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LEGEND ELECTRICAL ONE LINE DIAGRAM AND **DETAILS**

GENERAL NOTES

THE CONTRACTOR SHALL ADHERE TO THE FOLLOWING GUIDELINES, UNLESS OTHERWISE NOTED:

- NEW 3/4" CORPORATION STOPS ARE TO BE INSTALLED FOR ALL
- SERVICES

• NEW ¾" OR 1" 'K' COPPER IS TO BE INSTALLED FROM

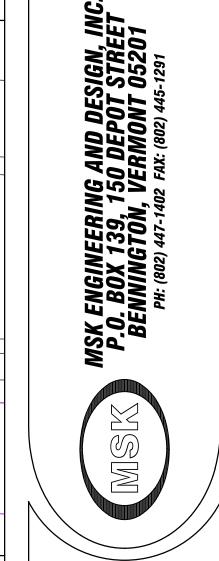
- CORPORATION STOPS TO CURB STOPS
- NEW 1" OR 1.5" HDPE IS TO BE INSTALLED FROM CURB STOPS TO SERVICE ENTRANCES OF ALL STRUCTURES
- CURB STOPS SHALL BE LOCATED NO LESS THAN 6 FEET NOR MORE THAN 8 FEET FROM EDGES OF ROADWAYS, AND (MINIMUM) 1 FOOT INSIDE STATE OR MUNICIPAL RIGHT-OF-WAYS. AVOID

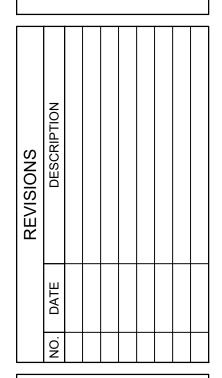
INSTALLING CURB STOPS IN DRIVE SURFACES, WHERE POSSIBLE

WATER SUPPLY RULES (04/12/2019), LEAKAGE CLAMPS ARE TO BE INSTALLED AT JOINTS ON WATER MAINS WITHIN 50' OF LEACH FIELDS AND SEPTIC TANKS, AND WITHIN 10' OF SANITARY PIPING. 8 mil POLYSTYRENE SLEEVES ARE TO BE APPLIED TO WATER SERVICES WITHIN 25' OF SANITARY SYSTEMS AND WITHIN 10' OF

SANITARY PIPING

• EXISTING PRIVATE WELLS ARE TO BE DECOMMISSIONED IN ACCORDANCE WITH VERMONT WATER SUPPLY RULES SECTION 1-1115 AT ALL SITES RECEIVING NEW WATER SERVICE.



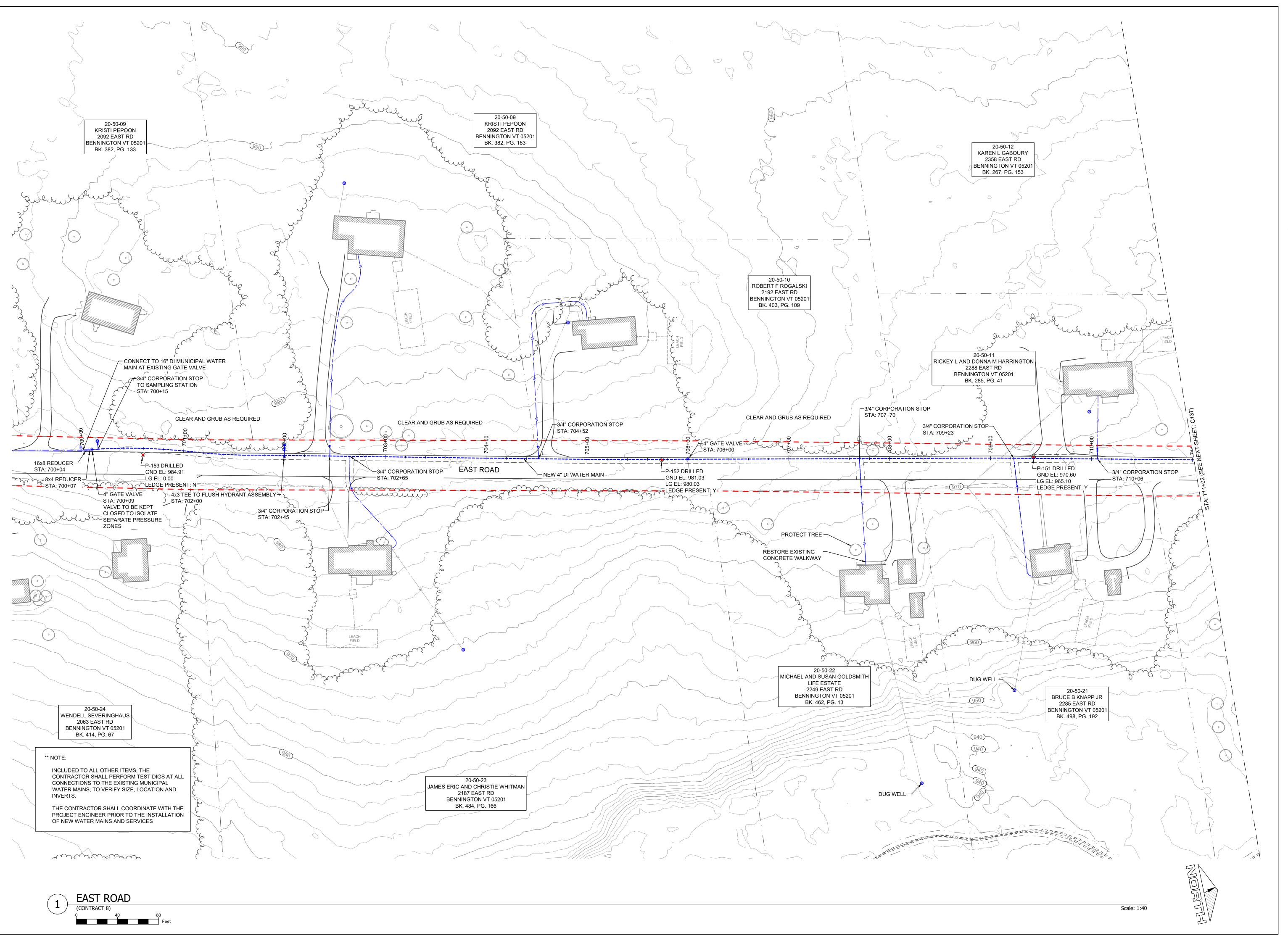


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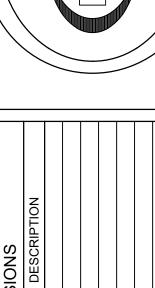
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P.O. BOX 139, 150 DEPOT STREET
BENNINGTON, VERMONT 05201
PH: (802) 447-1402 FAX: (802) 445-1291



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WATER SYSTEM
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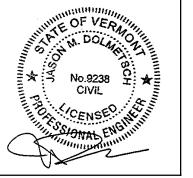
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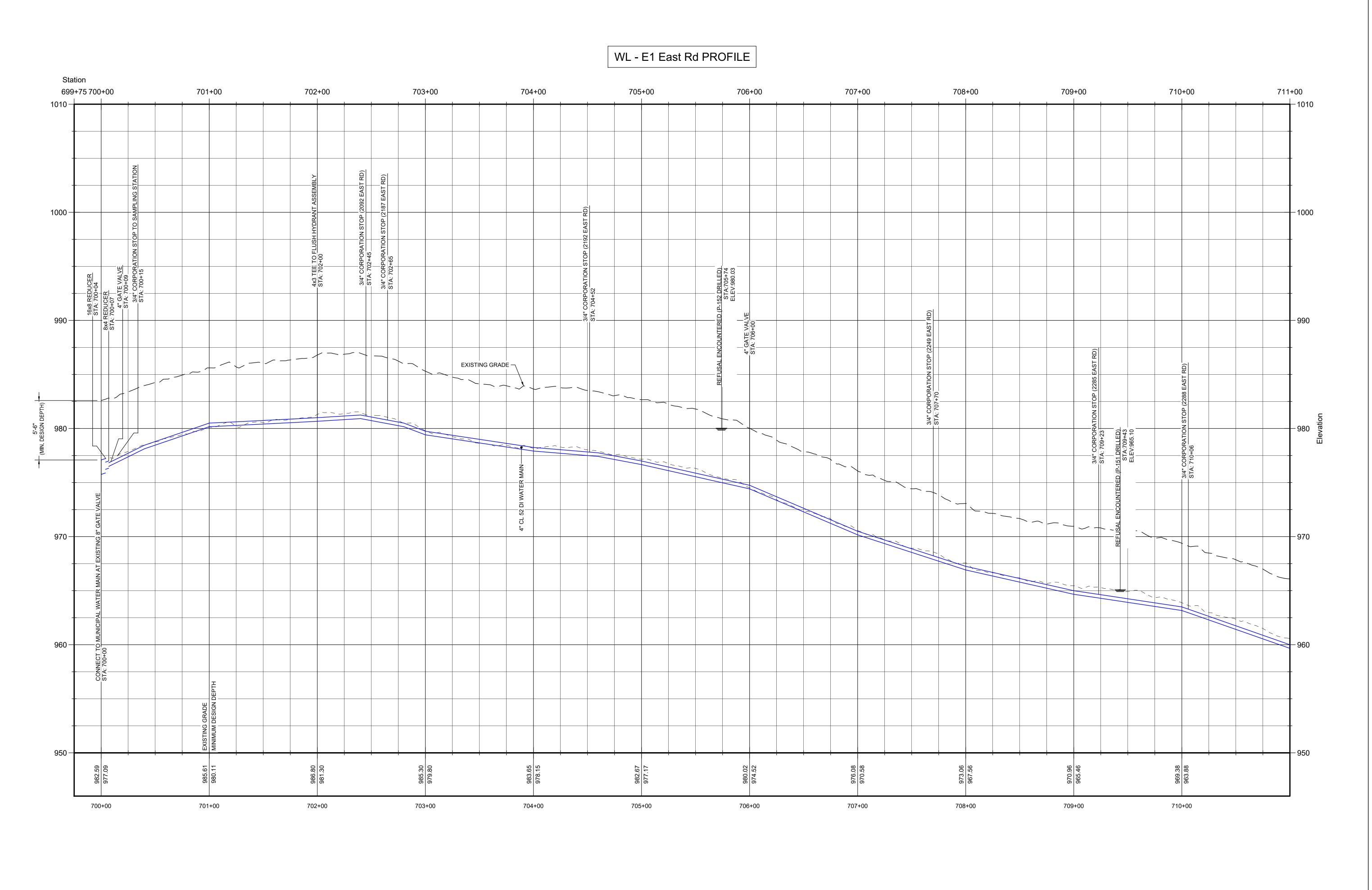
SERVICE CONTRACT 8

PLAN

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EAST ROAD

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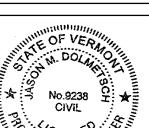
TOWN OF BENNINGTON
MUNICIPAL WATER SYSTEM
REMEDIAL EXPANSION PHASE II
BENNINGTON, VERMONT

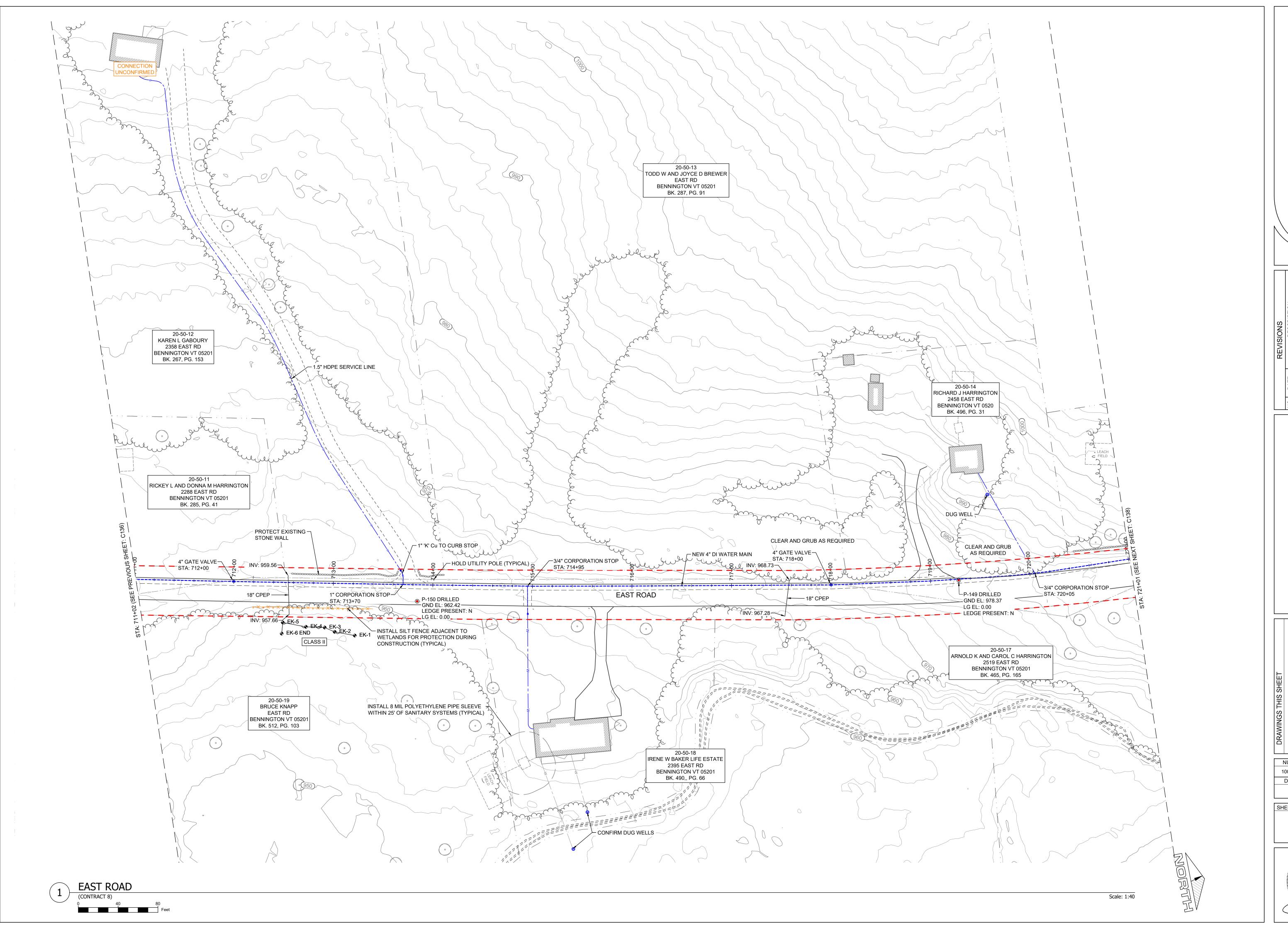
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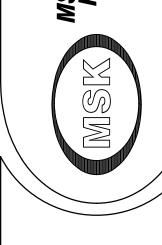
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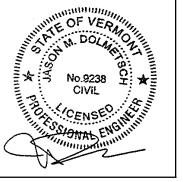


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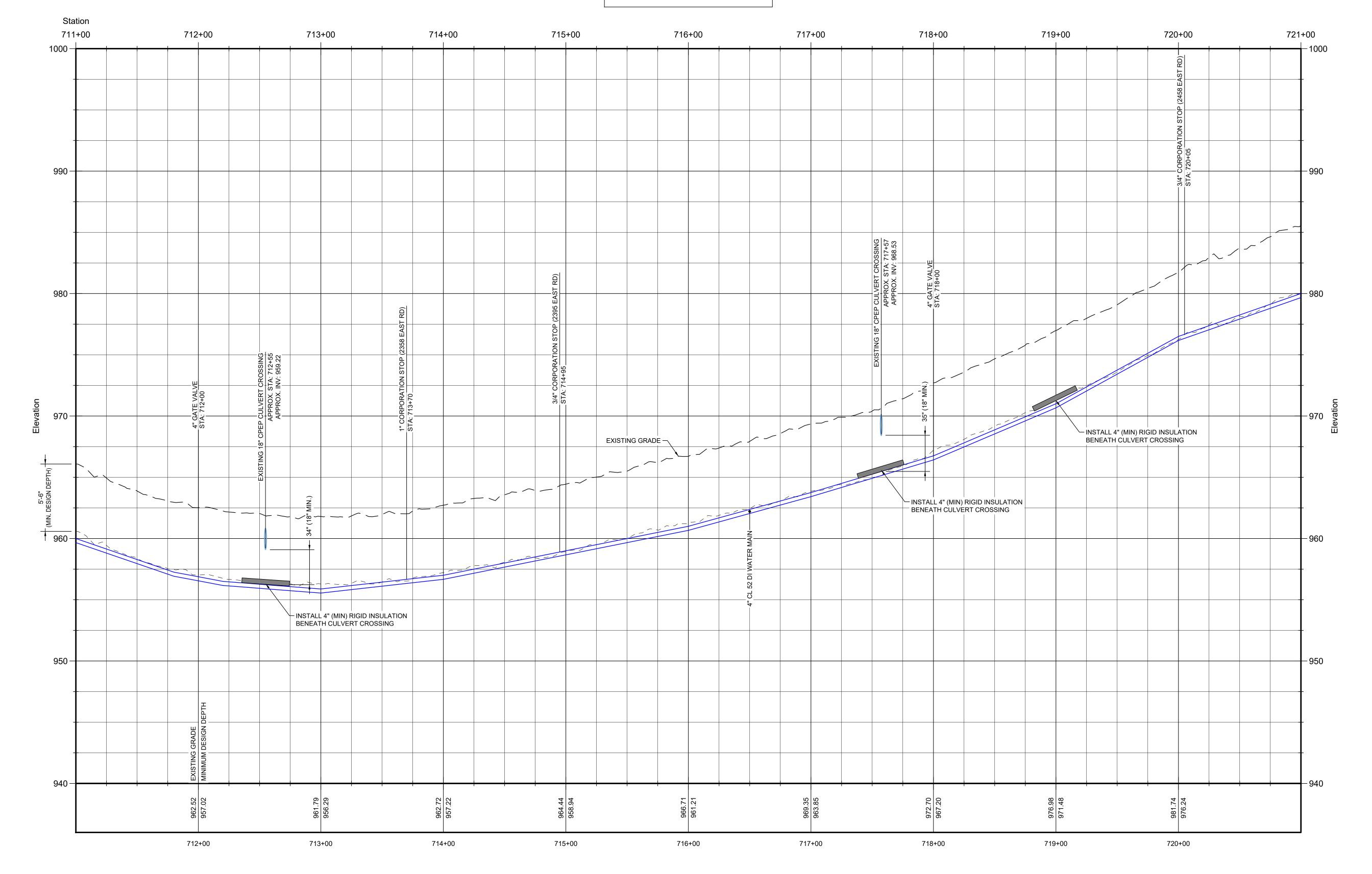
SERVICE CONTRACT 8
PLAN

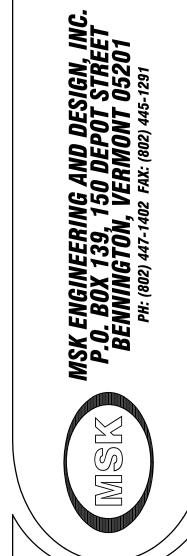
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WL - E1 East Rd PROFILE





PATE DESCRIPTION

TOWN OF BENNINGTON MUNICIPAL WATER SYSTEM EMEDIAL EXPANSION PHASE II BENNINGTON, VERMONT

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NUMBER DATE

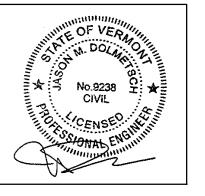
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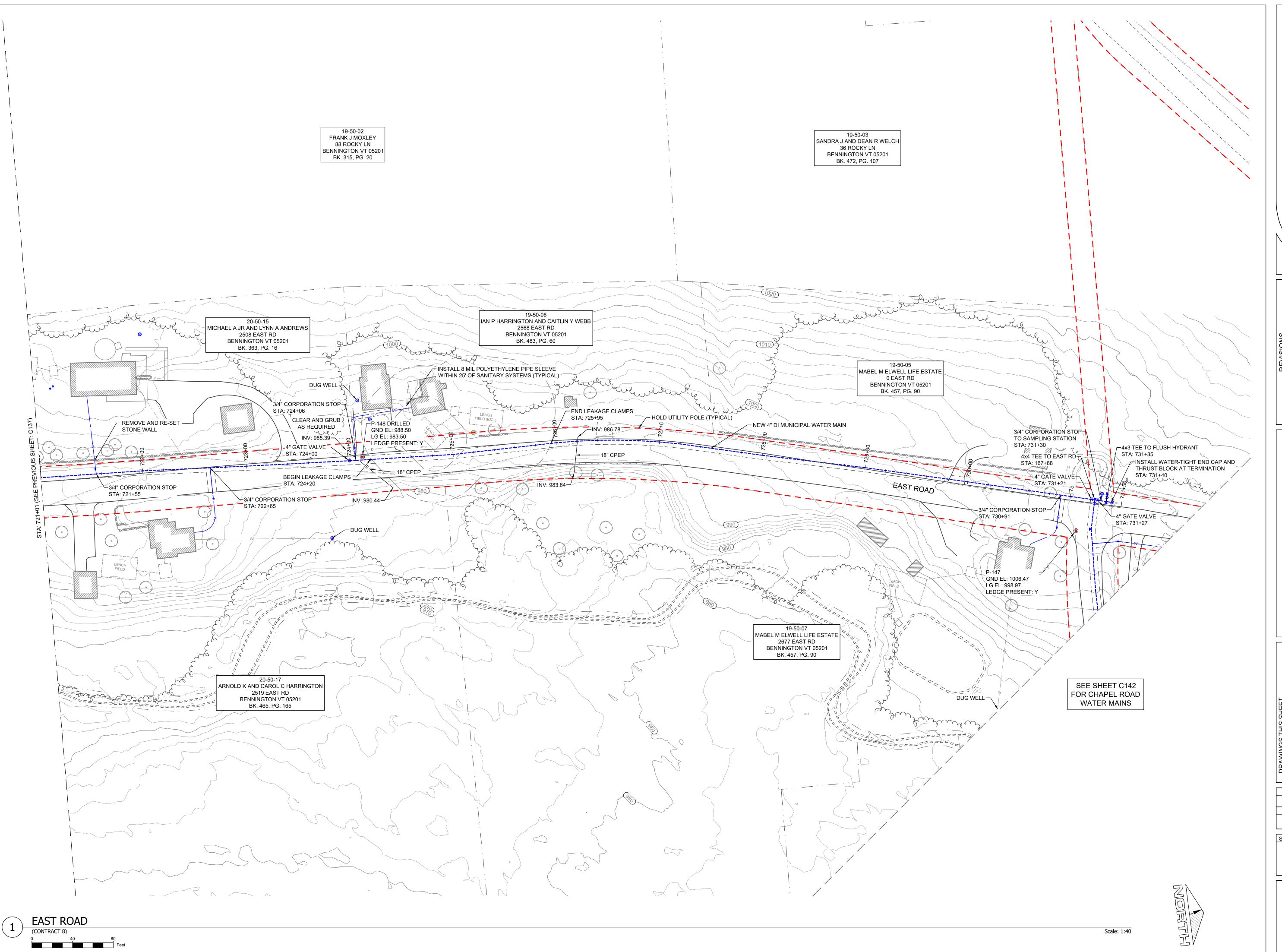
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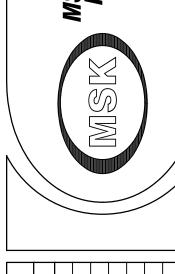
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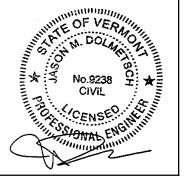


