# TOWN OF WILMINGTON, VERMONT CONTRACT DRAWINGS FOR ROUTE 9 WATER AND SEWER EXTENSION

CONTRACT No. 1
DECEMBER, 2024
AWARD #: NBRC-23GBVT03

# TOWN SELECTBOARD

TOM FITZGERALD, CHAIR

JOHN GANNON, VICE CHAIR

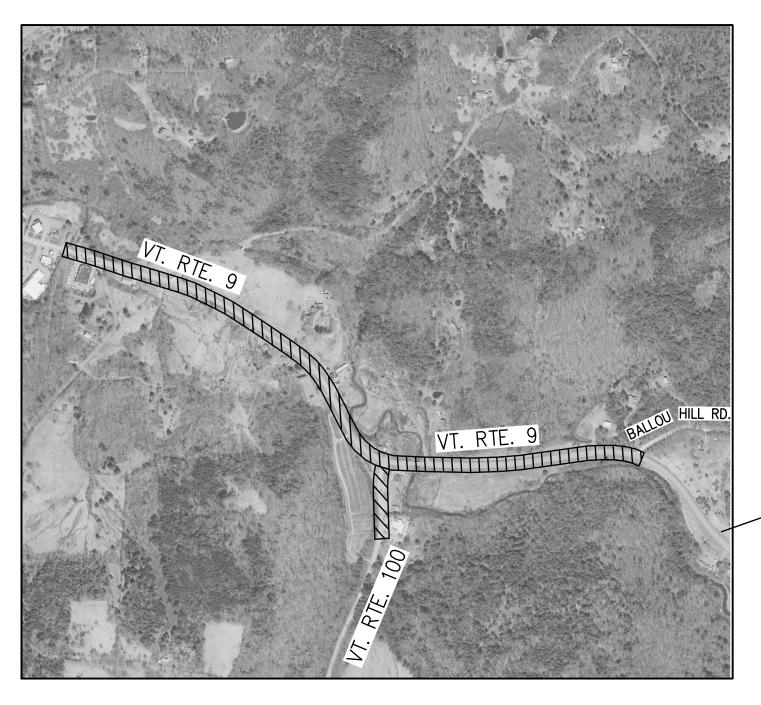
VINCENT RICE, CLERK

SARAH FISHER

TONY TRIBUNO

# TOWN MANAGER

SCOTT TUCKER





PROJECT LOCATION. . . . . . .



# INDEX OF DRAWINGS

DRAWING NO. TITLE TITLE SHEET AND INDEX OF DRAWINGS VT. ROUTE 9 WATER PLAN AND PROFILE STA. 36+00 TO 46+00 VT. ROUTE 9 SEWER PROFILE STA. 18+37 TO 29+57 VT. ROUTE 9 WATER PLAN AND PROFILE STA. 46+00 TO 56+39 VT. ROUTE 9 SEWER PROFILE STA. 29+57 TO 38+31 VT. ROUTE 100 WATER PLAN AND PROFILE STA. 0+00 TO 6+34 VT. ROUTE 100 SEWER PROFILE STA. 0+00 TO 8+67 EXISTING EAST MAIN STREET EJECTOR STATION DEMOLITION PLANS AND SECTIONS PUMP STATIONS PROPOSED SITE PLANS PUMP STATION PLAN, SECTIONS AND NOTES PUMP STATION DETAILS WATER DETAILS SEWER DETAILS I SEWER DETAILS II ROADWAY DETAILS EROSION CONTROL DETAILS AND NOTES ELECTRICAL LEGEND AND EAST MAIN STREET DEMOLITION PLAN EAST MAIN STREET PROPOSED ELECTRICAL PLAN AND DETAILS ROUTE 100 PROPOSED ELECTRICAL PLAN AND DETAILS ELECTRICAL DETAILS

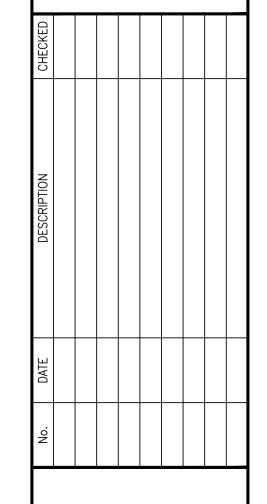
Aldrich + Elliot
WATER RESOURCE ENGINEERS

6 Market Place, Suite 2 Essex Jct., VT 05452

> P: 802.879.7733 AEengineers.com



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TOWN OF WILMINGTON, VERMONT

ROUTE 9 WATER
AND SEWER
EXTENSION
CONTRACT No. 1

TITLE SHEET AND INDEX OF DRAWINGS

DESIGNED
MG

DRAWN
JEB

CHECKED
WAE

DATE
DEC. 2024

PROJECT NO.

22028

DRAWING

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# PLAN-EXISTING PLAN-EXISTING SOIL BORING-PROBE . . . . . . . . . . . . . . . . . PROFILE-EXISTING NLTD: NO LEDGE TO DEPTH GRAVEL ROAD OR DRIVE . . . . . . . . . . . . . STONE CHECK DAM . . . . . . . . . . . . . . . . . PROFILE-PROPOSED CATCH BASIN . . . . . . . . . . . . . . . . . $\boxplus$ UTILITY POLE . . . . . . . . . . . . . . . . $\phi$ TRANSITION COUPLING . . . . . . . . . . . . . . . . ELECTRICAL PULL BOX . . . . . . . . . . . MAILBOX . . . . . . . . . . . . . . . . . MBI

# GENERAL CONSTRUCTION NOTES

## 1. <u>SAFETY</u>

- A. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF EMPLOYEES ON THE PROJECT AND SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF FEDERAL, STATE AND LOCAL SAFETY LAWS AND BUILDING CODES TO PREVENT ACCIDENTS OR INJURY. THE CONTRACTOR SHALL ERECT AND PROPERLY MAINTAIN AT ALL TIMES ALL NECESSARY SAFEGUARDS AND BARRICADES FOR THE PROTECTION OF EMPLOYEES ON THE WORK AND SAFETY OF OTHERS EMPLOYED NEAR THE WORK AND THE PUBLIC. FURTHER, THE CONTRACTOR SHALL POST DANGER SIGNS AND OTHER WARNING DEVICES TO PROTECT INDIVIDUALS FROM BEING INJURED IN THE VICINITY OF THE WORK.
- B. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE V.O.S.H.A. SAFETY REQUIREMENTS. THE CONTRACTOR SHALL INSURE ALL WORK PROCEEDS IN ACCORDANCE WITH V.O.S.H.A. REQUIREMENTS FOR SAFETY TRENCHING, EXCAVATION, AND CONFINED SPACE ENTRY PROCEDURES.
- C. THE CONTRACTOR SHALL PROVIDE ADEQUATE EQUIPMENT AND FACILITIES AS ARE NECESSARY AND REQUIRED TO PROVIDE EMERGENCY FIRST AID TO ANY PERSON WHO MAY BE INJURED IN THE PROSECUTION OF THE WORK UNDER THIS CONTRACT.
- D. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY TRAFFIC CONTROL SIGNS AND DEVICES BEFORE COMMENCING WORK ON THE PROJECT IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

## 2. EASEMENTS

- A. THE CONTRACTOR SHALL PERFORM ALL WORK WITHIN TEMPORARY CONSTRUCTION EASEMENT LIMITS AND/OR RIGHTS-OF-WAY AS SHOWN ON THE PLANS.
- B. WHERE NO TEMPORARY CONSTRUCTION EASEMENT IS SHOWN ON CONTRACT DRAWINGS, THE CONTRACTOR SHALL STAY WITHIN THE PERMANENT EASEMENT LIMITS, AND/OR RIGHTS-OF-WAY DURING CONSTRUCTION, AS SHOWN ON THE PLANS.

## 3. PROTECTION OF WORK

- A. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE PROTECTION OF ALL BUILDINGS, STRUCTURES AND UTILITIES (BOTH PUBLIC AND PRIVATE), INCLUDING POWER POLES, SIGNS, UTILITY SERVICES, WATER MAINS, HYDRANTS, SEWERS, FORCE MAINS, STORM DRAINS, BURIED ELECTRICAL OR CONTROL WIRES, GAS LINES, AND TELEPHONE CABLES WHETHER OR NOT THEY ARE SHOWN ON THE CONTRACT DRAWINGS.
- 3. THE CONTRACTOR SHALL CAREFULLY SUPPORT AND PROTECT ANY UTILITIES, STRUCTURES, PIPE LINES, AND CONDUITS WHICH MAY BE ENCOUNTERED DURING COMPLETION OF THE WORK. ANY DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY HIM TO THE SATISFACTION OF THE ENGINEER AT CONTRACTOR'S EXPENSE.

## 4. MAINTENANCE OF FLOWS

A. THE CONTRACTOR SHALL, AT HIS OWN COST, MAKE PROVISIONS FOR MAINTAINING FLOW THROUGH EXISTING FORCE MAINS, SEWER LINES, WATERLINES, STORM DRAINS, AND WATER COURSES WHICH MUST BE INTERRUPTED DURING THE PROGRESS OF THE WORK. UPON COMPLETION OF THE WORK, ALL TEMPORARY FLOW DIVERSIONS, STRUCTURES, AND PIPING SHALL BE REMOVED FROM THE SITE.

# 5. BURIED UTILITIES

- A. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE ONLY. THOSE SHOWN ON THE DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL MEET WITH THE ENGINEER, OWNER, REPRESENTATIVES OF THE TELEPHONE COMPANY, ELECTRICITY COMPANY, GAS COMPANY, CABLE COMPANY, AND ANY OTHER UTILITY COMPANIES INVOLVED WITH THE CONSTRUCTION OF THIS PROJECT TO COORDINATE THE MARKING, AND TIMING OF DISRUPTIONS OF THE VARIOUS UTILITIES, IF ANY.
- B. THE CONTRACTOR SHALL EXCAVATE TEST PITS AS SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER. THESE SHALL BE EXCAVATED TO LOCATE BURIED UTILITIES AND TO DETERMINE SIZE, LOCATIONS AND/OR MATERIALS OF EXISTING UTILITIES. SOME HAND EXCAVATING MAY BE NECESSARY TO PROTECT UTILITIES. TEST PITS SHALL BE EXCAVATED AT LEAST TWO (2) WEEKS PRIOR TO CONSTRUCTION SO THAT DESIGN REVISIONS MAY BE MADE IF REQUIRED. TEST PITS INDICATED ON DRAWINGS OR BY WRITTEN DIRECTION FROM THE ENGINEER WILL BE PAID FOR UNDER BID ITEM FOR MISC., EXTRA, AND BELOW GRADE EXCAVATION.
- C. EXISTING UTILITIES SHALL BE PROTECTED OR REMOVAL AND REPLACEMENT SHALL BE COORDINATED WITH THE APPROPRIATE COMPANY. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR REPAIR OF ANY SUCH DAMAGE AS QUICKLY AS POSSIBLE AT HIS OWN EXPENSE. ALL UTILITIES WHICH MAY BE BROKEN OR DAMAGED SHALL BE REPAIRED TO AS GOOD OR BETTER CONDITION AND RECONNECTED FOR SERVICE. SUBMIT ALL REPAIR METHODS TO THE ENGINEER FOR APPROVAL. NO REPAIR SHALL BE BACKFILLED PRIOR TO INSPECTION BY THE ENGINEER IN THE FIELD. CONTRACTOR SHALL TAKE MEASUREMENTS TO DOCUMENT WHERE ALL SERVICE REPAIRS ARE MADE. RECORDS SHALL BE MADE AVAILABLE TO THE ENGINEER AND OWNER UPON REQUEST AND PRIOR TO THE END OF CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN A SUPPLY OF REPAIR MATERIALS AND PIPE ON THE JOB SITE AT ALL TIMES IN ORDER TO MINIMIZE THE INCONVENIENCE CAUSED BY SUCH DAMAGE.

# 6. CONSTRUCTION

- A. THE CONTRACTOR SHALL USE ONLY DESIGNATED BENCH MARKS FOR REFERENCE ELEVATIONS.
- B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HOLDING UTILITY POLES AS NECESSARY. THE COST OF UTILITY POLE HOLDING SHALL BE INCIDENTAL TO THE PIPE. ALL WORK SHALL BE IN CONFORMANCE WITH UTILITY COMPANY REQUIREMENTS.
- C. SUBSURFACE EXPLORATION LOGS ARE BOUND IN THE SPECIFICATIONS.
- D. THE CONTRACTOR SHALL INSTALL A MECHANICAL PLUG IN THE END OF ALL PIPE WORK AT THE COMPLETION OF EACH WORK DAY TO SEAL IT FROM WATER AND SOIL.
- E. THE CONTRACTOR SHALL RESTORE DRIVEWAYS, LAWNS, AND SIDEWALKS IMMEDIATELY AFTER WORK IS COMPLETE. PAVED DRIVEWAYS, ROADS, AND SIDEWALKS SHALL BE SHIMMED WITH GRAVEL UNTIL FINAL PAVING.
- F. ADDITIONAL BENDS, AS NECESSARY, SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST. PROVIDE A MAXIMUM OF 45° BENDS FOR FORCEMAINS. NO 90° BENDS WILL BE ALLOWED.

# 6. CONSTRUCTION (CONT.)

- G. ALL PIPE MATERIALS SHALL BE AS FOLLOWS:
- 1. GRAVITY SEWER (MAINS AND SERVICES): SDR 35 PVC, PUSH-ON JOINT.
- 2. SEWER FORCE MAIN: SDR 21 PVC (IPS) WITH PUSH-ON JOINTS, OR SDR 11 HDPE WITH THERMALLY-FUSED JOINTS. AS NOTED ON THE DRAWINGS.
- 3. WATER MAIN: C900 PVC, DR 18 WITH A MINIMUM PRESSURE CLASS OF 235 PSI, WITH PUSH—ON JOINTS. FITTINGS SHALL BE CLASS 52 DI WITH MECHANICAL JOINTS AND RETAIN ER
- 4. WATER SERVICES: CLASS 200 CTS POLYETHYLENE.
- 5. FOR ALL SLEEVED PVC PIPING, PROVIDE RESTRAINED JOINT CASING SPACERS AT ALL JOINTS
- H. ALL MAIN LINE GATE VALVES AND HYDRANT VALVES SHALL BE OPEN-LEFT.
- I. THRUST BLOCKS SHALL BE PROVIDED FOR ALL WATERMAIN BENDS AND FITTINGS AND ARE INCIDENTAL TO THE UNIT PRICE OF THE PIPE.
- J. THE NEW SYSTEM SHALL BE TESTED, INSPECTED, CHLORINATED AND APPROVED PRIOR TO TRANSFERRING SERVICE TO NEW SYSTEM. NO WATER SHALL BE ALLOWED IN THE NEW SYSTEM UNTIL APPROVED BY THE OWNER AND ENGINEER, AND THE CONDITIONS IN THE AGENCY OF NATURAL RESOURCES, DRINKING WATER & GROUNDWATER PROTECTION DIVISION CONSTRUCTION PERMIT ARE COMPLETE.
- K. EXISTING WATER MAINS ARE UNDER PRESSURE. THE CONTRACTOR IS ADVISED TO TAKE PRECAUTIONS TO AVOID "BLOWING OUT" OF EXISTING WATERMAINS FROM THE SIDES OF TRENCHES DURING CONSTRUCTION. TEMPORARY SHEETING AND BRACING MAY BE REQUIRED.
- L. EROSION CONTROL, AS NECESSARY, SHALL BE PROVIDED BY THE CONTRACTOR, IN ACCORDANCE WITH CONTRACT DOCUMENTS. EROSION CONTROLS SHALL BE IN PLACE DOWNSTREAM OF THE AREA OF CONSTRUCTION PRIOR THE START OF ANY EARTH DISTURBANCE. ALL DISTURBED AREAS ARE TO BE IMMEDIATELY STABILIZED.
- M. THE CONTRACTOR SHALL RESTORE ANY DISTURBED AREA WITHIN THREE (3) WORKING DAYS OF INITIAL DISTURBANCE. ALL RESTORATION SHALL BE AS GOOD OR BETTER THAN ORIGINAL CONDITION AND SHALL MEET THE REQUIREMENTS SET FORTH IN THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN BASIS OF DESIGN.

# 7. <u>SITEWORK</u>

- A. THE CONTRACTOR IS RESPONSIBLE FOR RECORDING PRECONSTRUCTION CONDITIONS BY USE OF PHOTOGRAPHS, VIDEO TAPES, AND OTHER METHODS. EXISTING FENCES, GUARDRAILS, SIGNS, CATCH BASINS, CULVERTS, HEADWALLS, ETC. REMOVED BY THE CONTRACTOR SHALL BE REPLACED TO AT LEAST THEIR ORIGINAL CONDITION. THE COST OF THIS PRECONSTRUCTION DOCUMENTATION AND RECONSTRUCTION SHALL BE PAID FOR UNDER THE UNIT PRICE BID ITEM FOR PIPE WORK.
- B. ALL EXCESS MATERIAL SHALL BE DISPOSED OF OFF-SITE UNLESS OTHERWISE APPROVED BY THE OWNER. A COPY OF A WRITTEN AGREEMENT BETWEEN THE CONTRACTOR AND THE SITE OWNER SHALL BE SUBMITTED TO THE ENGINEER BEFORE ANY MATERIAL IS DEPOSITED ON ANY SITE. DISPOSAL OF EXCESS MATERIAL OFF-SITE SHALL BE PERFORMED IN ACCORDANCE WITH SOLID WASTE MANAGEMENT DIVISION REGULATIONS AND SHALL INCLUDE OBTAINING ANY REQUIRED PERMITS.
- C. CONTRACTOR IS RESPONSIBLE FOR RESTORING GRAVEL SHOULDERS, PAVED SHOULDERS, ROADWAY SURFACES, DRIVEWAYS, AND CULVERTS TO THE SAME OR BETTER CONDITION AT PROJECT COMPLETION. THE COST OF RESTORATION SHALL BE INCLUDED IN THE APPROPRIATE UNIT PRICE BID ITEM.
- D. SOME MAILBOXES AND SIGNS ARE NOT SHOWN ALONG PROJECT ROUTE FOR REASONS OF CLARITY. THE CONTRACTOR SHALL RESET ALL MAILBOXES AND SIGNS AS SOON AS POSSIBLE, AS CONSTRUCTION PERMITS AND/OR AS DIRECTED BY THE ENGINEER.
- E. TREES LOCATED WITHIN THE TEMPORARY CONSTRUCTION EASEMENT LIMITS SHALL NOT BE TRIMMED, DAMAGED, OR DESTROYED WITHOUT WRITTEN PERMISSION FROM THE PROPERTY OWNER ON A LOCATION BY LOCATION BASIS. DOCUMENTATION MUST BE FURNISHED TO THE ENGINEER PRIOR TO PERFORMING THE WORK.

# 8. RECORD DOCUMENTS

- A. ALL BURIED UTILITIES ENCOUNTERED SHALL BE DOCUMENTED WITH DEPTH AND THREE (3) TIES AND SHOWN BY THE CONTRACTOR ON RECORD DRAWINGS.
- B. ALL NEW SEWER LINES, FORCEMAINS, AND APPURTENACES SHALL BE DOCUMENTED WITH THREE (3) DISTANCE TIES AND DEPTH OF BURY, AND SHOWN BY THE CONTRACTOR ON RECORD DRAWINGS. THIS INFORMATION SHALL BE KEPT CURRENT AND SHALL BE PROVIDED TO THE ENGINEER IMMEDIATELY UPON REQUEST.
- C. RECORD DRAWINGS SHOWING ALL OF THE ABOVE INFORMATION SHALL BE SUBMITTED TO THE ENGINEER WITHIN 30 DAYS OF THE SUBSTANTIAL COMPLETION. A CERTIFICATE OF FINAL COMPLETION AND FINAL PAYMENT WILL NOT BE ISSUED UNTIL RECORD DOCUMENTATION HAS BEEN APPROVED BY THE ENGINEER.

# 9. <u>DIGSAFE</u>

A. CONTRACTOR SHALL NOTIFY DIG SAFE TWO (2) WEEKS PRIOR TO ANY ANTICIPATED EXCAVATIONS. CONTRACTOR SHALL NOT EXCAVATE IN ANY AREAS UNTIL DIG SAFE HAS BEEN TO THE SITE AND HAS MARKED UTILITIES. (DIG SAFE: 1–888–344–7233)

# 10.<u>SURVEY</u>

- A. TOPOGRAPHIC SURVEY DATUM IS BASED ON THE NATIONAL GEODETIC SURVEY USING NAD 83 (1996) HORIZONTAL DATUM AND NAVD 88 VERTICAL DATUM.
- B. PROPERTY AND RIGHT OF WAY (ROW) LINES SHOWN ON THESE DRAWINGS WERE OBTAINED FROM VERMONT CENTER FOR GEOGRAPHIC INFORMATION (VCGI). THEY SHOW AN APPROXIMATION OF PROPERTY AND ROW LINES AS THEY RELATE TO THE PROJECT DETAILS BASED ON THE SOURCE REFERENCE INFORMATION. A+E DOES NOT WARRANT THE ACCURACY OF THIS INFORMATION. THESE DRAWINGS SHALL NOT BE CONSTRUED AS A PROPERTY PLAT AND DO NOT DEFINE LEGAL RIGHTS OR MEET LEGAL REQUIREMENTS FOR A LAND SURVEY AS DESCRIBED IN 26 V.S.A. 2502(4).

