Groundwater Remediation Project

Naval Weapons Industrial Reserve Plant

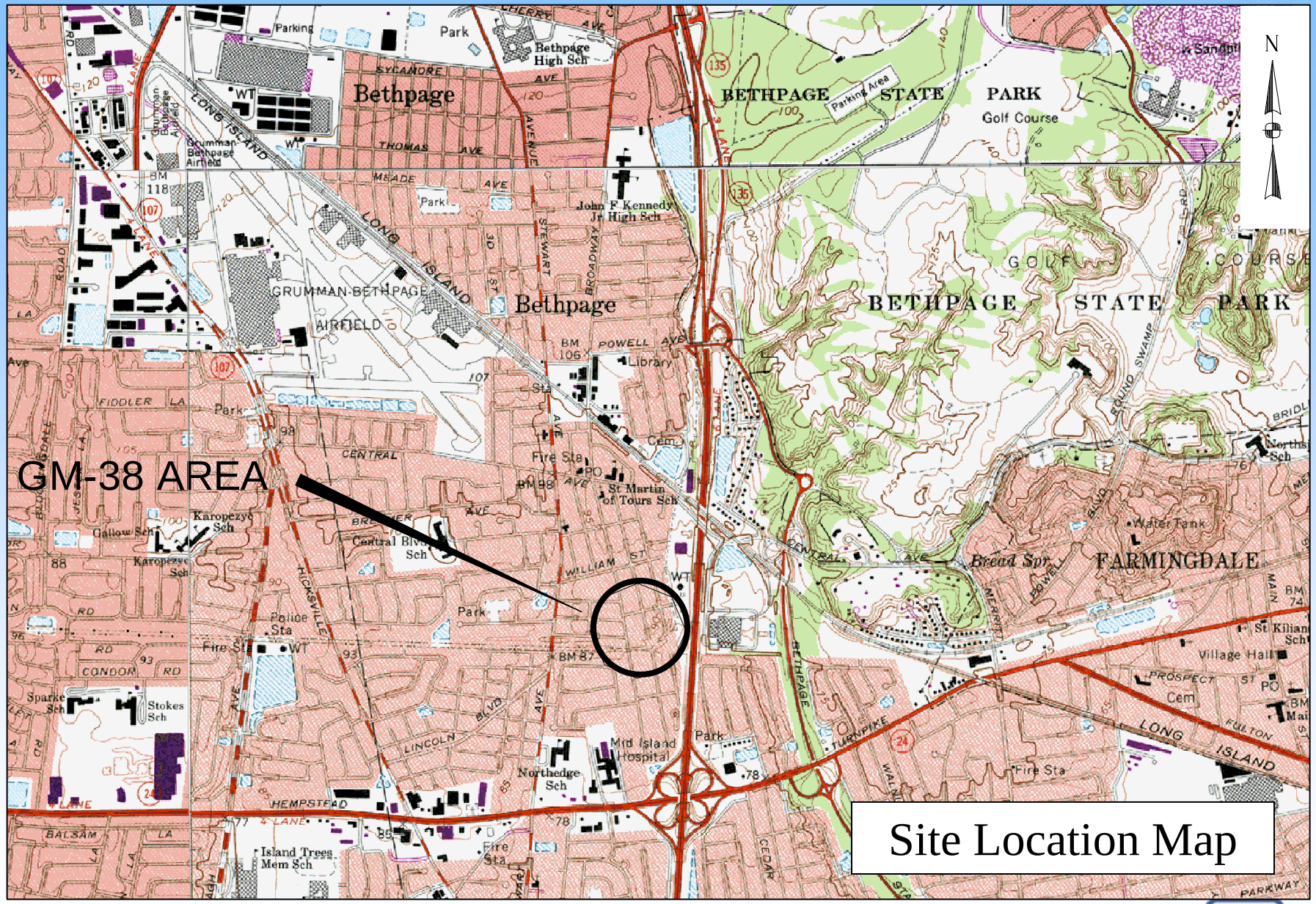
Bethpage, NY

GM-38 Area

Restoration Advisory Board Meeting

June 7, 2006

TETRA TECH EC, INC.



NAVFAC
Naval Facilities Engineering Command

Groundwater Remediation Project

- Site History
- Treatment System Design
- Well Installations
- Construction
- Operation & Maintenance

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Site History

- Chlorinated solvents detected in GW
- GW pump & treat system installed on Northrop Grumman property (Nov 1998)
- GM-38 Area delineated (June 2000-April 2002)
- Conceptual Plans to design and build GWTP in GM-38 Area for mass removal (February 2003)

Site History (cont'd)

- Community Workshop (September 2004)
- Pre-design investigation (November 2004)
- Draft Remedial Design (February 2005)
  - Reviewed by Navy and Third Party Consultant
- 90% Draft Final Design (November 2005)
  - Reviewed by same plus NYS DEC, TOB, and public
- Final Design (May 2006)

Groundwater Remediation Project

- Site History
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- Well Installations
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- Operation & Maintenance

