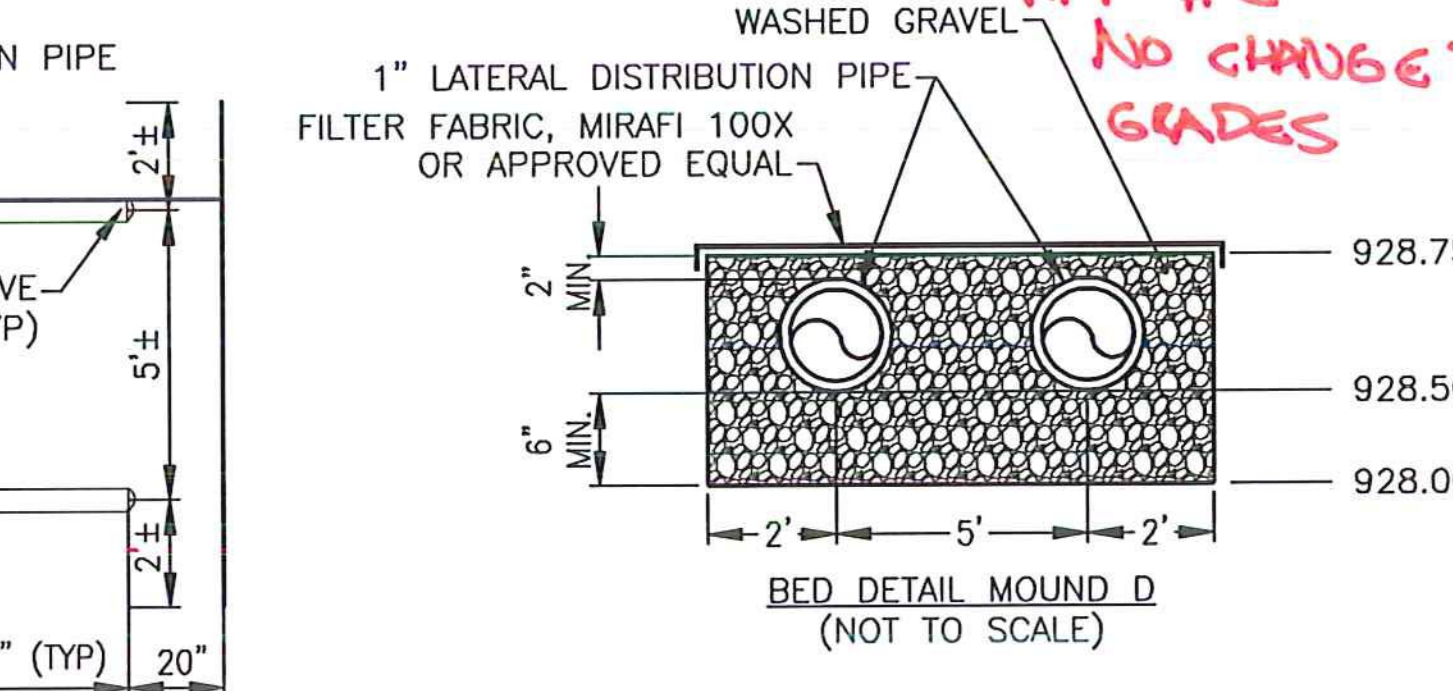
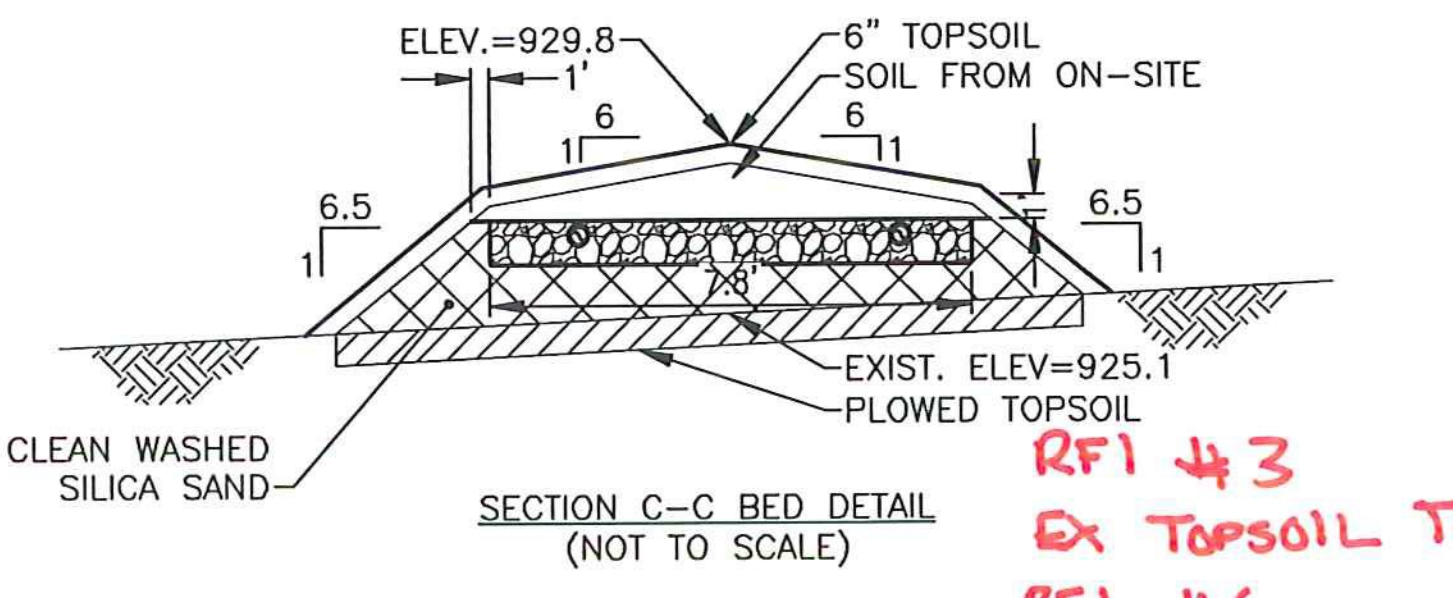
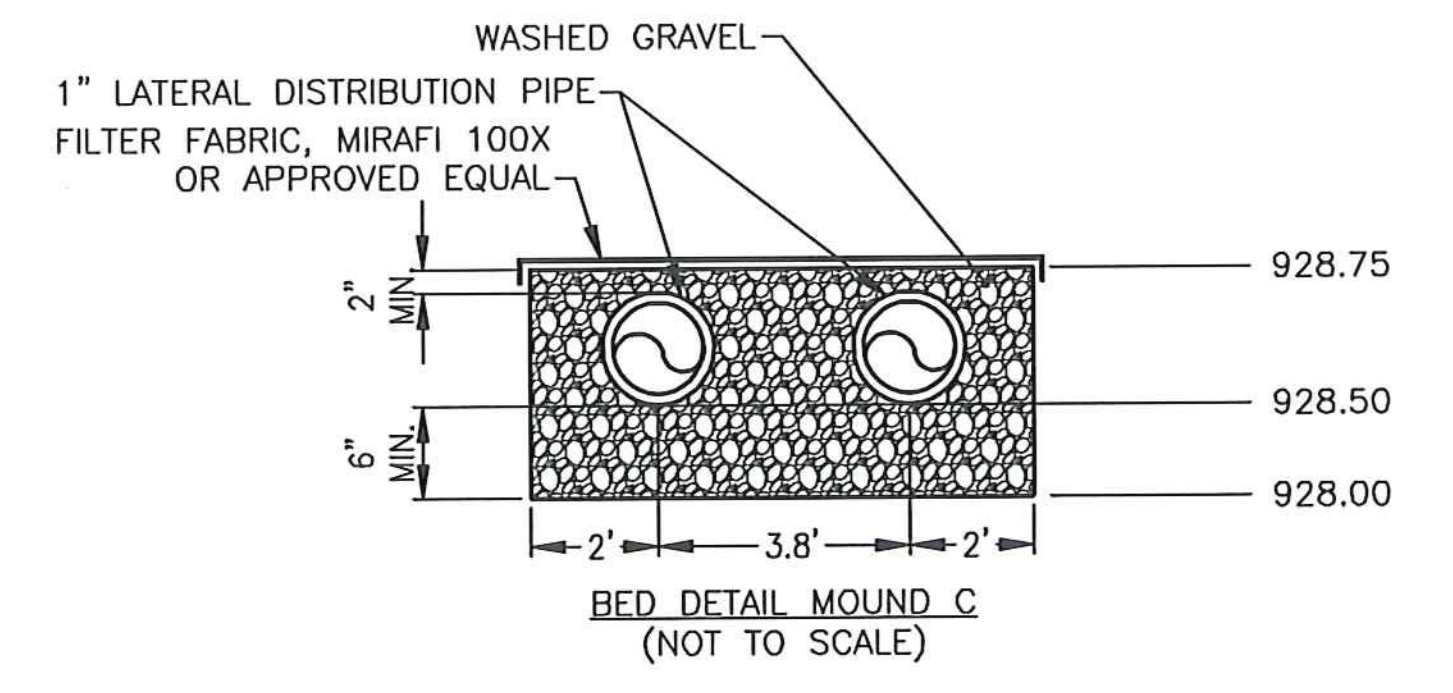
**MOUND D:**  
 Q = 850 GAL/DAY  
 MIN. BASAL AREA = 3,542 SF  
 APPLICATION RATE = 0.24 GPD/SF  
 AREA PROVIDED = 4,591 SF

BED:  
 LENGTH = 120'  
 WIDTH = 9'  
 AREA = 1,080 SF

**LATERAL PIPING & ORIFICES:**  
 PROVIDE 1/8" HOLES @ 56" SPACING TO PROVIDE MAX 25SF PER ORIFICE. TOTAL NUMBER OF ORIFICES = 52 (13 PER LATERAL)

MOST ORIFICES TO FACE UPWARD WITH ORIFICE SHIELD. PROVIDE DOWNWARD ORIFICE EVERY 4± ORIFICES TO ALLOW FOR DRAINAGE OF THE SYSTEM.

LAST ORIFICE TO FACE DOWNWARD PRIOR TO FLUSHING VALVE. REFER TO DETAILS ON SHEET SD-05.



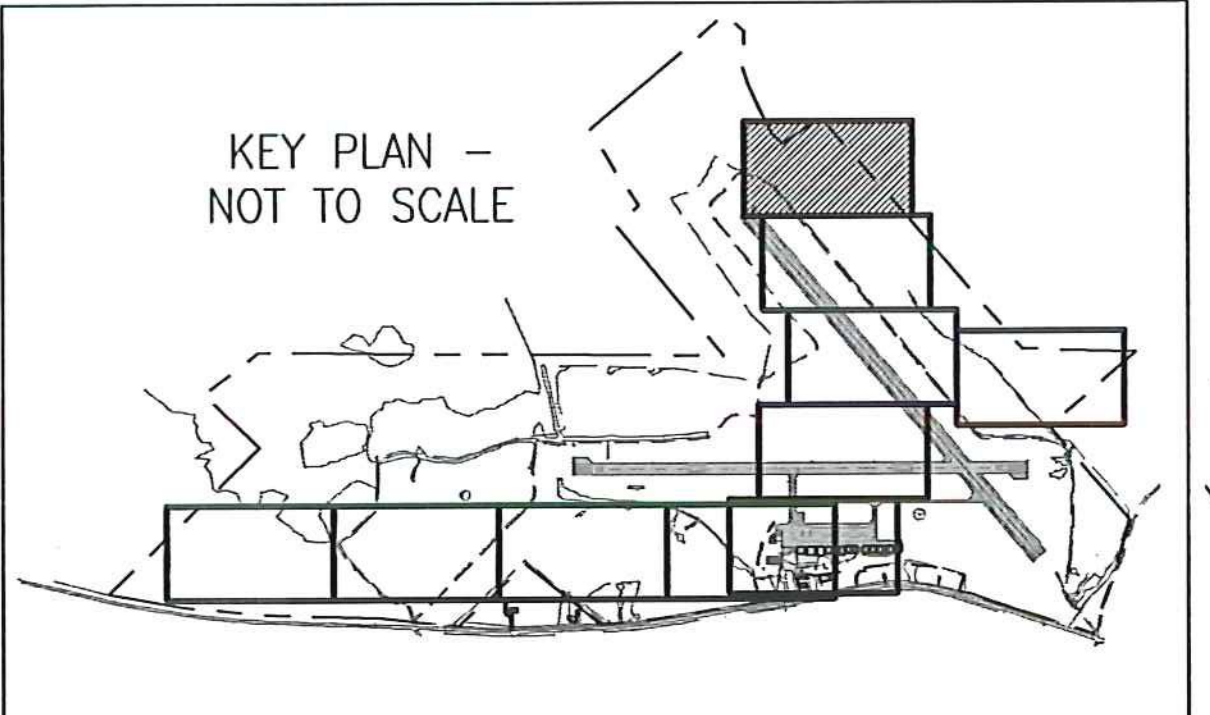
**WASHED GRAVEL:**  
 WASHED GRAVEL SHALL MEET THE REQUIREMENTS OF THE STATE OF VERMONT, AGENCY OF NATURAL RESOURCES, ENVIRONMENTAL PROTECTION RULES, CHAPTER 1, WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES DEFINITION OF "CRUSHED STONE"; CLEAN DURABLE STONE 3/4" < DIAMETER < 1-1/2"

**CLEAN WASHED SILICA SAND:**  
 CLEAN WASHED SILICA SAND SHALL MEET THE REQUIREMENTS OF THE STATE OF VERMONT, AGENCY OF NATURAL RESOURCES, ENVIRONMENTAL PROTECTION RULES, CHAPTER 1, WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES, SECTION 1-913(C).

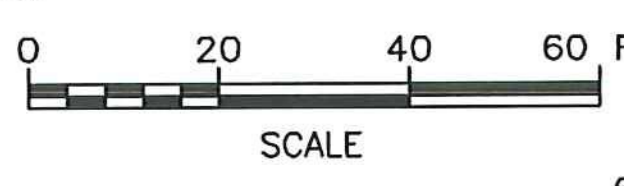
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECT DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

**LEGEND:**

- TEST PIT EXCAVATION
- FM SANITARY FORCE MAIN
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EFFECTIVE BASAL AREA
- ABSORPTION BED AREA



LOCATION	S.H.W.T.		IMPEDING SOILS (I) TYPE	BEDROCK (BR) DEPTH (FT)	GROUND WATER DEPTH (FT)	LIMITING CONDITION DEPTH (FT) TYPE
	MOTTLES	DEPTH (FT)				
TP-24	YES	1.3	SILTY CLAY LOAM, FIRM MASSIVE	2.2	>4.5	1.3 SWHT
TP-25	YES	1.3	SILT LOAM, FIRM MASSIVE	2.0	>7.0	1.3 SWHT
TP-304	YES	2.2	DENSE SILT	2.3	>3.5	2.2 SWHT
TP-305	YES	1.8	DENSE SILT AND CLAY	1.8	>4.0	1.8 I, SWHT
TP-306	YES	1.0	DENSE SILT LOAM	1.2	>4.0	1.0 SWHT



SCHEDULE B - WASTEWATER SYSTEM - BID SET  
 VTRANS PROJECT #AV157046-301  
 JUNE 2016

REV	DATE	DESCRIPTION	BY
6	6/15/15	INSULATION CHANGES	BLS
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

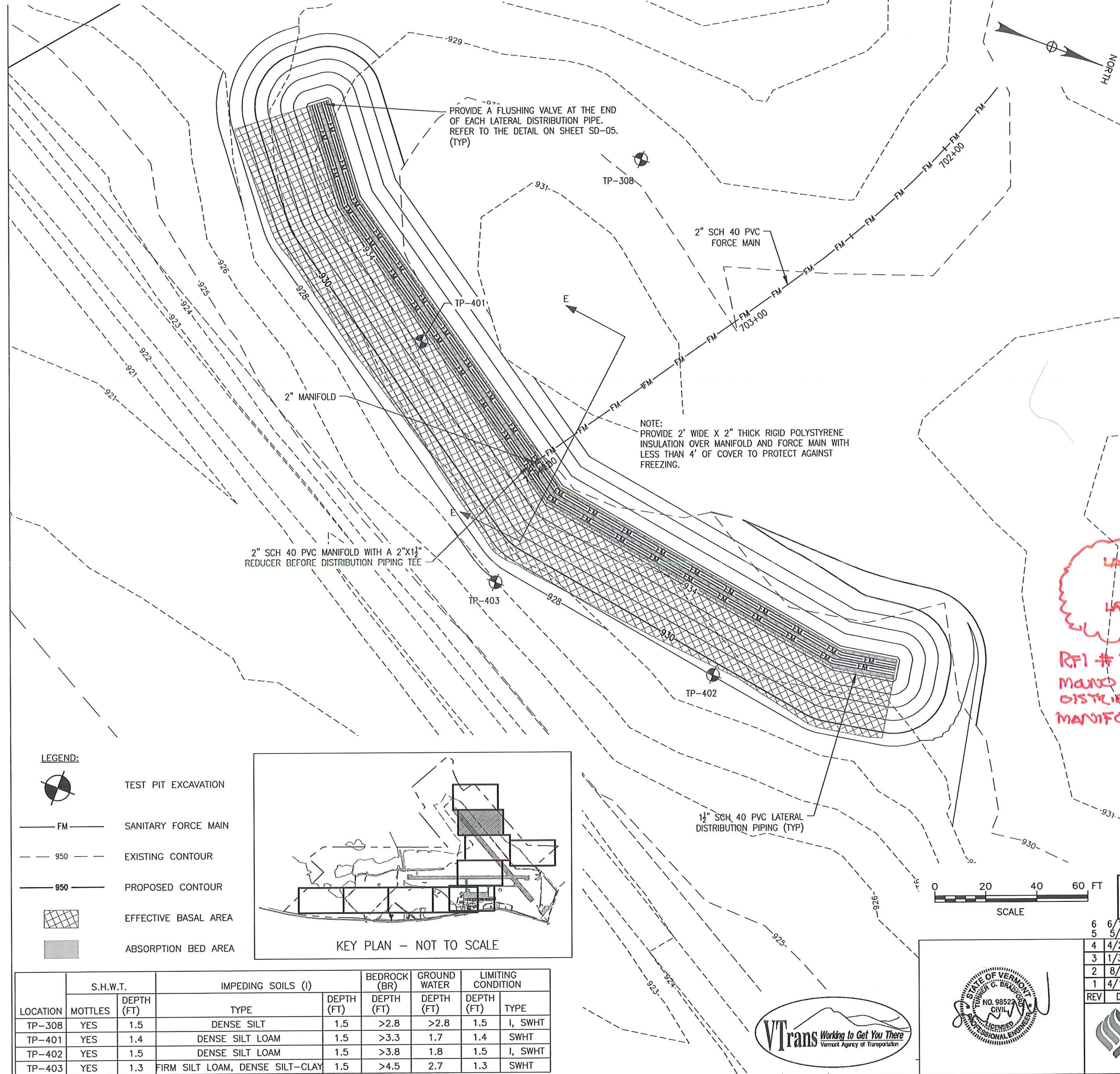


**McFarland Johnson**  
 53 REGIONAL DRIVE  
 CONCORD, NH 03301

NEWPORT STATE AIRPORT  
 COVENTRY, VERMONT  
 NEWPORT WASTEWATER

SITE 2 - MOUNDS C & D DETAILS

SCALE: 1" = 20'	DESIGN: TCB	MD2-01
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	



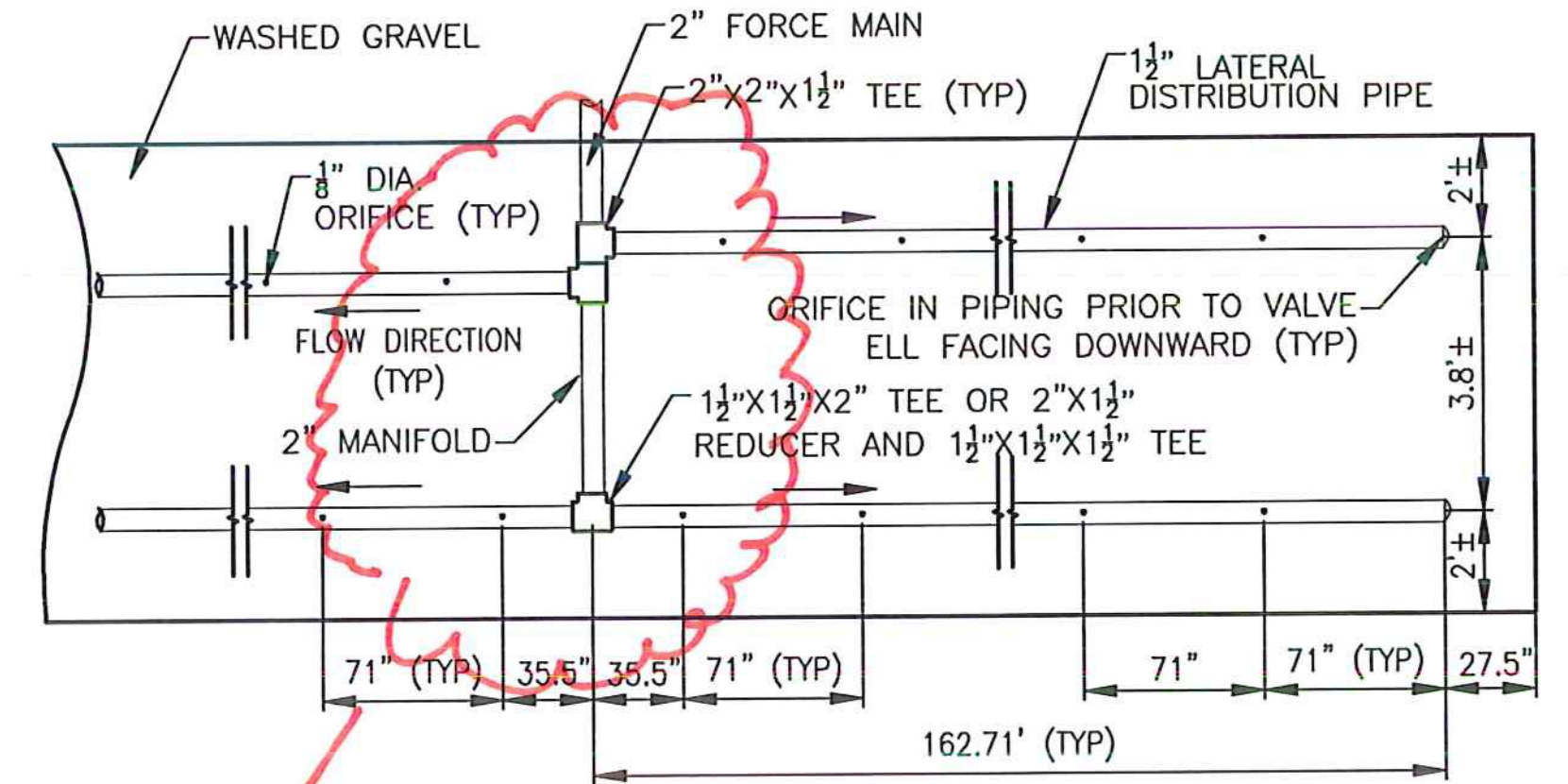
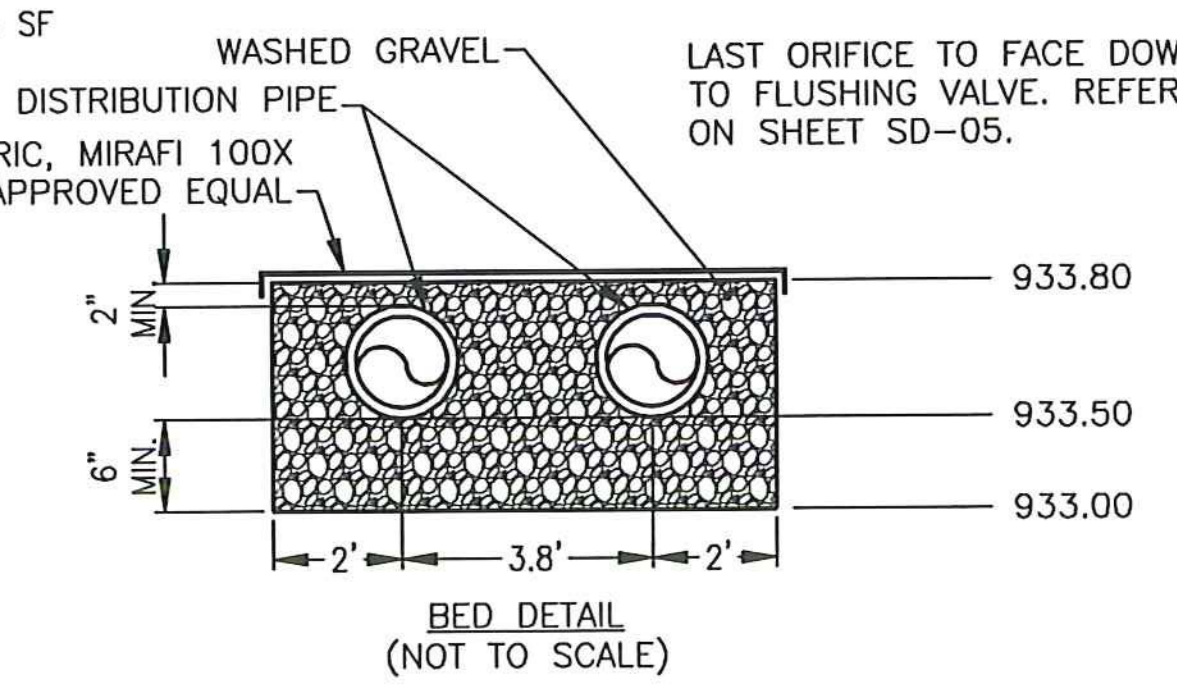
**MOUND E:**  
 Q = 1,980 GAL/DAY  
 MIN. BASAL AREA = 8,250 SF  
 APPLICATION RATE = 0.24 GPD/SF  
 AREA PROVIDED = 11,699 SF

**BED:**  
 LENGTH = 330'  
 WIDTH = 7.8'  
 AREA = 2,574 SF

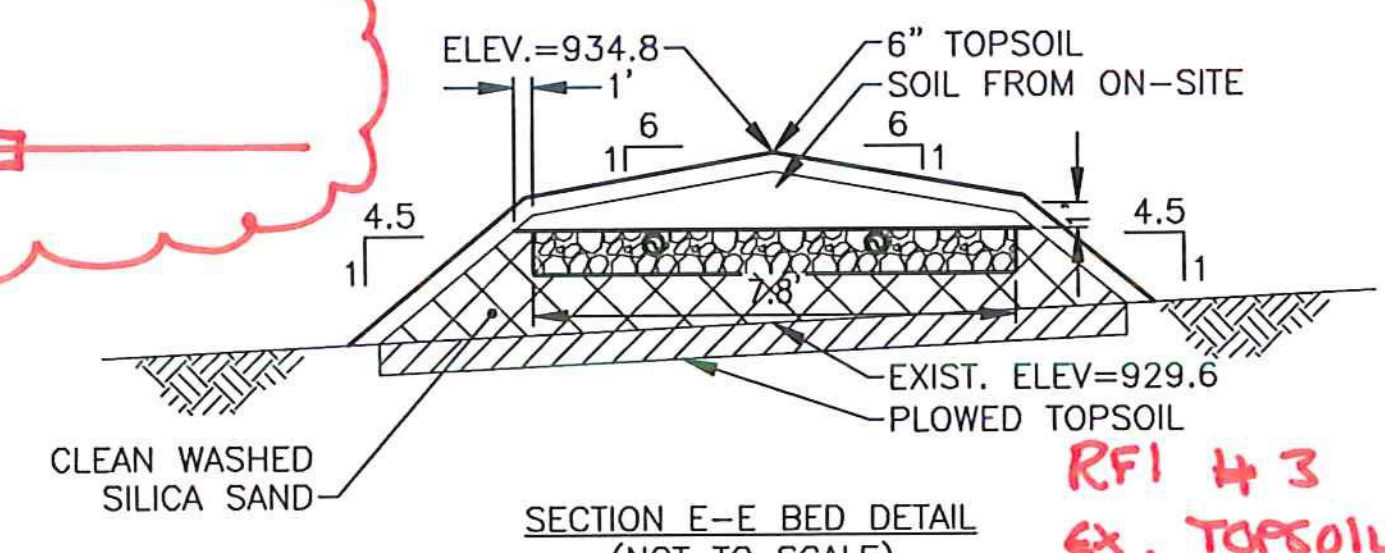
**LATERAL PIPING & ORIFICES:**  
 PROVIDE 1/2" HOLES @ 71" SPACING TO PROVIDE MAX 25SF PER ORIFICE.  
 TOTAL NUMBER OF ORIFICES = 112 (28 ORIFICES PER LATERAL)

MOST ORIFICES TO FACE UPWARD WITH ORIFICE SHIELD. PROVIDE DOWNWARD ORIFICE EVERY 4± ORIFICES TO ALLOW FOR DRAINAGE OF THE SYSTEM.