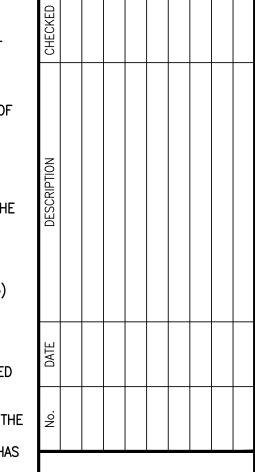


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TOWN OF WILMINGTON, VERMONT

ROUTE 9 WATER
AND SEWER
EXTENSION
CONTRACT No. 1

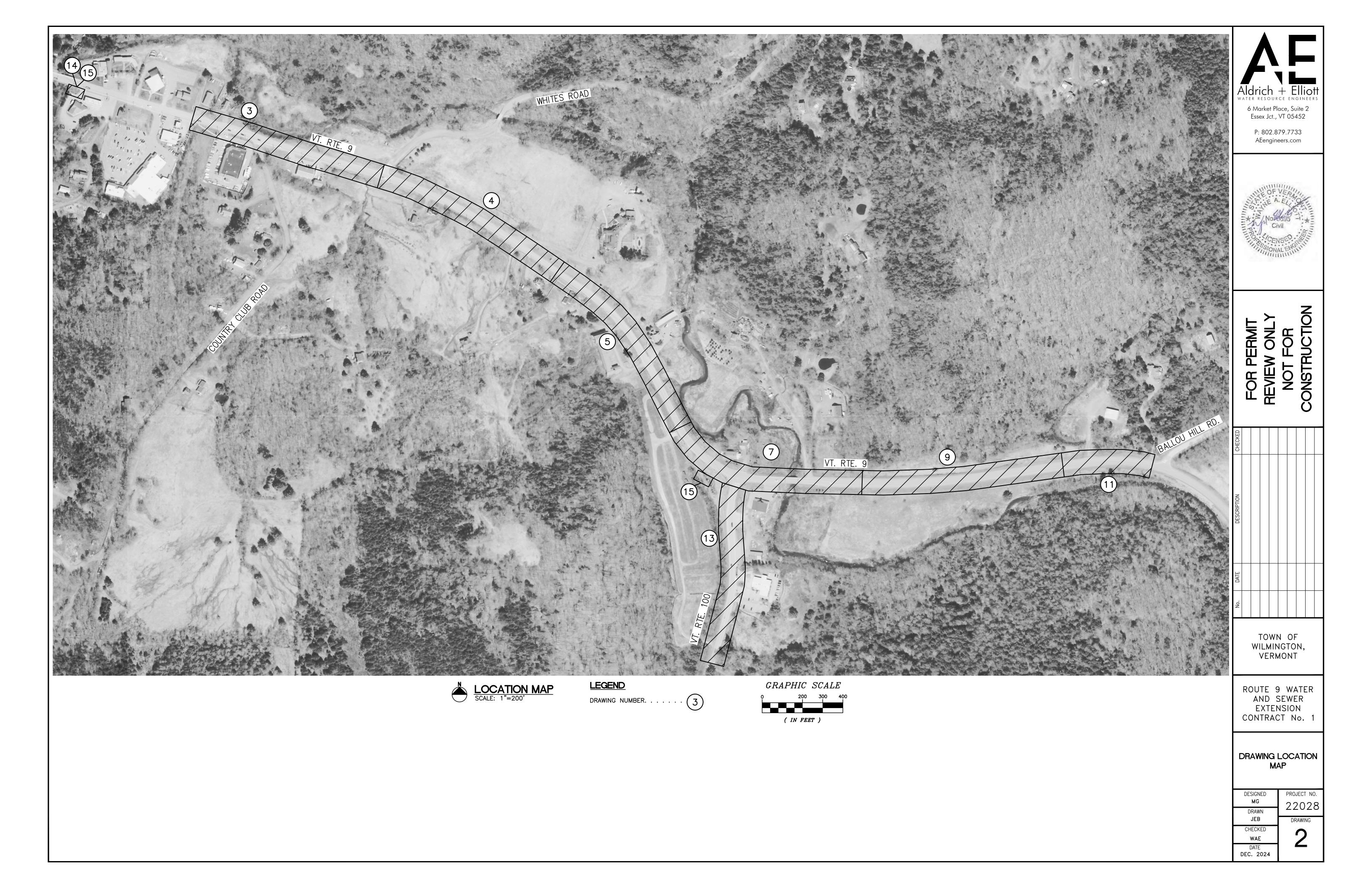
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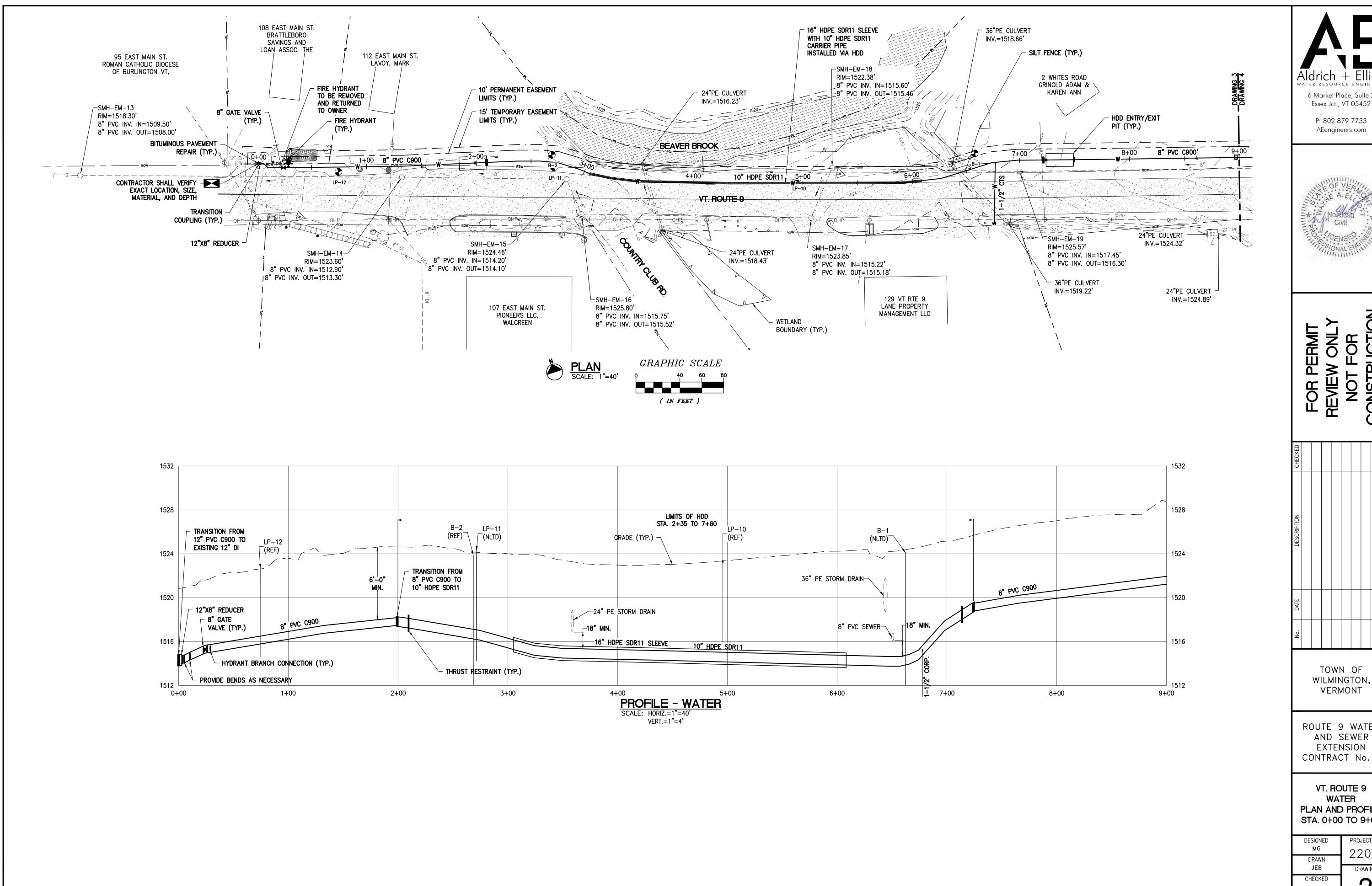
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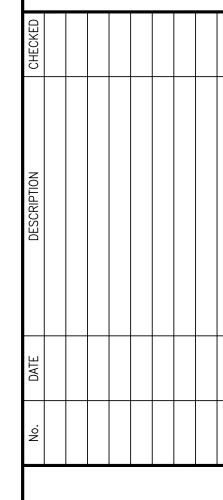
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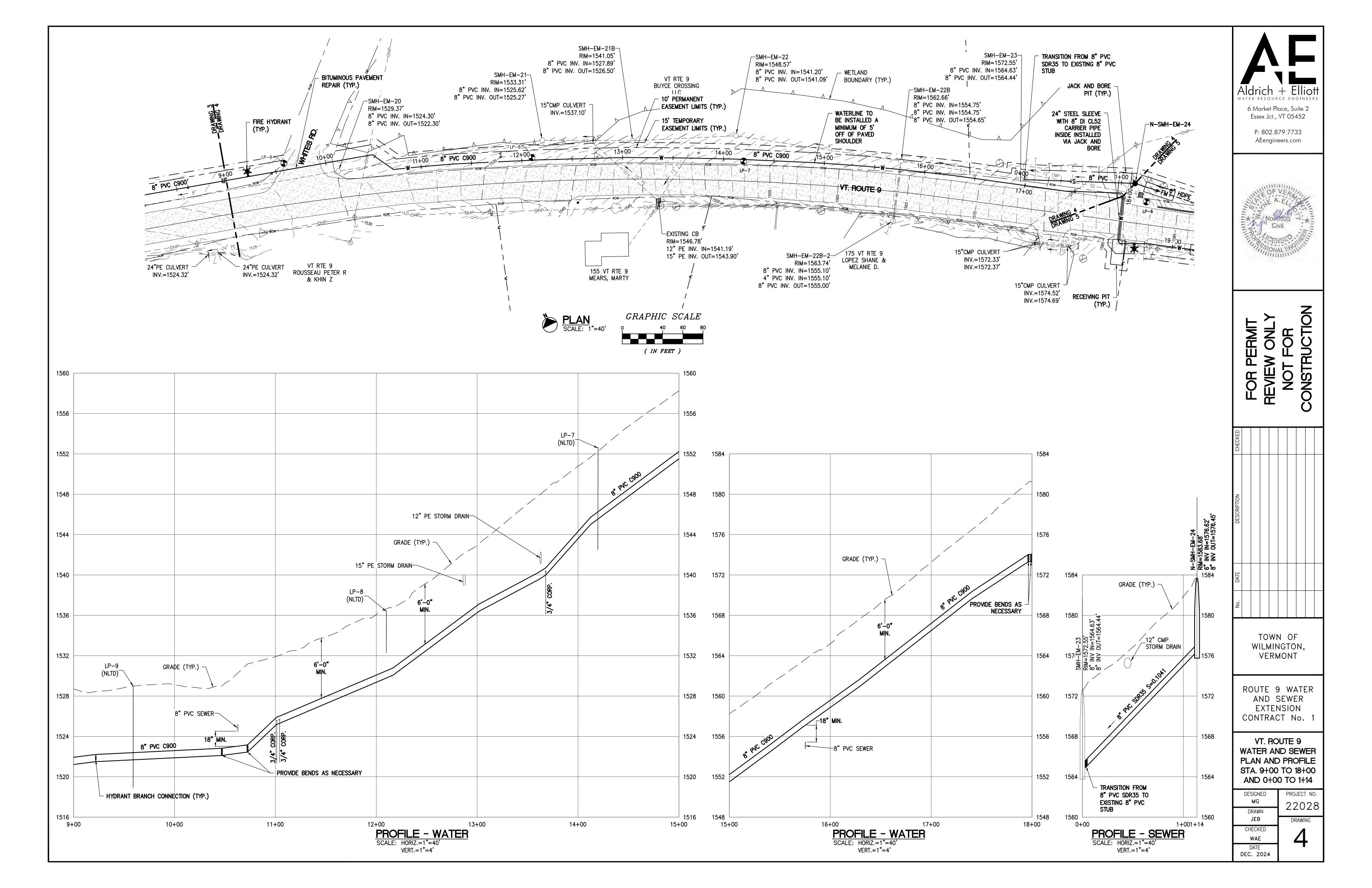


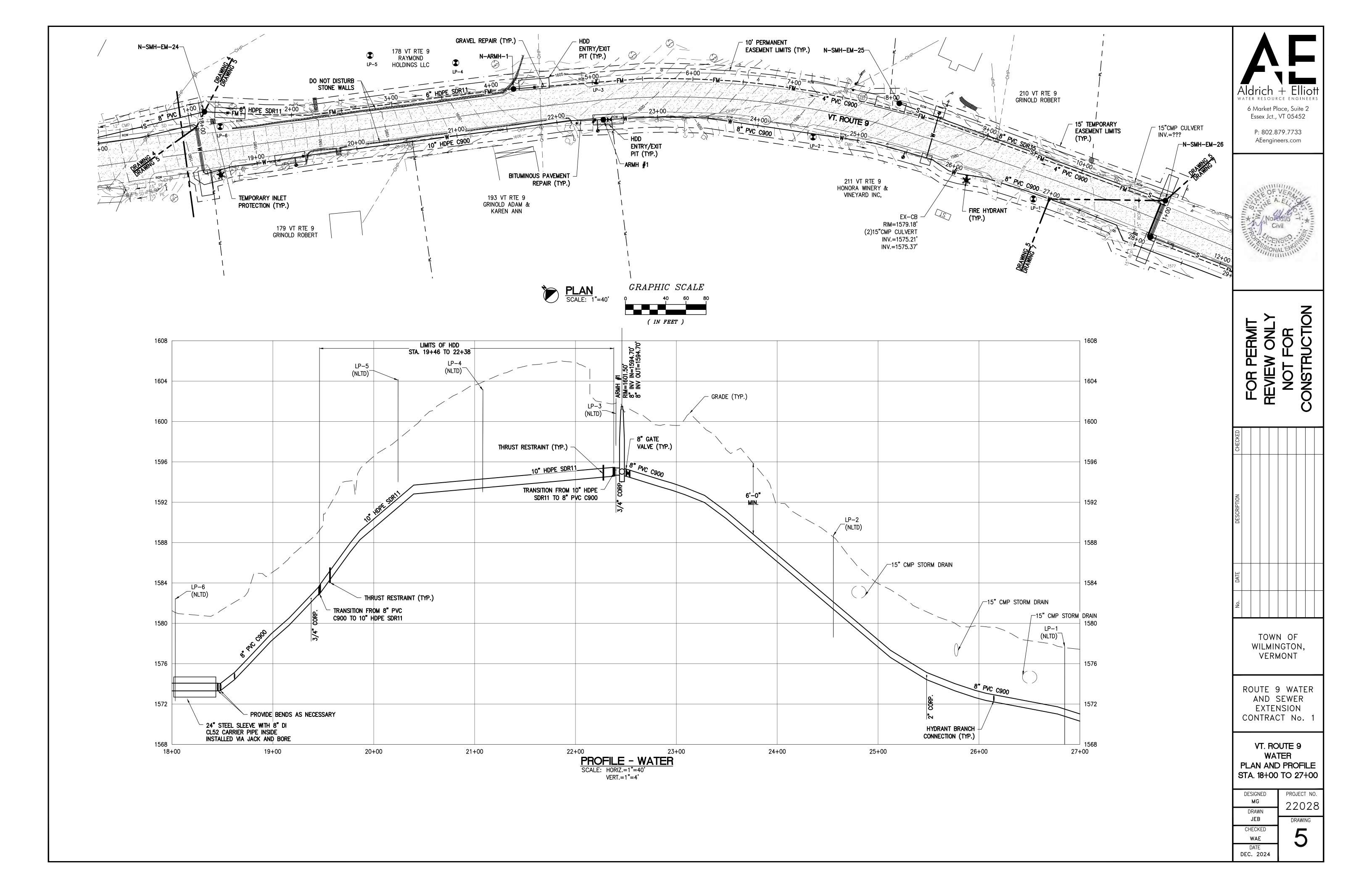


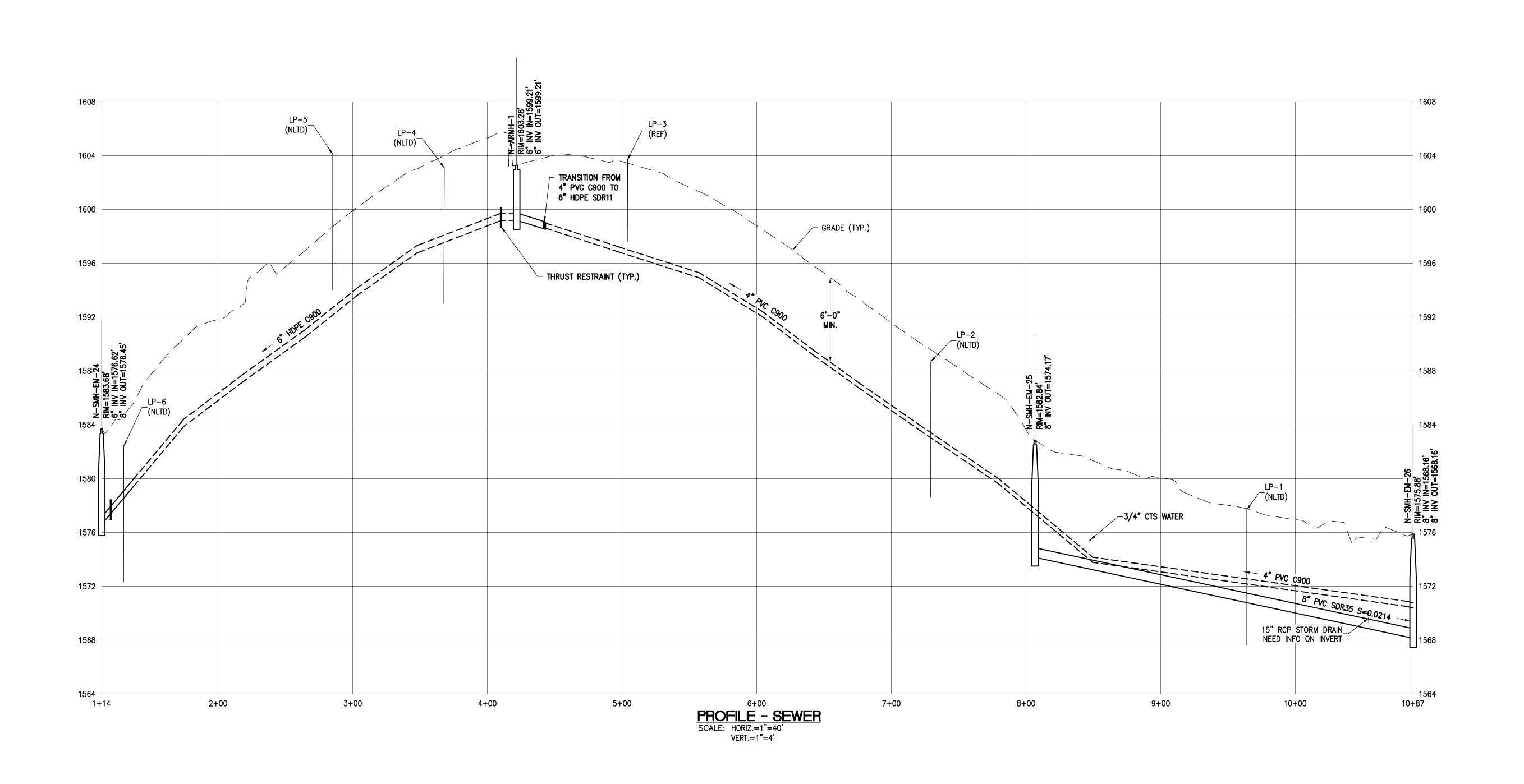
ROUTE 9 WATER AND SEWER CONTRACT No. 1

PLAN AND PROFILE STA. 0+00 TO 9+00

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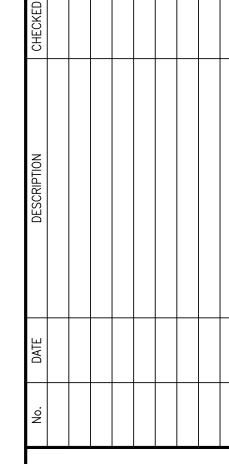




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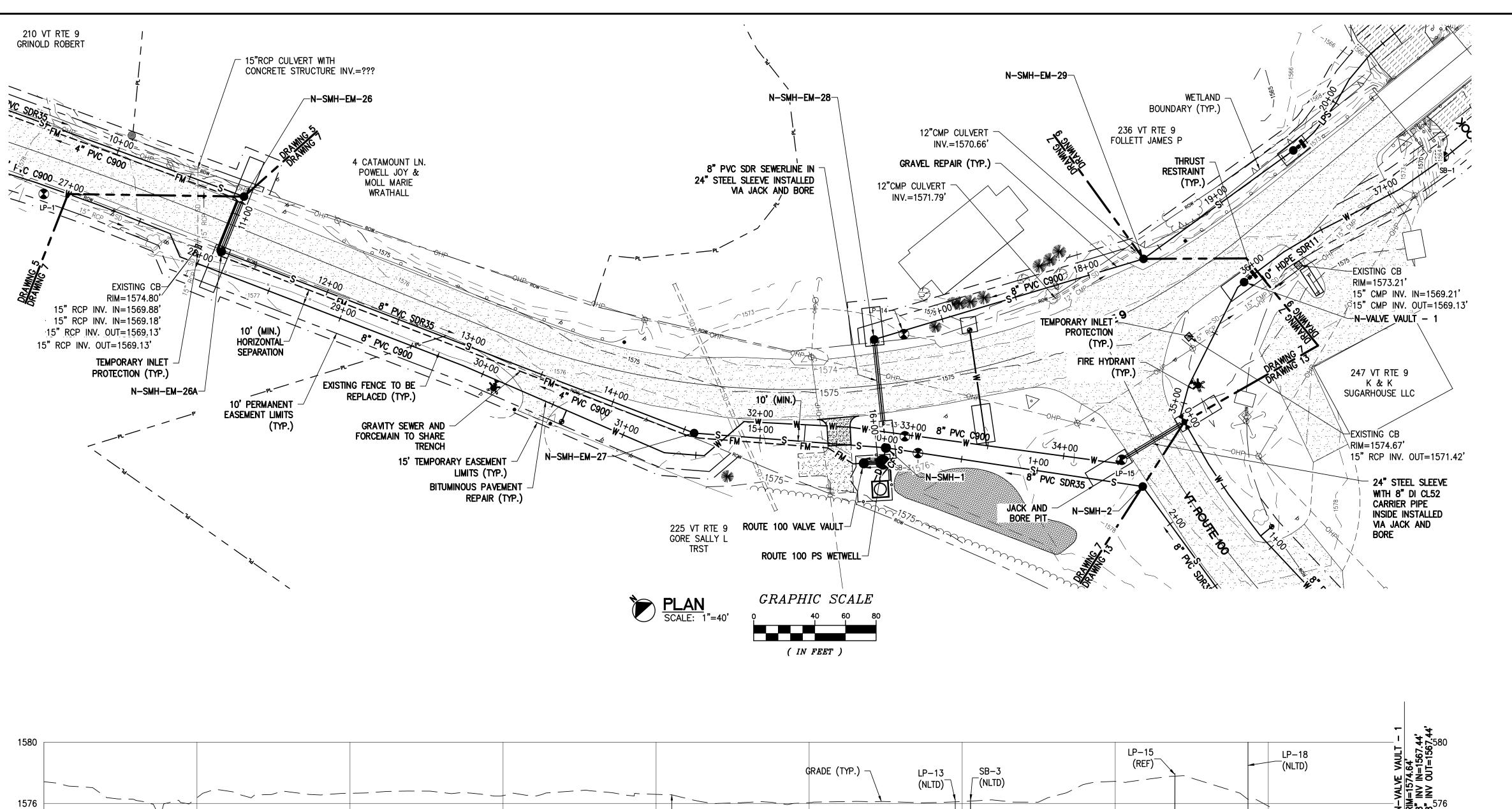
TOWN OF WILMINGTON, VERMONT

ROUTE 9 WATER AND SEWER
EXTENSION
CONTRACT No. 1

VT. ROUTE 9 SEWER PROFILE STA. 1+14 TO 10+87

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LP-14 (NLTD)

8" PVC SEWER-

 $\sim$ 24" RCP STORM DRAIN\_

✓4" PVC SEWER

33+00

PROVIDE BENDS AS NECESSARY

-8" PVC SEWER

TRANSITION -

24" STEEL SLEEVE WITH

8" DI CL52 CARRIER

PIPE INSIDE INSTALLED

VIA JACK AND BORE

34+00

COUPLING (TYP.)

15" RCP STORM DRAIN-

- HYDRANT BRANCH

CONNECTION (TYP.)

36+00

- 8" GATE VALVE (TYP.)

/ 8" PVC C900

- 8"X8" TEE

35+00

∕-15" RCP STORM DRAIN

1572

1568

1564

1560

27+00

/-15" RCP STORM DRAIN

- RIGID INSULATION (TYP.)