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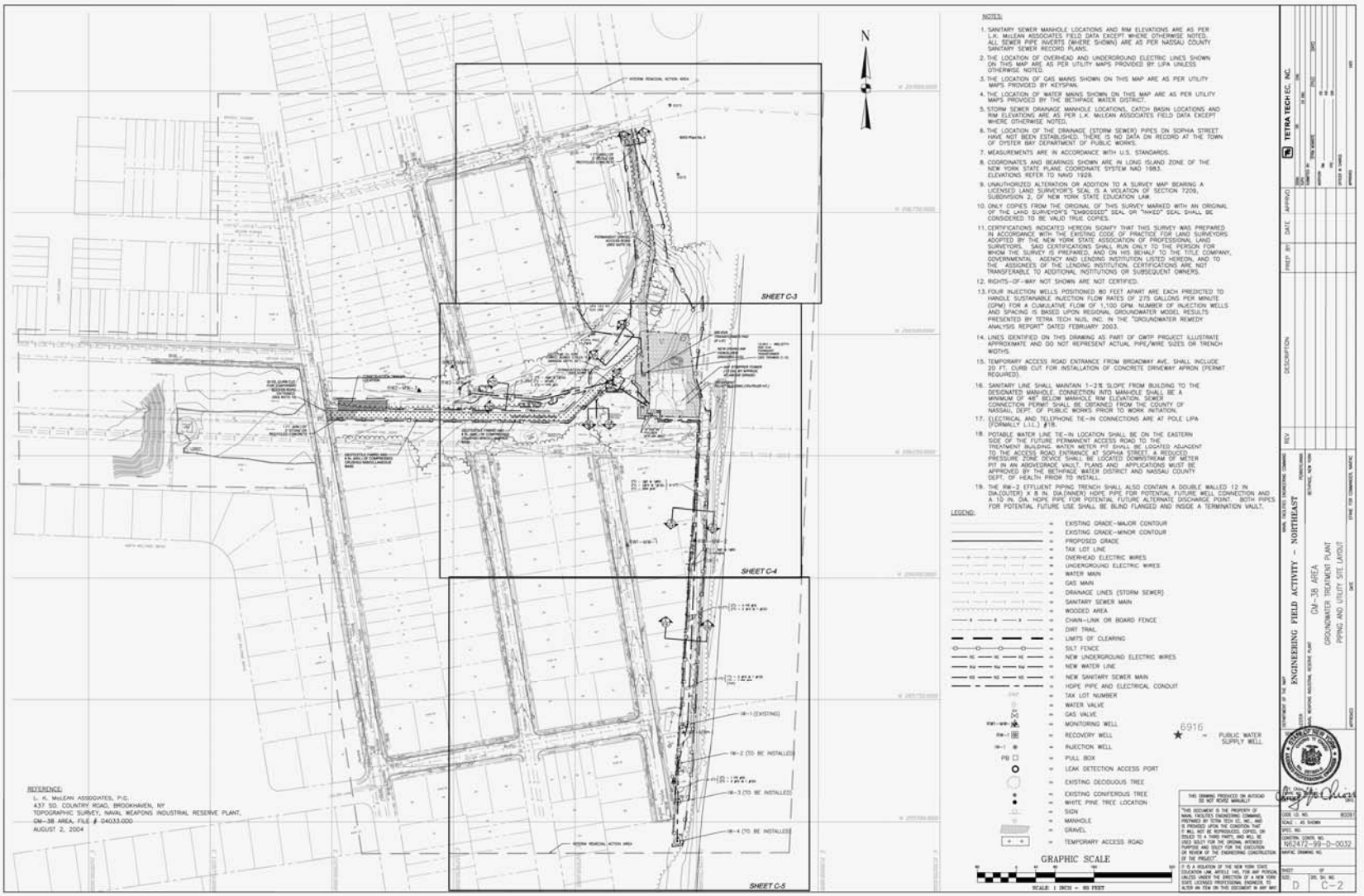
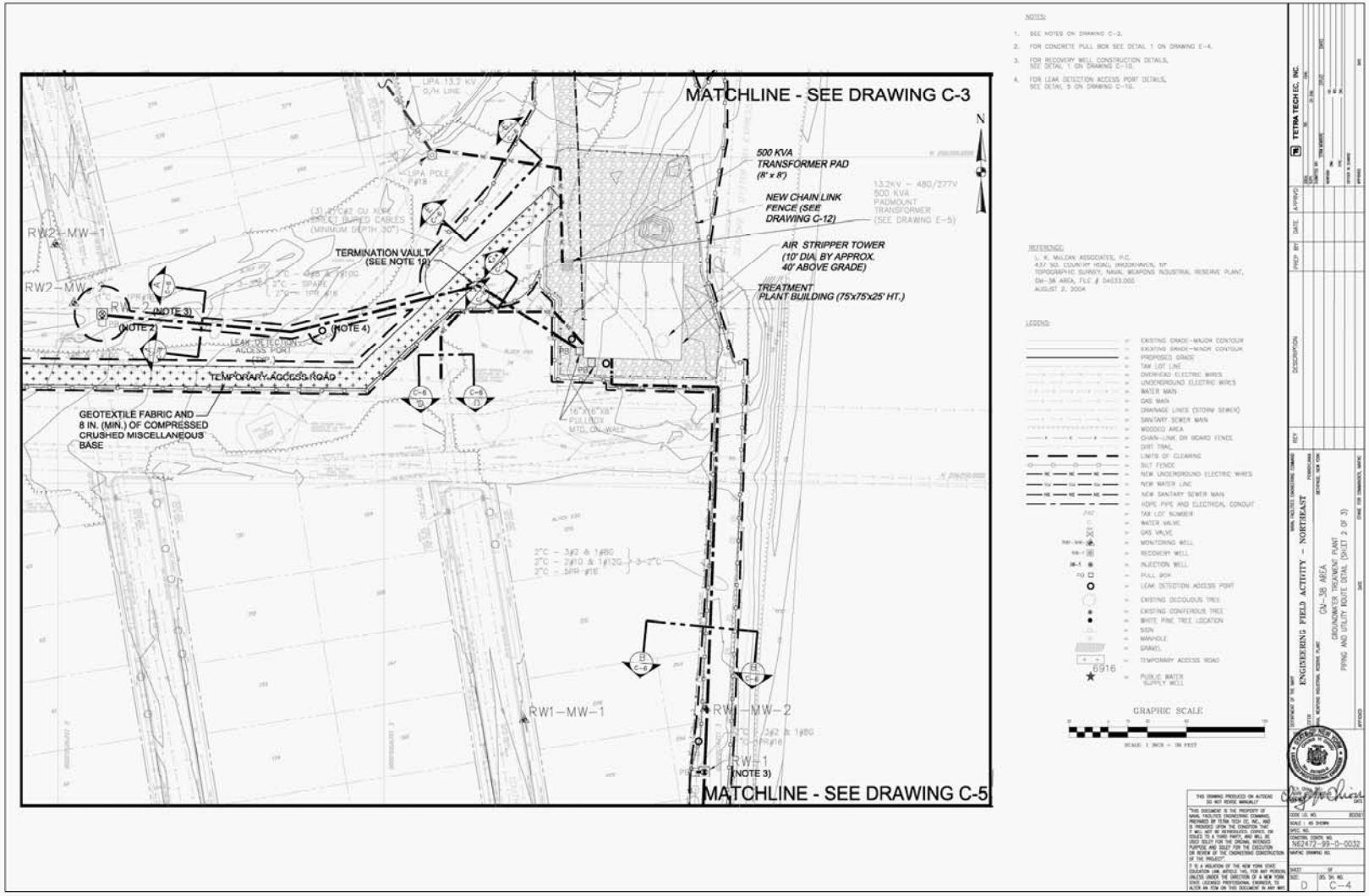
