PROPOSED SITE PLAN DOCUMENTS

FOR

cbt

PROPOSED

TEAM HOYT COMMUNITY YMCA

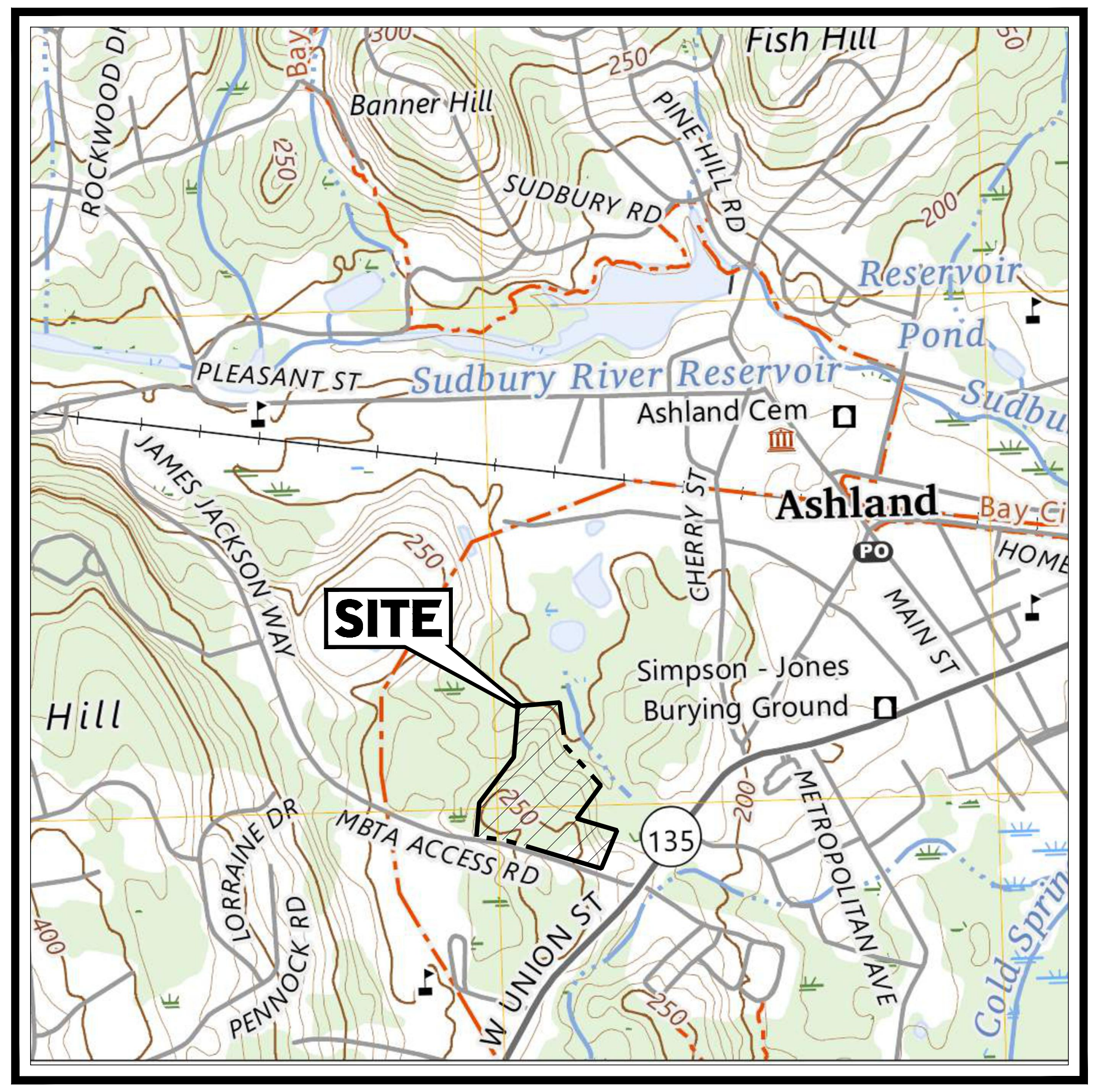
LOCATION OF SITE
30 MEMORIAL DRIVE, TOWN OF ASHLAND
MIDDLESEX COUNTY, MASSACHUSETTS
MAP 13, LOT 178

REFERENCES AND CONTACTS

REFERENCES

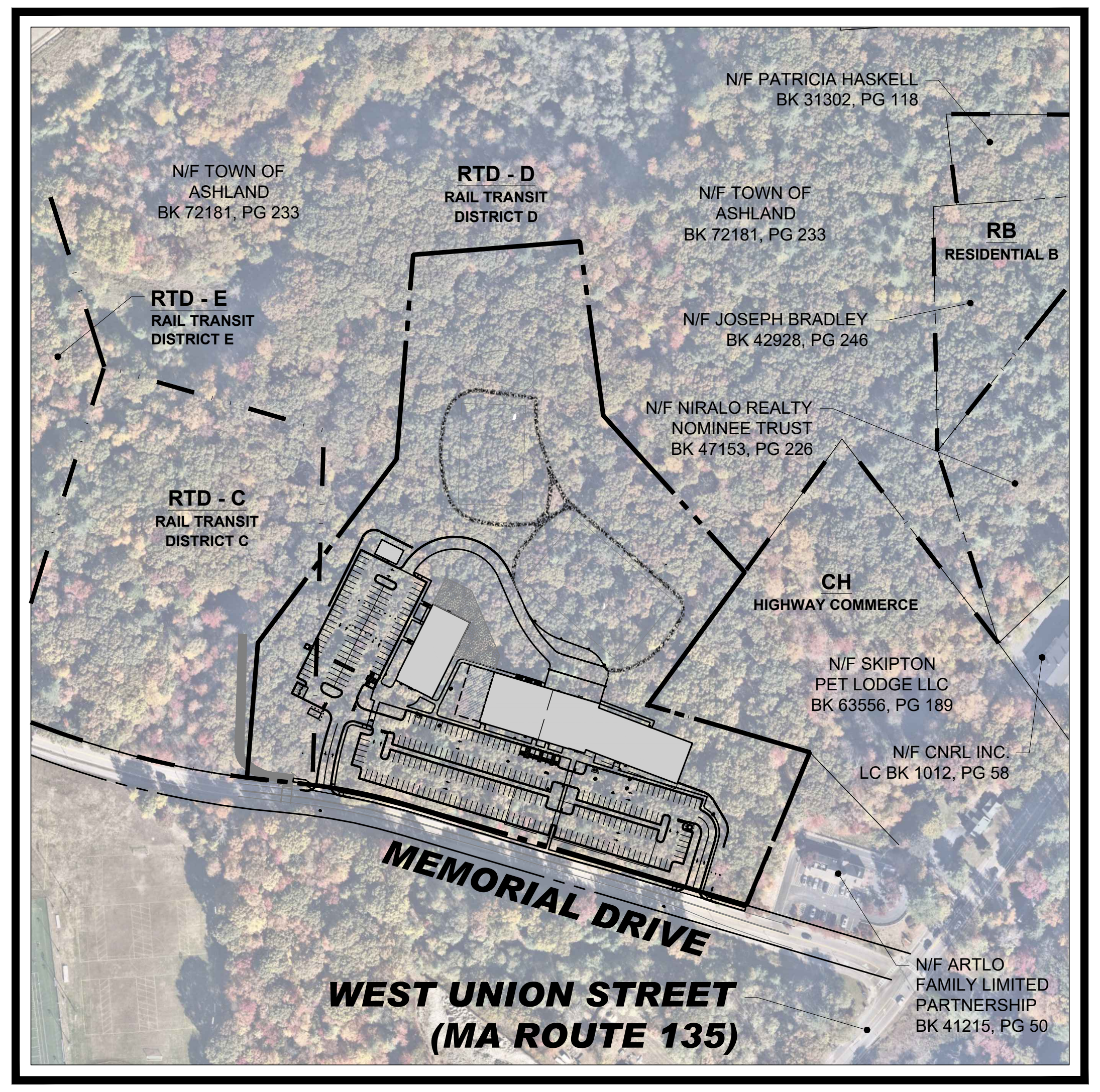
- ♦ EXISTING CONDITIONS PLAN:
  ALLEN & MAJOR ASSOCIATES, INC.
  100 COMMERCE WAY
  WOBURN, MA 01801-8501
  DATED: 02/06/2025
  SURVEY JOB #:2591-01C
  ELEVATIONS: NAVD 1988
- ♦ GEOTECHNICAL ENGINEERING REPORT:
  GEOENGINEERS USA
  239 CAUSEWAY STREET
  SUITE 400
  BOSTON, MA 02114
  DATED: 09/13/2024
- ♦ ARCHITECTURAL PLAN:
  CBT
  ONE CONSTITUTION ROAD
  SUITE 200
  BOSTON, MA 02129
  DATED: 04/25/2025

THE ABOVE REFERENCED DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THESE PLANS, HOWEVER, BOHLER ENGINEERING DOES NOT CERTIFY THE ACCURACY OF THE WORK REFERENCED OR DERIVED FROM THESE DOCUMENTS, BY OTHERS.


Fish Hill
Banner Hill
ROCKWOOD DR
PINE HILL RD
SUDBURY RD
Reservoir
Pond
PLEASANT ST
Sudbury River Reservoir
Ashland Cem
Ashland
JAMES JACKSON WAY
CHERRY ST
MAIN ST
HOMER
SITE
Simpson - Jones
Burying Ground
Hill
MBTA ACCESS RD
135
METROPOLITAN AVE
LORRAINE DR
PENNOCK RD
W UNION ST
Cold Spring
250
200

USGS MAP

SCALE: 1" = 1,000'
SOURCE: FRAMINGHAM, MA
USGS QUADRANGLE, 2024


N/F PATRICIA HASKELL
BK 31302, PG 118
N/F TOWN OF ASHLAND
BK 72181, PG 233
RTD - D
RAIL TRANSIT DISTRICT D
N/F TOWN OF ASHLAND
BK 72181, PG 233
RB
RESIDENTIAL B
RTD - E
RAIL TRANSIT DISTRICT E
N/F JOSEPH BRADLEY
BK 42928, PG 246
N/F NIRALO REALTY NOMINEE TRUST
BK 47153, PG 226
RTD - C
RAIL TRANSIT DISTRICT C
CH
HIGHWAY COMMERCE
N/F SKIPTON PET LODGE LLC
BK 63556, PG 189
N/F CNRL INC.
LC BK 1012, PG 58
MEMORIAL DRIVE
N/F ARTLO FAMILY LIMITED PARTNERSHIP
BK 41215, PG 50
WEST UNION STREET
(MA ROUTE 135)

AERIAL MAP

SCALE: 1" = 250'
SOURCE: NEARMAP AERIAL IMAGERY, 2024

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PREPARED BY

BOHLER

GENERAL NOTE:
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF THE WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

TEAM HOYT
COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt

One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER™

50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900

www.BohlerEngineering.com

J.A. KUCICH
John Kucich
JOHN A. KUCICH
CIVIL
No. 41530
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
NEW HAMPSHIRE LICENSE No. 15476
CONNECTICUT LICENSE No. 26177
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

ISSUED FOR
PERMIT

COVER SHEET

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

C-101

GENERAL NOTES

(Rev. 1/2023)

1. THESE PLANS ARE SOLELY BASED ON INFORMATION THE OWNER AND OTHERS PROVIDED TO BOHLER, LLC (HEREIN "BOHLER") PRIOR TO THE DATE ON WHICH THE PROFESSIONAL OF RECORD AND BOHLER PREPARED THESE PLANS. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS AND IMMEDIATELY NOTIFY BOHLER , IN WRITING, IF ANY ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THESE PLANS, OR IF THE PROPOSED WORK CONFLICTS WITH ANY OTHER SITE FEATURES.
2. THE CONTRACTOR MUST STRICTLY COMPLY WITH THESE NOTES AND ALL SPECIFICATIONS/REPORTS CONTAINED HEREIN. THE CONTRACTOR MUST ENSURE THAT ALL SUBCONTRACTORS FULLY AND COMPLETELY CONFORM TO AND COMPLY WITH THESE REQUIREMENTS, THESE NOTES, AND THE REQUIREMENTS ARTICULATED IN THE NOTES CONTAINED IN ALL THE OTHER DRAWINGS THAT COMPRISE THE PLAN SET OF DRAWINGS. ADDITIONAL NOTES AND SPECIFIC PLAN NOTES MAY BE FOUND ON THE INDIVIDUAL PLANS. THESE GENERAL NOTES APPLY TO THIS ENTIRE DOCUMENT PACKAGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL CONSTRUCTION CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE, PRIOR TO THE INITIATION AND COMMENCEMENT OF CONSTRUCTION.
3. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST CONFIRM WITH THE PROFESSIONAL OF RECORD AND BOHLER THAT THE LATEST EDITION OF THE DOCUMENTS AND/OR REPORTS REFERENCED WITHIN THE PLAN REFERENCES ARE BEING USED FOR CONSTRUCTION. THIS IS THE CONTRACTOR'S SOLE AND COMPLETE RESPONSIBILITY.
4. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION IS TO BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED THE CONDITIONS OF APPROVAL TO ALL PLANS AND OTHER DOCUMENTS REVIEWED AND APPROVED BY THE PERMITTING AUTHORITIES AND HAS ALSO CONFIRMED THAT ALL NECESSARY AND REQUIRED PERMITS HAVE BEEN OBTAINED. THE CONTRACTOR MUST HAVE COPIES OF ALL PERMITS AND APPROVALS ON SITE AT ALL TIMES.
5. THE CONTRACTOR MUST ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS/REPORTS AND CONDITIONS OF APPROVAL, AND ALL APPLICABLE REQUIREMENTS, RULES, REGULATIONS, STATUTORY REQUIREMENTS, CODES, LAWS AND STANDARDS OF ALL GOVERNMENTAL ENTITIES WITH JURISDICTION OVER THIS PROJECT, AND ALL PROVISIONS IN AND CONDITIONS OF THE CONSTRUCTION CONTRACT WITH THE OWNER/DEVELOPER INCLUDING ALL EXHIBITS, ATTACHMENTS AND ADDENDA TO SAME.
6. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST COORDINATE THE BUILDING LAYOUT BY CAREFULLY REVIEWING THE MOST CURRENT ARCHITECTURAL, CIVIL AND STRUCTURAL CONSTRUCTION DOCUMENTS (INCLUDING, BUT NOT LIMITED TO, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE SUPPRESSION PLANS, WHERE APPLICABLE). THE CONTRACTOR MUST IMMEDIATELY NOTIFY OWNER, ARCHITECT AND PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY CONFLICTS, DISCREPANCIES OR AMBIGUITIES WHICH EXIST BETWEEN THESE PLANS AND ANY OTHER PLANS THAT COMPRISE THE CONSTRUCTION DOCUMENTS.
7. CONTRACTOR MUST REFER TO AND ENSURE COMPLIANCE WITH THE APPROVED ARCHITECTURAL/BUILDING PLANS OF RECORD FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY LOCATIONS.
8. THE CONTRACTOR MUST FIELD VERIFY ALL DIMENSIONS AND MEASUREMENTS SHOWN ON THESE PLANS, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR MUST IMMEDIATELY NOTIFY PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, IF ANY CONFLICTS, DISCREPANCIES, OR AMBIGUITIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR WORK WHICH HAS TO BE RE-DONE OR REPAIRED DUE TO DIMENSIONS, MEASUREMENTS OR GRADES SHOWN INCORRECTLY ON THESE PLANS PRIOR TO BOTH (A) THE CONTRACTOR GIVING PROFESSIONAL OF RECORD AND BOHLER WRITTEN NOTIFICATION OF SAME AND (B) PROFESSIONAL OF RECORD AND BOHLER, THEREAFTER, PROVIDING THE CONTRACTOR WITH WRITTEN AUTHORIZATION TO PROCEED WITH SUCH ADDITIONAL WORK.
9. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND MEASUREMENTS INCLUDED ON DESIGN DOCUMENTS HEREIN AND MUST NOT SCALE OFF THE DRAWINGS DUE TO POTENTIAL PRINTING INACCURACIES. ALL DIMENSIONS AND MEASUREMENTS ARE TO BE CHECKED AND CONFIRMED BY THE GENERAL CONTRACTOR PRIOR TO PREPARATION OF SHOP DRAWINGS, FABRICATION/ORDERING OF PARTS AND MATERIALS AND COMMENCEMENT OF SITE WORK. SITE PLAN DRAWINGS ARE NOT INTENDED AS SURVEY DOCUMENTS. DIMENSIONS SUPERSEDE GRAPHICAL REPRESENTATIONS. THE CONTRACTOR MUST MAKE CONTRACTOR'S OWN MEASUREMENTS FOR LAYOUT OF IMPROVEMENTS.
10. THE OWNER AND CONTRACTOR MUST BE FAMILIAR WITH AND RESPONSIBLE FOR THE PROCUREMENT OF ANY AND ALL CERTIFICATIONS REQUIRED FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
11. WHEN INCLUDED AS ONE OF THE REFERENCED DOCUMENTS, THE GEOTECHNICAL REPORT, SPECIFICATIONS AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND, IN CASE OF CONFLICT, DISCREPANCY OR AMBIGUITY, THE MORE STRINGENT REQUIREMENTS AND/OR RECOMMENDATIONS CONTAINED IN: (A) THE PLANS; AND (B) THE GEOTECHNICAL REPORT AND RECOMMENDATIONS, MUST TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR MUST NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY SUCH CONFLICT, DISCREPANCY OR AMBIGUITY BETWEEN THE GEOTECHNICAL REPORT AND PLANS AND SPECIFICATIONS, PRIOR TO PROCEEDING WITH ANY FURTHER WORK. IF A GEOTECHNICAL REPORT WAS NOT CREATED, THEN THE CONTRACTOR MUST FOLLOW AND COMPLY WITH ALL OF THE REQUIREMENTS OF ANY AND ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE SPECIFICATIONS WHICH HAVE JURISDICTION OVER THIS PROJECT.
12. PROFESSIONAL OF RECORD AND BOHLER ARE NEITHER LIABLE NOR RESPONSIBLE FOR ANY SUBSURFACE CONDITIONS AND FURTHER, HAS NO LIABILITY FOR ANY HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES, OR POLLUTANTS ON, ABOUT OR UNDER THE PROPERTY.
13. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING WHEN AND WHERE SHORING IS REQUIRED AND FOR INSTALLING ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PRECAUTIONS TO BE TAKEN TO ASSURE THE STABILITY OF ADJACENT, NEARBY AND CONTIGUOUS STRUCTURES AND PROPERTIES. ALL OF THIS WORK IS TO BE PERFORMED AT CONTRACTOR'S SOLE COST AND EXPENSE.
14. THE CONTRACTOR MUST EXERCISE EXTREME CAUTION WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES, ETC. WHICH ARE TO REMAIN EITHER FOR AN INITIAL PHASE OF THE PROJECT OR AS PART OF THE FINAL CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ALL APPROPRIATE MEASURES REQUIRED TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT, UTILITIES, BUILDINGS, AND INFRASTRUCTURE WHICH ARE TO REMAIN, AND TO PROVIDE A SAFE WORK AREA FOR THIRD PARTIES, PEDESTRIANS AND ANYONE INVOLVED WITH THE PROJECT.
15. DEBRIS MUST NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION AND CONSTRUCTION WASTES, UNSUITABLE EXCAVATED MATERIAL, EXCESS SOIL AND DEBRIS (SOLID WASTE) MUST BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF ANY AND ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES WHICH HAVE JURISDICTION OVER THIS PROJECT OR OVER THE CONTRACTOR.
16. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN RECORDS TO DEMONSTRATE PROPER AND FULLY COMPLIANT DISPOSAL ACTIVITIES, TO BE PROMPTLY PROVIDED TO THE OWNER UPON REQUEST.
17. THE CONTRACTOR MUST REPAIR, AT CONTRACTOR'S SOLE COST, ALL DAMAGE DONE TO ANY NEW OR EXISTING CONSTRUCTION OR PROPERTY DURING THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. AND MUST BEAR ALL COSTS ASSOCIATED WITH SAME TO INCLUDE, BUT NOT BE LIMITED TO, REDESIGN, RE-SURVEY, RE-PERMITTING AND CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR AND MUST REPLACE ALL SIGNAL INTERCONNECTION CABLE, WIRING CONDUITS, AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION AND MUST BEAR ALL COSTS ASSOCIATED WITH SAME. THE REPAIR OF ANY SUCH NEW OR EXISTING CONSTRUCTION OR PROPERTY MUST RESTORE SUCH CONSTRUCTION OR PROPERTY TO A CONDITION EQUIVALENT TO OR BETTER THAN THE CONDITIONS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION, AND IN CONFORMANCE WITH APPLICABLE CODES, LAWS, RULES, REGULATIONS, STATUTORY REQUIREMENTS AND STATUTES. THE CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH SAME. THE CONTRACTOR MUST, PROMPTLY, DOCUMENT ALL EXISTING DAMAGE AND NOTIFY, IN WRITING, THE OWNER AND THE CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.
18. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR AND HAVE NO CONTRACTUAL, LEGAL OR OTHER RESPONSIBILITIES FOR JOB SITE SAFETY JOB SITE SUPERVISION, OR ANYTHING RELATED TO SAME. THE PROFESSIONAL OF RECORD AND BOHLER HAVE NOT BEEN RETAINED TO PERFORM OR TO BE RESPONSIBLE FOR JOB SITE SAFETY, SAME BEING WHOLLY OUTSIDE OF PROFESSIONAL OF RECORD'S AND BOHLER SERVICES AS RELATED TO THE PROJECT. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE TO IDENTIFY OR REPORT ANY JOB SITE SAFETY ISSUES OR ANY JOB SITE CONDITIONS, AT ANY TIME.
19. THE CONTRACTOR MUST IMMEDIATELY IDENTIFY IN WRITING, TO THE PROFESSIONAL OF RECORD AND BOHLER , ANY DISCREPANCIES THAT MAY OR COULD AFFECT THE PUBLIC SAFETY, HEALTH OR GENERAL WELFARE, OR PROJECT COST. IF THE CONTRACTOR PROCEEDS WITH CONSTRUCTION WITHOUT PROVIDING PROPER WRITTEN NOTIFICATION AS DESCRIBED ABOVE, IT WILL BE AT THE CONTRACTOR'S OWN RISK AND, FURTHER, THE CONTRACTOR MUST INDEMNIFY, DEFEND AND HOLD HARMLESS THE PROFESSIONAL OF RECORD AND BOHLER FOR ANY AND ALL DAMAGES, COSTS, INJURIES, ATTORNEY'S FEES AND THE LIKE WHICH RESULT FROM OR ARE IN ANY WAY RELATED TO SAME INCLUDING, BUT NOT LIMITED TO, ANY THIRD PARTY AND FIRST PARTY CLAIMS.
20. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR ANY INJURY OR DAMAGES RESULTING FROM THE CONTRACTOR'S FAILURE TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH THE APPROVED PLANS, AND CURRENT CODES, RULES, STATUTES AND THE LIKE. IF THE CONTRACTOR AND/OR OWNER FAIL TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH APPROVED PLANS, RULES, STATUTES, CODES AND THE LIKE, THE CONTRACTOR AND/OR OWNER AGREE TO AND MUST JOINTLY, INDEPENDENTLY, SEPARATELY, AND SEVERALLY INDEMNIFY AND HOLD THE PROFESSIONAL OF RECORD AND BOHLER HARMLESS FOR AND FROM ALL INJURIES, CLAIMS AND DAMAGES THAT PROFESSIONAL OF RECORD AND BOHLER SUFFER AND ANY AND ALL COSTS THAT PROFESSIONAL OF RECORD AND BOHLER INCUR AS RELATED TO SAME.
21. ALL CONTRACTORS MUST CARRY AT LEAST THE MINIMUM AMOUNT OF THE SPECIFIED AND COMMERCIALLY REASONABLE STATUTORY WORKER'S COMPENSATION INSURANCE, EMPLOYER'S LIABILITY INSURANCE AND COMMERCIAL GENERAL LIABILITY INSURANCE (CGL) INCLUDING ALSO ALL UMBRELLA COVERAGES. ALL CONTRACTORS MUST HAVE THEIR CGL POLICIES ENDORSED TO NAME BOHLER , AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AS ADDITIONAL NAMED INSUREDS AND TO PROVIDE CONTRACTUAL LIABILITY COVERAGE SUFFICIENT TO INSURE (DEFEND, IF APPLICABLE) AND HOLD HARMLESS AND INDEMNITY OBLIGATIONS ASSUMED AND AGREED TO BY THE CONTRACTOR HEREIN. ALL CONTRACTORS MUST FURNISH BOHLER WITH CERTIFICATIONS OF INSURANCE OR CERTIFICATES OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE COVERAGES PRIOR TO COMMENCING ANY WORK AND UPON RENEWAL OF EACH POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION AND FOR TWO YEARS AFTER THE COMPLETION OF CONSTRUCTION AND AFTER ALL PERMITS ARE ISSUED, WHICHEVER DATE IS LATER. IN ADDITION, ALL CONTRACTORS AGREE THAT THEY WILL, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, INDEMNIFY, DEFEND AND HOLD HARMLESS BOHLER AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS FROM AND AGAINST ANY DAMAGES, INJURIES, CLAIMS, ACTIONS, PENALTIES, EXPENSES, PUNITIVE DAMAGES, TORT DAMAGES, STATUTORY CLAIMS, STATUTORY CAUSES OF ACTION, LOSSES, CAUSES OF ACTION, LIABILITIES OR COSTS, INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEYS' FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH OR TO THE PROJECT, INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTOR(S), ALL CLAIMS BY THIRD PARTIES AND ALL CLAIMS RELATED TO THE PROJECT. THE CONTRACTOR MUST NOTIFY PROFESSIONAL OF RECORD, IN WRITING, AT LEAST THIRTY (30) DAYS PRIOR TO ANY TERMINATION, SUSPENSION OR CHANGE OF ITS INSURANCE HEREUNDER.
22. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR CONSTRUCTION METHODS, MEANS, TECHNIQUES OR PROCEDURES, GENERALLY OR FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES OR PROCEDURES FOR COMPLETION OF THE WORK DEPICTED BOTH ON THESE PLANS, AND FOR ANY CONFLICTS IN SCOPE AND REVISIONS THAT RESULT FROM SAME. THE CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR DETERMINING THE MEANS AND METHODS FOR COMPLETION OF THE WORK, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
23. NEITHER THE PROFESSIONAL ACTIVITIES OF BOHLER, NOR THE PRESENCE OF BOHLER AND/OR ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AT A CONSTRUCTION/PROJECT SITE (HEREIN "BOHLER PARTIES"), RELIEVES OR WILL RELIEVE THE CONTRACTOR OF AND FROM CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, OVERSEEING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND COMPLIANCE WITH ALL HEALTH AND SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES WITH JURISDICTION OVER THE PROJECT AND/OR PROPERTY. BOHLER PARTIES HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER (OR ANY RESPONSIBILITY FOR) ANY CONSTRUCTION, THE CONTRACTOR OR ITS EMPLOYEES RELATING TO THEIR WORK AND ANY AND ALL HEALTH AND SAFETY PROGRAMS OR PROCEDURES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY. THE CONTRACTOR MUST INDEMNIFY, DEFEND, PROTECT AND HOLD HARMLESS BOHLER PARTIES FOR AND FROM ANY LIABILITY TO BOHLER PARTIES RESULTING FROM THE CONTRACTOR'S WORK, SERVICES AND/OR VIOLATIONS OF THIS NOTE, THESE NOTES OR ANY NOTES IN THE PLAN SET AND, FURTHER, THE CONTRACTOR MUST NAME BOHLER AS AN ADDITIONAL INSURED UNDER THE GENERAL CONTRACTOR'S POLICIES OF GENERAL LIABILITY INSURANCE AS DESCRIBED ABOVE.
24. WHEN IT IS CLEARLY AND SPECIFICALLY WITHIN BOHLER'S SCOPE OF SERVICES CONTRACT WITH THE OWNER/DEVELOPER, BOHLER WILL REVIEW OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND OTHER DATA, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF EVALUATING CONFORMANCE WITH THE DESIGN INTENT AND THE INFORMATION SHOWN IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONSTRUCTION MEANS AND METHODS AND/OR TECHNIQUES OR PROCEDURES, COORDINATION OF THE WORK WITH OTHER TRADES, AND CONSTRUCTION SAFETY PRECAUTIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND BOHLER HAS NO RESPONSIBILITY OR LIABILITY FOR SAME. BOHLER WILL PERFORM ITS SHOP DRAWING REVIEW WITH REASONABLE PROMPTNESS, AS CONDITIONS PERMIT. ANY DOCUMENT, DOCUMENTING BOHLER'S REVIEW OF A SPECIFIC ITEM OR LIMITED SCOPE, MUST NOT INDICATE THAT BOHLER HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. BOHLER IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR MUST, IN WRITING, PROMPTLY AND IMMEDIATELY BRING ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS TO BOHLER'S ATTENTION. BOHLER IS NOT REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.
25. IF THE CONTRACTOR DEVIATES FROM THESE PLANS AND/OR SPECIFICATIONS, INCLUDING THE NOTES CONTAINED HEREIN, WITHOUT FIRST OBTAINING THE PRIOR WRITTEN AUTHORIZATION OF THE PROFESSIONAL OF RECORD AND BOHLER FOR ALL DEVIATIONS WITHIN PROFESSIONAL OF RECORD'S SCOPE, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PAYMENT OF ALL COSTS INCURRED IN CORRECTING ANY WORK PERFORMED WHICH DEVIATES FROM THE PLANS, ALL FINES AND/OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM AND, FURTHER, MUST DEFEND, INDEMNIFY, PROTECT, AND HOLD HARMLESS THE PROFESSIONAL OF RECORD AND BOHLER PARTIES TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, FOR AND FROM ALL FEES, ATTORNEYS' FEES, DAMAGES, COSTS, JUDGMENTS, CLAIMS, INJURIES, PENALTIES AND THE LIKE RELATED TO SAME.
26. THE CONTRACTOR IS RESPONSIBLE FOR A MAINTAINING AND PROTECTING THE TRAFFIC CONTROL PLAN AND ELEMENTS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS, FOR ALL WORK THAT AFFECTS PUBLIC TRAVEL EITHER IN THE RIGHT OF WAY OR ON SITE. THE COST FOR THIS ITEM MUST BE INCLUDED IN THE CONTRACTOR'S PRICE AND IS THE CONTRACTOR'S SOLE RESPONSIBILITY.
27. OWNER MUST MAINTAIN AND PRESERVE ALL PHYSICAL SITE FEATURES AND DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS IN STRICT ACCORDANCE WITH THE APPROVED PLAN(S) AND DESIGN; AND, FURTHER, THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR ANY FAILURE TO SO MAINTAIN OR PRESERVE SITE AND/OR DESIGN FEATURES. IF OWNER FAILS TO MAINTAIN AND/OR PRESERVE ALL PHYSICAL SITE FEATURES AND/OR DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS, OWNER AGREES TO INDEMNIFY AND HOLD THE PROFESSIONAL OF RECORD AND BOHLER PARTIES, HARMLESS FOR ALL INJURIES, DAMAGES AND COSTS THAT PROFESSIONAL OF RECORD AND BOHLER INCUR AS A RESULT OF SAID FAILURE OR FAILURE TO PRESERVE.
28. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES AND MATERIALS COMPLY WITH AND CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL RULES AND REGULATIONS, LAWS, ORDINANCES, AND CODES, AND ALL APPLICABLE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, (29 U.S.C. 651 ET SEQ.) AS AMENDED, AND ANY MODIFICATIONS, AMENDMENTS OR REVISIONS TO SAME.
29. THE CONTRACTOR MUST STRICTLY COMPLY WITH THE LATEST AND CURRENT OSHA STANDARDS AND REGULATIONS, AND/OR ANY OTHER AGENCY WITH JURISDICTION OVER EXCAVATION AND TRENCHING PROCEDURES. PROFESSIONAL OF RECORD AND BOHLER HAS NO RESPONSIBILITY FOR OR AS RELATED TO EXCAVATION AND TRENCHING PROCEDURES AND WORK.
30. THE CONTRACTOR AND THE OWNER MUST INSTALL ALL ELEMENTS AND COMPONENTS IN STRICT COMPLIANCE WITH AND IN ACCORDANCE WITH MANUFACTURER'S STANDARDS AND RECOMMENDED INSTALLATION CRITERIA AND SPECIFICATIONS. IF THE CONTRACTOR AND/OR OWNER FAIL TO DO SO, THEY AGREE TO JOINTLY, INDEPENDENTLY, SEPARATELY, COLLECTIVELY, AND SEVERALLY INDEMNIFY, DEFEND, PROTECT AND HOLD PROFESSIONAL OF RECORD AND BOHLER PARTIES HARMLESS FOR ALL INJURIES AND DAMAGES THAT PROFESSIONAL OF RECORD SUFFERS AND COSTS THAT PROFESSIONAL OF RECORD INCURS AS A RESULT OF SAID FAILURE.
31. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN AN ON-SITE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN COMPLIANCE WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIREMENTS OR LOCAL GOVERNING AGENCY FOR SITES WHERE ONE (1) ACRE OR MORE IS DISTURBED BY CONSTRUCTION ACTIVITIES (UNLESS THE LOCAL JURISDICTION REQUIRES A DIFFERENT THRESHOLD). THE CONTRACTOR MUST ENSURE THAT ALL ACTIVITIES, INCLUDING THOSE OF ALL SUBCONTRACTORS, ARE IN COMPLIANCE WITH THE SWPPP, INCLUDING BUT NOT LIMITED TO LOGGING ACTIVITIES (MINIMUM ONCE PER WEEK AND AFTER RAINFALL EVENTS) AND CORRECTIVE MEASURES, AS APPROPRIATE AND FURTHER, THE CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR FAILING TO DO SO.
32. AS CONTAINED IN THESE DRAWINGS AND ASSOCIATED DOCUMENTS PREPARED BY THE PROFESSIONAL OF RECORD AND BOHLER, THE USE OF THE WORDS 'CERTIFY' OR 'CERTIFICATION' CONSTITUTE(S) AN EXPRESSION ONLY OF PROFESSIONAL OPINION REGARDING THE INFORMATION WHICH IS THE SUBJECT OF THE PROFESSIONAL OF RECORD'S AND BOHLER KNOWLEDGE OR BELIEF AND IN ACCORDANCE WITH COMMON AND ACCEPTED PROCEDURE CONSISTENT WITH THE APPLICABLE STANDARDS OF PRACTICE, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE OF ANY NATURE OR TYPE, EITHER EXPRESSED OR IMPLIED, UNDER ANY CIRCUMSTANCES.

DEMOLITION NOTES

(Rev. 1/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. THE CONTRACTOR MUST CONDUCT DEMOLITION/REMOVALS ACTIVITIES IN SUCH A MANNER AS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND ALL OTHER ADJACENT FACILITIES. THE CONTRACTOR MUST OBTAIN ALL APPLICABLE PERMITS FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY(IES) PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE RIGHT-OF-WAY.
3. WHEN DEMOLITION-RELATED ACTIVITIES IMPACT ROADWAYS AND/OR ROADWAY RIGHT-OF-WAY, THE CONTRACTOR MUST PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH THE CURRENT FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), AND THE FEDERAL, STATE, AND LOCAL REGULATIONS.
4. THE DEMOLITION (AND/OR REMOVALS) PLAN IS INTENDED TO PROVIDE GENERAL INFORMATION AND TO IDENTIFY ONLY CONDITIONS REGARDING ITEMS TO BE DEMOLISHED, REMOVED, AND/OR TO REMAIN.
   A. THE CONTRACTOR MUST ALSO REVIEW ALL CONSTRUCTION DOCUMENTS AND INCLUDE WITHIN THE DEMOLITION ACTIVITIES ALL INCIDENTAL WORK NECESSARY FOR THE CONSTRUCTION OF THE NEW SITE IMPROVEMENTS.
   B. THIS PLAN IS NOT INTENDED TO AND DOES NOT PROVIDE DIRECTION REGARDING THE MEANS, METHODS, SEQUENCING, TECHNIQUES AND PROCEDURES TO BE EMPLOYED TO ACCOMPLISH THE WORK. ALL MEANS, METHODS, SEQUENCING, TECHNIQUES AND PROCEDURES TO BE USED MUST BE IN STRICT ACCORDANCE AND CONFORMANCE WITH ALL STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR MUST COMPLY WITH ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE FOR THE CONTRACTOR AND THE PUBLIC.
5. THE CONTRACTOR MUST PROVIDE ALL "METHODS AND MEANS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE. THE CONTRACTOR, AT THE CONTRACTOR'S SOLE COST, MUST REPAIR ALL DAMAGE TO ALL ITEMS AND FEATURES THAT ARE TO REMAIN. CONTRACTOR MUST USE NEW MATERIAL FOR ALL REPAIRS. CONTRACTOR'S REPAIRS MUST INCLUDE THE RESTORATION OF ALL ITEMS AND FEATURES REPAIRED TO THEIR PRE-DEMOLITION CONDITION, OR BETTER. CONTRACTOR MUST PERFORM ALL REPAIRS AT THE CONTRACTOR'S SOLE EXPENSE.
6. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. THE CONTRACTOR MUST PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, COMPLYING WITH ALL OSHA REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY AND SAFETY TO ALL PROPERTY ON THE SITE OR ADJACENT OR NEAR TO THE SAME.
7. THE CONTRACTOR IS RESPONSIBLE FOR JOB SITE SAFETY, WHICH MUST INCLUDE, BUT IS NOT LIMITED TO, THE INSTALLATION AND MAINTENANCE OF BARRIERS, FENCING, OTHER APPROPRIATE AND/OR NECESSARY SAFETY FEATURES AND ITEMS NECESSARY TO PROTECT THE PUBLIC FROM AREAS OF CONSTRUCTION AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST SAFEGUARD THE SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF ALL UNAUTHORIZED PERSONS AT ANY TIME, TO OR NEAR THE DEMOLITION AREA.
8. PRIOR TO THE COMMENCEMENT OF ANY SITE ACTIVITY AND ANY DEMOLITION ACTIVITY, THE CONTRACTOR MUST, IN WRITING, RAISE ANY QUESTIONS CONCERNING THE ACCURACY OR INTENT OF THESE PLANS AND/OR SPECIFICATIONS, ALL CONCERNS OR QUESTIONS REGARDING THE APPLICABLE SAFETY STANDARDS, AND/OR THE SAFETY OF THE CONTRACTOR AND/OR THIRD PARTIES IN PERFORMING THE WORK ON THIS PROJECT. ANY SUCH CONCERNS MUST BE CONVEYED TO THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING AND MUST ADDRESS ALL ISSUES AND ITEMS RESPONDED TO, BY THE PROFESSIONAL OF RECORD AND BY BOHLER, IN WRITING. ALL DEMOLITION ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, RULES, REQUIREMENTS, STATUTES, ORDINANCES AND CODES.
9. THE CONTRACTOR MUST BECOME FAMILIAR WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AND/OR DISCONNECTION AS IDENTIFIED OR REQUIRED FOR THE PROJECT. THE CONTRACTOR MUST PROVIDE THE OWNER WITH WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED, REMOVED AND/OR ABANDONED IN ACCORDANCE WITH THE JURISDICTION AND UTILITY COMPANY REQUIREMENTS AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.
10. PRIOR TO COMMENCING ANY DEMOLITION, THE CONTRACTOR MUST:
    A. OBTAIN ALL REQUIRED PERMITS AND MAINTAIN THE SAME ON SITE FOR REVIEW BY THE PROFESSIONAL OF RECORD AND ALL PUBLIC AGENCIES WITH JURISDICTION THROUGHOUT THE DURATION OF THE PROJECT, SITE WORK, AND DEMOLITION WORK.
    B. NOTIFY, AT A MINIMUM, THE MUNICIPAL ENGINEER, DESIGN ENGINEER, AND LOCAL SOIL CONSERVATION JURISDICTION, AT LEAST 72 BUSINESS HOURS PRIOR TO THE COMMENCEMENT OF WORK.
    C. INSTALL THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE, AND MAINTAIN SAID CONTROLS UNTIL SITE IS STABILIZED
    D. IN ACCORDANCE WITH STATE LAW, THE CONTRACTOR MUST CALL THE STATE ONE-CALL DAMAGE PROTECTION SYSTEM FOR UTILITY MARK OUT, IN ADVANCE OF ANY EXCAVATION.
    E. LOCATE AND PROTECT ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN AND ADJACENT TO THE LIMITS OF PROJECT ACTIVITIES. THE CONTRACTOR MUST USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL UNDERGROUND UTILITIES.
    F. PROTECT AND MAINTAIN IN OPERATION, ALL ACTIVE UTILITIES AND SYSTEMS THAT ARE NOT BEING REMOVED DURING ANY DEMOLITION ACTIVITIES.
    G. ARRANGE FOR AND COORDINATE WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) FOR THE TEMPORARY OR PERMANENT TERMINATION OF SERVICE REQUIRED BY THE PROJECT PLANS AND SPECIFICATIONS REGARDING THE METHODS AND MEANS TO CONSTRUCT SAME. THESE ARE NOT THE PROFESSIONAL OF RECORD'S OR BOHLER RESPONSIBILITY. IN THE EVENT OF ABANDONMENT, THE CONTRACTOR MUST PROVIDE THE UTILITY ENGINEER AND OWNER WITH IMMEDIATE WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTIONAL AND UTILITY COMPANY REQUIREMENTS.
    H. ARRANGE FOR AND COORDINATE WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS NECESSARY OR AS REQUIRED TO MINIMIZE THE IMPACT ON, OF, AND TO THE AFFECTED PARTIES. WORK REQUIRED TO BE PERFORMED "OFF-PEAK" IS TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
    I. IN THE EVENT THE CONTRACTOR DISCOVERS ANY HAZARDOUS MATERIAL, THE REMOVAL OF WHICH IS NOT ADDRESSED IN THE PROJECT PLANS AND SPECIFICATIONS OR THE CONTRACT WITH THE OWNER/DEVELOPER, THE CONTRACTOR MUST IMMEDIATELY CEASE ALL WORK IN THE AREA OF DISCOVERY, AND IMMEDIATELY NOTIFY, IN WRITING AND VERBALLY, THE OWNER, PROFESSIONAL OF RECORD AND BOHLER, THE DISCOVERY OF SUCH MATERIALS TO PURSUE PROPER AND COMPLIANT REMOVAL OF SAME.
11. THE CONTRACTOR MUST NOT PERFORM ANY EARTH MOVEMENT ACTIVITIES, DEMOLITION OR REMOVAL OF FOUNDATION WALLS, FOOTINGS, OR OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE, UNLESS SAME IS IN STRICT ACCORDANCE AND CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, OR PURSUANT TO THE WRITTEN DIRECTION OF THE OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.
12. DEMOLITION ACTIVITIES AND EQUIPMENT MUST NOT USE OR INCLUDE AREAS OUTSIDE THE DEFINED PROJECT LIMIT LINE, WITHOUT SPECIFIC WRITTEN PERMISSION AND AUTHORITY OF AND FROM THE OWNER AND ALL GOVERNMENTAL AGENCIES WITH JURISDICTION.
13. THE CONTRACTOR MUST BACKFILL ALL EXCAVATION RESULTING FROM, OR INCIDENTAL TO, DEMOLITION ACTIVITIES. BACKFILL MUST BE ACCOMPLISHED WITH APPROVED BACKFILL MATERIALS AND MUST BE SUFFICIENTLY COMPACTED TO SUPPORT ALL NEW IMPROVEMENTS AND MUST BE PERFORMED IN COMPLIANCE WITH THE RECOMMENDATIONS AND GUIDANCE ARTICULATED IN THE GEOTECHNICAL REPORT. BACKFILLING MUST OCCUR IMMEDIATELY AFTER DEMOLITION ACTIVITIES AND MUST BE PERFORMED SO AS TO PREVENT WATER ENTERING THE EXCAVATION. FINISHED SURFACES MUST BE GRADED TO PROMOTE POSITIVE DRAINAGE. THE CONTRACTOR IS RESPONSIBLE FOR COMPACTION TESTING AND MUST SUBMIT SUCH REPORTS AND RESULTS TO THE PROFESSIONAL OF RECORD AND THE OWNER.
14. EXPLOSIVES MUST NOT BE USED WITHOUT PRIOR WRITTEN CONSENT FROM BOTH THE OWNER AND ALL APPLICABLE, NECESSARY AND REQUIRED GOVERNMENTAL AUTHORITIES. PRIOR TO COMMENCING ANY EXPLOSIVE PROGRAM AND/OR ANY DEMOLITION ACTIVITIES, THE CONTRACTOR MUST ENSURE AND OVERSEE THE INSTALLATION OF ALL OF THE REQUIRED PERMIT AND EXPLOSIVE CONTROL MEASURES THAT THE FEDERAL, STATE, AND LOCAL GOVERNMENTS REQUIRE. THE CONTRACTOR IS ALSO RESPONSIBLE TO CONDUCT AND PERFORM ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES AND THE LIKE.
15. IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS, THE CONTRACTOR MUST USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR. AFTER THE DEMOLITION IS COMPLETE, THE CONTRACTOR MUST CLEAN ALL ADJACENT STRUCTURES AND IMPROVEMENTS TO REMOVE ALL DUST AND DEBRIS WHICH THE DEMOLITION OPERATIONS CAUSE. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION AT CONTRACTOR'S SOLE COST.
16. PAVEMENT MUST BE SAW CUT IN STRAIGHT LINES. ALL DEBRIS FROM REMOVAL OPERATIONS MUST BE REMOVED FROM THE SITE AT THE TIME OF EXCAVATION. STOCKPILING OF DEBRIS OUTSIDE OF APPROVED AREAS WILL NOT BE PERMITTED, INCLUDING BUT NOT LIMITED TO, THE PUBLIC RIGHT-OF-WAY.
17. THE CONTRACTOR MUST MAINTAIN A RECORD SET OF PLANS WHICH INDICATES THE LOCATION OF EXISTING UTILITIES THAT ARE CAPPED, ABANDONED IN PLACE, OR RELOCATED DUE TO DEMOLITION ACTIVITIES. THIS RECORD DOCUMENT MUST BE PREPARED IN A NEAT AND WORKMAN-LIKE MANNER AND TURNED OVER TO THE OWNER/DEVELOPER UPON COMPLETION OF THE WORK, ALL OF WHICH IS AT THE CONTRACTOR'S SOLE COST.
18. THE CONTRACTOR MUST EMPTY, CLEAN AND REMOVE FROM THE SITE ALL UNDERGROUND STORAGE TANKS, IF ENCOUNTERED, IN ACCORDANCE WITH FEDERAL, STATE, COUNTY AND LOCAL REQUIREMENTS, PRIOR TO CONTINUING CONSTRUCTION IN THE AREA AROUND THE TANK WHICH EMPTYING, CLEANING AND REMOVAL ARE AT THE CONTRACTOR'S SOLE COST.

SOIL EROSION & SEDIMENT CONTROL PLAN NOTES

(Rev. 12/2024)

1. EROSION CONTROL MEASURES MUST CONFORM TO THE MASSACHUSETTS GUIDELINES FOR EROSION AND SEDIMENT CONTROL UNLESS OTHERWISE NOTED, OR UNLESS ENGINEER CLEARLY AND SPECIFICALLY, IN WRITING, DIRECTS OTHERWISE. INSTALLATION OF EROSION CONTROL, CLEARING, AND SITE WORK MUST BE PERFORMED EXACTLY AS INDICATED IN THE EROSION CONTROL CONSTRUCTION NOTES.
2. THE FOLLOWING EROSION CONTROL MEASURES ARE PROPOSED FOR THIS SITE:
   a. STABILIZE CONSTRUCTION ENTRANCE/ EXIT - A TEMPORARY STONE CONSTRUCTION ACCESS IS TO BE INSTALLED AT THE DESIGNATED LOCATION AS SHOWN ON THE PLAN. THIS AREA MUST BE GRADED SO THAT RUNOFF WATER WILL BE RETAINED ON-SITE.
   b. SILT FENCE - INSTALL SILT FENCE(S) AND/OR SILT SOCK(S) AROUND ALL OF THE DOWNSLOPE PERIMETERS OF THE SITE, TEMPORARY FILL AREAS, AND SOIL STOCKPILES.
   c. INLET PROTECTION - IN ORDER TO REDUCE THE POTENTIAL FOR SEDIMENT TO ENTER THE STORMWATER SYSTEM, THE CONTRACTOR SHALL INSTALL INLET PROTECTION AROUND EACH INLET AS DRAINAGE STRUCTURES ARE INSTALLED. INSTALL TEMPORARY INLET PROTECTION ON INLETS DOWNSLOPE FROM DISTURBANCE, WHICH MAY BE BEYOND THE LIMITS OF DISTURBED AREA.
   d. TREE PROTECTION FENCE – THROUGH THE USE OF TREE PROTECTION FENCE, THE CONTRACTOR MUST MARK ALL EXISTING TREES AND SHRUBS WITHIN AND AROUND THE WORK AREA THAT ARE TO REMAIN. THE CONTRACTOR SHALL REFER TO THE TREE PROTECTION FENCE DETAILS HEREIN.
   e. SOIL STOCKPILES – STOCKPILES SHALL BE LIMITED TO 35' MAX. HEIGHT AND SHOULD BE REMOVED OR UTILIZED FOR SITE CONSTRUCTION AS SOON AS PRACTICABLE.
   f. DUST CONTROL –SHOULD EXCESSIVE DUST BE GENERATED, THE CONTRACTOR MUST PROMPTLY USE AND APPLY WATER TO BARE SOIL SURFACES TO ELIMINATE, OR IF NOT POSSIBLE, MINIMIZE, BLOWING DUST.
   g. DEWATERING – THE CONTRACTOR MUST PERFORM DEWATERING IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS AND APPROVED PERMITS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND PAY THE COSTS ASSOCIATED WITH ANY AND ALL NECESSARY DISCHARGE PERMITS ASSOCIATED WITH SAME.
   h. CONSTRUCTION WASTE MATERIAL STORAGE – THE CONTRACTOR MUST LOCATE CONSTRUCTION WASTE MATERIAL STORAGE AREAS TO MINIMIZE EXPOSURE TO STORMWATER. CONTRACTOR MUST IMMEDIATELY PLACE CONSTRUCTION WASTE IN ON-SITE STORAGE CONTAINERS UNTIL THAT CONSTRUCTION WASTE IS READY FOR OFF-SITE DISPOSAL. CONTRACTOR MUST MAINTAIN SPILL PREVENTION & RESPONSE EQUIPMENT AND MAKE SAME CONTINUOUSLY AVAILABLE ON-SITE FOR USE BY CONTRACTOR'S EMPLOYEES WHO MUST BE PROPERLY TRAINED IN THE APPLICATION OF SPILL PREVENTION & RESPONSE PROCEDURES.
3. THE CONTRACTOR MUST INSPECT EROSION CONTROL MEASURES WEEKLY. CONTRACTOR MUST IMMEDIATELY CLEAR ANY SILT GREATER THAN 6" BEHIND THE FILTER FABRIC AND/OR SILT SOCK BARRIERS AND EXCAVATE AND REMOVE ANY SILT FROM DROP INLET PROTECTION.
4. THE TERM 'PERMANENT STABILIZATION' USED THROUGHOUT THIS SEQUENCE IS MEANT TO DESCRIBE THE PROPER PLACING, GRADING, CONSTRUCTING, REINFORCING, LINING, AND COVERING OF SOIL, ROCK, OR EARTH TO ENSURE THEIR PERMANENT RESISTANCE TO EROSION, SLIDING OR OTHER MOVEMENT. FOR AN EARTH DISTURBANCE TO BE PERMANENTLY STABILIZED, THE DISTURBED AREA SHALL BE COVERED WITH ONE OF THE FOLLOWING: A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION; OR AN ACCEPTABLE BMP THAT PERMANENTLY MINIMIZES ACCELERATED EROSION AND SEDIMENTATION.
5. BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE CONSERVATION DISTRICT. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
6. THE CONTRACTOR MUST APPLY TEMPORARY SEED AND MULCH TO ALL DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINISHED GRADE AND VEGETATED WITHIN 7 DAYS. WHEN AREAS ARE DISTURBED AFTER THE GROWING SEASON, THE CONTRACTOR MUST STABILIZE SAME WITH GEOTEXTILE FABRIC AND MAINTAIN SAME IN STRICT ACCORDANCE WITH BEST MANAGEMENT PRACTICES.
7. AS SOON AS SLOPES, CHANNELS, DITCHES, AND OTHER DISTURBED AREAS REACH FINAL GRADE, THEY MUST BE STABILIZED. WHEN FINAL GRADE IS ACHIEVED DURING NON-GERMINATING MONTHS, THE AREA SHOULD BE MULCHED UNTIL THE BEGINNING OF THE NEXT PLANTING SEASON. AS DISTURBED AREAS WITHIN A PROJECT APPROACH FINAL GRADE, PREPARATIONS SHOULD BE MADE FOR SEEDING AND MULCHING TO BEGIN (I.E., ANTICIPATE THE COMPLETION DATE AND SCHEDULE THE SEEDER). IN NO CASE SHOULD AN AREA EXCEEDING 15,000 SQUARE FEET, WHICH IS TO BE STABILIZED BY VEGETATION, REACH FINAL GRADE WITHOUT BEING SEEDED AND MULCHED. WAITING UNTIL EARTHMOVING IS COMPLETED BEFORE MAKING PREPARATIONS FOR SEEDING AND MULCHING IS NOT ACCEPTABLE. SEEDING AND MULCHING REQUIREMENTS ARE SPECIFIED HEREIN.
8. ONCE AREAS HAVE REACHED PERMANENT STABILIZATION AND PRIOR TO DEMOBILIZATION, THE CONTRACTOR MUST REMOVE ALL TEMPORARY EROSION CONTROL MEASURES, AND ANY ACCUMULATED SILT OR DEBRIS.
9. THE CONTRACTOR MUST CLEAN EXISTING AND PROPOSED DRAINAGE STRUCTURES AND INTERCONNECTING PIPES ON OR OFF-SITE AS THE JURISDICTIONAL AGENCY REQUIRES, BOTH AT THE TIME OF SITE STABILIZATION AND AT END OF PROJECT.
10. A SITE CONSTRUCTION SEQUENCE IS PROVIDED AS A GUIDE FOR THE CONTRACTOR DURING CONSTRUCTION. PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR MUST REVIEW THE SEQUENCE, AND ANY REQUESTED CHANGES AND THOSE REQUESTED CHANGES MUST BE REVIEWED AND APPROVED BY THE JURISDICTIONAL AGENCY.
11. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN AND CONTRACTOR MUST REFER TO THEM. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
12. INSTALLATION OF EROSION CONTROL DEVICES MUST BE IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATIONS.
13. CONTRACTOR MUST INSTALL ADDITIONAL EROSION CONTROL MEASURES IF ENGINEER OR JURISDICTIONAL AGENCY SO REQUIRES, TO PREVENT THE DISCHARGE OF SEDIMENT LADEN RUNOFF FROM EXITING THE SITE.
14. THE CONTRACTOR IS RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL EROSION CONTROL MEASURES ON THE SITE UNTIL PERMANENT STABILIZATION IS ESTABLISHED UNLESS INDICATED OTHERWISE IN LOCAL, STATE AND/OR FEDERAL PROJECT APPROVALS. THE COST OF INSTALLING AND MAINTAINING THE EROSION CONTROL MEASURES MUST BE INCLUDED IN THE BID PRICE FOR THE SITE WORK AND THE CONTRACTOR IS RESPONSIBLE FOR ALL SUCH COSTS.
29. SITE DISTURBANCE EXCEEDS ONE ACRE. A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED AND THE OWNER AND/OR OPERATOR ARE REQUIRED TO OBTAIN A STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY GENERAL PERMIT FROM THE EPA UNDER THE NPDES PROGRAM.

SITE LAYOUT NOTES

(Rev. 1/2020)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. PRIOR TO THE COMMENCEMENT OF GENERAL CONSTRUCTION, THE CONTRACTOR MUST INSTALL SOIL EROSION CONTROL AND ANY STORMWATER POLLUTION PREVENTION PLAN (SWPPP) MEASURES NECESSARY, AS INDICATED ON THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN AND IN ACCORDANCE WITH APPLICABLE AND/OR APPROPRIATE AGENCIES' GUIDELINES TO PREVENT SEDIMENT AND/OR LOOSE DEBRIS FROM WASHING ONTO ADJACENT PROPERTIES OR THE RIGHT OF WAY.
3. ALL DIRECTIONAL/TRAFFIC SIGNING AND PAVEMENT STRIPING MUST CONFORM TO THE LATEST STANDARDS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ANY APPLICABLE STATE OR LOCALLY APPROVED SUPPLEMENTS, GUIDELINES, RULES, REGULATIONS, STANDARDS AND THE LIKE.
4. THE LOCATIONS OF PROPOSED UTILITY POLES AND TRAFFIC SIGNS SHOWN ON THE PLANS ARE SCHEMATIC AND PRELIMINARY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD-VERIFYING THEIR LOCATION. THE CONTRACTOR MUST COORDINATE THE RELOCATION OF TRAFFIC SIGNS WITH THE ENTITY WITH JURISDICTION OVER THE PROJECT.
5. ALL DIMENSIONS SHOWN ARE TO BOTTOM FACE OF CURB, EDGE OF PAVEMENT, OR EDGE OF BUILDING, EXCEPT WHEN DIMENSION IS TO A PROPERTY LINE, STAKE OUT OF LOCATIONS OF INLETS, LIGHT POLES, ETC. MUST BE PERFORMED IN STRICT ACCORDANCE WITH THE DETAILS, UNLESS NOTED CLEARLY OTHERWISE.

GRADING NOTES

(Rev. 1/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. SITE GRADING MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AS REFERENCED IN THIS PLAN SET. IF NO GEOTECHNICAL REPORT HAS BEEN REFERENCED, THE CONTRACTOR MUST HAVE A GEOTECHNICAL ENGINEER PROVIDE WRITTEN SPECIFICATIONS AND RECOMMENDATIONS PRIOR TO THE CONTRACTOR COMMENCING THE GRADING WORK. THE CONTRACTOR MUST FOLLOW THE REQUIREMENTS OF ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS, WHICH HAVE JURISDICTION OVER THIS PROJECT.
3. THE CONTRACTOR IS REQUIRED TO SECURE ALL NECESSARY AND/OR REQUIRED PERMITS AND APPROVALS FOR ALL OFF-SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. THE CONTRACTOR MUST SUPPLY A COPY OF APPROVALS TO THE PROFESSIONAL OF RECORD, BOHLER AND THE OWNER PRIOR TO THE CONTRACTOR COMMENCING ANY WORK.
4. THE CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFYING EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION. SHOULD DISCREPANCIES BETWEEN THE PLANS AND INFORMATION OBTAINED THROUGH FIELD VERIFICATIONS BE IDENTIFIED OR EXIST, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING.
5. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REPLACING ALL UNSUITABLE MATERIALS WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. THE CONTRACTOR MUST COMPACT ALL EXCAVATED OR FILLED AREAS IN STRICT ACCORDANCE WITH THE GEOTECHNICAL REPORT'S GUIDANCE. MOISTURE CONTENT AT TIME OF PLACEMENT MUST BE SUBMITTED IN A COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED. THIS REPORT MUST VERIFY THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES WHICH ARE IN EFFECT AND WHICH ARE APPLICABLE TO THE PROJECT. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT MUST BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE BY OWNER/DEVELOPER, OR OWNER/DEVELOPER'S REPRESENTATIVE, SUBBASE MUST BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL, COMPACTED AS THE GEOTECHNICAL REPORT DIRECTS. EARTHWORK ACTIVITIES INCLUDING, BUT NOT LIMITED TO, EXCAVATION, BACKFILL, AND COMPACTING MUST COMPLY WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES. EARTHWORK ACTIVITIES MUST COMPLY WITH THE STANDARD STATE DOT SPECIFICATIONS FOR ROADWAY CONSTRUCTION (LATEST EDITION) AND ANY AMENDMENTS OR REVISIONS THERETO.
6. IN THE EVENT OF A DISCREPANCY(IES) AND/OR A CONFLICT(S) BETWEEN PLANS, OR RELATIVE TO OTHER PLANS, THE GRADING PLAN TAKES PRECEDENCE AND CONTROLS. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY DISCREPANCY(IES) AND/OR CONFLICT(S).
7. THE CONTRACTOR IS RESPONSIBLE TO IMPORT FILL OR EXPORT EXCESS MATERIAL AS NECESSARY TO CONFORM TO THE PROPOSED GRADING, AND TO BACKFILL EXCAVATIONS FOR THE INSTALLATION OF UNDERGROUND IMPROVEMENTS.

ACCESSIBILITY DESIGN GUIDELINES

(Rev. 1/2023)

1. ALL ACCESSIBLE (A.K.A. ADA) COMPONENTS AND ACCESSIBLE ROUTES MUST BE CONSTRUCTED TO MEET, AT A MINIMUM, THE MORE STRINGENT OF: (A) THE REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT" (ADA) CODE (42 U.S.C. § 12101 ET SEQ. AND 42 U.S.C. § 4151 ET SEQ.); AND (B) ANY APPLICABLE LOCAL AND STATE GUIDELINES, AND ANY AND ALL AMENDMENTS TO BOTH, WHICH ARE IN EFFECT WHEN THESE PLANS WERE COMPLETED.
2. THE CONTRACTOR MUST REVIEW ALL DOCUMENTS REFERENCED IN THESE NOTES FOR ACCURACY, COMPLIANCE AND CONSISTENCY WITH INDUSTRY GUIDELINES.
3. THE CONTRACTOR MUST EXERCISE APPROPRIATE CARE AND PRECISION IN CONSTRUCTION OF ACCESSIBLE (ADA) COMPONENTS AND ACCESSIBLE ROUTES FOR THE SITE. FINISHED SURFACES ALONG THE ACCESSIBLE ROUTE OF TRAVEL FROM PARKING SPACES, PUBLIC TRANSPORTATION, PEDESTRIAN ACCESS, AND INTER-BUILDING ACCESS, TO POINTS OF ACCESSIBLE BUILDING ENTRANCE/EXIT, MUST COMPLY WITH THE ACCESSIBLE GUIDELINES AND REQUIREMENTS WHICH INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
   A. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SLOPES MUST NOT EXCEED 1:50 (2.0%) IN ANY DIRECTION.
   B. PATH OF TRAVEL ALONG ACCESSIBLE ROUTE MUST PROVIDE A 36-INCHES MINIMUM WIDTH (48-INCHES PREFERRED), OR AS SPECIFIED BY THE GOVERNING AGENCY. UNOBSTRUCTED WIDTH OF TRAVEL (CAR OVERHANGS AND/OR HANDRAILS) MUST NOT REDUCE THIS MINIMUM WIDTH. THE SLOPE MUST NOT EXCEED 1:20 (5.0%) IN THE DIRECTION OF TRAVEL AND MUST NOT EXCEED 1:50 (2.0%) IN CROSS SLOPE. WHERE ACCESSIBLE PATH OF TRAVEL IS GREATER THAN 1:20 (5.0%), AN ACCESSIBLE RAMP MUST BE PROVIDED. ALONG THE ACCESSIBLE PATH OF TRAVEL, OPENINGS MUST NOT EXCEED 1/2-INCH IN WIDTH. VERTICAL CHANGES OF UP TO 1/2-INCH ARE PERMITTED ONLY IF THEY INCLUDES A 1/4-INCH BEVEL AT A SLOPE NOT STEEPER THAN 1:2. NO VERTICAL CHANGES OVER 1/4-INCH ARE PERMITTED.
   C. ACCESSIBLE RAMPS MUST NOT EXCEED A SLOPE OF 1:12 (8.3%) AND A RISE OF 30-INCHES. LEVEL LANDINGS MUST BE PROVIDED AT EACH END OF ACCESSIBLE RAMPS. LANDING MUST PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES, AND MUST NOT EXCEED 1:50 (2.0%) SLOPE IN ANY DIRECTION. RAMPS THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS MUST HAVE A CLEAR LANDING OF A MINIMUM OF 60-INCHES BY 60-INCHES. HAND RAILS ON BOTH SIDES OF THE RAMP MUST BE PROVIDED ON AN ACCESSIBLE RAMP WITH A RISE GREATER THAN 6-INCHES.
   D. ACCESSIBLE CURB RAMPS MUST NOT EXCEED A SLOPE OF 1:12 (8.3%). WHERE FLARED SIDES ARE PROVIDED, THEY MUST NOT EXCEED 1:10 (10%) SLOPE. LEVEL LANDING MUST BE PROVIDED AT RAMPS TOP AT A MINIMUM OF 36-INCHES LONG (48-INCHES PREFERRED). IN ALTERATIONS, WHEN THERE IS NO LANDING AT THE TOP, FLARE SIDES SLOPES MUST NOT EXCEED A SLOPE OF 1:12 (8.3%).
   E. DOORWAY LANDINGS AREAS MUST BE PROVIDED ON THE EXTERIOR SIDE OF ANY DOOR LEADING TO AN ACCESSIBLE PATH OF TRAVEL. THIS LANDING MUST BE SLOPED AWAY FROM THE DOOR NO MORE THAN 1:50 (2.0%) FOR POSITIVE DRAINAGE. THIS LANDING AREA MUST BE NO FEWER THAN 60-INCHES (5 FEET) LONG, EXCEPT WHERE OTHERWISE CLEARLY PERMITTED BY ACCESSIBLE STANDARDS FOR ALTERNATIVE DOORWAY OPENING CONDITIONS. (SEE ICC/ANSI A117.1-2009 AND OTHER REFERENCES INCORPORATED BY CODE).
   F. WHEN THE PROPOSED CONSTRUCTION INVOLVES RECONSTRUCTION, MODIFICATION, REVISION OR EXTENSION OF OR TO ACCESSIBLE COMPONENTS FROM EXISTING DOORWAYS OR SURFACES, THE CONTRACTOR MUST VERIFY ALL EXISTING ELEVATIONS SHOWN ON THE PLAN. NOTE THAT TABLE 405.2 OF THE DEPARTMENT OF JUSTICE'S ADA STANDARDS FOR ACCESSIBLE DESIGN ALLOWS FOR STEEPER RAMP SLOPES, IN RARE CIRCUMSTANCES. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY DISCREPANCIES AND/OR FIELD CONDITIONS THAT DIFFER IN ANY WAY OR IN ANY RESPECT FROM WHAT IS SHOWN ON THE PLANS BEFORE COMMENCING ANY WORK. CONSTRUCTED IMPROVEMENTS MUST FALL WITHIN THE MAXIMUM AND MINIMUM LIMITATIONS IMPOSED BY THE BARRIER FREE REGULATIONS AND THE ACCESSIBLE GUIDELINES.
   G. THE CONTRACTOR MUST VERIFY ALL OF THE SLOPES OF THE CONTRACTOR'S FORMS PRIOR TO POURING CONCRETE. IF ANY NON-CONFORMANCE EXISTS OR IS OBSERVED OR DISCOVERED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, PRIOR TO POURING CONCRETE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL COSTS TO REMOVE, REPAIR AND/OR REPLACE NON-CONFORMING CONCRETE AND/OR PAVEMENT SURFACES.
4. IT IS STRONGLY RECOMMENDED THAT THE CONTRACTOR REVIEW THE INTENDED CONSTRUCTION TO ENSURE SAME IS CONSISTENT WITH THE LOCAL BUILDING CODE PRIOR TO COMMENCING CONSTRUCTION.