LAST ORIFICE TO FACE DOWNWARD PRIOR TO FLUSHING VALVE. REFER TO DETAILS ON SHEET SD-05.



*RFI #7  
 MANIFOLD DISTRIBUTION  
 MANIFOLD*

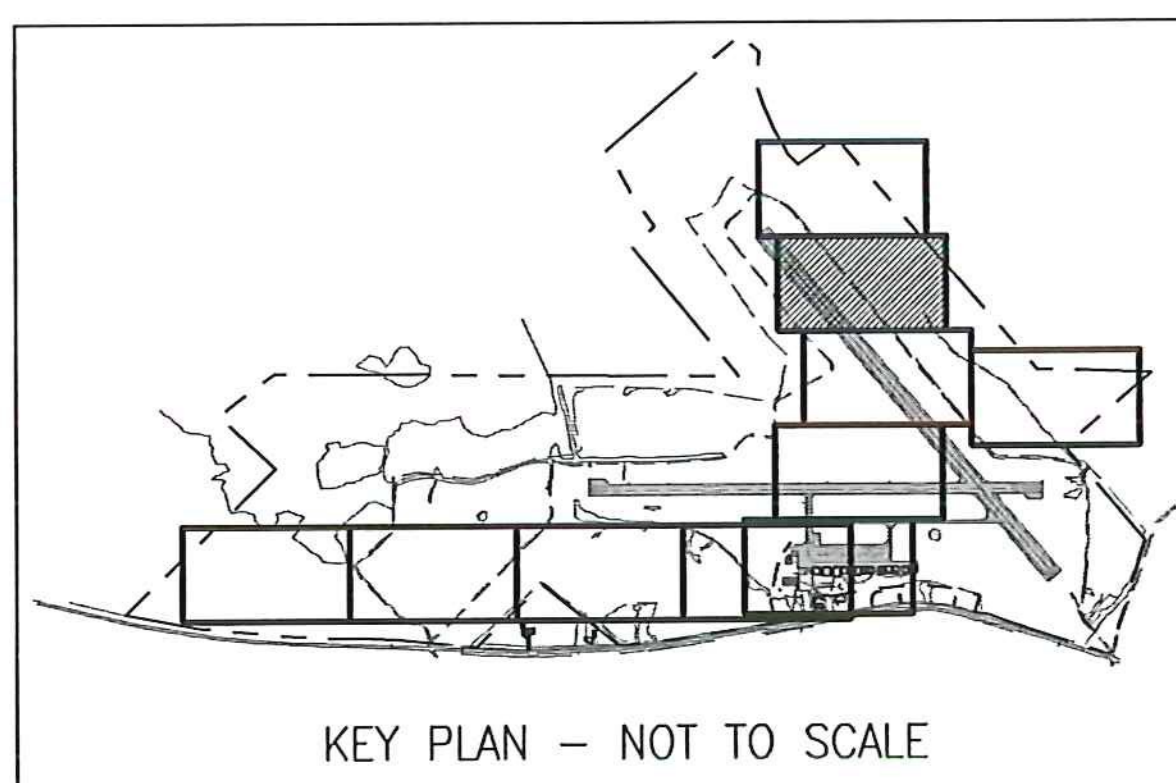


**WASHED GRAVEL:**  
 WASHED GRAVEL SHALL MEET THE REQUIREMENTS OF THE STATE OF VERMONT, AGENCY OF NATURAL RESOURCES', ENVIRONMENTAL PROTECTION RULES, CHAPTER 1, WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES DEFINITION OF "CRUSHED STONE"; CLEAN DURABLE STONE 3/4" < DIAMETER < 1-1/2"

**CLEAN WASHED SILICA SAND:**  
 CLEAN WASHED SILICA SAND SHALL MEET THE REQUIREMENTS OF THE STATE OF VERMONT, AGENCY OF NATURAL RESOURCES', ENVIRONMENTAL PROTECTION RULES, CHAPTER 1, WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES, SECTION 1-913(C).

*RFI #3  
 EX. TOPSOIL THK.  
 RFI #6 NO CHANGE  
 TO GRADES*

- LEGEND:**
- TEST PIT EXCAVATION
  - SANITARY FORCE MAIN
  - EXISTING CONTOUR
  - PROPOSED CONTOUR
  - EFFECTIVE BASAL AREA
  - ABSORPTION BED AREA



LOCATION	S.H.W.T.		IMPEDING SOILS (I)		BEDROCK (BR)	GROUND WATER		LIMITING CONDITION	
	MOTTLES	DEPTH (FT)	DEPTH (FT)	DEPTH (FT)		DEPTH (FT)	DEPTH (FT)	DEPTH (FT)	TYPE
TP-308	YES	1.5	DENSE SILT	1.5	>2.8	>2.8	1.5	I, SWHT	
TP-401	YES	1.4	DENSE SILT LOAM	1.5	>3.3	1.7	1.4	SWHT	
TP-402	YES	1.5	DENSE SILT LOAM	1.5	>3.8	1.8	1.5	I, SWHT	
TP-403	YES	1.3	FIRM SILT LOAM, DENSE SILT-CLAY	1.5	>4.5	2.7	1.3	SWHT	

SCHEDULE B - WASTEWATER SYSTEM - BID SET  
 VTRANS PROJECT #AV157046-301  
 JUNE 2016

REV	DATE	DESCRIPTION	BY
6	6/15/15	INSULATION CHANGES	BLS
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH



**McFarland Johnson**  
 53 REGIONAL DRIVE  
 CONCORD, NH 03301

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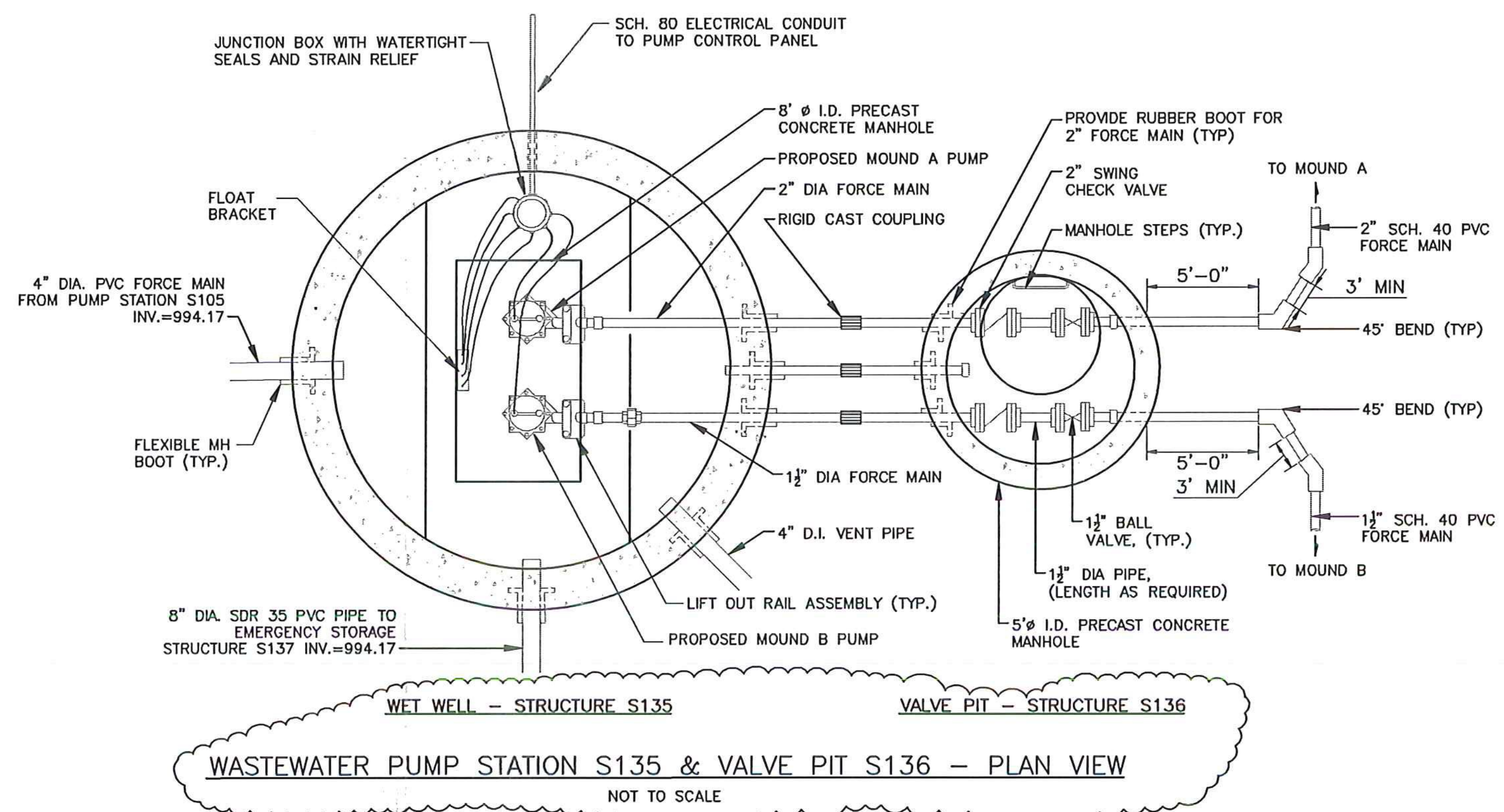
NEWPORT STATE AIRPORT COVENTRY, VERMONT NEWPORT WASTEWATER		
SITE 2 - MOUND E DETAIL		
SCALE: 1" = 20'	DESIGN: TCB	MD2-02 29 of 96
DRAWN: TCB	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	



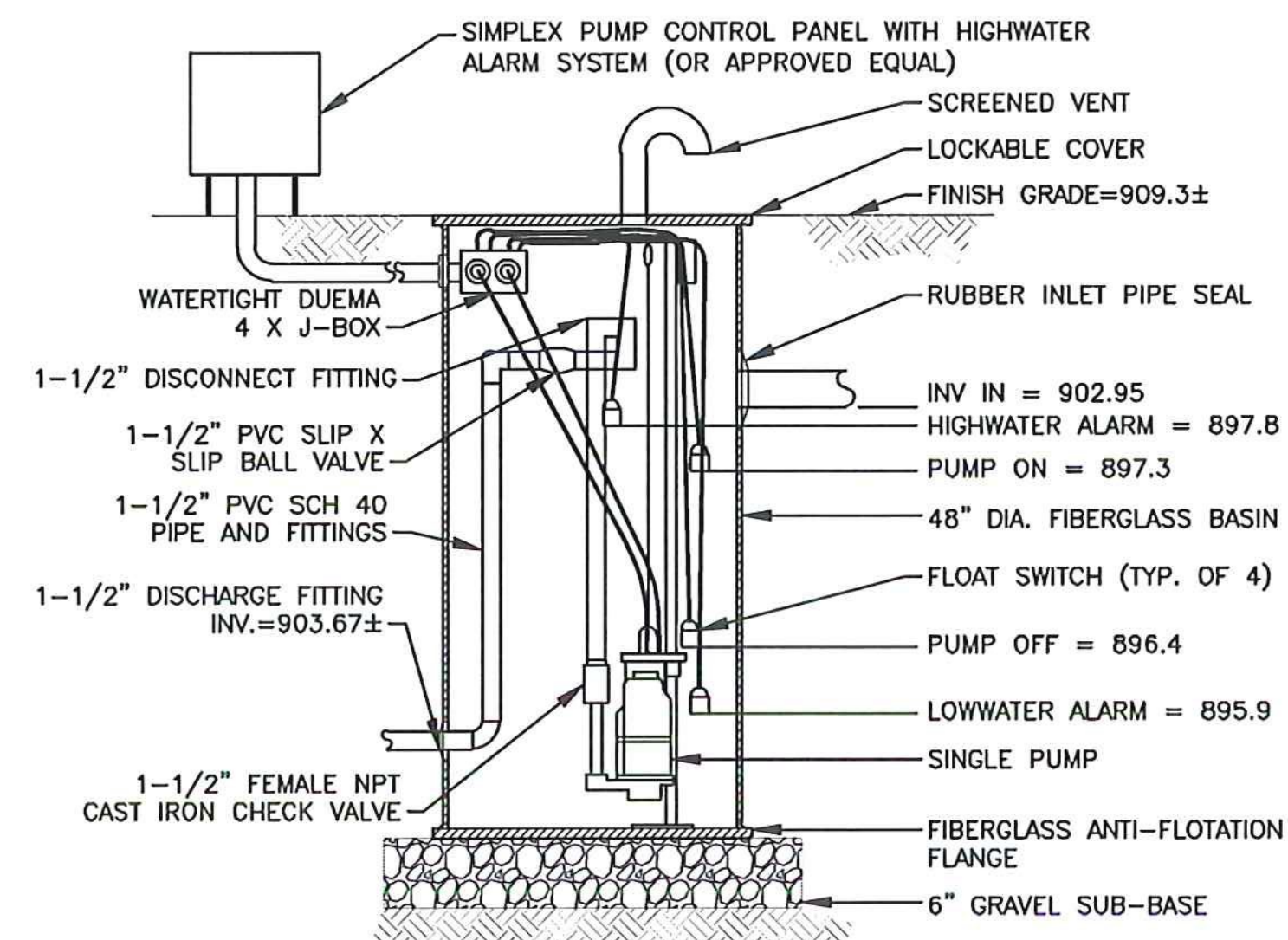




NOT CONSTRUCTED AS PART OF CONTRACT



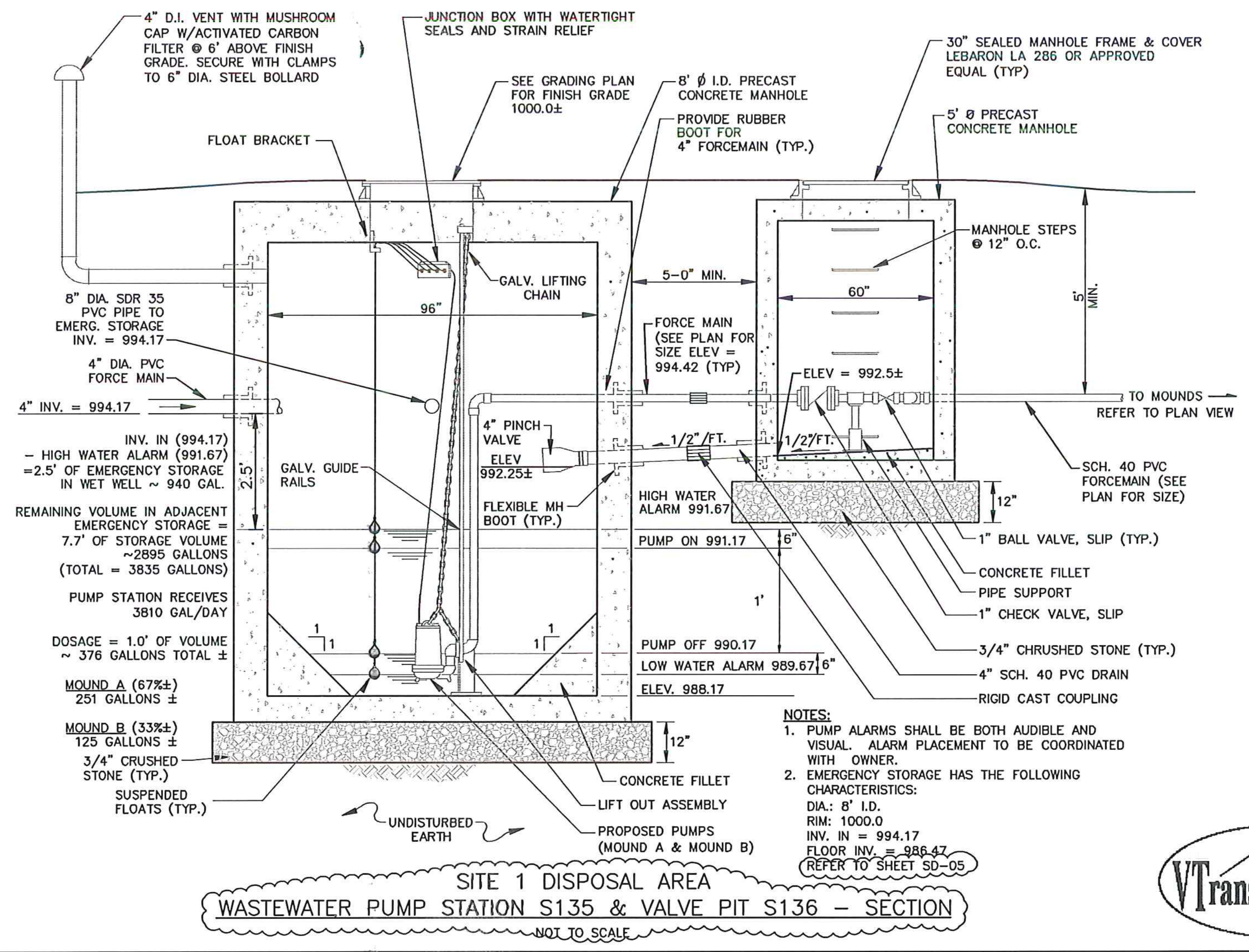
WASTEWATER PUMP STATION S135 & VALVE PIT S136 - PLAN VIEW  
NOT TO SCALE



BUILDING 7 SERVICE  
EFFLUENT PUMPING UNIT S128  
NOT TO SCALE

SEPTIC TANK ST127 INV. (903.0)  
-HIGH WATER ALARM (897.8)  
= 5.2' OF EMERGENCY STORAGE  
~ 488.8 GAL  
PUMP STATION RECEIVES  
486 GAL/DAY (BLDG 7)  
DOSAGE = 0.9' OF VOLUME  
~ 84.6 GALLONS

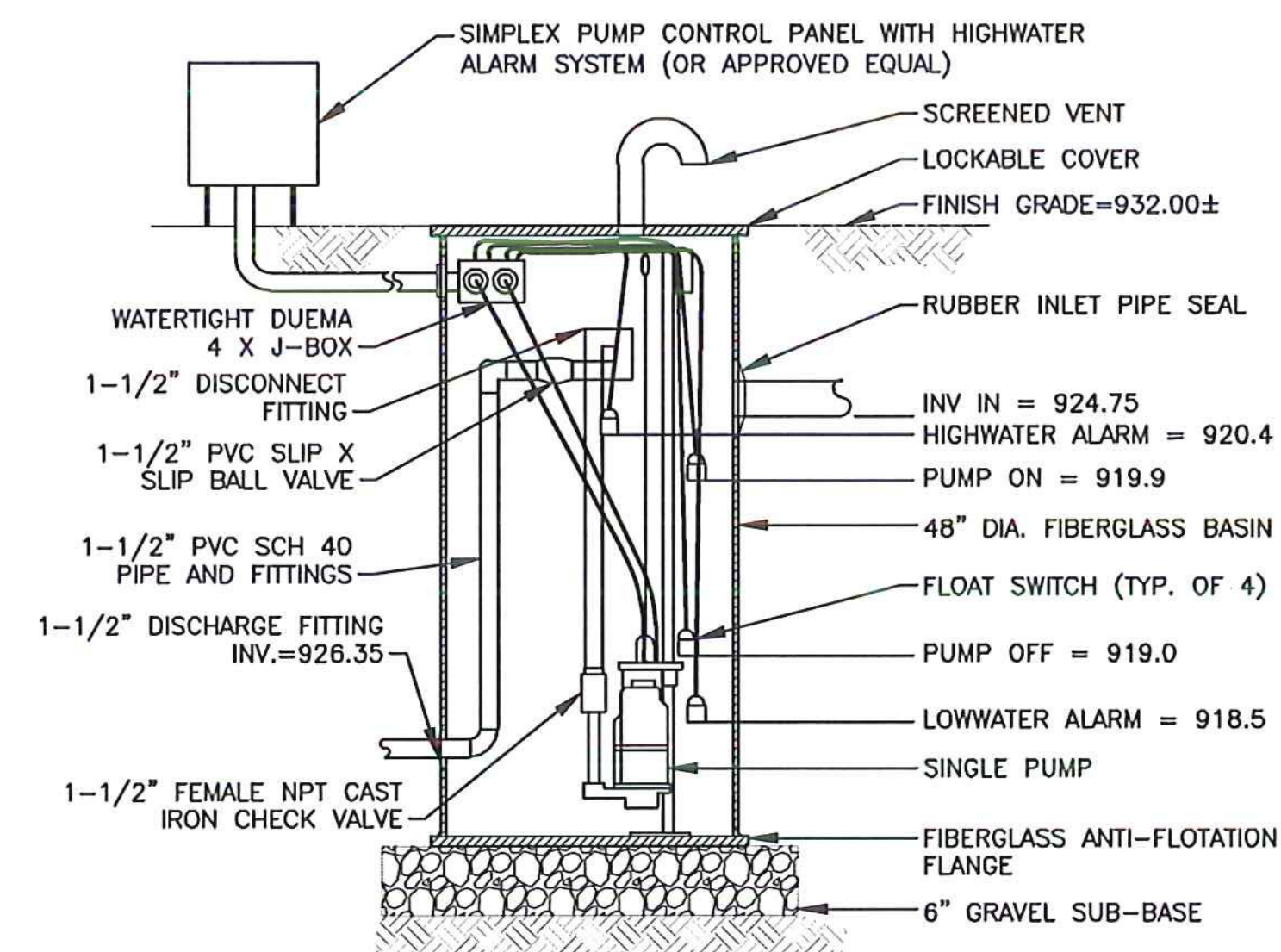
PUMP BASIS OF DESIGN  
Q = 20 GPM  
TDH = 22.1 FEET  
MYERS MODEL ME3F OR APPROVED EQUAL.  
POWER: SINGLE PHASE, 230V, 60HZ



SITE 1 DISPOSAL AREA  
WASTEWATER PUMP STATION S135 & VALVE PIT S136 - SECTION  
NOT TO SCALE

PUMP BASIS OF DESIGN  
MOUND A PUMP  
Q = 32.2 GPM  
TDH = 12.7 FEET  
MYERS MODEL MDC33 OR APPROVED EQUAL.  
POWER: SINGLE PHASE, 115V, 60HZ  
RUN TIME = 251 GAL/32.2 GPM = 7.8 ± MIN  
MOUND B PUMP  
Q = 16.2 GPM  
TDH = 13.8 FEET  
MYERS MODEL D550 OR APPROVED EQUAL.  
POWER: SINGLE PHASE, 115V, 60HZ  
RUN TIME = 125 GAL/16.2 GPM = 7.7 ± MIN  
PUMP CONTROLS TO BE GOVERNED BY THE PUMP  
RUN TIMES AFTER STARTED BY PUMP ON FLOAT.  
THE PUMP OFF FLOATS ARE TO BE USED AS A  
BACKUP TO THE RUN TIMES.

