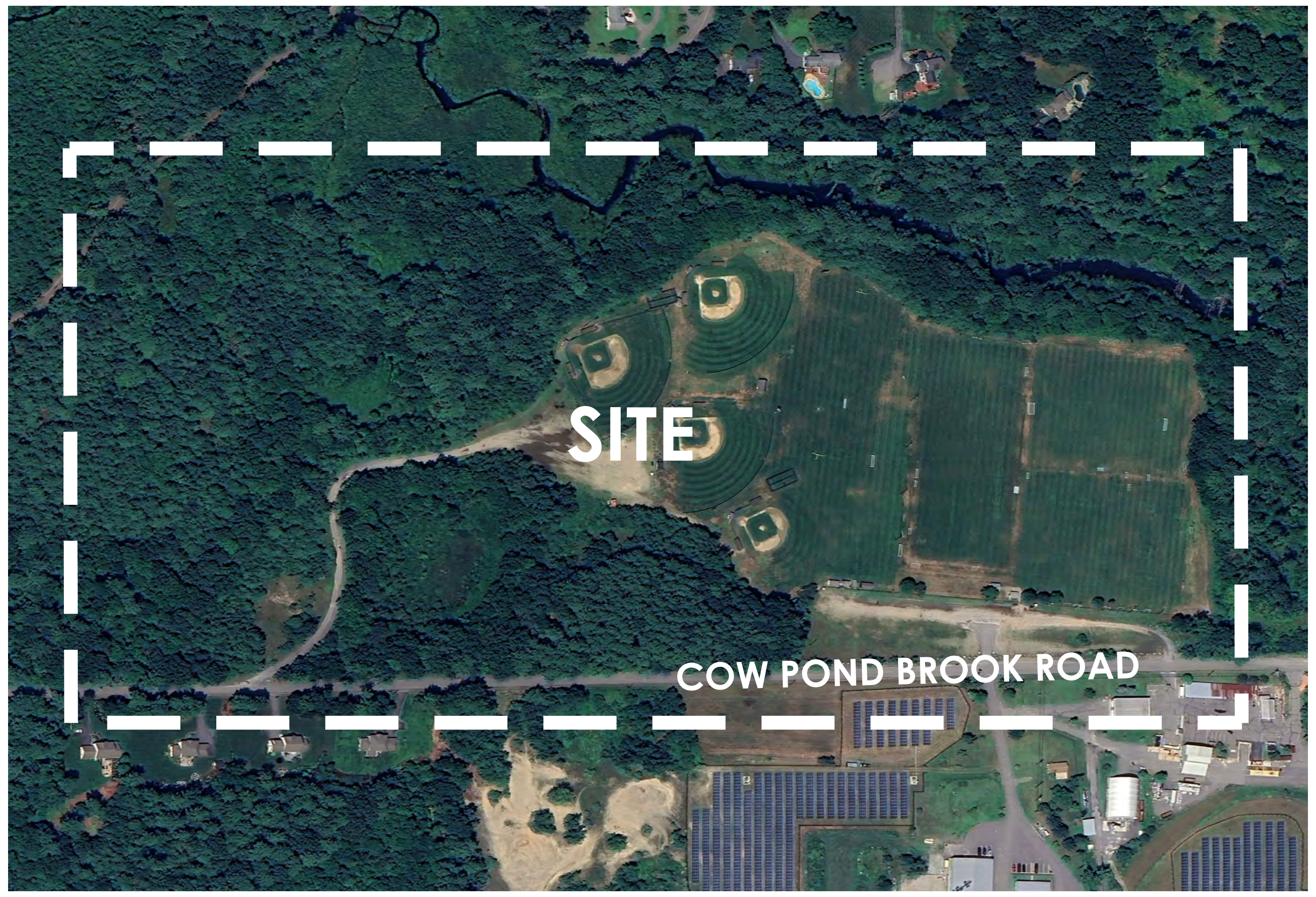


LOCUS MAP

N.T.S.

LIST OF DRAWINGS

	LANDTECH SURVEY (4 SHEETS, 24X36)
	DILLIS & ROY SURVEY (1 SHEET, 24X36)
EX.1	COMPILED EXISTING CONDITIONS PLAN
L0.1	KEY PLAN
L0.2	LOCUS & ZONING PLAN
L1.0	LEGEND & NOTES SHEET
SP1.1	SITE PREPARATION & EROSION CONTROL PLAN - SHEET I
SP1.2	SITE PREPARATION & EROSION CONTROL PLAN - SHEET II
SP1.3	SITE PREPARATION & EROSION CONTROL DETAIL SHEET
L1.1	LAYOUT & MATERIALS PLAN - SHEET I
L1.2	LAYOUT & MATERIALS PLAN - SHEET II
L2.1	GRADING PLAN - SHEET I
L2.2	GRADING PLAN - SHEET II
L3.1	UTILITY PLAN - SHEET I
L3.2	UTILITY PLAN - SHEET II
L4.1	HABITAT IMPLEMENTATION PLAN
L5.1	DETAIL SHEET I
L5.2	DETAIL SHEET II
L5.3	DETAIL SHEET III
L5.4	DETAIL SHEET IV
L6.1	LIGHTING DESIGN - SHEET I
L6.2	LIGHTING DESIGN - SHEET II

ZONING CHART

PARCEL	ZONE	AREA	FRONTAGE	MAX. HEIGHT	MAX. IMPERVIOUS	MIN. BUILDING SETBACK
REGULATIONS	*R/A*	*80,000 S.F.*	*225'*	*35'/3 STORIES*	25%	*FRONT 50' / SIDE 15' / REAR 15'*
40	R/A	29.9 ACRES	>225'	N/A	3	N/A
57	R/A	24 ACRES	>225'	N/A	3.7%	N/A
51	R/A	10.4 ACRES	>225'	N/A	6.7%	N/A

NOTE: POROUS ASPHALT PAVEMENT IS NOT INCLUDED IN THESE CALCULATIONS

PERMITTING DOCUMENTS | FEBRUARY 2, 2026

TOWN OF GROTON
IMPROVEMENTS AT COW POND BROOK FIELDS

GROTON, MA

OWNER

Town of Groton
173 Main Street
Groton, MA 01450
(978) 448-1100

LANDSCAPE ARCHITECT/CIVIL ENGINEER

Activitas
70 Milton Street
Dedham, MA 02026
(781) 326-2600

ELECTRICAL ENGINEER

NV5
200 Brickstone Square #201
Andover, MA 01810
(978) 472-0298

RESOURCE AREA & ENVIRONMENTAL ASSESSMENT

LEC Environmental Consultants, Inc.
380 Lowell Street
Wakefield, MA 01880
(781) 245-2500

SURVEY

LandTech Consultants
51 Groton Road
Westford, MA 01886
(978) 692-6100

TRANSPORTATION ENGINEER

MDM Transportation Consultants, Inc.
28 Lord Road
Marlborough, MA 01752
(508) 303-0370

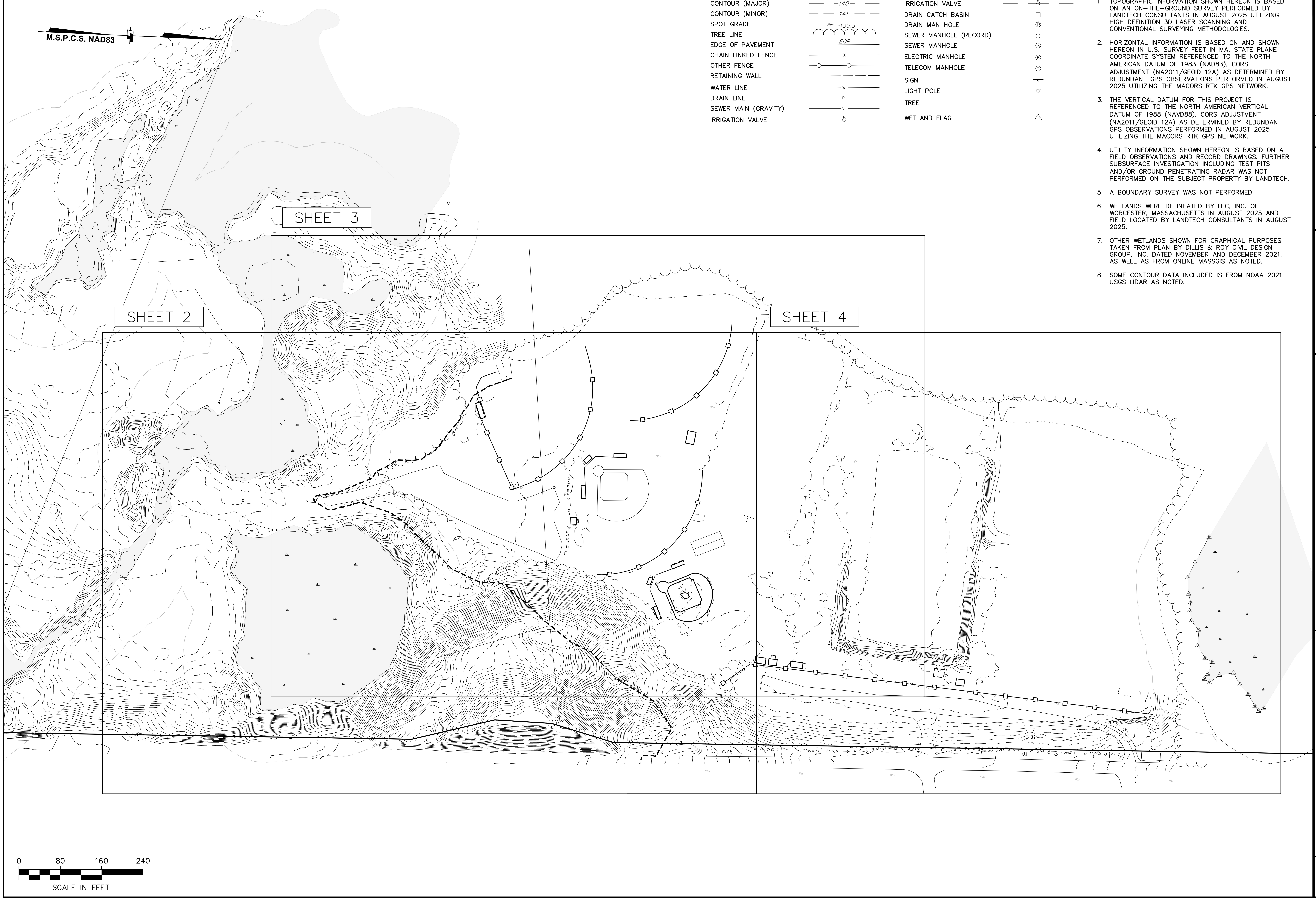
TOWN OF GROTON
IMPROVEMENTS AT COW POND BROOK FIELDS

PERMITTING DOCUMENTS | FEBRUARY 2, 2026

REVISIONS: PROJECT NO. 24051.00

NO.	DATE	SHEETS REVISED	NOTES

ACTIVITAS
landscape architecture | civil engineering



GENERAL LEGEND

CONTOUR (MAJOR)	—140—	IRRIGATION VALVE	IV
CONTOUR (MINOR)	- 141 -	DRAIN CATCH BASIN	□
SPOT GRADE	×130.5	DRAIN MAN HOLE	Ⓓ
TREE LINE	⌒⌒⌒	SEWER MANHOLE (RECORD)	○
EDGE OF PAVEMENT	EOP	SEWER MANHOLE	Ⓢ
CHAIN LINKED FENCE	— X —	ELECTRIC MANHOLE	Ⓔ
OTHER FENCE	—○—○—	TELECOM MANHOLE	Ⓣ
RETAINING WALL	— — —	SIGN	⊸
WATER LINE	— W —	LIGHT POLE	☼
DRAIN LINE	— D —	TREE	
SEWER MAIN (GRAVITY)	— S —	WETLAND FLAG	△
IRRIGATION VALVE	IV		

SURVEY NOTES

1. TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON AN ON–THE–GROUND SURVEY PERFORMED BY LANDTECH CONSULTANTS IN AUGUST 2025 UTILIZING HIGH DEFINITION 3D LASER SCANNING AND CONVENTIONAL SURVEYING METHODOLOGIES.

2. HORIZONTAL INFORMATION IS BASED ON AND SHOWN HEREON IN U.S. SURVEY FEET IN MA. STATE PLANE COORDINATE SYSTEM REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83), CORS ADJUSTMENT (NA2011/GEOID 12A) AS DETERMINED BY REDUNDANT GPS OBSERVATIONS PERFORMED IN AUGUST 2025 UTILIZING THE MACORS RTK GPS NETWORK.

3. THE VERTICAL DATUM FOR THIS PROJECT IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), CORS ADJUSTMENT (NA2011/GEOID 12A) AS DETERMINED BY REDUNDANT GPS OBSERVATIONS PERFORMED IN AUGUST 2025 UTILIZING THE MACORS RTK GPS NETWORK.

4. UTILITY INFORMATION SHOWN HEREON IS BASED ON A FIELD OBSERVATIONS AND RECORD DRAWINGS. FURTHER SUBSURFACE INVESTIGATION INCLUDING TEST PITS AND/OR GROUND PENETRATING RADAR WAS NOT PERFORMED ON THE SUBJECT PROPERTY BY LANDTECH.

5. A BOUNDARY SURVEY WAS NOT PERFORMED.

6. WETLANDS WERE DELINEATED BY LEC, INC. OF WORCESTER, MASSACHUSETTS IN AUGUST 2025 AND FIELD LOCATED BY LANDTECH CONSULTANTS IN AUGUST 2025.

7. OTHER WETLANDS SHOWN FOR GRAPHICAL PURPOSES TAKEN FROM PLAN BY DILLIS & ROY CIVIL DESIGN GROUP, INC. DATED NOVEMBER AND DECEMBER 2021. AS WELL AS FROM ONLINE MASSGIS AS NOTED.

8. SOME CONTOUR DATA INCLUDED IS FROM NOAA 2021 USGS LIDAR AS NOTED.

DATE	REVISION	BY

PREPARED FOR:
ACTIVITAS, INC.
70 MILTON STREET
DEDHAM, MA 02026

FIELD	DRAFT	CHECK
DS	CC	MG

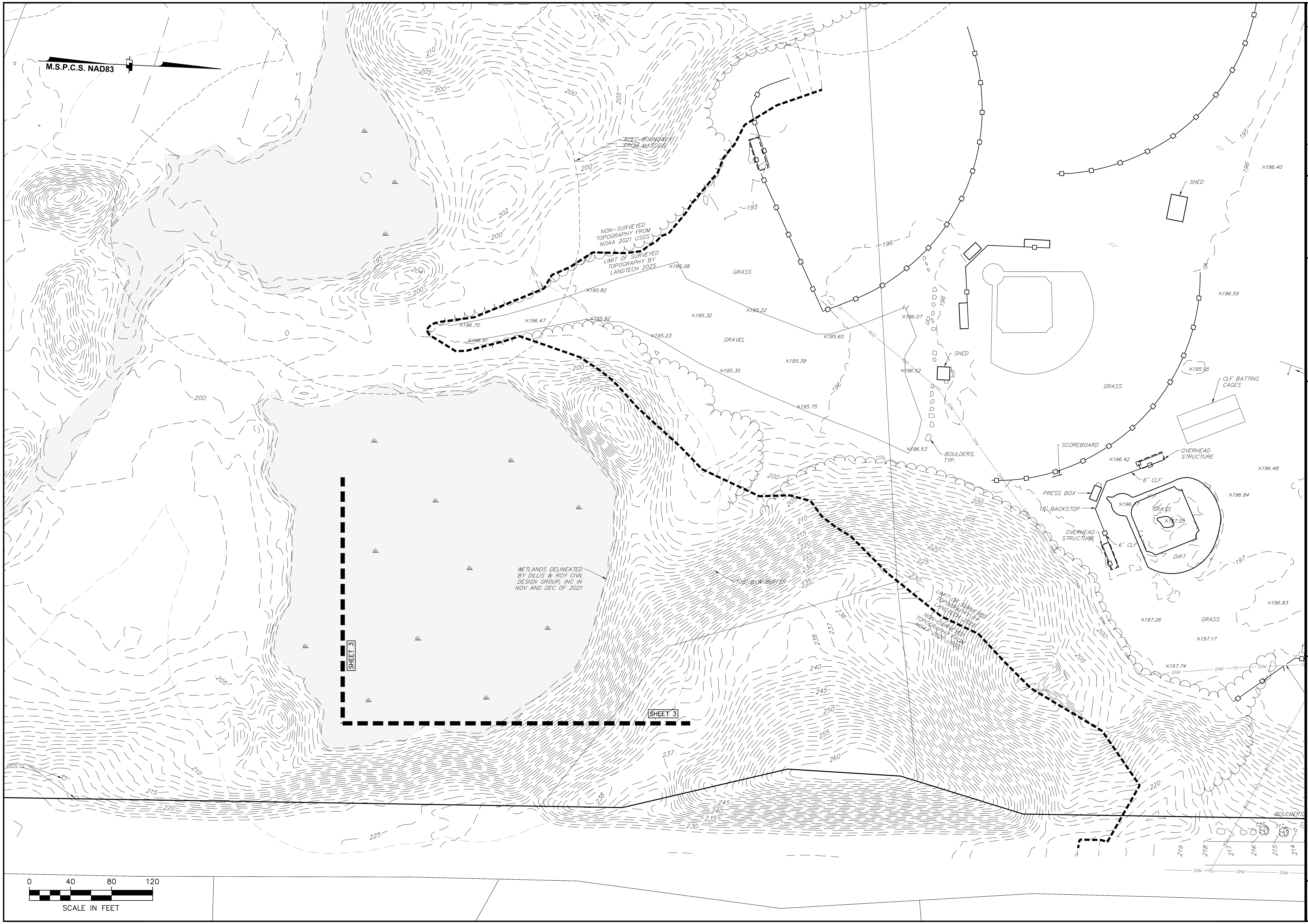
EXISTING CONDITIONS SURVEY

COW POND FIELDS
COW POND BROOK ROAD
GROTON, MASSACHUSETTS

SCALE: 1"=80'
DECEMBER 15, 2025

LandTech Consultants
515 Groton Road • Westford, MA 01886 • (978) 692-6100 • www.landtechinc.com

JOB NO. 24–195
DWG. NO. 11437
SHEET 1 OF 4



DATE	REVISION	BY

PREPARED FOR:
ACTIVITAS, INC.
70 MILTON STREET
DEDHAM, MA 02026

FIELD	DRAFT	CHECK
DS	CC	MG

EXISTING CONDITIONS SURVEY

COW POND FIELDS
COW POND BROOK ROAD
GROTON, MASSACHUSETTS

SCALE: 1"=40'

DECEMBER 15, 2025

LandTech Consultants

515 Groton Road • Westford, MA 01886 • (978) 692-6100 • www.landtechinc.com

JOB NO. 24–195

DWG. NO. 11437

SHEET 2 OF 4

DATE	REVISION	BY

PREPARED FOR:
ACTIVITAS, INC.
70 MILTON STREET
DEDHAM, MA 02026

FIELD	DRAFT	CHECK
DS	CC	MG

EXISTING CONDITIONS SURVEY

COW POND FIELDS
COW POND BROOK ROAD
GROTON, MASSACHUSETTS

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JOB NO. 24-195

DWG. NO. 11437

SHEET 3 OF 4

DATE	REVISION	BY

PREPARED FOR:
ACTIVITAS, INC.
70 MILTON STREET
DEDHAM, MA 02026

FIELD	DRAFT	CHECK
DS	CC	MG

EXISTING CONDITIONS SURVEY

COW POND FIELDS
COW POND BROOK ROAD
GROTON, MASSACHUSETTS

SCALE: 1"=40'

DECEMBER 15, 2025

LandTech Consultants
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JOB NO. 24-195
DWG. NO. 11437
SHEET 4 OF 4

GENERAL NOTES:

1. TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAN FROM NOAA LIDAR TOPOGRAPHY
2. PROPERTY LINE INFORMATION SHOWN ON THIS PLAN IS COMPILED BASED OF FIELD SURVEY AND RECORDED RECORDED PLANS AND DEEDS.
3. RESOURCE AREAS AS DEFINED BY THE MASSACHUSETTS WETLANDS PROTECTION ACT AND THE TOWN OF GROTON WETLANDS BYLAW WERE DELINEATED BY DILLIS & ROY CIVIL DESIGN GROUP, INC IN NOVEMBER & DECEMBER OF 2021.
4. A PORTION OF THIS SITES FALLS WITHIN ZONE AE AS SHOWN ON THE FLOOD INSURANCE RATE MAP 25017C0227E FOR THE TOWN OF GROTON.
5. A PORTION OF THE SITE LIES WITHIN THE PETAPAWAG ACEC AS SHOWN HEREON
6. THE SITE LIES WITH ESTIMATED AND PRIORITY HABITAT FOR ENDANGERED SPECIES

SCALE:

80 0 40 80 160 320

1 in. = 80 ft.

PREPARED BY:

DILLIS & ROY
CIVIL DESIGN GROUP

CIVIL ENGINEERS LAND SURVEYORS WETLAND CONSULTANTS

1 MAIN STREET, SUITE 1
LUNENBURG, MA 01462
PHONE: (978) 779-6091
www.dillisandroy.com

OWNER:

TOWN OF GROTON
COW POND BROOK ROAD
GROTON, MASSACHUSETTS

APPLICANT:

GROTON AFFORDABLE
HOUSING TRUST

STANLEY R. DILLIS
No. 33182

DATE: FEB. 2, 2022

DESIGN BY: SRD

DRAWN BY: SRD

CHECKED BY: SBD

EXISITING CONDITIONS
COW POND BROOK ROAD
GROTON, MASSACHUSETTS

NO.	DATE	DESCRIPTION	BY

JOB NO. 7027

DRAWING NO. 7027

SHEET NO. 1 OF 1

CONTACT DIGSAFE:
UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS. PHONE DIGSAFE 1-888-344-7233.

ACTIVITAS
landscape architecture | civil engineering
70 Milton Street | Dedham, MA 02026-2915
(781) 326-2600 | activitas.com

CONSULTANTS

ELECTRICAL ENGINEER -
NV5

RESOURCE AREA & ENVIRONMENTAL ASSESSMENT-
LEC ENVIRONMENTAL CONSULTANTS, INC.

SURVEY -
LANDTECH CONSULTANTS, INC.

TRANSPORTATION ENGINEER -
MDM TRANSPORTATION CONSULTANTS, INC.

SITE PLAN REVIEW SIGNATURES

THIS SITE PLAN APPROVAL DOES NOT NECESSARILY INDICATE COMPLIANCE WITH GROTON ZONING BYLAW

1.
2.
3.
4.
5.
6.
7.

TOWN OF GROTON
Groton, Massachusetts

IMPROVEMENTS AT COW POND BROOK FIELDS

Permitting Documents
February 2, 2026

REVISIONS:

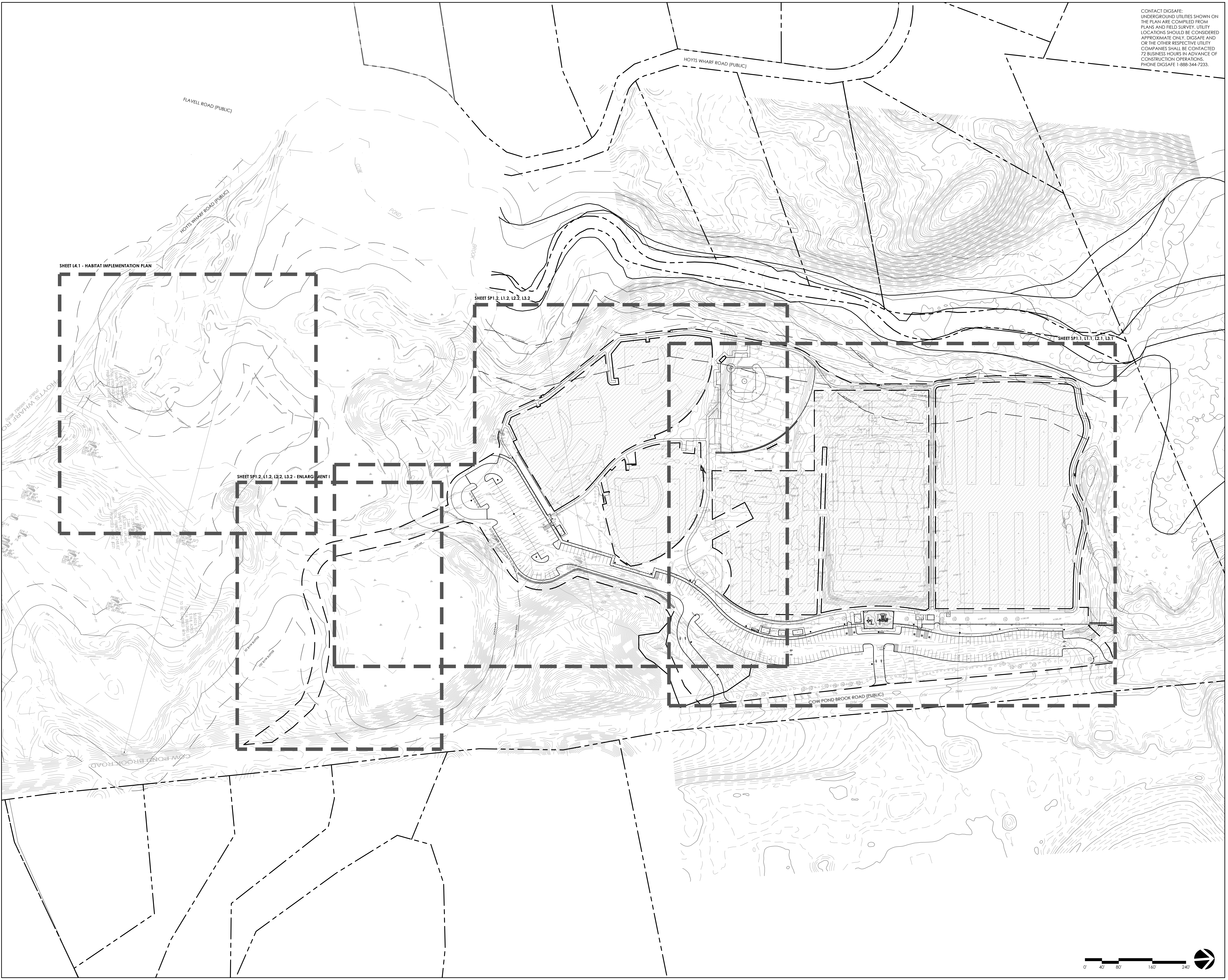
NO.	DATE	DESCRIPTION

SCALE:	1"=80'-0"
PROJECT NO.:	24051.00
FILE:	24051.00-L0.2-ACCESS_PLAN.dwg
DRAWN:	XXX
CHECKED:	EPM/MEB

SEAL:

SHEET TITLE:
COMPILED EXISTING CONDITIONS PLAN

SHEET NO:
EX.1



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7.

TOWN OF GROTON

Groton, Massachusetts

IMPROVEMENTS AT COW POND BROOK FIELDS

Permitting Documents
February 2, 2026

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE: 1"=80'-0"
PROJECT NO.: 24051.00
FILE: 24051.00-L0.1-KEY_PLAN.dwg
DRAWN: MJD
CHECKED: MEB

SEAL:
MEGAN E. BUCZYNSKI
CIVIL
No. 47392
M. Buczynski
2 February 2026

SHEET TITLE:
KEY PLAN

SHEET NO:
L0.1

CONTACT DIGSAFE:
UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS. PHONE DIGSAFE 1-888-344-7233.

ZONING CHART

PARCEL	ZONE	AREA	FRONTAGE	MAX. HEIGHT	MAX. IMPERVIOUS	MIN. BUILDING SETBACK
REGULATIONS	*R/A*	*80,000 S.F.*	*225'*	*35'/3 STORIES*	*25%*	*FRONT 50' / SIDE 15' / REAR 15'*
40	R/A	29.9 ACRES	>225'	N/A	3	N/A
57	R/A	24 ACRES	>225'	N/A	3.7%	N/A
51	R/A	10.4 ACRES	>225'	N/A	6.7%	N/A

NOTE: POROUS ASPHALT PAVEMENT IS NOT INCLUDED IN THESE CALCULATIONS

ACTIVITAS
landscape architecture | civil engineering
70 Milton Street | Dedham, MA 02026-2915
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CONSULTANTS

ELECTRICAL ENGINEER -
NV5

RESOURCE AREA & ENVIRONMENTAL ASSESSMENT-
LEC ENVIRONMENTAL CONSULTANTS, INC.

SURVEY -
LANDTECH CONSULTANTS, INC.

TRANSPORTATION ENGINEER -
MDM TRANSPORTATION CONSULTANTS, INC.

SITE PLAN REVIEW SIGNATURES

THIS SITE PLAN APPROVAL DOES NOT NECESSARILY INDICATE COMPLIANCE WITH GROTON ZONING BYLAW

1.
2.
3.
4.
5.
6.
7.

TOWN OF GROTON

Groton, Massachusetts

IMPROVEMENTS AT COW POND BROOK FIELDS

Permitting Documents
February 2, 2026

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE:	1"=80'-0"
PROJECT NO.:	24051.00
FILE:	24051.00-L0.2-ACCESS_PLAN.dwg
DRAWN:	MJD
CHECKED:	MEB

SEAL:

MEGAN E. BUCZYNSKI
CIVIL
No. 47392

M. Buczynski
2 February 2026

SHEET TITLE:
LOCUS & ZONING PLAN

SHEET NO:
L0.2

GENERAL NOTES

1. EXISTING CONDITIONS INFORMATION IS REPRODUCED FROM THE SURVEY PREPARED BY LANDTECH CONSULTANTS, LOCATED AT 51 GROTON ROAD, WESTFORD, MA, AND DATED SEPTEMBER 23, 2025; AND THE DILLIS & ROY OF LUNENBURG, MA SURVEY DEVELOPED FOR THE GROTON AFFORDABLE HOUSING TRUST, DATED FEBRUARY 2, 2022. MASSACHUSETTS GIS INFORMATION HAS BEEN USED TO SUPPLEMENT AREAS OUTSIDE OF THE AFOREMENTIONED SURVEY INFORMATION. EXISTING IRRIGATION INFORMATION BASED ON DRONE REVIEW AND NOT VERIFIED BY ONSITE SURVEY. LOCATION OF EXISTING CONDUIT IS APPROXIMATE BASED ON SITE REVIEW ONLY AND NOT VERIFIED SUBSURFACE.

2. THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ARE BASED ON THE SURVEYS REFERENCED ABOVE. THE CONTRACTOR SHALL NOTIFY DIGSAFE AND THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANIES TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.

3. CONTRACTOR(S) SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND SITE CONDITIONS PRIOR TO BIDDING AND PRIOR TO CONSTRUCTION.

4. ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS, AND SITE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE OWNER'S REPRESENTATIVE FOR CLARIFICATION AND RESOLUTION PRIOR TO BIDDING OR CONSTRUCTION.

5. THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON THE SURVEY REFERENCED. THE CONTRACTOR SHALL CONTACT DIGSAFE AND THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANIES TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.