DRAINAGE AND UTILITY NOTES

(Rev. 3/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. LOCATIONS OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE, AND THE CONTRACTOR MUST INDEPENDENTLY VERIFY AND CONFIRM THOSE LOCATIONS AND SERVICES WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCING ANY CONSTRUCTION OR EXCAVATION. THE CONTRACTOR MUST INDEPENDENTLY VERIFY AND CONFIRM ALL SANITARY CONNECTION POINTS AND ALL OTHER UTILITY SERVICE CONNECTION POINTS IN THE FIELD, PRIOR TO COMMENCING ANY CONSTRUCTION. THE CONTRACTOR MUST REPORT ALL DISCREPANCIES, ERRORS AND OMISSIONS IN WRITING, TO THE PROFESSIONAL OF RECORD AND BOHLER.
3. THE CONTRACTOR MUST VERTICALLY AND HORIZONTALLY LOCATE ALL UTILITIES AND SERVICES INCLUDING, BUT NOT LIMITED TO, GAS, WATER, ELECTRIC, SANITARY AND STORM, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE OR WORK SPACE, WHICHEVER IS GREATER. THE CONTRACTOR MUST USE, REFER TO, AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL OF THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO ANY EXISTING UTILITIES WHICH OCCUR DURING CONSTRUCTION, AT NO COST TO THE OWNER AND AT CONTRACTOR'S SOLE COST AND EXPENSE. THE CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH DAMAGE TO ANY EXISTING UTILITIES WHICH OCCURS DURING CONSTRUCTION.
4. THE CONTRACTOR MUST FIELD VERIFY THE PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES BY USING A TEST PIT TO CONFIRM EXACT DEPTH, PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. STORMWATER ROOF DRAIN LOCATIONS ARE BASED ON ARCHITECTURAL PLANS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS, SIZE, AND MATERIAL OF SAME BASED UPON FINAL ARCHITECTURAL PLANS.
6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING SITE PLAN DOCUMENTS AND ARCHITECTURAL PLANS FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS; GREASE TRAP REQUIREMENTS; AND DETAILS, DOOR ACCESS, AND EXTERIOR GRADING. THE ARCHITECT WILL DETERMINE THE UTILITY SERVICE SIZES. THE CONTRACTOR MUST COORDINATE INSTALLATION OF UTILITY SERVICES WITH THE INDIVIDUAL COMPANIES TO AVOID CONFLICTS AND TO ENSURE THAT PROPER DEPTHS ARE ACHIEVED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT INSTALLATION OF ALL IMPROVEMENTS COMPLIES WITH ALL UTILITY REQUIREMENTS OF THE APPLICABLE JURISDICTION AND REGULATORY AGENCIES AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES AND, FURTHER, IS RESPONSIBLE FOR COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE A CONFLICT(S) EXISTS BETWEEN THESE DOCUMENTS AND THE ARCHITECTURAL PLANS, OR WHERE ARCHITECTURAL PLAN UTILITY CONNECTION POINTS DIFFER, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, AND PRIOR TO CONSTRUCTION, MUST RESOLVE SAME.
7. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION MUST BE EXACTLY AS PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND THE CONTRACTOR MUST COORDINATE SAME WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS. WHEN THE PROJECT DOES NOT HAVE GEOTECHNICAL RECOMMENDATIONS, FILL AND COMPACTION MUST COMPLY WITH APPLICABLE REQUIREMENTS AND SPECIFICATIONS. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR DESIGN OF TRENCH BACKFILL OR FOR COMPACTION REQUIREMENTS
8. DURING THE INSTALLATION OF SANITARY, STORM, AND ALL UTILITIES, THE CONTRACTOR MUST MAINTAIN A CONTEMPORANEOUS AND THOROUGH RECORD OF CONSTRUCTION TO IDENTIFY THE AS-INSTALLED LOCATIONS OF ALL UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR MUST CAREFULLY NOTE ANY INSTALLATIONS THAT DEVIATE, IN ANY RESPECT, FROM THE INFORMATION CONTAINED IN THESE PLANS. THIS RECORD MUST BE KEPT ON A CLEAN COPY OF THE APPROPRIATE PLAN(S), WHICH THE CONTRACTOR MUST PROMPTLY PROVIDE TO THE OWNER IMMEDIATELY UPON THE COMPLETION OF WORK.
9. THE CONTRACTOR MUST ENSURE THAT ALL UTILITY TRENCHES LOCATED IN EXISTING PAVED ROADWAYS INCLUDING SANITARY, WATER AND STORM SYSTEMS, ARE REPAIRED IN ACCORDANCE WITH REFERENCED MUNICIPAL, COUNTY AND OR STATE DOT DETAILS AS APPLICABLE. THE CONTRACTOR MUST COORDINATE INSPECTION AND APPROVAL OF COMPLETED WORK WITH THE AGENCY WITH JURISDICTION OVER SAME.
10. FINAL LOCATIONS OF PROPOSED UTILITY POLES, AND/ OR POLES TO BE RELOCATED ARE AT THE SOLE DISCRETION OF THE RESPECTIVE UTILITY COMPANY, REGARDLESS OF WHAT THIS PLAN DEPICTS.
11. WATER SERVICE MATERIALS, BURIAL DEPTH, AND COVER REQUIREMENTS MUST BE SPECIFIED BY THE LOCAL UTILITY COMPANY. THE CONTRACTOR MUST CONTACT THE APPLICABLE MUNICIPALITY TO CONFIRM THE PROPER WATER METER AND VAULT, PRIOR TO COMMENCING CONSTRUCTION.
12. THE TOPS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEANOUT MUST BE ADJUSTED, AS NECESSARY, TO MATCH PROPOSED FINISHED GRADES WITH NO TRIPPING OR SAFETY HAZARD IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.

OUTSIDE SOURCE NOTES

(Rev. 11/2023)

ANY INFORMATION, DRAWINGS, DATA, PLANS, SPECIFICATIONS, MATERIALS, FIGURES, DOCUMENTATION, REPORTS, AND THE LIKE WHICH IS INDICATED TO HAVE BEEN PREPARED "BY OTHERS" (HEREIN, "BY OTHERS REPORTS, DOCUMENTS AND DETAILS") HAS BEEN OR WILL BE CREATED, DEVELOPED, PREPARED, PERFORMED, AND ANALYZED BY AN ENTITY OR PARTY OTHER THAN THE "BOHLER" ENTITY INVOLVED WITH THIS PROJECT. THE "BOHLER" ENTITY IS NOT IN ANY WAY RESPONSIBLE FOR THE BY OTHERS REPORTS, DOCUMENTS AND DETAILS EVEN IF/WHERE INCLUDED IN THE "BOHLER" ENTITY'S PLANS, REPORTS, ETC. SAME HAS BEEN INCLUDED ON THIS PLAN FOR THE CONVENIENCE, ONLY, OF THE PROJECT OWNER, DEVELOPERS, CONTRACTORS AND CONSULTANTS AND IN ORDER TO COORDINATE THE "BOHLER" ENTITY'S DESIGN WITH THAT OF "OTHERS". THE "BOHLER" ENTITY HAS ASSUMED, FOR PURPOSES OF THIS PLAN, THAT THE BY OTHERS REPORTS, DOCUMENTS AND DETAILS ARE CURRENT AND, IF APPLICABLE, PREPARED IN STRICT ACCORDANCE WITH ALL APPLICABLE COUNTY, STATE, FEDERAL AND OTHER STATUTES, LAWS, RULES, REGULATIONS, ORDINANCES AND THE LIKE. THE "BOHLER" ENTITY SPECIFICALLY DISCLAIMS ANY AND ALL LIABILITY AND RESPONSIBILITY FOR BY OTHERS REPORTS, DOCUMENTS AND DETAILS. THE ENTITY OR PERSON WHO CREATED THE INFORMATION CONTAINED IN THE BY OTHERS REPORTS, DOCUMENTS AND DETAILS (EXCLUDING INFORMATION AND/OR DETAILS SOLELY SUPPLIED BY A JURISDICTION AND/OR GOVERNING BODY) AGREES BY PARTICIPATING IN THIS PROJECT, RECEIVING, REVIEWING, USING AND/OR RELYING UPON THIS DOCUMENT, AND/OR BY AGREEING TO THE PROJECT OWNER/DEVELOPER'S CONTRACT DOCUMENTS, TO DEFEND, INDEMNIFY, PROTECT AND HOLD HARMLESS THE "BOHLER" ENTITY THAT PREPARED THIS DOCUMENT AND ITS EMPLOYEES FOR ANY AND ALL DAMAGES, INJURIES, COSTS, EXPENSES AND THE LIKE, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, WHICH THE "BOHLER" ENTITY AND/OR ITS EMPLOYEES SUFFER OR INCUR AS A RESULT OF INCLUDING ANY BY OTHERS REPORTS, DOCUMENTS AND DETAILS IN AND ON OR IN THIS PLAN. ANYONE OR ANY ENTITY WHO RECEIVED, RELIES UPON AND/OR USES THIS PLAN, AGREES TO HOLD THE "BOHLER" ENTITY AND ITS EMPLOYEES HARMLESS FROM ANY CLAIMS, DAMAGES, INJURIES, COSTS AND EXPENSES, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, FOR ANY DAMAGES, INJURIES, COSTS, EXPENSES AND THE LIKE, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, WHICH IT OR THEY SUFFER OR INCUR AS A RESULT OF THE ANY BY OTHERS REPORTS, DOCUMENTS AND DETAILS INCORPORATED IN THE PLAN, AND EXPRESSLY CONFIRMS THAT BY RECEIVING, RELYING UPON AND/OR USING SAME, THE "BOHLER" ENTITY SHALL HAVE NO LIABILITY RELATED TO SAME. WITH RESPECT TO ALL BY OTHERS REPORTS, DOCUMENTS AND DETAILS, CONTRACTOR MUST VERIFY ALL INFORMATION CONTAINED IN THE SCOPE OF ALL PARTIES INVOLVED IN PREPARING THE BY OTHERS REPORTS, DOCUMENTS AND DETAILS PRIOR TO COMMENCING ANY CONSTRUCTION AND MUST VERIFY THAT THE INFORMATION IS THE LATEST, THE MOST RECENT AND THE MOST CURRENT REPORT, DOCUMENT AND DETAIL. REFERENCES ON THIS PLAN TO INFORMATION PREPARED OR CONTAINED IN BY OTHERS REPORTS, DOCUMENTS AND DETAILS DEPICTING AN OFF-SITE AREA WHERE NO DETAIL IS INCLUDED IS A REFERENCE TO AN AREA, DETAIL, SPECIFICATION OR DESIGN THAT HAS NOT BEEN DESIGNED OR CONSTRUCTED BY THE "BOHLER" ENTITY AND REGARDING WHICH THE "BOHLER" ENTITY HAS NO CONTROL OVER OR LIABILITY REGARDING, BUT IS ADDED TO THIS PLAN FOR INFORMATIONAL PURPOSES, ONLY.

STANDARD ABBREVIATIONS

FOR ENTIRE PLAN SET

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AC	ACRE / ACRES
AD	AREA DRAIN
ADA	ACCESSIBLE / AMERICANS WITH DISABILITIES ACT
AG	ABOVE GROUND
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASPH	ASPHALT
ASSF	AREA SUBJECT TO STORMWATER FLOWAGE
ASSOC	ASSOCIATION
BC	BOTTOM OF CURB
BF	BASEMENT FLOOR
BIO	BIOGARDEN
BIT	BITUMINOUS
BK	BLOCK
BL	BASELINE
BLDG	BUILDING
BM	BENCH MARK
BRL	BUILDING RESTRICTION LINE
BVW	BORDERING VEGETATIVE WETLAND
CB	CATCH BASIN
CF	CUBIC FEET
CI	CURB INLET
CIT	CHANGE IN TYPE
CL	CENTER LINE
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CONC	CONCRETE
CONN	CONNECTION
COORD	COORDINATE
CPP	CORRUGATED PLASTIC PIPE
CY	CUBIC YARD
DEC	DECORATIVE
DEP	DEPARTMENT OF ENVIRONMENTAL PROTECTION
DET	DETENTION
DIA	DIAMETER
DMH	DRAINAGE MANHOLE
DOM	DOMESTIC
DOT	DEPARTMENT OF TRANSPORTATION
DP	DESIGN POINT
DWL	DASHED WHITE LINE
DYL	DOUBLE YELLOW LINE
EG	EXISTING GRADE
ELEC	ELECTRIC
ELEV	ELEVATION
EOR	ENGINEER OF RECORD
EP / EOP	EDGE OF PAVEMENT
ES / EOS	EDGE OF SHOULDER
EW	END WALL
EX	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
FES	FLARED END SECTION
FF	FINISH / FIRST FLOOR
FFE	FINISH / FIRST FLOOR ELEVATION
FG	FINISH GRADE
FH	FIRE HYDRANT
FM	FORCE MAIN
FO	FIBER OPTIC
G	GRADE
GC	GENERAL CONTRACTOR
GEO	GEOTECH/GEOTECHNICAL
GF / GFE	GARAGE FLOOR ELEVATION (AT DOOR)
GFA	GROSS FLOOR AREA
GH	GRADE HIGH (WALL)
GL	GRADE LOW (WALL)
GRT	GRATE
GT	GREASE TRAP
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HOR	HORIZONTAL
HP	HIGH POINT
HW	HEADWALL
ICS	INLET CONTROL STRUCTURE
INF	INFILTRATION
INT	INTERSECTION
INV	INVERT
LF	LINEAR FOOT
LOC	LIMIT OF CLEARING
LOD	LIMIT OF DISTURBANCE
LOS	LINE OF SIGHT
LOW	LIMIT OF WORK
LP	LOW POINT
LS	LANDSCAPE
LSA	LANDSCAPE AREA
MAX	MAXIMUM
ME	MATCH EXISTING
MEP	MECHANICAL, ELECTRICAL, AND PLUMBING
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
NOAA	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NRCS	NATIONAL RESOURCE CONSERVATION SERVICE
O&M	OPERATIONS AND MAINTENANCE
OC	ON CENTER
OCS	OUTLET CONTROL STRUCTURE
OGS	OIL AND GRIT SEPARATOR
ORD	ORDINANCE
PA / POA	POINT OF ANALYSIS
PC	POINT OF CURVATURE
PCCR	POINT OF CURVATURE, CURB RETURN
PERF	PERFORATED
PG	PROPOSED GRADE
PI	POINT OF INTERSECTION
POG	POINT OF GRADE
PP	POLYPROPYLENE PIPE
PROP	PROPOSED
PT	POINT OF TANGENCY
PTCR	POINT OF TANGENCY, CURB RETURN
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS / RADII
R/W	RIGHT-OF-WAY / RIGHTS-OF-WAY
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REGS	REGULATIONS
RELO	TO BE RELOCATED
REQ	REQUIRED
RET	RETENTION
RET WALL	RETAINING WALL
RETO	TO BE RETURNED TO OWNER
RG	RAIN GARDEN
S	SLOPE
SAN	SANITARY SEWER
SESC	SOIL EROSION AND SEDIMENT CONTROL
SF	SQUARE FEET
SHLO	STATE HIGHWAY LAYOUT
SMH	SANITARY MANHOLE
STA	STATION
STM	STORM WATER / STORM SEWER
SWL	SINGLE/SOLID WHITE LINE
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
TBA	TO BE ABANDONED
TBR	TO BE REMOVED
TBV	TO BE VACATED
TC	TOP OF CURB
Tc	TIME OF CONCENTRATION
TD	TRENCH DRAIN
TELE	TELECOMMUNICATIONS / TELEDATA
TPF	TREE PROTECTION FENCE
TR	TO REMAIN
TRANS	TRANSITION
TYP	TYPICAL
UG	UNDERGROUND
UP	UTILITY POLE
USGS	UNITED STATES GEOLOGICAL SURVEY
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	WIDE / WIDTH
W/L	WATER LINE
WM	WATER METER
WQU	WATER QUALITY UNIT
YD	YARD DRAIN
#	NUMBER
#:#	SLOPE EXPRESSED IN HORIZONTAL:VERTICAL IN FEET
±	PLUS OR MINUS
°	DEGREE
Ø	DIAMETER
'	FEET/FOOT
"	INCHES

STANDARD DRAWING LEGEND

FOR ENTIRE PLAN SET

LIMIT OF WORK — LOW — LOW —

LIMIT OF DISTURBANCE — LOD — LOD —

SAWCUT LINE

EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
	ONSITE PROPERTY LINE / R.O.W. LINE	
	NEIGHBORING PROPERTY LINE / INTERIOR PARCEL LINE	
	EASEMENT LINE	
	SETBACK LINE	
	CONCRETE CURB & GUTTER	CURB AND GUTTER SPILL TRANSITION DEPRESSED CURB AND GUTTER
	UTILITY POLE WITH LIGHT	
	POLE LIGHT	
	TRAFFIC LIGHT	
	UTILITY POLE	
	TYPICAL LIGHT	
	ACORN LIGHT	
	TYPICAL SIGN	
X	PARKING COUNTS	X
170 169	CONTOUR LINE	190 187
TC 516.4 OR 516.4	SPOT ELEVATIONS	FF 517.00 TC 516.00 BC 515.55 ME|G 516.00
SAN #	SANITARY LABEL	SAN-100
X #	STORM LABEL	A-100
SL	SANITARY SEWER LATERAL	SL
W	UNDERGROUND WATER LINE	W
E	UNDERGROUND ELECTRIC LINE	E
G	UNDERGROUND GAS LINE	G
OH	OVERHEAD WIRE	OH
T	UNDERGROUND TELEPHONE LINE	T
C	UNDERGROUND CABLE LINE	C
	STORM SEWER	
S	SANITARY SEWER MAIN	S
	HYDRANT	
S	SANITARY MANHOLE	S
D	STORM MANHOLE	D
WM	WATER METER	WM
WV	WATER VALVE	
	GAS VALVE	GV
	GAS METER	G
	TYPICAL END SECTION	
OR	HEADWALL OR ENDWALL	
	GRATE INLET	
	CURB INLET	
	CLEAN OUT	C/O
E	ELECTRIC MANHOLE	E
T	TELEPHONE MANHOLE	T
EB	ELECTRIC BOX	E
EP	ELECTRIC PEDESTAL	EP
	MONITORING WELL	
	TEST PIT	T-#
	BENCHMARK	
	BORING	B-#

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

TEAM HOYT
COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt
One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
www.BohlerEngineering.com

J.A. KUCICH
JOHN A. KUCICH
CIVIL
No. 41530
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
NEW HAMPSHIRE LICENSE No. 15476
CONNECTICUT LICENSE No. 26177
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

ISSUED FOR
PERMIT

GENERAL NOTES &
LEGEND

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

C-102

MASSACHUSETTS UTILITY NOTES

(Rev. 7/2024)

1. THE CONTRACTOR'S PRICE FOR WATER AND SEWER SERVICE INSTALLATIONS MUST INCLUDE ALL FEES, COSTS, AND APPURTENANCES REQUIRED BY THE UTILITY PROVIDER (AND OTHER AGENCIES HAVING JURISDICTION OVER THE WORK) TO PROVIDE FULL AND COMPLETE WORKING SERVICE, INCLUDING (BUT NOT LIMITED TO) NECESSARY FEES, TESTING, DISINFECTING, INSPECTIONS, ROAD OPENING & BACKFILL REQUIREMENTS, TRAFFIC CONTROL AND SURETY BONDS AS DEFINED BY THE PROVIDER (AND OTHER AGENCIES HAVING JURISDICTION OVER THE WORK).
2. ALL WORK ASSOCIATED WITH UTILITY POLES, OVERHEAD WIRES AND ANY/ALL APPURTENANCES SHALL BE COORDINATED BY THE GC WITH THE LOCAL UTILITY COMPANIES PRIOR TO THE ORDERING OF ANY MATERIALS. THIS MAY INCLUDE BUT IS NOT LIMITED TO THE REMOVAL, INSTALLATION, RELOCATION OR PROTECTION OF ANY BRACING, GUY WIRES, OVERHEAD WIRES, ETC. AS MAY BE REQUIRED TO ACCOMMODATE THE PROJECT.
3. SEWERS CONVEYING SANITARY FLOW, OR INDUSTRIAL FLOW MUST BE SEPARATED FROM WATER MAINS BY A DISTANCE OF AT LEAST 10 FEET HORIZONTALLY. IF SUCH LATERAL SEPARATION IS NOT POSSIBLE, THE PIPES MUST, AT A MINIMUM, BE IN SEPARATE TRENCHES WITH THE AT LEAST 18 INCHES OF VERTICAL SEPARATION FROM THE BOTTOM OF THE WATER MAIN TO THE TOP OF THE SEWER LINE. WHERE APPROPRIATE SEPARATION FROM A WATER MAIN IS NOT POSSIBLE, THE SEWER MUST BE ENCASED IN CONCRETE, OR CONSTRUCTED OF DUCTILE IRON PIPE USING MECHANICAL OR SLIP-ON JOINTS FOR A DISTANCE OF AT LEAST 10 FEET ON EITHER SIDE OF THE CROSSING. IN ADDITION, ONE FULL LENGTH OF SEWER PIPE SHOULD BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE. WHERE A WATER MAIN CROSSES UNDER A SANITARY SEWER, ADEQUATE STRUCTURAL SUPPORT FOR THE SANITARY SEWER MUST BE PROVIDED. ALL CROSSINGS SHALL BE IN ACCORDANCE WITH JURISDICTIONAL PERMITTING/UTILITY AUTHORITIES REGULATIONS.
4. WHEN THESE PLANS INVOLVE MULTIPLE BUILDINGS, SOME OF WHICH MAY BE BUILT AT A LATER DATE, THE CONTRACTOR MUST EXTEND ALL UTILITY SERVICES, INCLUDING BUT NOT LIMITED TO STORM, SANITARY, UTILITIES, AND IRRIGATION LINES, TO A POINT AT LEAST FIVE (5) FEET BEYOND THE PAVED AREAS FOR WHICH THE CONTRACTOR IS RESPONSIBLE. THE CONTRACTOR MUST CAP ENDS OF INSTALLED UTILITIES AS APPROPRIATE, MARK UTILITY ENDS WITH MAGNETIC TRACER TAPE, MARK TERMINUS LOCATIONS WITH A 2X4 STAKE, AND MUST NOTE THE LOCATION OF ALL UTILITY STUBS ON A CLEAN COPY OF THE PLAN. THIS RECORD DOCUMENT MUST BE PREPARED IN A NEAT AND WORKMAN-LIKE MANNER AND TURNED OVER TO THE OWNER/DEVELOPER UPON COMPLETION OF THE WORK, ALL OF WHICH IS AT THE CONTRACTOR'S SOLE COST.
5. UNLESS INDICATED OTHERWISE, ALL NEW UTILITIES/SERVICES, INCLUDING ELECTRIC, TELEPHONE, CABLE TV, ETC., MUST BE INSTALLED UNDERGROUND. ALL NEW UTILITY SERVICES MUST BE INSTALLED IN ACCORDANCE WITH THE UTILITY SERVICE PROVIDER INSTALLATION SPECIFICATIONS AND STANDARDS.
6. SANITARY PIPE MUST BE POLYVINYL CHLORIDE (PVC) SDR 35 EXCEPT WHERE CLEARLY INDICATED OTHERWISE. SANITARY LATERAL(S) MUST BE PVC SDR 26 UNLESS CLEARLY INDICATED OTHERWISE.
7. UNLESS CLEARLY INDICATED OTHERWISE ALL SANITARY PIPE MUST BE:
    - 7.1. FOR PIPES LESS THAN 12 FEET DEEP: POLYVINYL CHLORIDE (PVC) SDR 35 PER ASTM D3034.
    - 7.2. FOR PIPES GREATER THAN 12 FEET DEEP: POLYVINYL CHLORIDE (PVC) SDR 26 PER ASTM D3034.
    - 7.3. UNLESS LOCAL OR STATE BUILDING / PLUMBING CODE CLEARLY SPECIFIES DIFFERENTLY, SANITARY LATERALS MUST BE PVC SDR 26.
    - 7.4. FOR ALL UTILITY PIPING (INCLUDING DRAIN) WITHIN 10 FT OF A BUILDING, PIPE MATERIAL SHALL COMPLY WITH APPLICABLE LOCAL OR STATE BUILDING AND PLUMBING CODES. CONTRACTOR SHALL REFER TO PLUMBING ENGINEERING PLANS AND VERIFY PIPE MATERIAL WITH LOCAL OFFICIAL PRIOR TO ORDERING OF MATERIALS.
    - 7.5. CONTRACTOR SHALL VERIFY THE CONNECTION OF EXTERIOR PIPING TO ANY FIXTURES (SUCH AS AN EXTERIOR GREASE INTERCEPTOR) OR OTHER DRAINAGE SYSTEMS WITH LOCAL OFFICIALS FOR COMPLIANCE WITH APPLICABLE LOCAL OR STATE BUILDING AND PLUMBING CODES PRIOR TO ORDERING OF MATERIALS.
8. WATER MAIN PIPING MUST BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE LOCAL WATER COMPANY. IN THE ABSENCE OF SUCH REQUIREMENTS, WATER MAIN PIPING MUST BE CEMENT-LINED DUCTILE IRON (DIP) MINIMUM CLASS 52 THICKNESS. ALL PIPE AND APPURTENANCES MUST COMPLY WITH THE APPLICABLE AWWA STANDARDS IN EFFECT AT THE TIME OF APPLICATION.
9. GAS METERS MUST BE PROTECTED AS REQUIRED BY THE JURISDICTIONAL GAS PROVIDER.
10. TRANSFORMERS AND SWITCH GEARS: GC SHALL PROVIDE ALL APPURTENANCES IN ACCORDANCE WITH UTILITY COMPANY SPECIFICATIONS AND CARRY SAME IN BASE BID. APPURTENANCES SHALL INCLUDE, BUT NOT BE LIMITED TO, THE CONCRETE PAD, SECONDARY SPILL CONTAINMENT AREAS (IF REQUIRED), BOLLARD / VEHICULAR PROTECTION, AND OTHER ITEMS AS MAY BE REQUIRED BY THE UTILITY PROVIDER FOR INSTALLATION OF THE TRANSFORMER AND SWITCH GEAR (IF REQUIRED). GC SHALL COORDINATE ALL ASPECTS OF INSTALLATION WITH UTILITY PROVIDER PRIOR TO ORDERING OF MATERIALS AND NOTIFY DESIGN ENGINEER OF ANY CONFLICTS IN WRITING.

MASSACHUSETTS DEMOLITION NOTES

(Rev. 1/2023)

1. THE CONTRACTOR MUST LOCATE AND CLEARLY DEFINE VERTICALLY AND HORIZONTALLY ALL ACTIVE AND INACTIVE UTILITY AND/OR SERVICE SYSTEMS THAT ARE TO BE REMOVED. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE SYSTEMS THAT ARE NOT BEING REMOVED/RELOCATED DURING SITE ACTIVITY.
2. CONTRACTOR SHALL FIELD LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION AND IF REQUIRED, DIG EXPLORATORY TEST PITS TO CONFIRM EXACT LOCATION AND DEPTH OF UTILITIES. CONTRACTOR SHALL NOTIFY DESIGN ENGINEER WITH ANY CONFLICTS AS NEEDED TO COORDINATE FINAL LOCATION OF ALL PROPOSED IMPROVEMENTS.
3. CONTRACTOR SHALL INSPECT ALL EXISTING UTILITY STRUCTURES THAT ARE TO REMAIN FOR THE PROJECTS RE-USE TO VERIFY SUITABILITY FOR SAME. IF STRUCTURES CAN NOT BE REUSED THEN THE CONTRACTOR SHALL PROVIDE A NEW STRUCTURE. THE CONTRACTOR SHALL COORDINATE SUCH WORK WITH THE APPLICABLE UTILITY PROVIDER.
4. CONTRACTOR TO REMOVE ANY BUILDING FOUNDATION REMAINS OR ASSOCIATED IMPROVEMENTS, DELETERIOUS MATERIALS, AND/OR DEBRIS THAT IMPEDE THE WORK SHOWN ON THESE PLANS.
5. THE CONTRACTOR SHALL REVIEW THE PLANS VERSUS THE LOCATION OF EXISTING STRUCTURES, UTILITIES AND APPURTENANCES IN THE FIELD TO CONFIRM ACCURACY OF SAME AND VERIFY ITEMS TO BE REMOVED. THE CONTRACTOR SHALL CARRY COSTS FOR REMOVAL OF ANY EXISTING STRUCTURES, APPURTENANCES, AND UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO, DRAIN, WATER, SEWER, STEAM, IRRIGATION, GAS, TELECOM AND ELECTRIC.
6. THE CONTRACTOR SHALL MAINTAIN, ADJUST OR ABANDON EXISTING MONITORING WELLS IN ACCORDANCE WITH THE DIRECTION OF THE ENVIRONMENTAL CONSULTANT (TYP.)
7. WHERE THE LIMIT OF WORK COINCIDES WITH PROPERTY LINE, TREE LINE, PROPOSED SAWCUT OR COMBINATION THEREOF IT IS SHOWN ADJACENT TO THESE FEATURES FOR GRAPHICAL CLARITY.
8. EXISTING TREES TO REMAIN ARE TO BE PROTECTED DURING CONSTRUCTION UNLESS CLEARLY INDICATED OTHERWISE. REASONABLE CARE AND CAUTION SHALL BE TAKEN DURING CONSTRUCTION TO PREVENT DAMAGE AND SELECTIVE PRUNING MAY BE REQUIRED TO ENSURE THAT TREES DO NOT CONFLICT WITH THE DEVELOPMENT.
9. CONTRACTOR SHALL REPAIR/REPLACE ANY TRAFFIC LOOP DETECTORS THAT ARE DAMAGED DURING CONSTRUCTION WITHIN EXISTING OR PROPOSED RIGHTS OF WAYS. ANY SUCH WORK SHALL BE PERFORMED BY A LICENSED / DOT APPROVED SIGNAL CONTRACTOR. ANY DAMAGED LOOPS OR OTHER SIGNAL EQUIPMENT SHALL BE REPAIRED IMMEDIATELY AFTER THE WORK IS COMPLETE. THE SIGNAL CONTRACTOR SHALL BE AVAILABLE TO MAKE ANY TEMPORARY SIGNAL CHANGES IF REQUESTED BY DOT AND/OR THE MUNICIPALITY.
10. THE CONTRACTOR MUST FIELD VERIFY THE LOCATIONS WHERE PROPOSED UTILITIES CROSS EXISTING UNDERGROUND UTILITIES BY USING A TEST PIT TO DETERMINE THE EXACT SIZE, DEPTH AND LOCATION, PRIOR TO COMMENCEMENT OF CONSTRUCTION.
11. CONTRACTOR SHALL LOCATE ANY EXISTING UTILITY SERVICES THAT ARE TO BE TERMINATED AT THE EXISTING MAIN AND/OR PROPERTY LINE. THESE SERVICES ARE TO BE TERMINATED IN ACCORDANCE WITH MUNICIPAL / STATE TRANSPORTATION DEPARTMENT REQUIREMENTS.

MASSACHUSETTS SITE NOTES

(Rev. 5/2024)

1. WHEN APPLICABLE, OWNER/ OPERATOR MUST FILE THE NOI FOR NPDES PERMITS AT APPROPRIATE AND/OR REQUIRED TIME FRAMES BASED UPON THE DESIRED START OF CONSTRUCTION. LAND DISTURBING ACTIVITIES MUST NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED FROM GOVERNING AUTHORITIES (INCLUDING STORMWATER POLLUTION PREVENTION PLAN). THE CONTRACTOR MUST STRICTLY ADHERE TO THE APPROVED SWPPP PLAN DURING CONSTRUCTION OPERATIONS (IF PROVIDED).
2. ALL CONCRETE MUST BE AIR ENTRAINED AND INCLUDE THE MINIMUM COMPRESSIVE STRENGTH OF JURISDICTIONAL STANDARD PSI AT 28 DAYS (OR 4,000 PSI) UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT. IF THERE ARE ANY DISCREPANCIES BETWEEN THE PLANS, DETAILS AND GEOTECHNICAL REPORT THEN THE GEOTECHNICAL REPORT SHALL GOVERN.
3. THE CONTRACTOR MUST FILE SITE SIGNAGE APPLICATION OR PERMIT UNDER SEPARATE APPLICATION UNLESS DONE SO AS PART OF JURISDICTIONAL PERMITTING PROCEDURES.
4. THE CONTRACTOR MUST REPAIR OR REPLACE, AT THE CONTRACTOR'S SOLE COST AND EXPENSE, ALL SIDEWALKS, CURBS, PAVEMENT MARKINGS, AND PAVEMENT DAMAGED BY CONSTRUCTION ACTIVITIES WHETHER SPECIFIED ON THIS PLAN OR NOT.
5. WORK WITHIN THE RIGHT-OF-WAY MUST BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS AND STANDARDS OF THE DEPARTMENT OF PUBLIC WORKS, ENGINEERING DEPARTMENT, HIGHWAY DIVISION, AND/OR STATE DOT HIGHWAY DEPARTMENT.
6. WHERE RETAINING WALLS ARE IDENTIFIED ON THE PLANS, TOP AND BOTTOM OF WALL WIDTHS DO NOT REPRESENT THE ACTUAL WIDTH OF THE PROPOSED WALL, RATHER THEY ARE AN ASSUMPTION BASED ON WALL TYPE AND WALL HEIGHT. WALL FOOTINGS AND /OR FOUNDATIONS ARE NOT IDENTIFIED HEREIN AND ARE TO BE SET/DETERMINED BY THE CONTRACTOR OR WALL DESIGNER, AND MUST BE SET BASED UPON FINAL STRUCTURAL DESIGN SHOP DRAWINGS PREPARED BY THE APPROPRIATE PROFESSIONAL LICENSED IN THE STATE WHERE THE CONSTRUCTION OCCURS. THE CONTRACTOR MUST ENSURE THAT AN APPROPRIATELY LICENSED PROFESSIONAL DESIGNS ALL WALLS SHOWN HEREON AND PRIOR TO CONSTRUCTION. REFER TO GRADING NOTES REGARDING RETAINING WALL DESIGN.
7. CONTRACTOR IS CAUTIONED OF EXISTING UTILITY SERVICES TO REMAIN IN PROXIMITY TO PROPOSED BOLLARDS AND SIGNS. CONTRACTOR SHALL PROVIDE FIELD MODIFICATION LOCATIONS OF BOLLARDS AND BOLLARDS WITH SIGNAGE AS NEEDED TO AVOID CONFLICTS WITH EXISTING UTILITY SERVICES TO REMAIN.

MASSACHUSETTS GRADING NOTES

(Rev. 5/2024)

1. PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 6" ABOVE PAVEMENT GRADE UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR MUST CONFIRM AND ENSURE THAT AS CONSTRUCTED IMPROVEMENTS CREATE THE FOLLOWING MINIMUM SLOPES (EXCEPT WHERE ADA REQUIREMENTS LIMIT THEM): 1.0% ON ALL CONCRETE SURFACES, 1.5% ON ASPHALT SURFACES, 1.5% IN LANDSCAPED AREAS AND 0.75% SLOPE AGAINST ALL ISLANDS, GUTTERS, AND CURBS TO PROVIDE POSITIVE DRAINAGE.
3. WHERE RETAINING WALLS ARE IDENTIFIED ON THE PLANS, TOP AND BOTTOM OF WALL ELEVATIONS (GH & GL) REPRESENT THE PROPOSED FINISHED GRADE AT THE FACE OF THE TOP AND THE BOTTOM OF THE WALL AND DO NOT REPRESENT THE OVERALL HEIGHT OF THE WALL TO ITS EXTENTS (I.E. ANY CAP UNITS OR COURSES BELOW GRADE INCLUDING FOOTINGS ARE EXCLUDED). WALL FOOTINGS/FOUNDATION ELEVATIONS ARE NOT IDENTIFIED HEREIN AND ARE TO BE SET/DETERMINED BY THE CONTRACTOR OR WALL DESIGNER, AND MUST BE SET BASED UPON FINAL STRUCTURAL DESIGN SHOP DRAWINGS PREPARED BY THE APPROPRIATE PROFESSIONAL LICENSED IN THE STATE WHERE THE CONSTRUCTION OCCURS. THE CONTRACTOR MUST ENSURE THAT THERE ARE NO UTILITIES ON THE PASSIVE SIDE OF THE RETAINING WALL. NO EXCAVATION MAY BE PERFORMED ON THE PASSIVE SIDE OF THE RETAINING WALL WITHOUT APPROPRIATELY AND SAFELY SUPPORTING THE WALL IN ACCORDANCE WITH THE STANDARD OF CARE AND ALL APPLICABLE RULES, REGULATIONS, CODES, ORDINANCES, LAWS AND STATUTES.
4. MSE OR GRAVITY BLOCK WALLS SHALL BE CONSTRUCTED SUCH THAT UPON COMPLETION OF CONSTRUCTION THERE IS NO UNFINISHED SURFACE OR LIFTING RINGS VISIBLE (E.G. USE OF FINISHED TOP BLOCK OR CAP STONES)
5. STORMWATER RUNOFF WITHIN PROPERTY MUST BE COLLECTED ON-SITE WITH NO OVERLAND RUNOFF ONTO THE RIGHT-OF-WAY OR ADJACENT PROPERTIES TO THE MAXIMUM EXTENT POSSIBLE OR IN THE MANNER SHOWN ON THE CONSTRUCTION DRAWINGS. STORMWATER RUNOFF ONTO ADJACENT PROPERTIES SHALL BE CONTROLLED AS TO NOT ADVERSELY IMPACT SAID PROPERTIES.
6. BEFORE COMMENCING GRADING WORK, CONTRACTOR SHALL SUBMIT SAMPLES OF ALL NATIVE AND IMPORTED MATERIALS WITH THEIR INTENDED FOR STRUCTURAL USES TO THE GEOTECHNICAL ENGINEER OF RECORD.
7. REFER TO GENERAL NOTES SHEET FOR ADDITIONAL ADA GUIDELINES AND REQUIREMENTS.
8. FOR ALL RETAINING WALLS 4 FEET OR GREATER IN HEIGHT:
    - 8.1. THE OWNER OR THE OWNER'S CONTRACTOR IS TO PROVIDE A SITE-SPECIFIC RETAINING WALL DESIGN PREPARED BY THE APPROPRIATE PROFESSIONAL LICENSED (E.G. STRUCTURAL ENGINEER) IN THE STATE WHERE THE CONSTRUCTION OCCURS. SOIL TYPES, WATER TABLE ELEVATION, EXISTING & PROPOSED SURROUNDING IMPROVEMENTS/CONDITIONS (INCLUDING BUT NOT LIMITED TO SLOPES, DRIVE AISLES, ROADS, FENCING, GUIDERAILS, UTILITIES, DRAINAGE FACILITIES, STRUCTURES, FOUNDATIONS), LIVE LOADS AND OTHER SITE AMENITIES THAT COULD HAVE AN INFLUENCE OR IMPACT ON THE RETAINING WALL(S) CONSTRUCTABILITY AND/OR LONGEVITY SHALL BE CONSIDERED AND INCORPORATED INTO THE RETAINING WALL DESIGN AS WELL AS THE GLOBAL STABILITY ANALYSIS.
    - 8.2. PEER REVIEW AND GLOBAL STABILITY ANALYSIS OF THE RETAINING WALL DESIGN MUST BE COMPLETED BY THE OWNER'S GEOTECHNICAL ENGINEER TO CERTIFY THE DESIGN MEETS INDUSTRY STANDARDS FOR FACTOR OF SAFETY. SOIL TYPES, WATER TABLE ELEVATION AND DESIGN PROPERTIES AS NOTED ABOVE SHALL BE FIELD CONFIRMED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO WALL CONSTRUCTION.
9. CONTRACTOR SHALL INSTALL CONCRETE CURB ALONG FACE OF BUILDING / WALL AS SHOWN TO PROVIDE CONSISTENT WIDTH ALONG LENGTH OF PROPOSED ACCESSIBLE RAMP AND RAMP LANDING TO MEET ADA/AAB REQUIREMENTS.
10. CONTRACTOR SHALL REVIEW RETAINING WALL LOCATIONS VERSUS APPLICABLE STATE AND LOCAL CODES AND PROVIDE FALL PROTECTION (E.G. FENCING OR RAILING) IN ACCORDANCE WITH SAID CODE.
11. CONTRACTOR SHALL COORDINATE WITH OWNER/OPERATOR TO REVIEW EXISTING DEPRESSIONS WITHIN EXISTING PAVEMENT AREAS TO REMAIN AND SHALL CONFIRM THAT THE SCOPE OF WORK SHALL PROVIDE POSITIVE DRAINAGE BY FIXING ANY EXISTING AREAS OF PONDING.
12. BEFORE COMMENCING GRADING WORK, CONTRACTOR SHALL SUBMIT SAMPLES OF ALL NATIVE AND IMPORTED MATERIALS WITH THEIR INTENDED FOR STRUCTURAL USES TO THE GEOTECHNICAL ENGINEER OF RECORD.

MASSACHUSETTS ACCESSIBILITY DESIGN GUIDELINES

(Rev. 5/2024)

1. IN ADDITION TO THE ACCESSIBILITY DESIGN GUIDELINES ON SHEET C-102, THE CONTRACTOR MUST ALSO ENSURE THAT ALL ACCESSIBLE COMPONENTS AND ACCESSIBLE ROUTES ARE CONSTRUCTED IN STRICT ACCORDANCE WITH THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD REGULATIONS 521 CMR. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IN WRITING, OF ANY DISCREPANCIES BETWEEN THE "AMERICANS WITH DISABILITIES ACT" (ADA) CODE AND STATE BUILDING CODE AS IT RELATES TO ANY ACCESSIBLE IMPROVEMENTS BEING CONSTRUCTED PRIOR TO COMMENCING THE WORK.

MASSACHUSETTS DRAINAGE NOTES

(Rev. 1/2023)

1. WHEN THESE PLANS INVOLVE MULTIPLE BUILDINGS, SOME OF WHICH MAY BE BUILT AT A LATER DATE, THE CONTRACTOR MUST EXTEND ALL UTILITY SERVICES, INCLUDING BUT NOT LIMITED TO STORM, SANITARY, UTILITIES, AND IRRIGATION LINES, TO A POINT AT LEAST FIVE (5) FEET BEYOND THE PAVED AREAS FOR WHICH THE CONTRACTOR IS RESPONSIBLE. THE CONTRACTOR MUST CAP ENDS OF INSTALLED UTILITIES AS APPROPRIATE, MARK UTILITY ENDS WITH MAGNETIC TRACER TAPE, MARK TERMINUS LOCATIONS WITH A 2X4 STAKE, AND MUST NOTE THE LOCATION OF ALL UTILITY STUBS ON A CLEAN COPY OF THE PLAN. THIS RECORD DOCUMENT MUST BE PREPARED IN A NEAT AND WORKMAN-LIKE MANNER AND TURNED OVER TO THE OWNER/DEVELOPER UPON COMPLETION OF THE WORK, ALL OF WHICH IS AT THE CONTRACTOR'S SOLE COST.
2. STORM AND SANITARY PIPE LENGTHS INDICATED ARE NOMINAL AND ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE UNLESS INDICATED ON THE PLANS OTHERWISE.
3. UNLESS CLEARLY INDICATED OTHERWISE, ALL STORM PIPE MUST BE REINFORCED CONCRETE PIPE (RCP) CLASS III WITH SILT/SOIL TIGHT JOINTS. WHEN HIGH-DENSITY POLYETHYLENE PIPE (HDPE) IS CALLED FOR ON THE PLANS, IT MUST CONFORM TO AASHTO M252 FOR PIPES 4" TO 10" AND TO AASHTO M294 FOR PIPES 12" TO 60" AND TYPE S (SMOOTH INTERIOR WITH ANGULAR CORRUGATIONS) WITH GASKET FOR SILT/SOIL TIGHT JOINT. PIPE FOR ROOF DRAIN CONNECTION MUST BE SDR 26 PVC OR SCHEDULE 40 UNLESS INDICATED OTHERWISE. HDPE PIPE JOINT GASKETS MUST BE PROVIDED AND CONFORM TO ASTM F477. DRAIN PIPE INSTALLED WITH OVER TEN (10) FEET OVER COVER AND/OR IN HIGH GROUNDWATER CONDITIONS SHALL BE SANITITE HP POLYPROPYLENE PIPE (PP), OR APPROVED EQUIVALENT.

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

TEAM HOYT
COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt

One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER™

50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900

www.BohlerEngineering.com

J.A. KUCICH
JOHN A. KUCICH
CIVIL
No. 41530
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
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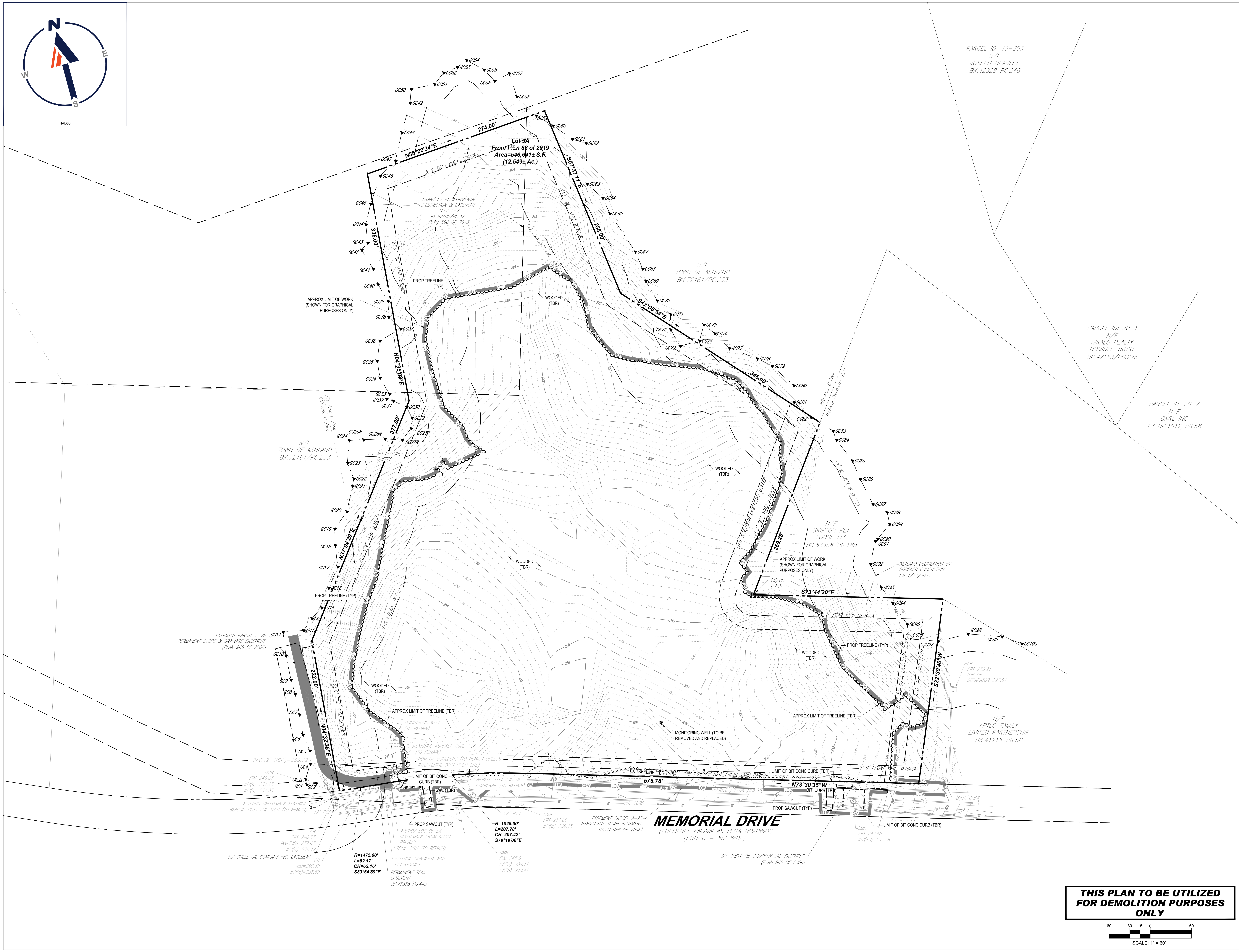
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

ISSUED FOR
PERMIT

JURISDICTIONAL
NOTES

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

C-103


N
E
S
W
NAD83
Lot 3A
From Plan 86 of 2019
Area=546,641± S.F.
(12.549± Ac.)
N85°22'34"E
274.00'
S07°37'11"E
288.00'
S42°05'54"E
346.00'
269.28'
S73°44'20"E
S22°30'40"W
575.78'
N73°30'35"W
222.00'
N04°32'25"E
N37°04'29"E
377.00'
N04°35'08"E
336.00'
30.0' REAR YARD SETBACK
25.0' SIDE YARD SETBACK
25' NO DISTURB BUFFER
10.0' FRONT YARD PARKING
25.0' FRONT SETBACK
GRANT OF ENVIRONMENTAL RESTRICTION & EASEMENT AREA A-2 BK.62400/PG.377 PLAN 590 OF 2013
PROP TREELINE (TYP)
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
WOODED (TBR)
APPROX LIMIT OF TREELINE (TBR)
MONITORING WELL (TO BE REMOVED AND REPLACED)
EX TREELINE (TBR) (TYP)
LIMIT OF BIT CONC CURB (TBR)
SWL (TBR)
PROP SAWCUT (TYP)
APPROX LOCATION OF GUARDRAIL (TO REMAIN)
APPROX LOC OF EX CROSSWALK FROM AERIAL IMAGERY
TRAIL SIGN (TO REMAIN)
EXISTING CONCRETE PAD (TO REMAIN)
PERMANENT TRAIL EASEMENT BK.78388/PG.443
12" HDPE
12" PVC
DMH RIM=245.61 INV(a)=239.11 INV(b)=240.41
R=1475.00' L=62.17' CH=62.16' S83°54'59"E
R=1025.00' L=207.78' CH=207.42' S79°19'00"E
EASEMENT PARCEL A-26 PERMANENT SLOPE & DRAINAGE EASEMENT (PLAN 966 OF 2006)
EASEMENT PARCEL A-28 PERMANENT SLOPE EASEMENT (PLAN 966 OF 2006)
50' SHELL OIL COMPANY INC. EASEMENT
50' SHELL OIL COMPANY INC. EASEMENT (PLAN 966 OF 2006)
MEMORIAL DRIVE
(FORMERLY KNOWN AS MBTA ROADWAY)
(PUBLIC - 50' WIDE)
WETLAND DELINEATION BY GODDARD CONSULTING ON 1/17/2025
PARCEL ID: 19-205 N/F JOSEPH BRADLEY BK.42928/PG.246
N/F TOWN OF ASHLAND BK.72181/PG.233
PARCEL ID: 20-1 N/F NIRALO REALTY NOMINEE TRUST BK.47153/PG.226
PARCEL ID: 20-7 N/F CNRL INC. L.C.BK.1012/PG.58
N/F SKIPTON PET LODGE LLC BK.63556/PG.189
N/F ARTLO FAMILY LIMITED PARTNERSHIP BK.41215/PG.50
N/F TOWN OF ASHLAND BK.72181/PG.233
RID Area D Zone
RID Area C Zone
WD Area D Zone
Highway Commerce Zone
CB/DH (FND)
GC1–GC100
60 30 15 0 60
SCALE: 1" = 60'

THIS PLAN TO BE UTILIZED FOR DEMOLITION PURPOSES ONLY

REVISIONS

#	DATE	DESCRIPTION
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MEMORIAL DRIVE
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cbt

One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER//™

50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900

www.BohlerEngineering.com

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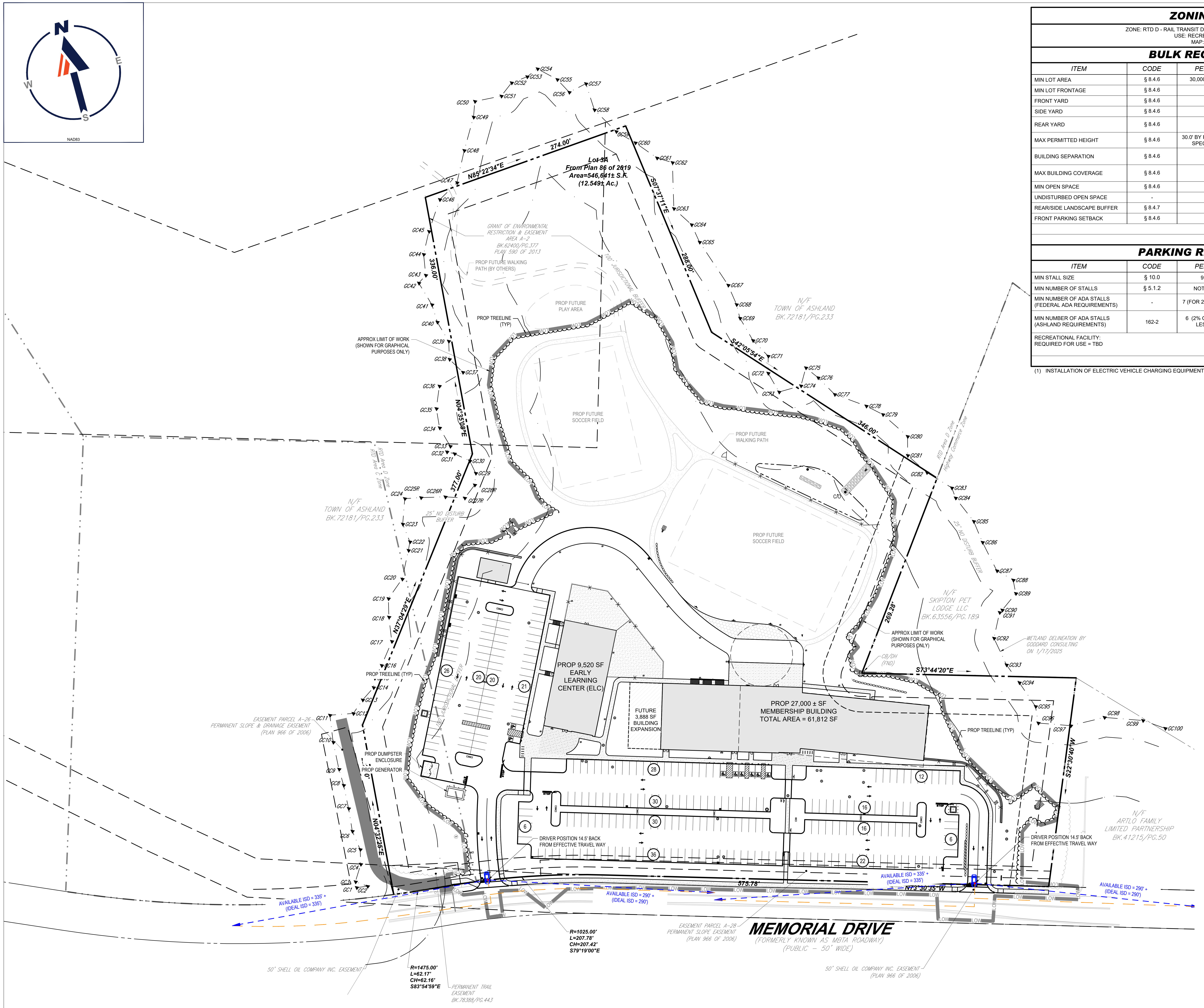
ISSUED FOR
PERMIT

EXISTING CONDITIONS/
DEMOLITION PLAN

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

C-201


N
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From Plan 86 of 2019
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(12.549± Ac.)
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S42°05'54"E
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269.28'
S73°44'20"E
S22°30'40"W
575.78'
N73°30'35"W
GRANT OF ENVIRONMENTAL RESTRICTION & EASEMENT AREA A-2 BK.62400/PG.377 PLAN 590 OF 2013
PROP FUTURE WALKING PATH (BY OTHERS)
100' JURISDICTIONAL BUFFER
PROP FUTURE PLAY AREA
PROP TREELINE (TYP)
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
PROP FUTURE SOCCER FIELD
PROP FUTURE WALKING PATH
PROP FUTURE SOCCER FIELD
C/O
N/F TOWN OF ASHLAND BK.72181/PG.233
N/F TOWN OF ASHLAND BK.72181/PG.233
RTD Area D Zone
RTD Area C Zone
RTD Area D Zone
Highway Commerce Zone
25' NO DISTURB BUFFER
25' NO DISTURB BUFFER
N/F SKIPTON PET LODGE LLC BK.63556/PG.189
WETLAND DELINEATION BY GODDARD CONSULTING ON 1/17/2025
CB/DH (FND)
PROP 9,520 SF EARLY LEARNING CENTER (ELC)
FUTURE 3,888 SF BUILDING EXPANSION
PROP 27,000 ± SF MEMBERSHIP BUILDING TOTAL AREA = 61,812 SF
PROP DUMPSTER ENCLOSURE
PROP GENERATOR
EASEMENT PARCEL A-26 PERMANENT SLOPE & DRAINAGE EASEMENT (PLAN 966 OF 2006)
DRIVER POSITION 14.5' BACK FROM EFFECTIVE TRAVEL WAY
DRIVER POSITION 14.5' BACK FROM EFFECTIVE TRAVEL WAY
N/F ARTLO FAMILY LIMITED PARTNERSHIP BK.41215/PG.50
26
20
20
21
28
30
30
36
6
12
16
16
6
22
STOP
LOW
AVAILABLE ISD = 335' + (IDEAL ISD = 335')
AVAILABLE ISD = 290' + (IDEAL ISD = 290')
AVAILABLE ISD = 335' + (IDEAL ISD = 335')
AVAILABLE ISD = 290' + (IDEAL ISD = 290')
50' SHELL OIL COMPANY INC. EASEMENT
R=1475.00' L=62.17' CH=62.16' S83°54'59"E
PERMANENT TRAIL EASEMENT BK.78388/PG.443
R=1025.00' L=207.78' CH=207.42' S79°19'00"E
EASEMENT PARCEL A-28 PERMANENT SLOPE EASEMENT (PLAN 966 OF 2006)
MEMORIAL DRIVE
(FORMERLY KNOWN AS MBTA ROADWAY)
(PUBLIC - 50' WIDE)
50' SHELL OIL COMPANY INC. EASEMENT (PLAN 966 OF 2006)

ZONING TABLE

ZONE: RTD D - RAIL TRANSIT DISTRICT D & RAIL TRANSIT DISTRICT C
USE: RECREATIONAL FACILITY
MAP: 13 LOT: 178

BULK REQUIREMENTS

ITEM	*CODE*	*PERMITTED*	**EXISTING**	**PROPOSED**
MIN LOT AREA	§ 8.4.6	30,000 SF (0.69 AC)	546,641 SF (12.55 AC)	NO CHANGE
MIN LOT FRONTAGE	§ 8.4.6	150.0'	845.7' ±	NO CHANGE
FRONT YARD	§ 8.4.6	25.0'	-	158.7' (1)
SIDE YARD	§ 8.4.6	25.0'	-	60.1'
REAR YARD	§ 8.4.6	30.0'	-	32.5'
MAX PERMITTED HEIGHT	§ 8.4.6	30.0' BY RIGHT OR 50' BY SPECIAL PERMIT	-	46'-5"
BUILDING SEPARATION	§ 8.4.6	20.0'	-	71.8' (W/O EXPANSION) 30.4' (W/ EXPANSION)
MAX BUILDING COVERAGE	§ 8.4.6	N/A	-	7.3% ± (INCLUDES FUTURE EXPANSION)
MIN OPEN SPACE	§ 8.4.6	30.0%	100% (546,641 SF)	74.5% ± (407,248 SF ±)
UNDISTURBED OPEN SPACE	-	-	-	154,207 SF ±
REAR/SIDE LANDSCAPE BUFFER	§ 8.4.7	50.0'	-	20.6'
FRONT PARKING SETBACK	§ 8.4.6	10.0'	-	17.0'
			KEY =	RELIEF REQUIRED

PARKING REQUIREMENTS

ITEM	*CODE*	*PERMITTED*	**EXISTING**	**PROPOSED**
MIN STALL SIZE	§ 10.0	9.0' X 20.0'	-	9.0' X 18.0'
MIN NUMBER OF STALLS	§ 5.1.2	NOT SPECIFIED	-	289
MIN NUMBER OF ADA STALLS (FEDERAL ADA REQUIREMENTS)	-	7 (FOR 201-300 SPACES)	-	8
MIN NUMBER OF ADA STALLS (ASHLAND REQUIREMENTS)	162-2	6 (2% OF TOTAL, NOT LESS THAN 6)	-	8
RECREATIONAL FACILITY: REQUIRED FOR USE = TBD				
			KEY =	RELIEF REQUIRED

(1) INSTALLATION OF ELECTRIC VEHICLE CHARGING EQUIPMENT MAY REQUIRE A VARIANCE FOR FRONT YARD SETBACK

SIGNS, LANDSCAPING, AND OTHER FEATURES LOCATED WITHIN SIGHT TRIANGLE AREAS SHALL BE DESIGNED, INSTALLED, AND MAINTAINED SO AS NOT TO EXCEED 2.0-FEET IN HEIGHT. SNOW ACCUMULATION (WINDROWS) LOCATED WITHIN SIGHT TRIANGLE AREAS THAT EXCEED 3.5-FEET IN HEIGHT OR THAT WOULD OTHERWISE INHIBIT SIGHT LINES SHALL BE PROMPTLY REMOVED.