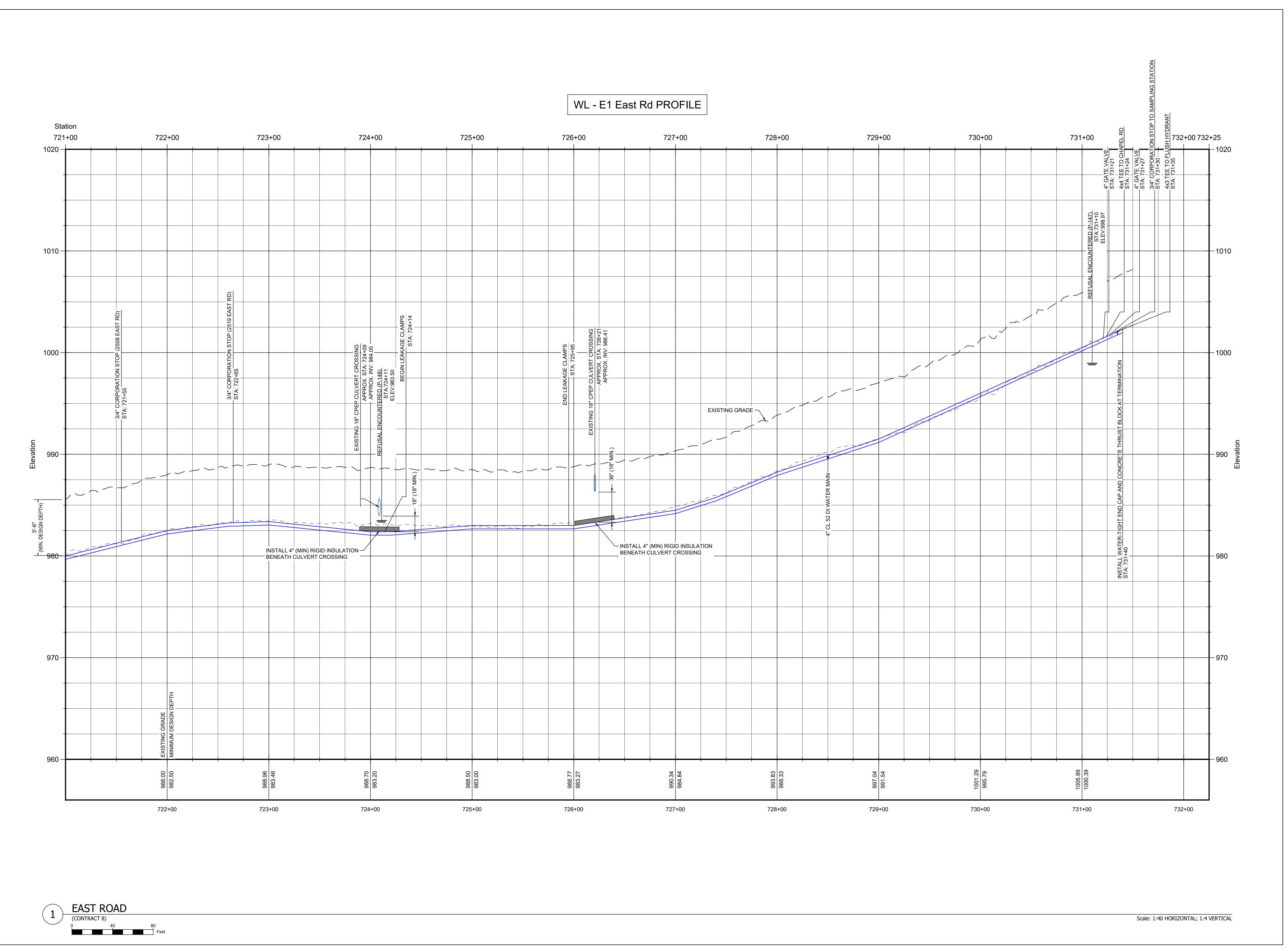


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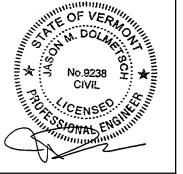
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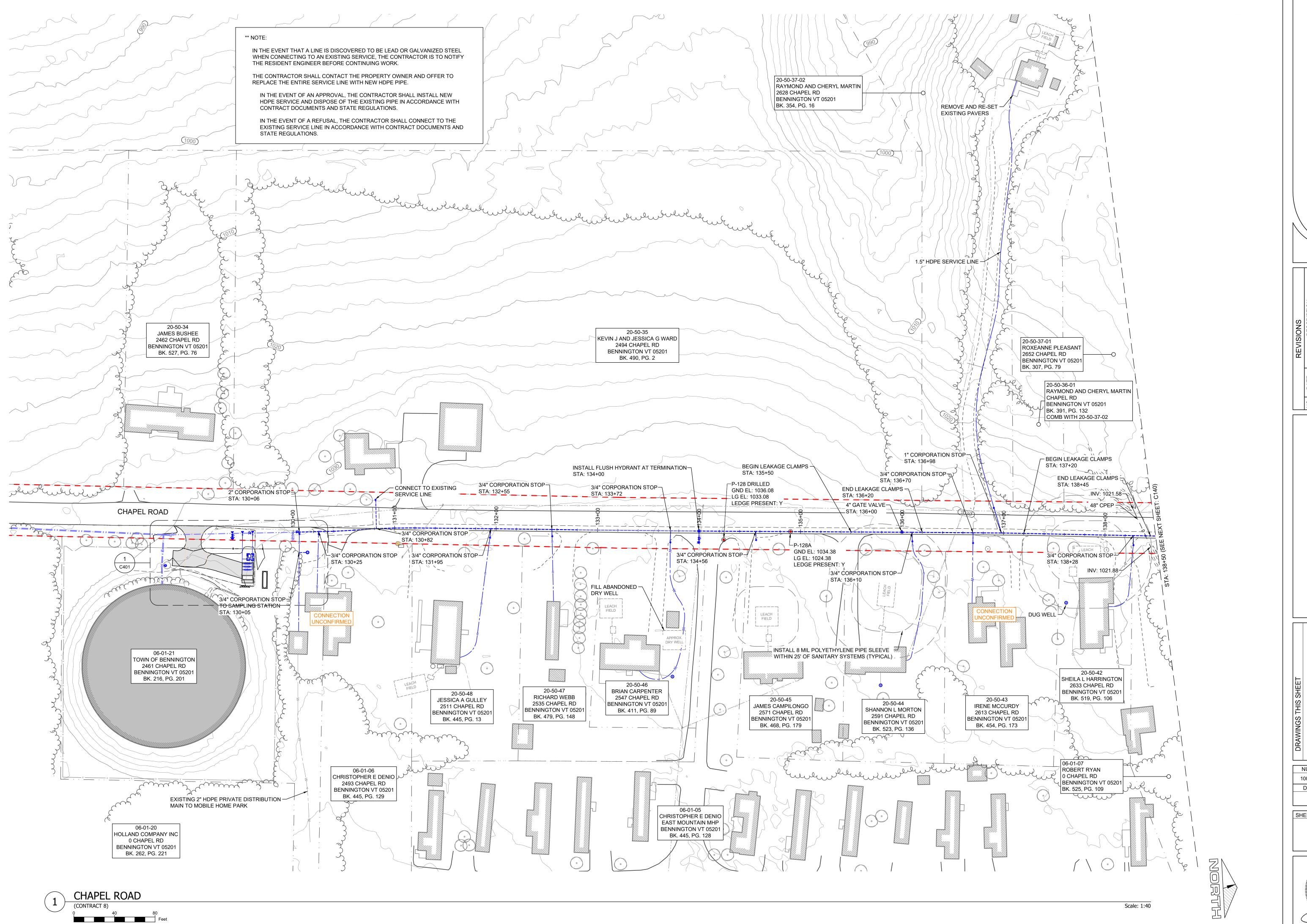
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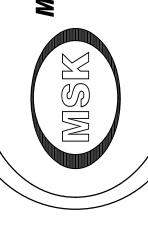
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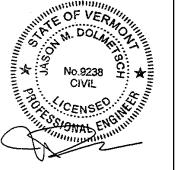




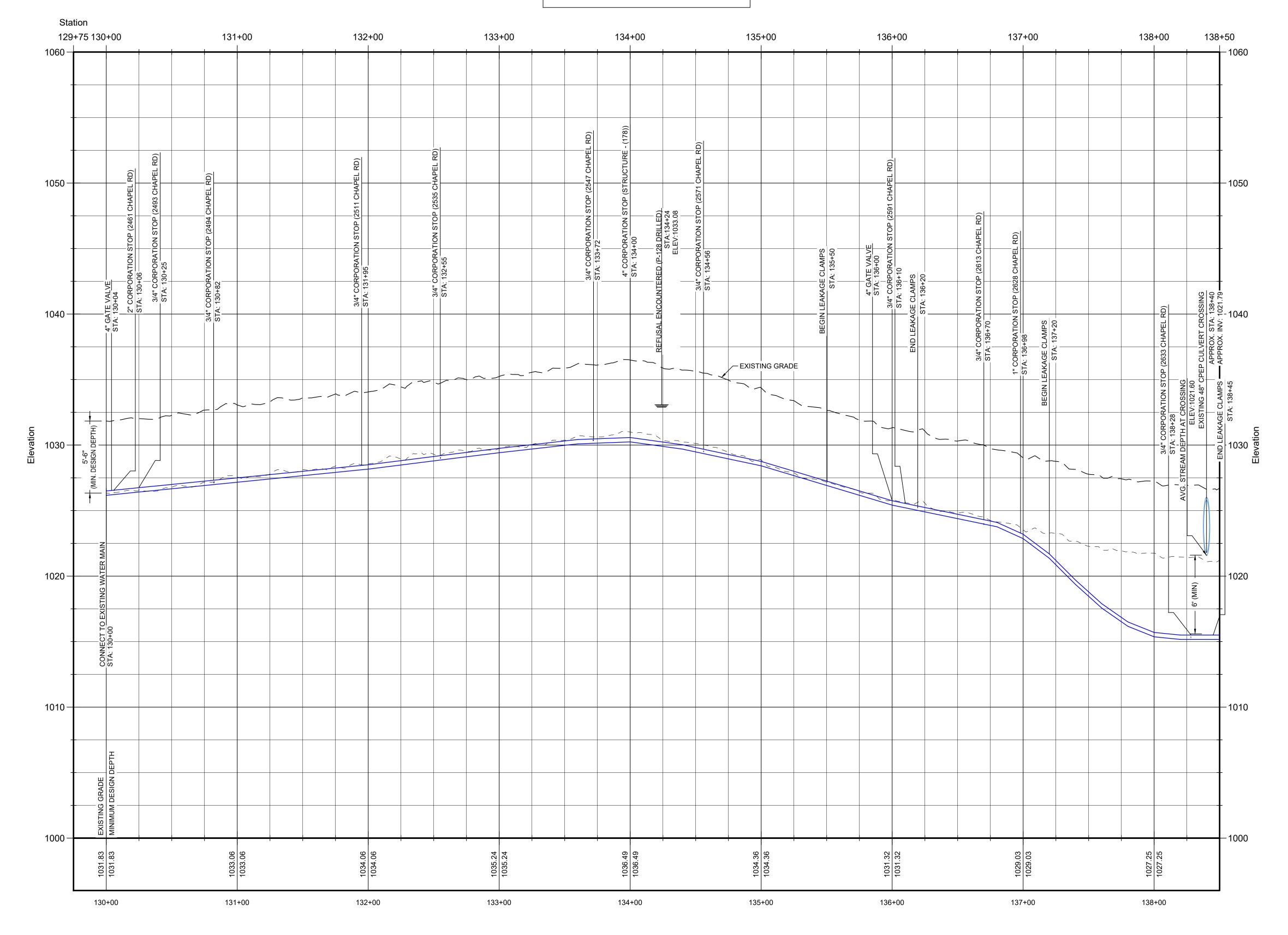
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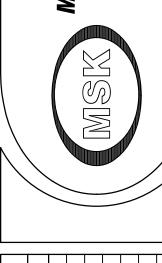
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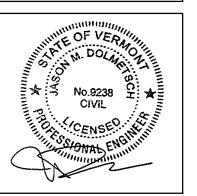
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REMEDIAL EXPANSION PHASE

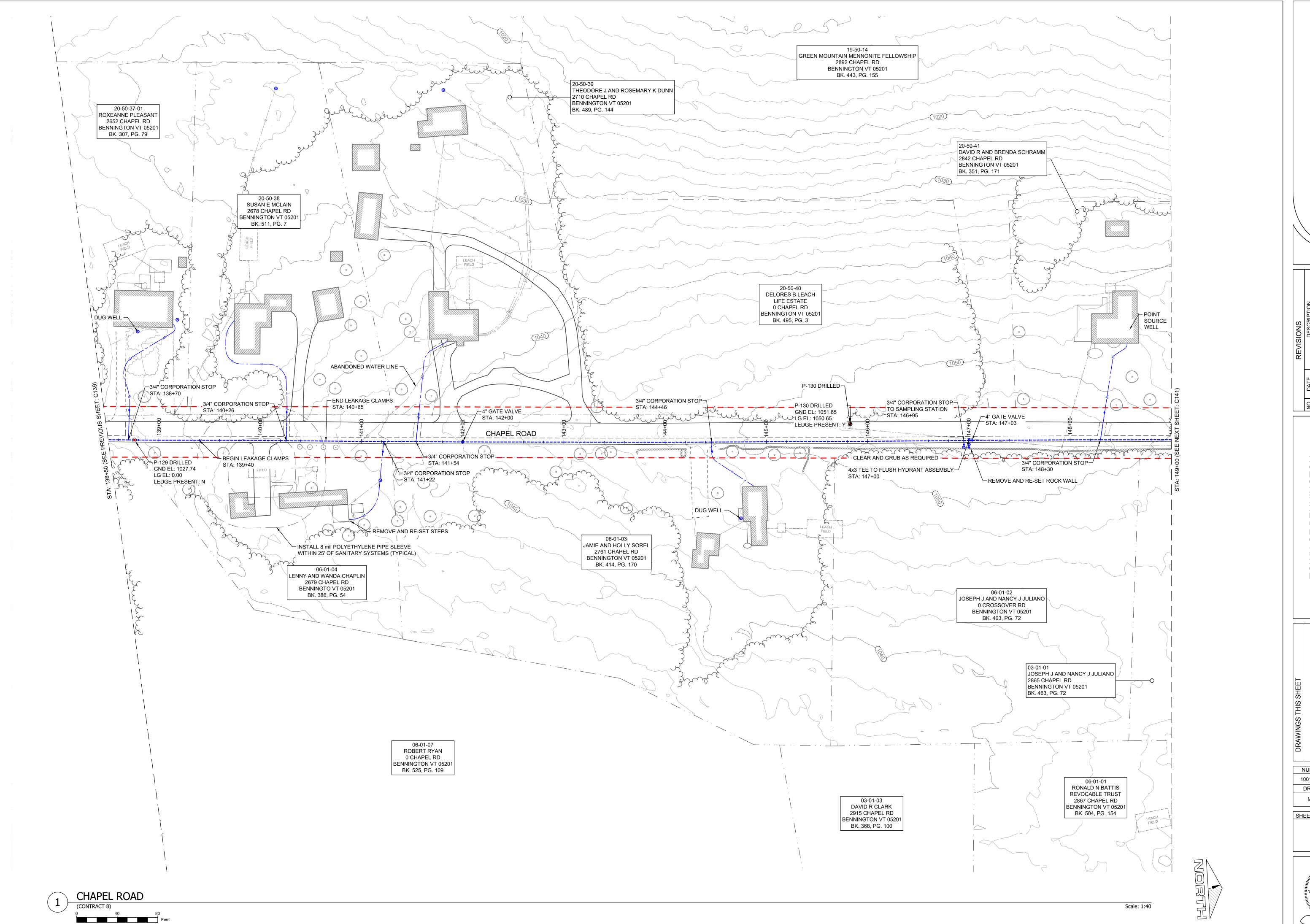
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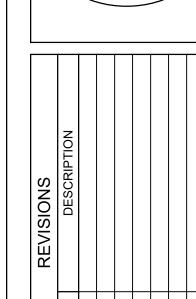
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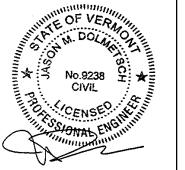




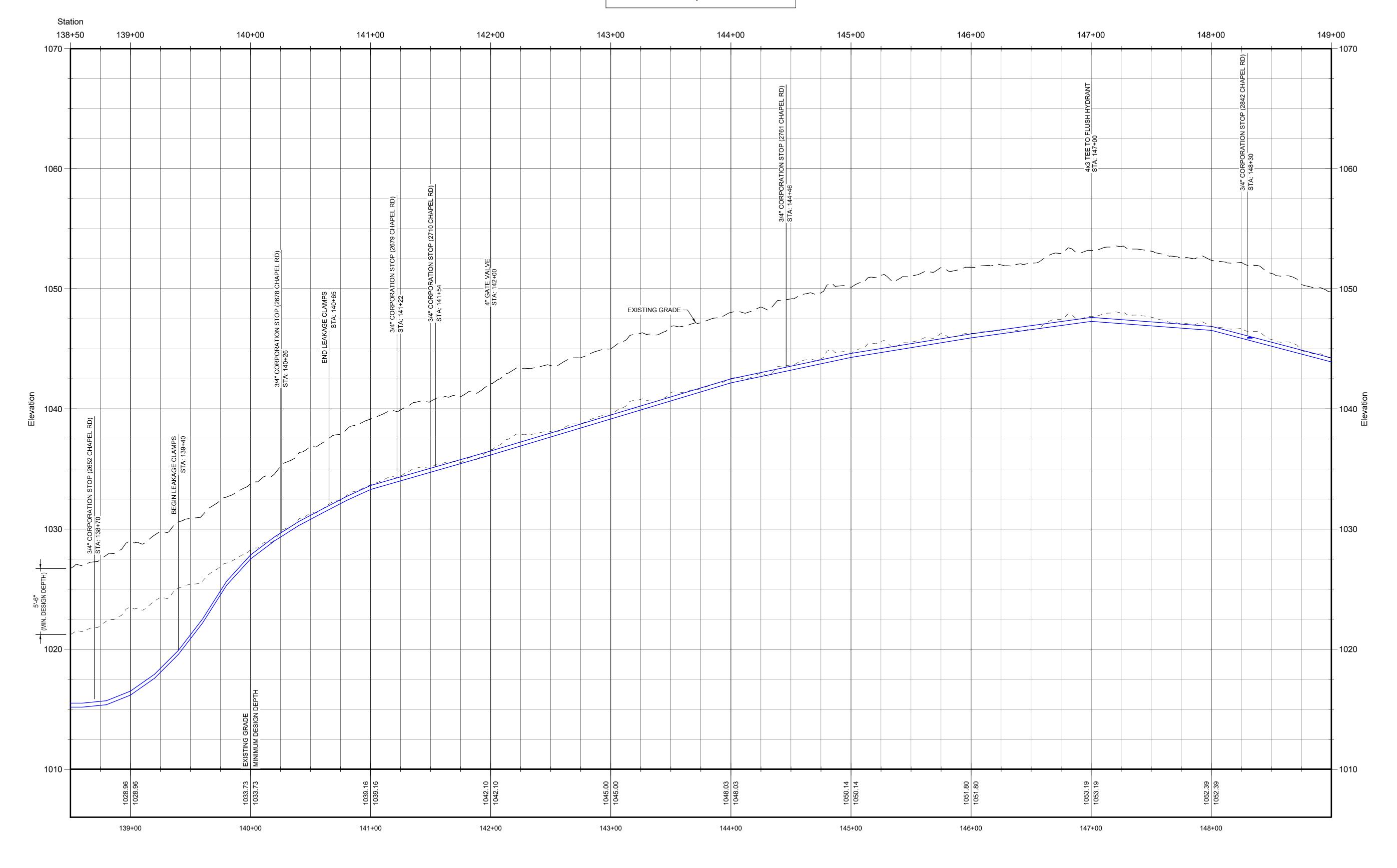
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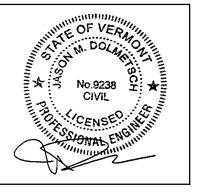
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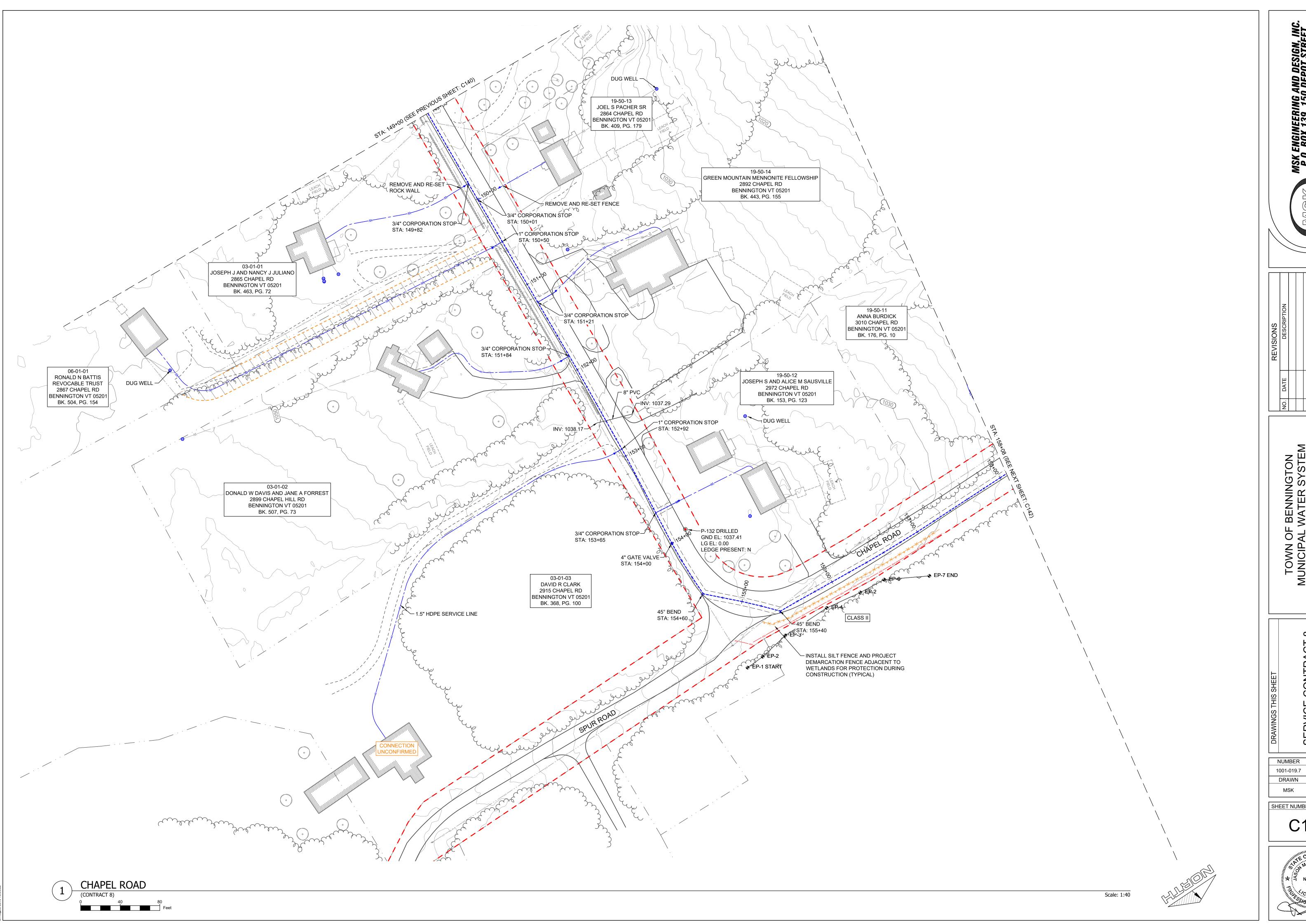
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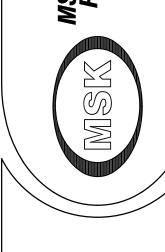
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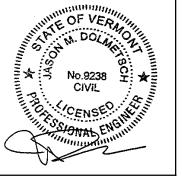