NOTES:  
1. PUMP ALARMS SHALL BE BOTH AUDIBLE AND VISUAL. ALARM PLACEMENT TO BE COORDINATED WITH OWNER.  
2. EMERGENCY STORAGE HAS THE FOLLOWING CHARACTERISTICS:  
DIA: 8' I.D.  
RIM: 1000.0  
INV. IN = 994.17  
FLOOR INV. = 986.47  
REFER TO SHEET SD-05



BUILDING 9 SERVICE  
EFFLUENT PUMPING UNIT S132  
NOT TO SCALE

INV. IN (924.75)  
- HIGH WATER ALARM (920.4)  
= 4.35' OF EMERGENCY STORAGE  
~ 409 GAL  
PUMP STATION RECEIVES  
324 GAL/DAY (BLDG 9)  
DOSAGE = 0.9' OF VOLUME  
~ 86.4 GALLONS

PUMP BASIS OF DESIGN  
Q = 20 GPM  
TDH = 24.5 FEET  
MYERS MODEL ME3H OR APPROVED EQUAL.  
POWER: SINGLE PHASE, 230V, 60HZ

PERMIT PLANS

REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECT DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

NEWPORT STATE AIRPORT  
COVENTRY, VERMONT  
NEWPORT WASTEWATER

SANITARY SEWER DETAILS

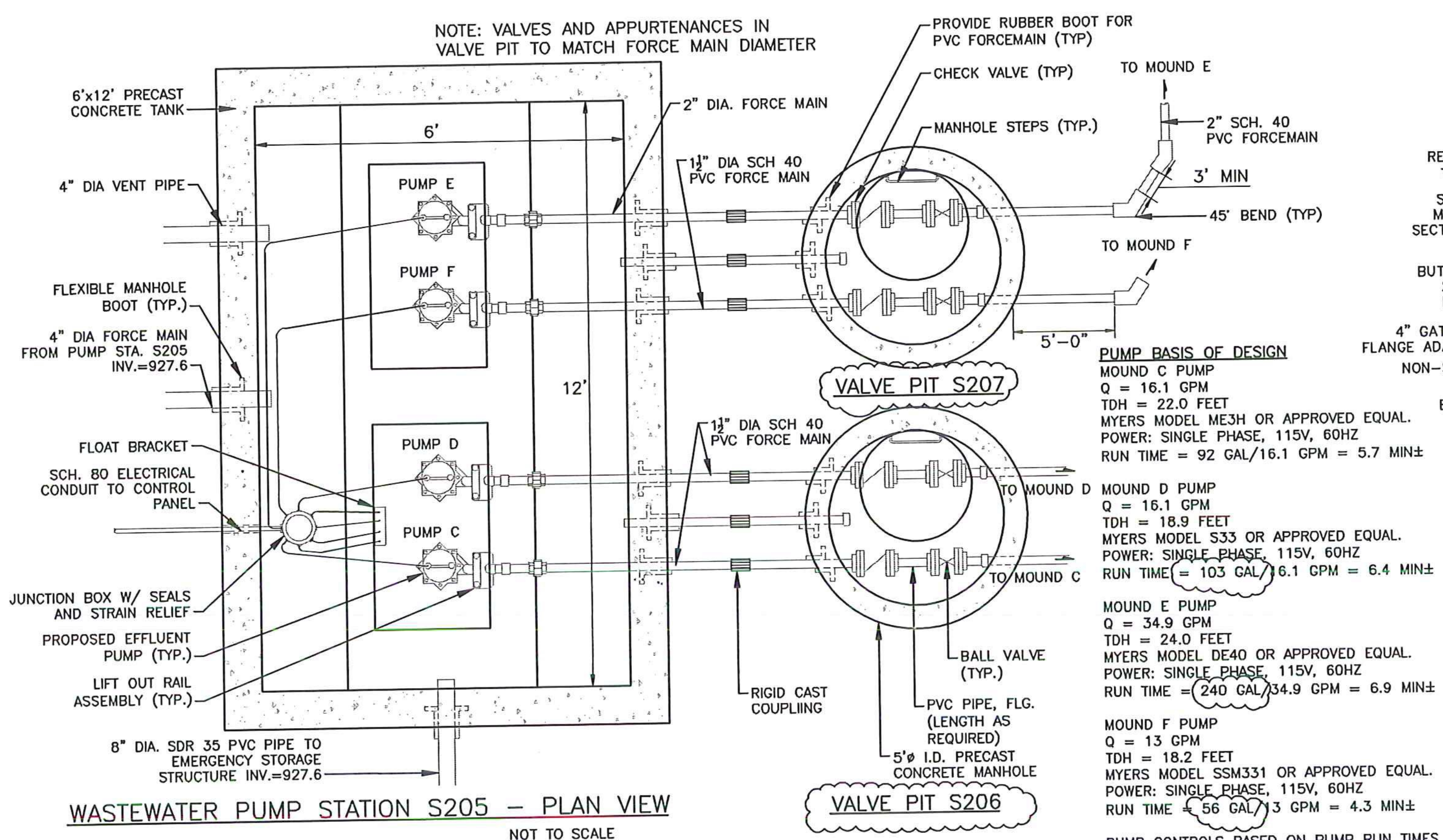
SCALE: N.T.S.	DESIGN: TCB	SD-02 32 OF 36
DRAWN: MTF	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	



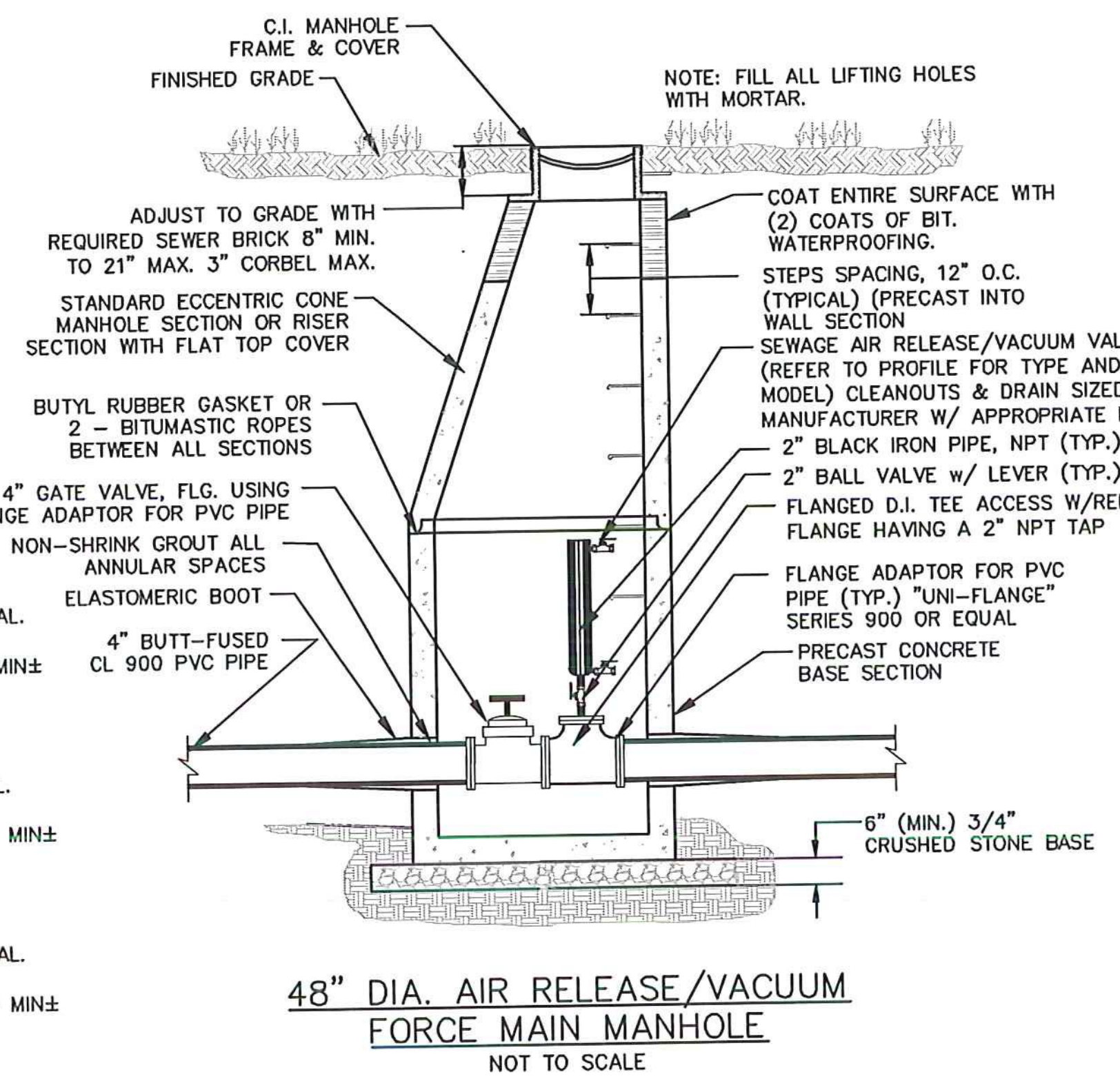
**McFarland Johnson**  
53 REGIONAL DRIVE  
CONCORD, NH 03301



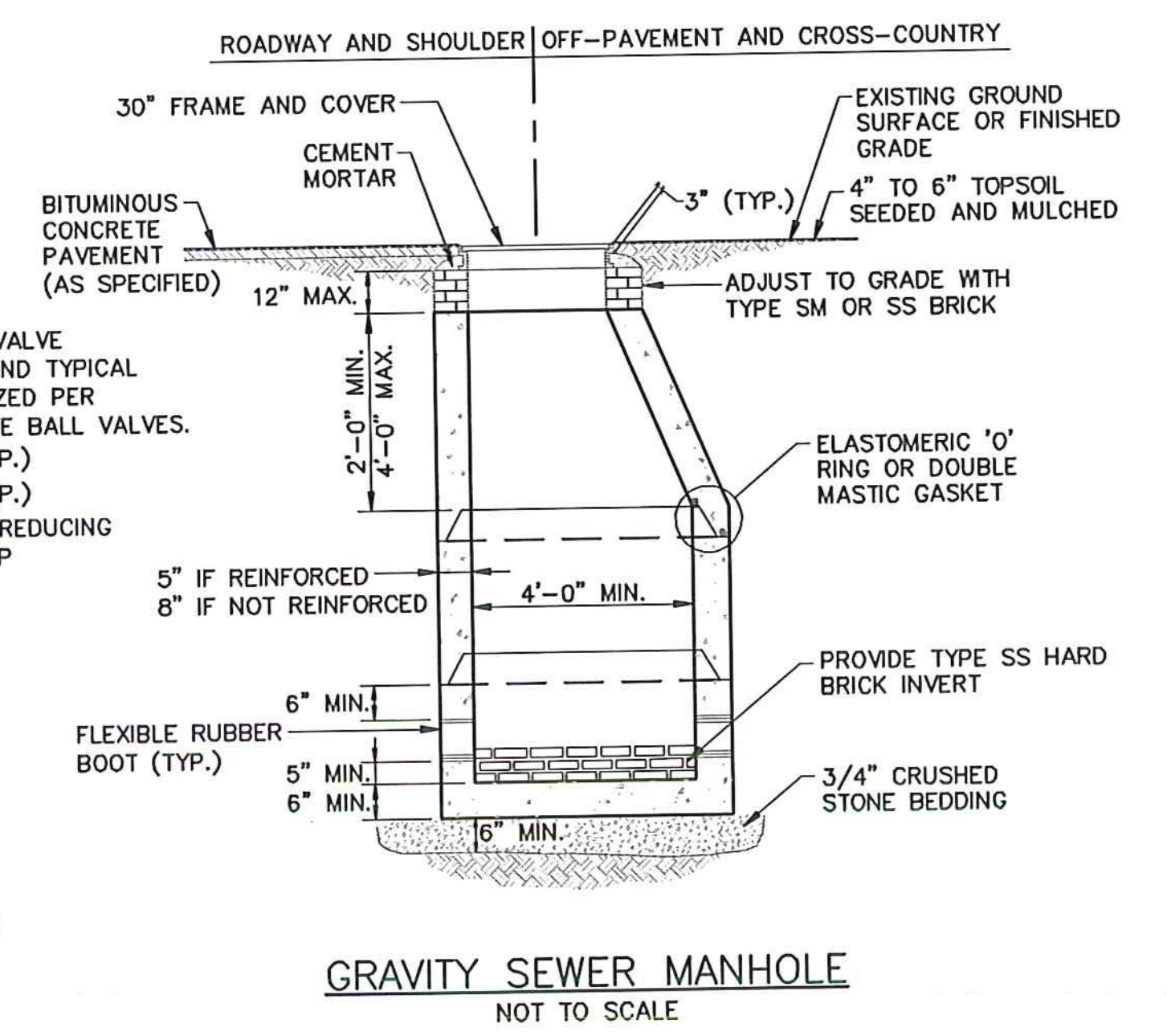
SEE RFI #4 FOR BALANCE CALCS.



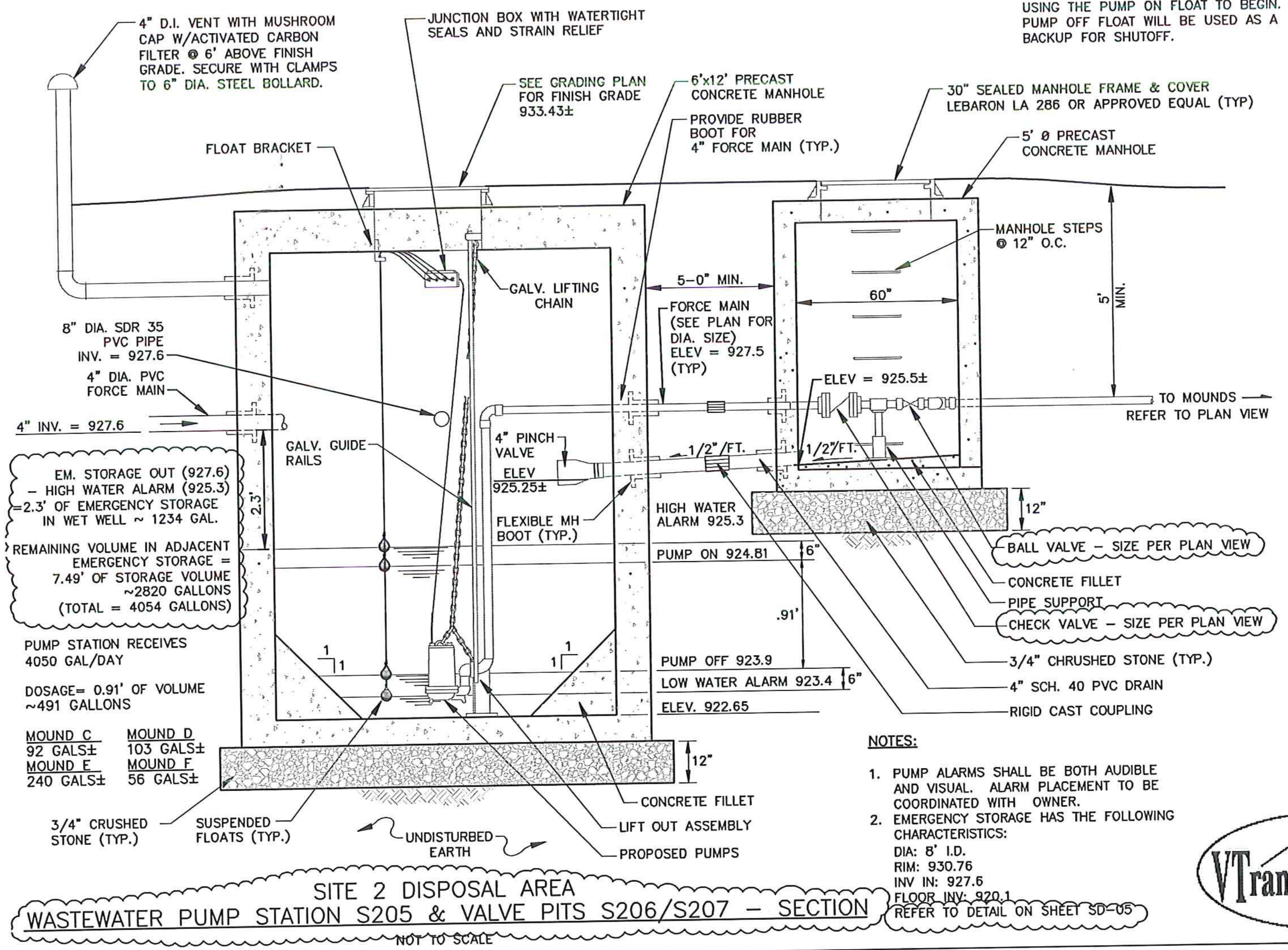
WASTEWATER PUMP STATION S205 - PLAN VIEW  
NOT TO SCALE



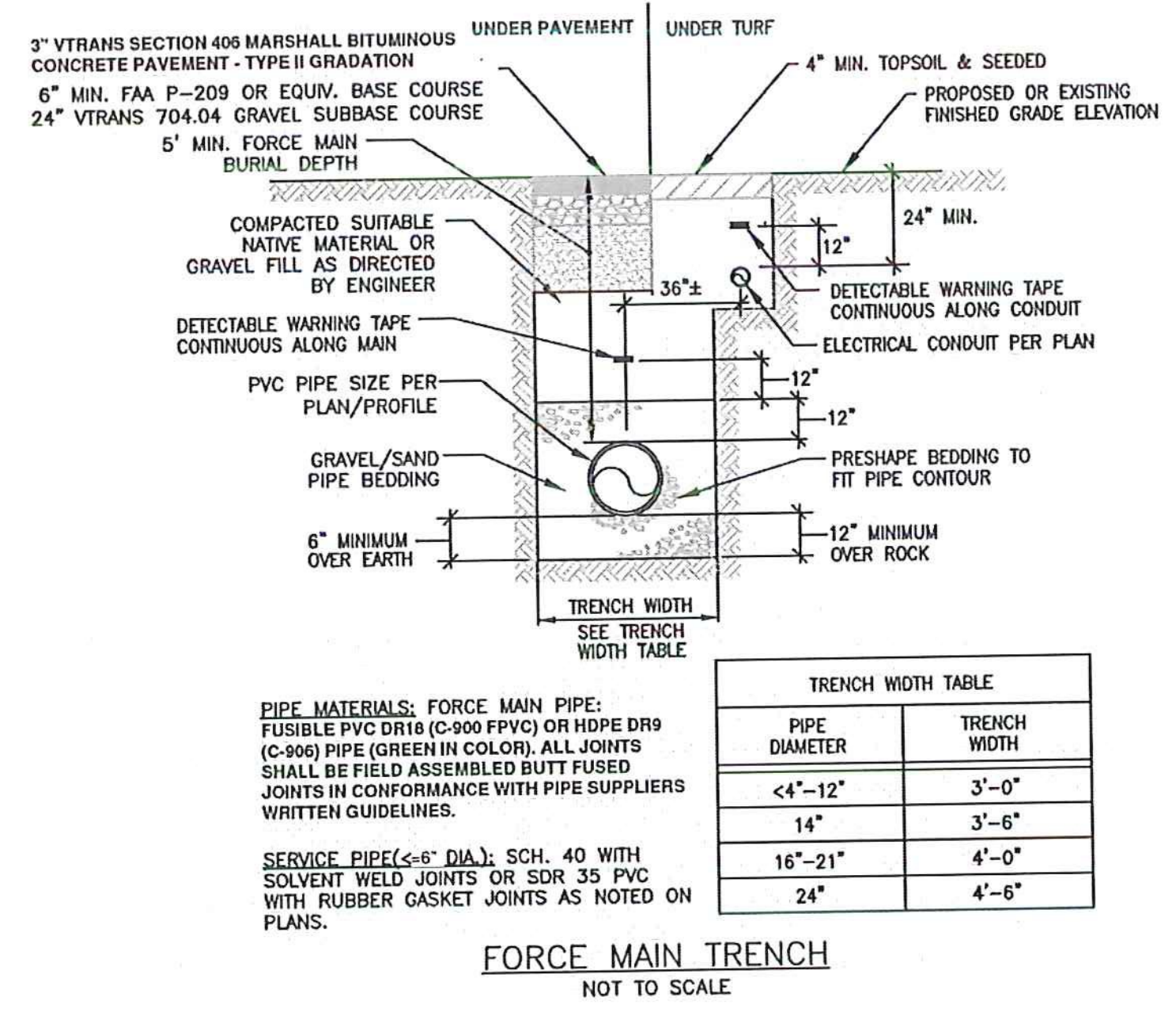
48" DIA. AIR RELEASE/VACUUM FORCE MAIN MANHOLE  
NOT TO SCALE



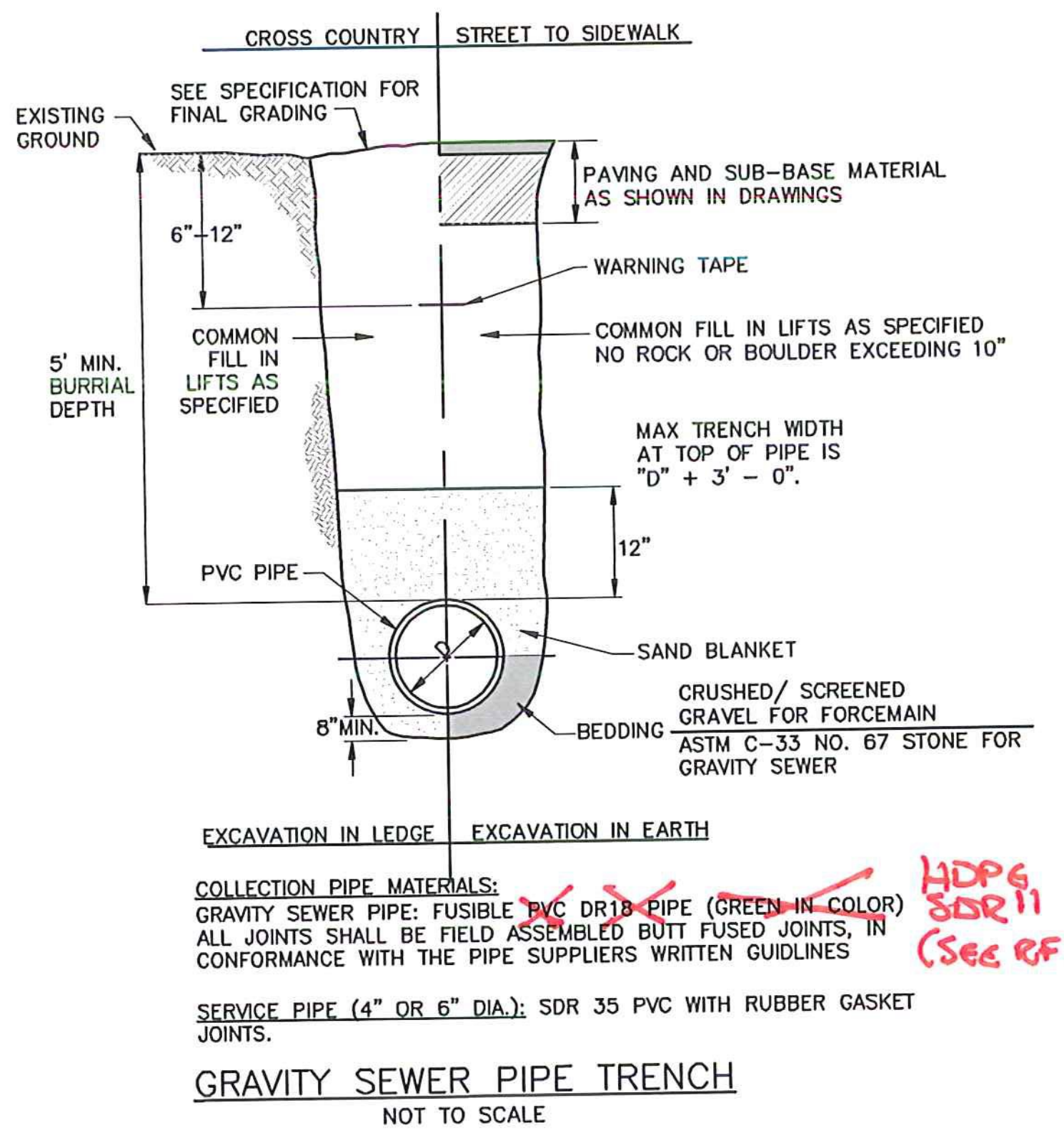
GRAVITY SEWER MANHOLE  
NOT TO SCALE



WASTEWATER PUMP STATION S205 & VALVE PITS S206/S207 - SECTION  
NOT TO SCALE



FORCE MAIN TRENCH  
NOT TO SCALE



GRAVITY SEWER PIPE TRENCH  
NOT TO SCALE

TRENCH WIDTH TABLE	
PIPE DIAMETER	TRENCH WIDTH
<4\"-12"	3\"-0"
14"	3\"-6"
16\"-21"	4\"-0"
24"	4\"-6"

- NOTES:
- PUMP ALARMS SHALL BE BOTH AUDIBLE AND VISUAL. ALARM PLACEMENT TO BE COORDINATED WITH OWNER.
  - EMERGENCY STORAGE HAS THE FOLLOWING CHARACTERISTICS:  
DIA: 8' I.D.  
RIM: 930.76  
INV IN: 927.6  
FLOOR INV: 920.1  
REFER TO DETAIL ON SHEET SD-05

SCHEDULE B - WASTEWATER SYSTEM - BID SET  
VTRANS PROJECT #AV1157046-301  
JUNE 2016

REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECT DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