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

60 30 15 0 60
SCALE: 1" = 60'

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

TEAM HOYT COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt
One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER//™
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
www.BohlerEngineering.com

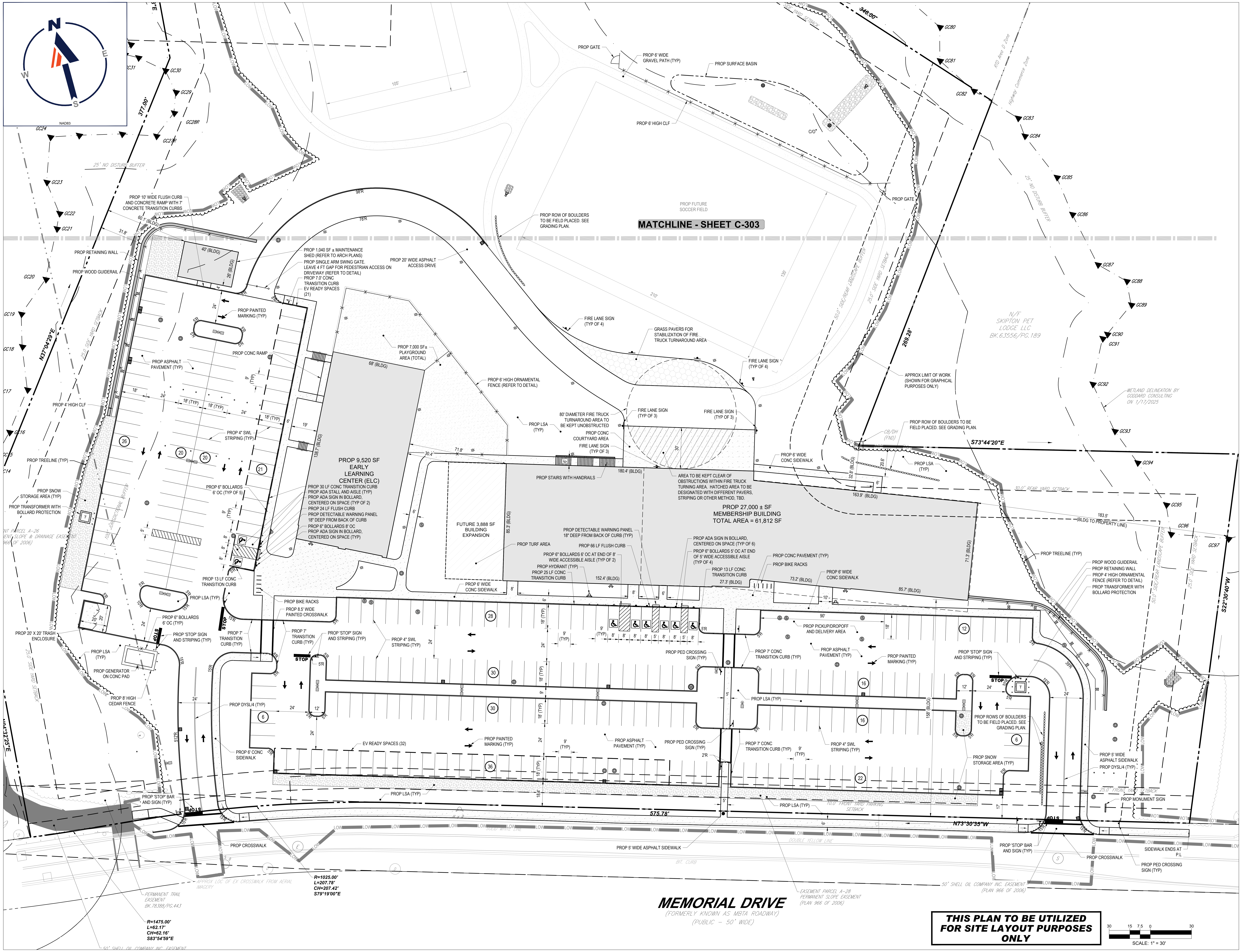
J.A. KUCICH
John Kucich
JOHN A. KUCICH CIVIL No. 41530
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
NEW HAMPSHIRE LICENSE No. 15476
CONNECTICUT LICENSE No. 26177
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

ISSUED FOR PERMIT

OVERALL SITE PLAN

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

C-301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E
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NAD83
MATCHLINE - SHEET C-303
PROP GATE
PROP 6' WIDE GRAVEL PATH (TYP)
PROP SURFACE BASIN
PROP 6' HIGH CLF
PROP FUTURE SOCCER FIELD
PROP ROW OF BOULDERS TO BE FIELD PLACED. SEE GRADING PLAN.
PROP 10' WIDE FLUSH CURB AND CONCRETE RAMP WITH 7' CONCRETE TRANSITION CURBS
PROP RETAINING WALL
PROP WOOD GUIDERAIL
25' NO DISTURB BUFFER
PROP 1,040 SF ± MAINTENANCE SHED (REFER TO ARCH PLANS)
PROP SINGLE ARM SWING GATE. LEAVE 4 FT GAP FOR PEDESTRIAN ACCESS ON DRIVEWAY (REFER TO DETAIL)
PROP 7.0' CONC TRANSITION CURBS
EV READY SPACES (21)
PROP 20' WIDE ASPHALT ACCESS DRIVE
PROP PAINTED MARKING (TYP)
PROP CONC RAMP
PROP ASPHALT PAVEMENT (TYP)
PROP 7,000 SF± PLAYGROUND AREA (TOTAL)
PROP 6' HIGH ORNAMENTAL FENCE (REFER TO DETAIL)
FIRE LANE SIGN (TYP OF 4)
GRASS PAVERS FOR STABILIZATION OF FIRE TRUCK TURNAROUND AREA
FIRE LANE SIGN (TYP OF 4)
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
N/F SKIPTON PET LODGE LLC BK.63556/PG.189
WETLAND DELINEATION BY GODDARD CONSULTING ON 1/17/2025
PROP ROW OF BOULDERS TO BE FIELD PLACED. SEE GRADING PLAN.
PROP 4' HIGH CLF
PROP 4" SWL STRIPING (TYP)
80' DIAMETER FIRE TRUCK TURNAROUND AREA TO BE KEPT UNOBSTRUCTED
FIRE LANE SIGN (TYP OF 3)
PROP LSA (TYP)
PROP CONC COURTYARD AREA
FIRE LANE SIGN (TYP OF 3)
PROP 6' WIDE CONC SIDEWALK
PROP TREELINE (TYP)
PROP 9,520 SF EARLY LEARNING CENTER (ELC)
PROP 30 LF CONC TRANSITION CURB
PROP ADA STALL AND AISLE (TYP)
PROP ADA SIGN IN BOLLARD, CENTERED ON SPACE (TYP OF 2)
PROP 24 LF FLUSH CURB
PROP DETECTABLE WARNING PANEL 18" DEEP FROM BACK OF CURB
PROP 6" BOLLARDS 8' OC
PROP ADA SIGN IN BOLLARD, CENTERED ON SPACE (TYP)
PROP 6" BOLLARDS 6' OC (TYP OF 5)
PROP SNOW STORAGE AREA (TYP)
PROP TRANSFORMER WITH BOLLARD PROTECTION
PROP STAIRS WITH HANDRAILS
AREA TO BE KEPT CLEAR OF OBSTRUCTIONS WITHIN FIRE TRUCK TURNING AREA. HATCHED AREA TO BE DESIGNATED WITH DIFFERENT PAVERS, STRIPING OR OTHER METHOD, TBD.
PROP 27,000 ± SF MEMBERSHIP BUILDING TOTAL AREA = 61,812 SF
FUTURE 3,888 SF BUILDING EXPANSION
PROP TURF AREA
PROP DETECTABLE WARNING PANEL 18" DEEP FROM BACK OF CURB (TYP)
PROP 66 LF FLUSH CURB
PROP 6" BOLLARDS 6' OC AT END OF 8' WIDE ACCESSIBLE AISLE (TYP OF 2)
PROP HYDRANT (TYP)
PROP 25 LF CONC TRANSITION CURB
PROP ADA SIGN IN BOLLARD, CENTERED ON SPACE (TYP OF 6)
PROP 6" BOLLARDS 5' OC AT END OF 5' WIDE ACCESSIBLE AISLE (TYP OF 4)
PROP 13 LF CONC TRANSITION CURB
PROP CONC PAVEMENT (TYP)
PROP BIKE RACKS
PROP 6' WIDE CONC SIDEWALK
PROP TREELINE (TYP)
PROP WOOD GUIDERAIL
PROP RETAINING WALL
PROP 4' HIGH ORNAMENTAL FENCE (REFER TO DETAIL)
PROP TRANSFORMER WITH BOLLARD PROTECTION
PROP 13 LF CONC TRANSITION CURB
PROP LSA (TYP)
PROP BIKE RACKS
PROP 8.5' WIDE PAINTED CROSSWALK
PROP 20' X 20' TRASH ENCLOSURE
PROP 6" BOLLARDS 6' OC (TYP)
PROP 'STOP' SIGN AND STRIPING (TYP)
PROP 7' TRANSITION CURB (TYP)
PROP 'STOP' SIGN AND STRIPING (TYP)
PROP 4" SWL STRIPING (TYP)
PROP LSA (TYP)
PROP GENERATOR ON CONC PAD
PROP 8' HIGH CEDAR FENCE
PROP DYSL/4 (TYP)
PROP PED CROSSING SIGN (TYP)
PROP 7' CONC TRANSITION CURB (TYP)
PROP PICKUP/DROPOFF AND DELIVERY AREA
PROP ASPHALT PAVEMENT (TYP)
PROP PAINTED MARKING (TYP)
PROP 'STOP' SIGN AND STRIPING (TYP)
PROP LSA (TYP)
PROP ROWS OF BOULDERS TO BE FIELD PLACED. SEE GRADING PLAN.
PROP SNOW STORAGE AREA (TYP)
PROP 5' WIDE ASPHALT SIDEWALK
PROP DYSL/4 (TYP)
PROP 6' CONC SIDEWALK
EV READY SPACES (32)
PROP PAINTED MARKING (TYP)
PROP ASPHALT PAVEMENT (TYP)
PROP PED CROSSING SIGN (TYP)
PROP 7' CONC TRANSITION CURB (TYP)
PROP 4" SWL STRIPING (TYP)
PROP 'STOP' BAR AND SIGN (TYP)
PROP LSA (TYP)
PROP LSA (TYP)
PROP MONUMENT SIGN
25.0' FRONT YARD SETBACK
10.0' FRONT YARD PARKING SETBACK
10.0' REAR YARD SETBACK
25.0' SIDE YARD SETBACK
25' NO DISTURB BUFFER
183.5' (BLDG TO PROPERTY LINE)
575.78'
N73°30'35"W
S73°44'20"E
S22°30'40"W
N37°04'29"E
269.28'
346.00'
377.00'
PROP CROSSWALK
PROP 5' WIDE ASPHALT SIDEWALK
PROP 'STOP' BAR AND SIGN (TYP)
PROP CROSSWALK
SIDEWALK ENDS AT P.L.
PROP PED CROSSING SIGN (TYP)
MEMORIAL DRIVE
(FORMERLY KNOWN AS MBTA ROADWAY)
(PUBLIC – 50' WIDE)
DOUBLE YELLOW LINE
BIT. CURB
R=1025.00'
L=207.78'
CH=207.42'
S79°19'00"E
R=1475.00'
L=62.17'
CH=62.16'
S83°54'59"E
PERMANENT TRAIL EASEMENT BK.78398/PG.443
APPROX LOC OF EX CROSSWALK FROM AERIAL IMAGERY
EASEMENT PARCEL A-28 PERMANENT SLOPE EASEMENT (PLAN 966 OF 2006)
50' SHELL OIL COMPANY INC. EASEMENT (PLAN 966 OF 2006)
50' SHELL OIL COMPANY INC. EASEMENT
NT PARCEL A-26 ENT SLOPE & DRAINAGE EASEMENT 966 OF 2006)
THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY
30 15 7.5 0 30
SCALE: 1" = 30'

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

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MEMORIAL DRIVE
ASHLAND, MA

cbt
One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
www.BohlerEngineering.com

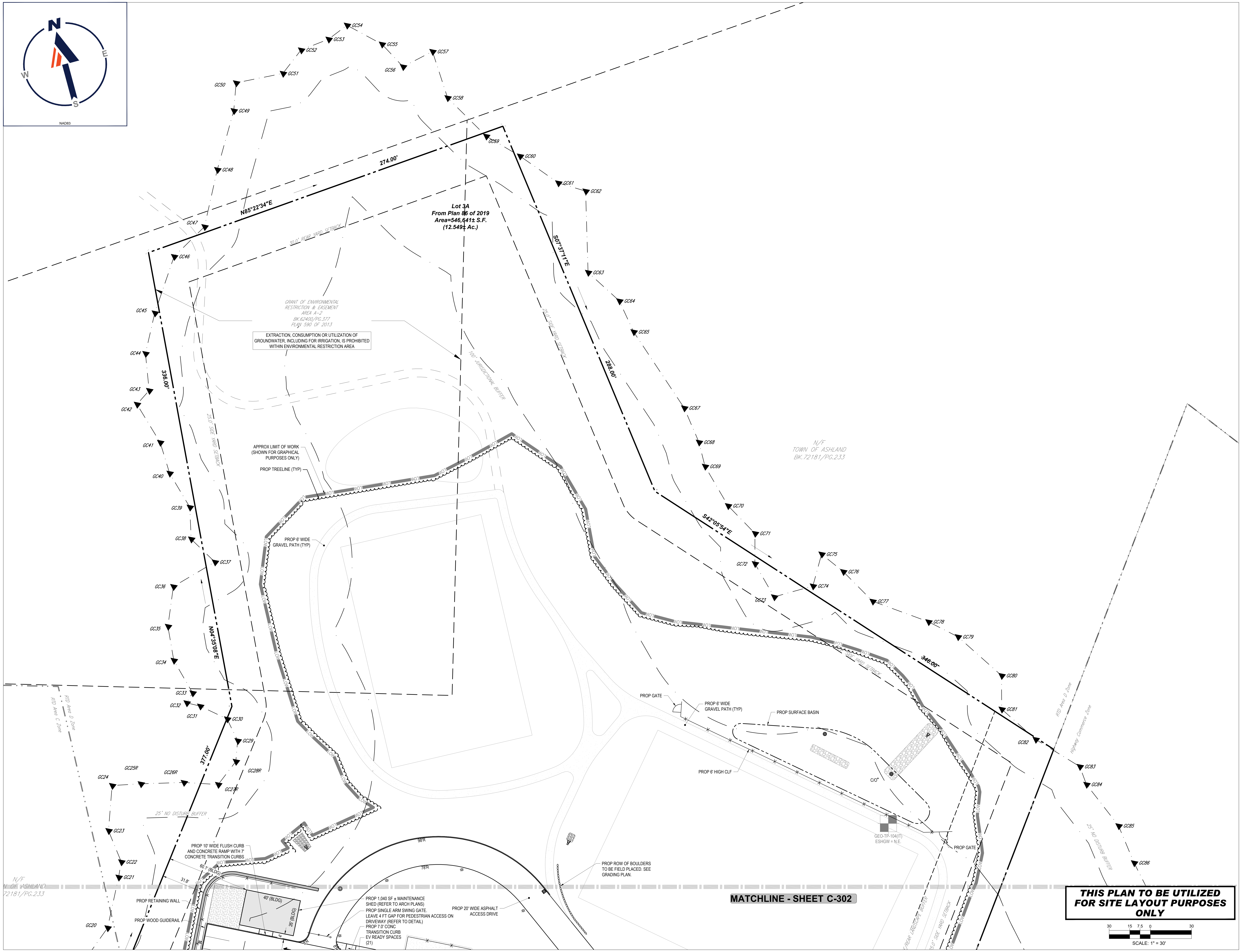
J.A. KUCICH
JOHN A. KUCICH
CIVIL
No. 41530
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
NEW HAMPSHIRE LICENSE No. 15476
CONNECTICUT LICENSE No. 26177
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

ISSUED FOR PERMIT

SITE PLAN A

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

C-302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GC81
GC82
GC83
GC84
GC85
GC86
N85°22'34"E
274.00'
S07°37'11"E
288.00'
S42°05'54"E
346.00'
336.00'
N04°35'08"E
377.00'
Lot 3A
From Plan 86 of 2019
Area=546,641± S.F.
(12.549± Ac.)
30.0' REAR YARD SETBACK
25.0' SIDE YARD SETBACK
100' JURISDICTIONAL BUFFER
25' NO DISTURB BUFFER
GRANT OF ENVIRONMENTAL RESTRICTION & EASEMENT AREA A-2 BK.62400/PG.377 PLAN 590 OF 2013
EXTRACTION, CONSUMPTION OR UTILIZATION OF GROUNDWATER, INCLUDING FOR IRRIGATION, IS PROHIBITED WITHIN ENVIRONMENTAL RESTRICTION AREA
N/F TOWN OF ASHLAND BK.72181/PG.233
N/F N. OF ASHLAND 72181/PG.233
RTD Area D Zone
RTD Area C Zone
Highway Commerce Zone
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
PROP TREELINE (TYP)
PROP 6' WIDE GRAVEL PATH (TYP)
LOW
PROP GATE
PROP SURFACE BASIN
PROP 6' HIGH CLF
C/O
GEO-TP-104(IT) ESHGW = N.E.
PROP 10' WIDE FLUSH CURB AND CONCRETE RAMP WITH 7' CONCRETE TRANSITION CURBS
60.1' (BLDG)
31.8'
40' (BLDG)
26' (BLDG)
4'
8'R
98'R
78'R
PROP RETAINING WALL
PROP WOOD GUIDERAIL
PROP 1,040 SF ± MAINTENANCE SHED (REFER TO ARCH PLANS)
PROP SINGLE ARM SWING GATE. LEAVE 4 FT GAP FOR PEDESTRIAN ACCESS ON DRIVEWAY (REFER TO DETAIL)
PROP 7.0' CONC TRANSITION CURB
EV READY SPACES (21)
PROP 20' WIDE ASPHALT ACCESS DRIVE
PROP ROW OF BOULDERS TO BE FIELD PLACED. SEE GRADING PLAN.
REAR LANDSCAPE BUFFER
25.0' SIDE YARD SETBACK
MATCHLINE - SHEET C-302
30 15 7.5 0 30
SCALE: 1" = 30'

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

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MEMORIAL DRIVE
ASHLAND, MA

cbt
One Constitution Road
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Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
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J.A. KUCICH
JOHN A. KUCICH
CIVIL
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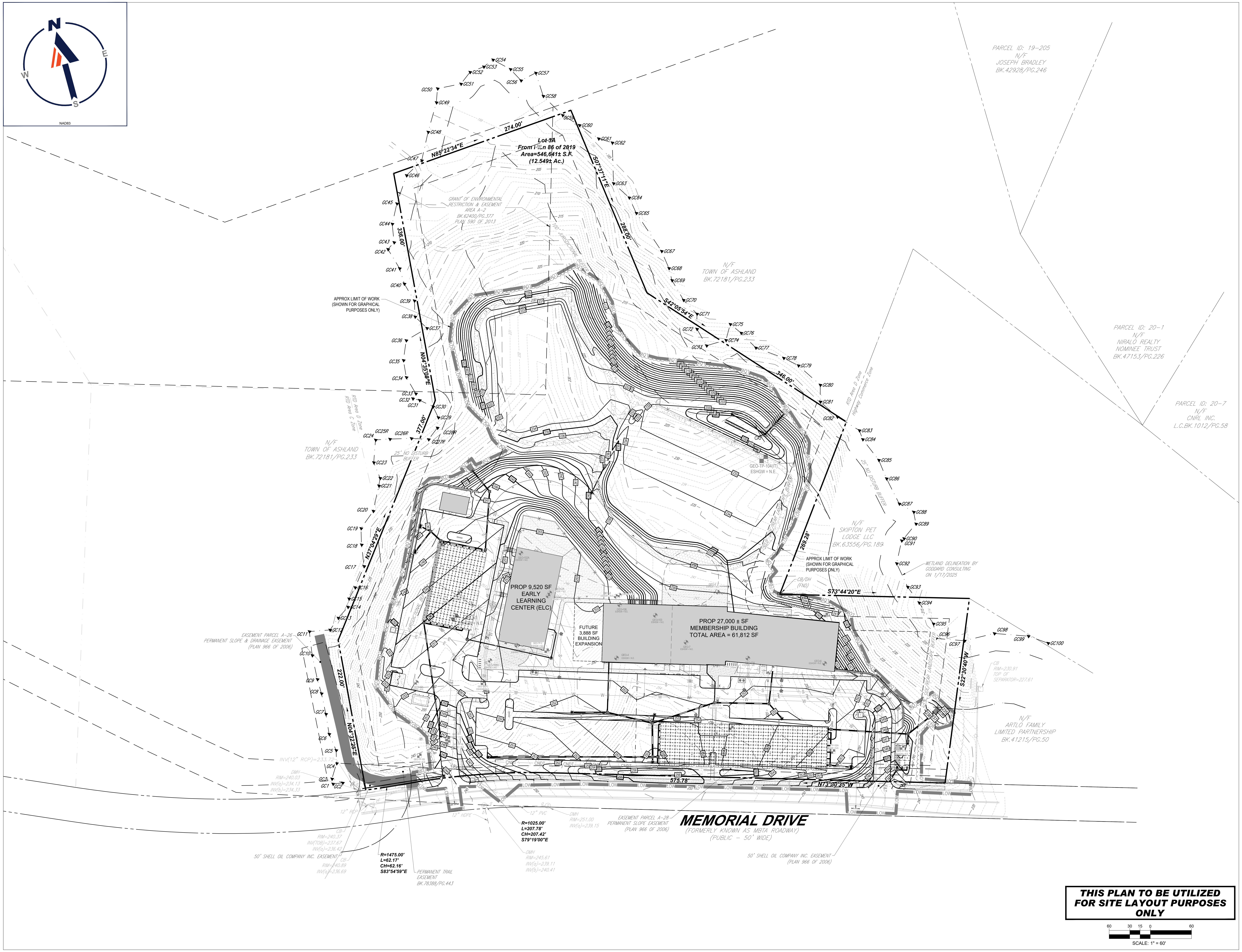
MAINE LICENSE No. 12553

ISSUED FOR PERMIT

SITE PLAN B

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

C-303


N
E
S
W
NAD83
Lot 3A
From Plan 86 of 2019
Area=546,641± S.F.
(12.549± Ac.)
N85°22'34"E
274.00'
S07°37'11"E
288.00'
S42°05'54"E
346.00'
269.28'
S73°44'20"E
S22°30'40"W
575.78'
N73°30'35"W
N04°32'25"E
222.00'
N37°04'29"E
377.00'
N04°35'08"E
336.00'
GRANT OF ENVIRONMENTAL RESTRICTION & EASEMENT AREA A-2 BK.62400/PG.377 PLAN 590 OF 2013
N/F TOWN OF ASHLAND BK.72181/PG.233
N/F TOWN OF ASHLAND BK.72181/PG.233
PARCEL ID: 19-205 N/F JOSEPH BRADLEY BK.42928/PG.246
PARCEL ID: 20-1 N/F NIRALO REALTY NOMINEE TRUST BK.47153/PG.226
PARCEL ID: 20-7 N/F CNRL INC. L.C.BK.1012/PG.58
N/F SKIPTON PET LODGE LLC BK.63556/PG.189
N/F ARTLO FAMILY LIMITED PARTNERSHIP BK.41215/PG.50
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
WETLAND DELINEATION BY GODDARD CONSULTING ON 1/17/2025
25' NO DISTURB BUFFER
RTD Area D Zone
Highway Commerce Zone
GEO-TP-104(IT) ESHGW = N.E.
CB/DH (FND)
PROP 9,520 SF EARLY LEARNING CENTER (ELC)
FUTURE 3,888 SF BUILDING EXPANSION
PROP 27,000 ± SF MEMBERSHIP BUILDING TOTAL AREA = 61,812 SF
EASEMENT PARCEL A-26 PERMANENT SLOPE & DRAINAGE EASEMENT (PLAN 966 OF 2006)
INV(12" RCP)=233.72
DMH RIM=240.03 INV(a)=234.13 INV(b)=234.33
12" RCP
12" HDPE
12" PVC
CB RIM=240.37 INV(TOB)=237.67 INV(a)=236.42
50' SHELL OIL COMPANY INC. EASEMENT
CB RIM=240.89 INV(a)=236.69
R=1475.00' L=62.17' CH=62.16' S83°54'59"E
PERMANENT TRAIL EASEMENT BK.78388/PG.443
R=1025.00' L=207.78' CH=207.42' S79°19'00"E
DMH RIM=251.00 INV(a)=239.15
DMH RIM=245.61 INV(a)=239.11 INV(b)=240.41
EASEMENT PARCEL A-28 PERMANENT SLOPE EASEMENT (PLAN 966 OF 2006)
MEMORIAL DRIVE
(FORMERLY KNOWN AS MBTA ROADWAY)
(PUBLIC – 50' WIDE)
50' SHELL OIL COMPANY INC. EASEMENT (PLAN 966 OF 2006)
CB RIM=230.97 TOP OF SEPARATOR=227.61
60
30
15
0
60
SCALE: 1" = 60'

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

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MEMORIAL DRIVE
ASHLAND, MA

cbt

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Suite 200
Boston, MA 02129
cbtarchitects.com
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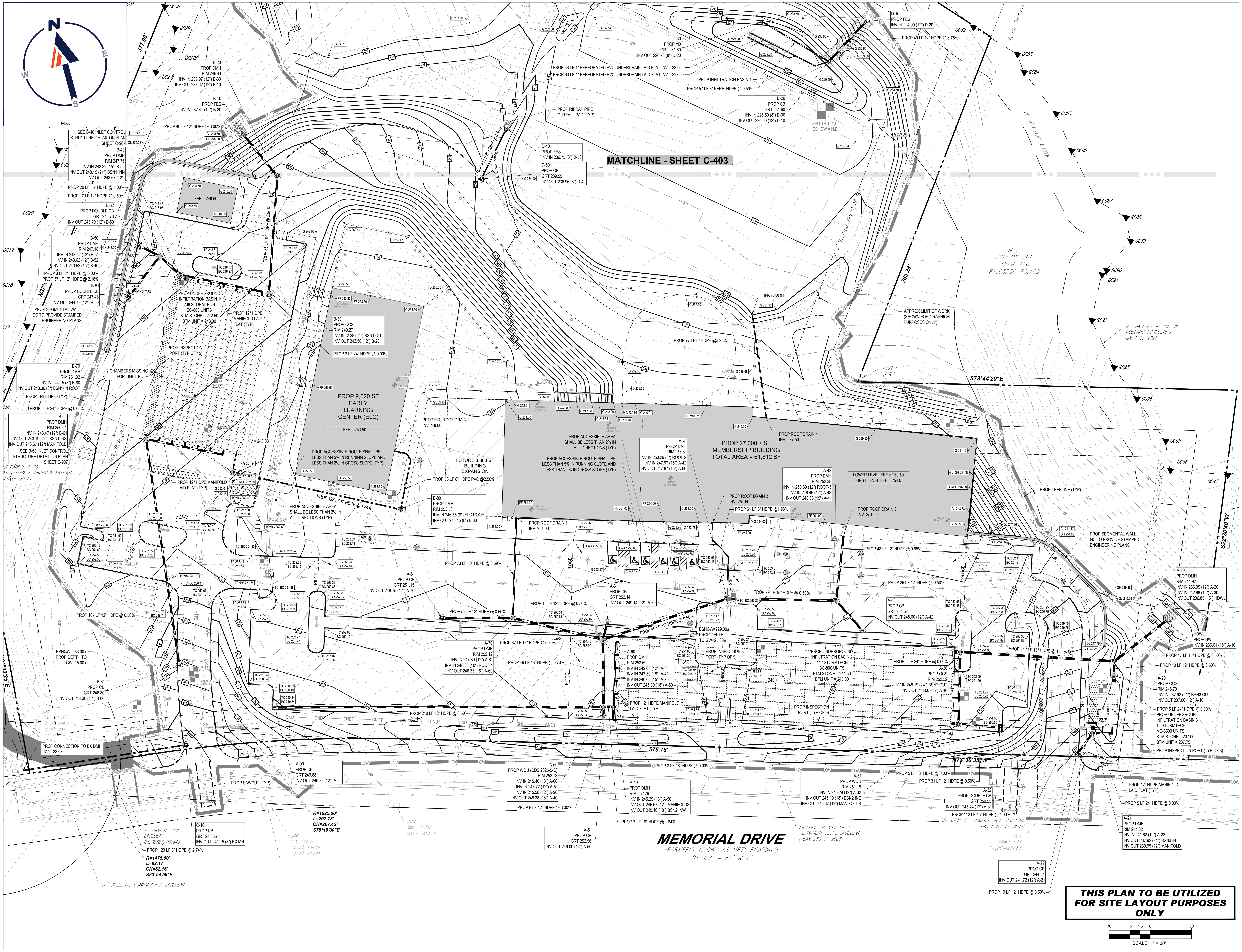
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

ISSUED FOR PERMIT

OVERALL GRADING AND DRAINAGE PLAN

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

C-401


N
E
S
W
NAD83
MATCHLINE - SHEET C-403
PROP 9,520 SF EARLY LEARNING CENTER (ELC)
FFE = 253.50
FFE = 248.50
PROP 27,000 ± SF MEMBERSHIP BUILDING TOTAL AREA = 61,812 SF
FUTURE 3,888 SF BUILDING EXPANSION
LOWER LEVEL FFE = 239.50
FIRST LEVEL FFE = 254.0
B-20 PROP DMH RIM 246.41 INV IN 239.97 (12") B-30 INV OUT 238.62 (12") B-10
B-10 PROP FES INV IN 237.41 (12") B-20
SEE B-40 INLET CONTROL STRUCTURE DETAIL ON PLAN SHEET C-907
B-40 PROP DMH RIM 247.76 INV IN 243.32 (15") B-50 INV IN 243.19 (24") BSN1 INN INV OUT 243.67 (12")
PROP 40 LF 12" HDPE @ 3.00%
PROP 20 LF 15" HDPE @ 1.00%
PROP 17 LF 12" HDPE @ 0.50%
B-52 PROP DOUBLE CB GRT 246.73 INV OUT 243.70 (12") B-50
B-50 PROP DMH RIM 247.18 INV IN 243.62 (12") B-51 INV IN 243.62 (12") B-52 INV OUT 243.52 (15") B-40
PROP 3 LF 24" HDPE @ 0.00%
PROP 37 LF 12" HDPE @ 2.18%
B-51 PROP DOUBLE CB GRT 247.43 INV OUT 244.42 (12") B-50
PROP SEGMENTAL WALL GC TO PROVIDE STAMPED ENGINEERING PLANS
PROP UNDERGROUND INFILTRATION BASIN 1 238 STORMTECH SC-800 UNITS BTM STONE = 242.50 BTM UNIT = 243.00
PROP 12" HDPE MANIFOLD LAID FLAT (TYP)
PROP INSPECTION PORT (TYP OF 15)
2 CHAMBERS MISSING FOR LIGHT POLE
B-70 PROP DMH RIM 251.92 INV IN 244.15 (8") B-80 INV OUT 243.36 (8") BSN1 ROOF
PROP TREELINE (TYP)
PROP 3 LF 24" HDPE @ 0.00%
B-60 PROP DMH RIM 250.04 INV IN 243.47 (12") B-61 INV OUT 243.19 (24") BSN1 INV INV OUT 243.67 (12") MANIFOLD
SEE B-60 INLET CONTROL STRUCTURE DETAIL ON PLAN SHEET C-907
PROP 12" HDPE MANIFOLD LAID FLAT (TYP)
INV = 243.08
B-30 PROP OCS RIM 249.27 INV IN -2.28 (24") BSN1 OUT INV OUT 242.50 (12") B-20
PROP 3 LF 24" HDPE @ 0.00%
PROP ACCESSIBLE ROUTE SHALL BE LESS THAN 5% IN RUNNING SLOPE AND LESS THAN 2% IN CROSS SLOPE (TYP)
PROP 125 LF 8" HDPE @ 1.84%
PROP ACCESSIBLE AREA SHALL BE LESS THAN 2% IN ALL DIRECTIONS (TYP)
PROP ELC ROOF DRAIN INV 248.00
PROP 58 LF 8" HDPE PVC @ 2.50%
B-80 PROP DMH RIM 253.50 INV IN 246.55 (8") ELC ROOF INV OUT 246.45 (8") B-80
PROP 85 LF 12" HDPE @ 2.96%
PROP 41 LF 8" HDPE @ 0.50%
D-40 PROP FES INV IN 236.75 (8") D-50
D-50 PROP CB GRT 239.59 INV OUT 236.96 (8") D-40
D-30 PROP YD GRT 231.60 INV OUT 226.78 (8") D-20
D-10 PROP FES INV IN 224.99 (12") D-20
PROP 40 LF 12" HDPE @ 3.75%
PROP 38 LF 4" PERFORATED PVC UNDERDRAIN LAID FLAT INV = 227.00
PROP 63 LF 4" PERFORATED PVC UNDERDRAIN LAID FLAT INV = 227.00
PROP INFILTRATION BASIN 4
PROP 57 LF 8" PERF. HDPE @ 0.50%
D-20 PROP CB GRT 231.60 INV IN 226.50 (8") D-30 INV OUT 226.50 (12") D-10
GEO-TP-104(T) ESHGW = N.E.
PROP RIPRAP PIPE OUTFALL PAD (TYP)
INV=235.01
PROP 77 LF 8" HDPE @3.23%
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
N/F SKIPTON PET LODGE LLC BK.63556/PG.189
WETLAND DELINEATION BY GODDARD CONSULTING ON 1/7/2025
25' NO DISTURB BUFFER
CB/DH (FND)
S73°44'20"E
269.28'
377.00'
S22°30'40"W
N37°2
PROP ROOF DRAIN 4 INV 237.50
A-41 PROP DMH RIM 253.31 INV IN 250.29 (8") ROOF 2 INV IN 247.97 (15") A-42 INV OUT 247.87 (15") A-60
A-42 PROP DMH RIM 252.38 INV IN 250.69 (12") ROOF-3 INV IN 248.46 (12") A-43 INV OUT 248.36 (15") A-41
PROP ACCESSIBLE AREA SHALL BE LESS THAN 2% IN ALL DIRECTIONS (TYP)
PROP ACCESSIBLE ROUTE SHALL BE LESS THAN 5% IN RUNNING SLOPE AND LESS THAN 2% IN CROSS SLOPE (TYP)
PROP ROOF DRAIN 2 INV 251.50
PROP 61 LF 8" HDPE @ 1.98%
PROP ROOF DRAIN 3 INV 251.00
PROP ROOF DRAIN 1 INV 251.00
PROP TREELINE (TYP)
PROP SEGMENTAL WALL GC TO PROVIDE STAMPED ENGINEERING PLANS
PROP 48 LF 12" HDPE @ 0.65%
PROP 73 LF 10" HDPE @ 3.59%
A-81 PROP CB GRT 251.15 INV OUT 248.15 (12") A-70
PROP 52 LF 12" HDPE @ 0.50%
PROP 13 LF 12" HDPE @ 0.50%
A-61 PROP CB GRT 252.14 INV OUT 249.14 (12") A-60
PROP 79 LF 15" HDPE @ 0.50%
PROP 29 LF 12" HDPE @ 0.50%
A-43 PROP CB GRT 251.64 INV OUT 248.60 (12") A-42
A-10 PROP DMH RIM 244.92 INV IN 236.95 (12") A-20 INV IN 242.88 (15") A-30 INV OUT 236.85 (15") HDWL
HDWL PROP HW INV IN 236.61 (15") A-10
PROP 47 LF 15" HDPE @ 0.50%
PROP 10 LF 12" HDPE @ 0.50%
PROP 167 LF 12" HDPE @ 0.50%
ESHGW=233.00± PROP DEPTH TO GW=15.00±
B-61 PROP CB GRT 246.80 INV OUT 244.30 (12") B-60
A-70 PROP DMH RIM 252.12 INV IN 247.89 (12") A-81 INV IN 248.38 (10") ROOF-1 INV OUT 246.33 (15") A-60
PROP 67 LF 15" HDPE @ 0.50%
PROP 49 LF 18" HDPE @ 0.70%
PROP 95 LF 15" HDPE @ 0.50%
ESHGW=229.00± PROP DEPTH TO GW=25.00±
A-60 PROP DMH RIM 253.69 INV IN 249.08 (12") A-61 INV IN 247.39 (15") A-41 INV IN 246.00 (15") A-70 INV OUT 245.80 (18") A-50
PROP INSPECTION PORT (TYP OF 9)
PROP UNDERGROUND INFILTRATION BASIN 2 442 STORMTECH SC-800 UNITS BTM STONE = 244.50 BTM UNIT = 245.00
PROP 5 LF 24" HDPE @ 0.00%
A-30 PROP OCS RIM 252.52 INV IN 245.19 (24") BSN2 OUT INV OUT 244.00 (15") A-10
PROP 112 LF 15" HDPE @ 1.00%
PROP 12" HDPE MANIFOLD LAID FLAT (TYP)
PROP INSPECTION PORT (TYP OF 9)
PROP 240 LF 12" HDPE @ 0.50%
A-20 PROP OCS RIM 245.70 INV IN 237.92 (24") BSN3 OUT INV OUT 237.00 (12") A-10
PROP 5 LF 24" HDPE @ 0.00%
PROP UNDERGROUND INFILTRATION BASIN 3 12 STORMTECH MC-3500 UNITS BTM STONE = 237.00 BTM UNIT = 237.75
PROP INSPECTION PORT (TYP OF 3)
PROP CONNECTION TO EX DMH INV = 237.86
575.78'
N73°30'35"W
PROP 3 LF 18" HDPE @ 0.00%
A-90 PROP CB GRT 249.88 INV OUT 246.78 (12") A-50
PROP SAWCUT (TYP)
A-50 PROP WQU (CDS 2025-5-C) RIM 252.73 INV IN 245.46 (18") A-60 INV IN 246.77 (12") A-51 INV IN 245.58 (12") A-90 INV OUT 245.38 (18") A-40
PROP 8 LF 12" HDPE @ 3.00%
A-40 PROP DMH RIM 252.79 INV IN 245.25 (18") A-50 INV OUT 245.67 (12") MANIFOLDS INV OUT 245.16 (18") BSN2 INW
PROP 7 LF 18" HDPE @ 1.84%
A-31 PROP WQU RIM 251.15 INV IN 245.29 (12") A-32 INV OUT 245.19 (18") BSN2 INE INV OUT 245.67 (12") MANIFOLDS
PROP 5 LF 18" HDPE @ 0.00%
PROP 31 LF 12" HDPE @ 0.50%
A-32 PROP DOUBLE CB GRT 250.55 INV OUT 245.44 (12") A-31
PROP 112 LF 15" HDPE @ 1.00%
PROP 12" HDPE MANIFOLD LAID FLAT (TYP)
PROP 5 LF 24" HDPE @ 0.00%
A-21 PROP DMH RIM 244.32 INV IN 241.62 (12") A-22 INV OUT 237.92 (24") BSN3 IN INV OUT 239.95 (12") MANIFOLD
A-22 PROP CB GRT 244.34 INV OUT 241.72 (12") A-21
PROP 19 LF 12" HDPE @ 0.50%
A-51 PROP CB GRT 252.56 INV OUT 249.00 (12") A-50
C-10 PROP CB GRT 243.65 INV OUT 241.15 (8") EX MH
PROP 120 LF 8" HDPE @ 2.74%
R=1025.00' L=207.78' CH=207.42' S79°19'00"E
R=1475.00' L=62.17' CH=62.16' S83°54'59"E
PERMANENT TRAIL EASEMENT BK.78388/PG.443
50' SHELL OIL COMPANY INC. EASEMENT
50' SHELL OIL COMPANY INC. EASEMENT (PLAN 966 OF 2006)
EASEMENT PARCEL A-28 PERMANENT SLOPE EASEMENT (PLAN 966 OF 2006)
MEMORIAL DRIVE
(FORMERLY KNOWN AS MBTA ROADWAY)
(PUBLIC - 50' WIDE)
RIDGE
30 15 7.5 0 30
SCALE: 1" = 30'

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
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5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

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ASHLAND, MA

cbt

One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER

50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900

www.BohlerEngineering.com

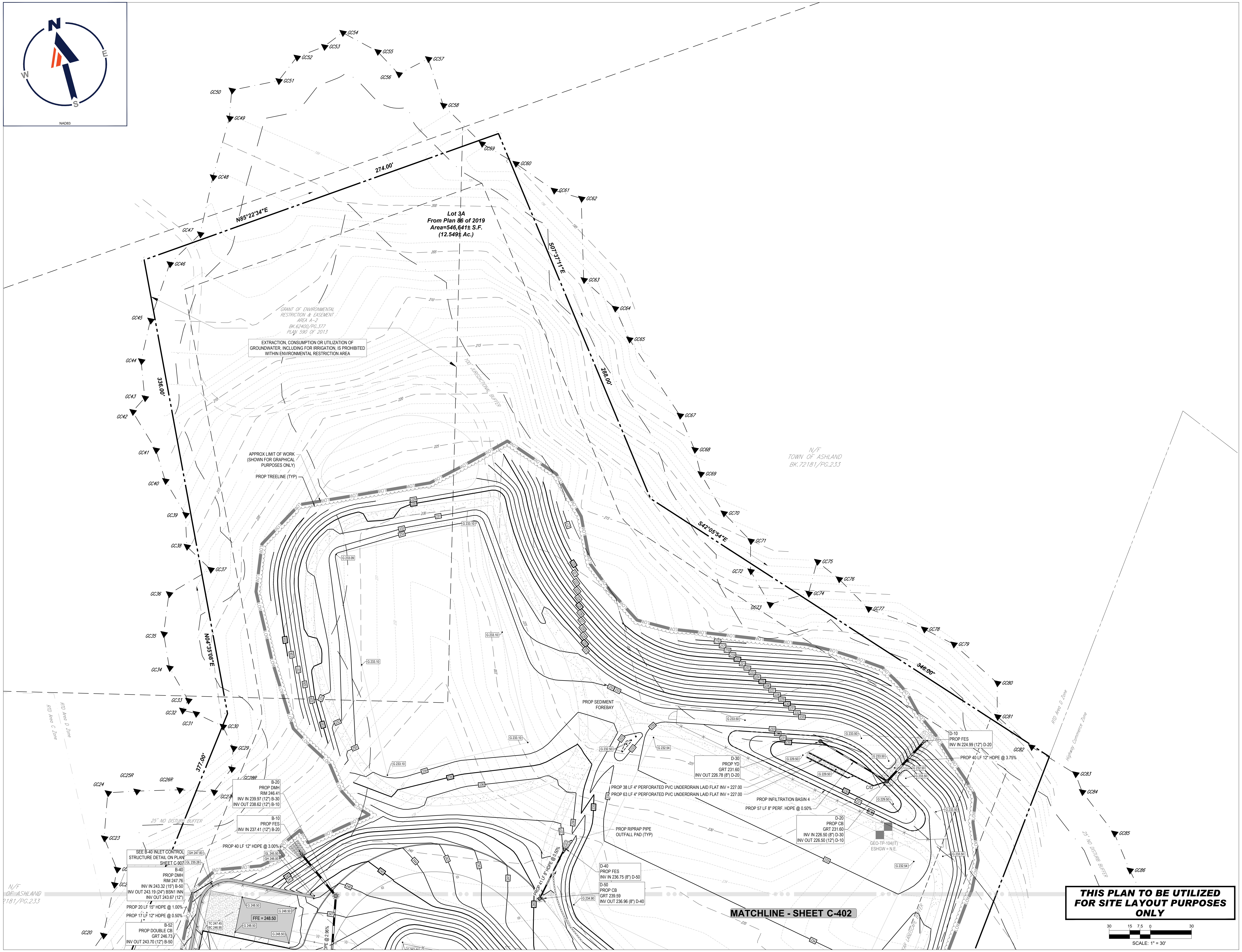
J.A. KUCICH
PROFESSIONAL ENGINEER
MAINE LICENSE No. 12553

ISSUED FOR
PERMIT

GRADING AND
DRAINAGE PLAN A

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

C-402


N
E
S
W
NAD83
Lot 3A
From Plan 86 of 2019
Area=546,641± S.F.
(12.549± Ac.)
N85°22'34"E
274.00'
S07°37'11"E
288.00'
S42°05'54"E
346.00'
336.00'
N04°35'08"E
377.00'
GRANT OF ENVIRONMENTAL RESTRICTION & EASEMENT AREA A-2 BK.62400/PG.377 PLAN 590 OF 2013
EXTRACTION, CONSUMPTION OR UTILIZATION OF GROUNDWATER, INCLUDING FOR IRRIGATION, IS PROHIBITED WITHIN ENVIRONMENTAL RESTRICTION AREA
100' JURISDICTIONAL BUFFER
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
PROP TREELINE (TYP)
N/F TOWN OF ASHLAND BK.72181/PG.233
RTD Area D Zone
RTD Area C Zone
Highway Commerce Zone
25' NO DISTURB BUFFER
LOW
PROP SEDIMENT FOREBAY
D-30 PROP YD GRT 231.60 INV OUT 226.78 (8") D-20
PROP 38 LF 4" PERFORATED PVC UNDERDRAIN LAID FLAT INV = 227.00
PROP 63 LF 4" PERFORATED PVC UNDERDRAIN LAID FLAT INV = 227.00
PROP INFILTRATION BASIN 4
PROP 57 LF 8" PERF. HDPE @ 0.50%
D-20 PROP CB GRT 231.60 INV IN 226.50 (8") D-30 INV OUT 226.50 (12") D-10
D-10 PROP FES INV IN 224.99 (12") D-20
PROP 40 LF 12" HDPE @ 3.75%
C/O
GEO-TP-104(IT) ESHGW = N.E.
PROP RIPRAP PIPE OUTFALL PAD (TYP)
D-40 PROP FES INV IN 236.75 (8") D-50
D-50 PROP CB GRT 239.59 INV OUT 236.96 (8") D-40
PROP 41 LF 8" HDPE @ 0.50%
HDPE @ 2.96%
B-20 PROP DMH RIM 246.41 INV IN 239.97 (12") B-30 INV OUT 238.62 (12") B-10
B-10 PROP FES INV IN 237.41 (12") B-20
PROP 40 LF 12" HDPE @ 3.00%
SEE B-40 INLET CONTROL STRUCTURE DETAIL ON PLAN SHEET C-907
B-40 PROP DMH RIM 247.76 INV IN 243.32 (15") B-50 INV OUT 243.19 (24") BSN1 INN INV OUT 243.67 (12")
PROP 20 LF 15" HDPE @ 1.00%
PROP 17 LF 12" HDPE @ 0.50%
B-52 PROP DOUBLE CB GRT 246.73 INV OUT 243.70 (12") B-50
GH 247.83
GL 235.28
GL 245.50
GH 246.00
TC 247.45
BC 246.95
FFE = 248.50
G 248.50
G 233.10
G 233.09
G 233.50
G 232.50
G 232.54
G 229.50
G 234.90
G 232.54
200
205
210
215
220
225
230
234
235
GC20
GC23
GC24
GC25R
GC26R
GC27R
GC28R
GC29
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GC73
GC74
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GC79
GC80
GC81
GC82
GC83
GC84
GC85
GC86
MATCHLINE - SHEET C-402
THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY
30 15 7.5 0 30
SCALE: 1" = 30'

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
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MEMORIAL DRIVE
ASHLAND, MA

cbt

One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER

50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900

www.BohlerEngineering.com

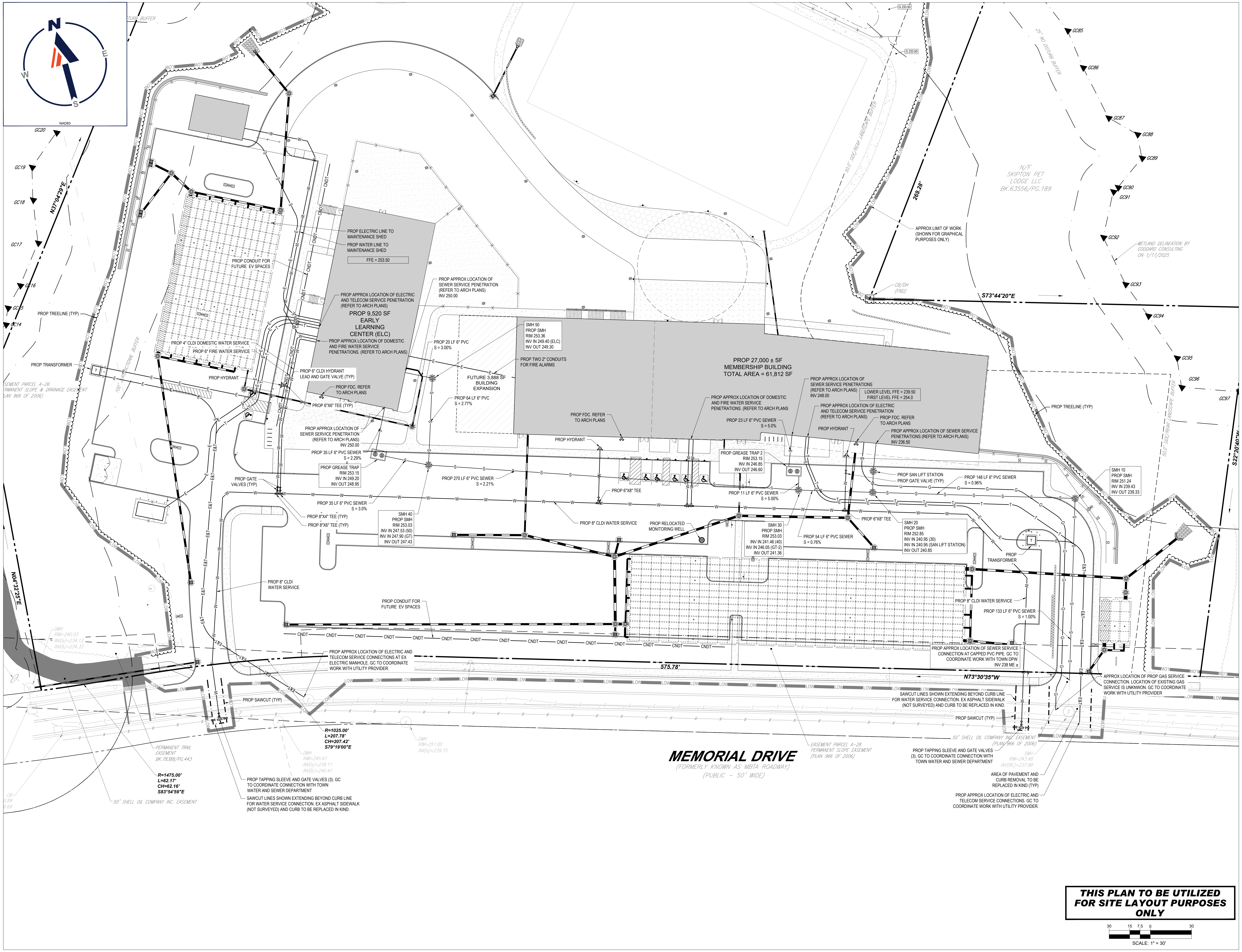
J.A. KUCICH
JOHN A. KUCICH
CIVIL
No. 41530
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
NEW HAMPSHIRE LICENSE No. 15476
CONNECTICUT LICENSE No. 26177
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

ISSUED FOR PERMIT

GRADING AND DRAINAGE PLAN B

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

C-403


N
E
S
W
NAD83
GC14
GC15
GC16
GC17
GC18
GC19
GC20
GC85
GC86
GC87
GC88
GC89
GC90
GC91
GC92
GC93
GC94
GC95
GC96
GC97
N37°04'29"E
N04°32'25"E
S73°44'20"E
269.28'
S22°30'40"W
575.78'
N73°30'35"W
N/F
SKIPTON PET
LODGE LLC
BK.63556/PG.189
25' NO DISTURB BUFFER
50.0' SIDE/REAR LANDSCAPE BUFFER
100' JURISDICTIONAL BUFFER
WETLAND DELINEATION BY GODDARD CONSULTING ON 1/17/2025
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
CB/DH (FND)
PROP TREELINE (TYP)
PROP TRANSFORMER
EASEMENT PARCEL A-26 PERMANENT SLOPE & DRAINAGE EASEMENT (PLAN 966 OF 2006)
PROP ELECTRIC LINE TO MAINTENANCE SHED
PROP WATER LINE TO MAINTENANCE SHED
FFE = 253.50
PROP CONDUIT FOR FUTURE EV SPACES
PROP APPROX LOCATION OF ELECTRIC AND TELECOM SERVICE PENETRATION (REFER TO ARCH PLANS)
PROP 9,520 SF EARLY LEARNING CENTER (ELC)
PROP 4" CLDI DOMESTIC WATER SERVICE
PROP 6" FIRE WATER SERVICE
PROP APPROX LOCATION OF DOMESTIC AND FIRE WATER SERVICE PENETRATIONS. (REFER TO ARCH PLANS)
PROP 6" CLDI HYDRANT LEAD AND GATE VALVE (TYP)
PROP HYDRANT
PROP FDC. REFER TO ARCH PLANS
PROP 6"X6" TEE (TYP)
PROP APPROX LOCATION OF SEWER SERVICE PENETRATION (REFER TO ARCH PLANS) INV 250.00
PROP 35 LF 6" PVC SEWER S = 2.29%
PROP GREASE TRAP RIM 253.15 INV IN 249.20 INV OUT 248.95
PROP GATE VALVES (TYP)
PROP 35 LF 6" PVC SEWER S = 3.0%
PROP 8"X4" TEE (TYP)
PROP 8"X6" TEE (TYP)
SMH 40 PROP SMH RIM 253.03 INV IN 247.53 (50) INV IN 247.90 (GT) INV OUT 247.43
PROP 8" CLDI WATER SERVICE
PROP 20 LF 6" PVC S = 3.00%
PROP 64 LF 6" PVC S = 2.77%
SMH 50 PROP SMH RIM 253.36 INV IN 249.40 (ELC) INV OUT 249.30
PROP TWO 2" CONDUITS FOR FIRE ALARMS
FUTURE 3,888 SF BUILDING EXPANSION
PROP 27,000 ± SF MEMBERSHIP BUILDING TOTAL AREA = 61,812 SF
PROP APPROX LOCATION OF DOMESTIC AND FIRE WATER SERVICE PENETRATIONS. (REFER TO ARCH PLANS
PROP APPROX LOCATION OF SEWER SERVICE PENETRATIONS (REFER TO ARCH PLANS) INV 248.00
LOWER LEVEL FFE = 239.50 FIRST LEVEL FFE = 254.0
PROP 23 LF 6" PVC SEWER S = 5.0%
PROP APPROX LOCATION OF ELECTRIC AND TELECOM SERVICE PENETRATION (REFER TO ARCH PLANS)
PROP FDC. REFER TO ARCH PLANS
PROP APPROX LOCATION OF SEWER SERVICE PENETRATIONS (REFER TO ARCH PLANS) INV 236.50
PROP 270 LF 6" PVC SEWER S = 2.21%
PROP 6"X8" TEE
PROP GREASE TRAP 2 RIM 253.15 INV IN 246.85 INV OUT 246.60
PROP 11 LF 6" PVC SEWER S = 5.00%
PROP SAN LIFT STATION
PROP GATE VALVE (TYP)
PROP 148 LF 6" PVC SEWER S = 0.96%
SMH 10 PROP SMH RIM 251.24 INV IN 239.43 INV OUT 239.33
PROP RELOCATED MONITORING WELL
SMH 30 PROP SMH RIM 253.03 INV IN 241.46 (40) INV IN 246.05 (GT-2) INV OUT 241.36
PROP 54 LF 6" PVC SEWER S = 0.76%
SMH 20 PROP SMH RIM 252.85 INV IN 240.95 (30) INV IN 240.95 (SAN LIFT STATION) INV OUT 240.85
PROP TRANSFORMER
PROP 133 LF 6" PVC SEWER S = 1.00%
PROP APPROX LOCATION OF SEWER SERVICE CONNECTION AT CAPPED PVC PIPE. GC TO COORDINATE WORK WITH TOWN DPW. INV 238 ME ±
APPROX LOCATION OF PROP GAS SERVICE CONNECTION. LOCATION OF EXISTING GAS SERVICE IS UNKNWON. GC TO COORDINATE WORK WITH UTILITY PROVIDER
SAWCUT LINES SHOWN EXTENDING BEYOND CURB LINE FOR WATER SERVICE CONNECTION. EX ASPHALT SIDEWALK (NOT SURVEYED) AND CURB TO BE REPLACED IN KIND.
PROP SAWCUT (TYP)
50' SHELL OIL COMPANY INC. EASEMENT (PLAN 966 OF 2006)
PROP TAPPING SLEEVE AND GATE VALVES (3). GC TO COORDINATE CONNECTION WITH TOWN WATER AND SEWER DEPARTMENT
SMH RIM=243.48 INV(BC)=237.88
AREA OF PAVEMENT AND CURB REMOVAL TO BE REPLACED IN KIND (TYP)
PROP APPROX LOCATION OF ELECTRIC AND TELECOM SERVICE CONNECTIONS. GC TO COORDINATE WORK WITH UTILITY PROVIDER.
EASEMENT PARCEL A-28 PERMANENT SLOPE EASEMENT (PLAN 966 OF 2006)
MEMORIAL DRIVE
(FORMERLY KNOWN AS MBTA ROADWAY)
(PUBLIC – 50' WIDE)
PROP APPROX LOCATION OF ELECTRIC AND TELECOM SERVICE CONNECTIONS AT EX ELECTRIC MANHOLE. GC TO COORDINATE WORK WITH UTILITY PROVIDER.
PROP 8" CLDI WATER SERVICE
R=1025.00' L=207.78' CH=207.42' S79°19'00"E
R=1475.00' L=62.17' CH=62.16' S83°54'59"E
PERMANENT TRAIL EASEMENT BK.78388/PG.443
50' SHELL OIL COMPANY INC. EASEMENT
DMH RIM=240.03 INV(a)=234.13 INV(b)=234.33
DMH RIM=245.61 INV(a)=239.11 INV(b)=240.41
DMH RIM=251.00 INV(a)=239.15
CB 0.89 6.69
CNDT
E&T
W
S
G
E
T
LOW

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

30 15 7.5 0 30
SCALE: 1" = 30'

REVISIONS

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1	6/24/25	NOI AND SMP
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MEMORIAL DRIVE
ASHLAND, MA

cbt
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cbtarchitects.com
617.262.4354

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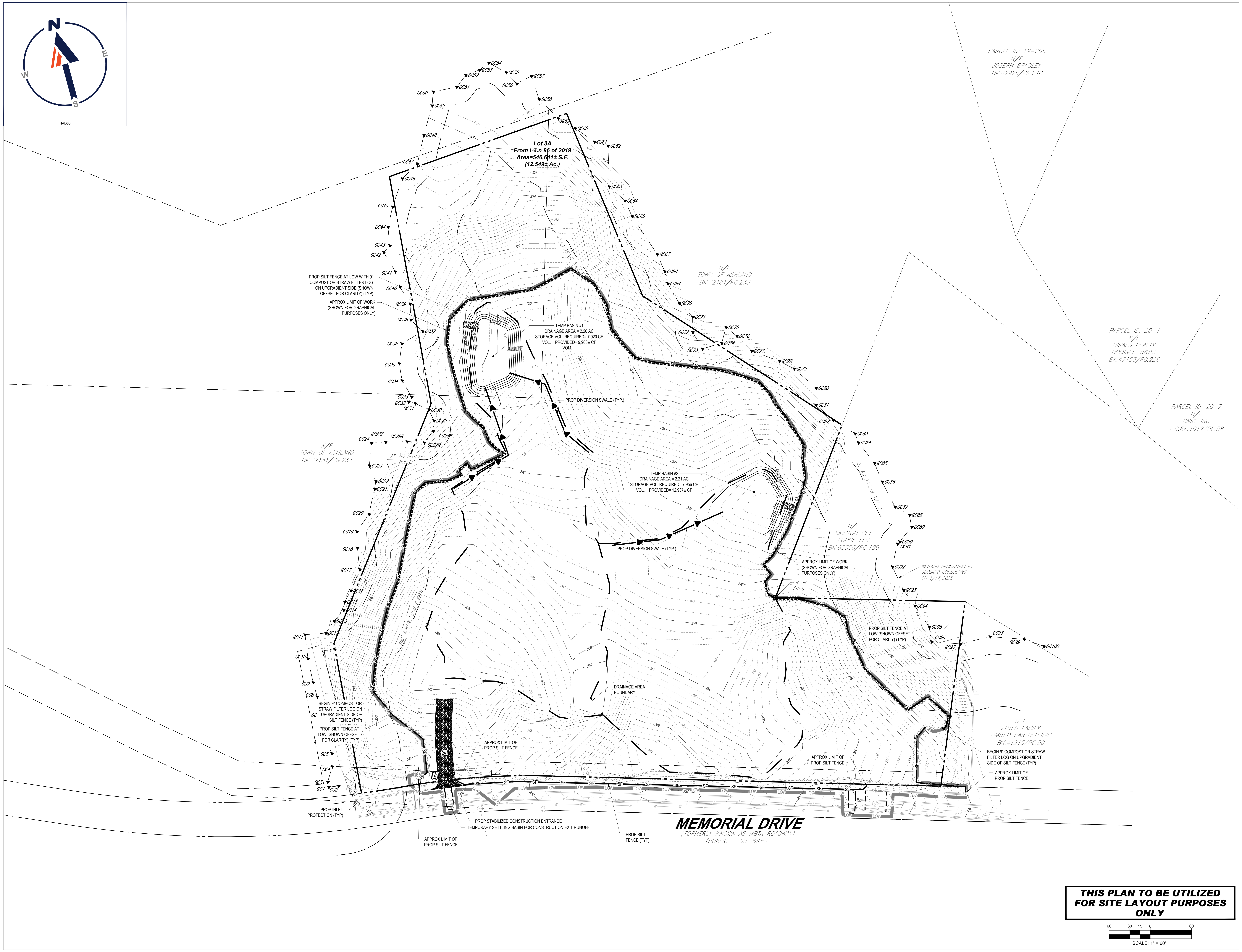
MAINE LICENSE No. 12553

ISSUED FOR PERMIT

UTILITY PLAN

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

C-501


N
E
S
W
NAD83
Lot 3A
From Plan 86 of 2019
Area=546,641± S.F.
(12.549± Ac.)
PARCEL ID: 19-205
N/F
JOSEPH BRADLEY
BK.42928/PG.246
N/F
TOWN OF ASHLAND
BK.72181/PG.233
PARCEL ID: 20-1
N/F
NIRALO REALTY
NOMINEE TRUST
BK.47153/PG.226
PARCEL ID: 20-7
N/F
CNRL INC.
L.C.BK.1012/PG.58
N/F
TOWN OF ASHLAND
BK.72181/PG.233
N/F
SKIPTON PET
LODGE LLC
BK.63556/PG.189
N/F
ARTLO FAMILY
LIMITED PARTNERSHIP
BK.41215/PG.50
100' JURISDICTIONAL BUFFER
25' NO DISTURB BUFFER
PROP SILT FENCE AT LOW WITH 9" COMPOST OR STRAW FILTER LOG ON UPGRADIENT SIDE (SHOWN OFFSET FOR CLARITY) (TYP)
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
TEMP BASIN #1
DRAINAGE AREA = 2.20 AC
STORAGE VOL. REQUIRED= 7,920 CF
VOL. PROVIDED= 9,968± CF
VOM.
PROP DIVERSION SWALE (TYP.)
TEMP BASIN #2
DRAINAGE AREA = 2.21 AC
STORAGE VOL. REQUIRED= 7,956 CF
VOL. PROVIDED= 12,937± CF
PROP DIVERSION SWALE (TYP.)
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
CB/DH (FND)
WETLAND DELINEATION BY GODDARD CONSULTING ON 1/17/2025
PROP SILT FENCE AT LOW (SHOWN OFFSET FOR CLARITY) (TYP)
DRAINAGE AREA BOUNDARY
BEGIN 9" COMPOST OR STRAW FILTER LOG ON UPGRADIENT SIDE OF SILT FENCE (TYP)
PROP SILT FENCE AT LOW (SHOWN OFFSET FOR CLARITY) (TYP)
APPROX LIMIT OF PROP SILT FENCE
24'
APPROX LIMIT OF PROP SILT FENCE
BEGIN 9" COMPOST OR STRAW FILTER LOG ON UPGRADIENT SIDE OF SILT FENCE (TYP)
APPROX LIMIT OF PROP SILT FENCE
PROP INLET PROTECTION (TYP)
PROP STABILIZED CONSTRUCTION ENTRANCE
TEMPORARY SETTLING BASIN FOR CONSTRUCTION EXIT RUNOFF
APPROX LIMIT OF PROP SILT FENCE
PROP SILT FENCE (TYP)
MEMORIAL DRIVE
(FORMERLY KNOWN AS MBTA ROADWAY)
(PUBLIC - 50' WIDE)
SF
LOW
GC1 GC2 GC3 GC4 GC5 GC8 GC9 GC10 GC11 GC12 GC13 GC14 GC15 GC16 GC17 GC18 GC19 GC20 GC21 GC22 GC23 GC24 GC25R GC26R GC27R GC28R GC29 GC30
GC31 GC32 GC33 GC34 GC35 GC36 GC37 GC38 GC39 GC40 GC41 GC42 GC43 GC44 GC45 GC46 GC47 GC48 GC49 GC50 GC51 GC52 GC53 GC54 GC55 GC56 GC57 GC58 GC59 GC60
GC61 GC62 GC63 GC64 GC65 GC67 GC68 GC69 GC70 GC71 GC72 GC73 GC74 GC75 GC76 GC77 GC78 GC79 GC80 GC81 GC82 GC83 GC84 GC85 GC86 GC87 GC88 GC89 GC90
GC91 GC92 GC93 GC94 GC95 GC96 GC97 GC98 GC99 GC100
195 196 197 198 199 200 205 210 215 220 225 230 235 240 245 250 255 260
60 30 15 0 60
SCALE: 1" = 60'

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

REVISIONS

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4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

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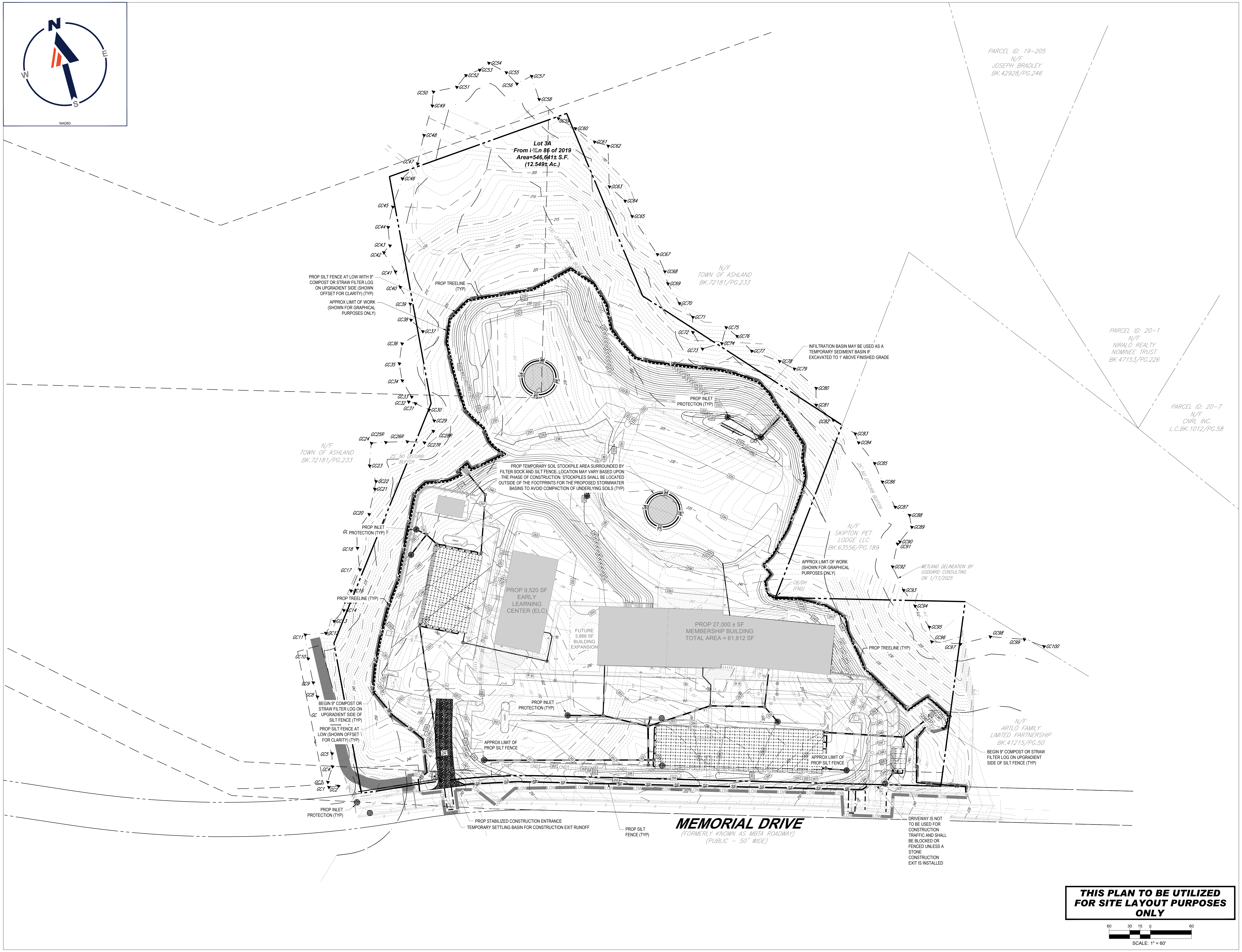
J.A. KUCICH
John Kucich
JOHN A. KUCICH CIVIL No. 41530
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
NEW HAMPSHIRE LICENSE No. 15476
CONNECTICUT LICENSE No. 26177
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

ISSUED FOR PERMIT

OVERALL EROSION AND SEDIMENT CONTROL PLAN: PHASE 1

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

C-801


N
E
S
W
NAD83
Lot 3A
From Plan 86 of 2019
Area=546,641± S.F.
(12.549± Ac.)
PARCEL ID: 19-205
N/F
JOSEPH BRADLEY
BK.42928/PG.246
N/F
TOWN OF ASHLAND
BK.72181/PG.233
PARCEL ID: 20-1
N/F
NIRALO REALTY
NOMINEE TRUST
BK.47153/PG.226
PARCEL ID: 20-7
N/F
CNRL INC.
L.C.BK.1012/PG.58
N/F
SKIPTON PET
LODGE LLC
BK.63556/PG.189
N/F
ARTLO FAMILY
LIMITED PARTNERSHIP
BK.41215/PG.50
PROP SILT FENCE AT LOW WITH 9" COMPOST OR STRAW FILTER LOG ON UPGRADIENT SIDE (SHOWN OFFSET FOR CLARITY) (TYP)
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
PROP TREELINE (TYP)
25' NO DISTURB BUFFER
INFILTRATION BASIN MAY BE USED AS A TEMPORARY SEDIMENT BASIN IF EXCAVATED TO 1' ABOVE FINISHED GRADE
PROP INLET PROTECTION (TYP)
PROP TEMPORARY SOIL STOCKPILE AREA SURROUNDED BY FILTER SOCK AND SILT FENCE. LOCATION MAY VARY BASED UPON THE PHASE OF CONSTRUCTION. STOCKPILES SHALL BE LOCATED OUTSIDE OF THE FOOTPRINTS FOR THE PROPOSED STORMWATER BASINS TO AVOID COMPACTION OF UNDERLYING SOILS (TYP)
WETLAND DELINEATION BY GODDARD CONSULTING ON 1/17/2025
CB/DH (FND)
PROP 9,520 SF EARLY LEARNING CENTER (ELC)
FUTURE 3,888 SF BUILDING EXPANSION
PROP 27,000 ± SF MEMBERSHIP BUILDING TOTAL AREA = 61,812 SF
BEGIN 9" COMPOST OR STRAW FILTER LOG ON UPGRADIENT SIDE OF SILT FENCE (TYP)
PROP SILT FENCE AT LOW (SHOWN OFFSET FOR CLARITY) (TYP)
APPROX LIMIT OF PROP SILT FENCE
24'
PROP STABILIZED CONSTRUCTION ENTRANCE
TEMPORARY SETTLING BASIN FOR CONSTRUCTION EXIT RUNOFF
PROP SILT FENCE (TYP)
MEMORIAL DRIVE
(FORMERLY KNOWN AS MBTA ROADWAY)
(PUBLIC – 50' WIDE)
DRIVEWAY IS NOT TO BE USED FOR CONSTRUCTION TRAFFIC AND SHALL BE BLOCKED OR FENCED UNLESS A STONE CONSTRUCTION EXIT IS INSTALLED
SF
LOW
60 30 15 0 60
SCALE: 1" = 60'

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

TEAM HOYT COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt
One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
www.BohlerEngineering.com

J.A. KUCICH
JOHN A. KUCICH
CIVIL
No. 41530
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
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ISSUED FOR PERMIT

OVERALL EROSION AND SEDIMENT CONTROL PLAN: PHASE 2

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

C-802

MASSACHUSETTS EROSION AND SEDIMENT CONTROL NOTES

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE AS SET FORTH IN THE MOST CURRENT STATE SEDIMENT AND EROSION CONTROL MANUAL.
2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. AT A MINIMUM, AREAS SHALL BE PERMANENTLY STABILIZED ACCORDING TO THE CURRENT EDITION OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), OR IN THE ABSENCE OF A SWPPP, THEY SHALL BE PERMANENTLY STABILIZED WITHIN 14 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 100 FEET OF A STREAM OR POND, THE AREA SHALL BE STABILIZED WITHIN 7 DAYS OR PRIOR TO ANY STORM EVENT (THIS WOULD INCLUDE WETLANDS).
3. SEDIMENT BARRIERS (SILT FENCE, STRAW BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 8%.
4. INSTALL SILTATION BARRIER AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF. SEE SILTATION BARRIER DETAILS FOR PROPER INSTALLATION. SILTATION BARRIER WILL REMAIN IN PLACE PER NOTE #5.
5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED. FOR SEDIMENT CONTROL DEVICES THAT ARE WITHIN AREAS SUBJECT TO CONSERVATION COMMISSION JURISDICTION, THE DEVICES SHALL REMAIN IN PLACE AND BE REMOVED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.
6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN THREE TO ONE (3:1) UNLESS OTHERWISE INDICATED ON THE PLANS. SLOPE PROTECTION FOR SLOPES GREATER THAN 3:1 SHALL BE DESIGNED BY A GEOTECHNICAL ENGINEER.
7. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCH (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
8. TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT FROM SPRING RUNOFF PROBLEMS.
9. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL STANDARDS.
10. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:
    a) SIX INCHES, OR DEPTH SPECIFIED ON THE LANDSCAPE PLAN, OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
    b) APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 LB PER ACRE OR 18.4 LB PER 1,000 SF USING 10-20-20 OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER 1,000 SF).
    c) FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED TO A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDED TO A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUE-GRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYEGRASS: SEEDING RATE IS 1.03 LBS PER 1,000 SF LAWN. QUALITY SOD MAY BE SUBSTITUTED FOR SEED WHERE SLOPES DO NOT EXCEED 2:1, SOD ON SLOPES STEEPER THAN 3:1 SHOULD BE PEGGED.
    d) STRAW MULCH AT THE RATE OF 70-90 LBS PER 1,000 SF. A HYDRO-APPLICATION OF WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE NON-TOXIC BINDER WILL BE USED ON STRAW MULCH FOR WIND CONTROL.
11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS 70% STABILIZED. FOR EROSION CONTROL MEASURES THAT ARE WITHIN AREAS SUBJECT TO CONSERVATION COMMISSION JURISDICTION, THE MEASURES SHALL REMAIN IN PLACE AND BE REMOVED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.
12. WETLANDS WILL BE PROTECTED WITH BARRIERS CONSISTING OF STRAW BALES, COMPOST TUBES, SILT FENCE OR A COMBINATION THEREOF.
13. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL HAVE AN EXPOSURE WINDOW OF NOT MORE THAN 7 DAYS.
14. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IF NOT BEING ACTIVELY WORKED:

LOCATION (1000 SF)	**MULCH**	**MULCH RATE**
PROTECTED AREA	STRAW	100 POUNDS
WINDY AREA	SHREDDED OR CHOPPED CORNSTALKS	185-275 POUNDS
	STRAW (ANCHORED)*	100 POUNDS
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES GREATER THAN 3:1	JUTE MESH OR EXCELSIOR MAT	AS REQUIRED
GREATER THAN 3:1	(REFER TO GEOTECHNICAL REPORT FOR FINAL DESIGN REQUIREMENT)	

* A HYDRO-APPLICATION OF WOOD OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE NON-TOXIC BINDER SHALL BE USED TO ADDITIONAL WIND CONTROL.

