MANCHESTER VA MEDICAL CENTER

MANCHESTER. NH

VA PROJ. NO. 608-20-101

LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADE

100% SUBMITTAL - BID DOCUMENTS

06/21/2022

PRIME ENGINEER - PROJECT MANAGEMENT, MECHANICAL, ELECTRICAL, TELECOM

CIVIL, LANDSCAPE, ARCHITECTURE, STRUCTURAL

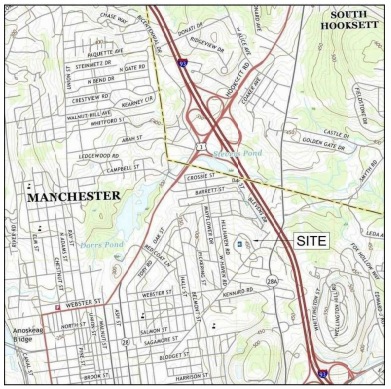
GEOTECHNICAL ENGINEERING

SUBSURFACE UTILITY ENGINEERING

ENVIRONMENTAL ENGINEERING

ESTIMATING SERVICES

PHYSICAL SECURITY



LOCATION MAP

N.T.S.

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CP302	ROAD PLAN & PROFILE
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CG102	SITE GRADING AND EROSION CONTROL PLAN
CG103	SITE GRADING AND EROSION CONTROL PLAN
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CU101	SITE UTILITY PLAN
CU102	SITE UTILITY PLAN
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CU301	SITE STORMWATER UTILITY PLAN & PROFILE
CU302	SITE STORMWATER UTILITY PLAN & PROFILE
CU303	SITE STORMWATER UTILITY PLAN & PROFILE
CU304	SITE WATER UTILITY PLAN & PROFILE
CU305	SITE WATER UTILITY PLAN & PROFILE
CU306	SITE WATER UTILITY PLAN & PROFILE

DRAWING INDEX

SHEET NUMBER	SHEET NAME
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C002	SITE DETAILS
C003	SITE DETAILS
C004	SITE DETAILS
C005	SITE DETAILS
C006	SITE DETAILS
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LS001	HARDSCAPE DETAILS
LS002	HARDSCAPE DETAILS
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BK003	BORING LOGS
BK004	BORING LOGS
BK005	BORING LOGS
BK006	BORING LOGS
MS101	SITE STEAM UTILITY PLAN AND DETAILS
MS301	SITE STEAM UTILITY PLAN & PROFILE
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PS501	STEAM MANHOLE PLUMBING DETAILS
M-001	MECHANICAL LEGENDS AND SYMBOLS
MP101	MECHANICAL - STEAM PIPING PLAN
MP301	MECHANICAL - STEAM PIPING STRESS ANALYSIS
M-501	MECHANICAL - DETAILS AND SCHEDULES
E-001	ELECTRICAL LEGENDS
E-002	ELECTRICAL GENERAL NOTES
ED101	ELECTRICAL - SITE PLAN - DEMO
EL101	ELECTRICAL - LIGHTING SITE PLAN - NEW
ES101	ELECTRICAL - SECURITY PLAN - NEW
E-401	PARTIAL BOILER PLAN (BLDG 1) ELECTRICAL ONE-LINE DIAGRAM
E-501	ELECTRICAL DETAILS
E-502	ELECTRICAL DETAILS
E-601	ELECTRICAL SCHEDULES
EC101	SITE PLAN LIGHTING CALCS

No.	Revisions	Date
1	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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170 Commerce Way, Suite 200
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PH: 603.261.2064

STATE OF MAINE — MARK LIIMAKKA No. 13911 — LICENSED PROFESSIONAL ENGINEER

MARK LIIMAKKA, P.E.
ME License #13911

CONSULTANT

Drawing Title: COVER SHEET

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022 | Checked: MHL | Drawn: JJA

Project Number: 608-20-101

Building Number:

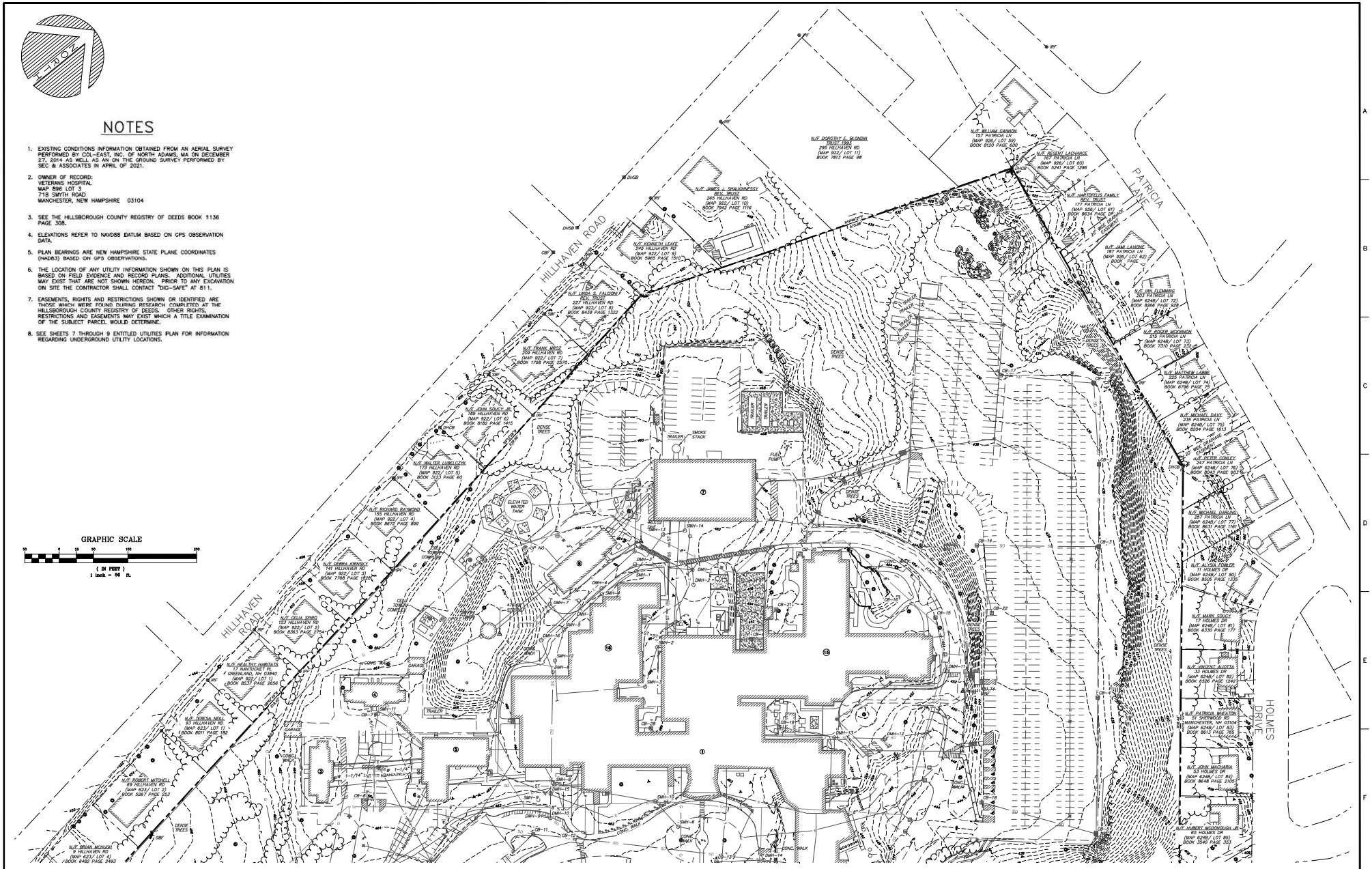
Drawing Number: G001

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08 - 8231

BIM 360://20026_Loop Road Utility Infrastructure Upgrades/Civil/21.23.4_24-01MCD0026_Loop Road Utility Upgrades_Dev 21.23.4_R24.4.rvt



SCI SUBMITAL - CONSTRUCTION DOCUMENTS	06/10/22	
Revisions	Date	

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COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2064

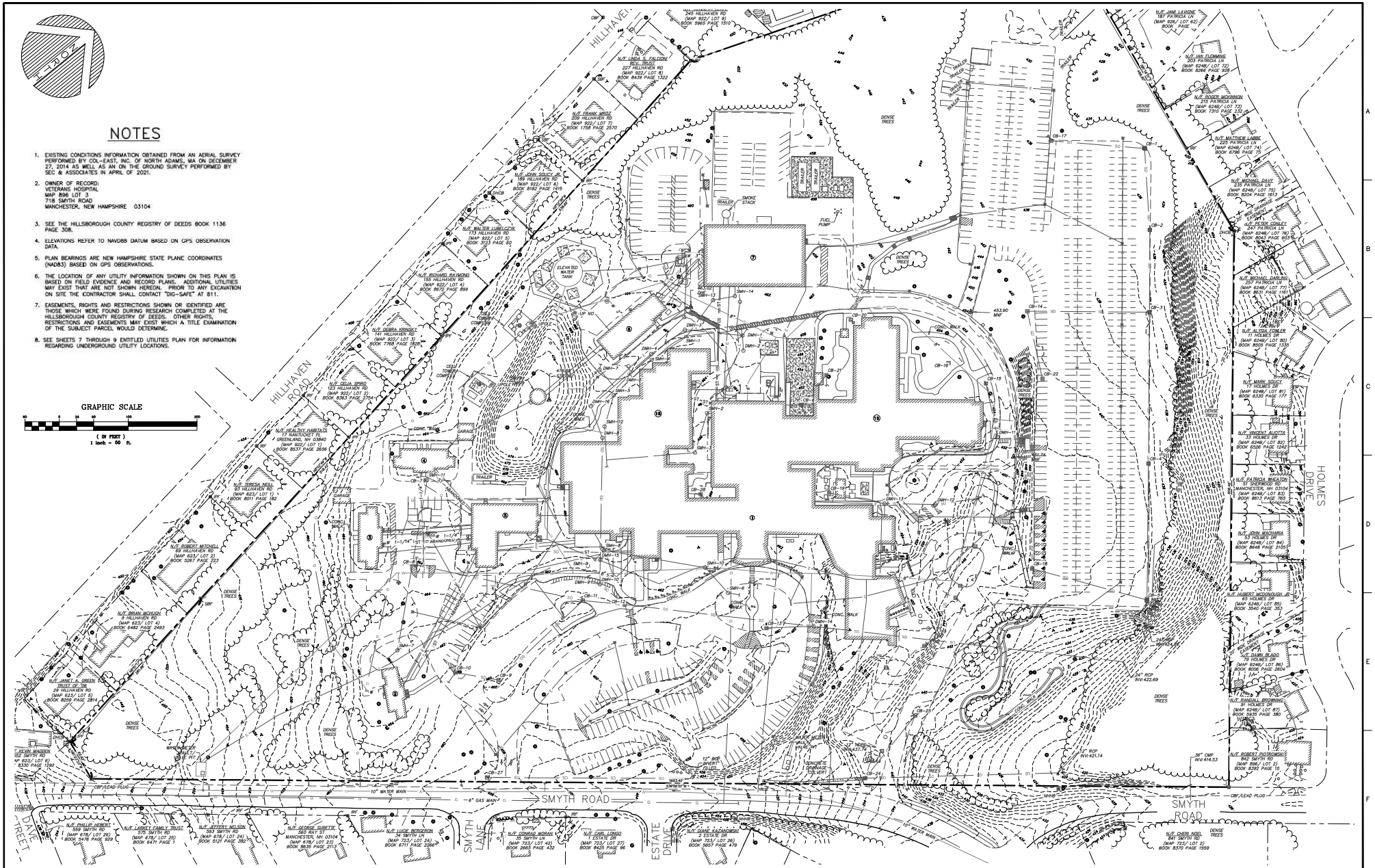
STATE OF NEW HAMPSHIRE — LAND SURVEYOR — No. 873 — BRIAN R. HAYNES

CONSULTANTS:

WBRC ARCHITECTS • ENGINEERS
WWW.WBRCAE.COM
BANGOR, MAINE
207-947-4511
PORTLAND, MAINE
207-828-1511
SARASOTA, FLORIDA
941-556-0757

Drawing Title: EXISTING CONDITIONS PLAN	Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES	Project Number: 608-20-101	Office of Construction and Facilities Management
Approved Project Director	Location: MANCHESTER VAMC, NH	Building Number: -	
	Date: 06/21/2022 Checked: JEH Drawn: TWS	Drawing Number: VB101	Department of Veterans Affairs

VA FORM 08-6231



90% SUBMITTAL - CONSTRUCTION DOCUMENTS	06/18/21
Revisions	Date

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www.abovegroupinc.com
COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2064

SDVOSB

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WBRC ARCHITECTS • ENGINEERS
WWW.WBRCAE.COM
BANGOR, MAINE 207-947-4511
PORTLAND, MAINE 207-828-1511
SARASOTA, FLORIDA 941-556-0757

Drawing Title	EXISTING CONDITIONS PLAN
Approved Project Director	
Project Title	LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES
Location	MANCHESTER VAMC, NH
Date	06/21/2022
Checked	JEH
Drawn	TWS
Project Number	608-20-101
Building Number	-
Drawing Number	VB102

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231

BSIE LEGEND

QUALITY LEVEL "A" INFORMATION

- TP-1 — VACUUM EXCAVATION DATA POINT QL-A

QUALITY LEVEL "B" INFORMATION

- CS QL-B — COMBINED SEWER QL-B
- CTV QL-B — CABLE TELEVISION QL-B
- SD QL-B — DRAIN QL-B
- E QL-B — ELECTRICAL QL-B
- FA QL-B — FIRE ALARM QL-B
- G QL-B — GAS QL-B
- S QL-B — SEWER QL-B
- ST QL-B — STEAM QL-B
- T QL-B — TELECOMMUNICATIONS QL-B
- TR QL-B — TRAFFIC QL-B
- UAIR QL-B — UNDERGROUND AIR PRODUCTS QL-B: CO2, NO2, ETC.
- U QL-B — UNKNOWN TRACE SIGNAL QL-B
- W QL-B — WATER QL-B

QUALITY LEVEL "C" INFORMATION

- CS QL-C — COMBINED SEWER QL-C
- CTV QL-C — CABLE TELEVISION QL-C
- SD QL-C — DRAIN QL-C
- E QL-C — ELECTRICAL QL-C
- FA QL-C — FIRE ALARM QL-C
- G QL-C — GAS QL-C
- S QL-C — SEWER QL-C
- ST QL-C — STEAM QL-C
- T QL-C — TELECOMMUNICATIONS QL-C
- TR QL-C — TRAFFIC QL-C
- UAIR QL-C — UNDERGROUND AIR PRODUCTS QL-C: CO2, NO2, ETC.
- U QL-C — UNKNOWN TRACE SIGNAL QL-C
- W QL-C — WATER QL-C
- OHE-T-TV(C) — OVERHEAD ELECTRIC - TELEPHONE - CABLE
- OHE-T(C) — OVERHEAD ELECTRIC - TELEPHONE
- OHE-TV(C) — OVERHEAD ELECTRIC - CABLE
- OHE(C) — OVERHEAD ELECTRIC
- OHT-TV(C) — OVERHEAD TELEPHONE - CABLE
- OHT(C) — OVERHEAD TELEPHONE
- OHTV(C) — OVERHEAD CABLE

QUALITY LEVEL "D" INFORMATION

- CS QL-D — COMBINED SEWER QL-D
- CTV QL-D — CABLE TELEVISION QL-D
- SD QL-D — DRAIN QL-D
- E QL-D — ELECTRICAL QL-D
- FA QL-D — FIRE ALARM QL-D
- G QL-D — GAS QL-D
- S QL-D — SEWER QL-D
- ST QL-D — STEAM QL-D
- T QL-D — TELECOMMUNICATIONS QL-D
- TR QL-D — TRAFFIC QL-D
- UAIR QL-D — UNDERGROUND AIR PRODUCTS QL-D: CO2, NO2, ETC.
- W QL-D — WATER QL-D

LAND BASE

- EXISTING BUILDINGS & RELATED STRUCTURES
- BRIDGE ABUTMENTS
- MAJOR CONTOUR
- MINOR CONTOUR
- MISC. DETAILS / EDGE OF PAVEMENT
- CHAINLINK OR WOOD FENCE
- STEEL GUARD RAIL OR WROUGHT IRON FENCE
- PROPERTY LINE
- TOP OF CURBS / BACK OF SIDEWALKS
- RETAINING / STONE WALLS

SUE PLAN NOMENCLATURE

- OR EOI — END OF INFORMATION
- (R) — RECORD INFORMATION
- QL–X | QL–X — CHANGE IN QUALITY LEVEL
- SUE PROJECT LIMITS
- IP — IRON PIPE
- CI — CAST IRON
- SFM — SEWER FORCE MAIN
- FO — FIBER OPTIC
- PVC — POLYVINYL CHLORIDE
- SW — SALT WATER
- HW — HOT WATER
- CND — CONDENSATE
- MH — MANHOLE
- T — TELEPHONE
- E — ELECTRIC
- W — WATER
- S — SEWER
- ST — STEAM
- U — UNKNOWN
- UAIR — UNDERGROUND AIR
- (ABAND.) — ABANDONED
- CH — CHIMNEY
- SUMP — BOTTOM OF MH STRUCTURE
- △ — NOTE CALLOUT

BSIE SYMBOLS LEGEND (QL-C) INFORMATION

CABLE TV FACILITIES

- CABLE HAND HOLE
- CABLE MANHOLE
- CABLE PEDESTAL

DRAIN FACILITIES

- AREA DRAIN
- CATCH BASIN
- CATCH BASIN ROUND
- CATCH BASIN D-GRATE
- DRAIN CLEAN OUT
- DRAIN LAMP HOLE
- DROP INLET
- DRAIN MANHOLE
- DRAIN LEACHING BASIN

ELECTRICAL FACILITIES

- ELECTRICAL HAND HOLE
- ELECTRICAL METER PIT
- ELECTRICAL CONTROL BOX
- ELECTRICAL MANHOLE
- ELECTRICAL CABINET
- ELECTRICAL PEDESTAL
- GUIDE ANCHOR
- MBTA MANHOLE
- ELECTRICAL PTC TEST BOX
- UTILITY POLE NO LIGHTS
- LIGHT POLE NO UTILITIES
- UTILITY LIGHT POLE

FIRE FACILITIES

- FIRE PULL BOX
- FIRE MANHOLE
- FIRE ALARM HANDHOLE

GAS FACILITIES

- GAS DIVISION GATE
- GAS GATE CIRCULAR
- GAS GATE SERVICE PIPE
- GAS METER PIT
- GAS REGULATOR PIT
- GAS SACRIFICIAL ANODE
- GAS TEST BOX
- GAS VENT
- GAS DRIP
- GAS GATE SQUARE

LAND BASE FACILITIES

- BOLLARD
- SOIL BORING
- COAL HOLE
- USPS MAIL BOX
- OBSERVATION WELL
- PARKING METER
- SHRUB
- SIGN
- TREE

POLICE FACILITIES

- POLICE PULL BOX
- POLICE HANDHOLE

SEWER FACILITIES

- COMBINED SEWER LAMP HOLE
- COMBINED SEWER MANHOLE
- SEWER MANHOLE
- SEWER LAMP HOLE
- SEWER VENT

STEAM FACILITIES

- STEAM REGULATOR PIT
- STEAM MANHOLE
- STEAM VALVE

SURVEY CONTROL

- BENCH MARK
- STONE BOUND
- CAT CONTROL POINT
- CROSS CUT
- DRILL HOLE
- IRON PIPE
- LEAD PLUG W/ BRASS TAC
- MASS. GEODETIC DISK
- PARKER KALON NAIL

TELEPHONE & TRAFFIC FACILITIES

- TELEPHONE HAND HOLE
- TELEPHONE MANHOLE
- TELEPHONE CABINET
- TELEPHONE BOOTH
- TELEPHONE PEDESTAL
- TRAFFIC LOOP DETECTOR
- TRAFFIC CONTROL BOX
- TRAFFIC HAND HOLE
- TRAFFIC SIGNAL POLE

UNKNOWN FACILITIES

- UNKNOWN GATE VALVE
- MANHOLE UNKNOWN

WATER FACILITIES

- AIR COCK
- BUTTERFLY VALVE
- WATER CHECK VALVE
- FIRE HYDRANT
- LOWRY HYDRANT
- WATER METER PIT
- WATER PITOMETER
- WATER POST INDICATOR VALVE
- WATER STAND PIPE
- WATER DIVISION GATE
- WATER GATE
- WATER GATE FIRE PIPE
- WATER GATE SERVICE PIPE
- WATER SACRIFICAL ANODE
- WATER TEST BOX
- WATER VENT
- WATER MANHOLE
- BUTTERFLY VALVE CHAMBER

Subsurface Utility Engineering Notes:

1. This plan was prepared in conformance with the American Society of Civil Engineers standard CI/ASCE 38-02 "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data".
2. BSIE will only warrant the existence or nonexistence of utility lines based on quality level A information. QL "A" information is only valid within the visible limits of the test hole.
3. BSIE will advance a vacuum test hole until a condition of practical refusal for vacuum excavation is reached. Practical refusal is defined as any of the following conditions occurring: Encountering a utility, bedrock, water table, rocks/cobbles, condition of hole instability or reaching a depth of 8'.
4. Below ground structures, unless dimensioned, are symbolic only.
5. Prior to excavation utility owners shall review and approve this drawing.
6. This drawing is prepared in color. Reproduction may alter the information contained hear in. BSIE does not warrant the information contained hear in following reproduction.
7. Use or reuse of this drawing by parties not directly contracted with BSIE is prohibited without prior written permission.
8. Base mapping/survey control is shown for information purposes only and is not warranted by BSIE.
9. BSIE recommends that all existing utilities near proposed construction activities be located by vacuum excavation (quality level A) prior to any excavation (if not already located by vacuum excavation).

Utility Quality Level Information Index (see ASCE/CI 38-02):

QUALITY LEVEL D: "QL D". Utility information plotted on the drawing based solely on record information, individual recollections or the existence of utility service. It shall be noted that all information shown (other than at test hole locations, see QL A below), including but not limited to a utilities size, capacity, material composition, condition or service status shall be considered QL D even though the utility may be plotted and labeled as QL C or QL B.

QUALITY LEVEL C: "QL C". Utility information obtained and categorized as QL D, plotted to correlate with surface utility features which have been field verified, survey located and accurately transposed onto the design/construction documents. Included in this category aerial utility information and utility depiction's, which in the professional opinion of the subsurface utility engineer, represent the most probable approximate horizontal location, type and/or existence of a utility.

QUALITY LEVEL B: "QL B". Utility information derived by establishing the approximate surface horizontal location of a utility using electronic methods. Said information is subsequently field survey located and accurately reduced onto the design/construction documents.

QUALITY LEVEL A: "QL A". Utility information which has been visually verified, survey located (both horizontally and vertically) and accurately reduced onto the design/construction documents. This is typically shown as test hole or other dimensioned information.

SUE General Notes:

1. Certain utilities shown have been traced on the ground using electronic designation techniques. Designation, or electronic utility location, is defined as the surface location of a utility line based on electronic geophysical prospecting techniques and is approximate in relation to the actual location of the possible utility.
2. Certain utilities shown have been taken from available record information. These utilities may not have been verified. (See Note #4 below.)
3. All existing designated utilities near proposed construction should be exactly located using Non-Destructive Air-Vacuum Excavation, if not already located by Air-Vacuum Excavation (See Quality Level A above).
4. Unless Non-Destructive Air-Vacuum Excavation is utilized at a particular location, BSIE does not guarantee the existence or non-existance of utility lines
5. At locations, where BSIE is directed to perform Non-Destructive Air-Vacuum Excavation, the test hole is advanced until a condition of practical refusal for Air-Vacuum Excavation is reached or hole is advanced to a depth of 8.0' (eight feet). Practical refusal being defined as encountering a utility, bedrock, water table, large rocks/ cobbles, suspected hazardous materials or a condition of hole instability.
6. Where BSIE is directed to perform Non-Destructive Air-Vacuum Excavation to confirm the non-existance of utilities, BSIE will only report non-existance of utilities within the visible limits of the excavation. BSIE is not responsible for ensuring that work by others is performed at the same location as the Air-Vacuum Excavation Hole.
7. Below ground structures unless otherwise depicted are symbolic only.
8. Prior to any excavating, BSIE recommends that all utility owners should review this drawing for accuracy and completeness.