SITE PREPARATION LEGEND

APPROXIMATE PROPERTY LINE	— - - — - - —
APPROXIMATE LIMIT OF WORK	— — —
TEMPORARY CONSTRUCTION FENCE	-o-o-o-o-
EROSION CONTROL	- - - - - -
REMOVE AND DISPOSE OF EXISTING AMENITY	〰
PAVEMENT SAWCUT	- - - - - -
REMOVE AND DISPOSE OF EXISTING PAVEMENT	▨
REMOVE AND STOCKPILE FOR REUSE EXISTING INFIELD MIX	░
STRIP AND DISPOSE OF EXISTING SOD; STRIP, SCREEN, AND STOCKPILE TOPSOIL	▩
STRIP AND STOCKPILE GRAVEL/WEEDY AREA	▨
REMOVE AND DISPOSE OF EXISTING VEGETATION	▩
STABILIZED CONSTRUCTION ENTRANCE	▦
SILT SACK	☒
PROTECT EXISTING ELEMENT OR STRUCTURE TO REMAIN	⬚
PROTEXT EXISTING TREE TO REMAIN	◌
REMOVE AND DISPOSE OF EXISTING ELEMENT	×

SITE PREPARATION NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS TO REMAIN THAT ARE DUE TO CONTRACTOR OPERATIONS.

2. ALL ITEMS TO BE REMOVED THAT ARE NOT STOCKPILED FOR LATER REUSE ON THE PROJECT OR FOR DELIVERY TO THE OWNER SHALL BE LEGALLY DISPOSED OF OFF SITE BY THE CONTRACTOR.

3. THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON THE SURVEY REFERENCED. THE CONTRACTOR SHALL CONTACT DIGSAFE AND THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANIES TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS EFFORTS OF THE DEMOLITION WITH ALL TRADES.

5. THE CONTRACTOR SHALL COORDINATE ALL ADJUSTMENTS OR ABANDONMENT OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY.

6. THE CONTRACTOR SHALL MAINTAIN OR ADJUST TO NEW FINISH GRADE (AS NECESSARY) ALL UTILITY AND SITE STRUCTURES SUCH AS MANHOLES, CATCH BASINS, ETC. FROM MAINTAINED UTILITY AND SITE SYSTEMS UNLESS OTHERWISE NOTED OR DIRECTED BY THE CIVIL ENGINEER / LANDSCAPE ARCHITECT.

7. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCING PER THE PLANS AND SPECIFICATIONS. CONTRACTOR MUST TAKE APPROPRIATE MEASURES TO MAINTAIN A SECURE SITE THROUGHOUT THE PROJECT.

8. CONTRACTOR SHALL REVIEW EROSION CONTROL INSTALLATION METHOD AND SEQUENCING FOR ALL AREAS WITHIN WETLAND BUFFER ZONE PRIOR TO MOBILIZATION.

LAYOUT & MATERIALS LEGEND

APPROXIMATE PROPERTY LINE	— - - — - - —
APPROXIMATE LIMIT OF WORK	— — —
TENSION NETTING SYSTEM	—⊙—⊙—⊙—
CHAIN LINK FENCE AND GATES	•—•—^—•—•
CEMENT CONCRETE PAVEMENT	░
POROUS ASPHALT PAVEMENT	▒
BITUMINOUS CONCRETE PAVEMENT	▓
DO NOT DISTURB EXISTING FIELD	▨
PLAYGROUND SURFACING	░
ATHLETIC FIELD CONTRACTOR INFIELD MIX	☐
ATHLETIC FIELD LIGHTING	▽▽▽▽
PARKING LOT LIGHTING	◉
LOAM AND SEED	░
LOAM AND SOD	▩
UPLAND SEED MIX	▤
ORNAMENTAL GRASS PLANTINGS	░
DECIDUOUS TREE PLANTING	⊕

LAYOUT & MATERIALS NOTES

1. WHILE THE CONTRACTOR MAY USE THE ELECTRONIC DRAWINGS FOR LAYOUT PURPOSES, IT IS HIS RESPONSIBILITY TO CHECK ALL LAYOUT IN THE FIELD TO CONFIRM CONFORMITY WITH THE PROJECT DRAWINGS, SPECIFICATIONS, AND APPROVED SHOP DRAWINGS AND SUBMITTALS. USE OF ONLY THE ELECTRONIC DRAWINGS WITHOUT A SITE CHECK OF LAYOUT IS NOT ACCEPTABLE.

2. ALL CEMENT CONCRETE AND BITUMINOUS CONCRETE PAVING SHALL CONFORM TO MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (MAAB) AND AMERICANS WITH DISABILITIES ACT (ADA) APPENDIX TO PART 1191 ACCESSIBILITY GUIDELINES FOR BUILDING AND FACILITIES.

3. ALL MATERIALS SHALL CONFORM TO MASSACHUSETTS HIGHWAY DEPARTMENT (MHD) STANDARD SPECIFICATIONS.

4. ALL CEMENT CONCRETE SCORING SHALL BE REVIEWED AND APPROVED BY THE OWNER AND CIVIL ENGINEER PRIOR TO CEMENT CONCRETE INSTALLATION.

5. CONTRACTOR SHALL BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING AND WILL CONTINUE UNTIL FINAL WRITTEN ACCEPTANCE OF PLANT MATERIAL.

6. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM PROPOSED BUILDING, STRUCTURES, AND PLANTING BEDS.

7. THE LANDSCAPE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE ALL PLANTINGS SHOWN ON THIS DRAWING.

8. ALL MATERIALS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.

9. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISH GRADE AS TO ORIGINAL GRADES BEFORE DIGGING.

10. FINAL LAYOUT OF PLANTINGS WILL BE IN THE FIELD PER THE DIRECTION OF THE LANDSCAPE ARCHITECT, PROVIDE A MINIMUM FORTY-EIGHT (48) HOURS NOTICE PRIOR TO BEGINNING FINAL LAYOUT AND PLANTING OPERATIONS.
11. ALL PLANTS TO BE BALLED IN BURLAP OR CONTAINERIZED.

12. ALL PLANTED AREAS TO BE EDGED AND MULCHED WITH AGED PINE BARK: PARTIALLY DECOMPOSED, JET BLACK IN COLOR AND FREE OF WOOD CHIPS THICKER THAN 1/4 INCH.

13. LANDSCAPE ISLAND PLANTING SOIL MIX: UTILIZE EXISTING SITE LOAM FROM STOCKPILES. THOROUGHLY INCORPORATE WITH COMPOST AS NEEDED PER SOILS ANALYSIS. FERTILIZE PER RECOMMENDED RATES IN SOIL ANALYSIS.

14. TREE PIT PLANTING SOIL MIX: REFER TO SPECIFICATIONS FOR CU STRUCTURAL SOIL.

15. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR ONE (1) FULL YEAR FROM DATE OF ACCEPTANCE.

16. ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT, AT THE NURSERY, AND AT THE SITE.

17. ALL AREAS OF THE SITE WHICH HAVE BEEN DISTURBED AND NOT OTHERWISE DEVELOPED SHALL BE LOAMED AND SEEDED WITH A MINIMUM DEPTH OF 12" DEPTH TOPSOIL UNLESS OTHERWISE NOTED.

18. SLOPES 3:1 AND GREATER SHALL RECEIVE STRAW BLANKET PRIOR TO SEEDING.

19. REFER TO SHEET L3.2 FOR PLANTING AND SEED MIX SCHEDULES.

GRADING LEGEND

APPROXIMATE PROPERTY LINE	— - - — - - —
APPROXIMATE LIMIT OF WORK	— — —
EXISTING 1' CONTOUR	— — XXX — —
PROPOSED 1' CONTOUR	XXX.XX
EXISTING SPOT GRADE	× XXX.XX
PROPOSED SPOT GRADE	+ XXX.XX

GRADING NOTES

1. ALL AREAS OF THE SITE WHICH HAVE BEEN DISTURBED AND NOT OTHERWISE DEVELOPED SHALL BE LOAMED AND SEED/SODDED WITH A MINIMUM DEPTH OF 6" DEPTH TOPSOIL UNLESS OTHERWISE NOTED.

2. WHERE PROPOSED GRADES MEET EXISTING GRADES, CONTRACTOR SHALL BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW WORK. PONDING AT TRANSITION AREAS WILL NOT BE ALLOWED.

3. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS, STRUCTURES AND PLANTING BEDS.

4. THE CONTRACTOR SHALL MAINTAIN OR ADJUST TO NEW FINISH GRADE (AS NECESSARY) ALL UTILITY AND SITE STRUCTURES SUCH AS MANHOLES, CATCH BASINS, ETC. FROM MAINTAINED UTILITY AND SITE SYSTEMS UNLESS OTHERWISE NOTED OR DIRECTED BY THE LANDSCAPE ARCHITECT/CIVIL ENGINEER.

5. WHILE THE CONTRACTOR MAY USE THE ELECTRONIC DRAWINGS FOR LAYOUT PURPOSES, IT IS HIS RESPONSIBILITY TO CHECK ALL LAYOUT IN THE FIELD TO CONFIRM CONFORMITY WITH THE PROJECT DRAWINGS, SPECIFICATIONS, AND APPROVED SHOP DRAWINGS AND SUBMITTALS. USE OF ONLY THE ELECTRONIC DRAWINGS WITHOUT A SITE CHECK OF LAYOUT IS NOT ACCEPTABLE.

UTILITY LEGEND

APPROXIMATE PROPERTY LINE	— - - — - - —
APPROXIMATE LIMIT OF WORK	— — —
SOLID DRAIN PIPE	D
PERFORATED DRAIN PIPE	PERF. D
ELECTRIC CONDUIT	E
CATCH BASIN	▦
DRAIN MANHOLE	Ⓓ
WATER QUALITY UNIT	WQ
SUBSURFACE CHAMBER SYSTEM	▥

UTILITY NOTES

1. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE OWNER'S REPRESENTATIVE FOR RESOLUTION OF THE CONFLICT.

2. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF ALL GAS, ELECTRIC, TELEPHONE, AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.

3. CONTRACTOR SHALL MAINTAIN, OR ADJUST TO NEW FINISH GRADE, AS NECESSARY ALL UTILITY AND SITE STRUCTURES SUCH AS: TRAFFIC SIGN POLES, ETC., FROM MAINTAINED UTILITY AND SITE SYSTEMS, UNLESS OTHERWISE NOTED OR DIRECTED BY THE OWNER'S REPRESENTATIVE.

4. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION, AT THE CONTRACTOR'S EXPENSE.

5. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF ALL GAS, ELECTRIC, TELEPHONE AND OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION.

6. PROTECT AND MAINTAIN EXISTING ON-SITE DRAINAGE STRUCTURES AND PIPES UNLESS OTHERWISE NOTED.

7. BITUMINOUS CONCRETE ELEVATIONS AT CATCH BASINS TO BE ¼ INCH ABOVE RIM ELEVATION SHOWN FOR CATCH.

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SITE PLAN REVIEW SIGNATURES

THIS SITE PLAN APPROVAL DOES NOT NECESSARILY INDICATE COMPLIANCE WITH GROTON ZONING BYLAW

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TOWN OF GROTON
Groton, Massachusetts
IMPROVEMENTS AT COW POND BROOK FIELDS

Permitting Documents
February 2, 2026

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE:	AS NOTED
PROJECT NO.:	24051.00
FILE:	24051.00-L1.0-LEGEND.dwg
DRAWN:	MJD
CHECKED:	MEB

SEAL:

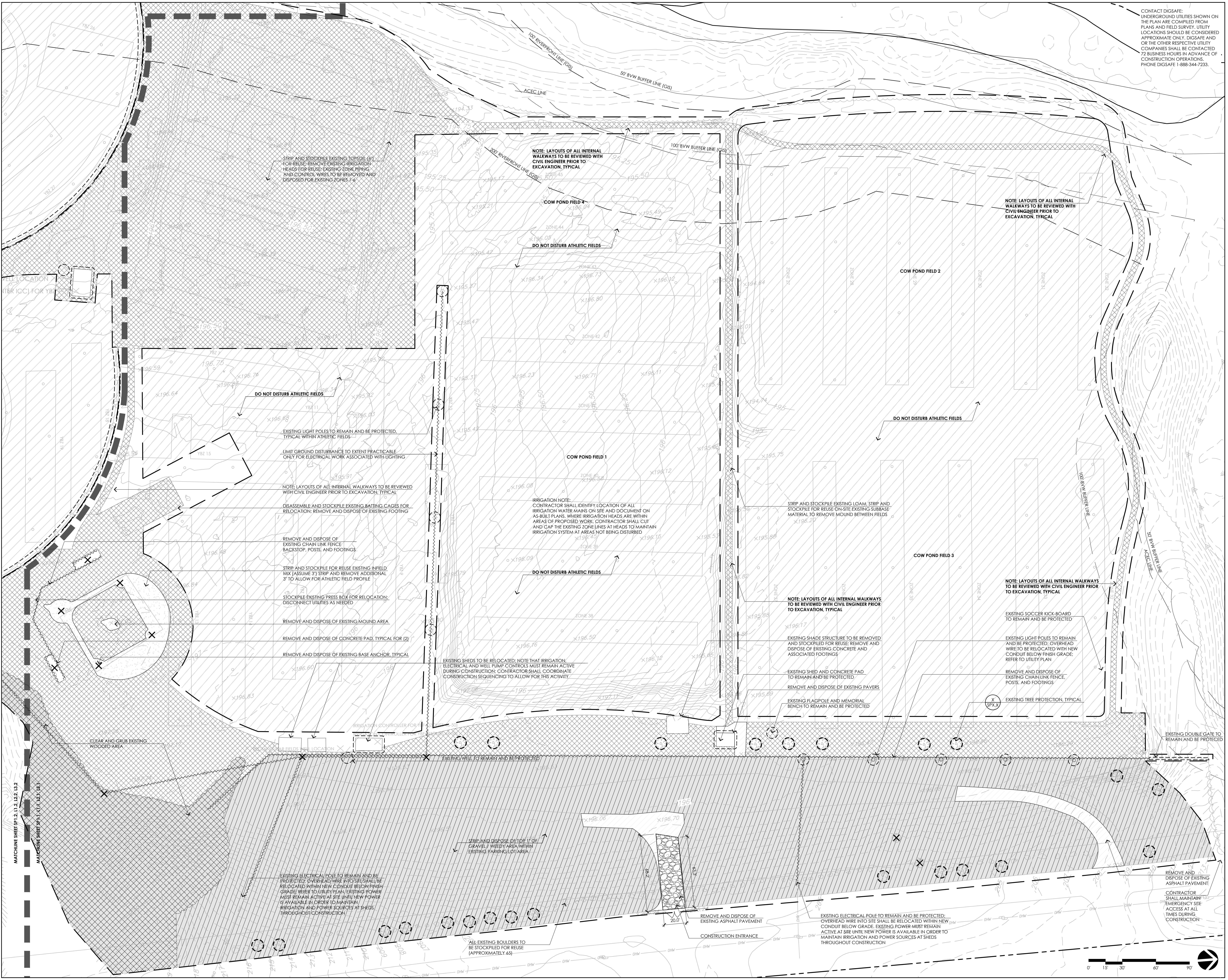
MEGAN E. BUCZYNSKI
CIVIL
No. 47392

M Buczynski
2 February 2026

SHEET TITLE:

LEGEND & NOTES SHEET

SHEET NO:
L1.0



CONTACT DIGSAFE:
UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS. PHONE DIGSAFE 1-888-344-7233.

STRIP AND STOCKPILE EXISTING TOPSOIL (6") FOR REUSE; REMOVE EXISTING IRRIGATION HEADS FOR REUSE; EXISTING ZONE PIPING AND CONTROL WIRES TO BE REMOVED AND DISPOSED FOR EXISTING ZONES 1-6

NOTE: LAYOUTS OF ALL INTERNAL WALKWAYS TO BE REVIEWED WITH CIVIL ENGINEER PRIOR TO EXCAVATION, TYPICAL

DO NOT DISTURB ATHLETIC FIELDS

EXISTING LIGHT POLES TO REMAIN AND BE PROTECTED, TYPICAL WITHIN ATHLETIC FIELDS

LIMIT GROUND DISTURBANCE TO EXTENT PRACTICABLE ONLY FOR ELECTRICAL WORK ASSOCIATED WITH LIGHTING

NOTE: LAYOUTS OF ALL INTERNAL WALKWAYS TO BE REVIEWED WITH CIVIL ENGINEER PRIOR TO EXCAVATION, TYPICAL

DISASSEMBLE AND STOCKPILE EXISTING BATTING CAGES FOR RELOCATION; REMOVE AND DISPOSE OF EXISTING FOOTING

REMOVE AND DISPOSE OF EXISTING CHAIN LINK FENCE BACKSTOP, POSTS, AND FOOTINGS

STRIP AND STOCKPILE FOR REUSE EXISTING INFIELD MIX (ASSUME 3") STRIP AND REMOVE ADDITIONAL 3" TO ALLOW FOR ATHLETIC FIELD PROFILE

STOCKPILE EXISTING PRESS BOX FOR RELOCATION; DISCONNECT UTILITIES AS NEEDED

REMOVE AND DISPOSE OF EXISTING MOUND AREA

REMOVE AND DISPOSE OF CONCRETE PAD, TYPICAL FOR (2)

REMOVE AND DISPOSE OF EXISTING BASE ANCHOR, TYPICAL

EXISTING SHEDS TO BE RELOCATED; NOTE THAT IRRIGATION, ELECTRICAL AND WELL PUMP CONTROLS MUST REMAIN ACTIVE DURING CONSTRUCTION; CONTRACTOR SHALL COORDINATE CONSTRUCTION SEQUENCING TO ALLOW FOR THIS ACTIVITY

IRRIGATION NOTE:
CONTRACTOR SHALL IDENTIFY LOCATION OF ALL IRRIGATION WATER MAINS ON SITE AND DOCUMENT ON AS-BUILT PLANS. WHERE IRRIGATION HEADS ARE WITHIN AREAS OF PROPOSED WORK, CONTRACTOR SHALL CUT AND CAP THE EXISTING ZONE LINES AT HEADS TO MAINTAIN IRRIGATION SYSTEM AT AREAS NOT BEING DISTURBED

DO NOT DISTURB ATHLETIC FIELDS

NOTE: LAYOUTS OF ALL INTERNAL WALKWAYS TO BE REVIEWED WITH CIVIL ENGINEER PRIOR TO EXCAVATION, TYPICAL

DO NOT DISTURB ATHLETIC FIELDS

STRIP AND STOCKPILE EXISTING LOAM, STRIP AND STOCKPILE FOR REUSE ON-SITE EXISTING SUBBASE MATERIAL TO REMOVE MOUND BETWEEN FIELDS

NOTE: LAYOUTS OF ALL INTERNAL WALKWAYS TO BE REVIEWED WITH CIVIL ENGINEER PRIOR TO EXCAVATION, TYPICAL

NOTE: LAYOUTS OF ALL INTERNAL WALKWAYS TO BE REVIEWED WITH CIVIL ENGINEER PRIOR TO EXCAVATION, TYPICAL

EXISTING SHADE STRUCTURE TO BE REMOVED AND STOCKPILED FOR REUSE; REMOVE AND DISPOSE OF EXISTING CONCRETE AND ASSOCIATED FOOTINGS

EXISTING SHED AND CONCRETE PAD TO REMAIN AND BE PROTECTED

REMOVE AND DISPOSE OF EXISTING PAVERS

EXISTING FLAGPOLE AND MEMORIAL BENCH TO REMAIN AND BE PROTECTED

EXISTING SOCCER KICK-BOARD TO REMAIN AND BE PROTECTED

EXISTING LIGHT POLES TO REMAIN AND BE PROTECTED; OVERHEAD WIRE TO BE RELOCATED WITH NEW CONDUIT BELOW FINISH GRADE; REFER TO UTILITY PLAN

REMOVE AND DISPOSE OF EXISTING CHAIN LINK FENCE, POSTS, AND FOOTINGS

EXISTING TREE PROTECTION, TYPICAL

EXISTING DOUBLE GATE TO REMAIN AND BE PROTECED

CLEAR AND GRUB EXISTING WOODED AREA

EXISTING WELL TO REMAIN AND BE PROTECTED

STRIP AND DISPOSE OF TOP 1" OF GRAVEL / WEEDY AREA WITHIN EXISTING PARKING LOT AREA

EXISTING ELECTRICAL POLE TO REMAIN AND BE PROTECTED; OVERHEAD WIRE INTO SITE SHALL BE RELOCATED WITHIN NEW CONDUIT BELOW FINISH GRADE; REFER TO UTILITY PLAN. EXISTING POWER MUST REMAIN ACTIVE AT SITE UNTIL NEW POWER IS AVAILABLE IN ORDER TO MAINTAIN IRRIGATION AND POWER SOURCES AT SHEDS THROUGHOUT CONSTRUCTION

ALL EXISTING BOULDERS TO BE STOCKPILED FOR REUSE (APPROXIMATELY 65)

REMOVE AND DISPOSE OF EXISTING ASPHALT PAVEMENT

CONSTRUCTION ENTRANCE

EXISTING ELECTRICAL POLE TO REMAIN AND BE PROTECTED; OVERHEAD WIRE INTO SITE SHALL BE RELOCATED WITHIN NEW CONDUIT BELOW GRADE. EXISTING POWER MUST REMAIN ACTIVE AT SITE UNTIL NEW POWER IS AVAILABLE IN ORDER TO MAINTAIN IRRIGATION AND POWER SOURCES AT SHEDS THROUGHOUT CONSTRUCTION

REMOVE AND DISPOSE OF EXISTING ASPHALT PAVEMENT

CONTRACTOR SHALL MAINTAIN EMERGENCY SITE ACCESS AT ALL TIMES DURING CONSTRUCTION

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SITE PLAN REVIEW SIGNATURES

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TOWN OF GROTON
Groton, Massachusetts

IMPROVEMENTS AT COW POND BROOK FIELDS

Permitting Documents
February 2, 2026

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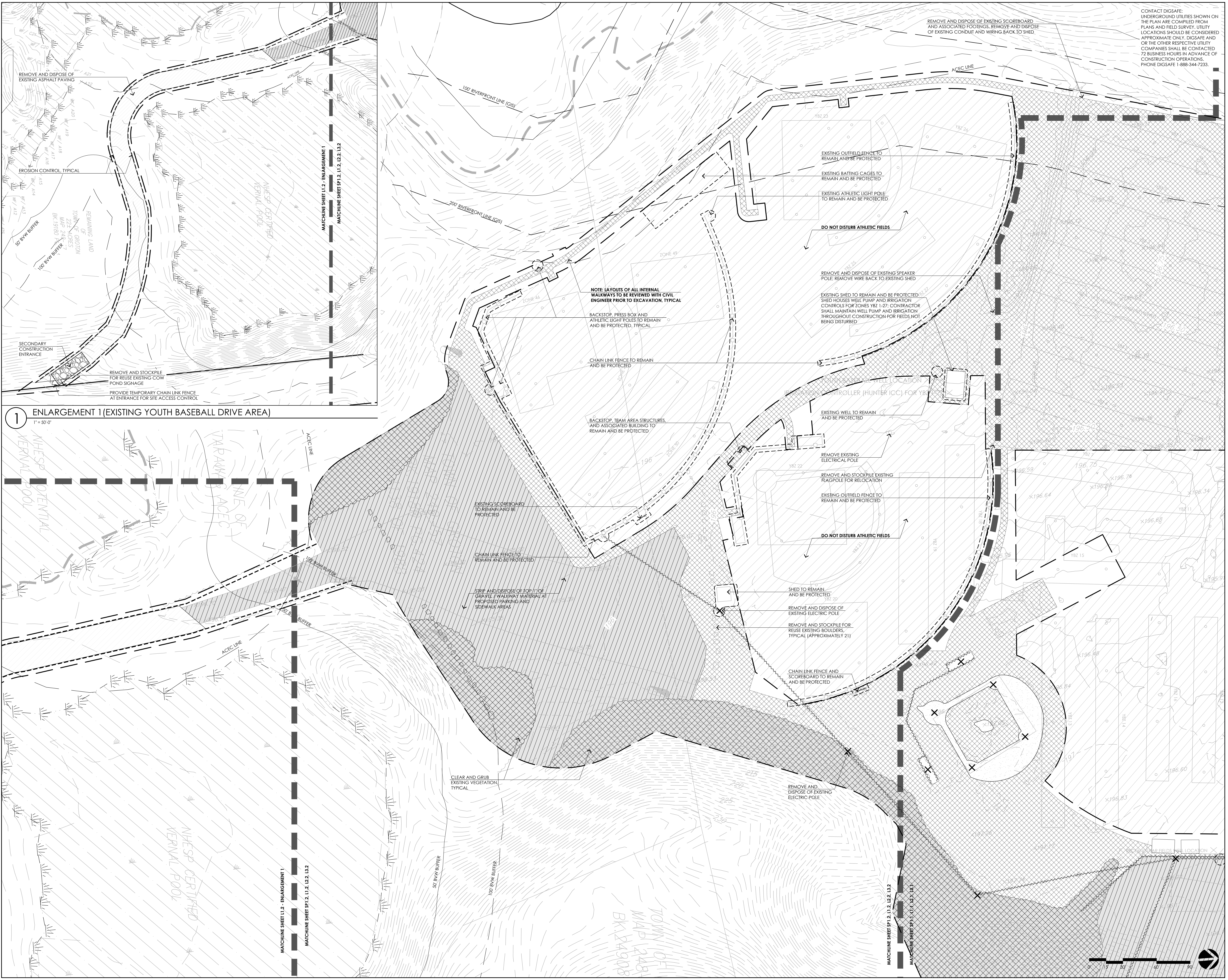
DRAWN:	MJD
CHECKED:	MEB

SEAL:
MEGAN E. BUCZYNSKI
CIVIL
No. 47392
M. Buczynski
2 February 2026

SHEET TITLE:

SITE PREPARATION
PLAN - SHEET I

SHEET NO:
SP1.1



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SEAL:

MEGAN E. BUCZYNSKI CIVIL No. 47392

M Buczynski
2 February 2026

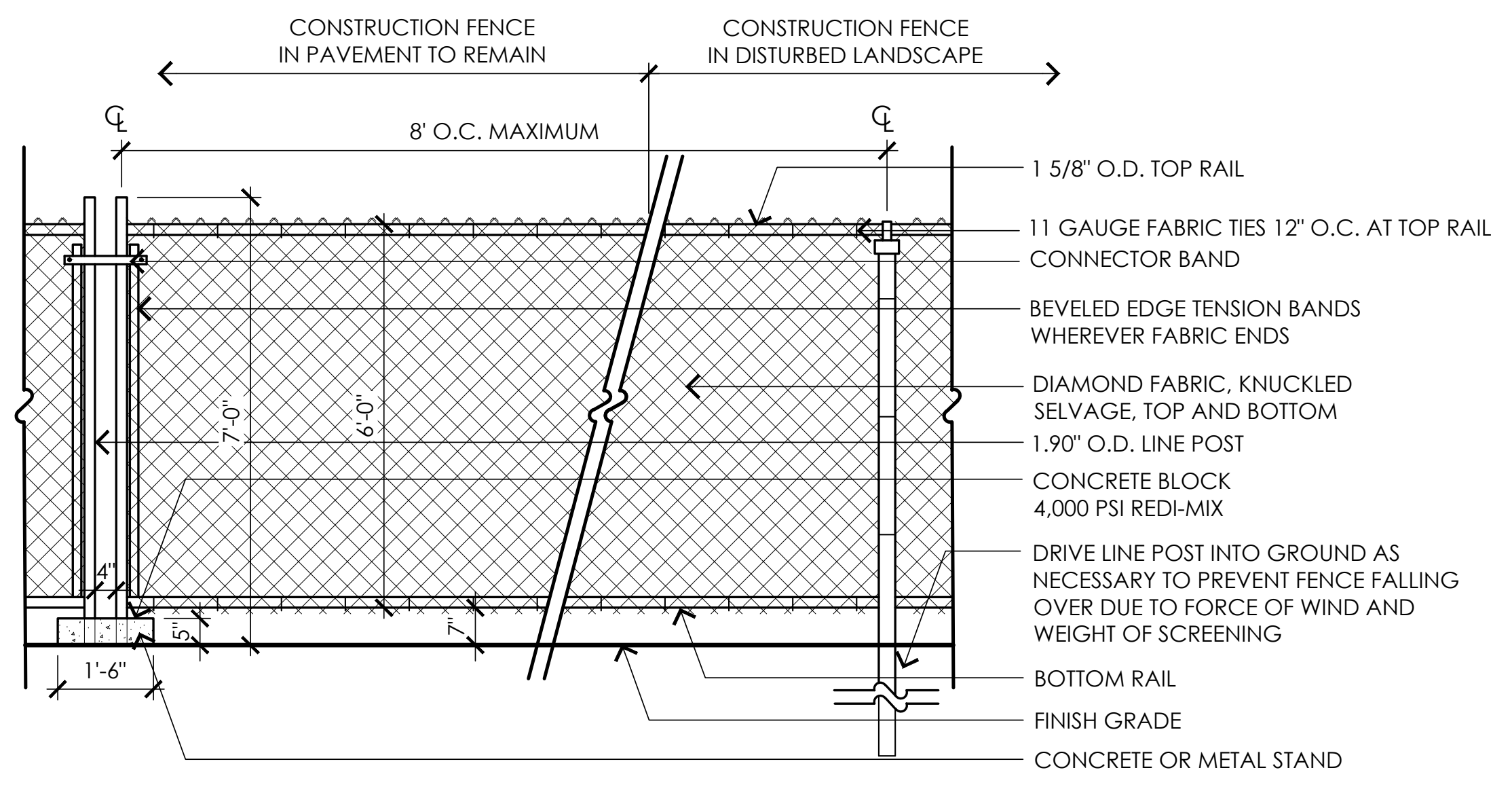
SHEET TITLE:

SITE PREPARATION PLAN - SHEET II

SHEET NO:
SP1.2

NOTES:

1. TEMPORARY CONSTRUCTION FENCE SHALL BE PROVIDED AT PROJECT LIMITS AS SHOWN ON THE SITE PREPARATION PLAN AND AS SPECIFIED. CONTRACTOR PROPOSED MODIFICATIONS TO TEMPORARY CONSTRUCTION FENCE, SUCH AS BUT NOT LIMITED TO THE USE OF SNOW FENCE (OR SIMILAR) WILL NOT BE CONSIDERED, UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL MAINTAIN A SECURE SITE AT ALL TIMES. CONTRACTOR SHALL PROVIDE ADDITIONAL TEMPORARY CONSTRUCTION FENCE AT NO ADDITIONAL COST TO THE OWNER IF NECESSARY TO PROPERLY SECURE THE SITE.