* MULCH ANCHORING: ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD/BLOCK); MULCH NETTING (AS PER MANUFACTURER); WOOD CELLULOSE FIBER (750 LBS/ACRE); CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS); USE OF A SERRATED STRAIGHT DISK. WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.

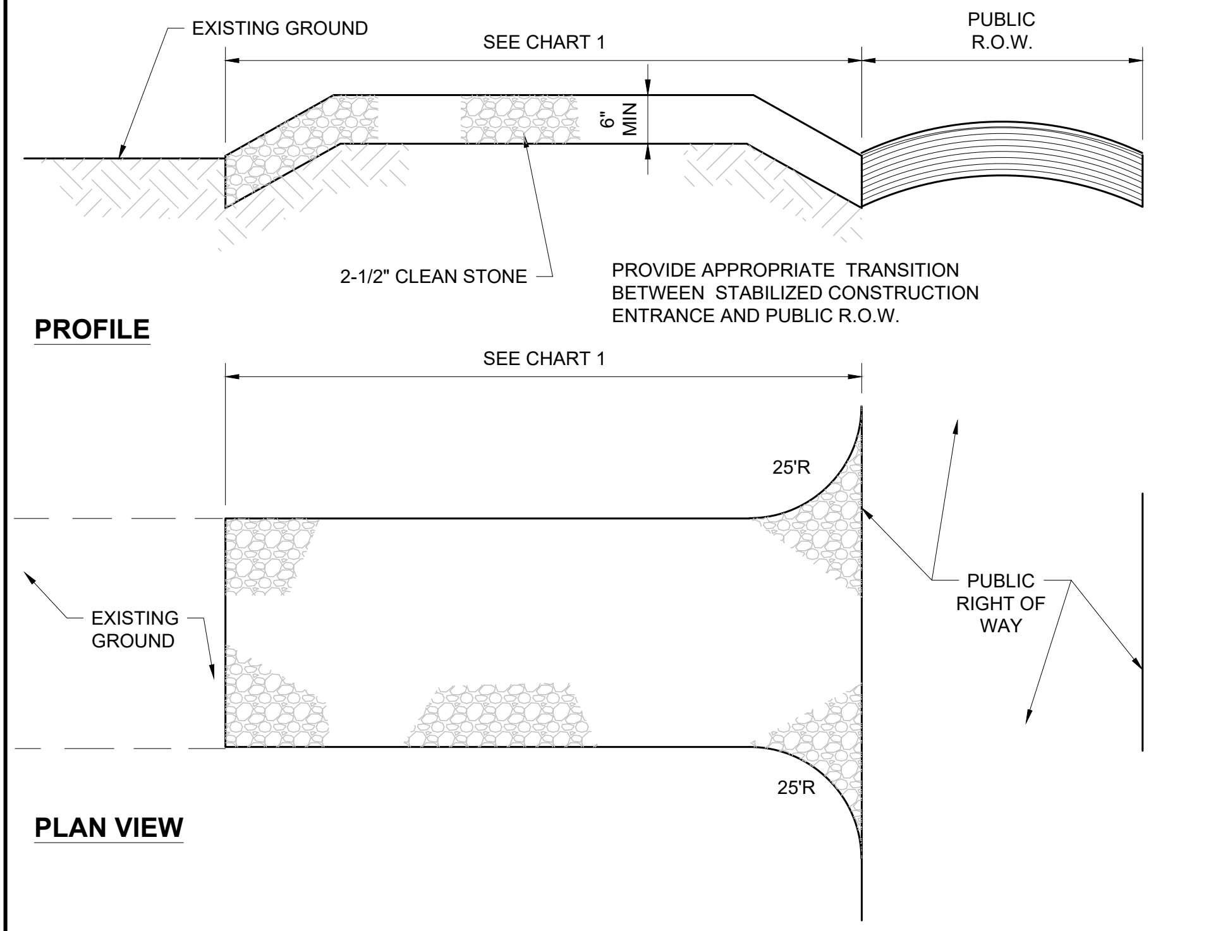
15. PROPOSED LOCATIONS OF SURFACE STORMWATER MANAGEMENT BASINS CAN BE UTILIZED AS A TEMPORARY SEDIMENT TRAP DURING CONSTRUCTION.SEDIMENT TRAPS SHALL BE SIZED AND CONSTRUCTED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.
    a) TEMPORARY SEDIMENT TRAPS SHALL BE SIZED PER THE CURRENT EDITION OF THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" AND PROVIDE A MINIMUM OF 1,800 CF PER ACRE OF TRIBUTARY AREA WITH A MAXIMUM TRIBUTARY AREA OF 5 ACRES, MAINTAIN A 2:1 LENGTH TO WIDTH RATIO, AND NOT EXCEED 5 FT IN HEIGHT. UPON SITE STABILIZATION, ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE TEMPORARY SEDIMENT TRAP EXCAVATED TO 1 FOOT BELOW THE TRAP. THE AREA SHALL THEN BE SCARIFIED TO PREVENT COMPACTION AND PROMOTE INFILTRATION, AND GRADED AND STABILIZED IN ACCORDANCE WITH THE GRADING AND LANDSCAPE PLANS.
16. STOCKPILING OF MATERIALS (DIRT, WOOD, CONSTRUCTION MATERIALS, ETC.) MUST REMAIN COVERED AT ALL TIMES TO MINIMIZE ANY DUST PROBLEMS THAT MAY OCCUR WITH ADJACENT PROPERTIES AND TO PROVIDE MAXIMUM PROTECTION AGAINST EROSION RUNOFF.
17. EXISTING CATCH BASIN STRUCTURES SHALL BE PROTECTED UNTIL SUCH TIME AS THEY ARE REMOVED.
18. THE CONTRACTOR MUST PERFORM DEWATERING (IF REQUIRED), IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND PAY FOR THE COSTS ASSOCIATED WITH ANY AND ALL NECESSARY DISCHARGE PERMITS ASSOCIATED WITH SAME.
19. THE CONTRACTOR MUST LOCATE CONSTRUCTION WASTE MATERIAL STORAGE AREAS TO MINIMIZE EXPOSURE TO STORMWATER. THE CONTRACTOR MUST IMMEDIATELY PLACE CONSTRUCTION WASTE IN ON-SITE STORAGE CONTAINERS UNTIL THAT CONSTRUCTION WASTE IS READY FOR OFF-SITE DISPOSAL. THE CONTRACTOR MUST MAINTAIN SPILL PREVENTION AND RESPONSE EQUIPMENT AND MAKE SAME CONTINUOUSLY AVAILABLE ON-SITE FOR USE BY THE CONTRACTOR'S EMPLOYEES WHO MUST BE PROPERLY TRAINED IN THE APPLICATION OF SPILL PREVENTION AND RESPONSE PROCEDURES.
20. EROSION CONTROL NOTES DURING WINTER CONSTRUCTION
21. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
22. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT THE AMOUNT OF AREA OPEN AT ONE TIME IS MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE AND IN CONFORMANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN SUCH THAT ADEQUATE PROVISIONS ARE EMPLOYED TO CONTROL STORMWATER RUNOFF.
23. CONTINUATION OF EARTHWORK OPERATION ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
24. AN AREA SHALL BE CONSIDERED TO HAVE BEEN TEMPORARILY STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR STRAW AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE.
25. FOR AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR A PERIOD EXCEEDING 14 DAYS BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED. IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 200-300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED AS APPLICABLE. SLOPES SHALL NOT BE LEFT UNSTABILIZED OVER THE WINTER OR IN AREAS WHERE WORK HAS CEASED FOR MORE THAN 14 DAYS UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF SEDIMENT BARRIERS OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
26. MULCHING REQUIREMENTS:
    a) BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING OR WOOD CELLULOSE FIBER.
    b) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPE EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.
    c) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
27. ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE STORMWATER PREVENTION PLAN.
28. DURING THE WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.
29. SITE DISTURBANCE EXCEEDS ONE ACRE. A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED AND THE OWNER AND/OR OPERATOR ARE REQUIRED TO OBTAIN A STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY GENERAL PERMIT FROM THE EPA UNDER THE NPDES PROGRAM.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. EROSION CONTROL MEASURES MUST CONFORM TO THE STATE, LOCAL, AND FEDERAL GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL UNLESS OTHERWISE NOTED, OR UNLESS THE PROFESSIONAL OF RECORD CLEARLY AND SPECIFICALLY, IN WRITING, DIRECTS OTHERWISE. INSTALLATION OF EROSION CONTROL, CLEARING, AND SITE WORK MUST BE PERFORMED EXACTLY AS INDICATED IN THE EROSION CONTROL CONSTRUCTION NOTES.
3. THE DISTURBED LAND AREA OF THIS SITE IS APPROXIMATELY 9.44 ACRES.
4. THE FOLLOWING EROSION CONTROL MEASURES ARE PROPOSED FOR THIS SITE:
    a) STABILIZED CONSTRUCTION ENTRANCE/ EXIT - A TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT IS TO BE INSTALLED AT THE DESIGNATED LOCATION SHOWN ON THE PLAN. THIS AREA MUST BE GRADED SO THAT RUNOFF WATER WILL BE RETAINED ON-SITE.
    b) SEDIMENT FENCE - INSTALL SILT FENCE(S) AND/OR SILT SOCK AROUND ALL OF THE DOWNSLOPE PERIMETERS OF THE SITE, TEMPORARY FILL AND SOIL STOCKPILES.
    c) INSTALL FILTER FABRIC DROP INLET PROTECTION AROUND EACH DRAINAGE INLET AS DRAINAGE STRUCTURES ARE INSTALLED TO REDUCE THE QUANTITY OF SEDIMENT. INSTALL TEMPORARY INLET PROTECTION ON INLETS DOWNSLOPE FROM DISTURBANCE, WHICH MAY BE BEYOND THE LIMITS OF DISTURBED AREA.
5. INSTALLATION OF EROSION CONTROL DEVICES MUST BE IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATIONS.
6. THE CONTRACTOR MUST INSPECT EROSION CONTROL MEASURES WEEKLY. THE CONTRACTOR MUST REMOVE ANY SILT DEPOSITS GREATER THAN 6 INCHES OR HALF THE EROSION CONTROL BARRIER'S HEIGHT COLLECTED ON THE FILTER FABRIC AND/OR SILT SOCK BARRIERS AND EXCAVATE AND REMOVE ANY SILT FROM DROP INLET PROTECTION.
7. THE CONTRACTOR MUST APPLY TEMPORARY SEED AND MULCH TO ALL DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINISHED GRADE AND VEGETATED WITHIN 7 DAYS. WHEN AREAS ARE DISTURBED AFTER THE GROWING SEASON, THE CONTRACTOR MUST STABILIZE SAME WITH GEOTEXTILE FABRIC AND MAINTAIN SAME IN STRICT ACCORDANCE WITH BEST MANAGEMENT PRACTICES.
8. THE CONTRACTOR MUST INSTALL ADDITIONAL EROSION CONTROL MEASURES IF THE PROFESSIONAL OF RECORD SO REQUIRES, TO PREVENT ANY, INCLUDING THE INCIDENTAL, DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE.
9. THE CONTRACTOR MUST BE RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL EROSION CONTROL MEASURES ON THE SITE UNTIL PERMANENT PAVING AND TURF/LANDSCAPING IS ESTABLISHED. THE COSTS OF INSTALLING AND MAINTAINING THE EROSION CONTROL MEASURES MUST BE INCLUDED IN THE BID PRICE FOR THE SITE WORK AND THE CONTRACTOR IS RESPONSIBLE FOR ALL SUCH COSTS.
10. THE CONTRACTOR MUST CONTINUE TO MAINTAIN ALL EROSION CONTROL MEASURES UNTIL THE COMPLETION OF CONSTRUCTION AND THE ESTABLISHMENT OF VEGETATION.
11. THE CONTRACTOR MUST REMOVE EROSION CONTROL MEASURES, SILT AND DEBRIS AFTER ESTABLISHING PERMANENT VEGETATION COVER OR OTHER INSTALLING A DIFFERENT, SPECIFIED METHOD OF STABILIZATION.
12. THIS PLAN REPRESENTS THE MINIMUM LEVEL OF IMPLEMENTATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROL FACILITIES, MEASURES AND STRUCTURES. ADDITIONAL FACILITIES, MEASURES AND STRUCTURES MUST BE INSTALLED WHERE NECESSARY TO COMPLY WITH ALL APPLICABLE CODES AND STANDARDS AND/OR TO PREVENT ANY, INCLUDING THE INCIDENTAL DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE.
13. THE CONTRACTOR MUST PROTECT ALL EXISTING TREES AND SHRUBS. THE CONTRACTOR MUST REFER TO THE LANDSCAPE AND/OR DEMOLITION PLAN(S) FOR TREE PROTECTION, FENCE LOCATIONS AND DETAILS.
14. THE CONTRACTOR MUST REFER TO GRADING PLANS FOR ADDITIONAL INFORMATION.
15. THE CONTRACTOR MUST CLEAN EXISTING AND PROPOSED DRAINAGE STRUCTURES AND INTERCONNECTING PIPES ON OR OFF-SITE AS THE JURISDICTIONAL AGENCY REQUIRES, BOTH AT THE TIME OF SITE STABILIZATION AND AT END OF PROJECT.
16. SOIL EROSION CONTROL MEASURES MUST BE ADJUSTED OR RELOCATED BY THE CONTRACTOR AS IDENTIFIED DURING SITE OBSERVATION IN ORDER TO MAINTAIN THE COMPLETE EFFECTIVENESS OF ALL CONTROL MEASURES.
17. THE CONTRACTOR MUST IDENTIFY, ON THE PLAN, THE LOCATION OF WASTE CONTAINERS, FUEL STORAGE TANKS, CONCRETE WASHOUT AREAS AND ANY OTHER LOCATIONS WHERE HAZARDOUS MATERIALS ARE STORED.

THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED:

- INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE/EXIT (AS SHOWN)
- INSTALLATION OF EROSION CONTROL BARRIER (STRAW BALES AND SILT FENCE) (AS SHOWN)
- INSTALLATION OF INLET PROTECTION IN STREET (AS SHOWN)
- DEMOLITION OF EXISTING SITE STRUCTURES (SEE DEMOLITION PLAN)
- DEMOLITION OF EXISTING SITE PAVEMENT AND AMENITIES (SEE DEMOLITION PLAN)
- CLEARING AND GRUBBING
- INSTALLATION OF TEMPORARY SWALES AND SEDIMENT BASINS
- EARTHWORK AND EXCAVATION/FILLING AS NECESSARY
- CONSTRUCTION OF UTILITIES
- STABILIZE PERMANENT LAWN AREAS AND SLOPES WITH TEMPORARY SEEDING
- INSTALLATION OF INLET PROTECTION OF ON-SITE UTILITIES (AS SHOWN)
- CONSTRUCTION OF BUILDINGS
- CONSTRUCTION OF ALL CURBING AND LANDSCAPE ISLANDS AS INDICATED ON THE PLANS
- SPREAD TOPSOIL ON SLOPED AREAS AND SEED AND MULCH
- FINAL GRADING OF ALL SLOPED AREAS
- PLACE 6" TOPSOIL ON SLOPES AFTER FINAL GRADING COMPLETED. FERTILIZE, SEED, AND MULCH SEED MIXTURE TO BE INSTALLED AS REQUIRED.
- REMOVAL OF THE TEMPORARY SEDIMENT BASINS
- PAVE PARKING LOT
- LANDSCAPING PER LANDSCAPING PLAN
- REMOVE EROSION CONTROLS AS DISTURBED AREAS BECOME STABILIZED TO 70% STABILIZATION OR GREATER



PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT	100 FT
2% TO 5%	100 FT	200FT
>5%	ENTIRE ENTRANCE STABILIZED WITH FABC BASE COURSE (1)	

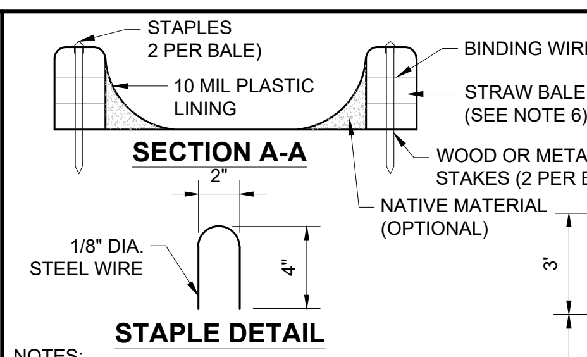
(1) AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

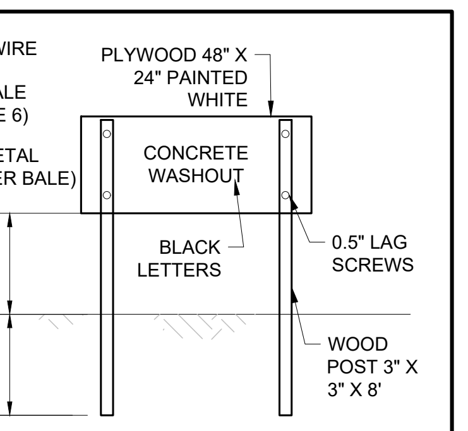
CHART 1

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

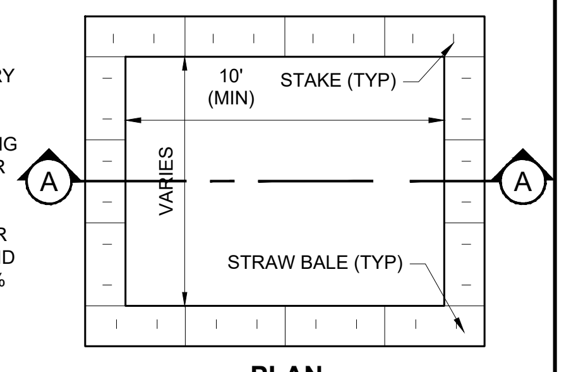
(NE-O020101 - 09/2023)





CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)

NOTES:
1. TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE LOCATED A MINIMUM OF 50 FT. FROM STORM DRAIN INLETS.
2. ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN, THE CONCRETE SHOULD BE BROKEN UP, REMOVED, AND DISPOSED OF OFF-SITE. CONTRACTOR TO DISPOSE OF HARDENED CONCRETE ON A REGULAR BASIS.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
4. PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
5. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL.
6. STRAW BALE AND STAPLES MAY BE SUBSTITUTED WITH ALTERNATE SECURING MEASURES SUCH AS CONCRETE BLOCK.

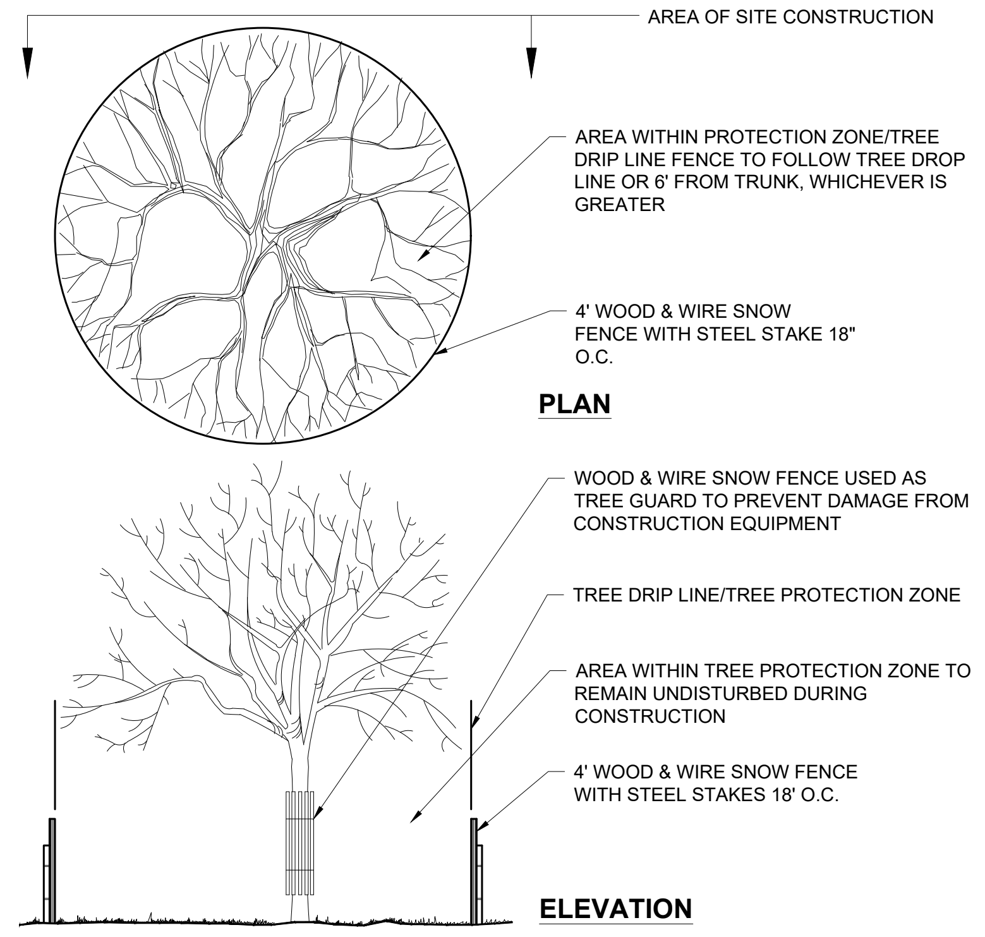


PLAN

CONCRETE WASTE MANAGEMENT AREA

NOT TO SCALE

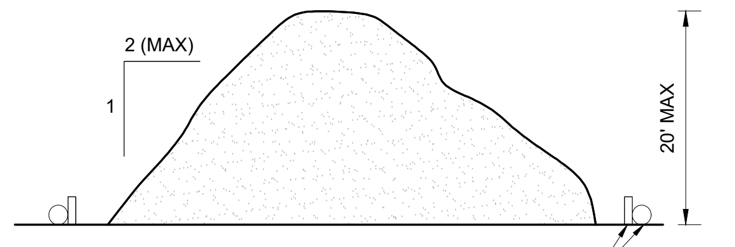
(NE-O020201 - 09/2023)


AREA OF SITE CONSTRUCTION
AREA WITHIN PROTECTION ZONE/TREE DRIP LINE FENCE TO FOLLOW TREE DROP LINE OR 6' FROM TRUNK, WHICHEVER IS GREATER
4' WOOD & WIRE SNOW FENCE WITH STEEL STAKE 18" O.C.
PLAN
WOOD & WIRE SNOW FENCE USED AS TREE GUARD TO PREVENT DAMAGE FROM CONSTRUCTION EQUIPMENT
TREE DRIP LINE/TREE PROTECTION ZONE
AREA WITHIN TREE PROTECTION ZONE TO REMAIN UNDISTURBED DURING CONSTRUCTION
4' WOOD & WIRE SNOW FENCE WITH STEEL STAKES 18' O.C.
ELEVATION

TREE PROTECTION DURING SITE CONSTRUCTION

NOT TO SCALE

(NE-O030201 - 09/2023)

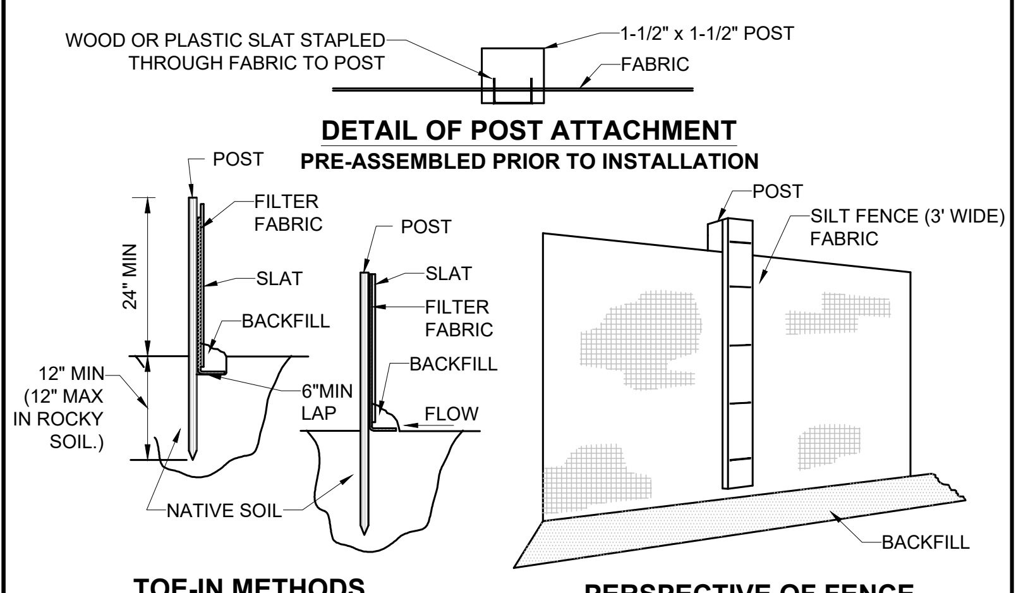


CONSTRUCT SILT FENCE AND MIN 6" COMPOST FILTER SOCK AROUND PERIMETER OF STOCKPILE, APPROXIMATELY 6 FEET FROM BASE OF PILE

TEMPORARY STOCK PILE WITH SILT FENCE AND FILTER SOCK

NOT TO SCALE

(NE-O060102 - 09/2023)

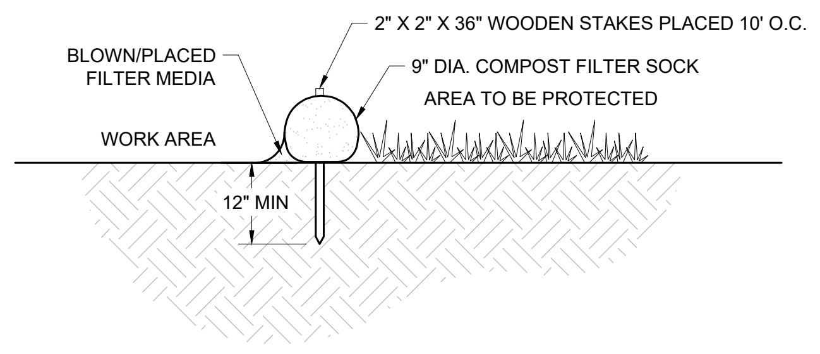

WOOD OR PLASTIC SLAT STAPLED THROUGH FABRIC TO POST
1-1/2" x 1-1/2" POST
FABRIC
DETAIL OF POST ATTACHMENT
PRE-ASSEMBLED PRIOR TO INSTALLATION
POST
FILTER FABRIC
24" MIN
SLAT
BACKFILL
12" MIN (12" MAX IN ROCKY SOIL.)
6"MIN LAP
POST
SLAT
FILTER FABRIC
BACKFILL
FLOW
NATIVE SOIL
TOE-IN METHODS
POST
SILT FENCE (3' WIDE) FABRIC
BACKFILL
PERSPECTIVE OF FENCE

NOTES:
1. EXCAVATE A 6"x6" TRENCH ALONG THE LINE OF EROSION CONTROL OF THE SITE.
2. UNROLL SILTATION FENCE AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH (NET SIDE AWAY FROM FLOW DIRECTION).
3. DRIVE THE POST INTO THE GROUND UNTIL THE NETTING IS LAYING ACROSS THE TRENCH BOTTOM.
4. LAY THE TOE-IN FLAP OF THE FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH, BACKFILL ALSO BE ACCOMPLISHED BY LAYING FABRIC FLAP ON UNDISTURBED GROUND AND PILING & TAMPING FILL AT THE BASE.
5. WHEN NECESSARY TO EXTEND SILT FENCE PAST THE END OF ONE ROLL OF FABRIC, THE BEGINNING OF THE SECOND ROLL SHALL OVERLAP THE END OF THE FIRST OVER TWO FENCE POSTS.
6. SILT FENCE FABRIC TO BE SECURED TO POSTS USING AT LEAST THREE FASTENERS PER POST.

SILT FENCE

NOT TO SCALE

(NE-O040101 - 09/2023)


2" X 2" X 36" WOODEN STAKES PLACED 10' O.C.
BLOWN/PLACED FILTER MEDIA
9" DIA. COMPOST FILTER SOCK
AREA TO BE PROTECTED
WORK AREA
12" MIN

SECTION

NOTES:
1. ALL MATERIAL TO MEET MANUFACTURER SPECIFICATIONS
2. COMPOST FILTER SOCK FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE AT COMPLETION OF CONSTRUCTION OR AS DIRECTED BY OWNER AFTER STABILIZATION IS ACHIEVED.

OR APPROVED EQUIVALENT

COMPOST FILTER SOCK

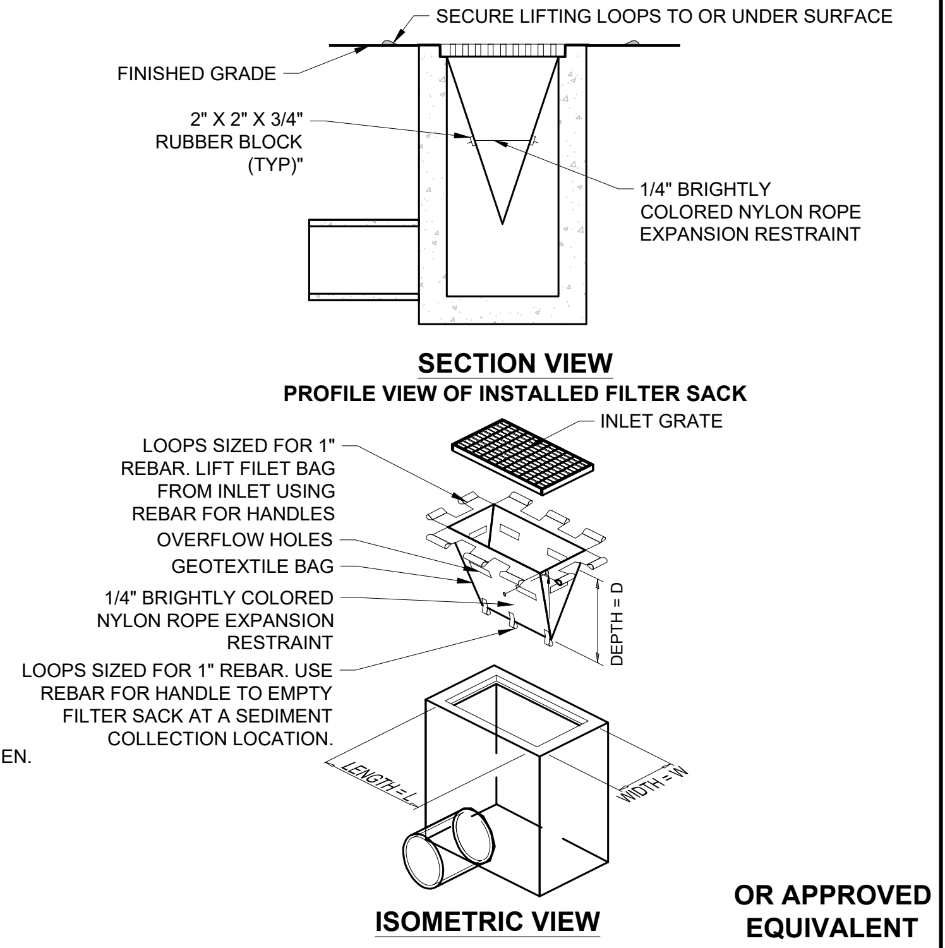
NOT TO SCALE

(NE-O040201 - 09/2023)

LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC $^{-1}$

MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC $^{-1}$

NOTES:
1. REMOVE TRAPPED SEDIMENT WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
2. GEOTEXTILE SHALL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
3. PLACE AN OIL ADSORBENT PAD OR PILLOW OVER INLET GRATE WHEN OIL SPILLS ARE A CONCERN.
4. INSPECT PER REGULATORY REQUIREMENTS.
5. THE WIDTH, "W", OF THE FILTER SACK SHALL MATCH THE INSIDE WIDTH OF THE GRATED INLET BOX.
6. THE DEPTH, "D", OF THE FILTER SACK SHALL BE BETWEEN 18 INCHES AND 36 INCHES.
7. THE LENGTH, "L", OF THE FILTER SACK SHALL MATCH THE INSIDE LENGTH OF THE GRATED INLET BOX.

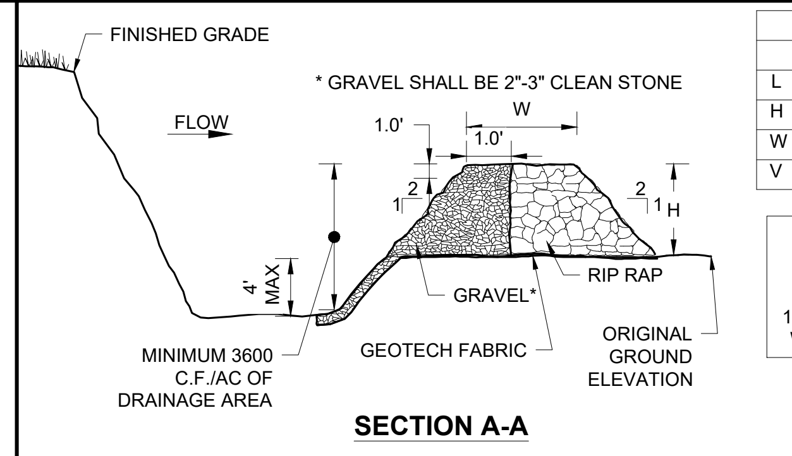

SECURE LIFTING LOOPS TO OR UNDER SURFACE
FINISHED GRADE
2" X 2" X 3/4" RUBBER BLOCK (TYP)"
1/4" BRIGHTLY COLORED NYLON ROPE EXPANSION RESTRAINT
SECTION VIEW
PROFILE VIEW OF INSTALLED FILTER SACK
INLET GRATE
LOOPS SIZED FOR 1" REBAR. LIFT FILET BAG FROM INLET USING REBAR FOR HANDLES
OVERFLOW HOLES
GEOTEXTILE BAG
1/4" BRIGHTLY COLORED NYLON ROPE EXPANSION RESTRAINT
LOOPS SIZED FOR 1" REBAR. USE REBAR FOR HANDLE TO EMPTY FILTER SACK AT A SEDIMENT COLLECTION LOCATION.
DEPTH = D
LENGTH = L
WIDTH = W
ISOMETRIC VIEW

OR APPROVED EQUIVALENT

INLET PROTECTION WITH MANUFACTURED INSERT

NOT TO SCALE

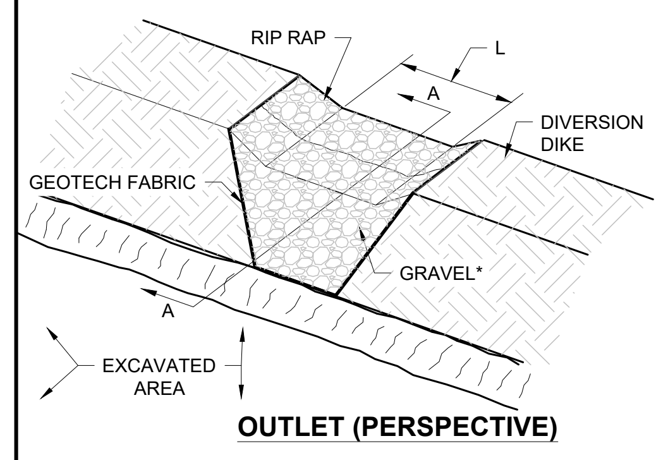
(NE-O050101 - 09/2023)


FINISHED GRADE
FLOW
* GRAVEL SHALL BE 2"-3" CLEAN STONE
W
1.0'
1.0'
2
1
2
1
H
4' MAX
RIP RAP
GRAVEL*
GEOTECH FABRIC
ORIGINAL GROUND ELEVATION
MINIMUM 3600 C.F./AC OF DRAINAGE AREA
SECTION A-A

OUTLET DIM (FT).			
	TRAP 1	TRAP 2	TRAP 3
L			
H			
W			
V			

MAX DRAINAGE AREA: 5 ACRES

L (IN FEET) = 6' OR 1 x DRAINAGE AREA (AC) WHICHEVER IS LARGER



TEMPORARY SEDIMENT TRAP

NOT TO SCALE

(NE-O049902 - 02/2025)

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

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One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

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50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900

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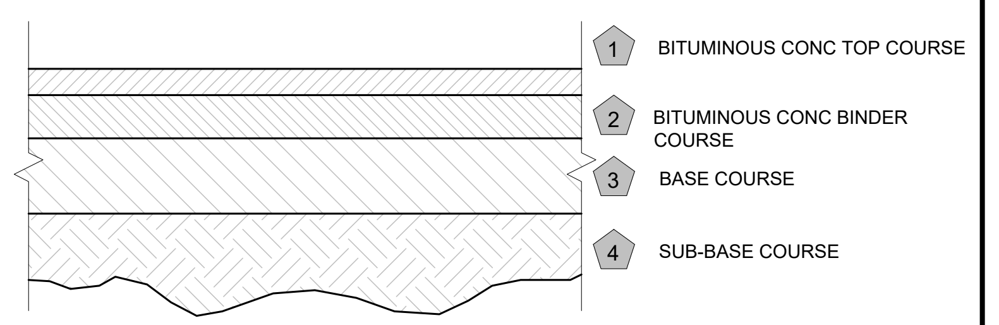
J.A. KUCICH
JOHN A. KUCICH
PROFESSIONAL ENGINEER
MAINE LICENSE No. 12553

ISSUED FOR
PERMIT

EROSION AND
SEDIMENT CONTROL
NOTES AND DETAILS

SCALE	**PROJECT #**	**DATE ISSUED**
AS NOTED	MAA240220.01	06.24.2025

C-803

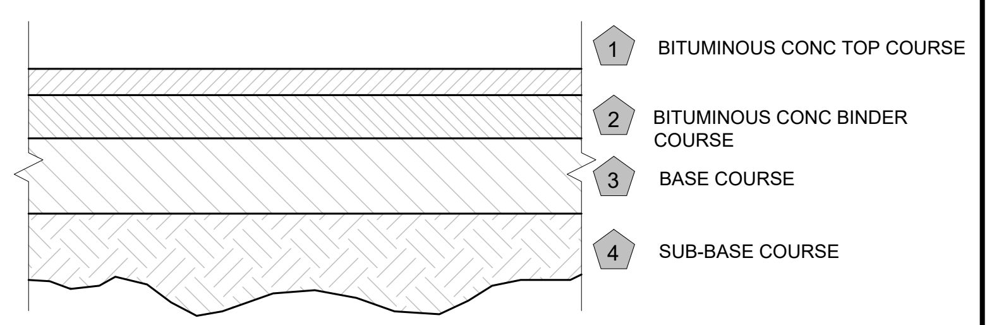

1 BITUMINOUS CONC TOP COURSE
2 BITUMINOUS CONC BINDER COURSE
3 BASE COURSE
4 SUB-BASE COURSE

1. BITUMINOUS CONC TOP COURSE (LIGHT DUTY=1.5")
2. BITUMINOUS CONC BINDER COURSE (LIGHT DUTY=1.5")
3. DENSE GRADED CRUSHED STONE BASE COURSE (LIGHT DUTY=8")
4. GRAVEL BORROW SUB-BASE COURSE (LIGHT DUTY=8")

NOTES:
1. PAVEMENT BASE AND SUBBASE COURSES TO CONFORM TO STATE DEPARTMENT OF TRANSPORTATION
2. GC TO REFER TO GEOTECHNICAL REPORT FOR PAVEMENT SPECIFICATIONS.

PAVEMENT SECTION

NOT TO SCALE (NE-S010101 - 10/2024)

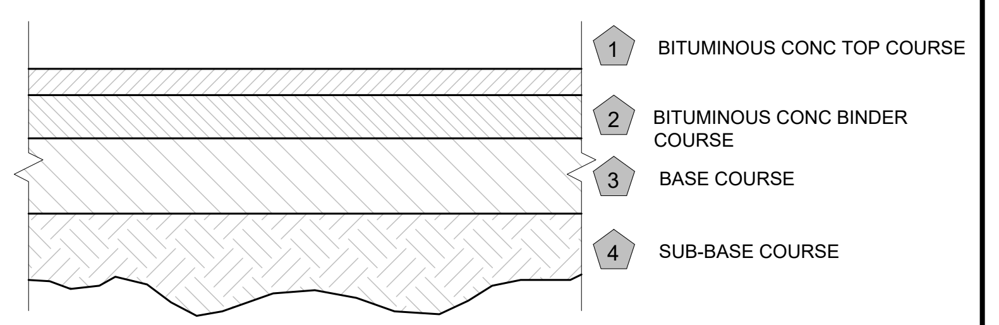

1 BITUMINOUS CONC TOP COURSE
2 BITUMINOUS CONC BINDER COURSE
3 BASE COURSE
4 SUB-BASE COURSE

1. BITUMINOUS CONC TOP COURSE 1.5"
2. BITUMINOUS CONC BINDER COURSE 3"
3. DENSE GRADED GRAVEL BASE COURSE 4"
4. GRAVEL BORROW SUB-BASE COURSE 12"

NOTES:
1. PAVEMENT BASE AND SUBBASE COURSES TO CONFORM TO STATE DEPARTMENT OF TRANSPORTATION
2. GC TO REFER TO GEOTECHNICAL REPORT FOR PAVEMENT SPECIFICATIONS.

PAVEMENT SECTION WITHIN MEMORIAL DRIVE

NOT TO SCALE (NE-S010101 - 10/2024)

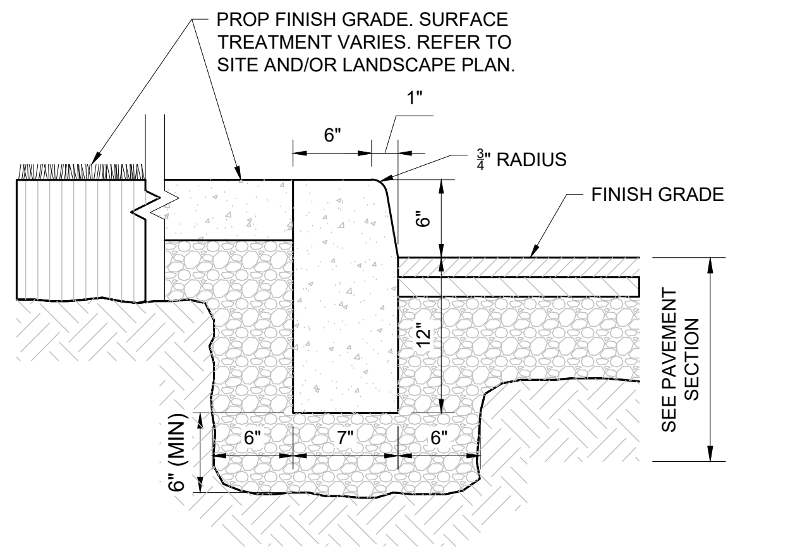

1 BITUMINOUS CONC TOP COURSE
2 BITUMINOUS CONC BINDER COURSE
3 BASE COURSE
4 SUB-BASE COURSE

1. BITUMINOUS CONC TOP COURSE 1.5"
2. BITUMINOUS CONC BINDER COURSE 1.5"
3. DENSE GRADED GRAVEL BASE COURSE 4"
4. GRAVEL BORROW SUB-BASE COURSE 8"

NOTES:
1. PAVEMENT BASE AND SUBBASE COURSES TO CONFORM TO STATE DEPARTMENT OF TRANSPORTATION
2. GC TO REFER TO GEOTECHNICAL REPORT FOR PAVEMENT SPECIFICATIONS.

PAVEMENT SECTION WITHIN MEMORIAL DRIVE MULTI-USE PATH

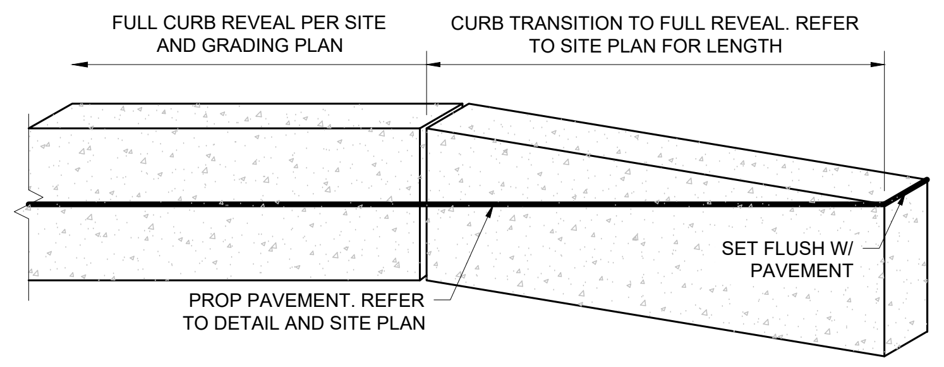
NOT TO SCALE (NE-S010101 - 10/2024)


PROP FINISH GRADE. SURFACE TREATMENT VARIES. REFER TO SITE AND/OR LANDSCAPE PLAN.
1"
6"
$\frac{3}{4}$" RADIUS
FINISH GRADE
6"
12"
SEE PAVEMENT SECTION
6" (MIN)
6"
7"
6"

NOTES:
1. CURB SHALL CONSIST OF 4,000 PSI AIR ENTRAINED CONCRETE, EXPOSED EDGES TO HAVE RUBBED FINISH, AND SURFACE SHALL BE TREATED WITH A CONCRETE PENETRANT/SEALER.
2. THE ENDS OF CURB SECTIONS SHALL BE CHAMFERED 1/4 INCH.
3. THE CORNERS OF CURB SECTIONS SHALL MATCH THE ADJACENT CURB IN SIZE, COLOR AND FINISH.
4. CURBS, CURB CORNERS OR EDGING SHALL BE FITTED TOGETHER AS CLOSELY AS POSSIBLE.
5. EXPANSION JOINTS SHALL BE INSTALLED AT A MAXIMUM OF TWENTY FEET (20') ON CENTER USING PREFORMED EXPANSION JOINT FILLER HAVING A THICKNESS OF $\frac{1}{2}$ INCH.
6. PAVEMENT SECTION DEPTHS, MATERIAL, AND SPECIFICATIONS PER PAVEMENT SECTION DETAIL.
7. STRAIGHT CURB SECTIONS CAN BE USED FOR RADII 25' OR GREATER. OTHERWISE, CURVED CURB LENGTHS SHALL BE INSTALLED AT THE SPECIFIED RADIUS PER THE SITE PLAN.

PRECAST CONCRETE CURB

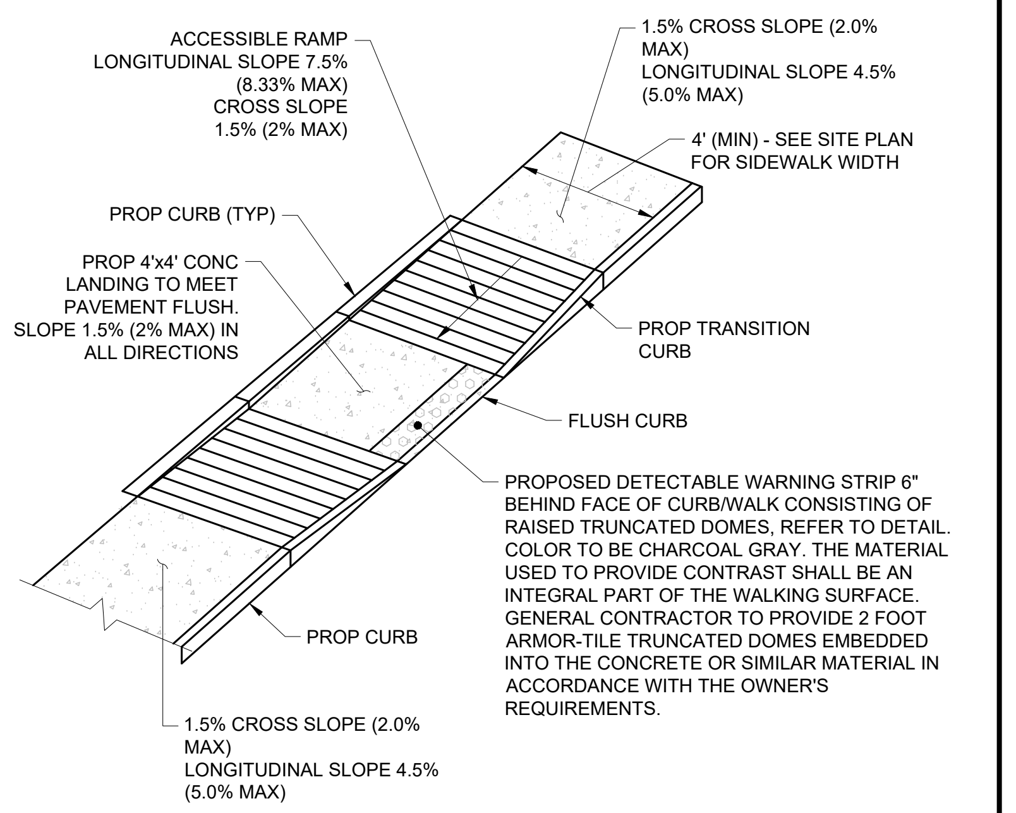
NOT TO SCALE (NE-S020201 - 10/2024)


FULL CURB REVEAL PER SITE AND GRADING PLAN
CURB TRANSITION TO FULL REVEAL. REFER TO SITE PLAN FOR LENGTH
SET FLUSH W/ PAVEMENT
PROP PAVEMENT. REFER TO DETAIL AND SITE PLAN

NOTES:
1. SEE TYPICAL CURB DETAIL AND SITE PLAN FOR CURB TYPE AND TRANSITION CURB LOCATIONS

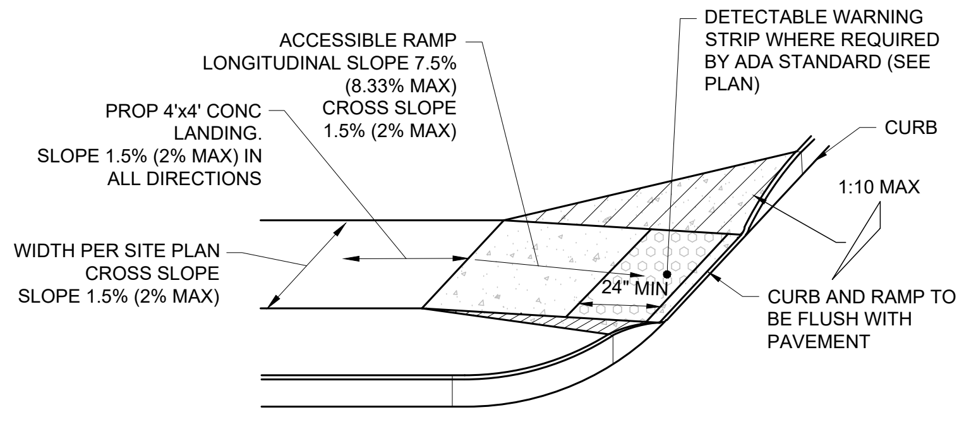
PRECAST CONCRETE TRANSITION CURB

NOT TO SCALE (NE-S020206 - 09/2023)


ACCESSIBLE RAMP LONGITUDINAL SLOPE 7.5% (8.33% MAX) CROSS SLOPE 1.5% (2% MAX)
1.5% CROSS SLOPE (2.0% MAX) LONGITUDINAL SLOPE 4.5% (5.0% MAX)
4' (MIN) - SEE SITE PLAN FOR SIDEWALK WIDTH
PROP CURB (TYP)
PROP 4'x4' CONC LANDING TO MEET PAVEMENT FLUSH. SLOPE 1.5% (2% MAX) IN ALL DIRECTIONS
PROP TRANSITION CURB
FLUSH CURB
PROPOSED DETECTABLE WARNING STRIP 6" BEHIND FACE OF CURB/WALK CONSISTING OF RAISED TRUNCATED DOMES, REFER TO DETAIL. COLOR TO BE CHARCOAL GRAY. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. GENERAL CONTRACTOR TO PROVIDE 2 FOOT ARMOR-TILE TRUNCATED DOMES EMBEDDED INTO THE CONCRETE OR SIMILAR MATERIAL IN ACCORDANCE WITH THE OWNER'S REQUIREMENTS.
PROP CURB
1.5% CROSS SLOPE (2.0% MAX) LONGITUDINAL SLOPE 4.5% (5.0% MAX)

ACCESSIBLE RAMP TYPE B

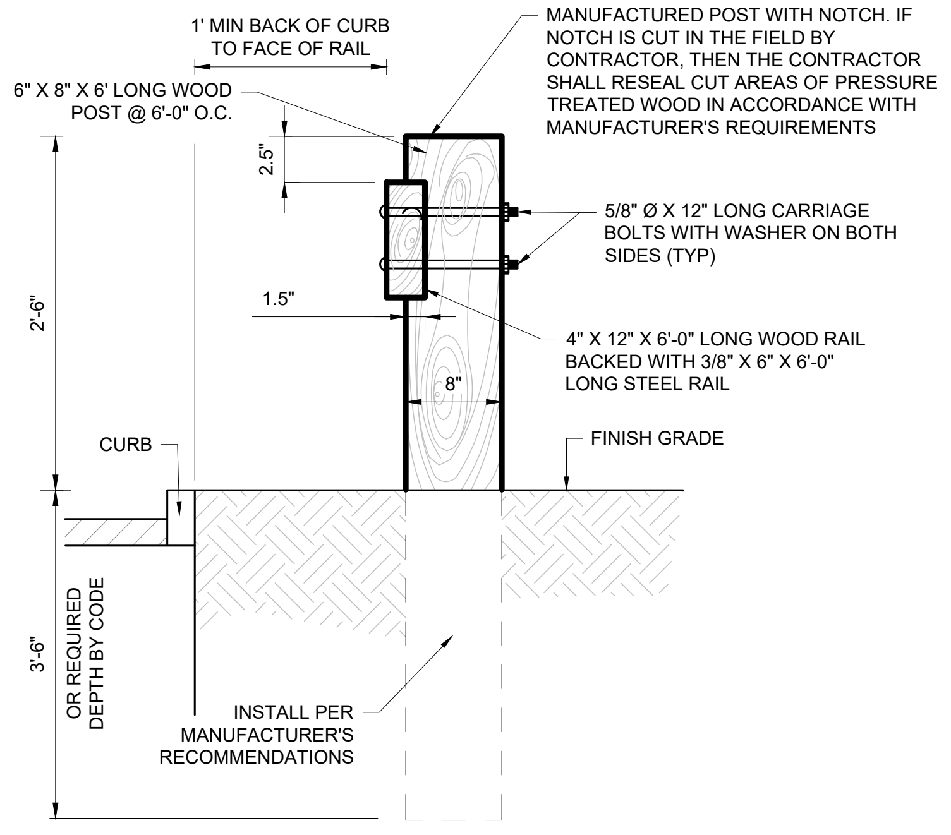
NOT TO SCALE (NE-S030205 - 10/2024)


ACCESSIBLE RAMP LONGITUDINAL SLOPE 7.5% (8.33% MAX) CROSS SLOPE 1.5% (2% MAX)
DETECTABLE WARNING STRIP WHERE REQUIRED BY ADA STANDARD (SEE PLAN)
PROP 4'x4' CONC LANDING. SLOPE 1.5% (2% MAX) IN ALL DIRECTIONS
CURB
1:10 MAX
WIDTH PER SITE PLAN CROSS SLOPE SLOPE 1.5% (2% MAX)
24" MIN
CURB AND RAMP TO BE FLUSH WITH PAVEMENT

NOTES:
1. ADA RAMP TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST ADA STANDARDS.
2. CONTRACTOR TO CONSTRUCT DETECTABLE WARNINGS WHEN SIDEWALK IS WITHIN PUBLIC ROW AND WHERE SHOWN ON PLANS.
3. DETECTABLE WARNING SURFACES SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A BOTTOM DIAMETER OF NOMINAL 0.9 INCH, A TOP DIAMETER OF 0.4 INCH, A HEIGHT OF NOMINAL 0.2 INCH, A CENTER TO CENTER SPACING OF NOMINAL 2.35 INCH, AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT ON DARK OR DARK ON LIGHT. (SEE DETAIL)
4. TOP OF CURB TO HAVE SAME SLOPE AS ADJACENT CURB RAMP.

ACCESSIBLE RAMP TYPE C

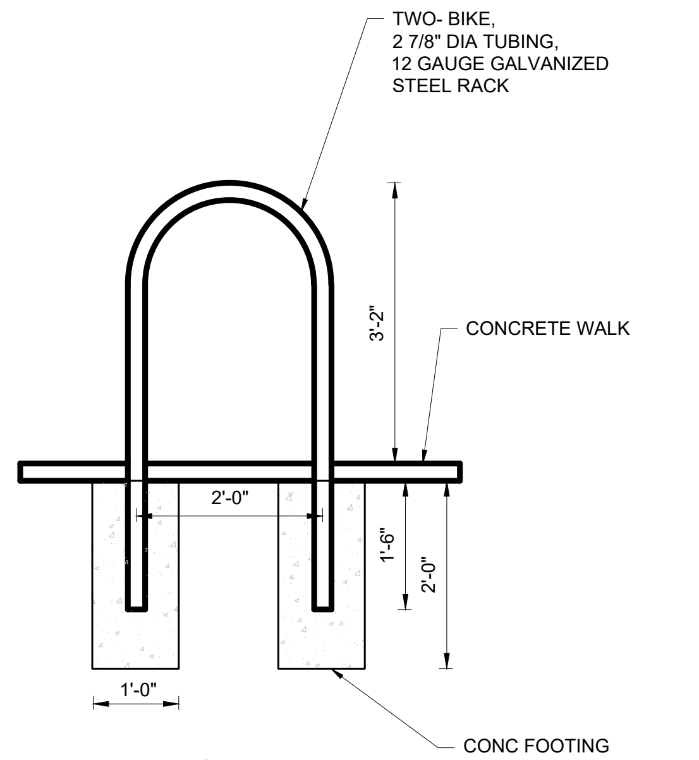
NOT TO SCALE (NE-S030206 - 10/2024)


1' MIN BACK OF CURB TO FACE OF RAIL
6" X 8" X 6' LONG WOOD POST @ 6'-0" O.C.
MANUFACTURED POST WITH NOTCH. IF NOTCH IS CUT IN THE FIELD BY CONTRACTOR, THEN THE CONTRACTOR SHALL RESEAL CUT AREAS OF PRESSURE TREATED WOOD IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS
2.5"
5/8" Ø X 12" LONG CARRIAGE BOLTS WITH WASHER ON BOTH SIDES (TYP)
1.5"
2'-6"
4" X 12" X 6'-0" LONG WOOD RAIL BACKED WITH 3/8" X 6" X 6'-0" LONG STEEL RAIL
8"
CURB
FINISH GRADE
3'-6" OR REQUIRED DEPTH BY CODE
INSTALL PER MANUFACTURER'S RECOMMENDATIONS

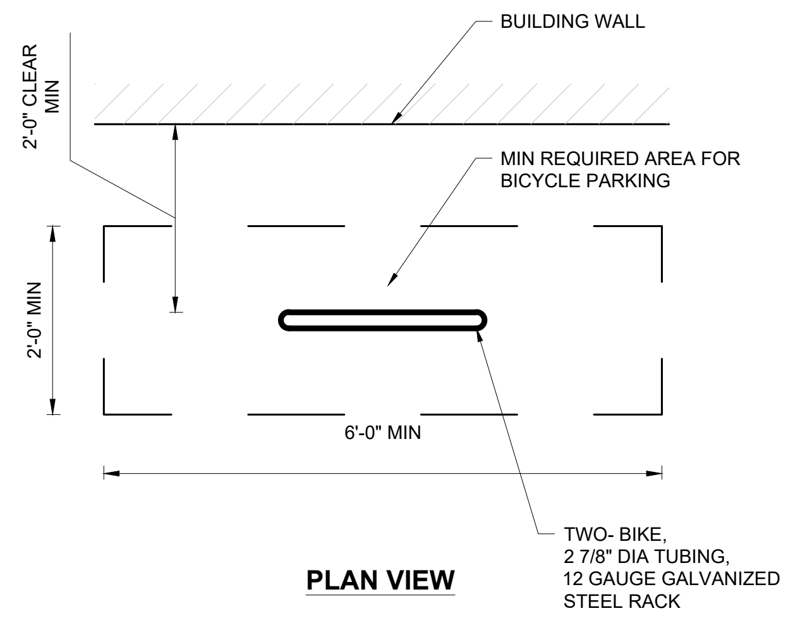
NOTE: ALL CARRIAGE BOLTS, NUTS & WASHERS TO BE GALVANIZED & ALL WOOD POSTS & RAILS TO BE PRESSURE TREATED.