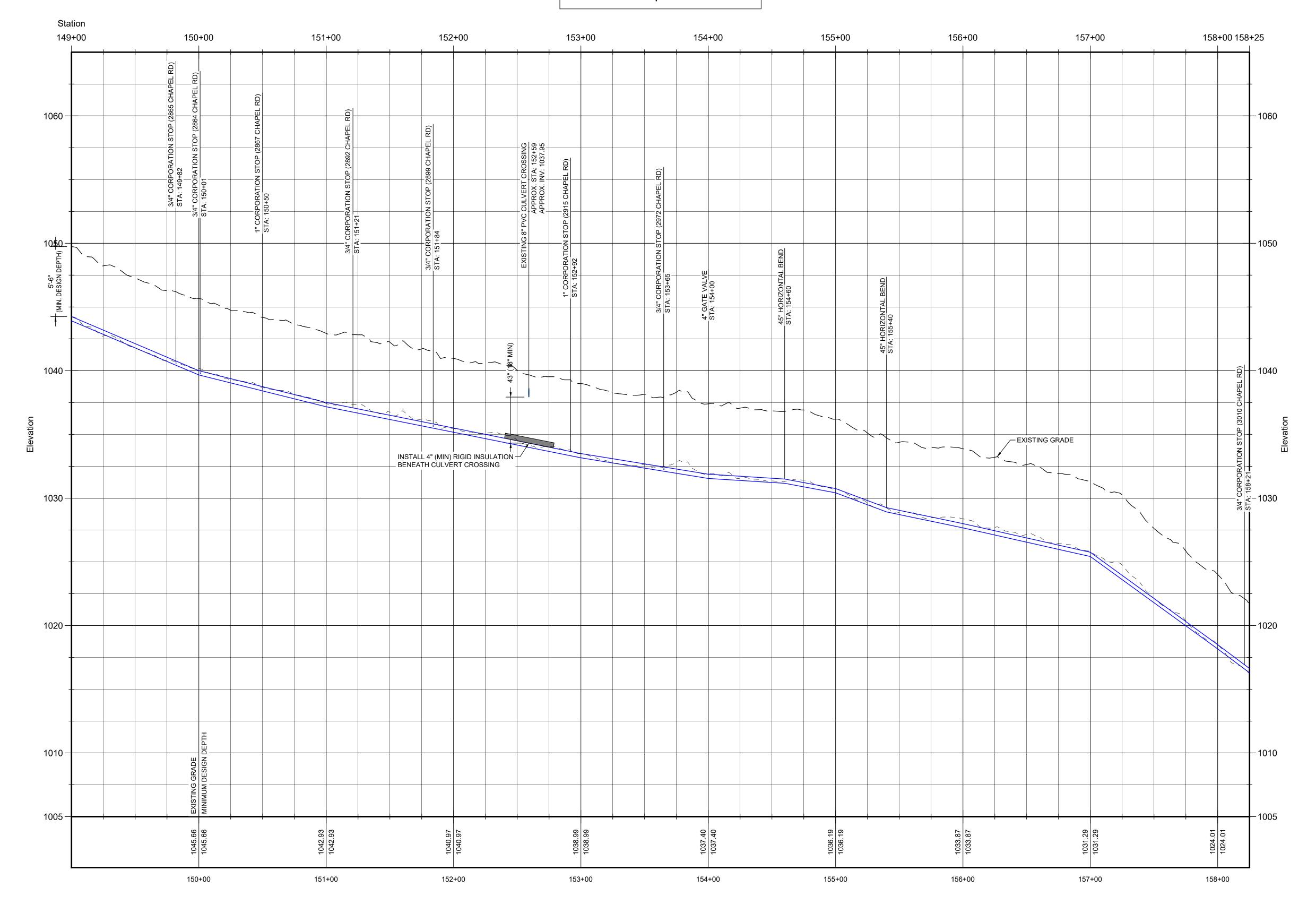
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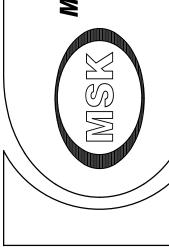
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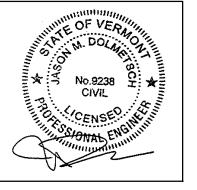
SERVICE CONTRACT 8

PROFILE

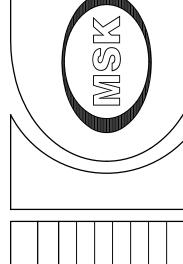
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MSK JMD

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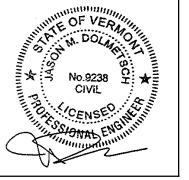




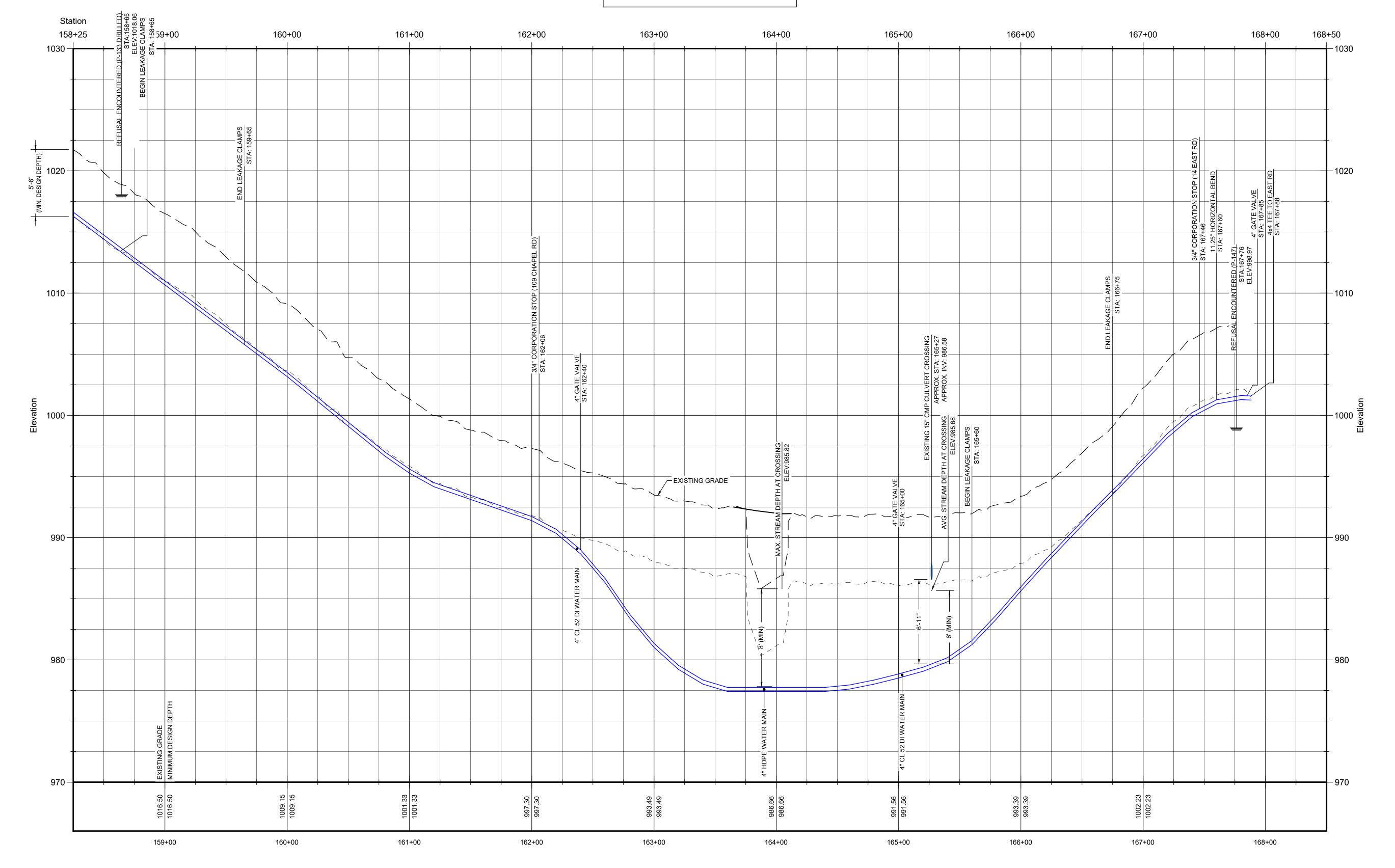
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NUMBER DATE 08-22-2019 1001-019.7 CHECKED DRAWN JMD

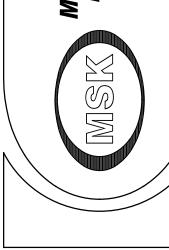
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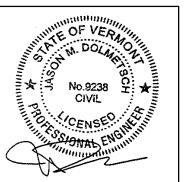
TOWN OF BENNINGTON
MUNICIPAL WATER SYSTEM
REMEDIAL EXPANSION PHASE II
BENNINGTON, VERMONT

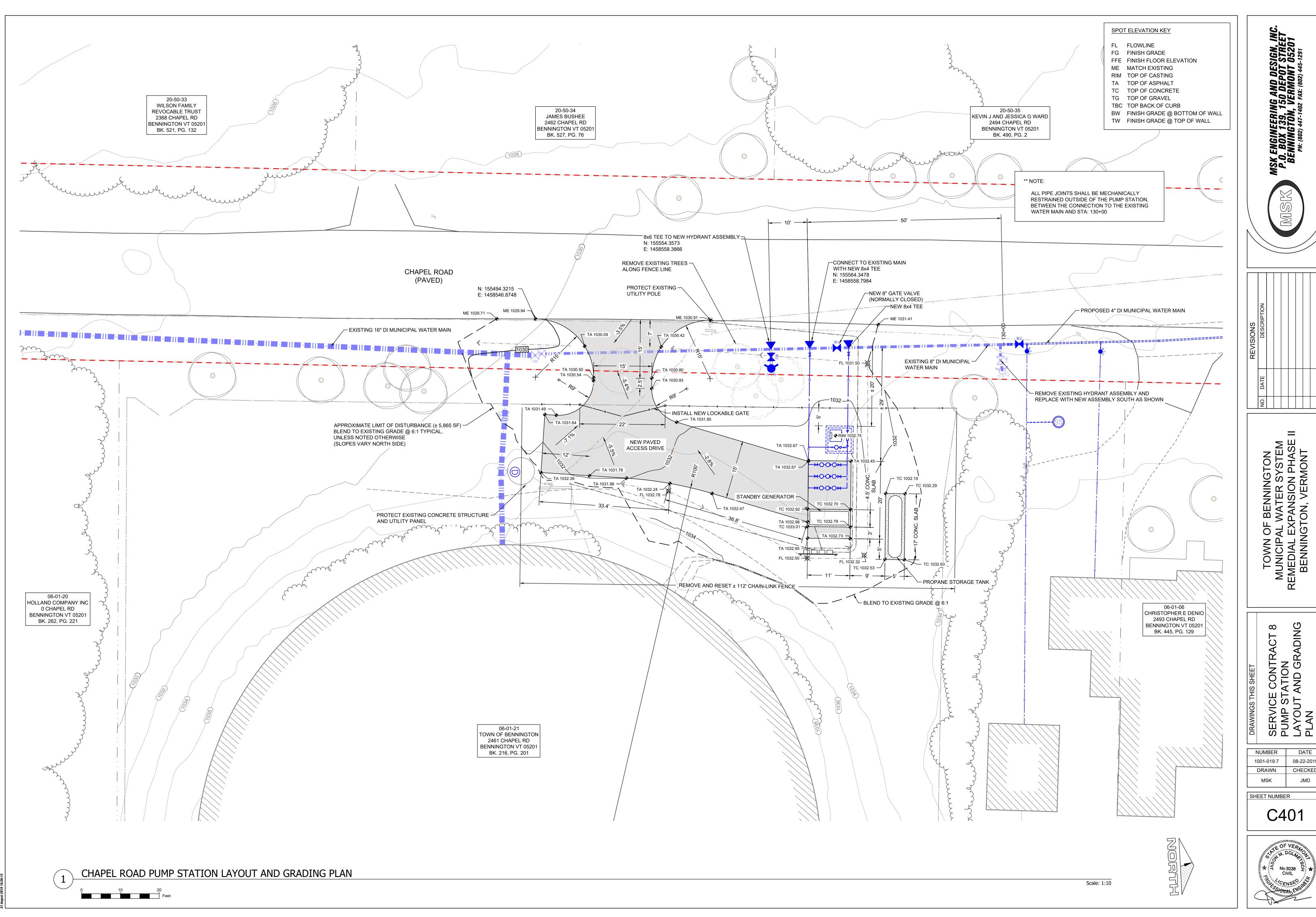
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DATE NUMBER 08-22-2019 1001-019.7 DRAWN CHECKED MSK JMD

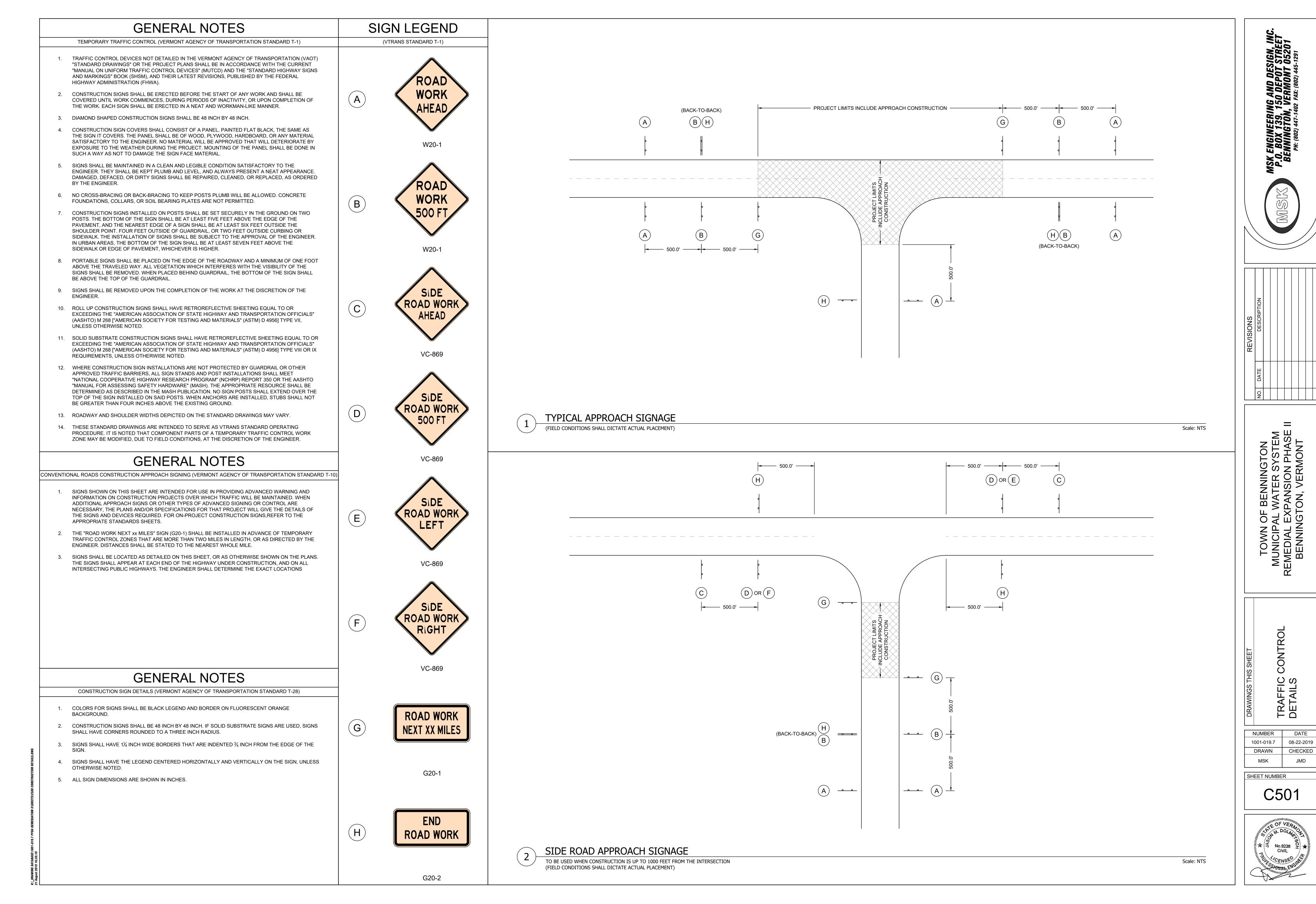
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LEGEND

MUTCD TABLE 6H-2: MEANING OF SYMBOLS ON TYPICAL APPLICATION DIAGRAMS

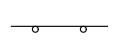
CHANNELIZING DEVICE



DIRECTION OF TRAFFIC



EL AGGEI



SIGN



WORK SPACE

TABLE 6H-3: MEANING OF LETTER CODES ON TYPICAL APPLICATION DIAGRAMS DISTANCE BETWEEN SIGNS ** A B C URBAN (LOW SPEED) * 100 FEET 100 FEET 100 FEET URBAN (HIGH SPEED) * 350 FEET 350 FEET 350 FEET RURAL 500 FEET 500 FEET 500 FEET

EXPRESSWAY/FREEWAY 1,000 FEET

SPEED CATEGORY TO BE DETERMINED BY HIGHWAY AGENCY

THE COLUMN HEADINGS A,B, AND C ARE THE DIMENSIONS SHOWN IN FIGURES 6H-3 AND 6H-10. THE DIMENSION A IS THE DISTANCE FROM THE TRANSITION, OR POINT OF RESTRICTION, TO THE FIRST SIGN. THE B DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS. THE C DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS. [THE "FIRST SIGN" IS THE SIGN IN A THREE-SIGN SERIES THAT IS CLOSEST TO THE TEMPORARY TRAFFIC CONTROL (TTC) ZONE. THE "THIRD SIGN" IS THE SIGN THAT IS LOCATED THE FURTHEST UPSTREAM FROM THE TTC ZONE.]

1,500 FEET

2,640 FEET

NOTES FOR FIGURE 6H-3: TYPICAL APPLICATION 3 "WORK ON THE SHOULDERS":

GUIDANCE

 A "SHOULDER WORK" SIGN SHOULD BE PLACED ON THE LEFT SIDE OF THE ROADWAY FOR A DIVIDED OR ONE-WAY STREET ONLY IF THE LEFT SHOULDER IS AFFECTED.

OPTION

- THE "WORKERS" SYMBOL SIGN MAY BE USED INSTEAD OF "SHOULDER WORK" SIGNS.
 THE "SHOULDER WORK AHEAD" SIGN ON AN INTERSECTING ROADWAY MAY BE OMITTED WHERE DRIVERS EMERGING FROM THAT ROADWAY WILL ENCOUNTER ANOTHER ADVANCED WARNING
- SIGN PRIOR TO THIS ACTIVITY AREA.

 4. FOR SHORT DURATION OPERATIONS OF 60 MINUTES OR LESS, ALL SIGNS AND CHANNELIZING DEVICES MAY BE ELIMINATED IF A VEHICLE WITH ACTIVATED HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS IS USED.
- 5. VEHICLE HAZARD WARNING SIGNALS MAY BE USED TO SUPPLEMENT HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

STANDARD

- 6. VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S
- HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

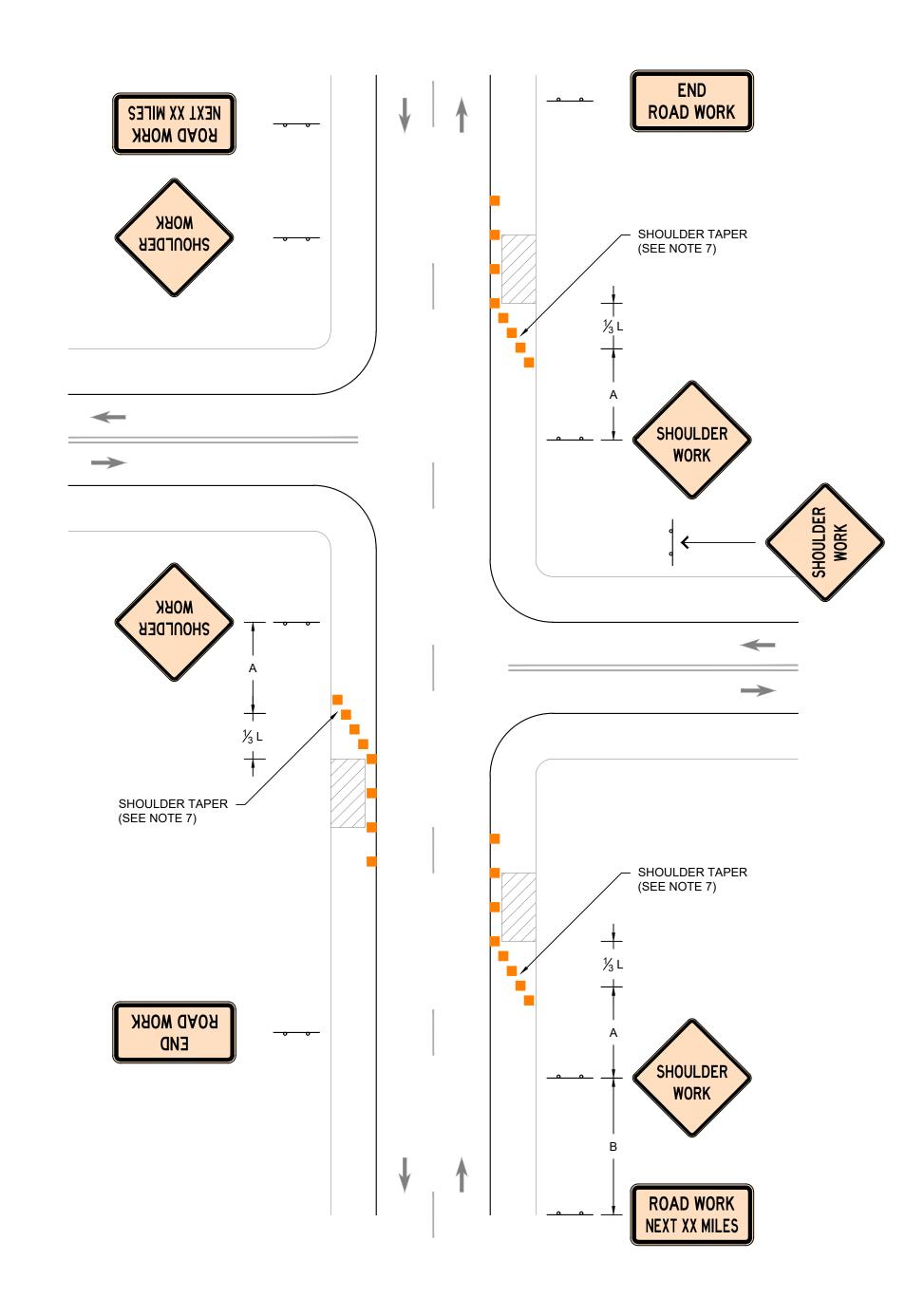
 7. WHEN PAVED SHOULDERS HAVING A WIDTH OF 8 FEET OR MORE ARE CLOSED, AT LEAST ONE ADVANCED WARNING SIGN SHALL BE USED. IN ADDITION, CHANNELIZING DEVICES SHALL BE USED TO CLOSE THE SHOULDER IN ADVANCE TO DELINEATE THE BEGINNING OF THE WORK SPACE AND DIRECT VEHICULAR TRAFFIC TO REMAIN WITHIN THE TRAVELED WAY.