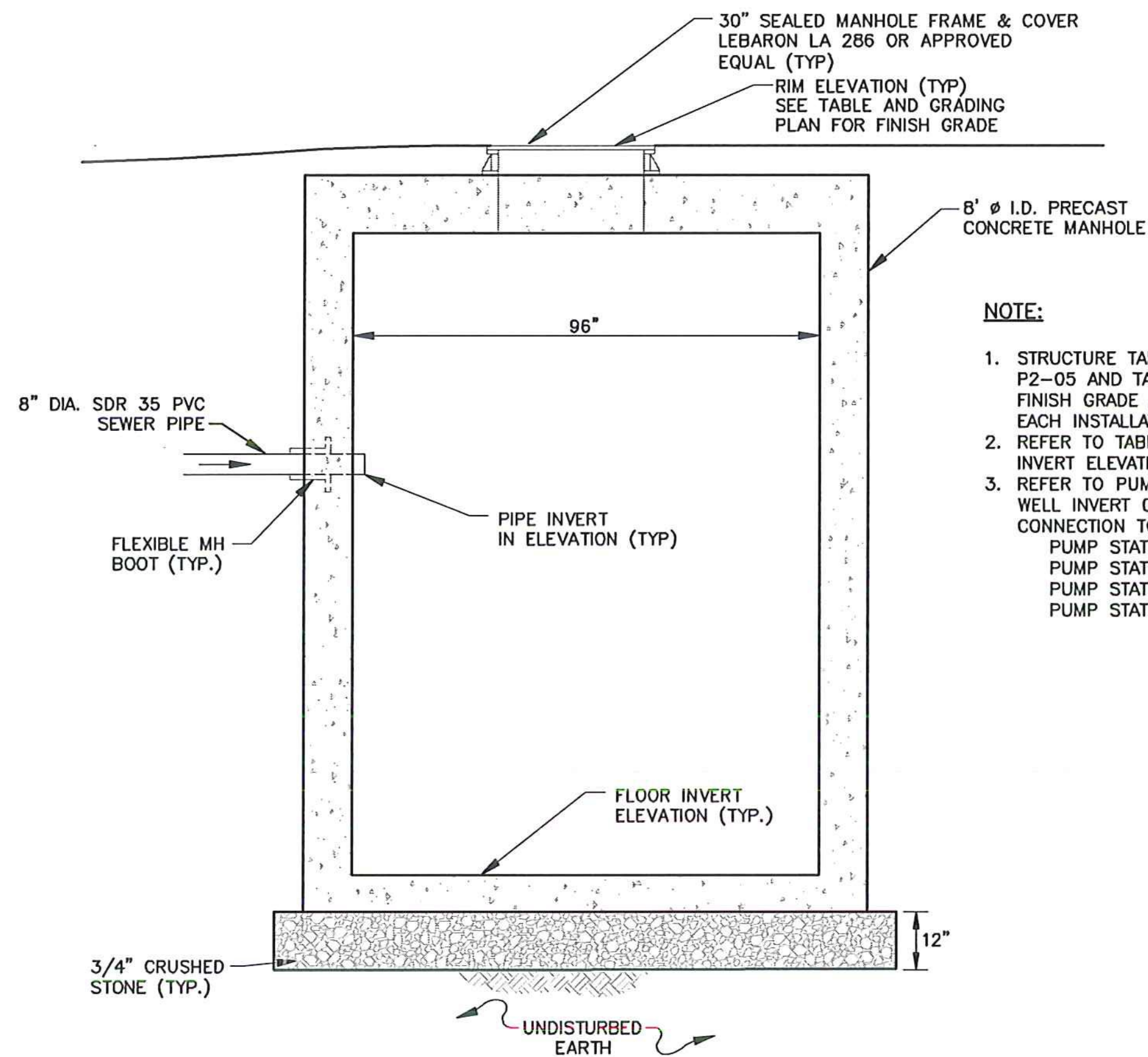
NEWPORT STATE AIRPORT  
COVENTRY, VERMONT  
NEWPORT WASTEWATER  
SANITARY SEWER DETAILS

SCALE: N.T.S.	DESIGN: TCB	SD-04 34 OF 36
DRAWN: MTF	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	



**McFarland Johnson**  
53 REGIONAL DRIVE  
CONCORD, NH 03301

HDPG SDR 11 (See RFI #1)

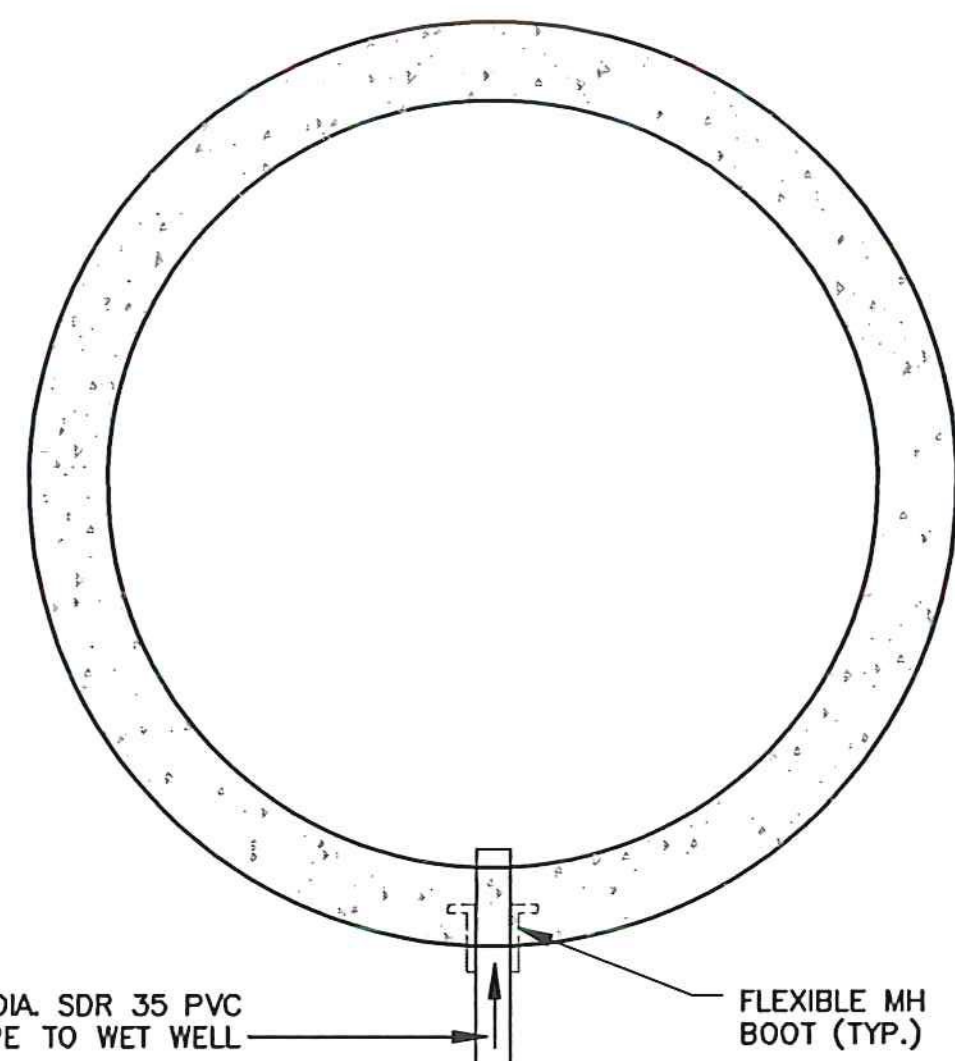


- NOTE:**
- STRUCTURE TABLE ON SHEETS P1-05 AND P2-05 AND TABLE IN THIS DETAIL SHOW FINISH GRADE AND INVERT ELEVATIONS FOR EACH INSTALLATION.
  - REFER TO TABLE IN THIS TABLE FOR FLOOR INVERT ELEVATIONS.
  - REFER TO PUMP STATION DETAILS FOR WET WELL INVERT OUT ELEVATIONS AND PIPE CONNECTION TO THE WET WELL.  
 PUMP STATION 105 - SHEET SD-01  
 PUMP STATION 135 - SHEET SD-02  
 PUMP STATION 203 - SHEET SD-03  
 PUMP STATION 205 - SHEET SD-04

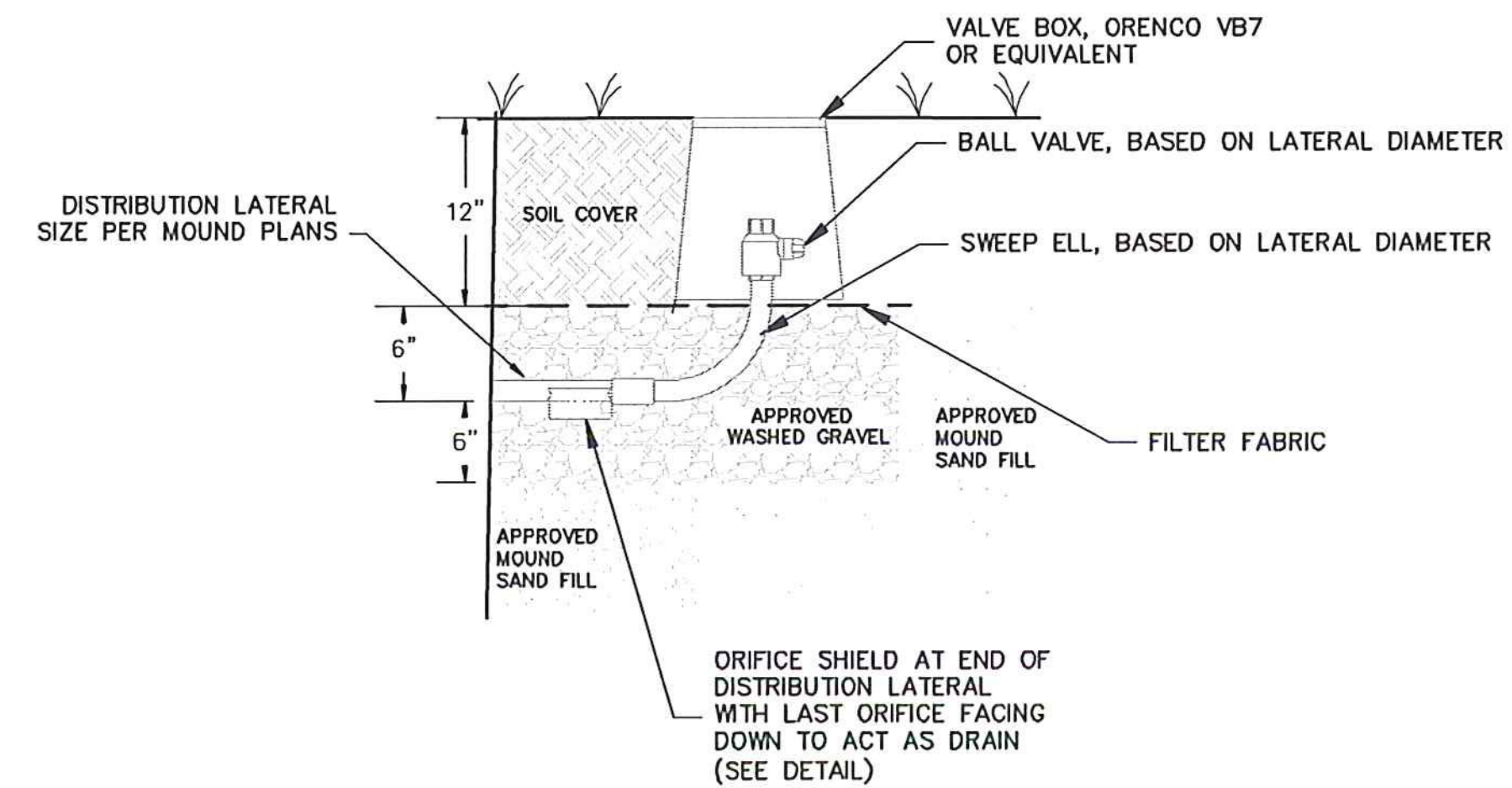
TYPICAL EMERGENCY STORAGE (S105A/S137/S203A/S208) - SECTION  
NOT TO SCALE

*S203A & S208 WERE ONLY CONSTRUCTED AS PART OF THIS CONTRACT*

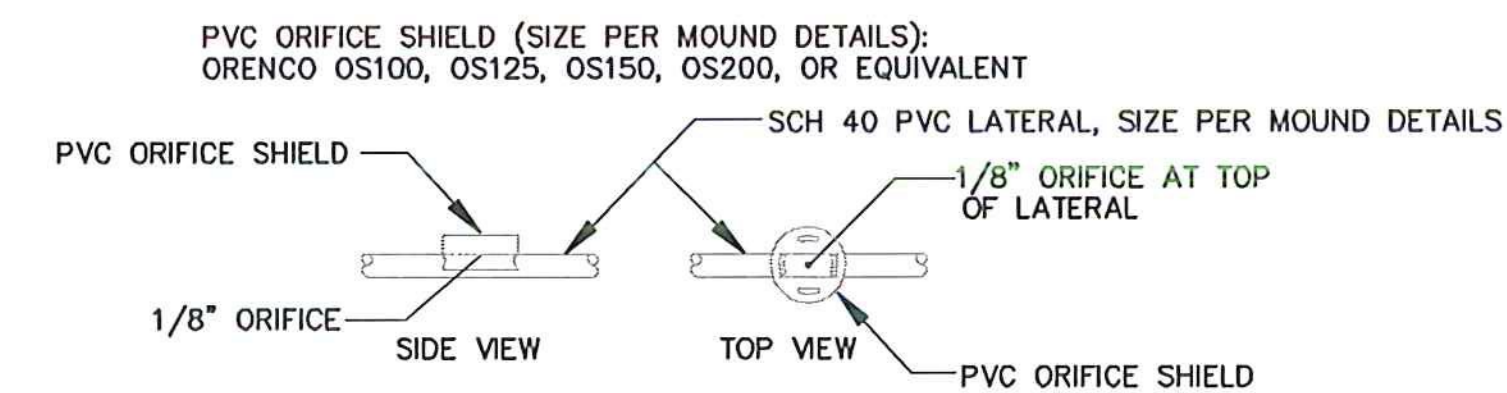
EMERG. STORAGE STRUCTURE ID.	CONNECTED TO WET WELL	RIM ELEV. (FEET)	PIPE INV. IN ELEV. (FEET)	FLOOR INV. ELEV. (FEET)	STORAGE VOLUME (GALS)
S105A	S105	907.8±	899.95	895.5	1692
S137	S135	1000±	994.17	986.47	2895
S203A	S203	916.2±	906.64	899.1	2835
S208	S205	930.75±	927.6	920.1	2820



TYPICAL EMERGENCY STORAGE (S105A/S137/S203A/S208) - PLAN VIEW  
NOT TO SCALE



DISTRIBUTION LATERAL FLUSHING VALVE DETAIL  
NOT TO SCALE



STANDARD ORIFICE SHIELD DETAIL  
NOT TO SCALE

SCHEDULE B - WASTEWATER SYSTEM - BID SET  
VTRANS PROJECT #AV1157046-301  
JUNE 2016

REV	DATE	DESCRIPTION	BY
5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH

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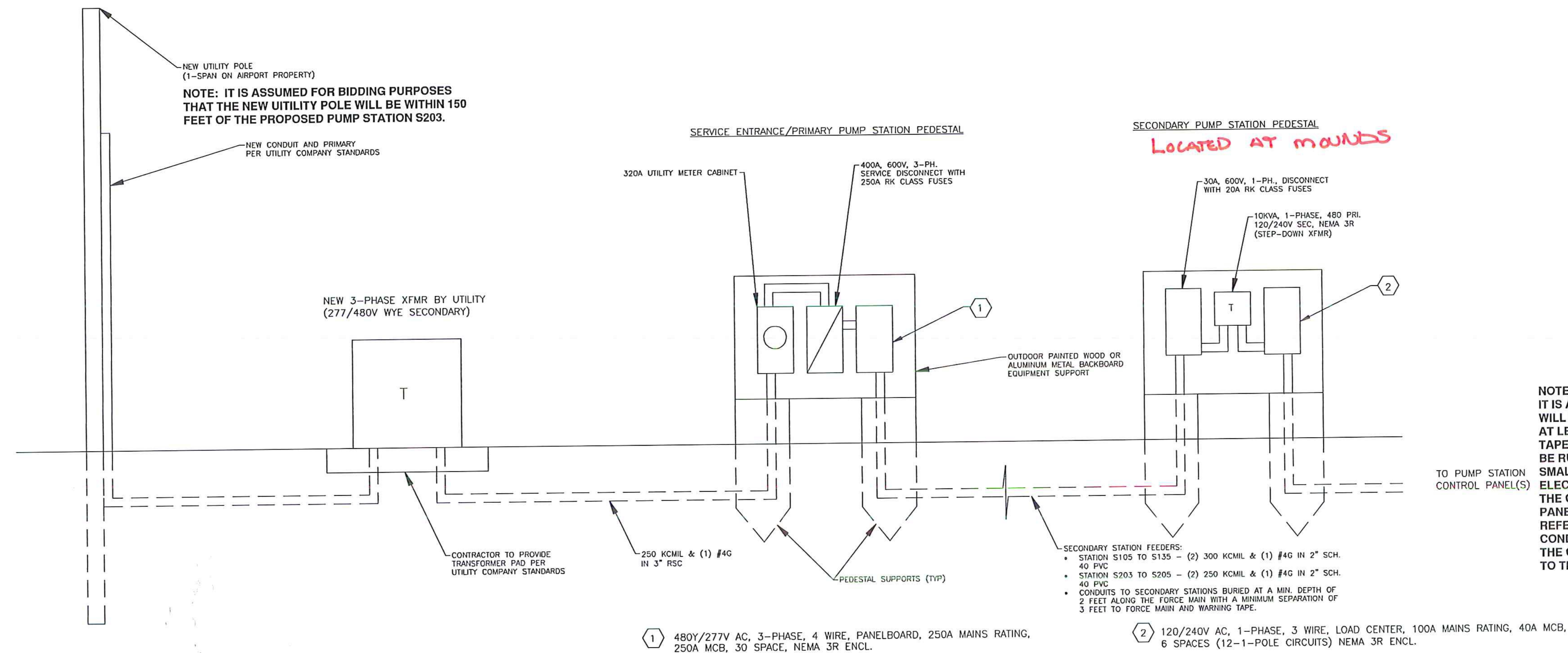
NEWPORT STATE AIRPORT  
COVENTRY, VERMONT  
NEWPORT WASTEWATER

SANITARY SEWER DETAILS



**McFarland Johnson**  
53 REGIONAL DRIVE  
CONCORD, NH 03301

SCALE: 1" = 20'	DESIGN: TCB	SD-05 35 of 36
DRAWN: MTF	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	



NOTE:  
IT IS ASSUMED THE ELECTRICAL CONDUIT TO THE DISPOSAL FIELD PUMP STATION WILL RUN PARALLEL WITH THE PROPOSED FORCE MAIN. THE CONDUIT SHALL HAVE AT LEAST A 3-FOOT SEPARATION AT A MINIMUM DEPTH OF 24" AND HAVE WARNING TAPE INSTALLED AT 8" DEPTH. THE FORCE MAIN AND ELECTRICAL CONDUIT CAN NOT BE RUN IN THE SAME SLEEVE WHERE SLEEVES ARE USED. EITHER PROVIDE A SMALLER SEPARATE SLEEVE OR DIRECTIONALLY BORE A CONDUIT FOR THE ELECTRICAL.  
THE CONDUIT RUN FROM THE MAIN PANEL TO THE DISPOSAL FIELD PUMP STATION PANEL WILL BE REQUIRED TO ADHERE TO ALL NATIONAL ELECTRIC CODE AND OTHER REFERENCED STANDARDS, INCLUDING REQUIREMENTS FOR MAXIMUM BENDS FOR CONDUITS AND PULLING TENSION FOR CONDUCTORS. THEREFORE, HAND HOLES FOR THE CONDUIT RUN TO THE PUMP STATION PANELS WILL BE NECESSARY TO ADHERE TO THESE REQUIREMENTS.

*SEE RFI # 9 FOR CLARIFICATION ON SERVICE CONNECTION (OPT. 2 WAS CHOSEN)*

ELECTRICAL SERVICE ONE-LINE DIAGRAM  
NOT TO SCALE

GENERAL ELECTRICAL NOTES:

- ALL ELECTRICAL WORK UNDER THIS CONTRACT SHALL BE DONE IN ACCORDANCE WITH THE NEC, LOCAL AUTHORITY HAVING JURISDICTION (AHJ), AND LOCAL UTILITY COMPANY.
- ELECTRICAL CONTRACTOR (E.C.) SHALL VERIFY AND COORDINATE ELECTRICAL CHARACTERISTICS (I.E. VOLTAGE, MCA, MOP, WIRING, GROUNDING) WITH MECHANICAL EQUIPMENT VENDOR AND COMPLY AS REQUIRED.
- THE DIAGRAMS ABOVE ARE INTENDED TO FURNISH SYSTEM INTENT ONLY. E.C. SHALL BE RESPONSIBLE FOR PROPERLY SIZING ALL FEEDERS AND/OR BRANCH CIRCUITS, AND CONDUITS, AS REQUIRED TO PROPERLY SERVE ACTUAL EQUIPMENT TO BE INSTALLED. E.C. SHALL SUBMIT WIRE SIZING AND CONDUIT FILL CALCULATIONS TO THE ENGINEER. E.C. SHALL INCLUDE IN ITS PRICE, THE NEC REQUIRED WIRE AND CONDUIT TO PROPERLY COMPLETE THE INSTALLATION.
- GROUNDING OF ELECTRICAL SERVICE AND EQUIPMENT SHALL BE IN ACCORDANCE WITH NEC ARTICLE 250, AND EQUIPMENT MANUFACTURER REQUIREMENTS.
- EQUIPMENT SHALL BE MOUNTED SO THAT THE BOTTOM IS A MINIMUM OF 36" AGL, UNLESS OTHERWISE REQUIRED BY THE NEC.
- E.C. SHALL FURNISH AND INSTALL ONE (1) NEW 20A, 125V, NEMA 5-20R, TAMPER RESISTANT, WEATHER RESISTANT, GFI RECEPTACLE, INDUSTRIAL GRADE, DUPLEX, WITH WHILE IN USE COVER AT EACH PRIMARY AND SECONDARY PUMP STATION PEDESTAL FOR MAINTENANCE PURPOSES. E.C. SHALL FURNISH AND INSTALL A STEP DOWN TRANSFORMER AT PRIMARY PUMP STATION PEDESTAL TO SERVE NEW RECEPTACLE. NOTE: NEW RECEPTACLES, RECEPTACLE STEP DOWN TRANSFORMER, AND WIRING/CONDUIT NOT SHOWN ABOVE.
- REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. ALSO REFER TO SPECIFICATION SECTION Q220 - WASTEWATER PUMP STATION FOR PUMP CONTROL INFORMATION. PUMP SYSTEMS SHOWN IN THE CONTRACT DOCUMENTS ARE THE BASIS OF DESIGN, IF THE CONTRACTOR SUBSTITUTES EQUAL PUMP STATION PRODUCTS, THE CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE ELECTRICAL SERVICE SYSTEM AND PROVIDING COMPLETE AND OPERATIONAL SYSTEMS.

6 6/9/15 ELECTRIC SERVICE CMH

SCHEDULE B - WASTEWATER SYSTEM - BID SET  
VTRANS PROJECT #AVI157046-301  
JUNE 2016

5	5/3/15	COLD WEATHER MODIFICATIONS	BMB
4	4/29/15	PERMITTING MODIFICATIONS	SKI
3	1/30/15	WW SYSTEM MODIFICATIONS	BMB
2	8/5/14	ANR COMMENTS	TCB
1	4/18/14	ADD 400-SERIES TEST PITS	CH
REV	DATE	DESCRIPTION	BY