PROVIDE BENDS AS NECESSARY

29+00

30+00

31+00

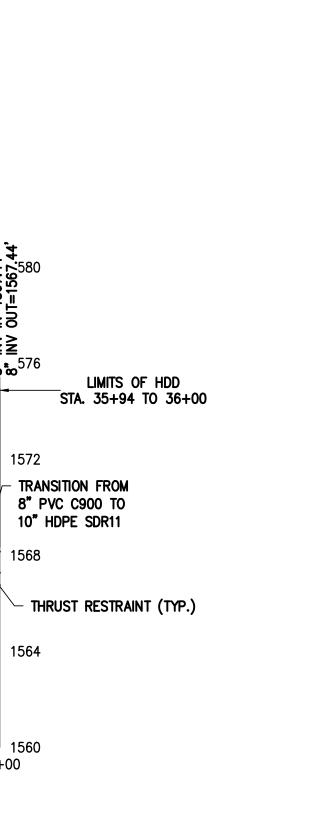
PROFILE - WATER

VERT.=1"=4"

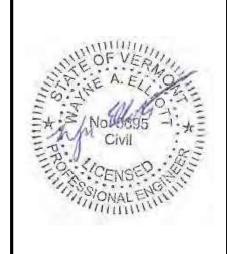
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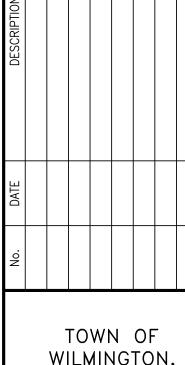
28+00

8" PVC C900



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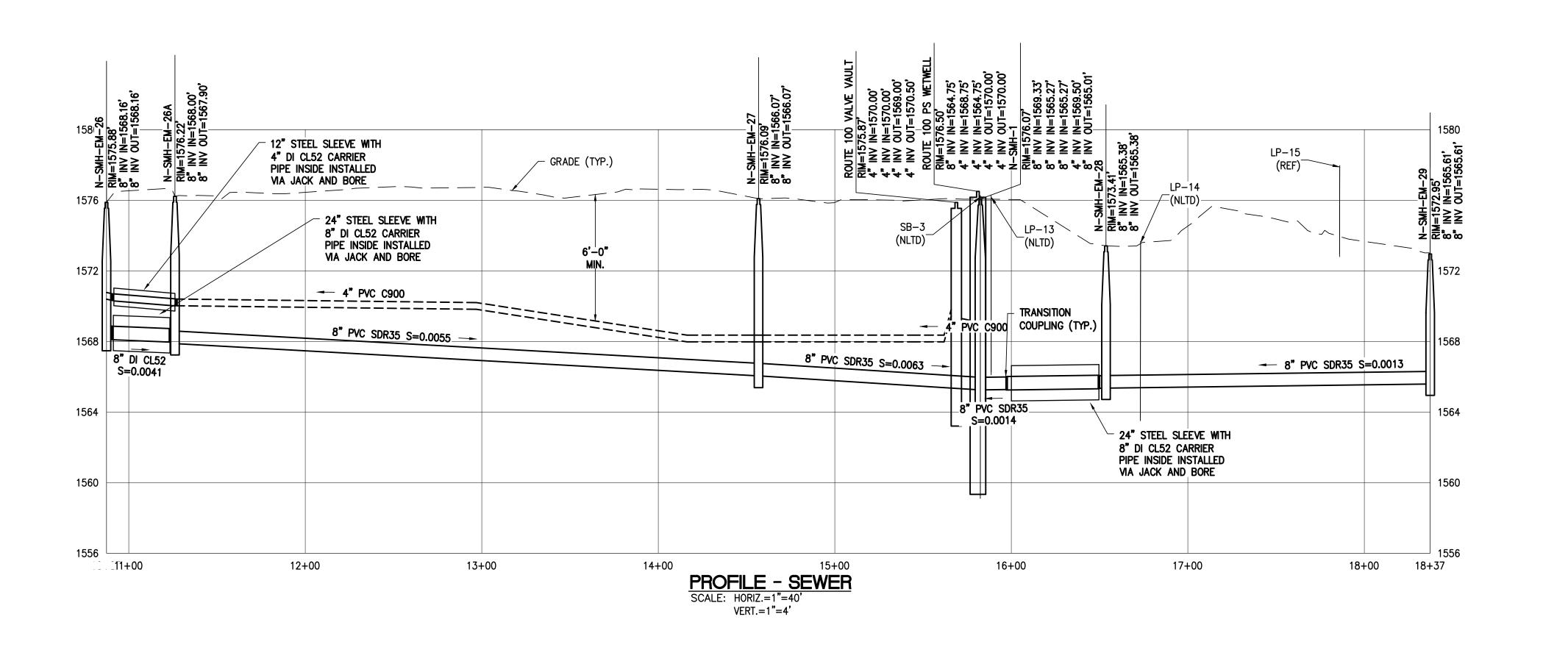


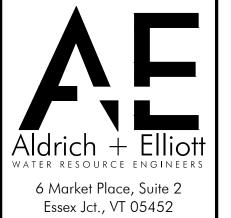
WILMINGTON, VERMONT

ROUTE 9 WATER AND SEWER EXTENSION CONTRACT No. 1

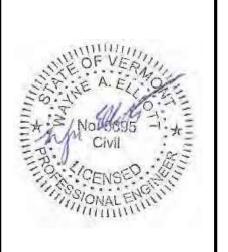
VT. ROUTE 9 WATER PLAN AND PROFILE STA. 27+00 TO 36+00

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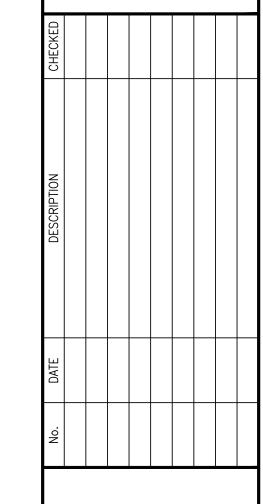




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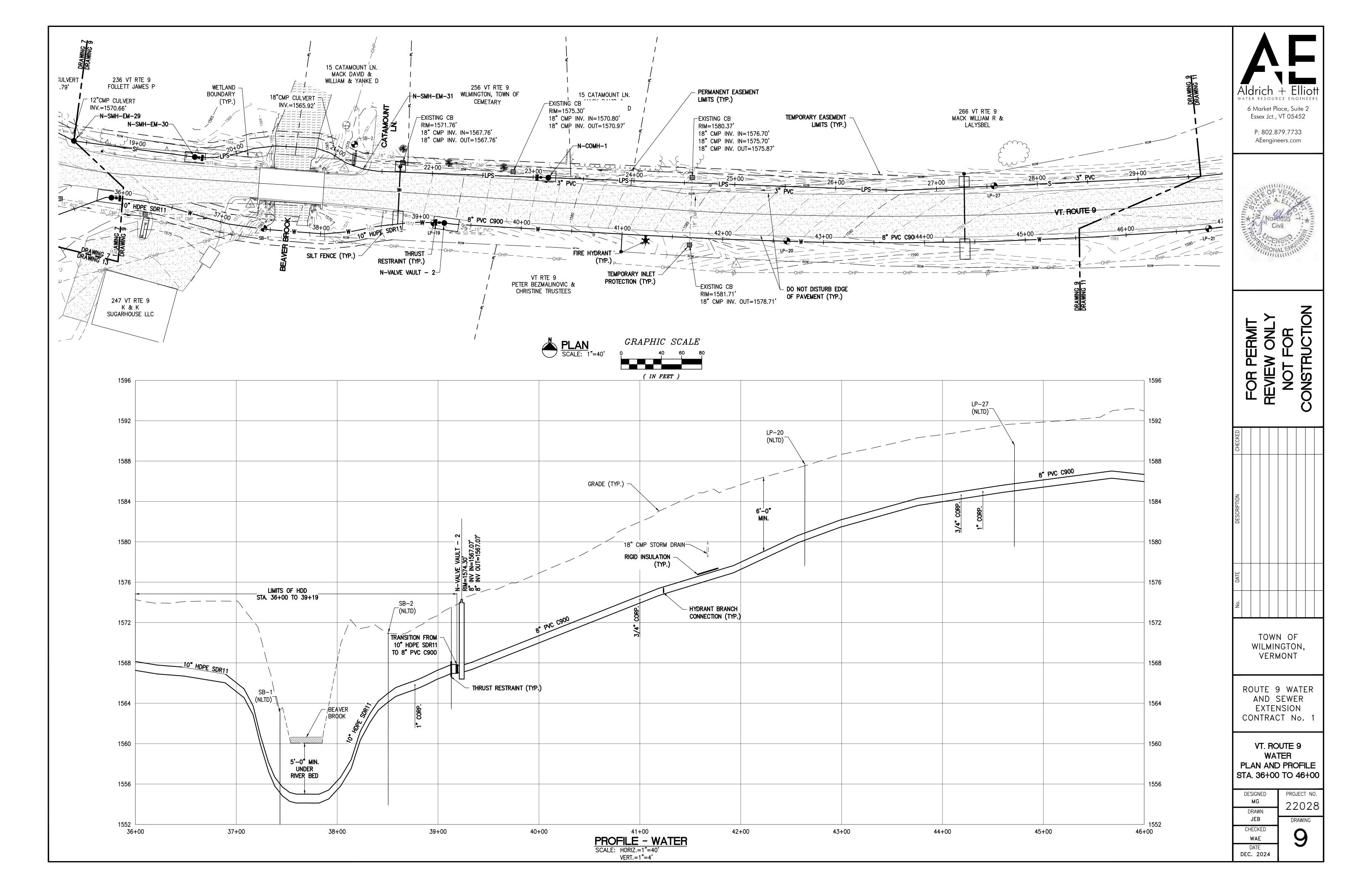
ROUTE 9 WATER
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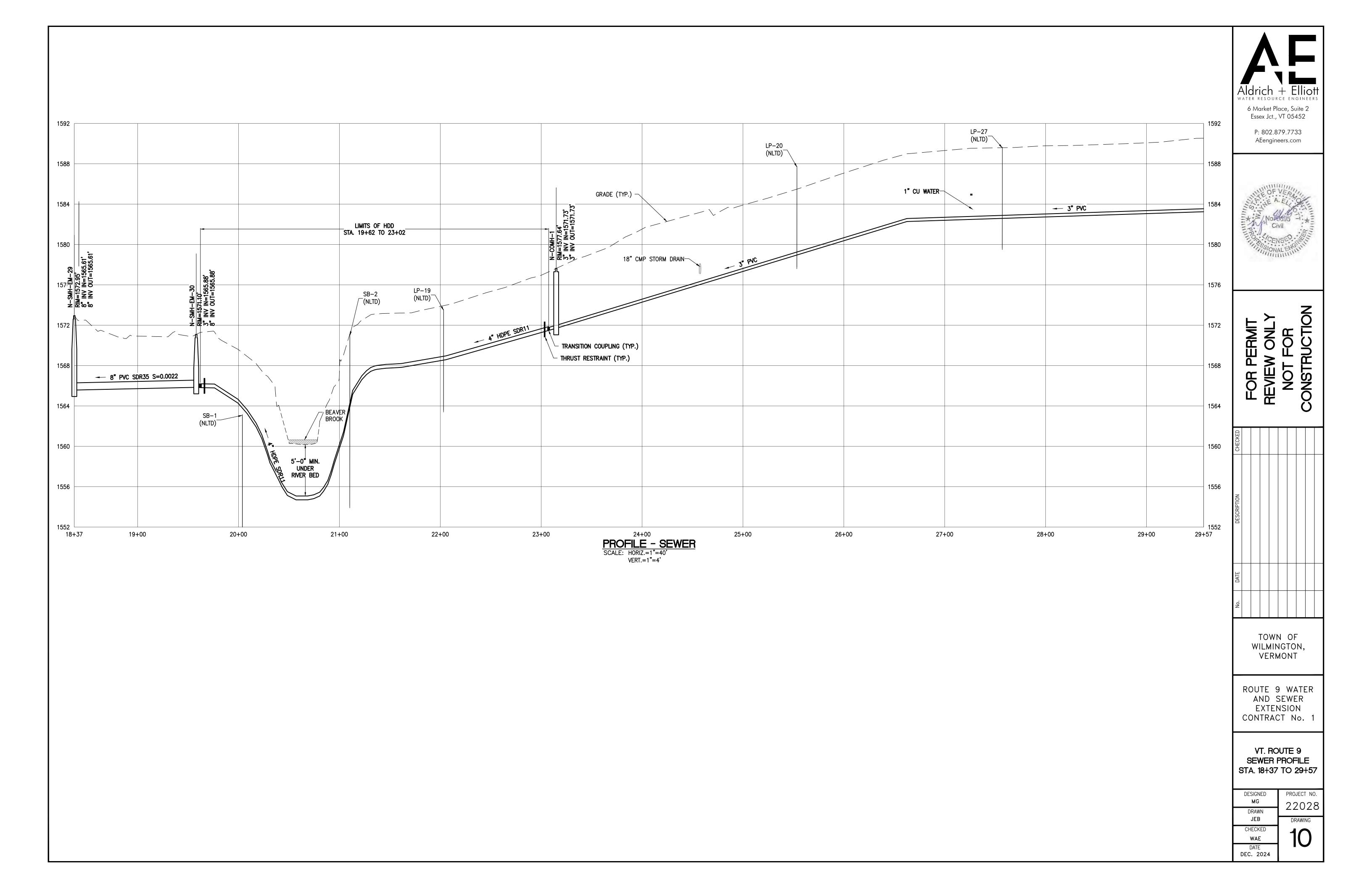
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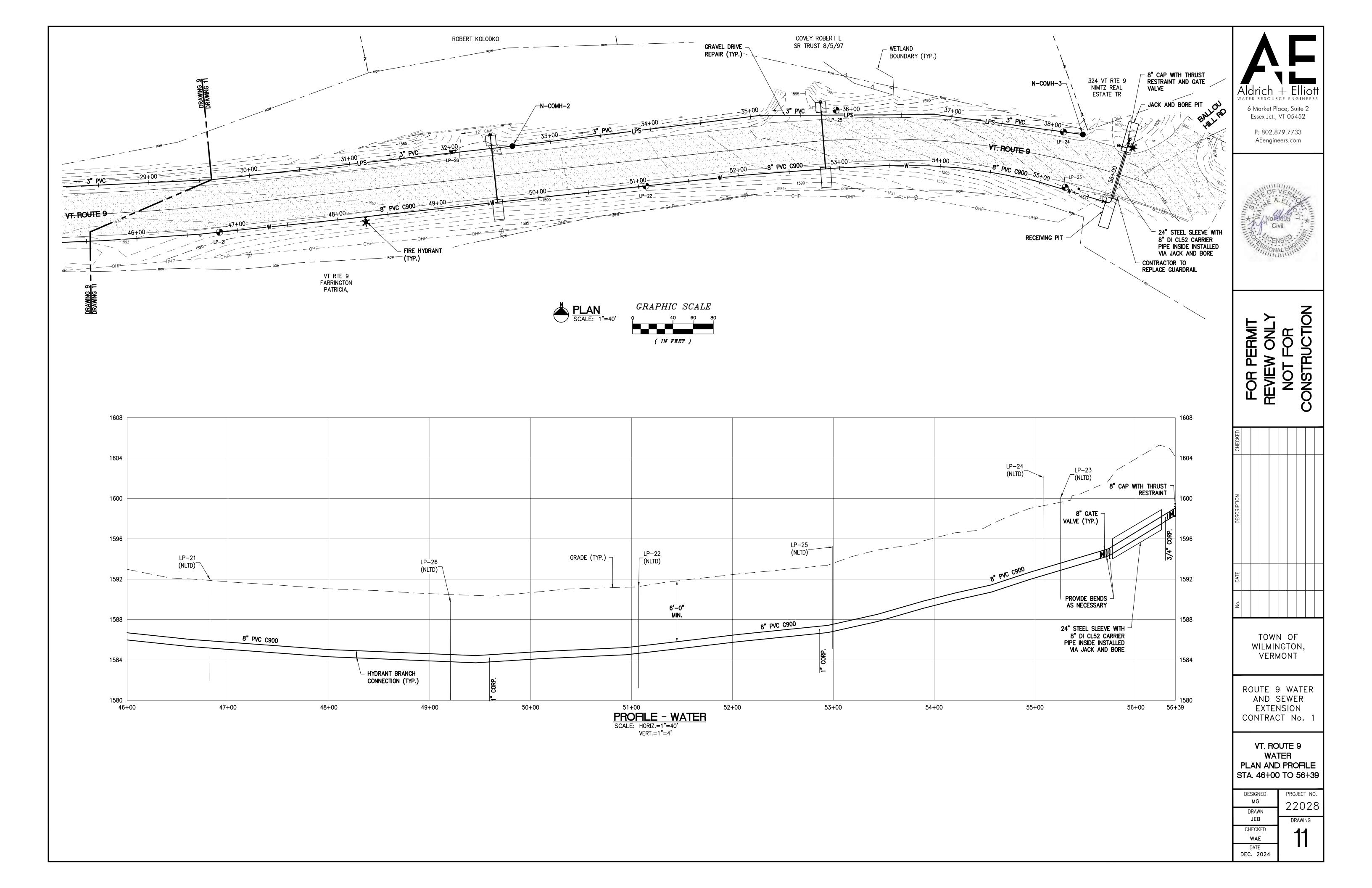
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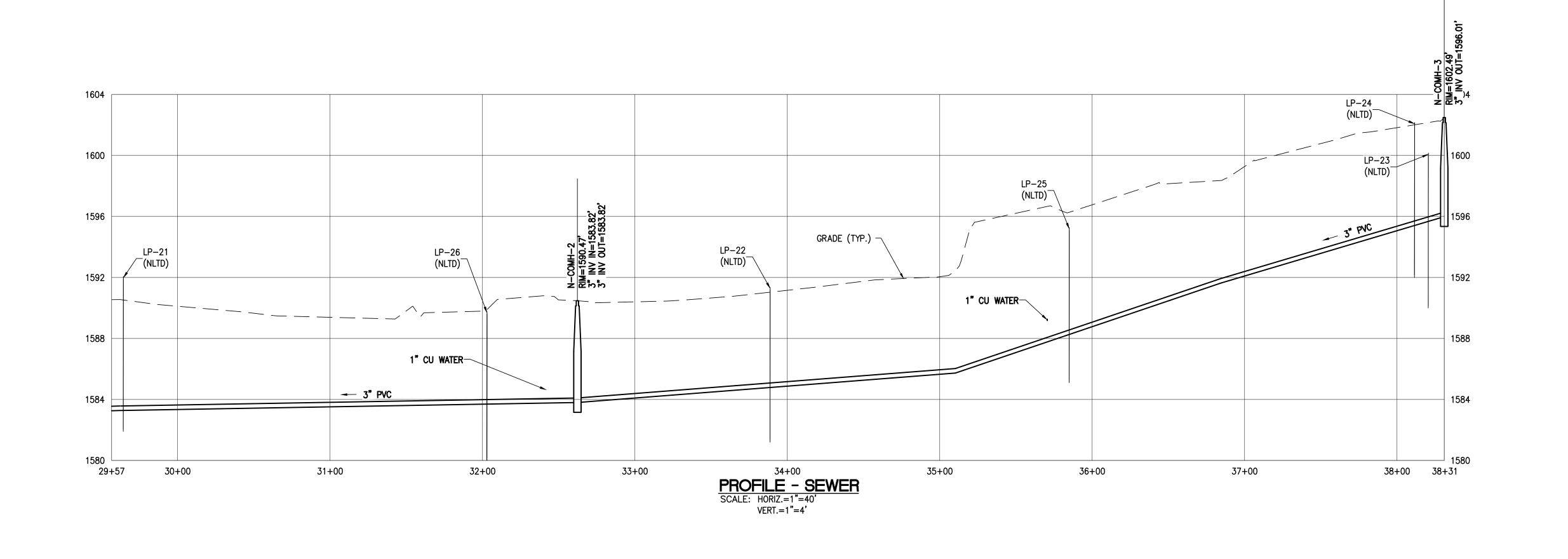
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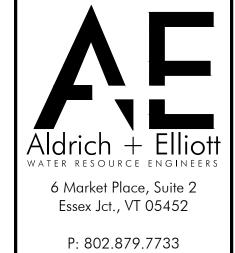
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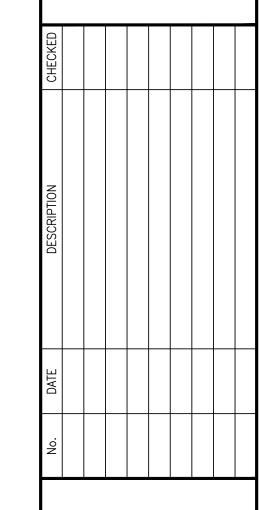




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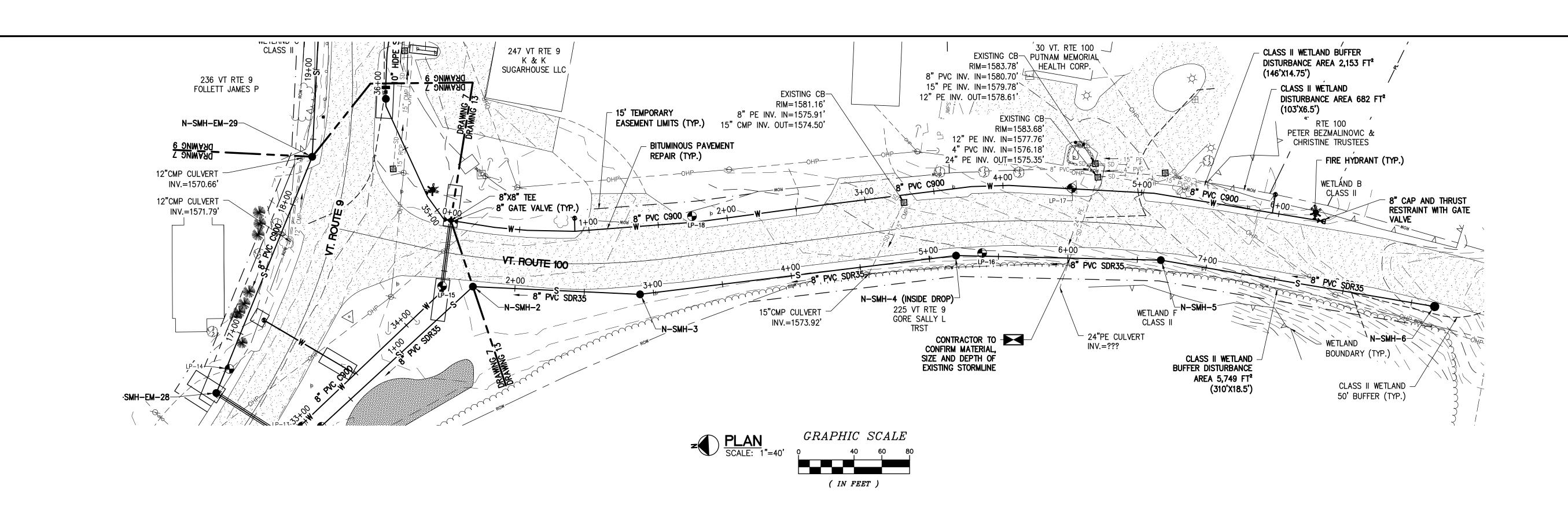
TOWN OF WILMINGTON, VERMONT

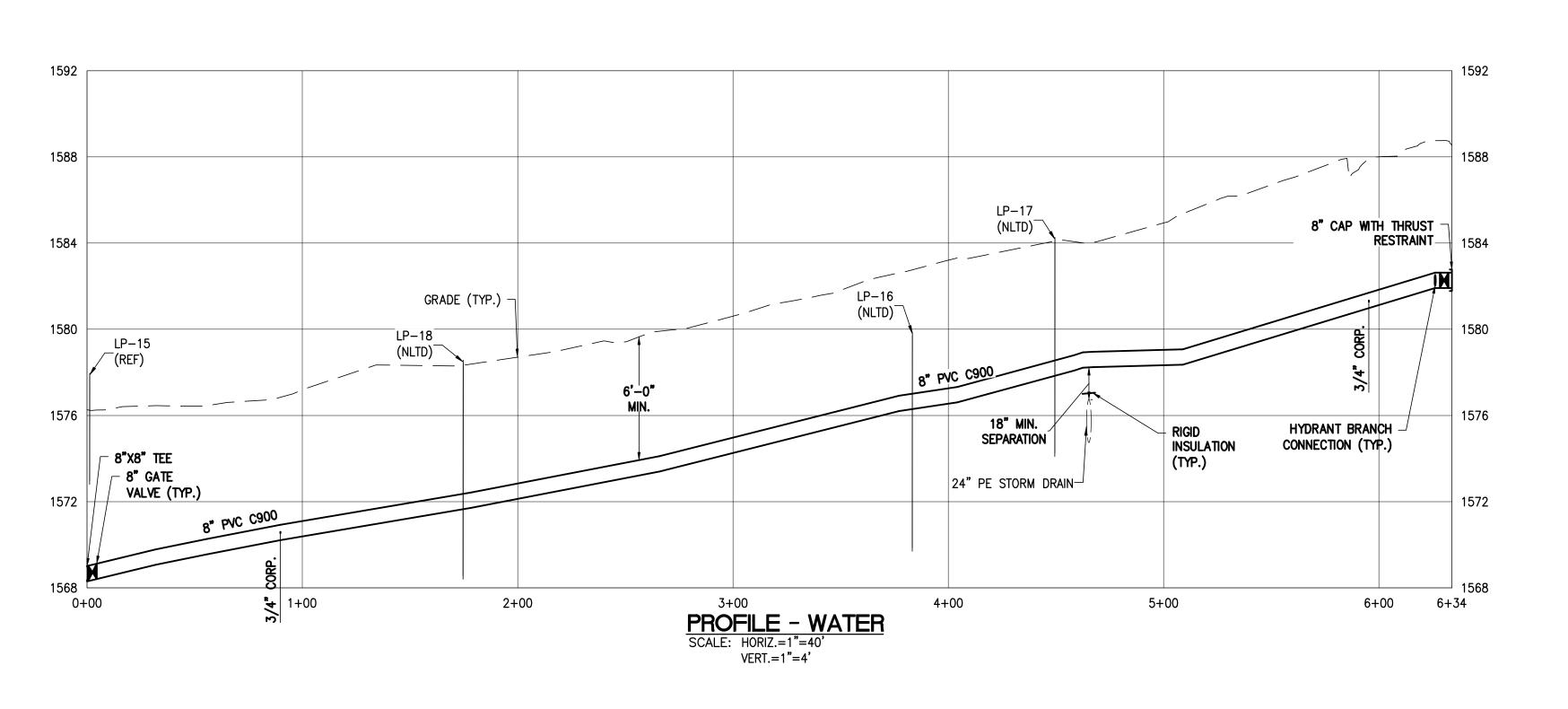
ROUTE 9 WATER
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VT. ROUTE 9 SEWER PROFILE STA. 29+57 TO 38+31