General Project Notes:

1. Mapping provided by:
   WBRC
   30 Danforth Street
   Portland, ME 04101

2. Horizontal and vertical survey control provided by:
   WBRC
   30 Danforth Street
   Portland, ME 04101

Revisions	Date
90% SUBMITTAL – CONSTRUCTION DOCUMENTS	06/16/2021

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www.abovegroupinc.com
COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2064
SDVOSB

CONSULTANT

BSI Engineering, Inc.
100 Hallet Street, Boston, MA 02124
Telephone (617) 265 4200 Fax (617) 209 1297 www.bsieng.com

Drawing Title: SUBSURFACE UTILITY ENGINEERING (SUE) - LEGEND

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022 | Checked: BL | Drawn: PM/BL

Project Number: 608-20-101

Building Number:

Drawing Number: BI101

Office of Construction and Facilities Management

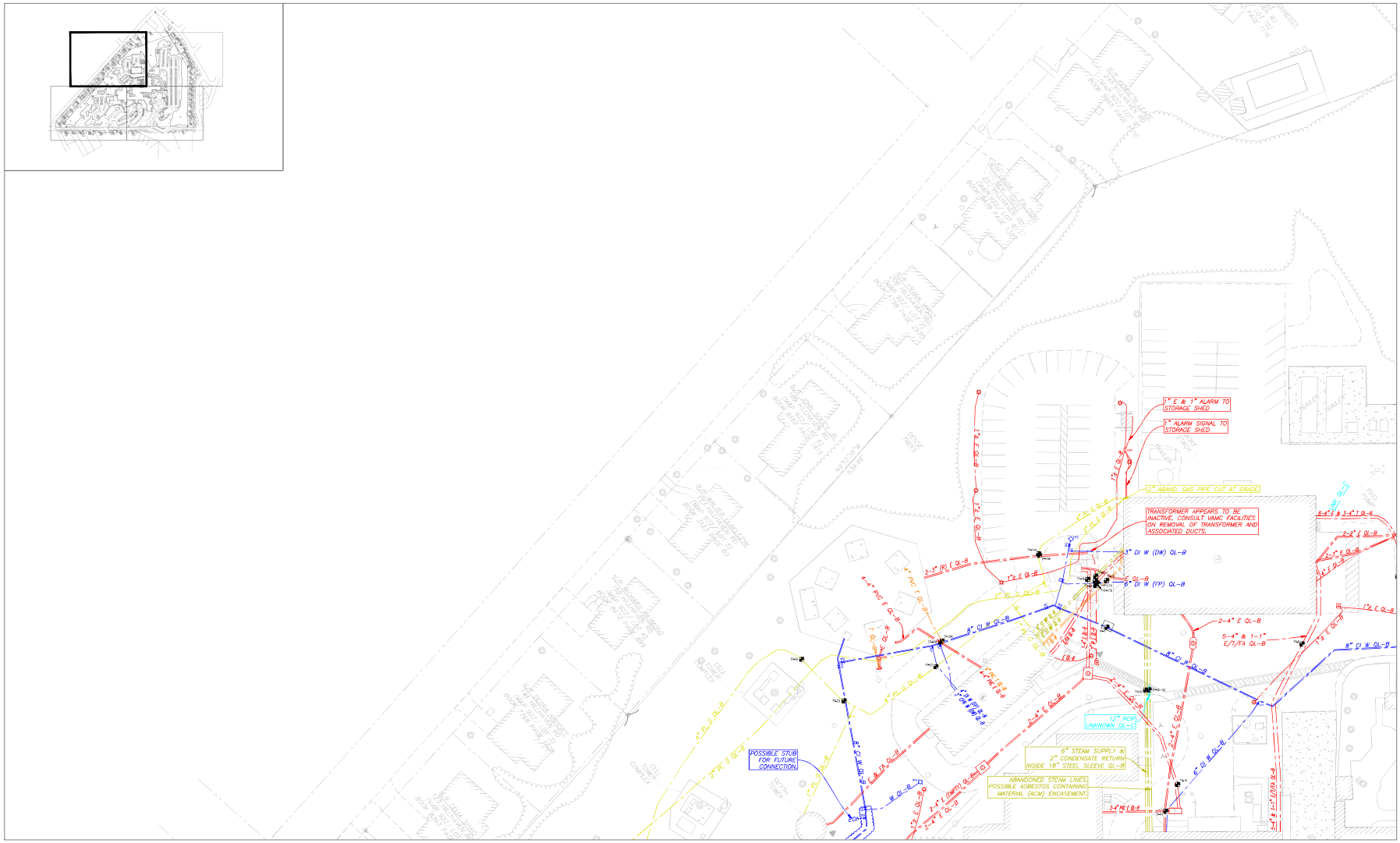
VA U.S. Department of Veterans Affairs

STATE OF NEW HAMPSHIRE · JAMES F. NOONE No. 11136 · LICENSED PROFESSIONAL ENGINEER

VA FORM 08-6231

BIM 360://0120026 Loop Road Utility Infrastructure Upgrades Div 21 22 & 23 - R19/0120026 Loop Road Utility Upgrades Div 21, 22, & 23 - R19.rvt 6/15/2021 12:32:02 PM

three inch = one foot · one and one half inch = one foot · one inch = one foot · three quarters inch = one foot · one half inch = one foot · three eighths inch = one foot · one quarter inch = one foot · one eighth inch = one foot



Revisions		Date
90% SUBMITTAL – CONSTRUCTION DOCUMENTS		06/18/2021

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170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2064

CONSULTANT

BSI Engineering, Inc.
100 Hallet Street, Boston, MA 02124
Telephone (617) 265 4200 Fax (617) 209 1297 www.bsieng.com

Drawing Title	SUE - EXISTING UTILITIES PLAN
Approved:	
Project Title	LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES
Location	MANCHESTER VAMC, NH
Issue Date	06/21/2022
Checked	BL
Drawn	PM/BL
Project Number	608-20-101
Building Number	
Drawing Number	BI102

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08-6231

0 15' 30' 60' 90'
1" = 30'

Revisions		Date
	90% SUBMITTAL – CONSTRUCTION DOCUMENTS	06/16/2021

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COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2064

CONSULTANT

BSI Engineering, Inc.
100 Hallet Street, Boston, MA 02124
Telephone (617) 265 4200 Fax (617) 209 1297 www.bsieng.com

Drawing Title: SUE - EXISTING UTILITIES PLAN

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022 | Checked: BL | Drawn: PM/BL

Project Number: 608-20-101

Building Number:

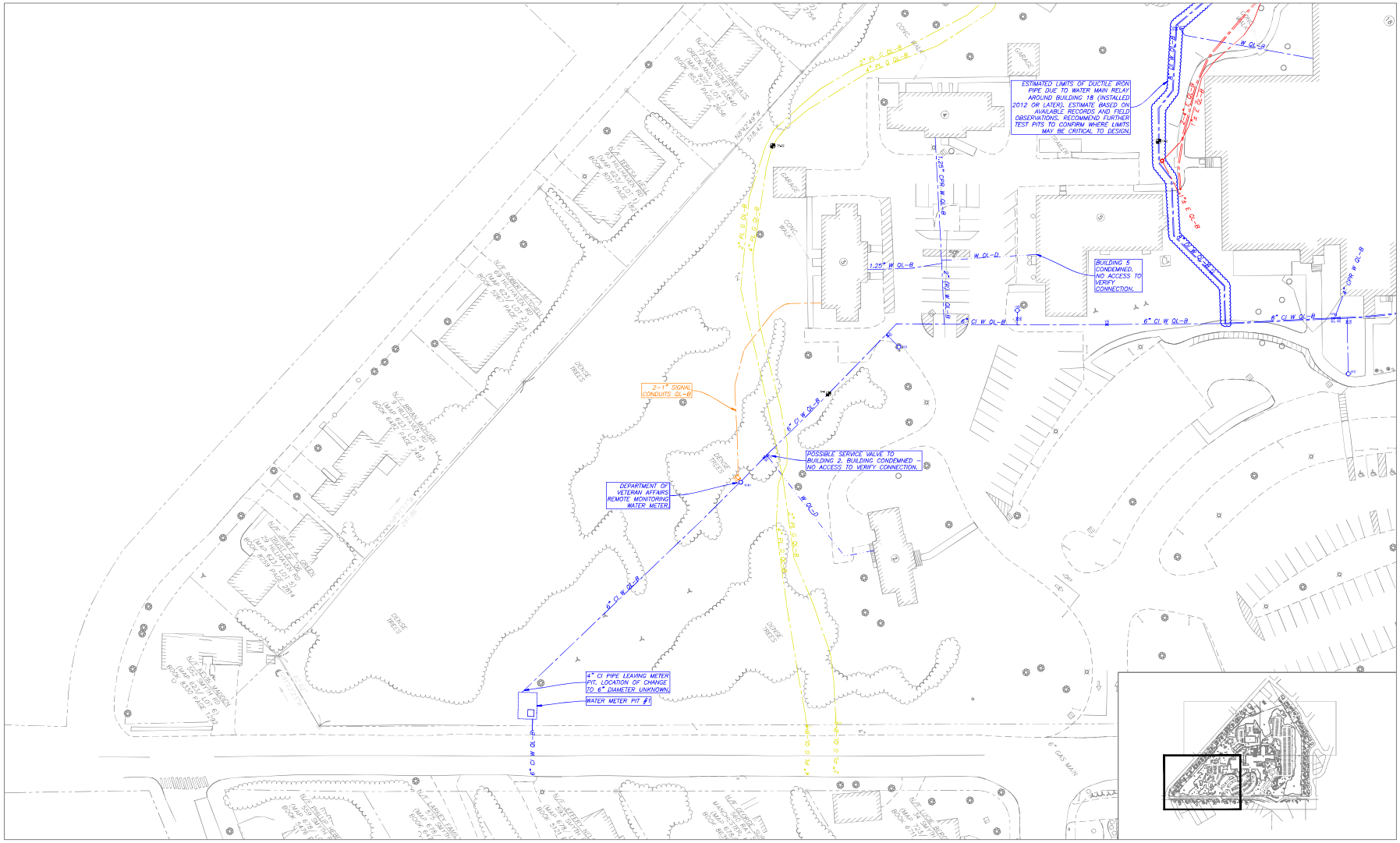
Drawing Number: BI103

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

BM_XYZ:0.000,0.000,0.000 Loop Road Utility Infrastructure Upgrades Div 21 22 & 23-FINISH.000.dwg 6/18/2021 12:33:02 PM

VA FORM 08-6231



0 15' 30' 60' 90'
1" = 30'

Revisions		Date
	90% SUBMITTAL – CONSTRUCTION DOCUMENTS	06/18/2021

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ENGINEERING | DESIGN | CONSULTING

www.abovegroupinc.com
COA/CA Lic. No. 31120

170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2064

CONSULTANT

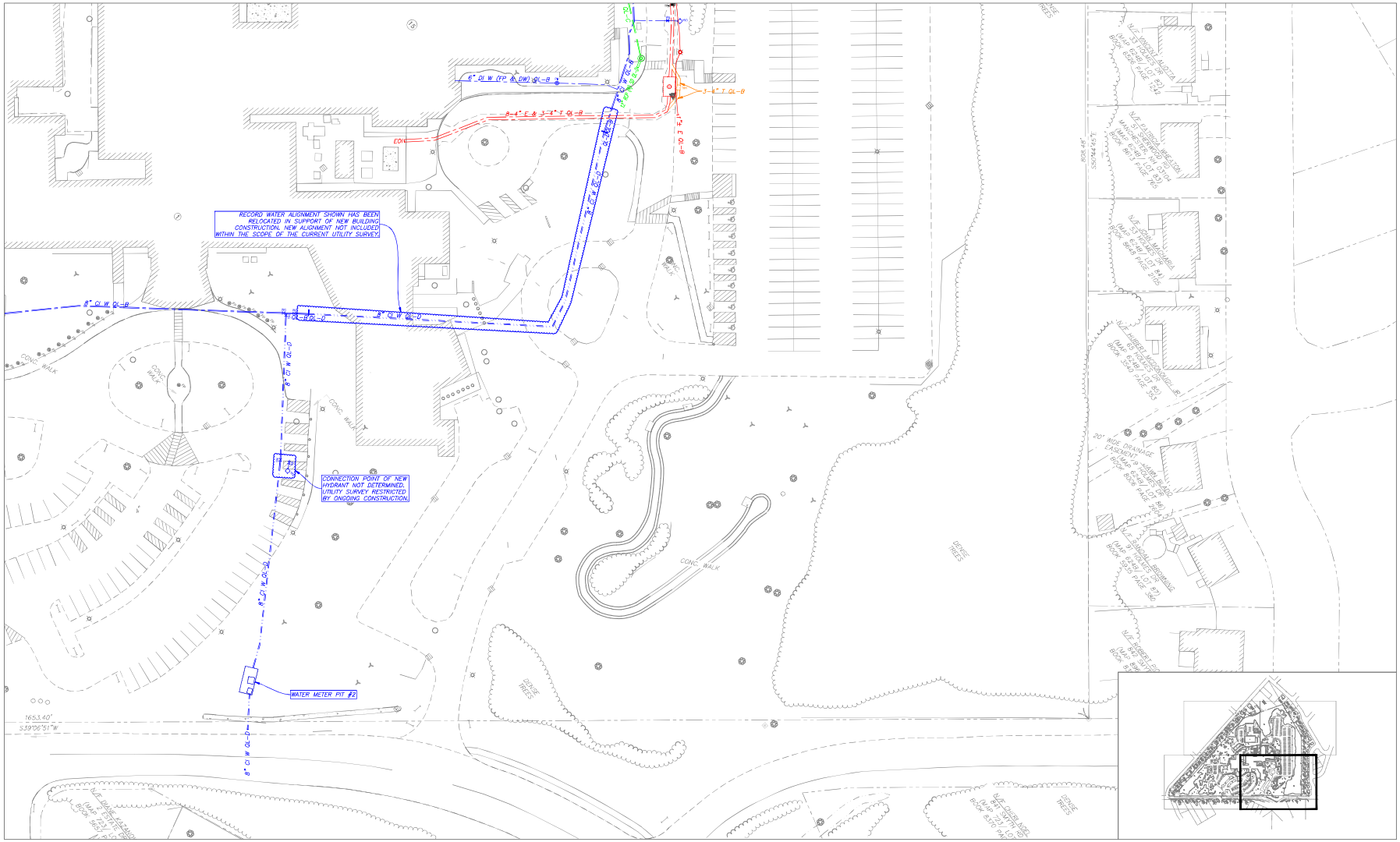
BSI Engineering, Inc.
100 Hallet Street, Boston, MA 02124
Telephone (617) 265 4200 Fax (617) 209 1297 www.bsieng.com

Drawing Title	Project Title	Project Number
SUE - EXISTING UTILITIES PLAN	LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES	608-20-101
Approved:	Location: MANCHESTER VAMC, NH	Building Number
	Issue Date: 06/21/2022 · Checked: BL · Drawn: PM/BL	Drawing Number: BI104

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08-6231



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1" = 30'

Revisions		Date
	90% SUBMITTAL – CONSTRUCTION DOCUMENTS	09/16/2021

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ENGINEERING | DESIGN | CONSULTING
SDVOSB
www.abovegroupinc.com
COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.262.6264

CONSULTANT

BSI Engineering, Inc.
100 Hallet Street, Boston, MA 02124
Telephone (617) 265 4200 Fax (617) 209 1297 www.bsieng.com

Drawing Title: SUE - EXISTING UTILITIES PLAN

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022 | Checked: BL | Drawn: PM/BL

Project Number: 608-20-101

Building Number:

Drawing Number: BI105

Office of Construction and Facilities Management

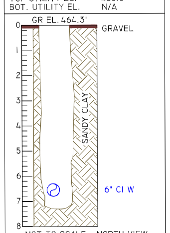
U.S. Department of Veterans Affairs

BI_608-20-101_Loop Road Utility Infrastructure Upgrades_Div 21, 22, & 23-R19.01.00.dwg 6/18/2021 12:23:02 PM

VA FORM 08-6231

QUALITY LEVEL A VACUUM EXCAVATION TP-1

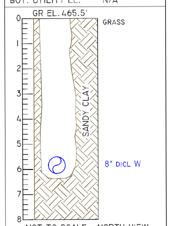
	TP-1
NORTHING	186276.15
EASTING	1044375.88
GROUND EL.	464.3'
MEASURE DOWN TOP	-6.3'
MEASURE DOWN BOT.	N/A
TOP UTILITY EL.	458.0'
BOT. UTILITY EL.	N/A



NOT TO SCALE - NORTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-2

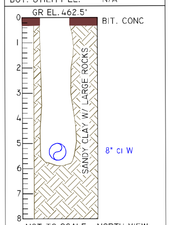
	TP-2
NORTHING	186593.8
EASTING	1044396.7
GROUND EL.	465.5'
MEASURE DOWN TOP	-5.5'
MEASURE DOWN BOT.	N/A
TOP UTILITY EL.	460.0'
BOT. UTILITY EL.	N/A



NOT TO SCALE - NORTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-3

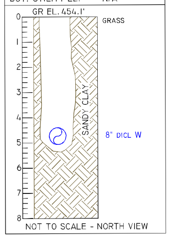
	TP-3
NORTHING	186940.0
EASTING	1044322.7
GROUND EL.	462.5'
MEASURE DOWN TOP	-5.0'
MEASURE DOWN BOT.	N/A
TOP UTILITY EL.	457.5'
BOT. UTILITY EL.	N/A



NOT TO SCALE - NORTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-4

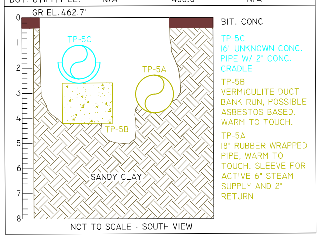
	TP-4
NORTHING	187175.5
EASTING	1044724.7
GROUND EL.	454.1'
MEASURE DOWN TOP	-4.4'
MEASURE DOWN BOT.	N/A
TOP UTILITY EL.	449.7'
BOT. UTILITY EL.	N/A



NOT TO SCALE - NORTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-5A TP-5B TP-5C

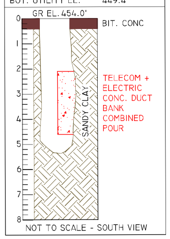
	TP-5A	TP-5B	TP-5C
NORTHING	186932.5	186934.5	186934.5
EASTING	1044378.6	1044380.2	1044380.2
GROUND EL.	462.7'	462.7'	462.7'
MEASURE DOWN TOP	-2.3'	-2.6'	-1.1'
MEASURE DOWN BOT.	N/A	-4.2'	N/A
TOP UTILITY EL.	460.4'	460.1'	461.6'
BOT. UTILITY EL.	N/A	458.5'	N/A



NOT TO SCALE - SOUTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-6

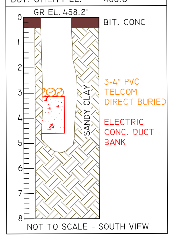
	TP-6
NORTHING	187197.6
EASTING	1044744.2
GROUND EL.	454.0'
MEASURE DOWN TOP	-2.1'
MEASURE DOWN BOT.	-4.6'
TOP UTILITY EL.	451.9'
BOT. UTILITY EL.	449.4'



NOT TO SCALE - SOUTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-7

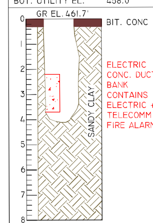
	TP-7
NORTHING	187136.9
EASTING	1044433.3
GROUND EL.	458.2'
MEASURE DOWN TOP	-2.8'
MEASURE DOWN BOT.	-4.6'
TOP UTILITY EL.	455.4'
BOT. UTILITY EL.	453.6'



NOT TO SCALE - SOUTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-8

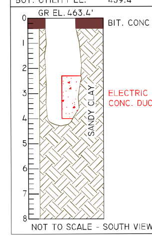
	TP-8
NORTHING	187047.3
EASTING	1044427.1
GROUND EL.	461.7'
MEASURE DOWN TOP	-2.2'
MEASURE DOWN BOT.	-3.7'
TOP UTILITY EL.	459.5'
BOT. UTILITY EL.	458.0'



NOT TO SCALE - SOUTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-10

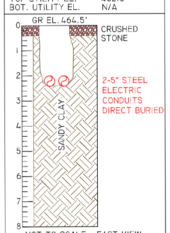
	TP-10
NORTHING	186905.5
EASTING	1044450.0
GROUND EL.	463.4'
MEASURE DOWN TOP	-2.3'
MEASURE DOWN BOT.	-4.0'
TOP UTILITY EL.	461.1'
BOT. UTILITY EL.	459.4'



NOT TO SCALE - SOUTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-11

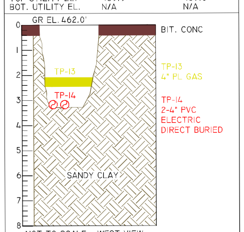
	TP-11
NORTHING	186885.6
EASTING	1044460.0
GROUND EL.	464.5'
MEASURE DOWN TOP	-2.0'
MEASURE DOWN BOT.	N/A
TOP UTILITY EL.	462.5'
BOT. UTILITY EL.	N/A



NOT TO SCALE - EAST VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-13 TP-14

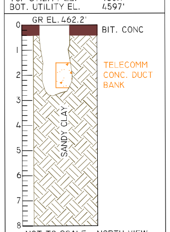
	TP-13	TP-14
NORTHING	186935.1	186934.8
EASTING	1044246.2	1044247.4
GROUND EL.	462.0'	462.0'
MEASURE DOWN TOP	-2.1'	-3.0'
MEASURE DOWN BOT.	N/A	N/A
TOP UTILITY EL.	459.9'	459.0'
BOT. UTILITY EL.	N/A	N/A



NOT TO SCALE - WEST VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-16

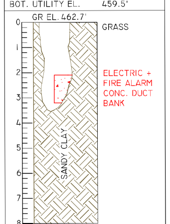
	TP-16
NORTHING	186962.3
EASTING	1044294.9
GROUND EL.	462.2'
MEASURE DOWN TOP	-1.5'
MEASURE DOWN BOT.	-2.5'
TOP UTILITY EL.	460.7'
BOT. UTILITY EL.	4597'



NOT TO SCALE - NORTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-17A

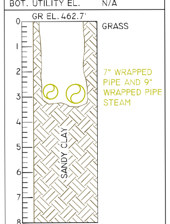
	TP-17A
NORTHING	186955.5
EASTING	1044289.9
GROUND EL.	462.7'
MEASURE DOWN TOP	-2.1'
MEASURE DOWN BOT.	-3.2'
TOP UTILITY EL.	460.6'
BOT. UTILITY EL.	459.5'



NOT TO SCALE - NORTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-18

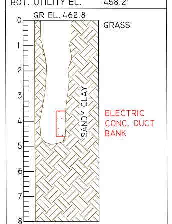
	TP-18
NORTHING	186958.2
EASTING	1044286.9
GROUND EL.	462.7'
MEASURE DOWN TOP	-2.5'
MEASURE DOWN BOT.	N/A
TOP UTILITY EL.	460.2'
BOT. UTILITY EL.	N/A



NOT TO SCALE - NORTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-19

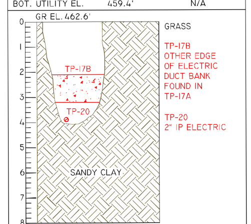
	TP-19
NORTHING	186951.5
EASTING	1044284.8
GROUND EL.	462.8'
MEASURE DOWN TOP	-3.6'
MEASURE DOWN BOT.	-4.6'
TOP UTILITY EL.	459.2'
BOT. UTILITY EL.	458.2'



NOT TO SCALE - NORTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-17B TP-20

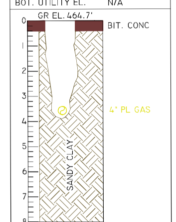
	TP-17B	TP-20
NORTHING	186954.8	186953.4
EASTING	1044292.0	1044292.6
GROUND EL.	462.6'	462.6'
MEASURE DOWN TOP	-2.1'	-3.8'
MEASURE DOWN BOT.	-3.2'	N/A
TOP UTILITY EL.	460.5'	458.8'
BOT. UTILITY EL.	459.4'	N/A



NOT TO SCALE - WEST VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-22

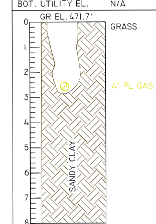
	TP-22
NORTHING	186819.7
EASTING	1044263.2
GROUND EL.	464.7'
MEASURE DOWN TOP	-3.4'
MEASURE DOWN BOT.	N/A
TOP UTILITY EL.	461.3'
BOT. UTILITY EL.	N/A



NOT TO SCALE - SOUTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-23

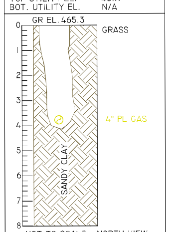
	TP-23
NORTHING	186748.8
EASTING	1044238.9
GROUND EL.	471.7'
MEASURE DOWN TOP	-2.4'
MEASURE DOWN BOT.	N/A
TOP UTILITY EL.	469.3'
BOT. UTILITY EL.	N/A



NOT TO SCALE - WEST VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-26

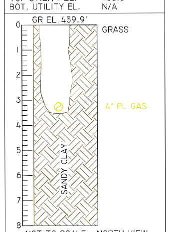
	TP-26
NORTHING	186743.7
EASTING	1044193.7
GROUND EL.	465.3'
MEASURE DOWN TOP	-3.6'
MEASURE DOWN BOT.	N/A
TOP UTILITY EL.	461.7'
BOT. UTILITY EL.	N/A



NOT TO SCALE - NORTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-29

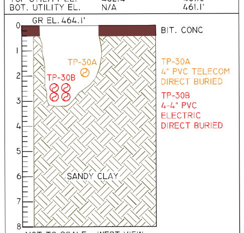
	TP-29
NORTHING	186363.4
EASTING	1044201.9
GROUND EL.	459.9'
MEASURE DOWN TOP	-3.1
MEASURE DOWN BOT.	N/A
TOP UTILITY EL.	456.8'
BOT. UTILITY EL.	N/A



NOT TO SCALE - NORTH VIEW

QUALITY LEVEL A VACUUM EXCAVATION TP-30A TP-30B

	TP-30A	TP-30B
NORTHING	186835.8	186834.4
EASTING	1044250.9	1044250.9
GROUND EL.	464.1'	464.1'
MEASURE DOWN TOP	-1.7'	-2.3'
MEASURE DOWN BOT.	N/A	-3.0'
TOP UTILITY EL.	462.4'	461.8'
BOT. UTILITY EL.	N/A	461.1'



NOT TO SCALE - WEST VIEW

1" = 30'

Revisions		Date
	90% SUBMITTAL – CONSTRUCTION DOCUMENTS	06/16/2021

ARCHITECT/ENGINEER OF RECORD

Above Group
ENGINEERING | DESIGN | CONSULTING
www.abovegroupinc.com
COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2064

CONSULTANT

BSI Engineering, Inc.
100 Hallet Street, Boston, MA 02124
Telephone (617) 265 4200 Fax (617) 209 1297 www.bsieng.com

Drawing Title: SUE - EXISTING UTILITIES PLAN

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022 | Checked: PM | Drawn: BL

Project Number: 608-20-101

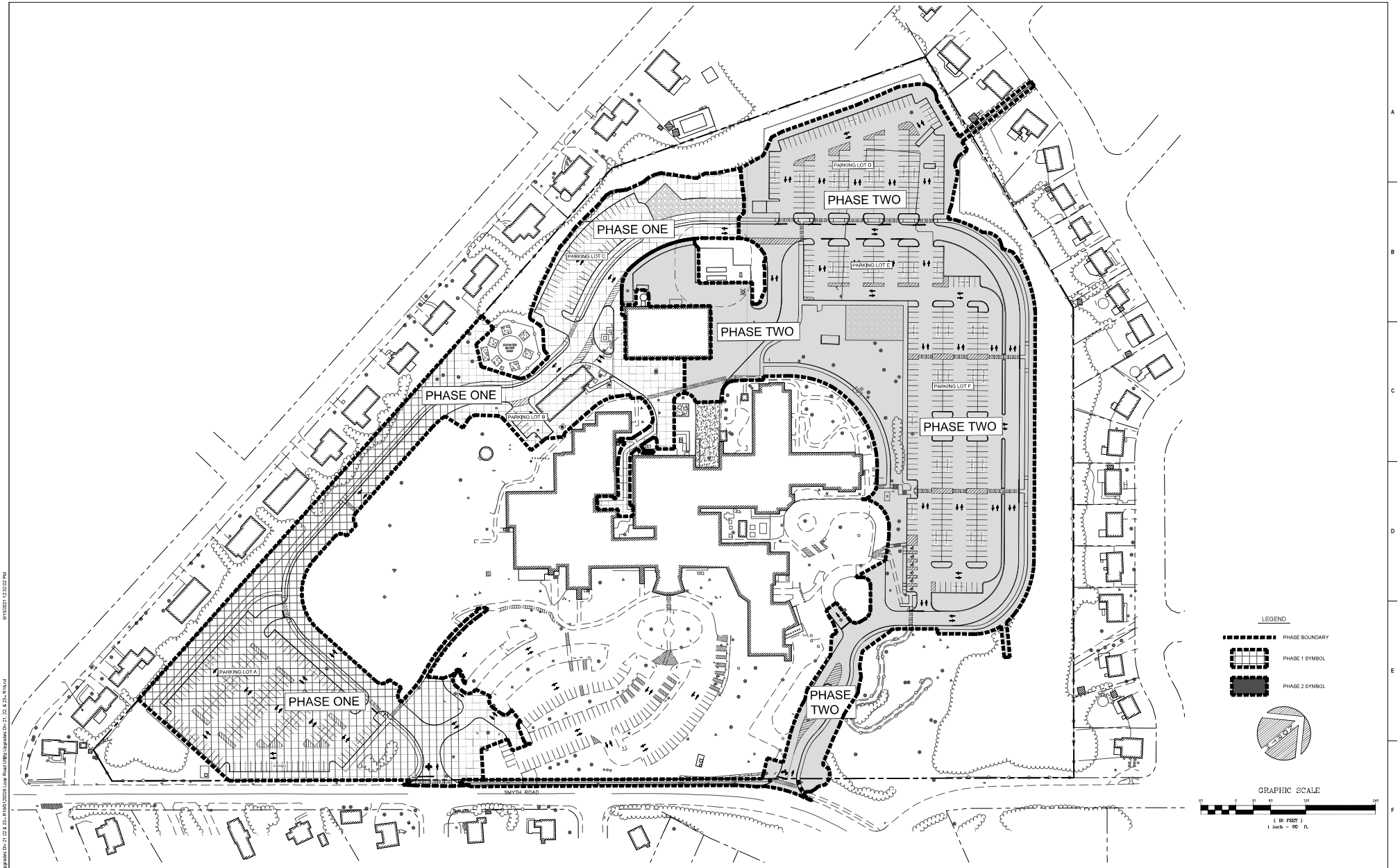
Building Number:

Drawing Number: BI106

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08-6231



Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

ARCHITECT/ENGINEER OF RECORD

Above Group
ENGINEERING | DESIGN | CONSULTING
www.abovegroupinc.com
COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2064

STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: PHASING PLAN

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022 | Checked: MAG | Drawn: BTH

Project Number: 608-20-101

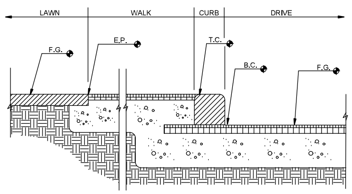
Building Number:

Drawing Number: PH101

Office of Construction and Facilities Management

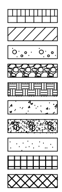
VA U.S. Department of Veterans Affairs

VA FORM 08 - 6231

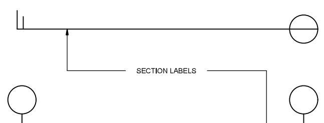


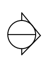
SPOT ELEVATION REFERENCE INDEX

SYMBOLS



- BITUMINOUS PAVEMENT SECTION
- TOPSOIL, LOAM AND SEED, SOD
- GRANULAR FILL MATERIAL
- COARSE AGGREGATE
- UNDISTURBED NATIVE SOIL
- CONCRETE SECTION
- GENERAL FILL MATERIAL
- SAND OR STONE DUST
- RIGID INSULATION
- MULCH BED





REMOVALS NOTES

R1 THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL UTILITIES AND SHALL NOTIFY THE ARCHITECT OF UTILITIES DEVIATING FROM THOSE SHOWN ON THIS PLAN

R2 THE CONTRACTOR SHALL MEET THE REQUIREMENTS OF THE UTILITY COMPANIES WHEN INSTALLING WORK ON OR NEAR THEIR POLES.

