

**NEEDHAM
ZONING BOARD OF APPEALS
AGENDA**

**Thursday, April 27, 2023 - 7:30PM
Zoom Meeting ID Number: 876-1480-7841**

**To view and participate in this virtual meeting on your computer, at the above date and time, go to www.zoom.us, click “Join a Meeting” and enter the Meeting ID: 869-6475-7241
Or join the meeting at link: <https://us02web.zoom.us/j/87614087841>**

AGENDA

Minutes	Review and approve Minutes from March 16, 2023 meeting.
Case #1 – 7:30PM	1000 Olin Lane – ENGIE Distributed Renewables Development, LLC has applied for an Amendment to a Special Permit under Sections 5.1.3 and any other applicable Sections of the By-Law to waive parking plan and parking design requirements to permit the installation of a 480kW AC solar canopy array over the existing Main Parking Lot A at Olin College. The property is located at 1000 Olin Lane, Needham, MA in the Institutional District.
Discussion	2023 ZBA Meeting Schedule

Next ZBA Meeting – May 18, 2023

**NEEDHAM
ZONING BOARD OF APPEALS
MINUTES
THURSDAY, March 16, 2023– 7:30 PM
Zoom Meeting ID Number: 876-1480-7841**

Pursuant to notice published at least 48 hours prior to this date, a meeting of the Needham Board of Appeals was held remotely on Zoom on Thursday, March 16, 2023 at 7:30 p.m. Jon D. Schneider, Chair, presided and the following members were present: Jonathan D. Tamkin, Howard S. Goldman, and Nik Ligris. Absent: Peter Freidenberg, Associate Member. Staff present: Daphne M. Collins, Zoning Specialist. Mr. Schneider opened the meeting at 7:30 p.m.

Minutes - Mr. Tamkin motioned to approve the minutes of February 16, 2023. Mr. Goldman seconded the motion. The Board unanimously approved the minutes.

Case #1	246 Forest Street	Approved
Case #2	238 Highland Avenue	Approved
Case #3	73 Highland Avenue	Approved
Case #4	1584 Great Plain Avenue	Withdrawn without prejudice
Case #4	470 Dedham Avenue	Approved

A summary of the discussions on each subject, a list of the documents and other exhibits used at the meeting, the decisions made, and the actions taken at each meeting, including a record of all votes, are set forth in a detailed decision signed by the members voting on the subject and filed with the Town Clerk. The hearings can be viewed at <http://www.needhamchannel.org/watch-programs/> or at <https://www.youtube.com/user/TownofNeedhamMA/playlists>

The meeting adjourned at 9:32 p.m.



ZBA Application For Hearing

Applicants must consult with the Building Inspector prior to filing this Application. Failure to do so will delay the scheduling of the hearing.

Applicant Information

Applicant Name	ENGIE Distributed Renewables Development, LLC			Date:	04/03/2023
Applicant Address	225 W. Hubbard St. Suite 200 Chicago, IL 60654				
Phone	937-901-5115	email	kristen.fornes@ENGIE.com		
Applicant is ☐ Owner; ☒ Tenant; ☐ Purchaser; ☐ Other _____					
If not the owner, a letter from the owner certifying authorization to apply must be included					
Representative Name	Kristen Tarr				
Address	225 W. Hubbard St. Suite 200 Chicago, IL 60654				
Phone	573-239-7508	email	kristen.tarr@ENGIE.com		
Representative is ☐ Attorney; ☐ Contractor; ☐ Architect; ☒ Other <u>Developer</u>					
Contact ☒ Me ☐ Representative in connection with this application.					

Subject Property Information

Property Address	1000 Olin Way, Needham, MA 02492		
Map/Parcel Number	199/309.0-0020-0000.0	Zone of Property	Institutional
Is property within 100 feet of wetlands, 200 feet of stream or in flood Plain? ☒ Yes ☐ No			
Is property ☐ Residential or ☒ Commercial			
If residential renovation, will renovation constitute "new construction"? ☐ Yes ☐ No			
If commercial, does the number of parking spaces meet the By-Law requirement? ☒ Yes ☐ No			
Do the spaces meet design requirements? ☒ Yes ☐ No			
Application Type (<i>select one</i>): ☐ Special Permit ☐ Variance ☐ Comprehensive Permit ☒ Amendment ☐ Appeal Building Inspector Decision			



ZBA Application For Hearing

Existing Conditions:

Existing paved parking lot (Main Lot A) for use by students, faculty, and staff at the Franklin W. Olin College of Engineering:

Statement of Relief Sought:

Developer proposes constructing a 480kW AC solar carport canopy over existing Main Lot A.

Applicable Section(s) of the Zoning By-Law:

Section 5.1.3 of the Zoning By-Law (Parking Plan and Design Requirements) and any other applicable sections of the By-Law.

If application under Zoning Section 1.4 above, list non-conformities:

	Existing Conditions	Proposed Conditions
Use		
# Dwelling Units		
Lot Area (square feet)		
Front Setback (feet)		
Rear Setback (feet)		
Left Setback (feet)		
Right Setback (feet)		
Frontage (feet)		
Lot Coverage (%)		
FAR (Floor area divided by the lot area)		

Numbers must match those on the certified plot plan and supporting materials



ZBA Application For Hearing

Date Structure Constructed including additions: August 2023 (Expected Mechanical Completion Date)	Date Lot was created: 2000
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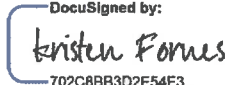
Submission Materials	Provided
Certified Signed Plot Plan of Existing and Proposed Conditions <i>(Required)</i>	X
Application Fee, check made payable to the Town of Needham Check holders name, address, and phone number to appear on check and in the Memo line state: "ZBA Fee – Address of Subject Property" <i>(Required)</i>	X
If applicant is tenant, letter of authorization from owner <i>(Required)</i>	X
Electronic submission of the complete application with attachments <i>(Required)</i>	X
Elevations of Proposed Conditions <i>(when necessary)</i>	X
Floor Plans of Proposed Conditions <i>(when necessary)</i>	

Feel free to attach any additional information relative to the application.
Additional information may be requested by the Board at any time during the
application or hearing process.



I hereby request a hearing before the Needham Zoning Board of Appeals. I have
reviewed the Board Rules and instructions.

I certify that I have consulted with the Building Inspector 12/15/2022
date of consult

Date: 3/31/2023 Applicant Signature 

DocuSigned by:

Kristen Fornes

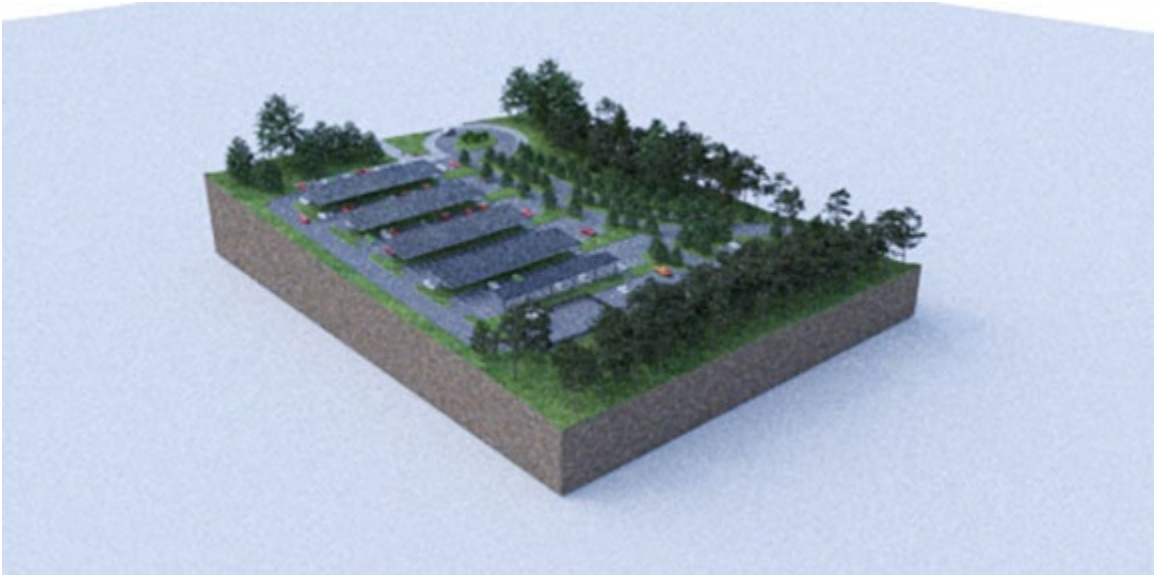
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DS

JT

*An application must be submitted to the Town Clerk's Office at
townclerk@needhamma.gov and the ZBA Office at dcollins@needhamma.gov*









Preliminary SWPPP Report

To: Olin College

From: SoCore Engineering

Date: 03/31/2023

Subject: Permit Submission to Town of Needham, MA - Zoning Board of Appeals

SoCore Engineering, an ENGIE North America company, proposes to construct a solar carport on the campus of Olin College. The site is an existing parking lot located at 1000 Olin Way in Needham, Massachusetts featuring head-in parking stalls separated by landscaped islands with curb and gutter. A topographic survey has been conducted onsite to give additional information on the existing features of the site to aid in the final design of the solar carport project.

The proposed improvements include the installation of five total solar carport structures and associated electrical equipment and cables. The installation of these features will require disturbances to the ground- most notably to install the concrete pier foundations supporting the carport structures as well as the trenching and boring required to install electrical cables. The installation of the solar carport structures will be completed in phases to ensure minimal disturbance and inconvenience to the students and faculty that use this parking lot.

A total of 13,400 SF of impervious area will be created due to the installation of the solar carports. These carport structures will feature rain gutters and snowguards to prevent water and snow from falling onto vehicles and people beneath. The gutters will collect the rain and snow melt from the solar panels and direct it through downspouts to the parking lot level where it will flow into the nearest storm drains. The stormwater will flow through this existing storm sewer network and cross underneath Olin Way before releasing into the existing wetland. No drainage features are proposed for this project beyond the stormwater conveyance system within the solar canopy.

A full SWPPP report will be prepared prior to construction to ensure that the construction activities planned on site will have minimal impact on the surrounding natural environment. This SWPPP will be present on-site during construction and shall be made available upon request by a State or Municipal inspector.

Temporary erosion control best management practices (BMPs) will be implemented on site to ensure no sediment laden stormwater runoff leaves the construction area. The provided drawing set details the proposed design and locations of these BMPs on the C3.00 – Erosion Control & Stormwater Management Plan and C3.10 – Erosion Control Details sheets. Based on the current design, all rainwater that falls on the project area leaves the site through the existing storm sewer network. Inlet protection will also be used to ensure untreated stormwater does not flow into the existing storm sewer network within the parking lot area and temporary soil stockpiles on site will be protected with additional BMPs as needed. If this design is modified in such a way that some of this stormwater flows offsite without flowing through the storm sewer, then silt fence or sediment control logs will be installed and maintained along



the down-slope project perimeter to capture any sediment in this stormwater and protect all downstream areas. A construction entrance will be provided if deemed necessary based on site conditions to prevent sediment from being tracked onto public roadways.

Prior to construction, a Notice of Intent (NOI) will be filed through the National Pollutant Discharge Elimination System (NPDES) program within the US EPA to provide coverage under the NPDES General Permit. Upon construction completion and final stabilization of all disturbed areas, a Notice of Termination (NOT) will be filed to terminate coverage under the NPDES General Permit. If there are any concerns with this preliminary SWPPP plan please contact our team using the contact information below.

Report by:

Will Maidment

William.Maidment@engie.com

(815) 382-6480

Reviewed by:

Mark Albery, PE

Mark.Albery@engie.com

(260) 720-2191

FILE PATH: \\PCH1FILE02.D90.TES.LOCAL\CH1\COMPANY DATA\NEW FOLDER STRUCTURE\PROJECTS\OLIN WAY_MA_OLIN\ENGINEERING AND DESIGN\DRAWINGS\G1.00 - COVER SHEET.DWG 3/30/2023 BY: XF5883

OLIN WAY SOLAR

NEEDHAM TOWNSHIP,
NORFOLK COUNTY,
MASSACHUSETTS

PROJECT INFORMATION

DESIGN PROFESSIONALS
IN RESPONSIBLE CHARGE: ELECTRICAL — SEAN P. PRISLINGER, P.E.
CIVIL — JOHN C. GANTNER, P.E.

BUILDING CODE: MASSACHUSETTS BUILDING CODE, 9TH EDITION (BASED ON IBC-15)

FIRE CODE: MASSACHUSETTS COMPREHENSIVE FIRE SAFETY CODE (BASED ON NFPA 1-15)

ELECTRICAL CODE: MASSACHUSETTS ELECTRICAL CODE (BASED ON NFPA 70-20)

SYSTEM SIZE: 480.00kWdc/690.12kWdc

RACKING TYPE: FIXED-TILT 5° (6 MODULES IN PORTRAIT & 3 MODULES IN PORTRAIT)

ROW SPACING: 78' C-C

HEIGHT: 12' MINIMUM

SITE INFORMATION

ZONING DISTRICT: 942 — COLLEGE OR UNIVERSITY

JURISDICTION: NEEDHAM TOWNSHIP

FLOOD ZONE: PROPERTY IS IN FLOOD ZONE DESIGNATION X, PER FEMA FLOOD INSURANCE RATE MAP NUMBER 25021C0017E, EFFECTIVE DATE OF JULY 17, 2012.

PROJECT TEAM

UTILITY

EVERSOURCE

Eversource Energy

800 Boylston St.
Boston, MA 02199
1-800-592-2000

DEVELOPER

engie

Engie Distributed Solar & Storage

225 West Hubbard St. Suite 200
Chicago, IL 60654
1-877-SOCORE1

ELECTRICAL/CIVIL

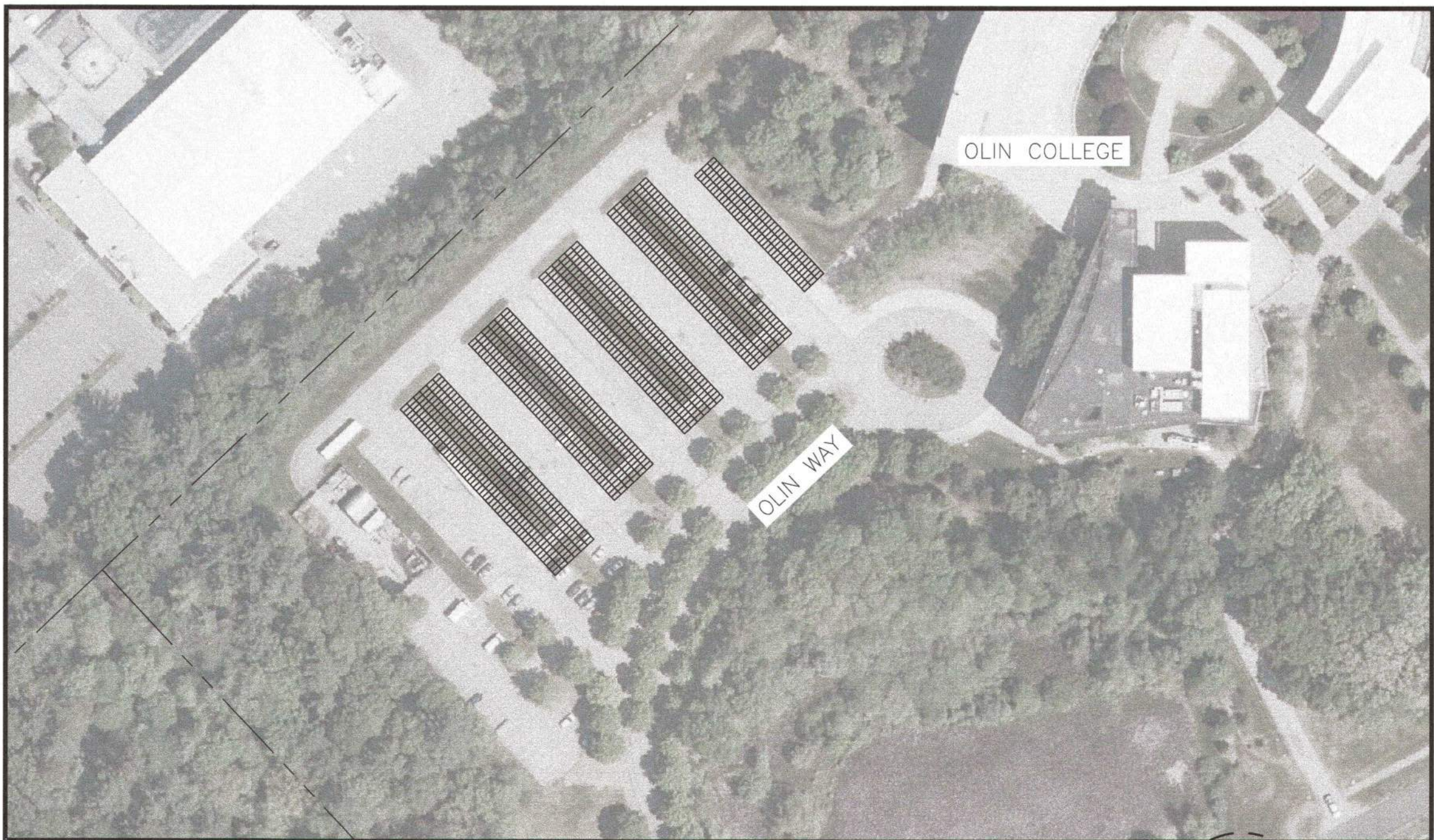
SoCore Engineering

225 West Hubbard St. Suite 200
Chicago, IL 60654
1-877-SOCORE1



VICINITY MAP

NOT TO SCALE



SITE AERIAL

SCALE: 1" = 100'



SHEET INDEX

SHEET NUMBER	SHEET TITLE	INTERCONNECTION	ISSUE FOR ZONING PERMIT
G1.00	COVER SHEET	—	●
	ALTA / TOPOGRAPHIC SURVEY (BY OTHERS)	—	●
CIVIL DRAWINGS			
C0.10	CIVIL SITE NOTES & SPECIFICATIONS	—	●
C1.00	EXISTING CONDITIONS & SITE DEMO PLAN	—	●
C2.00	SITE GEOMETRY PLAN	—	●
C2.10	SITE DETAILS	—	●
C3.00	EROSION CONTROL & STORMWATER MGMT PLAN	—	●
C3.10	EROSION CONTROL DETAILS	—	●
ELECTRICAL DRAWINGS			
E2.00	SINGLE LINE DIAGRAM	●	—

THE INFORMATION DISCLOSED HEREIN WAS ORIGINATED BY AND IS THE SOLE PROPERTY OF SOCORE ENGINEERING, LLC. ALL PATENT, PROPRIETARY, DESIGN, USE, SALE, MANUFACTURING AND REPRODUCTION RIGHTS THERETO ARE HEREBY RESERVED.

CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL PLANS AND SPECIFICATIONS, VERIFYING ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH CONSTRUCTION, AND NOTIFYING SOCORE ENGINEERING IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS.

CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF PROPERLY SIZED EQUIPMENT. SUBMIT SHOP DRAWINGS TO SOCORE ENGINEERING FOR APPROVAL OF CONFORMITY TO SOCORE'S DESIGN INTENT.

SOCORE ENGINEERING, LLC, SHALL RETAIN ALL COPYRIGHTS, STATUTORY AND COMMON LAW RIGHT WITH REGARD TO THESE PLANS, REPRODUCTION, CHANGES OR ASSIGNMENT TO ANY THIRD PARTY SHALL NOT OCCUR WITHOUT OBTAINING EXPRESSED WRITTEN CONSENT OF SOCORE ENGINEERING, LLC.

ALL STATEMENTS AND REQUIREMENTS SET FORTH ABOVE ARE INCORPORATED BY REFERENCE AND APPLY TO THE PLAN DRAWINGS OF EACH PAGE OF THIS DRAWING SET.

engie

ENGIE Distributed Solar & Storage

ENGIE North America Inc.
225 West Hubbard St. Suite 200
Chicago, IL 60654

DEVELOPER

SoCore Engineering

225 West Hubbard St. Suite 200
Chicago, IL 60654
1-877-SOCORE1

ENGINEER

PROJECT NAME

OLIN WAY SOLAR

1000 OLIN WAY

NEEDHAM, MA 02492

(42.292826, -71.265995)

SHEET NAME

COVER SHEET

DESIGNER WMM

REVIEWER MSA

SCALE AS NOTED

SHEET SIZE 24" X 36"

STAMP

JOHN C. GANTNER
CIVIL
NO. 06748
REGISTERED PROFESSIONAL ENGINEER

3/31/23

FOR: CIVIL

JOHN C. GANTNER, PE

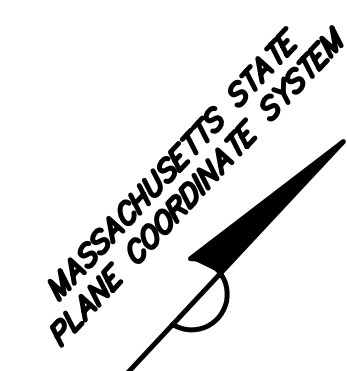
SHEET NUMBER

G1.00



N/F
BABSON COLLEGE

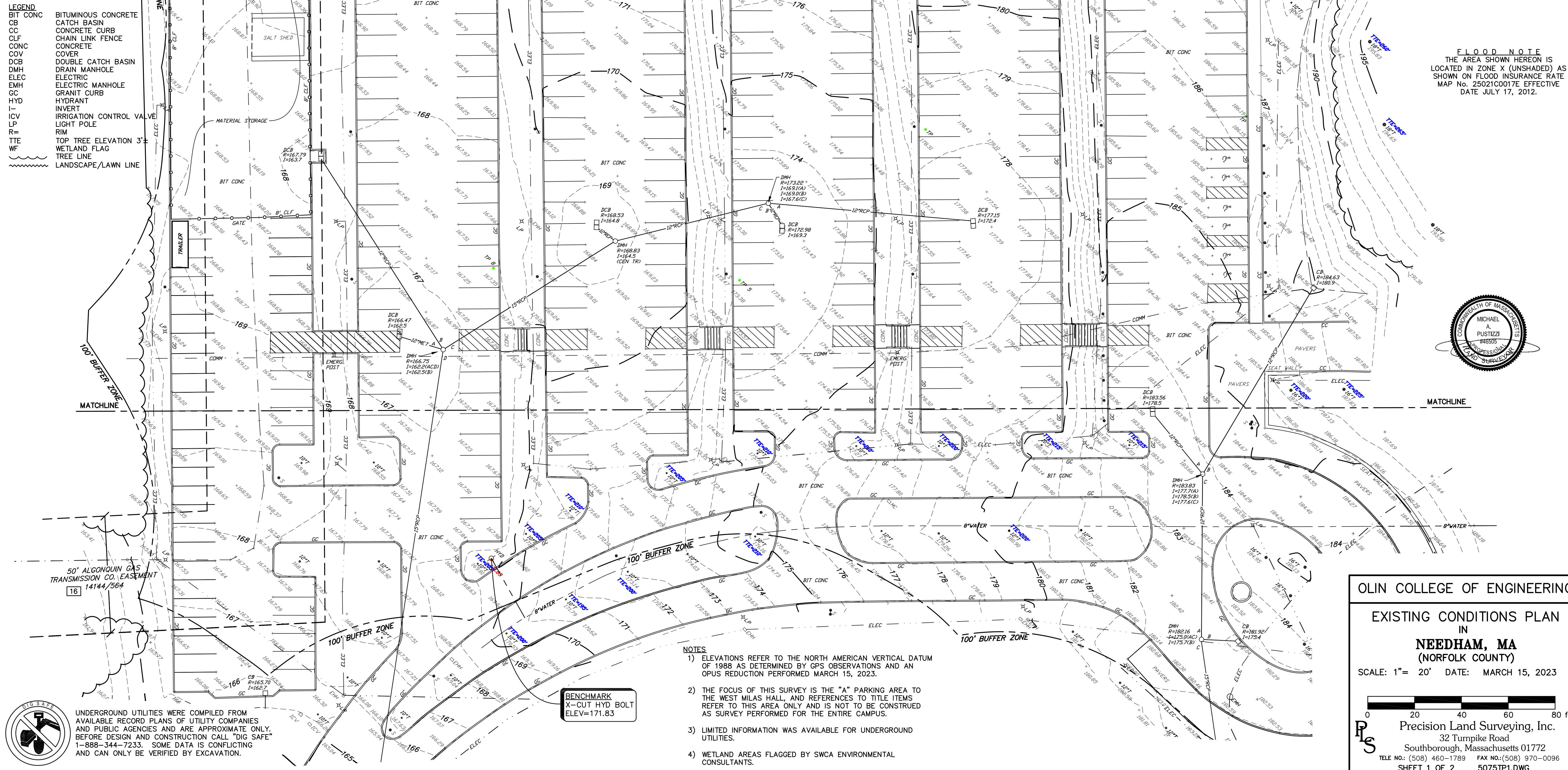
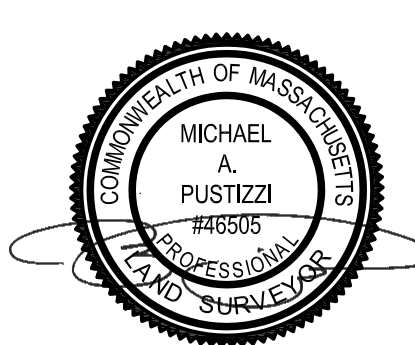
WELLESLEY
NEEDHAM



- LEGEND**
- BIT CONC BITUMINOUS CONCRETE
 - CB CATCH BASIN
 - CC CONCRETE CURB
 - CLF CHAIN LINK FENCE
 - CONC CONCRETE
 - COV COVER
 - DCB DOUBLE CATCH BASIN
 - DMH DRAIN MANHOLE
 - ELEC ELECTRIC
 - EMH ELECTRIC MANHOLE
 - GC GRANIT CURB
 - HYD HYDRANT
 - I INVERT
 - ICV IRRIGATION CONTROL VALVE
 - LP LIGHT POLE
 - R= RIM
 - TTE TOP TREE ELEVATION 3'
 - WF WETLAND FLAG
 - Tree LINE LANDSCAPE/LAWN LINE

50' ALGONQUIN GAS
TRANSMISSION CO. EASEMENT
14155/564 [16]

FLOOD NOTE
THE AREA SHOWN HEREON IS
LOCATED IN ZONE X (UNSHADED) AS
SHOWN ON FLOOD INSURANCE RATE
MAP No. 25021C0017E EFFECTIVE
DATE JULY 17, 2012.



- NOTES**
- ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 AS DETERMINED BY GPS OBSERVATIONS AND AN OPUS REDUCTION PERFORMED MARCH 15, 2023.
 - THE FOCUS OF THIS SURVEY IS THE "A" PARKING AREA TO THE WEST MILAS HALL, AND REFERENCES TO TITLE ITEMS REFER TO THIS AREA ONLY AND IS NOT TO BE CONSTRUED AS SURVEY PERFORMED FOR THE ENTIRE CAMPUS.
 - LIMITED INFORMATION WAS AVAILABLE FOR UNDERGROUND UTILITIES.
 - WETLAND AREAS FLAGGED BY SWCA ENVIRONMENTAL CONSULTANTS.

BENCHMARK
X-CUT HYD BOLT
ELEV=171.83

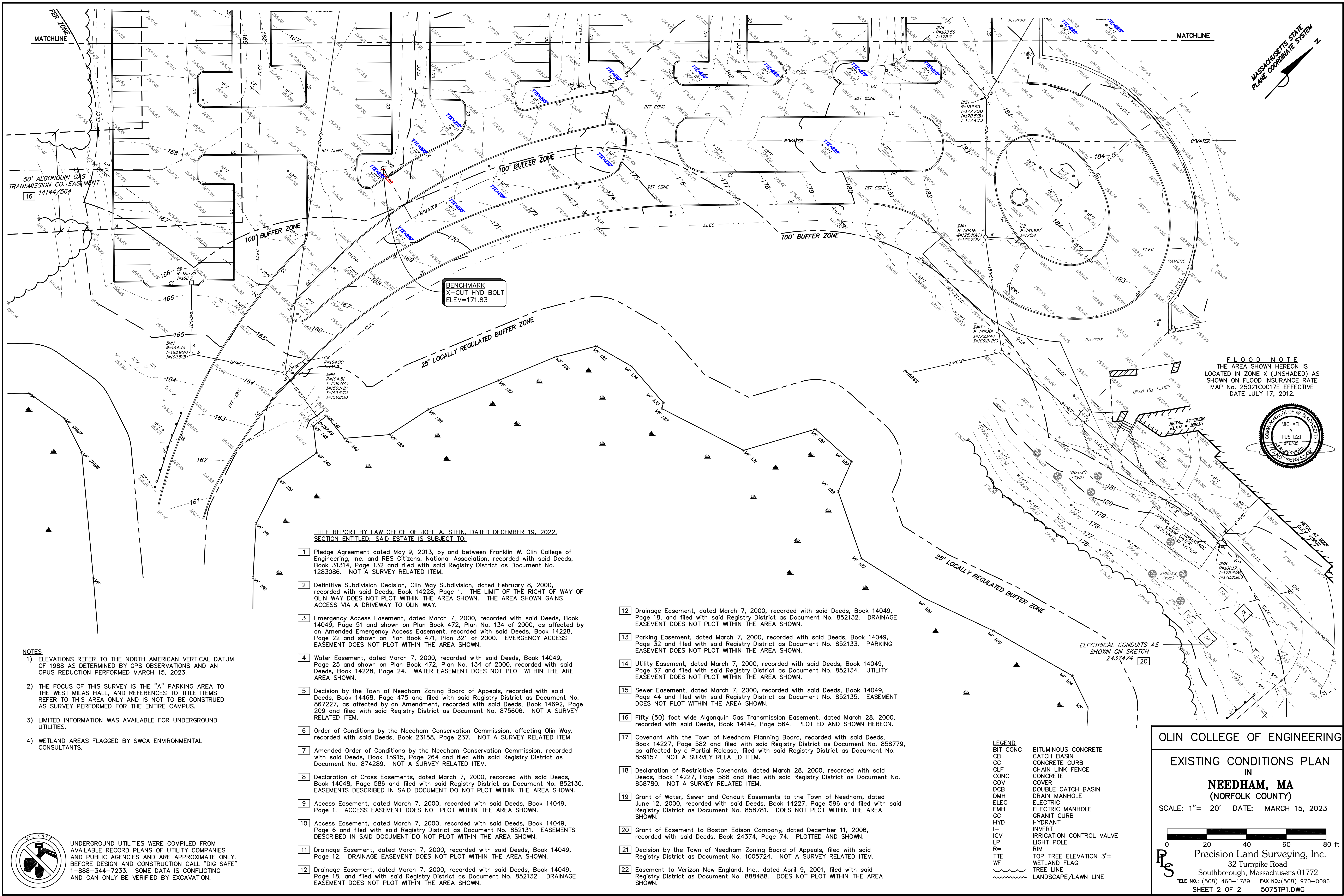
DIG SAFE
UNDERGROUND UTILITIES WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE ONLY. BEFORE DESIGN AND CONSTRUCTION CALL "DIG SAFE" 1-888-344-7233. SOME DATA IS CONFLICTING AND CAN ONLY BE VERIFIED BY EXCAVATION.

OLIN COLLEGE OF ENGINEERING

EXISTING CONDITIONS PLAN
IN
NEEDHAM, MA
(NORFOLK COUNTY)

SCALE: 1"= 20' DATE: MARCH 15, 2023

0 20 40 60 80 ft
Precision Land Surveying, Inc.
32 Turnpike Road
Southborough, Massachusetts 01772
TEL NO: (508) 460-1789 FAX NO: (508) 970-0096
SHEET 1 OF 2 5075TP1.DWG



- NOTES**
- 1) ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 AS DETERMINED BY GPS OBSERVATIONS AND AN OPUS REDUCTION PERFORMED MARCH 15, 2023.
 - 2) THE FOCUS OF THIS SURVEY IS THE "A" PARKING AREA TO THE WEST MILAS HALL, AND REFERENCES TO TITLE ITEMS REFER TO THIS AREA ONLY AND IS NOT TO BE CONSTRUED AS SURVEY PERFORMED FOR THE ENTIRE CAMPUS.
 - 3) LIMITED INFORMATION WAS AVAILABLE FOR UNDERGROUND UTILITIES.
 - 4) WETLAND AREAS FLAGGED BY SWCA ENVIRONMENTAL CONSULTANTS.

 UNDERGROUND UTILITIES WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE ONLY. BEFORE DESIGN AND CONSTRUCTION CALL "DIG SAFE" 1-888-344-7233. SOME DATA IS CONFLICTING AND CAN ONLY BE VERIFIED BY EXCAVATION.

- TITLE REPORT BY LAW OFFICE OF JOEL A. STEIN, DATED DECEMBER 19, 2022. SECTION ENTITLED: SAID ESTATE IS SUBJECT TO:**
- 1) Pledge Agreement dated May 9, 2013, by and between Franklin W. Olin College of Engineering, Inc. and RBS Citizens, National Association, recorded with said Deeds, Book 31314, Page 132 and filed with said Registry District as Document No. 1283086. NOT A SURVEY RELATED ITEM.
 - 2) Definitive Subdivision Decision, Olin Way Subdivision, dated February 8, 2000, recorded with said Deeds, Book 14228, Page 1. THE LIMIT OF THE RIGHT OF WAY OF OLIN WAY DOES NOT PLOT WITHIN THE AREA SHOWN. THE AREA SHOWN GAINS ACCESS VIA A DRIVEWAY TO OLIN WAY.
 - 3) Emergency Access Easement, dated March 7, 2000, recorded with said Deeds, Book 14049, Page 51 and shown on Plan Book 472, Plan No. 134 of 2000, as affected by an Amended Emergency Access Easement, recorded with said Deeds, Book 14228, Page 22 and shown on Plan Book 471, Plan 321 of 2000. EMERGENCY ACCESS EASEMENT DOES NOT PLOT WITHIN THE AREA SHOWN.
 - 4) Water Easement, dated March 7, 2000, recorded with said Deeds, Book 14049, Page 25 and shown on Plan Book 472, Plan No. 134 of 2000, recorded with said Deeds, Book 14228, Page 24. WATER EASEMENT DOES NOT PLOT WITHIN THE AREA SHOWN.
 - 5) Decision by the Town of Needham Zoning Board of Appeals, recorded with said Deeds, Book 14468, Page 475 and filed with said Registry District as Document No. 867227, as affected by an Amendment, recorded with said Deeds, Book 14692, Page 209 and filed with said Registry District as Document No. 875606. NOT A SURVEY RELATED ITEM.
 - 6) Order of Conditions by the Needham Conservation Commission, affecting Olin Way, recorded with said Deeds, Book 23158, Page 237. NOT A SURVEY RELATED ITEM.
 - 7) Amended Order of Conditions by the Needham Conservation Commission, recorded with said Deeds, Book 15915, Page 264 and filed with said Registry District as Document No. 874289. NOT A SURVEY RELATED ITEM.
 - 8) Declaration of Cross Easements, dated March 7, 2000, recorded with said Deeds, Book 14048, Page 586 and filed with said Registry District as Document No. 852130. EASEMENTS DESCRIBED IN SAID DOCUMENT DO NOT PLOT WITHIN THE AREA SHOWN.
 - 9) Access Easement, dated March 7, 2000, recorded with said Deeds, Book 14049, Page 1. ACCESS EASEMENT DOES NOT PLOT WITHIN THE AREA SHOWN.
 - 10) Access Easement, dated March 7, 2000, recorded with said Deeds, Book 14049, Page 6 and filed with said Registry District as Document No. 852131. EASEMENTS DESCRIBED IN SAID DOCUMENT DO NOT PLOT WITHIN THE AREA SHOWN.
 - 11) Drainage Easement, dated March 7, 2000, recorded with said Deeds, Book 14049, Page 12. DRAINAGE EASEMENT DOES NOT PLOT WITHIN THE AREA SHOWN.
 - 12) Drainage Easement, dated March 7, 2000, recorded with said Deeds, Book 14049, Page 18, and filed with said Registry District as Document No. 852132. DRAINAGE EASEMENT DOES NOT PLOT WITHIN THE AREA SHOWN.

- 12) Drainage Easement, dated March 7, 2000, recorded with said Deeds, Book 14049, Page 18, and filed with said Registry District as Document No. 852132. DRAINAGE EASEMENT DOES NOT PLOT WITHIN THE AREA SHOWN.
- 13) Parking Easement, dated March 7, 2000, recorded with said Deeds, Book 14049, Page 32 and filed with said Registry District as Document No. 852133. PARKING EASEMENT DOES NOT PLOT WITHIN THE AREA SHOWN.
- 14) Utility Easement, dated March 7, 2000, recorded with said Deeds, Book 14049, Page 37 and filed with said Registry District as Document No. 852134. UTILITY EASEMENT DOES NOT PLOT WITHIN THE AREA SHOWN.
- 15) Sewer Easement, dated March 7, 2000, recorded with said Deeds, Book 14049, Page 44 and filed with said Registry District as Document No. 852135. EASEMENT DOES NOT PLOT WITHIN THE AREA SHOWN.
- 16) Fifty (50) foot wide Algonquin Gas Transmission Easement, dated March 28, 2000, recorded with said Deeds, Book 14144, Page 564. PLOTTED AND SHOWN HEREON.
- 17) Covenant with the Town of Needham Planning Board, recorded with said Deeds, Book 14227, Page 582 and filed with said Registry District as Document No. 858779, as affected by a Partial Release, filed with said Registry District as Document No. 859157. NOT A SURVEY RELATED ITEM.
- 18) Declaration of Restrictive Covenants, dated March 28, 2000, recorded with said Deeds, Book 14227, Page 588 and filed with said Registry District as Document No. 858780. NOT A SURVEY RELATED ITEM.
- 19) Grant of Water, Sewer and Conduit Easements to the Town of Needham, dated June 12, 2000, recorded with said Deeds, Book 14227, Page 596 and filed with said Registry District as Document No. 858781. DOES NOT PLOT WITHIN THE AREA SHOWN.
- 20) Grant of Easement to Boston Edison Company, dated December 11, 2006, recorded with said Deeds, Book 24374, Page 74. PLOTTED AND SHOWN.
- 21) Decision by the Town of Needham Zoning Board of Appeals, filed with said Registry District as Document No. 1005724. NOT A SURVEY RELATED ITEM.
- 22) Easement to Verizon New England, Inc., dated April 9, 2001, filed with said Registry District as Document No. 888488. DOES NOT PLOT WITHIN THE AREA SHOWN.