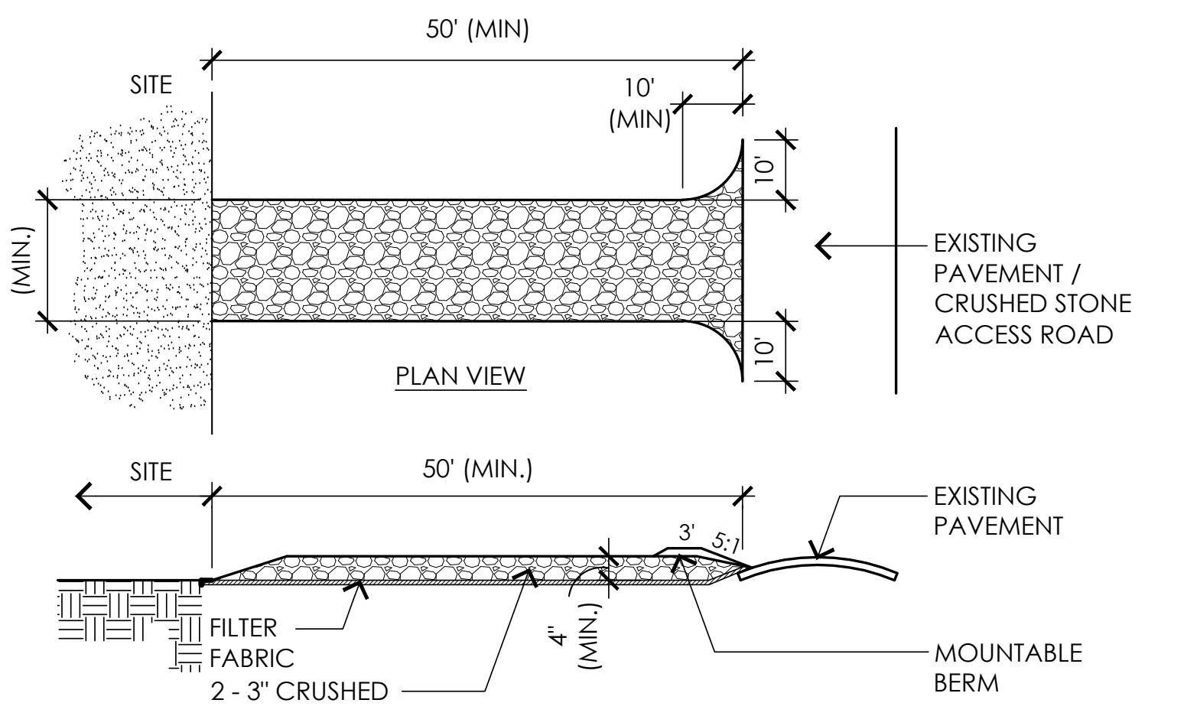


① TEMPORARY CONSTRUCTION FENCE

NOT TO SCALE

NOTES:

1. ENTRANCE WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT INTO RIGHT-OF-WAY OR ADJACENT PARKING AREAS AND DRIVES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED AND/OR TRACKED ONTO PUBLIC RIGHTS-OF-WAYS OR ADJACENT PARKING AREAS AND DRIVES MUST BE REMOVED IMMEDIATELY. MOUNTABLE BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED.
3. CONTRACTOR SHALL WASH WHEELS OF VEHICLES AT CONSTRUCTION ENTRANCE PRIOR TO VEHICLES EXITING SITE TO PREVENT SOIL MATERIAL FROM BEING TRACKED FROM THE SITE.

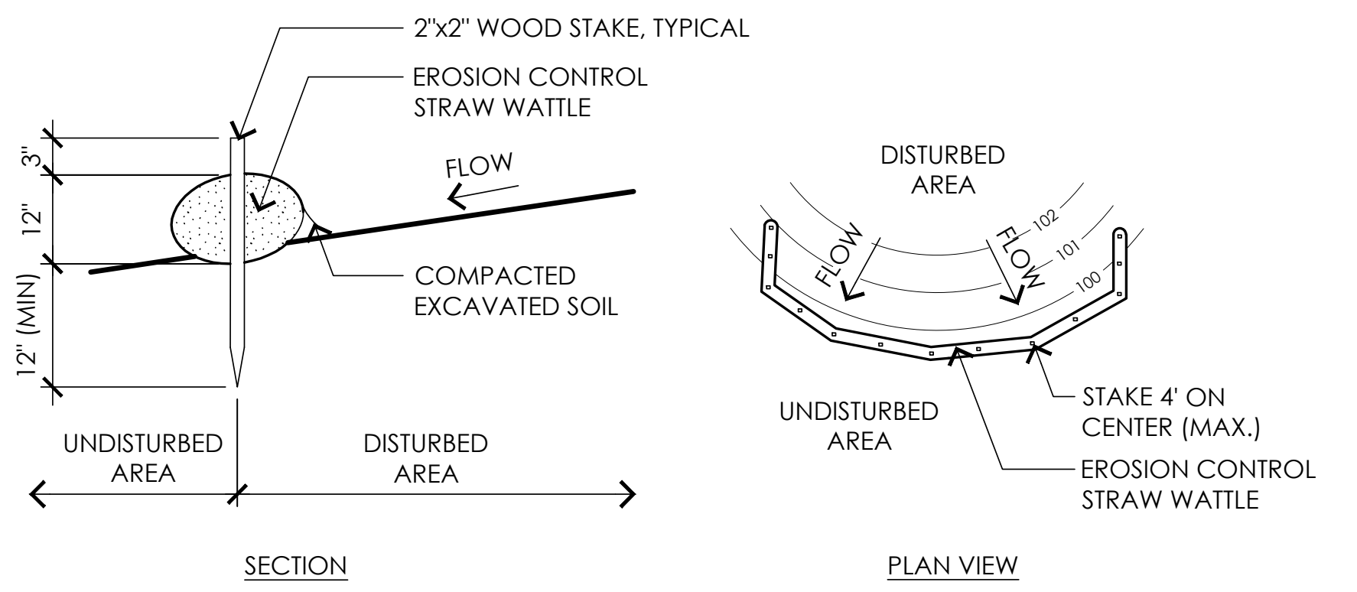


② TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE

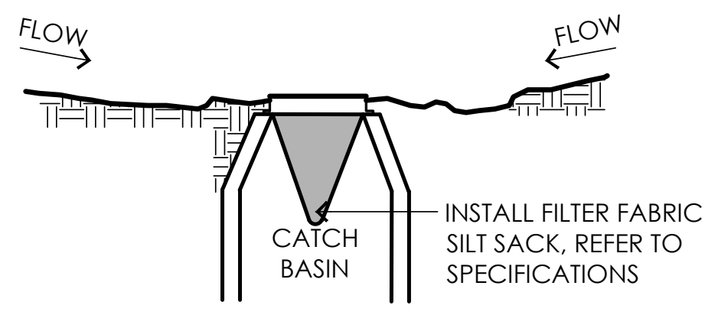
NOTES:

1. PLACE STRAW WATTLE ON LEVEL GRADE. EXTEND BOTH ENDS OF THE STRAW WATTLE AT LEAST 8'-0" UPSLOPE AT 45 DEGREES TO THE MAIN ALIGNMENT.
2. REMOVE DEPOSITS WHEN SEDIMENT ACCUMULATION IS ONE THIRD THE HEIGHT OF THE EXPOSED STRAW WATTLE OR ONE HALF OF THE EXPOSED STRAW FILTER SOCK.
3. STRAW WATTLE SHALL REMAIN IN WORKING ORDER UNTIL THE SITE IS STABILIZED. ADDITIONAL EROSION CONTROLS SHALL BE INSTALLED AS NEEDED TO PREVENT SILT FROM LEAVING THE SITE AT NO ADDITIONAL COST TO THE OWNER.



③ EROSION CONTROL STRAW WATTLE

NOT TO SCALE

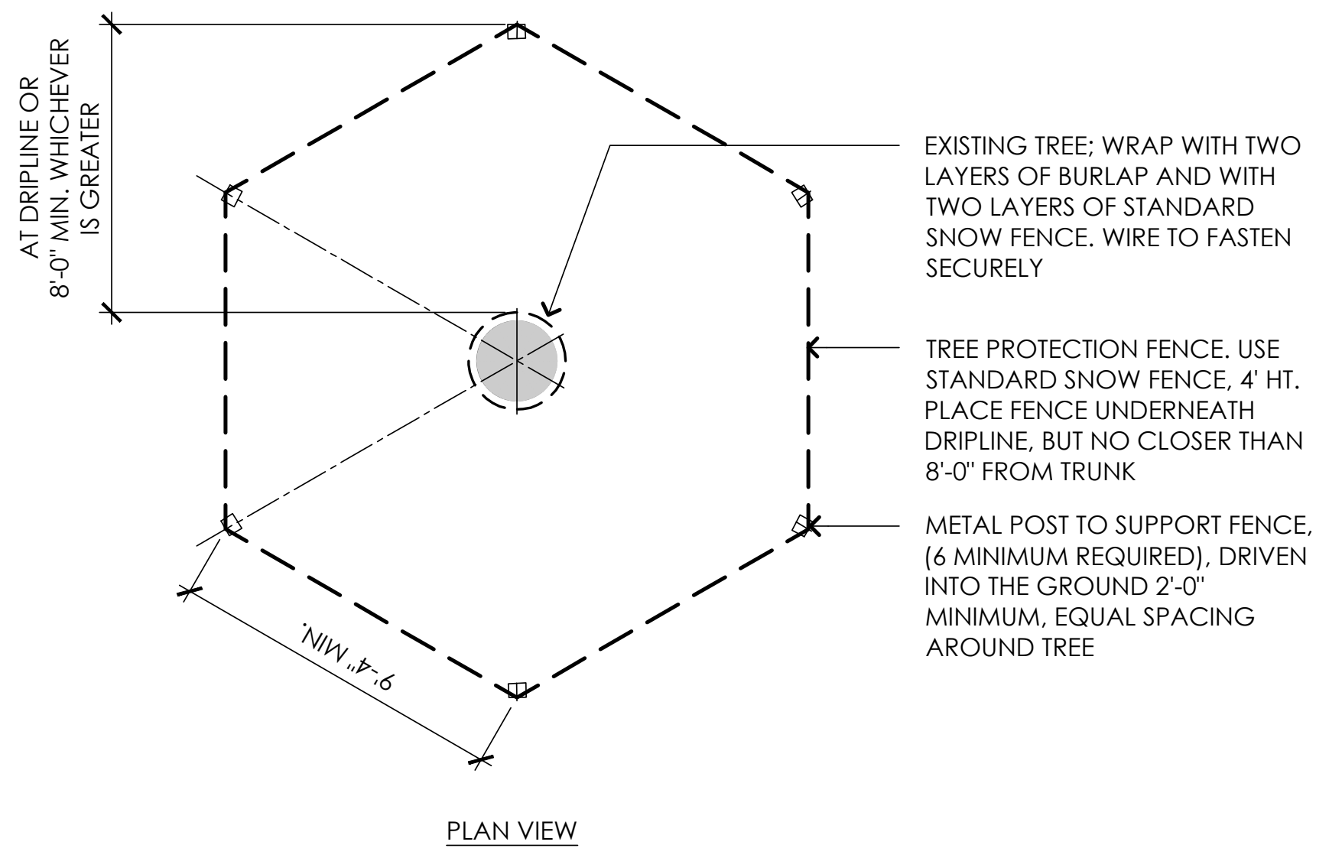


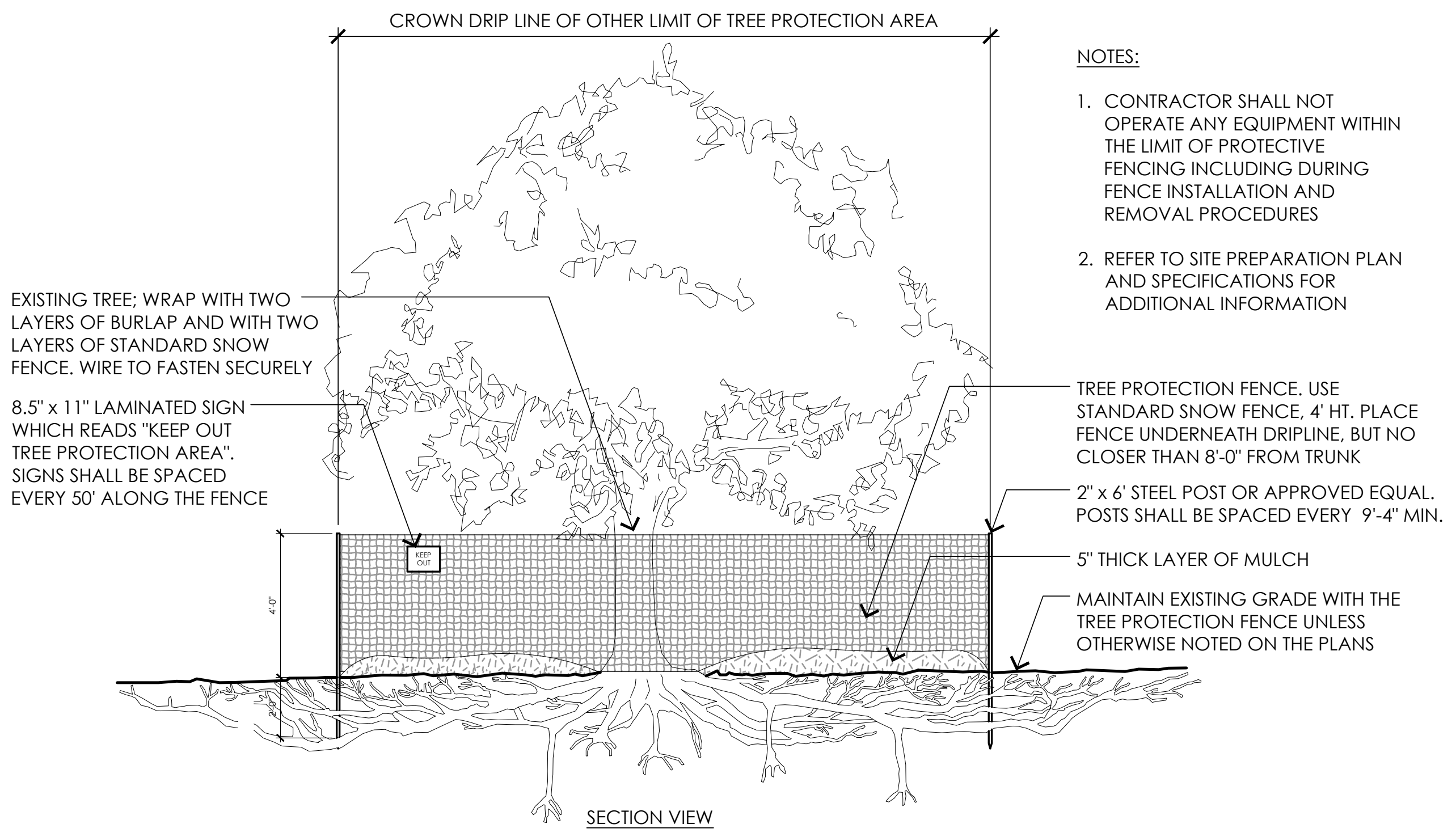
④ SILT SACK

NOT TO SCALE

NOTES:

1. INVENTORY AND PHOTOGRAPH – ALL SIGNIFICANT TREES TO BE PRESERVED, BOTH INSIDE AND WITHIN 25' OF THE 'LIMIT OF WORK' ZONE, SHALL BE IDENTIFIED. PRE-CONSTRUCTION, DATED AND LABELED PHOTOGRAPHS, TAKEN WITH SUFFICIENT CONTEXT TO ACCURATELY REFLECT THE CONDITION AND SCALE OF THESE TREES SHALL BE PROVIDED TO THE TOWN PLANNER IN ORDER TO ACCURATELY RECORD AND PORTRAY THE HEALTH AND INTEGRITY OF THE TREES TO BE SAVED PRIOR TO CONSTRUCTION.
2. ROOT PRUNE – IF EXCAVATION IS REQUIRED WITHIN THE CRITICAL ROOT ZONE OF A TREE, ALL EFFORTS, SUCH AS AIR SPADES OR ROOT PRUNING WITH AN ARBORIST, SHALL BE TAKEN TO AVOID OR MINIMIZE ROOT DAMAGE WITHIN THE CRZ.
3. TREE PROTECTION FENCE – A PHYSICAL BARRIER SHALL BE INSTALLED IN ORDER TO INHIBIT ROOT ZONE AND TRUNK DAMAGE OF TREES TO BE SAVED. THIS BARRIER SHALL BE COMPRISED OF MIN. 6' HT. CHAIN LINK FENCING ALONG THE INNER 75% OF THE CRITICAL ROOT ZONE OF THE TREE AND SHALL BE MAINTAINED FOR THE DURATION OF THE CONSTRUCTION. WHERE THE LIMIT OF WORK IS WITHIN THE INTERIOR 75% OF THE CRITICAL ROOT ZONE THE FENCE SHALL BE LOCATED AT THE LIMIT OF WORK. FENCING IS TO BE ERECTED AND SECURED WITHOUT DIGGING IN THE CRITICAL ROOT ZONE.
4. ROOT PROTECTION – IF ACCESS IS NEEDED FOR CONSTRUCTION ROADWAYS/MATERIAL STORAGE WITHIN THE OUTER 50% OF THE CRITICAL ROOT ZONE, ADDITIONAL ROOT ZONE PROTECTION SHALL BE REQUIRED. ACCEPTABLE ROOT ZONE PROTECTION MEASURES INCLUDE EITHER: A) 9-12" OF EVENLY DISPERSED WOOD CHIPS WITHIN THE CRITICAL ROOT ZONE, B) 4" OF EVENLY DISPERSED WOOD CHIPS WITHIN THE CRITICAL ROOT ZONE AND ¾" PLYWOOD EVENLY LAID ON TOP, OR C) 4-6" OF EVENLY DISPERSED WOOD CHIPS WITHIN THE CRITICAL ROOT ZONE AND LOGGING OR UTILITY MATS EVENLY LAID ON TOP. ROOT PROTECTION MEASURES SHALL BE MAINTAINED FOR THE DURATION OF THE CONSTRUCTION.
5. CRITICAL ROOT ZONE – THE CRITICAL ROOT ZONE SHALL BE DEFINED AS A CIRCLE WHOSE DIAMETER IS 18" MULTIPLIED BY THE DIAMETER OF THE TREE MEASURED AT A HEIGHT OF 4'
6. AFTER INITIAL TREE CLEARING AND GRADING HAS BEEN COMPLETED INSPECT THE SITE TO ENSURE ADEQUATE PROTECTION WITHIN THE CRITICAL ROOT ZONES AS DESCRIBED IN THE PRECEDING CONDITIONS IS IN PLACE.
7. TREE CONDITION INSPECTIONS & MONITORING – AN ISA CERTIFIED ARBORIST SHALL INSPECT ALL SIGNIFICANT TREES EVERY MONTH DURING CONSTRUCTION AND AT THE END OF CONSTRUCTION IN ORDER TO IDENTIFY POTENTIAL MECHANICAL, WATER, PEST, AND DISEASE ISSUES. ANY ISSUES SHALL BE ADDRESSED IMMEDIATELY PER THE RECOMMENDATION OF THE ARBORIST.





NOTES:

1. CONTRACTOR SHALL NOT OPERATE ANY EQUIPMENT WITHIN THE LIMIT OF PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL PROCEDURES
2. REFER TO SITE PREPARATION PLAN AND SPECIFICATIONS FOR ADDITIONAL INFORMATION

⑤ EXISTING TREE PROTECTION

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TOWN OF GROTON

Groton, Massachusetts

IMPROVEMENTS AT COW POND BROOK FIELDS

Permitting Documents
February 2, 2026

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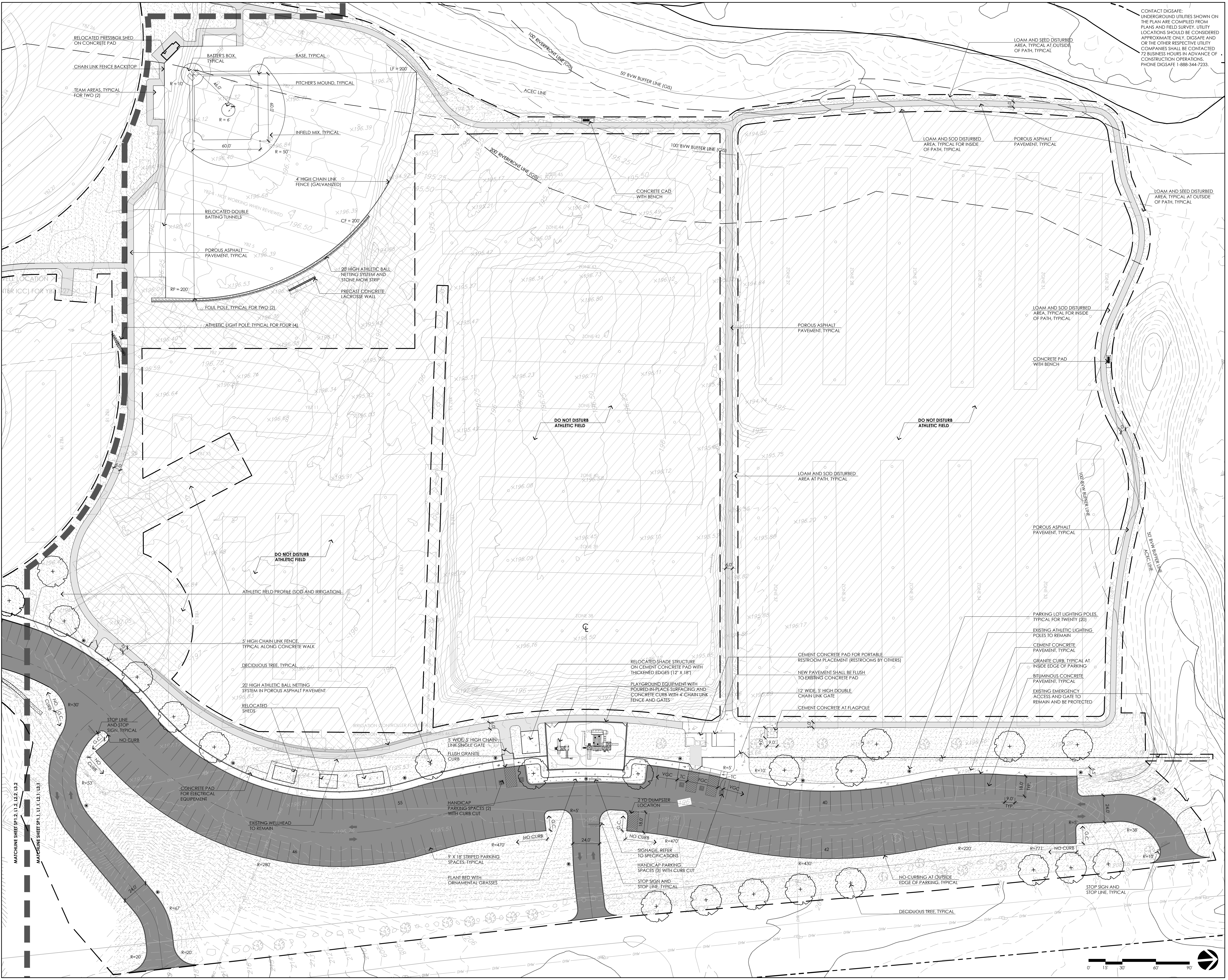
SEAL:

MEGAN E. BUCZYNSKI
CIVIL
No. 47392

2 February 2026

SHEET TITLE:
SITE PREPARATION & EROSION CONTROL DETAIL SHEET

SHEET NO:
SP1.3



CONTACT DIGSAFE:
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CHECKED:	MEB

SEAL:

MEGAN E. BUCZYNSKI
CIVIL
No. 47392

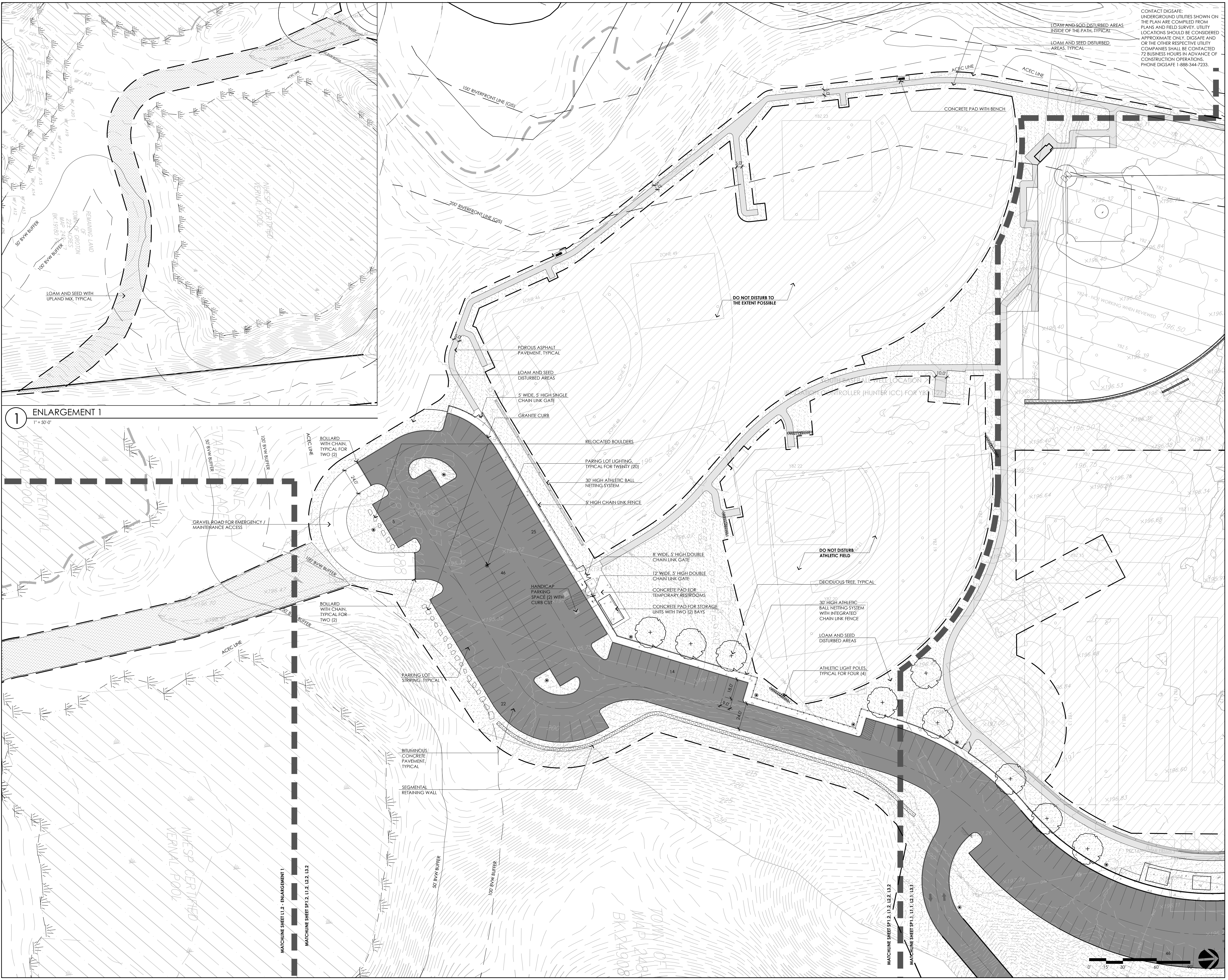
Mg Buczynski
2 February 2026

SHEET TITLE:

LAYOUT & MATERIALS
PLAN - SHEET I

SHEET NO:

L1.1



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M. Buczynski
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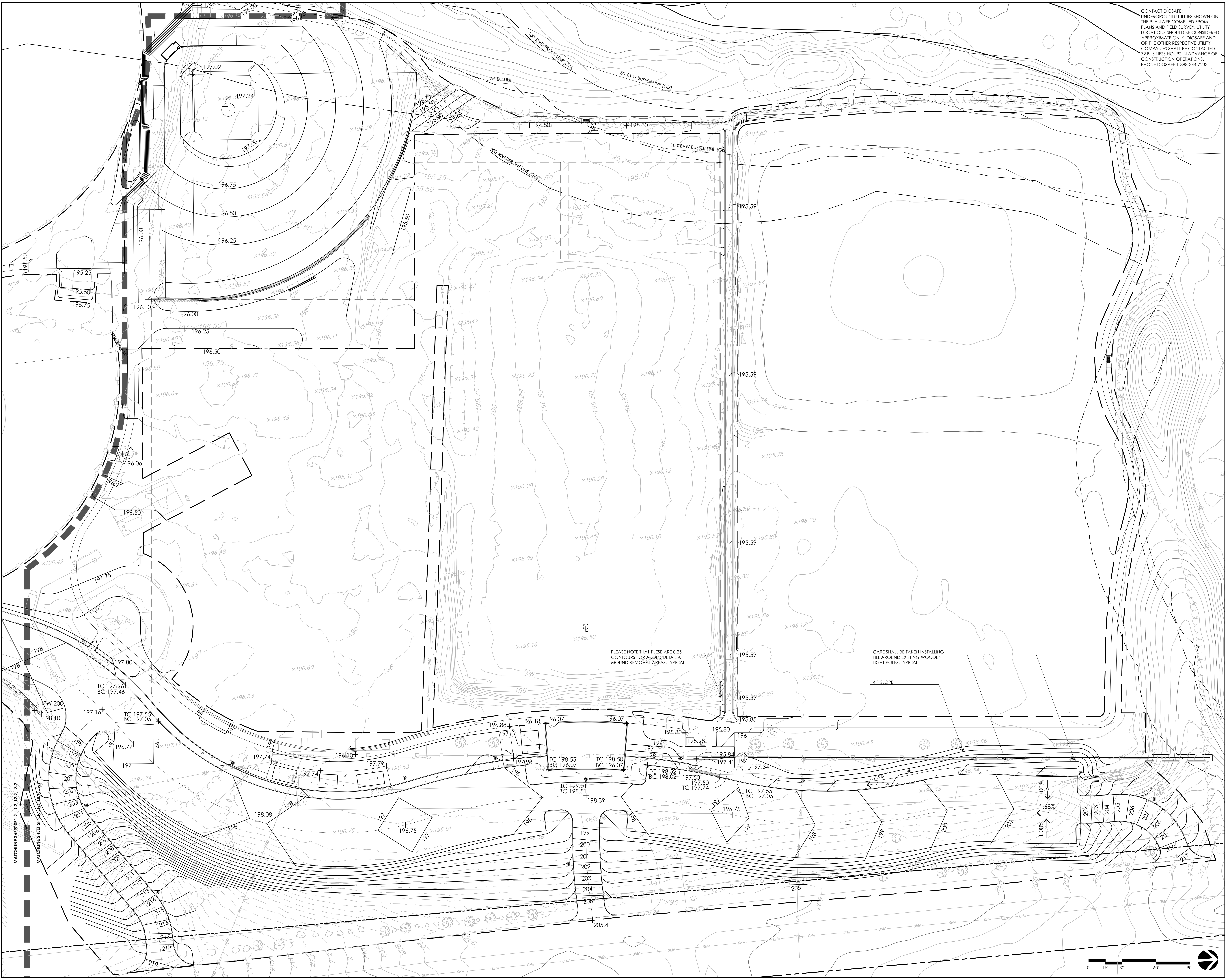
SHEET TITLE:
LAYOUT & MATERIALS PLAN - SHEET II

SHEET NO:
L1.2



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PLEASE NOTE THAT THESE ARE 0.25' CONTOURS FOR ADDED DETAIL AT MOUND REMOVAL AREAS, TYPICAL

CARE SHALL BE TAKEN INSTALLING FILL AROUND EXISTING WOODEN LIGHT POLES, TYPICAL

4:1 SLOPE

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RESOURCE AREA & ENVIRONMENTAL ASSESSMENT-
LEC ENVIRONMENTAL CONSULTANTS, INC.

SURVEY -
LANDTECH CONSULTANTS, INC.