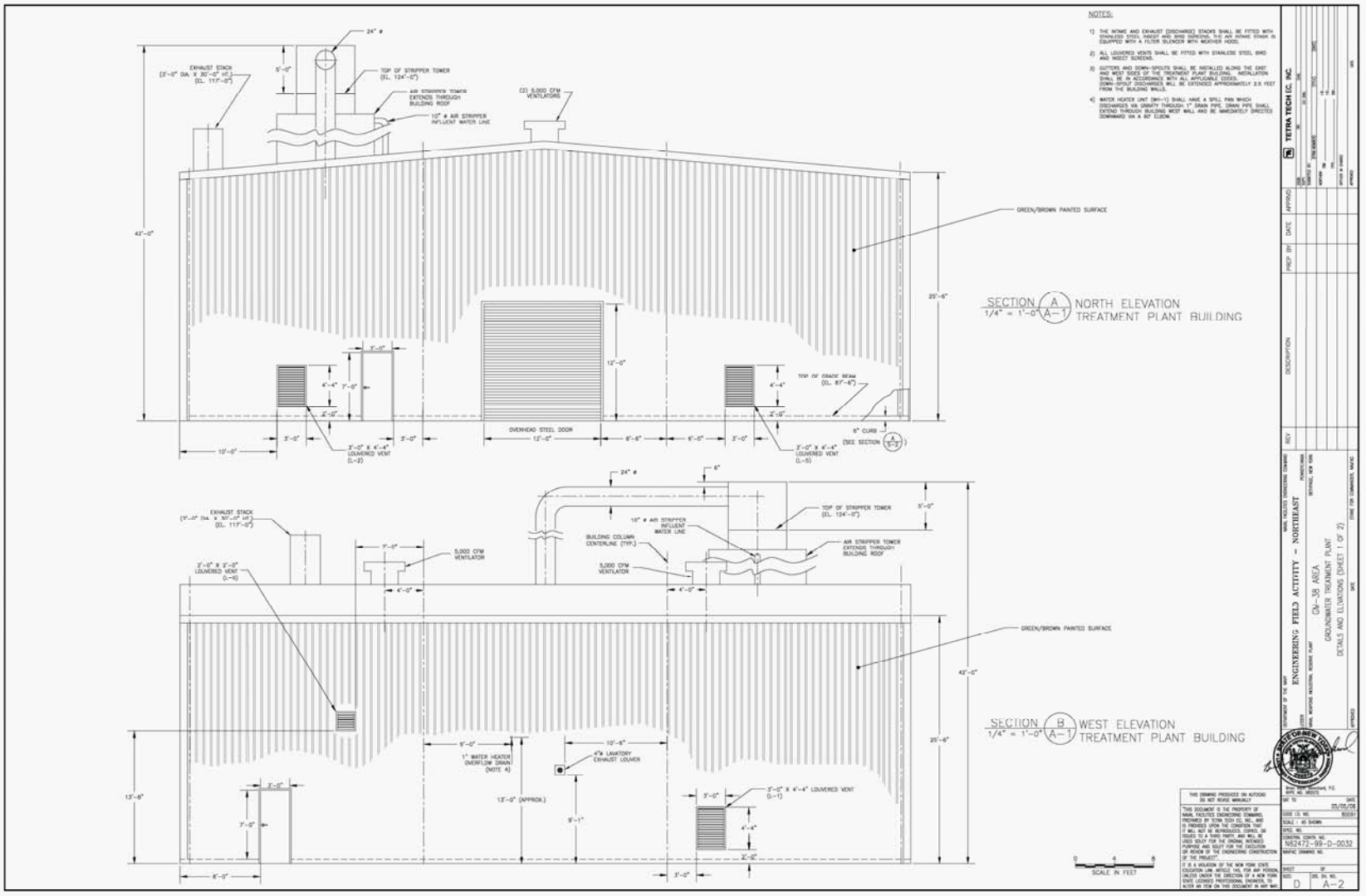
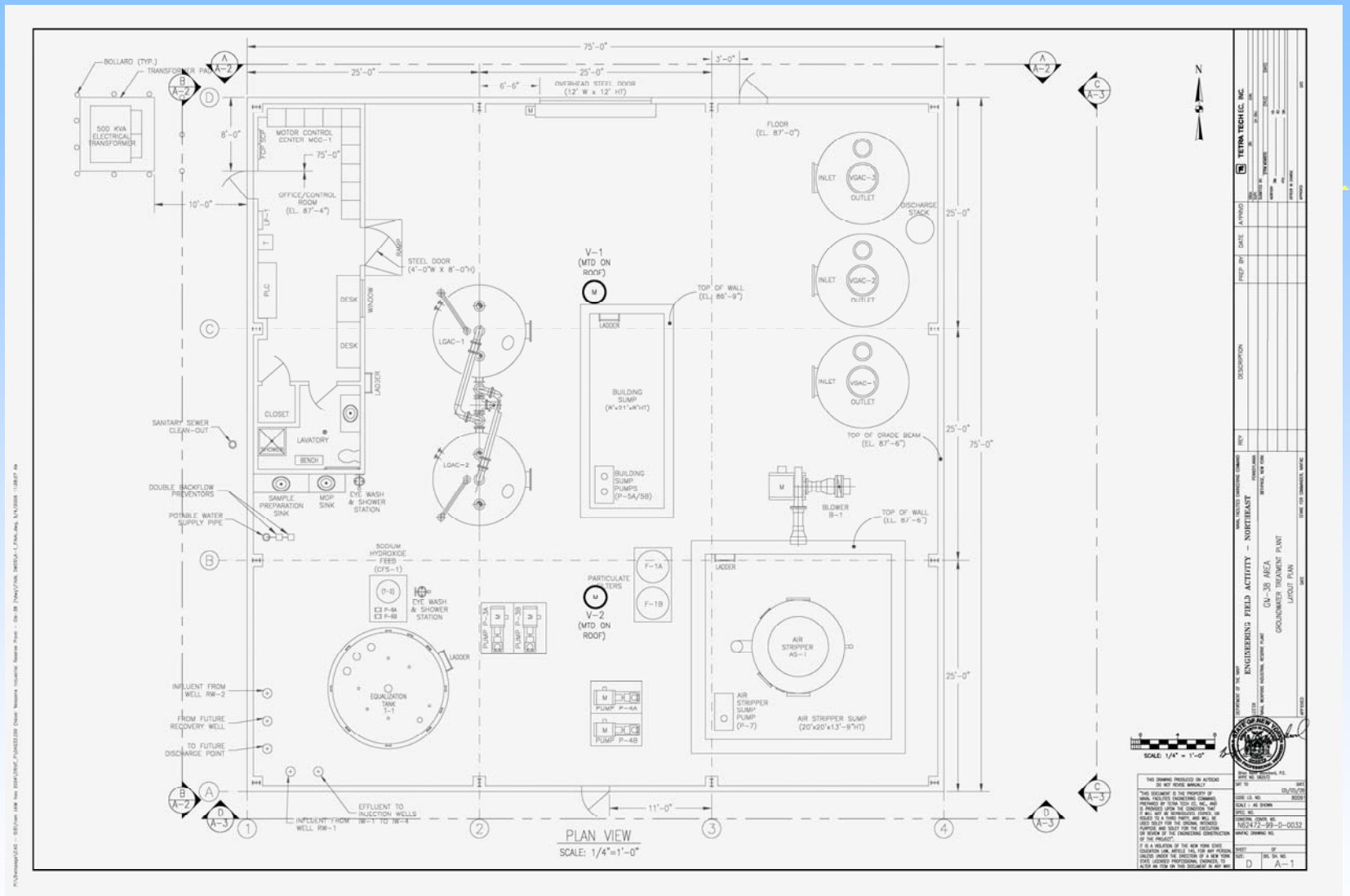
Treatment System Design (cont'd)