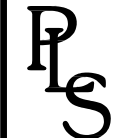
- LEGEND**
- | | |
|----------|--------------------------|
| BIT CONC | BITUMINOUS CONCRETE |
| CB | CATCH BASIN |
| CC | CONCRETE CURB |
| CLF | CHAIN LINK FENCE |
| CONC | CONCRETE |
| COV | COVER |
| DCB | DOUBLE CATCH BASIN |
| DMH | DRAIN MANHOLE |
| ELEC | ELECTRIC |
| EMH | ELECTRIC MANHOLE |
| GC | GRANIT CURB |
| HYD | HYDRANT |
| I | INVERT |
| ICV | IRRIGATION CONTROL VALVE |
| LP | LIGHT POLE |
| R | RIM |
| TTE | TOP TREE ELEVATION 3'± |
| WF | WETLAND FLAG |
| | TREE LINE |
| | LANDSCAPE/LAWN LINE |

OLIN COLLEGE OF ENGINEERING

EXISTING CONDITIONS PLAN
IN
NEEDHAM, MA
(NORFOLK COUNTY)

SCALE: 1"= 20' DATE: MARCH 15, 2023



 Precision Land Surveying, Inc.
32 Tumpike Road
Southborough, Massachusetts 01772
TEL NO: (508) 460-1789 FAX NO: (508) 970-0096
SHEET 2 OF 2 5075TP1.DWG

GENERAL CONSTRUCTION NOTES:

1. REFER TO ALTA SURVEY FOR THE HORIZONTAL COORDINATE SYSTEM AND VERTICAL DATUM USED FOR THE DESIGN OF THIS PROJECT.
2. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, THE PROJECT GEOTECHNICAL REPORT, AND ANY OTHER APPLICABLE TECHNICAL REPORTS.
3. THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, SPECIFICATIONS, AND PERMITS WHICH RELATE TO THE CONSTRUCTION OF THESE SITE IMPROVEMENTS, INCLUDING LOCAL STATE AND FEDERAL REQUIREMENTS WITH RESPECT TO STORMWATER DISCHARGE AND CONTROLLING THE POLLUTION OF THE ENVIRONMENT AND DRIVING EQUIPMENT OVER AND ACROSS STATE AND TOWN MAINTAINED ROADS.
4. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS AND LICENSES AND MAINTAIN COPIES OF THEM ON-SITE AT ALL TIMES. PRIOR TO THE CONSTRUCTION OF THE PROJECT, THE CONTRACTOR SHALL MAINTAIN A SET OF THE MOST UP TO DATE CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) ON-SITE AT ALL TIMES DURING CONSTRUCTION.
5. NO CONSTRUCTION ACTIVITIES TO TAKE PLACE OUTSIDE PERMITTED LIMITS OF CONSTRUCTION LINE WITHOUT PRIOR AUTHORIZATION.
6. ALL WORK IN THE PUBLIC RIGHTS OF WAY SHALL CONFORM WITH THE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS" FOR WORK IN THE APPLICABLE STATE.
7. CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION FIELD STAKING, TESTING AND DOCUMENTATION, UNLESS SPECIFIED OTHERWISE BY THE OWNER.
8. THESE PLANS WERE DEVELOPED BASED ON INFORMATION PROVIDED TO SOCORE ENGINEERING LLC AT THE TIME OF PLAN PREPARATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER IF ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLAN, OR IF THE PROPOSED WORK WOULD BE INHIBITED BY ANY OTHER EXISTING SITE FEATURES.
9. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT OF WAY. OVERNIGHT PARKING OF VEHICLES ON PRIVATE PROPERTY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. ALL PROPERTY CORNERS OR MONUMENTS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A PROFESSIONAL LICENSED LAND SURVEYOR.
11. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THEIR WORK WITH ACTUAL CONDITIONS AT THE JOB SITE PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER. PRIOR TO BEGINNING COMMENCING WORK, NO FIELD CHANGES OR DEVIATIONS FROM THE DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, STANDARD SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND WITHOUT LIABILITY. IN THE EVENT OF ANY DOUBT OR QUESTION ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.
12. CONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE CIVIL ENGINEER OF RECORD FOR APPROVAL PRIOR TO MAKING ANY CHANGES. APPROVED CHANGES SHALL REQUIRE A DRAWING REVISION TO MAINTAIN CONTROL OVER THE ENGINEER APPROVED DESIGN. CHANGES MADE WITHOUT APPROVAL MAY NEED TO BE AMENDED AT CONTRACTORS COST.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND MEASURES ON SITE. THE CIVIL ENGINEER OF RECORD HAS NO OVERALL SUPERVISORY AUTHORITY AND NO DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS.
14. THE CONTRACTOR IS RESPONSIBLE FOR ALL BRACING AND STORING OF EQUIPMENT DURING INSTALLATION.
15. ALL WORK AND MATERIALS WHICH DO NOT CONFORM TO THE SPECIFICATIONS ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
16. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS. ALL QUANTITIES SHOWN ARE APPROXIMATE AND CONTRACTOR SHOULD RELY ON FINAL TAKEOFFS FOR EXACT QUANTITIES.

DEMOLITION NOTES:

1. CONTRACTOR TO CONDUCT DEMOLITION OPERATIONS AND REMOVAL OF DEBRIS AND SPOILS TO ENSURE MINIMAL INTERFERENCE WITH FACILITY OPERATIONS. ENSURE SAFE PASSAGE OF PERSONS AROUND AREAS OF DEMOLITION.
2. REMOVE FROM SITE ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM DEMOLITION AND LAWFULLY DISPOSE OF SAME.
3. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER ON ALL ITEMS DESIGNATED TO BE REMOVED OR RELOCATED. ADDITIONAL COORDINATION WITH LAND OWNER MAY BE REQUIRED PRIOR TO DEMOLITION.
4. IF ANY ITEMS OR STRUCTURES ARE ENCOUNTERED IN THE FIELD THAT ARE NOT SHOWN ON THE PLANS OR ALTA SURVEY WHICH REQUIRE DEMOLITION OR RELOCATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
5. ANY DAMAGE BY THE CONTRACTOR TO UTILITIES, STRUCTURES, TREES, STREETS OR ADJACENT PROPERTIES WILL BE REPLACED/REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. CONTRACTOR SHOULD CONTACT ENGINEER IF ANY QUESTION ARISES REGARDING THE VIABILITY OF AN EXISTING UTILITY STRUCTURE.
7. CLEARING SHALL INCLUDE THE REMOVAL OF BUSHES, TREES AND OTHER PLANTS, AS DETERMINED BY OWNER, WITHIN THE LIMITS SHOWN. CLEARING SHALL ALSO INCLUDE THE REMOVAL OF ALL ROCKS OR BOULDERS LARGER THAN 2 INCHES, AT THE SURFACE, TO ALLOW FOR FUTURE SITE MOVING. ROCKS AND BOULDERS SHALL BE PILED AT A LOCATION DETERMINED BY THE LAND OWNER AND CIVIL ENGINEER. TREES AND STUMPS MAY BE CHIPPED AND USED ONSITE AS TEMPORARY EROSION CONTROL BARRIERS.
8. PRIOR TO STARTING ANY DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR:
 - A. FLAGGING PERIMETER OF LIMITS OF CONSTRUCTION, WETLAND BOUNDARIES, AND ANY OTHER AREAS OF PROTECTION OR CONSERVATION.
 - B. ENSURING THAT COPIES OF ALL APPLICABLE PERMITS AND APPROVALS ARE MAINTAINED ON SITE AND AVAILABLE FOR REVIEW.
 - C. INSTALLING THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES AND TREE PROTECTION MEASURES PRIOR TO SITE DISTURBANCE.
 - D. LOCATING (VERTICALLY AND HORIZONTALLY) ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES.
 - E. FAMILIARIZING THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION REQUIRED FOR THE PROJECT. CONTRACTOR SHALL NOTIFY OWNER 72 HOURS IN ADVANCE OF ANY UTILITY SHUTDOWN AND SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
 - F. COORDINATION WITH UTILITY COMPANIES & ADJACENT LANDOWNERS/BUSINESSES WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS MAY BE REQUIRED TO MINIMIZE THE IMPACT ON THE AFFECTED PARTIES.
9. CONTRACTOR IS TO PROCEED WITH SITE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL FEDERAL, OSHA, STATE AND LOCAL REQUIREMENTS (AS APPLICABLE), TO ENSURE PUBLIC AND CONTRACTOR SAFETY.
10. IN THE ABSENCE OF SPECIFICATIONS, THE CONTRACTOR SHALL PERFORM EARTH MOVEMENT ACTIVITIES, DEMOLITION AND OFF-SITE AND ON-SITE DRAINAGE WALLS, FOOTINGS, AND OTHER MATERIALS WITHIN THE LIMITS OF CONSTRUCTION WITH DIRECTION BY OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.
11. USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS. AFTER THE DEMOLITION IS COMPLETE, ADJACENT STRUCTURES AND IMPROVEMENTS SHALL BE CLEANED OF ALL DUST AND DEBRIS CAUSED BY DEMOLITION OPERATIONS.
12. CONTRACTOR IS RESPONSIBLE TO SAFEGUARD SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF UNAUTHORIZED PERSONS AT ANY TIME.
13. THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION OTHER THAN THAT ALL METHODS AND MEANS ARE TO BE IN ACCORDANCE WITH STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE. THE CONTRACTOR SHALL PROVIDE ALL THE "MEANS AND METHODS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND OTHER IMPROVEMENTS THAT AREA REMAINING ON OR OFFSITE. THE DEMOLITION CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS AND DAMAGE TO ALL ITEMS THAT ARE TO REMAIN ON SITE AS A RESULT OF DEMOLITION ACTIVITIES.
14. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION WASTES AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND APPLICABLE CODES. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEMOLISHED MATERIAL FROM THE PROJECT SITE AND DISPOSING OF THOSE MATERIALS IN A LEGAL MANNER.

TRAFFIC CONTROL NOTES:

1. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AS WELL AS ANY APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS WHEN CONSTRUCTION ACTIVITIES IMPACT PUBLIC ROADWAYS OR RIGHTS OF WAY. DEMOLITION AND CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, AND OTHER ADJACENT FACILITIES.
2. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR DEVELOPING AND IMPLEMENTING TRAFFIC CONTROL PLAN. STREET CLOSURE PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY.
3. ALL EXISTING TRAFFIC AND STREET SIGNS DISTURBED DURING CONSTRUCTION SHALL BE REINSTALLED WHERE APPLICABLE BY THE CONTRACTOR, UNLESS THE PLANS SPECIFICALLY DICTATE OTHERWISE. ONE-SIDE AND OTHER DIRECTIONAL SIGNS SHD BE LOCATED OUT OF THE FENCED AREA AND AUTOMOBILE ROUTES AND SHALL BE LOCATED BETWEEN THREE AND FIVE FEET BEHIND THE NEAREST BACK OF CURB. SIGN HEIGHT, LOCATION, AND FOUNDATION STRUCTURE SHALL BE LOCATED SUCH THAT THE SIGNS POSE NO THREAT TO PUBLIC SAFETY. CONTRACTOR SHALL CONFIRM WITH ENGINEER PRIOR TO SIGN PLACEMENT.

ACCESS ROAD NOTES:

1. THE PRIVATE ACCESS ROADS HAVE BEEN DESIGNED TO ACCOMMODATE LIGHT DUTY TRUCKS FOR LOW VOLUME USE IN NORMAL OPERATION CONDITIONS AS WELL AS HEAVY DELIVERY VEHICLES THROUGHOUT THE CONSTRUCTION PERIOD. THE ROAD DESIGN IS NOT INTENDED FOR ALL WEATHER USE OF HIGH VOLUME, HEAVY CONSTRUCTION LOADS. PERIODIC ROADWAY MAINTENANCE IS REQUIRED SUCH AS GRADING AND REPLACEMENT OF APPROVED ROAD BASE DURING AND AFTER CONSTRUCTION INCLUDING AFTER HEAVY RAIN OR EXCESSIVE FREEZE-THAW CYCLES. ACCESS ROAD SECTIONS MAY VARY THROUGHOUT THE SITE AND DO NOT NECESSARILY FOLLOW GEOTECHNICAL REPORT RECOMMENDATIONS.
2. CARE SHOULD BE TAKEN TO ENSURE THE EXPOSED SUBGRADE OR FILL SOILS DO NOT DRY OUT OR BECOME SATURATED PRIOR TO PLACEMENT OF ADDITIONAL FILL OR BASE MATERIAL. IF THIS OCCURS, THE EXPOSED FILL SOILS OR SUBGRADE SHOULD BE SCARIFIED, MOISTURE ADJUSTED, AND RE-COMPACTED BEFORE PLACEMENT OF ADDITIONAL MATERIAL.
4. ALL AGGREGATE MATERIAL MUST BE SUPPLIED FROM A SOURCE APPROVED BY PROJECT OWNER AND ENGINEER OF RECORD BASED ON AGGREGATE TEST RESULTS.
5. APPROVED BASE SHOULD BE PLACED IN LOOSE LIFTS IN ACCORDANCE WITH THE PROJECT'S GEOTECHNICAL REPORT.
6. AGGREGATE MATERIAL SHALL BE MOVED AND STORED IN A MANNER TO MINIMIZE PARTICLE SEPARATION.
7. ONE GRADATION SIEVE ANALYSIS SHALL BE PERFORMED FOR EVERY 5,000 CY OF ROAD BASE PLACED WITHIN THE PROJECT AND PROVIDED TO THE ENGINEER. (MAX OF 10 PER PROJECT).
8. APPROVED ROAD BASE SHOULD BE PROOF-ROLLED WITH A MINIMUM OF 26,500 POUNDS PER AXLE VEHICLE. IF PUMPING OR TUGGING IN EXCESS OF 1.5 INCHES IS OBSERVED, SOFT AREAS SHOULD BE EXCAVATED AND RE-COMPACTED OR REPLACED AND RE-CHECKED BY PROOF ROLLING.
9. APPROVED ROAD BASE SHALL BE COMPACTED TO THE MAXIMUM DRY DENSITY AND +/- 2% OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698, AT A FREQUENCY OF ONE TEST PER LIFT PER 1,000 LINEAL FEET, OR MINIMUM OF 2 TESTS PER LIFT PER ACCESS ROAD, WHICHEVER IS GREATER.
10. WHERE THE ACCESS ROADS TIE INTO EXISTING PAVEMENT: EXISTING PAVEMENT SHALL BE NEATLY SAW CUT TO A STRAIGHT LINE AND ALL PAVING ON THE NEW PAVEMENT SURFACE OF THE CUT SHALL BE COMPLETELY REMOVED AND REPLACED WITH THE PAVEMENT SECTIONS PROPOSED IN THE CONSTRUCTION DRAWINGS, IF APPLICABLE. THE CUT LINE SHALL BE FULL-DEPTH AND COATED WITH A TACK COAT TO FURNISH A BOND BETWEEN THE EXISTING SURFACE COURSE AND THE NEW SURFACE COURSE.

UTILITY NOTES:

1. ALL EXISTING UTILITIES SHOWN ARE LOCATED BASED ON INFORMATION AVAILABLE TO THE ENGINEER OF RECORD AT THE TIME THE DRAWINGS WERE PREPARED AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. GUARANTEE IS NOTE MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR ARE SHOWN IN ACCURATE LOCATIONS. CONTRACTOR IS RESPONSIBLE FOR THE FIELD LOCATION AND PROTECTION OF ALL EXISTING UTILITIES ASSOCIATED WITH THE PROJECT WORK SCOPE DURING CONSTRUCTION. AT LEAST 72 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE 811 UTILITY LOCATE SERVICE FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE PROJECT SITE. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGE SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR THE TEMPORARY BRACING AND SHORING REQUIRED FOR CONSTRUCTION. IF IT IS NECESSARY TO SHORE, BRACE, SWING, OR RELOCATE AN EXISTING UTILITY, THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY OR DEPARTMENT AFFECTED TO OBTAIN THEIR PERMISSION REGARDING THE METHOD USED FOR SUCH WORK.
2. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES SHALL BE OBTAINED FROM ALL UTILITY COMPANIES, INVESTIGATED AND VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE STARTING WORK IN THE CONSTRUCTION AREA. EXCAVATION IN THE VICINITY OF EXISTING FACILITIES AND UTILITIES SHALL BE PERFORMED BY HAND. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY AND ALL DAMAGES TO EXISTING FACILITIES, MAINTENANCE AND PROTECTION OF EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
3. THE CONTRACTOR IS TO UNCOVER ALL EXISTING UTILITY LINES BEING TIED INTO OR CROSSED AND VERIFY EXISTING GRADES BEFORE ANY CONSTRUCTION.
4. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL MAINTAIN A MINIMUM OF 18" VERTICAL CLEARANCE BETWEEN STORM, SANITARY, AND ALL UTILITIES.
5. BRACING OF UTILITY POLES OR OTHER STRUCTURES MAY BE REQUIRED BY UTILITY COMPANIES WHEN TRENCHING OR EXCAVATION IS REQUIRED IN CLOSE PROXIMITY TO EXISTING OR PROPOSED STRUCTURES. THE COST OF BRACING POLES WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

SITE CLEARING SPECIFICATIONS:

1. REMOVE SHRUBS, GRASS AND OTHER VEGETATION, IMPROVEMENTS, OR OBSTRUCTIONS AS REQUIRED TO ALLOW INSTALLATION OF PROJECT. REMOVE SIMILAR ITEMS ELSEWHERE ON SITE OR PREMISES AS SPECIFICALLY INDICATED ON PLANS. "REMOVAL" INCLUDES DIGGING OUT AND OFF-SITE DISPOSING OF STUMPS AND ROOTS UNLESS NOTED OTHERWISE.
2. CUT MINOR ROOTS AND BRANCHES OF TREES INDICATED TO REMAIN IN A CLEAN AND CAREFUL MANNER, WHERE SUCH ROOTS AND BRANCHES OBSTRUCT INSTALLATION OF NEW CONSTRUCTION.
3. TOPSOIL: TOPSOIL IS DEFINED AS FERTILE, FRIABLE NATURAL LOAM SURFACE SOIL FOUND IN A DEPTH OF NOT LESS THAN 4 INCHES. SATISFACTORY TOPSOIL IS REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH, WEEDS AND OTHER LITTERS, AND FREE OF ROOTS, STUMPS, STONES LARGER THAN 1/2", AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH.
 - A. TOPSOIL SHALL BE STRIPPED FROM AREAS WITHIN THE EXTENTS OF GRADING AND TRENCHING AND STOCKPILED IN SUCH A MANNER THAT NATURAL DRAINAGE IS NOT OBSTRUCTED, AND NO OFF-SITE OR ON-SITE DRAINAGE DAMAGE OCCURS.
 - B. STOCKPILES SHALL BE CONSTRUCTED SUCH THAT THE SIDE SLOPES DO NOT EXCEED 2H:1V, AND STOCKPILES SHALL BE STABILIZED AND PROTECTED IMMEDIATELY AFTER FORMATION.
 - C. PERIMETER CONTROLS MUST BE PLACED AROUND THE STOCKPILE IMMEDIATELY AND SEEDING OF STOCKPILES SHALL BE COMPLETED WITHIN 7 DAYS OF THE FORMATION OF THE STOCKPILE.
 - D. PRIOR TO IMPORTING TOPSOIL, CONTRACTOR SHALL SUBMIT INFORMATION ON THE SOURCE AND TYPE OF TOPSOIL TO ENGINEER FOR APPROVAL.
 - E. ROTOTILL NEWLY IMPORTED TOPSOIL WITH THE NATIVE SOIL IN 6 INCH LIFTS TO PROVIDE AN EVEN MIXTURE BETWEEN NATIVE AND IMPORTED SOIL.
4. CLEARING AND GRUBBING: CLEAR SITE OF TREES, SHRUBS AND OTHER VEGETATION, EXCEPT FOR THOSE INDICATED TO BE LEFT STANDING. ABSOLUTELY NO CLEARING OR GRUBBING IS TO TAKE PLACE WITHIN A WETLAND. CONTRACTOR TO NOTIFY ENGINEER IF ANY EXISTING WETLANDS OTHER PROTECTED AREAS ARE IMPEDING CONSTRUCTION.
 - A. AREAS OF PROPOSED GRUBBING ARE LIMITED TO FENCED ARRAY AREAS, AREAS OF GRADING OR FILL PLACEMENT, AND ACCESS ROADS, STUMPS AND ROOT MASSES ARE ANTICIPATED TO REMAIN IN PLACE FOR ALL OTHER AREAS.
 - B. GRUBBING SHALL BE CONDUCTED SO THAT EARTH DISTURBANCE COMMENCES FROM THE HIGHEST ELEVATION. ONCE TEMPORARY STABILIZATION MEASURES (MULCH, EROSION CONTROL MIX, ETC.) ARE IN-PLACE, GRUBBING OF DOWNGRADE AREAS MAY COMMENCE.
 - C. COMPLETELY REMOVE STUMPS, ROOTS, AND OTHER DEBRIS PROTRUDING THROUGH GROUND SURFACE.
 - D. USE ONLY HAND METHODS FOR GRUBBING INSIDE DRIP LINE OF TREES INDICATED TO REMAIN.

- E. FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIAL, UNLESS FURTHER EXCAVATION OR EARTHWORK IS INDICATED.
 1. PLACE FILL MATERIAL IN HORIZONTAL LAYERS NOT EXCEEDING 8 INCHES LOOSE DEPTH, AND THOROUGHLY COMPACT TO A DENSITY EQUAL TO ADJACENT ORIGINAL GROUND.
5. REMOVAL OF EXISTING SITE FEATURES: REMOVE ALL UNDERGROUND AND ABOVE GROUND SITE FEATURES SHOWN ON THE DRAWINGS.
 - A. FOUNDATIONS SHALL BE REMOVED TO A MINIMUM OF 3' BELOW SUB-GRADE.
 - B. ABOVE- OR BELOW-GRADE IMPROVEMENTS MAY BE ENCOUNTERED WHICH ARE NOT ON THE SURVEY DOCUMENTS OR SHOWN ON THE CONTRACT DRAWINGS WHICH MUST BE REMOVED AS A PART OF THIS CONTRACT. IF ANY SUCH IMPROVEMENTS ARE ENCOUNTERED THE CONTRACTOR MUST NOTIFY THE ENGINEER PRIOR TO REMOVAL.
6. DISPOSAL OF WASTE MATERIALS
 - A. REMOVE ALL WASTE MATERIALS AND UNSUITABLE SOIL FROM THE OWNER'S PROPERTY, AT THE CONTRACTOR'S EXPENSE.

GRADING NOTES:

1. CONTRACTOR TO ADJUST ALL EXISTING STRUCTURES TO MEET NEW GRADES.
2. WHEREVER FEASIBLE, STORMWATER RUNOFF ORIGINATING FROM UPGRADIENT AREAS SHALL BE DIVERTED AWAY FROM THE ARRAY AREA UNTIL FINAL STABILIZATION IS ACHIEVED.
3. ACTIVE AREAS OF EARTH DISTURBANCE SHALL BE LIMITED TO 5 CONTIGUOUS ACRES OR THE AMOUNT THAT CAN BE TEMPORARILY STABILIZED IN ONE DAY, WHICHEVER IS LESS. MASS CLEARING AND GRADING OF THE ENTIRE SITE SHALL BE AVOIDED.
4. ALL WORK RELATIVE TO PAD CONSTRUCTION, TRENCHING AND BACKFILLING, SITE PREPARATION AND GRAVEL INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION FOR THE PROJECT. ALL OTHER WORK SHALL, UNLESS OTHERWISE NOTED, BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, AND/OR STATE OR LOCAL STANDARD SPECIFICATIONS.
5. EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL (3H:1V) UNLESS SHOWN OTHERWISE.
6. THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE. THIS SHOULD BE ACHIEVED BY CONSTRUCTING ADEQUATE EROSION CONTROL BARRIERS ALONG THE LIMITS OF CONSTRUCTION AND WETTING THE SOIL TO PROTECT IT FROM WIND EROSION.
7. VERIFY ALL ELEVATIONS SHOWN ON PLAN FROM BASIS OF ELEVATION MONUMENT PRIOR TO BEGINNING CONSTRUCTION.
8. NO TOPSOIL AND NO OTHER SOIL TO BE REMOVED FROM SITE. EXCESS SOIL GENERATED FROM THIS SITE REQUIRES CHARACTERIZATION PRIOR TO REMOVAL. RATHER THAN EXPORT MATERIAL, IT IS PREFERRED THAT MINOR EXCAVATIONS ARE REUSED ON SITE AS BACKFILL IN THE SAME GENERAL AREA IT ORIGINATED.
9. A MINIMUM 4" LAYER OF TOPSOIL IS TO BE PROVIDED IN ALL PLANTING AREAS. TOPSOIL SHALL BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO DESIRED COMPACTED THICKNESS. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS. THE GENERAL CONTRACTOR SHALL TEST THE EXISTING TOPSOIL AND FILL TO ADD NUTRIENT ADDITIVES, BALANCE THE PH, AND IMPORT TOPSOIL AS NECESSARY TO OBTAIN STABILIZATION. IN THE EVENT THAT THERE IS EXCESS TOPSOIL NEAR THE END OF GRADING ACTIVITIES, REMAINING TOPSOIL IS TO BE ADDED TO THE PLANTING AREAS AND BERMS.
10. UNLESS OTHERWISE STATED, ALL FILL AREAS SHALL BE CONSTRUCTED IN LIFTS OF 8" MAXIMUM THICKNESS WITH WATER ADDED OR SOIL CONDITIONED TO THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE ENGINEER AND COMPACTED WITH A SHEEP'S FOOT ROLLER TO A COMPACTION GREATER THAN OR EQUAL TO 95% OPTIMUM MOISTURE CONTENT.
11. EXISTING FIELD CONDITIONS ARE TO BE MAINTAINED WHERE FEASIBLE. GRADES THROUGHOUT THE SITE ARE DESIGNED TO MEET THE SPECIFICATIONS OF THE RACKING SYSTEM. TOPSOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED AND RE-SPREAD AT COMPLETION OF GRADING.

DEWATERING NOTES:

1. THE CONTRACTOR SHALL INSTALL, MAINTAIN, AND OPERATE ALL CHANNELS, SUMPS, AND OTHER TEMPORARY DIVERSION AND PROTECTIVE WORKS NEEDED TO DIVERT STREAM FLOW AND OTHER SURFACE WATER THROUGH OR AROUND THE CONSTRUCTION SITE. CONTROL OF SURFACE WATER SHALL BE CONTINUOUS DURING THE PERIOD THAT DAMAGE TO CONSTRUCTION WORK COULD OCCUR.
2. OPEN EXCAVATIONS SHALL BE KEPT FREE OF STANDING WATER AND MUDDY CONDITIONS AS NECESSARY FOR THE PROPER EXECUTION OF THE WORK. THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN ALL DRAINS, SUMPS AND ALL OTHER EQUIPMENT REQUIRED TO PROPERLY DEWATER THE SITE. DEWATERING SYSTEMS THAT CAUSE A LOSS OF SOIL FINES FROM THE FOUNDATION AREAS WILL NOT BE PERMITTED.
3. INSTALL DIVERSION DITCHES OR BERMS IF NECESSARY TO MINIMIZE THE AMOUNT OF CLEAN STORMWATER RUNOFF ALLOWED INTO THE EXCAVATION AREA.
4. CONTRACTOR TO COORDINATE WITH ENGINEER PRIOR TO SELECTING AREAS TO DISCHARGE DEWATERING EFFLUENT. DISCHARGE SHALL BE MANAGED TO ENSURE IT IS LEAVING THE SITE IN THE FORM OF CLEAN SHEET FLOW.
5. REMOVAL OF WATER FROM THE CONSTRUCTION SITE SHALL BE ACCOMPLISHED SO THAT EROSION AND TRANSPORTATION OF SEDIMENT AND OTHER POLLUTANTS ARE MINIMIZED. DEWATERING IN PERIODS OF INTENSE HEAVY RAIN OR WHEN THE INTRINSIC CAPACITY OF THE SOIL IS EXCEEDED SHALL BE AVOIDED TO THE MAXIMUM EXTENT PRACTICABLE.
6. WHEN TEMPORARY WORKS ARE NO LONGER NEEDED, THE CONTRACTOR SHALL REMOVE AND RETURN THE AREA TO A CONDITION SIMILAR TO THAT WHICH EXISTED BEFORE CONSTRUCTION. AREAS WHERE TEMPORARY WORKS WERE LOCATED SHALL BE GRADED BASED ON APPEARANCE WITH NO OBSTRUCTION TO NATURAL SURFACE WATER FLOWS OR THE PROPER FUNCTIONING AND ACCESS TO THE WORKS OF IMPROVEMENTS BE INSTALLED. THE CONTRACTOR SHALL EXERCISE EXTREME CARE DURING THE REMOVAL STAGES TO MINIMIZE THE LOSS OF SOIL SEDIMENT AND DEBRIS THAT WAS COLLECTED DURING CONSTRUCTION.

EARTHWORK SPECIFICATIONS:

1. SOIL MATERIAL
 - A. GENERAL FILL: PROVIDE SOIL MATERIALS THAT ARE FREE OF DEBRIS, WASTE, FROZEN MATERIALS, VEGETABLE, ORGANIC AND OTHER DELETERIOUS MATTER AND HAVING MAXIMUM PARTICLE SIZE OF 2" IN ALL DIMENSIONS.
 - B. SELECT FILL: CLEAN NATURAL OR CRUSHED STONE OR GRAVEL CONFORMING TO THE APPLICABLE STATE DEPARTMENT OF TRANSPORTATION'S STANDARD GRADATION SPECIFICATIONS.
 - C. SUBBASE: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D2940; WITH AT LEAST 90 PERCENT PASSING A 1-1/2 INCH (38-MM) SIEVE AND NOT MORE THAN 12 PERCENT PASSING A NO. 200 (0.075-MM) SIEVE.
 - D. BASE: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; WITH AT LEAST 95 PERCENT PASSING A 1-1/2 INCH (38-MM) SIEVE AND NOT MORE THAN 8 PERCENT PASSING A NO. 200 (0.075-MM) SIEVE.
 - E. ENGINEERED FILL: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D2940; WITH AT LEAST 90 PERCENT PASSING A 1-1/2 INCH (38-MM) SIEVE AND NOT MORE THAN 12 PERCENT PASSING A NO. 200 (0.075-MM) SIEVE.
 - F. BEDDING: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D2940; EXCEPT WITH 100 PERCENT PASSING A 1-INCH (25-MM) SIEVE AND NOT MORE THAN 8 PERCENT PASSING A NO. 200 (0.075-MM) SIEVE.
 - G. DRAINAGE FILL: WASHED, NARROWLY GRADED MIXTURE OF CRUSHED STONE, OR CRUSHED OR UNCUSHED GRAVEL; ASTM D448; COARSE-AGGREGATE GRADING SIZE 57; WITH 100 PERCENT PASSING A 1-1/2 INCH (38-MM) SIEVE AND 0 TO 5 PERCENT PASSING A NO. 8 (2.36-MM) SIEVE.
 - H. FILTER MATERIAL: NARROWLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, OR CRUSHED STONE AND NATURAL SAND; ASTM D448; COARSE-AGGREGATE GRADING SIZE 67; WITH 100 PERCENT PASSING A 1-INCH (25-MM) SIEVE AND 0 TO 5 PERCENT PASSING A NO. 4 (4.75-MM) SIEVE.
2. DRAINAGE FABRIC, IF REQUIRED: NON-WOVEN GEOTEXTILE, SPECIFICALLY MANUFACTURED AS A DRAINAGE GEOTEXTILE; MADE FROM POLYOLEFINS, POLYESTERS, OR POLYAMIDES; AND WITH THE FOLLOWING MINIMUM PROPERTIES DETERMINED ACCORDING TO ASTM D4759 AND REFERENCED STANDARD TEST METHODS:
 - A. GRAB TENSILE STRENGTH: 110 LBF (490 N); ASTM D4632.
 - B. TEAR STRENGTH: 40 LBF (178 N); ASTM D4533.
 - C. PUNCTURE RESISTANCE: 50 LBF (222 N); ASTM D4833.
 - D. WATER FLOW RATE: 150 GPM PER SQ. FT. (100 L/S PER SQ. M); ASTM D4491.
 - E. APPARENT OPENING SIZE: NO. 50 (0.3 MM); ASTM D4751.

3. SEPARATION FABRIC, IF REQUIRED: WOVEN GEOTEXTILE, SPECIFICALLY MANUFACTURED FOR USE AS A SEPARATION GEOTEXTILE; MADE FROM POLYOLEFINS, POLYESTERS, OR POLYAMIDES; AND WITH THE FOLLOWING MINIMUM PROPERTIES DETERMINED ACCORDING TO ASTM D4759 AND REFERENCED STANDARD TEST METHODS:
 - A. GRAB TENSILE STRENGTH: 200 LBF (890 N); ASTM D4632.
 - B. TEAR STRENGTH: 75 LBF (333 N); ASTM D4533.
 - C. PUNCTURE RESISTANCE: 90 LBF (400 N); ASTM D4833.
 - D. WATER FLOW RATE: 4 GPM PER SQ. FT. (2.7 L/S PER SQ. M); ASTM D4491.
 - E. APPARENT OPENING SIZE: NO. 30 (0.6 MM); ASTM D4751.
4. SITE PREPARATION & COMPACTION OF BACKFILLS
 - A. PROOF ROLL SUBGRADE WITH HEAVY PNEUMATIC-TIRED EQUIPMENT TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. DO NOT PROOF ROLL WET OR SATURATED SUBGRADES.
 - B. PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8 INCHES (200 MM) IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4 INCHES (100 MM) IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
 - C. PLACE BACKFILL AND FILL MATERIALS EVENLY ON ALL SIDES OF STRUCTURES TO REQUIRED ELEVATIONS, AND UNIFORMLY ALONG THE FULL LENGTH OF EACH STRUCTURE/CONDUCTOR/CONDUIT.
 - D. COMPACT SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D1557: (REFER TO THE PROVIDED GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION)
 - D.1. BACKFILL DIRECTLY AROUND CONDUCTORS AND CONDUITS SHALL BE PLACED IN 10-INCH LIFTS AND COMPACTED TO 95 PERCENT OPTIMUM MOISTURE CONTENT.
 - D.2. UNDER PAVEMENTS, SLABS, AND GRAVEL DRIVEWAYS, SCARIFY AND RECOMPACT TOP 12 INCHES (300 MM) OF EXISTING SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL AT 95 PERCENT OPTIMUM MOISTURE CONTENT.
 - D.3. UNDER LAWN OR UNPAVED AREAS, SCARIFY AND RECOMPACT TOP 6 INCHES (150 MM) AND COMPACT EACH LAYER OF BACKFILL OR FILL MATERIAL AT 80 PERCENT OPTIMUM MOISTURE CONTENT.
5. GRADING: UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE FROM IRREGULAR SURFACE CHANGES. COMPLY WITH COMPACTION REQUIREMENTS AND GRADE TO CROSS SECTIONS, LINES, AND ELEVATIONS INDICATED.
 - A. PROVIDE A SMOOTH TRANSITION BETWEEN ADJACENT EXISTING GRADES AND NEW GRADES.
 - B. CUT OUT SOFT SPOTS, FILL LOW SPOTS, AND TRIM HIGH SPOTS TO COMPLY WITH REQUIRED SURFACE TOLERANCES.
 - C. SLOPE GRADES TO DIRECT WATER AWAY FROM FOUNDATIONS TO PREVENT PONDING. FINISH SUBGRADES TO REQUIRED ELEVATIONS WITHIN THE FOLLOWING TOLERANCES:
 - C.1. LAWN OR UNPAVED AREAS: ± 1 INCH (25 MM).
 - C.2. PAVEMENTS: ± 1/2 INCH (13 MM).