WOOD GUIDERAIL

NOT TO SCALE (NE-S090101 - 10/2024)


TWO- BIKE, 2 7/8" DIA TUBING, 12 GAUGE GALVANIZED STEEL RACK
3'-2"
CONCRETE WALK
2'-0"
1'-6"
2'-0"
1'-0"
CONC FOOTING 4000 PSI COND @ 28 DAYS

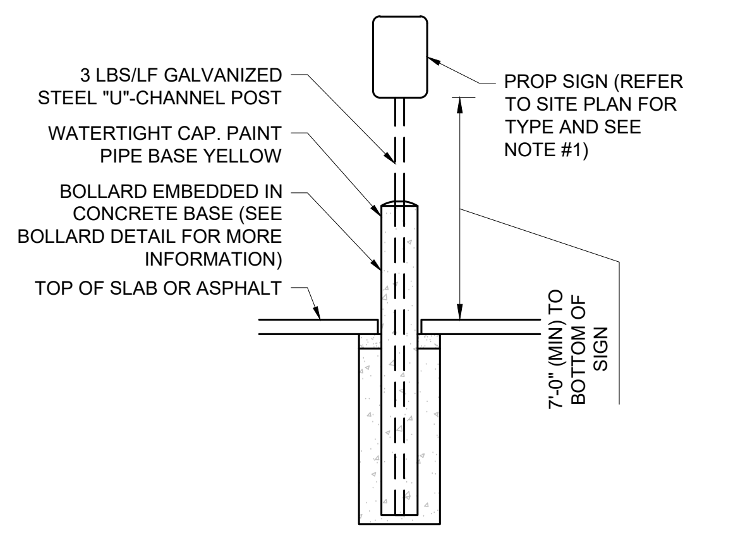
FRONT VIEW


BUILDING WALL
2'-0" CLEAR MIN
MIN REQUIRED AREA FOR BICYCLE PARKING
2'-0" MIN
6'-0" MIN
TWO- BIKE, 2 7/8" DIA TUBING, 12 GAUGE GALVANIZED STEEL RACK

PLAN VIEW

BIKE RACK

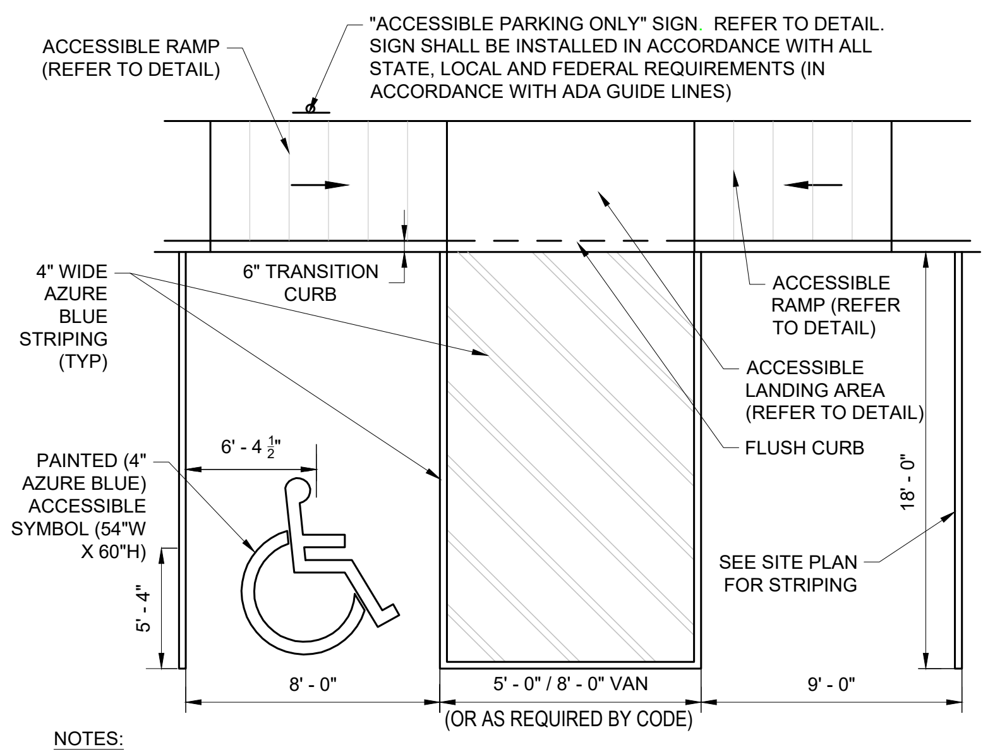
NOT TO SCALE (NY-S999903 - 08/2023)


3 LBS/LF GALVANIZED STEEL "U"-CHANNEL POST
WATERTIGHT CAP. PAINT PIPE BASE YELLOW
BOLLARD EMBEDDED IN CONCRETE BASE (SEE BOLLARD DETAIL FOR MORE INFORMATION)
TOP OF SLAB OR ASPHALT
PROP SIGN (REFER TO SITE PLAN FOR TYPE AND SEE NOTE #1)
7'-0" (MIN) TO BOTTOM OF SIGN

NOTES:
1. ACCESSIBLE AND VAN PARKING SIGNS SHALL CONFORM WITH CURRENT FEDERAL, STATE, AND LOCAL CODES AND REGULATIONS. REFER TO ACCESSIBLE SIGN DETAILS FOR ADDITIONAL INFORMATION

SIGN IN BOLLARD

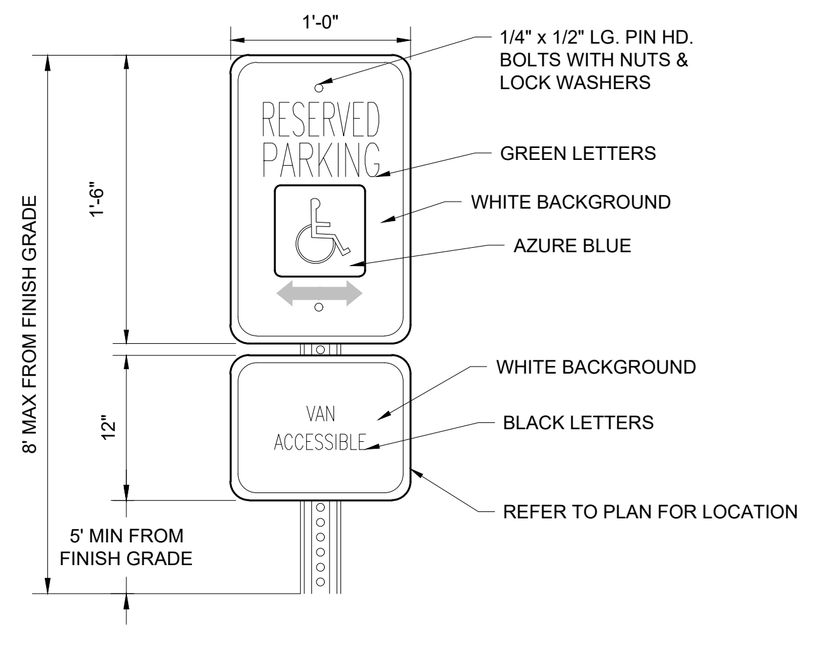
NOT TO SCALE (NE-S060201 - 12/2024)


ACCESSIBLE RAMP (REFER TO DETAIL)
"ACCESSIBLE PARKING ONLY" SIGN. REFER TO DETAIL. SIGN SHALL BE INSTALLED IN ACCORDANCE WITH ALL STATE, LOCAL AND FEDERAL REQUIREMENTS (IN ACCORDANCE WITH ADA GUIDE LINES)
4" WIDE AZURE BLUE STRIPING (TYP)
6" TRANSITION CURB
ACCESSIBLE RAMP (REFER TO DETAIL)
ACCESSIBLE LANDING AREA (REFER TO DETAIL)
FLUSH CURB
PAINTED (4" AZURE BLUE) ACCESSIBLE SYMBOL (54"W X 60"H)
6' - 4 ½"
18' - 0"
SEE SITE PLAN FOR STRIPING
5' - 4"
8' - 0"
5' - 0" / 8' - 0" VAN
(OR AS REQUIRED BY CODE)
9' - 0"

NOTES:
1. ALL PAVEMENT STRIPING AND MARKINGS SHALL CONSIST OF CHLORINATED RUBBER PAINT APPLIED TO A DRY SURFACE WHEN THE TEMPERATURE IS GREATER THAN 40°F. PAINT SHALL BE APPLIED AT A MINIMUM OF 0.015" (15 MIL) FILM THICKNESS

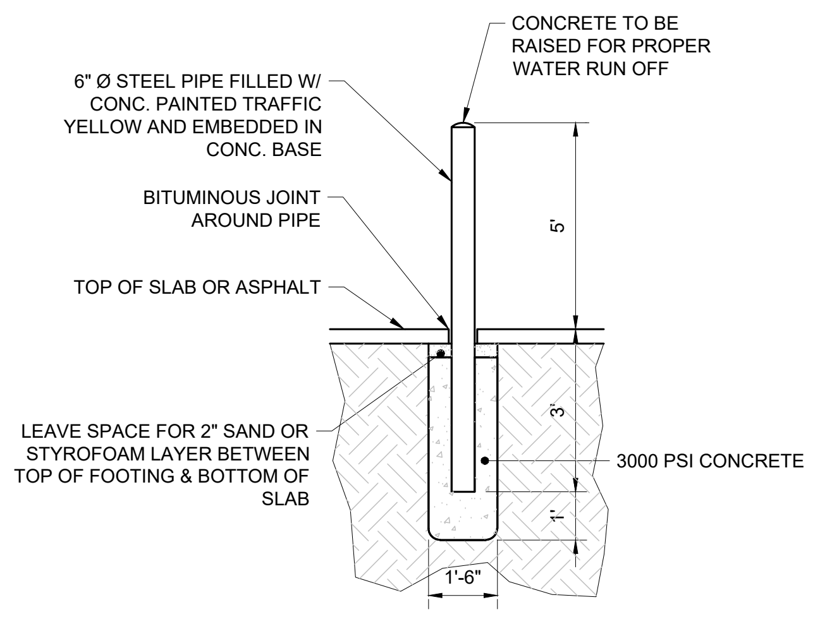
ACCESSIBLE PARKING STALL

NOT TO SCALE (NE-S050101 - 10/2024)


1'-0"
1/4" x 1/2" LG. PIN HD. BOLTS WITH NUTS & LOCK WASHERS
RESERVED PARKING
GREEN LETTERS
WHITE BACKGROUND
AZURE BLUE
1'-6"
8' MAX FROM FINISH GRADE
VAN ACCESSIBLE
WHITE BACKGROUND
BLACK LETTERS
12"
REFER TO PLAN FOR LOCATION
5' MIN FROM FINISH GRADE

ACCESSIBLE PARKING SIGNS

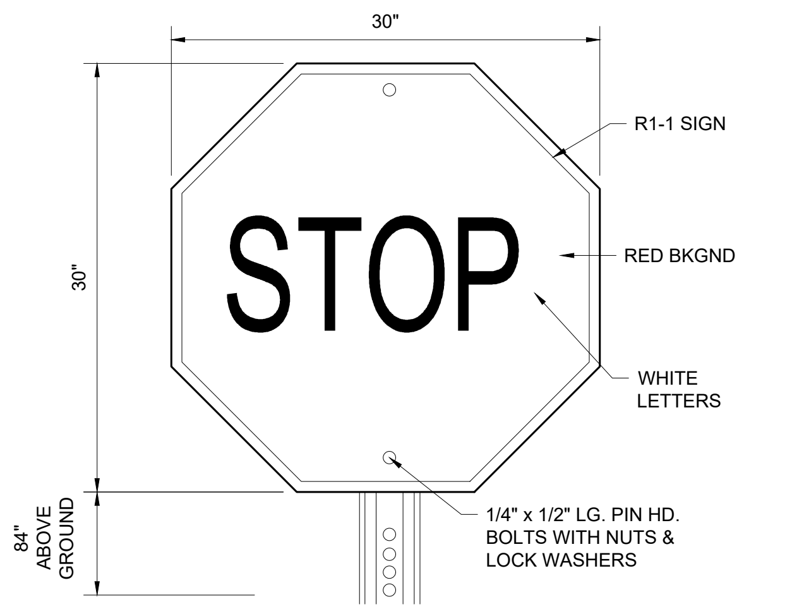
NOT TO SCALE (NE-S060101 - 10/2024)


CONCRETE TO BE RAISED FOR PROPER WATER RUN OFF
6" Ø STEEL PIPE FILLED W/ CONC. PAINTED TRAFFIC YELLOW AND EMBEDDED IN CONC. BASE
BITUMINOUS JOINT AROUND PIPE
5'
TOP OF SLAB OR ASPHALT
3'
LEAVE SPACE FOR 2" SAND OR STYROFOAM LAYER BETWEEN TOP OF FOOTING & BOTTOM OF SLAB
3000 PSI CONCRETE
1'
1'-6"

NOTES:
1. BOLLARDS REQUIRED AT BUILDING CORNERS, FIRE HYDRANTS, WATER METER, GAS METER, SPRINKLER RISER, SHOWN TRANSFORMER & ALL UTILITIES AT LOCATIONS SHOWN ON THESE DRAWINGS INTERIOR & EXTERIOR.

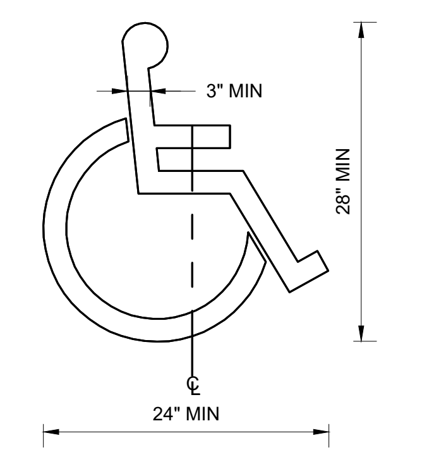
BOLLARD

NOT TO SCALE (NE-S070101 - 09/2023)


30"
R1-1 SIGN
STOP
RED BKGND
30"
WHITE LETTERS
84" ABOVE GROUND
1/4" x 1/2" LG. PIN HD. BOLTS WITH NUTS & LOCK WASHERS

STOP SIGN

NOT TO SCALE (NE-S060202 - 09/2023)

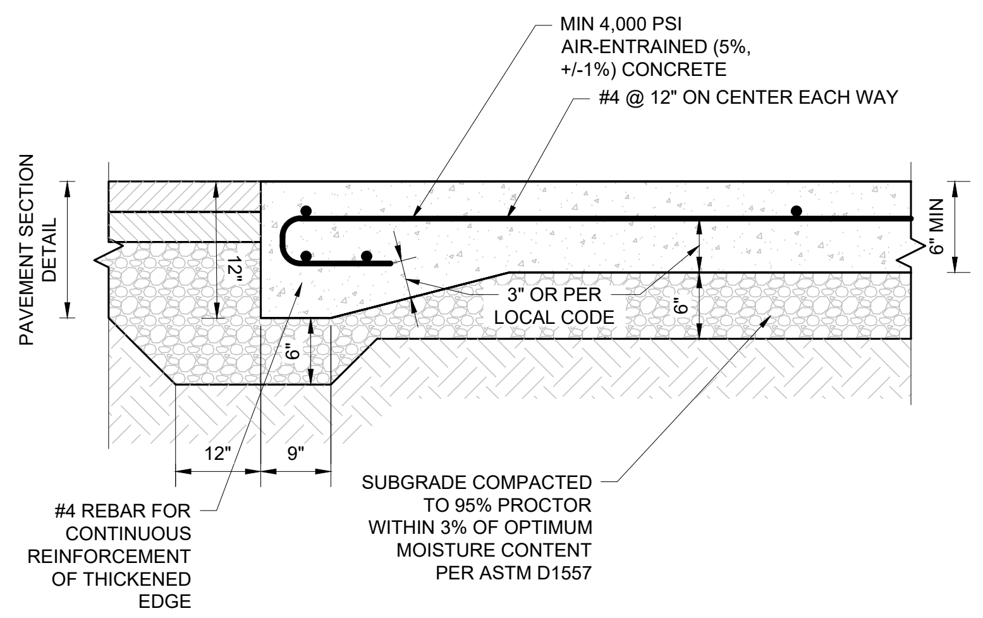

3" MIN
28" MIN
℄
24" MIN

LOCATE AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING

NOTES:
1. LOCATE AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING.
2. DIMENSIONS PER FIGURE 3B-22 PER LATEST EDITION OF MUTCD.
3. ACCESSIBLE PARKING SYMBOL TO CONFORM TO THE STRIPING PAINT SPECIFIED AND SHALL BE CENTERED IN THE STALL.

ACCESSIBLE PARKING SYMBOL

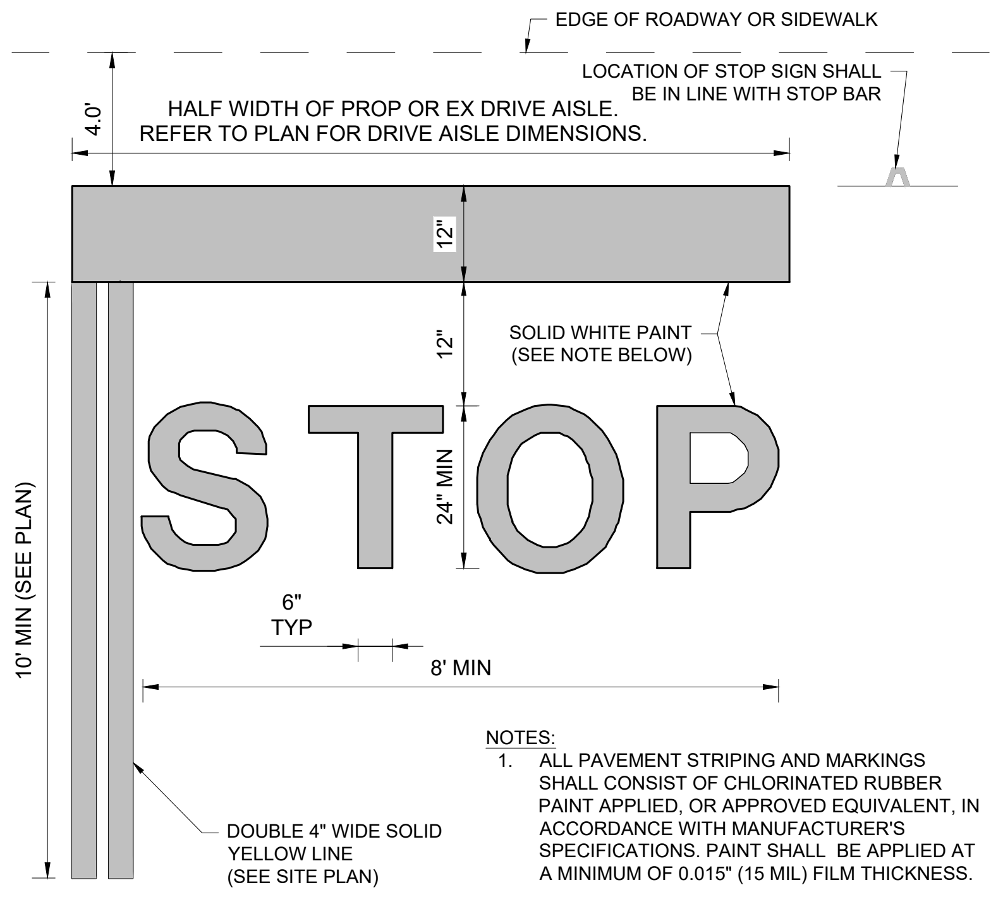
NOT TO SCALE (NE-S050102 - 10/2024)


MIN 4,000 PSI AIR-ENTRAINED (5%, +/-1%) CONCRETE
#4 @ 12" ON CENTER EACH WAY
PAVEMENT SECTION DETAIL
12"
6" MIN
3" OR PER LOCAL CODE
6"
6"
12"
9"
#4 REBAR FOR CONTINUOUS REINFORCEMENT OF THICKENED EDGE
SUBGRADE COMPACTED TO 95% PROCTOR WITHIN 3% OF OPTIMUM MOISTURE CONTENT PER ASTM D1557

NOTES:
1. GC TO REFER TO GEOTECHNICAL REPORT FOR SPECIFICATIONS. IF THERE ARE ANY DISCREPANCIES BETWEEN THIS DETAIL AND THE GEOTECHNICAL REPORT, THE REPORT SHALL GOVERN.
2. EXPANSION JOINTS SHALL BE PLACED ALONG BUILDING EDGES AND AT CORNERS.

TRASH ENCLOSURE PAD

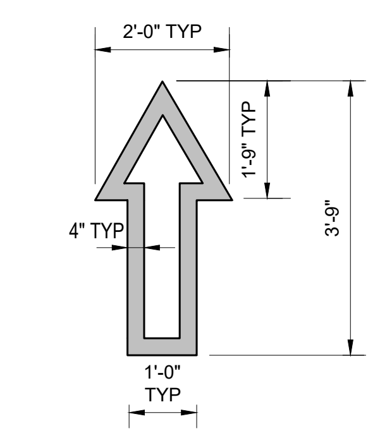
NOT TO SCALE (NE-S100201 - 12/2024)


EDGE OF ROADWAY OR SIDEWALK
LOCATION OF STOP SIGN SHALL BE IN LINE WITH STOP BAR
4.0'
HALF WIDTH OF PROP OR EX DRIVE AISLE. REFER TO PLAN FOR DRIVE AISLE DIMENSIONS.
12"
12"
SOLID WHITE PAINT (SEE NOTE BELOW)
STOP
24" MIN
10' MIN (SEE PLAN)
6" TYP
8' MIN
DOUBLE 4" WIDE SOLID YELLOW LINE (SEE SITE PLAN)

NOTES:
1. ALL PAVEMENT STRIPING AND MARKINGS SHALL CONSIST OF CHLORINATED RUBBER PAINT APPLIED, OR APPROVED EQUIVALENT, IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. PAINT SHALL BE APPLIED AT A MINIMUM OF 0.015" (15 MIL) FILM THICKNESS.

STOP BAR

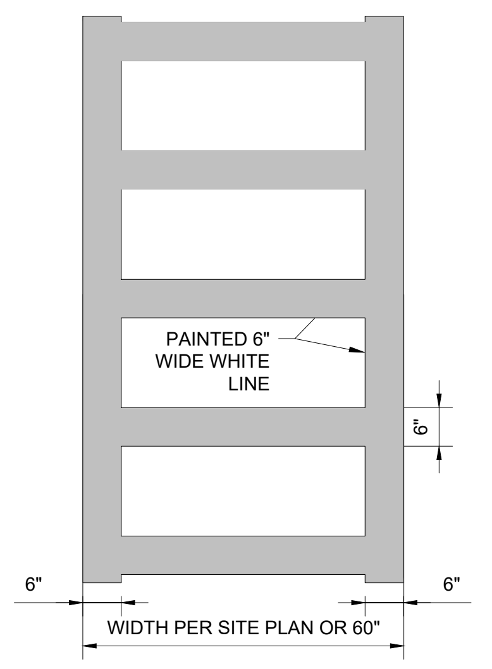
NOT TO SCALE (NE-S050301 - 12/2024)


2'-0" TYP
1'-9" TYP
3'-9"
4" TYP
1'-0" TYP

NOTES:
1. ALL TRAFFIC FLOW ARROWS TO BE REFLECTIVE WHITE PAINT PER SPECS.

TRAFFIC FLOW ARROW

NOT TO SCALE (NE-S050302 - 10/2024)


PAINTED 6" WIDE WHITE LINE
6"
6"
6"
WIDTH PER SITE PLAN OR 60"

CROSSWALK LADDER

NOT TO SCALE (NE-S050401 - 07/2024)

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

TEAM HOYT COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt
One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
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www.BohlerEngineering.com

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PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
NEW HAMPSHIRE LICENSE No. 15476
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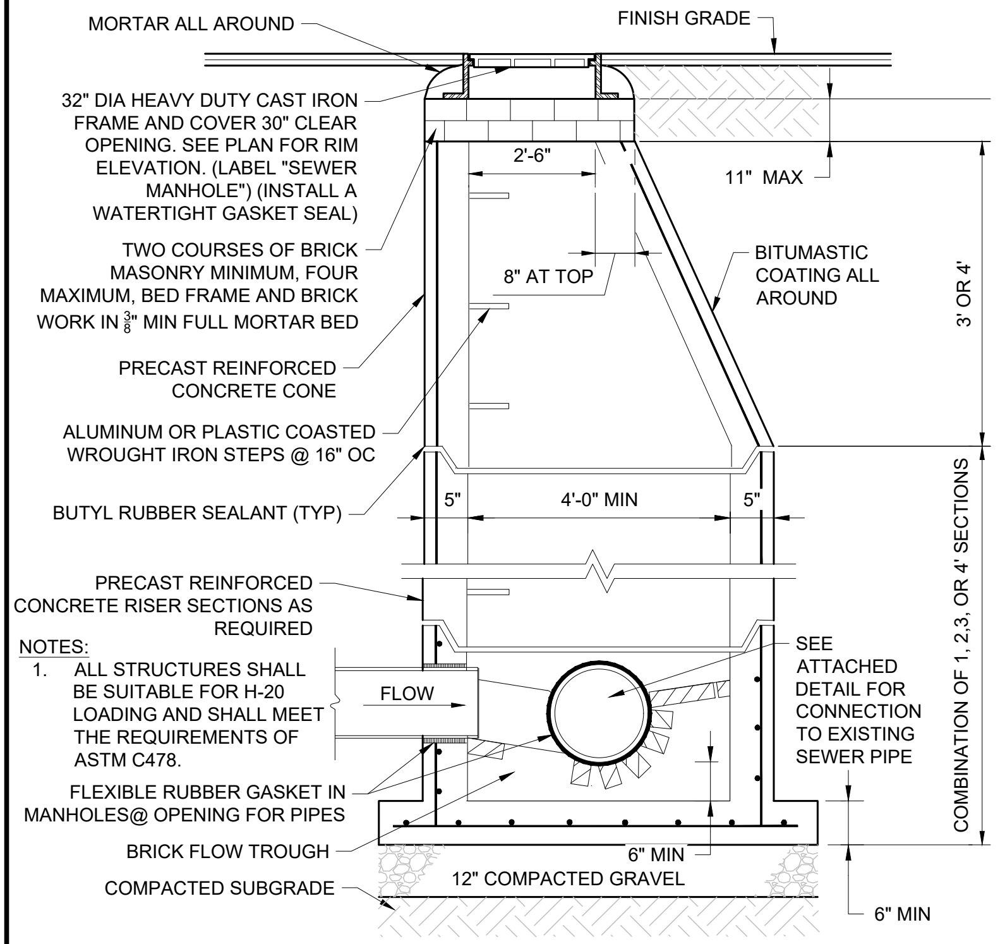
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

ISSUED FOR PERMIT

CONSTRUCTION DETAILS

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

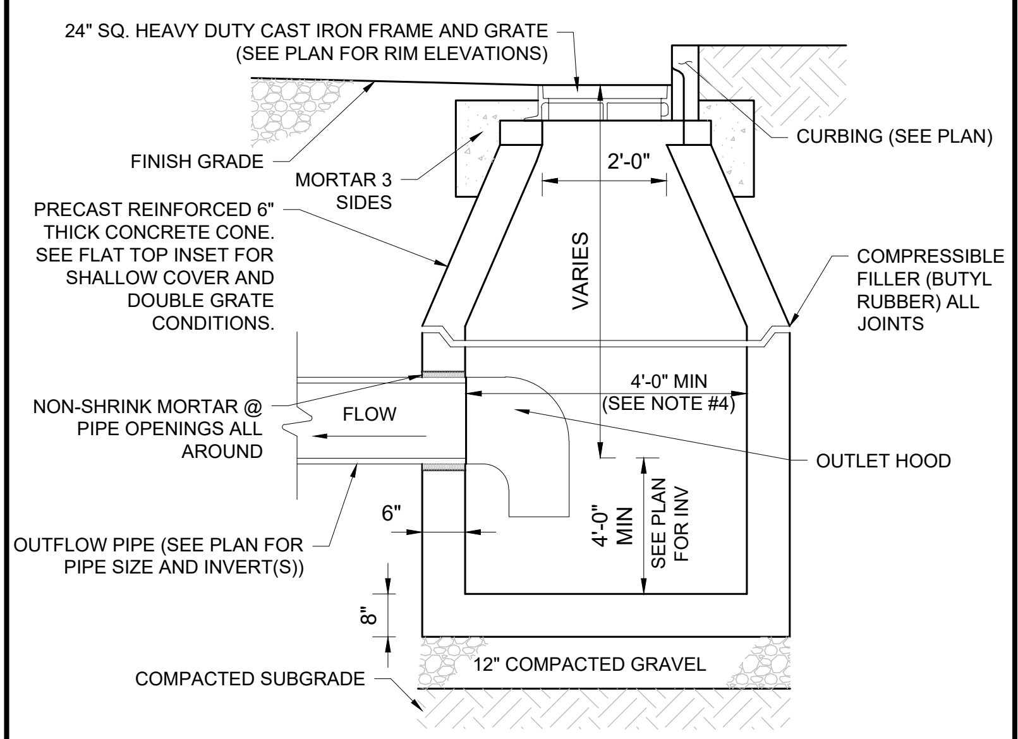
C-901


MORTAR ALL AROUND
FINISH GRADE
32" DIA HEAVY DUTY CAST IRON FRAME AND COVER 30" CLEAR OPENING. SEE PLAN FOR RIM ELEVATION. (LABEL "SEWER MANHOLE") (INSTALL A WATERTIGHT GASKET SEAL)
2'-6"
11" MAX
TWO COURSES OF BRICK MASONRY MINIMUM, FOUR MAXIMUM, BED FRAME AND BRICK WORK IN 3/8" MIN FULL MORTAR BED
8" AT TOP
BITUMASTIC COATING ALL AROUND
3' OR 4'
PRECAST REINFORCED CONCRETE CONE
ALUMINUM OR PLASTIC COASTED WROUGHT IRON STEPS @ 16" OC
BUTYL RUBBER SEALANT (TYP)
5"
4'-0" MIN
5"
PRECAST REINFORCED CONCRETE RISER SECTIONS AS REQUIRED
FLOW
SEE ATTACHED DETAIL FOR CONNECTION TO EXISTING SEWER PIPE
COMBINATION OF 1, 2,3, OR 4' SECTIONS
FLEXIBLE RUBBER GASKET IN MANHOLES@ OPENING FOR PIPES
BRICK FLOW TROUGH
6" MIN
12" COMPACTED GRAVEL
COMPACTED SUBGRADE
6" MIN

NOTES:
1. ALL STRUCTURES SHALL BE SUITABLE FOR H-20 LOADING AND SHALL MEET THE REQUIREMENTS OF ASTM C478.

PRECAST CONCRETE SANITARY MANHOLE

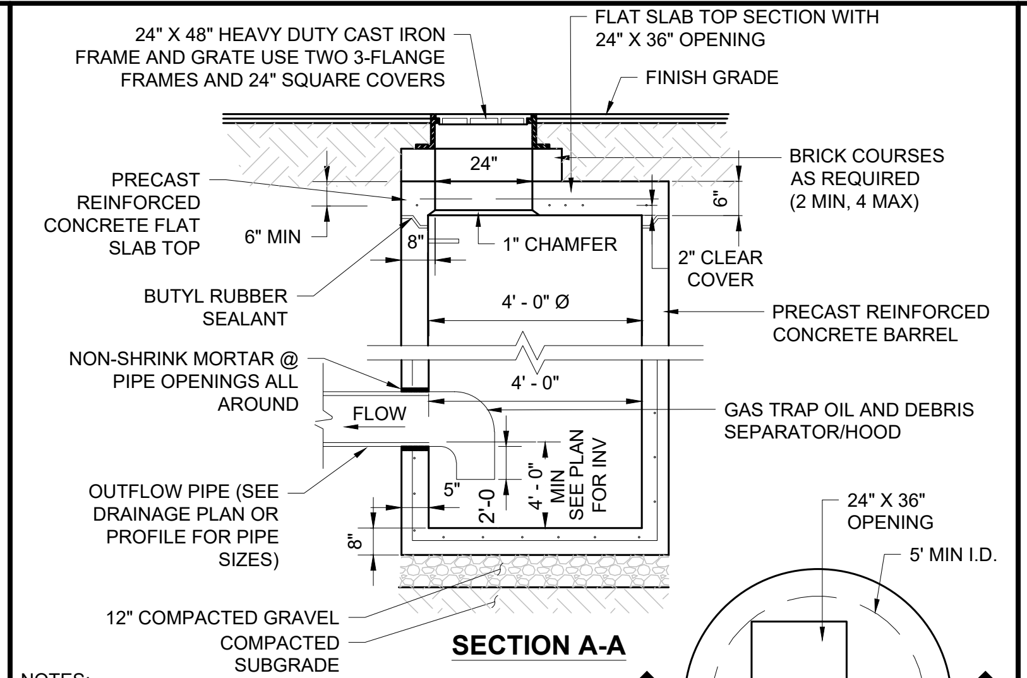
NOT TO SCALE (NE-U020101 - 11/2024)


24" SQ. HEAVY DUTY CAST IRON FRAME AND GRATE (SEE PLAN FOR RIM ELEVATIONS)
CURBING (SEE PLAN)
FINISH GRADE
MORTAR 3 SIDES
2'-0"
PRECAST REINFORCED 6" THICK CONCRETE CONE. SEE FLAT TOP INSET FOR SHALLOW COVER AND DOUBLE GRATE CONDITIONS.
VARIES
COMPRESSIBLE FILLER (BUTYL RUBBER) ALL JOINTS
NON-SHRINK MORTAR @ PIPE OPENINGS ALL AROUND
FLOW
4'-0" MIN (SEE NOTE #4)
OUTLET HOOD
6"
4'-0" MIN
SEE PLAN FOR INV
OUTFLOW PIPE (SEE PLAN FOR PIPE SIZE AND INVERT(S))
8"
COMPACTED SUBGRADE
12" COMPACTED GRAVEL

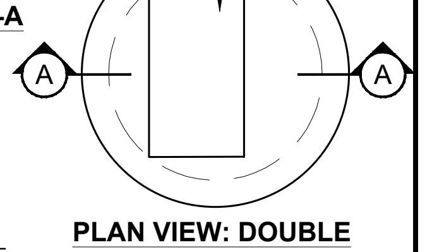
NOTES:
1. ALL STRUCTURES SHALL BE SUITABLE FOR H-20 LOADING AND SHALL MEET THE REQUIREMENTS OF ASTM C478.
2. CONCRETE SHALL BE 4,000 PSI AFTER 28 DAYS.
3. BUTYL RESIN SECTION JOINT CONFORM TO ASTM C990.
4. CONTRACTOR SHALL SIZE STRUCTURE AS NEEDED TO ACCOMMODATE PIPE SIZES AND PENETRATIONS AS SHOWN ON GRADING AND DRAINAGE PLANS.

PRECAST CONCRETE DEEP SUMP CATCH BASIN

NOT TO SCALE (NE-U010201 - 02/2025)


24" X 48" HEAVY DUTY CAST IRON FRAME AND GRATE USE TWO 3-FLANGE FRAMES AND 24" SQUARE COVERS
FLAT SLAB TOP SECTION WITH 24" X 36" OPENING
FINISH GRADE
24"
BRICK COURSES AS REQUIRED (2 MIN, 4 MAX)
PRECAST REINFORCED CONCRETE FLAT SLAB TOP
6" MIN
6"
8"
1" CHAMFER
2" CLEAR COVER
BUTYL RUBBER SEALANT
4' - 0" Ø
PRECAST REINFORCED CONCRETE BARREL
NON-SHRINK MORTAR @ PIPE OPENINGS ALL AROUND
4' - 0"
GAS TRAP OIL AND DEBRIS SEPARATOR/HOOD
FLOW
OUTFLOW PIPE (SEE DRAINAGE PLAN OR PROFILE FOR PIPE SIZES)
5"
2'-0
4' - 0" MIN
SEE PLAN FOR INV
8"
24" X 36" OPENING
5' MIN I.D.
12" COMPACTED GRAVEL
COMPACTED SUBGRADE
SECTION A-A

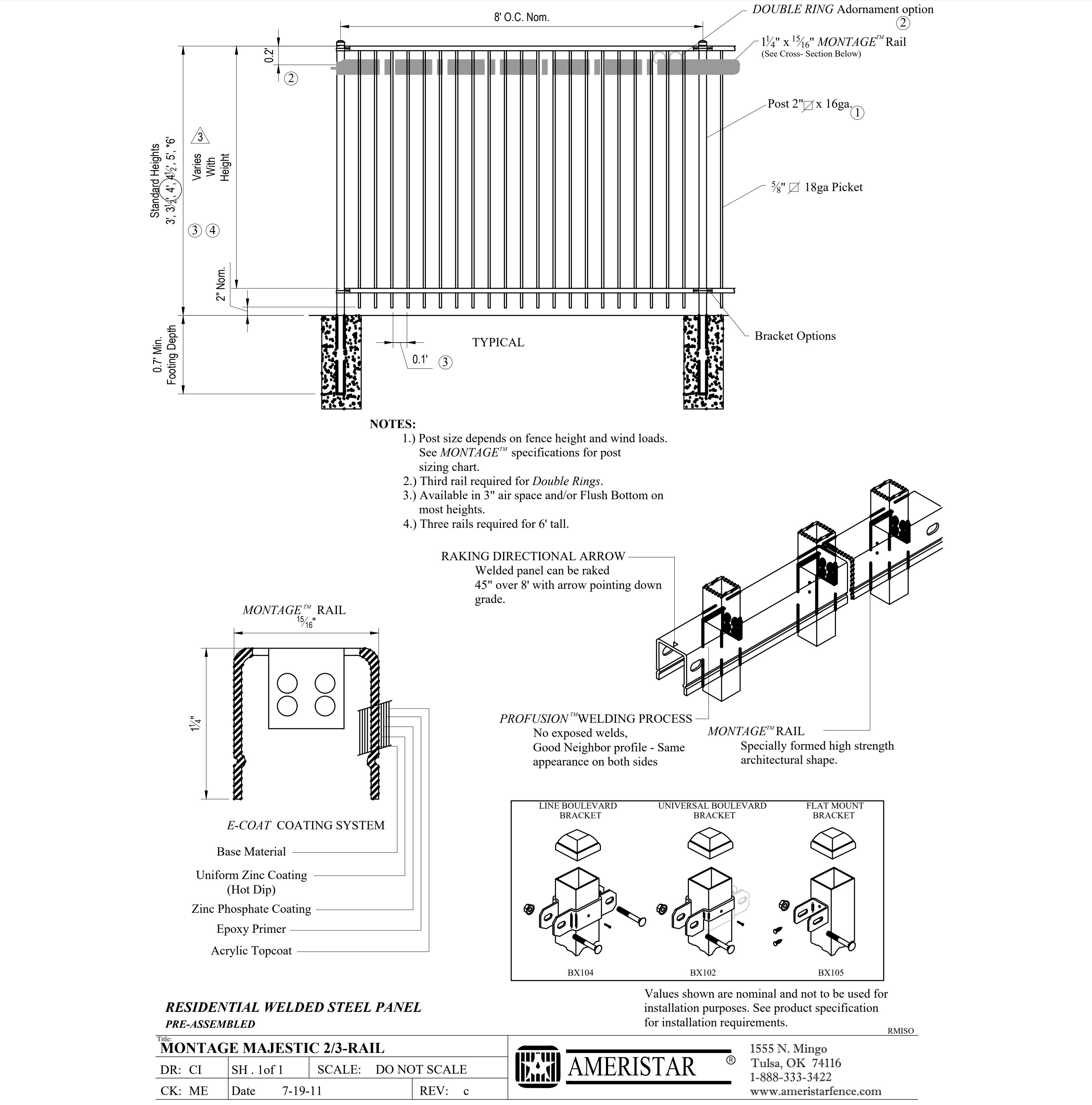
NOTES:
1. ALL STRUCTURES SHALL BE SUITABLE FOR H-20 LOADING AND SHALL MEET THE REQUIREMENTS OF ASTM C478.
2. CONCRETE SHALL BE 4,000 PSI AFTER 28 DAYS
3. REINFORCED STEEL CONFORMS TO ASTM A185 SPEC. 0.12 SQ IN/LINEAL FT AND 0.12 SQ IN (BOTH WAYS) BASE BOTTOM.
4. MANHOLE DESIGN SPECS CONFORM TO ASTM C478 SPEC FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS"



PLAN VIEW: DOUBLE GRATE TOP SLAB

PRECAST CONCRETE CATCH BASIN WITH DOUBLE GRATE

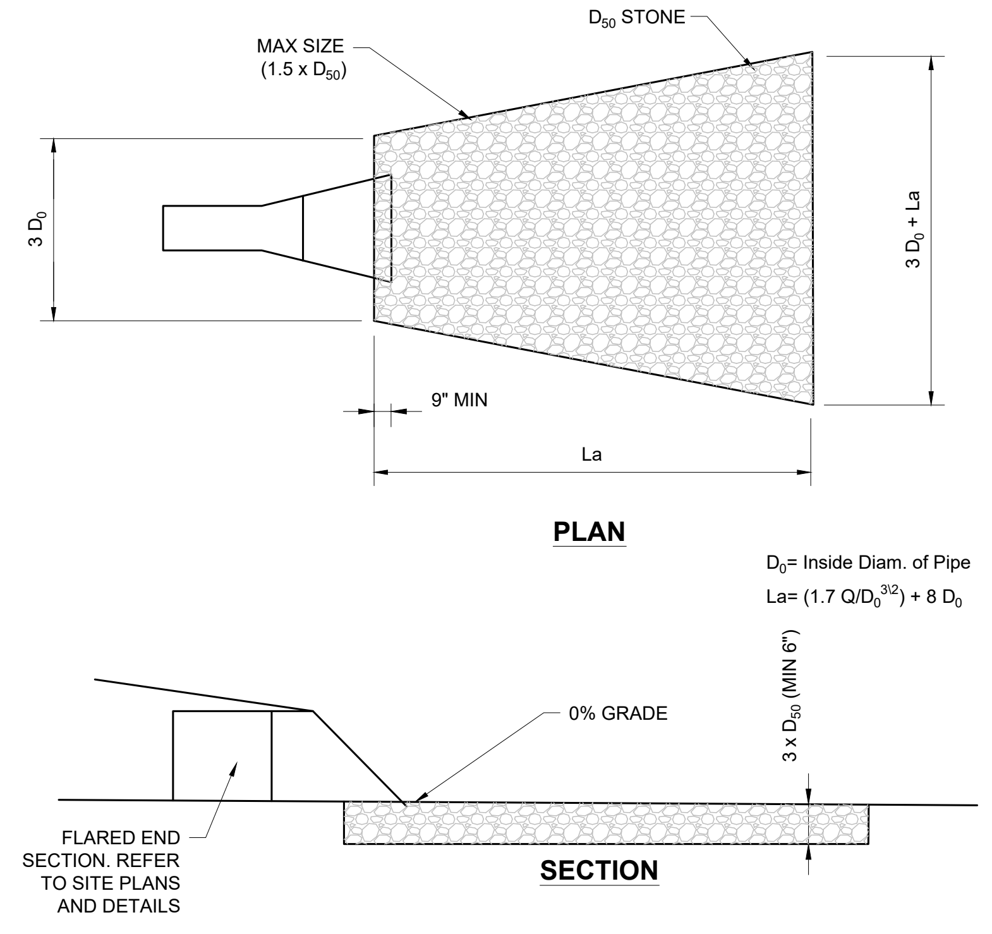
NOT TO SCALE (NE-U010202 - 11/2024)


8' O.C. Nom.
DOUBLE RING Adornament option ②
1¼" x 15/16" MONTAGE™ Rail (See Cross- Section Below)
0.2'
②
Standard Heights 3', 3½', 4', 4½', 5', *6'
3
Varies With Height
③ ④
Post 2" x 16ga. ①
5/8" 18ga Picket
2" Nom.
0.7' Min. Footing Depth
0.1' ③
TYPICAL
Bracket Options
RAKING DIRECTIONAL ARROW
Welded panel can be raked 45" over 8' with arrow pointing down grade.
MONTAGE™ RAIL
15/16"
1¼"
E-COAT COATING SYSTEM
Base Material
Uniform Zinc Coating (Hot Dip)
Zinc Phosphate Coating
Epoxy Primer
Acrylic Topcoat
PROFUSION™WELDING PROCESS
No exposed welds, Good Neighbor profile - Same appearance on both sides
MONTAGE™RAIL
Specially formed high strength architectural shape.
LINE BOULEVARD BRACKET
UNIVERSAL BOULEVARD BRACKET
FLAT MOUNT BRACKET
BX104
BX102
BX105
RESIDENTIAL WELDED STEEL PANEL
PRE-ASSEMBLED
RMISO
AMERISTAR

NOTES:
1.) Post size depends on fence height and wind loads. See *MONTAGE™* specifications for post sizing chart.
2.) Third rail required for *Double Rings*.
3.) Available in 3" air space and/or Flush Bottom on most heights.
4.) Three rails required for 6' tall.

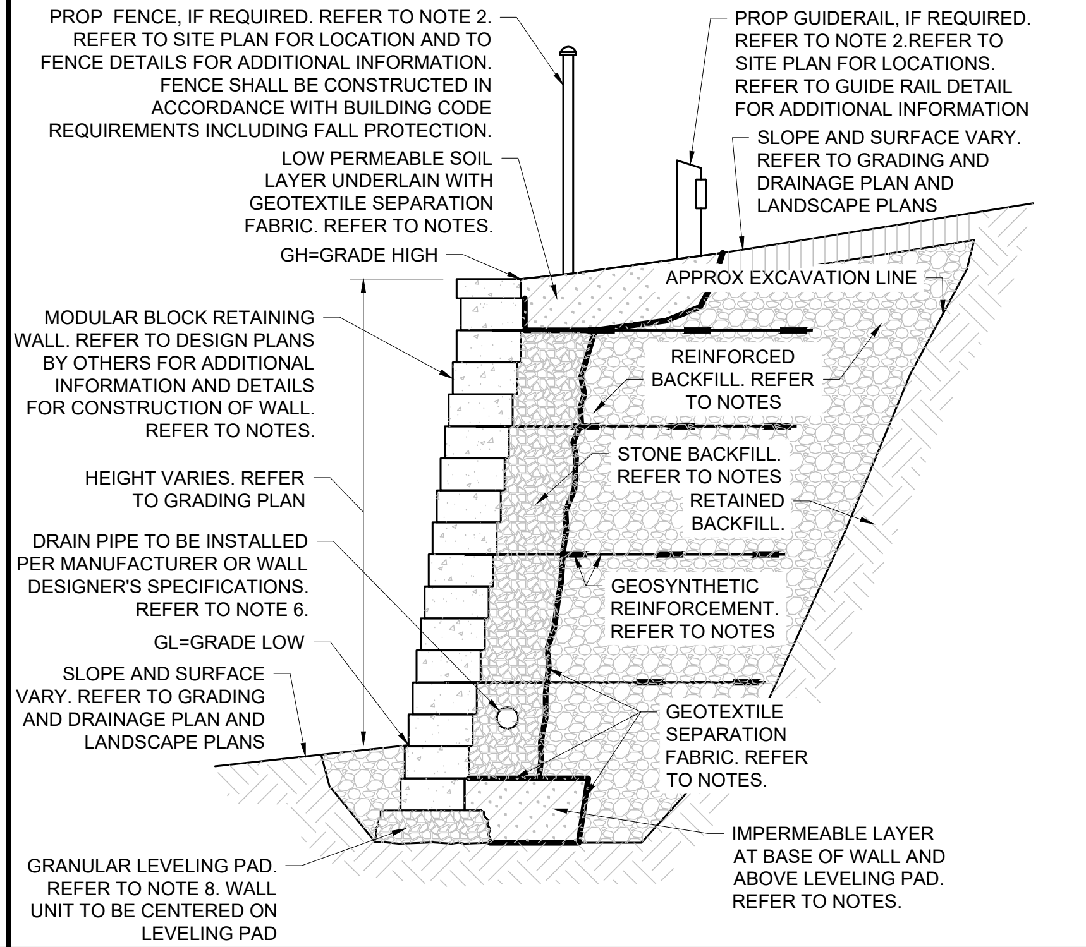
Values shown are nominal and not to be used for installation purposes. See product specification for installation requirements.

Title: MONTAGE MAJESTIC 2/3-RAIL			AMERISTAR®	1555 N. Mingo Tulsa, OK 74116 1-888-333-3422 www.ameristarfence.com
DR: CI	SH . 1of 1	SCALE: DO NOT SCALE		
CK: ME	Date 7-19-11	REV: c		


D50 STONE
MAX SIZE (1.5 x D50)
3 D0
3 D0 + La
9" MIN
La
PLAN
D0= Inside Diam. of Pipe
La= (1.7 Q/D0^3\2) + 8 D0
0% GRADE
3 x D50 (MIN 6")
FLARED END SECTION. REFER TO SITE PLANS AND DETAILS
SECTION

FLARED END SECTION WITH RIP-RAP

NOT TO SCALE (NE-U010403 - 09/2023)


PROP FENCE, IF REQUIRED. REFER TO NOTE 2. REFER TO SITE PLAN FOR LOCATION AND TO FENCE DETAILS FOR ADDITIONAL INFORMATION. FENCE SHALL BE CONSTRUCTED IN ACCORDANCE WITH BUILDING CODE REQUIREMENTS INCLUDING FALL PROTECTION.
PROP GUIDERAIL, IF REQUIRED. REFER TO NOTE 2.REFER TO SITE PLAN FOR LOCATIONS. REFER TO GUIDE RAIL DETAIL FOR ADDITIONAL INFORMATION
SLOPE AND SURFACE VARY. REFER TO GRADING AND DRAINAGE PLAN AND LANDSCAPE PLANS
LOW PERMEABLE SOIL LAYER UNDERLAIN WITH GEOTEXTILE SEPARATION FABRIC. REFER TO NOTES.
GH=GRADE HIGH
APPROX EXCAVATION LINE
MODULAR BLOCK RETAINING WALL. REFER TO DESIGN PLANS BY OTHERS FOR ADDITIONAL INFORMATION AND DETAILS FOR CONSTRUCTION OF WALL. REFER TO NOTES.
REINFORCED BACKFILL. REFER TO NOTES
HEIGHT VARIES. REFER TO GRADING PLAN
STONE BACKFILL. REFER TO NOTES
RETAINED BACKFILL.
DRAIN PIPE TO BE INSTALLED PER MANUFACTURER OR WALL DESIGNER'S SPECIFICATIONS. REFER TO NOTE 6.
GEOSYNTHETIC REINFORCEMENT. REFER TO NOTES
GL=GRADE LOW
SLOPE AND SURFACE VARY. REFER TO GRADING AND DRAINAGE PLAN AND LANDSCAPE PLANS
GEOTEXTILE SEPARATION FABRIC. REFER TO NOTES.
IMPERMEABLE LAYER AT BASE OF WALL AND ABOVE LEVELING PAD. REFER TO NOTES.
GRANULAR LEVELING PAD. REFER TO NOTE 8. WALL UNIT TO BE CENTERED ON LEVELING PAD

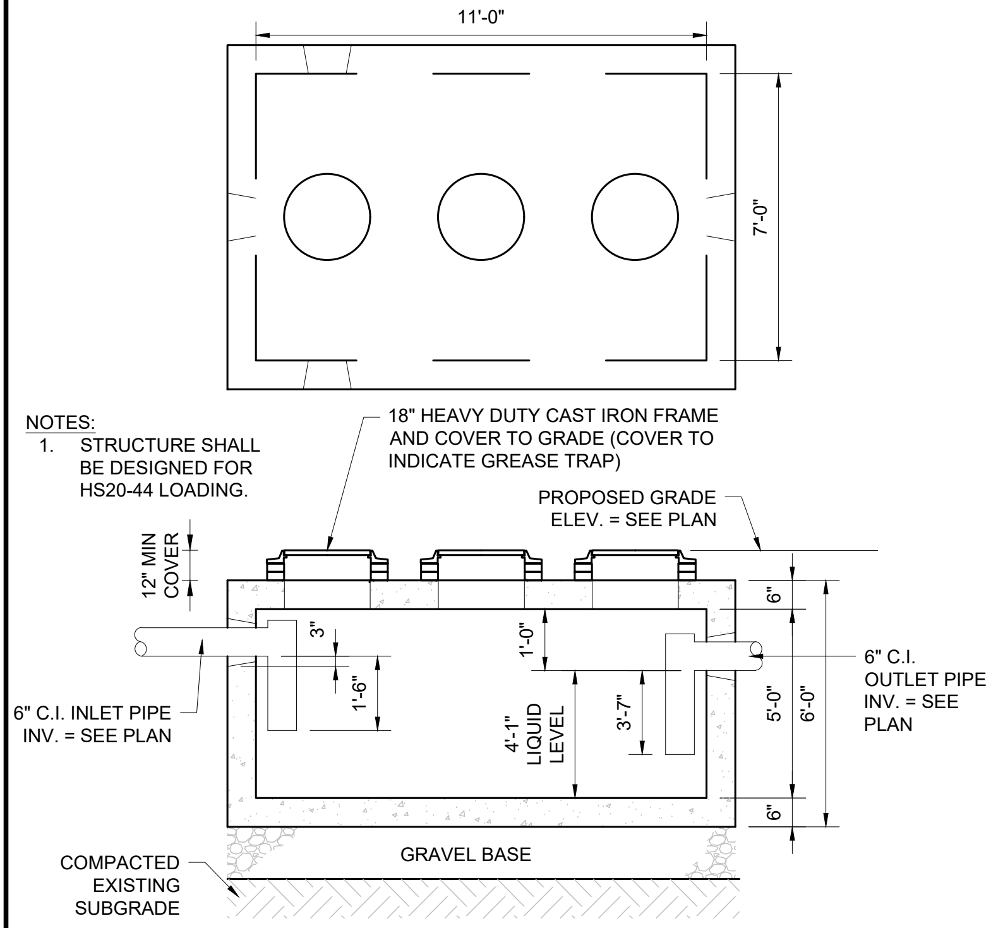
NOTES:
1. THIS TYPICAL DETAIL IS NOT FOR CONSTRUCTION AND IS PRELIMINARY AND CONCEPTUAL IN NATURE. THIS DETAIL IS PROVIDED FOR GRAPHICAL REFERENCE PURPOSES ONLY. DESIGN OF THE PROPOSED RETAINING WALL(S) SHALL BE PREPARED BY THE APPROPRIATE PROFESSIONAL (E.G. STRUCTURAL ENGINEER) LICENSED IN THE STATE WHERE THE CONSTRUCTION OCCURS. THE PROFESSIONAL SHALL BE FAMILIAR WITH THE ACTUAL SITE CONDITIONS AND MATERIALS AS WELL AS APPLICABLE, LOCAL, STATE AND FEDERAL REGULATIONS.
2. RETAINING WALL & ANY ASSOCIATED REINFORCEMENT SHALL BE DESIGNED ACCOUNTING FOR SOIL TYPES, WATER TABLE ELEVATION, EXISTING & PROPOSED SURROUNDING IMPROVEMENTS/CONDITIONS (INCLUDING BUT NOT LIMITED TO SLOPES, DRIVE AISLES, ROADS, FENCING (INCLUDING WIND LOAD), GUIDERAILS (INCLUDING COLLISION LOADING), UTILITIES, DRAINAGE FACILITIES, STRUCTURES, FOUNDATIONS), LIVE LOADS AND OTHER SITE AMENITIES THAT COULD HAVE AN INFLUENCE OR IMPACT ON THE RETAINING WALL(S) CONSTRUCTABILITY AND/OR LONGEVITY SHALL BE CONSIDERED AND INCORPORATED INTO THE RETAINING WALL DESIGN AS WELL AS THE GLOBAL STABILITY ANALYSIS.
3. RETAINING WALL DESIGNER SHALL ACCOUNT FOR MULTIPLE STORM STRUCTURES BEHIND WALL INCLUDING PARALLEL STORM PIPE THAT MAY INTERFERE WITH THE DESIGN OF THE WALL AND ANY ASSOCIATED REINFORCEMENT.
4. SEE GRADING AND DRAINAGE PLAN FOR PROPOSED ELEVATIONS AND SLOPES ASSOCIATED WITH SAME.
5. REFER TO GENERAL GRADING NOTES ON SHEET C-102 FOR ADDITIONAL NOTES REGARDING DESIGN AND CONSTRUCTION OF RETAINING WALLS.
6. DRAIN PIPE SHALL DISCHARGE TO CRUSHED STONE PAD AT GRADE (I.E. DAYLIGHT) OR CONNECT TO PROP DRAINAGE SYSTEM IF UNABLE TO DAYLIGHT. A RODENT SCREEN SHALL BE PROVIDED AT PIPE END WHERE PIPE DAYLIGHTS.
7. THIS DETAIL IS NOT APPLICABLE FOR WALLS UTILIZED TO RETAIN WATER.
8. MATERIALS UTILIZED IN CONSTRUCTION OF THE RETAINING WALL SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S AND WALL DESIGNER'S SPECIFICATIONS INCLUDING ANY REQUIRED COMPACTION AND TESTING.
9. WALL DESIGNER SHALL ACCOUNT FOR PROXIMITY OF DRAINAGE SYSTEMS AND ANY ASSOCIATED STORMWATER INFILTRATION INCLUDING PREPARATION OF GLOBAL STABILITY AND MOUNDING ANALYSES.

REINFORCED SEGMENTAL BLOCK RETAINING WALL

NOT TO SCALE (NE-S110501 - 02/2024)

ORNAMENTAL FENCE DETAIL

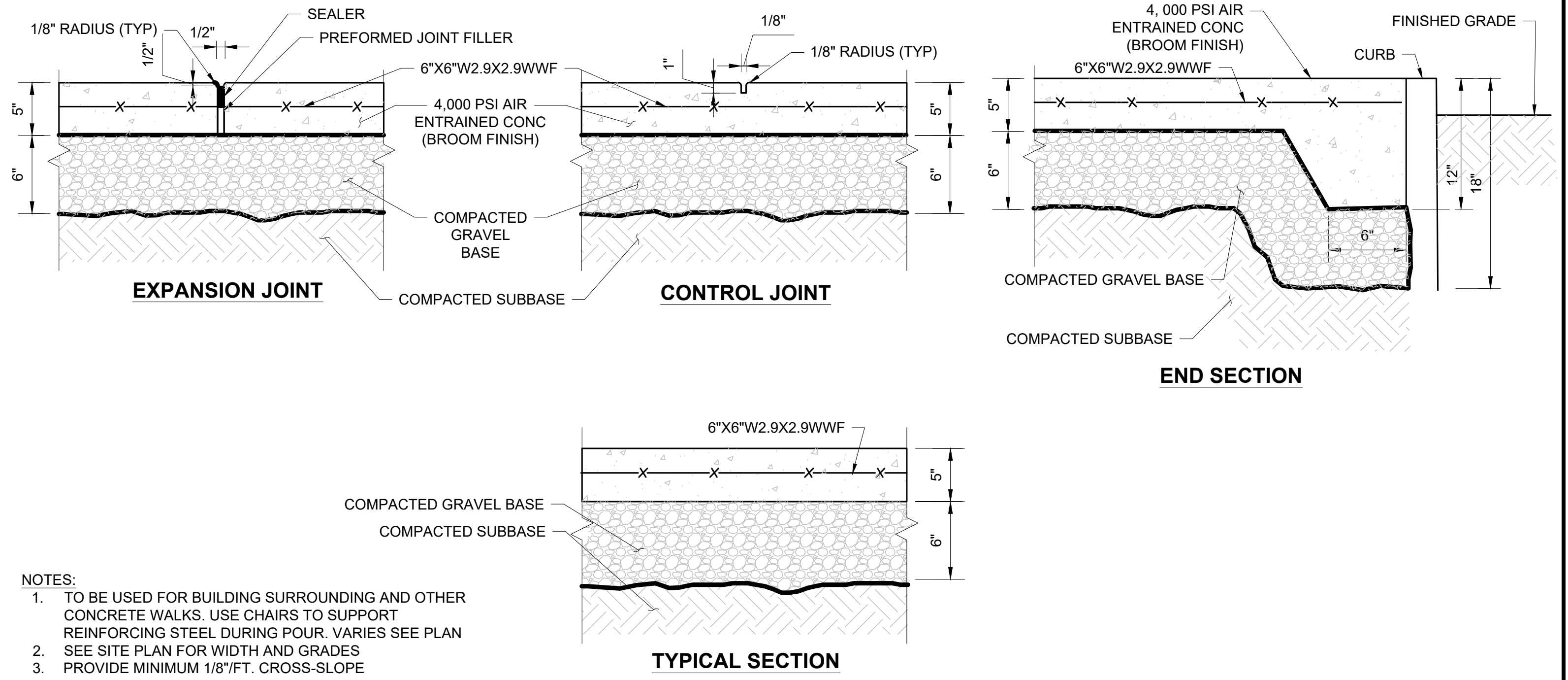
NOT TO SCALE


11'-0"
7'-0"
18" HEAVY DUTY CAST IRON FRAME AND COVER TO GRADE (COVER TO INDICATE GREASE TRAP)
PROPOSED GRADE ELEV. = SEE PLAN
12" MIN COVER
6"
3"
1'-0"
1'-6"
4'-1" LIQUID LEVEL
3'-7"
5'-0"
6'-0"
6"
6" C.I. INLET PIPE INV. = SEE PLAN
6" C.I. OUTLET PIPE INV. = SEE PLAN
GRAVEL BASE
COMPACTED EXISTING SUBGRADE

NOTES:
1. STRUCTURE SHALL BE DESIGNED FOR HS20-44 LOADING.

1,500 GALLON PRECAST CONCRETE GREASE TRAP

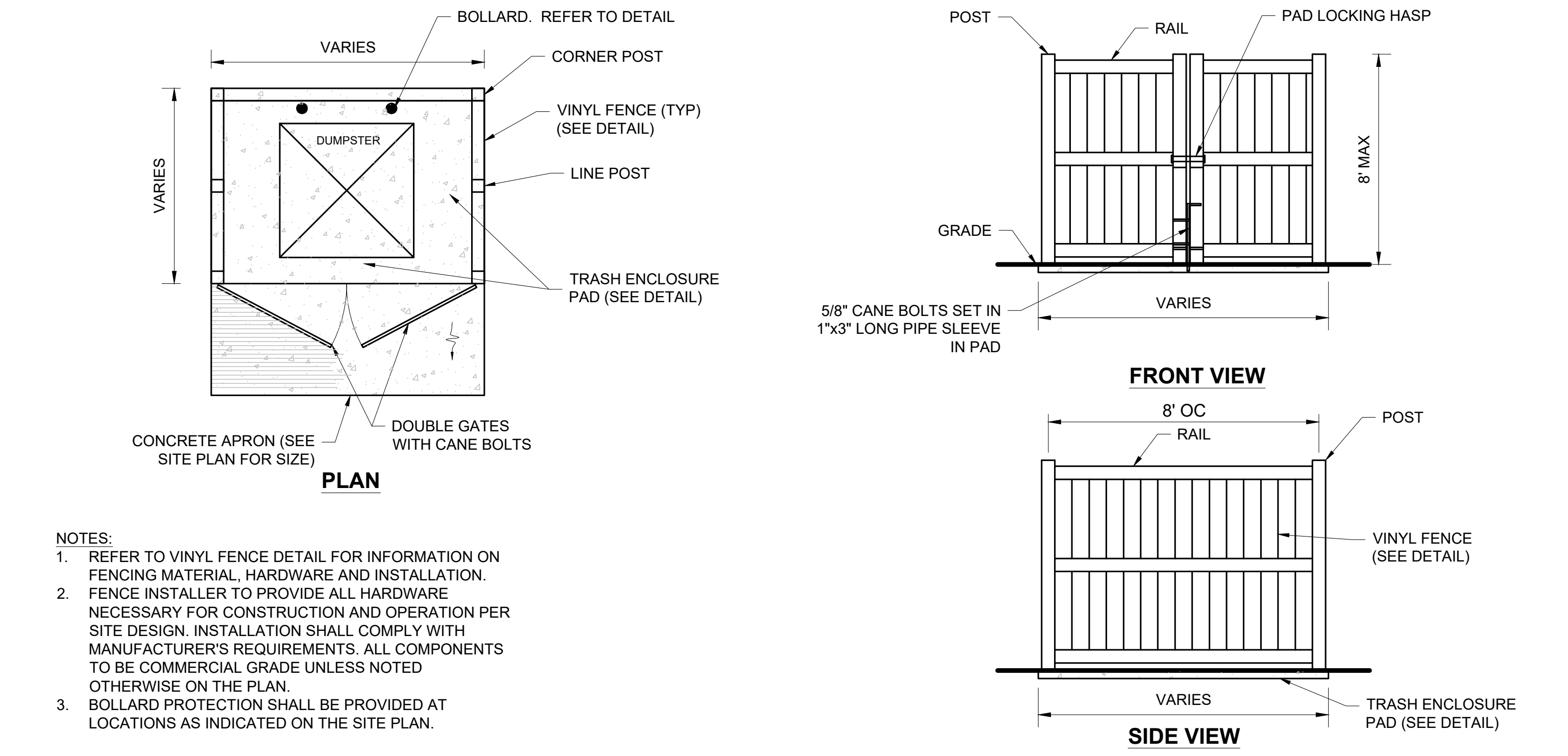
NOT TO SCALE (NE-U020302 - 05/2024)


1/8" RADIUS (TYP)
1/2"
1/2"
SEALER
PREFORMED JOINT FILLER
6"X6"W2.9X2.9WWF
4,000 PSI AIR ENTRAINED CONC (BROOM FINISH)
5"
6"
COMPACTED GRAVEL BASE
EXPANSION JOINT
COMPACTED SUBBASE
1/8"
1"
1/8" RADIUS (TYP)
CONTROL JOINT
4, 000 PSI AIR ENTRAINED CONC (BROOM FINISH)
FINISHED GRADE
CURB
12"
18"
COMPACTED GRAVEL BASE
COMPACTED SUBBASE
END SECTION
TYPICAL SECTION

NOTES:
1. TO BE USED FOR BUILDING SURROUNDING AND OTHER CONCRETE WALKS. USE CHAIRS TO SUPPORT REINFORCING STEEL DURING POUR. VARIES SEE PLAN
2. SEE SITE PLAN FOR WIDTH AND GRADES
3. PROVIDE MINIMUM 1/8"/FT. CROSS-SLOPE
4. PROVIDE CONTROL JOINTS 5'-0" O.C. MIN 5. PROVIDE EXPANSION JOINTS 20'-0" O.C. MIN AT EXPANSION JOINTS, PROVIDE DOWELS @ 24" O.C.