TABLE 6H-4: FORMULAS FOR DETERMINING TAPER LENGTH							
SPEED (S)	TAPER LENGTH (L) IN FEET						
40 MPH OR LESS	$L = \frac{WS^2}{60}$						
45 MPH OR MORE	L = WS						

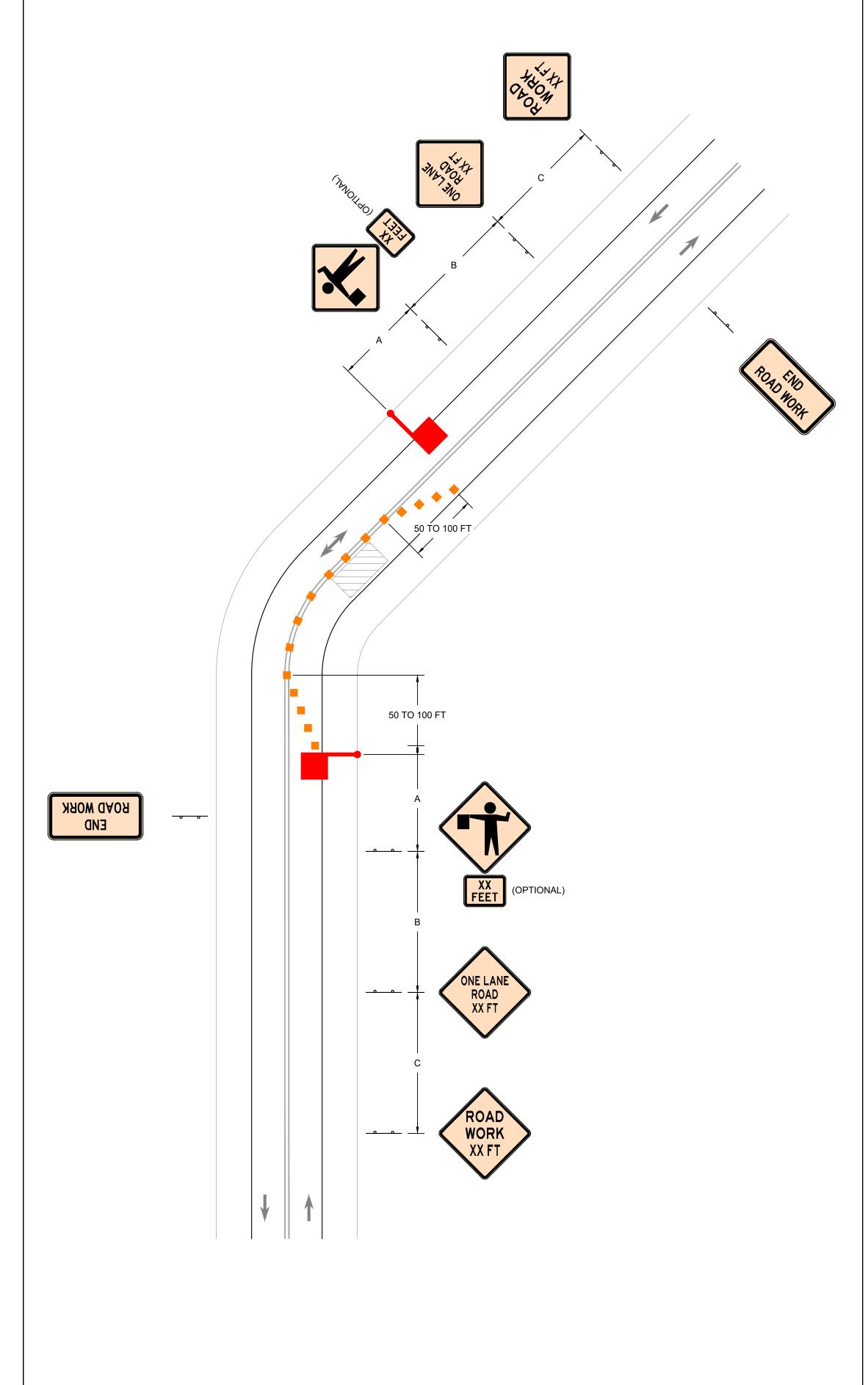
WHERE: L = TAPER LENGTH IN FEET

W = WIDTH OF OFFSET IN FEET

S = POSTED SPEED LIMIT, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH



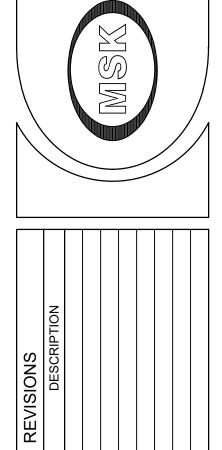




LANE CLOSURE ON TWO-LANE ROAD USING FLAGGERS (TA-10)

MUTCD FIGURE 6H-10: TYPICAL APPLICATION 10





TOWN OF BENNINGTON
MUNICIPAL WATER SYSTEM
REMEDIAL EXPANSION PHASE II
BENNINGTON, VERMONT

DETAILS

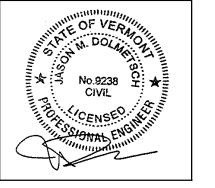
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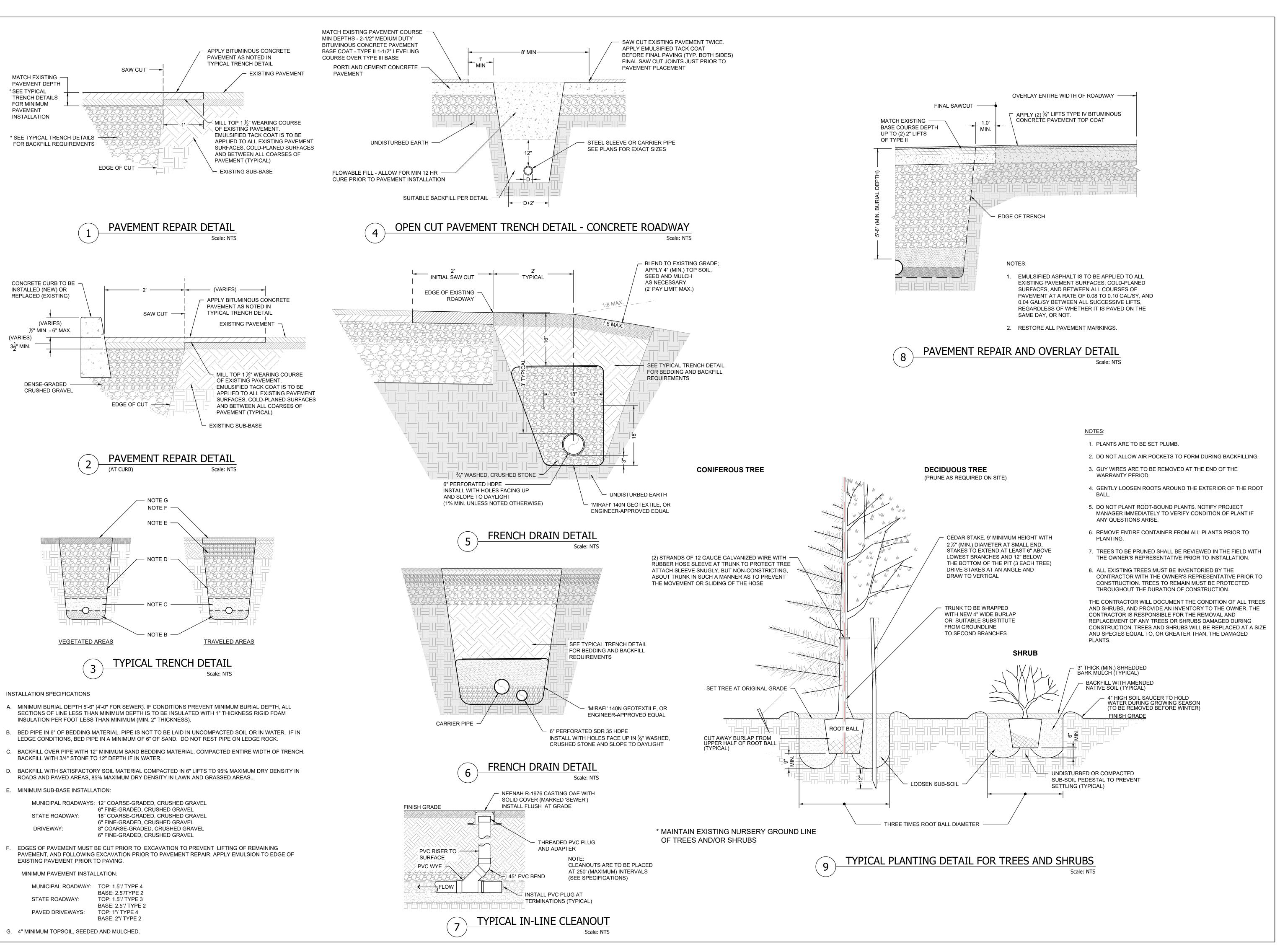
TRAFFIC CONTROL

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Scale: NTS





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DESCRIPTION

DESCRIPTION

TOWN OF BENNINGTON
MUNICIPAL WATER SYSTEM
REMEDIAL EXPANSION PHASE II
BENNINGTON, VERMONT

CONSTRUCTION

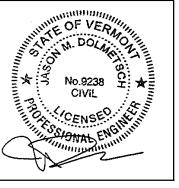
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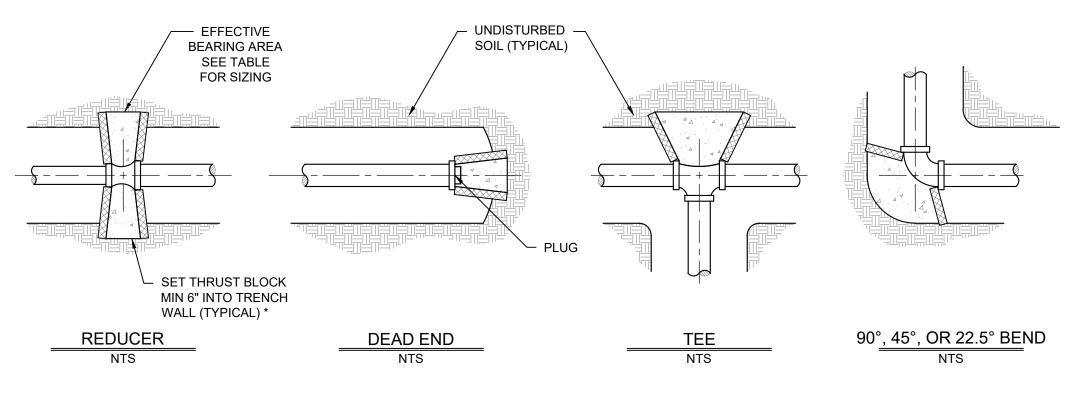
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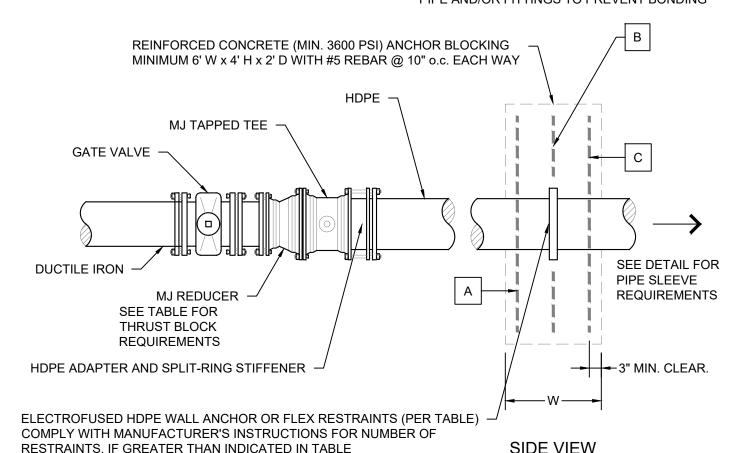
MINIMUM BEARING SURFACE AREA OF CONCRETE THRUST BLOCKS (IN SQUARE FEET)

R	EDUCEF	RS		4-	8"			10	0"			12	2"			SAFE
8x6	10x8	12x8	ENDS AND TEES	90° ELB	45° ELB	22.5° OR LESS	ENDS AND TEES	90° ELB	45° ELB	22.5° OR LESS	ENDS AND TEES	90° ELB	45° ELB	22.5° OR LESS	SOIL CONDITION	BEARING LOAD (PSF)
3.0	5.0	6.0	4.0	6.0	3.0	2.0	6.0	8.0	5.0	2.0	8.0	12.0	6.0	3.0	SOUND SHALE	10000
3.0	5.0	6.0	4.5	6.5	3.5	2.0	8.0	11.0	6.0	3.0	10.0	14.0	7.5	4.0	CEMENTED GRAVEL AND SAND	4000
7.0	7.0	11.0	7.0	9.0	5.0	3.0	10.0	14.0	7.0	4.0	14.0	19.0	11.0	5.0	COARSE AND FINE COMPACT SAND	3000
8.0	9.0	14.0	15.0	20.0	10.0	5.0	21.0	31.0	15.0	8.0	30.0	40.0	20.0	10.0	MEDIUM CLAY (CAN BE SPADED)	2000
8.0	11.0	16.0	20.0	28.0	15.0	8.0	29.0	41.0	22.0	11.0	41.0	58.0	31.0	16.0	SOFT CLAY	1000
MAXI	MAXIMUM WATER PRESSURE 300 PSI															

* THRUST BLOCKS ARE NOT REQUIRED AT REDUCERS OF ONE PIPE DIAMETER OR LESS ** ALL THRUST BLOCKS ARE TO BE FORMED WITH 2" RIGID FOAM INSULATION TO MEET MINIMUM BEARING SURFACE AREA. NON-FORMED THRUST BLOCKS WILL NOT BE PERMITTED.

TYPICAL CONCRETE THRUST BLOCK DETAIL

1. PLACE 3 MIL MINIMUM POLYETHYLENE SHEETING BETWEEN ALL CONCRETE THRUST BLOCKS AND PIPE AND/OR FITTINGS TO PREVENT BONDING



KAIN	15, IF GREA	<u> </u>	NIDE VIEV	<u>v</u>				
	THRUST A	DEAD END AT 200 PSI RESSURE	UNDISTURBED SOIL BEARING LOAD BEARING LOAD		MINIMUM WIDTH "W"	APPROXIMATE CONCRETE VOLUME		
	HDPE NOMINAL PIPE SIZE (INCHES)	TOTAL THRUST (LBS)	AREA (SQ FT)	(LB/ SQ FT)	(INCHES)	CUBIC FT	CUBIC YARDS	
	4	2,130	15	142	10	20	0.74	
	6	4,616	15	308	10	20	0.74	
	8	7,823	15	522	12	24	0.89	
	10	12,153	15	810	12	24	0.89	

1,140

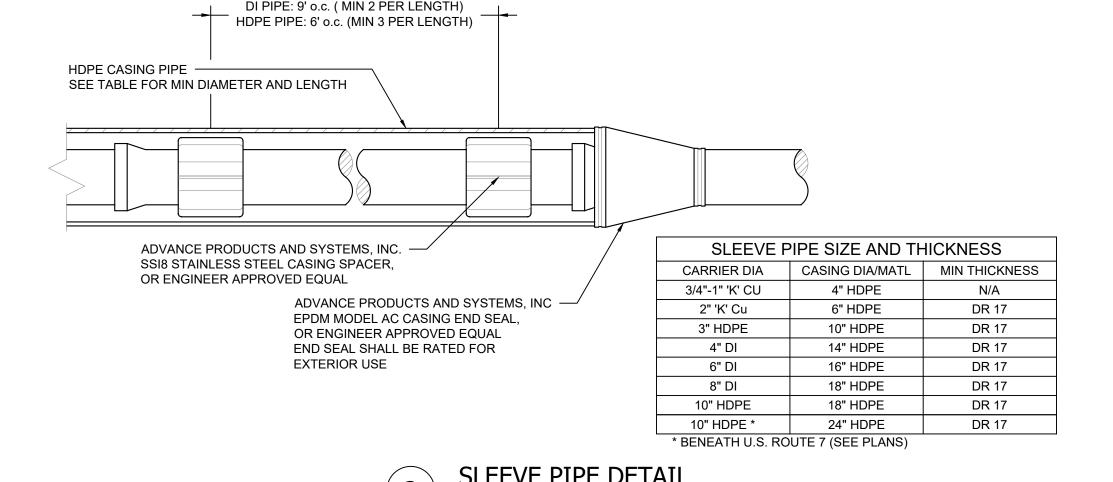
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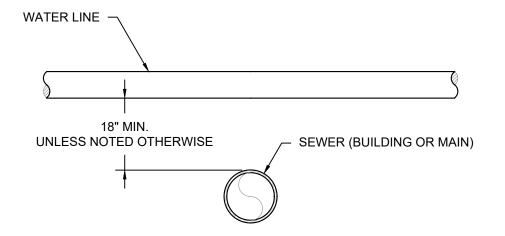
- 1. INSTALL (2) EXTRA HIGH-STRENGTH # 12 14 AWG SOLID COPPER TRACER WIRE WITH BLUE 30 mil INSULATION. CONNECT AT DUCTILE IRON PIPE, RUN ABOVE HDPE, AND IN SLEEVE. TRACER WIRE TO BE ELECTRICALLY CONTINUOUS TO BOTH ENDS OF HDPE, AND BONDED TO DUCTILE IRON.
- 2. FLEX RESTRAINTS MUST BE RATED AT 8,000 LBS OF FORCE OR HIGHER
- 3. WHEN DIRECTED BY THE ENGINEER, THE CONCRETE ANCHOR BLOCK SIZE MAY BE ADJUSTED, BASED ON SOIL CLASSIFICATION AND PIPE DIAMETER
- 4. ENGINEER TO CONFIRM ADEQUATE SOIL PRESSURE BEARING CAPACITY FOR CONCRETE ANCHOR BLOCKING
- 5. REINFORCEMENT NOTES
- a. FOR 4 TO 10 INCH PIPE, PLACE ONE MAT OF #5 REBAR AT LOCATION "B" AS SHOWN ON DIAGRAM
- b. FOR 12 INCH PIPE, PLACE TWO MATS OF #5 REBAR, ONE AT LOCATION "A" AND ONE AT LOCATION "C" AS SHOWN ON THE DIAGRAM

MINIMUM NUMBER OF FLEX RESTRAINTS BY PIPE SIZE					
HDPE NOMINAL PIPE SIZE (INCHES)	NUMBER OF FLEX RESTRAINTS				
4 THROUGH 8	2				
10 THROUGH 12	3				

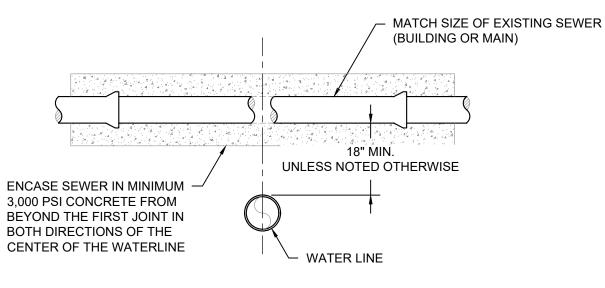
TYPICAL HDPE TRANSITION DETAIL Scale: NTS

14 28 1.04

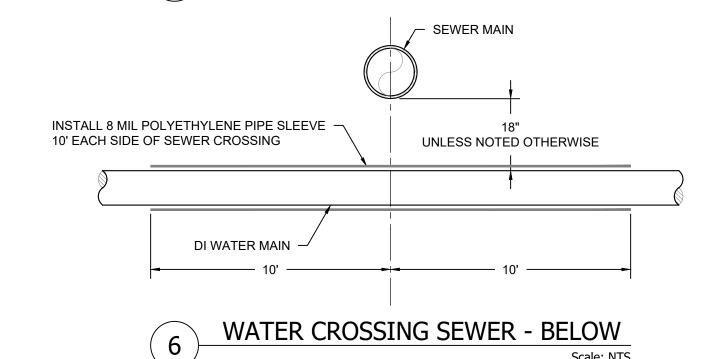


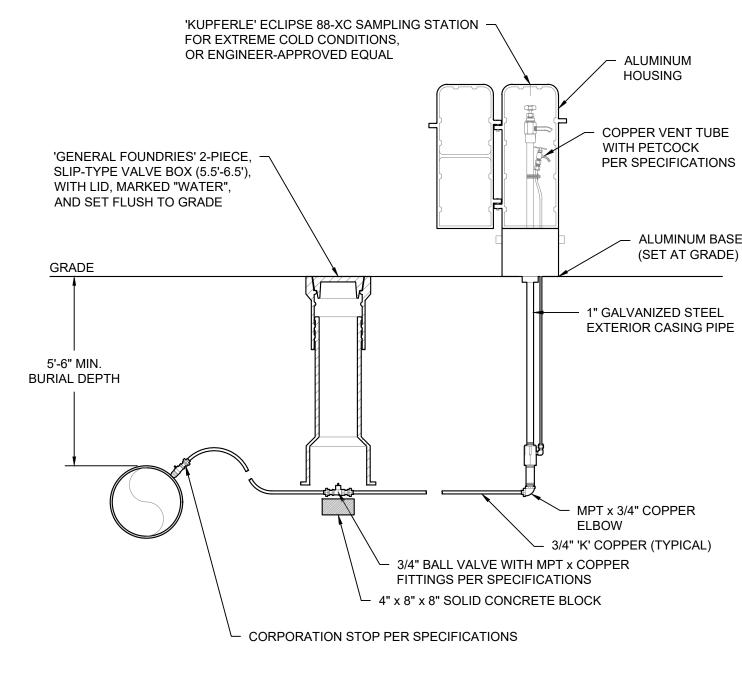


WATER CROSSING SEWER - ABOVE



WATER CROSSING SEWER - BELOW Scale: NTS



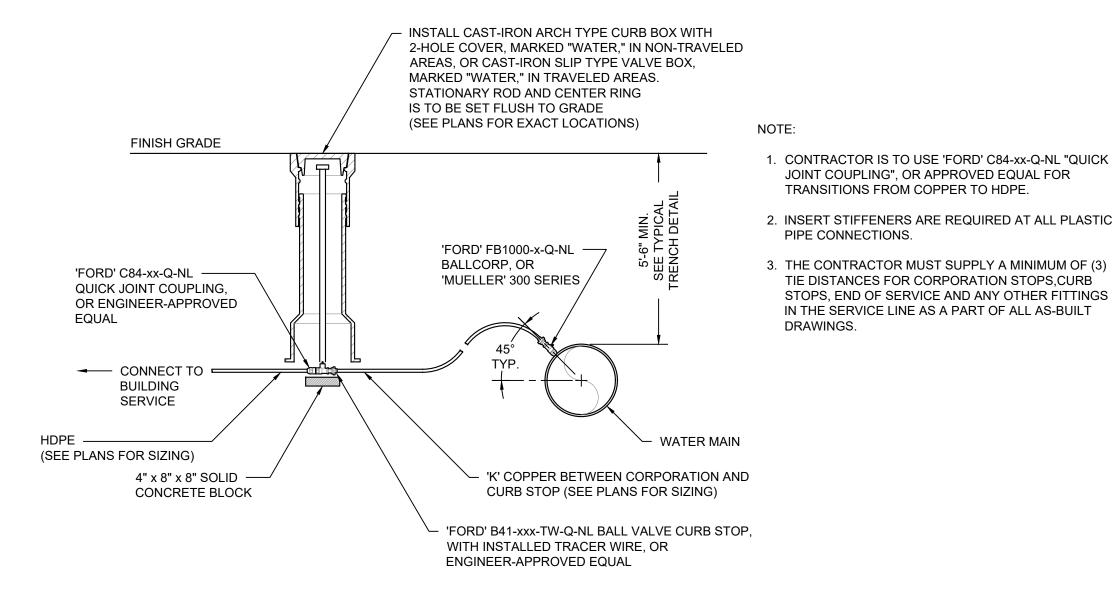


TYPICAL SAMPLING STATION DETAIL

- SAMPLING STATIONS ARE TO HAVE A 5'-6" MINIMUM BURIAL DEPTH, WITH 3/4" FIP INLET AND 3/4" HOSE OR UNTHREADED NOZZLE
- ALL STATIONS ARE TO BE ENCLOSED IN A LOCKABLE, NON-REMOVABLE ALUMINUM-CAST HOUSING, AND ARE TO INCLUDE THE MANUFACTURER'S VACUUM PUMP SYSTEM
- WHEN OPENED, THE STATION MUST REQUIRE NO KEY FOR OPERATION, AND THE WATER WILL FLOW IN AN ALL BRASS WATERWAY
- ALL WORKING PARTS WILL ALSO BE OF BRASS AND BE REMOVABLE FROM ABOVE GROUND WITH
- EXTERIOR PIPING ARE TO BE BRASS OR GALVANIZED

NO DIGGING

- A COPPER VENT TUBE WILL ENABLE EACH STATION TO BE PUMPED FREE OF STANDING WATER TO PREVENT FREEZING AND TO MINIMIZE THE GROWTH OF BACTERIA
- THE ECLIPSE No. 88-XC SAMPLING STATION, FOR EXTREME COLD CONDITIONS, WILL BE MANUFACTURED BY KUPFERLE FOUNDRY, ST. LOUIS, MO 63102



TYPICAL CURB STOP

VALVE BOX AND COVER (MARKED "WATER")

LOCATE 6' FROM EDGE OF ROADWAY

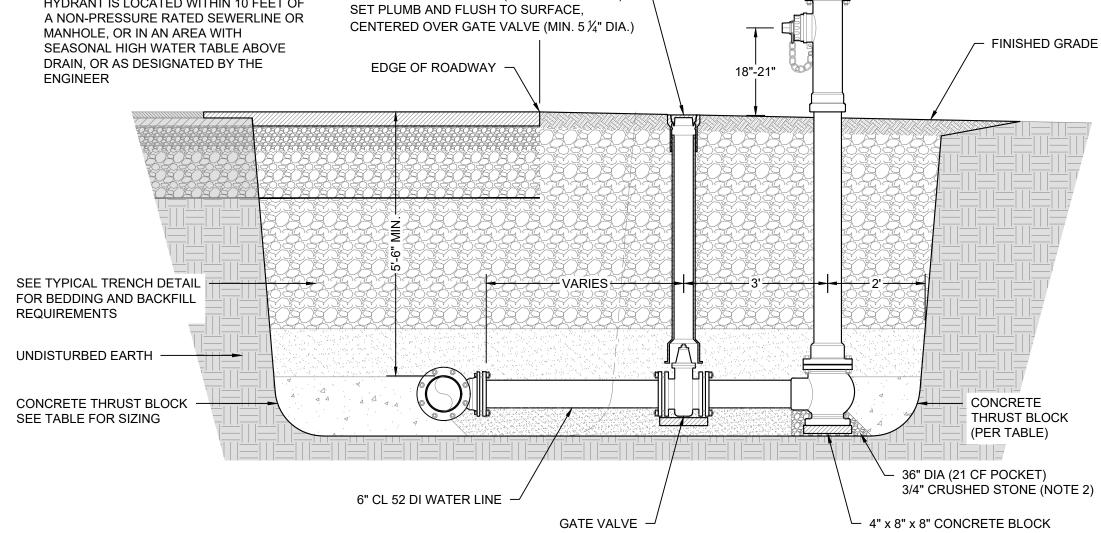
IN MUNICIPAL RIGHT-OF-WAYS AND

10' IN STATE RIGHT-OF-WAYS (TYPICAL)

1. ALL MECHANICAL JOINT FITTINGS ARE TO HAVE "MEGALUG" RETAINER GLANDS

NOTES:

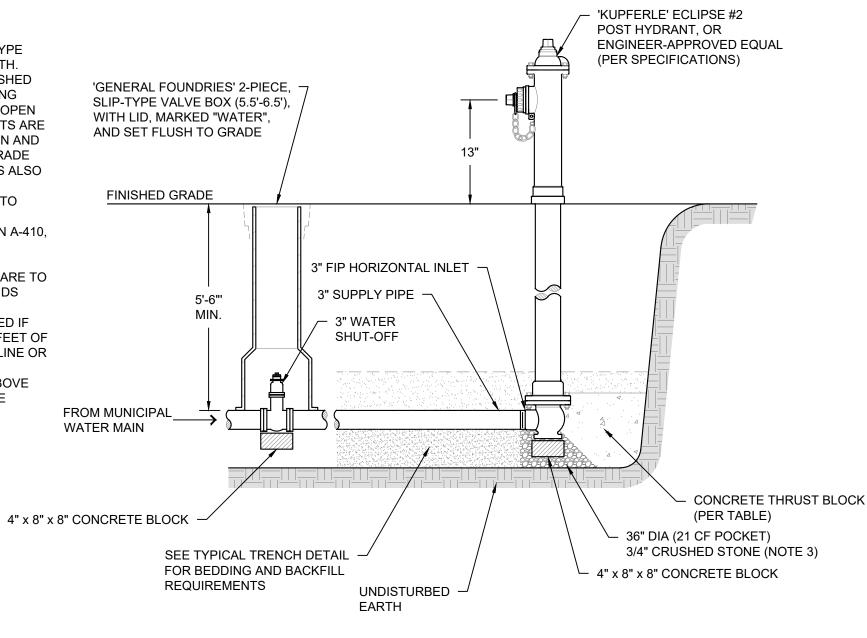
2. HYDRANT DRAIN MUST BE PLUGGED IF HYDRANT IS LOCATED WITHIN 10 FEET OF A NON-PRESSURE RATED SEWERLINE OR MANHOLE, OR IN AN AREA WITH SEASONAL HIGH WATER TABLE ABOVE DRAIN, OR AS DESIGNATED BY THE **ENGINEER**



HYDRANT ASSEMBLY DETAIL

NOTES:

- 1. POST HYDRANTS ARE TO BE NON-FREEZING, SELF-DRAINING TYPE WITH A 5'-6" MINIMUM BURIAL DEPTH. THESE HYDRANTS WILL BE FURNISHED WITH A 3" FIP INLET, A NON-TURNING OPERATING ROD, AND ARE TO BE OPEN TO THE RIGHT. ALL WORKING PARTS ARE TO BE BRONZE TO BRONZE DESIGN AND BE SERVICEABLE FROM ABOVE GRADE WITHOUT DIGGING. THE OUTLET IS ALSO TO BE BRONZE AND BE 2 ½" NST. HYDRANTS ARE TO BE LOCKABLE TO PREVENT UNAUTHORIZED USE AS MANUFACTURED BY MUELLER., P/N A-410, OR APPROVED EQUAL.
- 2. ALL MECHANICAL JOINT FITTINGS ARE TO HAVE "MEGALUG" RETAINER GLANDS
- 3. HYDRANT DRAIN MUST BE PLUGGED IF HYDRANT IS LOCATED WITHIN 10 FEET OF A NON-PRESSURE RATED SEWERLINE OR MANHOLE, OR IN AN AREA WITH SEASONAL HIGH WATER TABLE ABOVE DRAIN, OR AS DESIGNATED BY THE **ENGINEER**





TRANSITIONS FROM COPPER TO HDPE.