TRANSPORTATION ENGINEER -
MDM TRANSPORTATION CONSULTANTS, INC.

SITE PLAN REVIEW SIGNATURES

THIS SITE PLAN APPROVAL DOES NOT NECESSARILY INDICATE COMPLIANCE WITH GROTON ZONING BYLAW

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TOWN OF GROTON
Groton, Massachusetts
IMPROVEMENTS AT COW POND BROOK FIELDS

Permitting Documents
February 2, 2026

REVISIONS:

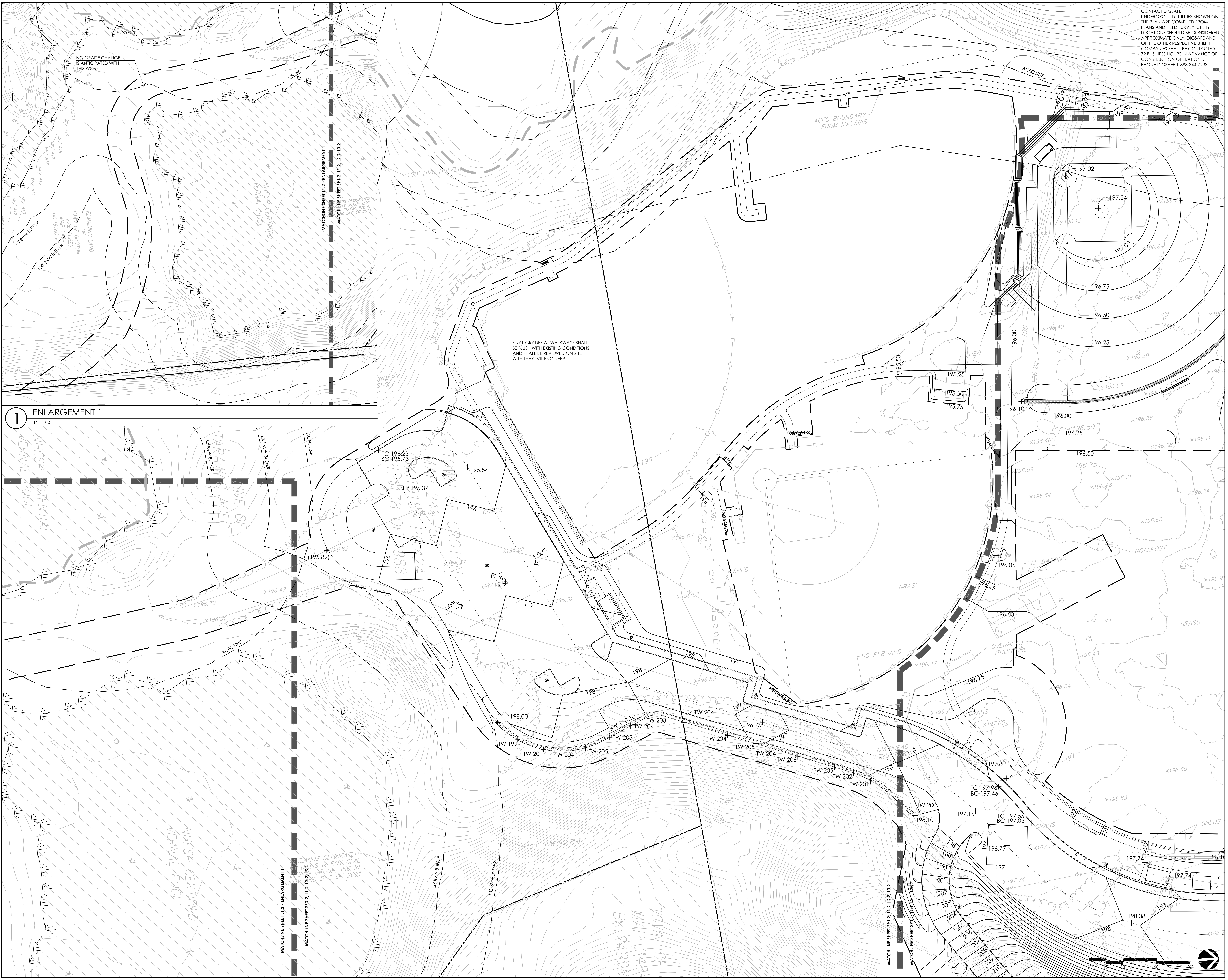
NO.	DATE	DESCRIPTION

SCALE:	1"=30'-0"
PROJECT NO.:	24051.00
FILE:	24051.00-L2.1-G_PLAN.dwg
DRAWN:	BJM
CHECKED:	MEB

SEAL:
MEGAN E. BUCZYNSKI
CIVIL
No. 47392
M. Buczynski
2 February 2026

SHEET TITLE:
GRADING PLAN - SHEET I

SHEET NO:
L2.1



CONTACT DIGSAFE:
UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS.
PHONE DIGSAFE 1-888-344-7233.

FINAL GRADES AT WALKWAYS SHALL BE FLUSH WITH EXISTING CONDITIONS AND SHALL BE REVIEWED ON-SITE WITH THE CIVIL ENGINEER

① ENLARGEMENT 1

1" = 50'-0"

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Groton, Massachusetts
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Permitting Documents
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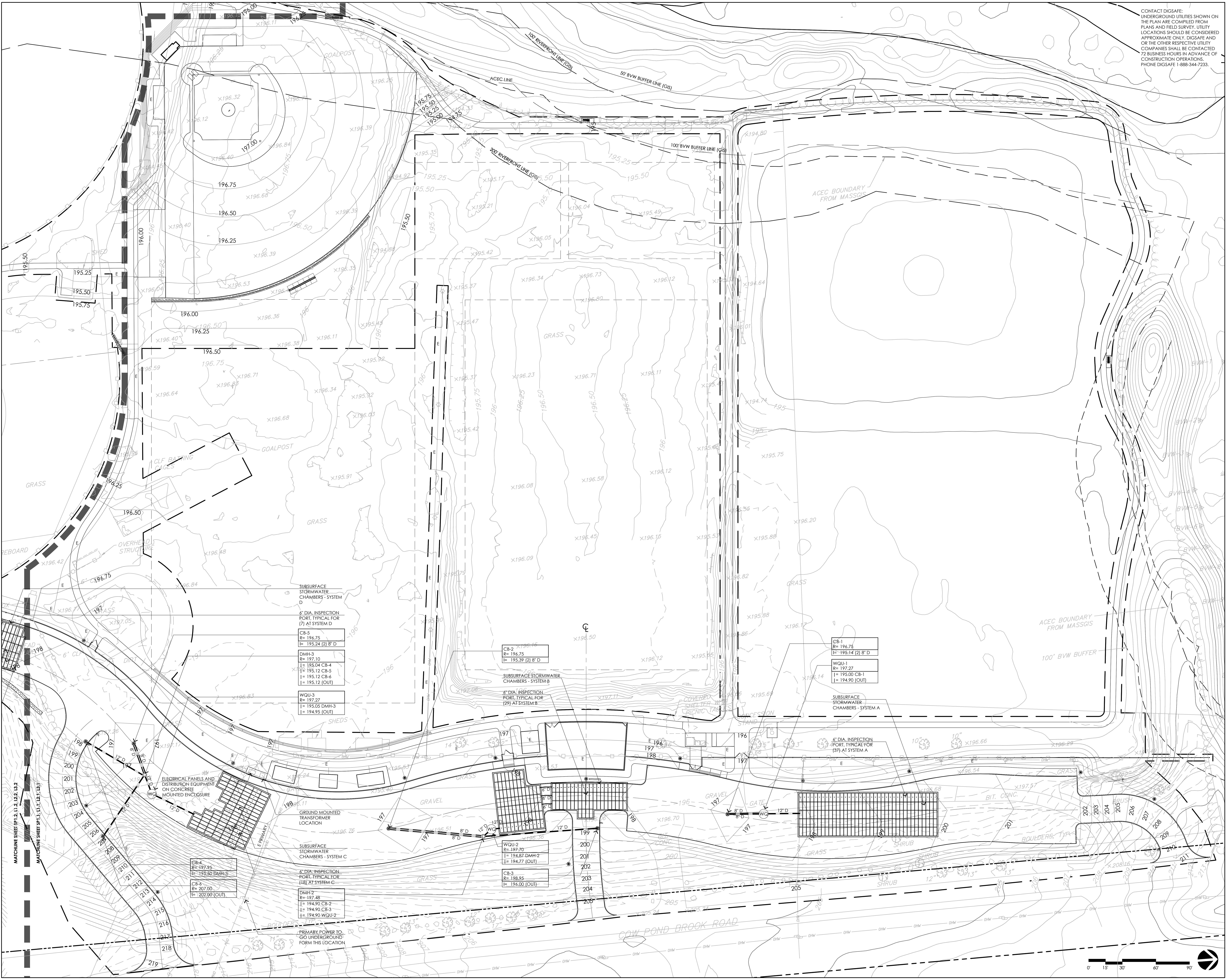
SEAL:
MEGAN E. BUCZYNSKI CIVIL No. 47392
Me Buczynski
2 February 2026

SHEET TITLE:
GRADING PLAN - SHEET II

SHEET NO:
L2.2



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Groton, Massachusetts
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CHECKED:	MEB

SEAL:

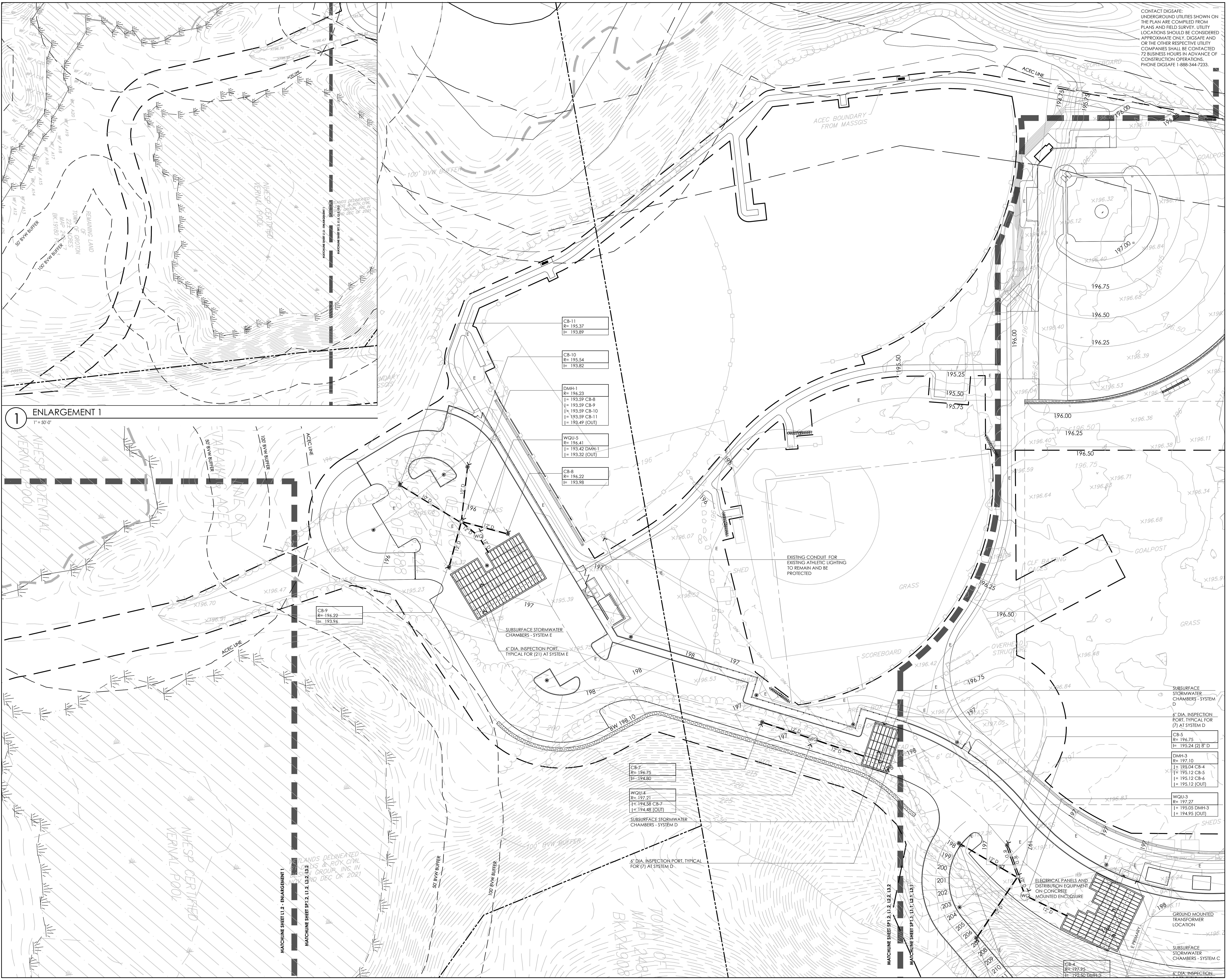
MEGAN E. BUCZYNSKI
CIVIL
No. 47392

Mg Buczynski
2 February 2026

SHEET TITLE:

UTILITY PLAN -
SHEET I

SHEET NO:
L3.1



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SHEET II

SHEET NO:
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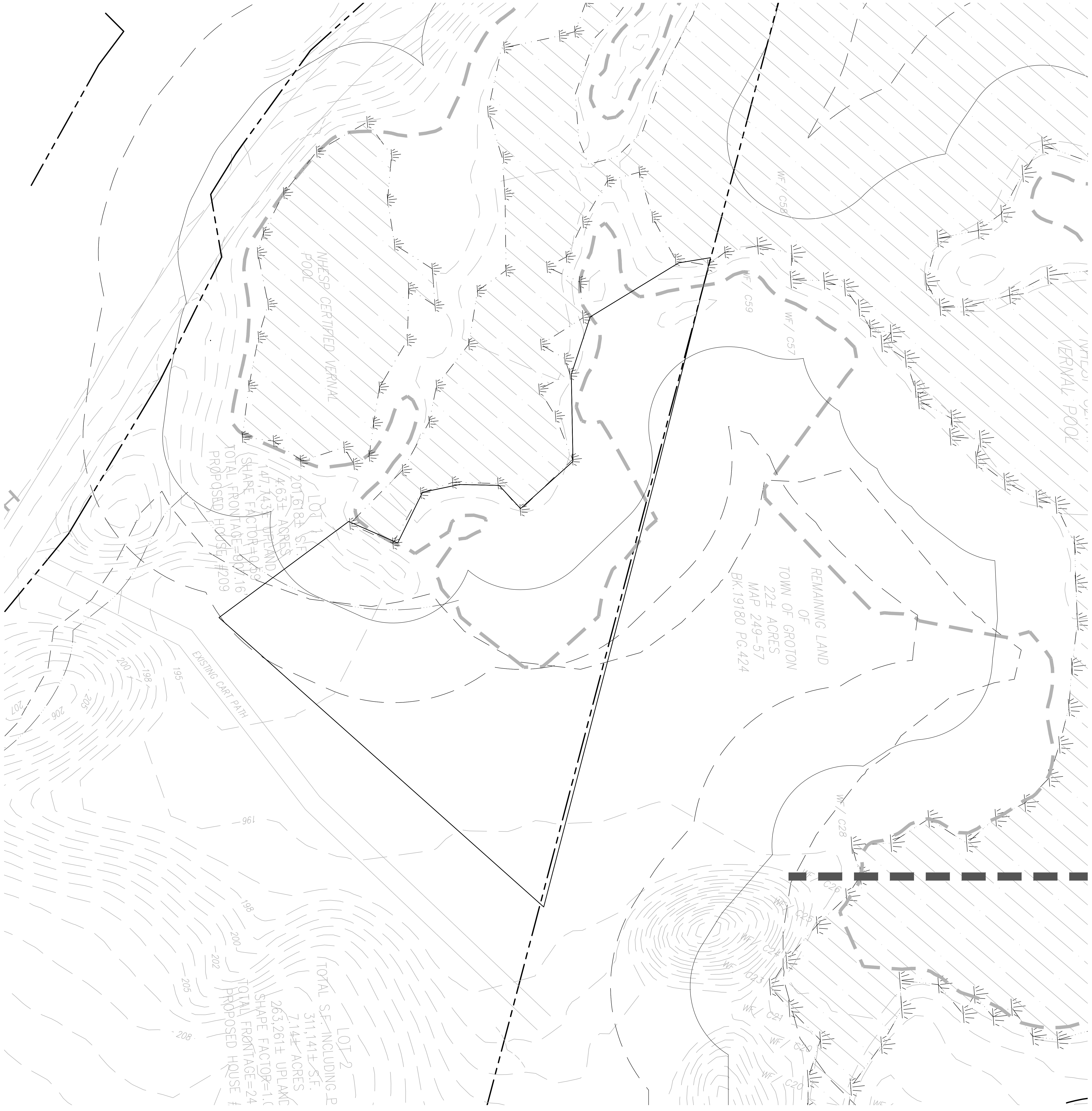

① ENLARGEMENT 1
1" = 30'-0"

AS PART OF THE REQUIRED MITIGATION WITH NHESP FOR THE MAIN PROJECT, NHESP HAS REQUESTED THE PROJECT INCLUDE DEVELOPING A TURTLE NESTING HABITAT. BASED ON MITIGATION CALCULATIONS, THIS IS ABOUT 1-ACRE OF LAND TO BE CLEARED AND PREPPED FOR HABITAT. THE APPLICANT WELCOMES DISCUSSION WITH CONSERVATION TO REVIEW PREFERRED LOCATION OF HABITAT. THE AREA CURRENTLY SHOWN IS SCHEMATIC FOR SIZE ONLY. THE FINAL DESIGN WILL BE WORKED OUT WITH NHESP, BUT WILL FOLLOW THE NHESP'S ADVISORY GUIDELINES FOR CREATING TURTLE NESTING HABITAT.

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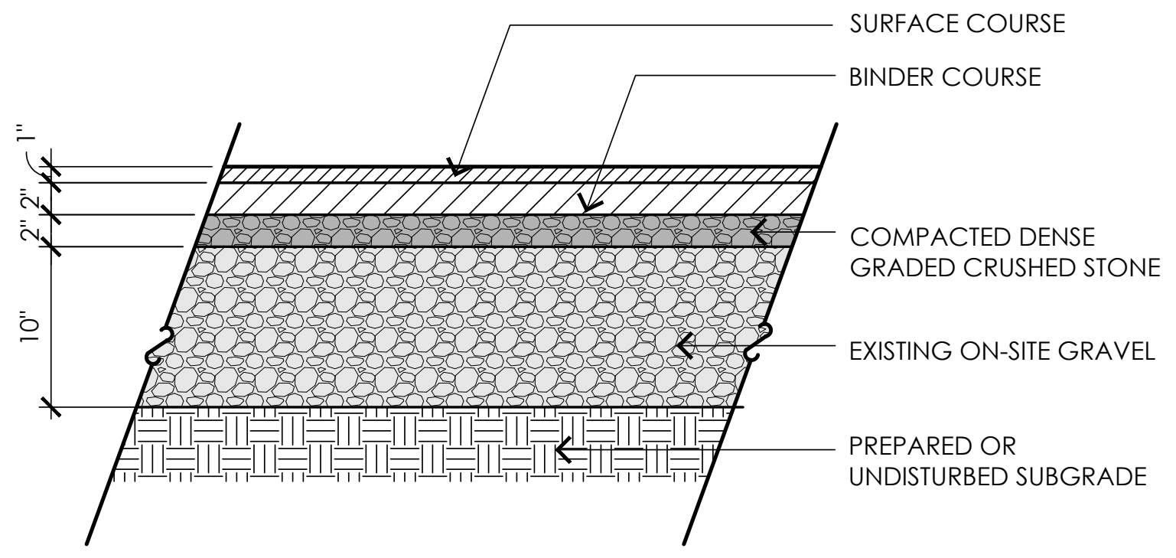
CIVIL
No. 47392

M. Buczynski
2 February 2026

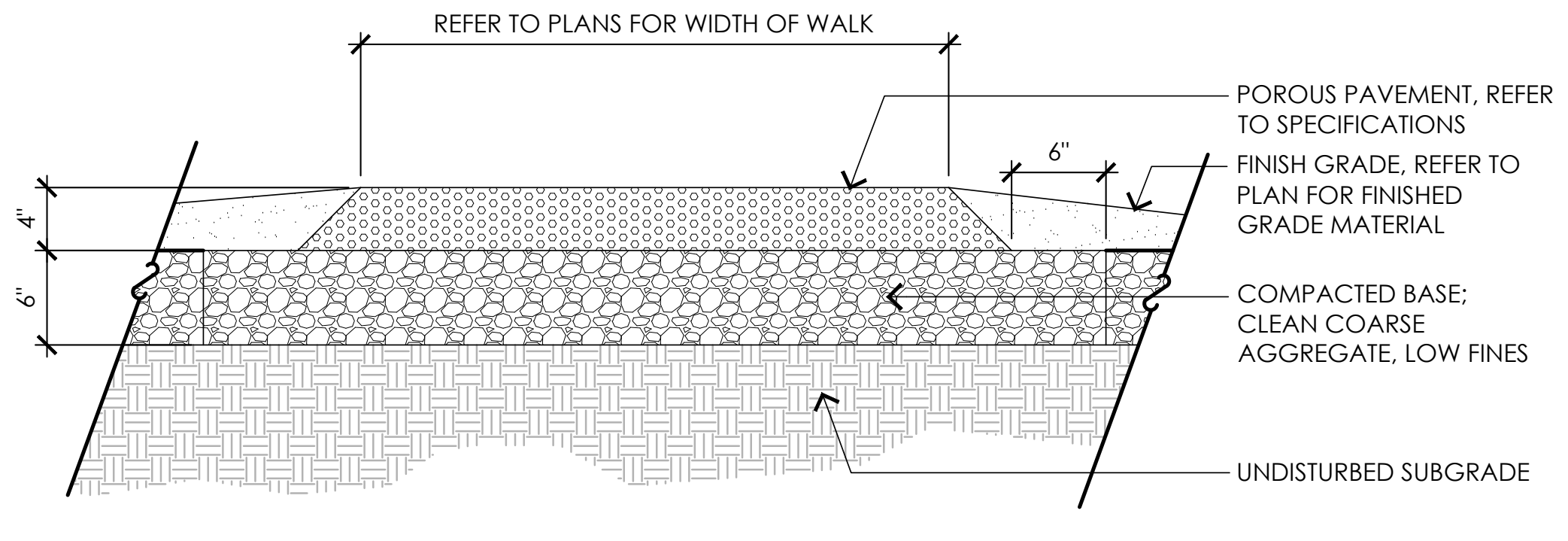
SHEET TITLE:
HABITAT IMPLEMENTATION PLAN

SHEET NO:
L4.1



1 BITUMINOUS CONCRETE PAVEMENT (PARKING LOT)

NOT TO SCALE

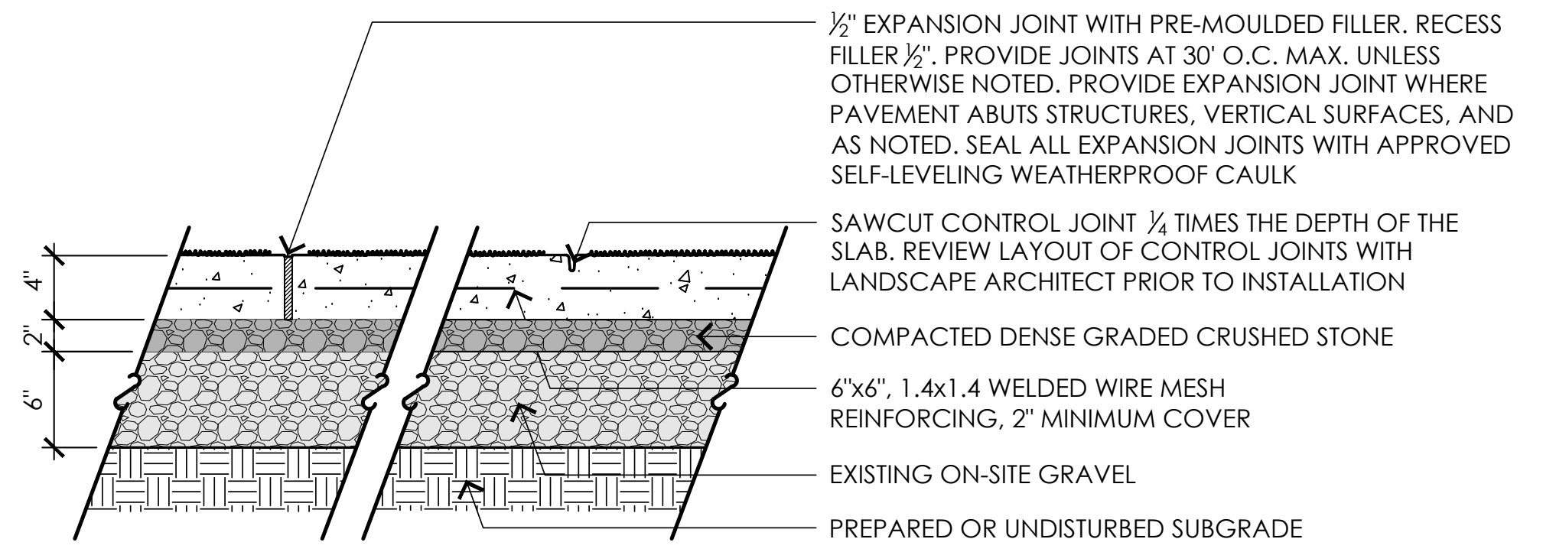


2 POROUS ASPHALT PAVEMENT (FIELD WALKWAYS)

NOT TO SCALE

NOTE:

1. PROVIDE LIGHT BROOM FINISH PERPENDICULAR TO FLOW OF TRAFFIC.

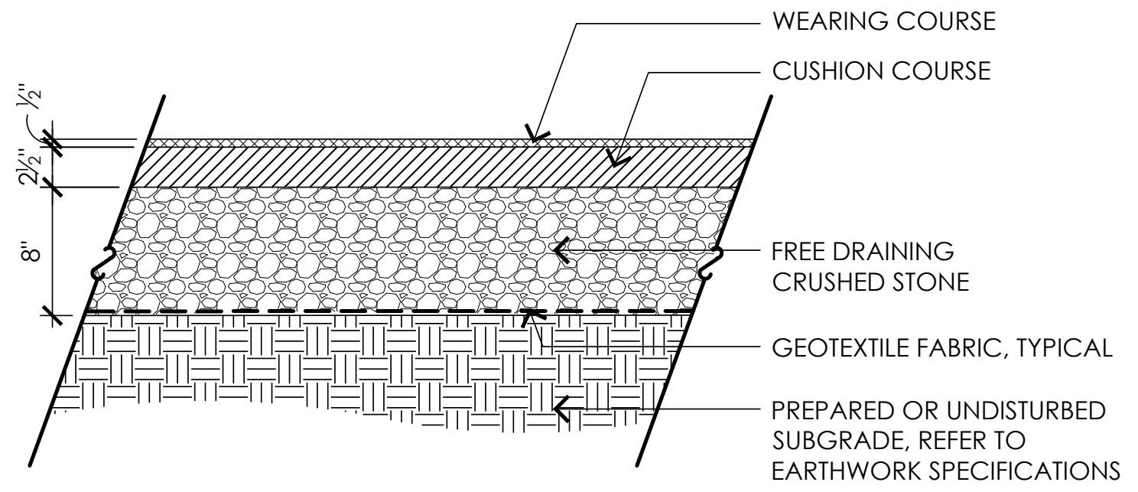


3 CEMENT CONCRETE PAVEMENT (PARKING LOT SIDEWALKS)

NOT TO SCALE

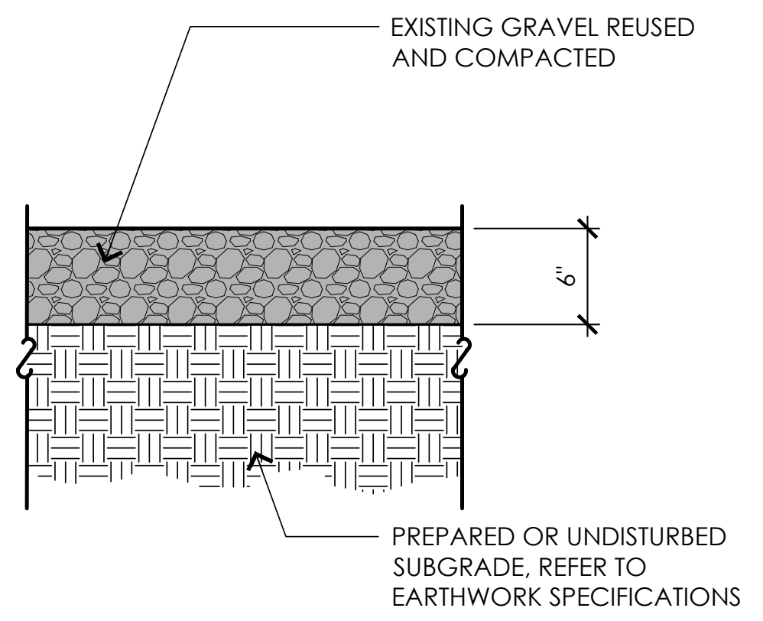
NOTE:

1. REFER TO SPECIFICATIONS FOR POURED-IN-PLACE RUBBER SURFACING COLOR REQUIREMENTS.



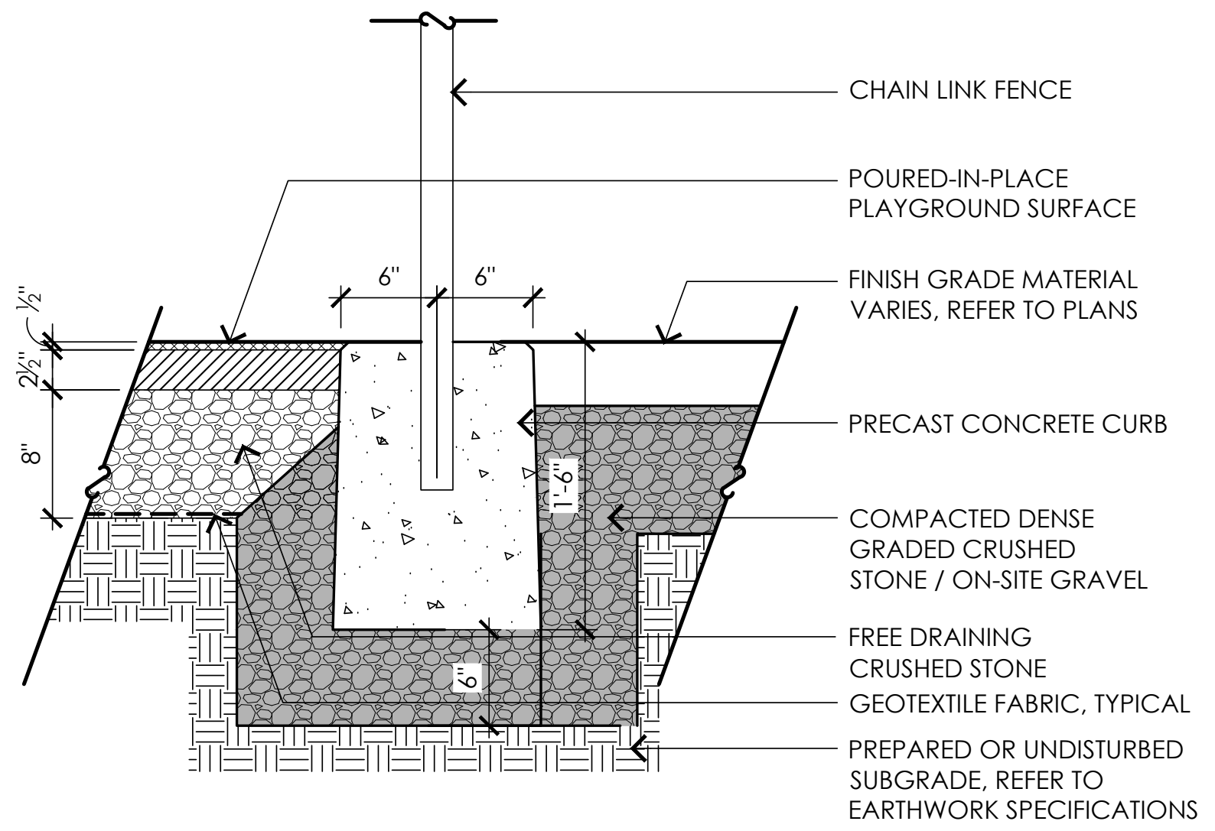
4 POURED-IN-PLACE PLAYGROUND SURFACING

NOT TO SCALE



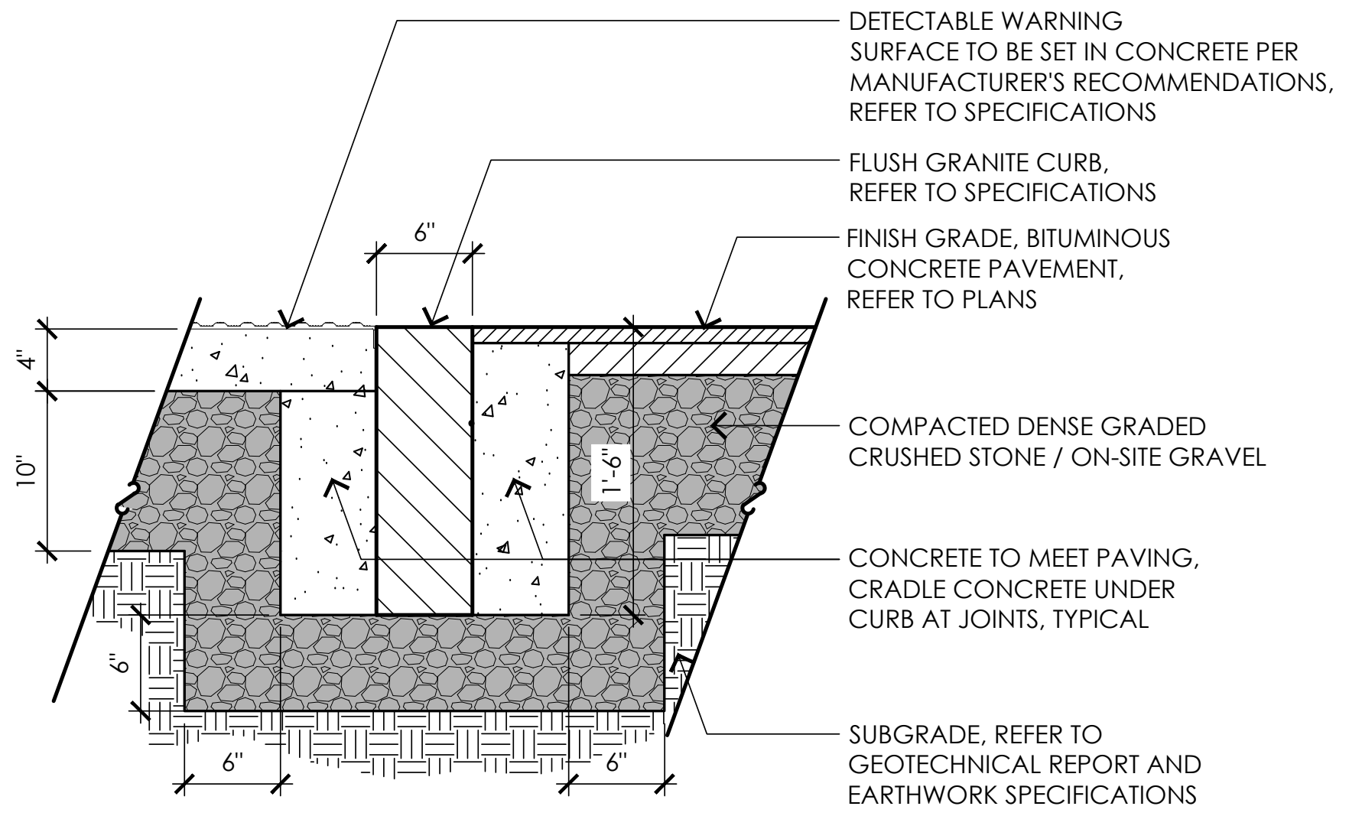
5 GRAVEL PAVEMENT

NOT TO SCALE



6 PRECAST CONCRETE CURB (AT PLAYGROUND)

NOT TO SCALE

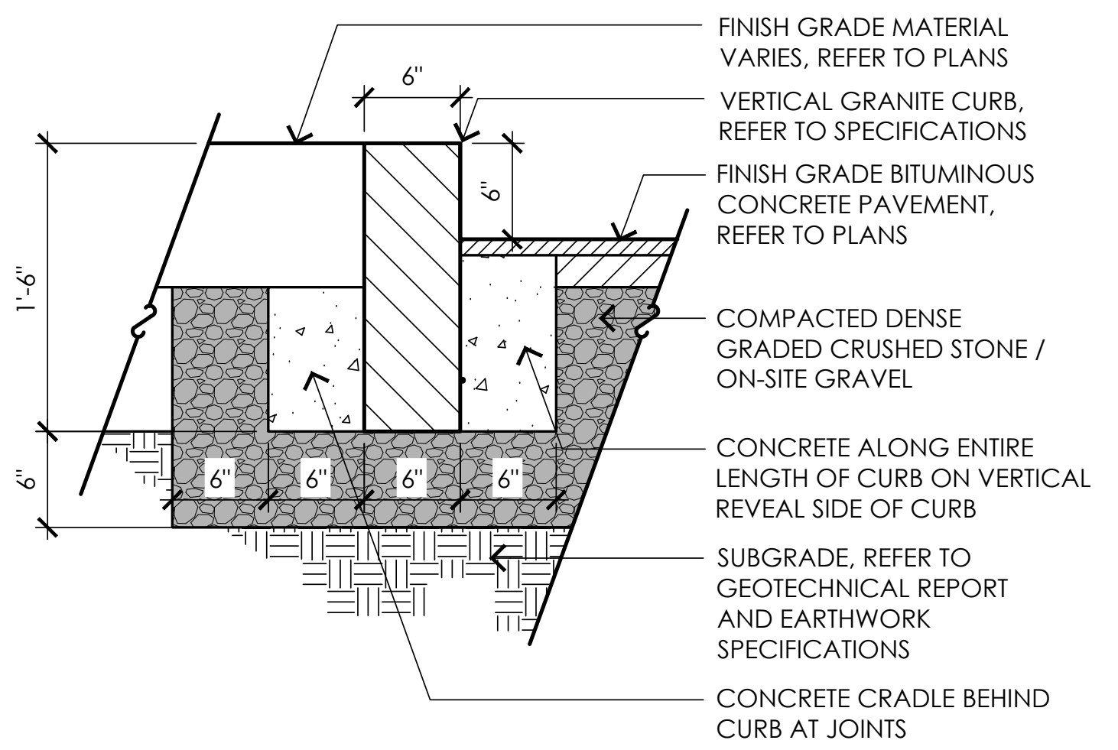


7 FLUSH GRANITE CURB

NOT TO SCALE

NOTE:

1. ALL JOINTS BETWEEN GRANITE CURB UNITS SHALL BE MORTARED.

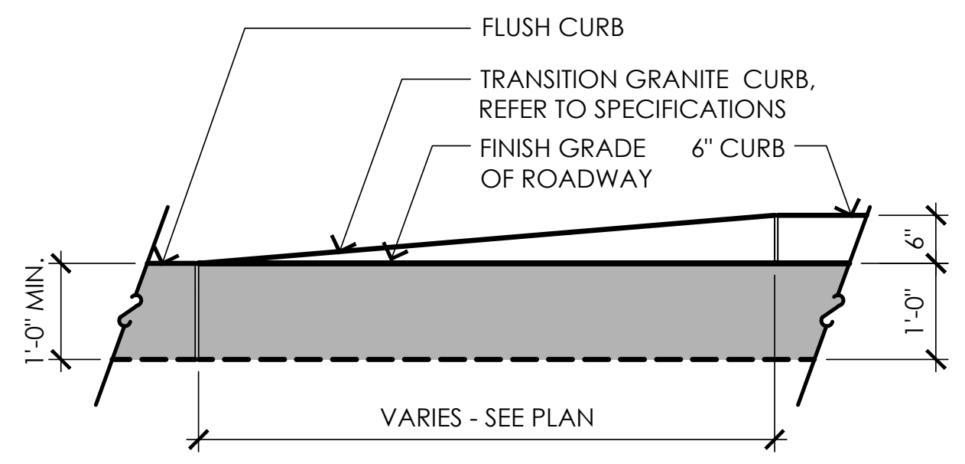


8 VERTICAL GRANITE CURB

NOT TO SCALE

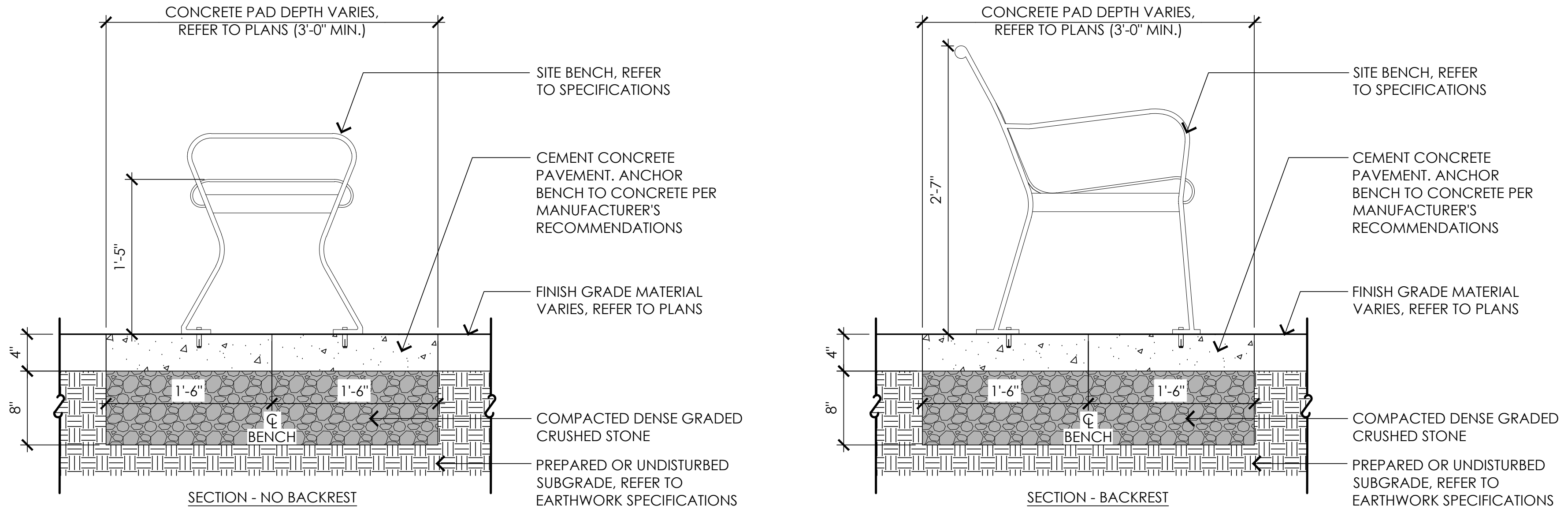
NOTE:

1. ALL JOINTS BETWEEN GRANITE CURB UNITS SHALL BE MORTARED.



9 TRANSITION GRANITE CURB

NOT TO SCALE

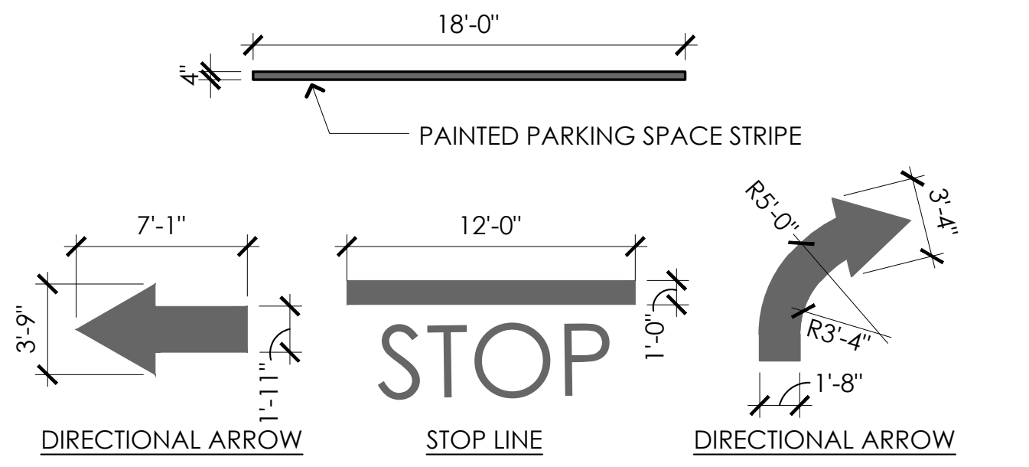


SECTION - NO BACKREST

SECTION - BACKREST

10 SITE BENCH

NOT TO SCALE



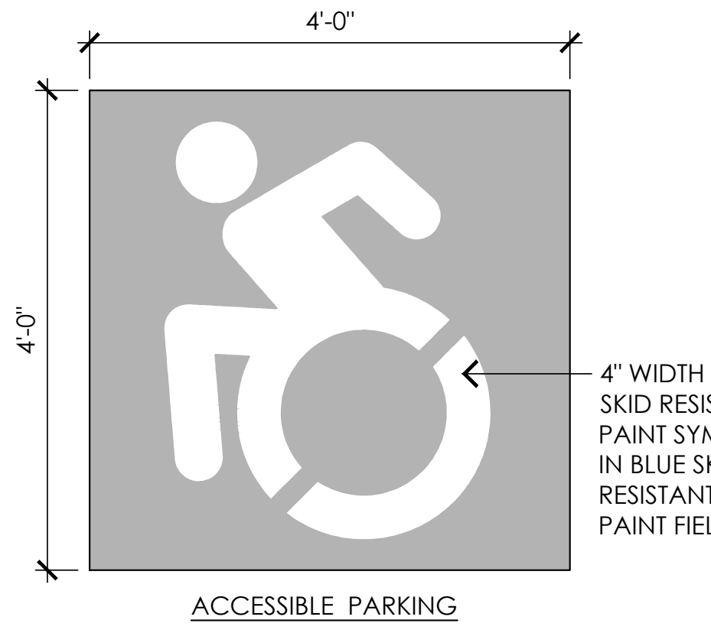
DIRECTIONAL ARROW

STOP LINE

DIRECTIONAL ARROW

11 PARKING LOT STRIPING

NOT TO SCALE



ACCESSIBLE PARKING

12 PAVEMENT MARKINGS

NOT TO SCALE

NOTE:

1. COLORS SHALL BE SELECTED FROM MANUFACTURER'S LIST OF STANDARD COLORS. COLORS ARE SHOWN FOR INTENT.
2. SHOWN FOR INTENT ONLY. FINAL WORDING TO BE REVIEWED AND APPROVED BY PARK COMMISSION.

WELCOME TO

COW POND BROOK FIELDS

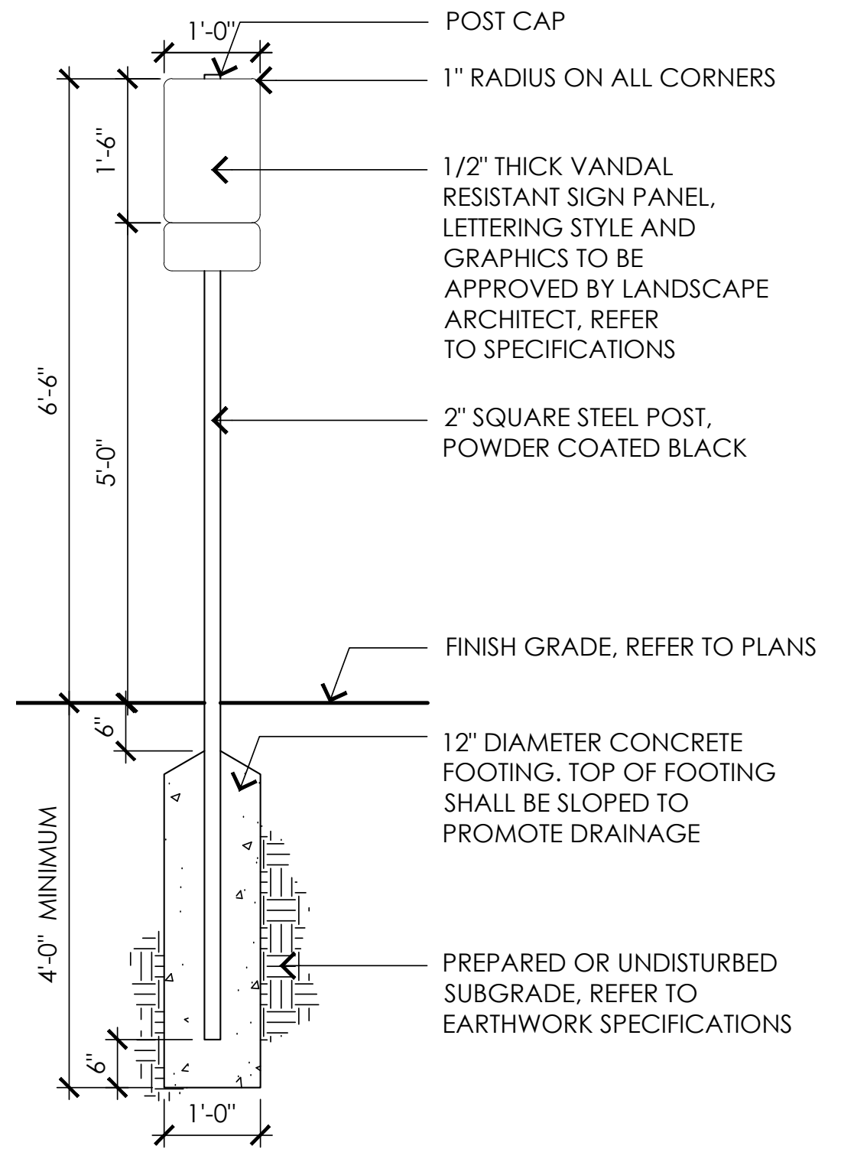
PLEASE CONSIDER THE FOLLOWING RULES AS YOU ENJOY THIS FACILITY:

- Park hours are dawn to dusk with the exception of permitted night time use approved by the Park Commission
- This is a carry in, carry-out facility. Please take all trash with you and dispose of it properly
- All pets to be on a leash
- Smoking and the use of alcohol is strictly prohibited
- Children under the age of 5 must be accompanied by an adult

IN CASE OF EMERGENCY DIAL 911

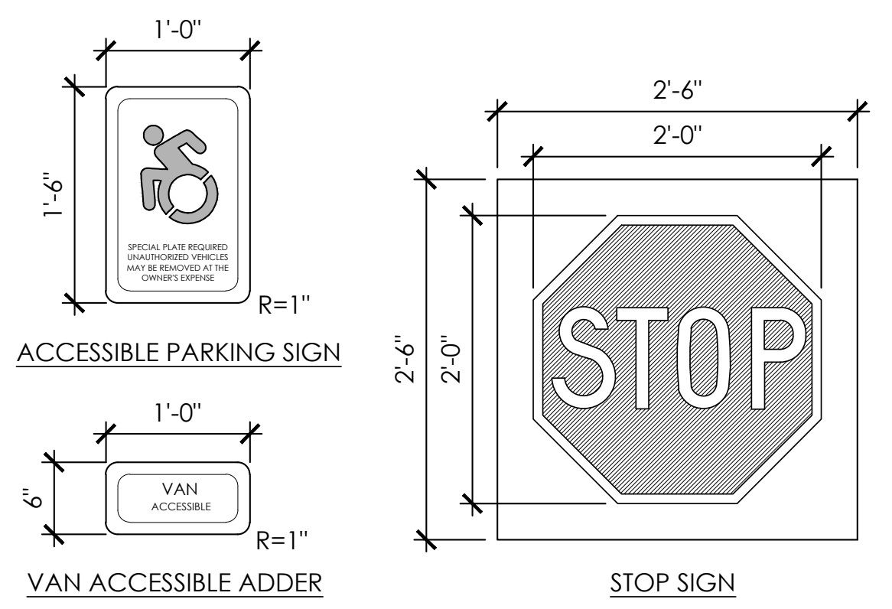
13 GATE SIGNAGE

NOT TO SCALE



NOTES:

1. GRAPHICS AND LETTERING STYLE SHALL BE SUPPLIED BY THE LANDSCAPE ARCHITECT AND COPY TO BE APPROVED BY LANDSCAPE ARCHITECT.
2. ALL TEXT, COLORS, FONTS, AND DIMENSIONS SHALL BE REVIEWED BY LANDSCAPE ARCHITECT AND THE OWNER.
3. CONTRACTOR SHALL SUBMIT MOUNTING METHOD FOR APPROVAL.
4. ALL SIGN MOUNTING MECHANISMS SHALL BE PAINTED BLACK.



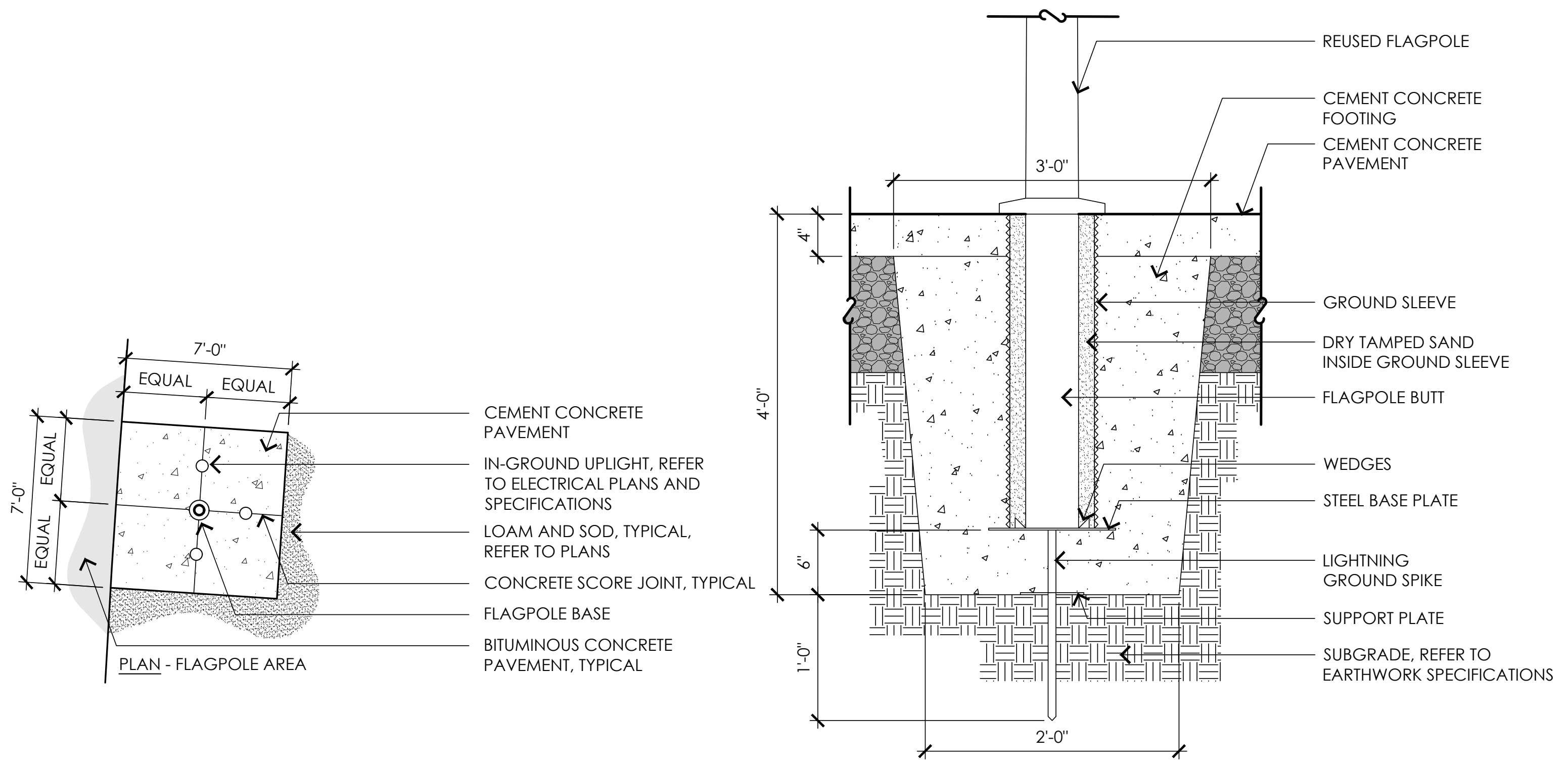
ACCESSIBLE PARKING SIGN

VAN ACCESSIBLE ADDER

STOP SIGN

14 SIGNAGE ON POST AND PANELS

NOT TO SCALE



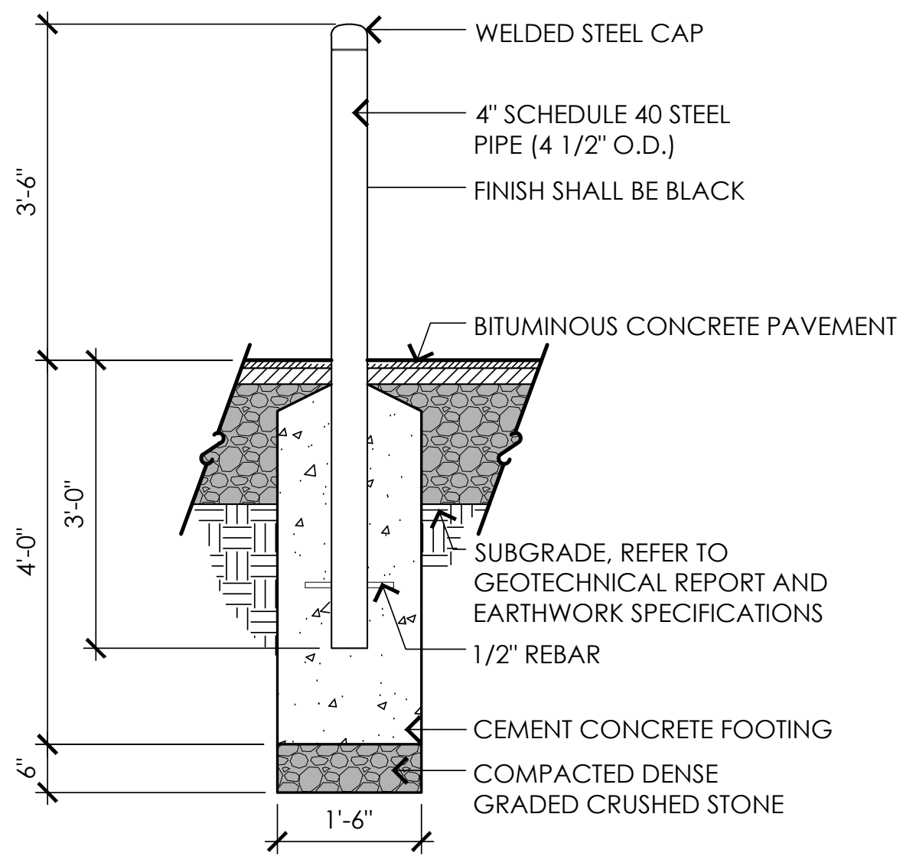
PLAN - FLAGPOLE AREA

15 FLAG POLE WITH UPLIGHTS

NOT TO SCALE

NOTE:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. PROVIDE CHAIN BETWEEN BOLLARDS.