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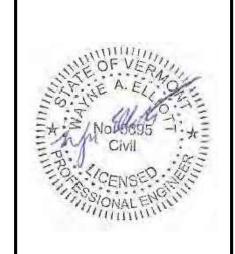


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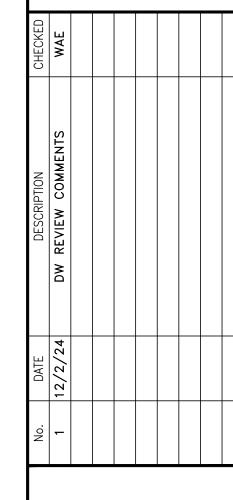
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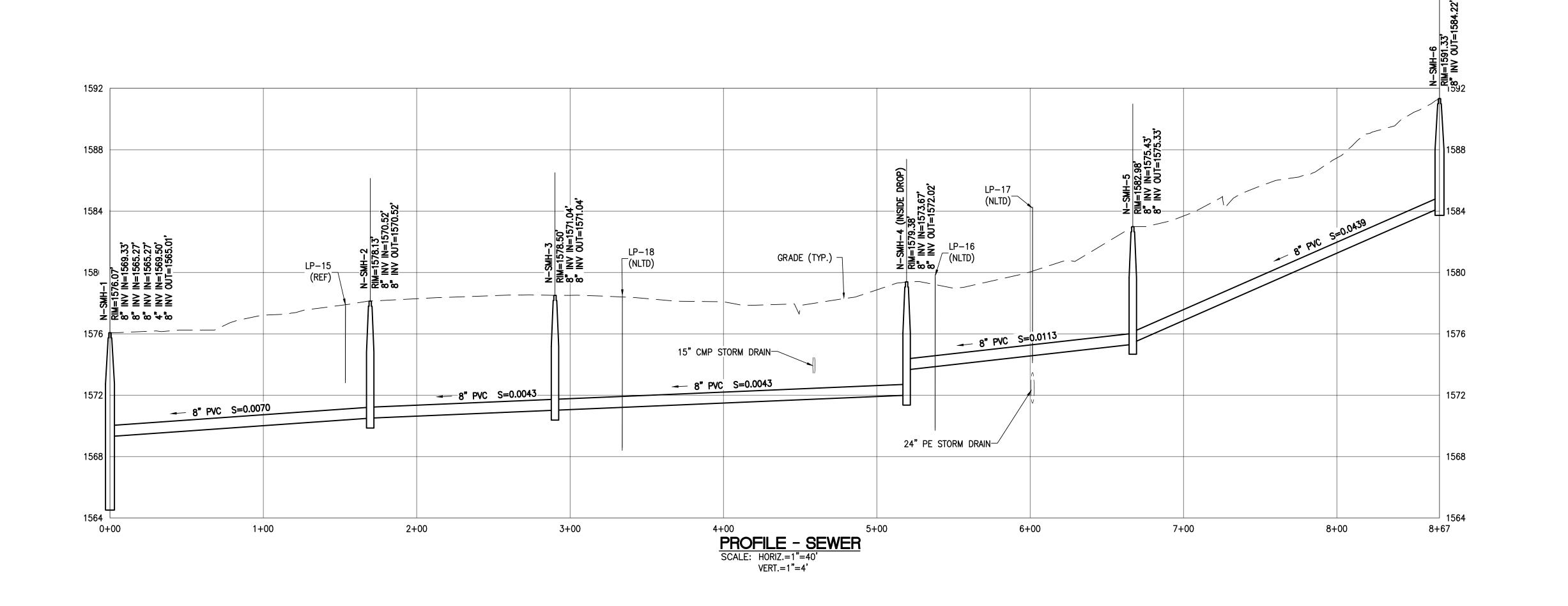


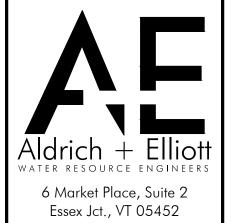
TOWN OF WILMINGTON, VERMONT

ROUTE 9 WATER
AND SEWER
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VT. ROUTE 100 WATER PLAN AND PROFILE STA. 0+00 TO 6+34

DESIGNED	PROJECT NO
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DRAWN	22020
JEB	DRAWING
CHECKED	40
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DATE	
DEC. 2024	

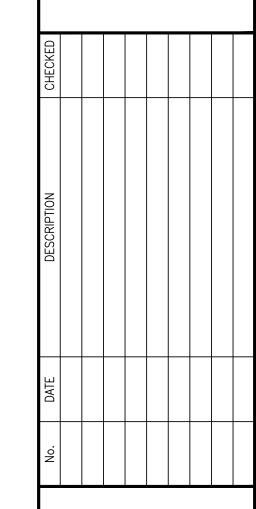




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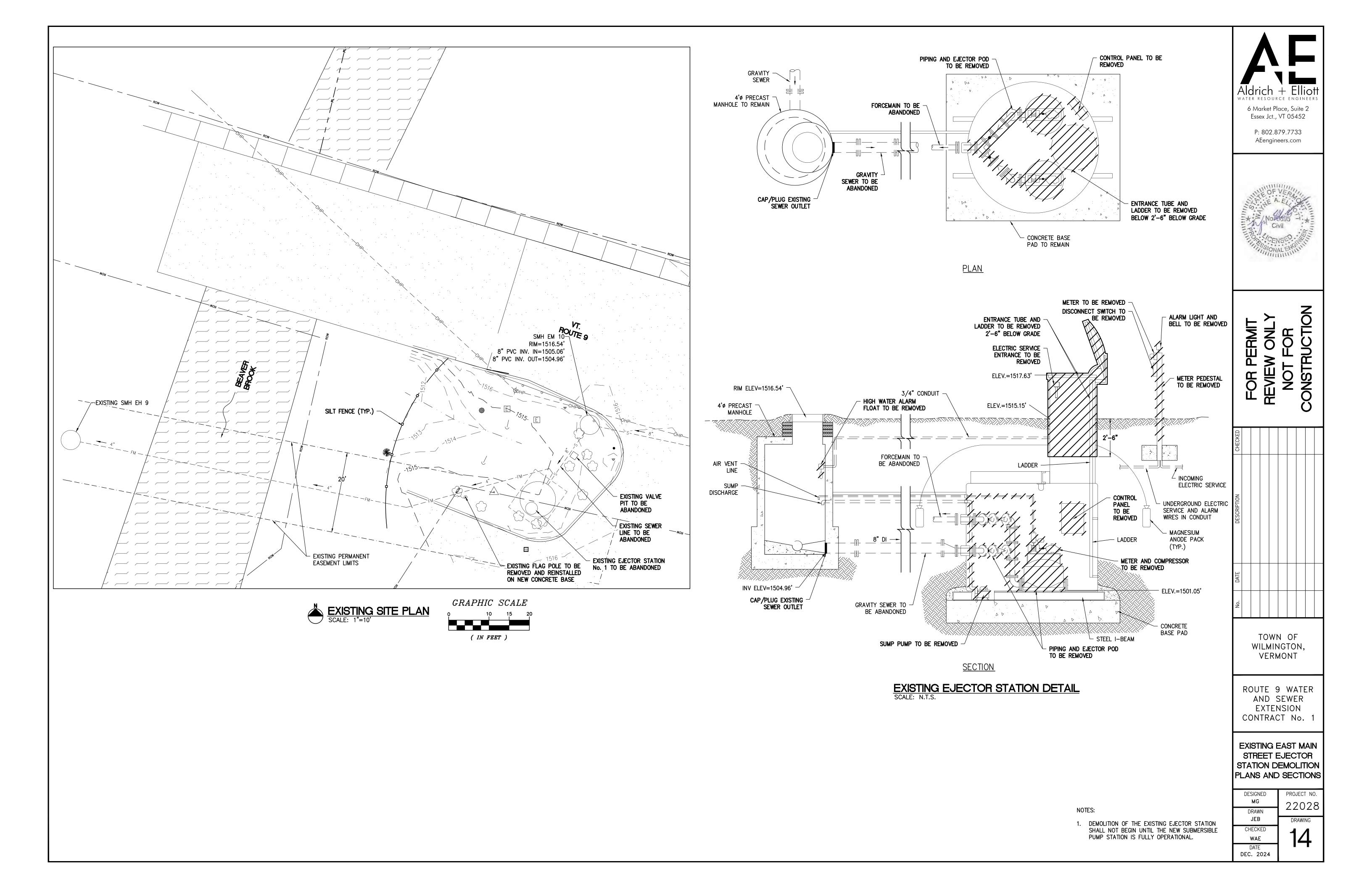
TOWN OF WILMINGTON, VERMONT

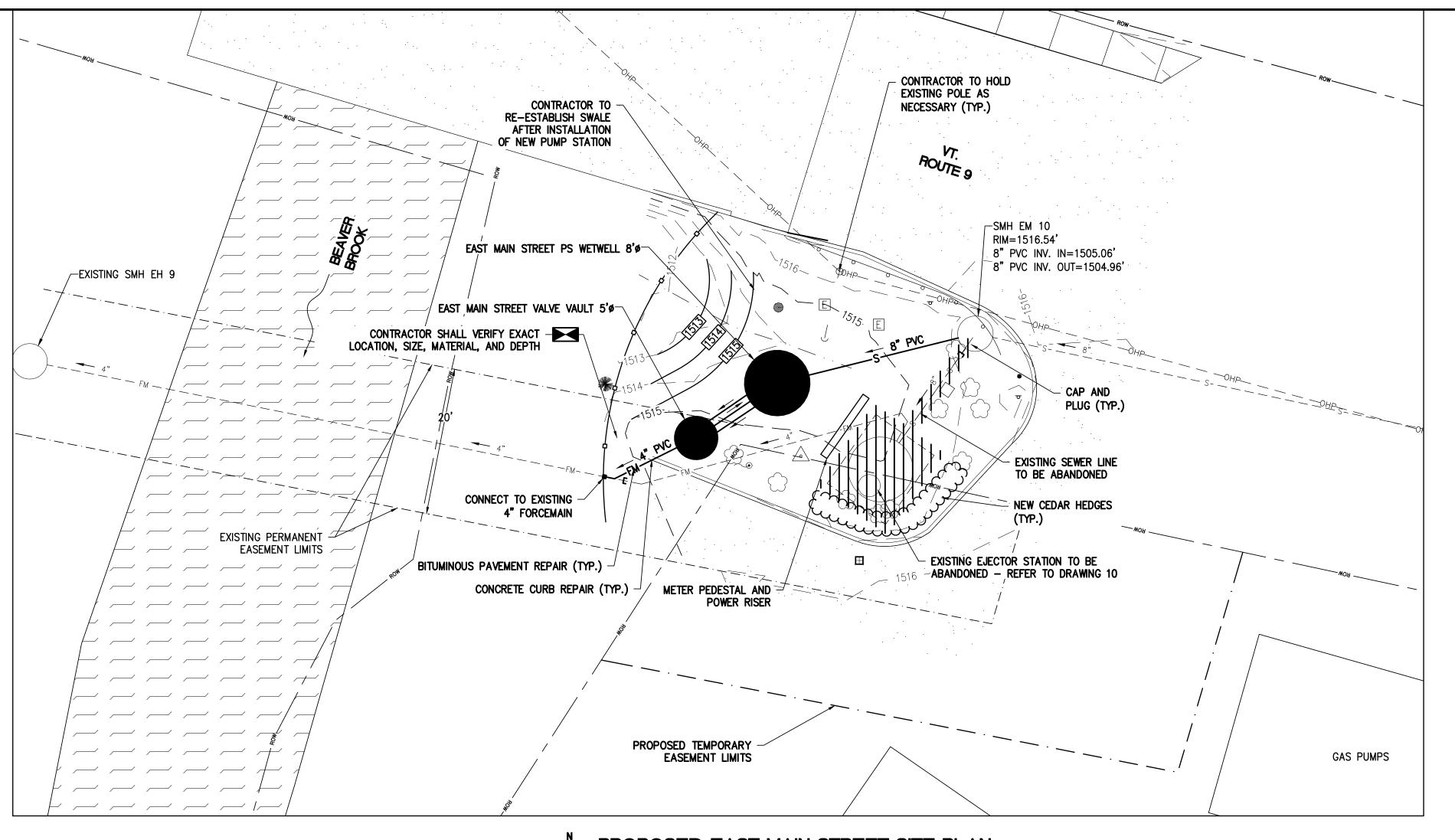
ROUTE 9 WATER
AND SEWER
EXTENSION
CONTRACT No. 1

VT. ROUTE 100 SEWER PROFILE STA. 0+00 TO 8+67

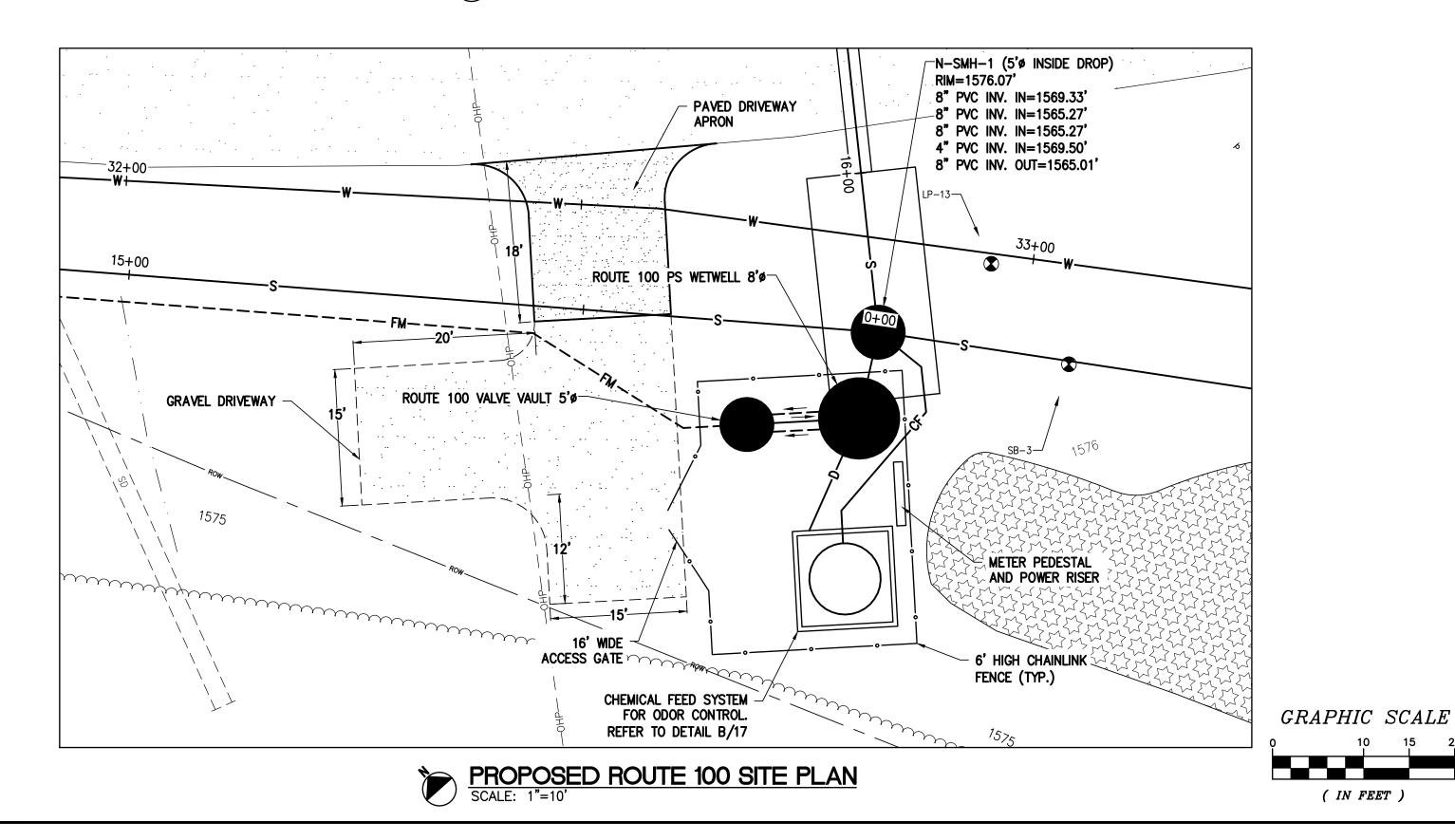
DESIGNED	PROJECT
MG	2202
DRAWN	2202
JEB	DRAWING
CHECKED	
WAE	I.̃⊀ <i>[</i>

DATE DEC. 2024





# PROPOSED EAST MAIN STREET SITE PLAN SCALE: 1"=10"



NOTES:

 ALL WORK FOR THE EAST MAIN STREET PUMP STATION -SHALL BE INCLUDED UNDER BID ITEM No. F-\_\_\_.

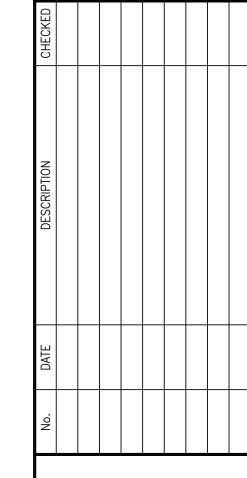
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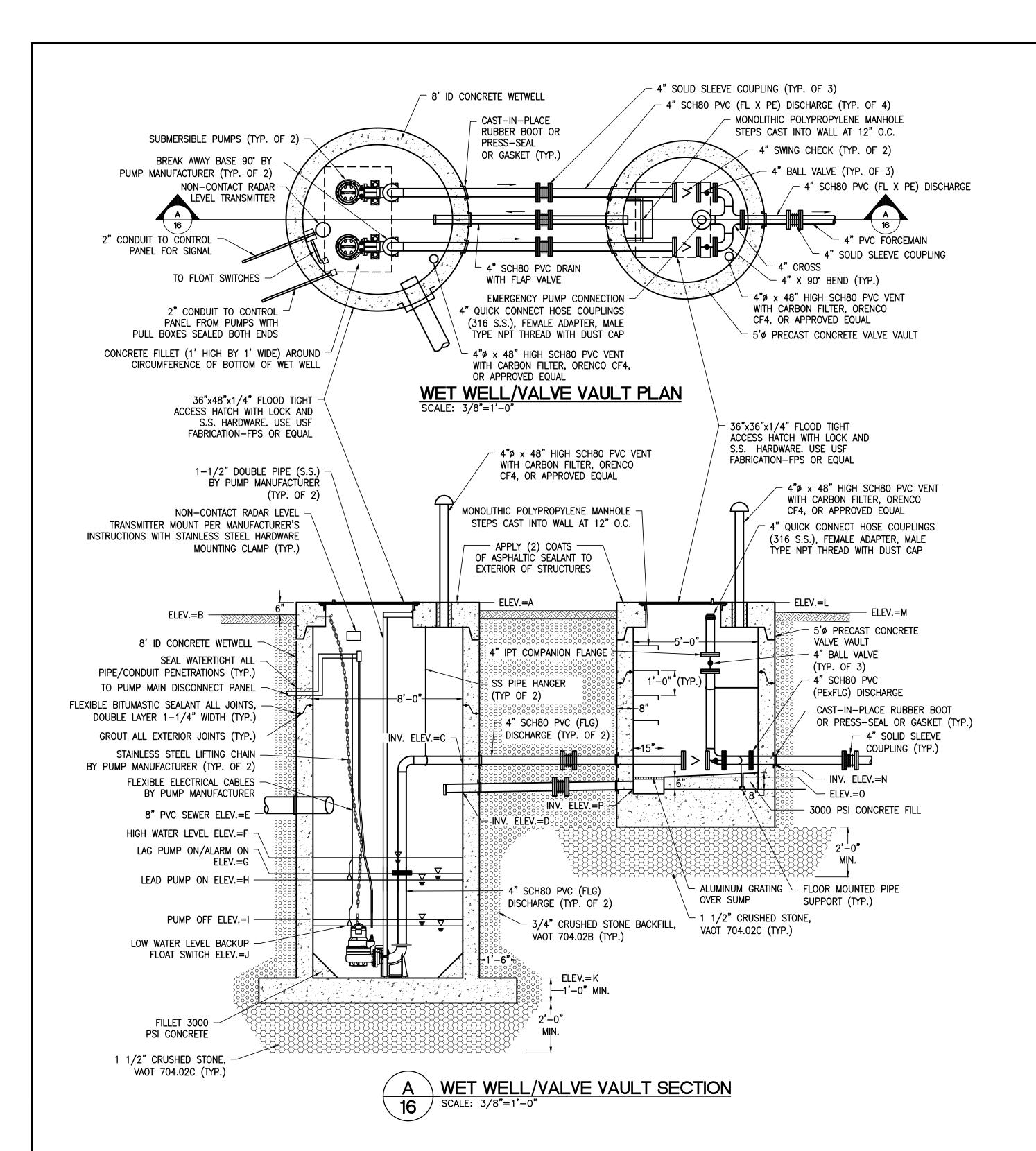
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ROUTE 9 WATER
AND SEWER
EXTENSION
CONTRACT No. 1