- Mass Removal of Volatile Organic Compounds (VOC's) from groundwater
- Process Flow Rate = 1,100 gallons / minute
- Pumping from two recovery wells
- Primary treatment is Air Stripping
- Secondary treatment (polish) is Carbon Media
- Vapors from Air Stripping Treated w/ Carbon
- Inject treated water into four injection wells


NOTES:
1. SANITARY SEWER MANHOLE LOCATIONS AND RIM ELEVATIONS ARE AS PER L.K. McLEAN ASSOCIATES FIELD DATA EXCEPT WHERE OTHERWISE NOTED. ALL SEWER PIPE INVERTS (WHERE SHOWN) ARE AS PER NASSAU COUNTY SANITARY SEWER RECORD PLANS.
2. THE LOCATION OF OVERHEAD AND UNDERGROUND ELECTRIC LINES SHOWN ON THIS MAP ARE AS PER UTILITY MAPS PROVIDED BY LIPA UNLESS OTHERWISE NOTED.
3. THE LOCATION OF GAS MAINS SHOWN ON THIS MAP ARE AS PER UTILITY MAPS PROVIDED BY KEYSPAN.
4. THE LOCATION OF WATER MAINS SHOWN ON THIS MAP ARE AS PER UTILITY MAPS PROVIDED BY THE BETHPAGE WATER DISTRICT.
5. STORM SEWER DRAINAGE MANHOLE LOCATIONS, CATCH BASIN LOCATIONS AND RIM ELEVATIONS ARE AS PER L.K. McLEAN ASSOCIATES FIELD DATA EXCEPT WHERE OTHERWISE NOTED.
6. THE LOCATION OF THE DRAINAGE (STORM SEWER) PIPES ON SOPHIA STREET HAVE NOT BEEN ESTABLISHED. THERE IS NO DATA ON RECORD AT THE TOWN OF OYSTER BAY DEPARTMENT OF PUBLIC WORKS.
7. MEASUREMENTS ARE IN ACCORDANCE WITH U.S. STANDARDS.
8. COORDINATES AND BEARINGS SHOWN ARE IN LONG ISLAND ZONE OF THE NEW YORK STATE PLANE COORDINATE SYSTEM NAD 1983. ELEVATIONS REFER TO NAVD 1929.
9. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUBDIVISION 2, OF NEW YORK STATE EDUCATION LAW.
10. ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S "EMBOSSED" SEAL OR "INKED" SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES.
11. CERTIFICATIONS INDICATED HEREON SIGNIFY THAT THIS SURVEY WAS PREPARED IN ACCORDANCE WITH THE EXISTING CODE OF PRACTICE FOR LAND SURVEYORS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS. SAID CERTIFICATIONS SHALL RUN ONLY TO THE PERSON FOR WHOM THE SURVEY IS PREPARED, AND ON HIS BEHALF TO THE TITLE COMPANY, GOVERNMENTAL AGENCY AND LENDING INSTITUTION LISTED HEREON, AND TO THE ASSIGNEES OF THE LENDING INSTITUTION. CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.
12. RIGHTS-OF-WAY NOT SHOWN ARE NOT CERTIFIED.
13. FOUR INJECTION WELLS POSITIONED 80 FEET APART ARE EACH PREDICTED TO HANDLE SUSTAINABLE INJECTION FLOW RATES OF 275 GALLONS PER MINUTE (GPM) FOR A CUMULATIVE FLOW OF 1,100 GPM. NUMBER OF INJECTION WELLS AND SPACING IS BASED UPON REGIONAL GROUNDWATER MODEL RESULTS PRESENTED BY TETRA TECH NUS, INC. IN THE "GROUNDWATER REMEDY ANALYSIS REPORT" DATED FEBRUARY 2003.
14. LINES IDENTIFIED ON THIS DRAWING AS PART OF GWTP PROJECT ILLUSTRATE APPROXIMATE AND DO NOT REPRESENT ACTUAL PIPE/WIRE SIZES OR TRENCH WIDTHS.
15. TEMPORARY ACCESS ROAD ENTRANCE FROM BROADWAY AVE. SHALL INCLUDE 20 FT. CURB CUT FOR INSTALLATION OF CONCRETE DRIVEWAY APRON (PERMIT REQUIRED).
16. SANITARY LINE SHALL MAINTAIN 1-2% SLOPE FROM BUILDING TO THE DESIGNATED MANHOLE. CONNECTION INTO MANHOLE SHALL BE A MINIMUM OF 48" BELOW MANHOLE RIM ELEVATION. SEWER CONNECTION PERMIT SHALL BE OBTAINED FROM THE COUNTY OF NASSAU, DEPT. OF PUBLIC WORKS PRIOR TO WORK INITIATION.
17. ELECTRICAL AND TELEPHONE TIE-IN CONNECTIONS ARE AT POLE LIPA (FORMALLY L.I.L.) #18.
18. POTABLE WATER LINE TIE-IN LOCATION SHALL BE ON THE EASTERN SIDE OF THE FUTURE PERMANENT ACCESS ROAD TO THE TREATMENT BUILDING. WATER METER PIT SHALL BE LOCATED ADJACENT TO THE ACCESS ROAD ENTRANCE AT SOPHIA STREET. A REDUCED PRESSURE ZONE DEVICE SHALL BE LOCATED DOWNSTREAM OF METER PIT IN AN ABOVEGRADE VAULT. PLANS AND APPLICATIONS MUST BE APPROVED BY THE BETHPAGE WATER DISTRICT AND NASSAU COUNTY DEPT. OF HEALTH PRIOR TO INSTALL.
19. THE RW-2 EFFLUENT PIPING TRENCH SHALL ALSO CONTAIN A DOUBLE WALLED 12 IN DIA.(OUTER) X 8 IN. DIA.(INNER) HDPE PIPE FOR POTENTIAL FUTURE WELL CONNECTION AND A 10 IN. DIA. HDPE PIPE FOR POTENTIAL FUTURE ALTERNATE DISCHARGE POINT. BOTH PIPES FOR POTENTIAL FUTURE USE SHALL BE BLIND FLANGED AND INSIDE A TERMINATION VAULT.
LEGEND:
EXISTING GRADE--MAJOR CONTOUR
EXISTING GRADE--MINOR CONTOUR
PROPOSED GRADE
TAX LOT LINE
OVERHEAD ELECTRIC WIRES
UNDERGROUND ELECTRIC WIRES
WATER MAIN
GAS MAIN
DRAINAGE LINES (STORM SEWER)
SANITARY SEWER MAIN
WOODED AREA
CHAIN-LINK OR BOARD FENCE
DIRT TRAIL
LIMITS OF CLEARING
SILT FENCE
NEW UNDERGROUND ELECTRIC WIRES
NEW WATER LINE
NEW SANITARY SEWER MAIN
HDPE PIPE AND ELECTRICAL CONDUIT
TAX LOT NUMBER
WATER VALVE
GAS VALVE
MONITORING WELL
RECOVERY WELL
INJECTION WELL
PULL BOX
LEAK DETECTION ACCESS PORT
EXISTING DECIDUOUS TREE
EXISTING CONIFEROUS TREE
WHITE PINE TREE LOCATION
SIGN
MANHOLE
GRAVEL
TEMPORARY ACCESS ROAD
6916
PUBLIC WATER SUPPLY WELL
GRAPHIC SCALE
SCALE: 1 INCH = 80 FEET
SHEET C-3
SHEET C-4
SHEET C-5
REFERENCE:
L. K. McLEAN ASSOCIATES, P.C.
437 SO. COUNTRY ROAD, BROOKHAVEN, NY
TOPOGRAPHIC SURVEY, NAVAL WEAPONS INDUSTRIAL RESERVE PLANT,
GM-38 AREA, FILE # 04033.000
AUGUST 2, 2004
TETRA TECH EC, INC.
ENGINEERING FIELD ACTIVITY - NORTHEAST
NAVAL FACILITIES ENGINEERING COMMAND
GM-38 AREA
GROUNDWATER TREATMENT PLANT
PIPING AND UTILITY SITE LAYOUT
CONTRACT NO. N62472-99-D-0032
SIZE D
SHT. NO. C-2