16 BOLLARD

NOT TO SCALE

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Groton, Massachusetts

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SEAL:

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CIVIL
No. 47392

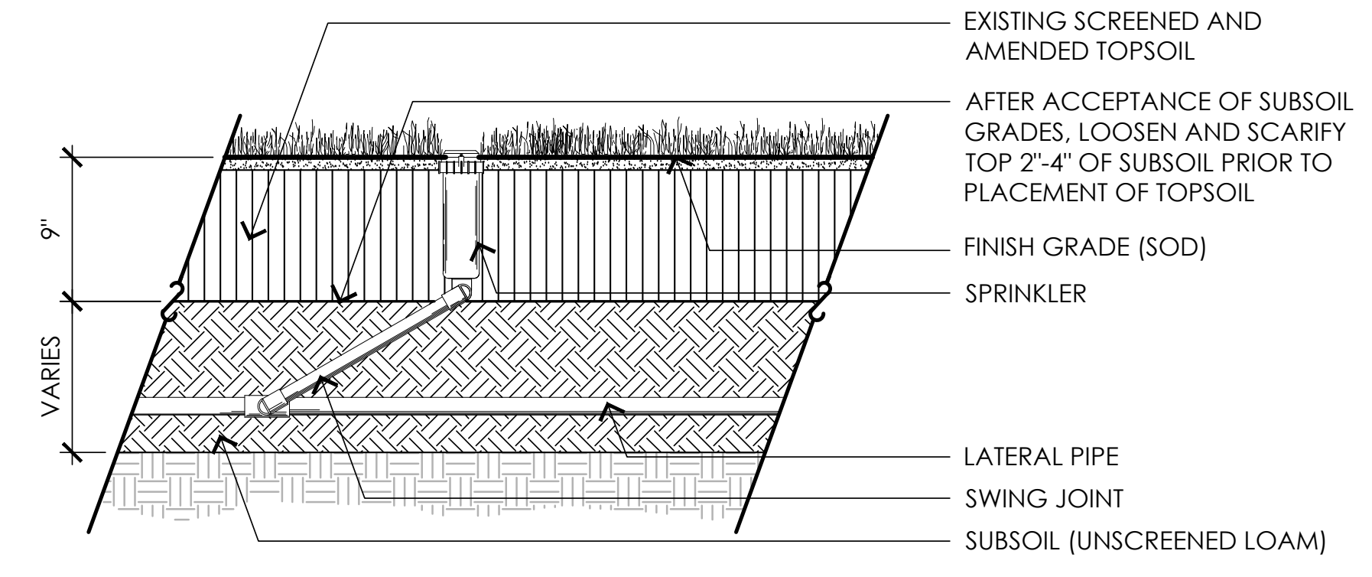
M. Buczynski
2 February 2026

SHEET TITLE:

DETAIL SHEET I

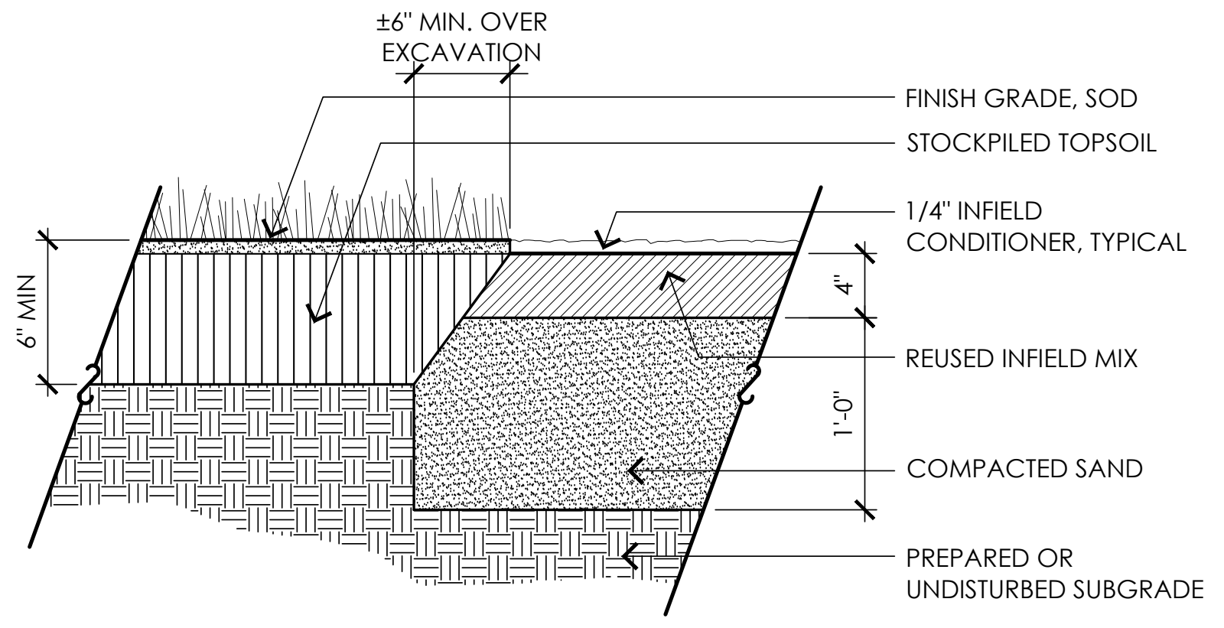
SHEET NO:

L5.1



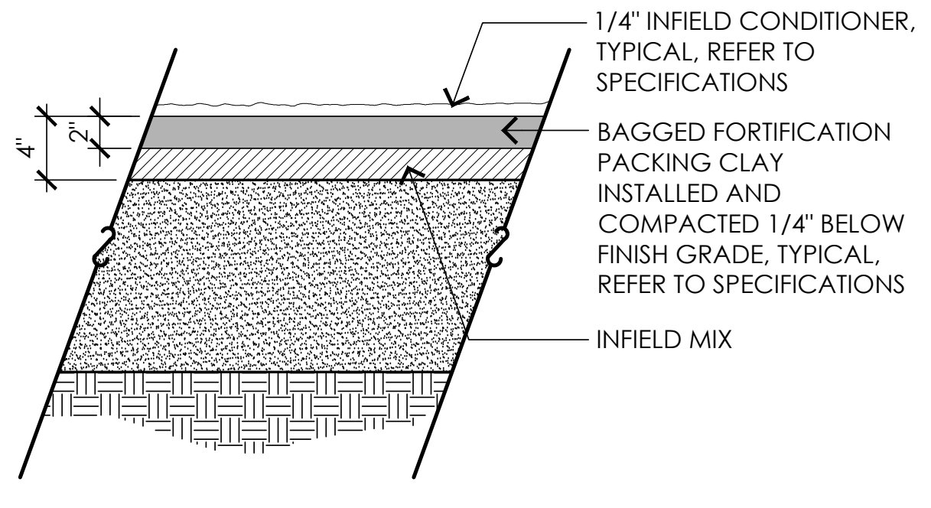
1 ATHLETIC FIELD PROFILE

NOT TO SCALE



2 SKINNED INFIELD MIX

NOT TO SCALE



3 CLAY FORTIFICATION - SECTION

NOT TO SCALE

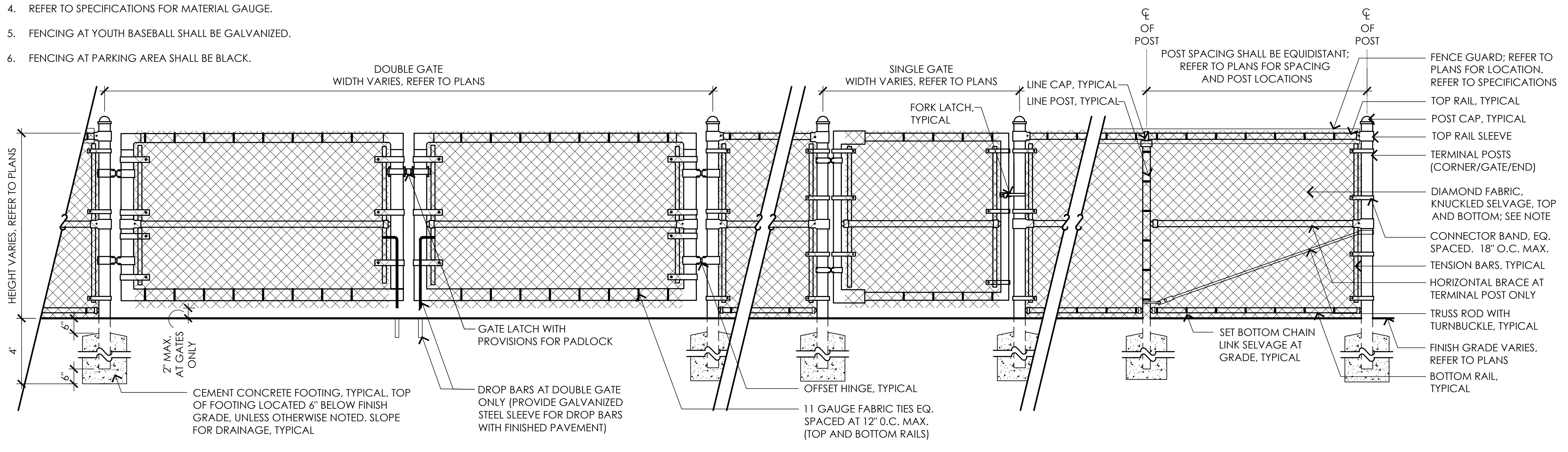
NOTES:

1. FENCE FABRIC TOP SHALL BE EVEN WITH TOP OF TOP RAIL.
2. TOP OF CONCRETE FENCE POST FOOTING TO HAVE SLOPE TO PROMOTE POSITIVE DRAINAGE.
3. GATES SHALL SWING 180° DEGREES SO THAT WHEN FULLY OPEN GATE PANELS SHALL BE PARALLEL TO CHAIN LINK FENCE.
4. REFER TO SPECIFICATIONS FOR MATERIAL GAUGE.
5. FENCING AT YOUTH BASEBALL SHALL BE GALVANIZED.
6. FENCING AT PARKING AREA SHALL BE BLACK.

CONCRETE FOOTING
DEPTH X WIDTH

	H
TERMINAL	48"x18"
LINE	48"x15"

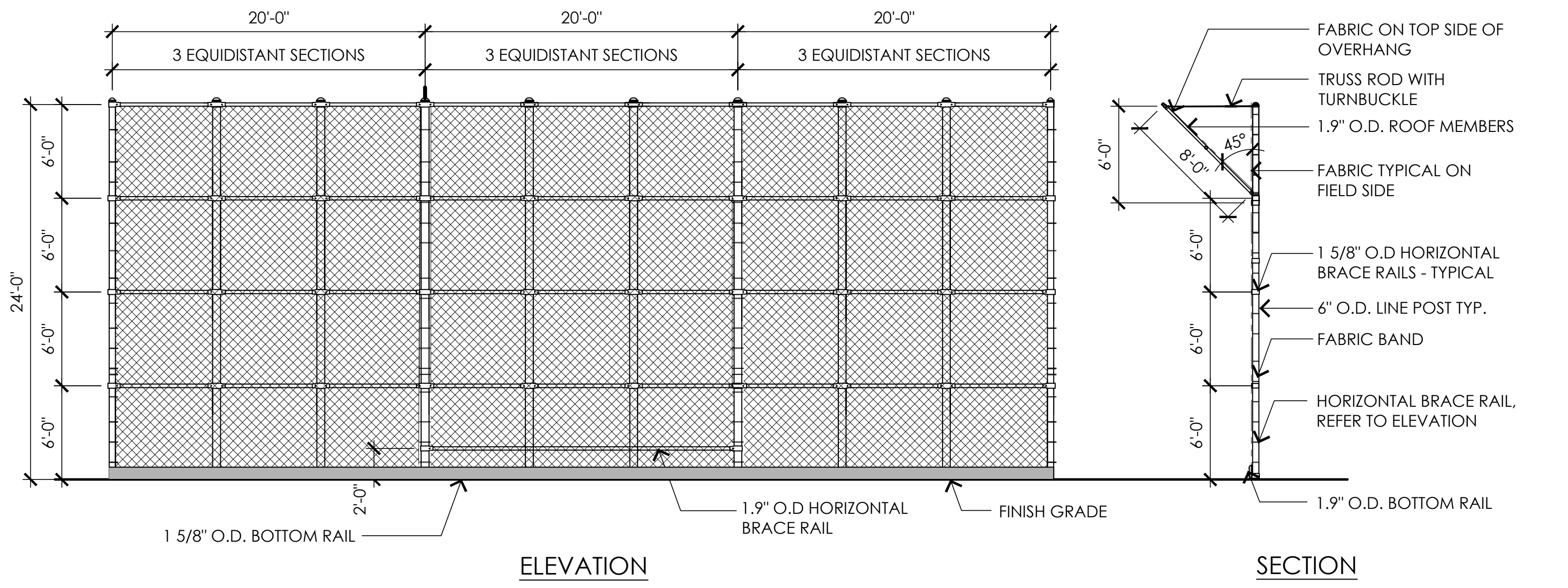
	H			
	4'-0"	6'-0"	8'-0"	10'-0"
TERMINAL POSTS	2.375	2.375	4.000	4.000
LINE POSTS	1.90	1.90	2.875	2.875
TOP RAIL	1.660	1.660	1.660	1.660
BOTTOM RAIL	1.660	1.660	1.660	1.660
HORIZONTAL BRACE	1.660	1.660	1.660	1.660
TRUSS ROD	N/A	$\frac{5}{16}$"	$\frac{5}{16}$"	$\frac{5}{16}$"



4 CHAIN LINK FENCE AND GATES

NOT TO SCALE

NOTE:
REFERENCE SPECIFICATIONS FOR FABRIC GAUGE AND MATERIAL. SYSTEM SHALL BE GALVANIZED.

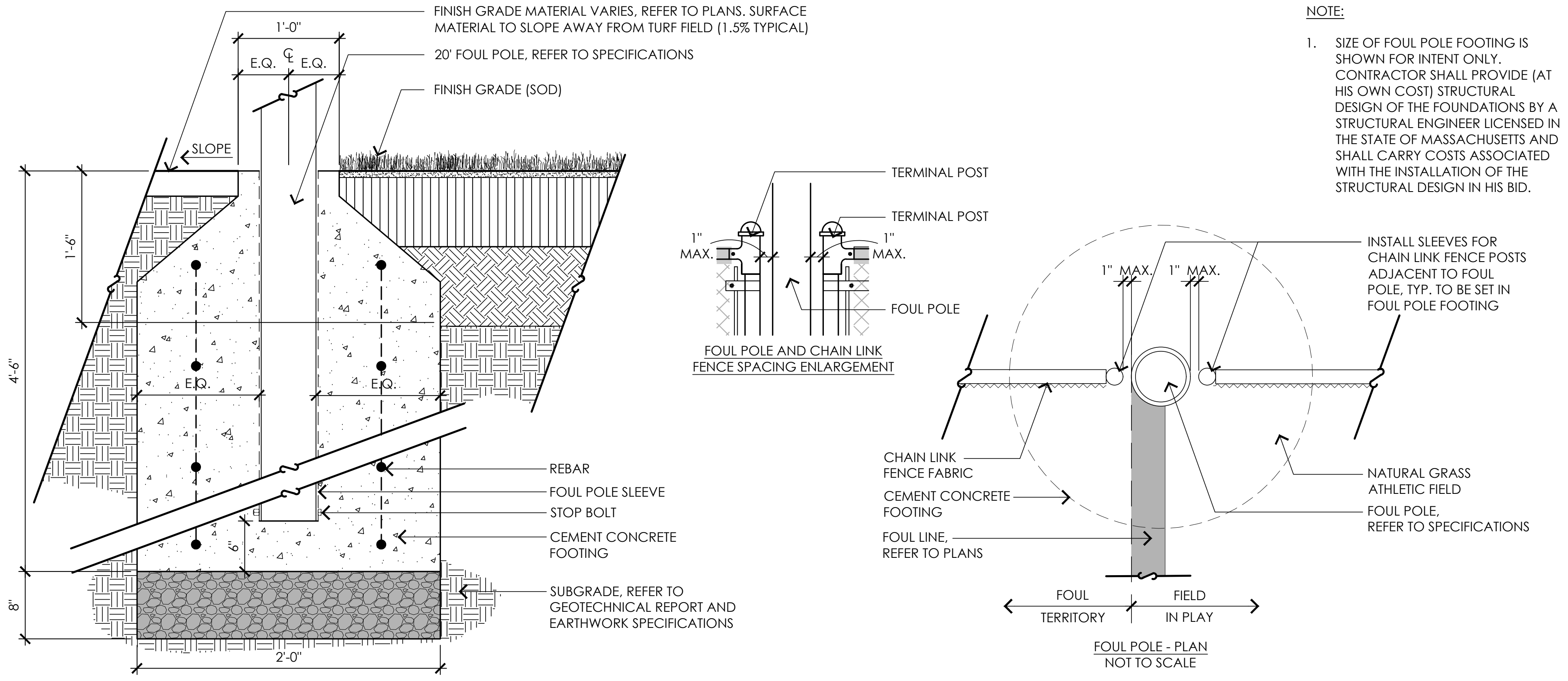


5 24' HIGH CHAIN LINK FENCE BACKSTOP

NOT TO SCALE

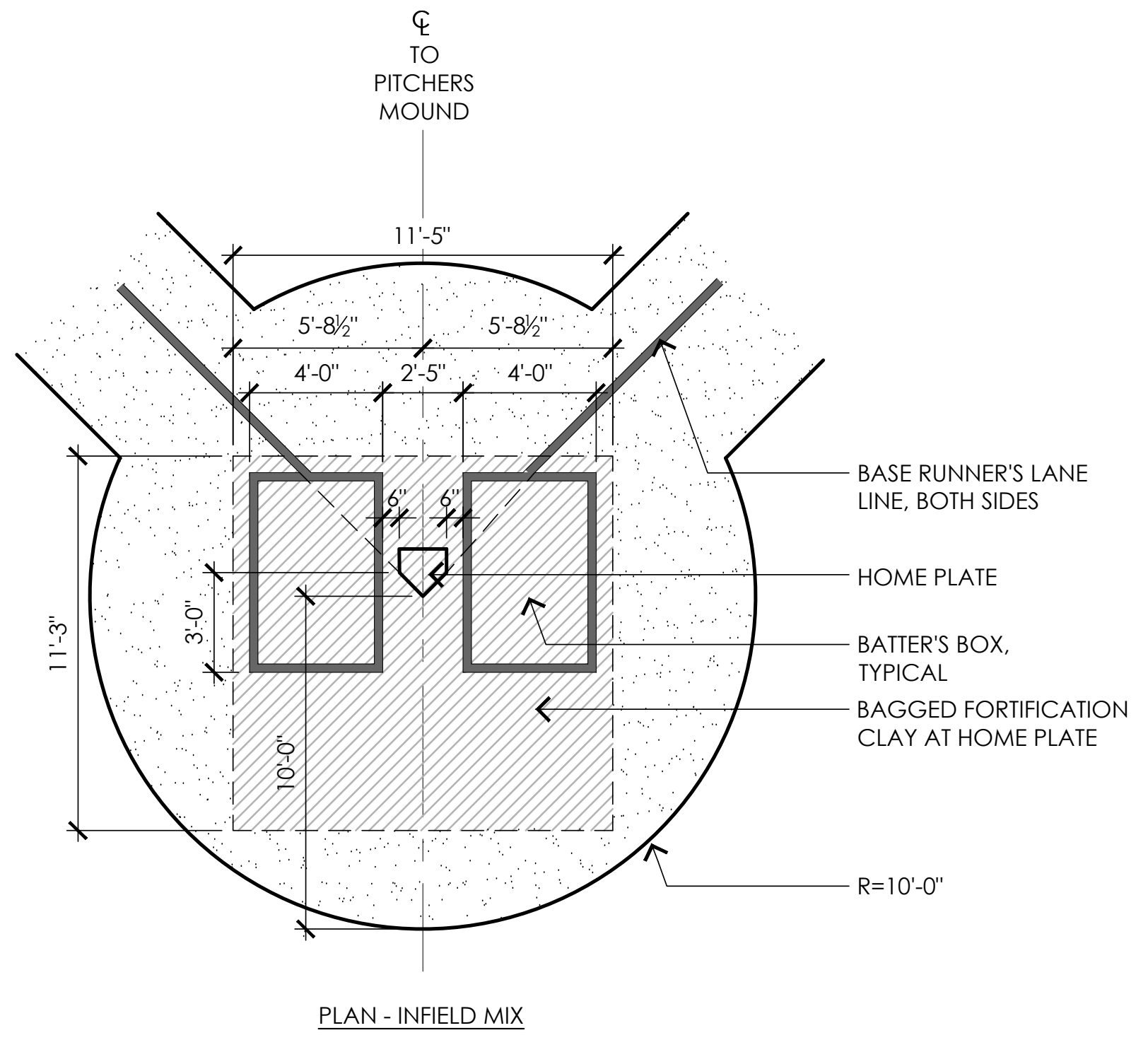
NOTE:

1. SIZE OF FOUL POLE FOOTING IS SHOWN FOR INTENT ONLY. CONTRACTOR SHALL PROVIDE (AT HIS OWN COST) STRUCTURAL DESIGN OF THE FOUNDATIONS BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF MASSACHUSETTS AND SHALL CARRY COSTS ASSOCIATED WITH THE INSTALLATION OF THE STRUCTURAL DESIGN IN HIS BID.



6 FOUL POLE

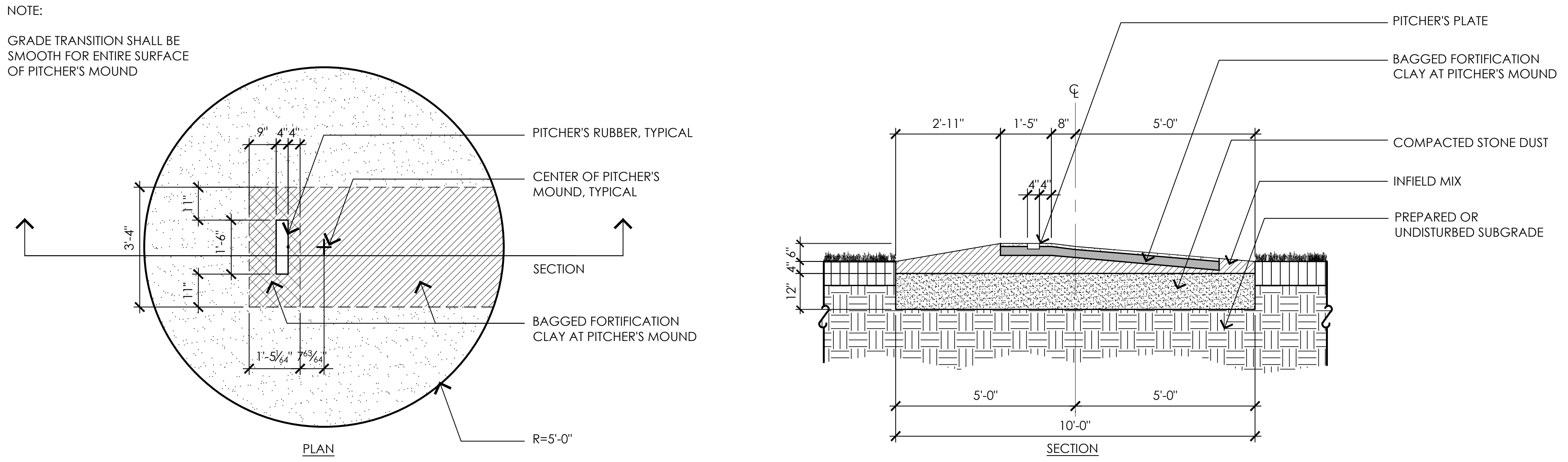
NOT TO SCALE



7 YOUTH BASEBALL FIELD HOME PLATE AREA

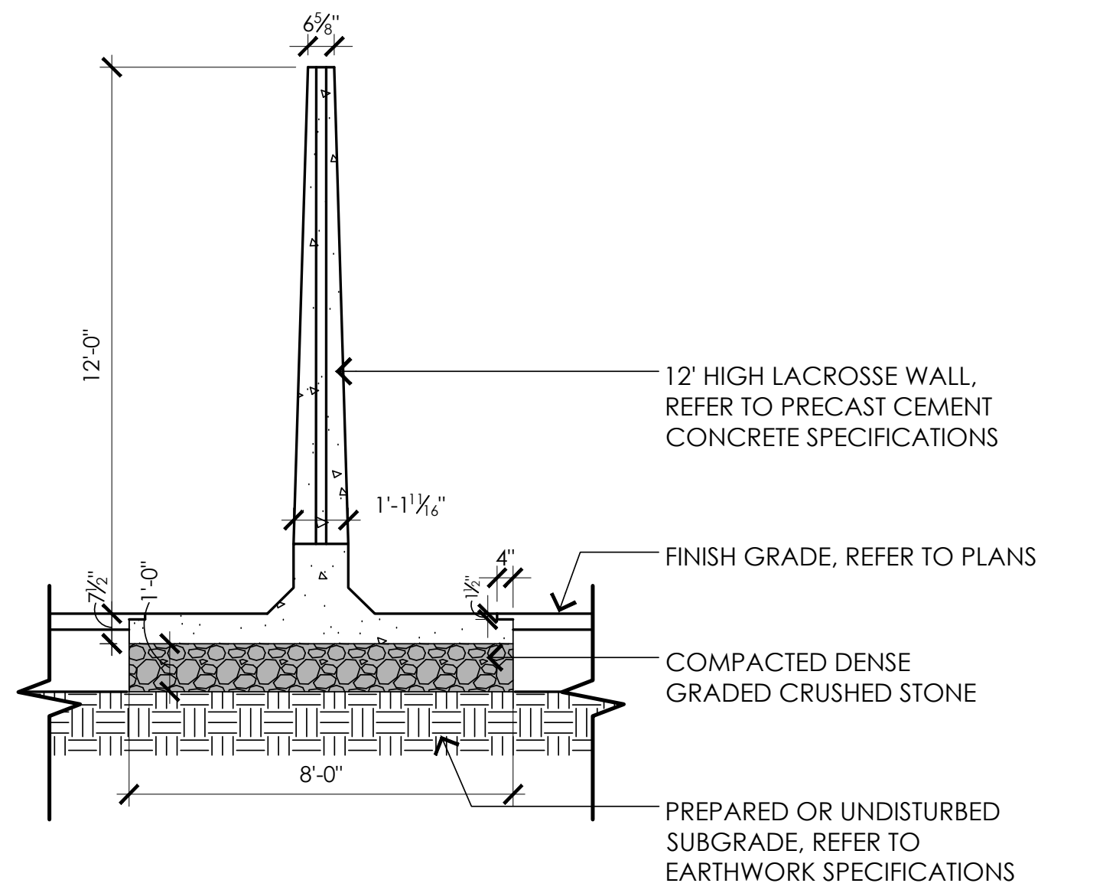
NOT TO SCALE

NOTE:
GRADE TRANSITION SHALL BE SMOOTH FOR ENTIRE SURFACE OF PITCHER'S MOUND



8 YOUTH BASEBALL CLAY PITCHER'S MOUND

NOT TO SCALE



9 PRECAST CEMENT CONCRETE LACROSSE WALL

NOT TO SCALE

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Mz Buczynski
2 February 2026

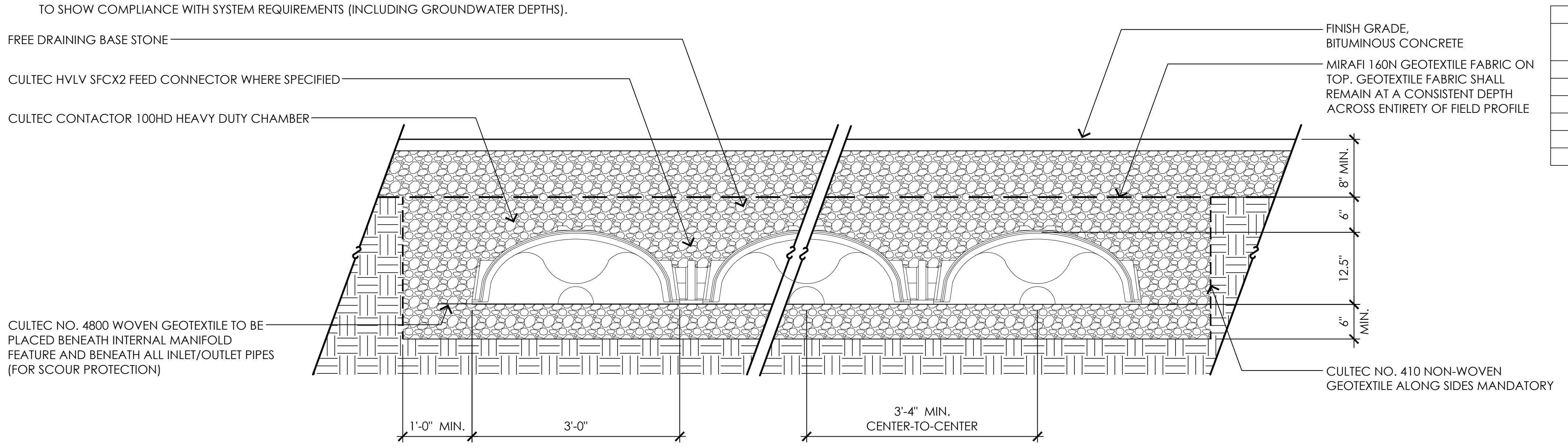
SHEET TITLE:

DETAIL SHEET II

SHEET NO:
L5.2

NOTES:

1. DESIGN BASED ON CULTEC C-100HD SYSTEM.
2. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR CHAMBER SYSTEM TO INCLUDE ALL HEADER PIPES AND CONNECTIONS TO THE SYSTEM.
3. CONTRACTOR MAY PROPOSE ALTERNATE SYSTEM, BUT IS RESPONSIBLE FOR ALL CALCULATIONS TO SHOW COMPLIANCE WITH SYSTEM REQUIREMENTS (INCLUDING GROUNDWATER DEPTHS).