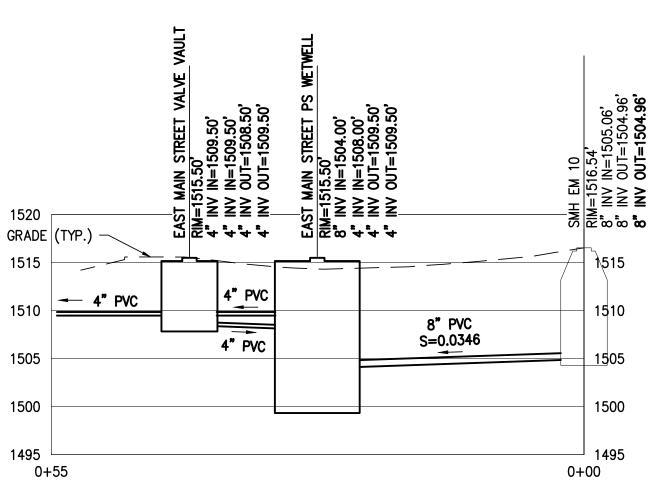
PUMP STATIONS PROPOSED SITE PLANS

DESIGNED	PROJECT N
MG	2202
DRAWN	
JEB	DRAWING
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\M/ A E	

DATE
DEC. 2024

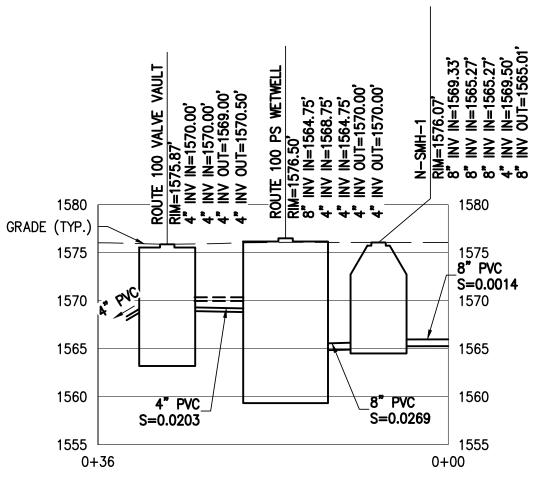


COMPONENT	ELEVATION ID	LOCATION	EAST MAIN STREET PUMP STATION	ROUTE 100 PUMP STATION
Wet Well	-			
	Α	Rim	1515.50'	1576.50'
	В	Ground	1515.00'	1576.00'
	С	Forcemain invert	1509.00'	1570.00'
	D	Drain invert	1508.00'	1568.75'
	E	Inlet sewer invert	1504.00'	1564.75'
	F	High water level	1503.50'	1564.25'
	G	Lag pump on/alarm on	1503.25'	1563.75'
	Н	Lead pump on	1503.00'	1563.25'
	I	Pump off	1501.50'	1562.00'
	J	Low water/ backup float	1501.25'	1561.75'
	К	Wet well bottom	1500.00'	1560.00'
Valve Pit			,	
	L	Rim	1515.50'	1576.50'
	M	Ground	1515.00'	1576.00'
	N	Forcemain invert	1509.50'	1570.50'
	0	Top of sump	1509.00'	1570.00'
	Р	Drain invert	1508.50'	1569.00'



EAST MAIN STREET PUMP STATION PROFILE

SCALE: HORIZ. 1'=10'
VERT. 1'=10'



ROUTE 100 PUMP STATION PROFILE

SCALE: HORIZ. 1'=10'
VERT. 1'=10'

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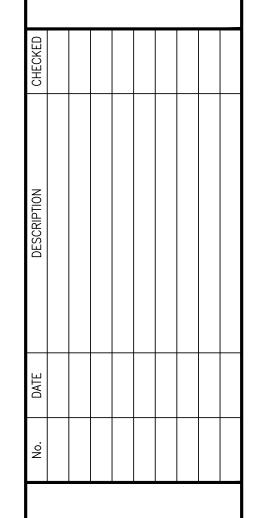
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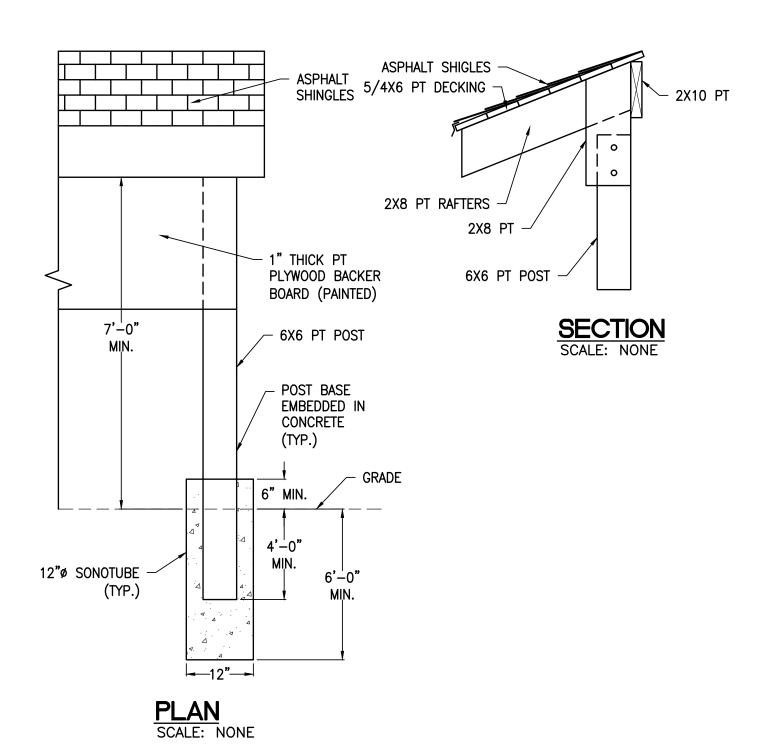


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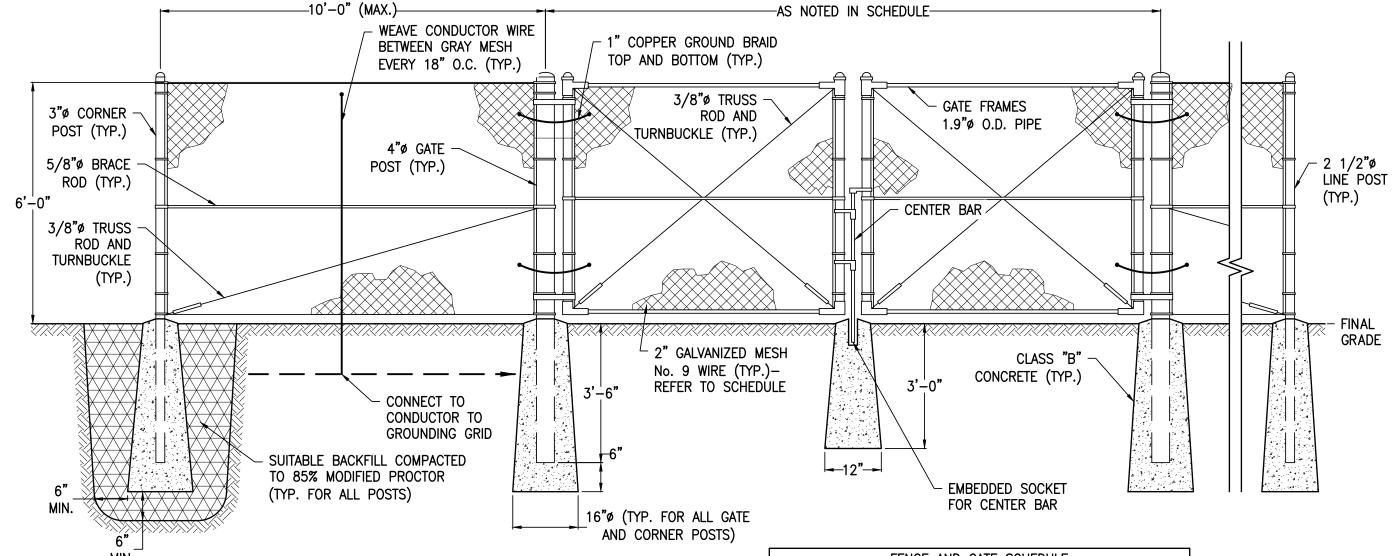
ROUTE 9 WATER
AND SEWER
EXTENSION
CONTRACT No. 1

PUMP STATIONS PLAN, SECTIONS AND NOTES

DESIGNED	PROJECT 1
MG	2202
DRAWN	2202
JEB	DRAWING
CHECKED	4 ^
WAE	
DATE	
DEC. 2024	









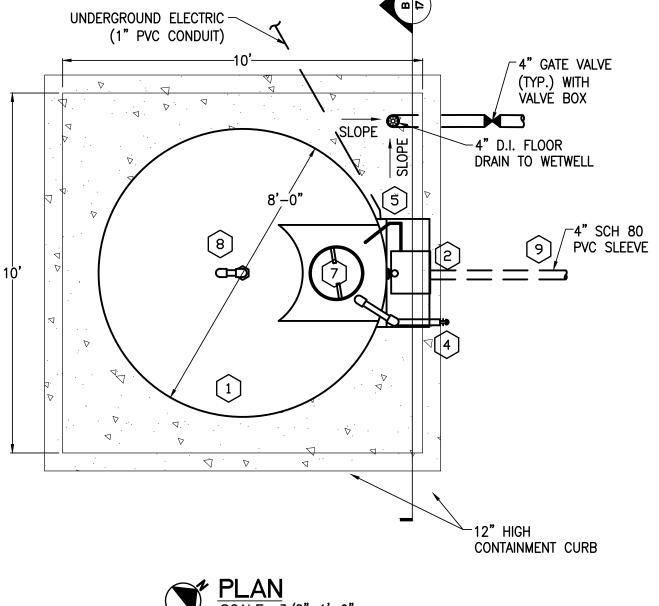
- 1. ALL MATERIALS TO COMPLY WITH VAOT SPEC 727.02.
- 2. PROVIDE GATE STOP/CATCH FOR EACH GATE LEAF

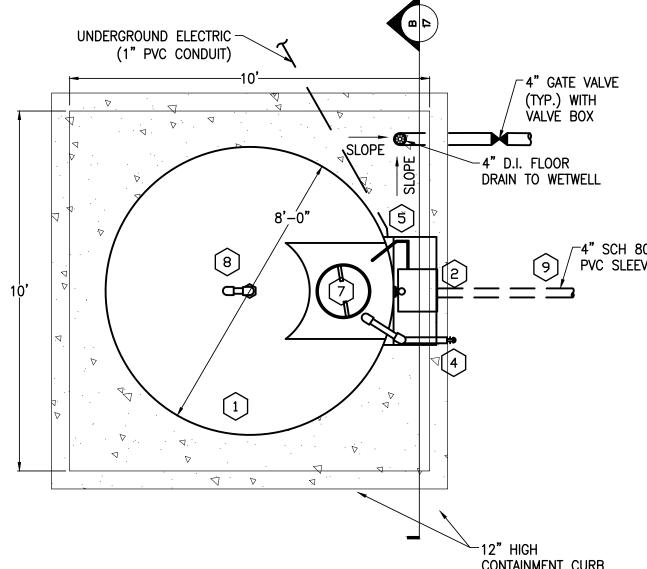
TYPICAL CHAINLINK FENCE WITH GATE DETAIL 17 SCALE: NONE

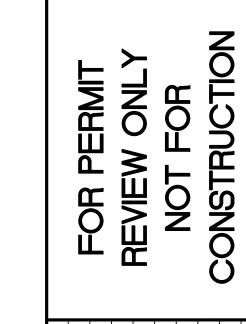
FENCE AND GATE SCHEDULE		
CHAIN LINK MESH TYPE	GREEN VINYL	
HDPE PRIVACY SLATS	INCLUDED-SAME COLOR AS MESH	
GATE TYPE	CANTILEVER	
GATE WIDTH	OPENING: 15 FEET - SLIDES LEFT	
TOTAL GATE LENGTH	23 FEET	
GATE OPERATOR	INCLUDE AUTOMATIC GATE OPERATOR WITH ACCESSORIES	
GATE OPTIONS	PER SECTION 02831, 2.1H	

CARRIER LINE

1. REFER TO SECTION 02831 FOR ADDITIONAL REQUIREMENTS.

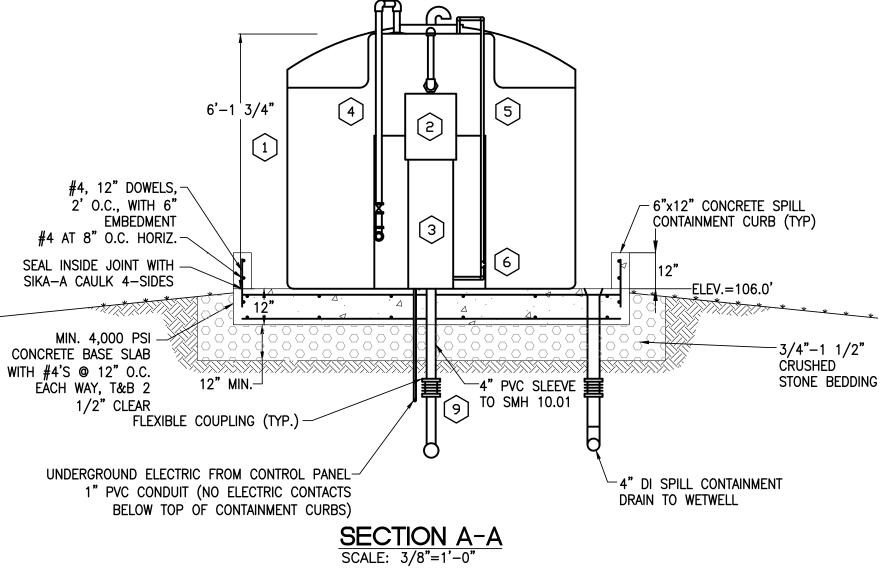






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CHEMICAL FEED SYSTEM (ODOR CONTROL) 17 SCALE: 3/8"=1'-0"

# **LEGEND**

STEEL WALL

SLEEVE WITH

WATERSTOP

TYPE WALL PENETRATION

SEAL

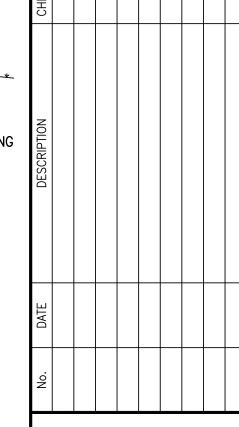
D LINK-SEAL DETAIL

17 SCALE: NONE

- 1700 GALLON BULK CHEMICAL STORAGE TANK (CROSS-LINKED HDPE WITH 1.9 SG RATING) FOR CALCIUM NITRATE STORAGE
- STAINLESS STEEL CHEMICAL FEED CONTROL PANEL AND PUMPING CHAMBER WITH DUPLEX DIAPHRAM CHEMICAL METERING PUMPS, SEPARATE PUMP TIMERS, HOA SWITCHES, GFCI OUTLET AND PUMP RUN LIGHTS
- STAINLESS STEEL PEDESTAL CABINET WITH CALIBRATION TUBE, (2)-3 WAY VALVES, 1/2" DIA. PE TUBING AND ELECTRICAL DISCONNECT SWITCH
- 2" SCH 80 PVC FILL PIPING
- 1/2" SCH 80 PVC SUCTION PIPING
- 1/2" PVC TRUE UNION BALL VALVE AND WYE STRAINER
- 24" DIA. THREADED HDPE MANHOLE ACCESS COVER
- 2" SCH 80 PVC VENT
- (2) 1/2" PE CHEMICAL FEED LINES INSIDE (1) 4" SCH 80 PVC SLEEVE

# ODOR CONTROL SYSTEM NOTES:

1. REFER TO SECTION 11265 - CHEMICAL FEED EQUIPMENT (ODOR CONTROL) FOR ADDITIONAL INFORMATION.

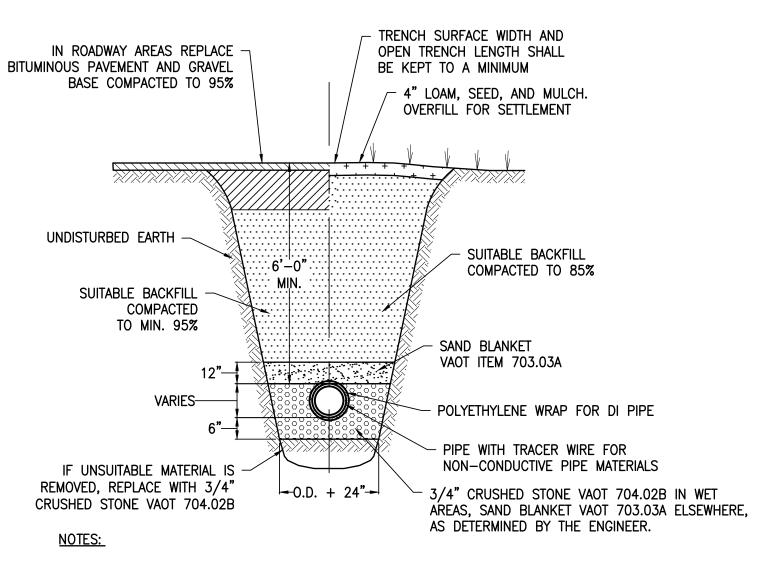


TOWN OF WILMINGTON, VERMONT

ROUTE 9 WATER AND SEWER EXTENSION CONTRACT No. 1

PUMP STATION **DETAILS** 

DESIGNED	PROJECT N
MG	2202
DRAWN	2202
JEB	DRAWING
CHECKED	47
WAE	/



- 1. NO MECHANICAL TAMPERS SHALL BE USED DIRECTLY OVER PIPE TO INSURE PIPE IS NOT DAMAGED.
- 2. BEDDING TO PROVIDE A FIRM, STABLE, CONTINUOUS AND UNIFORM SUPPORT FOR THE FULL LENGTH OF PIPE.

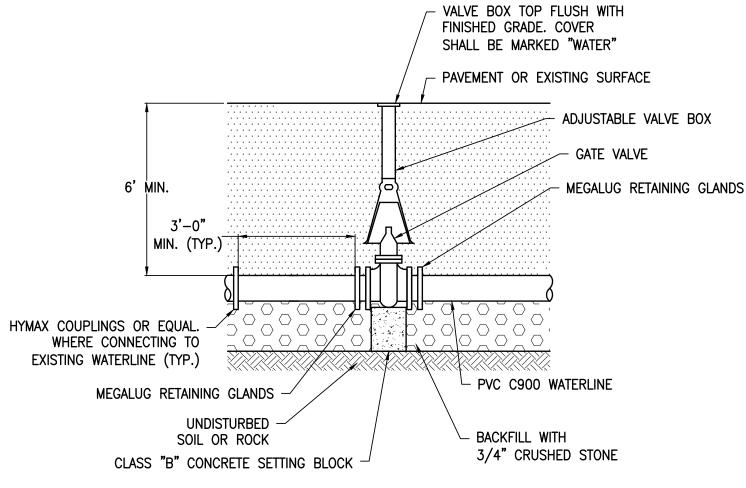


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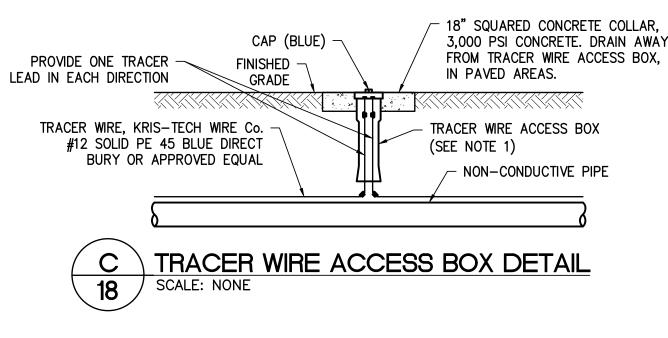
3/4" CTS SERVICE

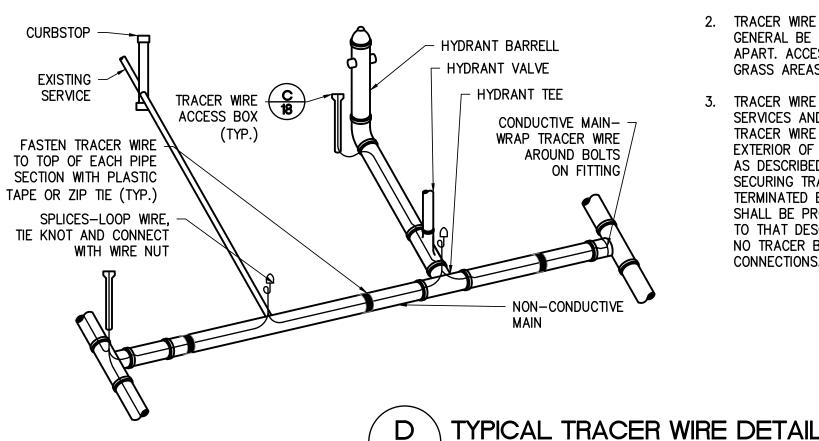
(OTHER SIZES/MATERIAL AS REQUIRED



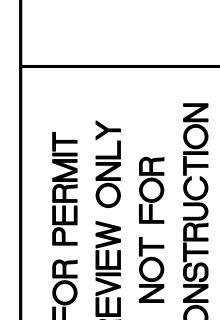
1. WHERE GATE VALVES ARE TO BE INSTALLED NEAR OR ADJACENT TO TEES, THEY SHALL BE RESTRAINED DIRECTLY TO THE TEE USING THREADED ROD OR OTHER METHOD APPROVED BY THE ENGINEER.







- 1. TRACER WIRE SHALL BE TERMINATED AT EACH END IN A FLUSH MOUNT ACCESS BOX. ACCESS BOX SHALL HAVE A CAST IRON LID THAT CAN BE LOCKED AND OPENED WITH A STANDARD PENTAGON HEAD KEY WRENCH. TRACER WIRES SHALL BE STRIPPED AND ATTACHED TO STAINLESS STEEL SCREWS MOUNTED TO THE UNDERSIDE OF THE LID. SUFFICIENT SLACK (12" MIN.) SHALL BE LEFT IN WIRE LENGTH SO COVER CAN BE LIFTED WITH WIRE INTACT. TRACER WIRE ACCESS BOX SHALL BE LOCATED OVER PIPE LINE TO WHICH TRACER LEAD IS ATTACHED AND SET TO GRADE. TRACER WIRE ACCESS BOX SHALL BE VALVCO TWAB OR APPROVED
- 2. TRACER WIRE ACCESS POINTS SHALL IN GENERAL BE NO MORE THAN 500 FEET APART. ACCESS BOX SHALL BE LOCATED IN GRASS AREAS WHENEVER POSSIBLE.
- 3. TRACER WIRE SHALL BE INSTALLED FOR ALL SERVICES AND TERMINATED AT GRADE. THE TRACER WIRE SHALL BE SECURED TO THE EXTERIOR OF THE CURB BOX IN A MANNER AS DESCRIBED IN THE SPECIFICATIONS FOR SECURING TRACER WIRE. FURTHER, THE TERMINATED END OF THE TRACER WIRE SHALL BE PROTECTED BY MEANS SIMILAR TO THAT DESCRIBED IN THE SPECIFICATION. NO TRACER BOX IS REQUIRED FOR SERVICE CONNECTIONS.



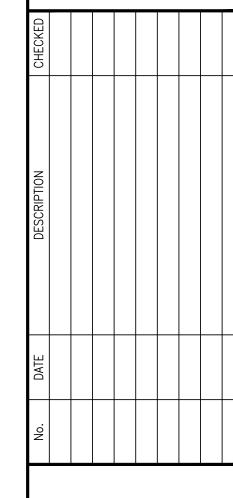
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TOWN OF WILMINGTON, VERMONT

ROUTE 9 WATER AND SEWER EXTENSION CONTRACT No.