CONCRETE SIDEWALK

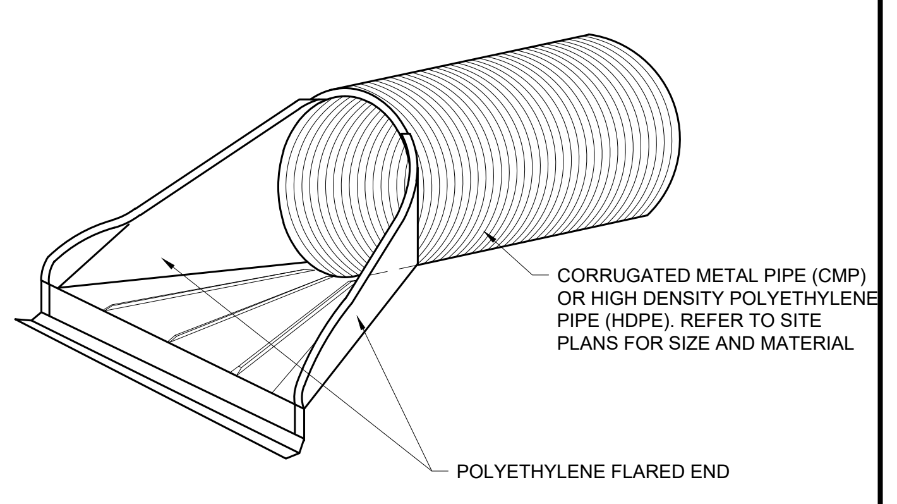
NOT TO SCALE (NE-S030201 - 10/2024)


BOLLARD. REFER TO DETAIL
VARIES
CORNER POST
VINYL FENCE (TYP) (SEE DETAIL)
DUMPSTER
VARIES
LINE POST
TRASH ENCLOSURE PAD (SEE DETAIL)
CONCRETE APRON (SEE SITE PLAN FOR SIZE)
DOUBLE GATES WITH CANE BOLTS
PLAN
POST
RAIL
PAD LOCKING HASP
8' MAX
GRADE
5/8" CANE BOLTS SET IN 1"x3" LONG PIPE SLEEVE IN PAD
VARIES
FRONT VIEW
8' OC
RAIL
POST
VINYL FENCE (SEE DETAIL)
VARIES
TRASH ENCLOSURE PAD (SEE DETAIL)
SIDE VIEW

NOTES:
1. REFER TO VINYL FENCE DETAIL FOR INFORMATION ON FENCING MATERIAL, HARDWARE AND INSTALLATION.
2. FENCE INSTALLER TO PROVIDE ALL HARDWARE NECESSARY FOR CONSTRUCTION AND OPERATION PER SITE DESIGN. INSTALLATION SHALL COMPLY WITH MANUFACTURER'S REQUIREMENTS. ALL COMPONENTS TO BE COMMERCIAL GRADE UNLESS NOTED OTHERWISE ON THE PLAN.
3. BOLLARD PROTECTION SHALL BE PROVIDED AT LOCATIONS AS INDICATED ON THE SITE PLAN.

TRASH ENCLOSURE WITH VINYL FENCE

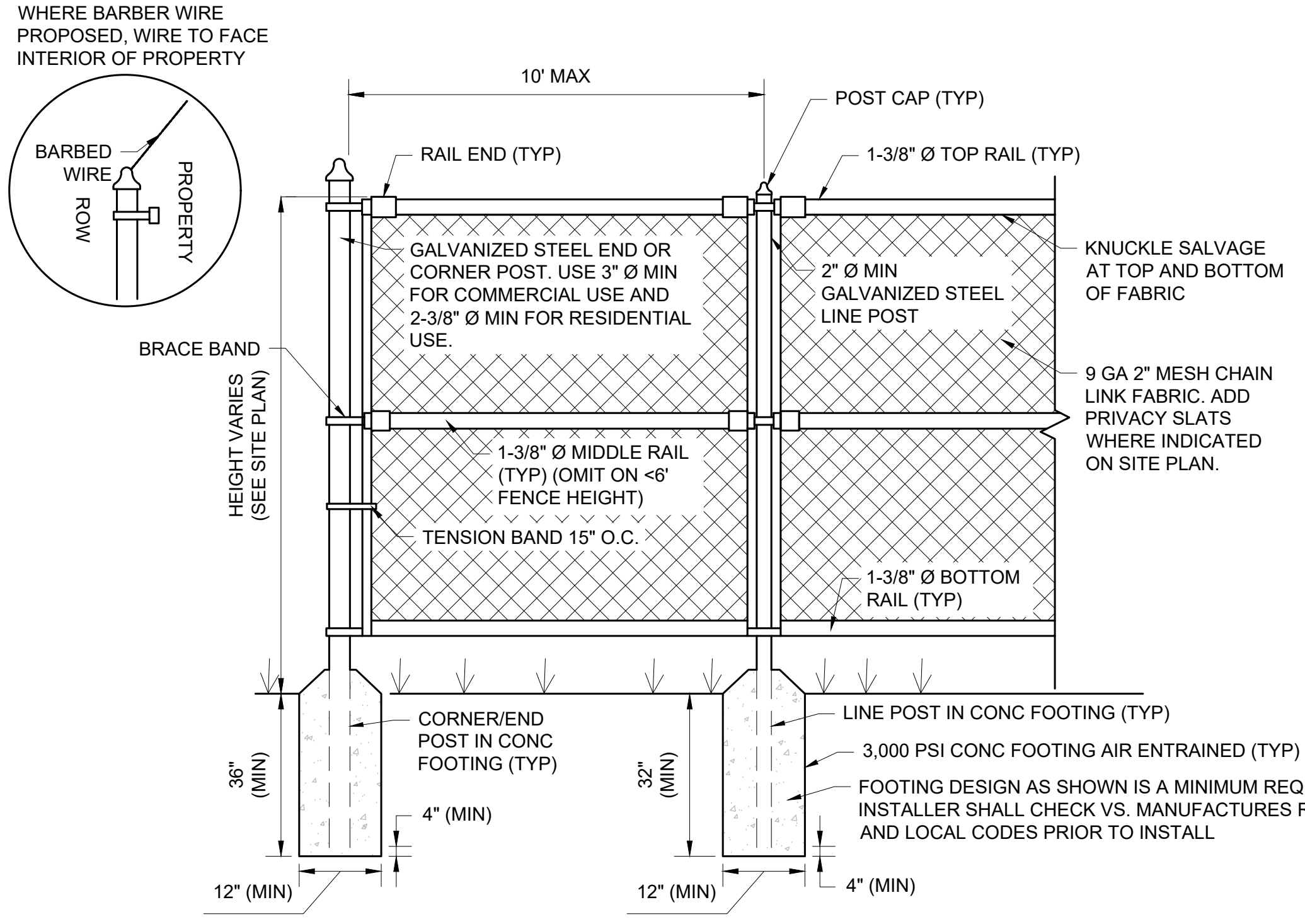
NOT TO SCALE (NE-S100301 - 03/2025)


CORRUGATED METAL PIPE (CMP) OR HIGH DENSITY POLYETHYLENE PIPE (HDPE). REFER TO SITE PLANS FOR SIZE AND MATERIAL
POLYETHYLENE FLARED END

NOTES:
1. 12" MINIMUM COVER OVER THE TOP OF THE PIPE, COMPACTED TO A DENSITY OF 90% AS PER AASHTO T-99.

POLYETHYLENE FLARED END SECTION

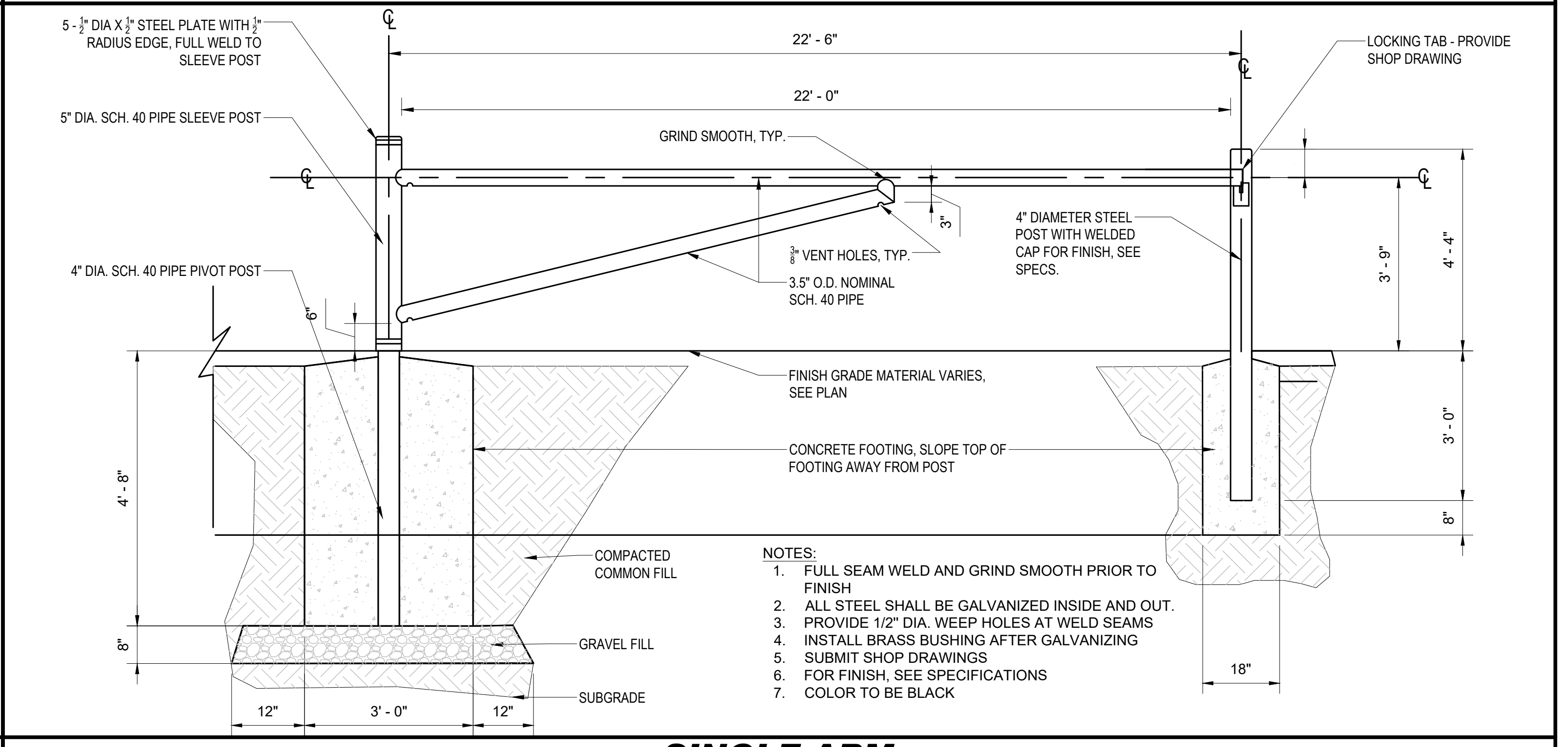
NOT TO SCALE (NE-U010401 - 09/2023)


WHERE BARBER WIRE PROPOSED, WIRE TO FACE INTERIOR OF PROPERTY
BARBED WIRE
ROW
PROPERTY
10' MAX
POST CAP (TYP)
RAIL END (TYP)
1-3/8" Ø TOP RAIL (TYP)
GALVANIZED STEEL END OR CORNER POST. USE 3" Ø MIN FOR COMMERCIAL USE AND 2-3/8" Ø MIN FOR RESIDENTIAL USE.
2" Ø MIN GALVANIZED STEEL LINE POST
KNUCKLE SALVAGE AT TOP AND BOTTOM OF FABRIC
BRACE BAND
HEIGHT VARIES (SEE SITE PLAN)
9 GA 2" MESH CHAIN LINK FABRIC. ADD PRIVACY SLATS WHERE INDICATED ON SITE PLAN.
1-3/8" Ø MIDDLE RAIL (TYP) (OMIT ON <6' FENCE HEIGHT)
TENSION BAND 15" O.C.
1-3/8" Ø BOTTOM RAIL (TYP)
CORNER/END POST IN CONC FOOTING (TYP)
LINE POST IN CONC FOOTING (TYP)
3,000 PSI CONC FOOTING AIR ENTRAINED (TYP)
FOOTING DESIGN AS SHOWN IS A MINIMUM REQUIREMENT AND INSTALLER SHALL CHECK VS. MANUFACTURES REQUIREMENTS AND LOCAL CODES PRIOR TO INSTALL
36" (MIN)
32" (MIN)
4" (MIN)
4" (MIN)
12" (MIN)
12" (MIN)

NOTES:
1. WHERE SITE PLAN INDICATES VINYL SLATS, COLOR TO BE COORD WITH DEVELOPER PRIOR TO ORDERING OF MATERIALS.
2. WHERE SITE PLAN INDICATES VINYL COATED FENCE, ALL POSTS AND HARDWARE TO BE BLACK AND 2" MESH TO BE BLACK VINYL COATED
3. WHERE SITE PLAN INDICATES BARBED WIRE FENCE, SEE INSET VIEW FOR WIRE FACING INTERIOR PROPERTY
4. WHERE FENCE WILL BE FOUNDED ON COMPETENT ROCK, CORE DRILL ROCK TO POST DIAMETER PLUS 2" MINIMUM 24" IN DEPTH, INSTALL FENCE POST AND BACKFILL WITH NON-SHRINK GROUT.
5. ALL FENCE FABRIC, POSTS, MATERIALS, COATINGS, GATES AND HARDWARE SHALL BE CONFIRMED BY THE PROJECT ARCHITECT AND OWNER PRIOR TO ORDERING UNLESS OTHERWISE NOTED ON THE DRAWINGS. FENCE POST DIAMETERS SHOWN ARE PLACEHOLDERS FOR BID ONLY AND NOT PART OF THE CIVIL ENGINEER SCOPE. FINAL POST SIZE/SCHEDULE SHALL BE VERIFIED BY CONTRACTOR BASED ON SITE CONDITIONS AS PART OF THE BID PROCESS.
6. WHEN FENCE IS TO BE USED AS A GUARD IT SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE STATE AND FEDERAL CODES
7. CONTRACTOR TO SUBMIT SHOP DRAWING FOR APPROVAL

CHAIN LINK FENCE

NOT TO SCALE (NE-S080204 - 10/2024)


5 - 1/2" DIA X 1/2" STEEL PLATE WITH 1/2" RADIUS EDGE, FULL WELD TO SLEEVE POST
℄
22' - 6"
22' - 0"
LOCKING TAB - PROVIDE SHOP DRAWING
5" DIA. SCH. 40 PIPE SLEEVE POST
GRIND SMOOTH, TYP.
3"
3/8" VENT HOLES, TYP.
3.5" O.D. NOMINAL SCH. 40 PIPE
4" DIAMETER STEEL POST WITH WELDED CAP FOR FINISH, SEE SPECS.
4" DIA. SCH. 40 PIPE PIVOT POST
6"
3' - 9"
4' - 4"
FINISH GRADE MATERIAL VARIES, SEE PLAN
CONCRETE FOOTING, SLOPE TOP OF FOOTING AWAY FROM POST
3' - 0"
4' - 8"
8"
COMPACTED COMMON FILL
GRAVEL FILL
SUBGRADE
8"
12"
3' - 0"
12"
18"

NOTES:
1. FULL SEAM WELD AND GRIND SMOOTH PRIOR TO FINISH
2. ALL STEEL SHALL BE GALVANIZED INSIDE AND OUT.
3. PROVIDE 1/2" DIA. WEEP HOLES AT WELD SEAMS
4. INSTALL BRASS BUSHING AFTER GALVANIZING
5. SUBMIT SHOP DRAWINGS
6. FOR FINISH, SEE SPECIFICATIONS
7. COLOR TO BE BLACK

SINGLE ARM SWING GATE

NOT TO SCALE (NE-S089901 - 09/2023)

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

TEAM HOYT
COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt

One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER

50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900

www.BohlerEngineering.com

J.A. KUCICH
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
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RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

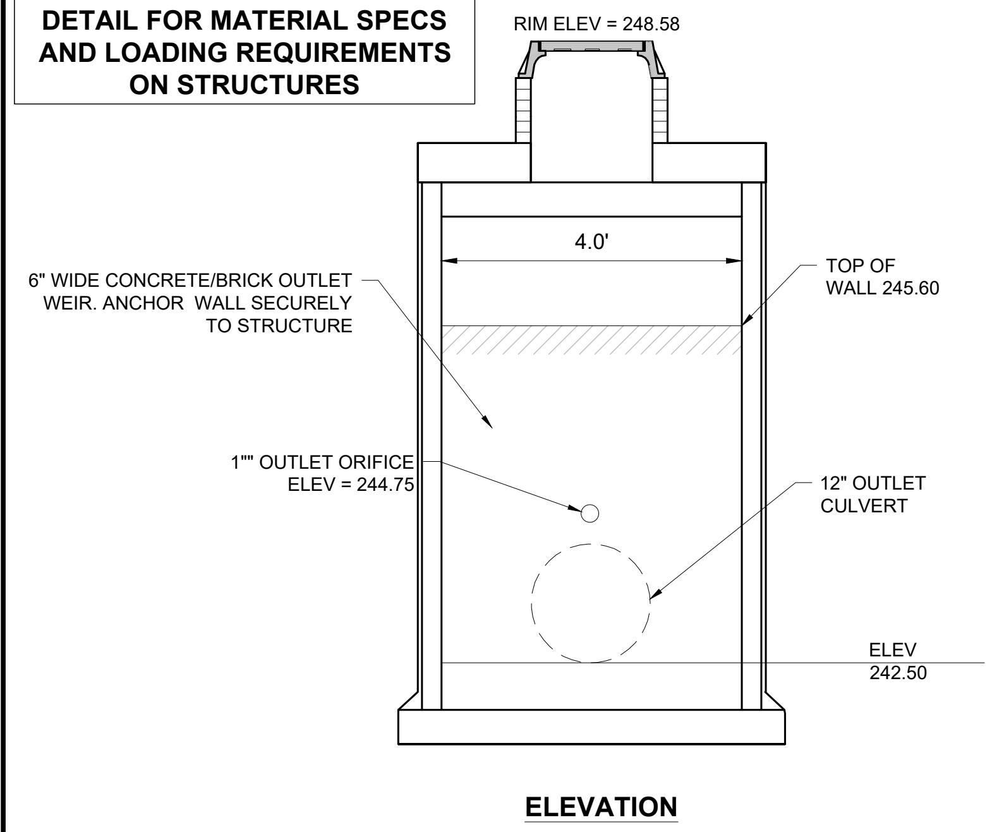
ISSUED FOR
PERMIT

CONSTRUCTION DETAILS

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

C-902

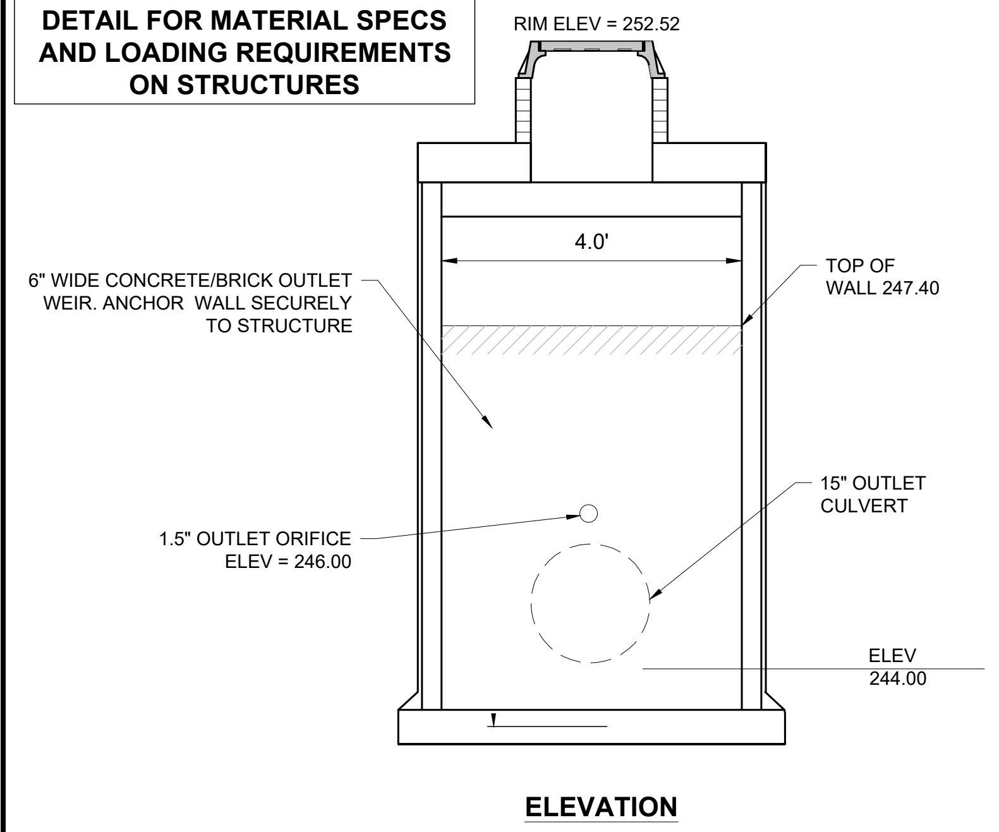
REFER TO "PRECAST CONCRETE STORM DRAIN MANHOLE" DETAIL FOR MATERIAL SPECS AND LOADING REQUIREMENTS ON STRUCTURES


RIM ELEV = 248.58
4.0'
6" WIDE CONCRETE/BRICK OUTLET WEIR. ANCHOR WALL SECURELY TO STRUCTURE
TOP OF WALL 245.60
1"" OUTLET ORIFICE ELEV = 244.75
12" OUTLET CULVERT
ELEV 242.50
ELEVATION

OUTLET CONTROL STRUCTURE B-30 (BASIN 1)

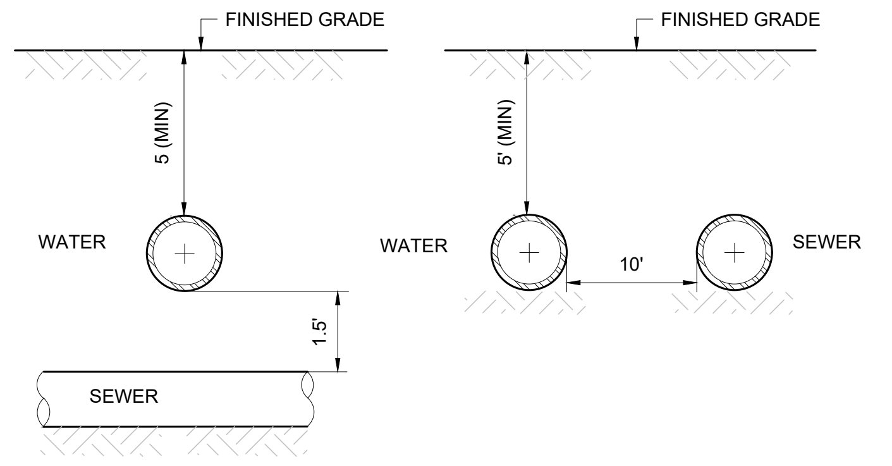
NOT TO SCALE (NE-U010103 - 11/2024)

REFER TO "PRECAST CONCRETE STORM DRAIN MANHOLE" DETAIL FOR MATERIAL SPECS AND LOADING REQUIREMENTS ON STRUCTURES


RIM ELEV = 252.52
4.0'
6" WIDE CONCRETE/BRICK OUTLET WEIR. ANCHOR WALL SECURELY TO STRUCTURE
TOP OF WALL 247.40
1.5" OUTLET ORIFICE ELEV = 246.00
15" OUTLET CULVERT
ELEV 244.00
ELEVATION

OUTLET CONTROL STRUCTURE A-30 (BASIN 2)

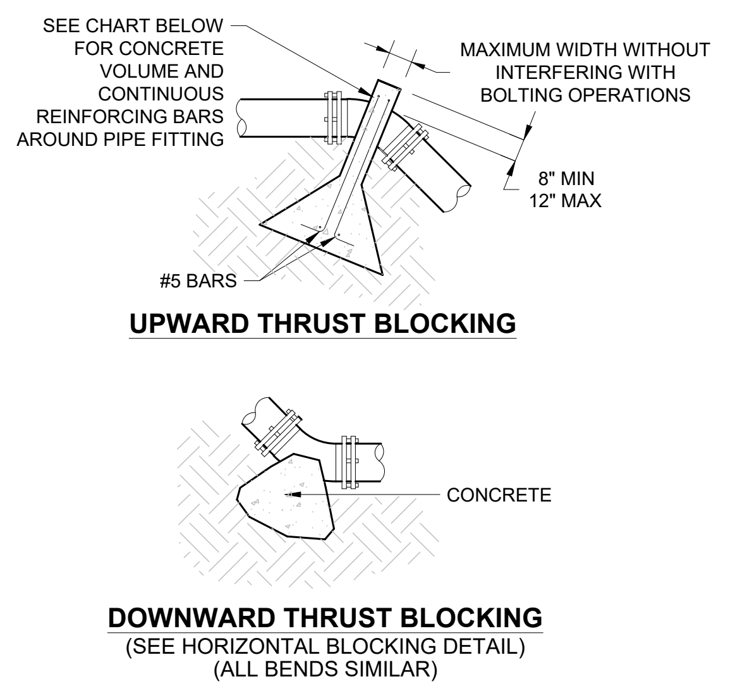
NOT TO SCALE (NE-U010103 - 11/2024)


FINISHED GRADE
FINISHED GRADE
5 (MIN)
5' (MIN)
WATER
WATER
SEWER
10'
1.5'
SEWER

NOTES:
1. 10' HORIZONTAL SEPARATION AND 1.5' VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN WATER AND SEWER AS DEPICTED IN THIS DETAIL OR SEWER SHALL BE ENCASED IN CONCRETE (SEE CONCRETE ENCASEMENT DETAIL) IN SECTIONS WHERE SEPARATIONS SHALL NOT BE ACHIEVED.

WATER AND SEWER UTILITY CROSSING

NOT TO SCALE (NE-U050101 - 09/2023)

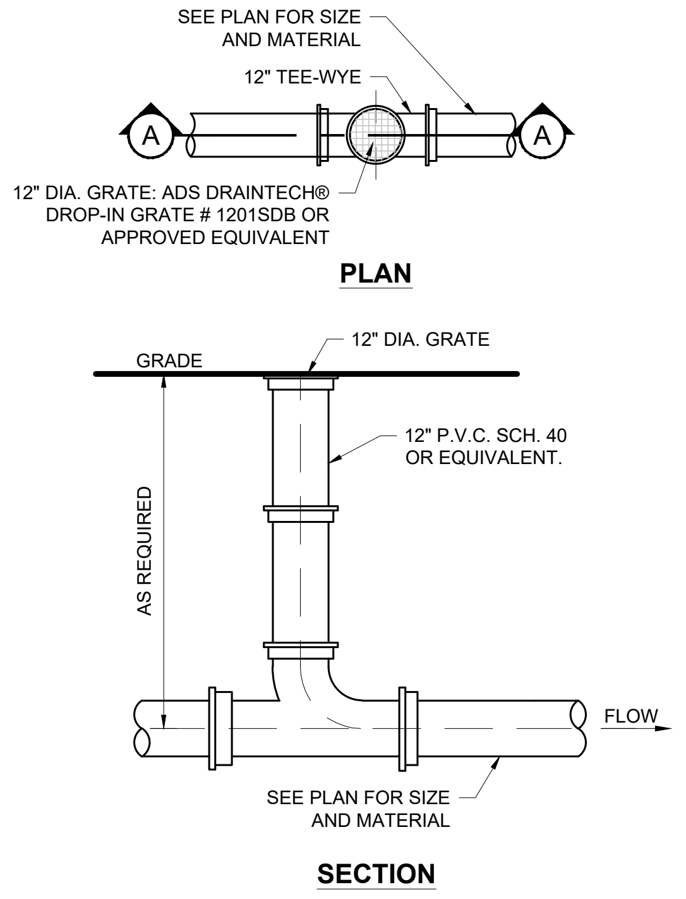

SEE CHART BELOW FOR CONCRETE VOLUME AND CONTINUOUS REINFORCING BARS AROUND PIPE FITTING
MAXIMUM WIDTH WITHOUT INTERFERING WITH BOLTING OPERATIONS
8" MIN 12" MAX
#5 BARS
UPWARD THRUST BLOCKING
CONCRETE
DOWNWARD THRUST BLOCKING
(SEE HORIZONTAL BLOCKING DETAIL)
(ALL BENDS SIMILAR)

UPWARD THRUST BLOCKING												
(REQUIRED REINFORCING BARS & CUBIC YARDS OF P.C. CONCRETE												
	90° BEND			45° BEND			22 1/2° BEND			11 1/4°BEND		
PIPE SIZE	CONC CY	REINF		CONC CY	REINF		CONC CY	REINF		CONC CY	REINF	
		QTY	SIZE		QTY	SIZE		QTY	SIZE		QTY	SIZE
6"	1.5	3	5	1.5	3	5	1.25	2	5	1.25	2	5
8"	2	3	5	2	3	5	1.5	2	5	1.5	2	5
10"	2.5	3	5	2.5	3	5	2	3	5	2	3	5
12"	3	3	5	3	3	5	2.5	3	5	2.5	3	5

NOTES:
1. DO NOT COVER BELLS OR FLANGES WITH CONCRETE
2. WRAP ALL FITTINGS WITH VISQUEEN.
3. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.
4. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
5. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL SHALL BE BACKED.
6. REACTION BACKING TABLE IS BASED ON 100 PSI AND SOIL BEARING PRESSURE OF 2,000 LBS/SF ADDITIONAL BACKING MAY BE REQUIRED IN SOME AREAS AS DIRECTED BY ENGINEERS.
7. ALL CONCRETE SHALL BE 2500 PSI
8. 18" AND LARGER REQUIRES SPECIFIC ANTI-THRUST DESIGN.

VERTICAL THRUST BLOCKING

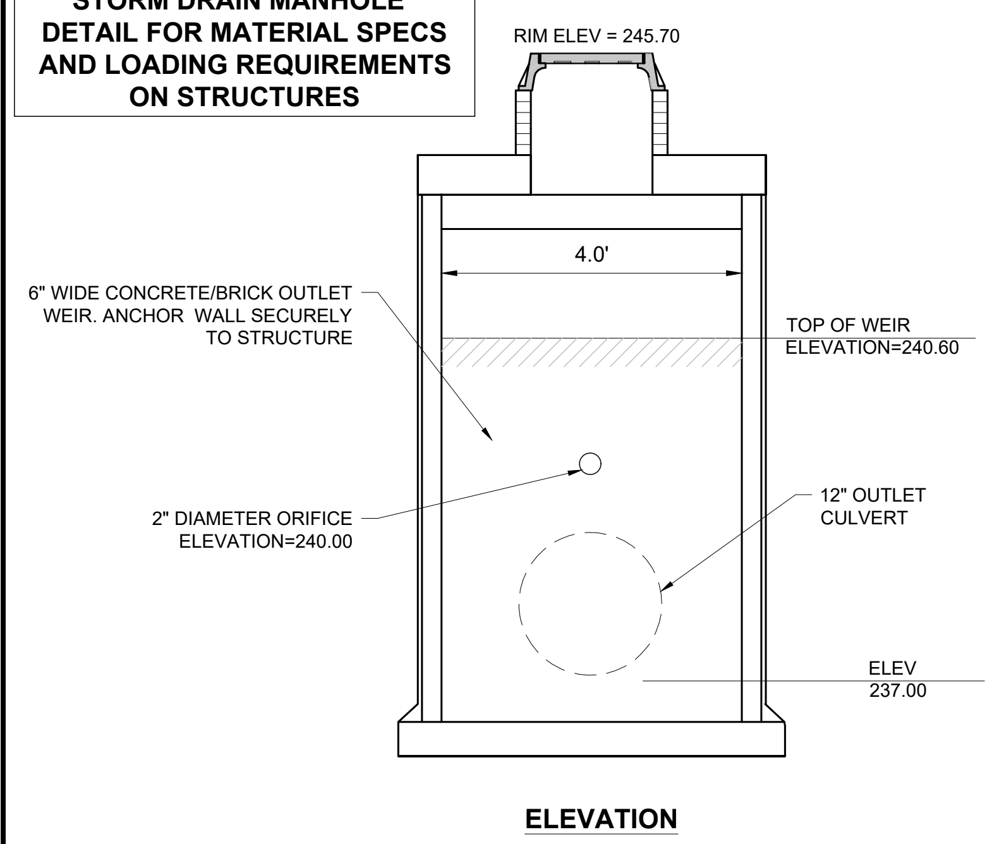
NOT TO SCALE (NE-U030502 - 11/2024)


SEE PLAN FOR SIZE AND MATERIAL
12" TEE-WYE
A
A
12" DIA. GRATE: ADS DRAINTECH® DROP-IN GRATE # 1201SDB OR APPROVED EQUIVALENT
PLAN
GRADE
12" DIA. GRATE
12" P.V.C. SCH. 40 OR EQUIVALENT.
AS REQUIRED
FLOW
SEE PLAN FOR SIZE AND MATERIAL
SECTION

12" YARD INLET

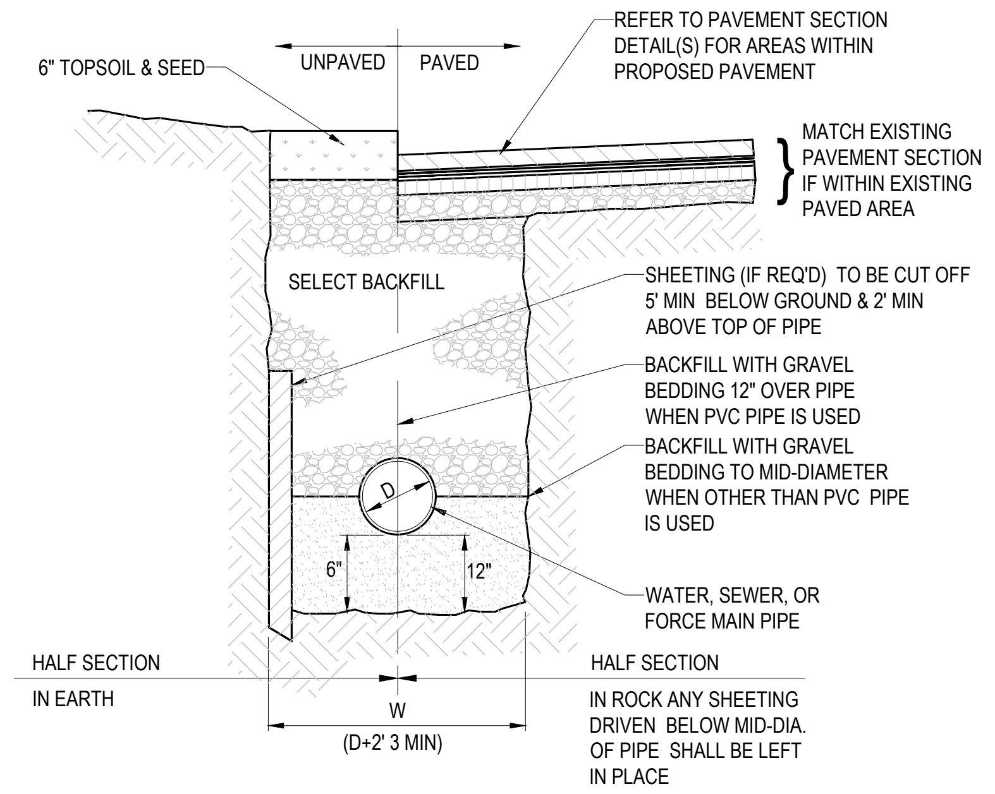
NOT TO SCALE (NJ-U010208 - 08/2023)

REFER TO "PRECAST CONCRETE STORM DRAIN MANHOLE" DETAIL FOR MATERIAL SPECS AND LOADING REQUIREMENTS ON STRUCTURES


RIM ELEV = 245.70
4.0'
6" WIDE CONCRETE/BRICK OUTLET WEIR. ANCHOR WALL SECURELY TO STRUCTURE
TOP OF WEIR ELEVATION=240.60
2" DIAMETER ORIFICE ELEVATION=240.00
12" OUTLET CULVERT
ELEV 237.00
ELEVATION

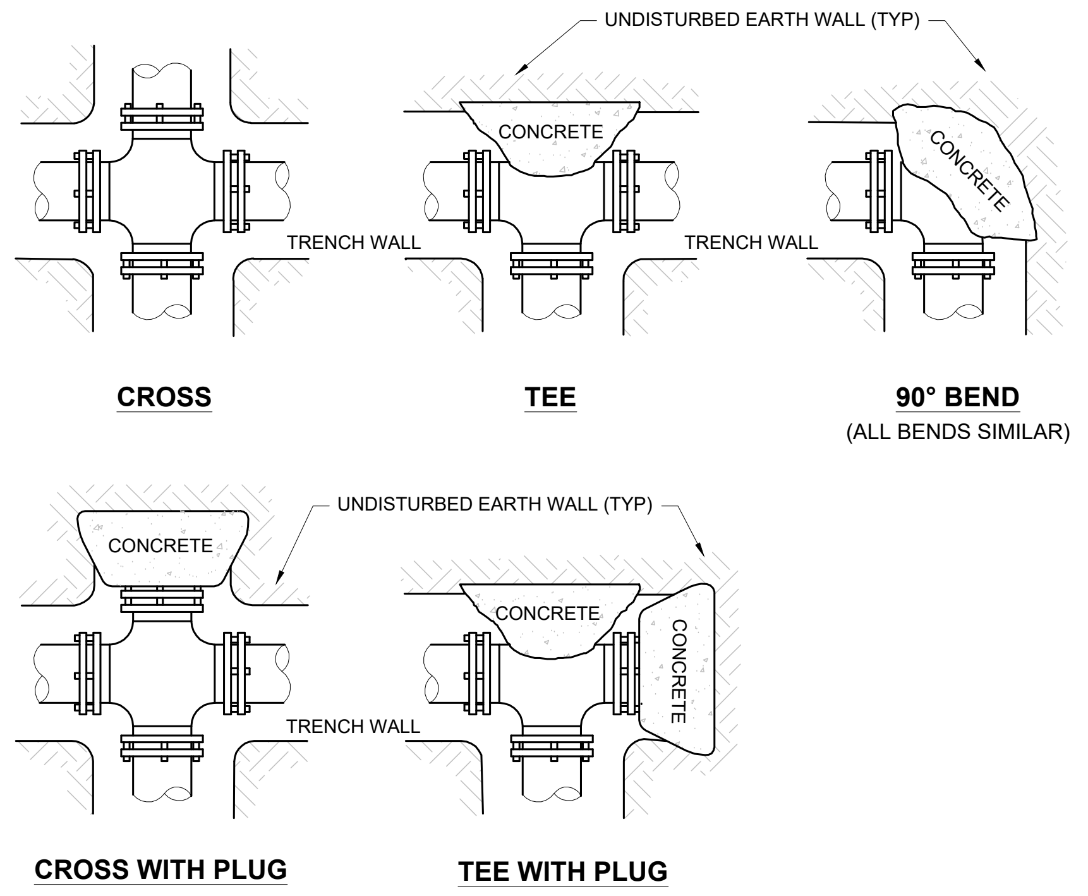
OUTLET CONTROL STRUCTURE A-20 (BASIN 3)

NOT TO SCALE (NE-U010103 - 11/2024)


6" TOPSOIL & SEED
UNPAVED
PAVED
REFER TO PAVEMENT SECTION DETAIL(S) FOR AREAS WITHIN PROPOSED PAVEMENT
MATCH EXISTING PAVEMENT SECTION IF WITHIN EXISTING PAVED AREA
SELECT BACKFILL
SHEETING (IF REQ'D) TO BE CUT OFF 5' MIN BELOW GROUND & 2' MIN ABOVE TOP OF PIPE
BACKFILL WITH GRAVEL BEDDING 12" OVER PIPE WHEN PVC PIPE IS USED
BACKFILL WITH GRAVEL BEDDING TO MID-DIAMETER WHEN OTHER THAN PVC PIPE IS USED
D
6"
12"
WATER, SEWER, OR FORCE MAIN PIPE
HALF SECTION IN EARTH
HALF SECTION IN ROCK ANY SHEETING DRIVEN BELOW MID-DIA. OF PIPE SHALL BE LEFT IN PLACE
W
(D+2' 3 MIN)

TYPICAL UTILITY TRENCH

NOT TO SCALE (NE-U050201 - 09/2024)

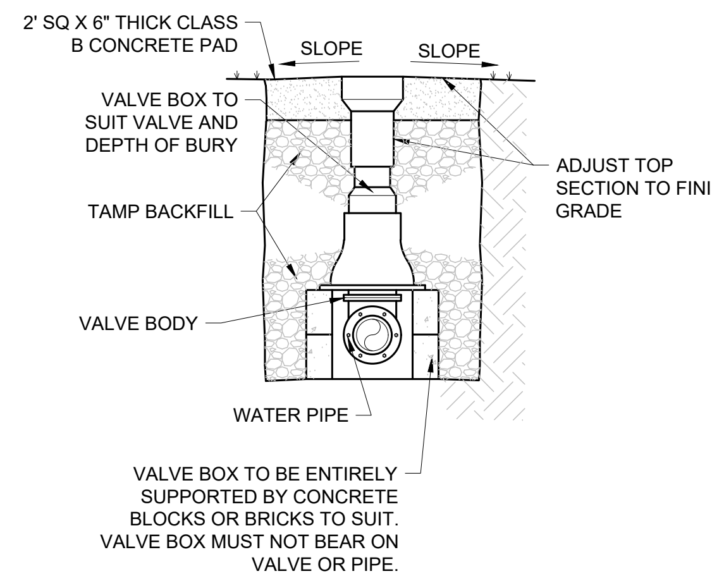

UNDISTURBED EARTH WALL (TYP)
CONCRETE
CONCRETE
TRENCH WALL
TRENCH WALL
CROSS
TEE
90° BEND
(ALL BENDS SIMILAR)
UNDISTURBED EARTH WALL (TYP)
CONCRETE
CONCRETE
CONCRETE
TRENCH WALL
CROSS WITH PLUG
TEE WITH PLUG

HORIZONTAL THRUST BLOCKING					
(BLOCKING HEIGHT GREATER THAN PIPE OD) (BLOCKING WIDTH BETWEEN 1 & 2 TIMES HEIGHT)					
REQUIRED SF OF UNDISTURBED EARTH WALL FOR REACTION BACKING					
TYPE OF FITTINGS					
PIPE SIZE	TEE & PLUG	BENDS			
		90°	45°	22 1/2°	11 1/4°
3"	1.0	1.0	1.0	1.0	1.0
4"	1.0	1.0	1.0	1.0	1.0
6"	1.5	2.0	1.0	1.0	1.0
8"	2.5	3.5	1.8	1.0	1.0
10"	4.0	5.5	2.8	1.5	1.0
12"	6.0	8.0	4.0	2.0	1.5

NOTES:
1. DO NOT COVER BELLS OR FLANGES WITH CONCRETE
2. WRAP ALL FITTINGS WITH VISQUEEN.
3. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.
4. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
5. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL SHALL BE BACKED.
6. REACTION BACKING TABLE IS BASED ON 100 PSI AND SOIL BEARING PRESSURE OF 2,000 LBS/SF ADDITIONAL BACKING MAY BE REQUIRED IN SOME AREAS AS DIRECTED BY ENGINEERS.
7. ALL CONCRETE SHALL BE 2500 PSI
8. 18" AND LARGER REQUIRES SPECIFIC ANTI-THRUST DESIGN.

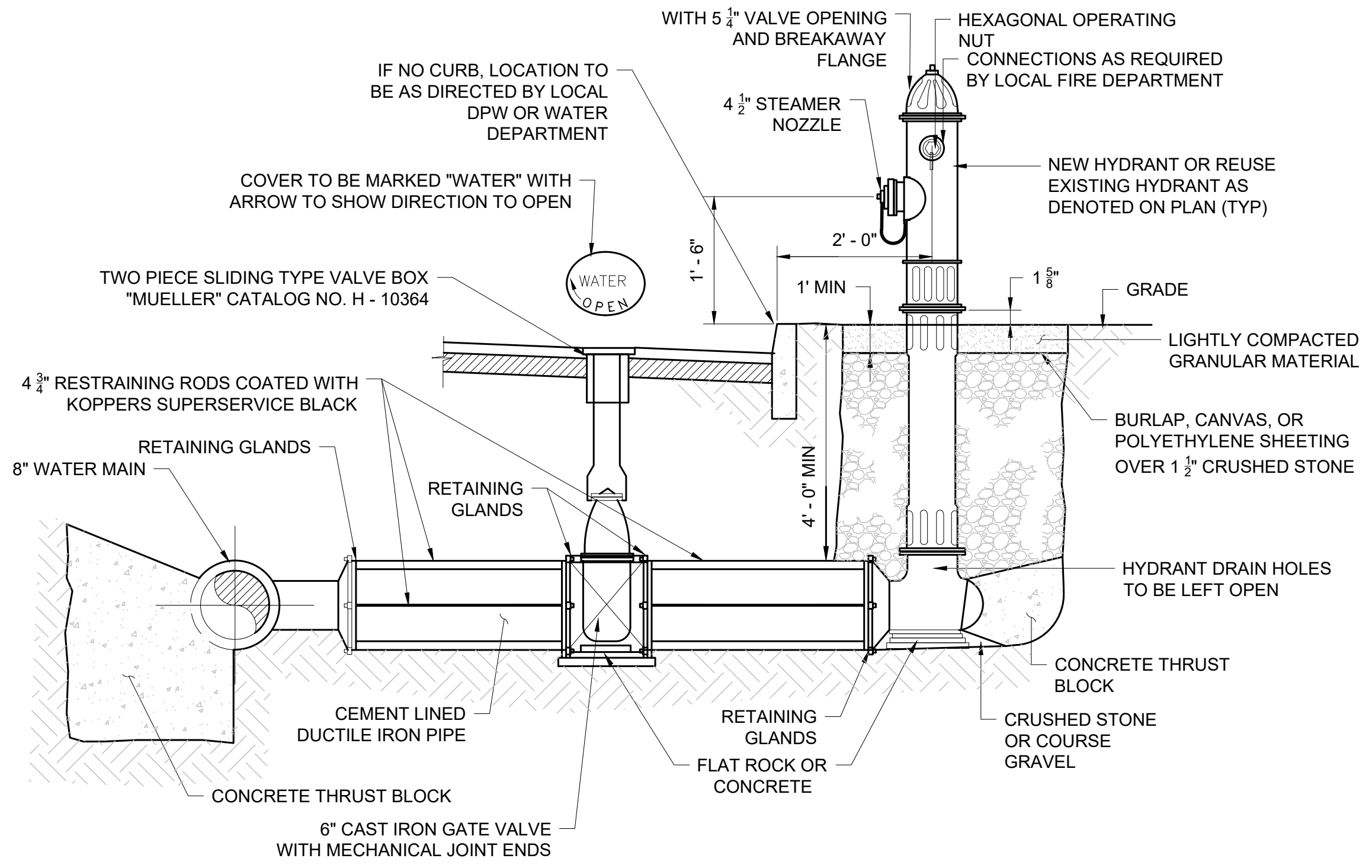
HORIZONTAL THRUST BLOCKING

NOT TO SCALE (NE-U030501 - 11/2024)


2' SQ X 6" THICK CLASS B CONCRETE PAD
SLOPE
SLOPE
VALVE BOX TO SUIT VALVE AND DEPTH OF BURY
TAMP BACKFILL
ADJUST TOP SECTION TO FINISH GRADE
VALVE BODY
WATER PIPE
VALVE BOX TO BE ENTIRELY SUPPORTED BY CONCRETE BLOCKS OR BRICKS TO SUIT. VALVE BOX MUST NOT BEAR ON VALVE OR PIPE.

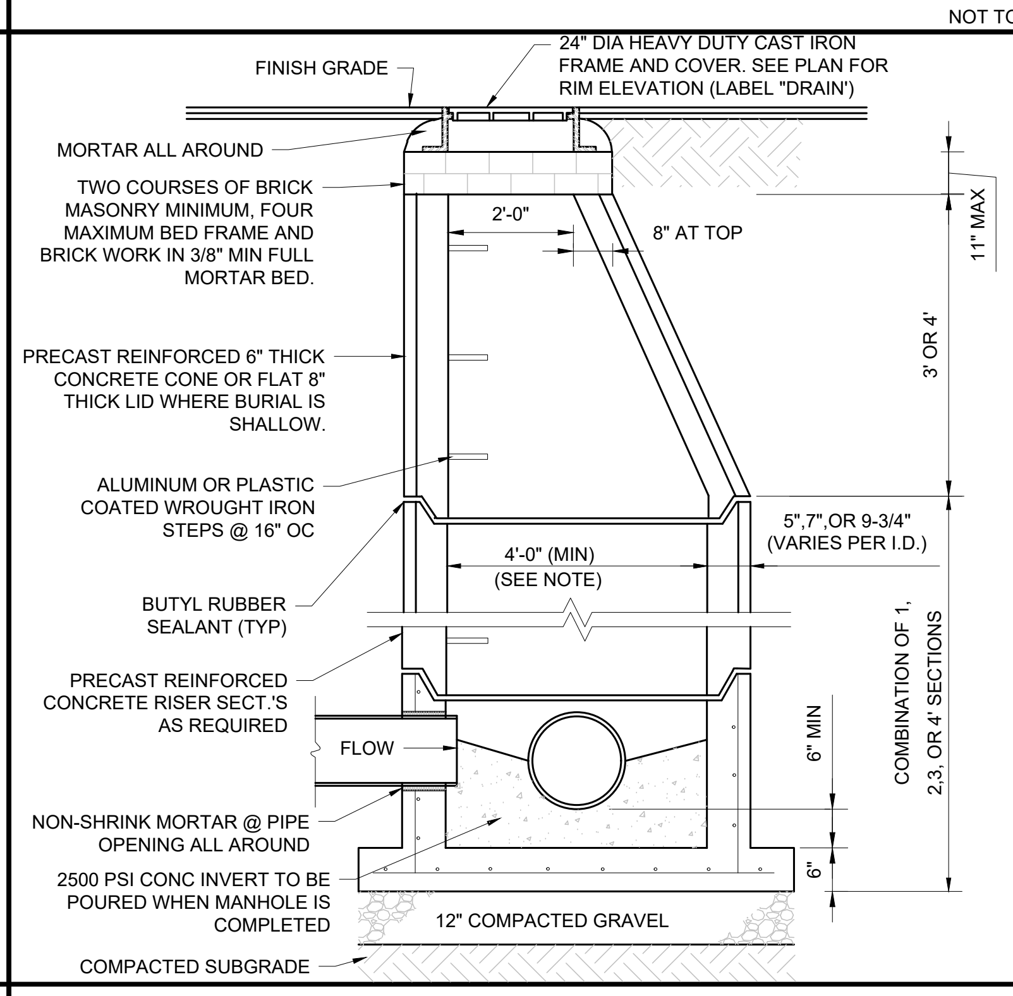
GATE VALVE

NOT TO SCALE (NE-U030201 - 09/2023)


WITH 5 1/4" VALVE OPENING AND BREAKAWAY FLANGE
HEXAGONAL OPERATING NUT
CONNECTIONS AS REQUIRED BY LOCAL FIRE DEPARTMENT
IF NO CURB, LOCATION TO BE AS DIRECTED BY LOCAL DPW OR WATER DEPARTMENT
4 1/2" STEAMER NOZZLE
NEW HYDRANT OR REUSE EXISTING HYDRANT AS DENOTED ON PLAN (TYP)
COVER TO BE MARKED "WATER" WITH ARROW TO SHOW DIRECTION TO OPEN
WATER OPEN
2' - 0"
1' - 6"
TWO PIECE SLIDING TYPE VALVE BOX "MUELLER" CATALOG NO. H - 10364
1' MIN
1 5/8"
GRADE
LIGHTLY COMPACTED GRANULAR MATERIAL
4 3/4" RESTRAINING RODS COATED WITH KOPPERS SUPERSERVICE BLACK
BURLAP, CANVAS, OR POLYETHYLENE SHEETING OVER 1 1/2" CRUSHED STONE
RETAINING GLANDS
8" WATER MAIN
RETAINING GLANDS
4' - 0" MIN
HYDRANT DRAIN HOLES TO BE LEFT OPEN
CONCRETE THRUST BLOCK
CEMENT LINED DUCTILE IRON PIPE
RETAINING GLANDS
CRUSHED STONE OR COURSE GRAVEL
FLAT ROCK OR CONCRETE
CONCRETE THRUST BLOCK
6" CAST IRON GATE VALVE WITH MECHANICAL JOINT ENDS

HYDRANT AND VALVE INSTALLATION

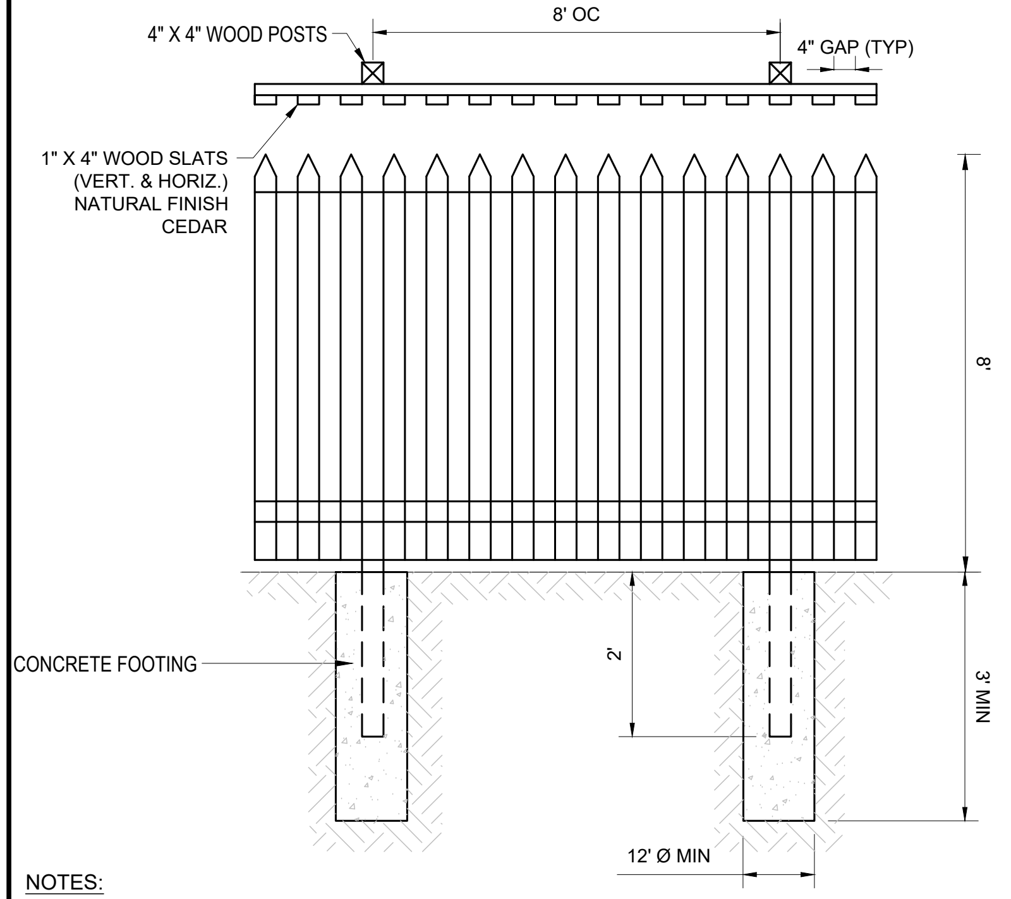
NOT TO SCALE (NE-U030101 - 11/2024)


FINISH GRADE
24" DIA HEAVY DUTY CAST IRON FRAME AND COVER. SEE PLAN FOR RIM ELEVATION (LABEL "DRAIN')
MORTAR ALL AROUND
TWO COURSES OF BRICK MASONRY MINIMUM, FOUR MAXIMUM BED FRAME AND BRICK WORK IN 3/8" MIN FULL MORTAR BED.
2'-0"
8" AT TOP
11" MAX
3' OR 4'
PRECAST REINFORCED 6" THICK CONCRETE CONE OR FLAT 8" THICK LID WHERE BURIAL IS SHALLOW.
ALUMINUM OR PLASTIC COATED WROUGHT IRON STEPS @ 16" OC
5",7",OR 9-3/4" (VARIES PER I.D.)
4'-0" (MIN) (SEE NOTE)
BUTYL RUBBER SEALANT (TYP)
PRECAST REINFORCED CONCRETE RISER SECT.'S AS REQUIRED
FLOW
6" MIN
COMBINATION OF 1, 2,3, OR 4' SECTIONS
NON-SHRINK MORTAR @ PIPE OPENING ALL AROUND
2500 PSI CONC INVERT TO BE POURED WHEN MANHOLE IS COMPLETED
6"
12" COMPACTED GRAVEL
COMPACTED SUBGRADE

NOTES:
1. ALL STRUCTURES SHALL BE SUITABLE FOR H-20 LOADING AND SHALL MEET THE REQUIREMENTS OF ASTM C478.
2. CONTRACTOR SHALL SIZE MANHOLE AS NECESSARY TO ACCOMMODATE THE PIPE SIZING AND ORIENTATION USING THE GEOMETRY SHOWN ON THE GRADING AND DRAINAGE PLANS.
3. CONCRETE SHALL BE 4,000 PSI AFTER 28 DAYS
4. REINFORCED STEEL CONFORMS TO ASTM A185 SPEC. 0.12 SQ IN/LINEAL FT AND 0.12 SQ IN (BOTH WAYS) BASE BOTTOM.
5. MANHOLE DESIGN SPECS CONFORM TO ASTM C478 SPEC FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS"

PRECAST CONCRETE STORM DRAIN MANHOLE

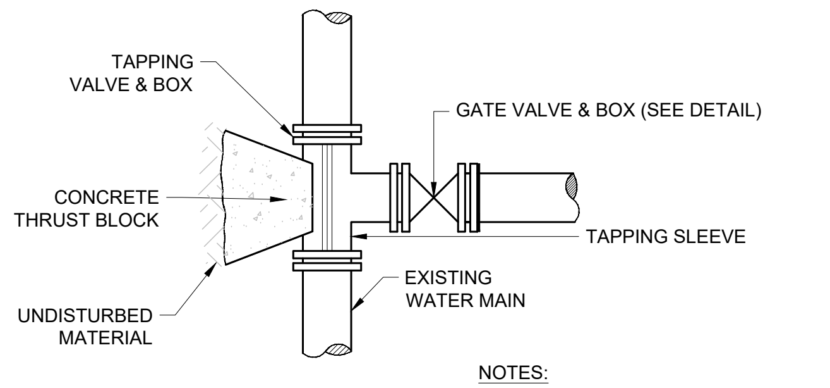
NOT TO SCALE (NE-U010101 - 11/2024)


4" X 4" WOOD POSTS
8' OC
4" GAP (TYP)
1" X 4" WOOD SLATS (VERT. & HORIZ.) NATURAL FINISH CEDAR
8'
CONCRETE FOOTING
2'
3' MIN
12' Ø MIN

NOTES:
1. ALL WOOD TO BE PRESSURE TREATED LUMBER (NATURAL FINISH CEDAR)

CEDAR FENCE

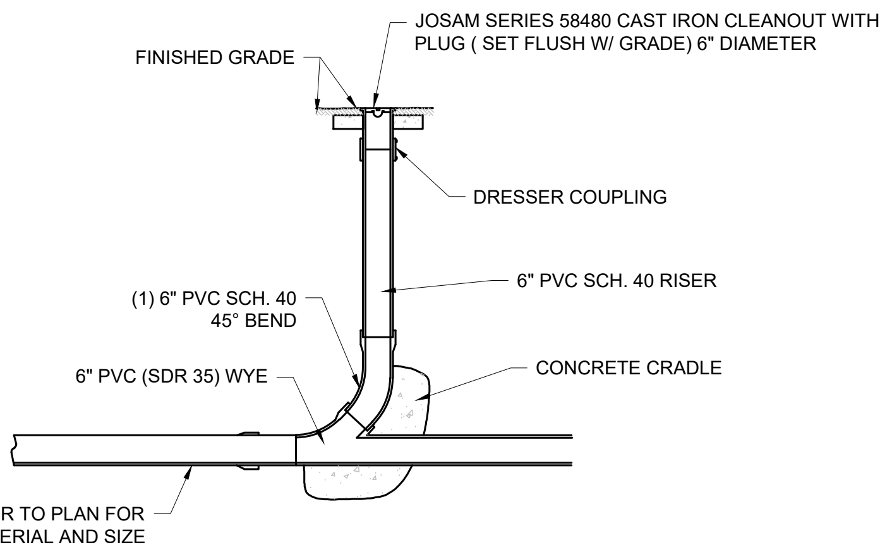
NOT TO SCALE (NE-S080102 - 09/2023)


TAPPING VALVE & BOX
GATE VALVE & BOX (SEE DETAIL)
CONCRETE THRUST BLOCK
TAPPING SLEEVE
EXISTING WATER MAIN
UNDISTURBED MATERIAL

NOTES:
1. DETAIL FOR GENERAL PURPOSES. GC TO COORDINATE CONNECTION WITH UTILITY COMPANY.

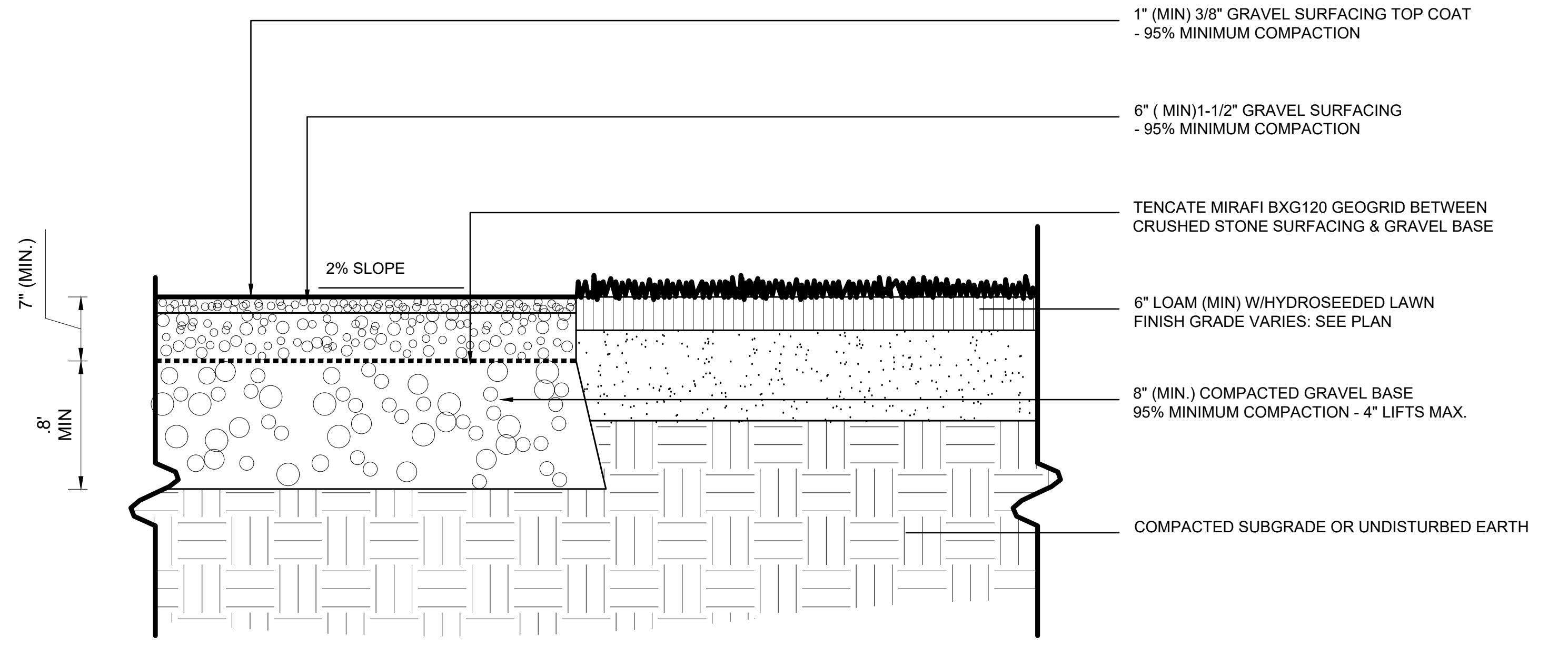
TAPPING SLEEVE AND GATE VALVE

NOT TO SCALE (NE-U030401 - 11/2024)


JOSAM SERIES 58480 CAST IRON CLEANOUT WITH PLUG (SET FLUSH W/ GRADE) 6" DIAMETER
FINISHED GRADE
DRESSER COUPLING
6" PVC SCH. 40 RISER
(1) 6" PVC SCH. 40 45° BEND
CONCRETE CRADLE
6" PVC (SDR 35) WYE
REFER TO PLAN FOR MATERIAL AND SIZE

CLEANOUT (IN-LINE)

NOT TO SCALE (NE-U010302 - 11/2024)


1" (MIN) 3/8" GRAVEL SURFACING TOP COAT - 95% MINIMUM COMPACTION
6" (MIN)1-1/2" GRAVEL SURFACING - 95% MINIMUM COMPACTION
TENCATE MIRAFI BXG120 GEOGRID BETWEEN CRUSHED STONE SURFACING & GRAVEL BASE
2% SLOPE
7" (MIN.)
8' MIN
6" LOAM (MIN) W/HYDROSEEDED LAWN FINISH GRADE VARIES: SEE PLAN
8" (MIN.) COMPACTED GRAVEL BASE 95% MINIMUM COMPACTION - 4" LIFTS MAX.
COMPACTED SUBGRADE OR UNDISTURBED EARTH

GRAVEL TRAIL SURFACE DETAIL

NOT TO SCALE

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

TEAM HOYT COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt
One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
www.BohlerEngineering.com

J.A. KUCICH
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
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RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

ISSUED FOR PERMIT

CONSTRUCTION DETAILS

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

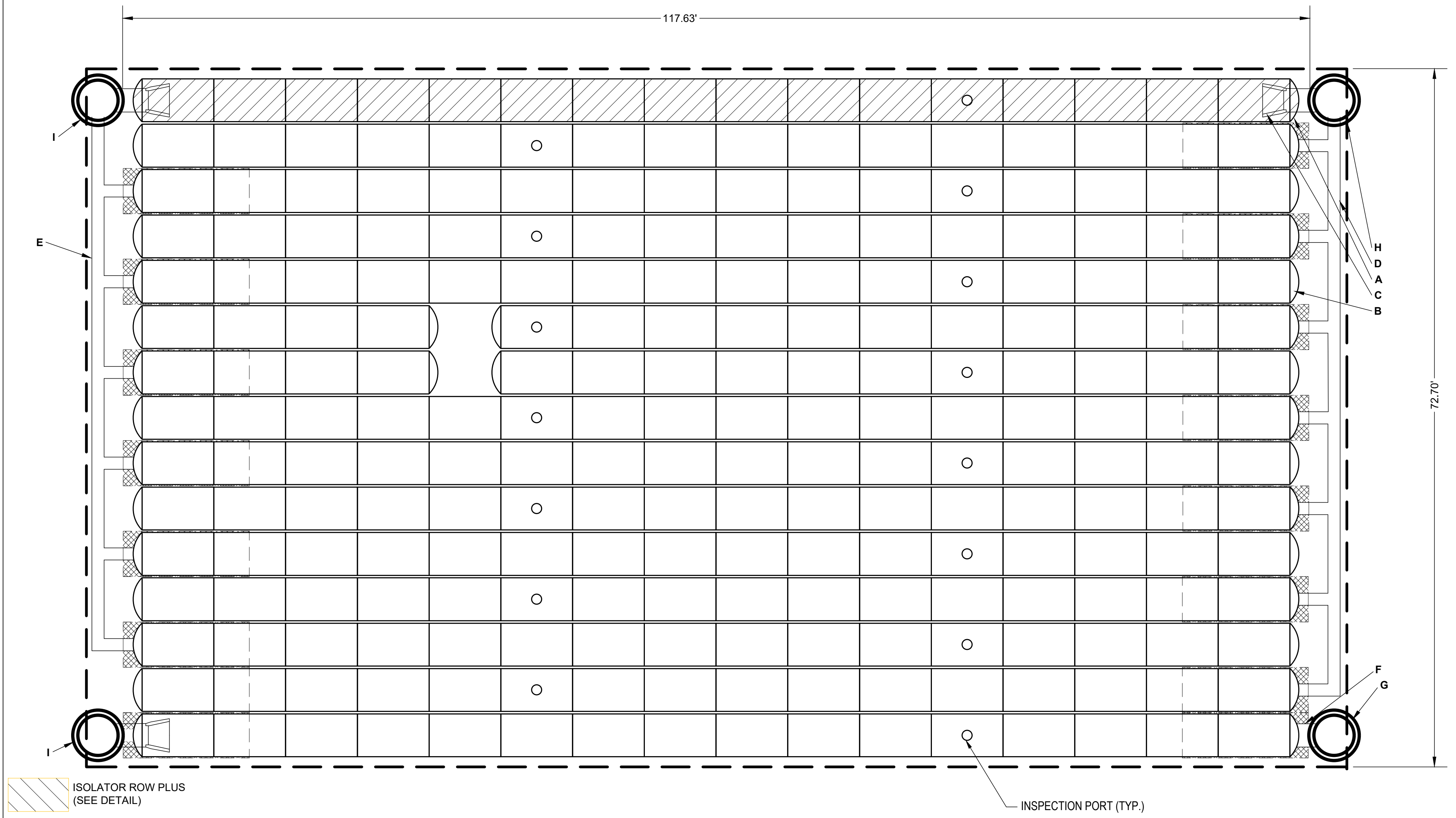
C-903

PROPOSED LAYOUT	
238	STORMTECH SC-800 CHAMBERS
30	STORMTECH SC-800 END CAPS
6	STONE ABOVE (in)
6	STONE BELOW (in)
40	STONE VOID
18,696	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)
8552	SYSTEM AREA (SF)
380.7	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS	
MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	253.75
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	247.50
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	247.00
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	247.00
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	247.00
TOP OF STONE:	246.25
TOP OF SC-800 CHAMBER:	245.75
12" x 12" TOP MANIFOLD INVERT:	244.20
12" x 12" TOP MANIFOLD INVERT:	244.20
24" ISOLATOR ROW PLUS INVERT:	243.19
24" ISOLATOR ROW PLUS INVERT:	243.19
24" BOTTOM CONNECTION INVERT:	243.19
BOTTOM OF SC-800 CHAMBER:	243.00
BOTTOM OF STONE:	242.50

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED EZ END CAP	A	24" BOTTOM PREFABRICATED EZ END CAP, PART#: SC800ECEZ / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.30"	
PRE-CORED END CAP	B	12" TOP PRE-CORED END CAP, PART#: SC800EPE12TPC / TYP OF ALL 12" TOP CONNECTIONS	14.40"	
FLAMP	C	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: SC80024RAMP (TYP 2 PLACES)		
MANIFOLD	D	12" x 12" TOP MANIFOLD, ADS N-12	14.40"	
MANIFOLD	E	12" x 12" TOP MANIFOLD, ADS N-12	14.40"	
PIPE CONNECTION	F	24" BOTTOM CONNECTION	2.30"	
CONCRETE STRUCTURE	G	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		2.8 CFS IN
CONCRETE STRUCTURE	H	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		5.9 CFS IN
CONCRETE STRUCTURE	I	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		5.9 CFS IN


117.63'
72.70'
I
E
H
D
A
C
B
F
G
I
INSPECTION PORT (TYP.)