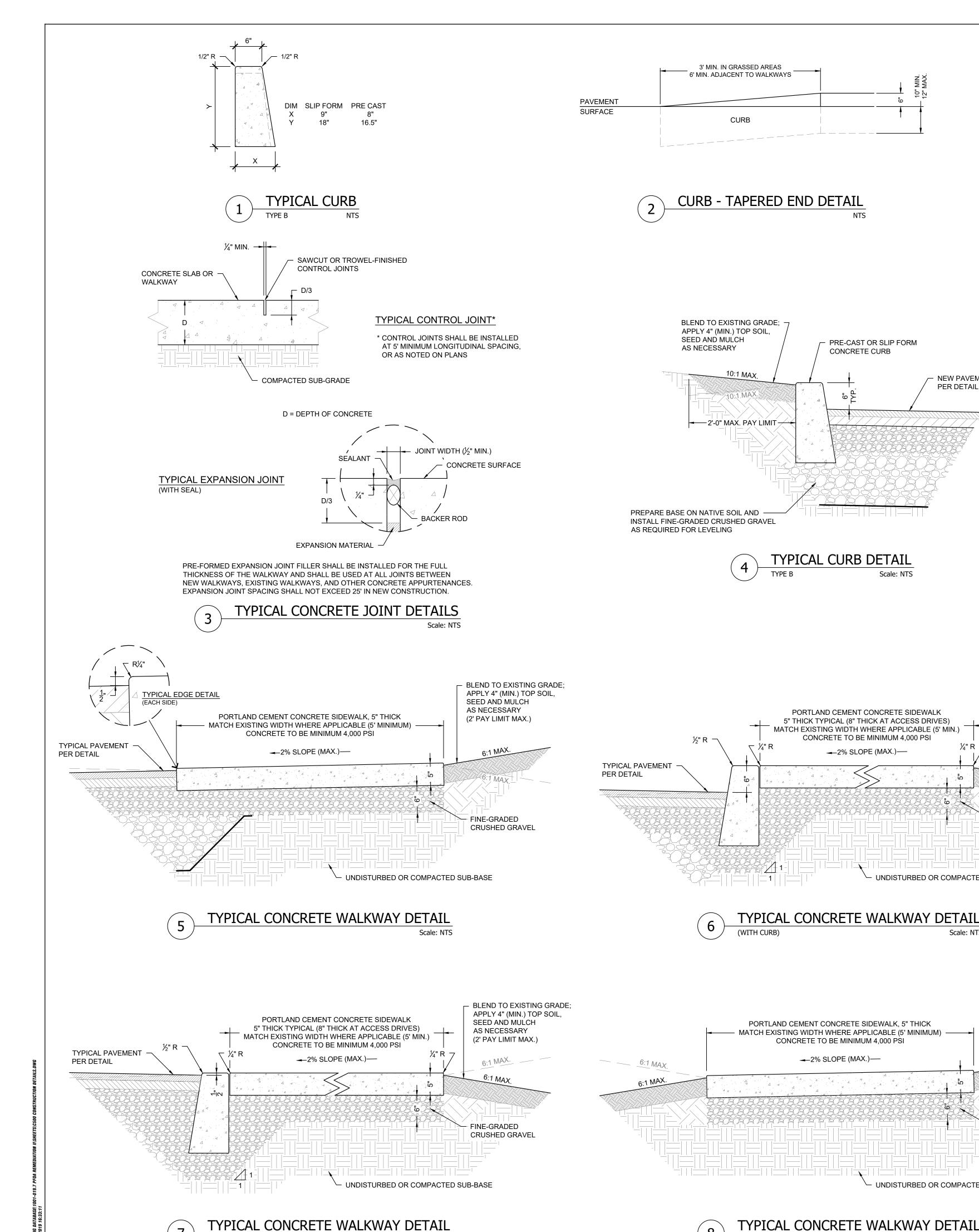
HYDRANT ASSEMBLY

PER SPECIFICATIONS

NUMBER DATE 1001-019.7 08-22-2019 DRAWN CHECKED JMD

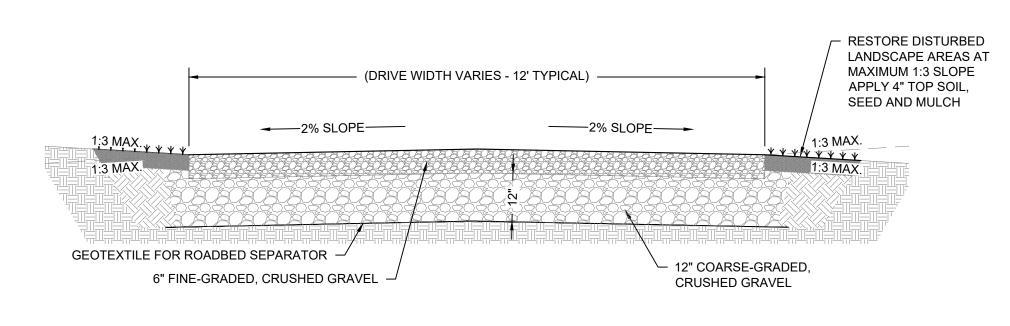
SHEET NUMBER C504



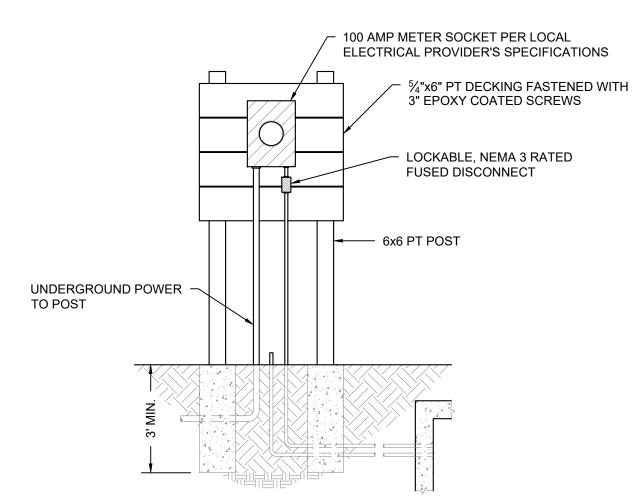


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(WITH FLUSH CURB)

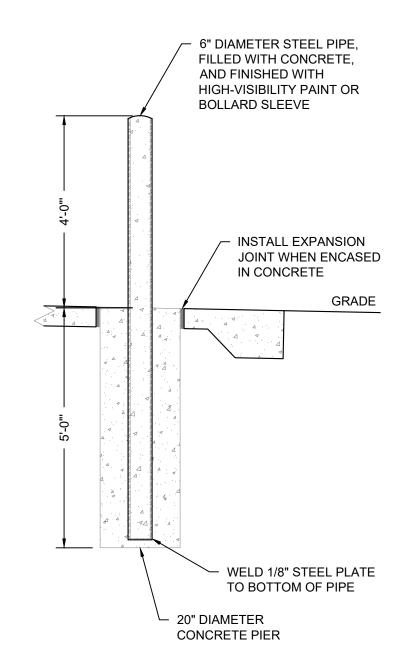


TYPICAL GRAVEL DRIVE



SITE ELECTRICAL NOTES:

- CONTRACTOR TO SUPPLY ALL ELECTRICAL MATERIALS AND LABOR FROM POWER COMPANY'S UTILITY POLE INTO VAULT'S CB PANEL AND TERMINATION INSIDE PANEL
- SITE CONTRACTOR IS RESPONSIBLE FOR STATE ELECTRICAL PERMITS; COORDINATION WITH POWER COMPANY (ANY POWER COMPANY CHARGES TO BE PAID BY OWNER)
- ALL WORK AND MATERIALS TO COMPLY WITH IAW NFPA 70, STATE ELECTRICAL CODE, AND POWER COMPANY SPECIFICATIONS/REQUIREMENTS



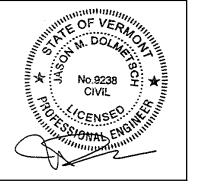
BOLLARD DETAIL Scale: NTS

NUMBER 1001-019.7

DATE 08-22-2019 DRAWN CHECKED

SHEET NUMBER

C505



TYPICAL CONCRETE WALKWAY DETAIL

NEW PAVEMENT

BLEND TO EXISTING GRADE;

APPLY 4" (MIN.) TOP SOIL,

SEED AND MULCH

AS NECESSARY

FINE-GRADED

- UNDISTURBED OR COMPACTED SUB-BASE

UNDISTURBED OR COMPACTED SUB-BASE

CRUSHED GRAVEL

- BLEND TO EXISTING GRADE;

APPLY 4" (MIN.) TOP SOIL,

SEED AND MULCH

(2' PAY LIMIT MAX.)

AS NECESSARY

6:1 MAX.

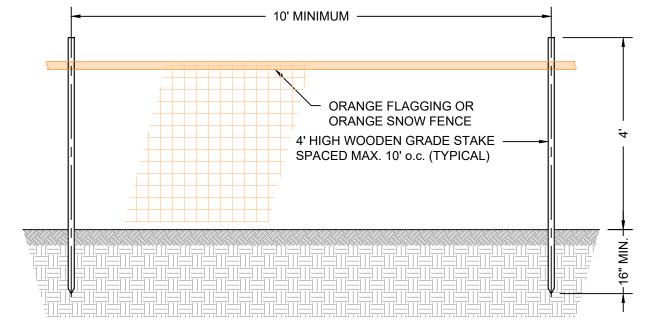
FINE-GRADED

CRUSHED GRAVEL

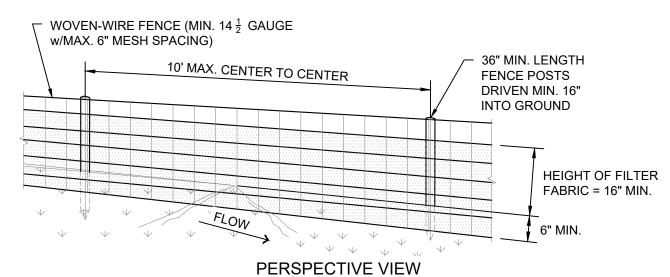
(2' PAY LIMIT MAX.)

PER DETAIL

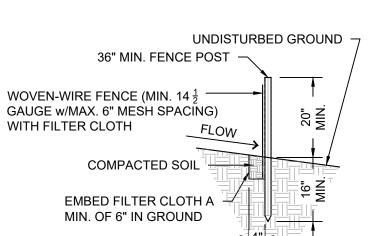
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CONSTRUCTION SPECIFICATIONS



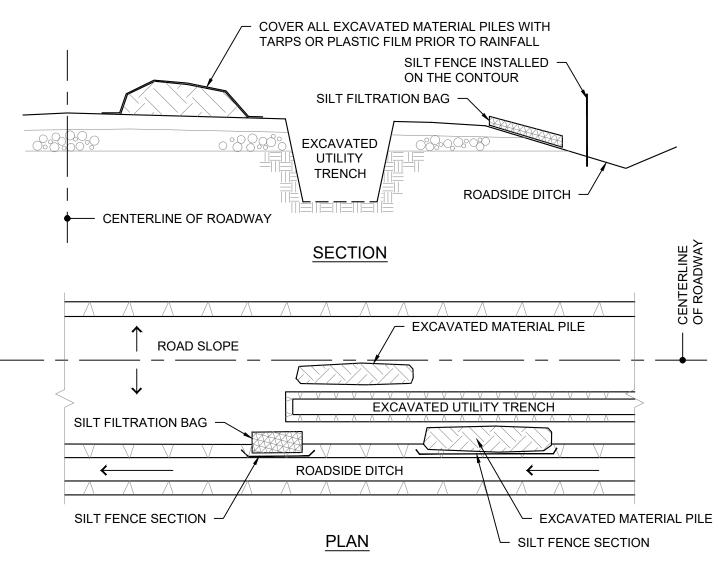
SECTION VIEW

- 1. WOVEN-WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL, EITHER "T" OR "U" TYPE, OR HARDWOOD.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN-WIRE FENCE WITH TIES, SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN-WIRE, 6" MAXIMUM MESH OPENING.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER- LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, 'MIRAFI' 100X, 'STABILINKA' T140N, OR APPROVED EQUIVALENT.
- 4. PRE-FABRICATED UNITS SHALL BE 'GEOFAB', 'ENVIROFENCE', OR APPROVED EQUIVALENT.
- 5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.



GENERAL NOTES

- 1. THIS PROJECT IS PERMITTED UNDER AN INDIVIDUAL STORMWATER CONSTRUCTION PERMIT.
- 2. SOIL DISTURBANCE IS TO BE LIMITED TO FIVE ACRES, OR LESS, AT ANY ONE TIME.
- 3. THE OSPC IS RESPONSIBLE FOR ALL SITE INSPECTIONS AND AMENDING THE EROSION PROTECTION AND SEDIMENT CONTROL (EPSC) PLAN.
- 4. INSPECTIONS TO BE CONDUCTED EVERY 7 DAYS AND WITHIN 24 HOURS OF STORM EVENTS RESULTING IN STORMWATER DISCHARGE FROM THE PROJECT SITE.
- 5. THE OSPC MUST COMPLETE THE VTDEC FORM "CGP-9020 INSPECTION
- 6. AT THE END OF EACH WORK DAY:
- GRADED AREAS ARE TO DRAIN TOWARD SWALES.
- EXCAVATED AREAS SHALL BE SELF-CONTAINED AND BE OF A DEPTH OF TWO FEET OR GREATER.
- MATERIAL SHALL NOT BE LEFT STOCKPILED, EXCEPT WITHIN STAGING AREAS, AND SHALL BE STABILIZED.
- 7. ALL TRENCH DEWATERING ACTIVITIES MUST BE DISCHARGED INTO
- 8. ADEQUATE STABILIZATION MATERIAL IS TO BE STORED ON SITE AT ALL
- 9. THE WINTER CONSTRUCTION SEASON IS DEFINED AS THE PERIOD FROM OCTOBER 15 THROUGH APRIL 15.
- 10. ALL SEEDING IS TO OCCUR BEFORE SEPTEMBER 15 OR SUITABLE ROLLED EROSION CONTROL PRODUCTS (RECP) SHALL BE USED.
- 11. WORK PERFORMED BELOW THE ORDINARY HIGH WATER (OHW) LEVEL SHALL BE COMPLETED IN ACCORDANCE WITH THE ARMY CORP GENERAL PERMIT AND THE STATE OF VERMONT STREAM ALTERATION PERMIT AND IS NOT COVERED UNDER THE STORMWATER CONSTRUCTION PERMIT.
- 12. ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY OR PERMANENT STABILIZATION WITHIN 7 DAYS OF THE INITIAL DISTURBANCE. AFTER THIS TIME, ANY DISTURBANCE IN THE AREA MUST BE STABILIZED AT THE END OF EACH WORK DAY. THE FOLLOWING EXCEPTIONS APPLY:
- STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST WITHIN THE SAME 24 HOUR TIME PERIOD.
- STABILIZATION NOT REQUIRED IF THE WORK IS OCCURRING WITHIN A SELF-CONTAINED EXCAVATION WITH A DEPTH OF TWO FEET OR GREATER.



CONSTRUCTION SPECIFICATIONS

- 1. UTILITY TRENCH EXCAVATION NOT TO EXCEED 500 LINEAR FEET OF OPEN TRENCH AT ANY ONE TIME.
- 2. EXCAVATED SOIL MATERIAL SHOULD BE PLACED ON UPHILL SIDE, BUT NOT ON THE EDGE, OF THE TRENCH. ENCIRCLE PILES WITH SILT FENCE SECTIONS IF EXCAVATED MATERIAL IS ON THE DOWNHILL SIDE OF TRENCH.
- 3. TRENCH DEWATERING ACTIVITIES MUST DISCHARGE INTO A SILT FILTRATION BAG OF WOVEN OR NON-WOVEN GEOTEXTILE. CONTRACTOR TO MONITOR BAG THROUGHOUT PUMPING OPERATIONS. SILT FENCE SECTION TO SURROUND DOWN SLOPE SIDE OF SILT FILTRATION BAG, DO NOT BLOCK FLOW OF RUNOFF WITHIN THE DITCH.
- EXCAVATED SOIL FROM TRENCH MUST BE PREVENTED FROM MIGRATING INTO ADJACENT PROPERTY, CATCH BASINS, ROADSIDE DITCHES, OR RECEIVING WATERS. IF EXCAVATED SOIL MIGRATES, CLEAN UP IMMEDIATELY.
- MATERIAL STOCKPILES TO BE ENCLOSED WITH SILT FENCE SECTIONS, TO BE ACCESSED FROM PAVEMENT OVER A STONE TRACKING PAD, AND TO BE LOCATED MORE THAN 50 FEET FROM ANY RECEIVING WATERS.
- 6. EXCAVATED SOIL FROM THE TRENCH TO BE COMPLETELY COVERED BY TARPS OR PLASTIC FILM DURING ALL RAINFALL EVENTS AND AT ANY TIME CONSTRUCTION ACTIVITIES ARE SUSPENDED DUE TO THE WEATHER.
- 7. ACCUMULATED SOIL ON PAVEMENT TO BE SWEPT PRIOR TO ALL FORECASTED RAINFALL EVENTS. ROADWAY TO BE SWEPT AT END OF THE WORK DAY IF TRENCH EXCAVATION IS WITHIN 50' OF ANY RECEIVING WATER.
- 8. WITHIN 24 HOURS OF BACKFILLING ANY TRENCH SECTION ON EXISTING PAVEMENT, A MINIMUM 6" LAYER OF COMPACTED SUB-BASE GRAVEL SHALL BE PLACED AS THE TOP COURSE OF MATERIAL. IF TRENCH IS WITHIN AN UNPAVED AREA, HAY OR STRAW MULCH MATERIAL AND GRASS SEED SHALL BE PLACED OVER DISTURBED AREAS WITHIN 24 HOURS OF BACKFILLING TRENCH SECTION. SEEDING TO BE TEMPORARY OR PERMANENT.



TYPICAL UTILITY TRENCH INSTALLATION DETAIL

EROSION PREVENTION/SEDIMENT CONTROL (EPSC) NOTES

- SEDIMENT BASINS/TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS,S STABILIZED CONSTRUCTION ENTRANCES, AND OTHER MEASURES CONSTRUCTED AS THE INITIAL STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
- 2. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME, OR SLOPE DRAIN STRUCTURE.
 - WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED AND SHALL CONVEY CLEAN RUNOFF IN A NON-EROSIVE MANNER TO AN OUTLET.
 - BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE AND RECEIVING CHANNEL.
- 5. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THESE STANDARDS AND OTHER APPLICABLE CRITERIA: NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME; EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES;
- 6. ALL SEDIMENT REMOVED FROM SEDIMENT CONTROL PRACTICES AS A PART OF MAINTENANCE SHALL BE DISPOSED OF IN AN AREA THAT IS: LESS THAN 5% IN SLOPE AND SUFFICIENTLY VEGETATED; A MIN. 100 FT FROM ANY DOWNSLOPE WATER BODY OR CONVEYANCE TO A WATER BODY (STORM DRAIN INLET OR DITCH); PERMANENTLY STABILIZED IMMEDIATELY AFTER DISPOSAL.
- 7. DISTURBED AREAS BORDERING AND DRAINING TO ANY ROADWAY MUST HAVE AN APPROPRIATE SEDIMENT BARRIER SPANNING THE DISTURBANCE EDGE TO PREVENT MIGRATION OF SEDIMENT.
- ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY OR PERMANENT STABILIZATION WITHIN 14 DAYS OF THE INITIAL DISTURBANCE. AFTER THIS TIME, ANY DISTURBANCE IN THE AREA MUST BE STABILIZED AT THE END OF EACH WORK DAY. THE
- A. STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE SAME AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS.
- B. STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION (I.E. NO OUTLET) WITH 2 FT OR GREATER DEPTH (E.G. FOUNDATION EXCAVATION, UTILITY TRENCHES).
- MAINTENANCE MUST BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. EXCEPT AS NOTED BELOW, ALL SITES SHALL BE SEEDED AND STABILIZED WITH EROSION CONTROL MATERIALS, SUCH AS MULCH OR ROLLED EROSION CONTROL PRODUCTS, INCLUDING AREAS WHERE CONSTRUCTION HAS BEEN SUSPENDED OR SECTIONS COMPLETED:
- A. ON THE CUT SIDE OF ROADS, DITCHES SHALL BE STABILIZED IMMEDIATELY WITH ROCK RIP-RAP OR OTHER NON-ERODIBLE LINERS (E.G. RECP), OR IF APPROPRIATE, VEGETATIVE MEASURES (SOD).
- B. FOR ACTIVE CONSTRUCTION AREAS SUCH AS BORROW OR STOCKPILE AREAS, ROADWAY IMPROVEMENTS AND AREAS WITHIN 50 FT. OF A BUILDING UNDER CONSTRUCTION, A PERIMETER SEDIMENT CONTROL SYSTEM CONSISTING, FOR EXAMPLE, OF SILT FENCING, SHALL BE INSTALLED AND MAINTAINED TO CONTAIN SOIL. EXPOSED DISTURBED AREAS ADJACENT TO A CONVEYANCE THAT PROVIDES RAPID OFFSITE DISCHARGE OF SEDIMENT, SUCH AS A CUT SLOPE AT AN ENTRANCE, SHALL BE COVERED WITH PLASTIC OR GEOTEXTILE TO PREVENT SOIL LOSS UNTIL STABILIZED. STABILIZED CONSTRUCTION ENTRANCES WILL BE MAINTAINED TO CONTROL VEHICLE TRACKING MATERIAL OFF SITE.
- C. PERMANENT SEEDING SHALL ONLY BE UNDERTAKEN IN THE SPRING FROM APRIL THROUGH MAY, AND IN LATE SUMMER AND EARLY FALL UNTIL SEPTEMBER 15, EXCEPT THAT PERMANENT SEEDING MAY BE UNDERTAKEN DURING THE SUMMER IF PLANS PROVIDE FOR ADEQUATE WATERING. DURING THE PEAK SUMMER MONTHS AND AFTER SEPTEMBER 15, IF SEEDING IS FOUND TO BE IMPRACTICABLE, AN APPROPRIATE TEMPORARY STABILIZATION IS STRAW/HAY MULCH OR WOODCHIPS.
- D. TEMPORARY SEDIMENT TRAPPING DEVICES SHALL NOT BE REMOVED UNTIL PERMANENT STABILIZATION IS ESTABLISHED IN ALL CONTRIBUTORY DRAINAGE AREAS. SIMILARLY, STABILIZATION OF CONTRIBUTING DRAINAGE AREAS SHALL BE ESTABLISHED PRIOR TO CONVERTING SEDIMENT TRAPS/ BASINS INTO PERMANENT (POST-CONSTRUCTION) STORMWATER MANAGEMENT PRACTICES.
- E. STABILIZATION MEASURES, TEMPORARY OR PERMANENT, SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
- F. UPON COMPLETION, ALL SLOPES STEEPER THAN 3:1 (H:V) OR 33.3%, PERIMETER DIKE/SWALES, SEDIMENT BASINS OR TRAPS, AND EMBANKMENTS SHALL BE IMMEDIATELY STABILIZED WITH SOD, SEED & ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES (RECP). AREAS OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM SHALL NOT BE DISTURBED.
- 10. IN ADVANCE OF A PREDICTED RAINFALL OR SNOWMELT EVENT, ALL MANAGEMENT PRACTICES APPROPRIATE TO CURRENT AREAS OF DISTURBANCE MUST BE INSPECTED AND REPAIRED AS NECESSARY TO ENSURE PROPER OPERATING CONDITION. IF NECESSARY TO PREVENT SEDIMENT DISCHARGE FROM THE CONSTRUCTION SITE TO WATERS OF THE STATE, THIS WILL INCLUDE TEMPORARY STABILIZATION OF ALL DISTURBED SOILS ON THE SITE IN ADVANCE OF THE ANTICIPATED RUNOFF PERIOD.
- 11. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER TEMPORARY MEASURES ARE NO LONGER NEEDED.