WATER DETAILS

DESIGNED PROJECT NO. DRAWN JEB DRAWING WAE

DATE DEC. 2024

SCALE: NONE GALVANIZED SPRING FLAG WITH REFLECTIVE MARKINGS 3'-0" MIN. \_6'-0" MAX. VALVE BOX TOP FLUSH WITH FINISHED GRADE. COVER 4'-0" SHALL BE MARKED "WATER" MIN. 18"–24" PAVEMENT OR EXISTING SURFACE : ADJUSTABLE VALVE BOX GATE VALVE BOX SEAT : MEGALUG RETAINING GLANDS CLASS "B" CONCRETE

THRUST BLOCK

ELIMINATE THIS SECTION OF

3/4" CRUSHED STONE VAOT 704.02B

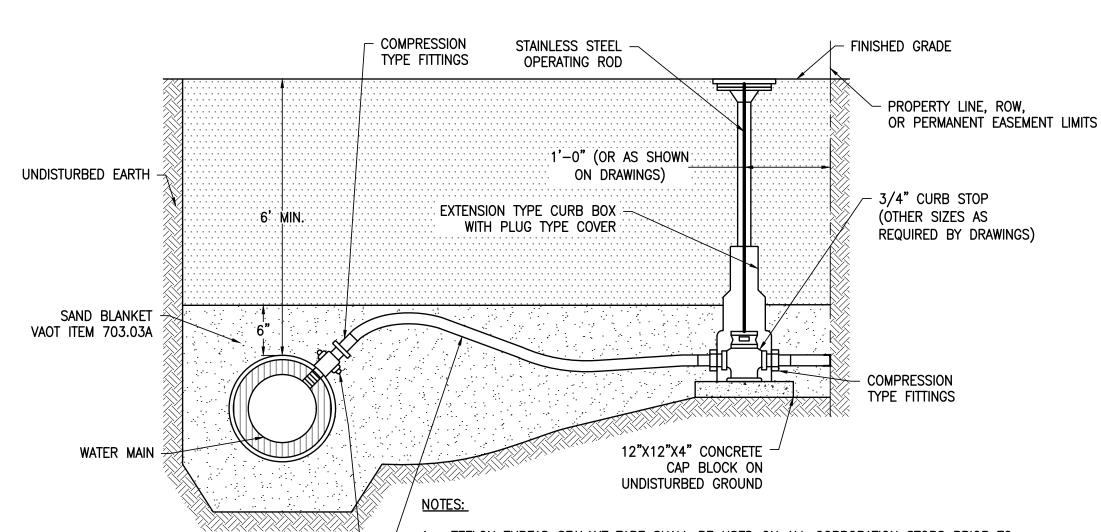
PIPE WHEREVER POSSIBLE

BACKFILL HYDRANT WITH

WATER MAIN

- 1. BRANCH PIPING AND FITTINGS SHALL BE MECHANICAL JOINT WITH RETAINING GLANDS.
- 2. HYDRANTS WHICH ARE INSTALLED WHERE THE GROUND WATER TABLE IS ABOVE THE HYDRANT WASTE ORIFICES SHALL HAVE THE ORIFICES PLUGGED. HYDRANTS WITH PLUGGED ORIFICES SHALL BE LABELED "ND" FOR NON-DRAINING IN 3" HIGH ORANGE PAINTED
- 3. GROUND AT HYDRANT SHALL BE AT STREET LEVEL. PROVIDE FILL AS NESSECARY TO RAISE HYDRANT UP TO STREET LEVEL. FILL SHALL EXTEND TO THE SHOULDER OF STREET AS NESSECARY TO ALLOW ACCESS FROM THE STREET TO THE HYDRANT ON THE SAME LEVEL AS THE STREET. WIDTH AT THE TOP OF FILL BETWEEN HYDRANT AND STREET SHALL BE A MINIMUM OF 8 FEET. COST FOR ANY FILL REQUIRED TO RAISE GROUND TO STREET LEVEL SHALL BE INCLUDED IN COST OF HYDRANT BID ITEM.
- 4. USE MECHANICAL JOINT OFFSETS AS NECESSARY TO ACHIEVE SPECIFIED BURY DEPTH OF HYDRANT. COST OF ANY OFFSET SHALL BE INCLUDED IN THE UNIT PRICE FOR HYDRANT INSTALLATION.
- 5. ALL HYDRANT BOLTS AND NUTS BELOW GRADE SHALL BE STAINLESS STEEL.
- 6. HYDRANT BRANCH CONNECTION PAY ITEM INCLUDES ALL PIPE, VALVE, FITTINGS, GLANDS, HYDRANT AND APPURTENANCES FROM TEE BRANCH TO HYDRANT.





1. TEFLON THREAD SEALANT TAPE SHALL BE USED ON ALL CORPORATION STOPS PRIOR TO INSERTION. a. SPIRAL WRAP COMPLETELY COVERING THE THREAD AREA WITH TWO WRAPS. 3/4" CORPORATION STOP (OTHER SIZES AS REQUIRED b. PIPE DOPE OR OTHER LIQUID THREAD SEALANTS ARE NOT ACCEPTABLE.

> 2. LEAVE ONE TO THREE THREADS SHOWING OUTSIDE OF PIPE. (A TORQUE OF 35 LBS. OR LESS IS RECOMMENDED).

3. CORPORATION STOPS SHALL NOT BE PLACED LESS THAN 12" APART ALONG PIPE.

4. DOUBLE STRAP SADDLES SHALL BE USED ON ALL CORPORATION STOPS FOR PVC PIPE. TYPICAL WATER SERVICE CONNECTION DETAIL SCALE: NONE

ROTATE AS DIRECTED BY ENGINEER. MARK "ND" (NON-DRAINING) SAFETY BREAK-AWAY RING

PLUG DRAINS -CLASS "B" CONCRETE THRUST BLOCK AGAINST

UNDISTURBED EARTH

UNDISTURBED SOIL (SEE THRUST BLOCK DETAIL)

CLASS "B" CONCRETE

SETTING BLOCK

NOTES:

FIRE HYDRANT SEE

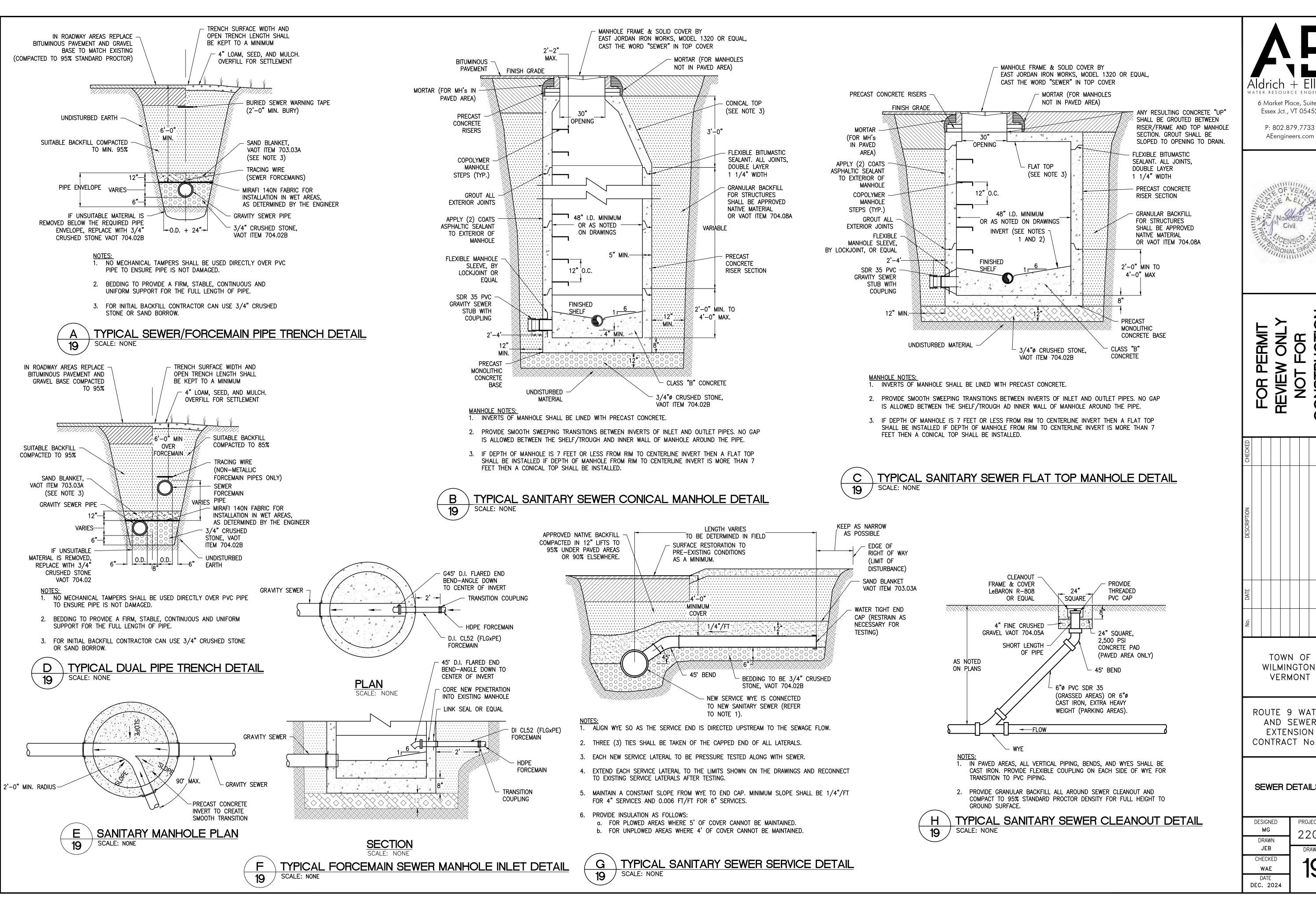
SPECIFICATION

SECTION 02645

MEGALUG RETAINING GLANDS -

UNDISTURBED SOIL OR ROCK

LETTERS ON THE BONNET FACING THE ROAD. HYDRANT DRAIN SHALL BE LEFT PLUGGED AS DETERMINED BY THE ENGINEER.



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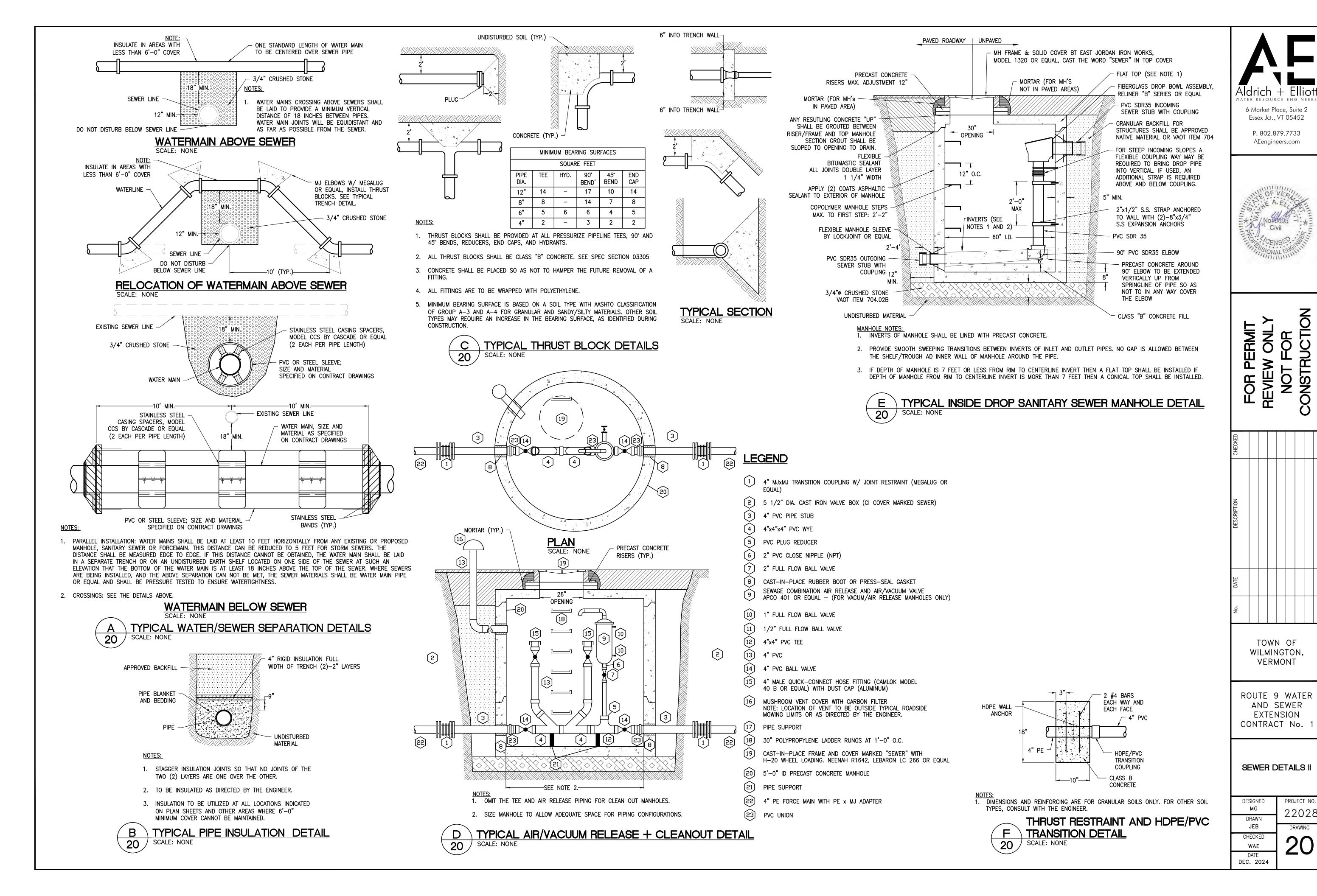
TOWN OF

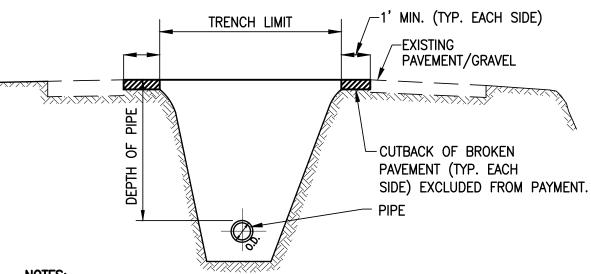
WILMINGTON, VERMONT

ROUTE 9 WATER AND SEWER EXTENSION CONTRACT No.

SEWER DETAILS I

DESIGNED PROJECT NO. DRAWING CHECKED

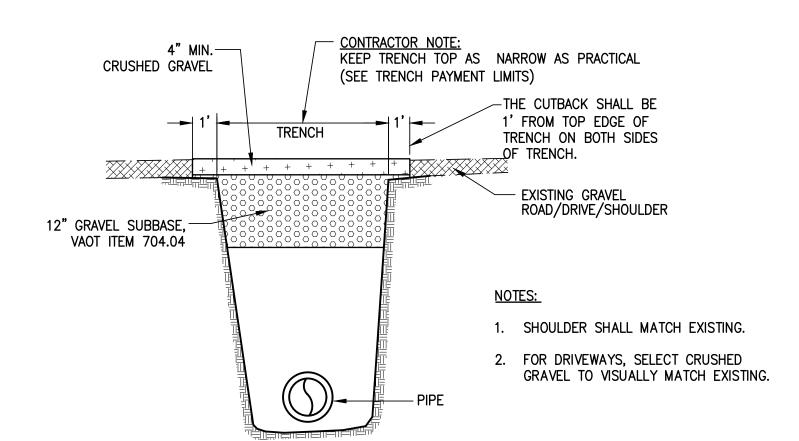




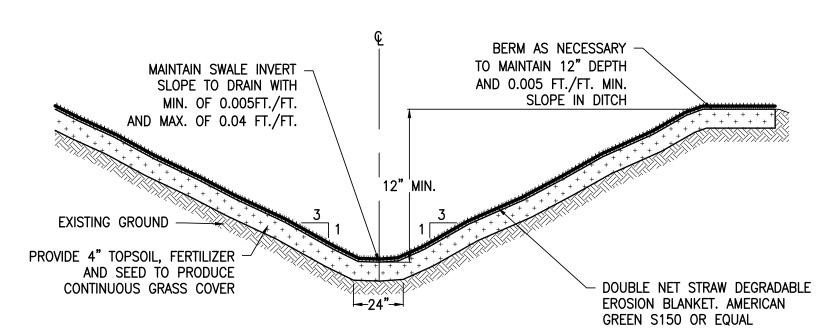
1. THE TRENCH REPAIR LIMIT SHALL BE AS FOLLOWS: DEPTH OF PIPE TRENCH LIMIT 0 TO 10 FEET | O.D. + 5'

- GREATER THAN 10 FEET | O.D. + 7' 2. THE TRENCH PAYMENT LIMIT SHALL BE THE TRENCH LIMIT AS SHOWN ABOVE.
- 3. THE TRENCH PAYMENT LIMIT APPLIES TO ALL TRENCHES AND ALL SURFACES. SURFACE REPLACEMENT AND RESTORATION OUTSIDE OF THE TRENCH PAYMENT LIMITS WILL BE AT THE CONTRACTOR'S EXPENSE.





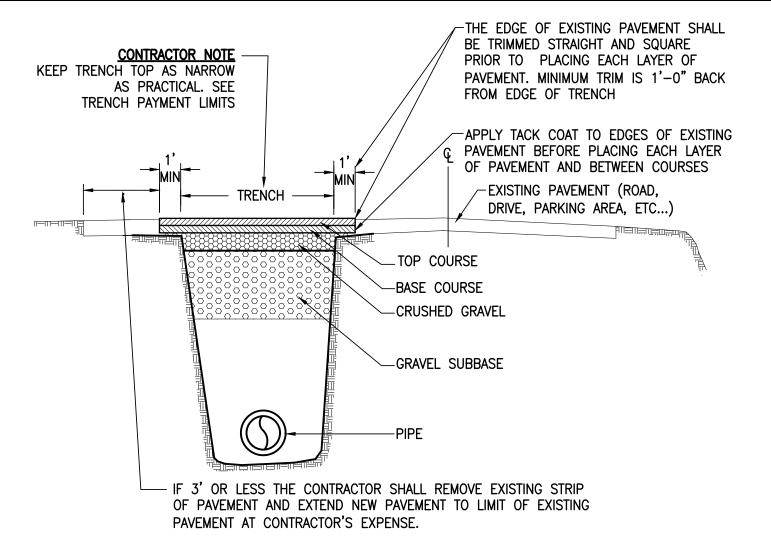
TYPICAL GRAVEL ROAD, DRIVE, OR SHOULDER REPAIR 21 SCALE: NONE



1. INSTALL DEGRADABLE EROSION BLANKET PER MANUFACTURERS REQUIREMENTS. UTILIZE BIODEGRADABLE STAKES. WIRE STAPLES ARE NOT ACCEPTABLE.

- 2. CONTRACTOR SHALL USE EROSION BLANKET ON ALL DISTURBED GRASSED DRAINAGE SWALES.
- 3. INSPECT GRASSED DRAINAGE SWALES AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER EACH RAINFALL. MAINTENANCE SHALL BE PERFORMED AS NEEDED. INSPECTIONS SHALL CONTINUE UNTIL GRASS IS FULLY ESTABLISHED.
- 4. WHERE CULVERTS OR OTHER HIGH-VELOCITY DISCHARGE TERMINATES IN SWALES, PROVIDE STONE OUTLET PROTECTION.
- 5. PAYMENT FOR GRASS LINED SWALES WILL BE INCIDENTAL TO THE INSTALLATION OF THE WATERLINE.





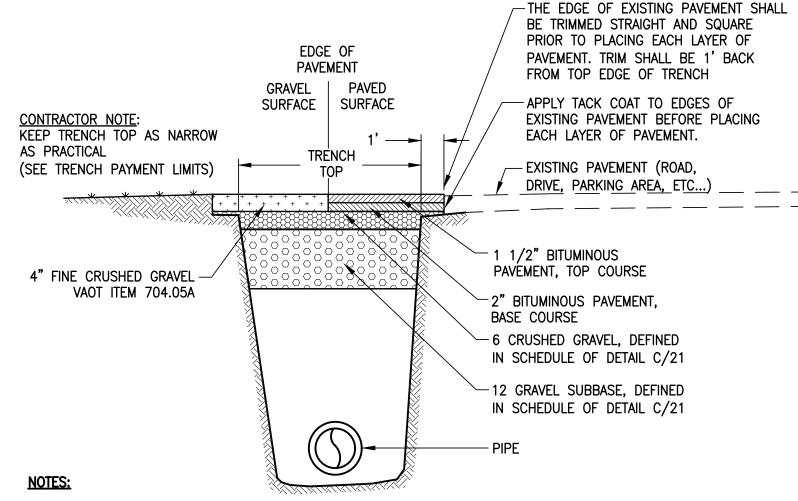
## PAVEMENT REPAIR NOTES:

- 1. ALL PAVEMENT SHALL HAVE A MINIMUM COMPACTED THICKNESS AS SHOWN.
- 2. IF NECESSARY, SHOULDER SHALL BE REPLACED TO A CONDITION EQUAL OR BETTER THAN BEFORE CONSTRUCTION ACTIVITIES.
- 3. ALL EXISTING PAVEMENT MARKINGS SHALL BE RE-PAINTED AS NECESSARY. EXISTING DURABLE MARKINGS SHALL BE REPLACED IN-KIND.
- 4. IT IS INTENDED THAT CONTRACTOR AVOID ANY DAMAGE TO EXISTING ROADWAY OR SHOULDER PAVEMENT. HOWEVER WHERE PIPE MUST BE INSTALLED WITHIN 3'-0" OF PAVED SURFACE, BITUMINOUS PAVEMENT REPAIR SHALL BE PAID IN ACCORDANCE WITH "TRENCH PAYMENT LIMITS" AND UNIT PRICE BID. PAVEMENT REPAIR OUTSIDE APPROVED LIMITS SHALL BE AT

# SCHEDULE OF TRENCH REPAIR THICKNESSES

	STREETS (ALL OTHER)	DRIVEWAYS
BITUMINOUS PAVEMENT		
TOP COURSE	1-1/2" TYPE III	1" TYPE IV
BASE COURSE — TYPE II	2-1/2"	2"
CRUSHED GRAVEL, VAOT 704.05A	6"	4"
GRAVEL SUBBASE, VAOT 704.04	12"	8"





- 1. IT IS INTENDED THAT THE CONTRACTOR AVOID ANY DAMAGE TO EXISTING ROADWAY OR SHOULDER PAVEMENT. HOWEVER WHERE PIPE MUST BE INSTALLED WITHIN PAVED SURFACE, BITUMINOUS PAVEMENT REPAIR SHALL BE PAID IN ACCORDANCE WITH "TRENCH PAYMENT LIMITS" AND UNIT PRICE BID. PAVEMENT REPAIR OUTSIDE APPROVED LIMITS SHALL BE AT CONTRACTOR'S EXPENSE.
- 2. ALL PAVEMENT AND GRAVEL SUBBASE SHALL HAVE A MINIMUM COMPACTED THICKNESS AS SHOWN IN "SCHEDULE OF TRENCH REPAIR THICKNESSES" SEE DETAIL C/21.
- 3. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
- 4. ALL EXISTING PAVEMENT MARKINGS SHALL BE RE-PAINTED AS NECESSARY.
- 5. IF NECESSARY, SHOULDER SHALL BE REPLACED TO A CONDITION EQUAL TO OR BETTER THAN BEFORE CONSTRUCTION ACTIVITIES.

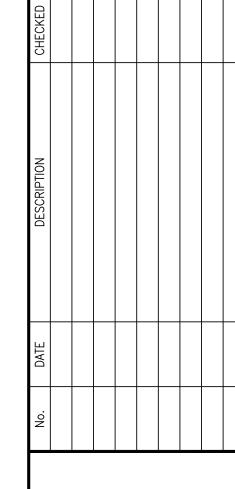




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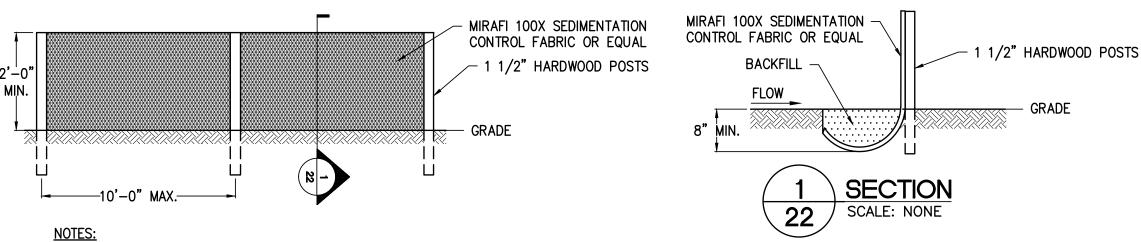


TOWN OF WILMINGTON, VERMONT

ROUTE 9 WATER AND SEWER EXTENSION CONTRACT No.