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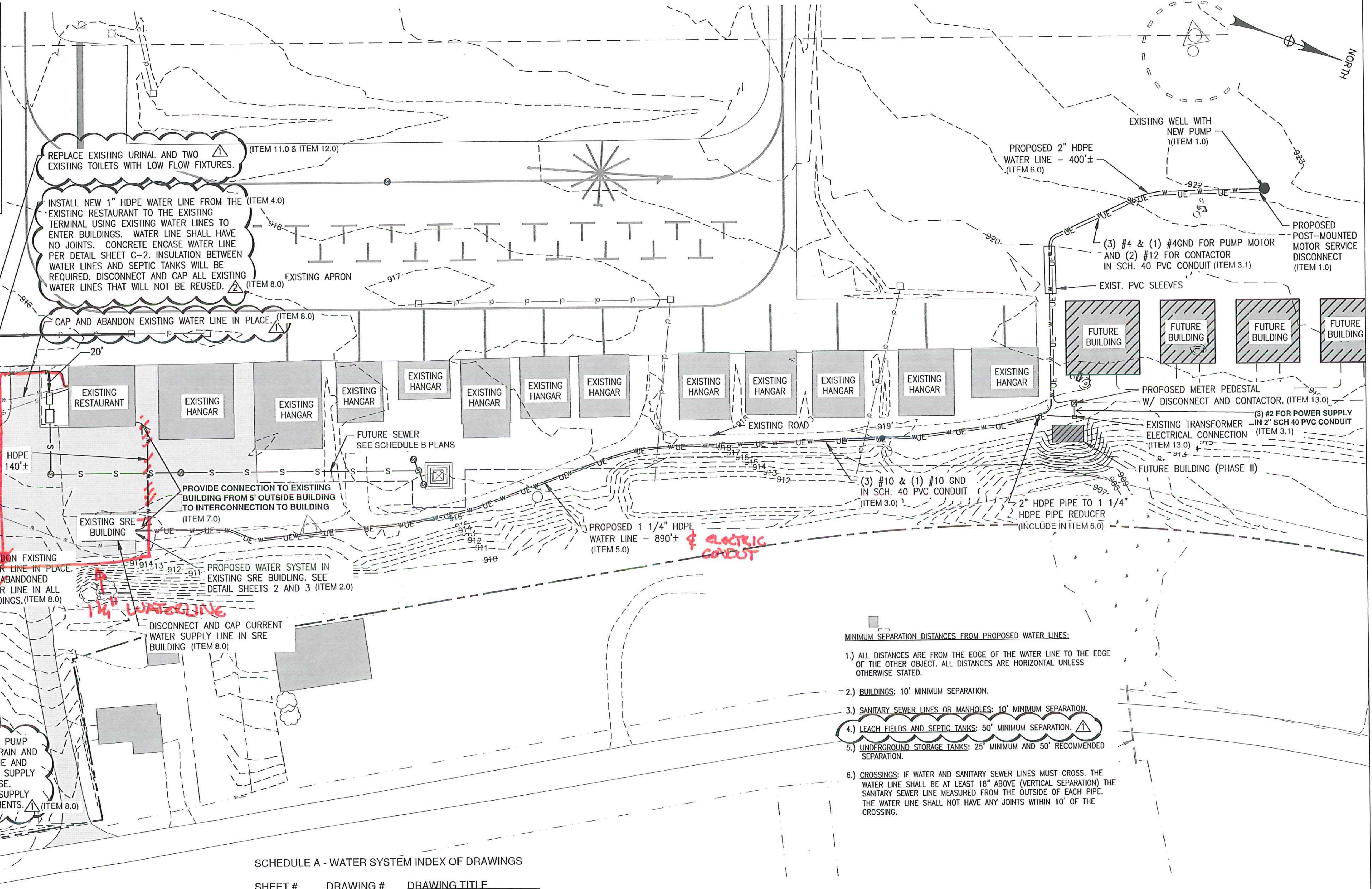
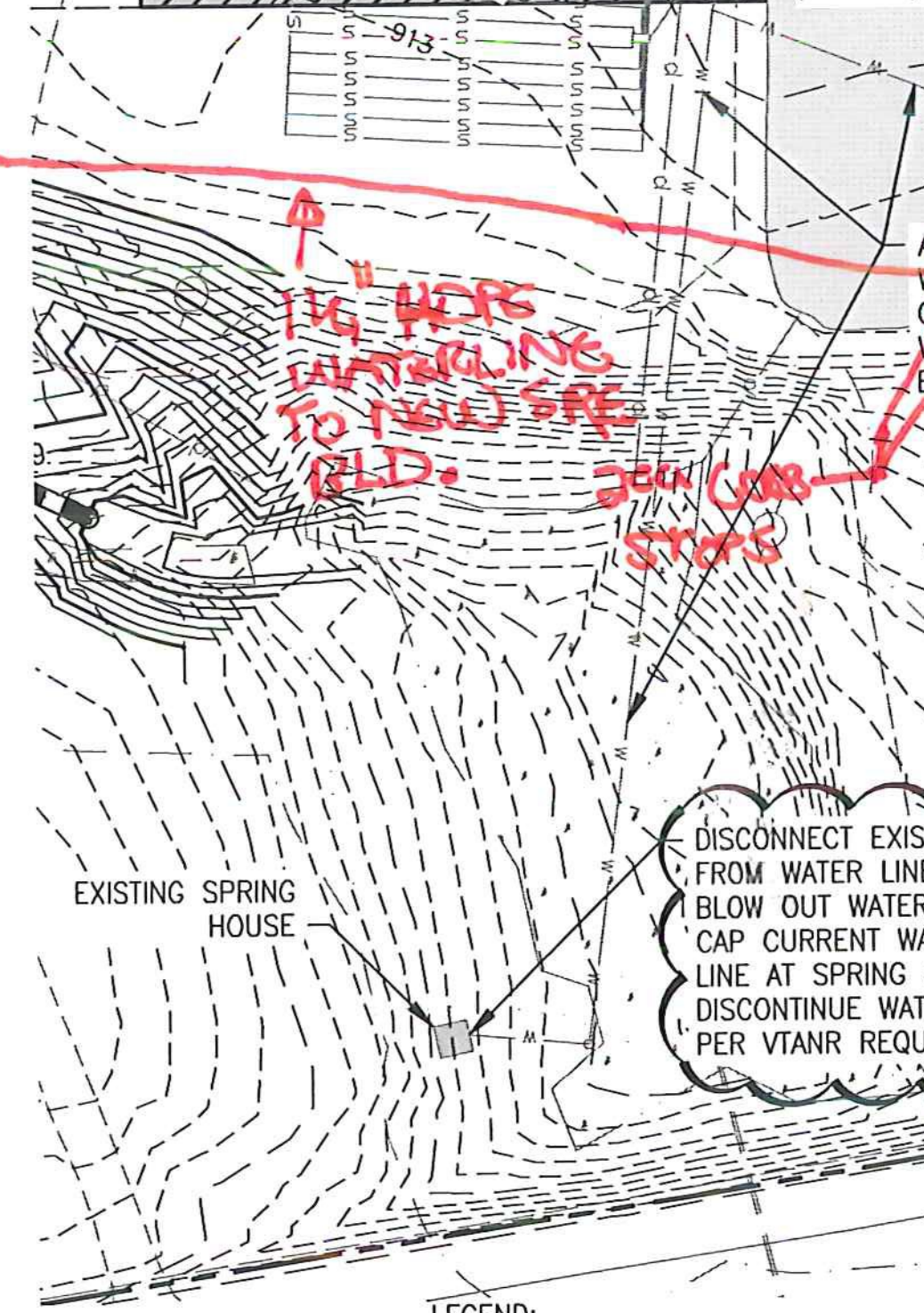
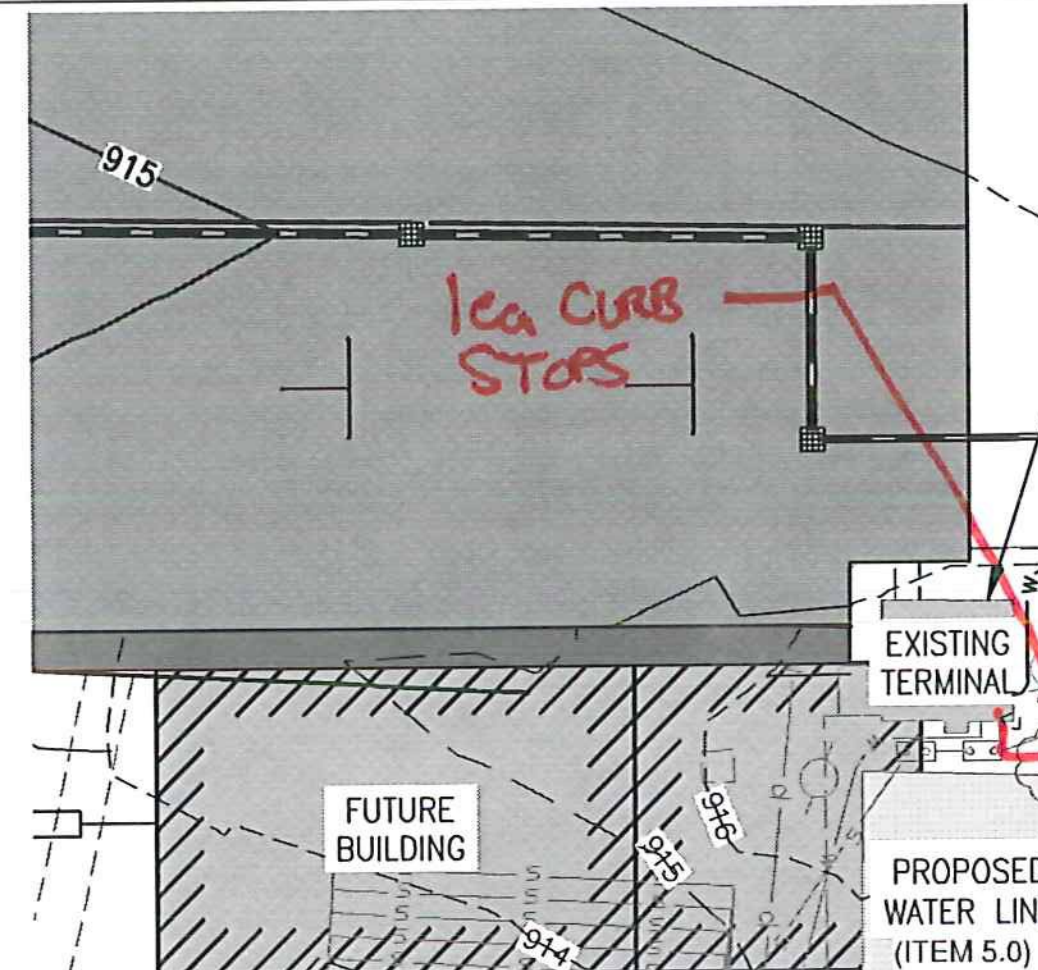
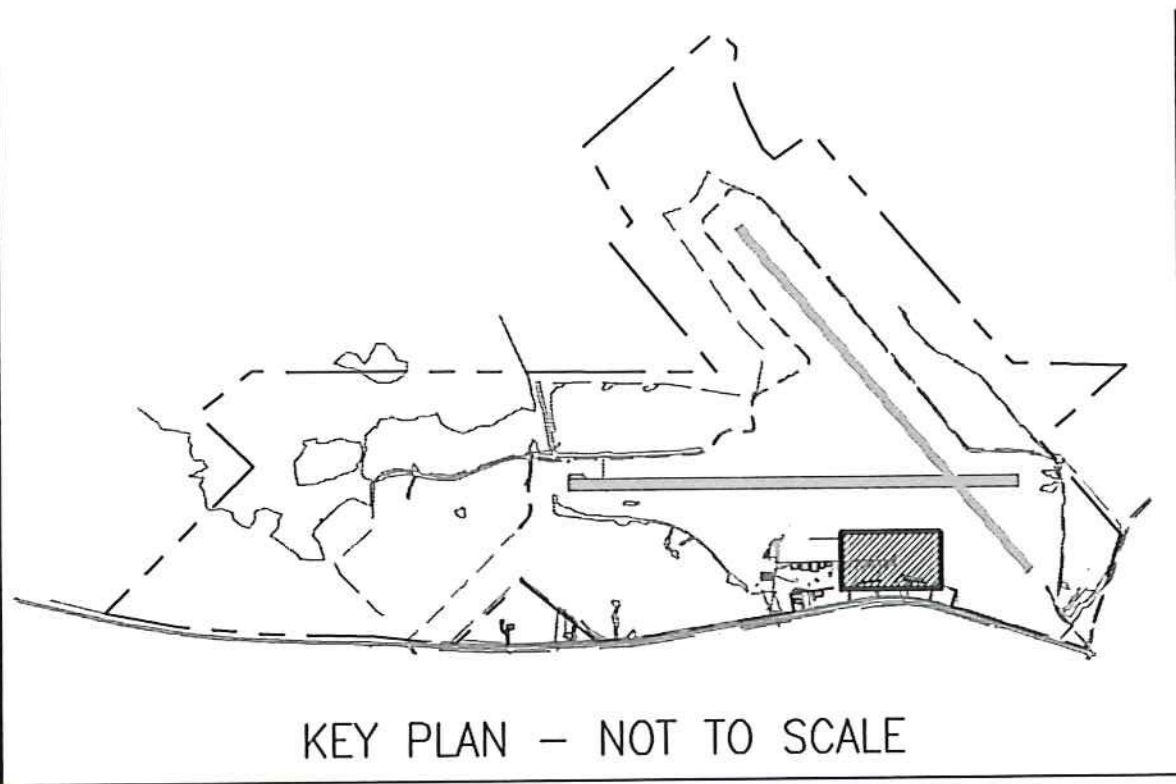
NEWPORT STATE AIRPORT  
COVENTRY, VERMONT  
NEWPORT WASTEWATER

ELECTRICAL-1



**McFarland Johnson**  
53 REGIONAL DRIVE  
CONCORD, NH 03301

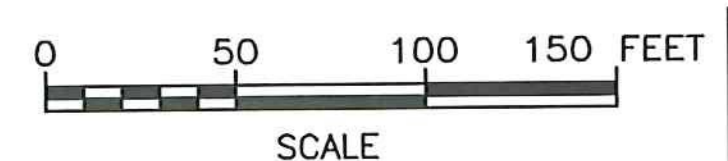
SCALE: 1" = 20'	DESIGN: TCB	E-01 36 OF 36
DRAWN: MTF	PROJECT: 17958.01	
CHECKED: BLS	DATE: JUNE, 2014	



- MINIMUM SEPARATION DISTANCES FROM PROPOSED WATER LINES:
- 1.) ALL DISTANCES ARE FROM THE EDGE OF THE WATER LINE TO THE EDGE OF THE OTHER OBJECT. ALL DISTANCES ARE HORIZONTAL UNLESS OTHERWISE STATED.
  - 2.) BUILDINGS: 10' MINIMUM SEPARATION.
  - 3.) SANITARY SEWER LINES OR MANHOLES: 10' MINIMUM SEPARATION.
  - 4.) LEACH FIELDS AND SEPTIC TANKS: 50' MINIMUM SEPARATION.
  - 5.) UNDERGROUND STORAGE TANKS: 25' MINIMUM AND 50' RECOMMENDED SEPARATION.
  - 6.) CROSSINGS: IF WATER AND SANITARY SEWER LINES MUST CROSS, THE WATER LINE SHALL BE AT LEAST 18" ABOVE (VERTICAL SEPARATION) THE SANITARY SEWER LINE MEASURED FROM THE OUTSIDE OF EACH PIPE. THE WATER LINE SHALL NOT HAVE ANY JOINTS WITHIN 10' OF THE CROSSING.

SCHEDULE A - WATER SYSTEM INDEX OF DRAWINGS

SHEET #	DRAWING #	DRAWING TITLE
1 OF 5	C-1	PHASE I SYSTEM PLAN
2 OF 5	C-2	MISCELLANEOUS NOTES
3 OF 5	201503	PROCESS/FLOW CONCEPT
4 OF 5	E-1	ELECTRIC PLAN
5 OF 5	E-2	ELECTRICAL DETAILS



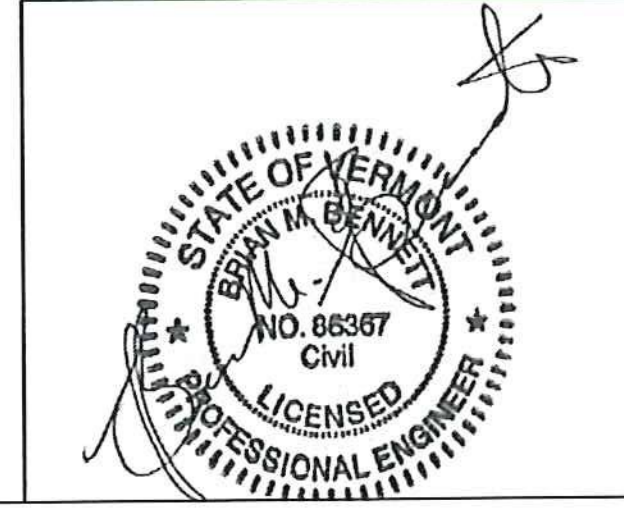
SCHEDULE A - WATER SYSTEM - BID SET  
VTRANS PROJECT #AV11570042-301  
JUNE 2016

LEGEND:

—UE—UE—	PROPOSED ELECTRIC LINE		EXISTING PAVEMENT
—W—W—W—	PROPOSED WATER LINE		EXISTING BUILDING
—S—S—S—	FUTURE SANITARY SEWER LINE		PROPOSED BUILDING
—UE—UE—	EXISTING UNDERGROUND ELECTRIC		FUTURE BUILDING
—S—S—S—	EXISTING SANITARY SEWER LINE		PROPOSED PAVEMENT
—W—W—W—	EXISTING WATER LINE		
—920—	PROPOSED CONTOUR		
- - - 920 - - -	EXISTING CONTOUR		

DESIGNER STATEMENT:  
THE DESIGN AND CONSTRUCTION WILL BE IN CONFORMANCE WITH THE STATE OF VERMONT WATER SUPPLY RULE, LATEST EDITION.

NOTES:  
CONTRACTOR SHALL BE MADE AWARE OF AN EXISTING PRIMARY CABLE THAT RUNS NEAR THE WEST SIDE OF THE PROPOSED 16W X 30L BUILDING. ONLY HAND DIGGING EXCAVATION IS ALLOWED AT THIS LOCATION.



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NEWPORT STATE AIRPORT COVENTRY, VERMONT	
WATER SYSTEM PERMIT TO CONSTRUCT	
PHASE I SYSTEM PLAN	
SCALE: ---	DESIGN: BLS
DRAWN: RJL	PROJECT: 17958.01
CHECKED: BMB	DATE: FEB. 6, 2015
	C-1 1 OF 5

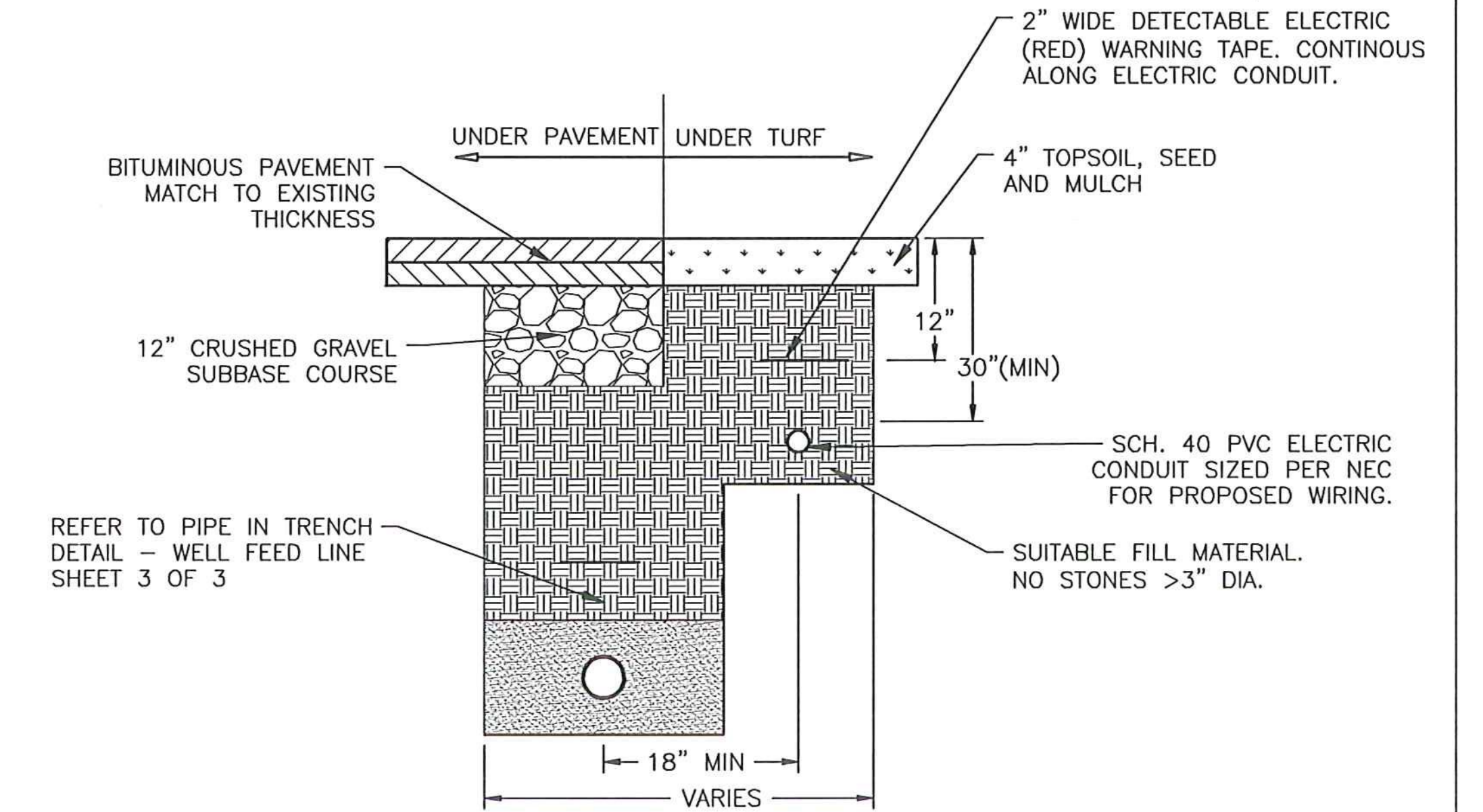
REV	DATE	DESCRIPTION	BY
Δ	5/23/16	REVISIONS PER VTNR COMMENTS	BMB
Δ	2/11/16	REVISIONS PER VTNR COMMENTS	RJL
Δ	8/28/15	REVISIONS PER VTNR COMMENTS	MKM

**WATER LINE PIPE/TUBING STANDARDS**

1. ALL NEW WATER LINE SHALL BE FUSIBLE PVC OR BUTT FUSED HDPE WHEN BURIED, OR AWWA C901 POLYETHYLENE PIPE/TUBING WITH POLYETHYLENE RESIN MEETING PE-3408/PE-3608 OR PE-4710 STANDARDS INSIDE THE BUILDING. THE PIPING SHALL HAVE A PRESSURE CLASS RATING OF 160 PSI (WALL THICKNESS OF DR 11). JOINTS SHALL BE FIELD BUTT FUSED OR MECHANICAL CONNECTIONS WITHIN THE BUILDING. THE MINIMUM BENDING RADIUS OF THE POLYETHYLENE TUBING SHALL BE 25 TIMES THE OUTSIDE DIAMETER OF THE TUBING.

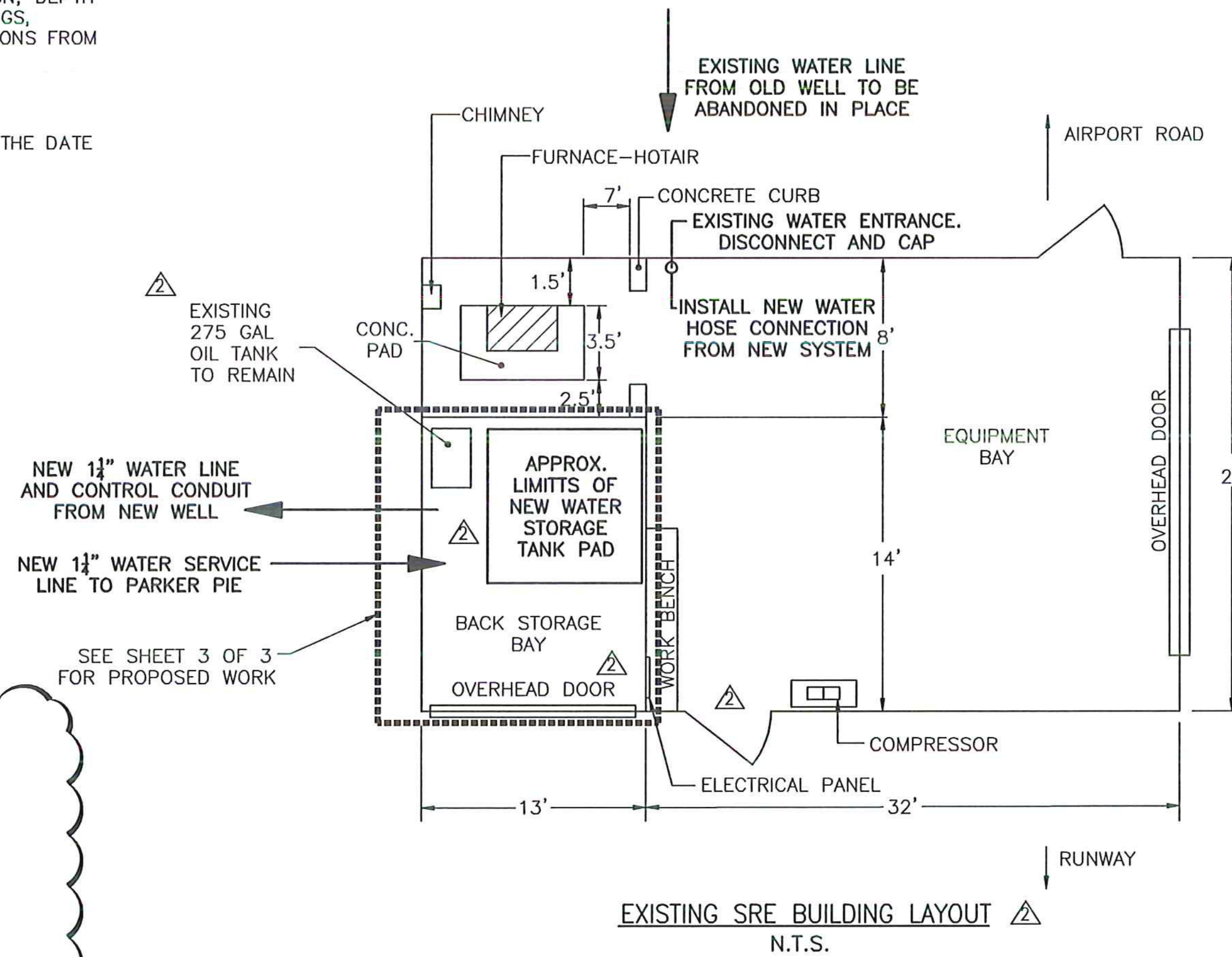
**GENERAL NOTES:**

1. THIS IS A PUBLIC, TRANSIENT, NON-COMMUNITY WATER SYSTEM AND SHALL BE CONSTRUCTED, DISINFECTED, TESTED, AND OPERATED IN ACCORDANCE WITH VERMONT AGENCY OF NATURAL RESOURCES (ANR) DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC) WATER SUPPLY RULES.
2. THE ENTIRE WATER SYSTEM, INCLUDING EXISTING LINES TO BE RE-USED, SHALL BE DISINFECTED. (SEE SHEET 3 OF 3)
3. ELECTRIC MATERIAL AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE (NEC), CURRENT EDITION, AND VERMONT BUILDING CODE.
4. CONTRACTOR SHALL CONFIRM PUMP TYPE AND SIZE PRIOR TO INSTALLATION BASED ON SYSTEM DATA PROVIDED BY THE ENGINEER.
5. CONTRACTOR SHALL MARK ALL FIELD INFORMATION ON A COPY OF THESE PLANS AND PROVIDE TO THE ENGINEER AT THE COMPLETION OF THE WORK FOR USE IN PREPARING AS-BUILT PLANS. INFORMATION SHALL INCLUDE, BUT NOT LIMITED TO: TIES TO BUILDINGS OR STRUCTURES AT 100' INTERVALS ALONG PIPE AND CONDUIT INSTALLATIONS AND AT ALL CHANGES IN DIRECTION; DEPTH OF PIPE AND CONDUIT; SIZE OF CONDUITS; LOCATIONS OF ALL FITTINGS, SPLICES, CONNECTIONS, AND SYSTEM COMPONENTS; AND ALL DEVIATIONS FROM THESE PLANS WHETHER AGREED TO BY THE OWNER OR NOT.
6. ALL INSTALLED AND RE-USED PIPE SHALL BE PRESSURE TESTED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA C901 STANDARDS (POLYETHYLENE PIPE AND TUBING) AND THE PIPE MANUFACTURER'S RECOMMENDATIONS AND GUIDELINES. VTRANS SHALL BE NOTIFIED OF THE DATE AND TIME OF THE TESTING, SO THE TESTS MAY BE OBSERVED.



- NOTES:**
1. CONTRACTOR SHALL SHORE TRENCH SIDES AS REQUIRED.
  2. CONTRACTOR SHALL DEWATER TRENCH EXCAVATION AS REQUIRED.
  3. CONTRACTOR SHALL CREATE A BENCH FOR ELECTRIC CONDUIT IN A COMMON TRENCH.