CONCRETE AND REINFORCING SPECIFICATIONS:

1. ALL CONCRETE WORK & TESTING SHALL BE IN ACCORDANCE WITH THE "AMERICAN CONCRETE INSTITUTE BUILDING CODE" (ACI 318) AND WITH "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301), LATEST EDITIONS.
2. ALL NORMAL WEIGHT CONCRETE (145 PCF) SHALL OBTAIN A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3500 PSI. TRANSFORMER 7 DAY STRENGTH TEST MUST MEET OR EXCEED 3500 PSI BEFORE TRANSFORMER CAN BE PLACED.
3. CALCIUM CHLORIDE AND/OR ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE USED IN CONCRETE.
4. ALL CONCRETE SUBJECT TO EXTERIOR EXPOSURE IN FREEZE THAW CLIMATES WITH SPECIFIED STRENGTH LESS THAN 6000 PSI SHALL BE AIR ENTRAINED 4% TO 6%.
5. COLD WEATHER CONCRETING SHALL BE DONE IN ACCORDANCE WITH ACI-306. HOT WEATHER CONCRETING SHALL BE DONE IN ACCORDANCE WITH ACI-305.
6. REINFORCING BARS SHALL BE DEFORMED BARS OF NEW BILLET STEEL CONFORMING TO ASTM SPECIFICATION A-615, GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. ALL REINFORCING AND ACCESSORIES SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI STANDARDS 318-14 AND 318R-14.
7. WELDING OF REINFORCING BARS WILL ONLY BE ALLOWED WHEN SHOWN. IN NO INSTANCE SHALL WELDING BE DONE AT THE BEND OF A BAR, NOR SHALL THERE BE ANY TACK WELDING DONE BETWEEN CROSSING BARS. WHEN WELDING IS SHOWN, PROCEDURES SHALL BE IN ACCORDANCE WITH "RECOMMENDED PRACTICE FOR WELDING REINFORCEMENT STEEL, METAL INSERTS AND CONNECTIONS IN REINFORCED CONCRETE CONSTRUCTION" AND D12.1-1-75.
8. PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCEMENT AT POSITIONS SHOWN ON THE PLANS AND DETAILS. PLASTIC COATED ACCESSORIES SHALL BE USED IN ALL EXPOSED CONCRETE WORK.
9. PLACE 2 #5 BARS (EACH FACE) WITH 2'-0" PROJECTION AROUND ALL OPENINGS IN CONCRETE, UNLESS OTHERWISE SHOWN OR NOTED.
10. CORNERS OR SPICE BARS SHALL BE PROVIDED IN ACCORDANCE WITH ACI STANDARDS 318-14 AND 318R-14. CORNER BARS SHALL BE PROVIDED AT ALL WALL CORNERS, EQUAL TO THE HORIZONTAL WALL REINFORCEMENT.
11. MINIMUM LAY OF REINFORCEMENT BARS SHALL BE EQUIVALENT TO A CLASS "B" SPICE, UNLESS NOTED OTHERWISE.
12. CONTROL JOINTS FOR SLABS-ON-GRADE SHALL BE IN A SQUARE PATTERN AND BE NOT MORE THAN 20 FT. O.C., UNLESS NOTED OTHERWISE ON PLAN.
13. GENERAL CONTRACTOR SHALL CHECK WITH CIVIL, RACKING, AND ELECTRICAL DRAWINGS AND SUB-CONTRACTORS FOR OPENINGS, SLEEVES, HANGERS, INSERTS, SLAB DEPRESSIONS AND OTHER ITEMS RELATED TO THE CONCRETE WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR PROPER LOCATION BEFORE PLACING CONCRETE. PITCH CONCRETE SLABS AS REQUIRED TO ELIMINATE PONDING.

SLIP PREVENTION & CONTAINMENT:

1. PETROLEUM PRODUCTS, HAZARDOUS OR CONTROLLED SUBSTANCES WHICH MAY BE TEMPORARY OR PERMANENTLY LOCATED ON THE SITE SHOULD BE HANDLED AND STORED IN CONFORMANCE WITH THE US - EPA CODE OR FEDERAL REGULATIONS 40CFR 112. IMMEDIATE ACTION MUST BE TAKEN TO CONTROL CONTAIN AND RECOVER THE DISCHARGE PRODUCT. NO COUNTERMEASURES THAT RISK THE HEALTH OR SAFETY OF PERSONNEL SHOULD BE UNDERTAKEN.
2. BULK OIL STORAGE MUST BE LOCATED IN A CONTAINMENT AREA OF GREATER THAN 1,320 GALLONS AND HAVE THE CAPACITY TO HOLD THE AMOUNT OF OIL PLUS RAINFALL FROM A 50-YEAR STORM EVENT.
3. SPILL RESPONSE EQUIPMENT SUCH AS ABSORBENT MATERIALS, BOOMS AND WASTE DRUMS OR DEDICATED CONTAINMENT SHALL BE AVAILABLE IN THE EVENT THERE IS A LEAK FROM FUEL DRUMS, OR OIL DRUMS.
4. ANY SPILLS ON LAND GREATER THAN 25 GALLONS MUST BE REPORTED TO THE STATE ENVIRONMENTAL AUTHORITY. SPILLS OF ANY VOLUME IN BODIES OF WATER THAT CREATE A SHEEN SHOULD ALSO BE REPORTED.
5. A FRONT-END LOADER, SKID STEER, GRADER, OR BACKHOE SHOULD BE READILY AVAILABLE TO RESPOND IN CASE OF A SPILL.
6. ALL SOLID WASTE INCLUDING BUT NOT LIMITED TO CRATES, CARDBOARD, PLASTIC WRAPPING, PIPES AND WIRE WASTE AND CONCRETE WASHOUT SHALL BE PROPERLY CONTAINED AT APPROPRIATE COLLECTION POINTS AND BE PROPERLY DISPOSED ON A REGULAR BASIS. CARE SHOULD BE TAKEN TO AVOID THE SPREAD OF MATERIAL THAT CAN BE WIND BLOWN FROM THIS SITE AREA OR CONTAINERS.
7. ACTIONS TO BE TAKEN INCLUDE:
8. ELIMINATE POTENTIAL SPARK SOURCES.
9. IF SAFE TO DO SO, IDENTIFY AND SHUT DOWN SOURCES OF DISCHARGE AND STOP THE FLOW.
10. CONTAIN DISCHARGE WITH SORBENTS, BERMS, TRENCHES, SAND BAGS OR OTHER APPROPRIATE MATERIALS.
11. COLLECT AND PROPERLY DISPOSE IN ACCORDANCE WITH APPLICABLE REGULATIONS.
12. KEEP ALL RECORDS OF EVENTS AND DISPOSALS.

LEGEND		
EXISTING	PROPOSED	DESCRIPTION
---	-----	PARCEL BOUNDARY
---	-----	LIMITS OF CONSTRUCTION
---	-----	LAYDOWN & STAGING AREA
---	---	EXISTING OBJECT TO BE REMOVED
---	---	MAJOR CONTOUR (5')
---	---	MINOR CONTOUR (1')
---	---	SLOPE
---	---	WETLAND
---	---	25' WETLAND BUFFER
---	---	100' WETLAND BUFFER
---	---	UTILITY EASEMENT
---	---	UNDERGROUND ELECTRIC LINE
---	---	STORM SEWER LINE
---	---	UNDERGROUND WATER LINE
---	---	UNDERGROUND TELEPHONE LINE
---	---	UNDERGROUND GAS LINE
---	---	LIGHT POLE
---	---	INLET PROTECTION
---	---	DC TRENCHING AREA



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DESCRIPTION	DATE	ISSUANCE
ORIGINAL	02/21/2023	0
REVISION	03/31/2023	1

PROJECT NAME: OLIN WAY SOLAR

1000 OLIN WAY
NEEDHAM, MA 02492
(42.292826, -71.265995)

SHEET NAME: CIVIL SITE NOTES & SPECIFICATIONS

DESIGNER: WMW
REVIEWER: MSA

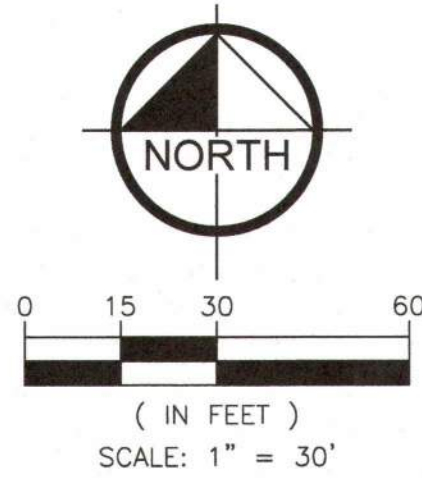
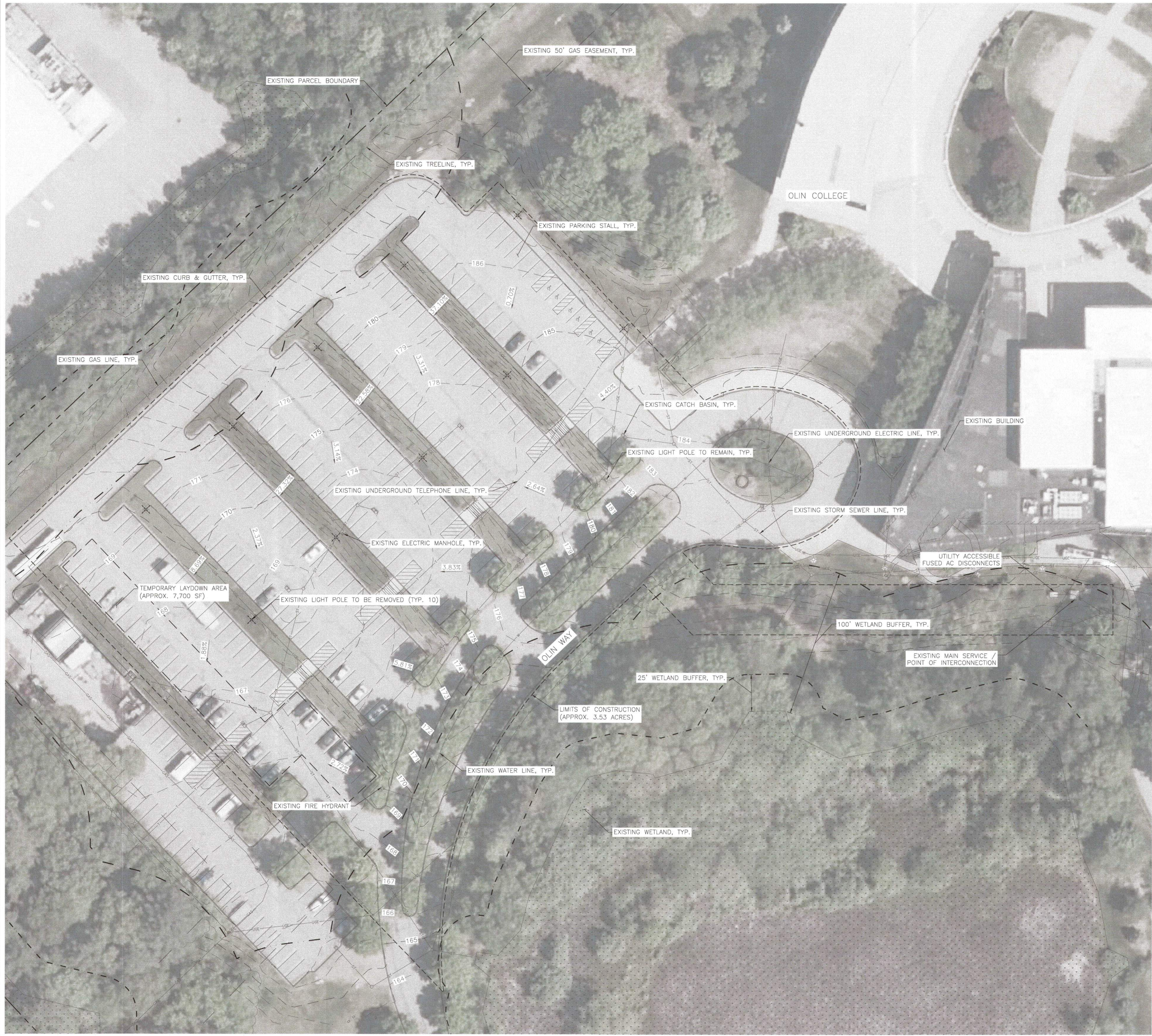
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SHEET SIZE: 24" X 36"



FOR: CIVIL
JOHN C. GANTNER, PE
SHEET NUMBER

C0.10

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REV	DATE	ISSUANCE	DESCRIPTION
0	02.24.2023	INTERCONNECTION	DRAWING OMITTED
1	03.31.2023	ISSUE FOR ZONING PERMIT	ORIGINAL ISSUANCE

PROJECT NAME

OLIN WAY SOLAR
1000 OLIN WAY
NEEDHAM, MA 02492
(42.292826, -71.265995)

SHEET NAME

EXISTING CONDITIONS & SITE DEMOLITION PLAN

DESIGNER: WMM

REVIEWER: MSA

SCALE: AS NOTED

SHEET SIZE: 24" X 36"

FOR: CIVIL

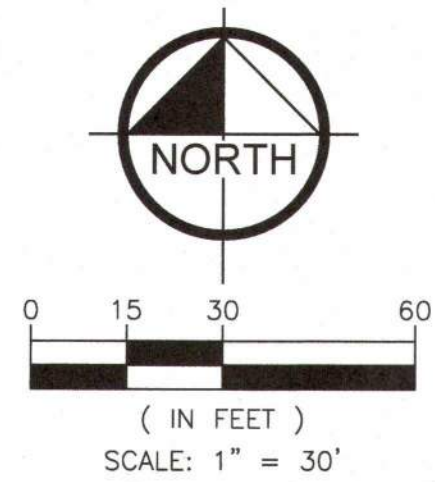
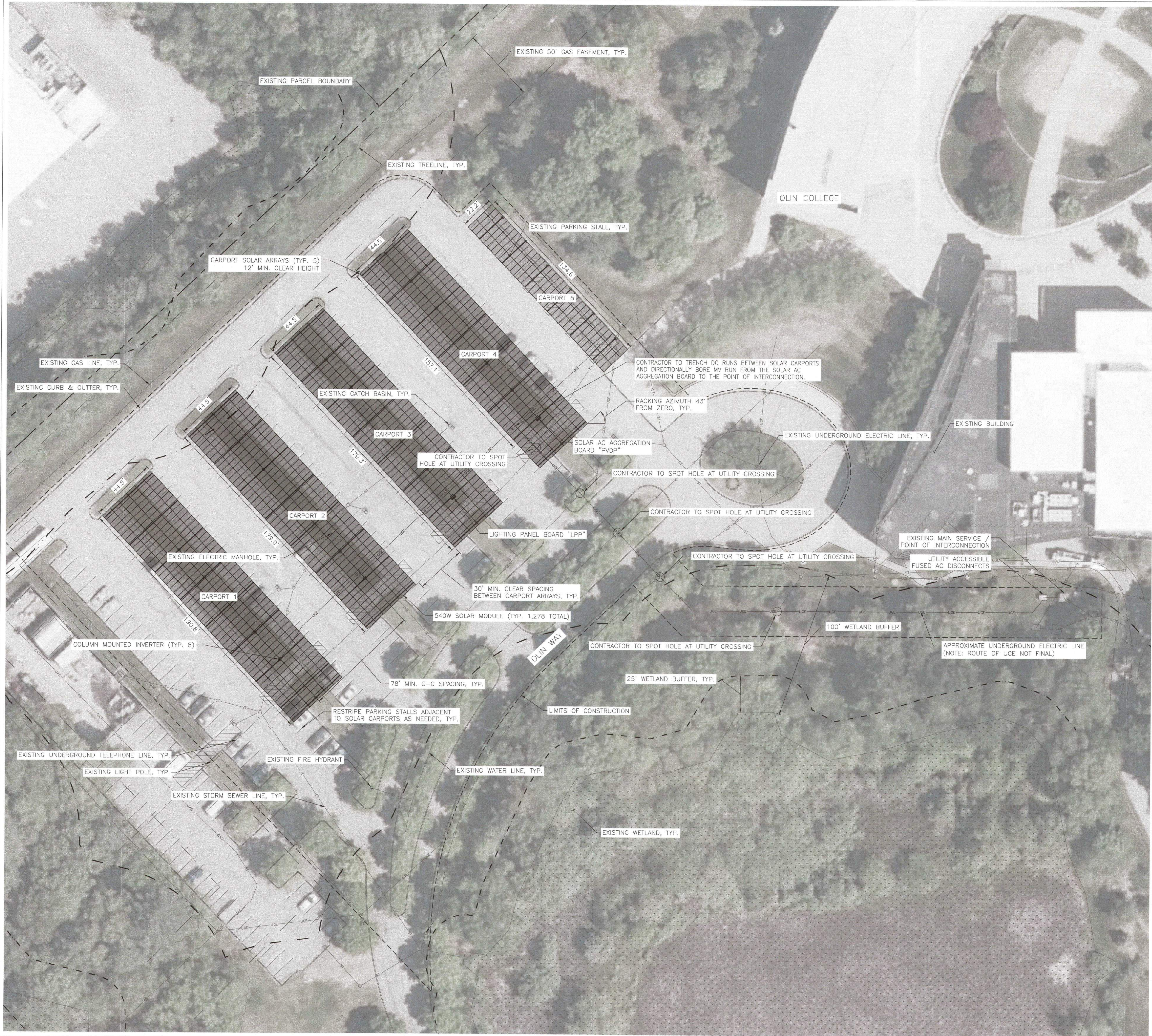
JOHN C. GANTNER, PE

SHEET NUMBER

C1.00



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SITE NOTES:
1. COLUMN LAYOUT AND QUANTITY TO BE DETERMINED ONCE THIRD-PARTY ENGINEERING FIRM BEGINS THEIR DESIGN OF THE SOLAR CARPORT STRUCTURE.