ROADWAY DETAILS

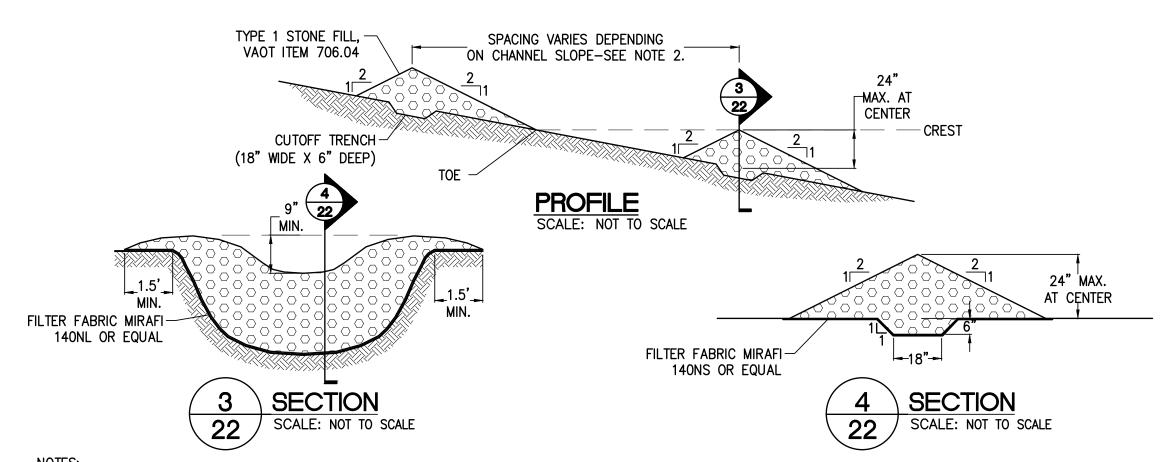
DESIGNED	PROJECT NO
MG	22028
DRAWN	22020
JEB	DRAWING
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WAE	' <b>/</b>
DATE	



1. SILT FENCE SHALL BE PRE-FABRICATED EROSION CONTROL FENCE BY MIRAFI OR APPROVED EQUAL.

- 2. INSTALL WHERE SHOWN ON PLANS. THE FENCE SHALL BE INSTALLED PARALLEL TO CONTOURS WHERE POSSIBLE. THE ENDS OF THE FENCE SHOULD BE CURVED UPHILL TO PREVENT FLOW AROUND THE ENDS.
- 3. SECTIONS OF THE SILT FENCE SHALL BE JOINED TO OVERLAP BY FOLDING FABRIC AROUND EACH POST ONE FULL TURN. DRIVE POSTS TIGHTLY TOGETHER AND SECURE TOPS OF POSTS BY TYING OFF WITH CORD OR WIRE TO PREVENT FLOW-THROUGH OR BUILT-UP SEDIMENT AT JOINT.
- 4. INSPECT ALL SILT FENCE AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER EACH RAINFALL. MAINTENANCE SHALL BE PERFORMED AS NEEDED, AND SEDIMENT REMOVED WHEN SEDIMENT REACHES 1/3 HEIGHT OF THE SILT FENCE.
- 5. UPON FINAL STABILIZATION OF THE AREA UPHILL OF THE FABRIC, THE FABRIC SHALL BE REMOVED WITH THE APPROVAL OF THE ENGINEER.



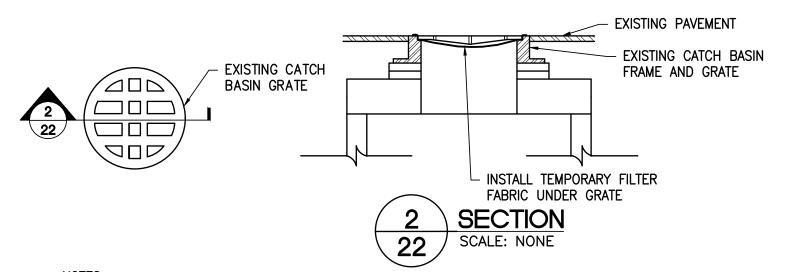


NOTES:

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION AT ALL LOCATIONS SHOWN ON THE PLANS.

- 2. SET SPACING OF THE CHECK DAMS TO ASSURE THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM
- 3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT THE FLOW OF WATER AROUND THE DAM.
- 4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
- 5. ENSURE THAT THE CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.
- 6. INSPECT ALL CHECK DAMS AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER WACH RAINFALL. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED WHEN SEDIMENT REACHES 1/3 HEIGHT OF CHECK DAM.
- 7. UPON STABILIZATION OF THE AREA UPSTREAM OF THE STONE CHECK DAM, THE CHECK DAM SHALL BE REMOVED WITH THE APPROVAL OF THE ENGINEER. THE AREA UNDER THE STONE CHECK DAM SHALL BE SEEDED AND MULCHED UPON REMOVAL.

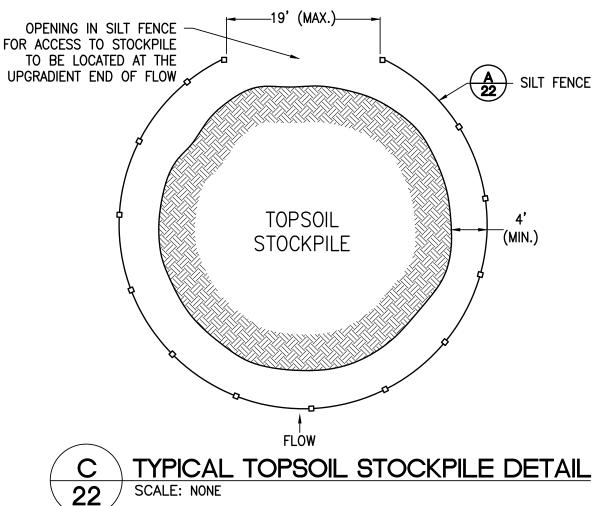




1. UNDERGRATE FABRIC INLET PROTECTION SHALL ONLY BE USED WHERE SHOWN ON PLANS. IT SHOULD ONLY BE USED FOR EXISTING CATCH BASINS IN EXISTING PAVED AREAS FOR LINEAR PIPELINE PROJECTS WHERE AMOUNT OF SEDIMENT RUN OFF IS MINIMAL AND DURATION OF CONSTRUCTION IS SHORT.

- 2. LIFT THE GRATE AND INSTALL FILTER FABRIC (MIRAFI 140NL OR EQUAL) OVER THE FRAME, AND THEN SET GRATE BACK IN PLACE.
- 3. INSPECT EACH INLET AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER EVERY RAINFALL. REPAIR AND REPLACEMENT OF INLET PROTECTION SHALL BE MADE AT TIME OF INSPECTION.
- 4. UPON STABILIZATION OF THE AREA UPSTREAM FROM THE INLET, THE PROTECTION SHALL BE REMOVED WITH THE APPROVAL OF THE ENGINEER.

TYPICAL TEMPORARY INLET PROTECTION DETAIL SCALE: NONE



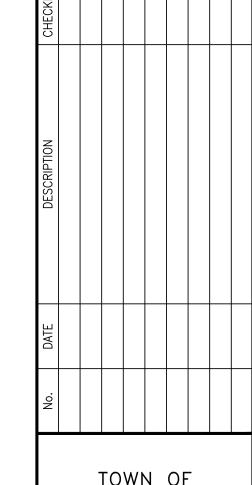
# WATER RESOURCE ENGINEER

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AEengineers.com



TOWN OF WILMINGTON, VERMONT

ROUTE 9 WATER AND SEWER EXTENSION CONTRACT No. 1

**EROSION CONTROL DETAILS AND NOTES** 

DESIGNED	PROJECT NO.
MG	22028
DRAWN	22020
JEB	DRAWING
CHECKED	$\sim$
	<i></i>

DEC. 2024

# **EROSION CONTROL NOTES:**

- 1. EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED PRIOR TO PERFORMING ANY EARTHWORK DOWNSTREAM OF THE DISTURBED AREA AND AS DIRECTED BY THE ENGINEER. THE MEASURES SHALL BE MAINTAINED UNTIL THE UPSTREAM DISTURBED AREA HAS BEEN PERMANENTLY STABILIZED AND AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL MEASURES DETERMINED NECESSARY IN THE FIELD.
- 2. SILT FENCE SHALL BE INSTALLED, AS SHOWN ON THE CONTRACT DRAWINGS PRIOR TO ANY EARTHWORK DOWNSTREAM OF THE DISTURBED AREA AND AS DIRECTED BY THE ENGINEER. THE SILT FENCE SHALL BE MAINTAINED AND CLEANED UNTIL THE UPSTREAM DISTURBED AREA HAS BEEN PERMANENTLY STABILIZED AND AS DIRECTED BY THE ENGINEER. WHERE POSSIBLE NATURAL DRAINAGE WAYS SHALL BE UTILIZED AND LEFT OPEN TO REMOVE EXCESS SURFACE WATER.
- 3. PROPER EROSION CONTROLS SHALL BE PROVIDED AROUND STOCKPILED EXCAVATED MATERIALS. THESE CONTROLS MAY INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING METHODS OF EROSION PREVENTION AND SEDIMENT CONTROL: PERIMETER SILT FENCE; INTERCEPTOR DRAINAGE DITCHES; VELOCITY REDUCTION DAMS IN DRAINAGE DITCHES; TEMPORARY BANK PROTECTION SUCH AS RIPRAP, MATTING, OR ARTIFICIAL COVERING; STONE CHECK DAM CONTROL SYSTEMS; SPECIAL STOCKPILING METHODS; AND WATER BARS.
- 4. THE CONTRACTOR SHALL PROVIDE A MECHANICAL SWEEPER AND SHALL SWEEP CLEAN THE ROADS IN THE CONSTRUCTION AREAS AS REQUIRED TO REMOVE ACCUMULATED SEDIMENT AND PREVENT SEDIMENT RUNOFF INTO RECEIVING WATERS AND AS DIRECTED BY THE
- 5. TEMPORARY EROSION CONTROL MEASURES SHALL BE UTILIZED BY THE CONTRACTOR AS REQUIRED TO PREVENT ANY SEDIMENTATION FROM RUNNING INTO RECEIVING WATERS. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE ANY IMPACT OF THE ON-SITE SURFACE RUNOFF ON THE QUALITY OF THE RECEIVING WATERS.
- 6. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE DISTURBED AT ANY ONE TIME DURING CONSTRUCTION. WHEN LAND IS DISTURBED DURING CONSTRUCTION, THE DISTURBANCE SHALL BE KEPT TO THE SHORTEST PRACTICAL DURATION AS APPROVED BY THE ENGINEER. LAND SHALL NOT BE LEFT DISTURBED DURING THE WINTER MONTHS AND OVERWINTER STABILIZATION MEASURES SHALL BE INSTALLED PRIOR TO OCTOBER 15TH.
- 7. ALL DISTURBED AREAS AND SIDE SLOPES WHICH ARE FINISH GRADED WITH NO FURTHER CONSTRUCTION TO TAKE PLACE SHALL BE LOAMED, LIMED, FERTILIZED, SEEDED, AND MULCHED WITHIN 48 HOURS OF FINAL GRADING. A MINIMUM OF 3 INCHES OF LOAM SHALL BE PLACED. SEED, LIME, FERTILIZER, AND MULCH SHALL CONFORM TO SPECIFICATION SECTION 02930.
- 8. NO DISTURBED AREAS SHALL BE LEFT UNSEEDED AND UNMULCHED FOR MORE THAN SEVEN (7) DAYS, DISTURBED AREAS WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION. HAY OR STRAW MULCH SHALL BE APPLIED TO ALL FRESHLY SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE. BALES SHALL BE UNSPOILED, AIR DRIED, AND FREE FROM WEED, SEEDS, AND ANY COARSE MATERIAL. CONTRACTOR MAY ALSO USE EROSION MATTING OR OTHER APPROVED METHODS OF TEMPORARY COVER.
- 9. ALL EROSION PREVENTION AND SEDIMENT CONTROL STRUCTURES AND MEASURES SHALL BE INSPECTED BY OR UNDER THE DIRECTION OF THE ON-SITE COORDINATOR AT LEAST EVERY SEVEN (7) CALENDAR DAYS AND AS SOON AS POSSIBLE BUT NO LATER THAN 24 HOURS AFTER ANY STORM EVENT WHICH GENERATES A DISCHARGE OF STORMWATER RUNOFF FROM THE CONSTRUCTION SITE.
- 10. AFTER ALL UPSTREAM DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED AND AS DIRECTED BY THE ENGINEER, THE DOWNSTREAM TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED AND THE ACCUMULATED SEDIMENT PROPERLY DISPOSED OF. THE AREA DISTURBED BY THE REMOVAL OF TEMPORARY MEASURES SHALL BE PREPARED, SEEDED, AND MULCHED.

# ELECTRICAL LEGEND SURGE PROTECTION DEVICE PANELBOARD, LETTERING DESIGNATES NAME EQUIPMENT CONNECTION (HARD WIRED) NON-FUSED DISCONNECT SWITCH TRANSFORMER UTILITY POLE BRANCH CIRCUIT HOMERUN TO PANELBOARD ---OHE--- OVERHEAD SECONDARY ELECTRICAL UNDERGROUND PRIMARY ELECTRICAL DUPLEX RECEPTACLE, GROUND FAULT TYPE W/ WEATHERPROOF COVÉR CIRCUIT BREAKER MAIN LUG PANELBOARD MAIN CIRCUIT BREAKER PANELBOARD SAFETY SWITCH (WITH FUSE SHOWN) MOTOR STARTER

GROUND

TRANSFORMER

LEVEL SWITCH

LEVEL TRANSMITTER

CONTROL PANEL

MOTOR

SURGE PROTECTION DEVICE

REMOTE TELEMETRY UNIT

# NOTES (APPLIES TO ALL ELECTRICAL DRAWINGS):

VARIABLE TORQUE

WEATHERPROOF

TRANSFORMER EXPLOSION PROOF

**ABBREVIATIONS** 

AFF

AFG

ATS

ELEV

EXH

HOA

LCS

MIN

MLO

SPD

SSOL

TYP

XFMR

EXIST

APPROX

AMPERES

AUTOMATIC

CONDUIT

ABOVE FINISHED FLOOR

APPROXIMATELY

CIRCUIT BREAKER

CONTROL PANEL

EXHAUST FAN

ELEVATION

EXHAUST

EXISTING GROUND

MINIMUM

OVERLOAD PHASE POLE

SWITCH

TYPICAL

UNIT HEATER VOLTS

GENERATOR

HAND-OFF-AUTO

JUNCTION BOX

MAIN LUG ONLY

ABOVE FINISHED GRADE

CURRENT TRANSFORMER

ENERGY RECOVERY UNIT

LOCAL CONTROL STATION LIGHTNING PROTECTION SYSTEM

MOTOR OPERATED DAMPER NORMALLY CLOSED CONTACT NORMALLY OPEN CONTACT

SURGE PROTECTION DEVICE SOLID STATE OVERLOAD

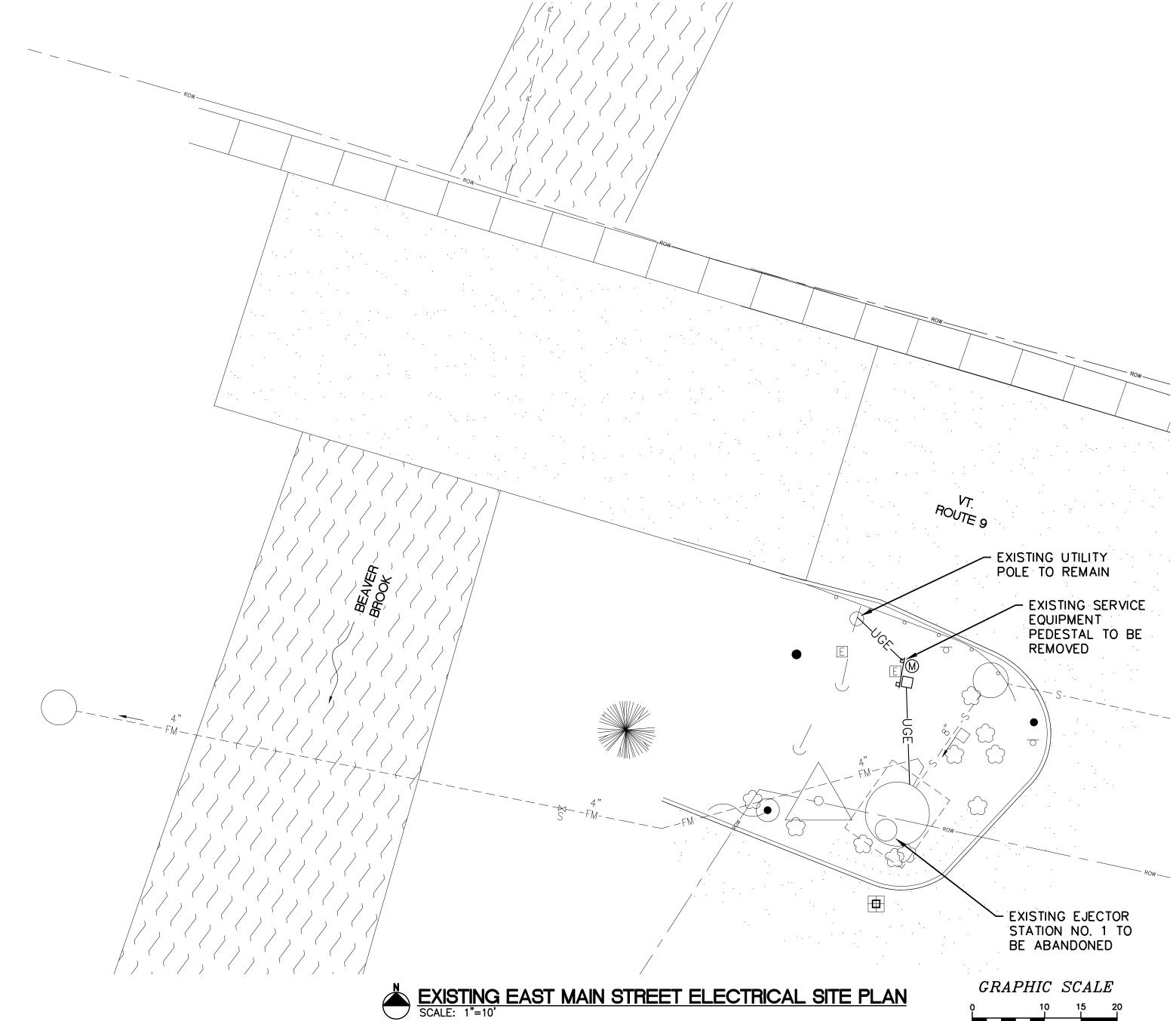
VARIABLE FREQUENCY DRIVE

LIMIT SWITCH OR LEVEL SWITCH

CABINET UNIT HEATER

AUTOMATIC TRANSFER SWITCH

- 1. INSTALLATION AND WIRING TO EQUIPMENT SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 2. ALL EQUIPMENT SHALL BE FIELD LABELED TO IDENTIFY THE CIRCUIT SOURCE. REFER TO SPECIFICATION 16195 FOR ADDITIONAL LABELING REQUIREMENTS.
- 3. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE ARRANGEMENT OF ALL POWER AND CONTROL PANELS, AND SHALL VERIFY DIMENSIONS OF EQUIPMENT PROVIDED BY OTHERS PRIOR TO LAYOUT AND ROUGH IN.



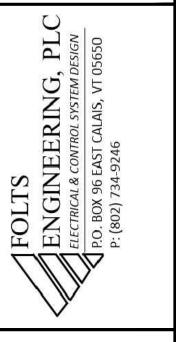
# **DEMOLITION NOTES:**

1. THE EXISTING EJECTOR PUMP STATION SHALL REMAIN IN SERVICE UNTIL THE NEW STATION HAS BEEN MADE OPERATIONAL AND ACCEPTED BY THE TOWN. FOLLOWING ACCEPTANCE, DISCONNECT AND REMOVE ALL WIRING AND CONDUIT TO THE EXISTING PUMP STATION SUCH THAT IT CAN BE SAFELY ABANDONED. REMOVE ELECTRICAL SERVICE EQUIPMENT PEDESTAL AND EQUIPMENT. REMOVE EXISTING ELECTRICAL SERVICE TO UTILITY POLE. COORDINATE WITH GREEN MOUNTAIN POWER.



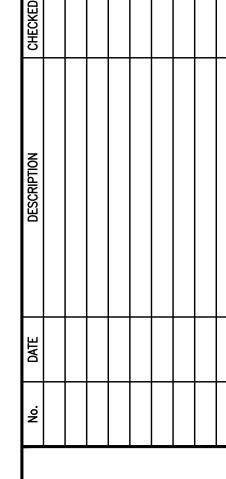
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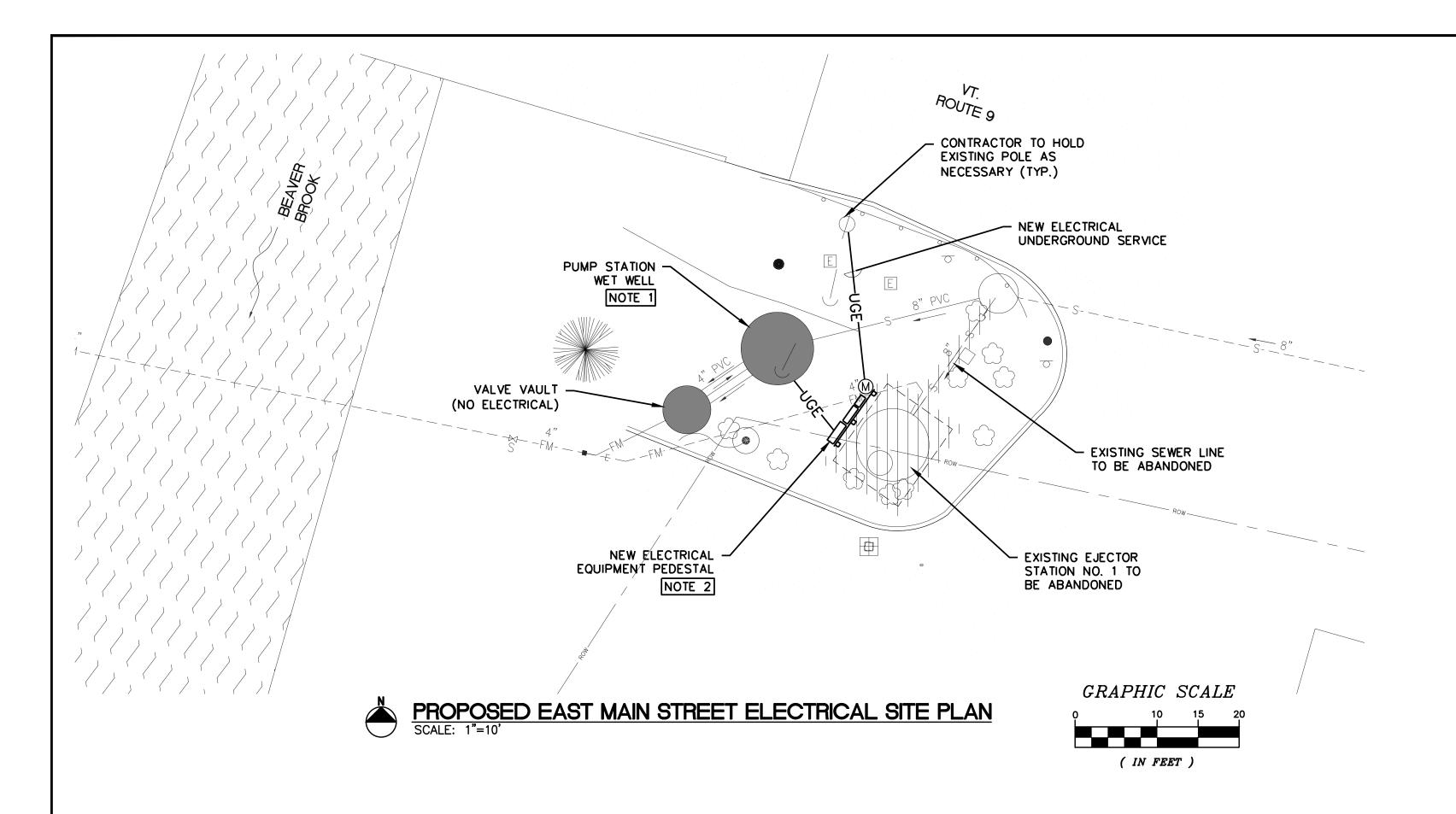
TOWN OF WILMINGTON, VERMONT

( IN FEET )

ROUTE 9 WATER
AND SEWER
EXTENSION
CONTRACT No. 1

ELECTRICAL LEGEND AND EAST MAIN STREET DEMOLITION PLAN

PROJECT
220
DRAWIN
00



# NOTES:

- 1. THE WET WELL IS AN HAZARDOUS LOCATION AS FOLLOWS: AREA INSIDE WET WELL IS CLASS I, DIVISION 1. SPHERICAL AREA WITHIN 3'-0" OF WET WELL VENT IS CLASS I, DIVISION 1. SPHERICAL AREA EXTENDING FROM 3'-0" TO 5'-0" OF VENT IS CLASS I DIVISION 2. SPHERICAL AREA WITHIN 3-0" OF WET WELL HATCH IS CLASS I, DIVISION 2. ALL WIRING AND EQUIPMENT INSIDE THE WET WELL SHALL BE EXPLOSION PROOF OR INTRINSICALLY SAFE AND INSTALLED IN ACCORDANCE WITH NEC ARTICLES 500, 501, AND 504, INCLUDING REQUIRED CONDUIT SEALS.
- 2. CONSTRUCT NEW PEDESTAL WITH ROOF TO SUPPORT ELECTRICAL EQUIPMENT. REFER ELECTRICAL DETAILS AND DRAWING 17 FOR CONSTRUCTION REQUIREMENTS. PEDESTAL SHALL BE LOCATED SUCH THAT ALL EQUIPMENT IS OUTSIDE OF CLASSIFIED AREAS.
- 3. REFER TO SPECIFICATION 16900 FOR TELEMETRY PANEL REQUIREMENTS. INSTALL PUMP STATION STATUS AND ALARM WIRING PER THE SCHEDULE ON THIS DRAWING.
- 4. REFER TO PUMP CONTROL PANEL WIRING DETAIL ON DRAWING 26.