- ▨ ISOLATOR ROW PLUS (SEE DETAIL)
- ▩ PLACE MINIMUM 12.50' OF ADSPLUS625 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS
- — — BED LIMITS

INFILTRATION BASIN #1 LAYOUT

NOTES

- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- **NOT FOR CONSTRUCTION**: THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

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SC-800 TECHNICAL SPECIFICATION

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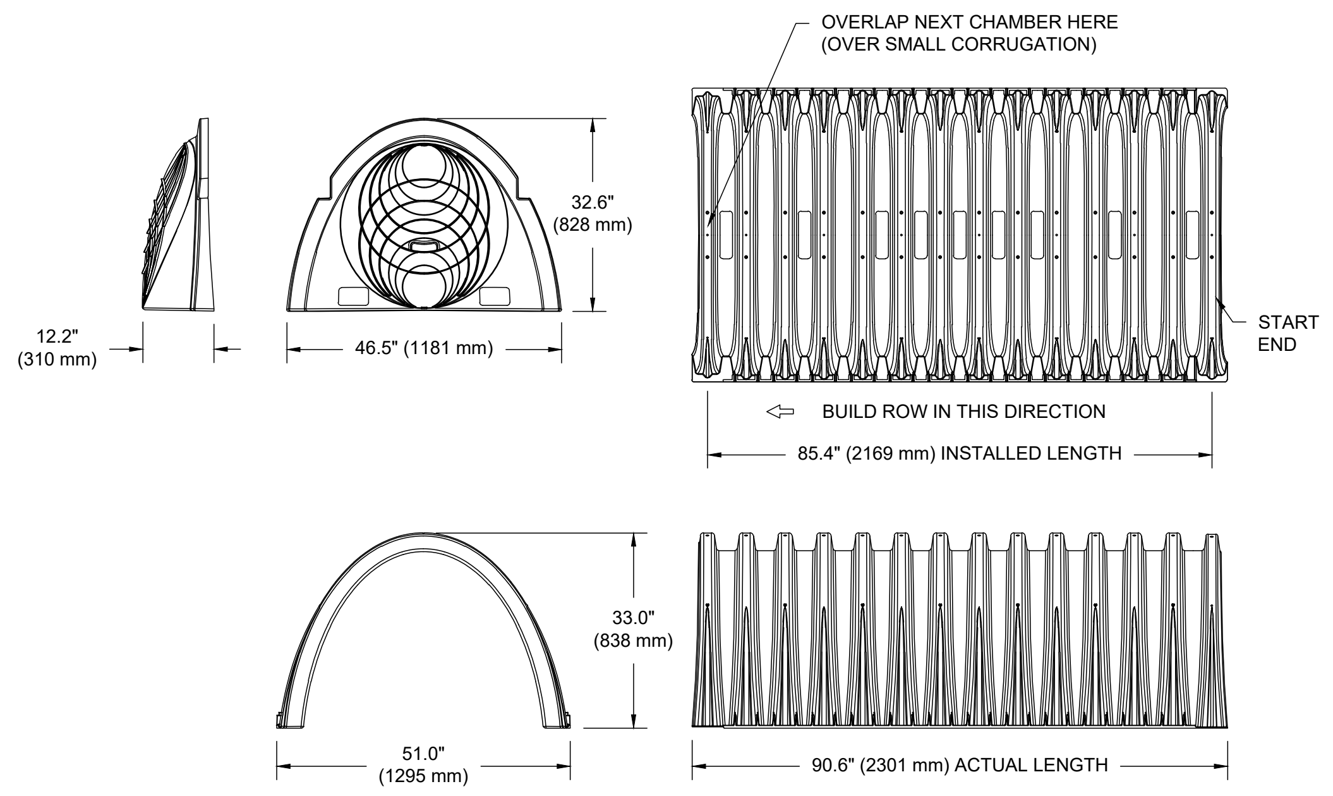

OVERLAP NEXT CHAMBER HERE
(OVER SMALL CORRUGATION)
32.6"
(828 mm)
12.2"
(310 mm)
46.5" (1181 mm)
START
END
BUILD ROW IN THIS DIRECTION
85.4" (2169 mm) INSTALLED LENGTH
33.0"
(838 mm)
51.0"
(1295 mm)
90.6" (2301 mm) ACTUAL LENGTH

NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 33.0" X 85.4"	(1295 mm X 838 mm X 2169 mm)
CHAMBER STORAGE	50.6 CUBIC FEET	(1.43 m³)
MINIMUM INSTALLED STORAGE*	78.4 CUBIC FEET	(2.22 m³)
WEIGHT	81.8 lbs.	(37.1 kg)

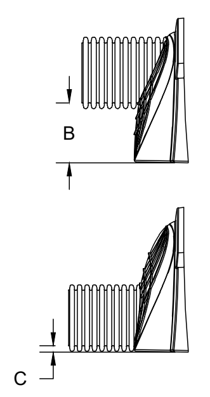
NOMINAL END CAP SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	46.5" X 32.6" X 10.5"	(1181 mm X 828 mm X 267 mm)
END CAP STORAGE	3.4 CUBIC FEET	(0.09 m³)
MINIMUM INSTALLED STORAGE**	14.7 CUBIC FEET	(0.42 m³)
WEIGHT	15.7 lbs.	(7.1 kg)

* ASSUMES 6" (150 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS, 3" (75 mm) BETWEEN CHAMBERS
**ASSUMES 6" (150 mm) STONE ABOVE AND BELOW END CAPS, 3" (150 mm) BETWEEN ROWS, 12" (300 mm) BEYOND END CAPS

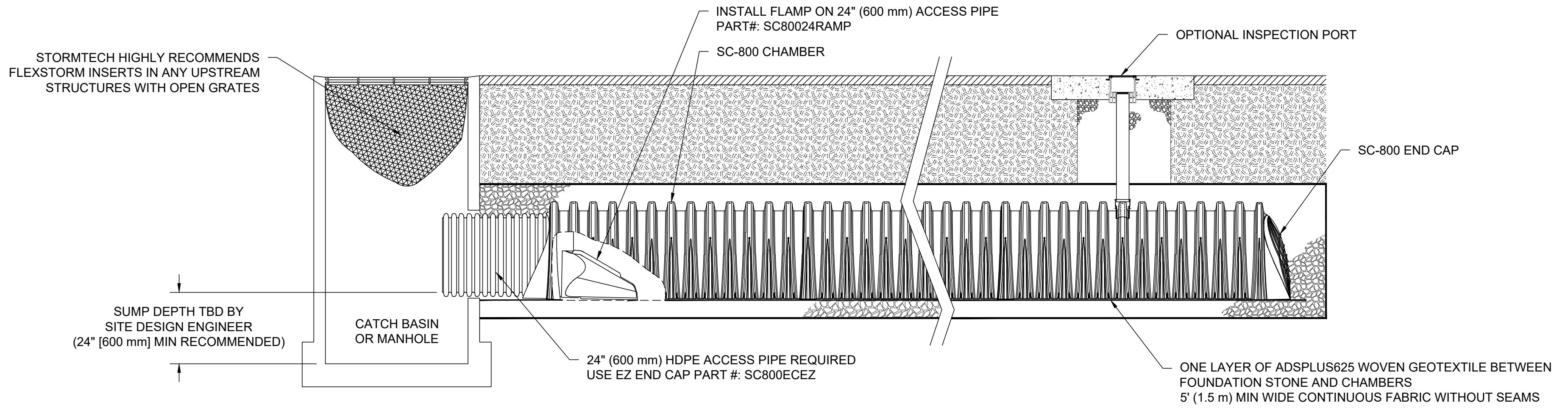
PRE-CORED HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "BPC"
PRE-CORED HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "TPC"

PART #	STUB	B	C
SC800EPE06TPC	6" (150 mm)	21.4" (544 mm)	---
SC800EPE06BPC		---	0.9" (23 mm)
SC800EPE08TPC	8" (200 mm)	19.2" (488 mm)	---
SC800EPE08BPC		---	1.0" (25 mm)
SC800EPE10TPC	10" (250 mm)	17.0" (432 mm)	---
SC800EPE10BPC		---	1.2" (30 mm)
SC800EPE12TPC	12" (300 mm)	14.4" (366 mm)	---
SC800EPE12BPC		---	1.6" (41 mm)
SC800EPE15TPC	15" (375 mm)	11.3" (287 mm)	---
SC800EPE15BPC		---	1.7" (43 mm)
SC800EPE18TPC	18" (450 mm)	8.0" (203 mm)	---
SC800EPE18BPC		---	2.0" (51 mm)
SC800EPE24BPC	24" (600 mm)	---	2.3" (58 mm)
SC800EPE	NONE	SOLID END CAP	



NOTE: ALL DIMENSIONS ARE NOMINAL

2 SC-800 TECHNICAL SPECIFICATION


STORMTECH HIGHLY RECOMMENDS FLEXSTORM INSERTS IN ANY UPSTREAM STRUCTURES WITH OPEN GRATES
INSTALL FLAMP ON 24" (600 mm) ACCESS PIPE PART#: SC80024RAMP
SC-800 CHAMBER
OPTIONAL INSPECTION PORT
SC-800 END CAP
SUMP DEPTH TBD BY SITE DESIGN ENGINEER (24" [600 mm] MIN RECOMMENDED)
CATCH BASIN OR MANHOLE
24" (600 mm) HDPE ACCESS PIPE REQUIRED USE EZ END CAP PART #: SC800ECEZ
ONE LAYER OF ADSPLUS625 WOVEN GEOTEXTILE BETWEEN FOUNDATION STONE AND CHAMBERS 5' (1.5 m) MIN WIDE CONTINUOUS FABRIC WITHOUT SEAMS

SC-800 ISOLATOR ROW PLUS DETAIL

NTS

3 SC-800 ISOLATOR ROW PLUS DETAIL

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INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

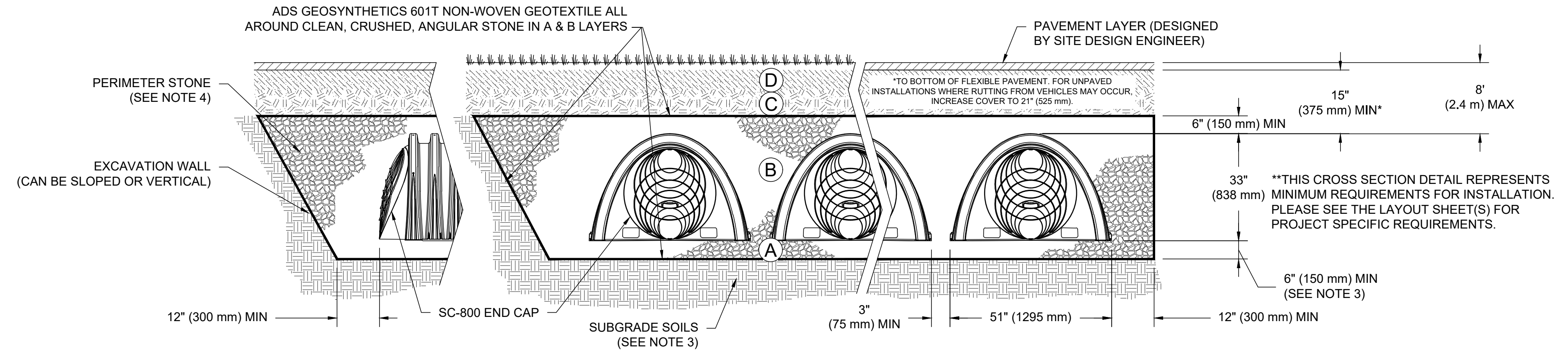
NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

ACCEPTABLE FILL MATERIALS: STORMTECH SC-800 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 15" (375 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".


ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE ALL AROUND CLEAN, CRUSHED, ANGULAR STONE IN A & B LAYERS
PAVEMENT LAYER (DESIGNED BY SITE DESIGN ENGINEER)
PERIMETER STONE (SEE NOTE 4)
EXCAVATION WALL (CAN BE SLOPED OR VERTICAL)
D
C
B
A
*TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 21" (525 mm).
15" (375 mm) MIN*
8' (2.4 m) MAX
6" (150 mm) MIN
33" (838 mm)
6" (150 mm) MIN (SEE NOTE 3)
12" (300 mm) MIN
SC-800 END CAP
SUBGRADE SOILS (SEE NOTE 3)
3" (75 mm) MIN
51" (1295 mm)
12" (300 mm) MIN

**THIS CROSS SECTION DETAIL REPRESENTS MINIMUM REQUIREMENTS FOR INSTALLATION. PLEASE SEE THE LAYOUT SHEET(S) FOR PROJECT SPECIFIC REQUIREMENTS.

NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-800 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 700 LBS/FT/%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

1 SC-800 CROSS SECTION DETAIL

DATE: 10/06/2025
PROJECT #:
NOT TO SCALE
DRAWN: SB
CHECKED: N/A
REV:

ASHLAND BASIN 1
ASHLAND, MA, USA

StormTech®
Chamber System

4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

ADS

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS/STORMTECH UNDER THE DIRECTION OF THE PROJECT ENGINEER OF RECORD ('EOR') OR OTHER PROJECT REPRESENTATIVE. THIS DRAWING IS NOT INTENDED FOR USE IN BIDDING OR CONSTRUCTION WITHOUT THE EOR'S PRIOR APPROVAL. EOR SHALL REVIEW THIS DRAWING PRIOR TO BIDDING AND/OR CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE EOR TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

SHEET
1 OF 1

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

TEAM HOYT
COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt
One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
www.BohlerEngineering.com

J.A. KUCICH
JOHN A. KUCICH
CIVIL
No. 41530
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
NEW HAMPSHIRE LICENSE No. 15476
CONNECTICUT LICENSE No. 26177
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

ISSUED FOR
PERMIT

CONSTRUCTION
DETAILS

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

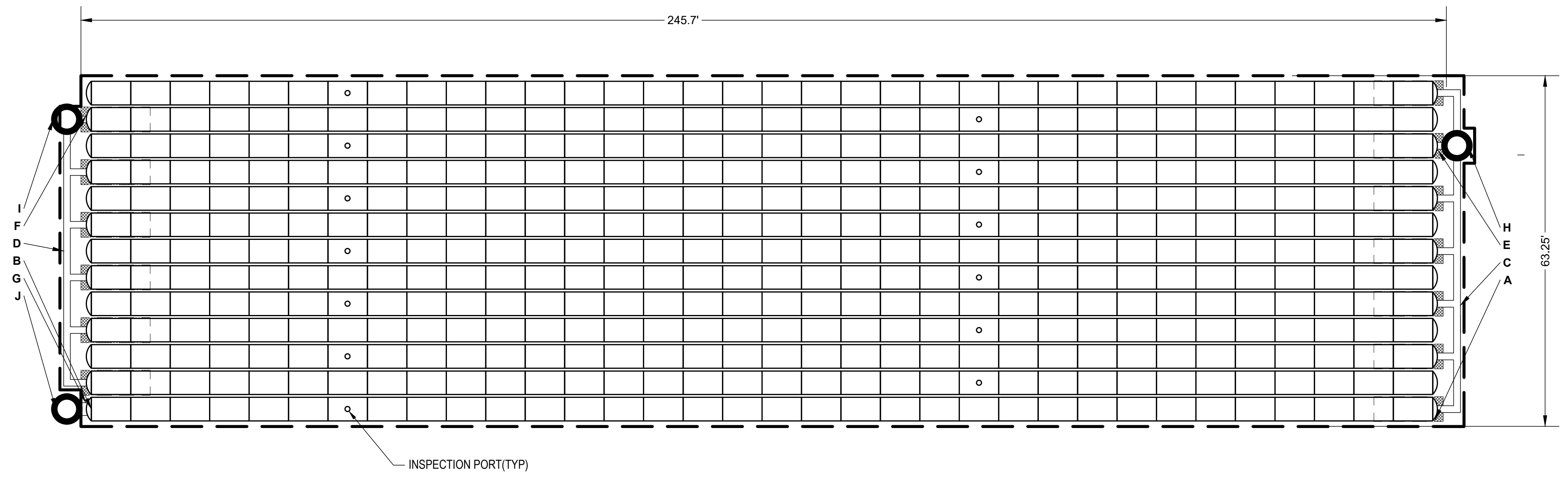
C-904

PROPOSED LAYOUT	
442	STORMTECH SC-800 CHAMBERS
26	STORMTECH SC-800 END CAPS
6	STONE ABOVE (in)
6	STONE BELOW (in)
40	STONE VOID
36,474	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)
15542	SYSTEM AREA (SF)
618.0	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS	
MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	255.75
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	249.50
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	249.00
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	249.00
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	249.00
TOP OF STONE:	248.25
TOP OF SC-800 CHAMBER:	247.75
24" BOTTOM CONNECTION INVERT:	245.19
12" x 12" BOTTOM MANIFOLD INVERT:	245.13
12" x 12" BOTTOM MANIFOLD INVERT:	245.13
12" BOTTOM CONNECTION INVERT:	245.13
12" BOTTOM CONNECTION INVERT:	245.13
BOTTOM OF SC-800 CHAMBER:	245.00
BOTTOM OF STONE:	244.50

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PRE-CORED END CAP	A	12" BOTTOM PRE-CORED END CAP, PART#: SC800EPE12BPC / TYP OF ALL 12" BOTTOM CONNECTIONS	1.60"	
PREFABRICATED EZ END CAP	B	24" BOTTOM PREFABRICATED EZ END CAP, PART#: SC800ECEZ / TYP OF ALL 24" BOTTOM CONNECTIONS	2.30"	
MANIFOLD	C	12" x 12" BOTTOM MANIFOLD, ADS N-12	1.60"	
MANIFOLD	D	12" x 12" BOTTOM MANIFOLD, ADS N-12	1.60"	
PIPE CONNECTION	E	12" BOTTOM CONNECTION	1.60"	
PIPE CONNECTION	F	12" BOTTOM CONNECTION	1.60"	
PIPE CONNECTION	G	24" BOTTOM CONNECTION	2.30"	
CONCRETE STRUCTURE	H	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		7.6 CFS IN
CONCRETE STRUCTURE	I	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		7.6 CFS IN
CONCRETE STRUCTURE	J	OCS (DESIGN BY ENGINEER / PROVIDED BY OTHERS)		7.0 CFS OUT


245.7'
63.25'
I
F
D
B
G
J
H
E
C
A
INSPECTION PORT(TYP)

▧ NO ISOLATOR ROW

▩ PLACE MINIMUM 12.50' OF ADSPLUS625 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

— — BED LIMITS

NOTES

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INFILTRATION BASIN #2 LAYOUT

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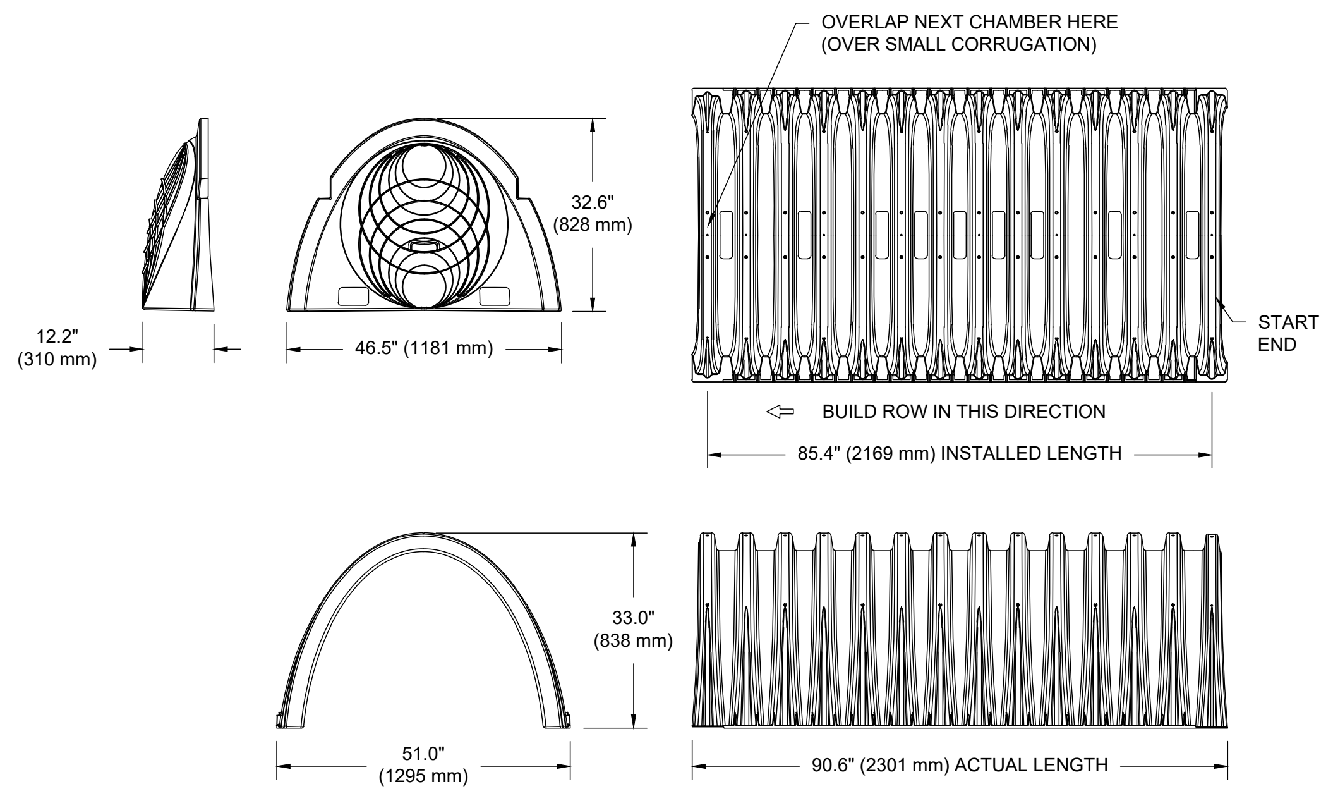
SC-800 TECHNICAL SPECIFICATION

NTS


OVERLAP NEXT CHAMBER HERE
(OVER SMALL CORRUGATION)
32.6"
(828 mm)
12.2"
(310 mm)
46.5" (1181 mm)
START
END
BUILD ROW IN THIS DIRECTION
85.4" (2169 mm) INSTALLED LENGTH
33.0"
(838 mm)
51.0"
(1295 mm)
90.6" (2301 mm) ACTUAL LENGTH

NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 33.0" X 85.4"	(1295 mm X 838 mm X 2169 mm)
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MINIMUM INSTALLED STORAGE*	78.4 CUBIC FEET	(2.22 m³)
WEIGHT	81.8 lbs.	(37.1 kg)

NOMINAL END CAP SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	46.5" X 32.6" X 10.5"	(1181 mm X 828 mm X 267 mm)
END CAP STORAGE	3.4 CUBIC FEET	(0.09 m³)
MINIMUM INSTALLED STORAGE**	14.7 CUBIC FEET	(0.42 m³)
WEIGHT	15.7 lbs.	(7.1 kg)

* ASSUMES 6" (150 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS, 3" (75 mm) BETWEEN CHAMBERS
**ASSUMES 6" (150 mm) STONE ABOVE AND BELOW END CAPS, 3" (150 mm) BETWEEN ROWS, 12" (300 mm) BEYOND END CAPS

PRE-CORED HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "BPC"
PRE-CORED HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "TPC"

PART #	STUB	B	C
SC800EPE06TPC	6" (150 mm)	21.4" (544 mm)	---
SC800EPE06BPC		---	0.9" (23 mm)
SC800EPE08TPC	8" (200 mm)	19.2" (488 mm)	---
SC800EPE08BPC		---	1.0" (25 mm)
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SC800EPE10BPC		---	1.2" (30 mm)
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SC800EPE12BPC		---	1.6" (41 mm)
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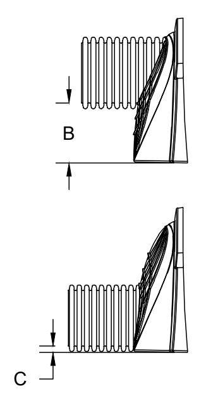
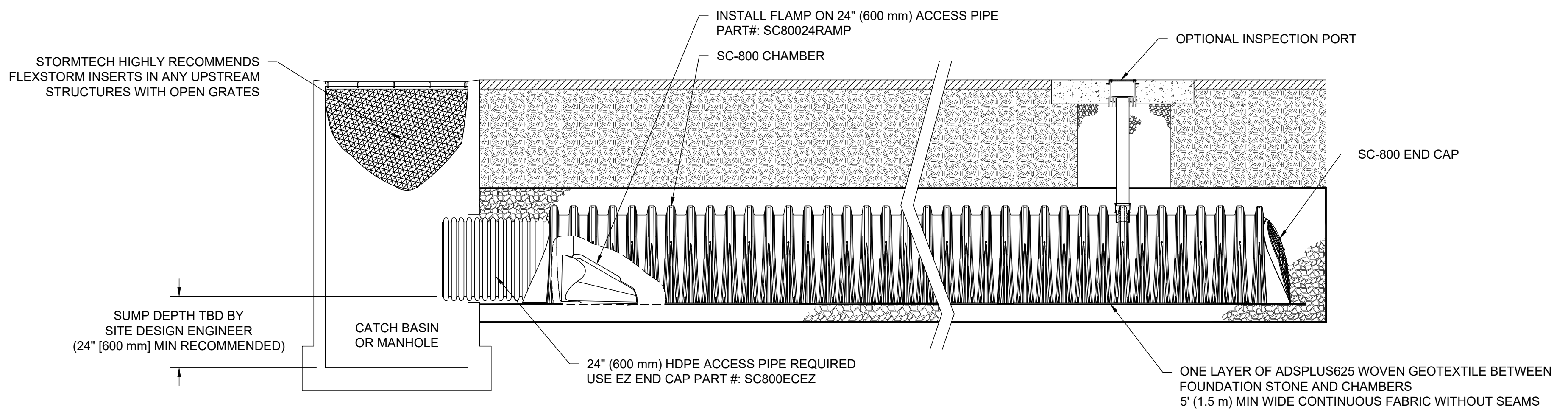
SC800EPE15BPC		---	1.7" (43 mm)
SC800EPE18TPC	18" (450 mm)	8.0" (203 mm)	---
SC800EPE18BPC		---	2.0" (51 mm)
SC800EPE24BPC	24" (600 mm)	---	2.3" (58 mm)
SC800EPE	NONE	SOLID END CAP	



NOTE: ALL DIMENSIONS ARE NOMINAL

2 SC-800 TECHNICAL SPECIFICATION


STORMTECH HIGHLY RECOMMENDS
FLEXSTORM INSERTS IN ANY UPSTREAM
STRUCTURES WITH OPEN GRATES
INSTALL FLAMP ON 24" (600 mm) ACCESS PIPE
PART#: SC80024RAMP
SC-800 CHAMBER
OPTIONAL INSPECTION PORT
SC-800 END CAP
SUMP DEPTH TBD BY
SITE DESIGN ENGINEER
(24" [600 mm] MIN RECOMMENDED)
CATCH BASIN
OR MANHOLE
24" (600 mm) HDPE ACCESS PIPE REQUIRED
USE EZ END CAP PART #: SC800ECEZ
ONE LAYER OF ADSPLUS625 WOVEN GEOTEXTILE BETWEEN
FOUNDATION STONE AND CHAMBERS
5' (1.5 m) MIN WIDE CONTINUOUS FABRIC WITHOUT SEAMS

SC-800 ISOLATOR ROW PLUS DETAIL

NTS

3 SC-800 ISOLATOR ROW PLUS DETAIL

SPACE INTENTIONALLY LEFT BLANK

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

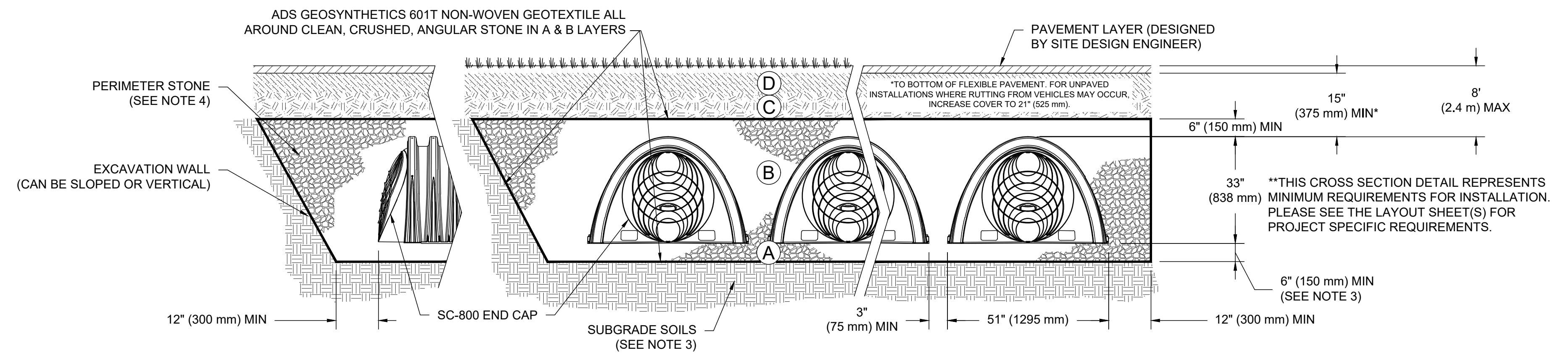
NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

ACCEPTABLE FILL MATERIALS: STORMTECH SC-800 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 15" (375 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145¹ A-1, A-2-4, A-3 OR AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE⁵	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE⁵	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.^{2,3}

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".


ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE ALL
AROUND CLEAN, CRUSHED, ANGULAR STONE IN A & B LAYERS
PAVEMENT LAYER (DESIGNED
BY SITE DESIGN ENGINEER)
PERIMETER STONE
(SEE NOTE 4)
D
C
*TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED
INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR,
INCREASE COVER TO 21" (525 mm).
15"
(375 mm) MIN*
8'
(2.4 m) MAX
6" (150 mm) MIN
EXCAVATION WALL
(CAN BE SLOPED OR VERTICAL)
B
33"
(838 mm)
**THIS CROSS SECTION DETAIL REPRESENTS
MINIMUM REQUIREMENTS FOR INSTALLATION.
PLEASE SEE THE LAYOUT SHEET(S) FOR
PROJECT SPECIFIC REQUIREMENTS.
A
6" (150 mm) MIN
(SEE NOTE 3)
12" (300 mm) MIN
SC-800 END CAP
SUBGRADE SOILS
(SEE NOTE 3)
3"
(75 mm) MIN
51" (1295 mm)
12" (300 mm) MIN

NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-800 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 700 LBS/FT/%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

1 SC-800 CROSS SECTION DETAIL

DATE: 10/06/2025
PROJECT #:
NOT TO SCALE
DRAWN: SB
CHECKED: N/A
REV:

ASHLAND BASIN 2
ASHLAND, MA, USA

StormTech®
Chamber System

ADS
4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS/STORMTECH UNDER THE DIRECTION OF THE PROJECT'S ENGINEER OF RECORD ('EOR') OR OTHER PROJECT REPRESENTATIVE. THIS DRAWING IS NOT INTENDED FOR USE IN BIDDING OR CONSTRUCTION WITHOUT THE EOR'S PRIOR APPROVAL. EOR SHALL REVIEW THIS DRAWING PRIOR TO BIDDING AND/OR CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE EOR TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

SHEET
1 OF 1

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

TEAM HOYT
COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt
One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
www.BohlerEngineering.com

J.A. KUCICH
John Kucich
JOHN A. KUCICH CIVIL No. 41530
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
NEW HAMPSHIRE LICENSE No. 15476
CONNECTICUT LICENSE No. 26177
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

ISSUED FOR
PERMIT

CONSTRUCTION
DETAILS

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

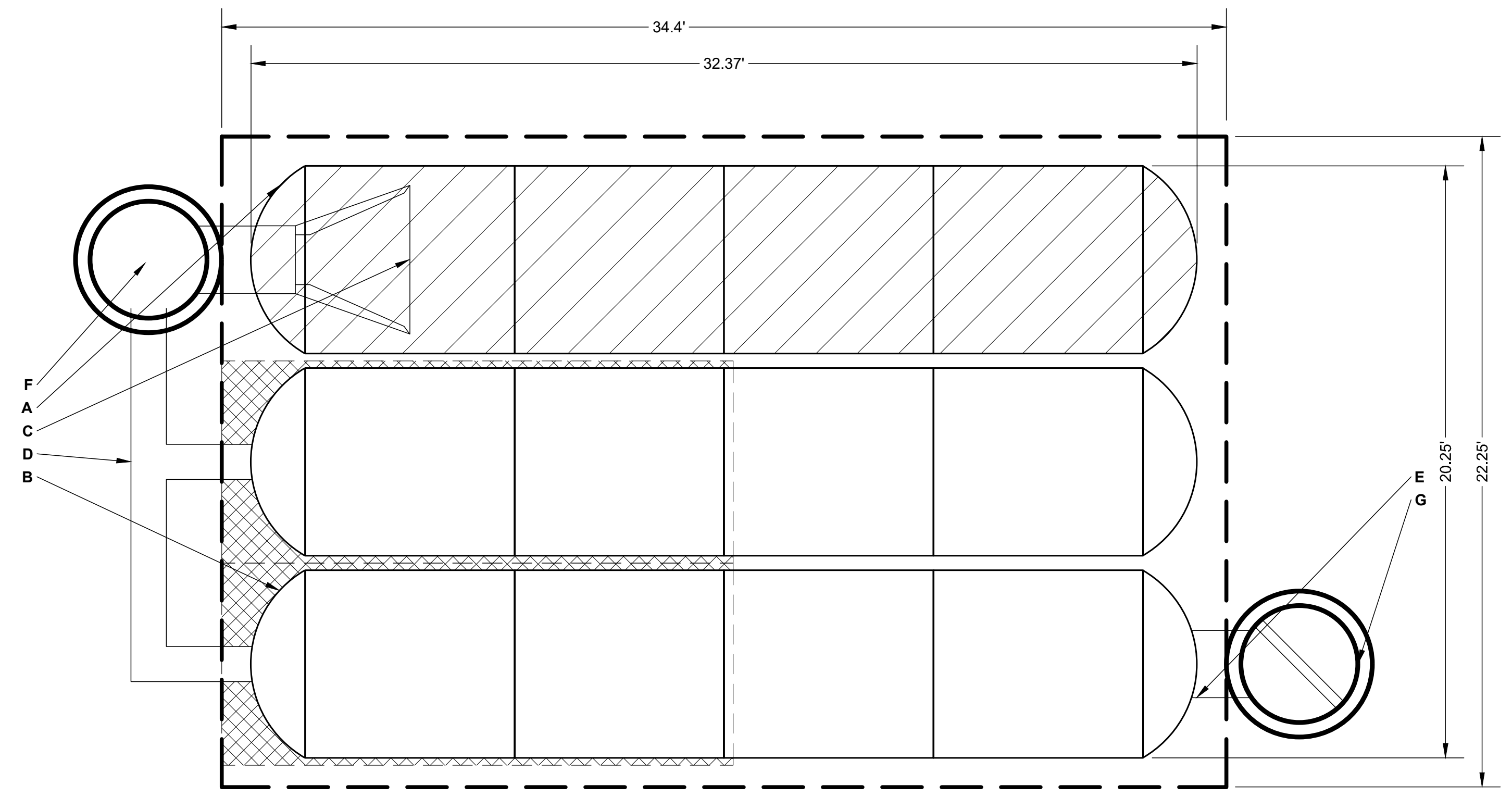
C-905

PROPOSED LAYOUT	
12	STORMTECH MC-3500 CHAMBERS
6	STORMTECH MC-3500 END CAPS
12	STONE ABOVE (in)
9	STONE BELOW (in)
40	STONE VOID
2712	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)
849	SYSTEM AREA (SF)
120.8	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS	
MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	249.50
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	243.50
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	243.00
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	243.00
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	243.00
TOP OF STONE:	242.50
TOP OF MC-3500 CHAMBER:	241.50
24" ISOLATOR ROW PLUS INVERT:	237.92
24" BOTTOM CONNECTION INVERT:	237.92
12" x 12" BOTTOM MANIFOLD INVERT:	237.86
BOTTOM OF MC-3500 CHAMBER:	237.75
BOTTOM OF STONE:	237.00

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	24" BOTTOM PRE-CORED END CAP, PART#: MC3500IEPP24BC / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.06"	
PREFABRICATED END CAP	B	12" BOTTOM PRE-CORED END CAP, PART#: MC3500IEPP12B / TYP OF ALL 12" BOTTOM CONNECTIONS	1.35"	
FLAMP	C	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: MCFLAMP		
MANIFOLD	D	12" x 12" BOTTOM MANIFOLD, ADS N-12	1.35"	
PIPE CONNECTION	E	24" BOTTOM CONNECTION	2.06"	
CONCRETE STRUCTURE	F	CONCRETE STRUCTURE(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		7.0 CFS OUT
CONCRETE STRUCTURE W/WEIR	G	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		3.7 CFS IN


34.4'
32.37'
F
A
C
D
B
E
G
20.25'
22.25'

▨ ISOLATOR ROW PLUS (SEE DETAIL)

▩ NO WOVEN GEOTEXTILE

— — BED LIMITS

NOTES
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- **NOT FOR CONSTRUCTION**: THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

INFILTRATION BASIN #3 LAYOUT

SPACE INTENTIONALLY LEFT BLANK

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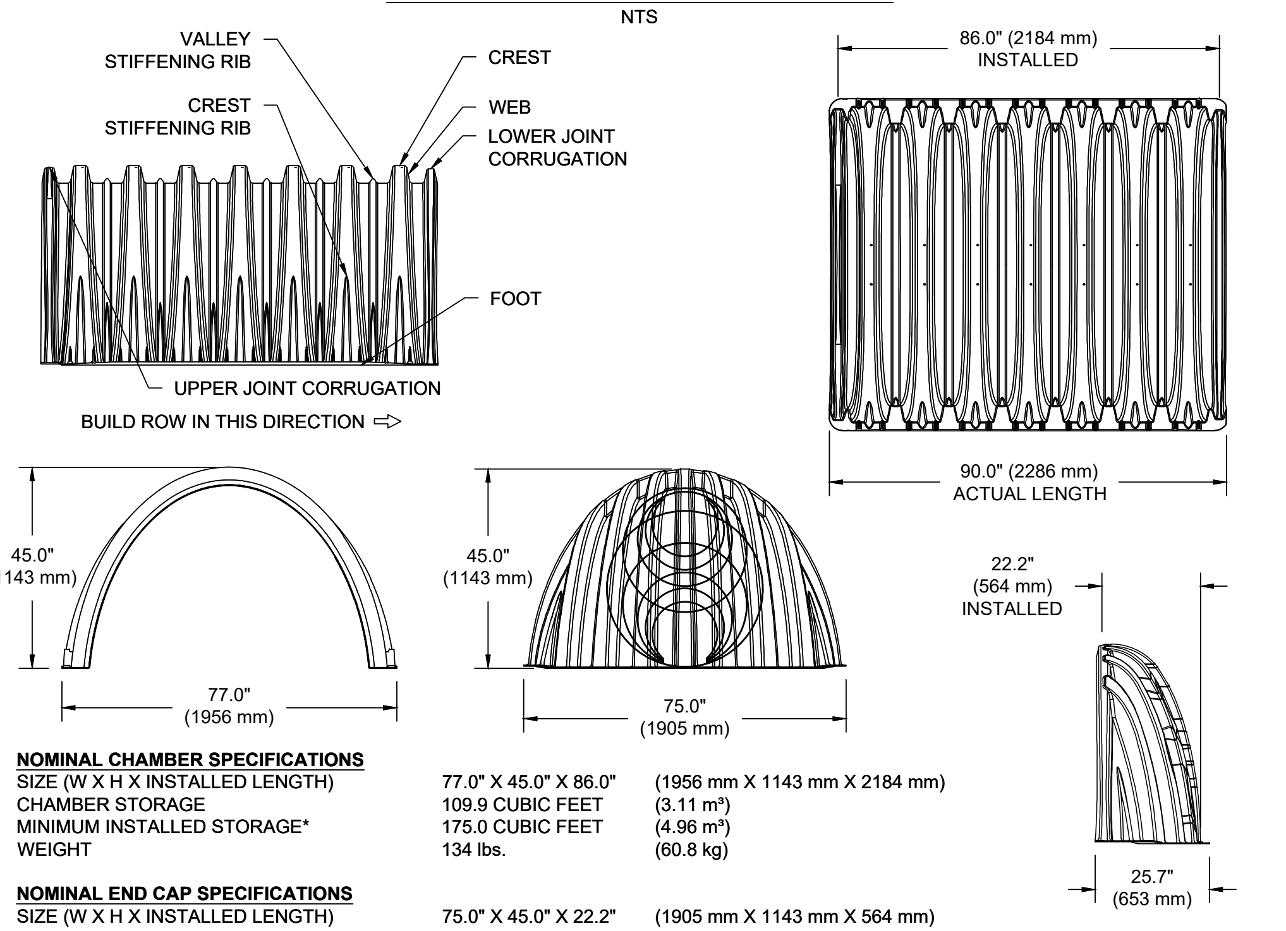
MC-3500 TECHNICAL SPECIFICATION

NTS


VALLEY STIFFENING RIB
CREST STIFFENING RIB
CREST
WEB
LOWER JOINT CORRUGATION
FOOT
UPPER JOINT CORRUGATION
BUILD ROW IN THIS DIRECTION ⇨
86.0" (2184 mm) INSTALLED
90.0" (2286 mm) ACTUAL LENGTH
45.0" (1143 mm)
77.0" (1956 mm)
45.0" (1143 mm)
75.0" (1905 mm)
22.2" (564 mm) INSTALLED
25.7" (653 mm)

NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	175.0 CUBIC FEET	(4.96 m³)
WEIGHT	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

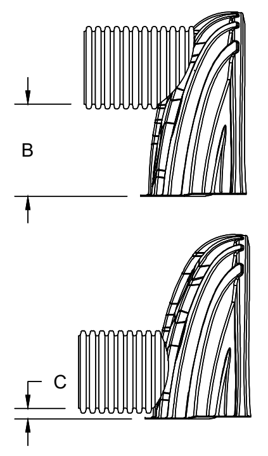
SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.9 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	45.1 CUBIC FEET	(1.28 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" SPACING BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

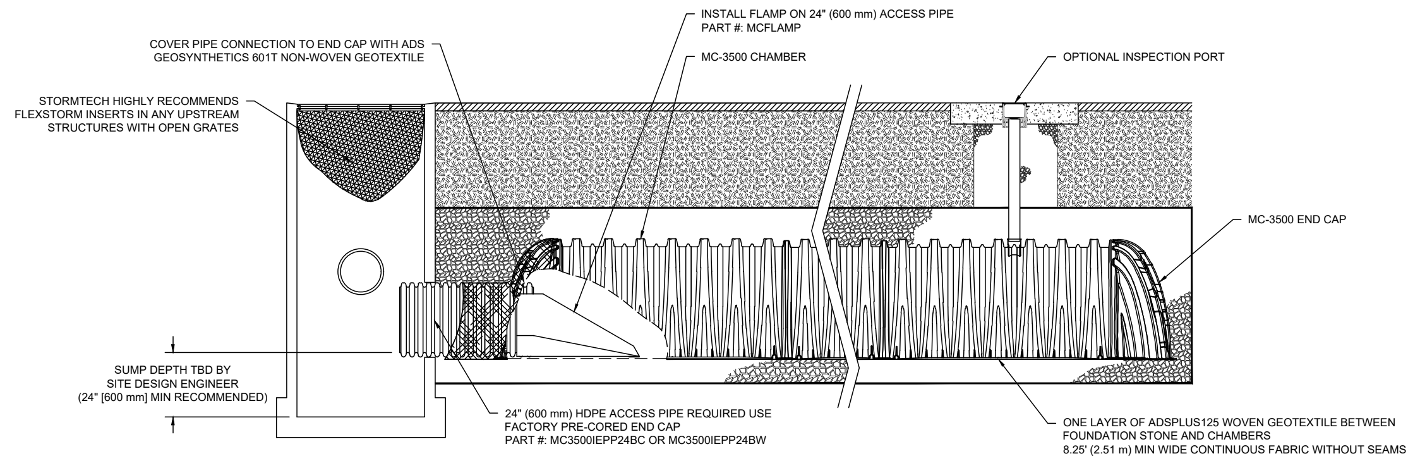
PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW			
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP18BW			
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TW			
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL



CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

2 MC-3500 TECHNICAL SPECIFICATION


COVER PIPE CONNECTION TO END CAP WITH ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE
STORMTECH HIGHLY RECOMMENDS FLEXSTORM INSERTS IN ANY UPSTREAM STRUCTURES WITH OPEN GRATES
INSTALL FLAMP ON 24" (600 mm) ACCESS PIPE PART #: MCFLAMP
MC-3500 CHAMBER
OPTIONAL INSPECTION PORT
MC-3500 END CAP
SUMP DEPTH TBD BY SITE DESIGN ENGINEER (24" [600 mm] MIN RECOMMENDED)
24" (600 mm) HDPE ACCESS PIPE REQUIRED USE FACTORY PRE-CORED END CAP PART #: MC3500IEPP24BC OR MC3500IEPP24BW
ONE LAYER OF ADSPLUS125 WOVEN GEOTEXTILE BETWEEN FOUNDATION STONE AND CHAMBERS 8.25' (2.51 m) MIN WIDE CONTINUOUS FABRIC WITHOUT SEAMS

MC-3500 ISOLATOR ROW PLUS DETAIL

NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

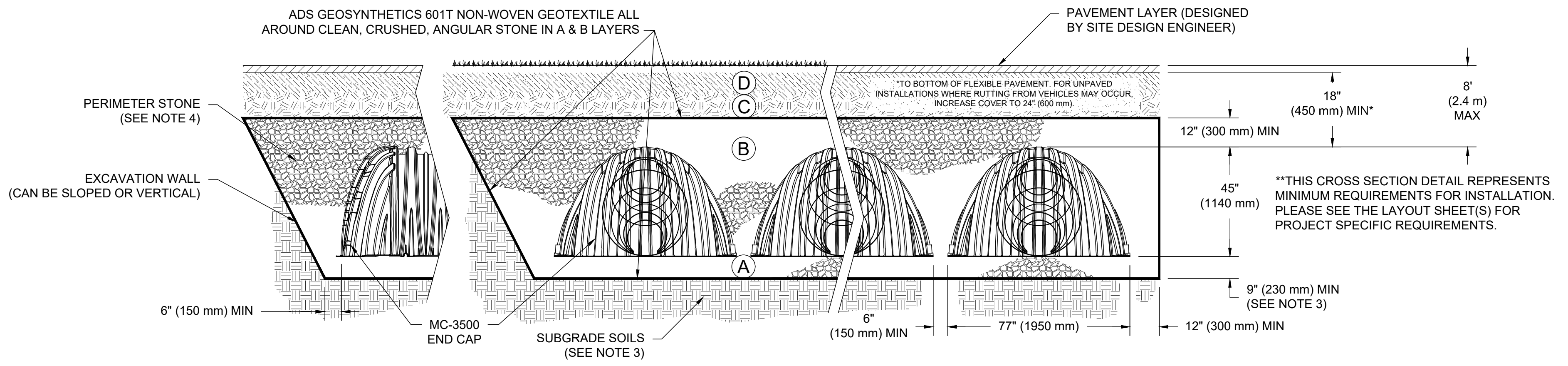
1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

3 MC-3500 ISOLATOR ROW PLUS DETAIL

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145¹ A-1, A-2-4, A-3 OR AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE⁵	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE⁵	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.²,³

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".


ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE ALL AROUND CLEAN, CRUSHED, ANGULAR STONE IN A & B LAYERS
PAVEMENT LAYER (DESIGNED BY SITE DESIGN ENGINEER)
PERIMETER STONE (SEE NOTE 4)
EXCAVATION WALL (CAN BE SLOPED OR VERTICAL)
D
C
B
A
*TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 24" (600 mm).
18" (450 mm) MIN*
8' (2.4 m) MAX
12" (300 mm) MIN
45" (1140 mm)
9" (230 mm) MIN (SEE NOTE 3)
12" (300 mm) MIN
77" (1950 mm)
6" (150 mm) MIN
6" (150 mm) MIN
MC-3500 END CAP
SUBGRADE SOILS (SEE NOTE 3)

**THIS CROSS SECTION DETAIL REPRESENTS MINIMUM REQUIREMENTS FOR INSTALLATION. PLEASE SEE THE LAYOUT SHEET(S) FOR PROJECT SPECIFIC REQUIREMENTS.

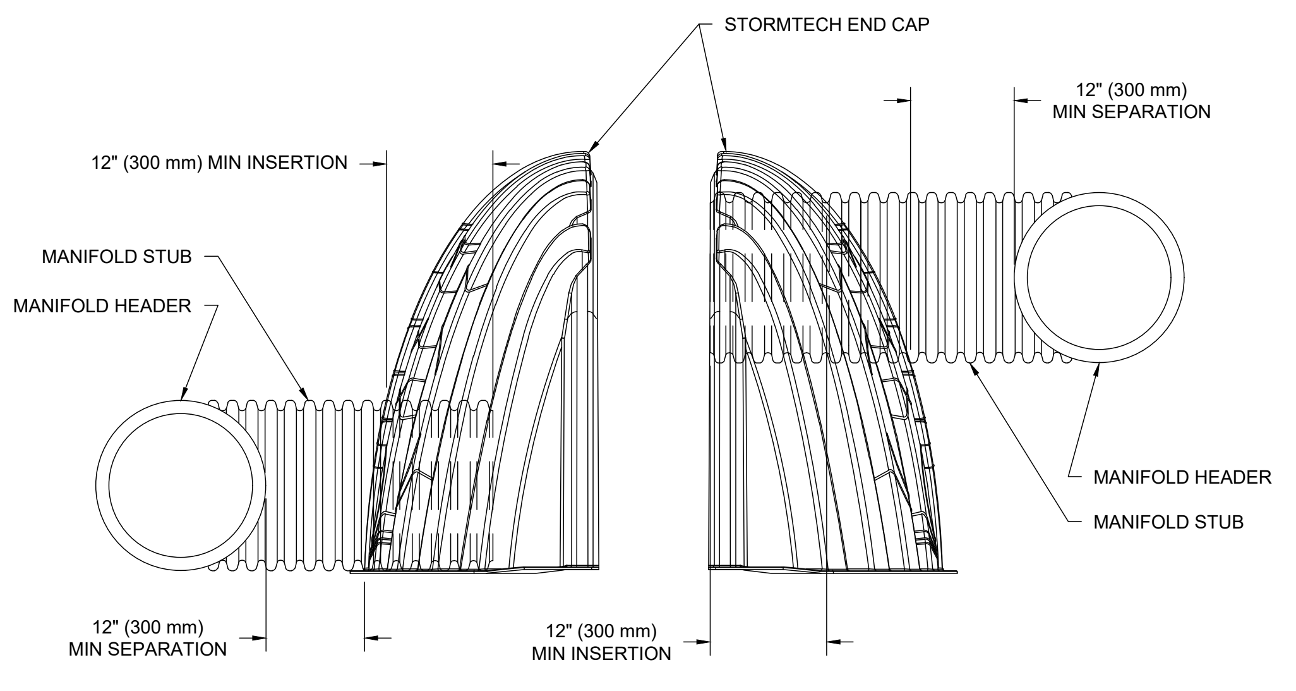
NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

SPACE INTENTIONALLY LEFT BLANK

MC-SERIES END CAP INSERTION DETAIL

NTS


STORMTECH END CAP
12" (300 mm) MIN INSERTION
12" (300 mm) MIN SEPARATION
MANIFOLD STUB
MANIFOLD HEADER
MANIFOLD HEADER
MANIFOLD STUB
12" (300 mm) MIN SEPARATION
12" (300 mm) MIN INSERTION

NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

4 MC-SERIES END CAP INSERTION DETAIL

1 MC-3500 CROSS SECTION DETAIL

DATE: 10/03/2025
PROJECT #:
NOT TO SCALE
DRAWN: SB
CHECKED: N/A
REV:

ASHLAND BASIN 3
ASHLAND, MA, USA

StormTech®
Chamber System

4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS/STORMTECH UNDER THE DIRECTION OF THE PROJECT'S ENGINEER OF RECORD ("EOR") OR OTHER PROJECT REPRESENTATIVE. THIS DRAWING IS NOT INTENDED FOR USE IN BIDDING OR CONSTRUCTION WITHOUT THE EOR'S PRIOR APPROVAL. EOR SHALL REVIEW THIS DRAWING PRIOR TO BIDDING AND/OR CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE EOR TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

SHEET
1 OF 1

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

TEAM HOYT
COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt
One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
www.BohlerEngineering.com

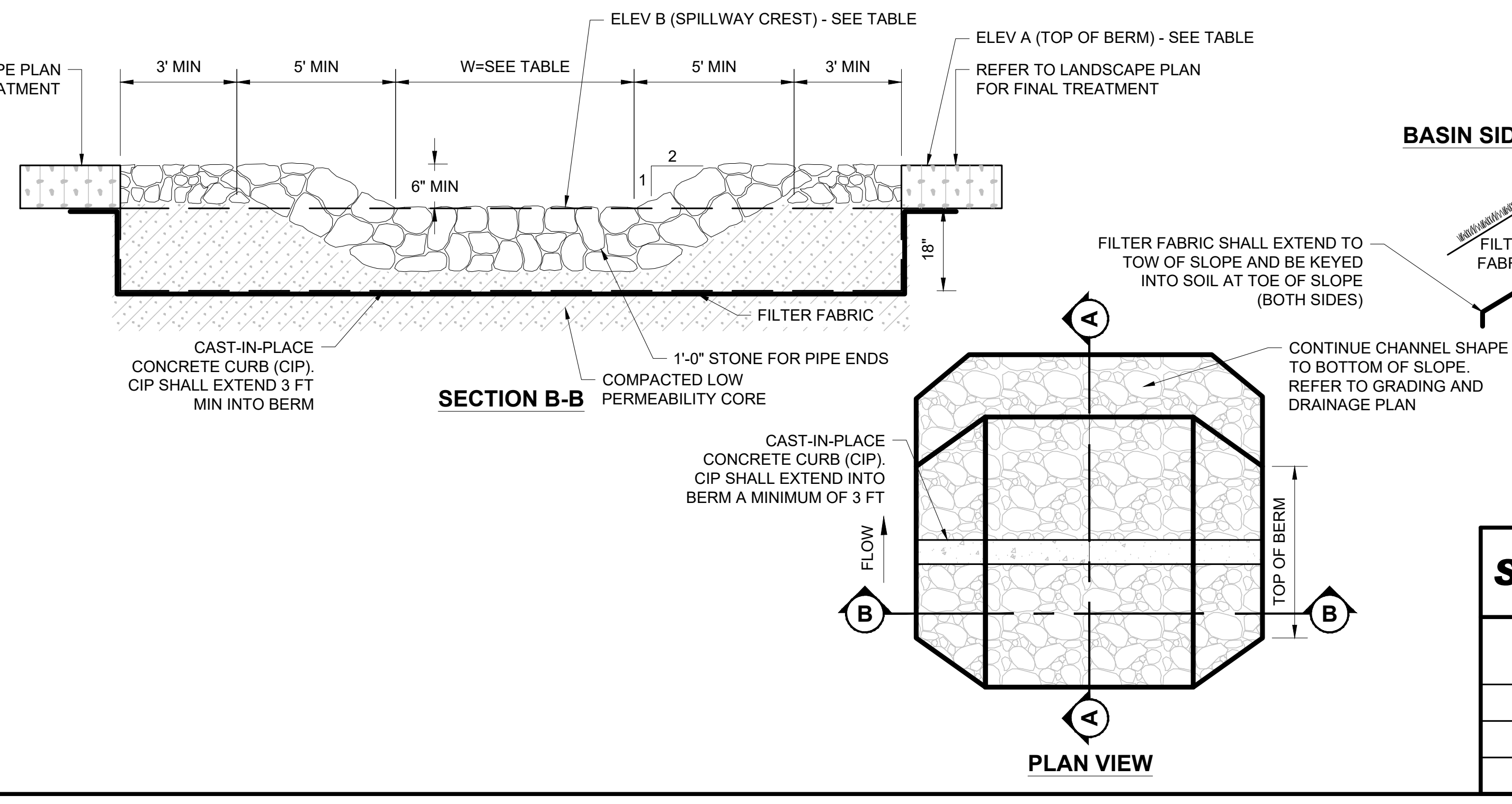
J.A. KUCICH
JOHN A. KUCICH
CIVIL
No. 41530
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
NEW HAMPSHIRE LICENSE No. 15476
CONNECTICUT LICENSE No. 26177
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

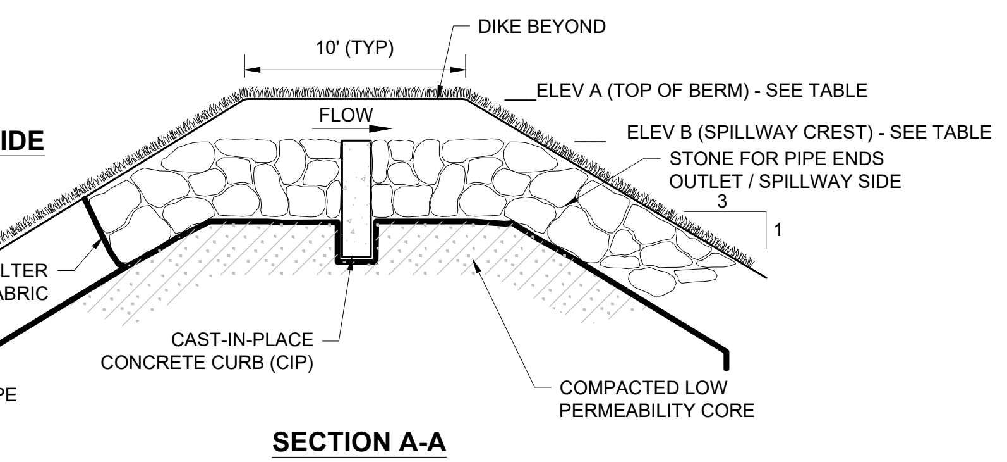
ISSUED FOR
PERMIT

CONSTRUCTION
DETAILS

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

C-906


ELEV B (SPILLWAY CREST) - SEE TABLE
ELEV A (TOP OF BERM) - SEE TABLE
REFER TO LANDSCAPE PLAN FOR FINAL TREATMENT
3' MIN
5' MIN
W=SEE TABLE
5' MIN
3' MIN
REFER TO LANDSCAPE PLAN FOR FINAL TREATMENT
6" MIN
2
1
18"
FILTER FABRIC
CAST-IN-PLACE CONCRETE CURB (CIP). CIP SHALL EXTEND 3 FT MIN INTO BERM
1'-0" STONE FOR PIPE ENDS
COMPACTED LOW PERMEABILITY CORE
SECTION B-B
FILTER FABRIC SHALL EXTEND TO TOW OF SLOPE AND BE KEYED INTO SOIL AT TOE OF SLOPE (BOTH SIDES)
CONTINUE CHANNEL SHAPE TO BOTTOM OF SLOPE. REFER TO GRADING AND DRAINAGE PLAN
CAST-IN-PLACE CONCRETE CURB (CIP). CIP SHALL EXTEND INTO BERM A MINIMUM OF 3 FT
FLOW
TOP OF BERM
A
B
B
A
PLAN VIEW


BASIN SIDE
DIKE BEYOND
10' (TYP)
ELEV A (TOP OF BERM) - SEE TABLE
FLOW
ELEV B (SPILLWAY CREST) - SEE TABLE
STONE FOR PIPE ENDS OUTLET / SPILLWAY SIDE
3
1
FILTER FABRIC
CAST-IN-PLACE CONCRETE CURB (CIP)
COMPACTED LOW PERMEABILITY CORE
SECTION A-A

NOTES:
1. FILTER FABRIC SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND SHALL OVERLAP SUCH THAT WATER WILL NOTE BE DIRECTED UNDER OR AROUND THE PROP FABRIC

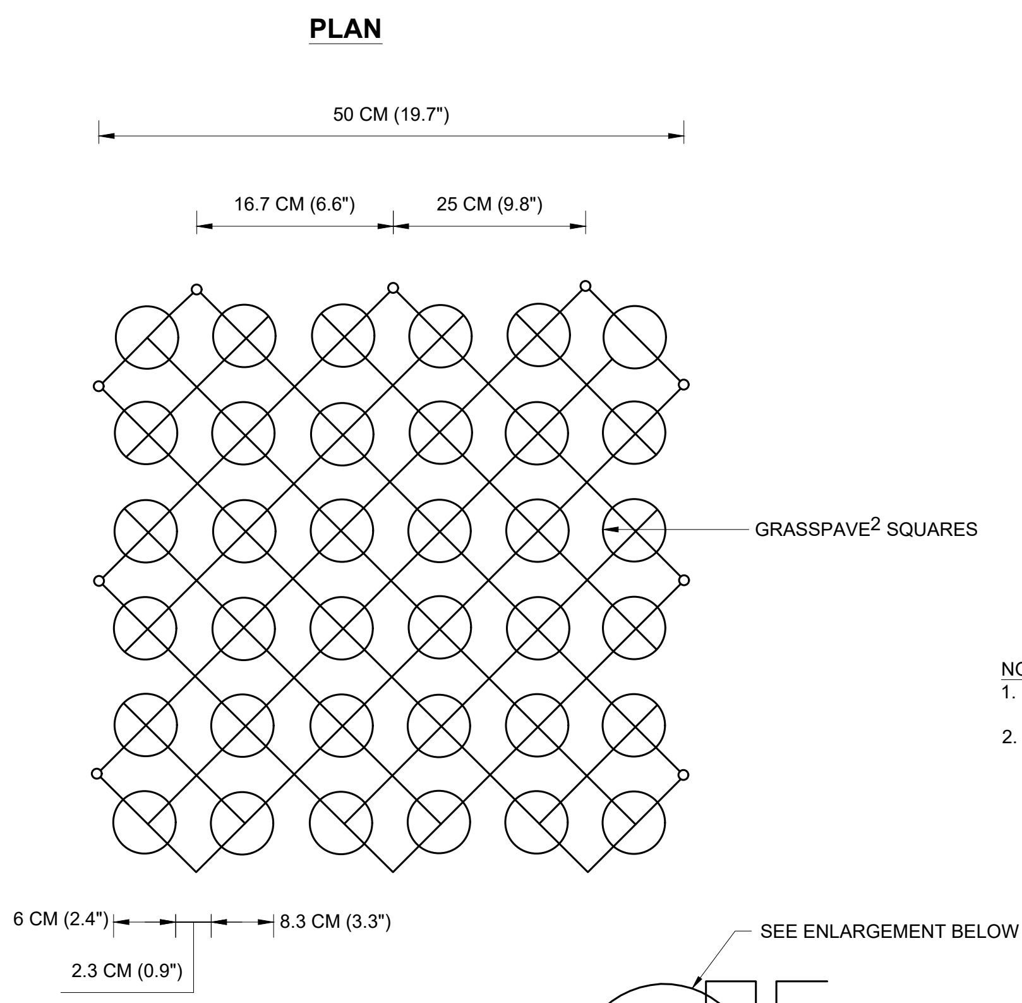
SPILLWAY DIMENSIONS AND ELEVATIONS

BASIN	TOP OF BERM ELEV A (FT)	SPILLWAY CREST ELEV B (FT)	WIDTH (W) OF SPILLWAY (FT)
BASIN #4	233.30	232.30	12

BASIN EMERGENCY SPILLWAY

NOT TO SCALE

(NE-G010101 - 05/2025)


PLAN
50 CM (19.7")
16.7 CM (6.6")
25 CM (9.8")
GRASSPAVE2 SQUARES
6 CM (2.4")
8.3 CM (3.3")
2.3 CM (0.9")

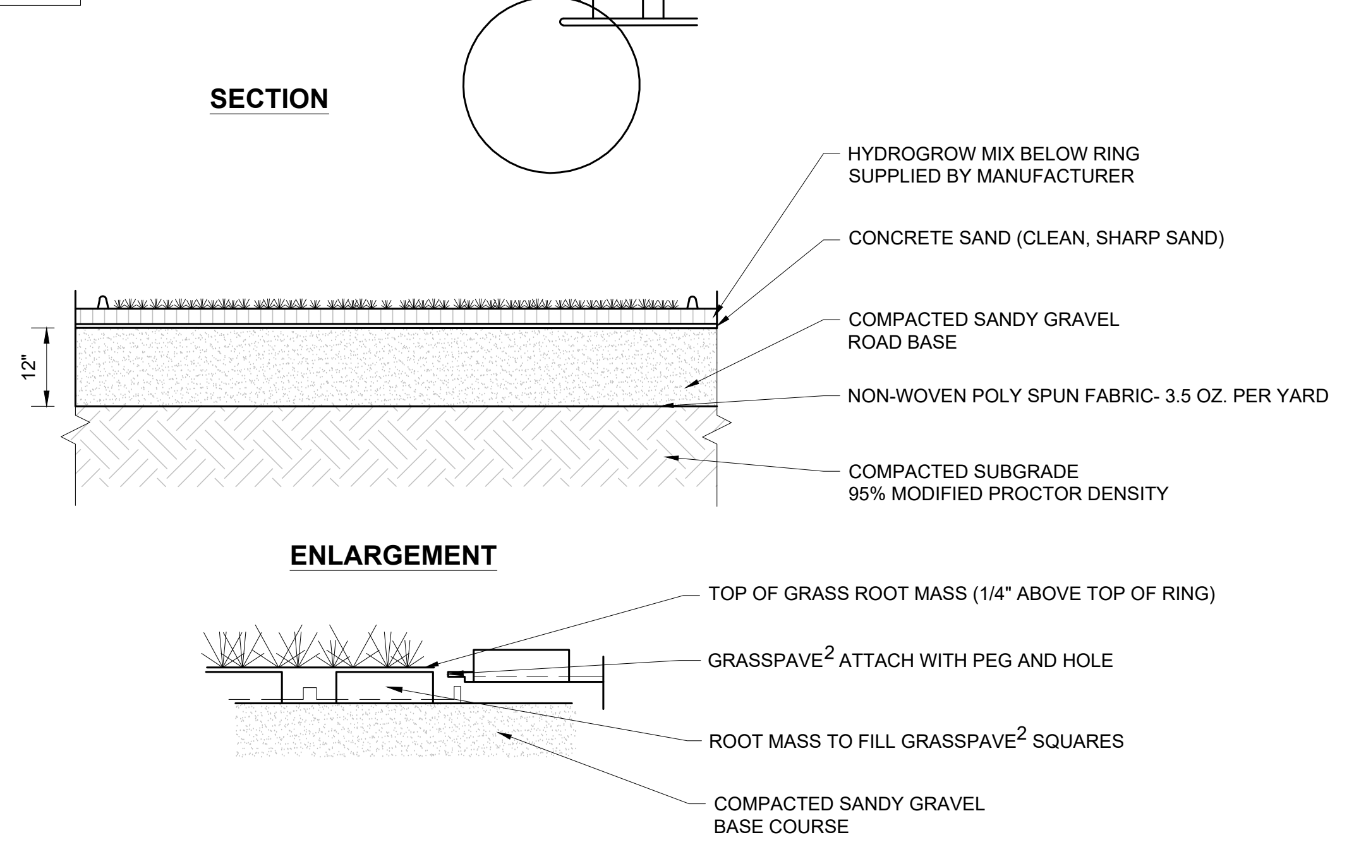
SPECIFICATIONS

UNIT SIZE- 50 CM X 50 CM X 25 CM
(20" X 20" X 1")
OR 100 CM X 100 CM X 25 CM
(40" X 40" X 1" - ONE METER SQUARE

UNIT WEIGHT- 510 GRAMS (18 OZ.)
OR 2.0 KG (4.5 POUNDS)

STRENGTH- 402 KG/CM^2 (5720 PSI)
COLOR- BLACK (STANDARD)
RESIN- 100% POST-CONSUMER RECYCLED HDPE/LDPE

NOTE:
1. GRASS/PLANT TYPES SHALL BE SPECIFIED BY A LANDSCAPE ARCHITECT.
2. GRASS PAVERS TO BE GRASSPAVERS^2 AS MANUFACTURED BY INVISIBLE STRUCTURES INC. OR APPROVED EQUAL.