**ELECTRIC LINE IN WATER LINE TRENCH DETAIL**  
N.T.S.

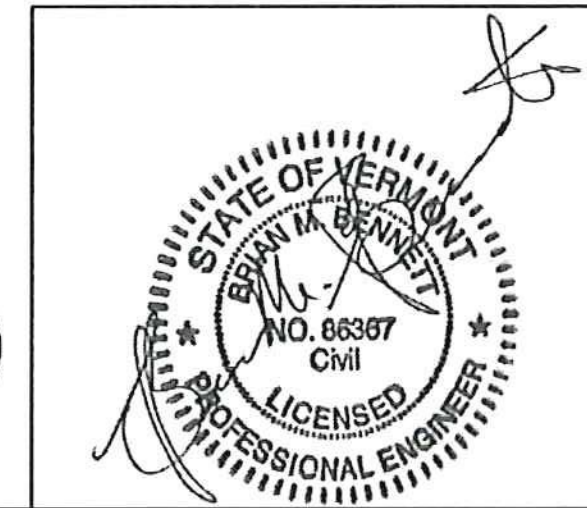
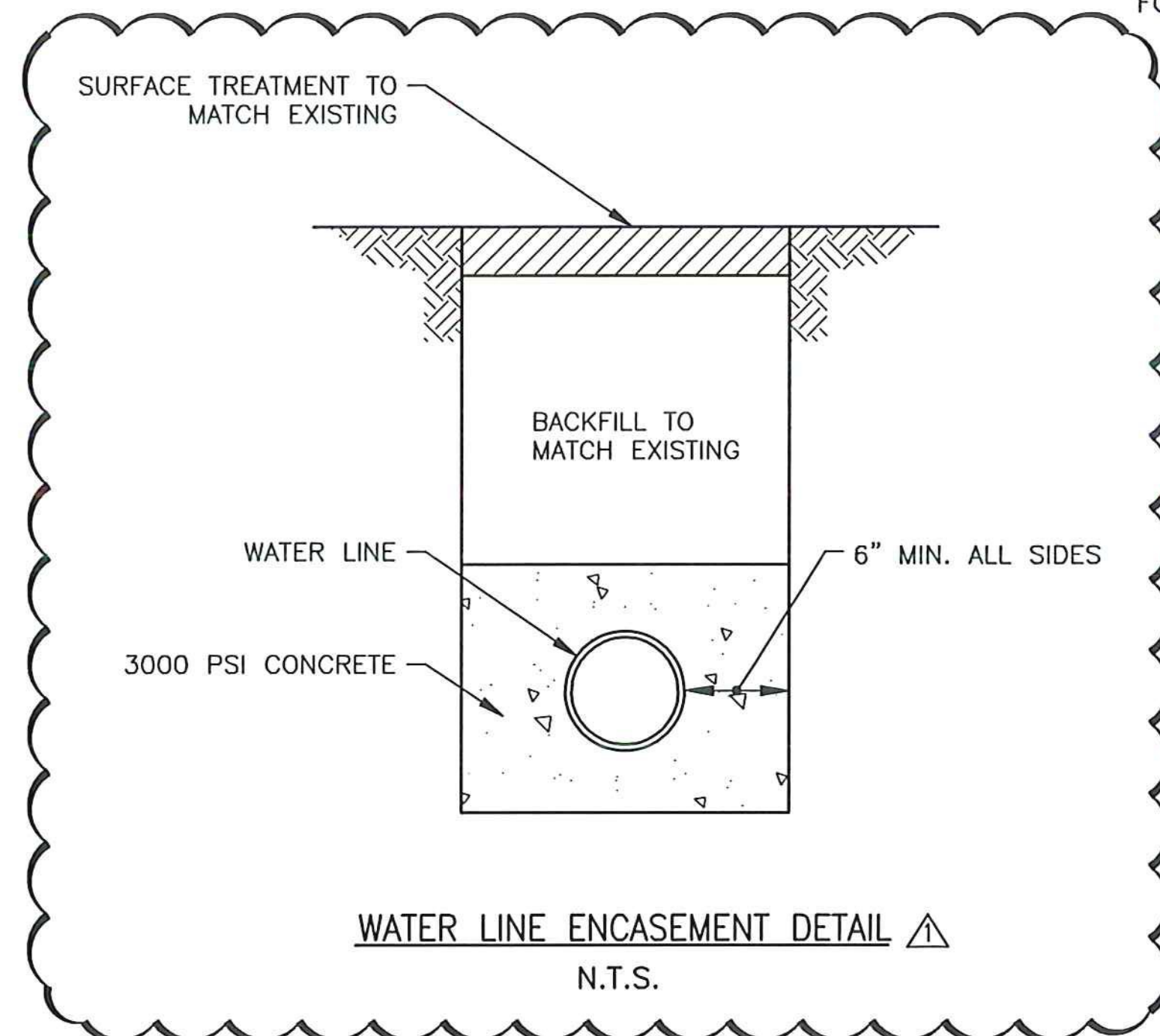


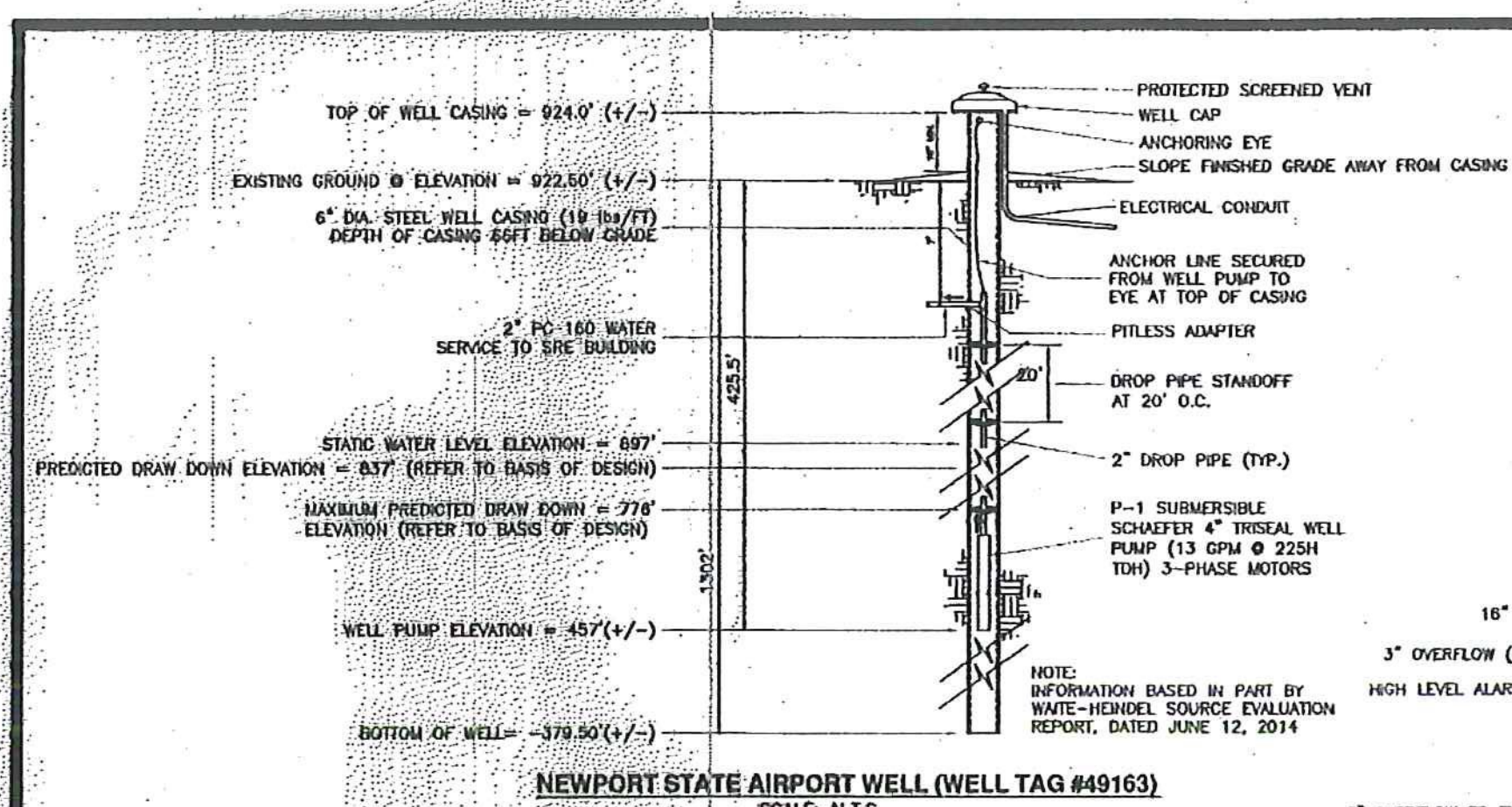
SCHEDULE A - WATER SYSTEM - BID SET  
VTRANS PROJECT #AV11570042-301  
JUNE 2016

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NEWPORT STATE AIRPORT  
COVENTRY, VERMONT  
WATER SYSTEM PERMIT TO CONSTRUCT

MISCELLANEOUS DETAILS	
SCALE: NTS	DESIGN: BLS
DRAWN: BJL	PROJECT: 17958.01
CHECKED: BMB	DATE: FEB. 6, 2015
C-2 2 OF 5	





**CONTROL SEQUENCE**

WATER SYSTEM IS SERVED BY A SINGLE CENTRIFUGAL BOOSTER PUMP OPERATING ON A RANGE BETWEEN 30 AND 50 PSI (ADJUSTABLE) WHEN PRESSURE REACHES 30 PSI, BOOSTER PUMP IS ENGAGED VIA PRESSURE SWITCH.

AS PRESSURE IN THE PIPING SYSTEM IS RAISED FROM 30 TO 50 PSI, WATER IS DRAWN FROM THE FINISHED WATER STORAGE TANK, VIA A SUCTION LINE. FLOW THROUGH THE SYSTEM IS MEASURED BY METER M-2.

ONCE 50 PSI IS REACHED, THE BOOSTER PUMP RAMPERS DOWN AND STOPS.

THE CYCLE IS REPEATED UNTIL THE LOW LEVEL ALARM CONTACT IN FINISHED WATER STORAGE TANK IS ENGAGED.

WELL PUMP IS SIGNALLED AND WELL PUMP IS ENGAGED.

WELL PUMP RAMPERS UP TO PROVIDE A GIVEN FLOW RATE AT A GIVEN TIME, THROUGH A VFD.

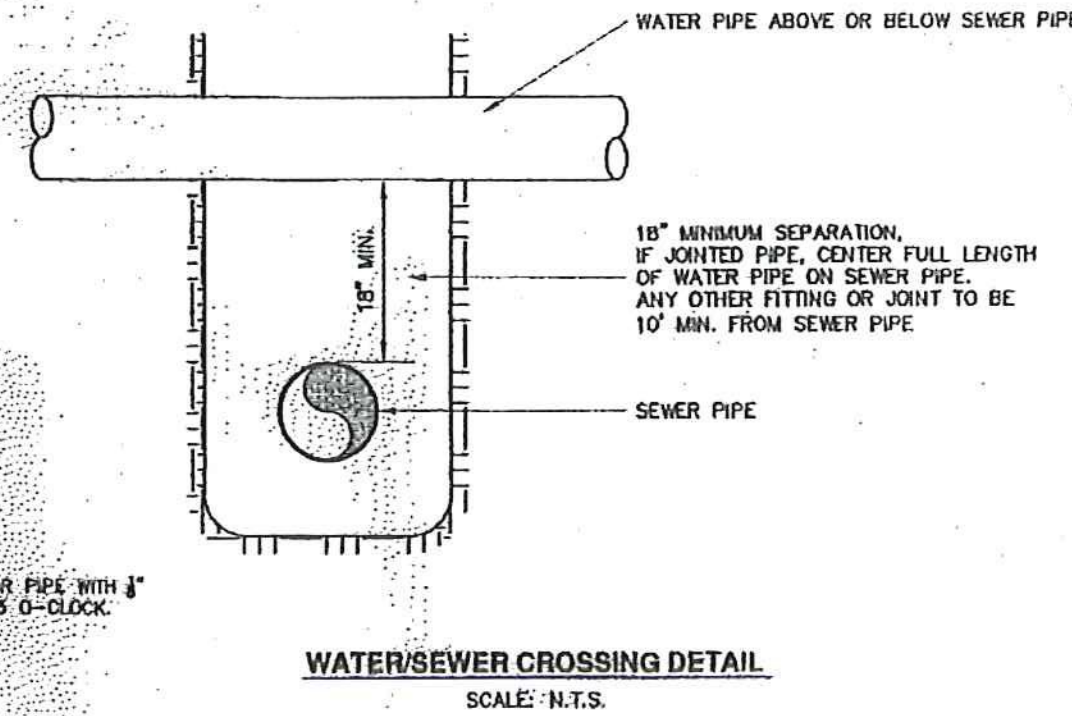
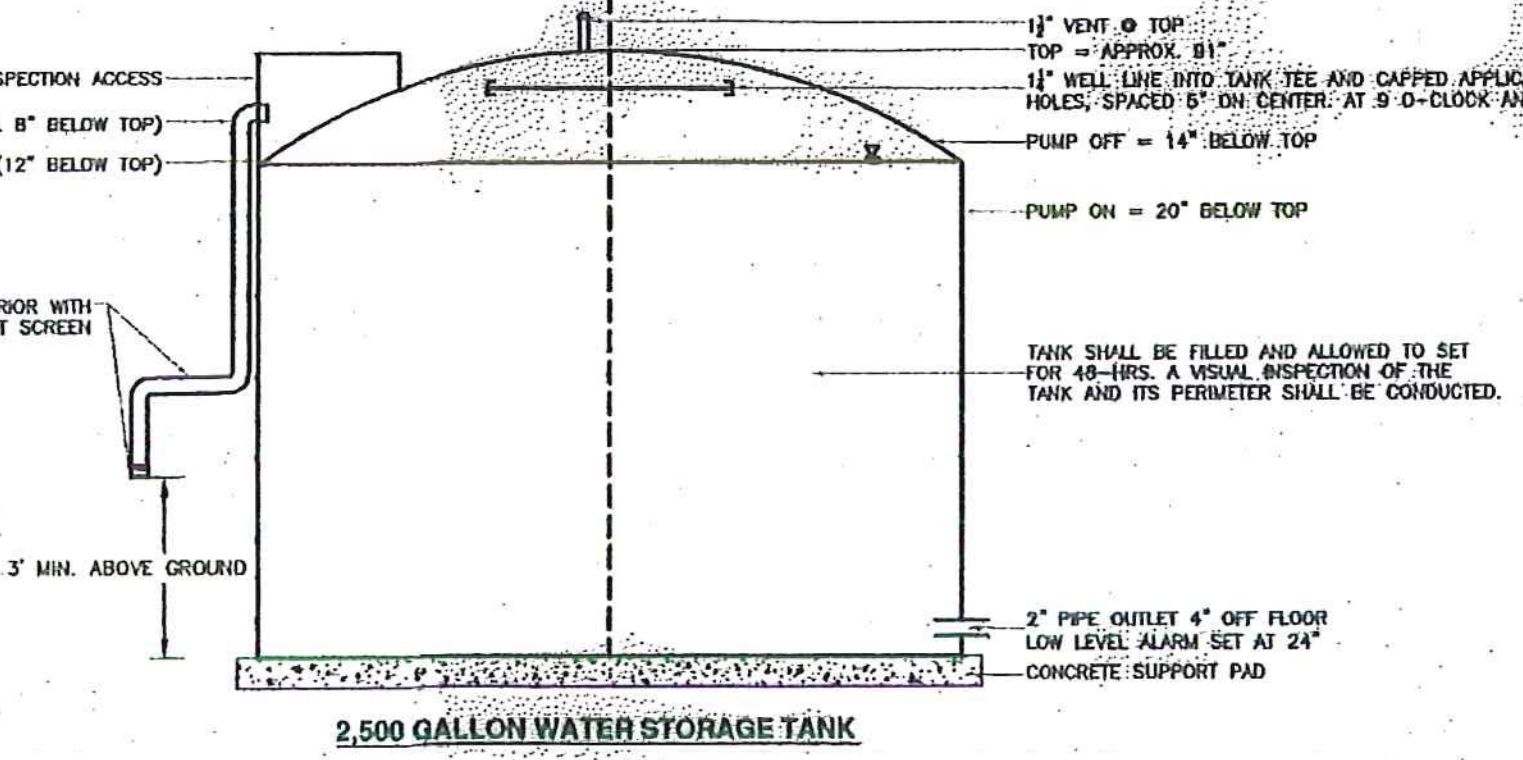
FLOW FROM THE WELL IS MEASURED THROUGH A FLOW METER AT THE PIPE ENTRANCE (METER M-1).

CHLORINE IS MIXED TO THE RAW WATER THRU A 1" BALL VALVE, WITH CHEMICAL FEED RATE, AND PAGED ON FLOW FROM THE WELL PUMP.

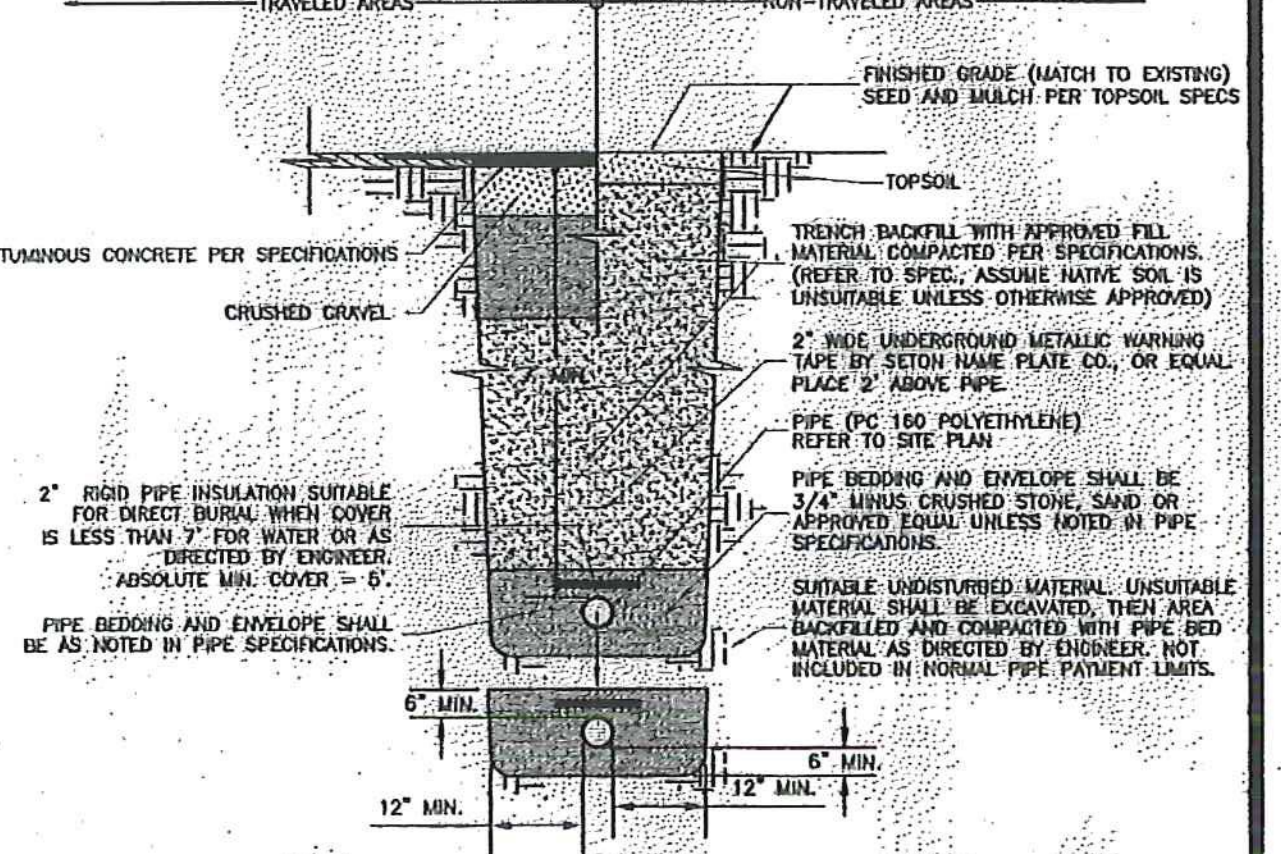
CHLORINE PUMP WILL BE WIRDED TO A DEDICATED OUTLET, AND FLOW METER, SO THE CHEMICAL FEED PUMP WILL ONLY OPERATE WHEN THE WELL PUMP IS ENGAGED, BUT PAGE FEED BASED ON FLOW.

WATER IS PUMPED DIRECTLY INTO THE FINISHED WATER STORAGE TANK UNTIL PUMP OFF CONTACT IS ENGAGED.

WELL PUMP SHUTS DOWN.