R3 REMOVE ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED MARKINGS.

R4 ALL DEMOLITION DEBRIS AND REMOVALS SHALL BE DISPOSED OF OFFSITE AND IN CONFORMANCE WITH LOCAL AND STATE ORDINANCES

R5 TREE CANOPY AS SHOWN ON PLANS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED BY THE SITE CONTRACTOR.

LAYOUT NOTES

L1 THE CONTRACTOR SHALL NOTIFY THE OWNER/ARCHITECT OF CONDITIONS VARYING FROM THOSE SHOWN ON THE DRAWING SHEET PRIOR TO CONTINUING WORK.

L2 THE CONTRACTOR SHALL EMPLOY A REGISTERED LAND SURVEYOR IN THE LAYOUT OF BUILDING, DRIVES AND SITE ELEMENTS.

L3 THE CONTRACTOR SHALL VERIFY AND CLEARLY MARK LOCATION OF ALL PROPERTY LINES PRIOR TO COMMENCING WORK.

L4 DETECTABLE WARNING PANELS SHALL BE INSTALLED AT THE BASE OF ADA RAMPS/ADA TIPDOWNS IN THE FOLLOWING LOCATIONS:
1) ALL NEW ADA RAMPS IN PUBLIC RIGHT-OF-WAY
2) AT THE SIDEWALK SIDE OF ADA PARKING STALLS
3) AT ADA RAMPS FOR CROSSWALKS CONTROLLED BY STOP SIGNS OR YIELD SIGNS
4) AT ADA RAMPS FOR SIDEWALKS ADJACENT PARKING LOTS EXCEEDING 30 SPACES
5) AS OTHERWISE INDICATED ON THE PLANS.
6) ALL LOOP ROAD CROSSINGS

GRADING NOTES

G1 TOPOGRAPHIC INFORMATION BASED ON A SURVEY BY CIVIL DESIGN CONSULTANTS INC., METHUEN, MA.

G2 BOUNDARY INFORMATION BASED ON A SURVEY BY CIVIL DESIGN CONSULTANTS INC., METHUEN, MA.

G3 ALL ELEVATIONS SHOWN HEREIN ARE BASED ON A SURVEY BY CIVIL DESIGN CONSULTANTS INC., METHUEN, MA.

G4 ALL TOPSOIL AND ORGANICS SHALL BE REMOVED FROM PAVEMENT AND BUILDING AREAS PRIOR TO CONSTRUCTION. THIS MATERIAL SHALL NOT BE USED AS GENERAL SITE FILL.

G5 FINISH GRADES ONE FOOT FROM BUILDING SHALL BE 8" BELOW FINISH FLOOR UNLESS OTHERWISE NOTED.

G6 FINISH GRADES OF SIDEWALKS AT BUILDING ENTRANCES SHALL BE FLUSH WITH FINISH FLOOR UNLESS OTHERWISE NOTED.

G7 BORING / TEST PIT LOCATIONS ARE APPROXIMATE-REFER TO GEOTECHNICAL REPORT PREPARED BY SW COLE INC.

G8 ALL DISTURBED AREAS NOT RECEIVING PAVEMENT, BUILDING, STONE DUST, COURSE AGGREGATE, ETC. SHALL RECEIVE 6" OF LOAM AND SEED UNLESS OTHERWISE NOTED.

UTILITY NOTES

E1 ALL UNDERGROUND SECONDARY SHALL BE RUN IN SCH. 40 CONDUIT UNLESS SPECIFIED OTHERWISE.

E2 ALL UNDERGROUND ELECTRICAL FOR SITE LIGHTING SHALL BE RUN IN SCH. 40 P.V.C. CONDUIT.

E3 ALL CABLE TELEVISION / TELEPHONE LINES SHALL BE RUN IN SCH. 40 P.V.C. CONDUIT.

E4 PROVIDE PULL WIRE IN ALL UNDERGROUND CONDUITS.

E5 MAINTAIN 2' - 6" COVER OVER CABLE TELEVISION/TELEPHONE.

S1 WHERE NEW WATER AND SEWER RUN SIDE BY SIDE, MAINTAIN A TEN FOOT (10') HORIZONTAL SEPARATION. WHERE THEY CROSS, MAINTAIN AN EIGHTEEN INCH (18") VERTICAL SEPARATION, WITH WATERLINE ABOVE SEWER. IF WITHIN 18" MIN. VERTICAL SEPARATION, ENCASE WATERLINE 10' EITHER SIDE OF SEWER IN CONC. 3,000 PSI MIN.

S2 SEWER SERVICE, WHEN ENTERING THE BUILDING, SHALL BE 6' - 0" BELOW FINISH FLOOR, UNLESS NOTED OTHERWISE.

W1 MAINTAIN A 5' - 6" MINIMUM COVER OVER WATER LINE.

U1 THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

U2 THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCHING AND BACKFILLING OF ALL CONDUIT. CONDUIT AND WIRING SHALL BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR.

U3 PRIOR TO ANY EARTHWORK ACTIVITIES, THE CONTRACTOR SHALL EMPLOY A PRIVATE UTILITY LOCATOR TO LOCATE UTILITIES IN THE PROJECT AREA. ANY UTILITIES ENCOUNTERED THAT ARE TO REMAIN IN PLACE OR BE ABANDONED SHALL BE DISCONNECTED AND TERMINATED IN ACCORDANCE WITH THE CONTROLLING UTILITY CO. AND NATIONALLY OR LOCALLY APPLICABLE CODES AND ORDINANCES.

U4 NO UTILITY TRENCH SHALL BE BACKFILLED UNTIL WORK HAS BEEN INSPECTED AND APPROVED BY PROJECT ENGINEER AND CONTROLLING UTILITY CO. OR DISTRICT

U5 ALL SANITARY SEWER LINE TO BE SDR 35 PVC MEETING ALL PERFORMANCE CHARACTERISTICS OF ASTM D3034. ALL PIPES AND FITTINGS SHALL HAVE PUSH-ON JOINTS WITH RUBBER GASKETS CONFORMING TO ASTM D1869 AND F477.

U6 ALL NEW WATER SERVICE LINE SHALL BE TYPE K COPPER MEETING ALL PERFORMANCE CHARACTERISTICS OF ASTM B-88-62 FOR TYPE K COPPER. ALL FITTINGS SHALL BE COMPRESSION TYPE.

U7 ALL NEW WATER SPRINKLER SERVICE SHALL BE CLASS 52 DUCTILE IRON MEETING ALL PERFORMANCE CHARACTERISTICS OF THE LATEST VERSION OF ASTM AND AWWA.

U8 THE FOLLOWING UTILITY COMPANIES ARE LOCATED WITHIN THE PROJECT SITE:
- WATER: CITY OF MANCHESTER WATER WORKS
- WASTEWATER & STORMWATER: CITY OF MANCHESTER DEPARTMENT OF PUBLIC WORKS
- NATURAL GAS: LIBERTY UTILITIES
- ELECTRICITY: EVERSOURCE
- COMMUNICATIONS: CONSOLIDATED COMMUNICATIONS

EROSION AND SEDIMENTATION CONTROL PLAN

ALL EROSION AND SEDIMENTATION CONTROL MEASURES ARE DESIGNED ACCORDING TO THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES STORMWATER MANUAL VOLUME 3: EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. SEDIMENT CONTROL MEASURES MUST BE IN PLACE BEFORE ACTIVITY BEGINS, MEASURES MUST REMAIN IN PLACE AND FUNCTIONAL UNTIL THE SITE IS PERMANENTLY STABILIZED.

1. POLLUTION PREVENTION. MINIMIZE DISTURBED AREAS AND PROTECT NATURAL DOWN-GRADIENT BUFFER AREAS TO THE EXTENT PRACTICABLE. THE DISCHARGE MAY NOT RESULT IN EROSION OF ANY OPEN DRAINAGE CHANNELS, SWALES, UPLAND, OR COASTAL OR FRESHWATER WETLANDS. MINIMIZE DISTURBED AREAS THROUGH PHASING, IF WORK WITHIN AN AREA IS NOT ANTICIPATED TO BEGIN WITHIN TWO WEEKS TIME, LEAVE THE AREA IN ITS NATURALLY EXISTING COVER IF PRACTICABLE.

2. SEDIMENT BARRIERS. PRIOR TO CONSTRUCTION, PROPERLY INSTALL SEDIMENT BARRIERS AT THE EDGE OF ANY DOWN-GRADIENT DISTURBED AREA AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE DISTURBED AREA. MAINTAIN THE SEDIMENT BARRIERS UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED.

3. TEMPORARY STABILIZATION. STABILIZE WITH MULCH OR OTHER NON-ERODABLE COVER ANY EXPOSED SOILS THAT WILL NOT BE WORKED FOR MORE THAN 7 DAYS. STABILIZE AREAS WITHIN 75 FEET OF A WETLAND OR WATERBODY WITHIN 48 HOURS OF THE INITIAL DISTURBANCE OF THE SOIL OR PRIOR TO ANY STORM EVENT, WHICHEVER COMES FIRST.

4. STOCKPILES: SEDIMENT BARRIERS SHALL BE INSTALLED DOWN-GRADIENT OF STOCKPILES. STORMWATER SHALL BE PREVENTED FROM RUNNING ONTO STOCKPILES.

5. REMOVAL OF TEMPORARY SEDIMENT CONTROL MEASURES. REMOVE ANY TEMPORARY SEDIMENT CONTROL MEASURES, SUCH AS SILT FENCE, WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED. REMOVE ANY ACCUMULATED SEDIMENTS AND STABILIZE. REMOVE SILT FENCE BY CUTTING THE FENCE MATERIALS AT GROUND LEVEL TO AVOID ADDITIONAL SOIL DISTURBANCE.

6. PERMANENT STABILIZATION. PERMANENTLY STABILIZE ALL DISTURBED AREAS THAT WILL NOT BE WORKED FOR MORE THAN ONE YEAR OR THAT HAVE BEEN BROUGHT TO FINAL GRADE BY PLANTING VEGETATION, SEEDING, SOD, OR THROUGH THE USE OF PERMANENT MULCH, OR RIPRAP, OR ROAD SUB-BASE. IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR THE LIGHT, SOIL AND MOISTURE CONDITIONS; AMEND AREAS OF DISTURBED SUBSOILS WITH TOPSOIL, COMPOST, OR FERTILIZERS; PROTECT SEEDED AREAS WITH MULCH OR, IF NECESSARY, EROSION CONTROL BLANKETS; AND SCHEDULE SODDING, PLANTING, AND SEEDING TO AVOID DIE-OFF FROM SUMMER DROUGHT AND FALL FROSTS. NEWLY SEEDED OR SODDED AREAS MUST BE PROTECTED FROM VEHICLE TRAFFIC, EXCESSIVE PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL-ESTABLISHED. IF NECESSARY, AREAS MUST BE SEEDED AND MULCHED AGAIN IF GERMINATION IS SPARSE, PLANT COVERAGE IS SPOTTY, OR TOPSOIL EROSION IS EVIDENT. ONE OR MORE OF THE FOLLOWING MAY APPLY TO A PARTICULAR SITE.
   (A) SEEDED AREAS. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS A 90% COVER OF HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.
   (B) SODDED AREAS. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.
   (C) PERMANENT MULCH. FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.
   (D) RIPRAP. FOR AREAS STABILIZED WITH RIPRAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIPRAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIPRAP. STONE MUST BE SIZED APPROPRIATELY. IT IS RECOMMENDED THAT ANGULAR STONE BE USED.
   (E) AGRICULTURAL USE. FOR CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL PURPOSES (E.G., PIPELINES ACROSS CROP LAND), PERMANENT STABILIZATION MAY BE ACCOMPLISHED BY RETURNING THE DISTURBED LAND TO AGRICULTURAL USE.
   (F) PAVED AREAS. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE COMPACTED GRAVEL SUBBASE IS COMPLETED.
   (G) DITCHES, CHANNELS, AND SWALES. FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH A 90% COVER OF HEALTHY VEGETATION, WITH A WELL-GRADED RIPRAP LINING, OR WITH ANOTHER NON-EROSIVE LINING SUCH AS CONCRETE OR ASPHALT PAVEMENT. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE CHANNEL LINING, UNDERCUTTING OF THE CHANNEL BANKS, OR DOWN-CUTTING OF THE CHANNEL.

7. WINTER CONSTRUCTION. "WINTER CONSTRUCTION" IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 15. IF DISTURBED AREAS ARE NOT STABILIZED WITH PERMANENT MEASURES BY NOVEMBER 1 OR NEW SOIL DISTURBANCE OCCURS AFTER NOVEMBER 1, BUT BEFORE APRIL 15, THEN THESE AREAS MUST BE PROTECTED AND RUNOFF FROM THEM MUST BE CONTROLLED BY ADDITIONAL MEASURES AND RESTRICTIONS.
   A. NATURAL RESOURCE PROTECTION ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 75 % MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH AN EROSION CONTROL COVER. DURING WINTER CONSTRUCTION, A DOUBLE ROW OF SEDIMENT BARRIERS (I.E. SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS.
   B. SEDIMENT BARRIERS DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.
   C. MULCHING ALL AREA SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75-LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4-INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW WILL BE REMOVED DOWN TO A ONE-INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, ASPHALT EMULSION CHEMICAL, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.
   D. SOIL STOCKPILING STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR-INCH LAYER OF EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH MULCHED) WITHIN 100 FEET FROM ANY NATURAL RESOURCES.
   E. SEEDING BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOOMED, FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4' OF LOAM AND SEED AT AN APPLICATION RATE OF 5LBS/1000 S.F. ALL AREAS SEEDED DURING THE WINTER WILL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75 % CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.
   F. OVERWINTER STABILIZATION OF DITCHES AND CHANNELS ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL GRASS-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. IF A DITCH OR CHANNEL IS NOT GRASS-LINED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE DITCH FOR LATE FALL AND WINTER. INSTALL A SOD LINING IN THE DITCH: A DITCH MUST BE LINED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES: PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING SOD AT THE BASE OF THE DITCH WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD FROM SLOUGHING DURING FLOW CONDITIONS. INSTALL A STONE LINING IN THE DITCH: A DITCH MUST BE LINED WITH STONE RIPRAP BY NOVEMBER 15. A REGISTERED PROFESSIONAL ENGINEER MUST BE HIRED TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE CONTRACTOR WILL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.
   G. OVERWINTER STABILIZATION OF DISTURBED SLOPES ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15, AND ALL SLOPES TO BE VEGETATED MUST BE SEEDED AND MULCHED BY SEPTEMBER 1. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% TO BE A SLOPE. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER. STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS – BY OCTOBER 1 THE DISTURBED SLOPE MUST BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE SLOPE BY NOVEMBER 1, THEN THE CONTRACTOR WILL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP AS DESCRIBED IN THE FOLLOWING STANDARDS.
   H. STABILIZE THE SOIL WITH SOD – THE DISTURBED SLOPE MUST BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
   I. STABILIZE THE SOIL WITH EROSION CONTROL MIX - EROSION CONTROL MIX MUST BE PROPERLY INSTALLED BY NOVEMBER 15. THE CONTRACTOR WILL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
   J. STABILIZE THE SOIL WITH STONE RIPRAP – PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE DEVELOPMENT'S OWNER WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.
   K. OVERWINTER STABILIZATION OF DISTURBED SOILS BY SEPTEMBER 15, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% MUST BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER. STABILIZE THE SOIL WITH TEMPORARY VEGETATION – BY OCTOBER 1, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1, THEN MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED BELOW. STABILIZE THE SOIL WITH SOD – STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. STABILIZE THE SOIL WITH MULCH – BY NOVEMBER 15, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.
   L. MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL, IN THE SPRING, INSPECT AND REPAIR ANY DAMAGES AND/OR BARE SPOTS. AN ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85 TO 90 % OF AREAS VEGETATED WITH VIGOROUS GROWTH.
   M. STABILIZATION SCHEDULE BEFORE WINTER:

   SEPTEMBER 15 ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED. ALL SLOPES MUST BE STABILIZED, SEEDED AND MULCHED. ALL GRASS-LINED DITCHES AND CHANNELS MUST BE STABILIZED WITH MULCH OR AN EROSION CONTROL BLANKET.

   OCTOBER 1 IF THE SLOPE IS STABILIZED WITH AN EROSION CONTROL BLANKET AND SEEDED, ALL DISTURBED AREAS TO BE PROTECTED WITH AN ANNUAL GRASS MUST BE SEEDED AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND MULCHED.

   NOVEMBER 15 ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED. SLOPES THAT ARE COVERED WITH RIPRAP MUST BE CONSTRUCTED BY THAT DATE.

   DECEMBER 1 ALL DISTURBED AREAS WHERE THE GROWTH OF VEGETATION FAILS TO BE AT LEAST THREE INCHES TALL OR AT LEAST 75% OF THE DISTURBED SOIL IS COVERED BY VEGETATION, MUST BE PROTECTED FOR OVER-WINTER.

8. STORMWATER CHANNELS. DITCHES, SWALES, AND OTHER OPEN STORMWATER CHANNELS MUST BE CONSTRUCTED AND STABILIZED USING MEASURES THAT ACHIEVE LONG-TERM EROSION CONTROL. EACH CHANNEL SHOULD BE CONSTRUCTED IN SECTIONS SO THAT THE SECTION'S GRADING, SHAPING, AND INSTALLATION OF THE PERMANENT LINING CAN BE COMPLETED THE SAME DAY. IF A CHANNEL'S FINAL GRADING OR LINING INSTALLATION MUST BE DELAYED, THEN DIVERSION BERMS MUST BE USED TO DIVERT STORMWATER AWAY FROM THE CHANNEL. PROPERLY-SPACED CHECK DAMS MUST BE INSTALLED IN THE CHANNEL TO SLOW THE WATER VELOCITY, AND A TEMPORARY LINING INSTALLED ALONG THE CHANNEL TO PREVENT SCOURING.

9. ROADS. GRAVEL AND PAVED ROADS MUST BE CONSTRUCTED WITH CROWNS OR OTHER MEASURES, SUCH AS WATER BARS, TO ENSURE THAT STORMWATER IS DELIVERED IMMEDIATELY TO ADJACENT STABLE DITCHES, VEGETATED BUFFER AREAS, CATCH BASIN INLETS, OR STREET GUTTERS.

10. CULVERTS. CULVERT INLETS MUST BE PROTECTED WITH APPROPRIATE MATERIALS AND PROTECTION MUST EXTEND AT LEAST AS HIGH AS THE EXPECTED MAXIMUM ELEVATION OF STORAGE BEHIND THE CULVERT. CULVERT OUTLETS MUST INCORPORATE MEASURES, SUCH AS APRONS OR PLUNGE POOLS, TO PREVENT SCOUR OF THE STREAM CHANNEL.

11. PARKING AREAS. PARKING AREAS MUST BE CONSTRUCTED TO ENSURE RUNOFF IS DELIVERED TO ADJACENT SWALES, CATCH BASINS, CURB GUTTERS, OR BUFFER AREAS WITHOUT ERODING AREAS DOWNSLOPE. THE PARKING AREA'S SUBBASE COMPACTION AND GRADING MUST BE DONE TO ENSURE RUNOFF IS EVENLY DISTRIBUTED TO ADJACENT BUFFERS OR SIDE SLOPES. CATCH BASINS MUST BE LOCATED AND SET TO PROVIDE ENOUGH STORAGE DEPTH AT THE INLET TO ALLOW INFLOW OF PEAK RUNOFF RATES WITHOUT BY-PASS OF RUNOFF TO OTHER AREAS.

INSPECTION AND MAINTENANCE PLAN

1. DURING CONSTRUCTION. THE FOLLOWING STANDARDS MUST BE MET DURING CONSTRUCTION:

(A) **CONSTRUCTION INSPECTIONS SHALL BE PERFORMED AT LEAST WEEKLY AND BEFORE AND AFTER EACH SIGNIFICANT RAINFALL EVENT (>1/2 INCH RAINFALL IN 24 HOUR PERIOD).**

(B) INSPECTION AND CORRECTIVE ACTION. SITE CONTRACTOR SHALL INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION CONTROL MEASURES, MATERIALS STORAGE AREAS THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE. INSPECT THESE AREAS AT LEAST ONCE A WEEK AS WELL AS BEFORE AND AFTER A STORM EVENT, AND PRIOR TO COMPLETING PERMANENT STABILIZATION MEASURES. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT THE INSPECTIONS.

(C) MAINTENANCE. SITE CONTRACTOR SHALL MAINTAIN ALL MEASURES IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED. IF BEST MANAGEMENT PRACTICES (BMPS) NEED TO BE MAINTAINED OR MODIFIED, ADDITIONAL BMPS ARE NECESSARY, OR OTHER CORRECTIVE ACTION IS NEEDED, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL).

(D) DOCUMENTATION. SITE CONTRACTOR SHALL KEEP A LOG (REPORT) SUMMARIZING THE INSPECTIONS AND ANY CORRECTIVE ACTION TAKEN. THE LOG MUST INCLUDE THE NAME(S) AND QUALIFICATIONS OF THE PERSON MAKING THE INSPECTIONS, THE DATE(S) OF THE INSPECTIONS, AND MAJOR OBSERVATIONS ABOUT THE OPERATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS, MATERIALS STORAGE AREAS, AND VEHICLES ACCESS POINTS TO THE PARCEL. MAJOR OBSERVATIONS MUST INCLUDE BMPS THAT NEED MAINTENANCE, BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, AND LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED. FOR EACH BMP REQUIRING MAINTENANCE, BMP NEEDING REPLACEMENT, AND LOCATION NEEDING ADDITIONAL BMPS, NOTE IN THE LOG THE CORRECTIVE ACTION TAKEN AND WHEN IT WAS TAKEN. THE LOG MUST BE MADE ACCESSIBLE TO NHDES STAFF AND A COPY MUST BE PROVIDED UPON REQUEST. THE PERMITTEE SHALL RETAIN A COPY OF THE LOG FOR A PERIOD OF AT LEAST THREE YEARS FROM THE COMPLETION OF PERMANENT STABILIZATION.

HOUSEKEEPING PLAN

1. SPILL PREVENTION. USE CONTROLS TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER, WHICH INCLUDES STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR SHALL DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.

2. GROUNDWATER PROTECTION. DURING CONSTRUCTION, DO NOT STORE OR HANDLE LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS. ANY PROJECT PROPOSING INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE INFILTRATION AREA, OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA, IN ORDER TO PREVENT THE ACCUMULATION OF FINES, REDUCTION IN INFILTRATION RATE, AND CONSEQUENT FLOODING AND DESTABILIZATION.

3. FUGITIVE SEDIMENT AND DUST. SITE CONTRACTOR SHALL TAKE ACTIONS TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHALL BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHALL BE SWEPT IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHALL WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.

4. DEBRIS AND OTHER MATERIALS. MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE. CONSTRUCTION AND POST-CONSTRUCTION ACTIVITIES RELATED TO A PROJECT MAY BE REQUIRED TO COMPLY WITH APPLICABLE PROVISION OF RULES RELATED TO SOLID, UNIVERSAL, AND HAZARDOUS WASTE, INCLUDING, BUT NOT LIMITED TO, THE MAINE SOLID WASTE AND HAZARDOUS WASTE MANAGEMENT RULES; MAINE HAZARDOUS WASTE MANAGEMENT RULES; MAINE OIL CONVEYANCE AND STORAGE RULES; AND MAINE PESTICIDE REQUIREMENTS.

5. TRENCH OR FOUNDATION DE-WATERING. TRENCH DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFERDAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. REMOVE COLLECTED WATER FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, AND SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVE TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT. NO DEWATERING MEASURE SHALL DISCHARGE WITHIN 25 FEET OF A WETLAND.

6. AUTHORIZED NON-STORMWATER DISCHARGES. IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE: DISCHARGES FROM FIREFIGHTING ACTIVITY; FIRE HYDRANT FLUSHINGS; VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDER- CARRIAGE AND TRANSMISSION WASHING IS PROHIBITED); DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS (SEE #3 ABOVE); ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS; PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED; UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE; UNCONTAMINATED GROUNDWATER OR SPRING WATER; FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED; UNCONTAMINATED EXCAVATION DEWATERING (SEE #5 ABOVE); POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND LANDSCAPE IRRIGATION.