MATCHLINE - SEE DRAWING C-3
MATCHLINE - SEE DRAWING C-5
500 KVA TRANSFORMER PAD (8' x 8')
NEW CHAIN LINK FENCE (SEE DRAWING C-12)
AIR STRIPPER TOWER (10' DIA. BY APPROX. 40' ABOVE GRADE)
TREATMENT PLANT BUILDING (75'x75'x25' HT.)
TERMINATION VAULT (SEE NOTE 1)
TEMPORARY ACCESS ROAD
GEOTEXTILE FABRIC AND 8 IN. (MIN.) OF COMPRESSED CRUSHED MISCELLANEOUS BASE
RW1-MW-1
RW1-MW-2
RW2-MW-1
RW2-MW-2
RW-1
(NOTE 2)
(NOTE 3)
(NOTE 4)
GRAPHIC SCALE
TETRA TECH EC, INC.
ENGINEERING FIELD ACTIVITY - NORTHEAST
OU-3B AREA
GROUNDWATER TREATMENT PLANT
PIPING AND UTILITY ROUTE DETAIL (SHEET 2 OF 3)
N62472-99-D-0032
C-4





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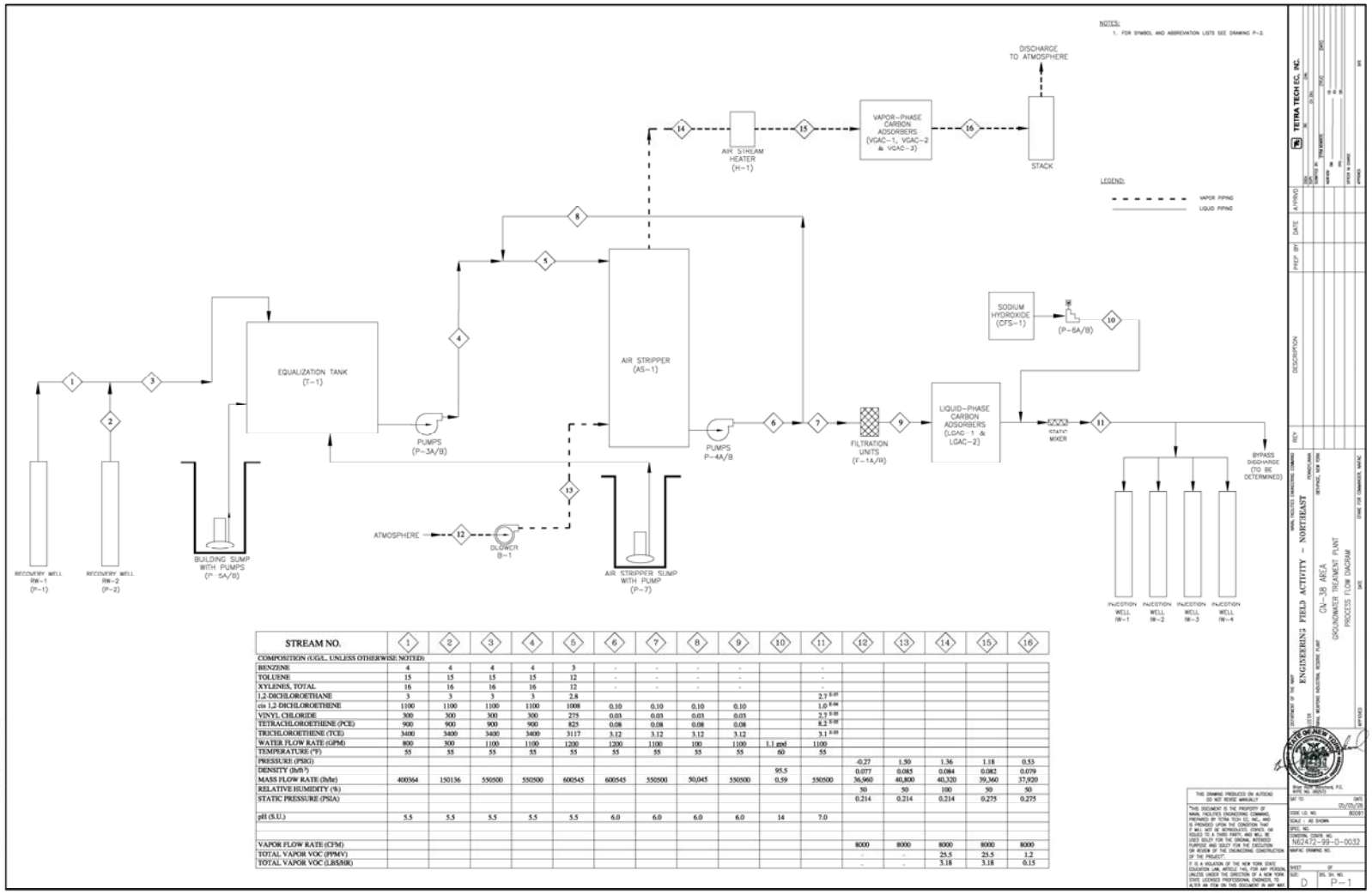

STREAM NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COMPOSITION (UG/L, UNLESS OTHERWISE NOTED)																
BENZENE	4	4	4	4	3	-	-	-	-		-					
TOLUENE	15	15	15	15	12	-	-	-	-		-					
XYLENES, TOTAL	16	16	16	16	12	-	-	-	-		-					
1,2 DICHLOROETHANE	3	3	3	3	2.8						2.7^{E-05}					
cis 1,2 DICHLOROETHENE	1100	1100	1100	1100	1008	0.10	0.10	0.10	0.10		1.0^{E-04}					
VINYL CHLORIDE	300	300	300	300	275	0.03	0.03	0.03	0.03		2.7^{E-05}					
TETRACHLOROETHENE (PCE)	900	900	900	900	825	0.08	0.08	0.08	0.08		8.2^{E-05}					
TRICHLOROETHENE (TCE)	3400	3400	3400	3400	3117	3.12	3.12	3.12	3.12		3.1^{E-05}					
WATER FLOW RATE (GPM)	800	300	1100	1100	1200	1200	1100	100	1100	1.1 gpd	1100					
TEMPERATURE (°F)	55	55	55	55	55	55	55	55	55	60	55					
PRESSURE (PSIG)												-0.27	1.50	1.36	1.18	0.53
DENSITY (lbs/ft³)										95.5		0.077	0.085	0.084	0.082	0.079
MASS FLOW RATE (lb/hr)	400364	150136	550500	550500	600545	600545	550500	50,045	550500	0.59	550500	36,960	40,800	40,320	39,360	37,920
RELATIVE HUMIDITY (%)												50	50	100	50	50
STATIC PRESSURE (PSIA)												0.214	0.214	0.214	0.275	0.275
pH (S.U.)	5.5	5.5	5.5	5.5	5.5	6.0	6.0	6.0	6.0	14	7.0					
VAPOR FLOW RATE (CFM)												8000	8000	8000	8000	8000
TOTAL VAPOR VOC (PPMV)												-	-	25.5	25.5	1.2
TOTAL VAPOR VOC (LBS/HR)												-	-	3.18	3.18	0.15