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ENGINEER

REV	DATE	ISSUANCE	DESCRIPTION
0	02/24/2023	INTERCONNECTION	DRAWING LIMITED
1	03/31/2023	ISSUE FOR ZONING PERMIT	ORIGINAL ISSUANCE

PROJECT NAME
OLIN WAY SOLAR
1000 OLIN WAY
NEEDHAM, MA 02492
(42.292826, -71.265995)

SHEET NAME
SITE GEOMETRY PLAN

DESIGNED BY
WMM

CHECKED BY
MSA

SCALE
AS NOTED

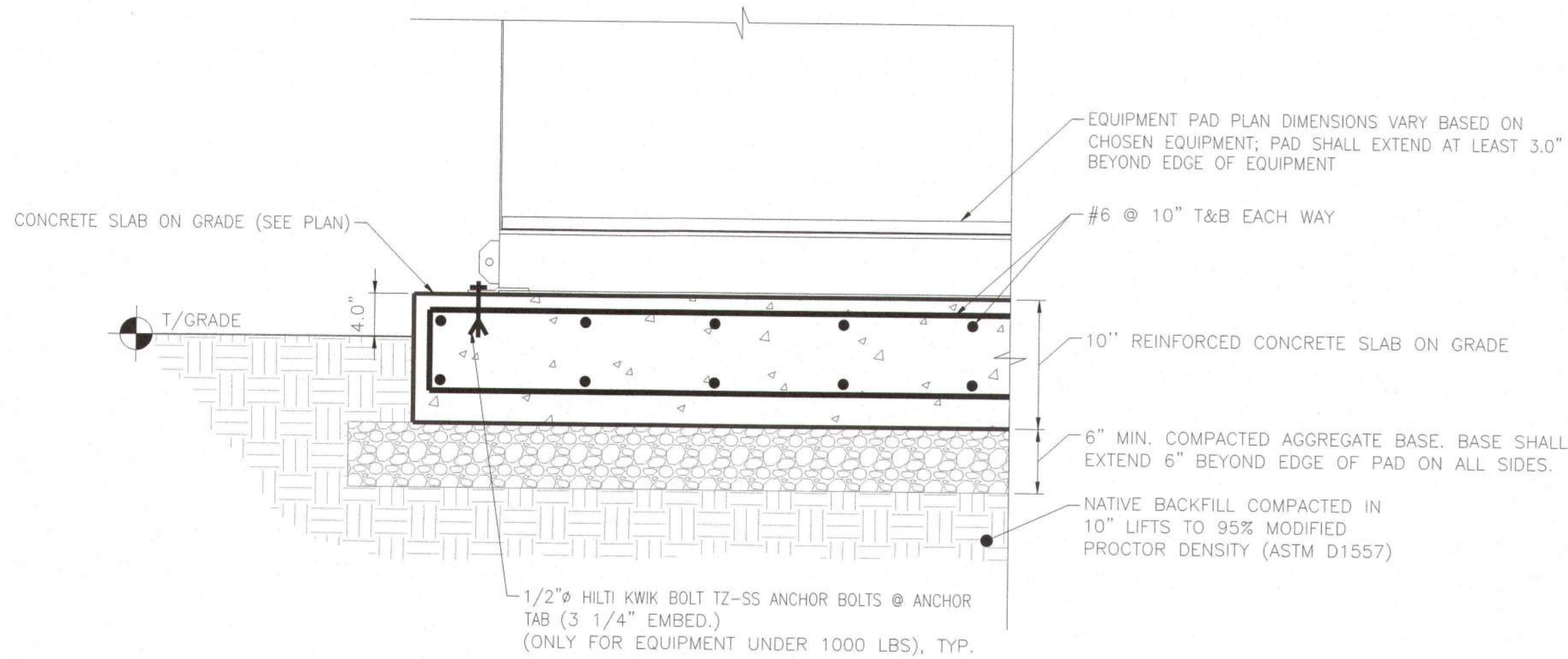
SHEET SIZE
24" X 36"

FOR: CIVIL
JOHN C. GANTNER, PE
SHEET NUMBER

C2.00

3/31/23

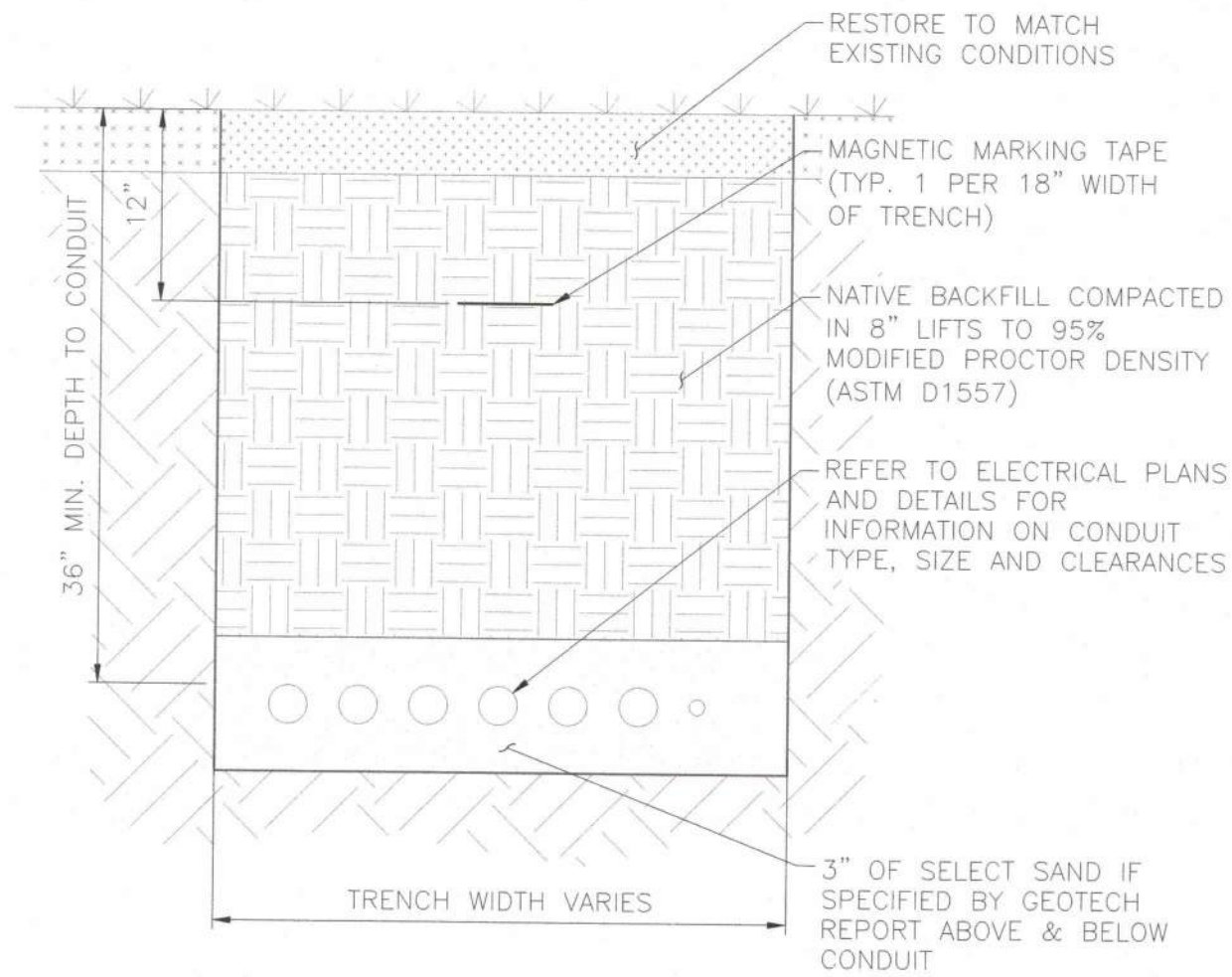
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NOTES:
1. CONTRACTOR SHALL ENSURE EQUIPMENT PAD DIMENSIONS SATISFY ELECTRICAL EQUIPMENT SIZES AND REQUIRED CLEARANCES PRIOR TO BEGINNING PAD PREPARATION WORK.

1 CONCRETE EQUIPMENT PAD

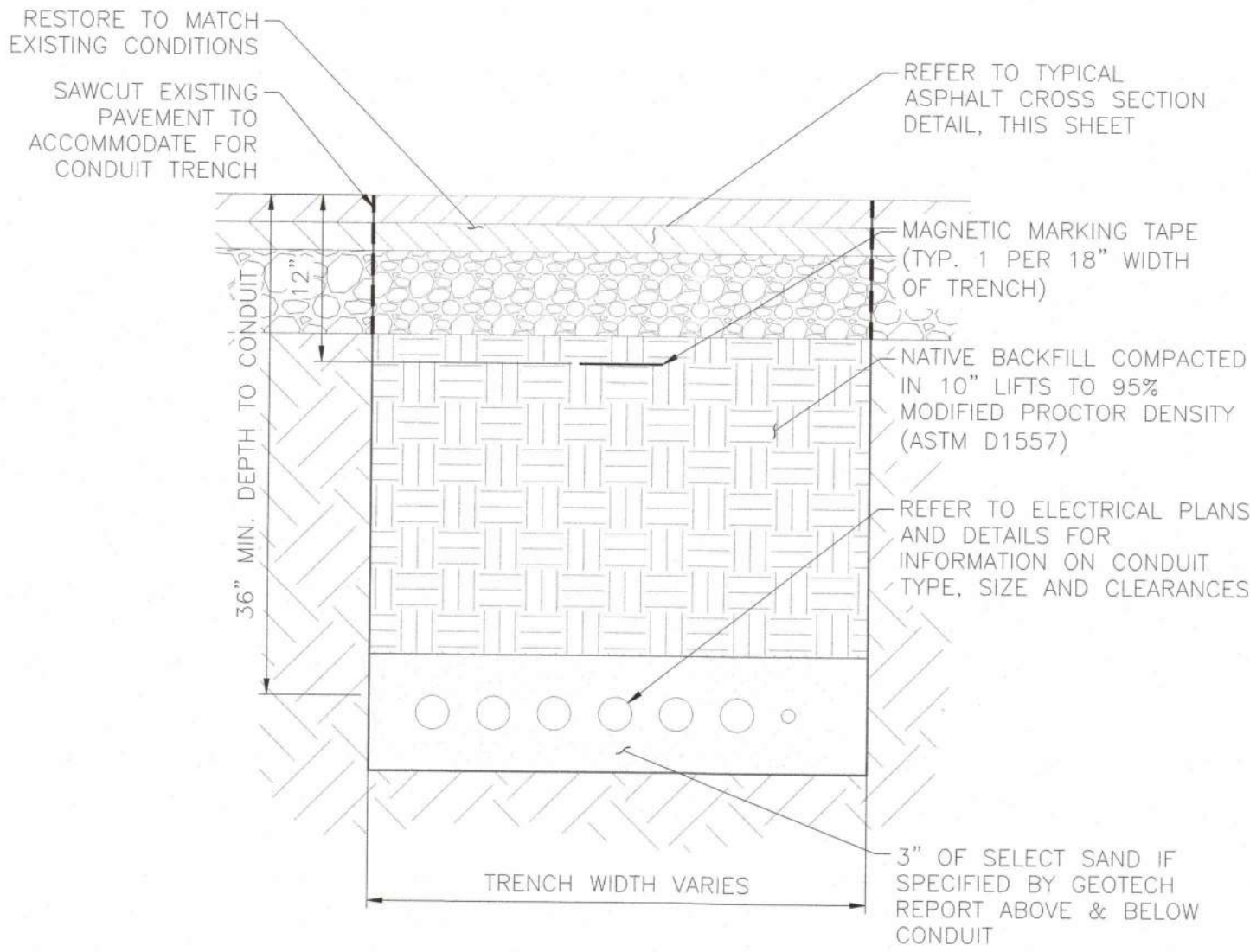
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NOTES:
1. TOPSOIL SHOULD BE SET ASIDE AND ONLY USED TO TOP OFF AREAS WHERE VEGETATION IS PROPOSED. ALL TOPSOIL SHALL BE COMPACTED TO 85% PER THE MODIFIED PROCTOR DENSITY TEST (ASTM D1557).
2. ONCE ALL ELECTRICAL CONDUITS OR CONDUCTORS ARE IN PLACE, RE-COMPACT THE DISTURBED NATIVE SOIL IN 8" LIFTS TO 95% PER THE MODIFIED PROCTOR DENSITY TEST (ASTM D1557). BACKFILL SHALL BE SAND OR SCREENED EARTH FREE OF STONES OR SHARP OBJECTS FOR THE FIRST SIX INCHES ABOVE THE CONDUIT.
3. ONSITE NON-ORGANIC SOILS ARE SUITABLE FOR USE AS BACKFILL. CONTRACTOR TO ENSURE THAT THE BOTTOM OF THE TRENCH MUST BE FREE OF LOOSE OR PROJECTING STONES AND DEBRIS CAPABLE OF DAMAGING CONDUIT OR CONDUCTORS. REFER TO EARTHWORK SPECIFICATIONS AND THE GEOTECHNICAL REPORT FOR MORE INFORMATION.
4. REFER TO ELECTRICAL PLANS AND DETAILS FOR INFORMATION ON CONDUIT TYPES, SIZES AND CLEARANCES.

2 CONDUIT TRENCH DETAIL

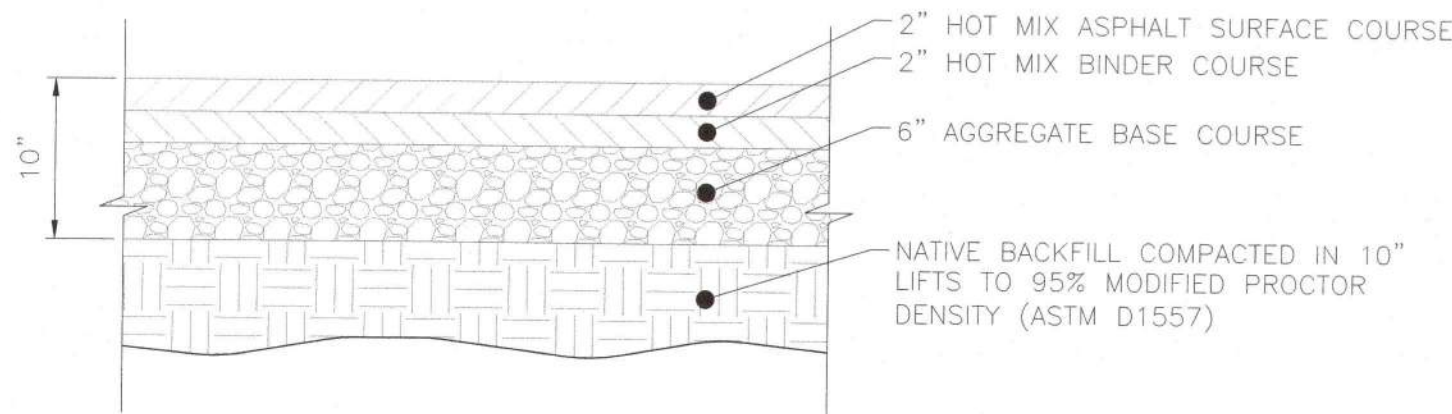
SCALE: 1" = 1'



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2. ONCE ALL ELECTRICAL CONDUITS OR CONDUCTORS ARE IN PLACE, RE-COMPACT THE DISTURBED NATIVE SOIL IN 8" LIFTS TO 95% PER THE MODIFIED PROCTOR DENSITY TEST (ASTM D1557).
3. ONSITE NON-ORGANIC SOILS ARE SUITABLE FOR USE AS BACKFILL. CONTRACTOR TO ENSURE THAT SOILS ARE FREE OF DEBRIS CAPABLE OF DAMAGING CONDUIT OR CONDUCTORS. REFER TO EARTHWORK SPECIFICATIONS AND THE GEOTECHNICAL REPORT FOR MORE INFORMATION.
4. CONTRACTOR TO INSTALL ASPHALT PER TYPICAL ASPHALT CROSS SECTION DETAIL.
5. REFER TO ELECTRICAL PLANS AND DETAILS FOR INFORMATION ON CONDUIT TYPES, SIZES AND CLEARANCES.

3 CONDUIT TRENCH DETAIL IN ASPHALT

SCALE: 1" = 1'



NOTES:
1. EXISTING ASPHALT CROSS SECTION SHOULD BE REPLACED IN KIND.

4 TYPICAL ASPHALT CROSS SECTION

SCALE: 1" = 1'

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REV	DATE	ISSUANCE	DESCRIPTION
0	02/24/2023	INTERCONNECTION	DRAWING OMITTED
1	03/31/2023	ISSUE FOR ZONING PERMIT	ORIGINAL ISSUANCE

PROJECT NAME

OLIN WAY SOLAR

1000 OLIN WAY

NEEDHAM, MA 02492

(42.292826, -71.266995)

SHEET NAME

SITE DETAILS

DESIGNER WMM

REVIEWER MSA

SCALE AS NOTED

SHEET SIZE 24" X 36"

STAMP

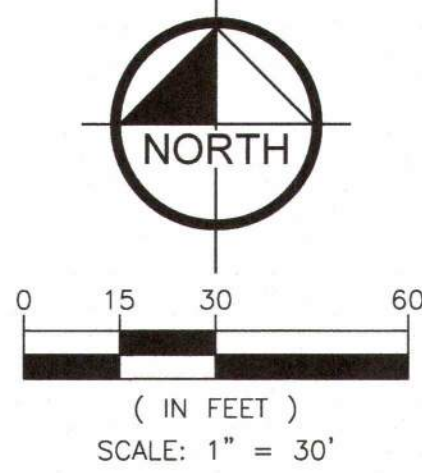
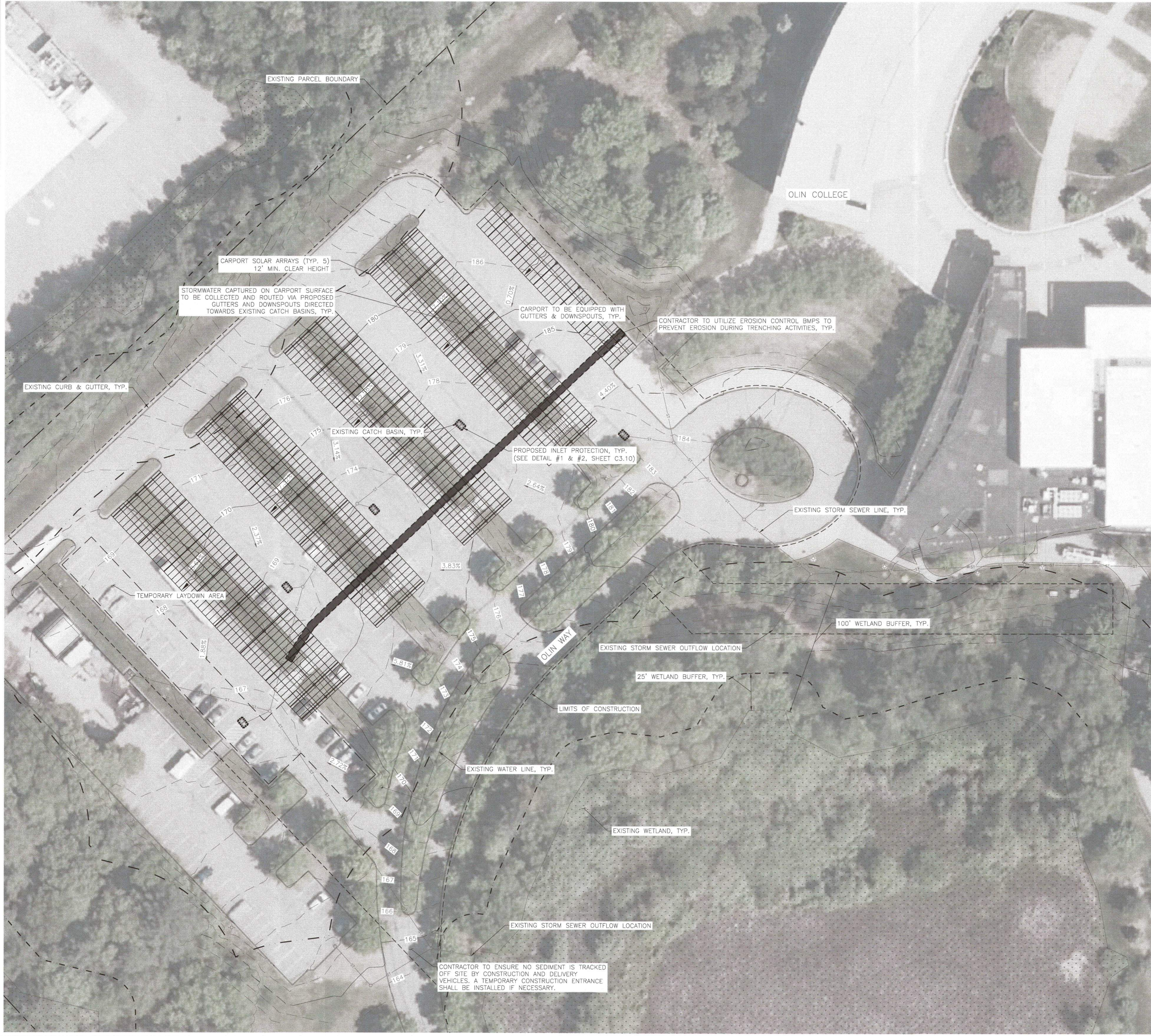
FOR: CIVIL

JOHN C. GANTNER, PE

SHEET NUMBER

C2.10

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DESCRIPTION OF SCOPE OF WORK:

THE SCOPE OF THIS PROJECT INCLUDES THE REMOVAL OF LIGHT POLE FIXTURES AND THE INSTALLATION OF SOLAR CARPORT STRUCTURES. SITE DISTURBANCE WILL BE LIMITED TO SMALL ISOLATED AREAS OF THE SITE.