7. UNAUTHORIZED NON-STORMWATER DISCHARGES. DISCHARGE THAT IS MIXED WITH A SOURCE OF NON_STORMWATER, OTHER THAN THOSE DISCHARGES IN COMPLIANCE WITH #6 ABOVE IS NOT AUTHORIZED. SPECIFICALLY, THE FOLLOWING DISCHARGES ARE NOT AUTHORIZED: WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS; FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

SITE ABBREVIATIONS

ACP	ASBESTOS CEMENT PIPE
ADD. ALT.	ADDITIVE ALTERNATE BID ITEM
AE	AERIAL ELECTRIC
ARCH.	ARCHITECTURAL
B.C.	BOTTOM OF CURB
BIT.	BITUMINOUS
BLDG.	BUILDING
BOT.	BOTTOM
BW	BOTTOM OF WALL
℄	CENTERLINE
CB	CATCH BASIN
C.I.	CAST IRON, CONTRACTOR INST'D.
C.I.P.	CAST IN PLACE
CMP	CORRUGATED METAL PIPE,
C	CENTER
C.O.	CLEANOUT
CONC.	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
CTV	CABLE TELEVISION
CFS	CUBIC FEET PER SECOND
D.I.	DITCH INVERT, DUCTILE IRON
DTL.	DETAIL
DIA. Ø	DIAMETER
DIM.	DIMENSION
DMH	DRAIN MANHOLE, DROP MANHOLE
DN	DOWN
DWG	DRAWING
E	EAST
E.P.	EDGE OF PAVEMENT
E.L. ELEV.	ELEVATION
EQ.	EQUAL
EXIST.	EXISTING
EXP.	EXPANSION
FD	FOOTING DRAIN
F.G.	FINISH GRADE
F.H.	FIRE HYDRANT
FIN.	FINISH
F.F.	FINISH FLOOR
FT.	FEET
FTG.	FOOTING
GA.	GAUGE
GALV.	GALVANIZED
GPM	GALLONS PER MINUTE
GRAN	GRANULAR
G.V.	GATE VALVE
G	GAS
H.C.	HANDICAP
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ., HOR.	HORIZONTAL
HMA	HOT MIX ASPHALT
I.D.	IDENTIFICATION, INSIDE DIAMETER
I.E.	INVERT ELEVATION
INV.	INVERT
INSUL.	INSULATION
LBS.	POUNDS
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET
L	LENGTH
MAS	MASONRY
MATL.	MATERIAL
MAX.	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MISC.	MISCELLANEOUS
N	NORTH, NEW UTILITY
N.I.C.	NOT IN CONTRACT
NFD	NEW FOUNDATION DRAIN
NFM	NEW FORCE MAIN
NGAS	NATURAL GAS
NOM.	NOMINAL
NO.	NUMBER
NRD	NEW ROOF DRAIN
NSS	NEW SANITARY SEWER
NSD	NEW STORM DRAIN
NTS	NOT TO SCALE
NUE	NEW UNDERGROUND ELECTRIC
NUD	NEW UNDERDRAIN
NUP	NEW UNDERGROUND PRIMARY
NUS	NEW UNDERGROUND SECONDARY
NW	NEW WATER LINE
OC	ON CENTER
OE	OVERHEAD ELECTRIC
OHW	OVERHEAD WIRE
PVMT.	PAVEMENT
PERF.	PERFORATED
PB	PULL BOX
PI	POINT OF INTERSECTION
PRELIM	PRELIMINARY
P.A.	POINT OF TANGENT
PT	POINT
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
S	SEWER
SS	SANITARY SEWER
SCH	SCHEDULE
SD	STORM DRAIN
SIM.	SIMILAR
SMH	SEWER MANHOLE
SPECS	SPECIFICATIONS
SQ.	SQUARE
S.F.	SQUARE FEET
STA.	STATION
STYRO.	STYROFOAM
TBM	TEMPORARY BENCH MARK
TEL	TELEPHONE
T.O.W.	TOP OF WALL
T.C.	TOP OF CURB
TEMP.	TEMPORARY
THK.	THICK
TV	TELEVISION
TYP	TYPICAL
T.S.	TOP OF SLAB
UE	UNDERGROUND ELECTRIC
US	UNDERGROUND SECONDARY
UP	UNDERGROUND PRIMARY
VERT., VER.	VERTICAL
W	WATER
W/	WITH
W/O	WITHOUT
WSO	WATER SHUTOFF (CURB STOP OR GATE VALVE)
W.W.F.	WELDED WIRE FABRIC
W V	WATER SHUT OFF / GATE VALVE

Revisions	Date
100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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Above Group
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www.abovegroupinc.com
COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2064

STATE OF MAINE – MICHAEL A. GUETHLE – 14284 – LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: SITE GENERAL NOTES & ABBREVIATIONS

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022 | Checked: MAG | Drawn: BTH

Project Number: 608-20-101

Building Number:

Drawing Number: C-001

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08-6231

BIM 360://0120026 Loop Road Utility Infrastructure Upgrades Div 21 22 & 23 - R19/0120026 Loop Road Utility Upgrades Div 21, 22, & 23 - R19.rvt

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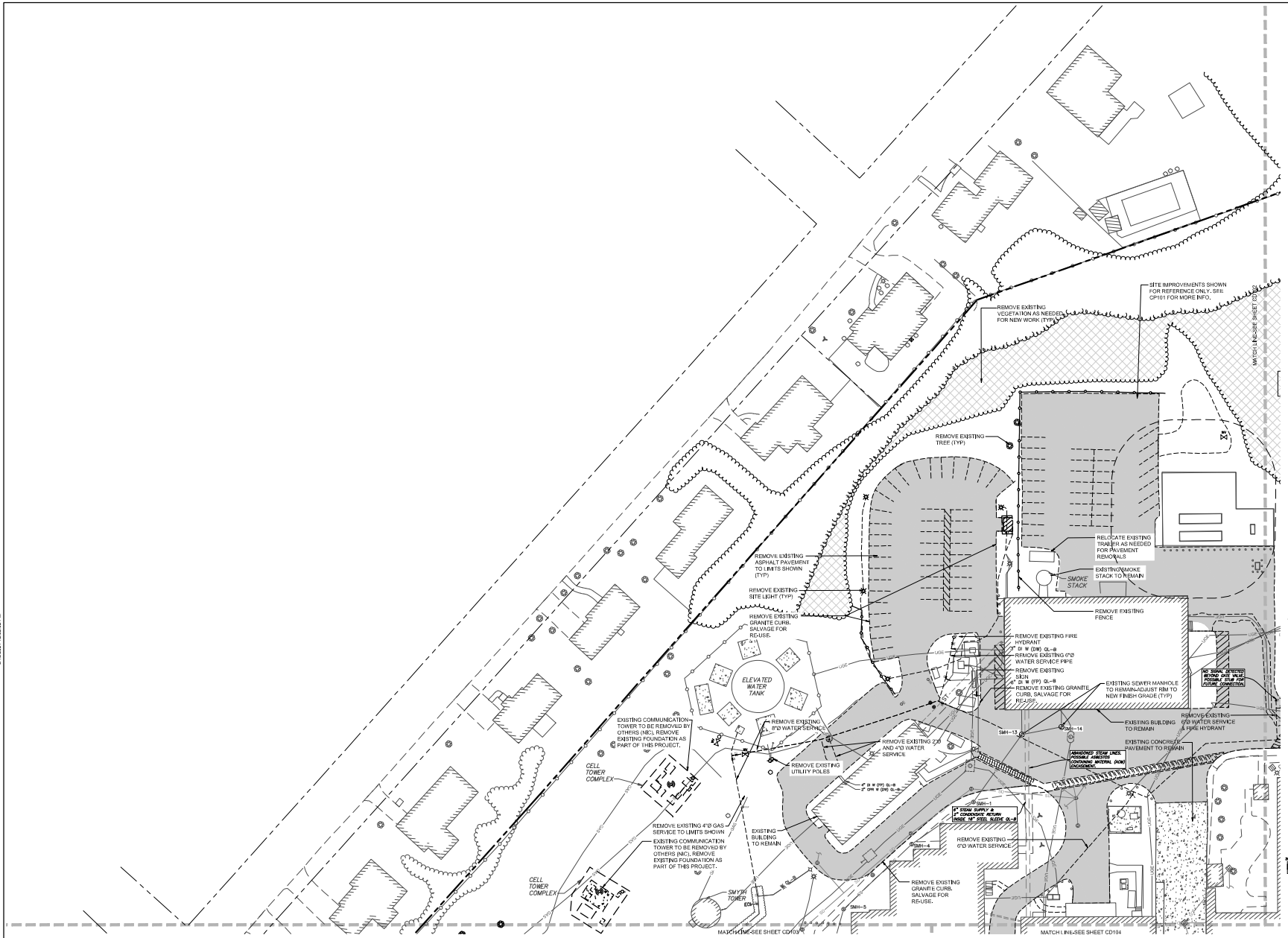

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2094

STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

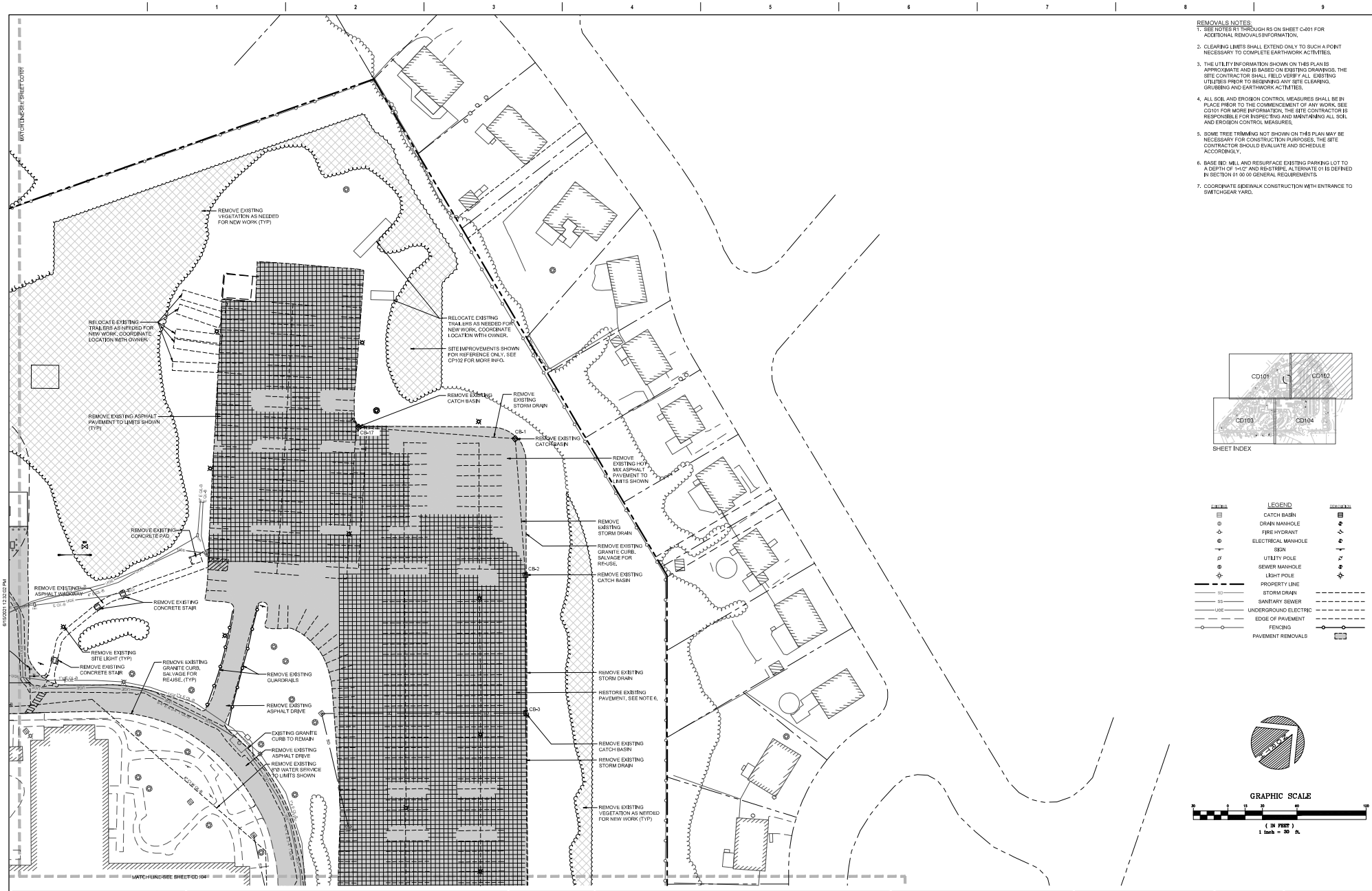
wbrc

Drawing Title	SITE REMOVALS PLAN
Approved:	
Project Title	LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES
Location	MANCHESTER VAMC, NH
Issue Date	06/21/2022
Checked	MAG
Drawn	BTH
Project Number	608-20-101
Building Number	
Drawing Number	CD101

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08 - 6231



REMOVALS NOTES:

1. SEE NOTES R1 THROUGH R5 ON SHEET C-001 FOR ADDITIONAL REMOVALS INFORMATION.
2. CLEARING LIMITS SHALL EXTEND ONLY TO SUCH A POINT NECESSARY TO COMPLETE EARTHWORK ACTIVITIES.
3. THE UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE AND IS BASED ON EXISTING DRAWINGS. THE SITE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY SITE CLEARING, GRUBBING AND EARTHWORK ACTIVITIES.
4. ALL SOIL AND EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY WORK. SEE CG101 FOR MORE INFORMATION, THE SITE CONTRACTOR IS RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL SOIL AND EROSION CONTROL MEASURES.
5. SOME TREE TRIMMING NOT SHOWN ON THIS PLAN MAY BE NECESSARY FOR CONSTRUCTION PURPOSES. THE SITE CONTRACTOR SHOULD EVALUATE AND SCHEDULE ACCORDINGLY.
6. BASE BID: MILL AND RESURFACE EXISTING PARKING LOT TO A DEPTH OF 1-1/2" AND RE-STRIPE. ALTERNATE 01 IS DEFINED IN SECTION 01 00 00 GENERAL REQUIREMENTS.
7. COORDINATE SIDEWALK CONSTRUCTION WITH ENTRANCE TO SWITCHGEAR YARD.

SHEET INDEX

EXISTING	LEGEND	REMOVALS
	CATCH BASIN	
	DRAIN MANHOLE	
	FIRE HYDRANT	
	ELECTRICAL MANHOLE	
	SIGN	
	UTILITY POLE	
	SEWER MANHOLE	
	LIGHT POLE	
	PROPERTY LINE	
SD	STORM DRAIN	
SS	SANITARY SEWER	
UGE	UNDERGROUND ELECTRIC	
	EDGE OF PAVEMENT	
	FENCING	
	PAVEMENT REMOVALS	

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Revisions		Date
1	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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www.abovegroupinc.com
COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.262.6264

STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title	SITE REMOVALS PLAN
Approved:	
Project Title	LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES
Location	MANCHESTER VAMC, NH
Issue Date	06/21/2022
Checked	MAG
Drawn	BTH
Project Number	608-20-101
Building Number	
Drawing Number	CD102

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08 - 8231

REMOVALS NOTES:

1. SEE NOTES R1 THROUGH R5 ON SHEET C-001 FOR ADDITIONAL REMOVALS INFORMATION.
2. CLEARING LIMITS SHALL EXTEND ONLY TO SUCH A POINT NECESSARY TO COMPLETE EARTHWORK ACTIVITIES.
3. THE UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE AND IS BASED ON EXISTING DRAWINGS. THE SITE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY SITE CLEARING, GRUBBING AND EARTHWORK ACTIVITIES.
4. ALL SOIL AND EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY WORK. SEE CG101 FOR MORE INFORMATION. THE SITE CONTRACTOR IS RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL SOIL AND EROSION CONTROL MEASURES.
5. SOME TREE TRIMMING NOT SHOWN ON THIS PLAN MAY BE NECESSARY FOR CONSTRUCTION PURPOSES. THE SITE CONTRACTOR SHOULD EVALUATE AND SCHEDULE ACCORDINGLY.

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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www.abovegroupinc.com
COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2004

SDVOSB

STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title	SITE REMOVALS PLAN
Approved:	
Project Title	LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES
Location	MANCHESTER VAMC, NH
Issue Date	06/21/2022
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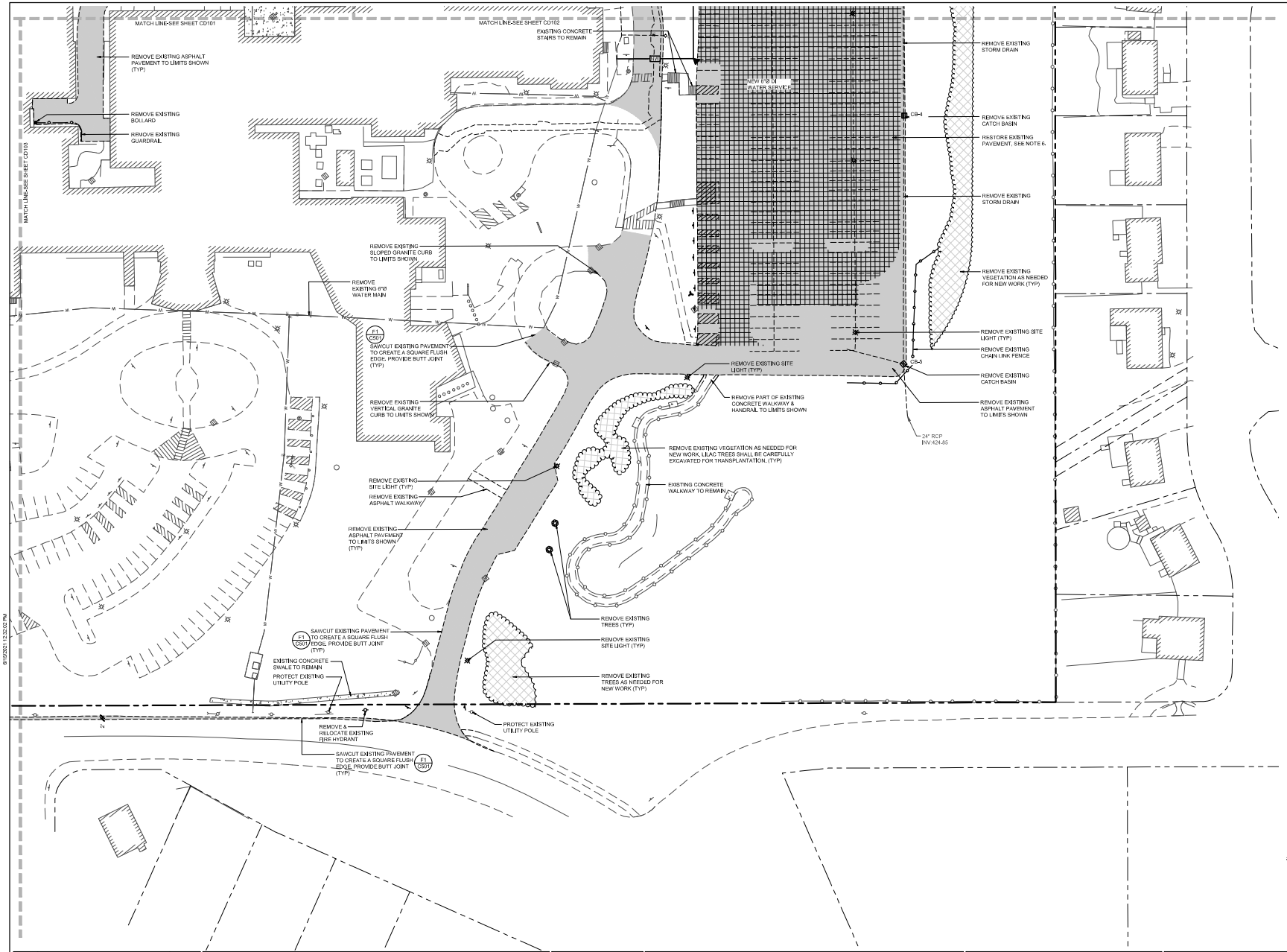
Drawn	BTH
Project Number	608-20-101
Building Number	
Drawing Number	CD103

Office of Construction and Facilities Management

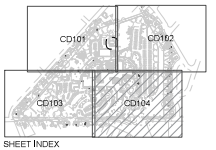
VA U.S. Department of Veterans Affairs

VA FORM 08 - 8231



REMOVALS NOTES:

1. SEE NOTES R1 THROUGH R5 ON SHEET C-001 FOR ADDITIONAL REMOVALS INFORMATION.
2. CLEARING LIMITS SHALL EXTEND ONLY TO SUCH A POINT NECESSARY TO COMPLETE EARTHWORK ACTIVITIES.
3. THE UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE AND IS BASED ON EXISTING DRAWINGS. THE SITE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY SITE CLEARING, GRUBBING AND EARTHWORK ACTIVITIES.
4. ALL SOIL AND EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY WORK. SEE C0101 FOR MORE INFORMATION. THE SITE CONTRACTOR IS RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL SOIL AND EROSION CONTROL MEASURES.
5. SOME TREE TRIMMING NOT SHOWN ON THIS PLAN MAY BE NECESSARY FOR CONSTRUCTION PURPOSES. THE SITE CONTRACTOR SHOULD EVALUATE AND SCHEDULE ACCORDINGLY.
6. BASE BID: MILL AND RESURFACE EXISTING PARKING LOT TO A DEPTH OF 1-½" AND RE-STRIPE. ALTERNATE 01 IS DEFINED IN SECTION 01 00 00 GENERAL REQUIREMENTS.



SHEET INDEX

EXISTING	LEGEND	REMOVALS
	CATCH BASIN	
	DRAIN MANHOLE	
	FIRE HYDRANT	
	ELECTRICAL MANHOLE	
	SIGN	
	UTILITY POLE	
	SEWER MANHOLE	
	LIGHT POLE	
	PROPERTY LINE	
SD	STORM DRAIN	
SS	SANITARY SEWER	
UGE	UNDERGROUND ELECTRIC	
	EDGE OF PAVEMENT	
	FENCING	
	PAVEMENT REMOVALS	

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Revisions		Date
100% SUBMITTAL - BID DOCUMENTS		06/21/2022

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COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.281.2084

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STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: SITE REMOVALS PLAN

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022 | Checked: MAG | Drawn: BTH

Project Number: 608-20-101

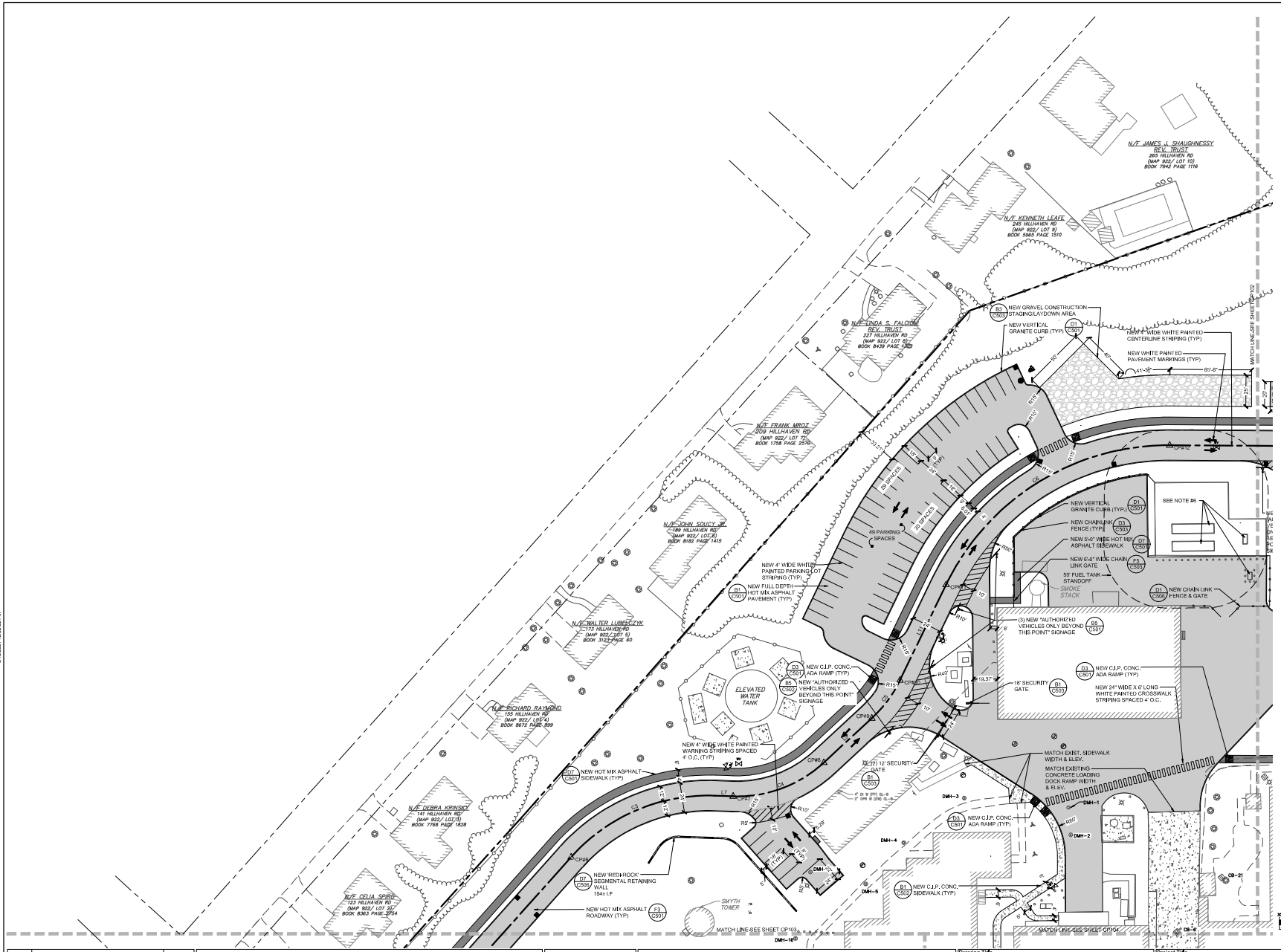
Building Number:

Drawing Number: CD104

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08 - 6231

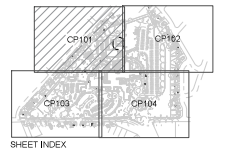


LAYOUT NOTES:

1. SEE NOTES L1 THROUGH L3 ON SHEET C-001 FOR ADDITIONAL LAYOUT INFORMATION.
2. ALL CURB RADII SHALL BE 5' UNLESS OTHERWISE NOTED.
3. COORDINATE ALL SIDEWALK LOCATIONS WITH ARCH. AND STRUCTURAL DRAWINGS TO VERIFY NEW EXTERIOR DOOR LOCATIONS. FIELD ADJUST AS REQUIRED.
4. REFER TO STRUCTURAL SHEETS FOR NEW FOUNDATION LAYOUT. COORDINATE LAYOUT WITH FOUNDATION CONTRACTOR.
5. SEE SHEET E1101 FOR ADDITIONAL INFORMATION RELATED TO THE LAYOUT OF SITE LIGHTS AND UTILITY POLES AND THEIR RESPECTIVE CONDUIT AND WIRING. COORDINATE LAYOUT WITH THE ELECTRICAL CONTRACTOR.
6. CONTRACTOR SHALL COORDINATE AROUND FUEL STORAGE AREA AS-BUILT CONDITIONS OR FINAL DESIGN DOCUMENTS AS THEY BECOME AVAILABLE FROM VA COR. PROGRESS DRAWINGS DATE 18 MAY 2022 WERE USED AS THE BASIS FOR THE PLANNING AND BIDDING PURPOSES OF THIS DRAWING.

CENTERLINE SEGMENT TABLE

Line #/Curve #	Length	Radius
L1	24.07	
C1	95.76	114.00
L3	225.59	
C2	153.95	98.00
L5	302.39	
C3	129.69	148.00
L7	14.82	
C4	79.64	102.00
L9	52.49	
C5	38.21	102.00
L11	85.07	
C6	223.07	198.00
L13	382.02	
C7	230.91	147.00
L15	416.92	
C8	157.08	100.00
L17	94.09	
C9	66.60	108.00
C10	72.39	67.00
C11	35.19	53.00
L21	65.30	
C12	17.01	83.00
L23	13.02	
C13	46.69	97.00
L25	63.52	



SHEET INDEX

LEGEND

Existing		Proposed
	CATCH BASIN	
	DRAIN MANHOLE	
	FIRE HYDRANT	
	ELECTRICAL MANHOLE	
	SIGN	
	UTILITY POLE	
	SEWER MANHOLE	
	LIGHT POLE	
	PROPERTY LINE	
	ROAD CENTERLINE	
	EDGE OF PAVEMENT	
	FENCING	
	CURBING	
	ROADWAY/PARKING PAVEMENT	
	SIDEWALK PAVEMENT	

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.262.6264

STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: SITE LAYOUT AND MATERIALS PLAN

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022

Checked: MAG

Drawn: BTH

Project Number: 608-20-101

Building Number:

Drawing Number: CP101

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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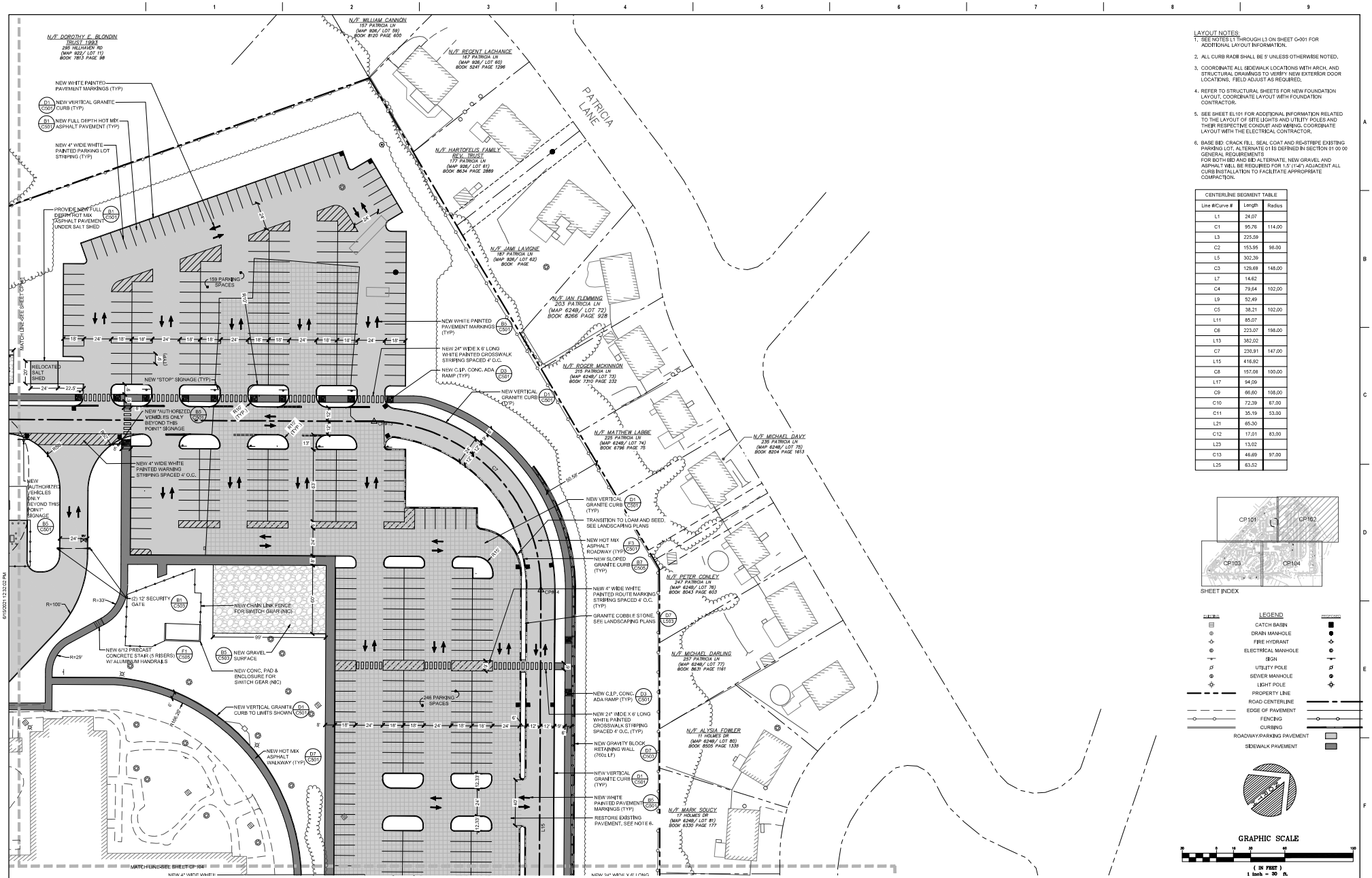

LAYOUT NOTES:

1. SEE NOTES L1 THROUGH L3 ON SHEET C-001 FOR ADDITIONAL LAYOUT INFORMATION.
2. ALL CURB RADII SHALL BE 5' UNLESS OTHERWISE NOTED.
3. COORDINATE ALL SIDEWALK LOCATIONS WITH ARCH. AND STRUCTURAL DRAWINGS TO VERIFY NEW EXTERIOR DOOR LOCATIONS. FIELD ADJUST AS REQUIRED.
4. REFER TO STRUCTURAL SHEETS FOR NEW FOUNDATION LAYOUT. COORDINATE LAYOUT WITH FOUNDATION CONTRACTOR.
5. SEE SHEET EL101 FOR ADDITIONAL INFORMATION RELATED TO THE LAYOUT OF SITE LIGHTS AND UTILITY POLES AND THEIR RESPECTIVE CONDUIT AND WIRING. COORDINATE LAYOUT WITH THE ELECTRICAL CONTRACTOR.
6. BASE BID: CRACK FILL, SEAL COAT AND RE-STRIPE EXISTING PARKING LOT. ALTERNATE 01 IS DEFINED IN SECTION 01 00 00 GENERAL REQUIREMENTS
FOR BOTH BID AND BID ALTERNATE, NEW GRAVEL AND ASPHALT WILL BE REQUIRED FOR 1.5' (1'-6") ADJACENT ALL CURB INSTALLATION TO FACILITATE APPROPRIATE COMPACTION.