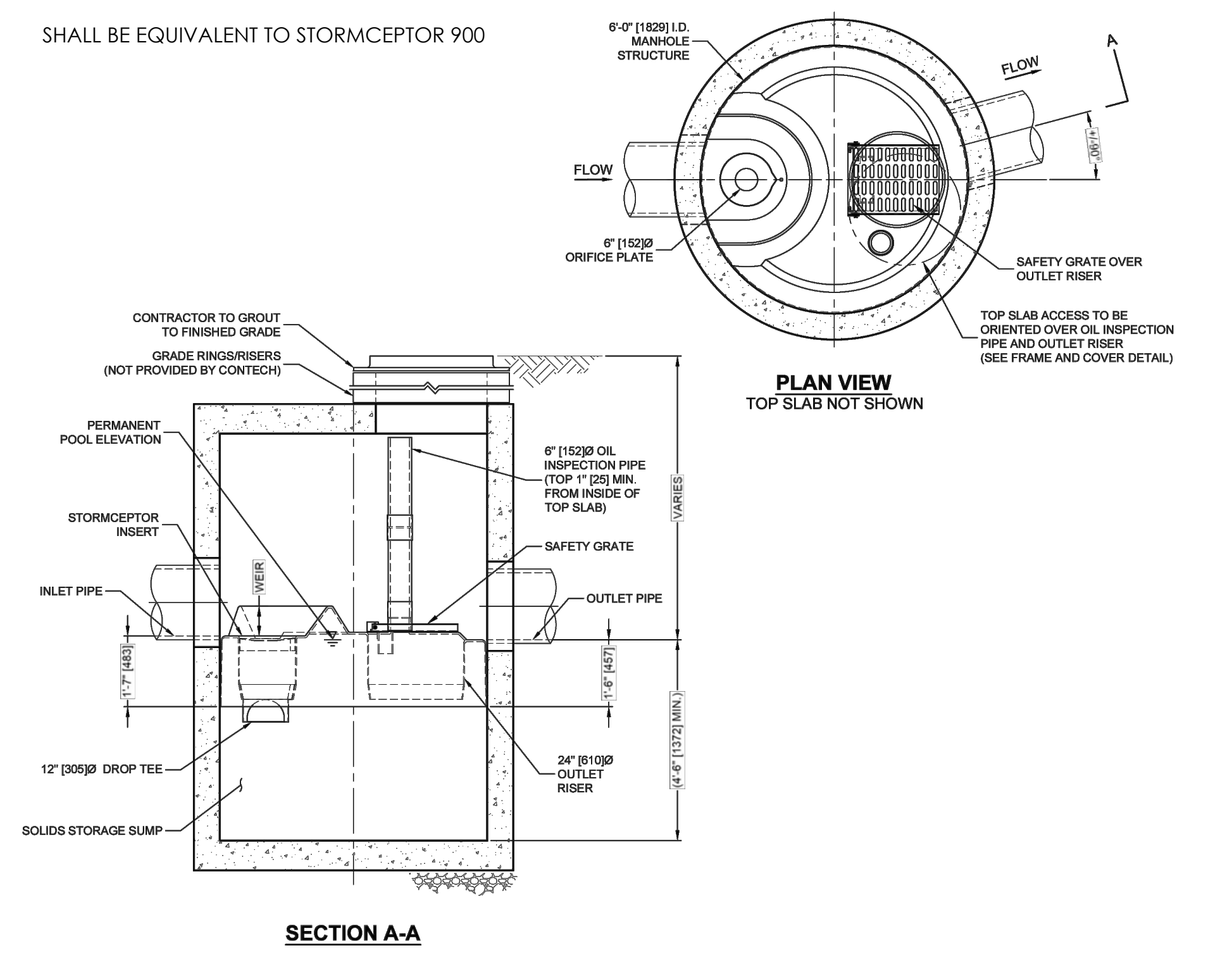
SYSTEM CALCULATIONS	SYSTEM A	SYSTEM B	SYSTEM C	SYSTEM D	SYSTEM E
OVERALL FOOTPRINT	5,009 SF	3,920 SF	2,613 SF	1,021 SF	3,267 SF
TOTAL STORAGE VOLUME	4,878 CF	3,833 CF	2,526 CF	969 CF	3,190 CF
STONE VOID RATIO	30%	30%	30%	30%	30%
ESTIMATED # OF UNITS	185	145	95	34	120
UNIT TYPE	C-100HD	C-100HD	C-100HD	C-100HD	C-100HD

SYSTEM ELEVATIONS	SYSTEM A	SYSTEM B	SYSTEM C	SYSTEM D	SYSTEM E
SYSTEM COMPONENT	ELEVATION	ELEVATION	ELEVATION	ELEVATION	ELEVATION
GROUNDWATER	192.75	192.75	193.25	192.75	191.50
BOTTOM OF STONE	194.75	194.75	194.75	194.25	193.25
BOTTOM OF CULTECS	195.25	195.25	195.25	194.75	193.75
TOP OF CULTECS	196.29	196.29	196.29	195.79	194.79
TOP OF STONE	196.79	196.79	196.79	196.29	195.29
FINISH GRADE	VARIES	VARIES	VARIES	VARIES	VARIES

1 SUBSURFACE STORMWATER CHAMBERS

NOT TO SCALE

SHALL BE EQUIVALENT TO STORMCEPTOR 900

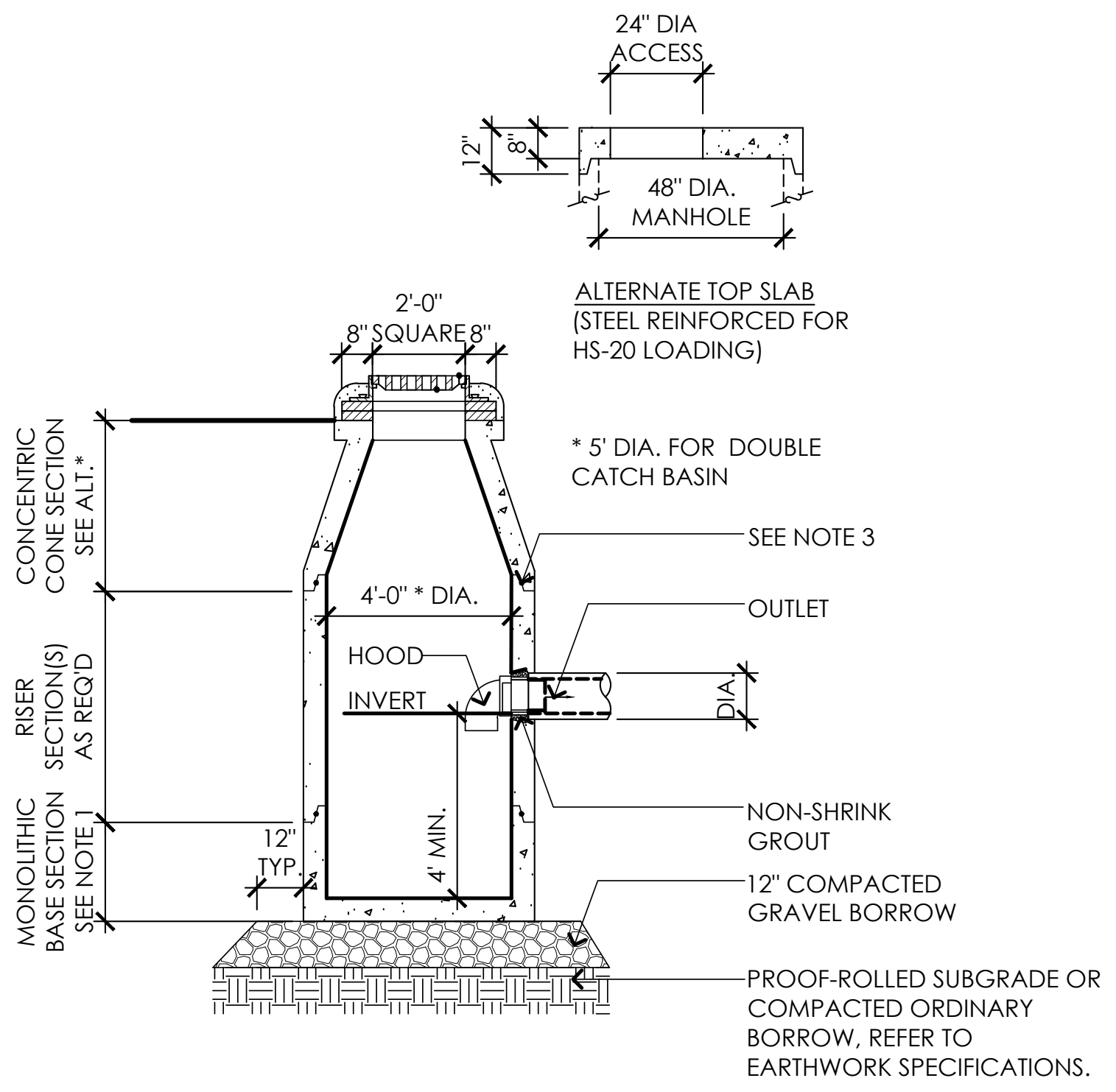


2 WATER QUALITY UNIT

NOT TO SCALE

NOTES:

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 1" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN FRAME SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR. (2 BRICK COURSES MIN., 5 BRICK COURSES MAX.)

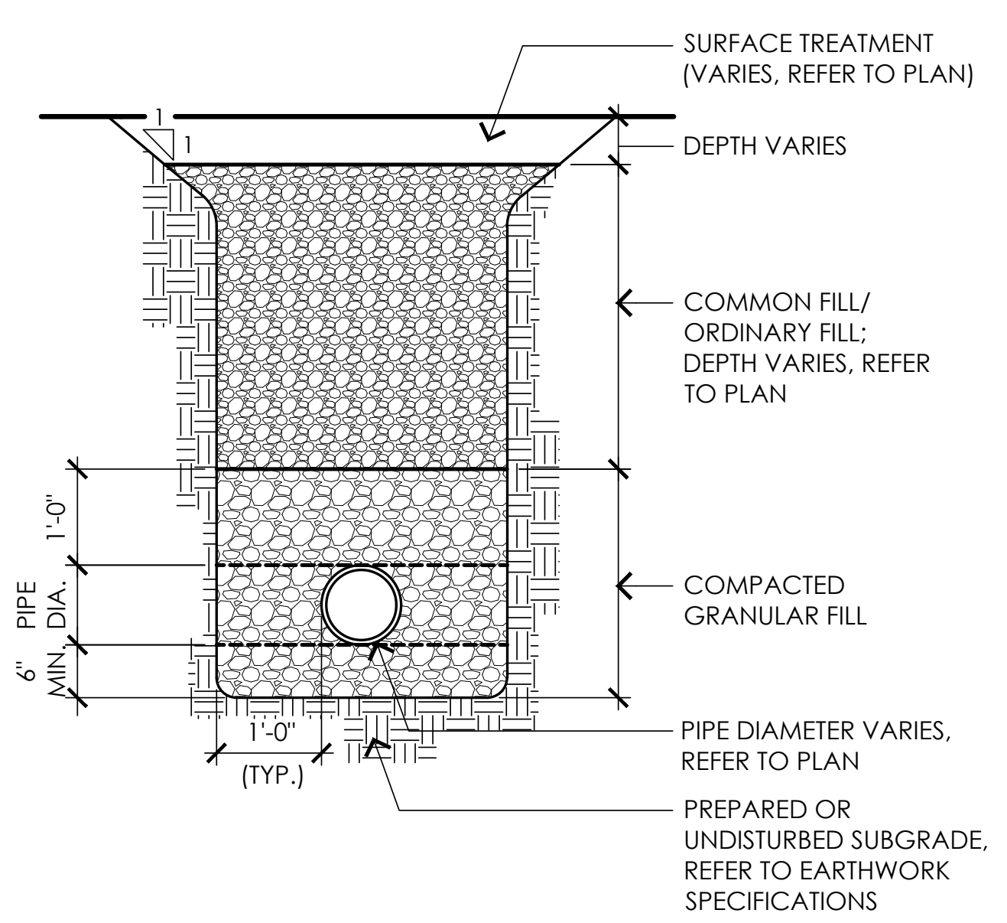


3 CATCH BASIN

NOT TO SCALE

NOTE:

PROVIDE APPROPRIATE CAUTION TAPE AS REQUIRED PER CODE.

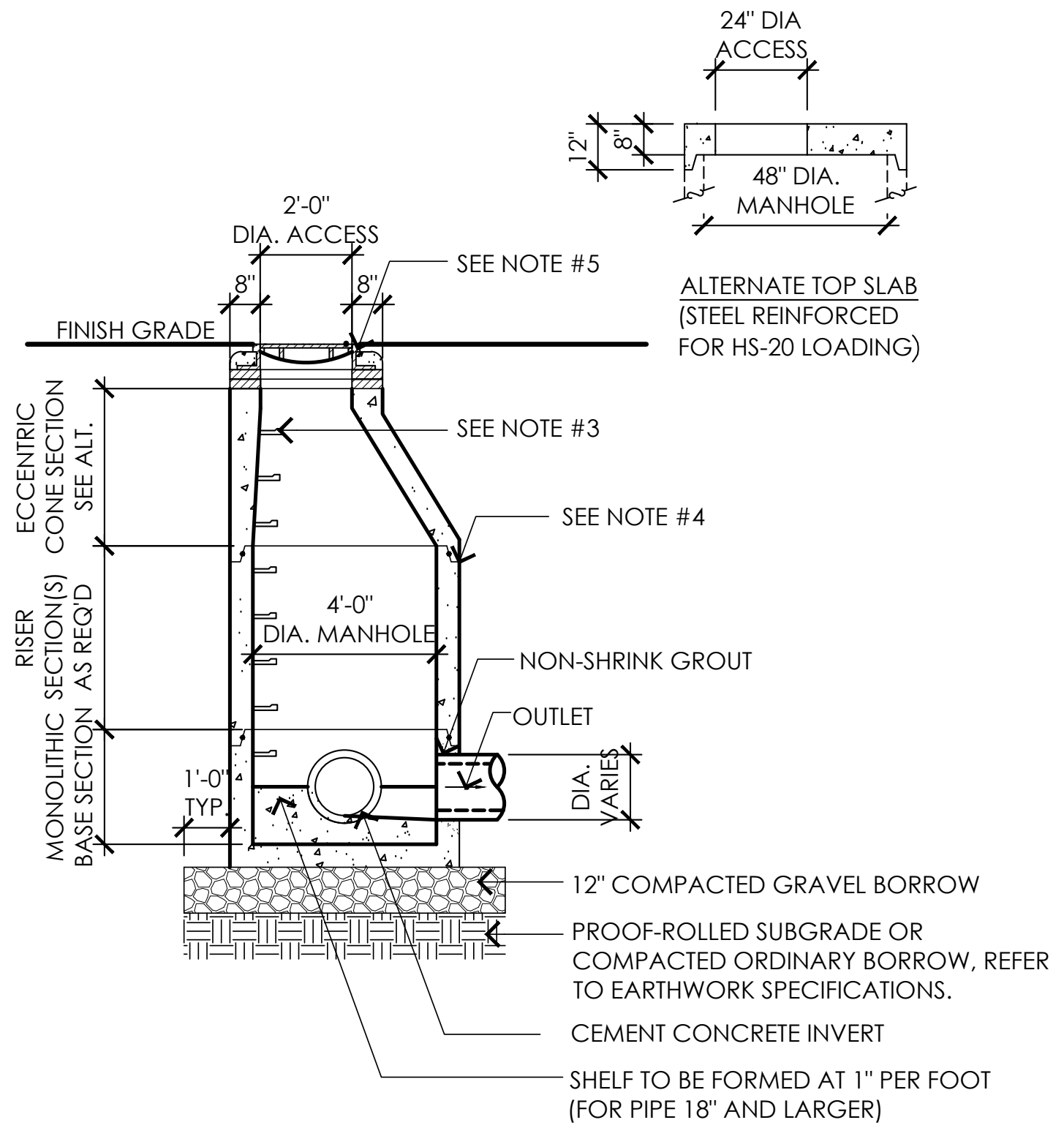


4 UTILITY TRENCH

NOT TO SCALE

NOTES:

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 1" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
5. DRAIN MANHOLE FRAME SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES MINIMUM 5 BRICK COURSES MAXIMUM)



5 DRAIN MANHOLE

NOT TO SCALE

PROVIDED BY GDYBB LEAGUE FOR INTENT

6 TEAM AREA ELEVATIONS

NOT TO SCALE

CONTACT DIGSAFE:
UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS.
PHONE DIGSAFE 1-888-344-7233.

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70 Milton Street | Dedham, MA 02026-2915
(781) 326-2600 | activitas.com

CONSULTANTS

ELECTRICAL ENGINEER -
NV5

RESOURCE AREA & ENVIRONMENTAL ASSESSMENT-
LEC ENVIRONMENTAL CONSULTANTS, INC.

SURVEY -
LANDTECH CONSULTANTS, INC.

TRANSPORTATION ENGINEER -
MDM TRANSPORTATION CONSULTANTS, INC.

SITE PLAN REVIEW SIGNATURES

THIS SITE PLAN APPROVAL DOES NOT NECESSARILY INDICATE COMPLIANCE WITH GROTON ZONING BYLAW

1.
2.
3.
4.
5.
6.
7.

TOWN OF GROTON

Groton, Massachusetts

IMPROVEMENTS AT COW POND BROOK FIELDS

Permitting Documents
February 2, 2026

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE: AS NOTED
PROJECT NO.: 24051.00
FILE: 24051.00-L4.X-DET_X.dwg
DRAWN: BJM
CHECKED: MEB

SEAL:

MEGAN E. BUCZYNSKI
No. 47392

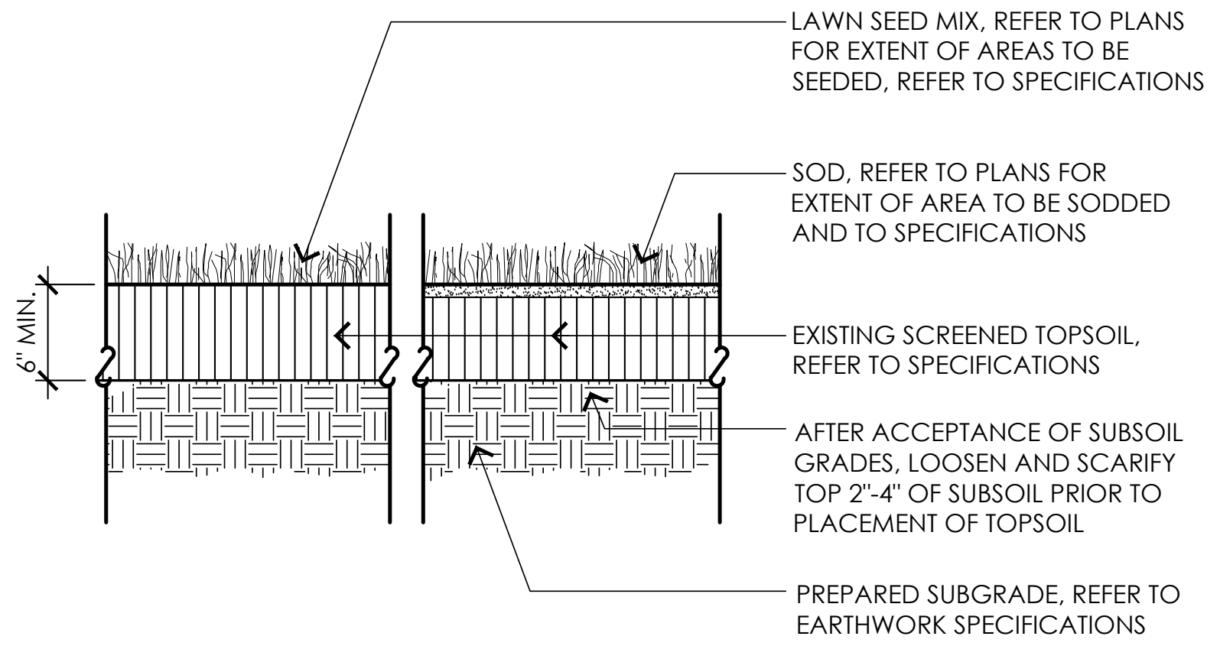
M. Buczynski
2 February 2026

SHEET TITLE:

DETAIL SHEET III

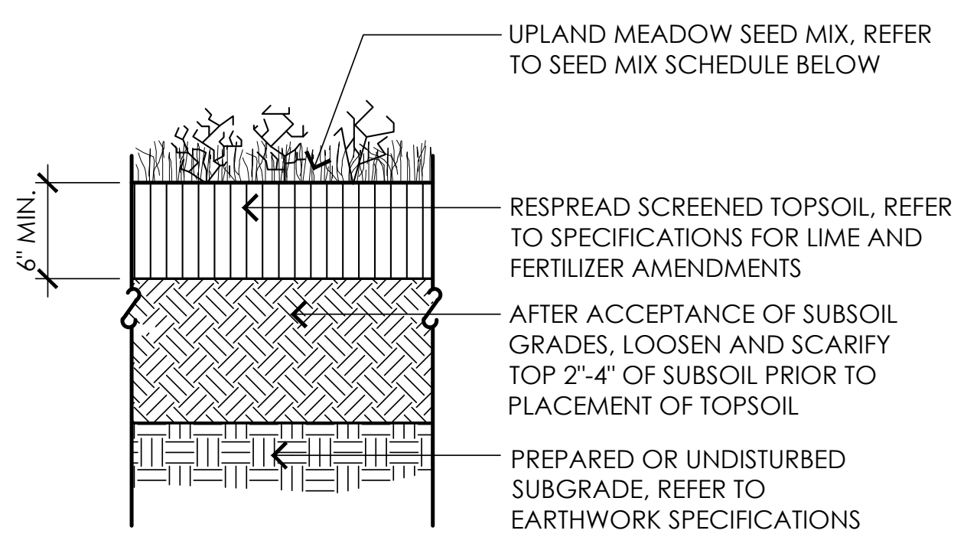
SHEET NO:

L5.3



1 LOAM AND SEED / SOD

NOT TO SCALE



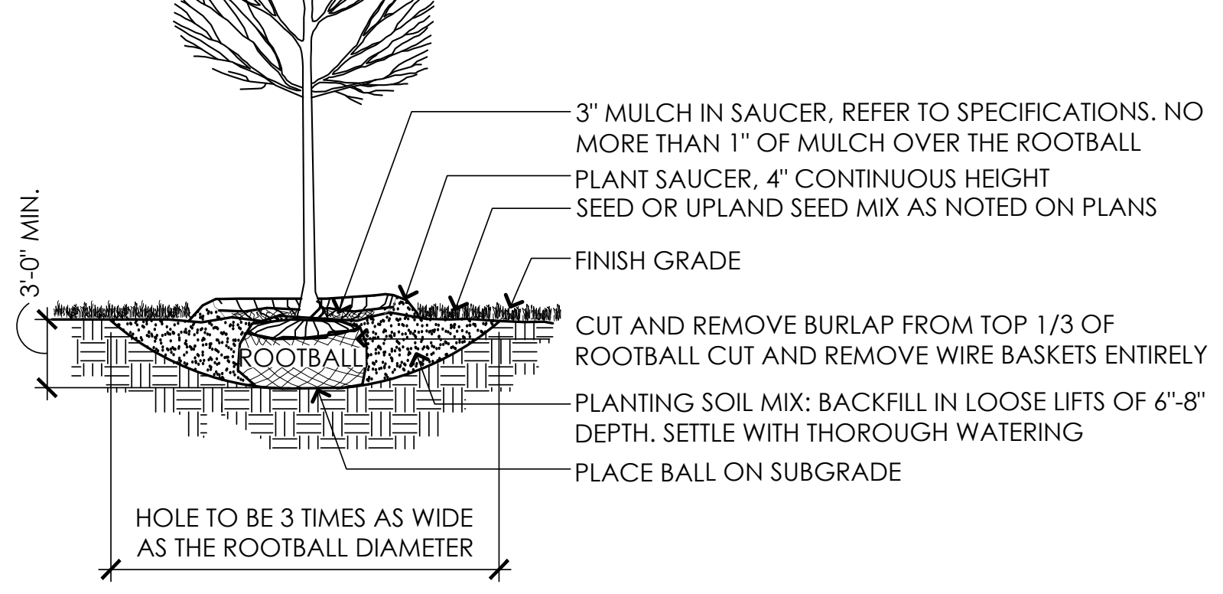
2 UPLAND SEED MIX

NOT TO SCALE

NOTES:

1. TREE SHALL BEAR SAME RELATIONSHIP TO FINISHED GRADE AS IT BORE TO NURSERY OR FIELD GRADE.

2. FOR TREES IN PLANT BEDS, PROVIDE 3" MULCH CONTINUOUS TO CUT EDGES OF PLANT BEDS.

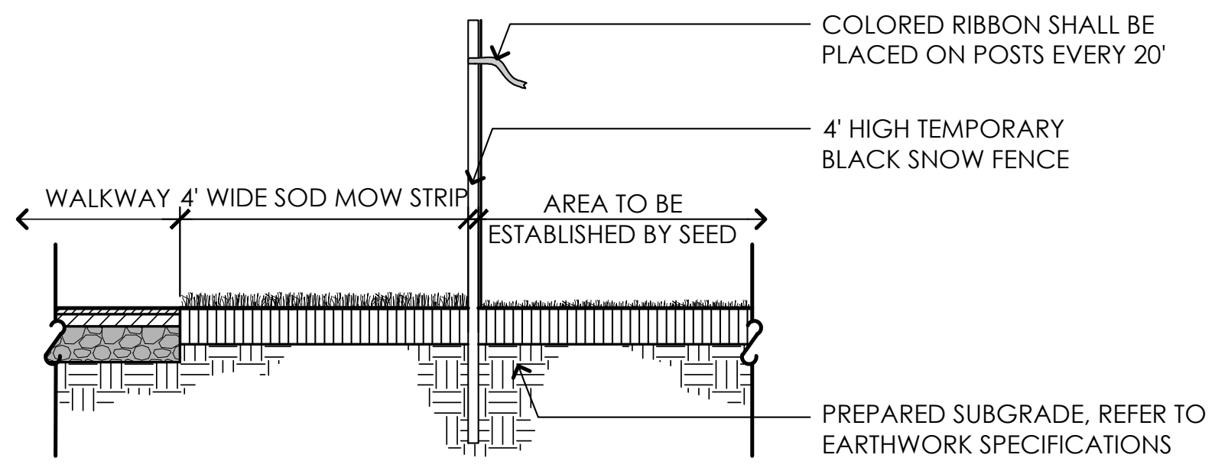


3 DECIDUOUS TREE

NOT TO SCALE

NOTE:

1. CONTRACTOR SHALL PROVIDE 18"x24" TEMPORARY VINYL SIGNS SECURED TO SNOW FENCE, TYPICAL FOR FOUR (4) SIGNS. GRAPHICS TO BE PROVIDED BY LANDSCAPE ARCHITECT.



4 TEMPORARY FENCING AT SEED ESTABLISHMENT AREAS

NOT TO SCALE

SUGGESTED TREES AND SHRUBS

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	NOTES	QTY.
TREES (MIXTURE OF DRY AND WET)					
AR	ACER RUBRUM 'RED SUNSET'	RED MAPLE	3-3.5" CAL.	B&B	8
AS	ACER SACCHARUM	SUGAR MAPLE	3-3.5" CAL.	B&B	8
QP	QUERCUS PALUSTRIS	PIN OAK	3-3.5" CAL.	B&B	6
QR	QUERCUS RUBRA	RED OAK	3-3.5" CAL.	B&B	3
GRASSES AND GROUNDCOVERS					
CA	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	1 GAL.	SPACE 24" O.C	75
PA	PENNISETUM ALOPECUROIDES 'HAMELN"	DWARF FOUNTAIN GRASS	1 GAL.	SPACE 24" O.C	75
RH	RUDBECKIA HIRTA	BLACK-EYED SUSAN	1 GAL.	SPACE 24" O.C	70

UPLAND SEED MIX

BOTANICAL NAME	COMMON NAME	
NEW ENGLAND ROADSIDE MATRIX UPLAND SEED MIX		
ELYMUS CANADENSIS	CANADA WILD RYE	FACW+
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	FACU
FESTUCA RUBRA	CREEPING RED FESCUE	FACU
ANDROPOGON GERARDII	BIG BLUESTEM	FAC
SORGHASTRUM NUTANS	INDIAN GRASS	UPL
CHAMAECRISTA FASCICULATA	PARTRIDGE PEA	FACU
PANICUM VIRGATUM	SWITCHGRASS	FAC
RHUS TYPHINA	STAGHORN SUMAC	
CORNUS AMOMUM	SILKY DOGWOOD	FACW
CORNUS RACEMOSA	GREY DOGWOOD	FAC
ASCLEPIAS SYRIACA	COMMON MILKWEED	FACU-
ZIZIA AUREA	GOLDEN ALEXANDERS	FAC
DESMODIUM CANADENSE	SHOWY TICK TREFOIL	FAC
LESPEDEZA CAPITATA	BUSH CLOVER	FACU-
HELIOPSIS HELIANTHOIDES	OX EYE SUNFLOWER	UPL
MONARDA FISTULOSA	WILD BERGAMOT	UPL
RUDBECKIA HIRTA	BLACK EYED SUSAN	FACU-
ASTER LAEVIS	SMOOTH BLUE ASTER	UPL
EUTHAMIA GRAMINIFOLIA	GRASS LEAVED GOLDENROD	FAC
SOLIDAGO JUNCEA	EARLY GOLDENROD	

APPLY 18LBS/ACRE: 1250 SF/LB

NOTES:

1. SEED MIXES SHALL BE EQUIVALENT TO THE SEED MIXES SHOWN AS DESIGNED AND SUPPLIED BY NEW ENGLAND WETLAND PLANTS, INC., AMHERST, MA (413) 548-8000.
2. CONTRACTOR SHALL SUBMIT ALL SEED MIXES TO LANDSCAPE ARCHITECT FOR REVIEW PRIOR TO PLACING ORDER.

UPLAND SEED MIX | 50:50 Blend of Upland Seed Mix and Loam and Seed Mix Quantity:

Site Development Areas	(±29,178 sf)	1 lb/1250 sf (**qty. ±24 lbs)**

TERMS:

OBL	OBLIGATED WETLAND SPECIES	ALMOST ALWAYS IN WETLANDS
FACW	FACULTATIVE WETLAND SPECIES	USUALLY IN WETLANDS BUT OCCASIONALLY NOT IN WETLANDS
FAC	FACULTATIVE SPECIES	EQUALLY LIKELY IN WETLANDS AND NOT IN WETLANDS
FACU	FACULTATIVE UPLAND SPECIES	USUALLY NOT IN WETLANDS BUT OCCASIONALLY IN WETLANDS
UPL	OBLIGATED UPLAND SPECIES	ALMOST ALWAYS IN NON-WETLANDS

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SURVEY -
LANDTECH CONSULTANTS, INC.

TRANSPORTATION ENGINEER -
MDM TRANSPORTATION CONSULTANTS, INC.