NAVFAC Naval Facilities Engineering Command

1.0 TANKS

ITEM NUMBER	NUMBER REQUIRED	NAME/DESCRIPTION
T-1	1	EQUALIZATION TANK -CONFIGURATION: VERTICAL; CYLINDRICAL, CLOSED-TOP, VENTED -MATERIAL OF FABRICATION: EPOXY COATED CARBON STEEL WITH EXTERIOR PAINT INTERIOR EPOXY COATING. -DIMENSIONS: 12.0 FT DIAMETER X 20.0 FT HT -CAPACITY: 16,900 GAL
T-2	1	CHEMICAL FEED TANK -CONFIGURATION: VERTICAL DRUM -CAPACITY: 55 GAL. -CONTENTS: 50% SODIUM HYDROXIDE

2.0 MIXERS

ITEM NUMBER	NUMBER REQUIRED	NAME/DESCRIPTION
M-1	1	EQUALIZATION TANK MIXER -TYPE: MEDIUM SPEED, TURBINE -CONFIGURATION: TOP CENTER MOUNT. -MOTOR: 3.0 HP, 460 V, 3 PH
M-2	1	IN-LINE STATIC MIXER -TYPE: PVC -CONFIGURATION: IN-LINE FLANGE-MOUNTED.

3.0 PUMPS

ITEM NUMBER	NUMBER REQUIRED	NAME/DESCRIPTION
P-1	1	RECOVERY WELL PUMP -TYPE: SUBMERSIBLE CENTRIFUGAL -CAPACITY: 800 GPM NOM (GPM MAX) -HEAD: 111 FT. -MOTOR: 60HP, 460V, 3 PH
P-2	1	RECOVERY WELL PUMP -TYPE: SUBMERSIBLE, CENTRIFUGAL -CAPACITY: 300 GPM NOM (GPM MAX) -HEAD: 100 FT -MOTOR: 15 HP, 460 V, 3PH
P-3A, P-3B	2	AIR STRIPPER FEED PUMP -TYPE: HORIZONTAL, CENTRIFUGAL -CAPACITY: 1375 GPM -HEAD: 73 FT -MOTOR: 40 HP, 460 V, 3 PH
P-4A, P-4B	2	RE-INJECTION PUMP -TYPE: HORIZONTAL, CENTRIFUGAL -CAPACITY: 1375 GPM -HEAD: 73 FT -MOTOR: 40 HP, 460 V, 3 PH
P-5A, P-5B	2	BUILDING SUMP PUMP -TYPE: SUBMERSIBLE, CENTRIFUGAL -CAPACITY: 10 GPM -HEAD: 40 FT -MOTOR: 1/2 HP, 460 V, 3 PH
P-6A, P-6B	2	CAUSTIC FEED PUMP -TYPE: METERING PUMP -CAPACITY: 0-8.0 GPM -MOTOR: 1/3 HP, 120 V, 1 PH
P-7	2	AIR STRIPPER SUMP PUMP -TYPE: SUBMERSIBLE, CENTRIFUGAL -CAPACITY: 10 GPM -HEAD: 40 FT -MOTOR: 1/2 HP, 120V, 1 PH

4.0 AIR BLOWERS, COMPRESSORS AND VENTILATORS

ITEM NUMBER	NUMBER REQUIRED	NAME/DESCRIPTION
B-1	1	AIR STRIPPER BLOWER -TYPE: RADIAL BLADE FAN -CAPACITY: 9860 CFM @ 43" S.P. -POWER: 150 HP, 460 V, 3 PH, 3,600 RPM -WEIGHT: 1,025 LBS -MOUNTING FOOTPRINT: 26"X29"
V-1, V-2	1	ROOF VENTILATOR -CAPACITY: 5,000 CFM -POWER: 2.0 HP, 460 V, 3 PH, TEFC
V-3	1	CEILING VENTILATOR -CAPACITY: 50 CFM -POWER: 1/6 HP, 120 V, 1 PH

5.0 SOLIDS SEPARATION EQUIPMENT

ITEM NUMBER	NUMBER REQUIRED	NAME/DESCRIPTION
F-1A F-1B	2	PARTICULATE FILTRATION UNITS -TYPE: MULTI-BAG FILTRATION HOUSINGS -MAXIMUM FLOW: 1700 GPM -OPERATING PRESSURE: 150 PSIG MAX. PRESSURE -SIZE: 25 MICRON PORE SIZE, 10" FLANGE INLET/OUTLET

6.0 ORGANICS REMOVAL EQUIPMENT

ITEM NUMBER	NUMBER REQUIRED	NAME/DESCRIPTION
AS-1	1	AIR STRIPPER -LIQUID LOADING RATE (MAX): 1,375 GPM (687,500 LB/HR) -MATERIAL: ALUMINUM (5000 SERIES STRUCTURAL ALUMINUM) -OVERALL DIMENSIONS: 10' DIA X 43' HT -PACKING HEIGHT: 25' -PACKING MATERIAL: JAEGER TRIPACK (3.5" DIA) -WEIGHT (EMPTY): 14,332 LBS -WEIGHT (FLOODED): 88,446 LBS
LGAC-1 LGAC-2	2	GRANULAR ACTIVATED CARBON ADSORBER (LIQUID PHASE) WITH PIPING MANIFOLD -CAPACITY: 20,000 LBS CARBON EACH -DIMENSIONS: 10' DIA X 16' HT -WEIGHT (EMPTY): 9,000 LBS (EACH -WEIGHT (OPERATING): 110,000 LBS -MAX FLOW: 1,400 GPM (IN PARALLEL OPERATION) -MAX PRESSURE: 125 PSIG
VGAC-1 VGAC-2 VGAC-3	3	GRANULAR ACTIVATED CARBON ADSORBER (VAPOR PHASE) -CAPACITY: 8,400 LBS CARBON EACH -DIMENSIONS: 10' DIA X 15' HT -WEIGHT (EMPTY): 2,500 LBS -WEIGHT (FULL): 20,900 LBS -MAX FLOW: 20,000 CFM (IN SERIES OPERATION) -MAX PRESSURE: 5 PSIG
H-1	1	AIR STRIPPER EXHAUST HEATER -USE: IN-LINE ELECTRIC HEATER FOR RELATIVE HUMIDITY REDUCTION. THERMOSTATICALLY CONTROLLED TO RAISE PROCESS AIR STREAM FROM 80F F TO 110° F -POWER: 162 KW, 480 V, 3 PH

7.0 CHEMICAL FEED SYSTEMS

ITEM NUMBER	NUMBER REQUIRED	NAME/DESCRIPTION
CFS-1	1	CAUSTIC FEED SYSTEM -USED IN CONJUNCTION WITH TANK T-2 AND PUMPS P-6A/B. -ALL APPURTENANCES NECESSARY TO METER 50% SODIUM HYDROXIDE SOLUTION INTO TANK T-1 AND/OR EFFLUENT LINE. -SPILL COLLECTION SYSTEM MOUNTED UNDER TANK (T-2) AND PUMPS (P-6A/B).