CENTERLINE SEGMENT TABLE

Line #/Curve #	Length	Radius
L1	24.07	
C1	95.76	114.00
L3	225.59	
C2	153.95	96.00
L5	302.39	
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C8	157.08	100.00
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C10	72.39	67.00
C11	35.19	53.00
L21	65.30	
C12	17.01	83.00
L23	13.02	
C13	46.69	97.00
L25	63.52	

SHEET INDEX

LEGEND

EXISTING		PROPOSED
	CATCH BASIN	
	DRAIN MANHOLE	
	FIRE HYDRANT	
	ELECTRICAL MANHOLE	
	SIGN	
	UTILITY POLE	
	SEWER MANHOLE	
	LIGHT POLE	
	PROPERTY LINE	
	ROAD CENTERLINE	
	EDGE OF PAVEMENT	
	FENCING	
	CURBING	
	ROADWAY/PARKING PAVEMENT	
	SIDEWALK PAVEMENT	

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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PH: 603.262.6264

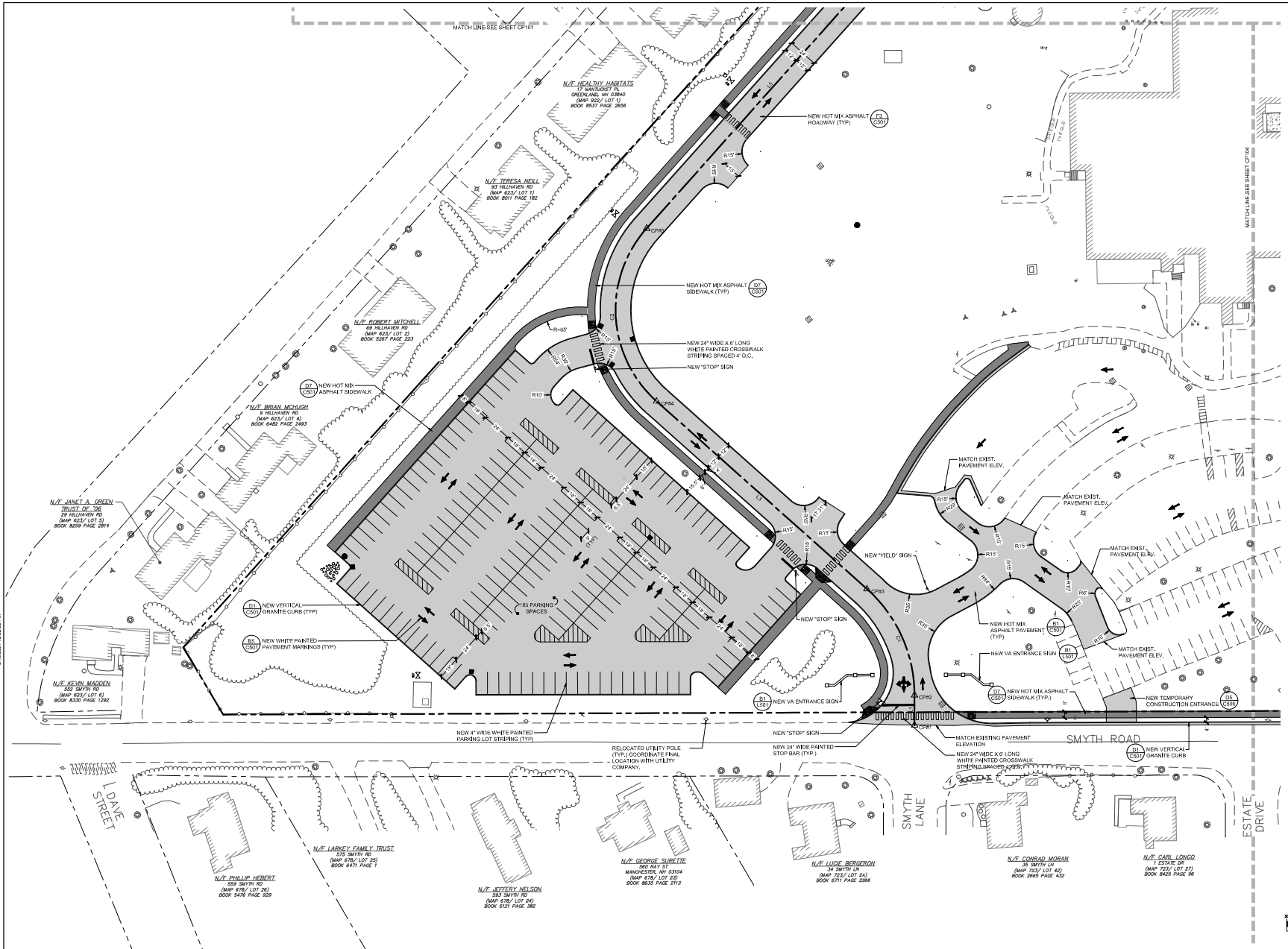
STATE OF MAINE
MICHAEL A. GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT
wbrc

Drawing Title: SITE LAYOUT AND MATERIALS PLAN
Approved:
Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES
Location: MANCHESTER VAMC, NH
Issue Date: 06/21/2022
Checked: MAG
Drawn: BTH
Project Number: 608-20-101
Building Number:
Drawing Number: CP102

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

VA FORM 08 - 6231

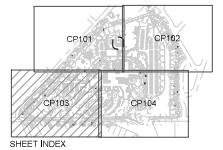


LAYOUT NOTES:

1. SEE NOTES L1 THROUGH L3 ON SHEET C-201 FOR ADDITIONAL LAYOUT INFORMATION.
2. ALL CURB RADII SHALL BE 5' UNLESS OTHERWISE NOTED.
3. COORDINATE ALL SIDEWALK LOCATIONS WITH ARCH. AND STRUCTURAL DRAWINGS TO VERIFY NEW EXTERIOR DOOR LOCATIONS. FIELD ADJUST AS REQUIRED.
4. REFER TO STRUCTURAL SHEETS FOR NEW FOUNDATION LAYOUT. COORDINATE LAYOUT WITH FOUNDATION CONTRACTOR.
5. SEE SHEET EL101 FOR ADDITIONAL INFORMATION RELATED TO THE LAYOUT OF SITE LIGHTS AND UTILITY POLES AND THEIR RESPECTIVE CONDUIT AND WIRING. COORDINATE LAYOUT WITH THE ELECTRICAL CONTRACTOR.

CENTERLINE SEGMENT TABLE

Line #/Curve #	Length	Radius
L1	24.07	
C1	95.76	114.00
L3	225.59	
C2	153.85	98.00
L5	302.39	
C3	129.69	148.00
L7	14.62	
C4	79.64	102.00
L9	52.49	
C5	38.21	102.00
L11	85.07	
C6	223.07	198.00
L13	382.02	
C7	230.91	147.00
L15	416.92	
C8	157.08	100.00
L17	94.09	
C9	66.60	108.00
C10	72.39	67.00
C11	35.19	53.00
L21	65.30	
C12	17.01	83.00
L23	13.02	
C13	46.69	97.00
L25	63.52	



SHEET INDEX

LEGEND

EXISTING		PROPOSED
	CATCH BASIN	
	DRAIN MANHOLE	
	FIRE HYDRANT	
	ELECTRICAL MANHOLE	
	SIGN	
	UTILITY POLE	
	SEWER MANHOLE	
	LIGHT POLE	
	PROPERTY LINE	
	ROAD CENTERLINE	
	EDGE OF PAVEMENT	
	FENCING	
	CURBING	
	ROADWAY/PARKING PAVEMENT	
	SIDEWALK PAVEMENT	

NORTH

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

1 inch = 30 ft.

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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www.abovegroupinc.com
COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2004

STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: SITE LAYOUT AND MATERIALS PLAN

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022

Checked: MAG

Drawn: BTH

Project Number: 608-20-101

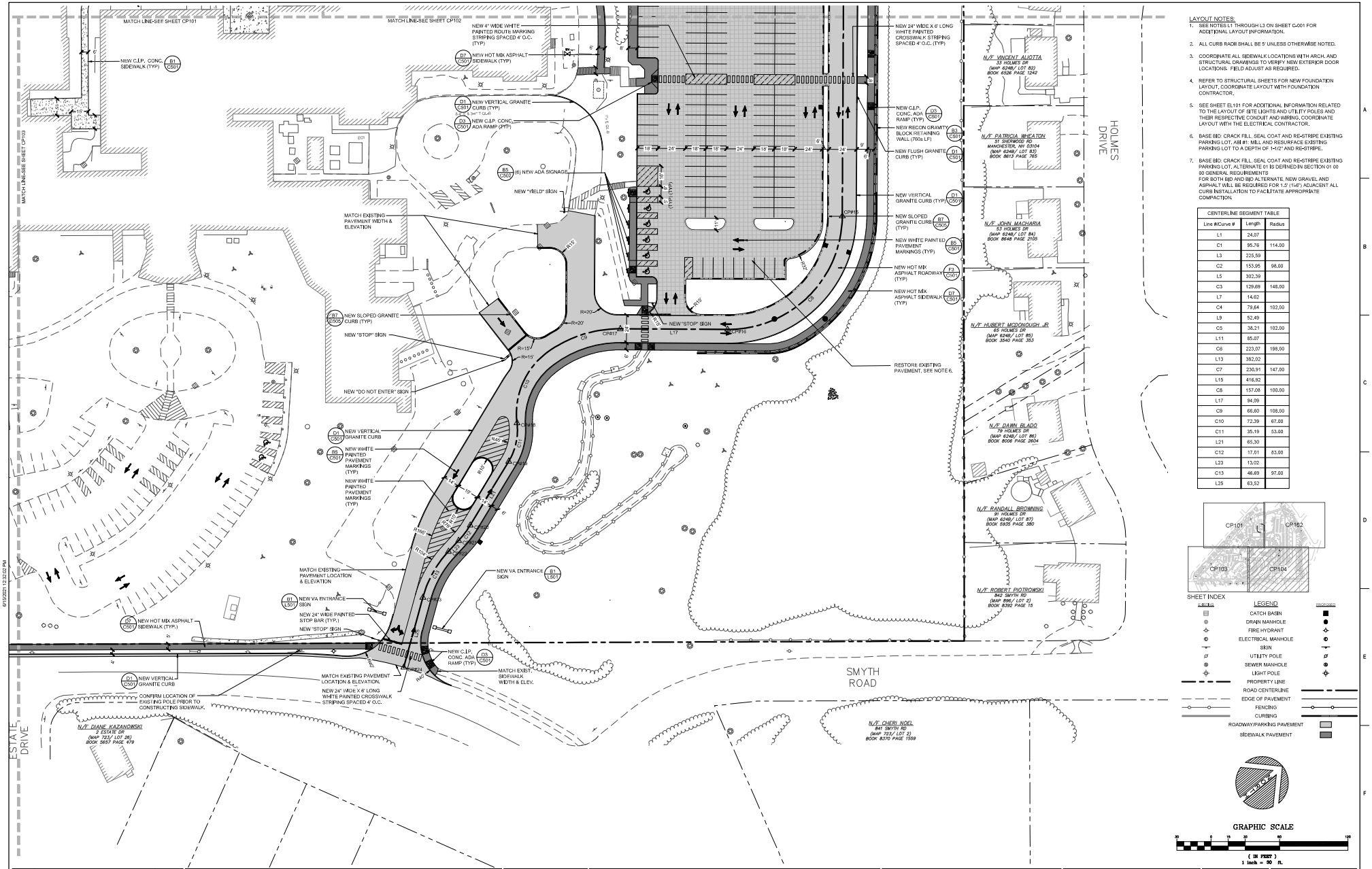
Building Number:

Drawing Number: CP103

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08 - 8231



LAYOUT NOTES:

1. SEE NOTES L1 THROUGH L3 ON SHEET C-001 FOR ADDITIONAL LAYOUT INFORMATION.
2. ALL CURB RADII SHALL BE 5' UNLESS OTHERWISE NOTED.
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4. REFER TO STRUCTURAL SHEETS FOR NEW FOUNDATION LAYOUT. COORDINATE LAYOUT WITH FOUNDATION CONTRACTOR.
5. SEE SHEET EL101 FOR ADDITIONAL INFORMATION RELATED TO THE LAYOUT OF SITE LIGHTS AND UTILITY POLES AND THEIR RESPECTIVE CONDUIT AND WIRING. COORDINATE LAYOUT WITH THE ELECTRICAL CONTRACTOR.
6. BASE BID: CRACK FILL, SEAL COAT AND RE-STRIPE EXISTING PARKING LOT. ABI #1: MILL AND RESURFACE EXISTING PARKING LOT TO A DEPTH OF 1-1/2" AND RE-STRIPE.
7. BASE BID: CRACK FILL, SEAL COAT AND RE-STRIPE EXISTING PARKING LOT. ALTERNATE 01 IS DEFINED IN SECTION 01 00 00 GENERAL REQUIREMENTS FOR BOTH BID AND BID ALTERNATE. NEW GRAVEL AND ASPHALT WILL BE REQUIRED FOR 1.5' (1'-6") ADJACENT ALL CURB INSTALLATION TO FACILITATE APPROPRIATE COMPACTION.

CENTERLINE SEGMENT TABLE

Line #/Curve #	Length	Radius
L1	24.07	
C1	95.76	114.00
L3	225.59	
C2	153.95	98.00
L5	302.39	
C3	129.69	148.00
L7	14.62	
C4	79.64	102.00
L9	52.49	
C5	38.21	102.00
L11	85.07	
C6	223.07	198.00
L13	382.02	
C7	230.91	147.00
L15	416.82	
C8	157.08	100.00
L17	94.09	
C9	66.60	108.00
C10	72.39	67.00
C11	35.19	53.00
L21	65.30	
C12	17.01	83.00
L23	13.02	
C13	46.69	97.00
L25	63.52	

SHEET INDEX

LEGEND

EXISTING / PROPOSED

- CATCH BASIN
- DRAIN MANHOLE
- FIRE HYDRANT
- ELECTRICAL MANHOLE
- SIGN
- UTILITY POLE
- SEWER MANHOLE
- LIGHT POLE
- PROPERTY LINE
- ROAD CENTERLINE
- EDGE OF PAVEMENT
- FENCING
- CURBING
- ROADWAY/PARKING PAVEMENT
- SIDEWALK PAVEMENT

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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www.abovegroupinc.com
COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.262.6264

STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: SITE LAYOUT AND MATERIALS PLAN

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022 | Checked: MAG | Drawn: BTH

Project Number: 608-20-101

Building Number:

Drawing Number: CP104

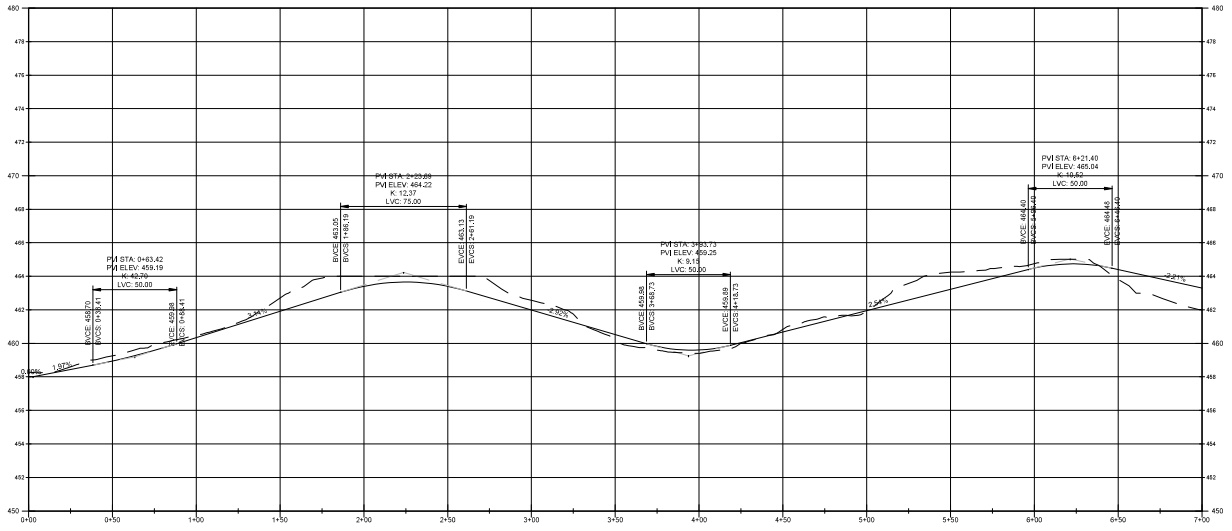
Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08 - 8231

G1 PROFILE VIEW-ROAD STA. 0+00 - 7+00

SCALE: 1"=30'



F1 PROFILE VIEW-ROAD STA. 0+00 - 7+00

SCALE: HORIZONTAL: 1"=30' VERTICAL: 1"=3'

EXISTING	LEGEND	PROPOSED
	CATCH BASIN	
	DRAIN MANHOLE	
	FIRE HYDRANT	
	ELECTRICAL MANHOLE	
	SIGN	
	UTILITY POLE	
	SEWER MANHOLE	
	LIGHT POLE	
	PROPERTY LINE	
	ROAD CENTERLINE	
	EDGE OF PAVEMENT	
	FENCING	
	PAVEMENT	

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2064

STATE OF MAINE
MICHAEL A. GUETHLE
14284
LICENSED
PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: ROAD PLAN & PROFILE

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date	Checked	Drawn
06/21/2022	MAG	BTH

Project Number: 608-20-101

Building Number:

Drawing Number: CP301

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08 - 6231

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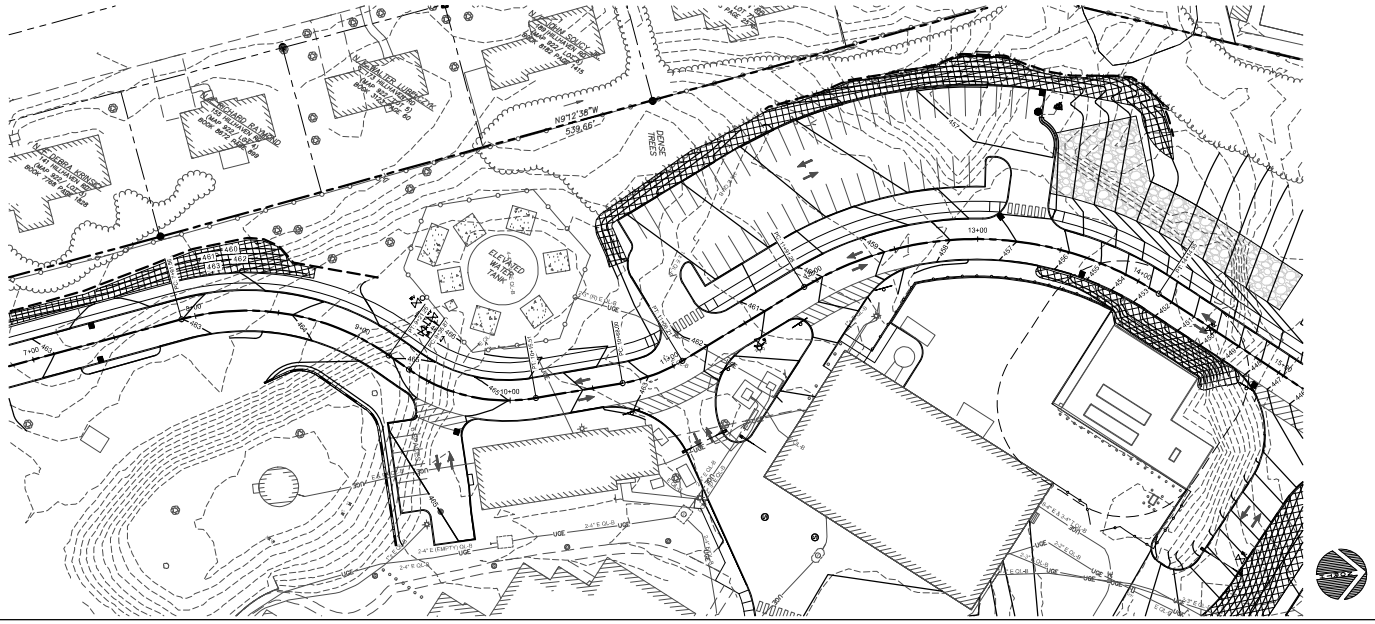
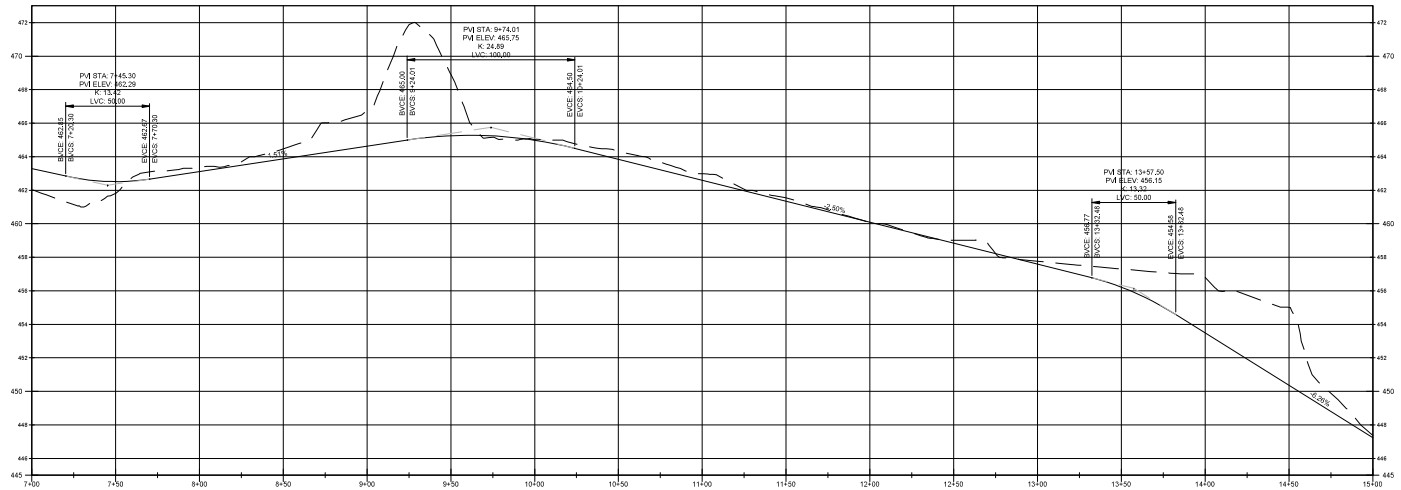


G1 PROFILE VIEW-ROAD STA. 7+00 - 15+00

SCALE: 1"=30'



F1 PROFILE VIEW-ROAD STA. 7+00-15+00

SCALE: HORIZONTAL: 1"=30' VERTICAL: 1"=3'

EXISTING	LEGEND	PROPOSED
	CATCH BASIN	
	DRAIN MANHOLE	
	FIRE HYDRANT	
	ELECTRICAL MANHOLE	
	SIGN	
	UTILITY POLE	
	SEWER MANHOLE	
	LIGHT POLE	
	PROPERTY LINE	
	ROAD CENTERLINE	
	EDGE OF PAVEMENT	
	FENCING	
	PAVEMENT	

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Revisions		Date
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PH: 603.261.2064

STATE OF MAINE
MICHAEL A. GUETHLE
14284
LICENSED
PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: ROAD PLAN & PROFILE

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date	Checked	Drawn
06/21/2022	MAG	BTH

Project Number: 608-20-101

Building Number:

Drawing Number: CP302

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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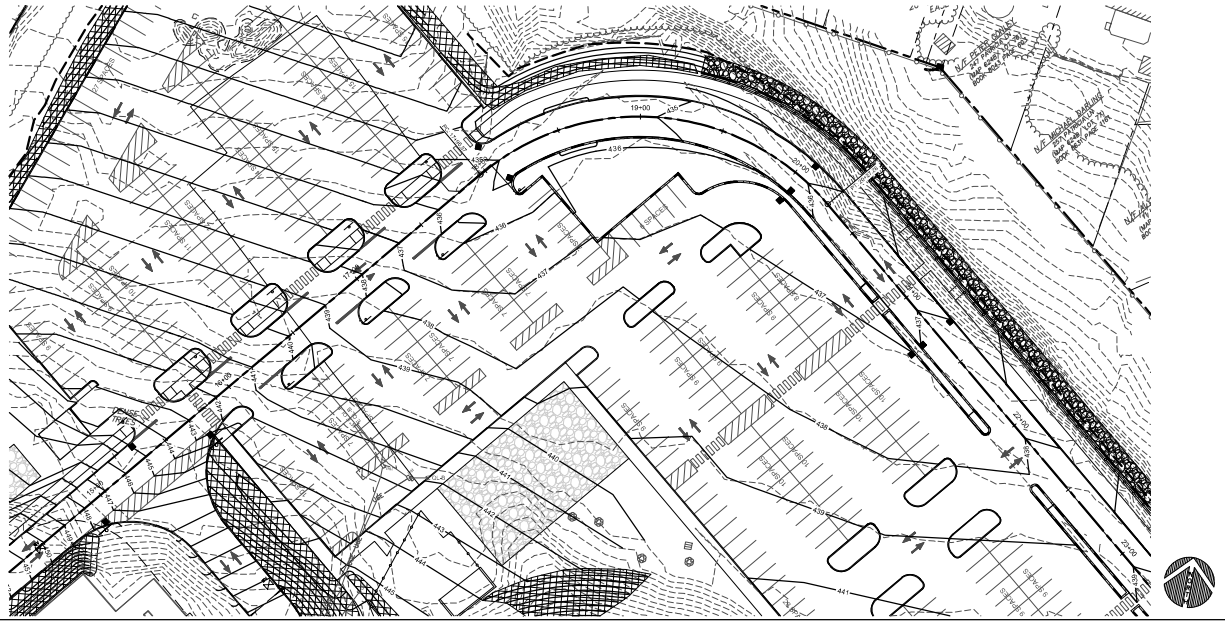
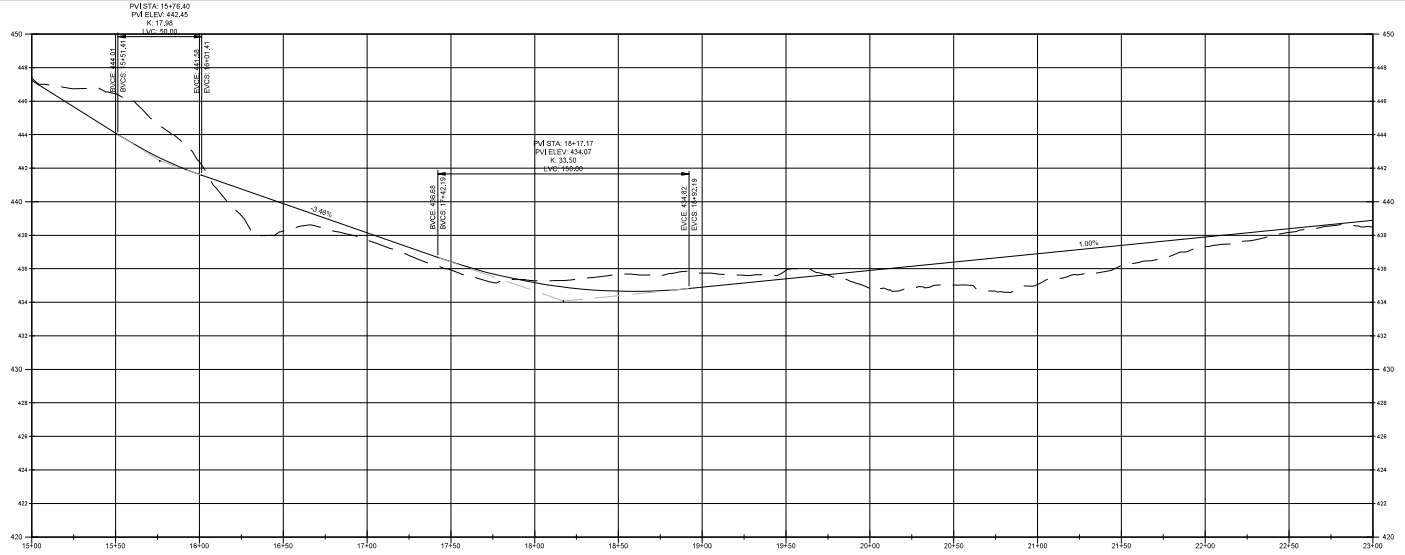
Bjl# 360/01/2023 Loop Road Utility Infrastructure Upgrades Div 21, 22 & 23 - R19/01/2023 Loop Road Utility Upgrades Div 21, 22, & 23 - R19.rvt 6/15/2021 12:32:02 PM