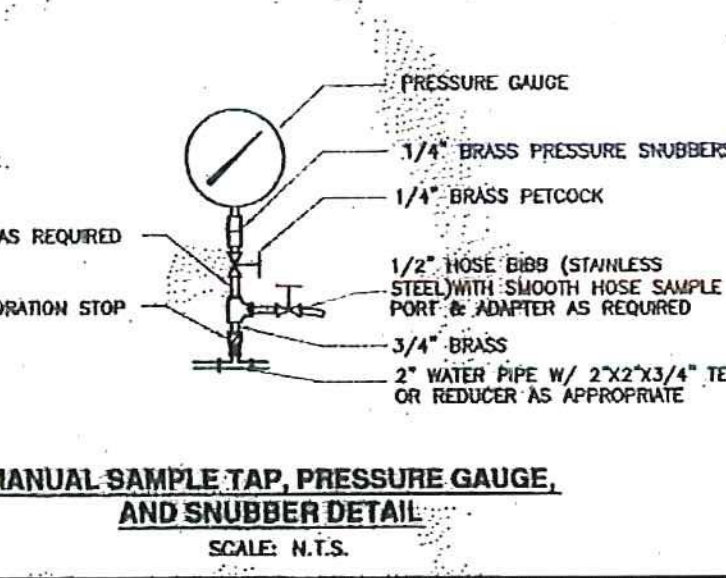
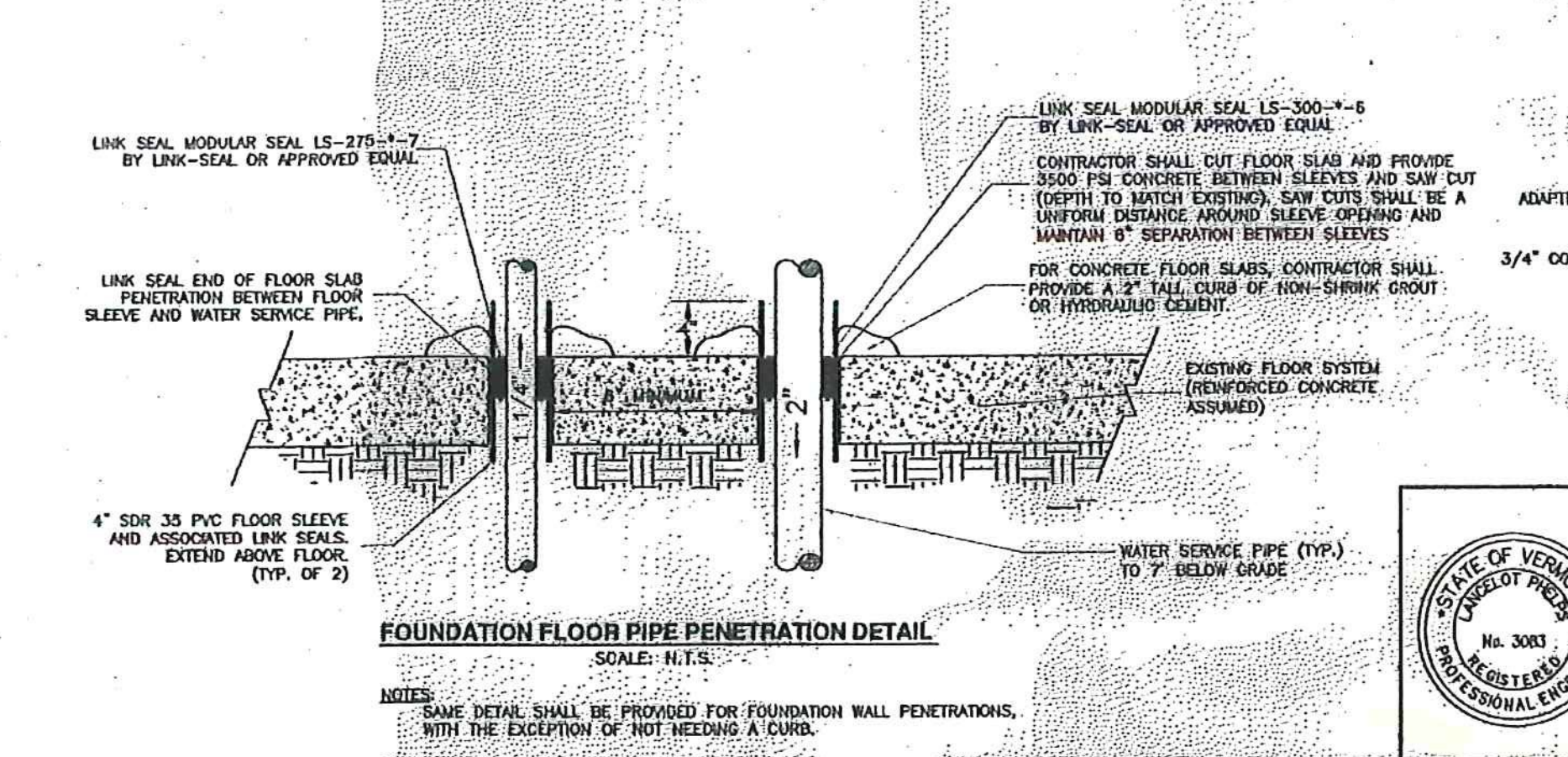
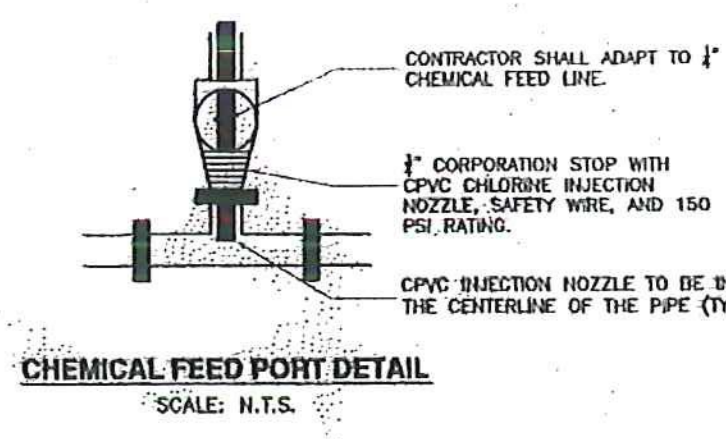
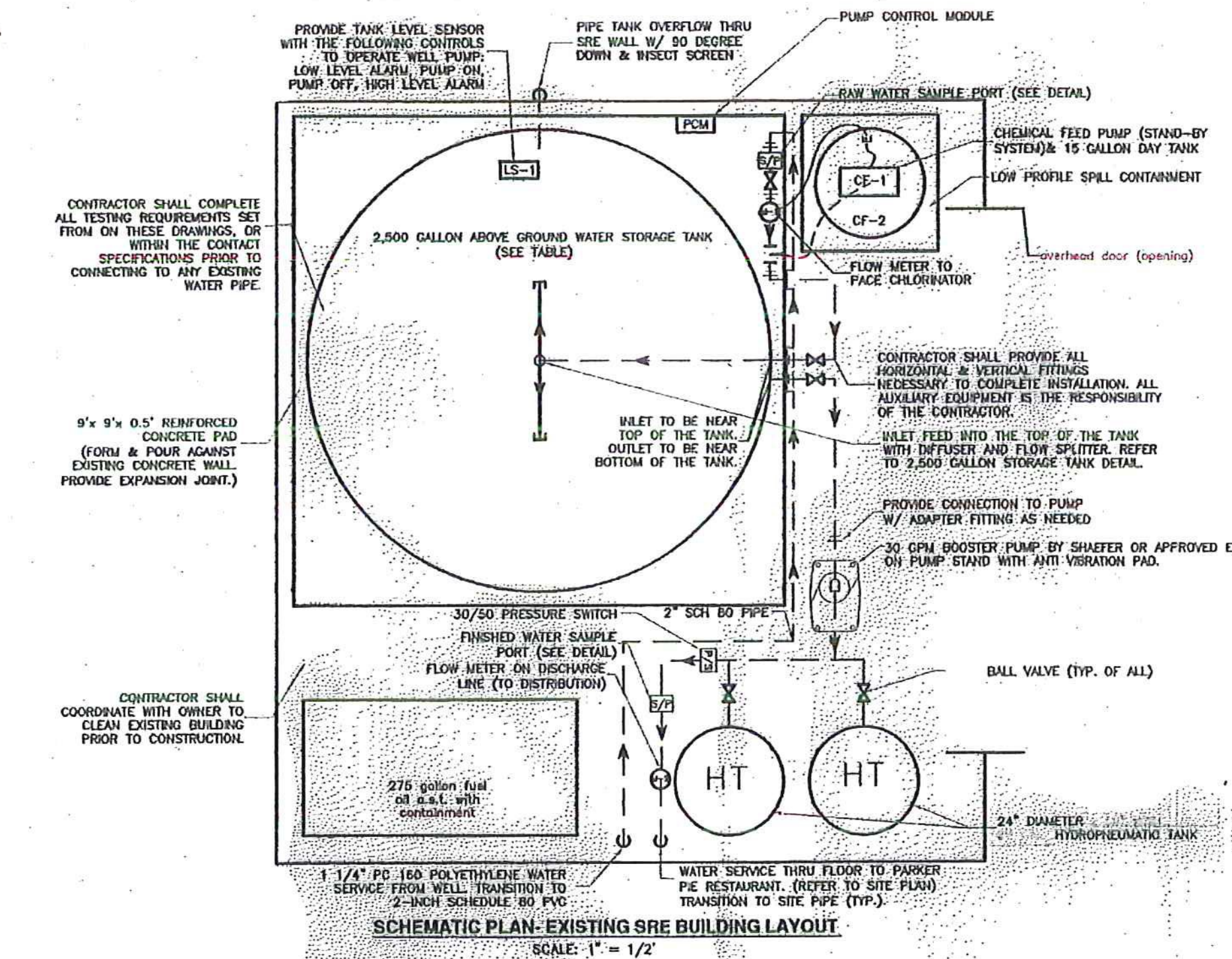
- WATER/SEWER CROSSING NOTES:**
- SEWERS CROSSING WATER MAINS SHALL BE LAD BENEATH THE WATER MAIN WITH AT LEAST 18" OF VERTICAL CLEARANCE BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER.
  - WHEN IT IS IMPOSSIBLE TO MAINTAIN THE 18" OF VERTICAL SEPARATION OR WHERE THE SEWER MUST BE LAD ABOVE THE WATER MAIN, THE CROSSING SHALL BE ARRANGED SO THAT ONE FULL LENGTH OF SEWER IS CENTERED ABOVE OR BELOW THE WATER LINE WITH SEWER JOINTS AS FAR AS POSSIBLE FROM WATER JOINTS. INSULATION BETWEEN THE WATER AND SEWER WILL BE REQUIRED.
  - THE SEWER PIPE MUST BE CONSTRUCTED TO WATER MAIN STANDARDS FOR A MINIMUM DISTANCE OF 20' EITHER SIDE OF CROSSING OR A TOTAL OF 3 PIPE LENGTHS, WHICHEVER IS GREATER.
  - THE SECTION CONSTRUCTED TO WATER MAIN STANDARDS MUST BE PRESSURE TESTED TO MAINTAIN 50 P.S.I. FOR 15 MIN. WITHOUT LEAKAGE PRIOR TO BACKFILLING 1' ABOVE THE PIPE TO ASSURE TIGHTNESS.
  - WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATER MAIN.



- GENERAL NOTES**
- INFORMATION PRESENTED ON THIS PLAN IS SCHEMATIC IN NATURE. ACTUAL LAYOUT TO BE COORDINATED BY CONTRACTOR.
  - IT IS NOT INTENT OF THE DRAWING TO SHOW EVERY PART. CONTRACTOR TO BUILD SYSTEM WHICH MEETS PERFORMANCE STANDARDS SHOWN.
  - CONTROLS, MECHANICAL, ELECTRICAL, DETAILS & NOTES BY OTHERS.
  - ALL WORK SHALL BE IN CONFORMANCE WITH STATE & LOCAL PLUMBING AND ELECTRICAL CODES.
- SYSTEM TESTING REQUIREMENTS**
- WATER SERVICE TESTING REQUIREMENTS:**
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL TEMPORARY PIPE, FITTINGS, MATERIALS, LABOR, AND EQUIPMENT REQUIRED FOR RE-TESTING. THE WELL LINE SHALL BE PRESSURE TESTED FOR A PERIOD OF NOT LESS THAN 2 HRS AT A PRESSURE EQUAL TO 1.5 TIMES THE WORKING PRESSURE IN THE SYSTEM (110 PSI).
  - PRIOR TO DISINFECTION OF THE SERVICE, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND SYSTEM OPERATOR TO COMPLETE THE PRESSURE TEST OF THE WELL LINE.
  - ONCE A SUCCESSFUL PRESSURE TEST HAS OCCURRED, THE DISINFECTION OF WATER SERVICES SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ANNA STANDARD FOR DISINFECTING WATER MAINS, LATEST EDITION. THE FOLLOWING DESCRIPTIONS MAY BE USED AS A GUIDE.
  - AT A POINT NOT MORE THAN 10 FEET (3 METERS) DOWNSTREAM FROM THE BEGINNING OF THE NEW SERVICE, WATER ENTERING THE NEW SERVICE SHALL RECEIVE A DOSE OF CHLORINE, FED AT A CONSTANT RATE (TABLET METHOD IS NOT ALLOWED) SUCH THAT THE WATER WILL HAVE NOT LESS THAN 25 MG/L FREE CHLORINE TO ENSURE THAT THIS CONCENTRATION IS PROVIDED. THE CONTRACTOR SHALL MEASURE THE CHLORINE CONCENTRATION AT REGULAR INTERVALS USING APPROPRIATE TEST KITS.
  - CHLORINE APPLICATION SHALL NOT CEASE UNTIL THE ENTIRE SERVICE IS FILLED WITH HEAVILY CHLORINATED WATER.
  - THE CHLORINATED WATER SHALL BE RETAINED IN THE SERVICE PIPE FOR AT LEAST 24 HOURS, DURING WHICH TIME ALL VALVES IN THE TREATED SECTION SHALL NOT BE OPERATED TO ENSURE DISINFECTION OF THE APPURTENANCES. AT THE END OF THIS 24 HOUR PERIOD, THE TREATED WATER IN ALL PORTIONS OF THE PIPE SHALL HAVE A RESIDUAL OF NOT LESS THAN 10 MG/L FREE CHLORINE.
  - FEED LINES SHALL BE OF SUCH MATERIAL AND STRENGTH AS TO SAFELY WITHSTAND THE CORROSION CAUSED BY THE CONCENTRATED CHLORINE SOLUTIONS AND THE MAXIMUM PRESSURES THAT MAY BE CREATED BY THE PUMPS. ALL CONNECTIONS SHALL BE CHECKED FOR TIGHTNESS BEFORE THE SOLUTION IS APPLIED TO THE PIPE.
  - UPON COMPLETION OF DISINFECTION AND DE-CHLORINATION OF THE WELL LINE, THE CONTRACTOR SHALL COLLECT AND SUBMIT A WATER QUALITY SAMPLE FOR ANALYSIS TO A VERMONT DEPARTMENT OF HEALTH APPROVED LABORATORY. THE CONTRACTOR IS RESPONSIBLE FOR COLLECTING AND DELIVERING THE SAMPLE TO THE LAB, INCLUDING ANY AND ALL FEES.
  - A MINIMUM OF 24 HOURS AFTER THE FIRST SAMPLE IS COLLECTED, THE CONTRACTOR SHALL COLLECT AND SUBMIT A WATER QUALITY SAMPLE FOR ANALYSIS TO THE SAME LABORATORY PREVIOUSLY SUBMITTED.
  - THE CONTRACTOR SHALL SUBMIT ALL WATER QUALITY TEST RESULTS TO THE ENGINEER AND SYSTEM OPERATOR. PENNING (2) CONSECUTIVE PASSING BACTERIOLOGICAL SAMPLES, THE LINE WILL BE CONSIDERED SUITABLE FOR CONSUMPTION, AND APPLICABLE CONNECTIONS CAN BE MADE.
  - WELL FEED LINE MUST ACHIEVE SUCCESSFUL TESTING PRIOR TO CONNECTION WITH ABOVE GROUND 2,500 GALLON STORAGE TANK.
- WATER TANK DISINFECTION TESTING REQUIREMENTS:**
- BEFORE FILLING THE STORAGE TANK, CONTRACTOR SHALL ACHIEVE PASSING RESULTS FOR ALL TESTING REQUIRED ON THE WELL SERVICE LINE.
  - CONTRACTOR SHALL THOROUGHLY CLEAN & FLUSH THE TANK PRIOR TO USE FOR TESTING.
  - THE CONTRACTOR SHALL NOTIFY THE ENGINEER & SYSTEM OPERATOR PRIOR TO CHLORINATING THE TANK.
  - DISINFECTION SHALL MEET THE ANNA C 652 STANDARD LATEST EDITION METHOD-2, OR AS REQUIRED BY THE APPLICABLE STATE AGENCY.
  - PRIOR TO FILLING ALL INTERIOR SURFACES OF THE TANK SHALL BE COATED WITH A 2000 PPM CHLORINE SOLUTION.
  - TANK SHALL BE FILLED AND ALLOWED TO SET FOR 48 HOURS.
  - PRIOR TO PLACING THE TANK IN SERVICE (2) CONSECUTIVE BACTERIOLOGICAL SAMPLES MUST BE COLLECTED AT LEAST 24 HOURS APART AND ANALYZED BY AN INDEPENDENT LABORATORY APPROVED BY VT DEPARTMENT OF HEALTH, WITH BOTH TEST RESULTS ABSENT OF TOTAL COLIFORM.
- WATER TANK INSPECTION:**
- UPON FILLING THE STORAGE TANK, THE CONTRACTOR SHALL VISUALLY INSPECT THE TANK AND ASSOCIATED FITTINGS FOR LEAKS. ANY DEFICIENCIES SHALL BE CORRECTED.

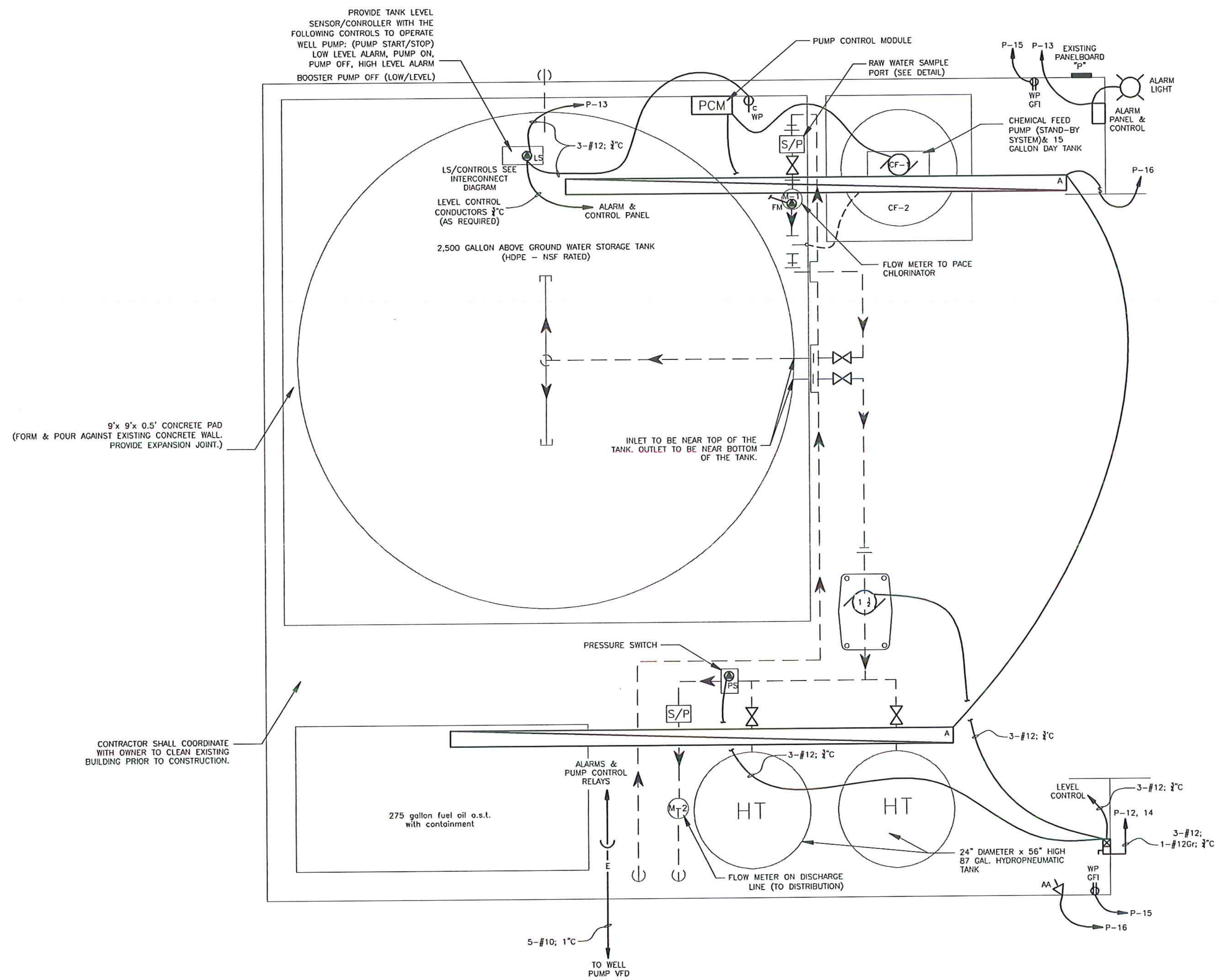
**Equipment Schedule**

Pumps				
Tag	Make	Model	Notes	
P-1	Schaefer	4-Inch Tri-Seal	1.5 hp well pump - 3 Phase - VFD Control	
P-2	Schaefer	MH	1.5 hp booster pump	
Chemical Feed				
Tag	Make	Model	Notes	
CF-1	Stenner	45MHP2	Classic Series, Single Head, Fixed Output Chemical Feed Pump	
CF-2	Stenner	STS15NC	15 gallon day tank (part of chemical feed package)	
PCM	Stenner	PCM1	Pump Control Module for proportional injection system	
Water Meters				
Tag	Make	Model	Notes	
M-1	Stenner	JLP0750-1PPG	Raw water meter to measure flow from well, and pace chemical feed	
M-2	Sensus	Omni C2	Finished Water Meter, range (0.5 to 200 gpm)	
Level Sensor				
Tag	Make	Model	Notes	
LS-1	Omega	PX-437-010G1	0-23.1 ft range, with 40 feet of cable	
LS-2	Omega	DP25B-E-A	Input Meter (Voltage and Current) with excitation, and Analog Output	
Interior Piping				
All interior piping shall be Schedule 80 Solvent Weld PVC (NSF approved), Type "L" Copper or approved equal.				
Ball Valves				
All ball valves shall be Nibco Schedule 80 PVC or Apollo Lead Free Brass				
Well Pipe (Site)				
All piping from the well to SRE building shall be PC 160 polyethylene, IPS. Size shall be per the site plan.				
Anti-Vibration Pads				
Anti-vibration pads shall be VibraSystems Neoprene Pads; VP series, Waffle design, and field cut to meet the dimensions of the pump.				
Storage Tank				
Tag	Make	Model	Notes	
TANK	Norwesco	#40051	2,500 Gallons; 95" diameter X 91" high, White Polyethylene	
Hydropneumatic Tanks				
Tag	Make	Model	Notes	
HT	Wellmate	WM-35WB	119 gallon capacity; 24" diameter	
Pressure Switch				
The pressure switch shall be a Dwyer, Mercoild, Model CXA-R2 adjustable pressure switch. Settings shall be 30 psi low, and 50 psi high at the start of system operation.				



**SCHEDULE A - WATER SYSTEM - BID SET**  
VTRANS PROJECT #AV11570042-301  
JUNE 2016

	<b>REVISIONS:</b> NEW DESIGN ENGINEER & CHECK COMMENTS: 8/27/15 PPE PLAN REVISIONS: 8/27/15 REVISED WATER SERVICE LOCATIONS: 8/27/15 MEC REVISIONS & CHANGE: 8/27/15 DESIGN ENGINEER: 8/27/15	THE DRAWINGS FOR THIS PROJECT SHALL NOT BE REUSED OR ALTERED IN ANY WAY WITHOUT THE WRITTEN APPROVAL AND AUTHORITY OF THE ENGINEER. ANY REVISIONS SHALL BE MADE BY THE ENGINEER AND NOTED IN THE REVISION BLOCK.	<b>PHELPS ENGINEERING, INC.</b> 79 Court St., P.O. Box 367 Middlebury, VT 05753 Telephone (802) 388-7829	<b>NEWPORT AIRPORT WATER SYSTEM DESIGN PHASE I BUILDOUT COVENTRY, VERMONT</b>
	PHELPS ENGINEERING, INC. SCALE: AS SHOWN DR. BY: RC/CJ SHEET NO. 3 OF 5 DWS. NO. 201503 DATE: 8/6/2015 CK'D BY: JR/RC	<b>PROCESS/FLOW CONCEPT</b>		



**ELECTRICAL PLAN- EXISTING SRE BUILDING LAYOUT**  
SCALE: 1" = 1'

SCHEDULE A - WATER SYSTEM - BID SET  
VTRANS PROJECT #AV11570042-301  
JUNE 2016

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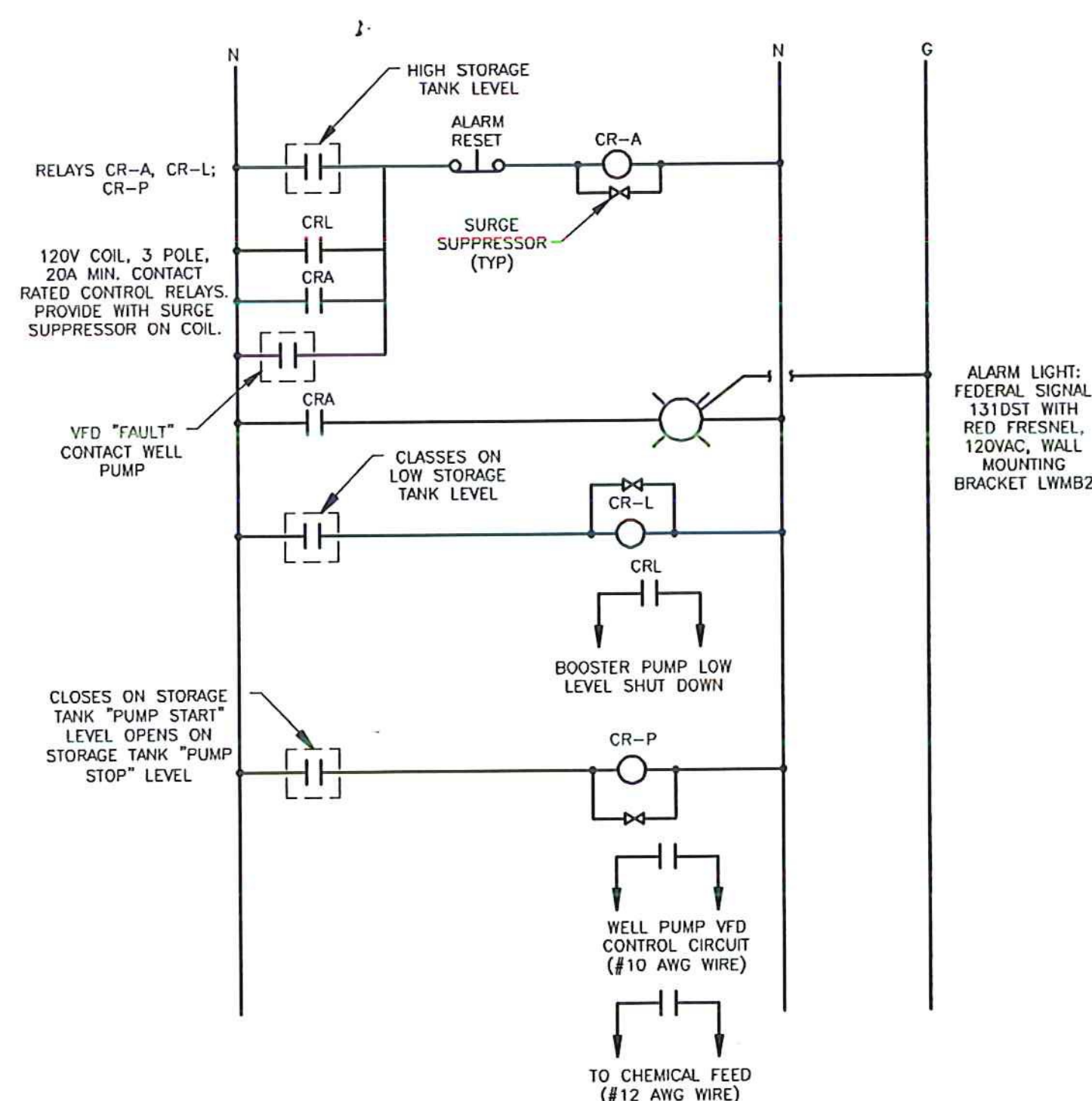
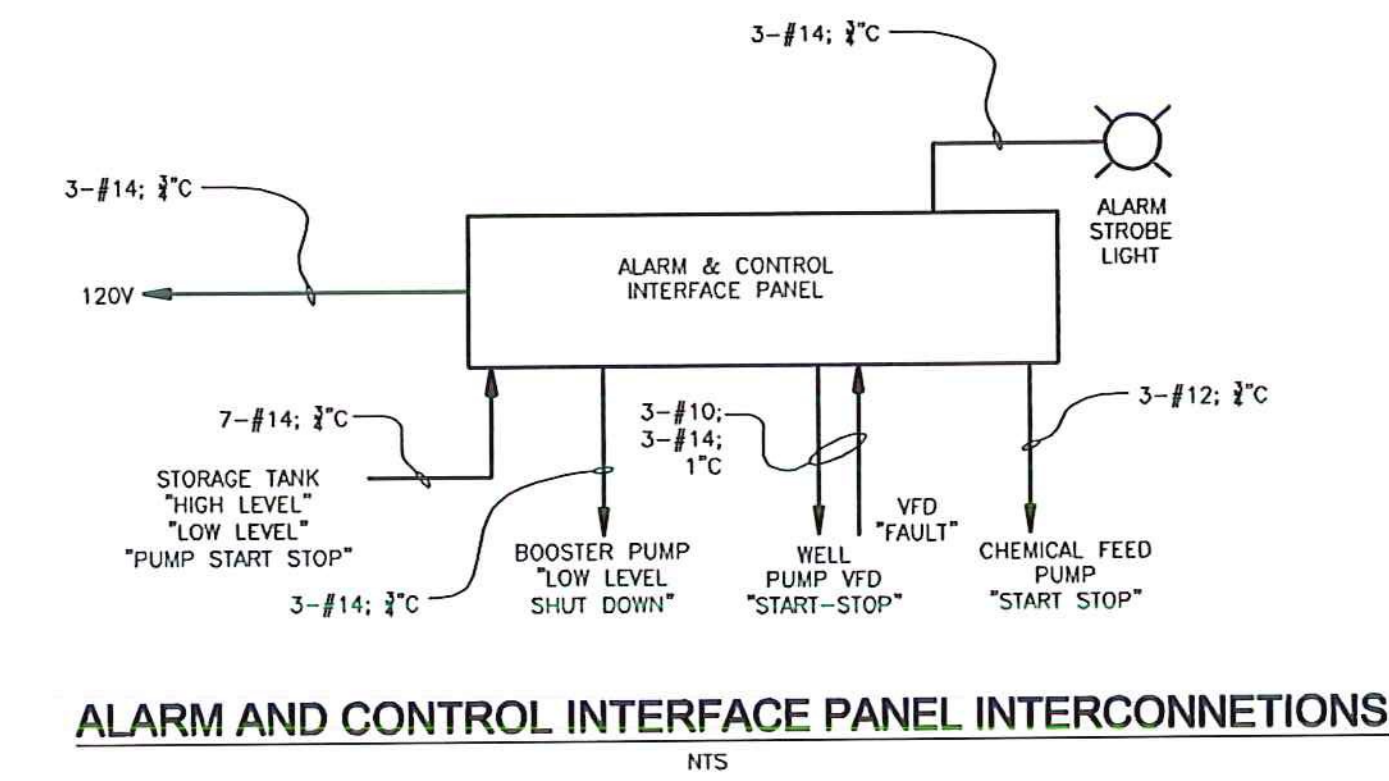
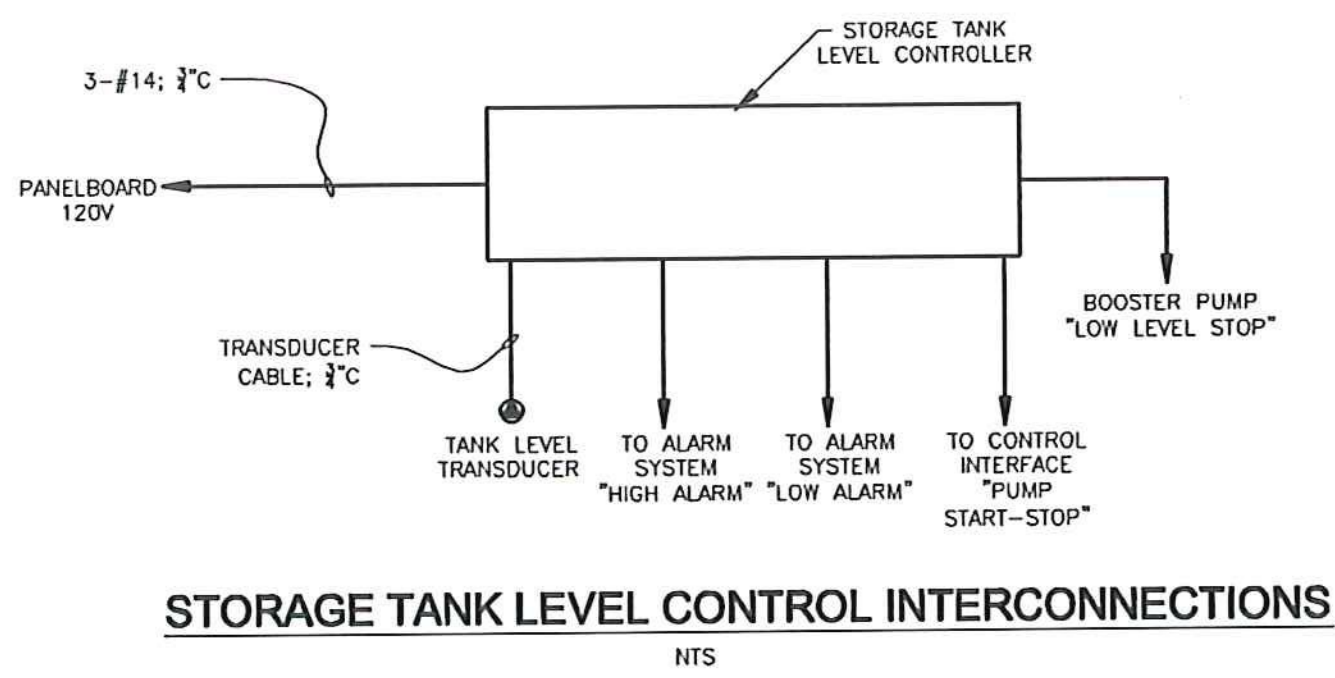
ELECTRICAL DESIGN BY:  
**Lee F. Carroll, PE**  
Electrical Consultants  
1 Madison Ave P.O. Box 357  
Gorham, NH 03581-0357  
603-466-5065  
lcarroll@ne.rr.com