EROSION AND SEDIMENTATION CONTROL WILL BE MOST CRITICAL DURING DEMOLITION AND DURING TRENCHING AND BACKFILLING OPERATIONS FOR THE UNDERGROUND ELECTRICAL CONDUIT AND FOUNDATION INSTALLATION.

EROSION CONTROL NOTES:

1. THE SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SOIL AND SEDIMENTATION CONTROL OF LOCAL GOVERNMENT AGENCIES, PROCEDURES AND STANDARDS FOR URBAN SOIL AND SEDIMENTATION CONTROL IN MASSACHUSETTS, AND MASSDEP STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION.
2. A COPY OF THE APPROVED EROSION SEDIMENTATION CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
3. PRIOR TO COMMENCING LAND-DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING BUT NOT LIMITED TO, ADDITIONAL PHASES OF DEVELOPMENT AND OFF-SITE BORROW OR WASTE AREAS) A SUPPLEMENTARY EROSION CONTROL PLAN SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
4. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE ENGINEER.
5. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS. DEWATERING DIRECTLY INTO THE FIELD TILES OR STORM SEWER IS PROHIBITED.
6. PERMANENT OR TEMPORARY SOIL STABILIZATION MUST BE APPLIED WITHIN 15 CALENDAR DAYS OF THE END OF ACTIVE SOIL DISTURBANCE.
7. FILTER BASKETS SHALL BE INSTALLED AND MAINTAINED AROUND THE INLET AND OUTLET STRUCTURES AS SPECIFIED. THIS INCLUDES ANY STRUCTURE IN THE VICINITY OF ALL TRENCHING AND BACKFILLING OPERATIONS.
8. SEDIMENTATION BASINS, BARRIERS, AND ALL APPROPRIATE EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SORT OF SITE DISTURBING.
9. INLETS NOT SHOWN ON THE PLANS THAT ARE IMPACTED BY THE CONSTRUCTION SHALL HAVE INLET PROTECTION INSTALLED.
10. ALL EXCAVATION FROM SITE TRENCHING OPERATIONS SHALL BE PROTECTED TO ELIMINATE EROSION & SEDIMENTATION FROM ENTERING THE SEWER SYSTEM OR FROM LEAVING THE SITE.
11. STOCKPILE LOCATION SHALL BE CHOSEN TO MINIMIZE THE POTENTIAL FOR EROSION.
12. THE CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES WEEKLY AND AFTER ANY STORM EVENT IN EXCESS OF 1/2". THE INSPECTION REPORT SHALL BE KEPT ON SITE AND FILLED OUT FOR EACH COMPLETED INSPECTION.
13. SHOULD THE VOLUME, VELOCITY, SEDIMENT LOAD, OR PEAK FLOW RATES OF STORMWATER RUNOFF TEMPORARILY INCREASE DURING CONSTRUCTION, THEN ADDITIONAL MEASURES TO PROTECT ADJACENT PROPERTIES SHALL BE UNDERTAKEN.
14. THE TEMPORARY EROSION MEASURES SHALL REMAIN IN PLACE UNTIL ALL THE PERMANENT EROSION CONTROL ITEMS ARE FULLY FUNCTIONAL.
15. GRAVELED ROADS, ACCESS DRIVES, PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH, AND VEHICLES WASHDOWN FACILITIES, SHALL BE PROVIDED TO PREVENT THE DEPOSIT OF SOIL FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SOIL REACHING A PUBLIC OR PRIVATE ROADWAY SHALL BE REMOVED CONTINUOUSLY.
16. EXCAVATED SOILS SHALL BE HAULED OFF IMMEDIATELY; IF STOCK PILING IS REQUIRED, SURROUND STOCKPILE WITH EROSION PROTECTION AND COVER DURING RAIN EVENTS.

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REV	DATE	ISSUANCE	DESCRIPTION
0	03/31/2023	ISSUE FOR ZONING PERMIT	DESIGN CONTROLLED ORIGINAL ISSUANCE
1	03/31/2023	ISSUE FOR ZONING PERMIT	

PROJECT NAME

OLIN WAY SOLAR
1000 OLIN WAY
NEEDHAM, MA 02492
(42.292826, -71.265995)

SHEET NAME

EROSION CONTROL & STORMWATER MANAGEMENT PLAN

DESIGNER	WMM	SCALE	AS NOTED
REVIEWER	MSA	SHEET SIZE	24" X 36"

STAMP

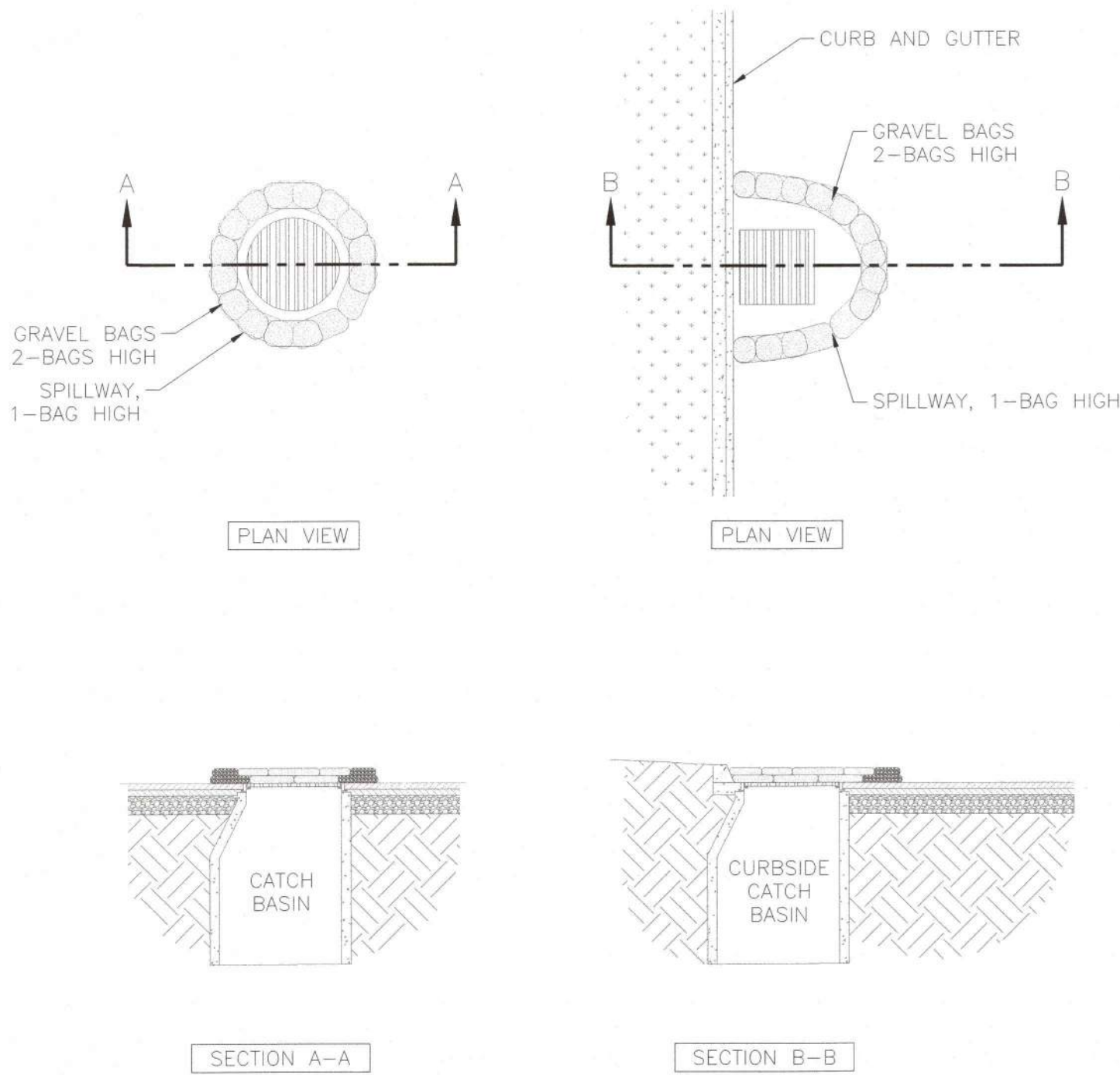
FOR: CIVIL

JOHN C. GANTNER, PE

SHEET NUMBER

C3.00

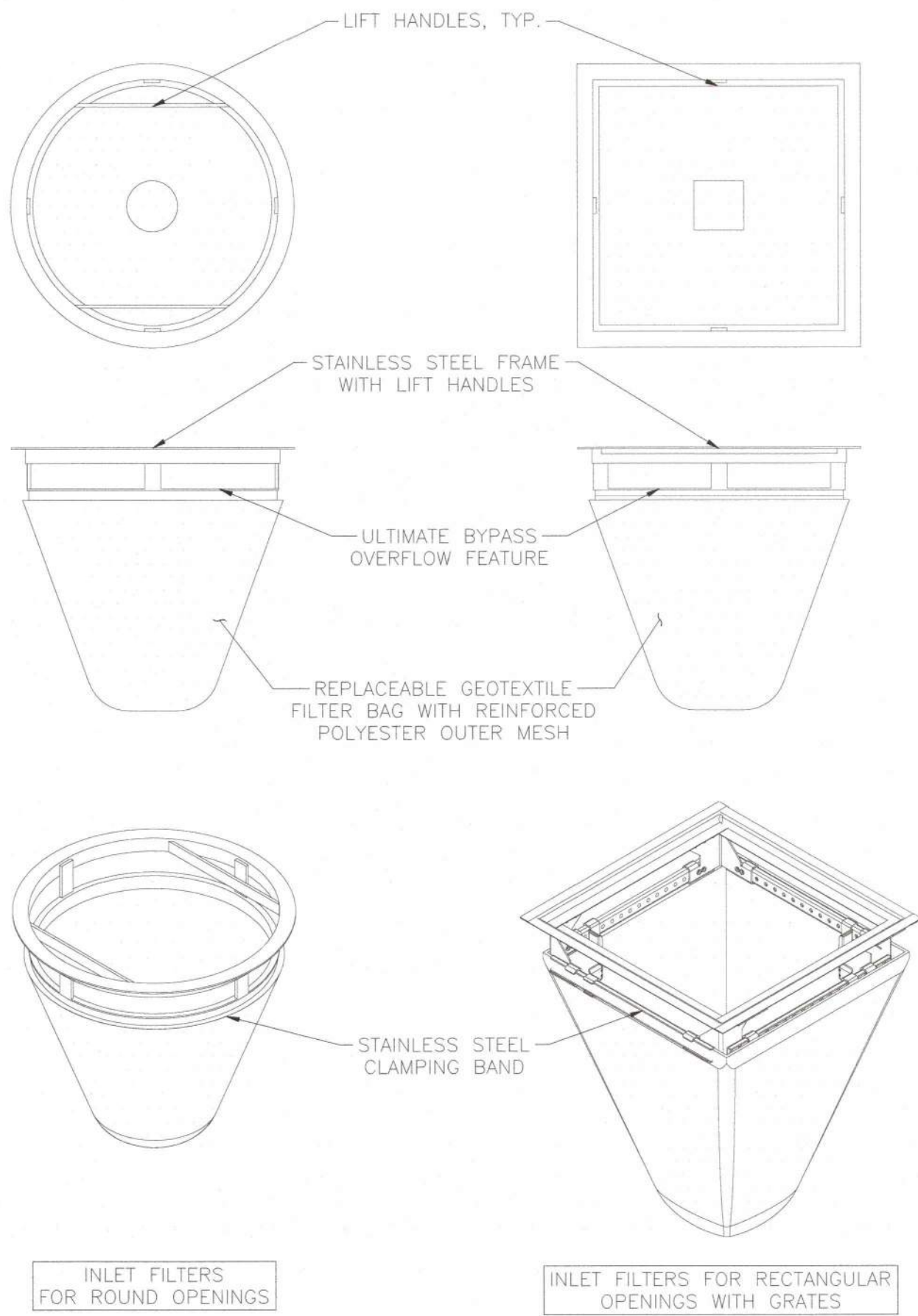
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- NOTES:
1. CONTRACTOR TO INSTALL TEMPORARY GRAVEL BAGS AROUND ON ALL STORM SEWER CATCH BASINS AND INLETS.
 2. INLET PROTECTION MEASURES MUST BE INSTALLED TO ENSURE THAT FLOWS DO NOT BYPASS THE INLET PROTECTION AND ENTER THE STORM DRAIN WITHOUT TREATMENT.
 3. CHECK GRAVEL BAGS FOR PROPER ARRANGEMENT AND DISPLACEMENT. REMOVE THE SEDIMENT BEHIND THE BARRIER WHEN IT REACHES ONE-THIRD THE HEIGHT OF THE BARRIER.
 4. INLET PROTECTION MUST BE REMOVED AND PROPERLY DISPOSED OF WHEN THE DRAINAGE AREA FOR THE INLET HAS REACHED FINAL STABILIZATION.
 5. GRAVEL BAG INLET PROTECTION IS NOT APPLICABLE IN AREAS WITH HIGH SILTS AND CLAYS WITHOUT ADDITIONAL FILTER FABRIC

1 INLET PROTECTION — GRAVEL BAG

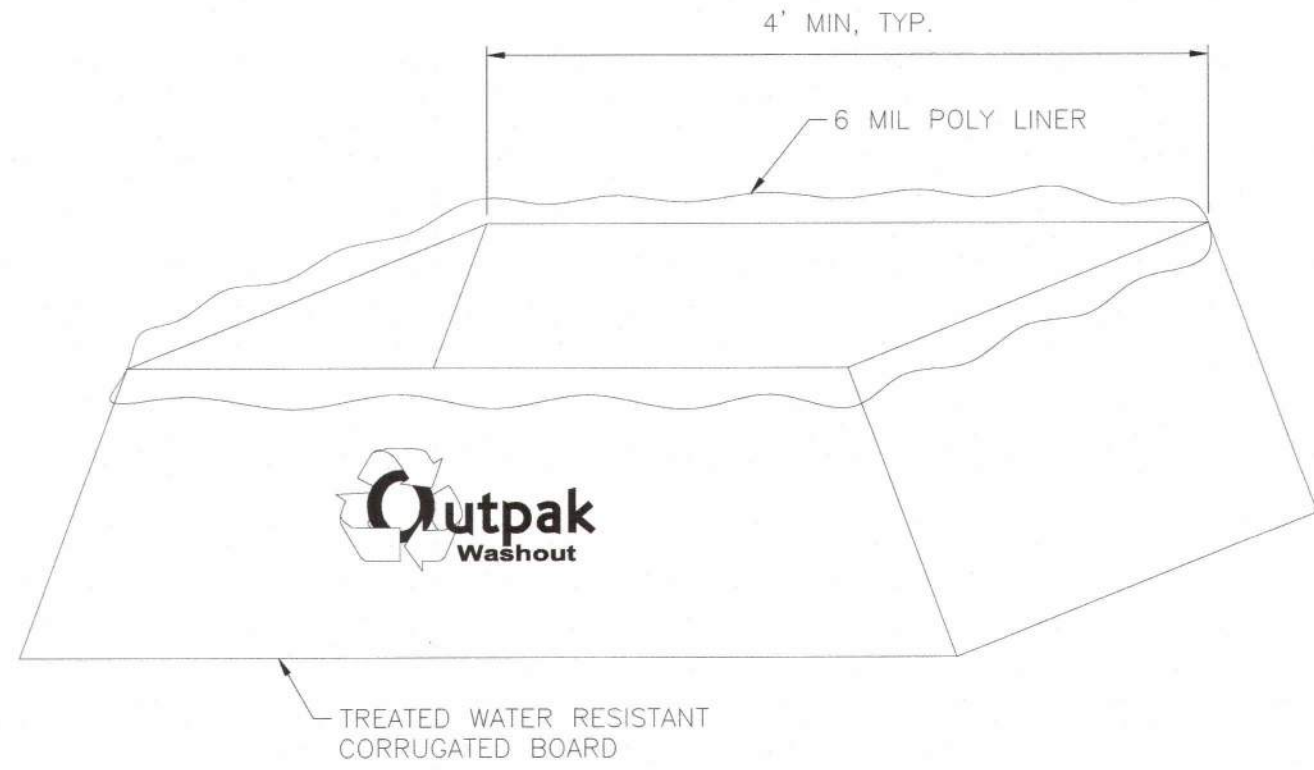
SCALE: 1" = 2'



- NOTES:
1. CONTRACTOR TO INSTALL TEMPORARY INLET SEDIMENT FILTER ON ALL STORM SEWER CATCH BASINS AND INLETS.
 2. INLET PROTECTION MEASURES MUST BE INSTALLED TO ENSURE THAT FLOWS DO NOT BYPASS THE INLET PROTECTION AND ENTER THE STORM DRAIN WITHOUT TREATMENT.
 3. PROPRIETY INLET PROTECTION DEVICES SHOULD BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
 4. INLET PROTECTION MUST BE REMOVED AND PROPERLY DISPOSED OF WHEN THE DRAINAGE AREA FOR THE INLET HAS REACHED FINAL STABILIZATION.

2 INLET PROTECTION — FILTER BASKET

SCALE: 1" = 1'



- NOTES:
1. CONTRACTOR TO PROVIDE OUTPAK CORRUGATED CONCRETE WASHOUT OR APPROVED EQUAL.
 2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON THIS PROJECT.
 3. SIGNS SHALL BE PLACED AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT.
 4. THE CONCRETE WASHOUT AREA WILL BE REPLACED AS NECESSARY TO MAINTAIN CAPACITY FOR WASTE CONCRETE AND OTHER LIQUID WASTE.
 5. WASHOUT RESIDUE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
 6. DO NOT MIX EXCESS AMOUNTS OF FRESH CONCRETE OR CEMENT ON-SITE.
 7. DO NOT WASH OUT CONCRETE TRUCKS INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.
 8. AVOID DUMPING EXCESS CONCRETE IN NON-DESIGNATED DUMPING AREAS.
 9. LOCATE WASHOUT AREA AT LEAST 50' (15 METERS) FROM STORM DRAINS, OPEN DITCHES, OR WATERBODIES.
 10. WASH OUT WASTES INTO THE WASHOUT AS SHOWN WHERE THE CONCRETE CAN SET, BE BROKEN UP, AND THEN DISPOSED OF PROPERLY.