G1 PROFILE VIEW-ROAD STA. 15+00 - 23+00

SCALE: 1"=30'



F1 PROFILE VIEW-ROAD STA. 15+00 - 23+00

SCALE: HORIZONTAL: 1"=30' VERTICAL: 1"=3'

EXISTING	LEGEND	PROPOSED
	CATCH BASIN	
	DRAIN MANHOLE	
	FIRE HYDRANT	
	ELECTRICAL MANHOLE	
	SIGN	
	UTILITY POLE	
	SEWER MANHOLE	
	LIGHT POLE	
	PROPERTY LINE	
	ROAD CENTERLINE	
	EDGE OF PAVEMENT	
	FENCING	
	PAVEMENT	

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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PH: 603.261.2064

STATE OF MAINE
MICHAEL A. GUETHLE
14284
LICENSED
PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: ROAD PLAN & PROFILE

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date	Checked	Drawn
06/21/2022	MAG	BTH

Project Number: 608-20-101

Building Number:

Drawing Number: CP303

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08 - 6231

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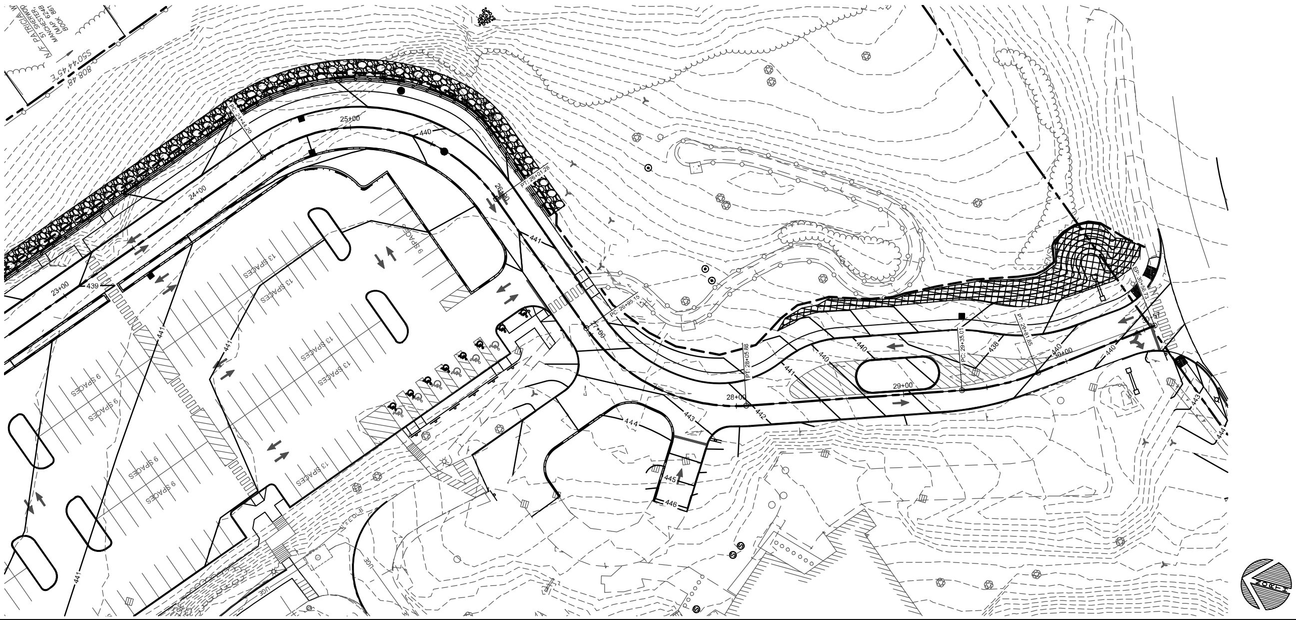
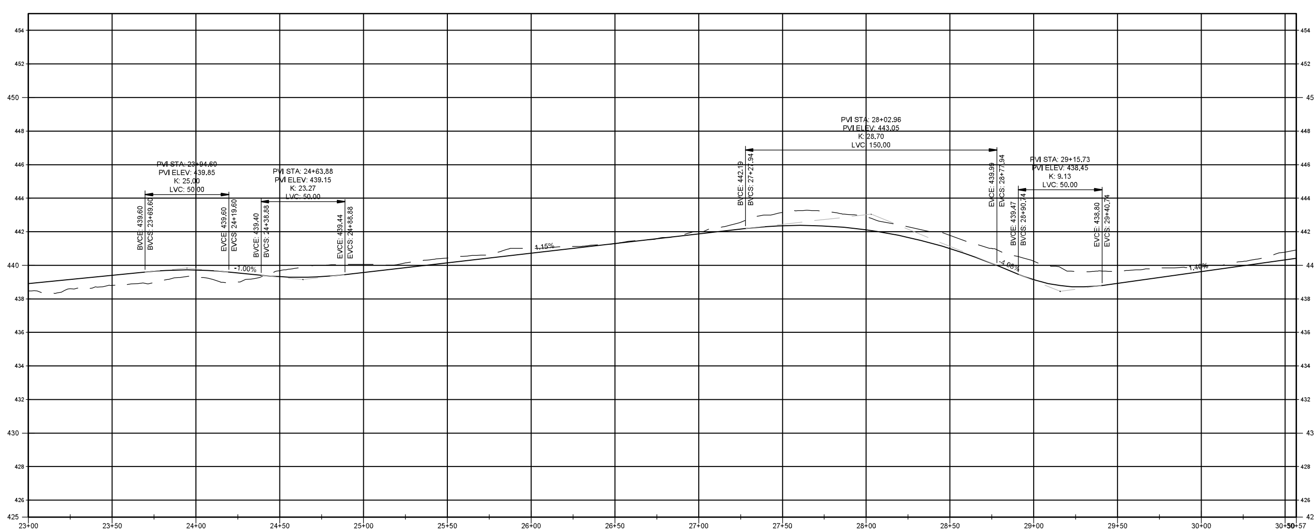


G1 PROFILE VIEW-ROAD STA. 23+00 - 30+57

SCALE: 1"=30'



F1 PROFILE VIEW-ROAD STA. 23+00 - 30+57

SCALE: HORIZONTAL: 1"=30' VERTICAL: 1"=3'

EXISTING	LEGEND	PROPOSED
	CATCH BASIN	
	DRAIN MANHOLE	
	FIRE HYDRANT	
	ELECTRICAL MANHOLE	
	SIGN	
	UTILITY POLE	
	SEWER MANHOLE	
	LIGHT POLE	
	PROPERTY LINE	
	ROAD CENTERLINE	
	EDGE OF PAVEMENT	
	FENCING	
	PAVEMENT	

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

	100% SUBMITTAL - BID DOCUMENTS	06/21/2022
Revisions		Date

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170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2064

SDVOSB

STATE OF MAINE
MICHAEL A. GUETHLE
14284
LICENSED
PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: ROAD PLAN & PROFILE

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date	Checked	Drawn
06/21/2022	MAG	BTH

Project Number: 608-20-101

Building Number

Drawing Number: CP304

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08-6231

BIM 360://012020 Loop Road Utility Infrastructure Upgrades Div 21, 22 & 23 - R19.rvt
6/15/2021 12:32:02 PM

Revisions		
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022
		Date

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COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.262.6264

STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title
SITE GRADING AND EROSION CONTROL PLAN

Approved:

Project Title
LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location
MANCHESTER VAMC, NH

Issue Date	Checked	Drawn
06/21/2022	MAG	BTH

Project Number
608-20-101

Building Number

Drawing Number
CG101

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08 - 8231

GRADING NOTES:

1. SEE NOTES G1 THROUGH G8 ON SHEET C-001 FOR ADDITIONAL GRADING INFORMATION.
2. ALL DISTURBED AREAS NOT RECEIVING PAVEMENT SHALL BE PROVIDED WITH LOAM AND SEED PER THE CONTRACT DOCUMENTS.
3. PROPOSED GRADING SHOWN ON THIS PLAN IS BASED ON AN EXISTING CONDITIONS PLAN BY WOODARD & CURRAN DATED SEPTEMBER 11, 2015.
4. BORINGS BY S.W. COLE
5. 2% MAXIMUM CROSS-SLOPE AT ALL CROSSWALKS AND SIDEWALKS

SHEET INDEX

EXISTING	LEGEND	PROPOSED
	CATCH BASIN	
	DRAIN MANHOLE	
	FIRE HYDRANT	
	ELECTRICAL MANHOLE	
	SIGN	
	UTILITY POLE	
	SEWER MANHOLE	
	LIGHT POLE	
	PROPERTY LINE	
	ROAD CENTERLINE	
	EDGE OF PAVEMENT	
	FENCING	
	CONTOUR	

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

ARCHITECT/ENGINEER OF RECORD

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COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2094

STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: SITE GRADING AND EROSION CONTROL PLAN

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022 | Checked: MAG | Drawn: BTH

Project Number: 608-20-101

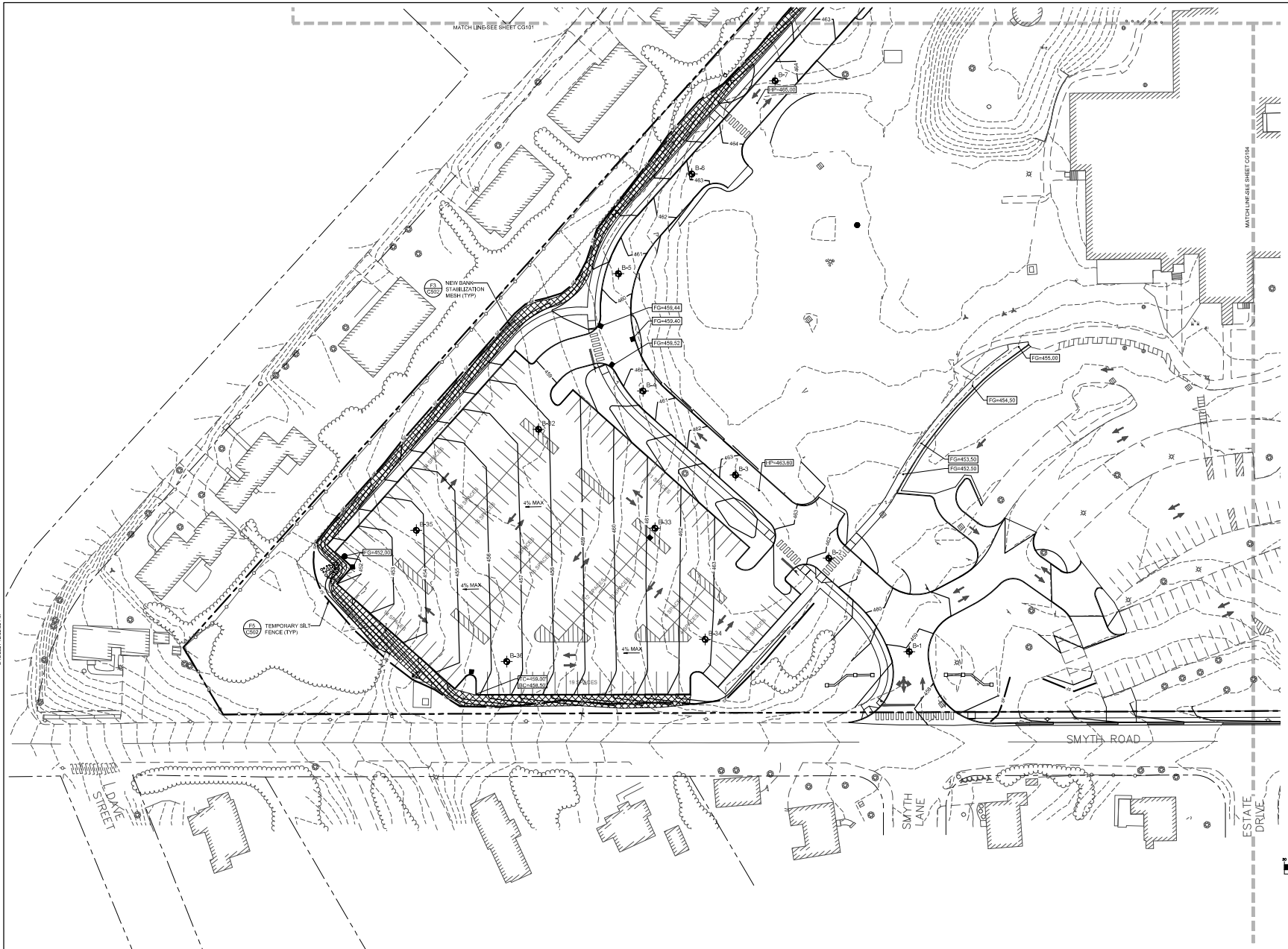
Building Number:

Drawing Number: CG102

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08 - 6231



GRADING NOTES:

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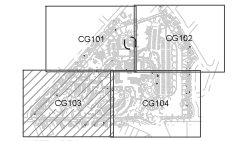

SHEET INDEX

LEGEND	
CATCH BASIN	
DRAIN MANHOLE	
FIRE HYDRANT	
ELECTRICAL MANHOLE	
SIGN	
UTILITY POLE	
SEWER MANHOLE	
LIGHT POLE	
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ROAD CENTERLINE	
EDGE OF PAVEMENT	
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CONTOUR	

GRAPHIC SCALE

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(IN FEET)

1 inch = 30 ft.

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

ARCHITECT/ENGINEER OF RECORD

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www.abovegroupinc.com
COA/CA Lic. No. 31120

170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.262.6264

STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title	SITE GRADING AND EROSION CONTROL PLAN
Approved:	
Project Title	LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES
Location	MANCHESTER VAMC, NH
Issue Date	06/21/2022
Checked	MAG
Drawn	BTH
Project Number	608-20-101
Building Number	
Drawing Number	CG103

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08 - 6231

GRADING NOTES:

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SHEET INDEX

LEGEND

EXISTING / PROPOSED

- CATCH BASIN
- DRAIN MANHOLE
- FIRE HYDRANT
- ELECTRICAL MANHOLE
- SIGN
- UTILITY POLE
- SEWER MANHOLE
- LIGHT POLE
- PROPERTY LINE
- ROAD CENTERLINE
- EDGE OF PAVEMENT
- FENCING
- CONTOUR

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

1 inch = 30 ft.

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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PH: 603.261.2064

STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

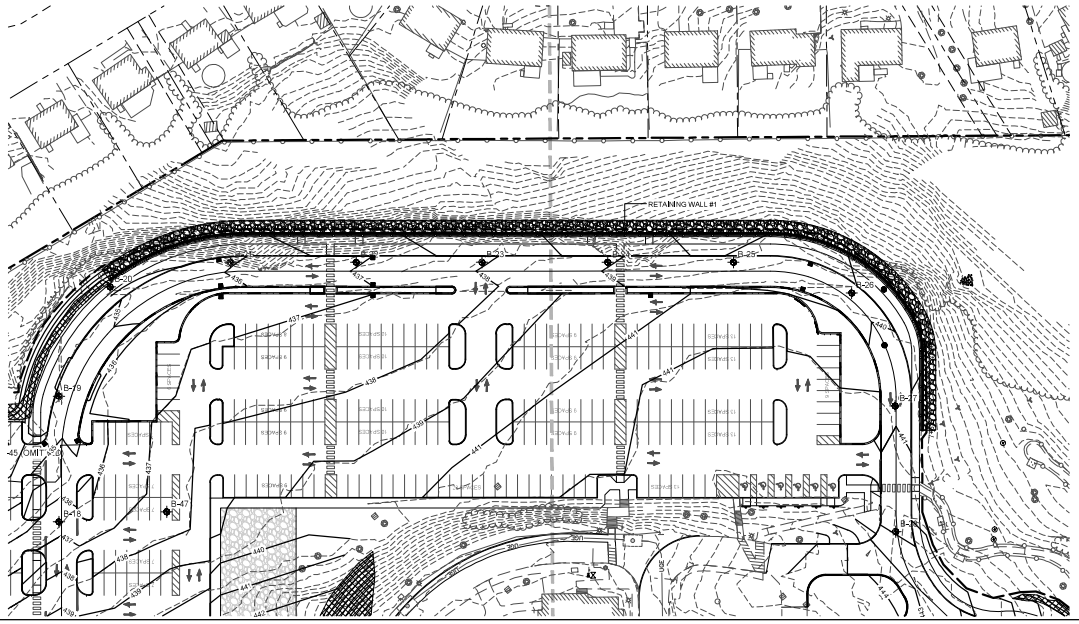
wbrc

Drawing Title	SITE GRADING AND EROSION CONTROL PLAN
Approved:	
Project Title	LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES
Location	MANCHESTER VAMC, NH
Issue Date	06/21/2022
Checked	MAG
Drawn	BTH
Project Number	608-20-101
Building Number	
Drawing Number	CG104

Office of Construction and Facilities Management

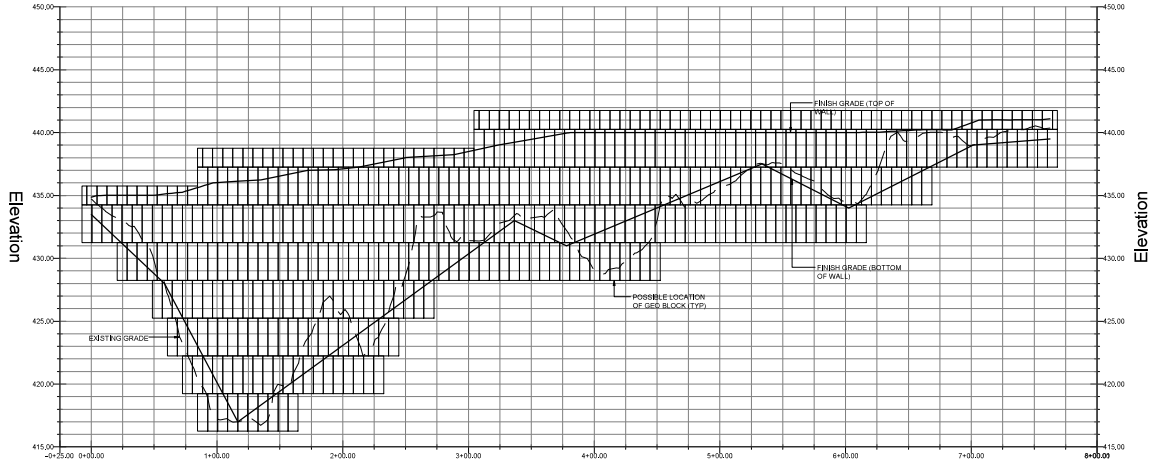
VA U.S. Department of Veterans Affairs

VA FORM 08 - 6231



J1 PLAN VIEW: NEW GEO BLOCK RETAINING WALL #1

SCALE: 1"=40'



A1 PROFILE VIEW: NEW GEO BLOCK RETAINING WALL #1 A10

SCALE: HORIZONTAL: 1"=40' VERTICAL: 1"=8' NO SCALE

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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PH: 603.261.2064

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STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: RETAINING WALL PLAN & PROFILE

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022 | Checked: MAG | Drawn: BTH

Project Number: 608-20-101

Building Number:

Drawing Number: CG301

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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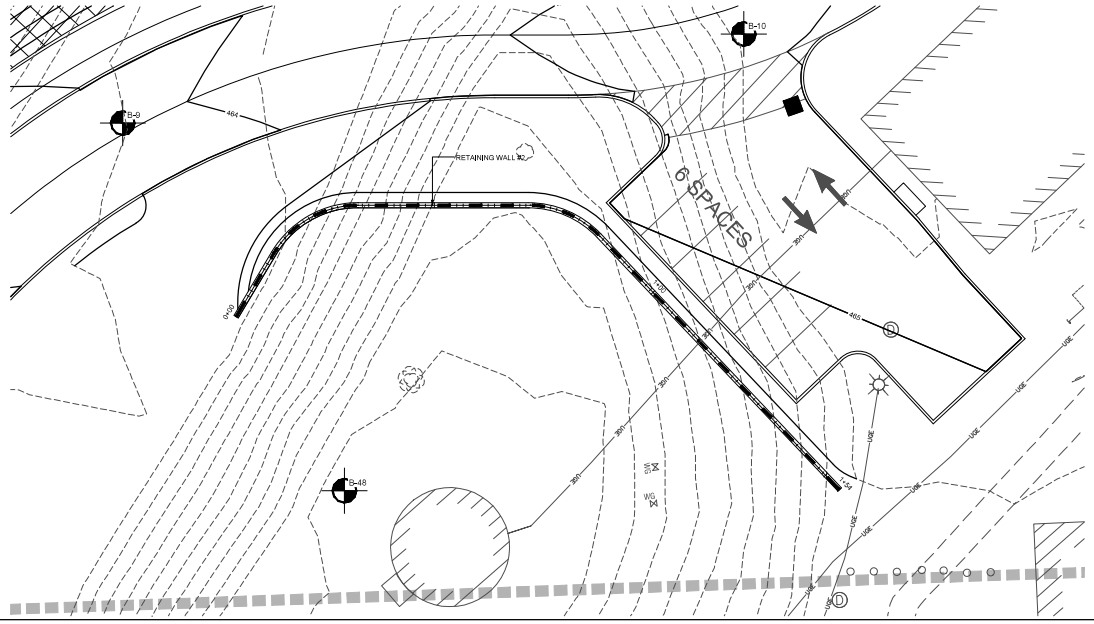
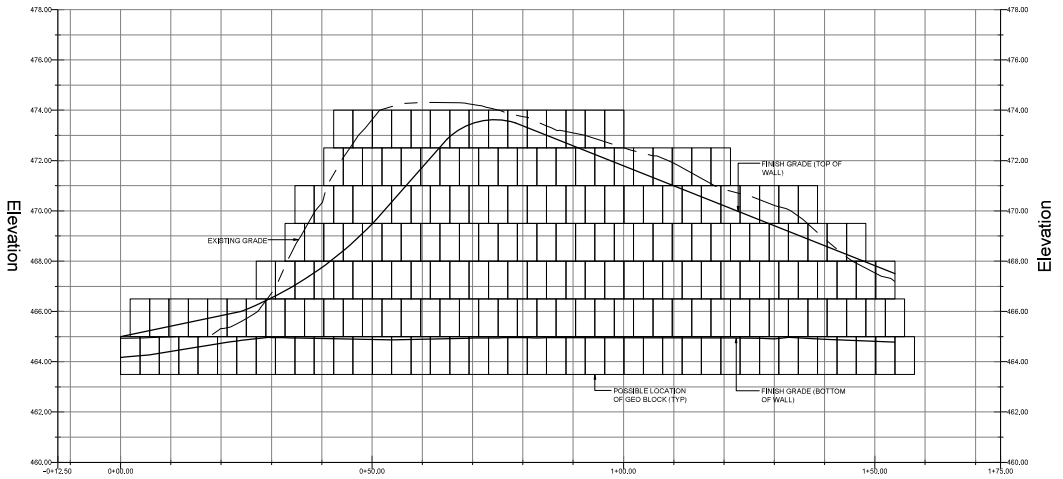


J1 PLAN VIEW: NEW GEO BLOCK RETAINING WALL #2

SCALE: 1"=10'



A1 PROFILE VIEW: NEW GEO BLOCK RETAINING WALL #2

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

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2064

STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: RETAINING WALL PLAN & PROFILE

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022 | Checked: MAG | Drawn: BTH

Project Number: 608-20-101

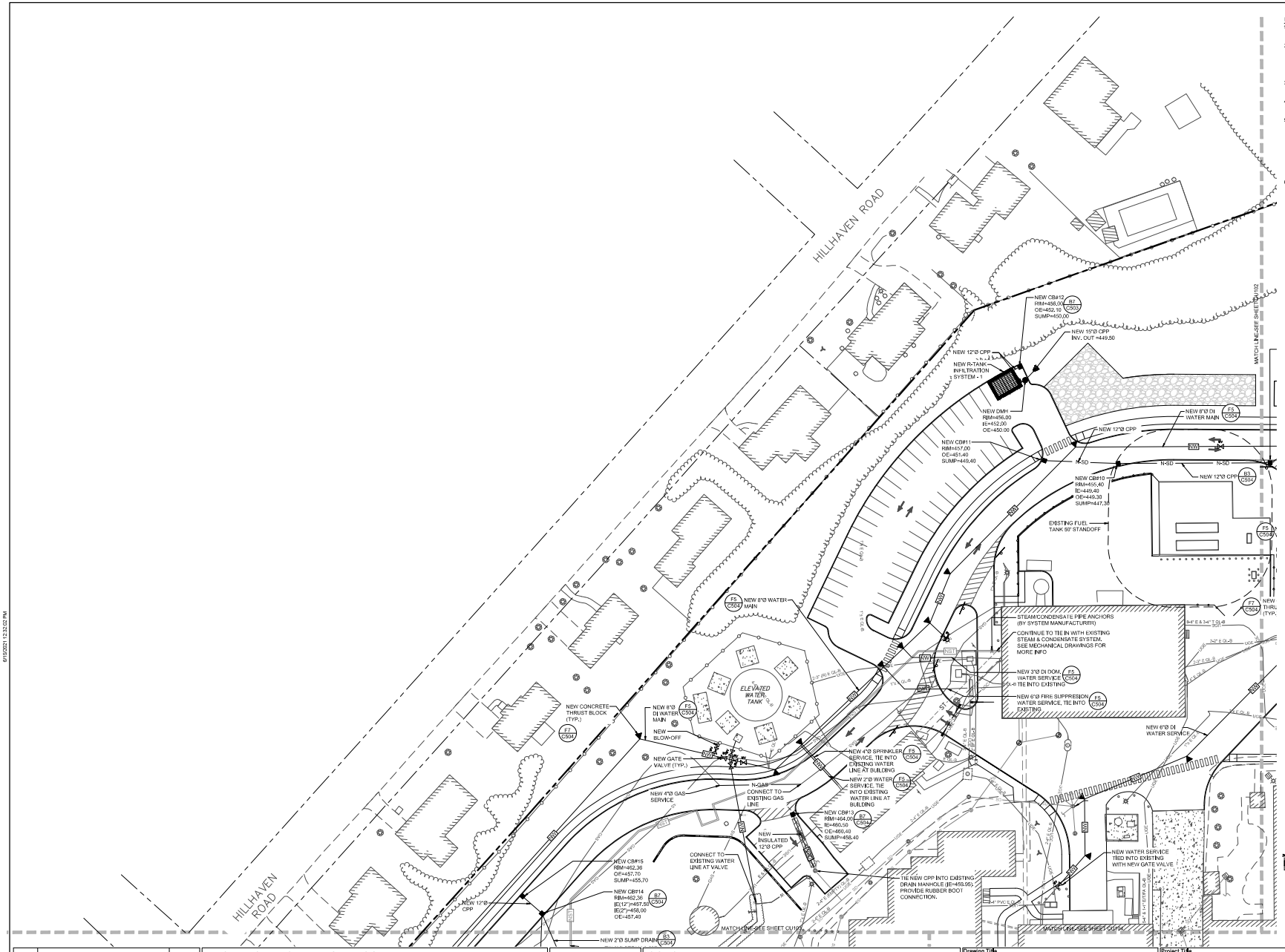
Building Number:

Drawing Number: CG302

Office of Construction and Facilities Management

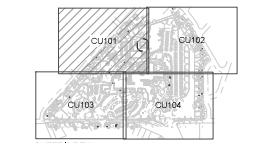
VA U.S. Department of Veterans Affairs

VA FORM 08 - 6231



UTILITY NOTES:

1. SEE NOTES E1 THROUGH U8 ON SHEET C-001 FOR ADDITIONAL UTILITY INFORMATION.
2. ALL TRENCH EXCAVATION AND BACKFILL FOR ELECTRICAL SYSTEMS SHALL BE BY THE SITE CONTRACTOR. CONDUIT, PULL BOXES, RISER POLES, LIGHT BASES, ETC. SHALL BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. LIGHT BASES TO BE SET BY THE SITE CONTRACTOR.
3. SITE CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY PROPOSED WORK.
4. PROVIDE 4" MIN. RIGID INSULATION BETWEEN WATER LINE AND SANITARY SEWER LINE, EXTEND 8' IN ALL DIRECTIONS WHERE THEY CROSS.
5. DOMESTIC WATER DISTRIBUTION AND FIRE SUPPRESSION PIPING AND APPURTENANCES SHALL BE SUPPLIED AND INSTALLED BY SITE CONTRACTOR. ALL EXCAVATION AND BACKFILL REQUIRED FOR ANY PART OF THE WATER SUPPLY SYSTEM AND FIRE SUPPRESSION PIPING SHALL BE BY THE SITE CONTRACTOR. COORDINATE INSTALLATION OF PIPING WITH THE PLUMBING AND MECHANICAL CONTRACTORS. PIPING FOR NEW BUILDING SHALL BE SUPPLIED AND INSTALLED BY THE PLUMBING CONTRACTOR FROM THE BUILDING TO A COORDINATED POINT LOCATED 10' FROM THE BUILDING PENETRATION.
6. ALL NEW STRUCTURES (CATCH BASINS, DRAINAGE MANHOLES, OR SEWER MANHOLES) SHALL BE 4'-0" DIAMETER UNLESS OTHERWISE NOTED.