SITE PLAN REVIEW SIGNATURES

THIS SITE PLAN APPROVAL DOES NOT NECESSARILY INDICATE COMPLIANCE WITH GROTON ZONING BYLAW

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TOWN OF GROTON
Groton, Massachusetts
IMPROVEMENTS AT COW POND BROOK FIELDS

Permitting Documents
February 2, 2026

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE:	AS NOTED
PROJECT NO.:	24051.00
FILE:	24051.00-L5.4-DET_4.dwg
DRAWN:	MJD
CHECKED:	MEB

SEAL:

MEGAN E. BUCZYNSKI
CIVIL
No. 47392

M Buczynski
2 February 2026

SHEET TITLE:

DETAIL SHEET IV

SHEET NO:

L5.4

Cow Pond Fields Baseball 2
Groton, MA

LIGHTING SYSTEM

Structure/Fixture Summary

Structure ID	Structure Height	Fixt. Attachment Ht.	Fixture Qty	Fixture Type	Load	Circuit
A1-A2	70'	70'	1	TLC-LED-1200	1.17 kW	A
		70'	2	TLC-LED-900	1.76 kW	A
		16'	1	TLC-BT-575	0.57 kW	A
B1-B2	70'	70'	1	TLC-LED-900	0.88 kW	A
		70'	3	TLC-LED-1200	3.51 kW	A
		16'	1	TLC-BT-575	0.57 kW	A
SQ1	17'	17'	2	LSI VALS	0.22 kW	B
SQ2-SQ4	17'	17'	4	LSI VALS	0.44 kW	B
SQ5-SQ6	17'	17'	1	LSI VALS	0.11 kW	B
SQ7-SQ19	17'	17'	1	LSI VALS	0.11 kW	C
23			47		20.16 kW	

Circuit Summary

Circuit	Description	Load	Fixture Qty
A	Baseball 2	16.94 kW	18
B	Baseball Parking	1.78 kW	16
C	Soccer Parking	1.44 kW	13

Fixture Type Summary

Type	Circuit	Source	Wattage	Lumens	L90	L80	L70	Quantity
LSI VALS	B	LED 3000K - 80 CRI	111W	11,870	--	--	--	16
LSI VALS	C	LED 3000K - 80 CRI	111W	11,870	--	--	--	13
TLC-BT-575	A	LED 5700K - 75 CRI	575W	52,000	>120,000	>120,000	>120,000	4
TLC-LED-1200	A	LED 5700K - 75 CRI	1170W	150,000	>120,000	>120,000	>120,000	8
TLC-LED-900	A	LED 5700K - 75 CRI	880W	104,000	>120,000	>120,000	>120,000	6

Single Fixture Amperage Draw Chart

Driver Specifications (.90 min power factor)	Line Amperage Per Fixture (max draw)						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
TLC-LED-1200	6.9	6.5	6.0	5.2	4.2	3.8	3.0
TLC-LED-900	5.2	4.9	4.5	3.9	3.1	2.9	2.3
TLC-BT-575	3.3	3.2	2.9	2.5	2.0	1.8	1.5
LSI VALS	-	-	-	-	-	-	-

Light Level Summary

Calculation Grid Summary

Grid Name	Calculation Metric	Illumination Ave					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Baseball (Infield)	Horizontal Illuminance	51.23	39	67	1.71	1.31	A	18
Baseball (Outfield)	Horizontal Illuminance	30.97	20	42	2.13	1.56	A	18
Parking	Horizontal	2.27	0	14	243.38	38.55	B,C	29
Spill at 150' (3')	Horizontal Illuminance	0.0089	0.00	0.04	-	-	A	18
Spill at 150' (5')	Max Candela Metric	682.9520	0.00	2697.49	-	-	A	18
Spill at 150' (5')	Max Vertical Illuminance Metric	0.0218	0.00	0.09	-	-	A	18
Zero Grid	Horizontal Illuminance	1.61	0	67	-	-	A,B,C	47

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

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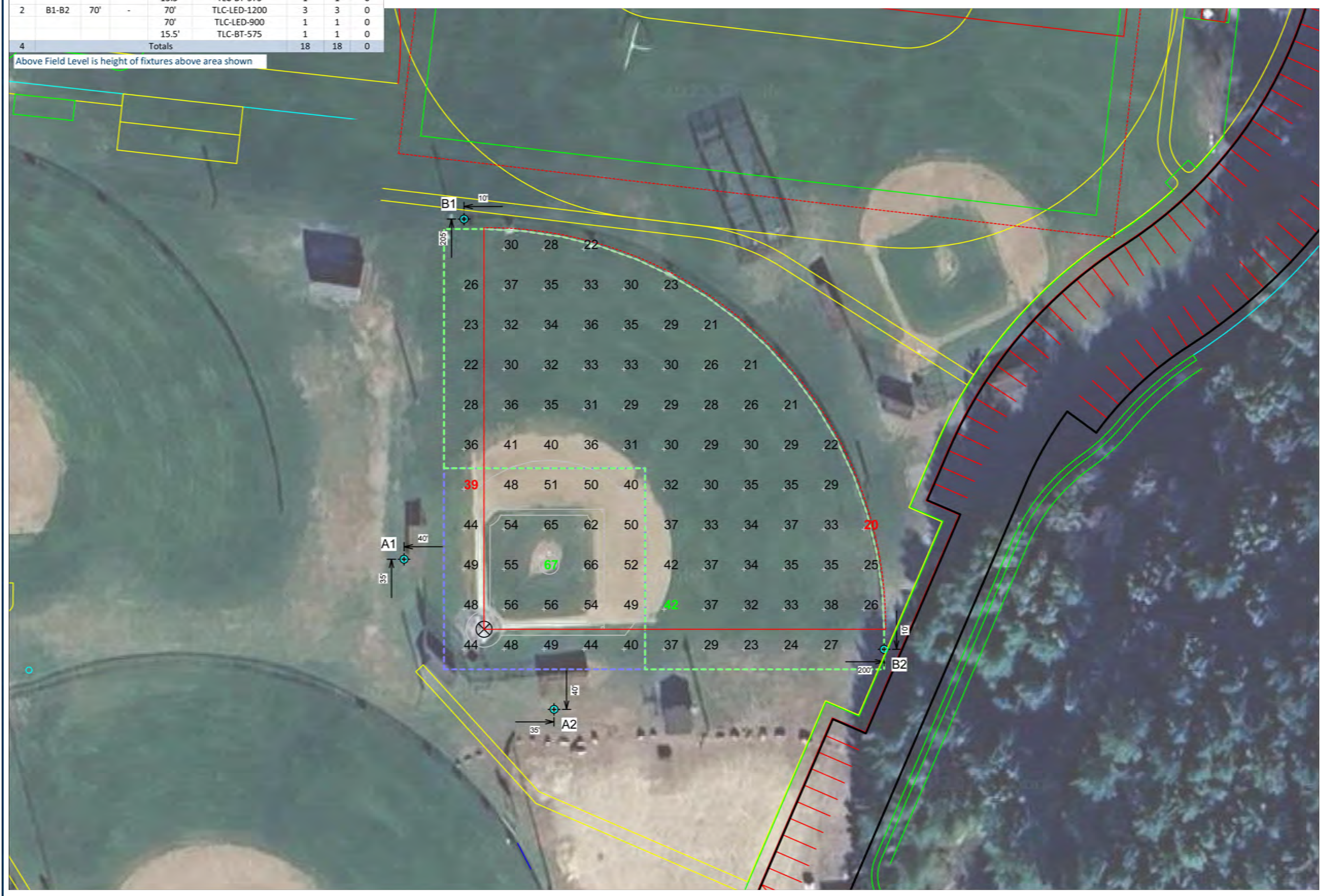
ENGINEERED DESIGN By: T.Lanphier • File #248723A • 10-Dec-25

PROJECT SUMMARY

Equipment List For Areas Shown

Structure				Fixtures				
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	-	70'	TLC-LED-1200	1	1	0
				70'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	1	1	0
2	B1-B2	70'	-	70'	TLC-LED-1200	3	3	0
				70'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	1	1	0
4	Totals					18	18	0

Above Field Level is height of fixtures above area shown



SCALE IN FEET 1 : 50
0' 50' 100'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: T.Lanphier • File #248723A • 10-Dec-25

Cow Pond Fields Baseball 2
Groton, MA

Grid Summary

Name: **Baseball**
Size: 200'/200'/200' - basepath 60'
Spacing: 20.0' x 20.0'
Height: 3.0' above grade

Illumination Summary

	MAINTAINED HORIZONTAL FOOTCANDLES	
	Infield	Outfield
Guaranteed Average:	**50**	**30**
Scan Average:	51.23	30.97
Maximum:	67	42
Minimum:	39	20
Avg/Min:	1.31	1.56
Guaranteed Max/Min:	**2**	**2.5**
Max/Min:	1.71	2.13
UG (adjacent pts):	1.27	1.66
CU:	0.70	
No. of Points:	25	71
FIXTURE INFORMATION		
Applied Circuits:	A	
No. of Fixtures:	**18**	
Total Load:	16.94 kW	

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

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ILLUMINATION SUMMARY

SCALE IN FEET 1 : 80
0' 80' 160'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: T.Lanphier • File #248723A • 10-Dec-25

Cow Pond Fields Baseball 2
Groton, MA

Grid Summary

Name: **Spill at 150' (3')**
Spacing: 30.0'
Height: 3.0' above grade

Illumination Summary

	INITIAL HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average:	**0.0089**
Maximum:	0.04
Minimum:	0.00
CU:	0.00
No. of Points:	56
FIXTURE INFORMATION	
Applied Circuits:	A
No. of Fixtures:	**18**
Total Load:	16.94 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

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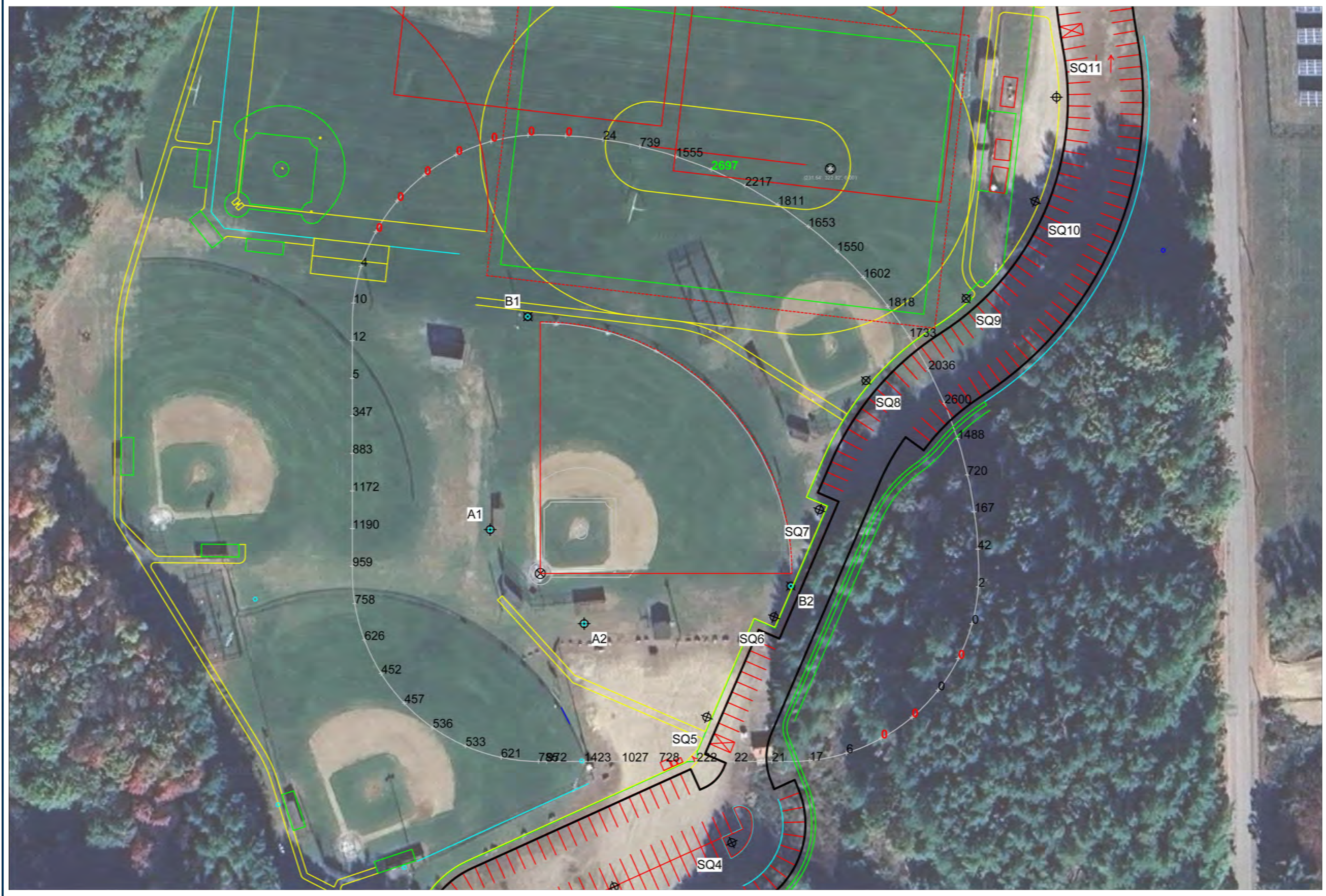
ILLUMINATION SUMMARY



SCALE IN FEET 1 : 80
0' 80' 160'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: T.Lanphier • File #248723A • 10-Dec-25

Cow Pond Fields Baseball 2
Groton, MA

Grid Summary

Name: **Spill at 150' (5')**
Spacing: 30.0'
Height: 5.0' above grade

Illumination Summary

	INITIAL CANDELA (PER FIXTURE)
	Entire Grid
Scan Average:	**682.9520**
Maximum:	2697.49
Minimum:	0.00
CU:	0.00
No. of Points:	56
FIXTURE INFORMATION	
Applied Circuits:	A
No. of Fixtures:	**18**
Total Load:	16.94 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

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ILLUMINATION SUMMARY

ACTIVITAS
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(781) 326-2600 | activitas.com

CONSULTANTS

ELECTRICAL ENGINEER -
NV5

RESOURCE AREA & ENVIRONMENTAL ASSESSMENT-
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SURVEY -
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TRANSPORTATION ENGINEER -
MDM TRANSPORTATION CONSULTANTS, INC.

SITE PLAN REVIEW SIGNATURES

THIS SITE PLAN APPROVAL DOES NOT NECESSARILY INDICATE COMPLIANCE WITH GROTON ZONING BYLAW

1.
2.
3.
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7.

TOWN OF GROTON
Groton, Massachusetts
IMPROVEMENTS AT COW POND BROOK FIELDS

Permitting Documents
February 2, 2026

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE: AS NOTED
PROJECT NO.: 24051.00
FILE: 24051.00-L7.1-LIGHTING.dwg
DRAWN: OCM
CHECKED: MEB

SEAL:
MEGAN E. BUCZYNSKI CIVIL No. 47392
Mg Buczynski
2 February 2026

SHEET TITLE:

LIGHTING DESIGN -
SHEET I

SHEET NO:
L6.1

Cow Pond Fields Baseball 2

Groton, MA

Grid Summary

Name:	**Spill at 150' (5')**
Spacing:	30.0'
Height:	5.0' above grade

Illumination Summary

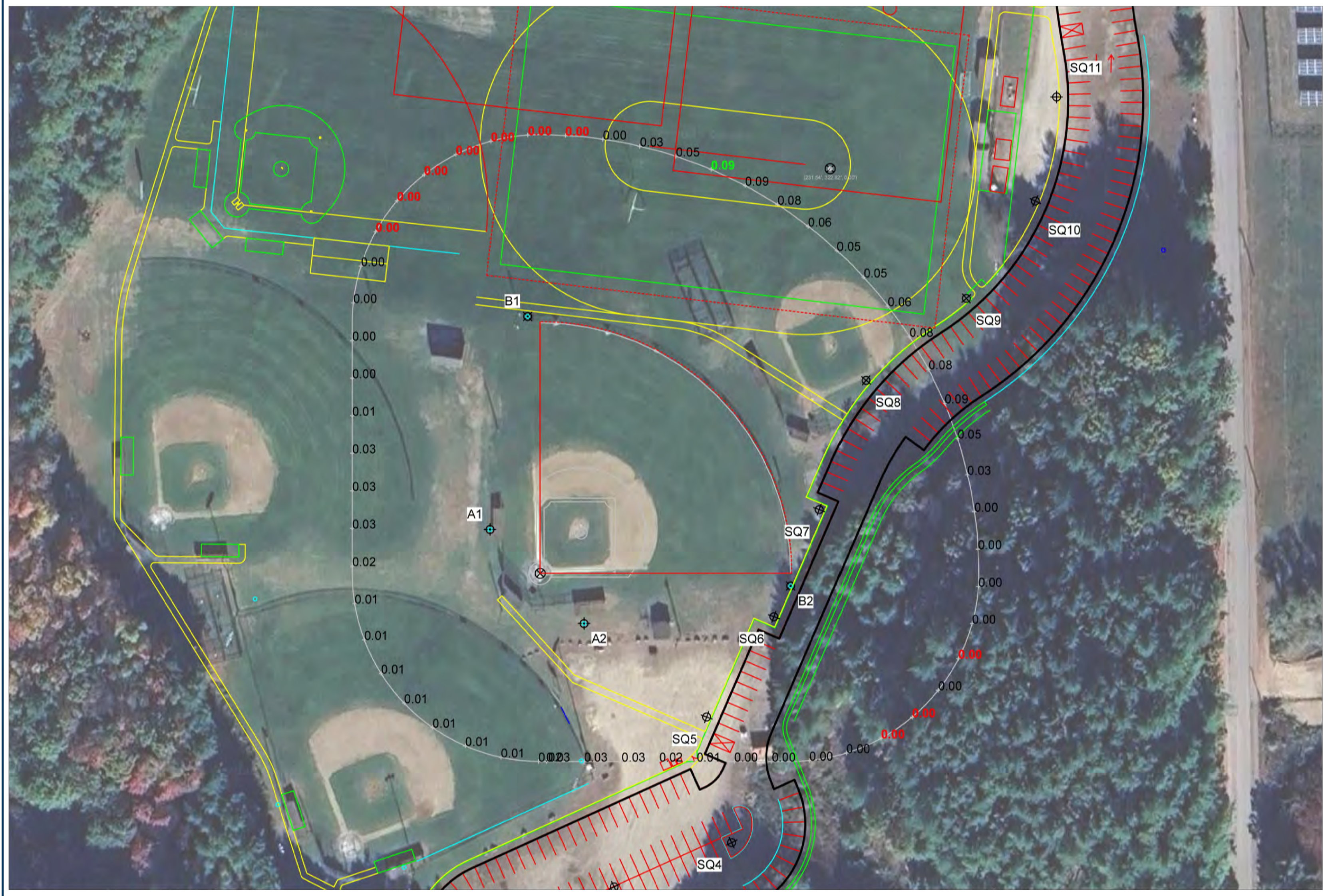
	INITIAL MAX VERTICAL FOOTCANDLES
	Entire Grid
Scan Average:	**0.0218**
Maximum:	0.09
Minimum:	0.00
CU:	0.00
No. of Points:	56
FIXTURE INFORMATION	
Applied Circuits:	A
No. of Fixtures:	**18**
Total Load:	16.94 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



SCALE IN FEET 1 : 80
0' 80' 160'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊠

ENGINEERED DESIGN By: T.Lanphier • File #248723A • 10-Dec-25

ILLUMINATION SUMMARY

Equipment List For Areas Shown

Structure				Fixtures				
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
1	SQ1	17'	3'	20'	LSI VALS	1/1*	2	0
3	SQ2-SQ4	17'	3'	20'	LSI VALS	3/1*	4	0
15	SQ5-SQ19	17'	3'	20'	LSI VALS	1	1	0
19			Totals			29	29	0

Above Field Level is height of fixtures above area shown

*This structure utilizes a back-to-back mounting configuration

Cow Pond Fields Baseball 2

Groton, MA

Grid Summary

Name:	**Parking**
Size:	657' x 1444'
Spacing:	10.0' x 10.0'
Height:	3.0' above grade

Illumination Summary

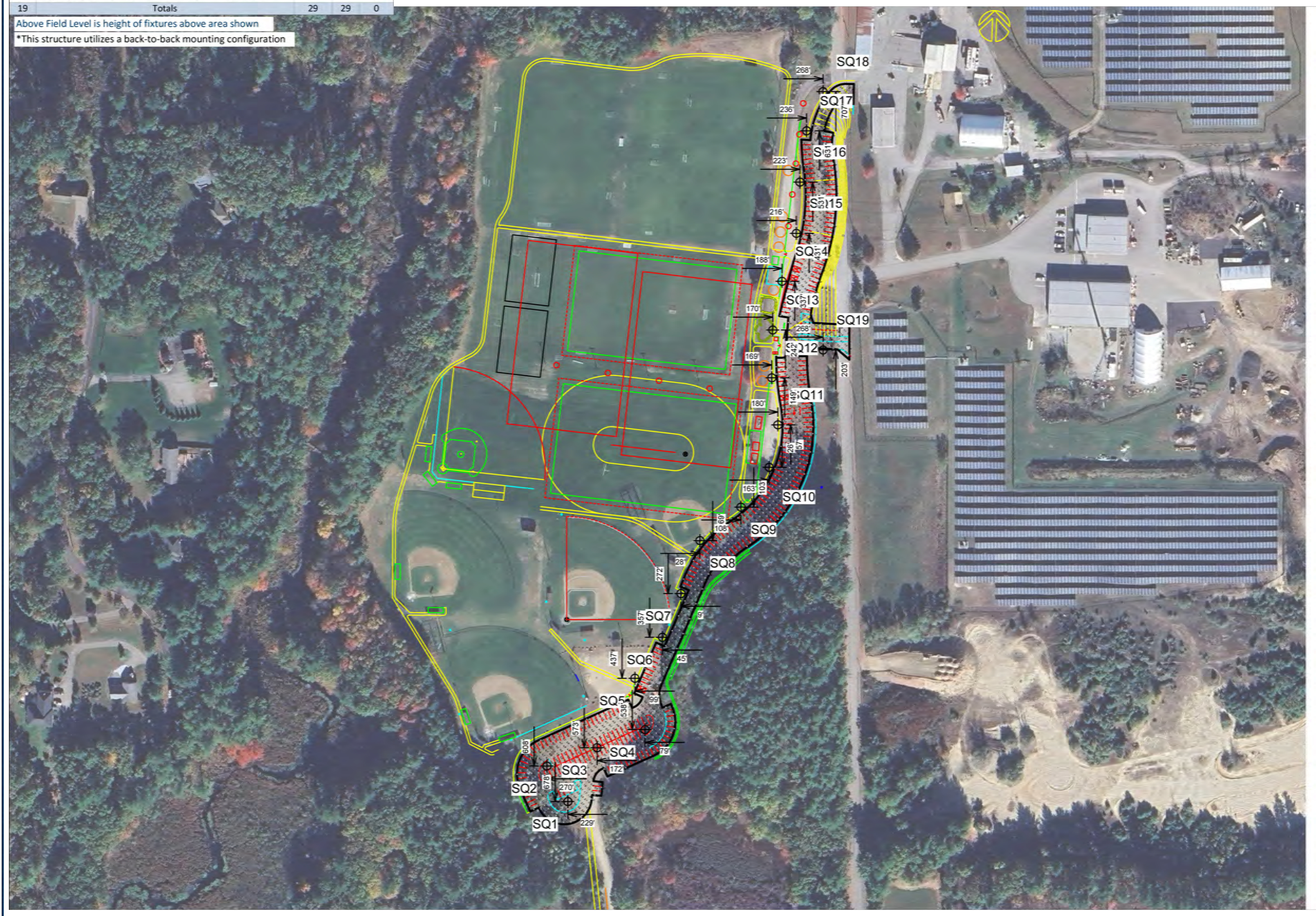
	MAINTAINED HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average:	**2.27**
Maximum:	14
Minimum:	0
Avg/Min:	38.55
Max/Min:	**243.38**
UG (adjacent pts):	5.24
CU:	0.74
No. of Points:	1117
FIXTURE INFORMATION	
Applied Circuits:	B,C
No. of Fixtures:	**29**
Total Load:	3.22 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



SCALE IN FEET 1 : 200
0' 200' 400'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊠

ENGINEERED DESIGN By: T.Lanphier • File #248723A • 10-Dec-25

ILLUMINATION SUMMARY

Cow Pond Fields Baseball 2

Groton, MA

Grid Summary

Name:	**Zero Grid**
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

Illumination Summary

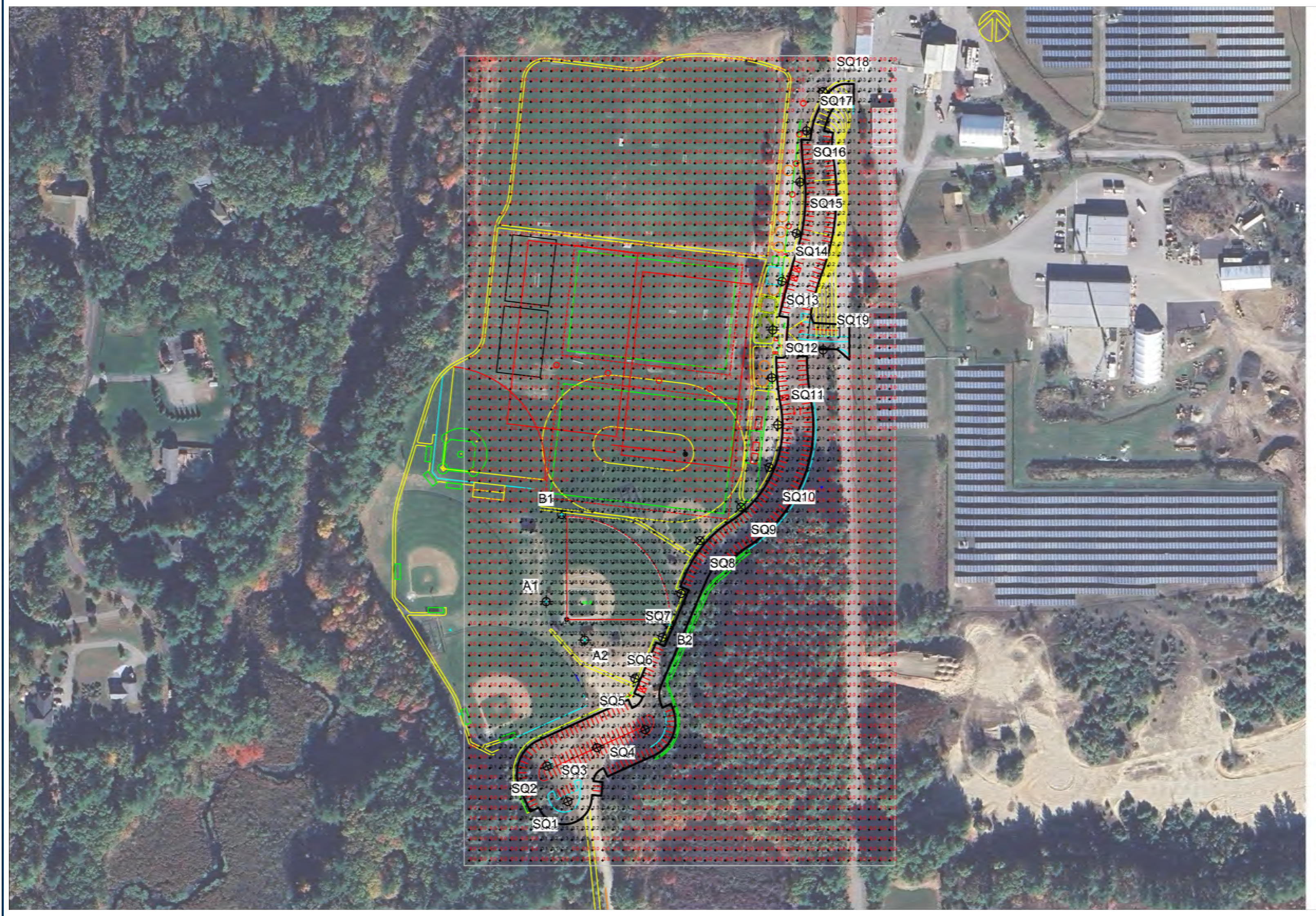
	MAINTAINED HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average:	**1.61**
Maximum:	67
Minimum:	0
Avg/Min:	-
Max/Min:	**-**
UG (adjacent pts):	211.99
CU:	0.91
No. of Points:	3318
FIXTURE INFORMATION	
Applied Circuits:	A,B,C
No. of Fixtures:	**47**
Total Load:	20.16 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



SCALE IN FEET 1 : 200
0' 200' 400'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊠

ENGINEERED DESIGN By: T.Lanphier • File #248723A • 10-Dec-25

ILLUMINATION SUMMARY

Cow Pond Fields Baseball 2

Groton, MA

Equipment Layout

INCLUDES:
- Baseball
- Parking

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

Equipment List For Areas Shown

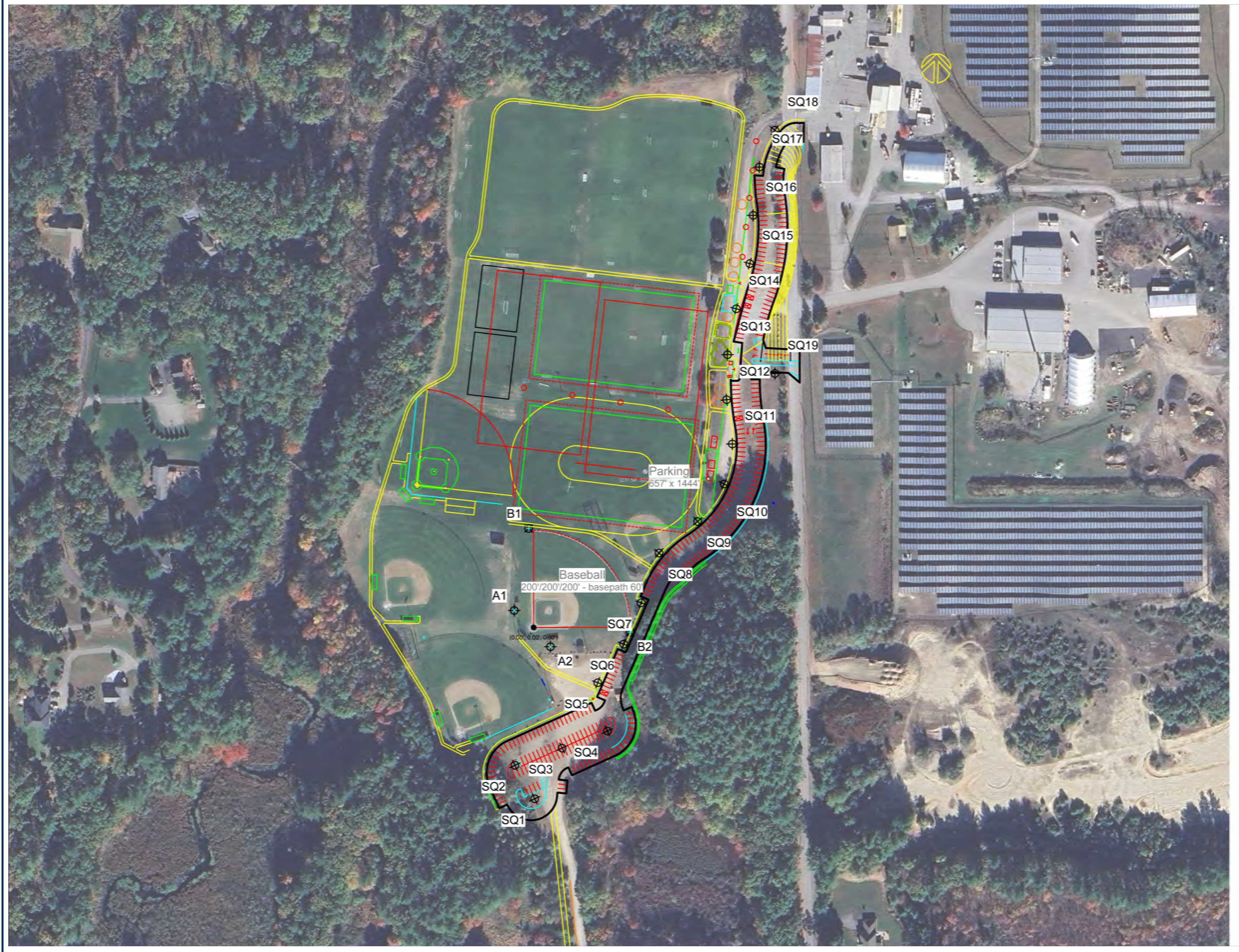
Structure				Fixtures		
QTY	STRUCTURE ID	SIZE	GLOBAL ELEVATION	ABOVE GLOBAL LEVEL	FIXTURE TYPE	QTY/POLE
2	A1-A2	70'	-	70' 70' 15.5'	TLC-LED-1200 TLC-LED-900 TLC-BT-575	1 2 1
2	B1-B2	70'	-	70' 70' 15.5'	TLC-LED-1200 TLC-LED-900 TLC-BT-575	3 1 1
1	SQ1	17'	3'	20'	LSI VALS	1/1*
3	SQ2-SQ4	17'	3'	20'	LSI VALS	3/1*
15	SQ5-SQ19	17'	3'	20'	LSI VALS	1
23			Totals			47

*This structure utilizes a back-to-back mounting configuration

Above Global Level is height of fixtures above design (0,0,0)

Single Fixture Amperage Draw Chart

Driver Specifications (.90 min power factor)	Line Amperage Per Fixture (max draw)						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
TLC-LED-1200	6.9	6.5	6.0	5.2	4.2	3.8	3.0
TLC-LED-900	5.2	4.9	4.5	3.9	3.1	2.9	2.3
TLC-BT-575	3.3	3.2	2.9	2.5	2.0	1.8	1.5
LSI VALS	-	-	-	-	-	-	-



SCALE IN FEET 1 : 200
0' 200' 400'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊠

ENGINEERED DESIGN By: T.Lanphier • File #248723A • 10-Dec-25

EQUIPMENT LAYOUT

ACTIVITAS
landscape architecture | civil engineering
70 Milton Street | Dedham, MA 02026-2915
(781) 326-2600 | activitas.com

CONSULTANTS

ELECTRICAL ENGINEER -
NV5

RESOURCE AREA & ENVIRONMENTAL ASSESSMENT-
LEC ENVIRONMENTAL CONSULTANTS, INC.

SURVEY -
LANDTECH CONSULTANTS, INC.

TRANSPORTATION ENGINEER -
MDM TRANSPORTATION CONSULTANTS, INC.

SITE PLAN REVIEW SIGNATURES

THIS SITE PLAN APPROVAL DOES NOT NECESSARILY INDICATE COMPLIANCE WITH GROTON ZONING BYLAW

1.

2.

3.

4.

5.

6.

7.

TOWN OF GROTON
Groton, Massachusetts

IMPROVEMENTS AT COW POND BROOK FIELDS

Permitting Documents
February 2, 2026

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE:	AS NOTED
PROJECT NO.:	24051.00
FILE:	24051.00-L7.1-LIGHTING.dwg
DRAWN:	OCM
CHECKED:	MEB

SEAL:

MEGAN E. BUCZYNSKI
CIVIL
No. 47392

M. Buczynski
2 February 2026

SHEET TITLE:

LIGHTING DESIGN -
SHEET II

SHEET NO:
L6.2