REQUIREMENTS FOR WINTER SHUTDOWN

FOLLOWING EXCEPTIONS APPLY:

FOR PROJECTS COMPLETING EARTH DISTURBANCE ACTIVITIES PRIOR TO THE BEGINNING OF THE WINTER PERIOD (OCTOBER 15), THE FOLLOWING ARE REQUIREMENTS OF THE EPSC PLAN:

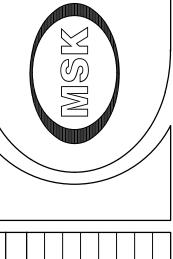
- 1. FOR AREAS TO BE STABILIZED BY VEGETATION, SEEDING TO BE COMPLETED NO LATER THAN SEPTEMBER 15TH TO ENSURE ADEQUATE GROWTH AND COVER PRIOR TO THE WINTER PERIOD.
- 2. FOR AREAS TO BE STABILIZED BY NONVEGETATIVE METHODS, STABILIZATION OF THESE AREAS OF DISTURBANCE WITHOUT VEGETATIVE COVER MUST OCCUR NO LATER THAN OCTOBER 15TH.
- 3. FOR AREAS TO BE STABILIZED BY MULCH, DOUBLE THE REGULAR COVERAGE RATE, OR ROUGHLY 2 INCHES OF STRAW/HAY MULCH WITH 100% COVERAGE, WILL BE APPLIED ON ALL DISTURBANCES. MULCH WILL BE ANCHORED TO PREVENT MIGRATION OF MATERIAL THROUGHOUT THE WINTER PERIOD.

REQUIREMENTS FOR WINTER CONSTRUCTION

FOR PROJECTS INVOLVING EARTH DISTURBANCE WITHIN THE WINTER PERIOD (AFTER OCTOBER 15 AND BEFORE APRIL 15), THE FOLLOWING ARE REQUIREMENTS OF THE EPSC PLAN:

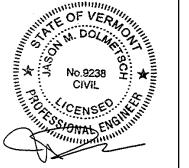
- ENLARGE ACCESS ROUTES TO ACCOMMODATE SNOW REMOVAL ACTIVITY, STABILIZE WITH STONE.
- LIMIT OF DISTURBANCE MOVED/REPLACED TO REFLECT BOUNDARY OF ANTICIPATED WINTER WORK.
- 3. A SNOW MANAGEMENT PLAN INCLUDING ADEQUATE STORAGE LOCATIONS AND CONTROL OF SNOWMELT, REQUIRING CLEARED SNOW TO BE STORED DOWN GRADIENT OF ALL AREAS OF EARTH DISTURBANCE AND PROHIBITING STORAGE OF SNOW WITHIN STORMWATER TREATMENT STRUCTURES.
- 4. A MINIMUM 25 FOOT BUFFER TO BE MAINTAINED FROM PERIMETER CONTROLS SUCH AS SILT FENCE, TEMPORARY SWALES OR PERIMETER DIKES TO ALLOW FOR SNOW CLEARING/MAINTENANCE.
- 5. IN AREAS OF DISTURBANCE WITHIN 100 FT OF A RECEIVING WATER, SILT FENCE TO BE REINFORCED OR USED WITH PERIMETER DIKES OR OTHER PRACTICES RESISTANT TO THE FORCES OF SNOW LOADS.
- 6. DRAINAGE STRUCTURES TO BE MONITORED TO REMAIN OPEN AND FREE OF SNOW AND ICE DAMS.
- INSTALL SILT FENCE SECTIONS, HAY BALE DIKES, PERIMETER DIKE/SWALES, WATERBARS, AND OTHER PRACTICES REQUIRING AN ASSOCIATED EARTH DISTURBANCE PRIOR TO GROUND FREEZING.
- 8. MULCH STABILIZATION MEASURES TO BE USE OF DOUBLE THE STANDARD RATE OF COVERAGE.
- 9. ALL MULCH MUST BE ANCHORED WITH AN APPROVED METHOD TO PREVENT REMOVAL BY WIND.
- 10. TO ENSURE COVER OF DISTURBED SOIL IN ADVANCE OF A MELT EVENT, AREAS OF DISTURBED SOIL MUST BE STABILIZED AT THE END OF EACH WORK DAY, WITH THE FOLLOWING EXCEPTIONS:
- 11. IF NO PRECIPITATION, RAIN OR SNOW, WITHIN 24 HOURS IS FORECASTED AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS, DAILY STABILIZATION IS NOT NECESSARY.
- 12. IF THE DISTURBED AREAS WILL COLLECT AND RETAIN RUNOFF, SUCH AS HOUSE FOUNDATIONS OR OPEN
- 13. UTILITY TRENCHES, DAILY STABILIZATION IS NOT NECESSARY UNTIL EXCAVATION BACKFILLING OCCURS.
- 14. PRIOR TO STABILIZATION, REMOVE SNOW OR ICE TO LESS THAN 1" THICKNESS ABOVE THE SOIL.
- 15. STONE STABILIZATION (8" THICK) AT ACCESS POINTS FOR CONSTRUCTION VEHICLE TRAFFIC, I.E. FROM THE PAVEMENT TO THE BUILDING PUT A 15' WIDE PATH ON TOP OF THE PROPOSED DRIVEWAY.

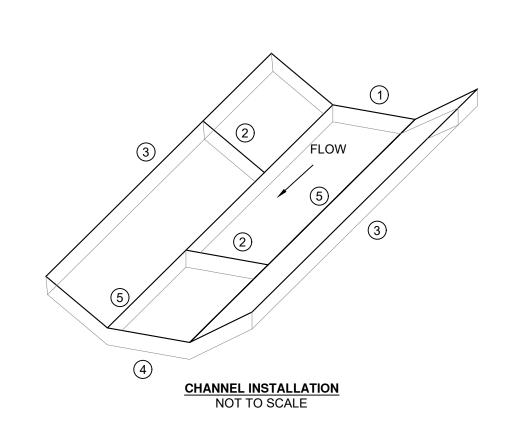




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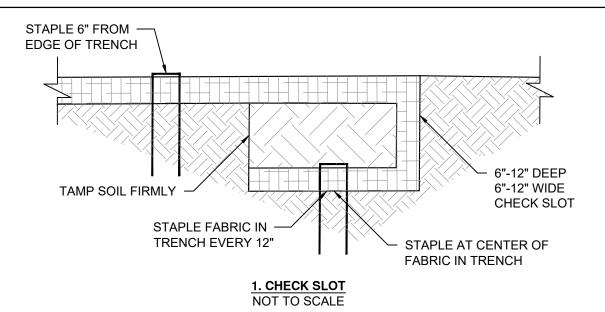
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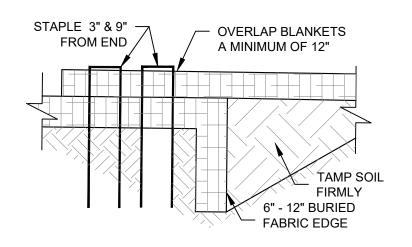




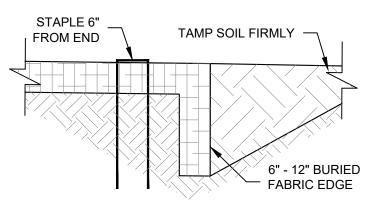
CONSTRUCTION SPECIFICATIONS

- 1. INSTALL RECP ON ALL SLOPES 3:1 OR GREATER AND IN CHANNELS
- 2. METAL STAPLES TO BE UNGALVANIZED U-SHAPED WIRE WITH 2" CROWN AND 6" TO 8" LONG LEG. SET STAPLE INTO THE FABRIC FLUSH WITH SURROUNDING SOIL. MAY BE MANUALLY OR MECHANICALLY HAMMERED DOWN.
- 3. METAL STAPLES ARE TO BE PLACED ALTERNATIVELY, IN COLUMNS ~ 2' APART AND IN ROWS ~ 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' x 225' ROLL OF MATERIAL AND ABOUT 125 STAPLES ARE REQUIRED PER 4' x 150' ROLL OF MATERIAL. ACTUAL STAPLE AMOUNTS VARY BASED UPON SOIL CONDITIONS.
- 4. DISTURBED AREA SHALL BE SMOOTHLY GRADED TO ENSURE CLOSE CONTACT BETWEEN RECP AND GROUND. REMOVE LARGE STONES AND WOODY DEBRIS THAT WILL PREVENT RECP FROM CONTACTING THE GROUND.
- 5. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
- 6. ENSURE EROSION CONTROL MATERIAL ROLLS ARE UNRAVELED DOWN SLOPE IN A CONTROLLED FASHION.
- 7. ALL RECP TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

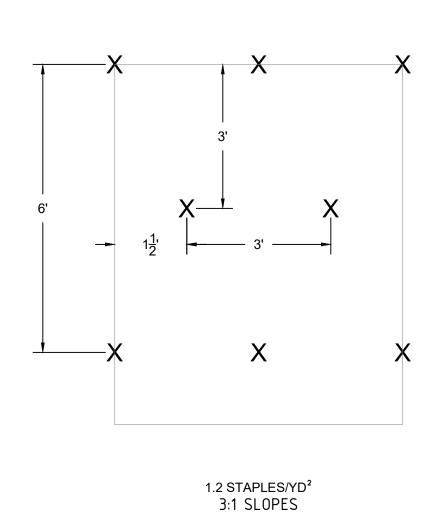


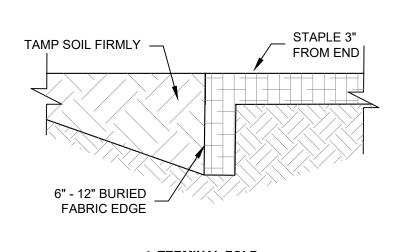


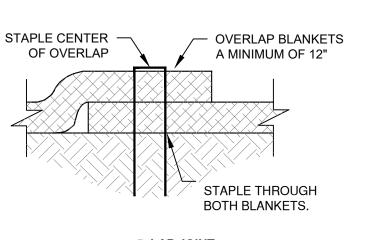




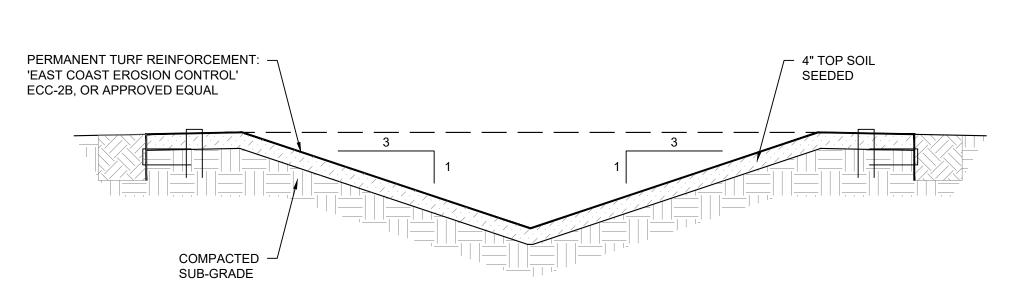
3. ANCHOR SLOT

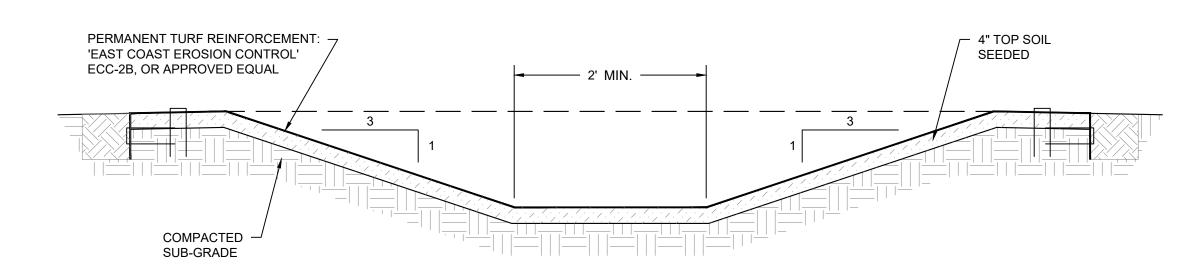






ROLLED EROSION CONTROL PRODUCT (RECP) - TYPICAL







URF REINFORCEMENT SWALE DETAIL

STABILIZATION NOTES

TEMPORARY SEEDING

PREPARATION:

RUNOFF CONTROL PRACTICES MUST BE INSTALLED PRIOR TO STABILIZATION AS APPROPRIATE FOR THE SITE CONDITIONS. THE AREA MUST BE ROUGH GRADED AND SLOPES PHYSICALLY STABLE. LARGE DEBRIS AND ROCKS SHOULD BE REMOVED. AREA MUST BE SEEDED WITHIN 24 HOURS OF PREVIOUS DISTURBANCE OR SCARIFICATION OF SOIL SURFACE WILL BE NECESSARY PRIOR TO SEEDING.

IF: SPRING OR SUMMER OR EARLY FALL. THEN SEED THE AREA WITH REGIONAL RYEGRASS (ANNUAL OR PERENNIAL) AT 20 LBS PER ACRE (APPROXIMATELY 0.5 LBS/1,000 SF OR USE 1 LB/1,000 SF). IF: LATE FALL OR EARLY WINTER, THEN SEED CERTIFIED 'AROOSTOOK' WINTER RYE (CEREAL RYE) AT 90 LBS PER ACRE (2.0 LBS/1,000 SF).

METHOD OF SEEDING:

ANY SEEDING METHOD MAY BE USED THAT WILL PROVIDE UNIFORM APPLICATION OF SEED ON THE AREA AND RESULT IN RELATIVELY GOOD SOIL TO SEED CONTACT. HAND SEEDING IS RECOMMENDED FOR AREAS OF THE SITE THAT CAN NOT BE ACCESSED WITH EQUIPMENT DUE TO SOIL MOISTURE.

MULCHING OVER SEED IS REQUIRED. MULCH THE AREA WITH HAY OR STRAW AT 2 TONS/ACRE (90 LBS/1,000 SF OR 2 BALES/1,000 SF). WOOD FIBER (CELLULOSE) HYDROMULCH OR SIMILAR SPRAYABLE PRODUCTS APPROVED FOR EROSION CONTROL MAY BE USED IF APPLIED ACCORDING TO THE MANUFACTURERS' SPECIFICATION BUT AT A MINIMUM OF 50 LBS/1,000 SF.

ANCHORING: MULCH ANCHORING WILL BE REQUIRED IN AREAS OF HIGH WIND, CONCENTRATED FLOWS OF RUNOFF, AND AREAS SEEDED BETWEEN OCTOBER 15 AND APRIL 15, I.E. DURING WINTER CONSTRUCTION.

WATERING OF SEED MAY BE IDEAL DURING SUMMER MONTHS TO ENSURE GERMINATION OF SEED.

INSPECT AREAS EVERY 7 DAYS AND AFTER RAINFALL EVENTS RESULTING IN RUNOFF FROM THE SITE. DOCUMENT AREAS OF SIGNIFICANT EROSION (RILLS & GULLIES) AND/OR LOSS OF VEGETATIVE COVER.

MAINTENANCE:

KEEP VEHICLES AND EQUIPMENT OFF OF MULCHED AND SEEDED AREAS TO PREVENT DISTURBANCE OF STABILIZED AREAS. RILLS AND GULLIES MUST BE REGARDED PRIOR TO PLACEMENT OF ADDITIONAL SEED AND MULCH. SCARIFY, SEED, AND MULCH BARE AREAS TO PREVENT CONTINUED EROSION.

TEMPORARY MULCHING

SITE PREPARATION PRIOR TO MULCHING REQUIRES THE INSTALLATION OF NECESSARY EROSION CONTROL OR RUNOFF CONTROL PRACTICES AND DRAINAGE SYSTEMS. SLOPE, GRADE AND SMOOTH THE SITE TO FIT THE NEEDS OF SELECTED MULCH PRODUCTS. REMOVE ALL UNDESIRABLE STONES AND OTHER DEBRIS TO MEET THE NEEDS OF ANTICIPATED LAND USE AND EXPECTED MAINTENANCE REQUIRED.

NOTE: THE BEST COMBINATION FOR GRASS/LEGUME ESTABLISHMENT IS STRAW (CEREAL GRAIN) MULCH APPLIED AT 2 TON/ACRE (90 LBS/1,000 SF) AND ANCHORED IMMEDIATELY WITH WOOD FIBER MULCH (HYDROMULCH) AT 500 - 750 LBS/ACRE (11 - 17 LBS/1,000 SF).

SPECIFICATIONS:			
MULCH MATERIAL	RATE PER 1,000 SF	COVERAGE	ANCHORIN
WOOD CHIPS OR SHAVINGS	500-900 LBS	2" TO 7"	NONE
WOOD FIBER CELLULOSE	50 LBS BAG	100%	TACKIFIER
GRAVEL, CRUSHED STONE	9 CUBIC YARDS	3" TO 6"	COMPACTE
HAY OR STRAW	90-100 LBS. 2-3 BALES	90%	VARIOUS
JUTE/EXCELSIOR/COIR	VARIOUS SIZED ROLLS	100%	STAPLES

3-9 CUBIC YARDS

ANCHORING METHODS:

WELL AGED COMPOST

BIODEGRADABLE NETTING - STAPLE TO GROUND AS PER MANUFACTURER'S SPECIFICATIONS CRIMPING - USE DISKS OR TRACKS ALONG THE CONTOUR TO EMBED THE MULCH INTO THE SOIL CELLULOSE OVERSPRAY - HYDROMULCH WOOD FIBERS AT 500 LBS PER ACRE, HAS GREEN DYE TACKIFIERS* - USE HYDROSEEDER TO MIX AND SPRAY CHEMICALS, APPLY WITH WOOD FIBER MULCH

1" TO 3"

NONE

*TO ALLOW FOR PROPER CURING OF THESE CHEMICALS, TACKIFIERS MAY ONLY BE APPLIED IF RAINFALL IS NOT PREDICTED WITHIN 24 HRS AND SOIL TEMPERATURES ARE HIGHER THAN 45° F. DO NOT APPLY TACKIFIERS WITHIN 50 FEET OF ANY SURFACE WATER OR UPON VEGETATION, BUILDINGS, VEHICLES. AND/OR EQUIPMENT. TACKIFIERS WITH KNOWN AQUATIC TOXICITY ARE PROHIBITED.

PREPARATION:

ALL WATER CONTROL MEASURES WILL BE INSTALLED AS NEEDED PRIOR TO FINAL GRADING AND SEEDBED PREPARATION. ANY SEVERELY COMPACTED SECTIONS WILL REQUIRE CHISELING OR DISKING TO PROVIDE AN ADEQUATE ROOTING ZONE. TO A MINIMUM DEPTH OF 12". THE SEEDBED MUST BE PREPARED TO ALLOW GOOD SOIL TO SEED CONTACT, WITH THE SOIL NOT TOO SOFT AND NOT TOO COMPACT. ADEQUATE SOIL MOISTURE MUST BE PRESENT TO ACCOMPLISH THIS. IF SURFACE IS POWDER DRY OR STICKY WET, POSTPONE OPERATIONS UNTIL MOISTURE CHANGES TO A FAVORABLE CONDITION. IF SEEDING IS ACCOMPLISHED WITHIN 24 HOURS OF FINAL GRADING, ADDITIONAL SCARIFICATION IS NOT NEEDED. REMOVE ALL STONES AND OTHER DEBRIS FROM THE SURFACE THAT ARE GREATER THAN 4 INCHES, OR THAT WILL INTERFERE WITH FUTURE MOWING OR MAINTENANCE.

AMENDMENTS:

SOIL AMENDMENTS MUST BE INCORPORATED INTO THE UPPER 2 INCHES OF SOIL. THE SOIL SHOULD BE TESTED TO DETERMINE THE AMOUNTS OF AMENDMENTS NEEDED. APPLY GROUND AGRICULTURAL LIMESTONE TO ATTAIN A PH OF 6.0 IN THE UPPER 2 INCHES OF SOIL. IF SOIL MUST BE FERTILIZED BEFORE RESULTS OF A SOIL TEST ARE OBTAINED TO DETERMINE FERTILIZER NEEDS, USE COMMERCIAL FERTILIZER AT 600 LBS PER ACRE OF 5-10-10 OR EQUIVALENT. IF MANURE IS USED, APPLY QUANTITY TO MEET THE NUTRIENTS OF THE ABOVE FERTILIZER. THIS REQUIRES AN APPROPRIATE MANURE ANALYSIS PRIOR TO APPLYING TO THE SITE. DO NOT USE IN AREAS OF CONCENTRATED WATER FLOW.

GENERAL SEED MIXTURES:

SEED MIXTURES MAY VARY DEPENDING ON LOCATION WITHIN THE STATE AND TIME OF SEEDING. GENERALLY, WARM SEASON GRASSES SHOULD ONLY BE SEEDED DURING EARLY SPRING, APRIL TO MAY. THESE GRASSES ARE PRIMARILY USED FOR VEGETATING EXCESSIVELY DRAINED SANDS AND GRAVELS. OTHER GRASSES MAY BE SEEDED ANY TIME OF THE YEAR WHEN THE SOIL IS NOT FROZEN AND IS WORKABLE. WHEN LEGUMES LIKE CLOVER ARE INCLUDED, SPRING SEEDING IS PREFERRED. ACTUAL GRASS SEED SPECIES USED ON THE SITE TO BE DETERMINED BY THE HOMEOWNER AND/OR LANDSCAPE PROFESSIONAL AND WILL REFLECT THE ULTIMATE LAND USE.

RECOMMENDED SEED RATES

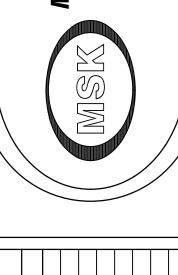
GRASS SPECIES	LBS/ACRE	LBS/1,000 SF	COMMENTS
COMMON WHITE CLOVER	8	0.20	ADD INOCULATES
TALL FESCUE	10	0.25	'REBEL' VARIETY
CREEPING RED FESCUE	20	0.45	'PENNLAWN' VARIETY
PERENNIAL RYEGRASS	5	0.10	'PENNFINE' VARIETY

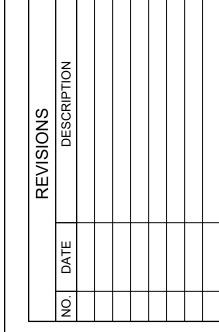
THE OPTIMUM TIMING FOR THE GENERAL SEED MIXTURE IS EARLY SPRING. PERMANENT SEEDINGS MAY BE MADE ANY TIME OF YEAR IF PROPERLY MULCHED AND ADEQUATE MOISTURE IS PROVIDED. LATE JUNE THROUGH EARLY AUGUST IS NOT A GOOD TIME TO SEED, BUT MAY FACILITATE COVERING THE LAND WITHOUT ADDITIONAL DISTURBANCE IF CONSTRUCTION IS COMPLETED. PORTIONS OF THE SEEDING THAT FAIL DUE TO DROUGHT/HEAT MAY BE RE-SEEDED IN LATE SUMMER, FALL, OR SPRING.

BROADCASTING, DRILLING, CULTIPACK TYPE SEEDING, OR HYDROSEEDING ARE ACCEPTABLE METHODS. PROPER SOIL TO SEED CONTACT IS KEY TO SUCCESSFUL GERMINATION.