SHEET INDEX

LEGEND

EXISTING / PROPOSED

THRUST BLOCK
CATCH BASIN
DRAIN MANHOLE
FIRE HYDRANT
SEWER MANHOLE
WATER VALVE
FENCE
PROPERTY BOUNDARY
ABUTTER PROPERTY
GAS LINE
SANITARY SEWER
STORM DRAIN
WATERLINE

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2004

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STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: SITE UTILITY PLAN

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022

Checked: MAG

Drawn: BTH

Project Number: 608-20-101

Building Number:

Drawing Number: CU101

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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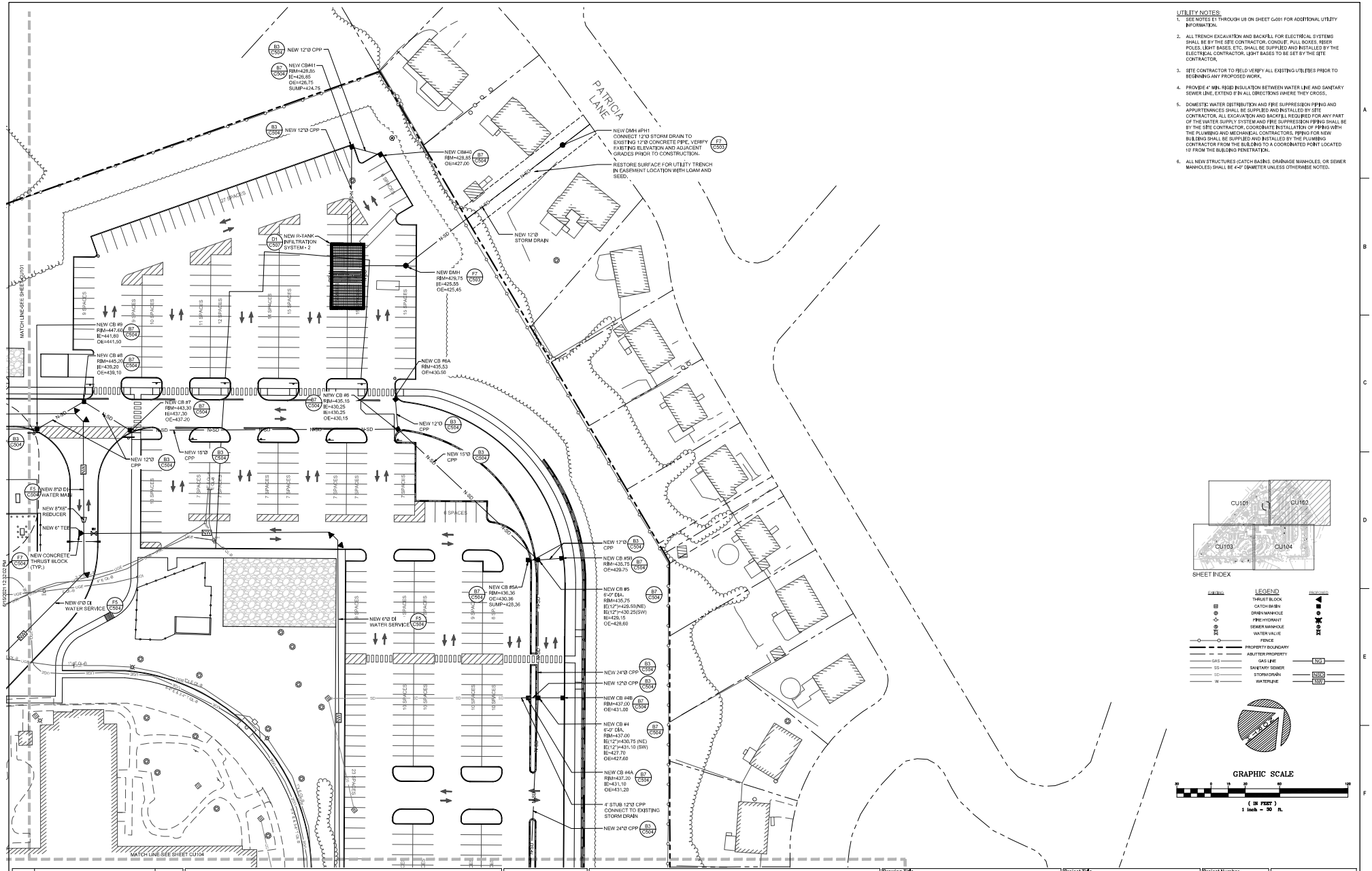

UTILITY NOTES:

1. SEE NOTES E1 THROUGH U5 ON SHEET C-001 FOR ADDITIONAL UTILITY INFORMATION.
2. ALL TRENCH EXCAVATION AND BACKFILL FOR ELECTRICAL SYSTEMS SHALL BE BY THE SITE CONTRACTOR. CONDUIT, PULL BOXES, RISER POLES, LIGHT BASES, ETC. SHALL BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. LIGHT BASES TO BE SET BY THE SITE CONTRACTOR.
3. SITE CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY PROPOSED WORK.
4. PROVIDE 4" MIN. RIGID INSULATION BETWEEN WATER LINE AND SANITARY SEWER LINE, EXTEND 8' IN ALL DIRECTIONS WHERE THEY CROSS.
5. DOMESTIC WATER DISTRIBUTION AND FIRE SUPPRESSION PIPING AND APPURTENANCES SHALL BE SUPPLIED AND INSTALLED BY SITE CONTRACTOR. ALL EXCAVATION AND BACKFILL REQUIRED FOR ANY PART OF THE WATER SUPPLY SYSTEM AND FIRE SUPPRESSION PIPING SHALL BE BY THE SITE CONTRACTOR. COORDINATE INSTALLATION OF PIPING WITH THE PLUMBING AND MECHANICAL CONTRACTORS. PIPING FOR NEW BUILDING SHALL BE SUPPLIED AND INSTALLED BY THE PLUMBING CONTRACTOR FROM THE BUILDING TO A COORDINATED POINT LOCATED 10' FROM THE BUILDING PENETRATION.
6. ALL NEW STRUCTURES (CATCH BASINS, DRAINAGE MANHOLES, OR SEWER MANHOLES) SHALL BE 4'-0" DIAMETER UNLESS OTHERWISE NOTED.

Revisions		Date
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170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.262.6264

STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: SITE UTILITY PLAN

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022 | Checked: MAG | Drawn: BTH

Project Number: 608-20-101

Building Number:

Drawing Number: CU102

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VA U.S. Department of Veterans Affairs

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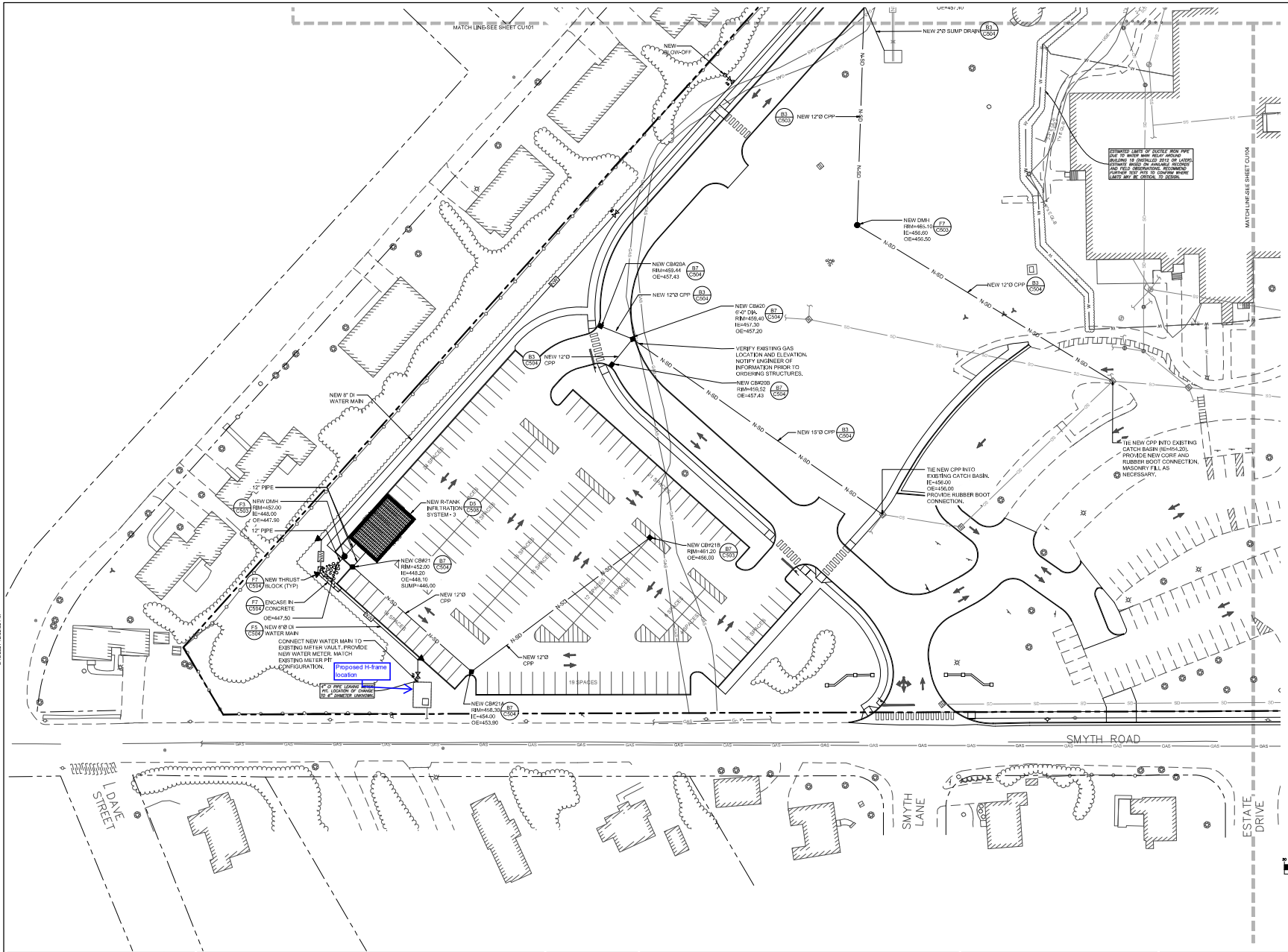

UTILITY NOTES:

1. SEE NOTES E1 THROUGH U8 ON SHEET C-001 FOR ADDITIONAL UTILITY INFORMATION.
2. ALL TRENCH EXCAVATION AND BACKFILL FOR ELECTRICAL SYSTEMS SHALL BE BY THE SITE CONTRACTOR, CONDUIT, PULL BOXES, RISER POLES, LIGHT BASES, ETC. SHALL BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. LIGHT BASES TO BE SET BY THE SITE CONTRACTOR.
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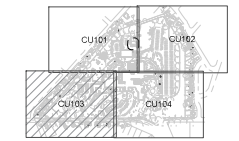

SHEET INDEX

LEGEND

THRUST BLOCK	
CATCH BASIN	
DRAIN MANHOLE	
FIRE HYDRANT	
SEWER MANHOLE	
WATER VALVE	
FENCE	
PROPERTY BOUNDARY	
ABUTTER PROPERTY	
GAS LINE	NGS
SANITARY SEWER	SS
STORM DRAIN	NSD
WATERLINE	NW

NORTH

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Revisions		Date
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PH: 603.261.2004

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STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: SITE UTILITY PLAN

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022

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Drawn: BTH

Project Number: 608-20-101

Building Number:

Drawing Number: CU103

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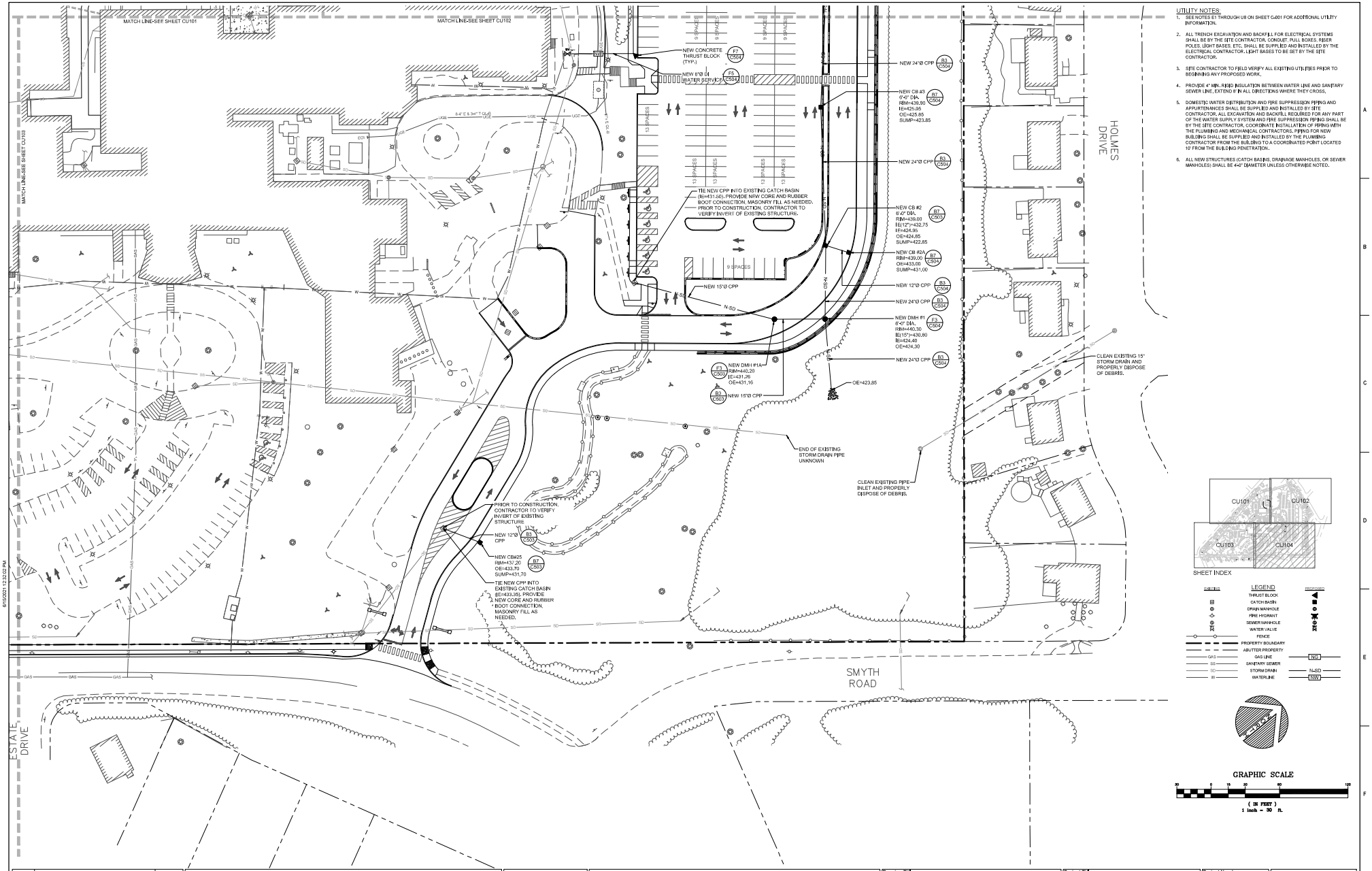

UTILITY NOTES:

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3. SITE CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY PROPOSED WORK.
4. PROVIDE 4" MIN. R30 INSULATION BETWEEN WATER LINE AND SANITARY SEWER LINE, EXTEND 8' IN ALL DIRECTIONS WHERE THEY CROSS.
5. DOMESTIC WATER DISTRIBUTION AND FIRE SUPPRESSION PIPING AND APPURTENANCES SHALL BE SUPPLIED AND INSTALLED BY SITE CONTRACTOR. ALL EXCAVATION AND BACKFILL REQUIRED FOR ANY PART OF THE WATER SUPPLY SYSTEM AND FIRE SUPPRESSION PIPING SHALL BE BY THE SITE CONTRACTOR. COORDINATE INSTALLATION OF PIPING WITH THE PLUMBING AND MECHANICAL CONTRACTORS. PIPING FOR NEW BUILDING SHALL BE SUPPLIED AND INSTALLED BY THE PLUMBING CONTRACTOR FROM THE BUILDING TO A COORDINATED POINT LOCATED 10' FROM THE BUILDING PENETRATION.
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SHEET INDEX

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Revisions		Date
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PH: 603.261.2064

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STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title	SITE UTILITY PLAN
Approved:	
Project Title	LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES
Location	MANCHESTER VAMC, NH
Issue Date	06/21/2022
Checked	MAG
Drawn	BTH
Project Number	608-20-101
Building Number	
Drawing Number	CU104

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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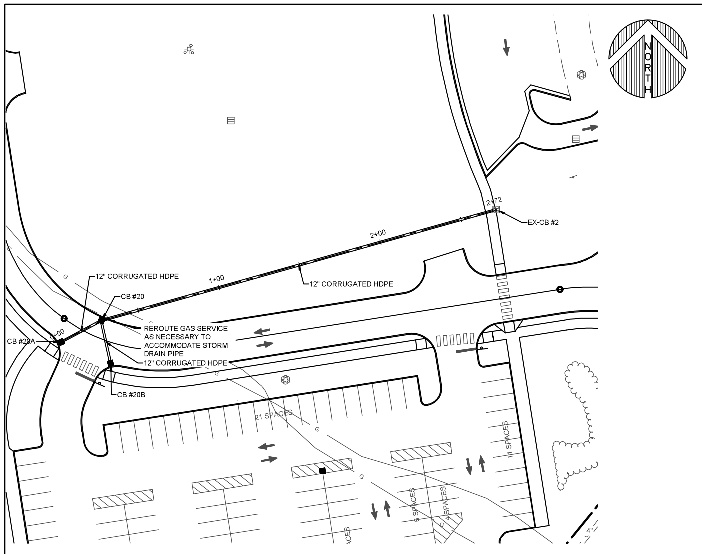
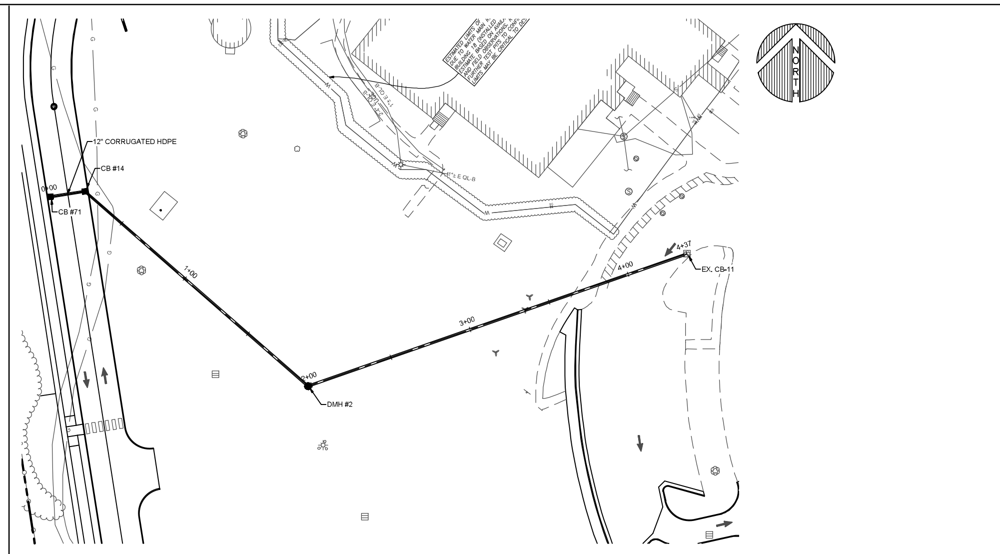


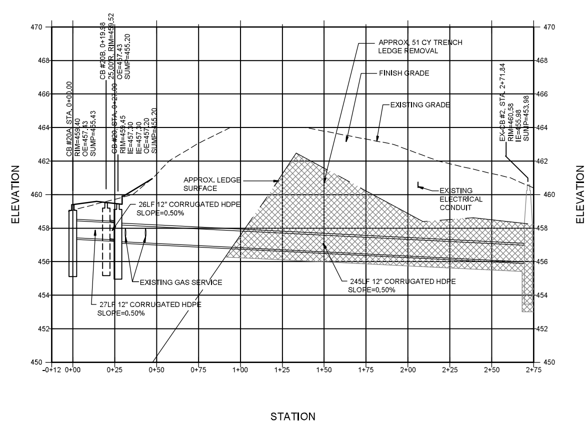
C1 PLAN VIEW-NEW STORM DRAIN #1

SCALE: 1"=30'



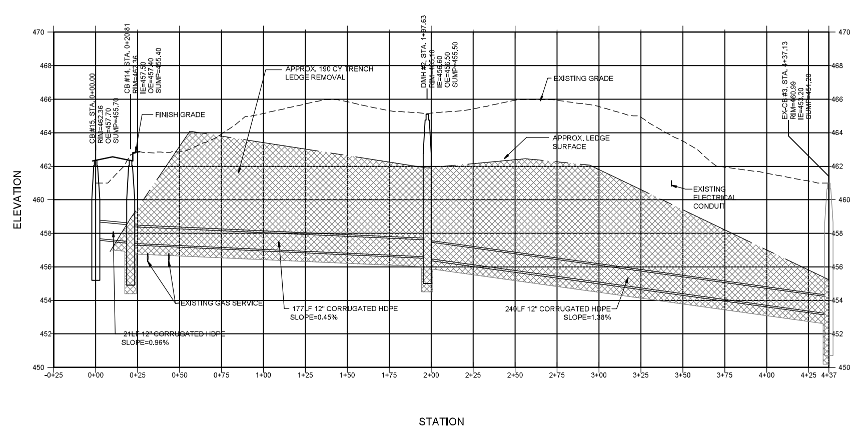
C3 PLAN VIEW-NEW STORM DRAIN #2

SCALE: 1"=30'



F1 PROFILE VIEW-NEW STORM DRAIN #1

SCALE: HORIZONTAL: 1"=30' VERTICAL: 1"=3'



F3 PROFILE VIEW-NEW STORM DRAIN #2

SCALE: HORIZONTAL: 1"=30' VERTICAL: 1"=3'

	100% SUBMITTAL - BID DOCUMENTS	06/21/2022
Revisions		Date

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Portsmouth, NH 03801
PH: 603.261.2064

STATE OF MAINE
MICHAEL A. GUETHLE
14284
LICENSED
PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title
SITE STORMWATER UTILITY PLAN & PROFILE

Approved:

Project Title
LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location
MANCHESTER VAMC, NH

Issue Date	Checked	Drawn
06/21/2022	MAG	BTH

Project Number
608-20-101

Building Number

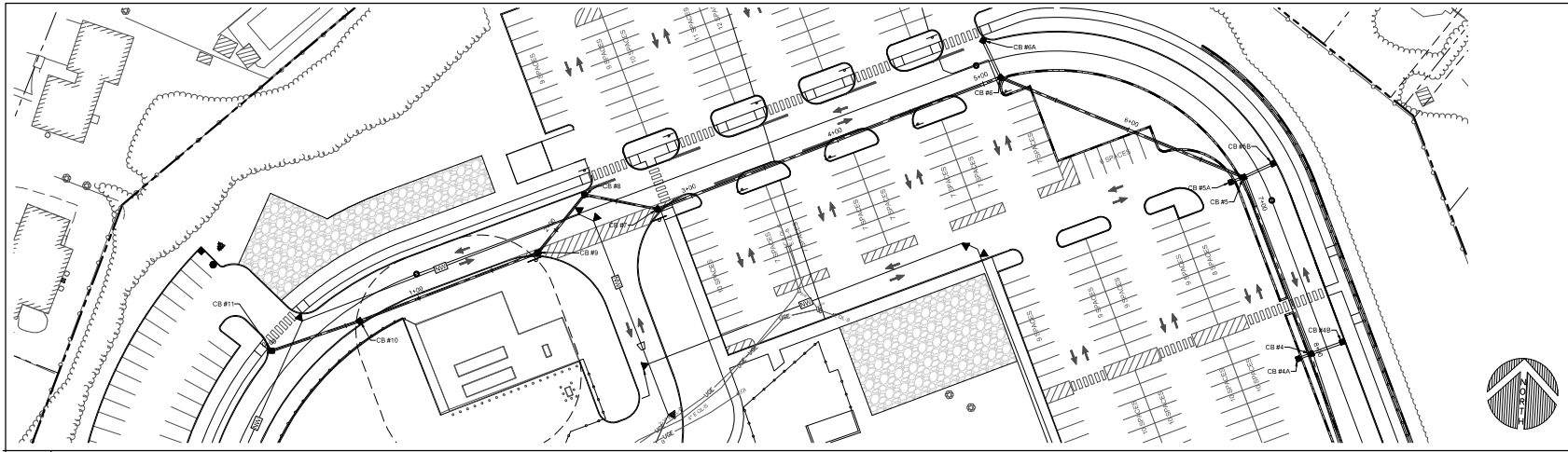
Drawing Number
CU301

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08-6231

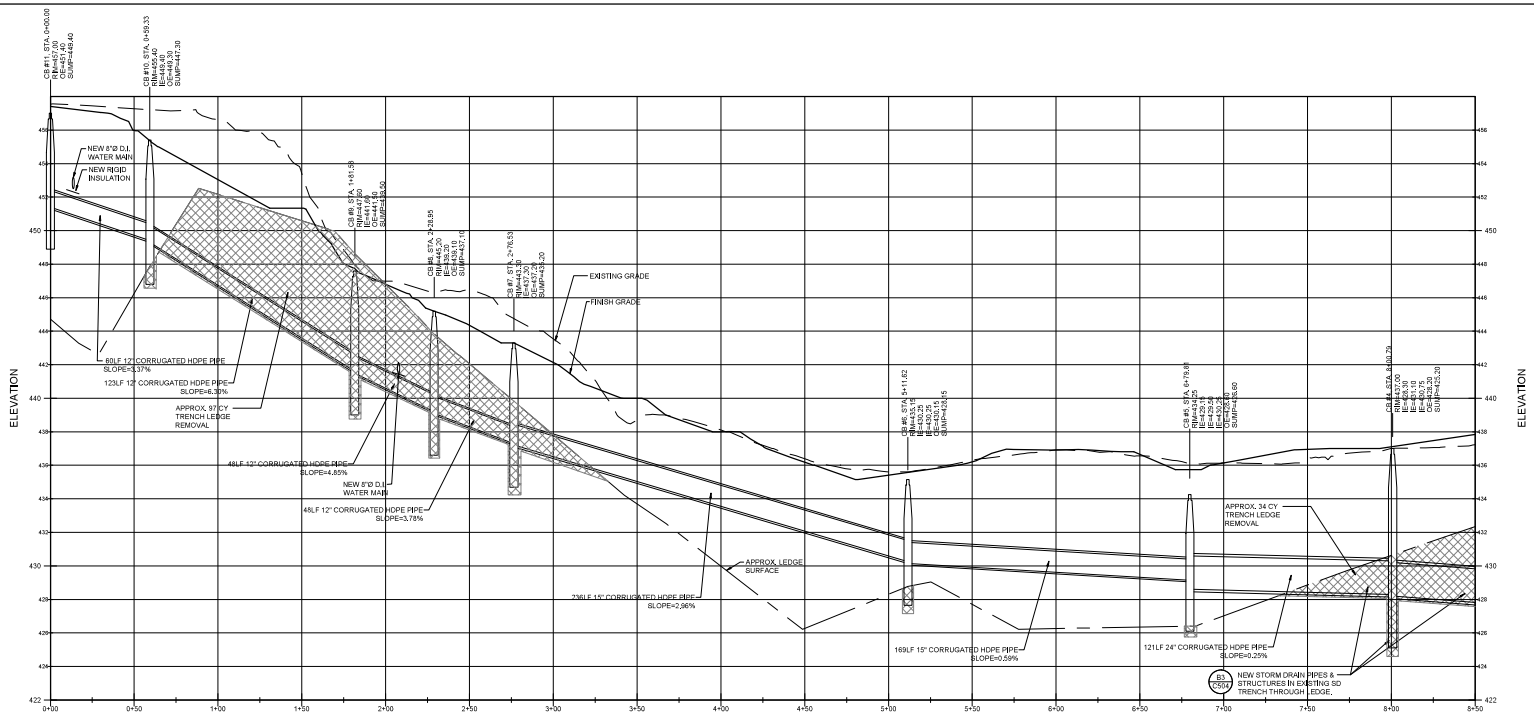
6/15/2021 12:32:02 PM



B1 PLAN VIEW-NEW STORM DRAIN #3

SCALE: 1"=30'

NOTE:
FINISH GRADE SHOWN IN PROFILE FOLLOWS STORM DRAIN AND IS APPROXIMATE. FINISH GRADE OF ROADWAY SHALL BE AS DETERMINED ON OTHER PLANS.