3 CONCRETE WASHOUT

SCALE: 1" = 1'



ENGIE Distributed Solar & Storage

ENGIE North America Inc.
225 West Hubbard St. Suite 200
Chicago, IL 60654

DEVELOPER

SoCore Engineering

225 West Hubbard St. Suite 200
Chicago, IL 60654
1-877-SOCORE1

ENGINEER

REV.	DATE	ISSUANCE	DESCRIPTION	DESCRIPTION
0	02/24/2023	ISSUANCE	ISSUANCE	ISSUANCE
1	03/31/2023	ISSUANCE	ISSUANCE	ISSUANCE

PROJECT NAME
OLIN WAY SOLAR
1000 OLIN WAY
NEEDHAM, MA 02492
(42.292826, -71.265995)

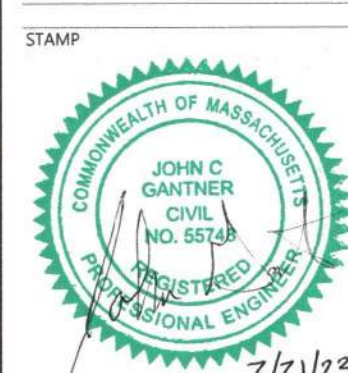
SHEET NAME
**EROSION CONTROL
DETAILS**

DESIGNER
WMW

REVIEWER
MSA

SCALE
AS NOTED

SHEET SIZE
24" X 36"



FOR: CIVIL
JOHN C. GANTNER, PE

SHEET NUMBER

C3.10

From: [Clayton Hutchinson](#)
To: [Daphne Collins](#)
Cc: [Deb Anderson](#)
Subject: RE: 1000 Olin Lane - ZBA Administrative Review - Comments due April 18, 2023
Date: Tuesday, April 18, 2023 4:58:38 PM
Attachments: [1000 Olin Lane - Conservation Review.pdf](#)

Hi Daphne,

Apologies for the late hour on this one. No wetland permitting is needed for the work as proposed, however, the existing drainage system discharges to a wetland area so Conservation Staff recommends the Applicant work with and comply with any requests from DPW/Engineer, as well as implement and maintain the erosion control measures as proposed.

Let me know if there is anything further I can provide!

-Clay

From: Daphne Collins <dcollins@needhamma.gov>
Sent: Tuesday, April 4, 2023 11:42 AM
To: David Roche <droche@needhamma.gov>; Mark Gluesing <mjgarchitect@verizon.net>; Tara Gurge <TGurge@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; Justin Savignano <jsavignano@needhamma.gov>; Tom Conroy <TConroy@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Elisa Litchman <elitchman@needhamma.gov>; Donald Anastasi <DAnastasi@needhamma.gov>; Jay Steeves <steevesj@needhamma.gov>; Ronnie Gavel <rgavel@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Clayton Hutchinson <chutchinson@needhamma.gov>; Deb Anderson <andersond@needhamma.gov>
Cc: Katie King <kking@needhamma.gov>; Kate Fitzpatrick <KFitzpatrick@needhamma.gov>; Henry Haff <hhaff@needhamma.gov>
Subject: 1000 Olin Lane - ZBA Administrative Review - Comments due April 18, 2023

Good Afternoon-

1000 Olin Lane (Olin College) – ENGIE Distributed Renewables Development LLC, applicant, is seeking a Special Permit Amendment to install a 480K AC solar carport array over the existing Main Lot at Olin College

Attached please find the application with its associated back-up documents for your information and review.

I appreciate your comments no later than **April 18, 2023** to allow time for the applicant to respond prior to the hearing.

If you have any questions, feel free to contact me.

Thank you,
Daphne

Daphne M. Collins

Zoning Specialist

Phone 781-455-7550, x 261

Web <https://www.needhamma.gov/>
<https://needhamma.gov/1101/Board-of-Appeals>
www.needhamma.gov/NeedhamYouTube

Town of Needham
Planning and Community Development
500 Dedham Avenue
Needham, MA 02492

Regular Office Hours: Mon-Wed 8:30am – 5:00pm

Remote Hours: Thurs 8:30am-5:00pm



TOWN OF NEEDHAM

**TOWN HALL
1471 Highland Avenue
Needham, MA 02492-2669**

Report of the Design Review Board

DATE: April 10, 2023

PROJECT: 1000 Olin Way, Olin College, Solar panel installation

The applicant presented the design for the installation of solar panel arrays over the existing parking area.

The parking area is tiered with approximately 5' of elevation change between parking sections. The panels will be supported by posts set in the planting beds. The panels are translucent so it is expected that the existing juniper bushes in the beds will get sufficient light to continue. If they do not, the applicant stated they would transfer to lower light, native plants. The College is working to limit the amount of grass lawn in their landscaping. The DRB approves of the planting approach.

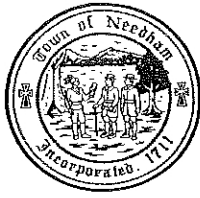
The Board discussed runoff drainage controls. There will be gutters at the lower edge of the arrays, with leaders back to downspouts attached to the structural posts. These will flow to an existing storm drain system.

The Board discussed the solar power connections to transformers or other equipment. The plan is to connect to Olin's existing electrical supply system hardware.

The solar installation will require removal of existing pole mounted lighting. It will be replaced by lighting installed under the solar array. The final fixture selection has not been made. The applicant showed examples of other lighting installations they have done. The Board agreed with the general approach, and that it will reduce the overall light spillage that might occur.

The Board members applaud the College for their efforts towards energy efficiency and approve the design of the solar panel installation.

End of Comments



**TOWN OF NEEDHAM, MASSACHUSETTS
PUBLIC WORKS DEPARTMENT
500 Dedham Avenue, Needham, MA 02492
Telephone (781) 455-7550 FAX (781) 449-9023**

April 14, 2023

Needham Zoning Board of Appeals
Needham Public Safety Administration Building
Needham, MA 02492

RE: Major Project Site Plan Special Permit – Solar Parking Canopy
1000

Dear Members of the Board,

The Department of Public Works has completed its review for the proposed solar parking canopy. The applicant is requesting permission to build a 480kW AC solar carport canopy over the existing main parking lot.

1. ZBA Application for Hearing Dated 04/03/23 by Engie Distributed Renewables Development , LLC
2. Preliminary SWPPP Report Prepared by SoCore Engineering Dated 03/31/23
3. Project Renderings Prepared by Engie Renewable consisting of 3 Sheets
4. Plan set prepared by Engie Distributed Solar & Storage & SoCore Engineering Dated 03/31/23 consisting of 9 sheets

Our comments and recommendations are as follows:

- In accordance with the Town of Needham Stormwater Bylaw, the proposed new structure requires a minimum combined volumetric capacity of 1 inch over the entire impervious area of the addition to be recharged. The plans should be revised, prior to receiving a building permit, showing the calculations that the infiltration system is sized to contain a minimum of 1-inch of the total impervious area of the addition for infiltration.

If you have any questions regarding the above, please contact our office at 781-455-7538.

Truly yours,

Thomas Ryder
Town Engineer

Daphne Collins

From: Tara Gurge
Sent: Tuesday, April 18, 2023 6:47 PM
To: Daphne Collins
Subject: RE: 1000 Olin Lane - ZBA Administrative Review - Comments due April 18, 2023

Daphne –

The Public Health Division conducted our Zoning Board review for the property located at #1000 Olin Lane and have no comments to share at this time.

Thanks,



TARA E. GURGE, R.S., C.E.H.T., M.S. (she/her/hers)
ASSISTANT PUBLIC HEALTH DIRECTOR
Needham Public Health Division
Health and Human Services Department
178 Rosemary Street
Needham, MA 02494
Ph- (781) 455-7940; Ext. 211/Fax- (781) 455-7922
Mobile- (781) 883-0127
Email - tgurge@needhamma.gov
Web- www.needhamma.gov/health



please consider the environment before printing this email

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[Follow Needham Public Health on Twitter!](#)

From: Daphne Collins <dcollins@needhamma.gov>
Sent: Tuesday, April 18, 2023 11:26 AM
To: David Roche <droche@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; Justin Savignano <jsavignano@needhamma.gov>; Tom Conroy <TConroy@needhamma.gov>; Donald Anastasi <DA Anastasi@needhamma.gov>; Jay Steeves <steevesj@needhamma.gov>; Ronnie Gavel <rgavel@needhamma.gov>; Clayton Hutchinson <chutchinson@needhamma.gov>; Deb Anderson <andersond@needhamma.gov>; Tara Gurge

Daphne Collins

From: John Schlittler
Sent: Tuesday, April 4, 2023 11:51 AM
To: Daphne Collins
Subject: RE: 1000 Olin Lane - ZBA Administrative Review - Comments due April 18, 2023

Police Department has no issues with this

From: Daphne Collins <dcollins@needhamma.gov>
Sent: Tuesday, April 4, 2023 11:42 AM
To: David Roche <droche@needhamma.gov>; Mark Gluesing <mjgarchitect@verizon.net>; Tara Gurge <TGurge@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; Justin Savignano <jsavignano@needhamma.gov>; Tom Conroy <TConroy@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Elisa Litchman <elitchman@needhamma.gov>; Donald Anastasi <DAnastasi@needhamma.gov>; Jay Steeves <steevesj@needhamma.gov>; Ronnie Gavel <rgavel@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Clayton Hutchinson <chutchinson@needhamma.gov>; Deb Anderson <andersond@needhamma.gov>
Cc: Katie King <kking@needhamma.gov>; Kate Fitzpatrick <KFitzpatrick@needhamma.gov>; Henry Haff <hhaff@needhamma.gov>
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If you have any questions, feel free to contact me.

Thank you,
Daphne

Daphne M. Collins

Zoning Specialist

Phone 781-455-7550, x 261

Web <https://www.needhamma.gov/>

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www.needhamma.gov/NeedhamYouTube

Town of Needham
Planning and Community Development
500 Dedham Avenue
Needham, MA 02492

Regular Office Hours: Mon-Wed 8:30am – 5:00pm

Remote Hours: Thurs 8:30am-5:00pm

RECEIVED
TOWN CLERK
NEEDHAM

TOWN OF NEEDHAM
MASSACHUSETTS
BOARD OF APPEALS
AUGUST 24, 2000

'00 SEP 25 P4:57

FRANKLIN W. OLIN COLLEGE OF ENGINEERING

Upon the application of Franklin W. Olin College of Engineering, 1735 Great Plain Avenue, Needham, Mass., owner, to the Board of Appeals for a special permit under Section 5.1.1.5 of the Zoning By-law to waive strict adherence to Sections 5.1.2 (parking) and 5.1.3 (design) of the By-law for property located at 1735 Great Plain Avenue, a public hearing was held at the Stephen Palmer Senior Center, 83 Pickering Street, Needham, Mass. on Thursday, August 24, 2000, pursuant to notice thereof published in a local newspaper and mailed to all parties in interest.

Chairman Tedoldi requested associate member Susan Glazer to serve in place of member Jon Schneider who was absent.

Appearing on behalf of the applicant was Robert C. Davis, Esq., Goulston & Storrs, 400 Atlantic Avenue, Boston, Mass. and Duncan Murdoch who submitted a rendering of the subject premises.

Mr. Davis pointed out the three parking areas on the rendering; buildings on the campus are being constructed in phases and the college is moving forward with Phase I consisting of four buildings. Mr. Davis continued that the campus will be residential in nature and enrollment will reach 188 students although fewer students will begin. The building in question at this time is the proposed auditorium which would increase the number of parking spaces needed from 341 to 441. The Building Inspector referred the applicant to the Board to determine if, in fact, the auditorium should be considered when calculating the required number of parking spaces.

Mr. Davis pointed out that the campus and the parking lots are separated by a gas line and the Sudbury Aqueduct. The larger parking Lot A is to the rear of the campus and provides 312 marked spaces. Near the entrance is Lot B which is a gravel lot and provides 78 spaces; this lot will remain as it is and will not be striped. Parking Lot B, a third lot, will accommodate 68 parking spaces; this lot meets all the criteria of the Zoning By-law except it is located in a separate portion of the campus from Lot A.

LEGAL NOTICE
TOWN OF NEEDHAM
BOARD OF APPEALS
NOTICE OF HEARING

Public notice is hereby given that Franklin W. Olin College of Engineering, 1735 Great Plain Avenue, Needham, Mass., owner, has made application to the Board of Appeals for a special permit under Section 5.1.1.5 of the Zoning By-law to waive strict adherence to Sections 5.1.2 (parking) and 5.1.3 (design) of the By-law for property located at 1735 Great Plain Avenue.

Upon said notice, a public hearing will be held at the Stephen Palmer Senior Center, 83 Pickering St.

Mr. Davis stated that the college believes that the parking lots provided at this time will be sufficient for a full campus.

In reply to a query from the Board as to whether there is any arrangement with Babson College to use part of its parking lots, Mr. Davis stated that the two schools are independent and there will be no vehicular interchange. The Board also inquired what uses are anticipated for the auditorium. Mr. Davis replied that the auditorium is intended to be used for college events; most events will be held in the evening when staff and faculty will not be there. Mr. Davis stated that as long as the college uses the auditorium for campus purposes, in his opinion, additional parking spaces will not be needed; for purposes of this application, the auditorium will be devoted to college use. He added that it will be five years before the college reaches the minimum demand for all the parking lots.

The Board received a letter from The West Needham Civic Association dated August 21, 2000, signed by Mark Gluesing, President which spoke of concerns about the parking. Appearing on behalf of the Association was Daniel Lintz, 71 Fuller Brook Avenue who stated that it would be useful for the applicant to provide an overall comprehensive plan for parking. Mr. Lintz inquired if the gravel parking lot could have wheelstops installed which Mr. Davis agreed to.

Mr. Davis also pointed out that after the college is fully operational, there is a possibility that the larger parking Lot A could be made into a single level parking garage.

Others speaking were Richard Dober, AICP, Dober, Lidsky, Craig and Associates, Inc., Campus and Facility Planning Consultants, Belmont, Mass. who stated that there is adequate parking available for Phase I; Hal Roft, 60 MacIntosh Avenue was concerned about traffic spilling out onto private streets.

The Planning Board in its letter of August 16, 2000, made no comment on this application. The hearing closed at 9:50 p.m. and the Board proceeded to deliberate.

Decision

On the basis of the evidence presented at the hearing on the application of Franklin W. Olin College of Engineering (the "applicant") for a special permit under Section 5.1.1.5 of the Zoning By-law to waive strict adherence to Sections 5.1.2 (parking) and 5.1.3 (design) of the By-law for property located at 1735 Great Plain Avenue, the Board makes the following findings:

1. The applicant's building plans as indicated by the plot plan prepared by Dana J. Standley, professional land surveyor, dated August 1, 2000, and by letter dated August 10, 2000, both incorporated by reference, will commence with a "Phase I" development requiring 341 parking spaces. Three lots, shown as Lots A, B, and C on the submitted plot plan will provide a total of 458 parking spaces.

2. The applicant seeks relief from the strict adherence to the By-law in that Lot B, containing 68 parking spaces, and Lot C, containing 78 spaces, are more than 300 feet from the northerly lot upon which are sited the college buildings and represent the principal use. The Board finds that this condition is caused by the Sudbury Aqueduct which is owned in fee by the Massachusetts Water Resources Authority and which separates Lots B and C from the land owned by the applicant on the northerly side of the aqueduct.

This is a special circumstance and does not warrant strict adherence to the design requirement under Section 5.1.3(m) which requires that off-street parking shall be located on either the same lot as the principal use or uses or on a lot within 300 feet which is under the same ownership.

3. Lot C has been designed as a gravel lot to help reduce storm water runoff and therefore, does not meet the provision of Section 5.1.1.1 which calls for paved parking spaces. The applicant seeks relief from the requirements of Section 5.1.3(f) which regulates parking space dimensions and though there is enough room in the lot to meet the parking size requirements, the parking spaces cannot be striped due to the gravel section.

The Board determines that spaces may be delineated with the use of properly spaced and anchored wheelstops.

4. The issuance of this special permit will not be detrimental to the Town or to the general character and visual appearance of the surrounding neighborhood and abutting uses, and is consistent with the intent of the Zoning By-law

Therefore, on the basis of the foregoing findings, following due and open deliberation, by unanimous vote duly made and seconded, the Board grants the applicant a special permit under Section 5.1.1.5 of the Zoning By-law to waive strict adherence to Sections 5.1.2 (parking) and 5.1.3 (design) of the By-law for property located at 1735 Great Plain Avenue subject to the following conditions:

1. Written permission from the Board of Appeals will be necessary for auditorium use for events not directly related to the educational function of the school which may exceed the permitted parking capacity.

2. Wheel stops shall be placed on Lot C to delineate the parking spaces.

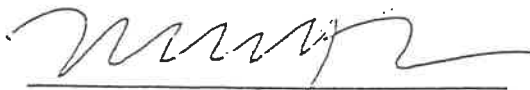
3. Access restraints, except for emergency purposes, shall be placed on connecting streets abutting Babson College.

4. There shall be no college related parking on the abutting off-campus residential streets.

5. Failure to comply with each and any of the foregoing conditions at any time may constitute cause for a modification of this special permit at a public hearing, with notice to the applicant and with such other notice as the Board, in its sole and exclusive discretion, shall deem due and sufficient.



William J. Tedoldi, Chairman



Michael A. Crowe, Member


Susan M. Glazer, Associate Member

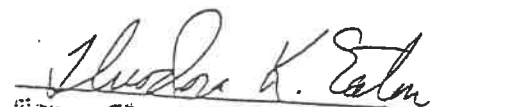
This is to certify that no appeal has been filed within the 20-day statutory appeal period.

Date October 17, 2000


Theodore K. Eaton
Town Clerk

A True Copy

ATTEST:


Theodore K. Eaton
Town Clerk of Needham, Mass.



2023 ZBA Meeting Schedule & Deadlines

The ZBA Meets on the 3rd Thursday of each Month*
at 7:30pm

on

Zoom Link: <https://us02web.zoom.us/j/86964757241>

Alternate Zoom Link##: <https://us02web.zoom.us/j/87614087841>

Meeting Date	Location	Deadline
Thursday, January 19, 2023	Zoom	Monday, December 19, 2022
Thursday, February 16, 2023	Zoom	Monday, January 23, 2023
Thursday, March 16, 2023	Zoom	Tuesday, February 21, 2023
Thursday, April 27, 2023*	Zoom##	Monday, April 3, 2023
Thursday, May 18, 2023	Zoom	Monday, April 24, 2023
Thursday, June 15, 2023	Zoom	Monday, May 22, 2023
Thursday, July 20, 2023	Zoom	Monday, June 26, 2023
Thursday, August 17, 2023	Zoom	Monday, July 24, 2023
Thursday, September 21, 2023	Zoom	Monday, August 28, 2023
Thursday, October 19, 2023	Zoom	Monday, September 25, 2023
Thursday, November 16, 2023	Zoom	Monday, October 23, 2023
Thursday, December 14, 2023*	Zoom	Monday, November 27, 2023

*unless there is a holiday and/or scheduling conflict.

Location:

as allowed until March 31, 2025 the ZBA may meet exclusively on Zoom or may convene in person for a selective meeting determined by the Board when necessary with continued Zoom public connection.

In-Person Location**:

Charles River Room
Public Services Administration Building (PSAB)
500 Dedham Avenue, Needham, MA 02492