MULCHING IS ESSENTIAL TO OBTAIN A UNIFORM STAND OF SEEDED PLANTS. OPTIMUM BENEFITS OF MULCHING NEW SEEDINGS ARE OBTAINED WITH THE USE OF SMALL GRAIN STRAW APPLIED AT A RATE OF 2 TONS PER ACRE, AND ANCHORED WITH AN OVERSPRAY OF HYDROMULCH AND/OR TACKIFIER.

IRRIGATION: WATERING MAY BE ESSENTIAL TO ESTABLISH A NEW SEEDING WHEN A DROUGHT CONDITION OCCURS SHORTLY AFTER A NEW SEEDING EMERGES. IRRIGATION IS A SPECIALIZED PRACTICE AND CARE MUST BE TAKEN NOT TO EXCEED THE APPLICATION RATE FOR THE SOIL OR SUBSOIL. WHEN DISCONNECTING IRRIGATION PIPE, BE SURE PIPES DO NOT CAUSE EROSION.



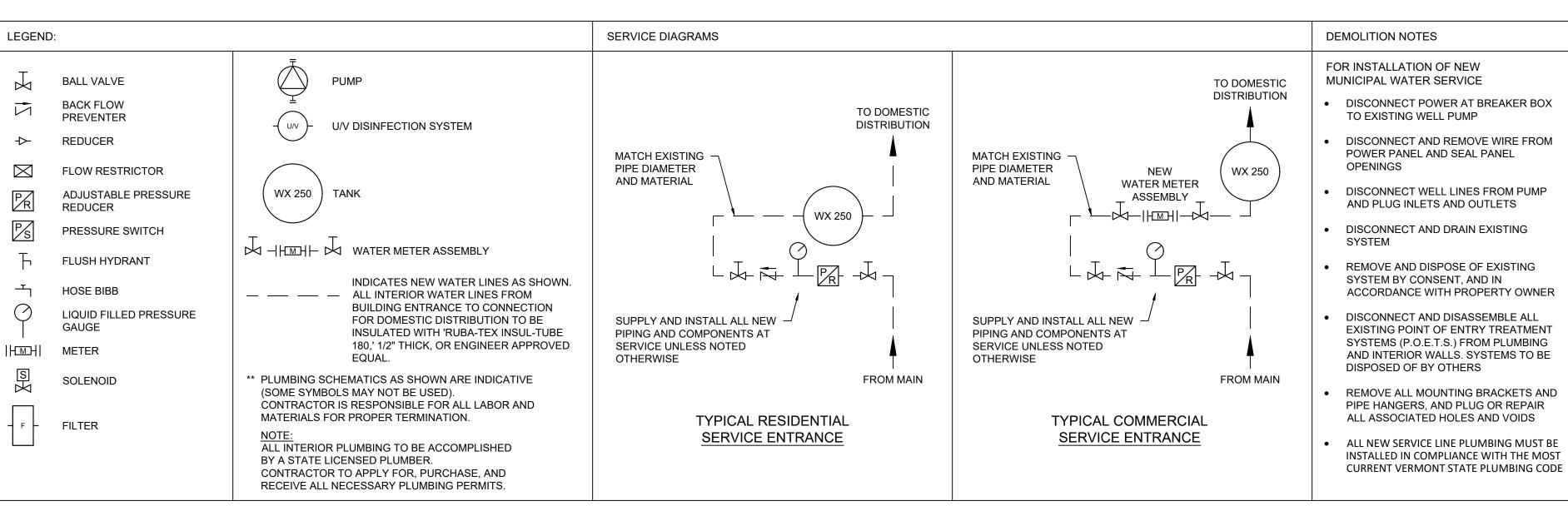


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NUMBER DATE 1001-019.7 08-22-2019 DRAWN CHECKED

SHEET NUMBER





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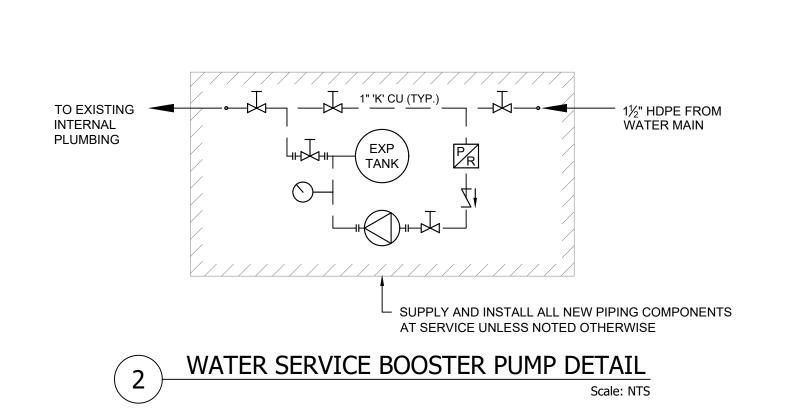
SERVICE ENTRANCE DIAGRAMS INCLUDED IN THE C600 SERIES OF THE SHEET SET ARE SCHEMATIC ONLY, AND BASED ON OBSERVATIONS MADE **DURING PRELIMINARY DESIGN INSPECTIONS PERFORMED IN COOPERATION** WITH THE PROPERTY OWNER. THESE DIAGRAMS ARE PROVIDED FOR **GENERAL REFERENCE ONLY.**

DUE TO SCHEDULING OR OTHER CIRCUMSTANCES, SOME PROPERTIES REQUIRING SERVICE CONNECTIONS WERE NOT INSPECTED, AND MAY NOT BE INCLUDED IN THE SHEET SET.

THE CONTRACTOR MUST VERIFY ALL INTERNAL PLUMBING COMPONENTS AND CONFIGURATIONS, AND COORDINATE CURB STOP AND SERVICE ENTRANCE LOCATIONS WITH THE ENGINEER AND PROPERTY OWNER PRIOR TO MAKING ANY CONNECTIONS.

ALL NEW INTERNAL PLUMBING, PIPING AND COMPONENTS SHALL BE COMPLETED BY A QUALIFIED PLUMBER, LICENSED TO PRACTICE IN THE STATE OF VERMONT, AND ALL WORK MUST BE PERFORMED IN COMPLIANCE WITH ALL APPLICABLE CODES, REGULATIONS AND PERMITS.

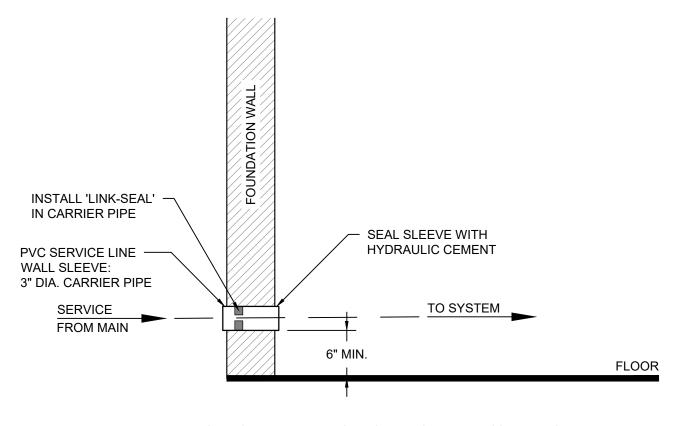
PLUMBING LEGEND AND TYPICAL WATER SERVICE ENTRANCE DETAILS Scale: NTS



'NEENAH' R-1733 HEAVY-DUTY SECTION B-B MANHOLE FRAME WITH SOLID (2 COURSES MAXIMUM) SEAL ALL JOINTS WITH MORTAR LID, MARKED "WATER," FOR 24" OPENINGS ENGINEER-APPROVED PRE-CAST (OR APPROVED EQUAL) CONCRETE MANHOLE UNITS WITH COVER SECTION FINISH GRADE (REF. STANDARD ASTM C478) CREATE WATER-TIGHT JOINTS USING APPROVED MASTIC OR RUBBER TO DOMESTIC COISTRIBUTION GASKET MATERIAL (TYP.) MANHOLE STEPS CAST-IN-PLACE FLEXIBLE (PER ASTM C478) WATER-TIGHT BOOT AT ALL PENETRATIONS (TYP.) (MINIMUM) **SECTION B-B** SUPPLY AND INSTALL ALL NEW PIPING AND COMPONENTS AT SERVICE ENTRANCES. TYPICAL UNLESS NOTED OTHERWISE (MATCH EXISTING PIPE DIAMETER/MATERIAL) TYPICAL RESIDENTIAL SERVICE ENTRANCE FROM MAIN DISTRIBUTION 🗲 CAST-IN-PLACE FLEXIBLE BACKFILL WITH SATISFACTORY SOIL MATERIAL WATER-TIGHT BOOT AT COMPACTED IN 6" LIFTS TO 95% MAXIMUM ALL PENETRATIONS (TYP.) DRY DENSITY IN ROADS AND PAVED AREAS, 85% MAXIMUM DRY DENSITY IN LAWN NEW WATER METER ASSEMBLY AND GRASSED AREAS SUPPLY AND INSTALL ALL NEW PIPING AND 3/4" CRUSHED STONE SUITABLE UNDISTURBED MATERIAL COMPONENTS AT SERVICE ENTRANCES, ADJUSTABLE PIPE SUPPORT AS REQUIRED UNSUITABLE MATERIAL SHALL BE EXCAVATED, THEN BACKFILLED AND TYPICAL UNLESS NOTED OTHERWISE COMPACTED WITH SUITABLE MATERIAL AS DIRECTED BY THE ENGINEER (MATCH EXISTING PIPE DIAMETER/MATERIAL) **SECTION A-A** TYPICAL COMMERCIAL SERVICE ENTRANCE (RESIDENTIAL CONNECTION SHOWN)

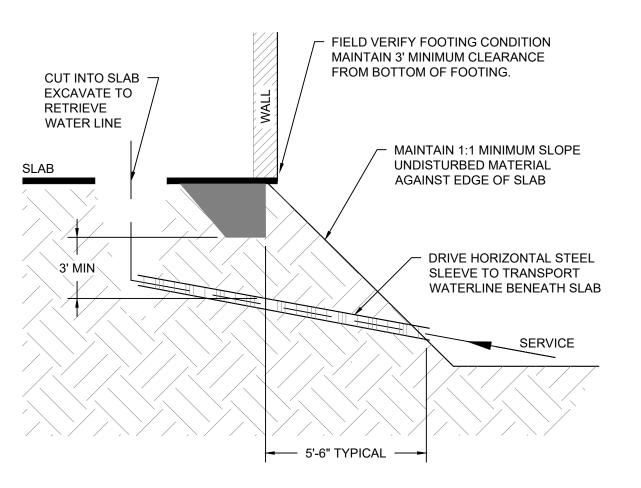
- ADJUST TO GRADE WITH PRE-CAST GRADE RING IN FULL MORTAR BED

PRE-CAST CONCRETE METER PIT DETAIL Scale: NTS

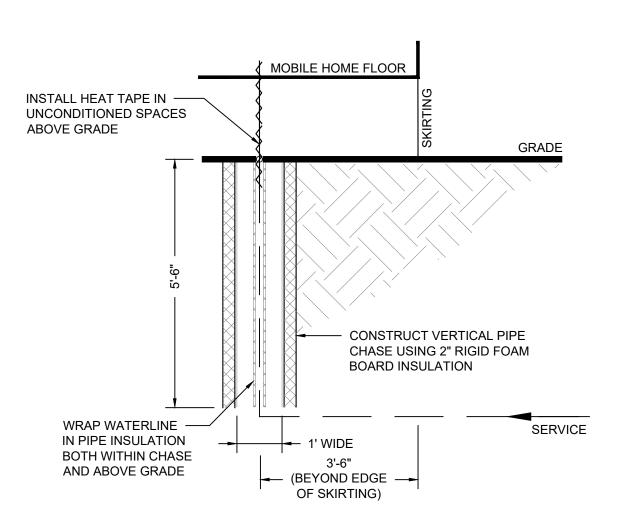


ALL NEW SERVICE LINE PLUMBING MUST BE INSTALLED IN COMPLIANCE WITH THE MOST CURRENT VERMONT STATE PLUMBING CODE





WATER SERVICE VERTICAL PIPE ENTRY Scale: NTS (THROUGH SLABS)



WATER SERVICE VERTICAL PIPE ENTRY

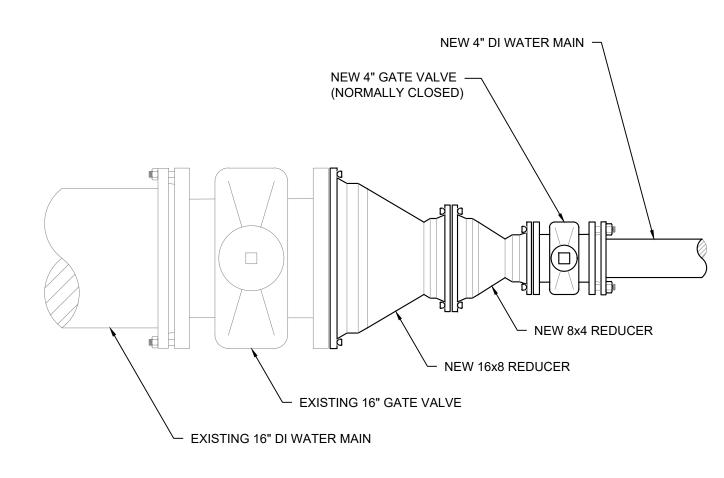
Scale: NTS (FOR MOBILE HOMES)

MSK ENGINEERING AND DESIGN, INC. P.O. BOX 139, 150 DEPOT STREET BENNINGTON, VERMONT 05201

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DATE NUMBER 08-22-2019 1001-019.7 DRAWN CHECKED

SHEET NUMBER C508

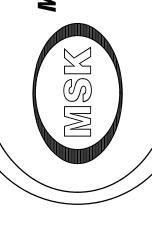


CONNECTION TO EXISTING MUNICIPAL WATER MAIN

EAST ROAD

Scale: NTS

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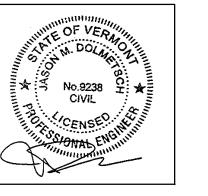
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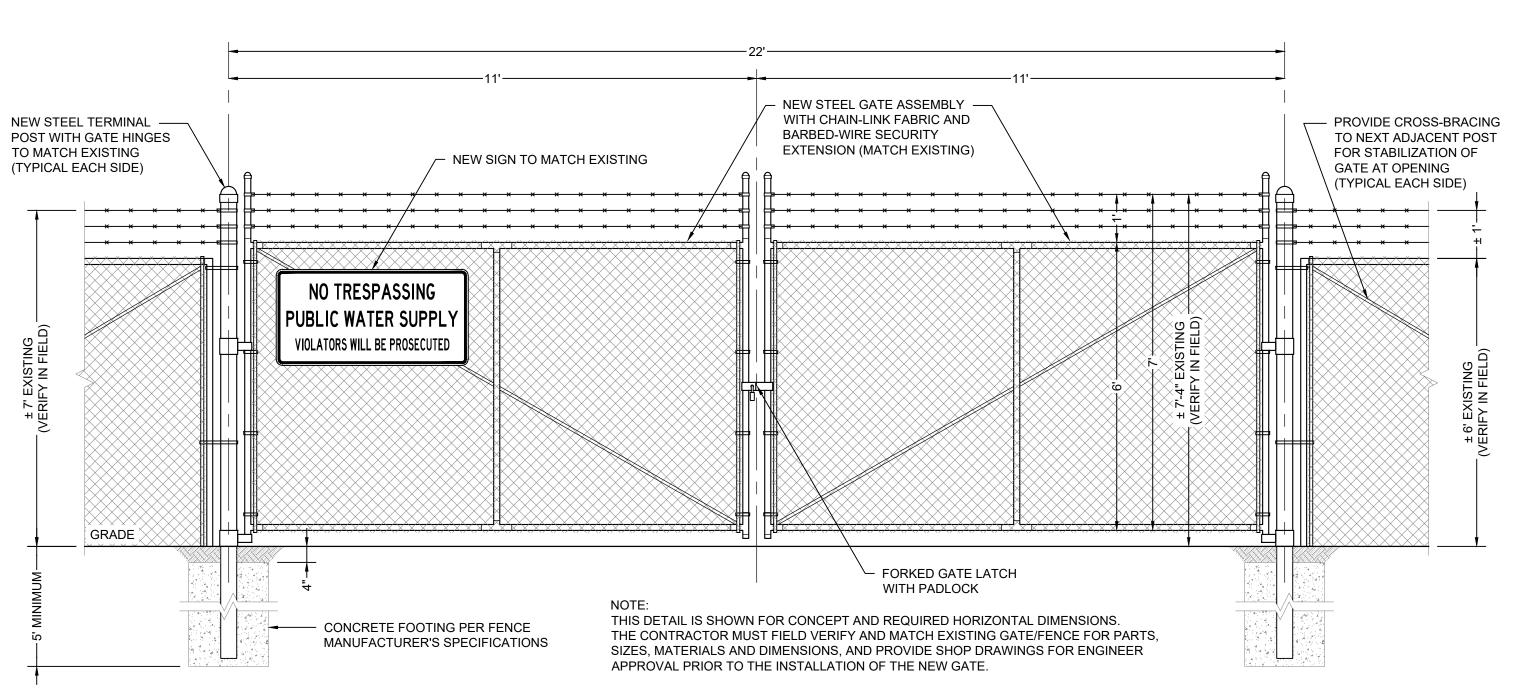
TOWN OF BENNINGTON MUNICIPAL WATER SYSTEM REMEDIAL EXPANSION PHASE II BENNINGTON, VERMONT

CONTRACT 8
CONNECTION DETAILS

	NUMBER	DATE
	1001-019.7	08-22-2019
	DRAWN	CHECKED
	MSK	JMD
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SHEET NUMBER





1 GATE DETAIL AT PUMP STATION
(WATER STORAGE TANK SITE ON CHAPEL RD) Scale: NTS

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REVISIONS
NO. DATE DESCRIPTION

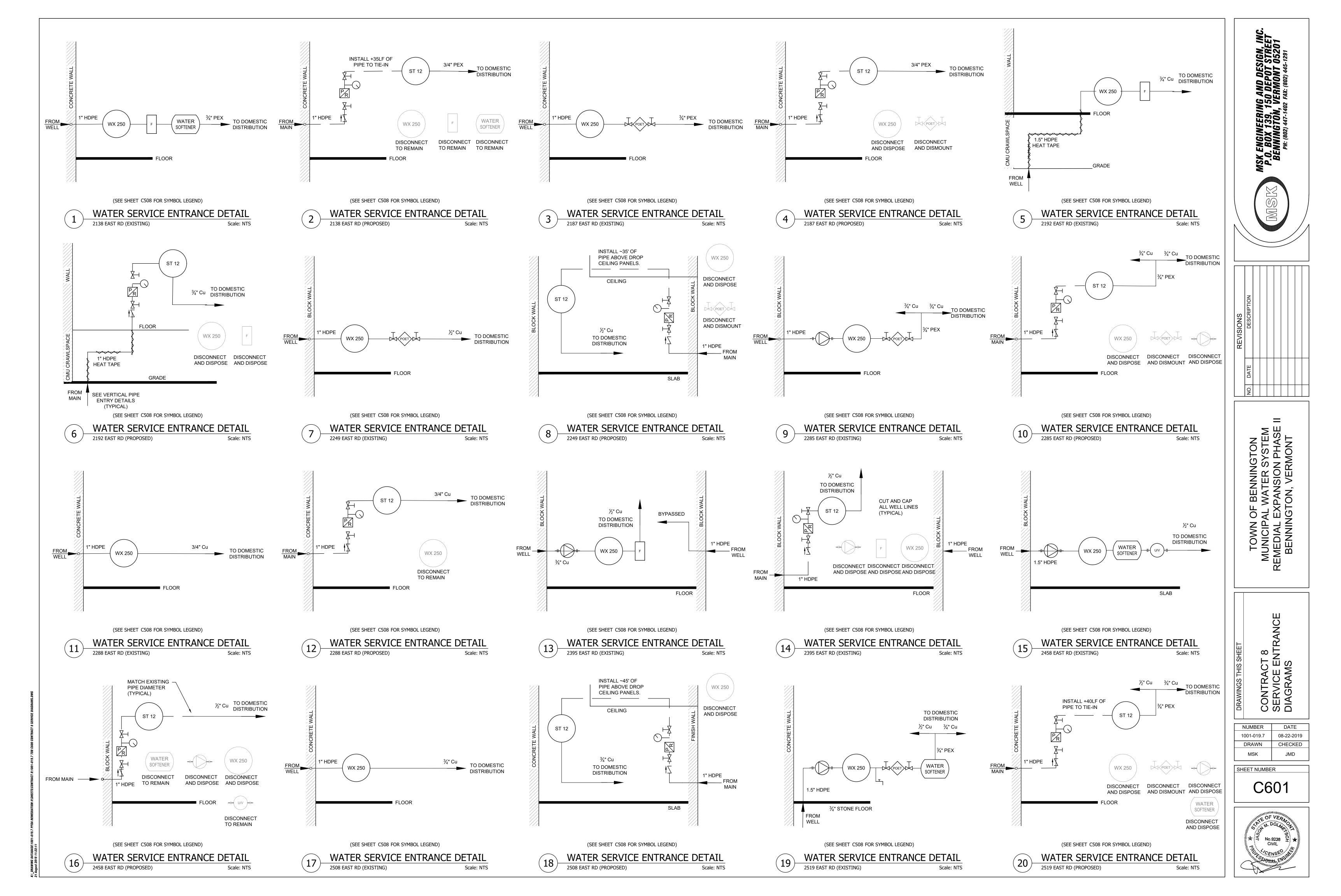
TOWN OF BENNINGTON
MUNICIPAL WATER SYSTEM
REMEDIAL EXPANSION PHASE II
BENNINGTON, VERMONT

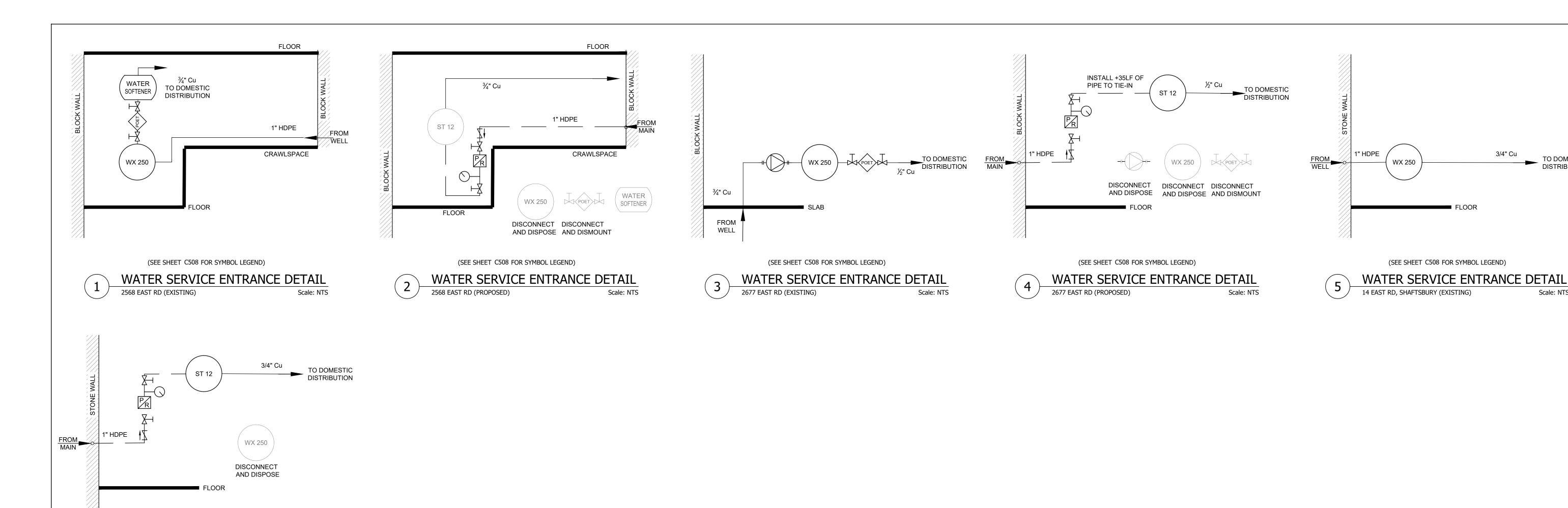
ONTRACT 8 ISCELLANEOUS

NUMBER DATE
1001-019.7 08-22-2019
DRAWN CHECKED
MSK JMD

SHEET NUMBER







(SEE SHEET C508 FOR SYMBOL LEGEND)