F1 PROFILE VIEW-NEW STORM DRAIN #3

SCALE: HORIZONTAL: 1"=30' VERTICAL: 1"=3'

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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www.abovegroupinc.com
COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.262.6264

STATE OF MAINE
MICHAEL A GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title
SITE STORMWATER UTILITY PLAN & PROFILE

Approved:

Project Title
LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location
MANCHESTER VAMC, NH

Issue Date: 06/21/2022 | Checked: MAG | Drawn: BTH

Project Number: 608-20-101

Building Number:

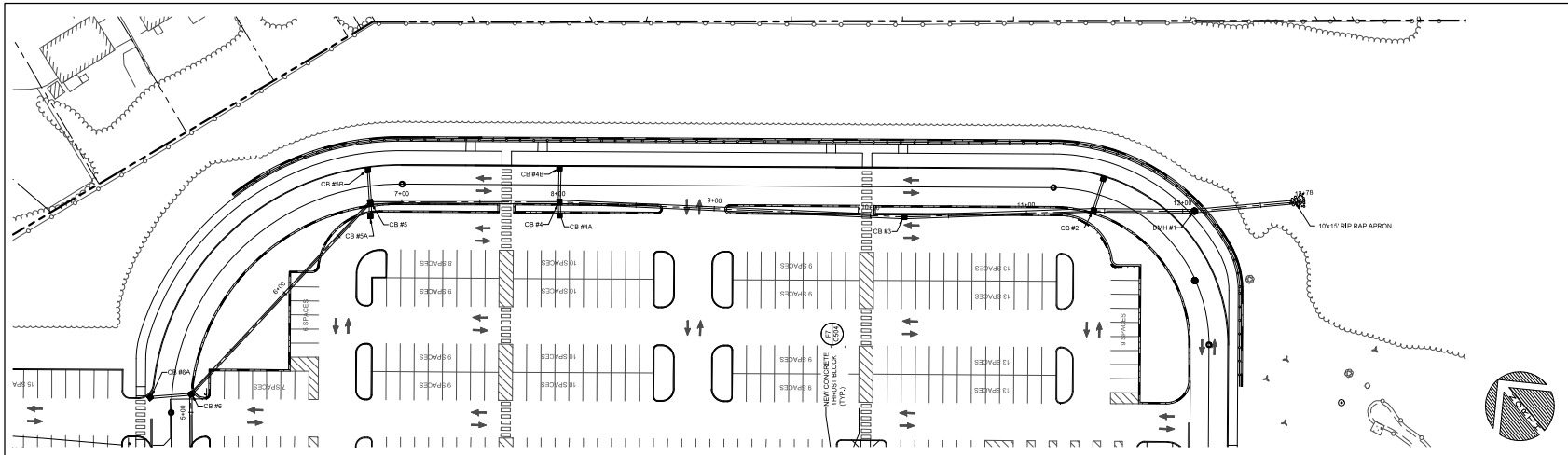
Drawing Number: CU302

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08 - 6231

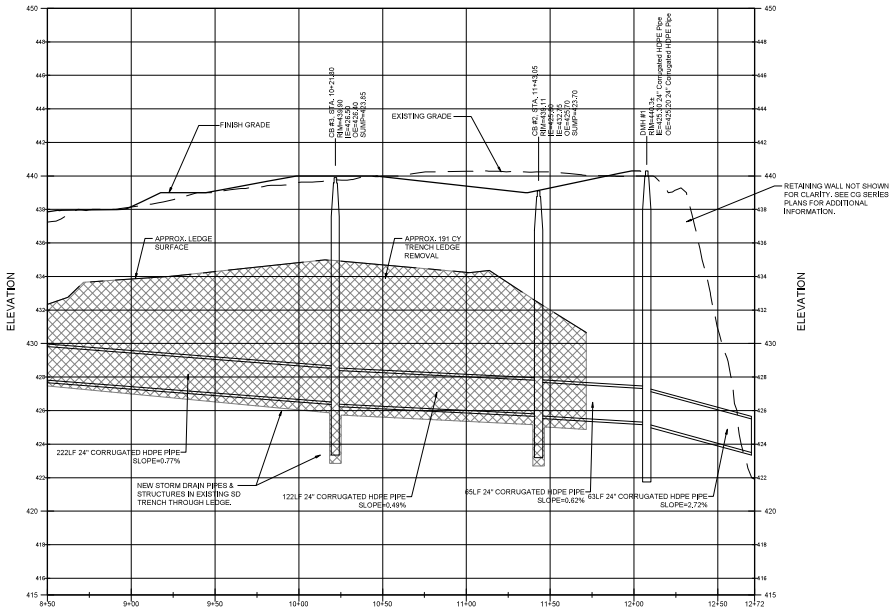
BIM 360:D:\2020\20053 Loop Road Utility Infrastructure Upgrades\Civil\20 ZZ & 23 - Revit\20053_Loop Road Utility Upgrades_CU-21 ZZ & 23-Revit_central_BTH.rvt 6/1/2021 12:33:02 PM



NOTE:
FINISH GRADE SHOWN IN PROFILE FOLLOWS STORM DRAIN AND IS APPROXIMATE. FINISH GRADE OF ROADWAY SHALL BE AS DETERMINED ON OTHER PLANS.

C1 PLAN VIEW-NEW STORM DRAIN #3 (CONTINUED)

SCALE: 1"=30'



F1 PROFILE VIEW-NEW STORM DRAIN #3 (CONTINUED)

SCALE: HORIZONTAL: 1"=30' VERTICAL: 1"=3'

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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www.abovegroupinc.com
COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2064

STATE OF MAINE
MICHAEL A. GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: SITE STORMWATER UTILITY PLAN & PROFILE

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date	Checked	Drawn
06/21/2022	MAG	BTH

Project Number: 608-20-101

Building Number:

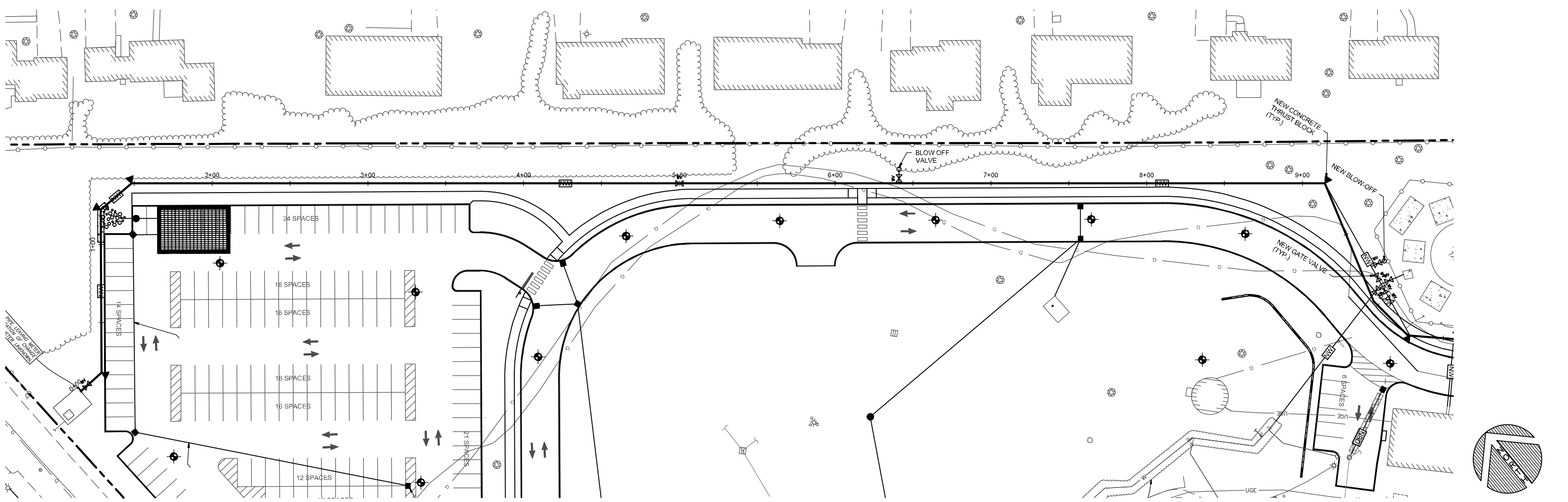
Drawing Number: CU303

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

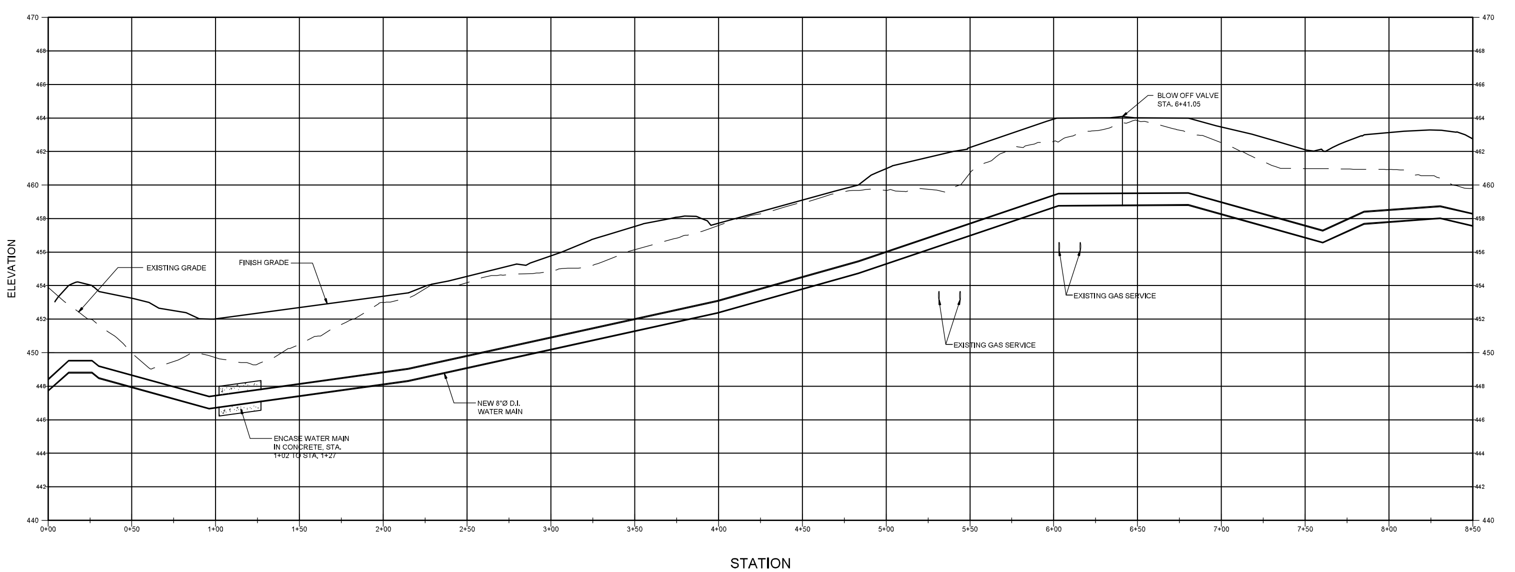
VA FORM 08 - 6231

NOTE:
FINISH GRADE SHOWN IN PROFILE FOLLOWS WATER LINE AND IS APPROXIMATE. FINISH GRADE OF ROADWAY SHALL BE AS DETERMINED ON OTHER PLANS.



C1 PLAN VIEW-NEW WATER LINE

SCALE: 1"=30'



F1 PROFILE VIEW-NEW WATER LINE

SCALE: HORIZONTAL: 1"=30' VERTICAL: 1"=3'

100% SUBMITTAL - BID DOCUMENTS	06/21/2022
Revisions	Date

ARCHITECT/ENGINEER OF RECORD

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Portsmouth, NH 03801
PH: 603.261.2064

STATE OF MAINE — MICHAEL A. GUETHLE 14284 — LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: SITE WATER UTILITY PLAN & PROFILE

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022 | Checked: MAG | Drawn: BTH

Project Number: 608-20-101

Building Number:

Drawing Number: CU304

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

VA FORM 08-6231

BIM 360://012002B Loop Road Utility Infrastructure Upgrades Div 21, 22, & 23 - R19/012002B Loop Road Utility Infrastructure Upgrades Div 21, 22, & 23 - R19.rvt
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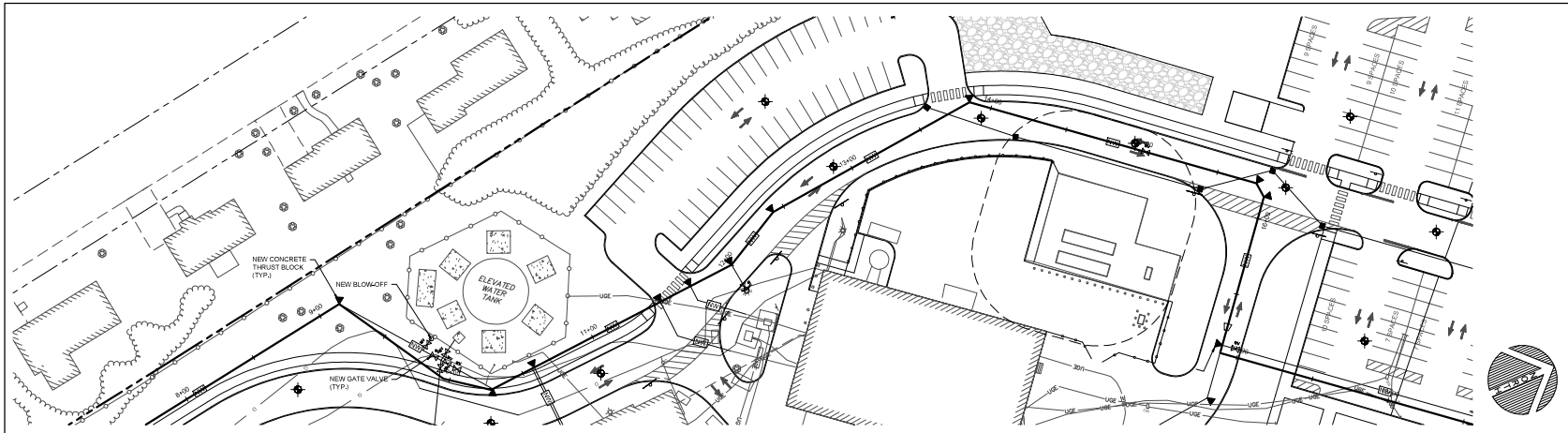
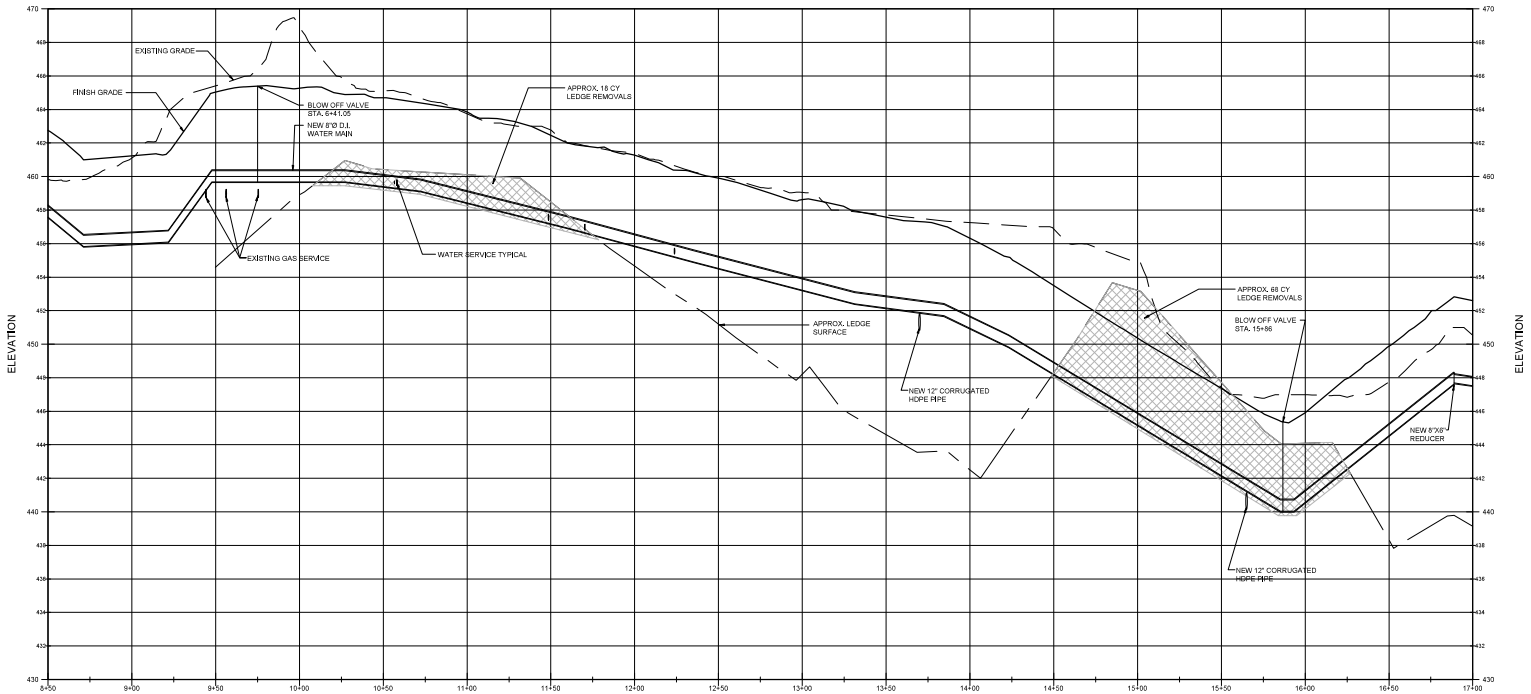


B1 PLAN VIEW-NEW WATER LINE (CONTINUED)

SCALE: 1"=30'

NOTE:
FINISH GRADE SHOWN IN PROFILE FOLLOWS WATER LINE AND IS APPROXIMATE. FINISH GRADE OF ROADWAY SHALL BE AS DETERMINED ON OTHER PLANS.



F1 PROFILE VIEW-NEW WATER LINE (CONTINUED)

SCALE: HORIZONTAL: 1"=30' VERTICAL: 1"=3'

Revisions		Date
	100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2064

STATE OF MAINE
MICHAEL A. GUETHLE
14284
LICENSED
PROFESSIONAL ENGINEER

CONSULTANT

wbrc

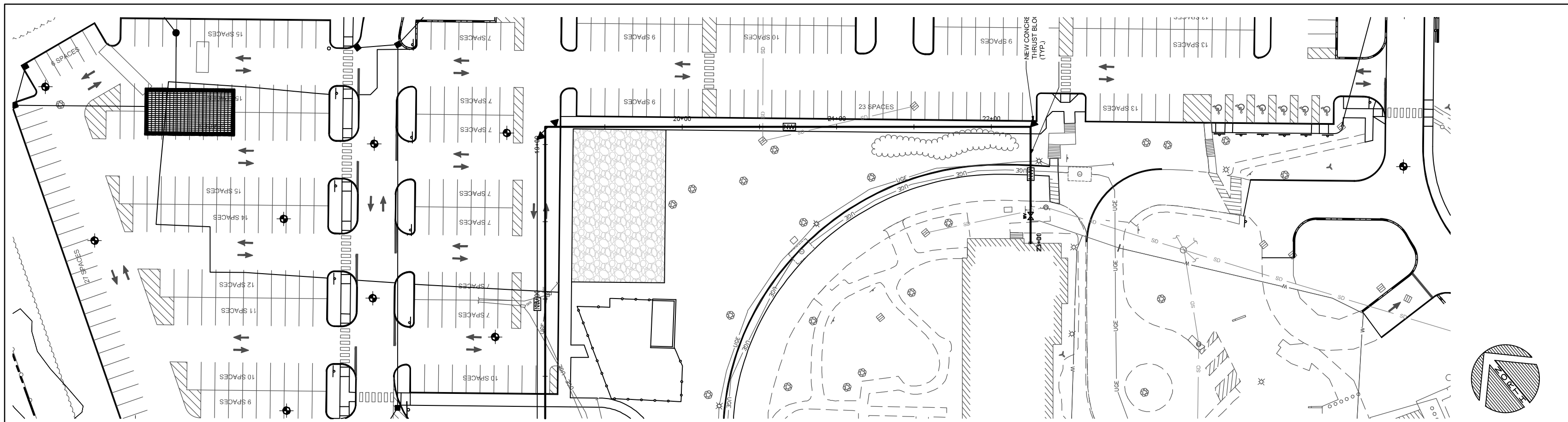
Drawing Title	SITE WATER UTILITY PLAN & PROFILE
Approved:	
Project Title	LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES
Location	MANCHESTER VAMC, NH
Issue Date	06/21/2022
Checked	MAG
Drawn	BTH
Project Number	608-20-101
Building Number	
Drawing Number	CU305

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

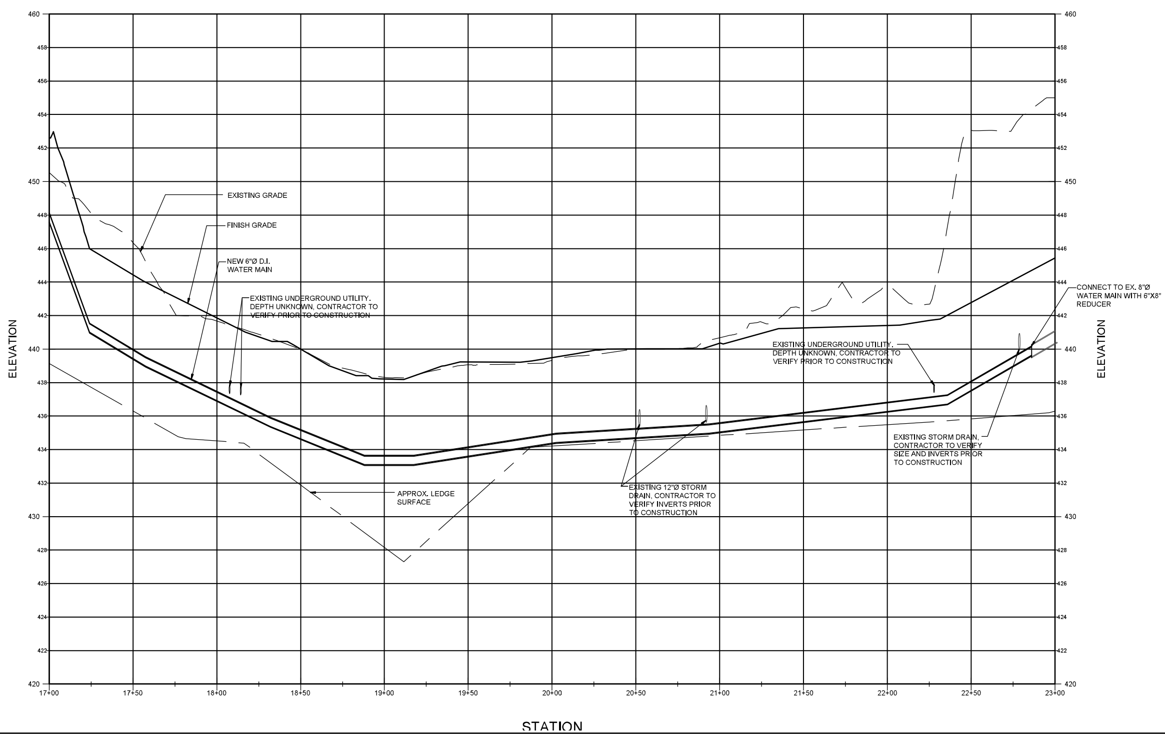
VA FORM 08 - 6231

NOTE:
FINISH GRADE SHOWN IN PROFILE FOLLOWS WATER LINE AND IS APPROXIMATE. FINISH GRADE OF ROADWAY SHALL BE AS DETERMINED ON OTHER PLANS.



B1 PLAN VIEW-NEW WATER LINE (CONTINUED)

SCALE: 1"=30'



F1 PROFILE VIEW-NEW WATER LINE (CONTINUED)

SCALE: HORIZONTAL: 1"=30' VERTICAL: 1"=3'

Revisions	Date
100% SUBMITTAL - BID DOCUMENTS	06/21/2022

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COA/CA Lic. No. 31120
170 Commerce Way, Suite 200
Portsmouth, NH 03801
PH: 603.261.2064

STATE OF MAINE
MICHAEL A. GUETHLE
14284
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

wbrc

Drawing Title: SITE WATER UTILITY PLAN & PROFILE

Approved:

Project Title: LOOP ROAD AND UTILITY INFRASTRUCTURE UPGRADES

Location: MANCHESTER VAMC, NH

Issue Date: 06/21/2022
Checked: MAG
Drawn: BTH

Project Number: 608-20-101

Building Number:

Drawing Number: CU306

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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