8.0 CONTROL PANELS

ITEM NUMBER	NUMBER REQUIRED	NAME/DESCRIPTION
MCC	1	MOTOR CONTROL CENTER -FEED: 480 V, 500 KVA STEP-DOWN TRANSFORMER
PLC	1	PROGRAMMABLE LOGIC CONTROL SYSTEM

TETRA TECH EC, INC.

DESCRIPTION

ENGINEERING FIELD ACTIVITY - NORTHEAST

CM-38 AREA

GROUNDWATER TREATMENT PLANT

PROCESS EQUIPMENT LIST

THIS DRAWING PRODUCED ON AUTOCAD DO NOT REVISE MANUALLY

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DATE 05/05/08

CODE I.D. NO. 80091

SCALE - AS SHOWN

SPEC. NO.

CONTRACT ESTATE NO. N62472-99-D-0032

NAVFAC DRAWING NO.

SHEET NO. 0 OF

DWG. SH. NO. P-8

NAVFAC Naval Facilities Engineering Command

Esthetic Considerations

- Excavated soil used to construct berm
- Maintain as many existing trees as possible
- 100 new trees to be planted
- Building exterior to be a natural color
- Exterior building lights are motion activated
- No audible exterior alarms
- Chain link fence with privacy screening

Groundwater Remediation Project

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- Construction
- Operation & Maintenance

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Well Installations

- Currently installed (Nov 2004 - May 2005)
  - 2 Recovery Wells
  - 1 Injection Well
  - 6 Monitoring Wells
  - To be installed during construction
  - 3 Injection Wells
  - 4 Monitoring Wells

Groundwater Remediation Project

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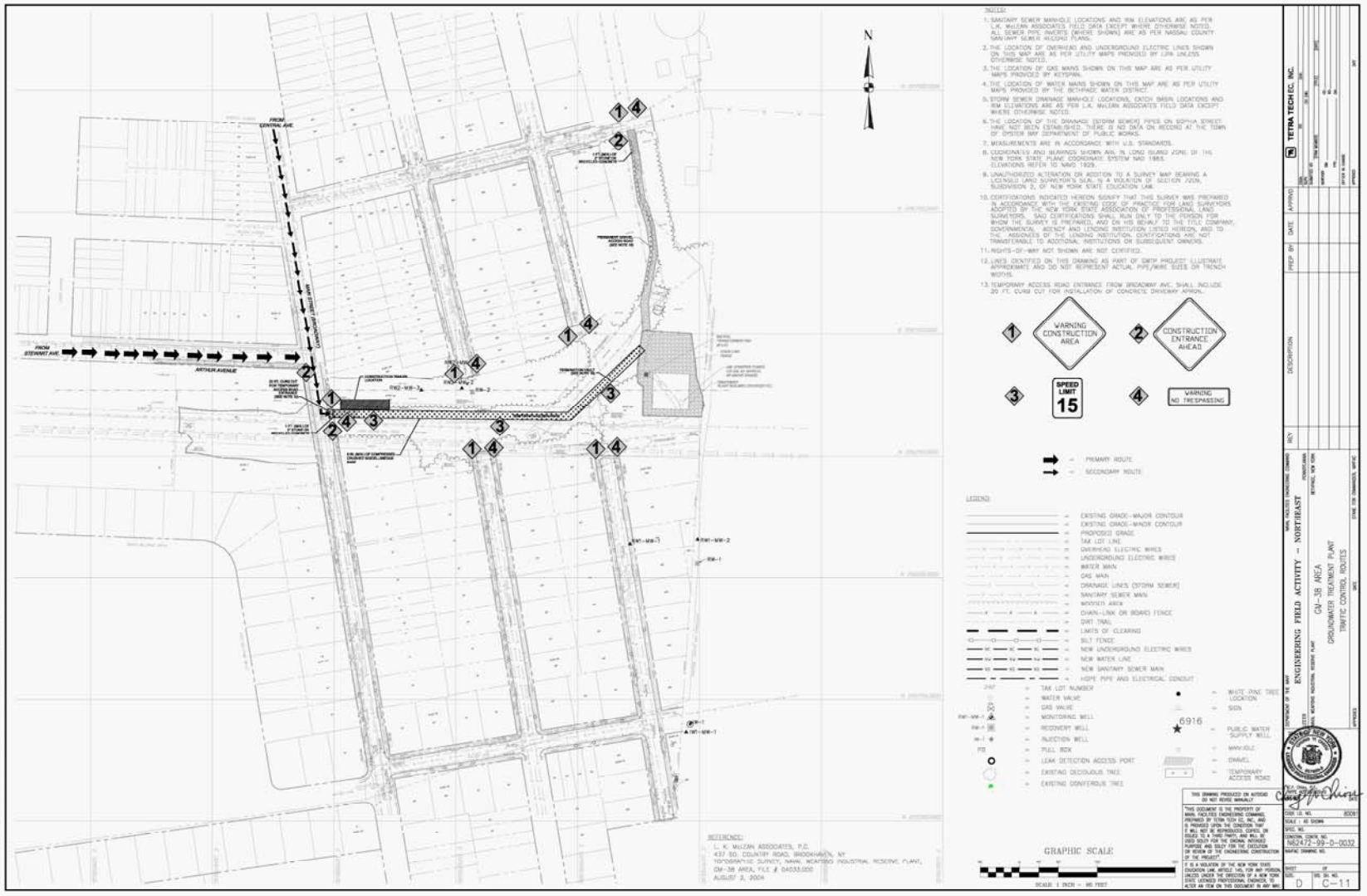
Construction