14 EAST RD, SHAFTSBURY (PROPOSED)

WATER SERVICE ENTRANCE DETAIL

3/4" Cu

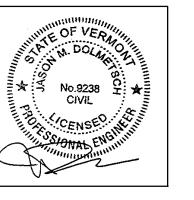
TO DOMESTIC DISTRIBUTION

Scale: NTS

CONTRACT 8
SERVICE ENTRANCE
DIAGRAMS

NUMBER	DATE
1001-019.7	08-22-2019
DRAWN	CHECKED
MSK	JMD
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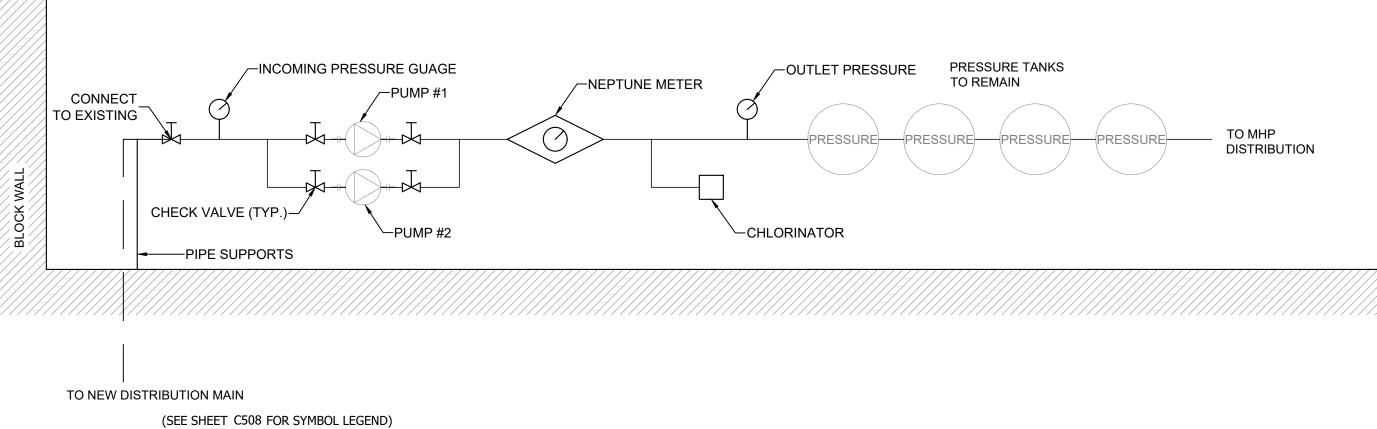


TO EXISTING WELL

(SEE SHEET C508 FOR SYMBOL LEGEND)

WATER SERVICE ENTRANCE DETAIL

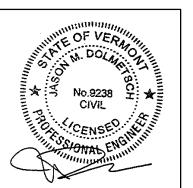
EAST MOUNTAIN MHP (EXISTING) Scale: NTS

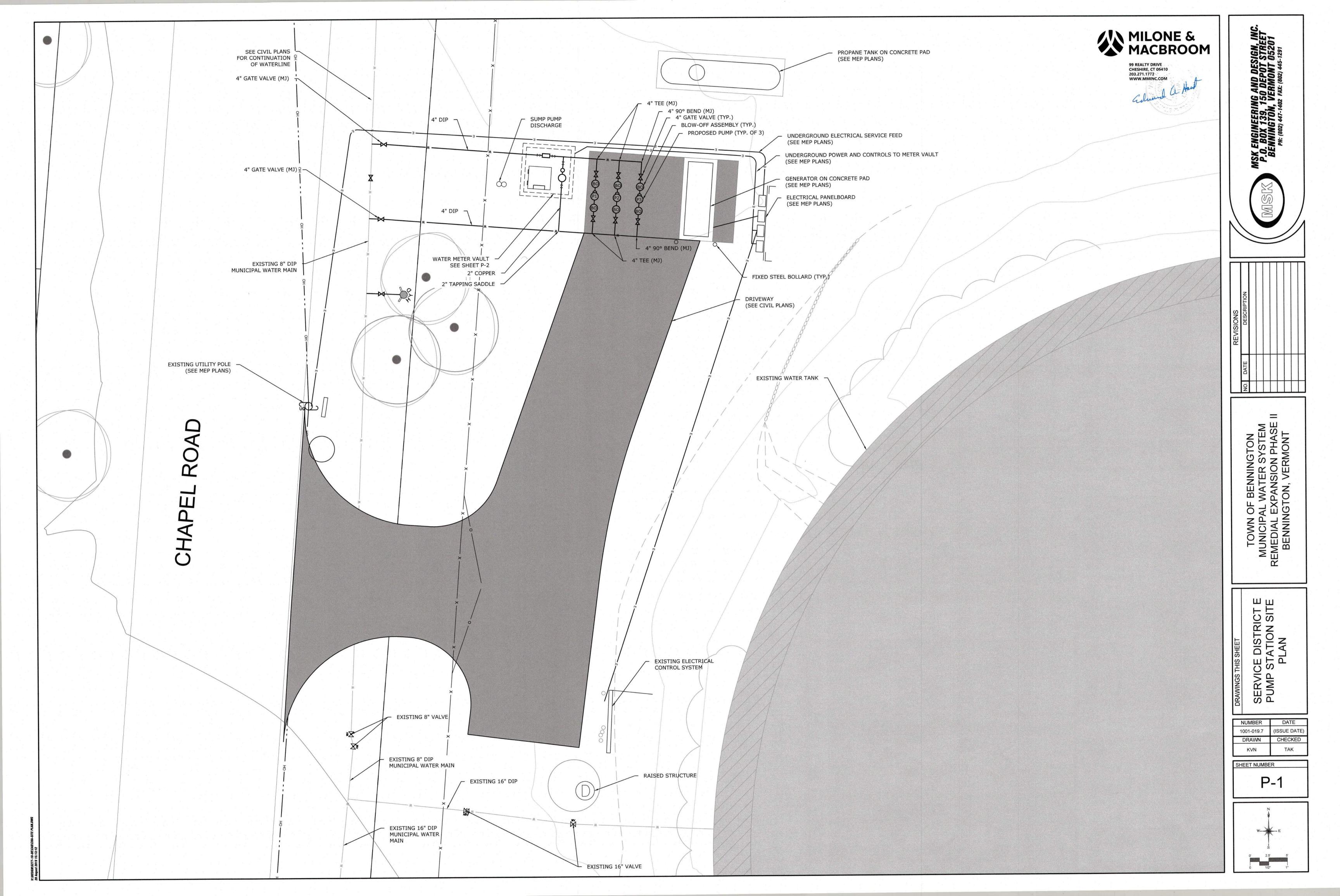


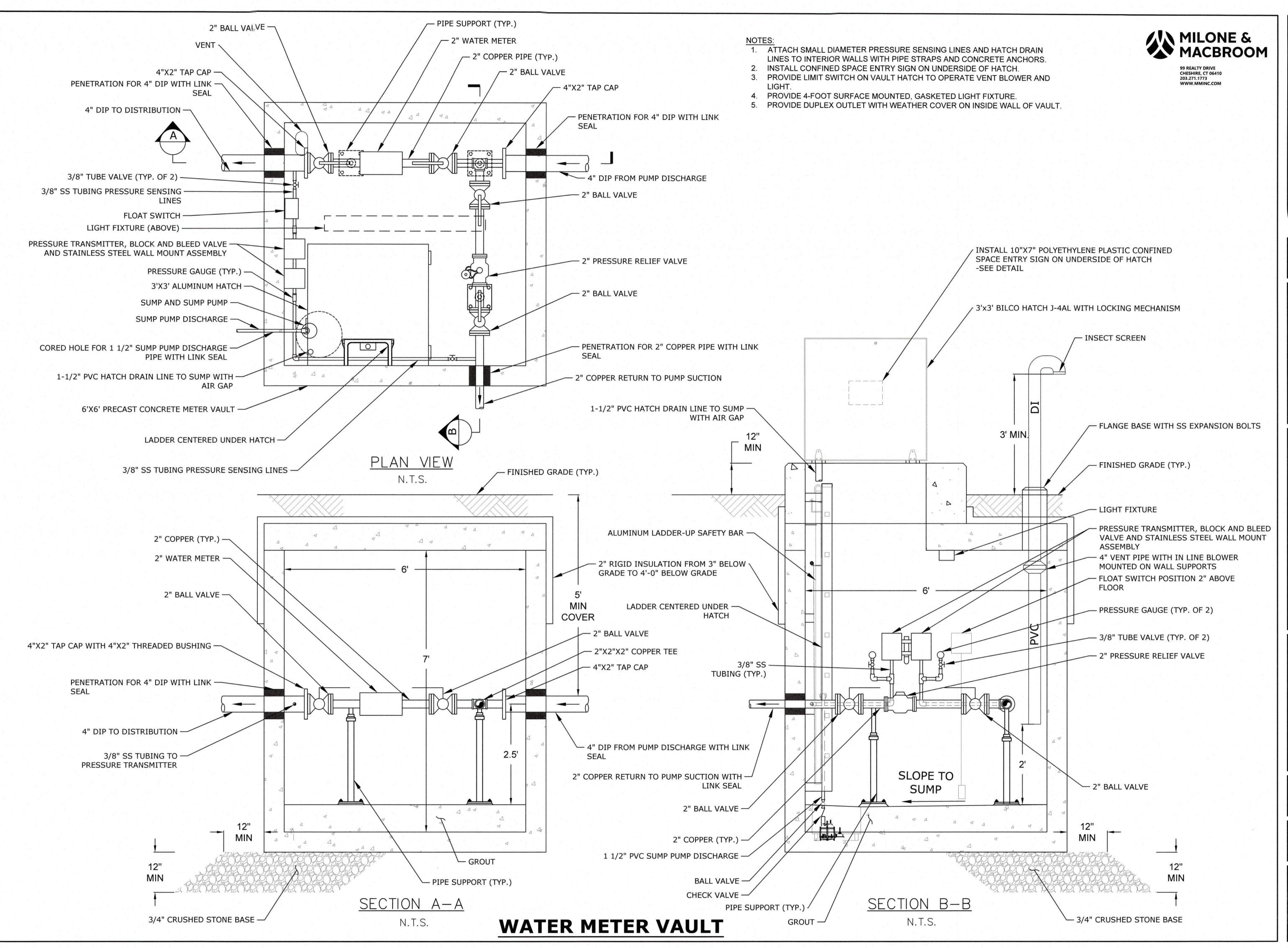
WATER SERVICE ENTRANCE DETAIL EAST MOUNTAIN MHP (PROPOSED) Scale: NTS

DATE NUMBER 08-22-2019 1001-019.7 DRAWN CHECKED JMD

MSK SHEET NUMBER

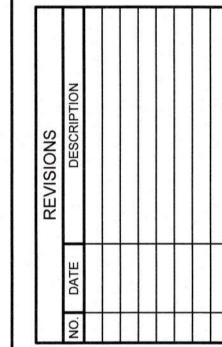












TOWN OF BENNINGTON
MUNICIPAL WATER SYSTEM
REMEDIAL EXPANSION PHASE II
BENNINGTON, VERMONT

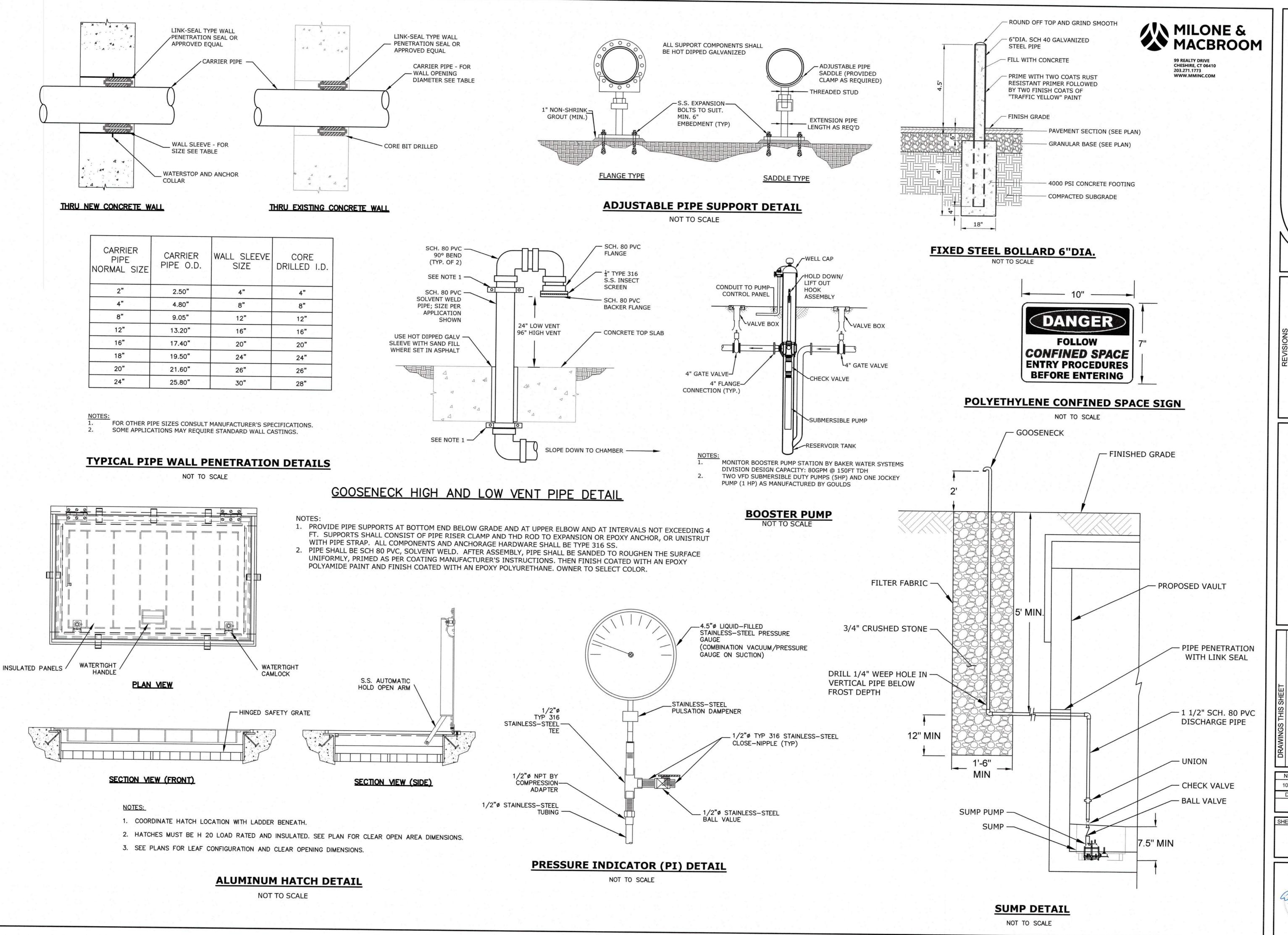
SERVICE DISTRICT E
PUMP STATION
PROCESS PLAN

_	NUMBER	DATE
	1001-019.7	(ISSUE DATE)
	DRAWN	CHECKED
	KVN	TAK

SHEET NUMBER

P-2





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PATE DESCRIPTION

TOWN OF BENNINGTON MUNICIPAL WATER SYSTEM REMEDIAL EXPANSION PHASE II BENNINGTON, VERMONT

SERVICE DISTRICT E
PUMP STATION
DETAILS

NUMBER DATE

1001-019.7 (ISSUE DATE)

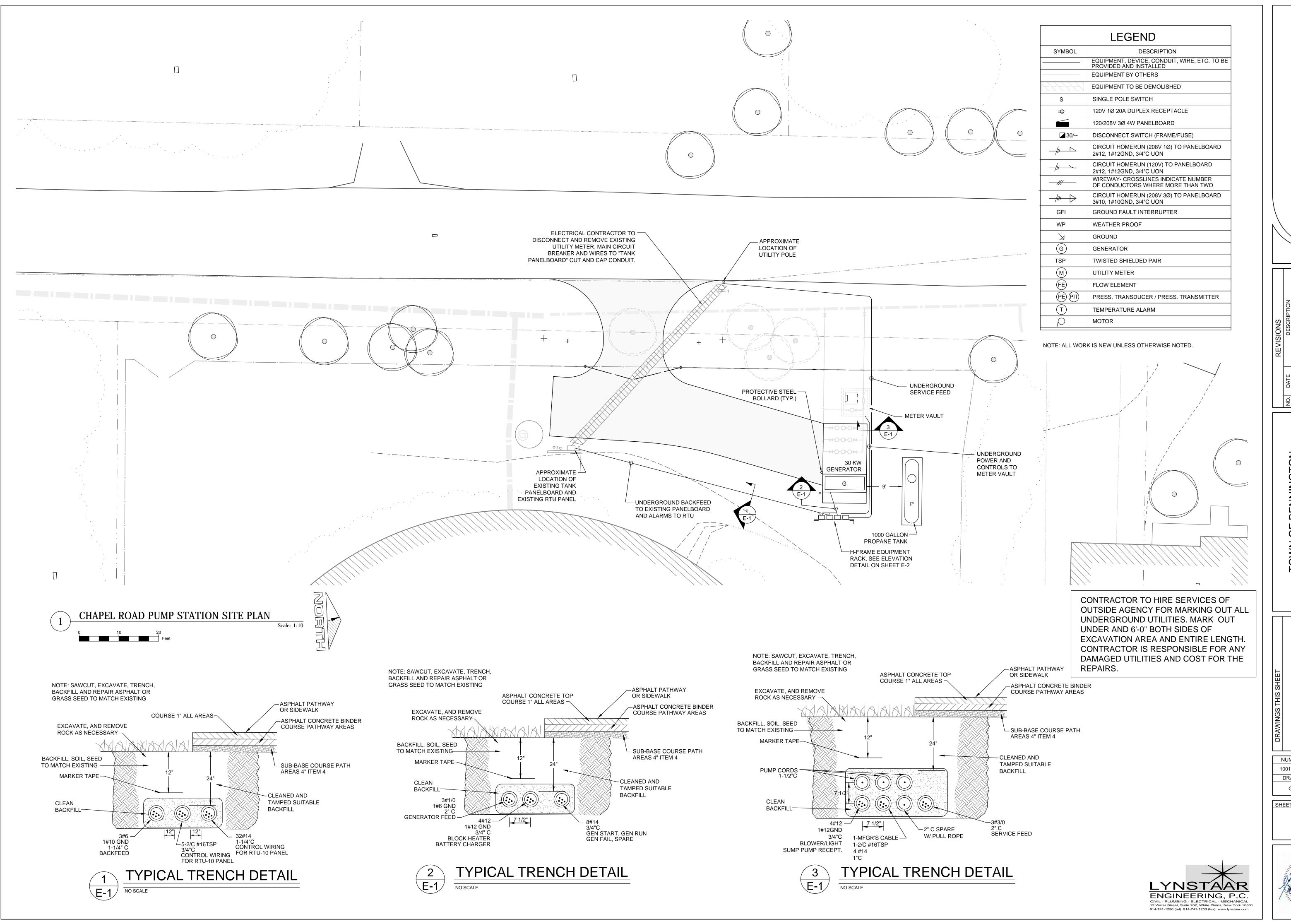
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P-3

about about



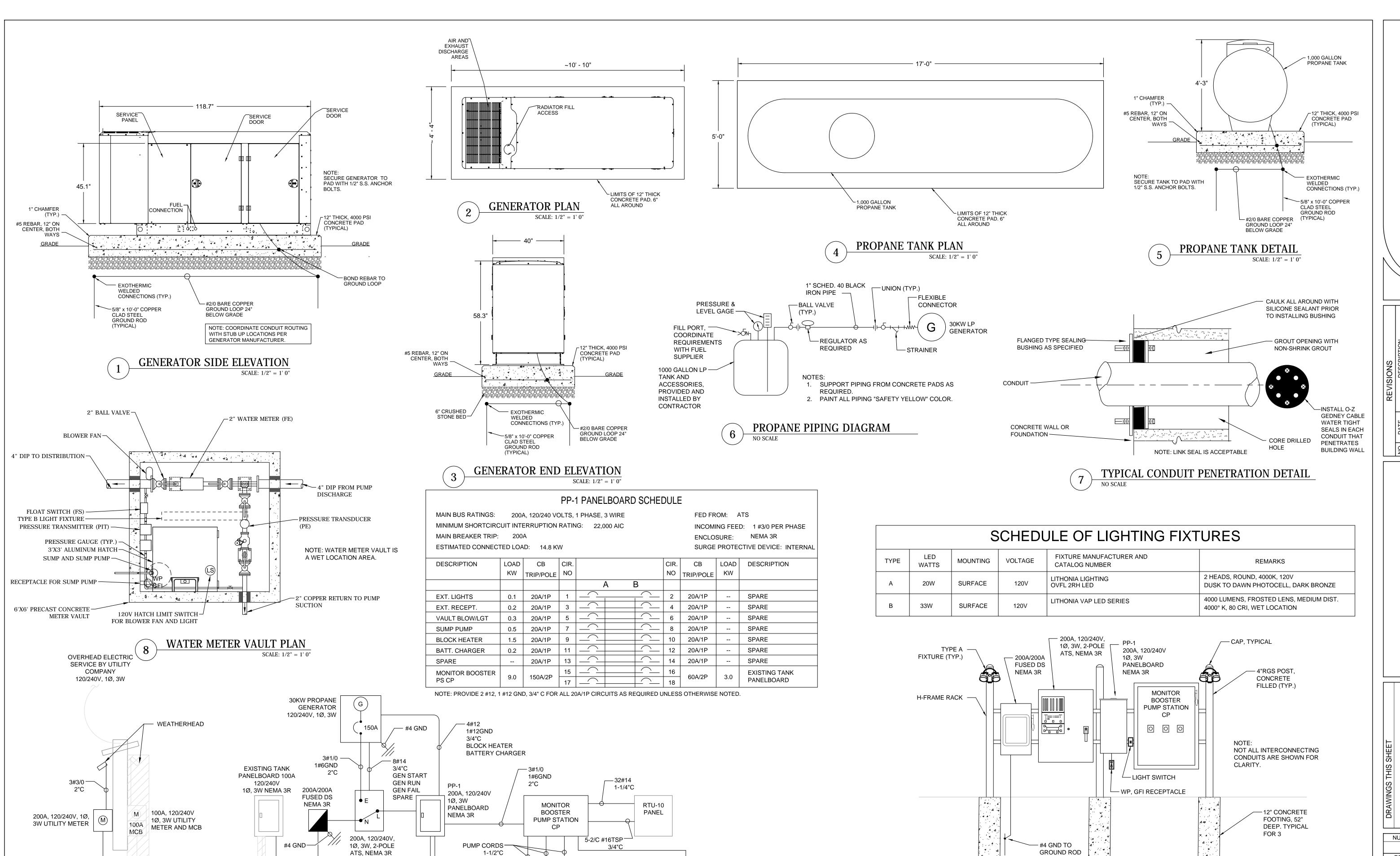
DETAILS AND LEG

NUMBER	DATE
1001-019.7	(ISSUE DATE)
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GD	JGD

SHEET NUMBER

E-1





— 1-MFGR'S CABLE

1-2/C #16TSP

FS FLOAT SWITCH

- MFGR'S CABLE

(PE) PRESSURE TRANSMITTER & TRANSDUCER

3/4"C

3/4"C

3/4"C

4 #14

1"C

WATER

METER

BLOWER FAN

2 #14 —

3/4"C

3/4"C -

MFGR'S CABLE

WATER METER VAULT

COORDINATE CONDUIT

SIZE REQUIRED WITH

--4#12

1#12GND

BLOWER/LIGHT

SUMP PUMP RECEPT.

3/4"C

1#10 GND

1-1/4"C

1#4GND

2" C SPARE W/ PULL ROPE

2" C

ELECTRICAL ONE LINE DIAGRAM

NO SCALE

ALL ELECTRIC SERVICE WORK SHALL BE IN ACCORDANCE WITH UTILITY COMPANY SPECIFICATIONS.

2. PROVIDE METER PAN, CONDUIT AND WIRE TYPES AS PER UTILITY COMPANY REQUIREMENTS.

PUMP CORDS SUPPLIED. /

DUTY PUMPS—

JOCKEY PUMP-

SUMP PUMP

₩P GFI

2 #12 —

1 #12 GND 3/4"C (TYP.) ENGINEERING, P.C.
CIVIL - PLUMBING - ELECTRICAL - MECHANICAL
12 Water Street, Suite 202, White Plains, New York 10601
914-741-1290 (tel) 914-741-1253 (fax) www.lynstaar.com

EQUIPMENT RACK ELEVATION

MSK ENGINEERING AND DESIGN, INC.
P.O. BOX 139, 150 DEPOT STREET
BENNINGTON, VERMONT 05201
PH: (802) 447-1402 FAX: (802) 445-1291

NO. DATE DESCRIPTION

TOWN OF BENNINGTON
MUNICIPAL WATER SYSTEM
REMEDIAL EXPANSION PHASE II
BENNINGTON, VERMONT

ELECTRICAL ONE LINE DIAGRAM AND DETAILS

NUMBER	DATE
	4/05/40
	4/25/19
DRAWN	CHECKED
9	100
GD	JGD

SHEET NUMBER

E-2