PANEL NAME:	LP1	NEW OR EXISTING:	<u>NEW</u>	
PANEL TYPE:	LOADCENTER	LOCATION:	EAST MAIN ST PUMP STATION	
VOLTAGE:	208/120V 3 PH 4 WIRE	MOUNTING:	SURFACE	
BUS AMPERAGE:	100A ALUMINUM	MAIN FEEDER SIZE:	#3AWG	
MAIN TYPE:	MAIN LUGS	KVA PHASE A:	<u>3</u>	
MAIN CB TYPE:		KVA PHASE B:	3.5	
BRANCH CB TYPE:	THERMAL MAGNETIC	KVA PHASE C:	<u>2</u>	
AIC:	<u>18KA</u>	KVA TOTAL:	8.5	
NOTES: PROVIDE NEMA 3R LOCKABLE ENCLOSURE; (G) DENOTES GROUND FAULT BREAKER				

CKT NO.	SIZE	DESCRIPTION	KVA	PH	CKT NO.	SIZE	DESCRIPTION	KVA
1			2.0	Α	2	20A-1P	TELEMETRY PANEL	1.0
3	25A-3P	PUMP CONTROL PANEL	2.0	В	4	20A-1P (G)	RECEPTACLE	1.5
5			2.0	С	6	20A-1P (G)	SPARE	-
7		SPACE		Α	8		SPACE	
9		SPACE		В	10		SPACE	
11		SPACE		С	12		SPACE	
13		SPACE		Α	14		SPACE	
15		SPACE		В	16		SPACE	
17		SPACE		С	18		SPACE	

STATUS AND ALARM POINTS - EAST MAIN ST PUMP STATION					
NO.	DESCRIPTION	SOURCE	TYPE		
1	PUMP 1 RUN STATUS	PUMP CONTROL PANEL	DI		
2	PUMP 2 RUN STATUS	PUMP CONTROL PANEL	DI		
3	PUMP 1 FAIL	PUMP CONTROL PANEL	DI		
4	PUMP 2 FAIL	PUMP CONTROL PANEL	DI		
5	WET WELL HIGH LEVEL ALARM	PUMP CONTROL PANEL	DI		
6	WET WELL LEVEL	PUMP CONTROL PANEL	Al		
7	PUMP STATION POWER FAIL	INTERNAL SIGNAL	INT		
6	WET WELL LEVEL	PUMP CONTROL PANEL	Al		

# NOTES:

NEW 208/120V 3 $\phi$ -4W

UTILITY SERVICE

100A `

**⇔**20A 1P

#6 AWG

(4) #3, #6G 1¼" C

(2)%" × 8' GROUND—

RODS, 6' APART

(4) #3, 2½" C

SPD 50KA

PUMP

208/120V 36-4W 3R

- 200A, 3ø-4w METER SOCKET w/100A-3P MAIN PER GMP

PROVIDE 50KA

or EQUAL)

SURGE PROTECTOR

(EATON #SP1-208Y

- PROVIDE 1½" C TO WET

WELL FOR EACH PUMP,

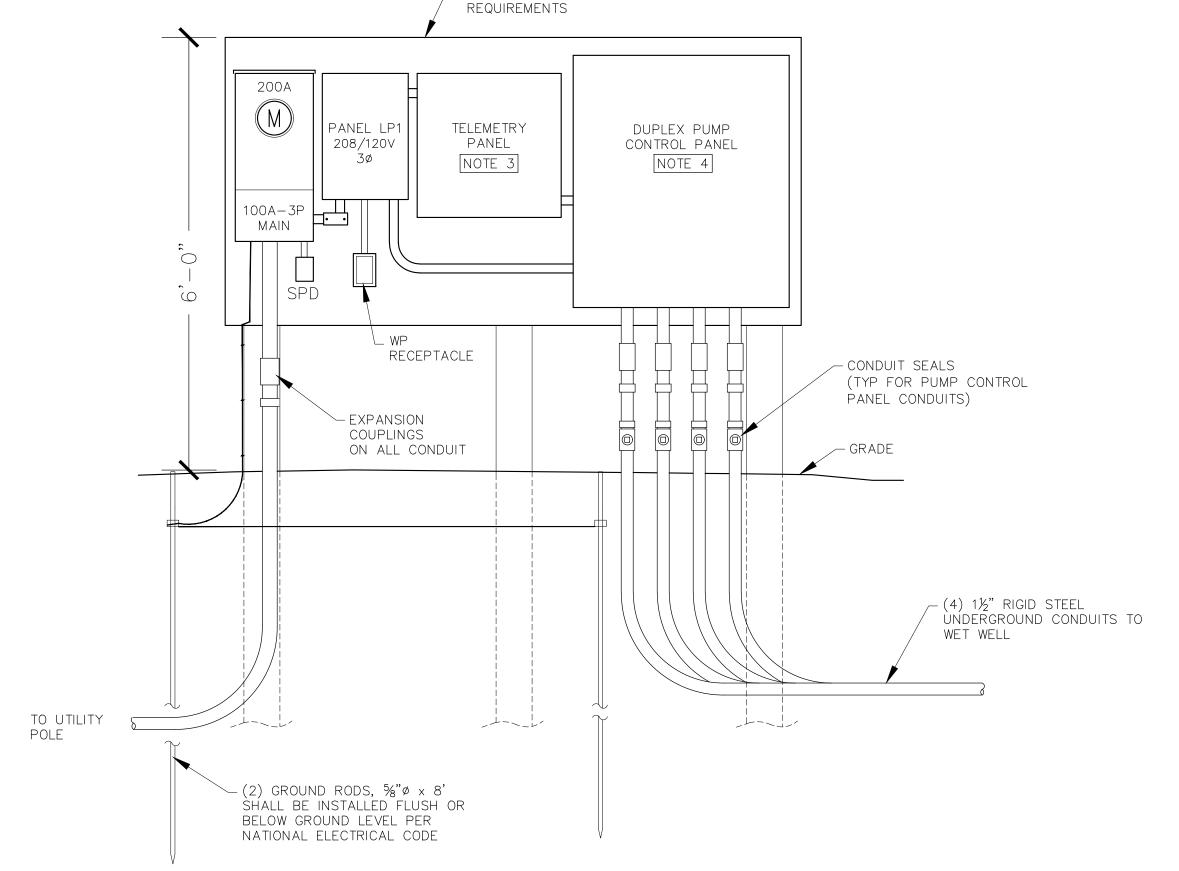
CABLES FURNISHED

WITH PUMPS

STANDARDS

(3) #10, #10G 34" C

- 1. WIRING FOR DIGITAL INPUTS (DI) SHALL BE (2) #16AWG.
- 2. WIRING FOR ANALOG INPUTS (AI) SHALL BE (1) #18AWG TWISTED SHIELDED PAIR (BELDON #8760 OR EQUAL).



REFER TO DETAIL A/17 FOR PEDESTAL CONSTRUCTION





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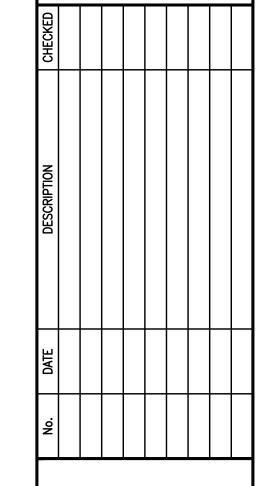
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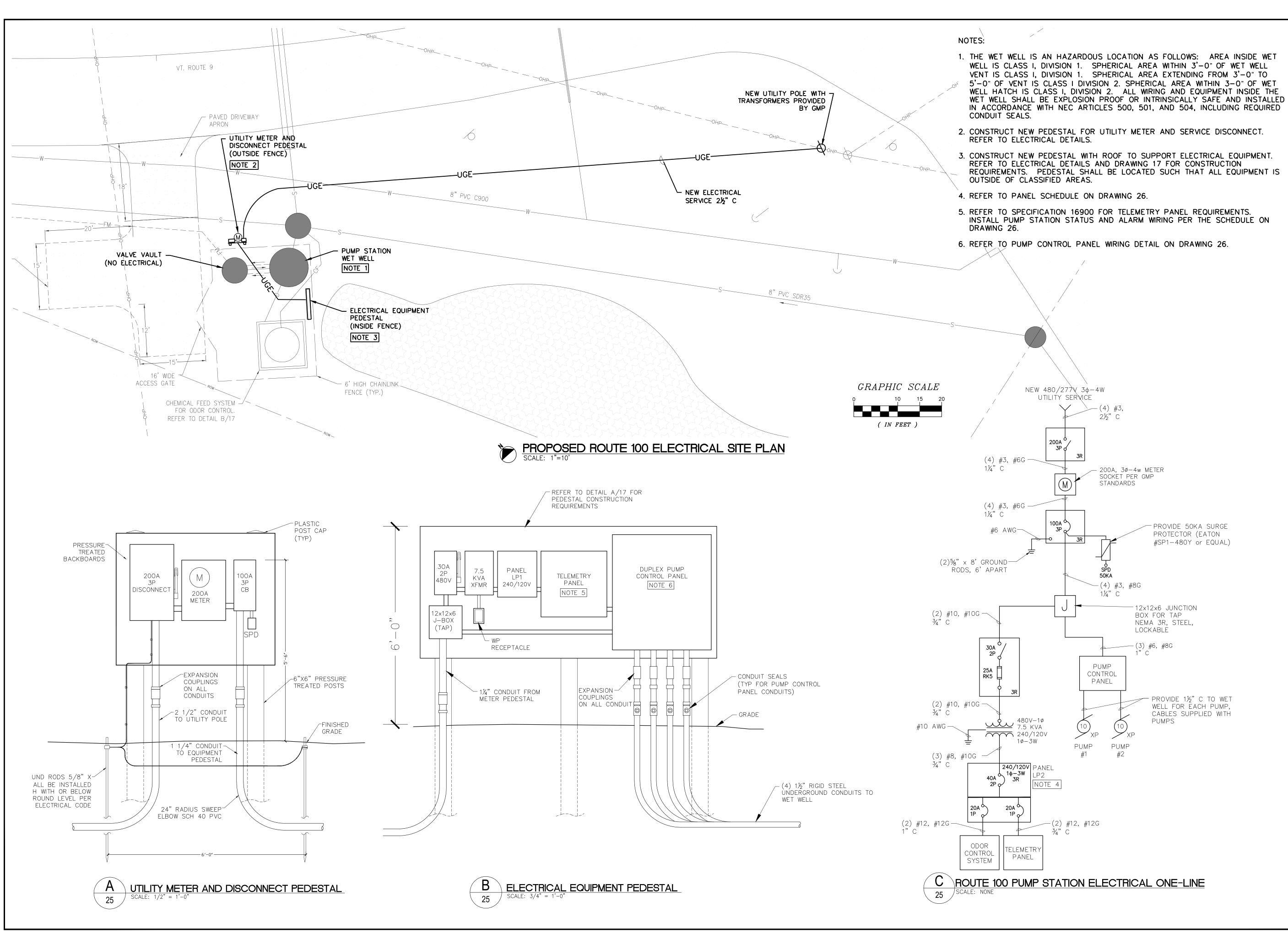


TOWN OF WILMINGTON, **VERMONT** 

ROUTE 9 WATER AND SEWER **EXTENSION** CONTRACT No. 1

EAST MAIN STREET **PROPOSED** ELECTRICAL PLANS AND DETAILS

DESIGNED	PROJECT
DFF	2202
DRAWN	2202
РЈМ	DRAWIN
CHECKED	
DFF	<b>-</b> /2
DATE	—



Aldrich + Elliott

ATER RESOURCE ENGINEERS

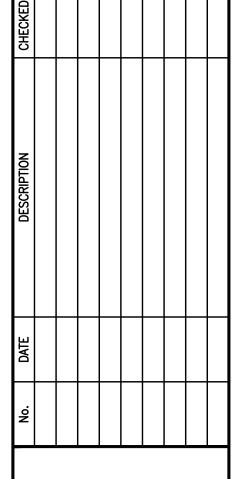
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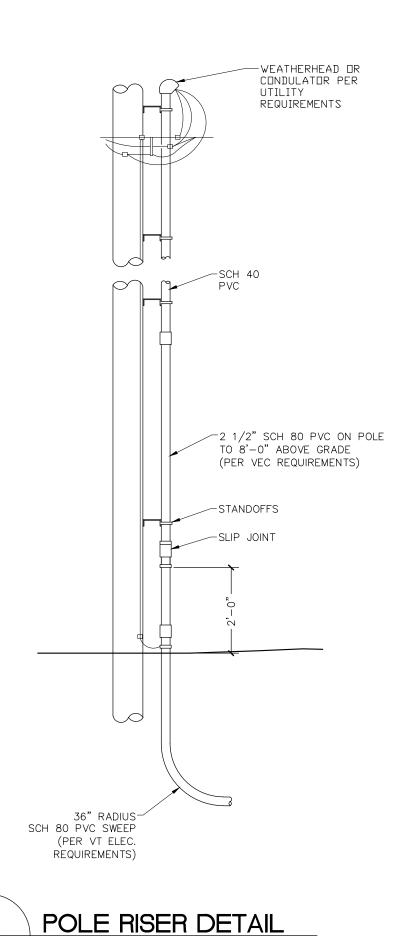


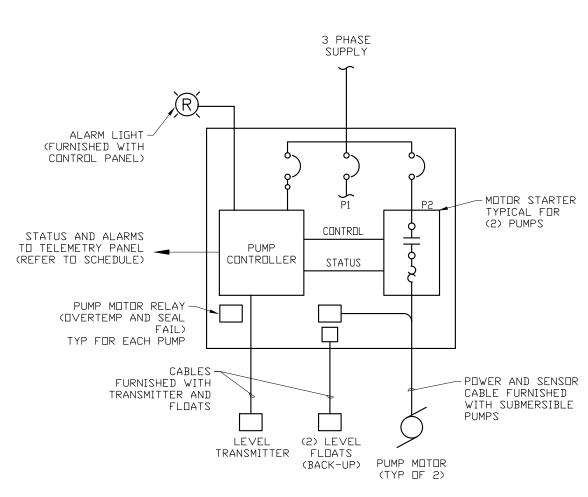
TOWN OF WILMINGTON, VERMONT

ROUTE 9 WATER
AND SEWER
EXTENSION
CONTRACT No. 1

ROUTE 100 PROPOSED ELECTRICAL PLAN AND DETAILS

DESIGNED	PROJECT NO
DFF	22028
DRAWN	
РЈМ	DRAWING
CHECKED	$\circ$
DFF	ノン
DATE	

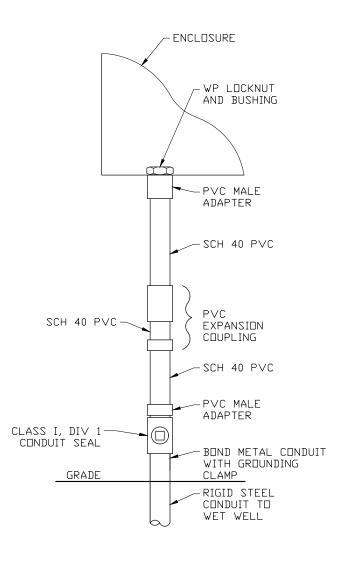




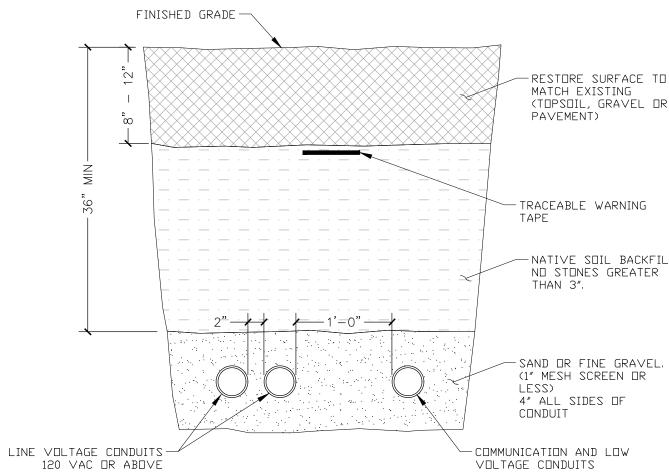


# NOTES:

- 1. REFER TO SITE/CIVIL DRAWINGS FOR RELATED INFORMATION.
- 2. WIRING DETAIL INDICATES DUPLEX PUMP CONTROL PANEL. THE PUMPS ARE SUBMERSIBLE TYPE WITH POWER/CONTROL CABLES AND INTEGRAL TEMPERATURE AND LEAK SENSORS, TYPICAL FOR EAST MAIN STREET AND ROUTE 100 PUMP STATIONS.
- 3. THE PUMP CONTROLLER SHALL START AND STOP EACH PUMP BASED ON LEVEL IN THE WET WELL.
- 4. WIRING FOR PUMP 1 AND PUMP 2 SHALL BE INSTALLED IN SEPARATE CONDUITS.
- 5. INTRINSICALLY SAFE WIRING IN WET WELL SHALL BE INSTALLED IN A DEDICATED CONDUIT AND IN ACCORDANCE WITH NEC ARTICLE 504.









# NOTES:

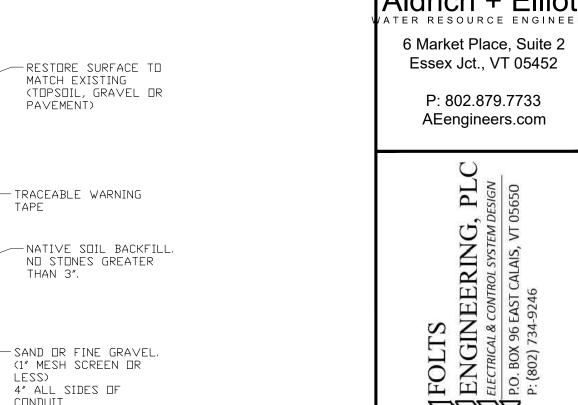
- 1. REFER TO LOCAL UTILITY COMPANY STANDARDS FOR SPECIFIC REQUIREMENTS RELATED TO CONDUIT INSTALLATION FOR UTILITY SERVICES.
- 2. WHEN BURIAL DEPTH MUST BE LESS THAN SHOWN DUE TO LEDGE, ROCK OR OTHER OBSTRUCTIONS, RIGID STEEL CONDUIT OR CONCRETE ENCASEMENT MUST BE USED.
- 3. REFER TO SITE/CIVIL DRAWINGS FOR SURFACE RESTORATION REQUIREMENTS (TOPSOIL, SEEDING. GRAVEL OR PAVEMENT).
- 4. ENGINEER OR UTILITY COMPANY REPRESENTATIVE (IF REQUIRED) MUST INSPECT ALL UNDERGROUND CONDUIT PRIOR TO BACKFILLING.

PANE	L NAME:	LP2	NEW OR EXISTING: NEW			NEW		
PA	NEL TYPE:	LOAD CENTER	LOCATION:		LOCATION:	N: <u>RT 100 PUMP STATION</u>		
	VOLTAGE:	240/120V 1PH 3 WIRE			N	MOUNTING:	SURFACE	
BUS A	MPERAGE:	100A ALUMINUM	MAIN FEEDER SIZE: #8AWG			#8AWG		
M	MAIN TYPE:	MAIN CIRCUIT BREAKER			KV	A PHASE A:	2.5	
MAIN	CB TYPE:	40A-2P			KV	A PHASE B:	1	
BRANCH	I CB TYPE:	THERMAL MAGNETIC			k	(VA TOTAL:	3.5	
	AIC:	10KA					_	
NOTES: PI	ROVIDE NE	MA 3R LOCKABLE ENCLOSURE;	(G) DE	NOT	ES GROUN	ND FAULT B	REAKER	
CKT NO.	SIZE	DESCRIPTION	KVA	PH	CKT NO.	SIZE	DESCRIPTION	KVA
1	20A-1P	CHEMICAL FEED SYSTEM	1.0	Α	2	20A-1P (G)	RECEPTACLE	1.5
3	20A-1P	TELEMETRY PANEL	1.0	В	4	20A-1P (G)	SPARE	
5	20A-1P	SPARE		Α	6	20A-1P	SPARE	
7		SPACE		В	8		SPACE	
9		SPACE		Α	10		SPACE	
11		SPACE		В	12		SPACE	
13		SPACE		Α	14		SPACE	
15	40A OD	MAIN CIDCUIT DDEAKED		Α	16		SPACE	
17	40A-2P	MAIN CIRCUIT BREAKER		В	18		SPACE	

STATUS AND ALARM POINTS - RT 100 PUMP STATION					
NO.	DESCRIPTION	SOURCE	TYPE		
1	PUMP 1 RUN STATUS	PUMP CONTROL PANEL	DI		
2	PUMP 2 RUN STATUS	PUMP CONTROL PANEL	DI		
3	PUMP 1 FAIL	PUMP CONTROL PANEL	DI		
4	PUMP 2 FAIL	PUMP CONTROL PANEL	DI		
5	WET WELL HIGH LEVEL ALARM	PUMP CONTROL PANEL	DI		
6	WET WELL LEVEL	PUMP CONTROL PANEL	Al		
7	PUMP STATION POWER FAIL	INTERNAL SIGNAL	INT		

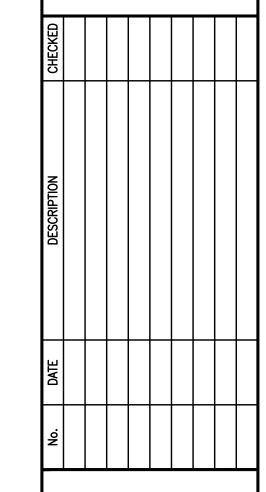
# NOTES:

- 1. WIRING FOR DIGITAL INPUTS (DI) SHALL BE (2) #16AWG.
- 2. WIRING FOR ANALOG INPUTS (AI) SHALL BE (1) #18AWG TWISTED SHIELDED PAIR (BELDON #8760 OR EQUAL).





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TOWN OF WILMINGTON, VERMONT

ROUTE 9 WATER
AND SEWER
EXTENSION
CONTRACT No. 1

ELECTRICAL DETAILS

DESIGNED	PROJECT
DFF	2202
DRAWN	2202
РЈМ	DRAWIN
CHECKED	01
DFF	<b>-</b> - / (
DATE	
DEC. 2024	