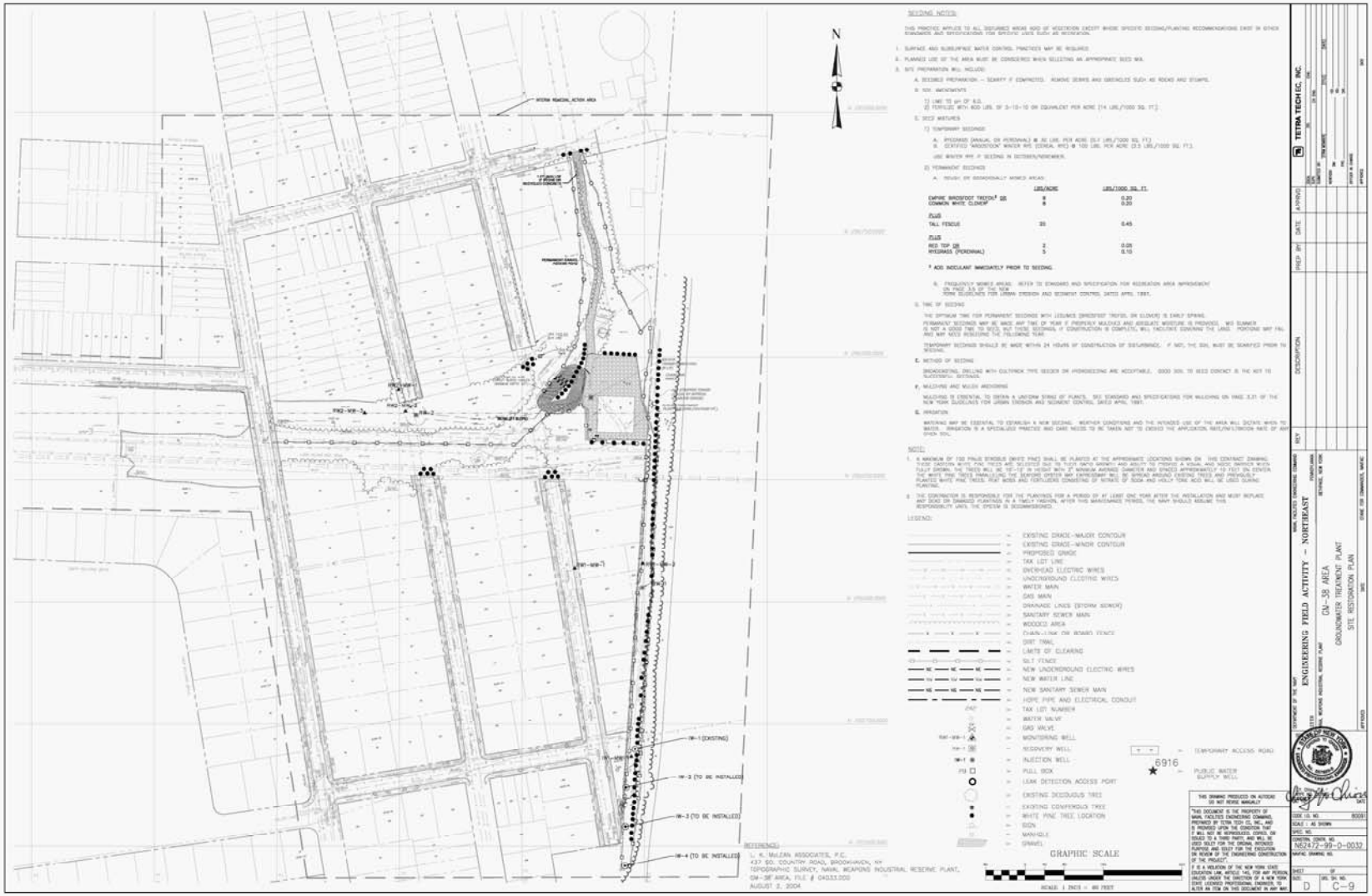
- Project Signage and Traffic Controls
- Erosion and Sediment Controls
- Access Roads (permanent and temporary)
- Install Building Footers and Foundation
- Trenching to Recovery and Injection Wells
- Utility Tie-in Connections (electric, phone, water, and sanitary sewer)
- Building Floor



NAVFAC Naval Facilities Engineering Command

Construction (cont'd)

- Set Large Equipment with Crane
- Erect Building Building
- Interior Piping and Electric
- Install Fire Alarm and Security Systems
- Install and Test Instrumentation
- Test and Balance All Systems
- Site Restoration


SEEDING NOTES:
NOTE:
LEGEND:
EXISTING GRADE-MAJOR CONTOUR
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GRAPHIC SCALE
REFERENCE:
L. K. McLEAN ASSOCIATES, P.C.
437 SO. COUNTRY ROAD, BROOKHAVEN, NY
TOPOGRAPHIC SURVEY, NAVAL WEAPONS INDUSTRIAL RESERVE PLANT,
OW-3B AREA, FILE # 04033.000
AUGUST 2, 2004
TETRA TECH EC, INC.
ENGINEERING FIELD ACTIVITY – NORTHEAST
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK
OW-3B AREA
GROUNDWATER TREATMENT PLANT
SITE RESTORATION PLAN
CONTRACT NO. N62472-99-D-0032
SHEET D
C-9

Groundwater Remediation Project

- Site History
- Treatment System Design
- Well Installations
- Construction
- Operation & Maintenance

NAVFAC Naval Facilities Engineering Command

Operation & Maintenance

- Operate 24 hours per day
- Trained personnel visits
  - 3 days per week during initial 6 months
  - Additional visits as needed

Safety Considerations

- Double-walled extraction piping and access ports
- GWTP sloped floor to sump – contain spills
- Liquid-phase carbon units – Total VOC polish
- Backflow preventor on influent potable water line
- Instrumentation
  - Monitor key operating parameters
  - Redundant controls to ensure safe operation
  - Automatic system shut-down signals
  - Requires manual restart
  - Telemonitoring system

Telemonitoring

- Remote system monitoring via PC
- Alarm conditions communicated to designated personnel via autodialer
- Troubleshooting operational issues before arriving at the site

Future Operating Considerations

- Piping to termination vaults
  - One vault for additional recovery well
  - One vault for future discharge location
- Current GWTP flow will be 1100 gpm
  - Maximum capacity = 1375 gpm (+25%)
- GWTP can treat future development water
  - Water piped/transported to GWTP sump

Operation, Maintenance and Monitoring Plan

- Establishes method of operating & tracking progress of GWTP
- Sampling frequency (system & wells)
- Modify GW model with analytical results
  - Decrease in Total VOC over time
- Emergency response and troubleshooting

Operation, Maintenance and Monitoring Plan (cont'd)

- Components:
  - Regulatory requirements
  - Plant Safety
  - GWTP control and monitoring system
  - GW collection and treatment systems
  - Vapor and ancillary treatment systems
  - Preventative maintenance
  - Exit strategy based on GW modeling

Operation, Maintenance and Monitoring Plan (cont'd)

- Appendices:
  - Final list of equip., instrumentation & valves
  - Recommended spare parts list
  - Maintenance schedule
  - GWTP start-up procedure
  - Record drawings (surveys, process, PLC, etc.)

Project Status

- Obtain real estate access agreements from three property owners – TOB, NYS DOT, and Long Island Railroad
- Obtain all necessary permits
- Competitive bidding for all subcontracted work and equipment
- Notice to Proceed from NYS DEC
- Mobilize and start construction

Anticipated Schedule

Milestones	Date
Project Planning	On-going
Mobilization & Start of Construction	Summer 2006
End of Construction	Summer 2007
Plant Start-Up and Shakedown	Summer - Fall 2007
Start of Operation & Maintenance	Fall 2007

Wrap-up

Questions?