**McFarland Johnson**  
53 REGIONAL DRIVE  
CONCORD, NH 03301

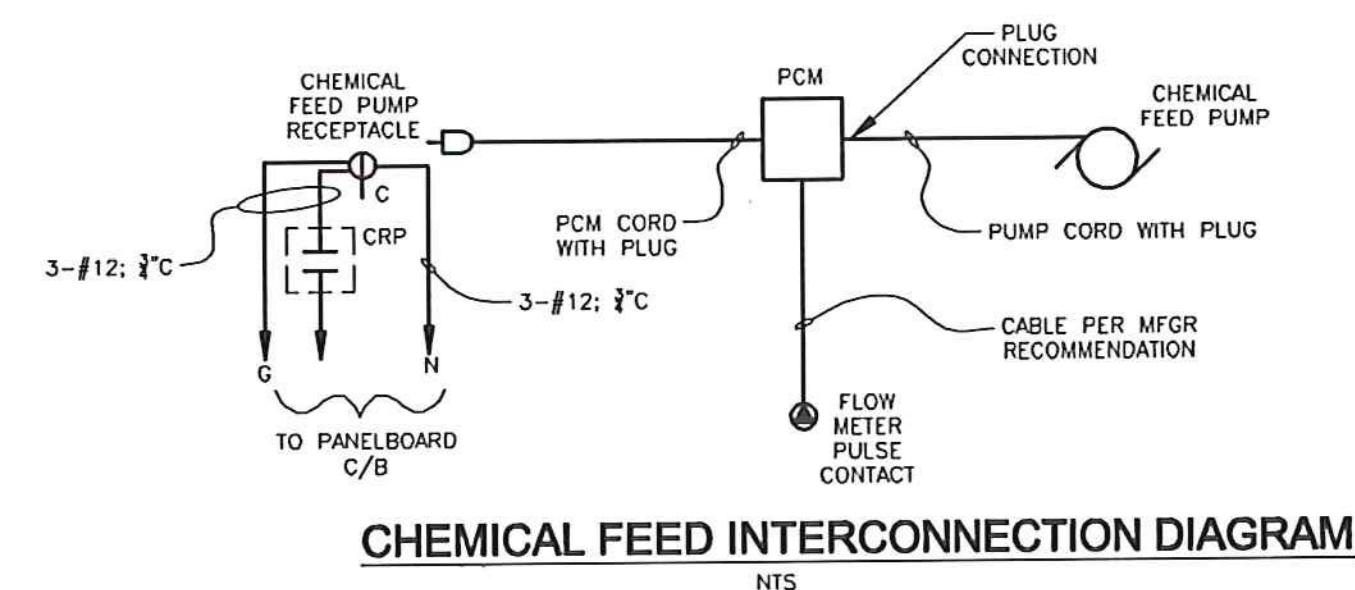
REV	DATE	DESCRIPTION	BY

NEWPORT STATE AIRPORT COVENTRY, VERMONT	
WATER SYSTEM PERMIT TO CONSTRUCT	
ELECTRICAL PLAN	
SCALE: AS SHOWN	DESIGN: LFC
DRAWN: IGT	PROJECT: 17958.01
CHECKED: LFC	DATE: 10/09/15

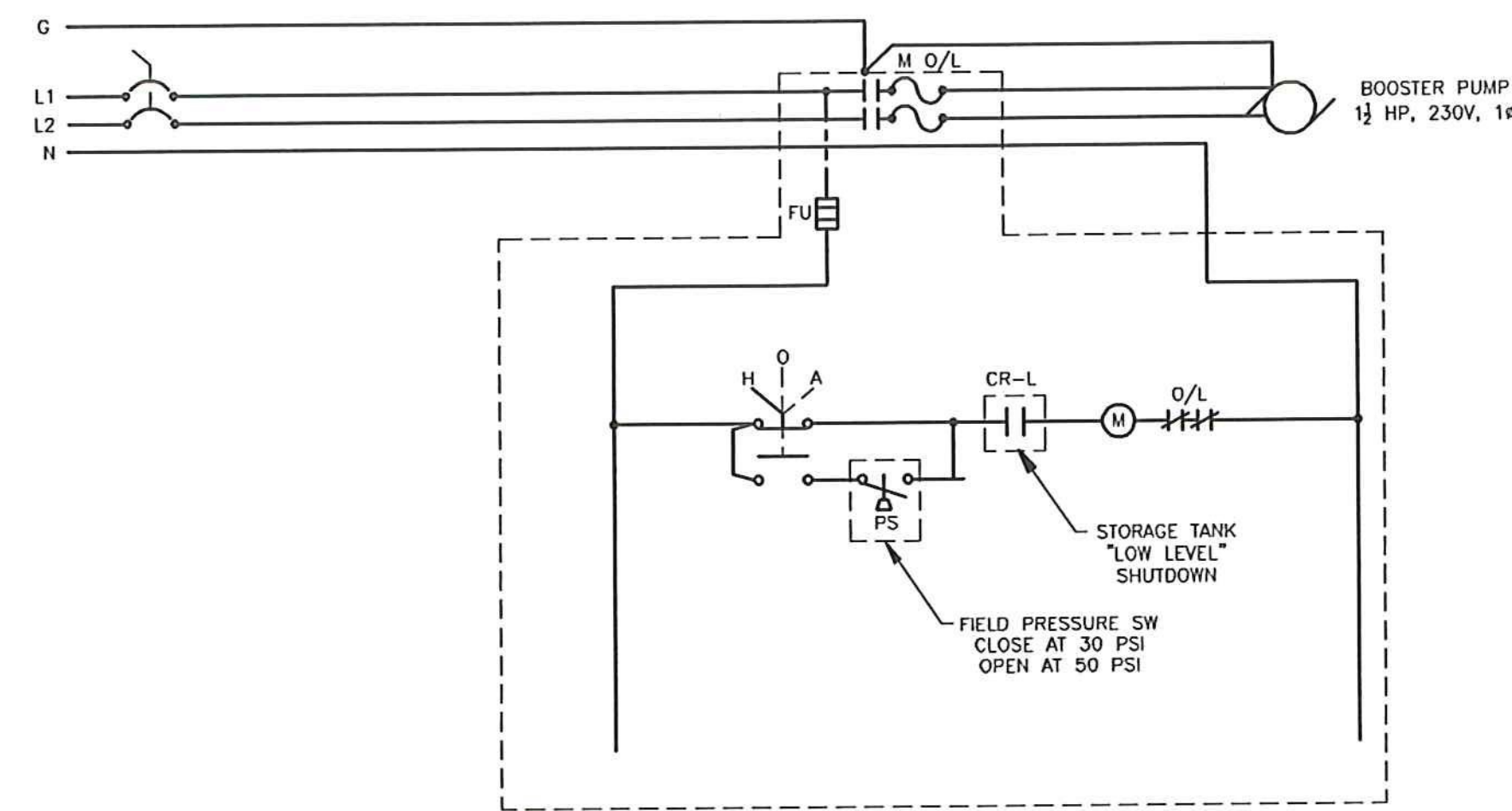


**ALARM AND CONTROL INTERFACE W/D**  
NTS

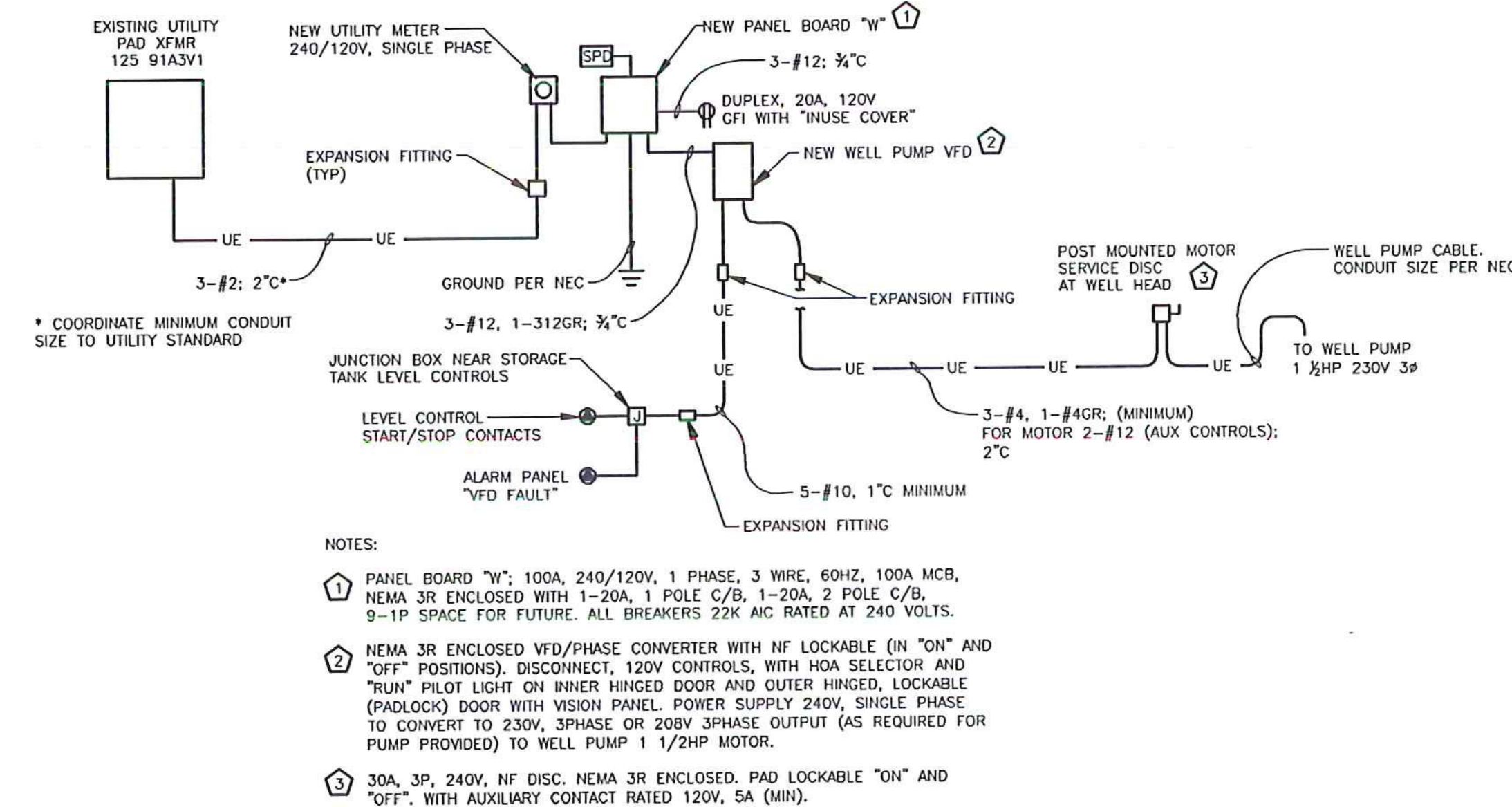
NOTE: PROVIDE NEMA 1 ENCLOSURE WITH REQUIRED TERMINAL BOARD FOR CONNECTION OF ALL FIELD WIRING AND TO CONTAIN RELAYS. PROVIDE CODE REQUIRED WARNING LABEL(S) INDICATING EXPOSED ENERGIZED TERMINALS WITHIN ENCLOSURE.



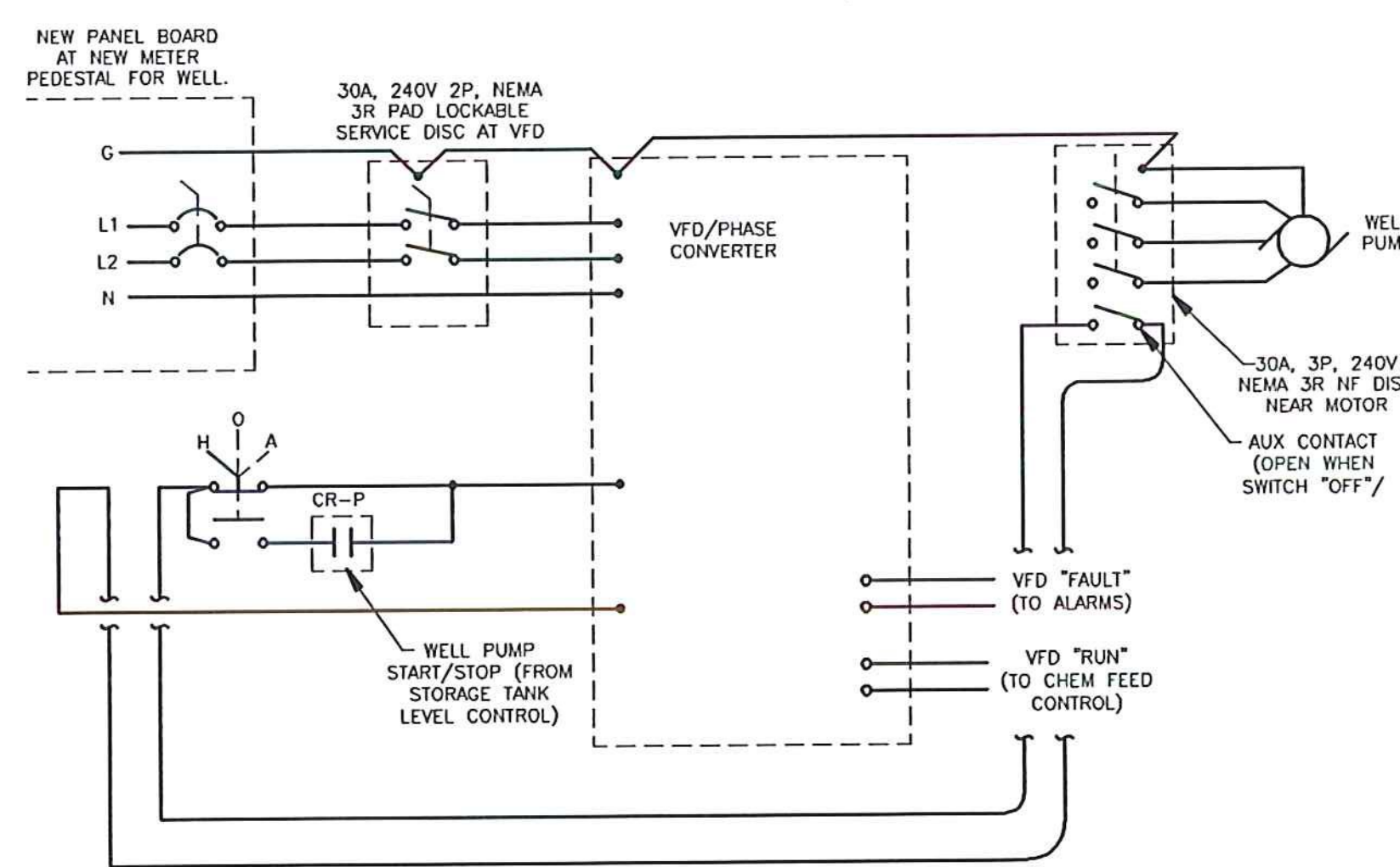
**CHEMICAL FEED INTERCONNECTION DIAGRAM**  
NTS



**BOOSTER PUMP W/D**  
NTS



**WELL PUMP POWER INTERCONNECTION BUILDING**  
NTS



**WELL PUMP W/D**  
NTS

ELECTRICAL DESIGN BY:  
**Lee F. Carroll, PE**  
Electrical Consultants  
1 Madison Ave P.O. Box 357  
Gorham, NH 03581-0357  
603-466-5005  
lcarroll@ne.rr.com



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**LEGEND**

	LIGHT FIXTURE-LED
	EMERGENCY LIGHT FIXTURE
	DUPLEX RECEPTACLE - 36" AFF
	SIMPLEX, CORROSION RESISTANT RECEPTACLE; 48" AFF
	SINGLE POLE SWITCH; 48" AFF
	CONNECTION TO FIXED EQUIPMENT
	DISCONNECT SWITCH OR CIRCUIT BREAKER -AS IDENTIFIED.
	MOTOR; NUMBER INDICATES HORSEPOWER
	UTILITY METER
AFF ABOVE FINISHED FLOOR	
GFI GROUND FAULT CIRCUIT INTERRUPTOR	
VFD VARIABLE FREQUENCY DRIVE	
MLO MAIN LUGS ONLY	
PCM PUMP CONTROL MODULE (CHEM FEED)	
CFP CHEMICAL FEED PUMP	
LS LEVEL SENSOR/CONTROLLER	
FM FLOW METER	
WP WATER PROOF	

**FIXTURE SCHEDULE**

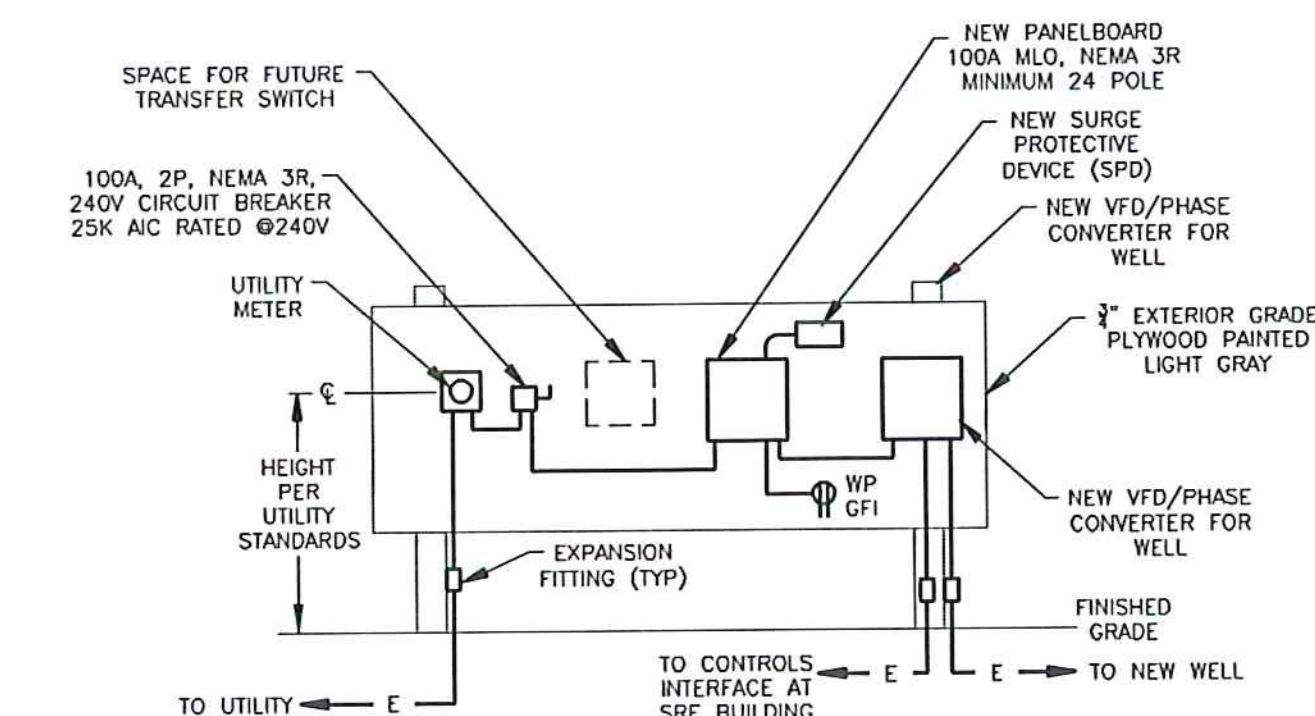
TYPE	FIXTURE MAKE / MODEL	LAMPING	MOUNTING
A	LITHONIA ZL1N-L96-6000LM-FST-MVOLT-40K-BOCRI WH WITH #C36 HANGING CHAINS	LED INCLUDED	CHAIN HANG FROM STRUCTURE
AA	HIGHLITES RL-9-SX WITH 2-12W HALOGEN HEADS	2-12W HALOGEN	WALL, 8 FT AFF

100 AMP MCB, 240/120 VOLT, 1 PHASE, 3 WIRE, 60 HERTZ

CKT. NO.	NO. POLES	RATING	DESCRIPTION
1	1	20	FURNACE & FURNACE OUTLET (EXISTING)
2	1	20	CEILING LIGHTS (BFT) (EXISTING)
3	1	20	CEILING LIGHTS (BFT) (EXISTING)
4	1	20	FUEL PUMP (EXISTING)
5	1	20	OUTLET BY WORKBENCH (EXISTING)
6	1	20	OVER HEAD DOOR (EXISTING)
7	1	20	(EXISTING)
8	1	20	AIR COMPRESSOR (EXISTING)
9	1	20	? SPARE (EXISTING)
10	1	20	? SPARE (EXISTING)
11	1	20	GATE CONTROL (EXISTING)
12,14	2	20*	NEW-BOOSTER PUMP
13	1	20*	NEW-LEVEL CONTROL, ALARMS, & CHEMFEED
15	1	20	NEW SERVICE OUTLET-WATER SYSTEM
16	1	20*	NEW LIGHTS-WATER SYSTEM
17-20	2	**	SPD

EXISTING PANEL ALTER CIRCUIT & DISTRIBUTION TO FEED NEW WATER SYSTEM LIGHTS FROM NEW CIRCUIT 16.  
EXISTING PANEL: SQUARE D, TYPE N GDB. BREAKERS 10,000 AC RATED.

* PROVIDE HANDLE LOCK ON CIRCUITS  
** RATING AS RECOMMENDED BY SPD MANUFACTURER



**TYPICAL PROPOSED LAYOUT OF ELECTRICAL EQUIPMENT NEW WELL SERVICE AND DISTRIBUTION**  
NTS

SCHEDULE A - WATER SYSTEM - BID SET  
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NEWPORT STATE AIRPORT  
CONVENTRY, VERMONT  
WATER SYSTEM PERMIT TO CONSTRUCT

**ELECTRICAL DETAILS**

SCALE: NTS	DESIGN: LFC	E-2
DRAWN: IGT	PROJECT: 17958.01	
CHECKED: LFC	DATE: 10/09/15	

5 OF 5