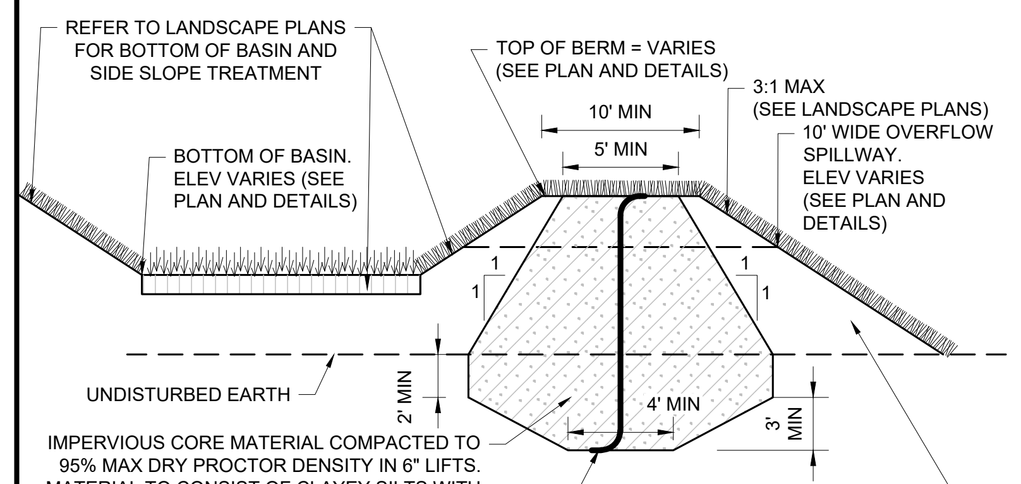

SEE ENLARGEMENT BELOW
SECTION
HYDROGROW MIX BELOW RING SUPPLIED BY MANUFACTURER
CONCRETE SAND (CLEAN, SHARP SAND)
COMPACTED SANDY GRAVEL ROAD BASE
12"
NON-WOVEN POLY SPUN FABRIC- 3.5 OZ. PER YARD
COMPACTED SUBGRADE 95% MODIFIED PROCTOR DENSITY
ENLARGEMENT
TOP OF GRASS ROOT MASS (1/4" ABOVE TOP OF RING)
GRASSPAVE2 ATTACH WITH PEG AND HOLE
ROOT MASS TO FILL GRASSPAVE2 SQUARES
COMPACTED SANDY GRAVEL BASE COURSE

GRASS PAVER DETAIL

NOT TO SCALE

NOT TO SCALE

(NJ-S019902 - 05/2025)


REFER TO LANDSCAPE PLANS FOR BOTTOM OF BASIN AND SIDE SLOPE TREATMENT
TOP OF BERM = VARIES (SEE PLAN AND DETAILS)
3:1 MAX (SEE LANDSCAPE PLANS)
10' WIDE OVERFLOW SPILLWAY. ELEV VARIES (SEE PLAN AND DETAILS)
10' MIN
5' MIN
BOTTOM OF BASIN. ELEV VARIES (SEE PLAN AND DETAILS)
1
1
1
1
UNDISTURBED EARTH
2' MIN
4' MIN
3' MIN

IMPERVIOUS CORE MATERIAL COMPACTED TO 95% MAX DRY PROCTOR DENSITY IN 6" LIFTS. MATERIAL TO CONSIST OF CLAYEY SILTS WITH THE FOLLOWING GRADATION:
50%-80% PASSING #200
20%-50% HAVING MIN PARTICLE SIZE OF 0.005 MILLIMETERS.
(SEE ALTERNATE NOTE)

ALTERNATE NOTE
AS AN ALTERNATE TO THE IMPERVIOUS CORE MATERIAL, GC MAY PROVIDE 40-MIL HDPE BARRIER (EXCAVATE 2' BELOW EXISTING GRADE) SEAMS SHALL BE SEALED (BONDS OR TAPE) AS SPECIFIED BY MANUFACTURER. CONTRACTOR TO ENSURE THAT ALL PIPE PENETRATIONS THROUGH THE BARRIER ARE WATER TIGHT AND INCLUDE THE USE OF AN ANTI-SEEP COLLAR AS NECESSARY

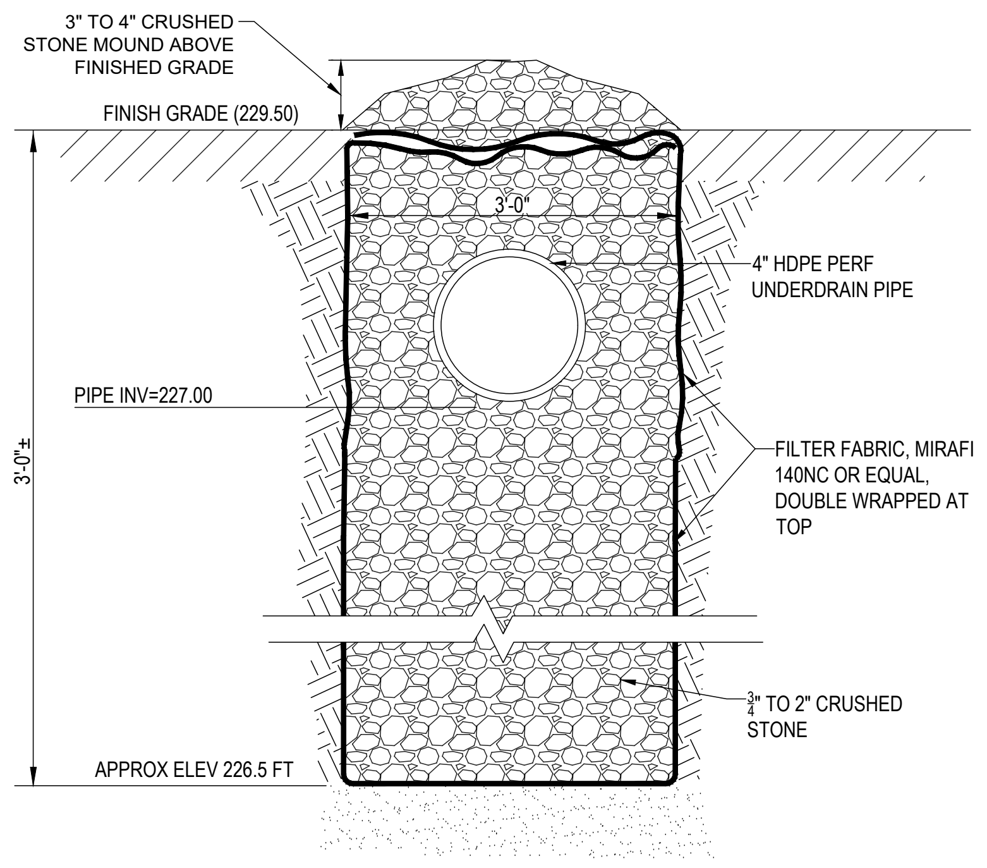
BASIN BERM MATERIAL COMPACTED TO 95% MAX DRY MODIFIED PROCTOR DENSITY IN 6" LEFTS. MATERIAL TO CONSIST OF 20-40% SANDY LOAM WITH THE FOLLOWING GRADATION:
0%-20% PASSING #200 SIEVE HAVING A MIN PARTICLE SIZE OF 0.005 MM.

NOTES:
1. FOUNDATION FOR BERM AND IMPERVIOUS CORE SHALL BE CLEARED OF ALL TOP SOIL, ROCKS, STUMPS, OR OTHER DELETERIOUS MATERIAL TO A FIRM SURFACE.

BASIN BERM AND IMPERVIOUS CORE

NOT TO SCALE

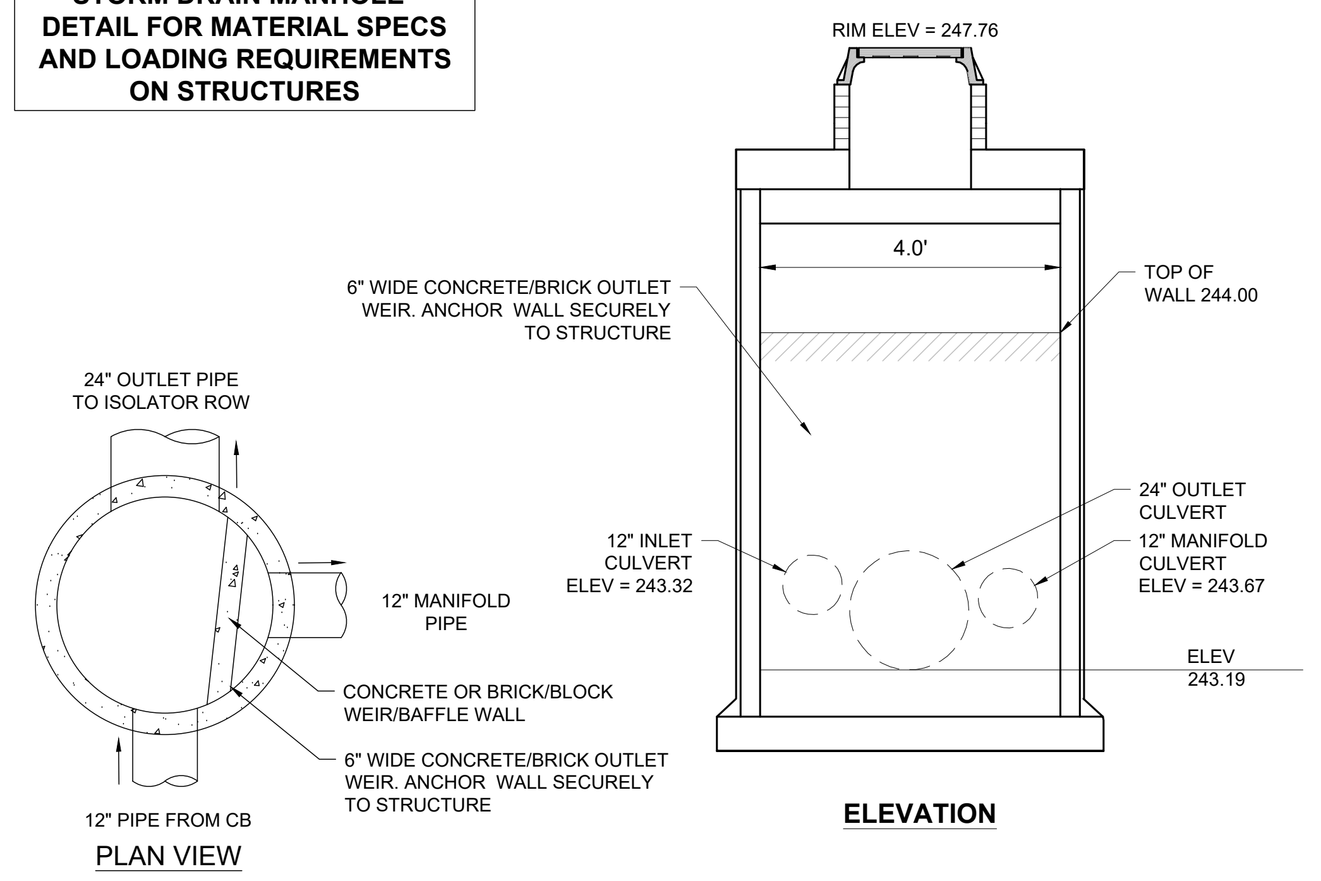
(NE-G019901 - 11/2024)


3" TO 4" CRUSHED STONE MOUND ABOVE FINISHED GRADE
FINISH GRADE (229.50)
3'-0"
4" HDPE PERF UNDERDRAIN PIPE
PIPE INV=227.00
3'-0"±
FILTER FABRIC, MIRAFI 140NC OR EQUAL, DOUBLE WRAPPED AT TOP
¾" TO 2" CRUSHED STONE
APPROX ELEV 226.5 FT

PERFORATED UNDERDRAIN DETAIL

NOT TO SCALE

REFER TO "PRECAST CONCRETE STORM DRAIN MANHOLE" DETAIL FOR MATERIAL SPECS AND LOADING REQUIREMENTS ON STRUCTURES

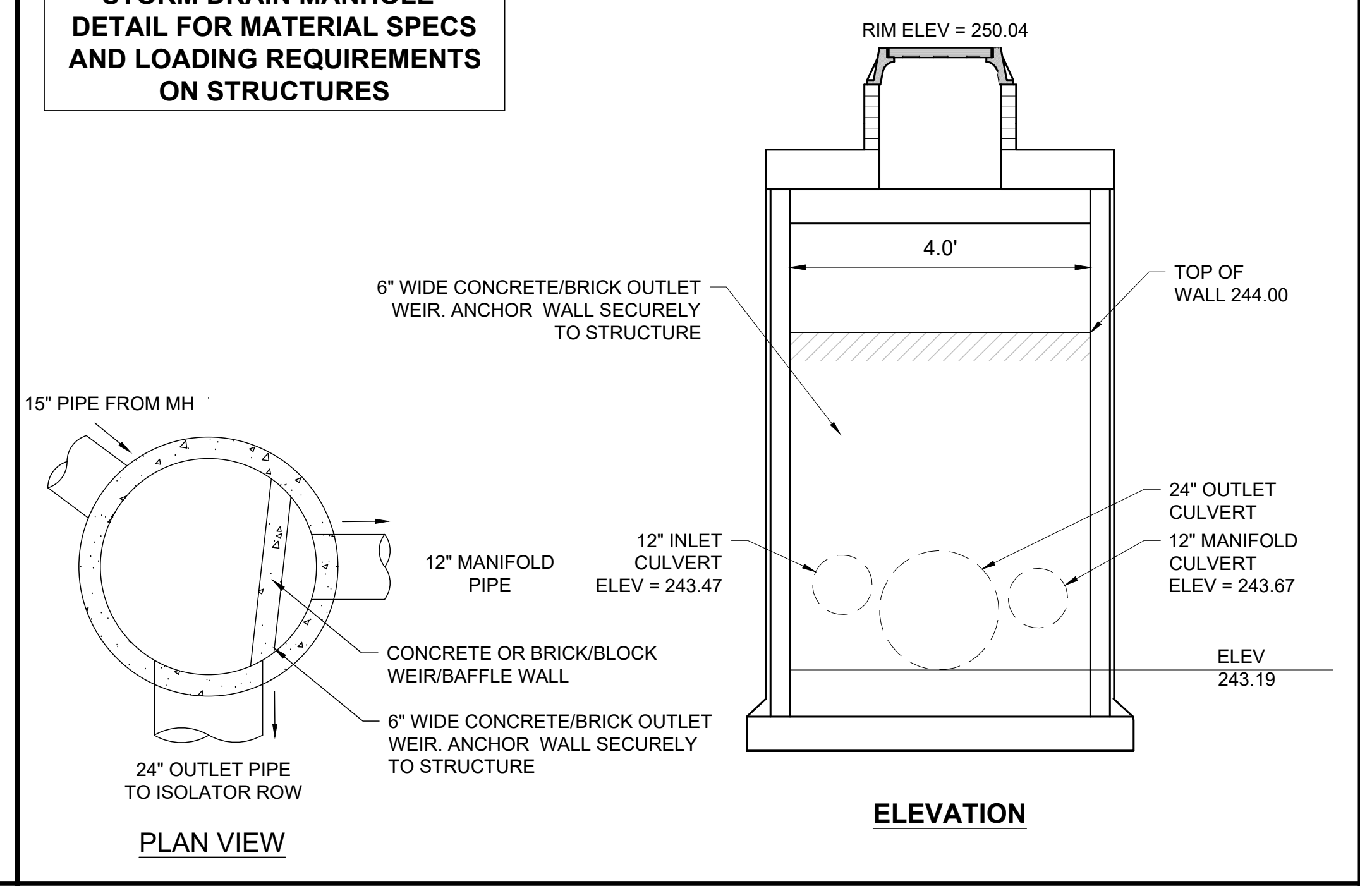

RIM ELEV = 247.76
4.0'
TOP OF WALL 244.00
6" WIDE CONCRETE/BRICK OUTLET WEIR. ANCHOR WALL SECURELY TO STRUCTURE
24" OUTLET PIPE TO ISOLATOR ROW
24" OUTLET CULVERT
12" MANIFOLD CULVERT ELEV = 243.67
12" INLET CULVERT ELEV = 243.32
12" MANIFOLD PIPE
ELEV 243.19
CONCRETE OR BRICK/BLOCK WEIR/BAFFLE WALL
6" WIDE CONCRETE/BRICK OUTLET WEIR. ANCHOR WALL SECURELY TO STRUCTURE
12" PIPE FROM CB
PLAN VIEW
ELEVATION

INLET CONTROL STRUCTURE B-40 (BASIN 1)

NOT TO SCALE

(NE-U010103 - 11/2024)

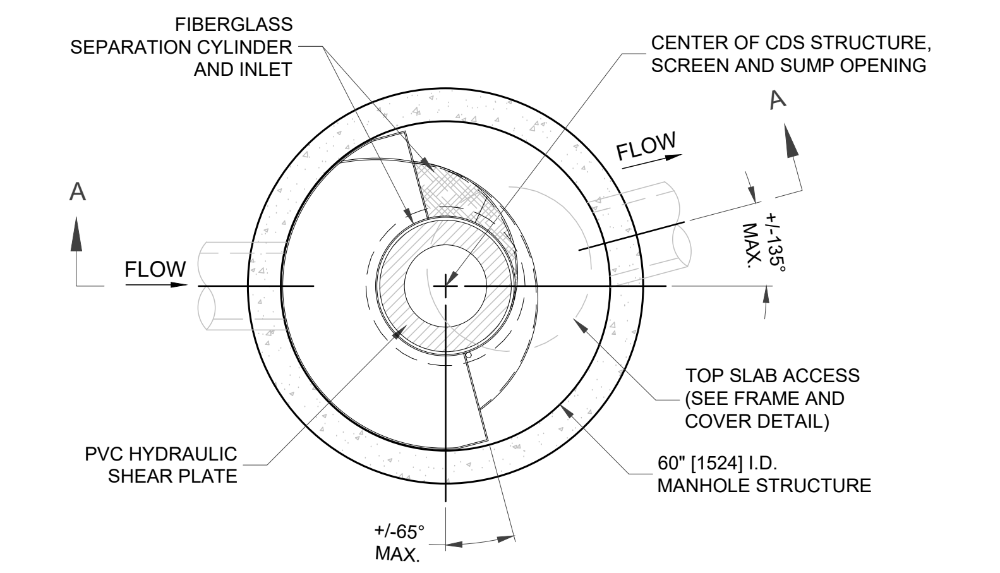
REFER TO "PRECAST CONCRETE STORM DRAIN MANHOLE" DETAIL FOR MATERIAL SPECS AND LOADING REQUIREMENTS ON STRUCTURES


RIM ELEV = 250.04
4.0'
TOP OF WALL 244.00
6" WIDE CONCRETE/BRICK OUTLET WEIR. ANCHOR WALL SECURELY TO STRUCTURE
15" PIPE FROM MH
24" OUTLET CULVERT
12" MANIFOLD CULVERT ELEV = 243.67
12" MANIFOLD PIPE
12" INLET CULVERT ELEV = 243.47
ELEV 243.19
CONCRETE OR BRICK/BLOCK WEIR/BAFFLE WALL
6" WIDE CONCRETE/BRICK OUTLET WEIR. ANCHOR WALL SECURELY TO STRUCTURE
24" OUTLET PIPE TO ISOLATOR ROW
PLAN VIEW
ELEVATION

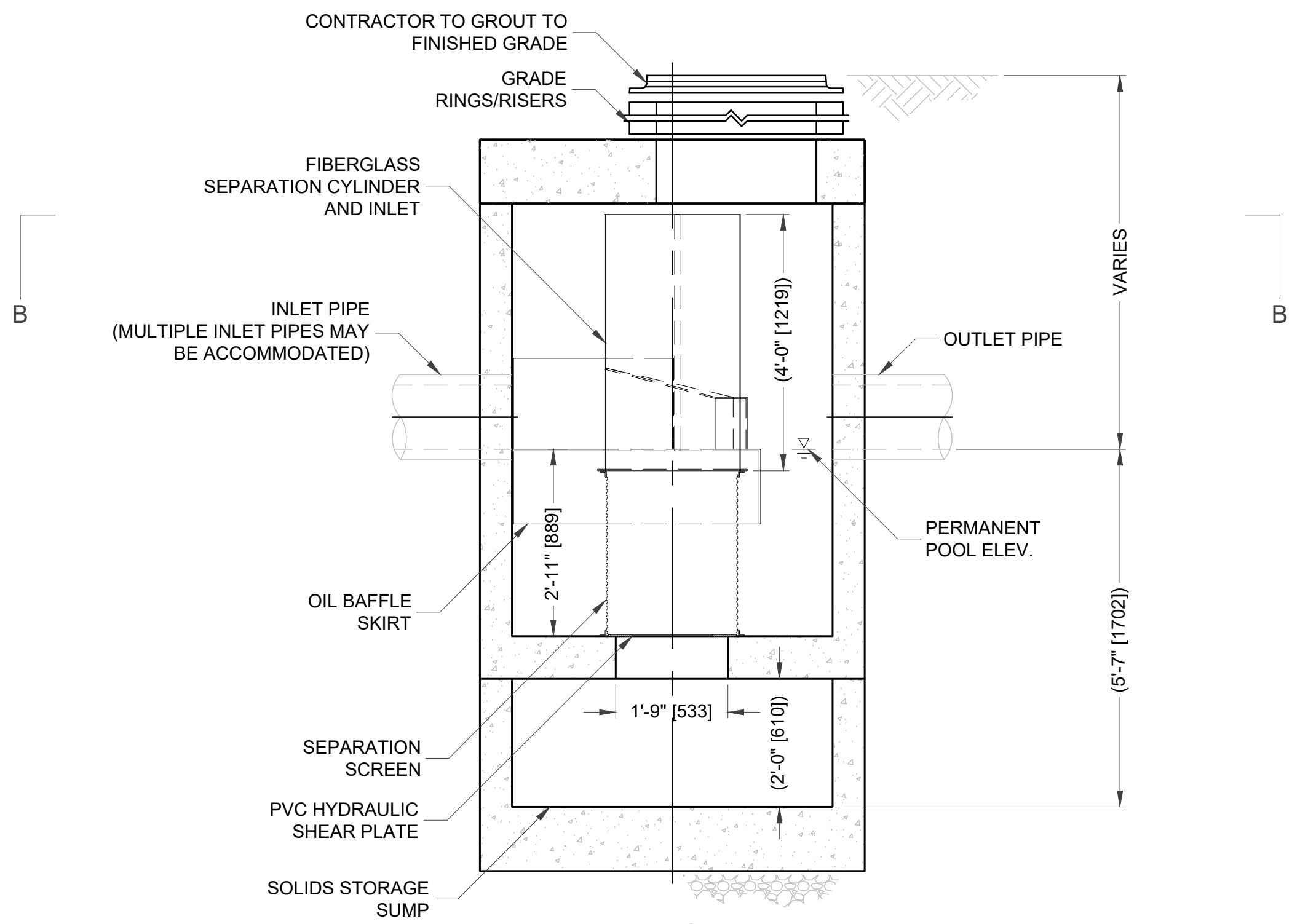
INLET CONTROL STRUCTURE B-60 (BASIN 1)

NOT TO SCALE

(NE-U010103 - 11/2024)


FIBERGLASS SEPARATION CYLINDER AND INLET
CENTER OF CDS STRUCTURE, SCREEN AND SUMP OPENING
A
FLOW
A
FLOW
+/-135° MAX.
TOP SLAB ACCESS (SEE FRAME AND COVER DETAIL)
PVC HYDRAULIC SHEAR PLATE
60" [1524] I.D. MANHOLE STRUCTURE
+/-65° MAX.

PLAN VIEW B-B
N.T.S.

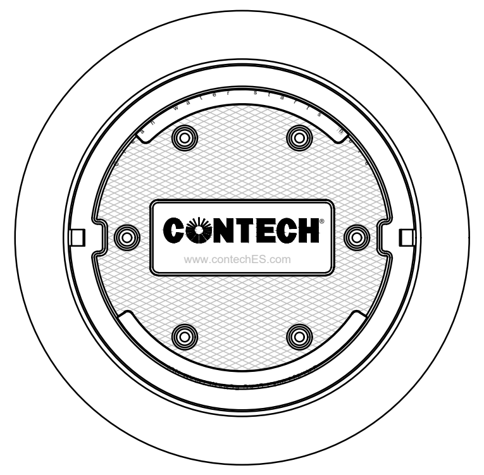

CONTRACTOR TO GROUT TO FINISHED GRADE
GRADE RINGS/RISERS
FIBERGLASS SEPARATION CYLINDER AND INLET
B
INLET PIPE (MULTIPLE INLET PIPES MAY BE ACCOMMODATED)
(4'-0" [1219])
VARIES
OUTLET PIPE
B
PERMANENT POOL ELEV.
2'-11" [889]
OIL BAFFLE SKIRT
(5'-7" [1702])
1'-9" [533]
(2'-0" [610])
SEPARATION SCREEN
PVC HYDRAULIC SHEAR PLATE
SOLIDS STORAGE SUMP

ELEVATION A-A
N.T.S.

CDS2025-5-C DESIGN NOTES

THE STANDARD CDS2025-5-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES
SEPARATE OIL BAFFLE (SINGLE INLET PIPE REQUIRED FOR THIS CONFIGURATION)
SEDIMENT WEIR FOR NJDEP / NJCAT CONFORMING UNITS


CONTECH
www.contechES.com

FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			
WATER QUALITY FLOW RATE (CFS OR L/s)	*		
PEAK FLOW RATE (CFS OR L/s)	*		
RETURN PERIOD OF PEAK FLOW (YRS)	*		
SCREEN APERTURE (2400 OR 4700)	*		
PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	*	*	*
INLET PIPE 2	*	*	*
OUTLET PIPE	*	*	*
RIM ELEVATION	*		
ANTI-FLOTATION BALLAST	WIDTH	HEIGHT	
	*	*	
NOTES/SPECIAL REQUIREMENTS:			

* PER ENGINEER OF RECORD

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.contechES.com
4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET HS20 (AASHTO M 306) LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
6. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH
ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CDS2025-5-C
INLINE CDS
STANDARD DETAIL

CONTECH CDS2025-5-C STANDARD DETAIL (WQU)

NOT TO SCALE

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
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ASHLAND, MA**

cbt
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cbtarchitects.com
617.262.4354

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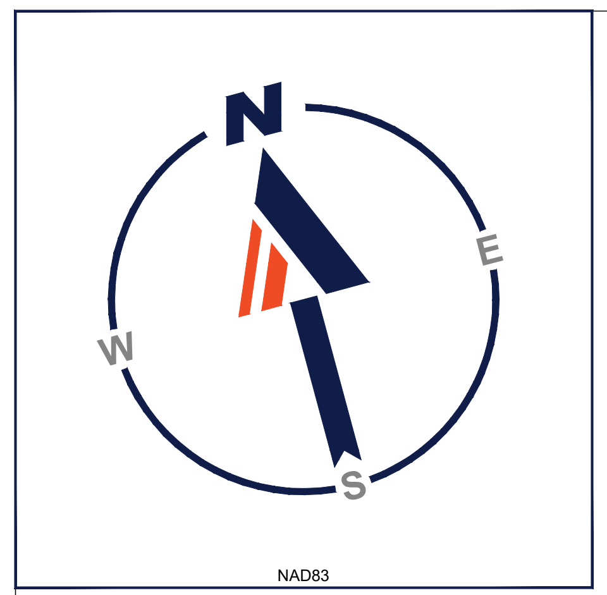
CONNECTICUT LICENSE No. 26177
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

ISSUED FOR
PERMIT

CONSTRUCTION
DETAILS

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

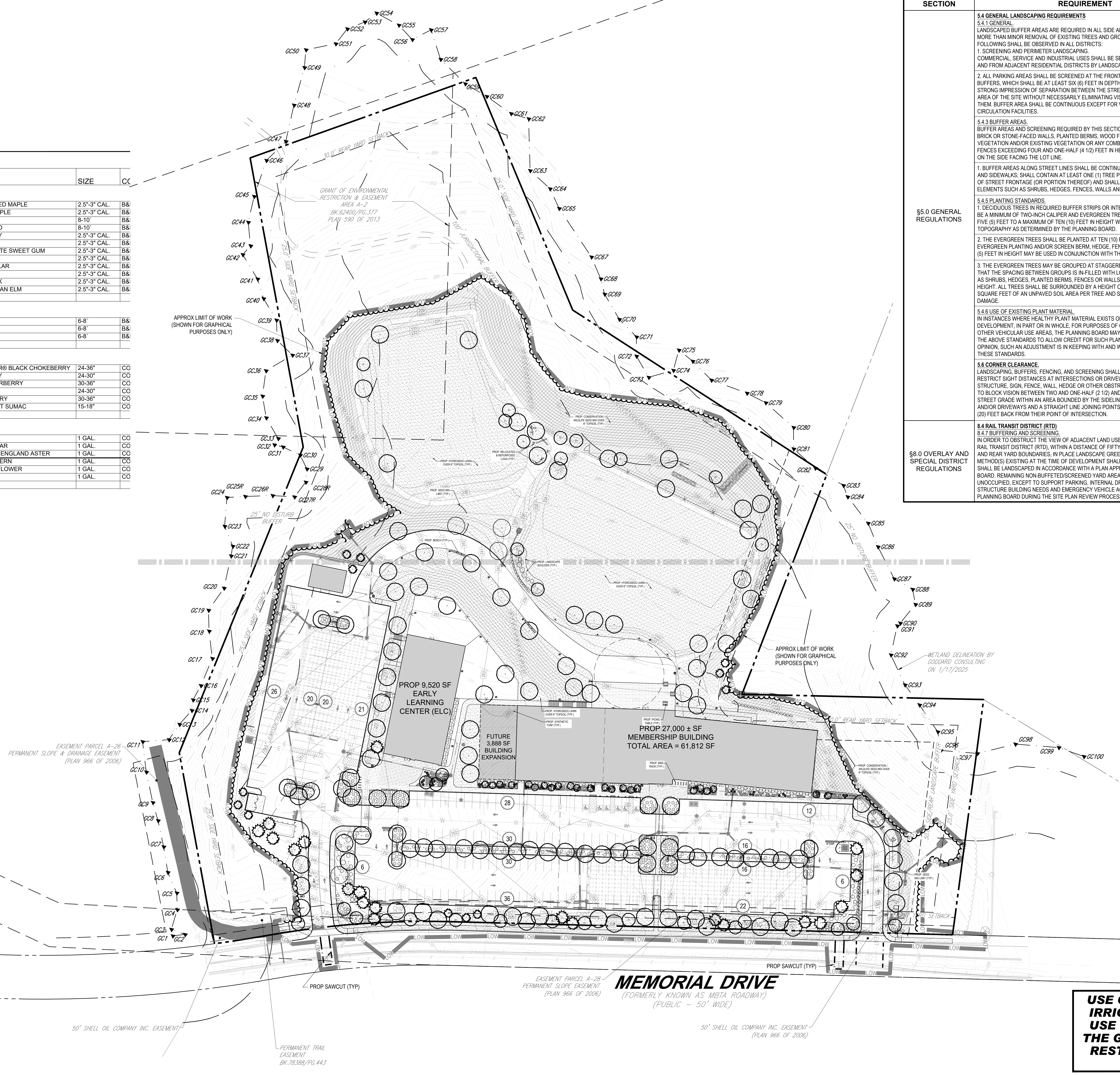
C-907



NAD83

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CO
CANOPY TREES					
AROG	15	ACER RUBRUM `OCTOBER GLORY`	OCTOBER GLORY RED MAPLE	2.5"-3" CAL.	B&
AS	16	ACER SACCHARUM 'BONFIRE'	BONFIRE SUGAR MAPLE	2.5"-3" CAL.	B&
CC	14	CERCIS CANADENSIS	EASTERN REDBUD	8-10`	B&
CF	20	CORNUS FLORIDA	EASTERN DOGWOOD	8-10`	B&
CO	7	CARYA OVATA	SHAGBARK HICKORY	2.5"-3" CAL.	B&
LS	9	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	2.5"-3" CAL.	B&
LS2	15	LIQUIDAMBAR STYRACIFLUA 'SLENDER SILHOUETTE'	SLENDER SILHOUETTE SWEET GUM	2.5"-3" CAL.	B&
LT	21	LIRIODENDRON TULIPIFERA	TULIP TREE	2.5"-3" CAL.	B&
LT2	8	LIRIODENDRON TULIPIFERA 'ARNOLD'	ARNOLD TULIP POPLAR	2.5"-3" CAL.	B&
QP	7	QUERCUS PALUSTRIS	PIN OAK	2.5"-3" CAL.	B&
QR	6	QUERCUS RUBRA	NORTHERN RED OAK	2.5"-3" CAL.	B&
UP	35	ULMUS AMERICANA 'PRINCETON'	PRINCETON AMERICAN ELM	2.5"-3" CAL.	B&
	173	SUBTOTAL:			
EVERGREEN TREES					
AB	20	ABIES BALSAMEA	BALSAM FIR	6-8`	B&
AF	12	ABIES FRASERI	FRASER FIR	6-8`	B&
LL	5	LARIX LARICINA	TAMARACK	6-8`	B&
	37	SUBTOTAL:			
SHRUBS					
AM	40	ARONIA MELANOCARPA 'UCONNAM166'	LOW SCAPE HEDGER® BLACK CHOKEBERRY	24-36"	CO
IGC	124	ILEX GLABRA `COMPACTA`	COMPACT INKBERRY	24-30"	CO
IVWR	15	ILEX VERTICILLATA `WINTER RED`	WINTER RED WINTERBERRY	30-36"	CO
JX	51	JUNIPERUS X 'GREY OWL'	GREY OWL JUNIPER	24-30"	CO
MP	31	MYRICA PENSYLVANICA	NORTHERN BAYBERRY	30-36"	CO
RA	332	RHUS AROMATICA `GRO-LOW`	GRO-LOW FRAGRANT SUMAC	15-18"	CO
	593	SUBTOTAL:			
PERENNIALS					
ACWG	25	ASARUM CANADENSE	WILD GINGER	1 GAL.	CO
AH	82	AMSONIA HUBRICHTII	ARKANSAS BLUE-STAR	1 GAL.	CO
AP4	95	ASTER NOVAE-ANGLIAE 'PURPLE DOME'	PURPLE DOME NEW ENGLAND ASTER	1 GAL.	CO
DMS	35	DRYOPTERIS MARGINALIS	MARGINAL SHIELD FERN	1 GAL.	CO
RFG	128	RUDBECKIA FULGIDA SULLIVANTII 'GOLDSTURM'	GOLDSTURM CONEFLOWER	1 GAL.	CO
TCF	24	TIARELLA CORDIFOLIA	FOAMFLOWER	1 GAL.	CO
	389	SUBTOTAL:			


GRANT OF ENVIRONMENTAL RESTRICTION & EASEMENT AREA A-2 BK.62400/PG.377 PLAN 590 OF 2013
30.0' REAR YARD SETBACK
25.0' SIDE YARD SETBACK
100' JURISDICTIONAL BUFFER
25' NO DISTURB BUFFER
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
WETLAND DELINEATION BY GODDARD CONSULTING ON 1/17/2025
PROP 9,520 SF EARLY LEARNING CENTER (ELC)
FUTURE 3,888 SF BUILDING EXPANSION
PROP 27,000 ± SF MEMBERSHIP BUILDING TOTAL AREA = 61,812 SF
50' FRONT YARD SETBACK
EASEMENT PARCEL A-26 PERMANENT SLOPE & DRAINAGE EASEMENT (PLAN 966 OF 2006)
EASEMENT PARCEL A-28 PERMANENT SLOPE EASEMENT (PLAN 966 OF 2006)
MEMORIAL DRIVE
(FORMERLY KNOWN AS MBTA ROADWAY)
(PUBLIC - 50' WIDE)
PROP SAWCUT (TYP)
50' SHELL OIL COMPANY INC. EASEMENT
50' SHELL OIL COMPANY INC. EASEMENT (PLAN 966 OF 2006)
PERMANENT TRAIL EASEMENT BK.78388/PG.443
LOW
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TOWN OF ASHLAND, MASSACHUSETTS
LANDSCAPE REQUIREMENTS

SECTION	REQUIREMENT	PROPOSED
§5.0 GENERAL REGULATIONS	**5.4 GENERAL LANDSCAPING REQUIREMENTS** 5.4.1 GENERAL. LANDSCAPED BUFFER AREAS ARE REQUIRED IN ALL SIDE AND REAR SETBACKS WITH NO MORE THAN MINOR REMOVAL OF EXISTING TREES AND GROUND VEGETATION. THE FOLLOWING SHALL BE OBSERVED IN ALL DISTRICTS: 1. SCREENING AND PERIMETER LANDSCAPING. COMMERCIAL, SERVICE AND INDUSTRIAL USES SHALL BE SEPARATED FROM THE STREET AND FROM ADJACENT RESIDENTIAL DISTRICTS BY LANDSCAPED BUFFER AREAS.	PROVIDED
	2. ALL PARKING AREAS SHALL BE SCREENED AT THE FRONT LOT LINE WITH LANDSCAPED BUFFERS, WHICH SHALL BE AT LEAST SIX (6) FEET IN DEPTH AND SHALL CREATE A STRONG IMPRESSION OF SEPARATION BETWEEN THE STREET AND THE DEVELOPED AREA OF THE SITE WITHOUT NECESSARILY ELIMINATING VISUAL CONTACT BETWEEN THEM. BUFFER AREA SHALL BE CONTINUOUS EXCEPT FOR VEHICULAR AND PEDESTRIAN CIRCULATION FACILITIES.	PROVIDED
	5.4.3 BUFFER AREAS. BUFFER AREAS AND SCREENING REQUIRED BY THIS SECTION MAY BE COMPRISED OF BRICK OR STONE-FACED WALLS, PLANTED BERMS, WOOD FENCES, PLANTED VEGETATION AND/OR EXISTING VEGETATION OR ANY COMBINATION THEREOF. WALLS OR FENCES EXCEEDING FOUR AND ONE-HALF (4 1/2) FEET IN HEIGHT SHALL HAVE PLANTINGS ON THE SIDE FACING THE LOT LINE.	PROVIDED
	1. BUFFER AREAS ALONG STREET LINES SHALL BE CONTINUOUS EXCEPT FOR DRIVEWAYS AND SIDEWALKS; SHALL CONTAIN AT LEAST ONE (1) TREE PER THIRTY (30) LINEAR FEET OF STREET FRONTAGE (OR PORTION THEREOF) AND SHALL INCLUDE LOWER-LEVEL ELEMENTS SUCH AS SHRUBS, HEDGES, FENCES, WALLS AND/OR PLANTED BERMS.	REQUIRED: 845 LF / 30 LF= 28.2 TREES PROVIDED: 49 TREES
	5.4.5 PLANTING STANDARDS. 1. DECIDUOUS TREES IN REQUIRED BUFFER STRIPS OR INTERIOR LANDSCAPING SHALL BE A MINIMUM OF TWO-INCH CALIPER AND EVERGREEN TREES SHALL BE A MINIMUM OF FIVE (5) FEET TO A MAXIMUM OF TEN (10) FEET IN HEIGHT WHEN PLANTED, DEPENDING ON TOPOGRAPHY AS DETERMINED BY THE PLANNING BOARD.	PROVIDED
	2. THE EVERGREEN TREES SHALL BE PLANTED AT TEN (10) FEET ON CENTER. NON EVERGREEN PLANTING AND/OR SCREEN BERM, HEDGE, FENCE OR WALL AT LEAST FIVE (5) FEET IN HEIGHT MAY BE USED IN CONJUNCTION WITH THE EVERGREEN TREES.	PROVIDED
	3. THE EVERGREEN TREES MAY BE GROUPED AT STAGGERED INTERVALS, PROVIDED THAT THE SPACING BETWEEN GROUPS IS IN-FILLED WITH LOWER LEVEL ELEMENTS SUCH AS SHRUBS, HEDGES, PLANTED BERMS, FENCES OR WALLS AT LEAST FIVE (5) FEET IN HEIGHT. ALL TREES SHALL BE SURROUNDED BY A HEIGHT OF AT LEAST THIRTY-SIX (36) SQUARE FEET OF AN UNPAVED SOIL AREA PER TREE AND SHALL BE PROTECTED FROM DAMAGE.	PROVIDED
	5.4.6 USE OF EXISTING PLANT MATERIAL. IN INSTANCES WHERE HEALTHY PLANT MATERIAL EXISTS ON A SITE PRIOR TO ITS DEVELOPMENT, IN PART OR IN WHOLE, FOR PURPOSES OF OFF-STREET PARKING OR OTHER VEHICULAR USE AREAS, THE PLANNING BOARD MAY ADJUST THE APPLICATION OF THE ABOVE STANDARDS TO ALLOW CREDIT FOR SUCH PLANT MATERIAL IF, IN ITS OPINION, SUCH AN ADJUSTMENT IS IN KEEPING WITH AND WILL PRESERVE THE INTENT OF THESE STANDARDS.	
	5.6 CORNER CLEARANCE. LANDSCAPING, BUFFERS, FENCING, AND SCREENING SHALL BE DESIGNED SO AS NOT TO RESTRICT SIGHT DISTANCES AT INTERSECTIONS OR DRIVEWAY ENTRANCES. NO STRUCTURE, SIGN, FENCE, WALL, HEDGE OR OTHER OBSTRUCTION SHALL BE ALLOWED TO BLOCK VISION BETWEEN TWO AND ONE-HALF (2 1/2) AND EIGHT (8) FEET ABOVE THE STREET GRADE WITHIN AN AREA BOUNDED BY THE SIDELINES OF INTERSECTING STREET AND/OR DRIVEWAYS AND A STRAIGHT LINE JOINING POINTS ON SUCH SIDELINES TWENTY (20) FEET BACK FROM THEIR POINT OF INTERSECTION.	PROVIDED
§8.0 OVERLAY AND SPECIAL DISTRICT REGULATIONS	**8.4 RAIL TRANSIT DISTRICT (RTD)** 8.4.7 BUFFERING AND SCREENING. IN ORDER TO OBSTRUCT THE VIEW OF ADJACENT LAND USE PARCELS OUTSIDE OF THE RAIL TRANSIT DISTRICT (RTD), WITHIN A DISTANCE OF FIFTY (50) FEET, MINIMUM, OF SIDE AND REAR YARD BOUNDARIES, IN PLACE LANDSCAPE GREENERY OR OTHER SCREENING METHOD(S) EXISTING AT THE TIME OF DEVELOPMENT SHALL REMAIN UNDISTURBED OR SHALL BE LANDSCAPED IN ACCORDANCE WITH A PLAN APPROVED BY THE PLANNING BOARD. REMAINING NON-BUFFETED/SCREENED YARD AREAS SHALL REMAIN UNOCCUPIED, EXCEPT TO SUPPORT PARKING, INTERNAL DRIVES, ACCESSORY STRUCTURE BUILDING NEEDS AND EMERGENCY VEHICLE ACCESS, AS DEEMED BY THE PLANNING BOARD DURING THE SITE PLAN REVIEW PROCESS.	PROVIDED

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

TEAM HOYT COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt
One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
www.BohlerEngineering.com

M.J. MRVA
REGISTERED LANDSCAPE ARCHITECT
MASSACHUSETTS No. 1217
RHODE ISLAND No. 419
NEW YORK No. 002359
NEW HAMPSHIRE No. 100
VERMONT No. 01337
OHIO No. 250433

ISSUED FOR
PERMIT

USE OF GROUNDWATER FOR IRRIGATION OR ANY OTHER USE IS PROHIBITED WITHIN THE GRANT ENVIRONMENTAL RESTRICTION & EASEMENT AREA

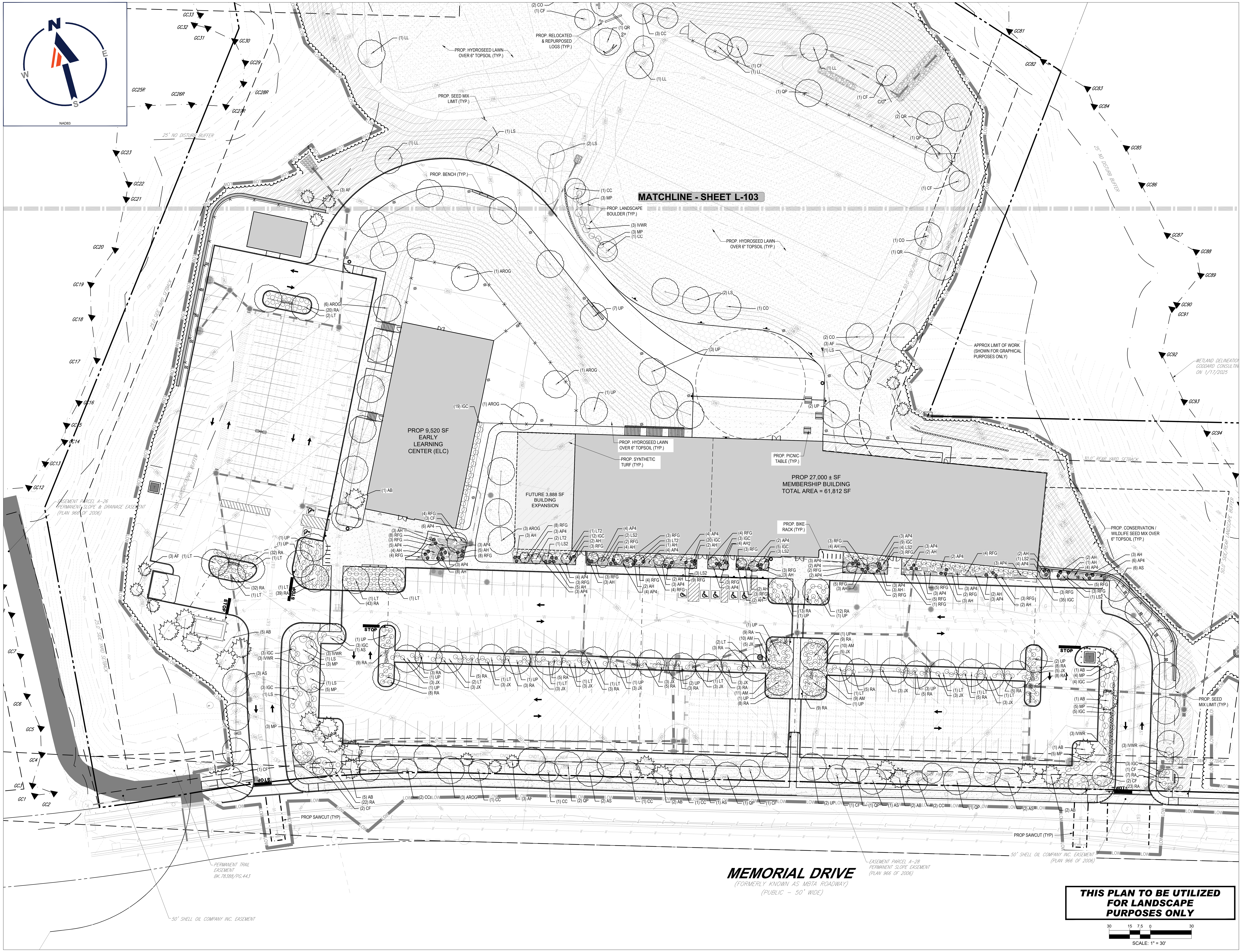
THIS PLAN TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY

60 30 15 0 60
SCALE: 1" = 60'

OVERALL LANDSCAPE PLAN

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

L-101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MATCHLINE - SHEET L-103
PROP 9,520 SF
EARLY
LEARNING
CENTER (ELC)
FUTURE 3,888 SF
BUILDING
EXPANSION
PROP 27,000 ± SF
MEMBERSHIP BUILDING
TOTAL AREA = 61,812 SF
PROP. HYDROSEED LAWN OVER 6" TOPSOIL (TYP.)
PROP. SEED MIX LIMIT (TYP.)
PROP. RELOCATED & REPURPOSED LOGS (TYP.)
PROP. BENCH (TYP.)
PROP. LANDSCAPE BOULDER (TYP.)
PROP. SYNTHETIC TURF (TYP.)
PROP. PICNIC TABLE (TYP.)
PROP. BIKE RACK (TYP.)
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
WETLAND DELINEATION GODDARD CONSULTING ON 1/17/2025
PROP. CONSERVATION / WILDLIFE SEED MIX OVER 6" TOPSOIL (TYP.)
PROP. SEED MIX LIMIT (TYP.)
25' NO DISTURB BUFFER
50.0' REAR YARD SETBACK
EASEMENT PARCEL A-26 PERMANENT SLOPE & DRAINAGE EASEMENT (PLAN 966 OF 2006)
EASEMENT PARCEL A-28 PERMANENT SLOPE EASEMENT (PLAN 966 OF 2006)
PERMANENT TRAIL EASEMENT BK.78388/PG.443
50' SHELL OIL COMPANY INC. EASEMENT
50' SHELL OIL COMPANY INC. EASEMENT (PLAN 966 OF 2006)
PROP SAWCUT (TYP)
STOP
MEMORIAL DRIVE
(FORMERLY KNOWN AS MBTA ROADWAY)
(PUBLIC – 50' WIDE)
30 15 7.5 0 30
SCALE: 1" = 30'

THIS PLAN TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

TEAM HOYT COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt

One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER

50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900

www.BohlerEngineering.com

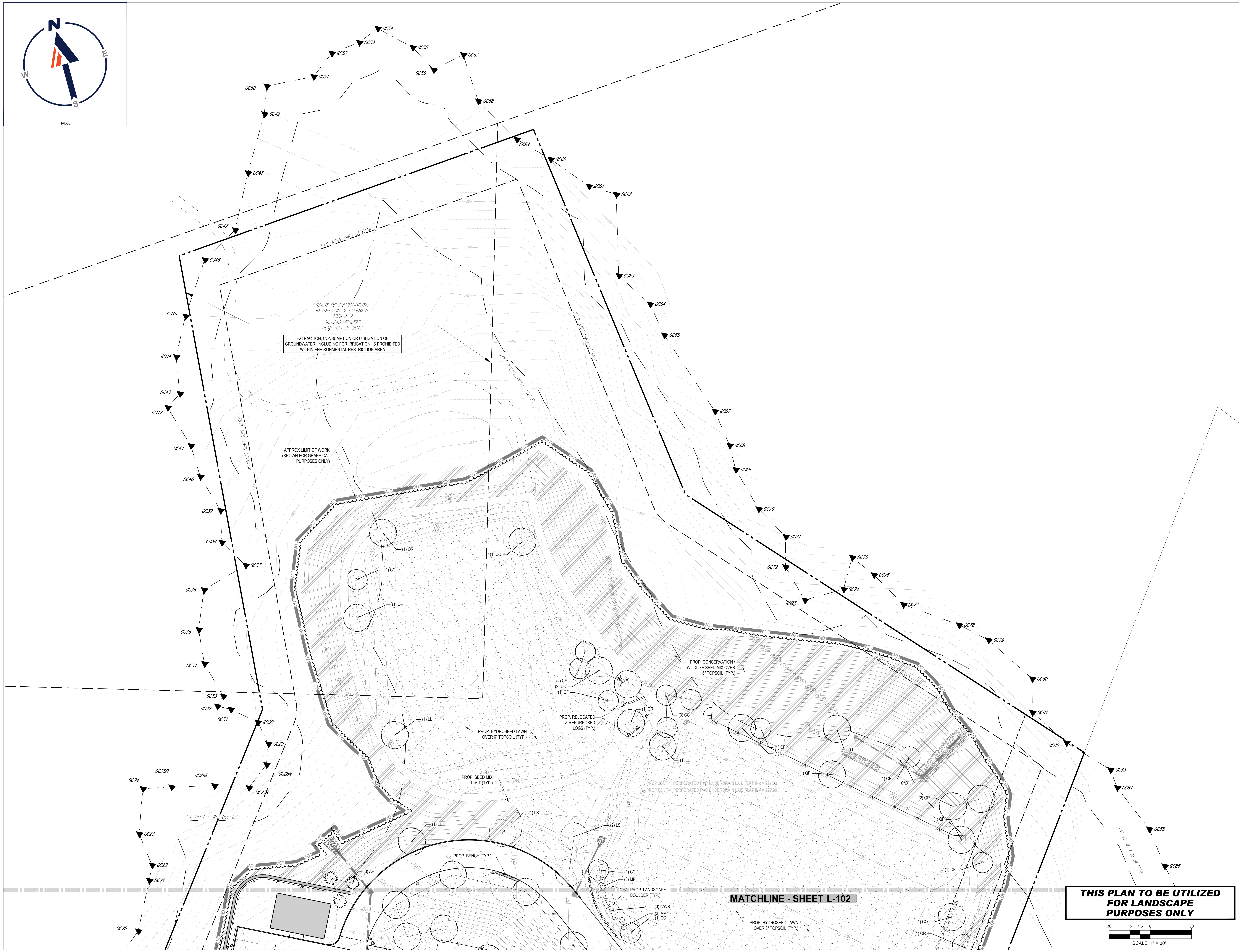
M.J. MRVA
REGISTERED LANDSCAPE ARCHITECT
MASSACHUSETTS No. 1217
VERMONT No. 01337
OHIO No. 250433

ISSUED FOR
PERMIT

LANDSCAPE PLAN A

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

L-102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30.0' REAR YARD SETBACK
25.0' SIDE YARD SETBACK
100' JURISDICTIONAL BUFFER
25' NO DISTURB BUFFER
GRANT OF ENVIRONMENTAL RESTRICTION & EASEMENT AREA A-2 BK.62400/PG.377 PLAN 590 OF 2013
EXTRACTION, CONSUMPTION OR UTILIZATION OF GROUNDWATER, INCLUDING FOR IRRIGATION, IS PROHIBITED WITHIN ENVIRONMENTAL RESTRICTION AREA
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
LOW
(1) QR
(1) CO
(1) CC
(1) QR
(1) LL
PROP. HYDROSEED LAWN OVER 6" TOPSOIL (TYP.)
PROP. SEED MIX LIMIT (TYP.)
(2) CF
(2) CO
(1) CF
PROP. RELOCATED & REPURPOSED LOGS (TYP.)
(1) QR
(3) CC
(1) LL
PROP. CONSERVATION / WILDLIFE SEED MIX OVER 6" TOPSOIL (TYP.)
(1) CF
(1) LL
(1) QP
(1) LL
(1) CF
C/O
(2) QR
(1) QP
(1) CF
(1) CO
(1) QR
PROP 38 LF 4" PERFORATED PVC UNDERDRAIN LAID FLAT INV = 227.00
PROP 63 LF 4" PERFORATED PVC UNDERDRAIN LAID FLAT INV = 227.00
(1) LS
(1) LL
(2) LS
(3) AF
PROP. BENCH (TYP.)
(1) CC
(3) MP
PROP. LANDSCAPE BOULDER (TYP.)
(3) IVWR
(3) MP
(1) CC
REAR LANDSCAPE BUFFER
SIDE YARD SETBACK
MATCHLINE - SHEET L-102

THIS PLAN TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY

30 15 7.5 0 30
SCALE: 1" = 30'

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

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M.J. MRVA
Matthew J. Mrva
REGISTERED LANDSCAPE ARCHITECT
MASSACHUSETTS No. 1211
VERMONT No. 01337
OHIO No. 250433

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LANDSCAPE PLAN B

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

L-103

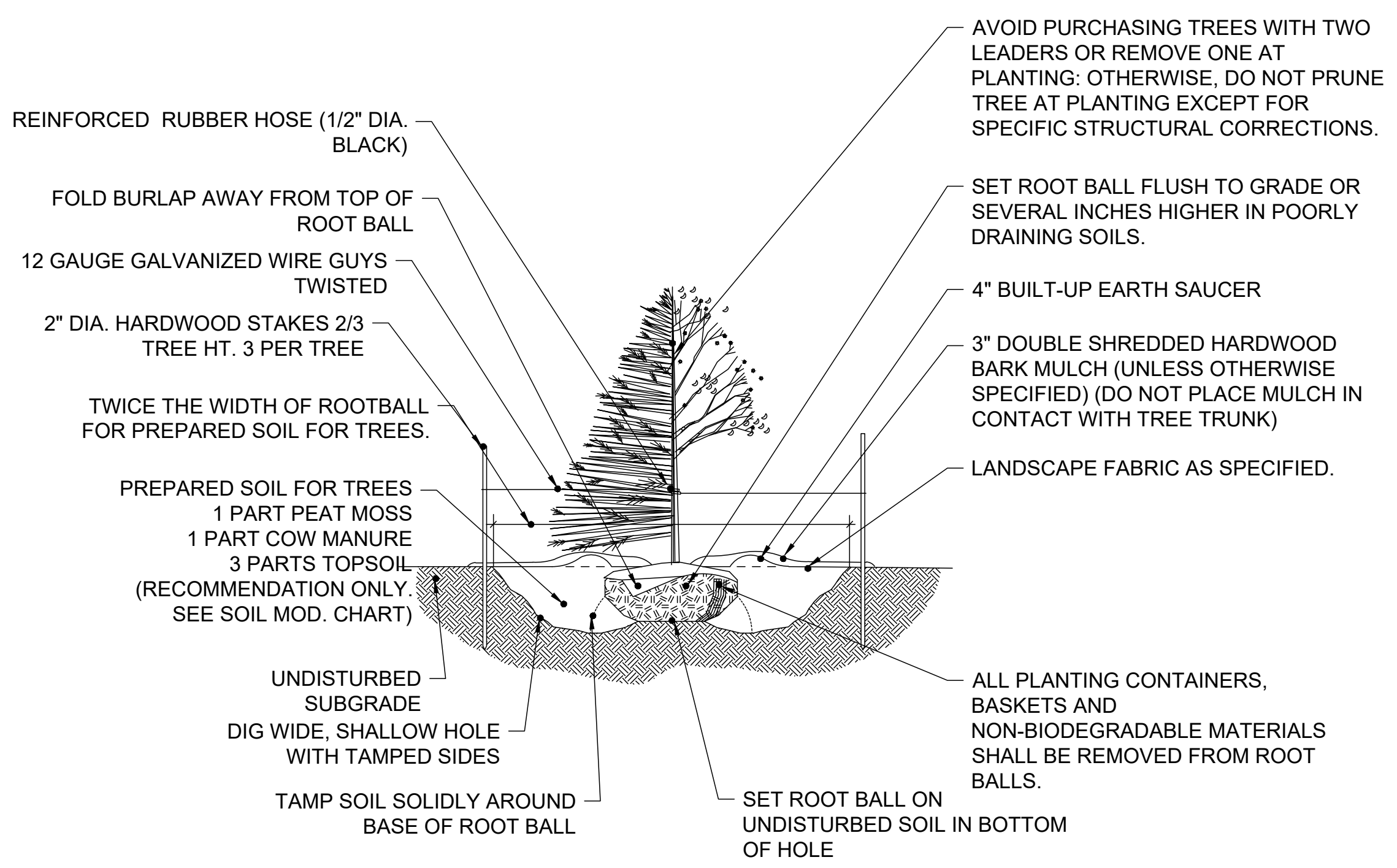
MASSACHUSETTS LANDSCAPE SPECIFICATION

1. SCOPE OF WORK:
  a) THE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION PERMANENT SEEDING OR SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.
2. MATERIALS
  a) GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS.
  b) TOPSOIL - NATURAL, FRIABLE, LOAMY SILT SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLODS.
  c) LAWN:
    c)a) ALL DISTURBED AREAS ARE TO BE TREATED WITH A MINIMUM 6" THICK LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, AND SEEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED ON THE LANDSCAPE PLAN.
    c)b) LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED.
    c)c) SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE/PEST FREE WITH A UNIFORM THICKNESS. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.
    c)d) MULCH - ALL PLANTING BEDS SHALL BE MULCHED WITH A 3" THICK LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN AND/OR LANDSCAPE PLAN NOTES / DETAILS.
  d) FERTILIZER:
    d)a) FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE STORED IN A WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE.
    d)b) FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED SOIL LABORATORY. CONTRACTOR TO ADHERE TO STATE REGULATIONS REGARDING APPLICATION OF FERTILIZERS.
  e) PLANT MATERIAL:
    e)a) ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (FORMERLY THE AMERICAN ASSOCIATION OF NURSERYMEN).
    e)b) IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.
    e)c) PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS ARE TO REMAIN ON AT LEAST ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING THE FINAL INSPECTION.
    e)d) TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 1¼", WHICH HAVE NOT BEEN COMPLETELY CALLUSED, SHALL BE REJECTED. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.
    e)e) ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH: WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE.
    e)f) CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX INCHES (6") ABOVE THE NATURAL GRADE FOR TREES UP TO AND INCLUDING A FOUR INCH (4") CALIPER SIZE. IF THE CALIPER AT SIX INCHES (6") ABOVE THE GROUND EXCEEDS FOUR INCHES (4") IN CALIPER, THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE NATURAL GRADE.
    e)g) SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH.
    e)h) TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.
3. GENERAL WORK PROCEDURES
  a) CONTRACTOR TO UTILIZE WORKMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF.
  b) WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY FROM THE SITE.
4. SITE PREPARATIONS
  a) BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN.
  b) ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE BRANCH COLLAR. CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN, SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDER OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE.
  c) CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF WORK.
5. TREE PROTECTION
  a) CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DRIP LINE OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICT TREE PROTECTION ZONE SHALL BE HONORED.
  b) A FORTY-EIGHT INCH (48") HIGH WOODEN SNOW FENCE OR ORANGE COLORED HIGH-DENSITY 'VISI-FENCE', OR APPROVED EQUAL, MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL.
  c) WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO DEMOLITION, GRADING, TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.
  d) AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.
6. SOIL MODIFICATIONS
  a) CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY.
  b) LANDSCAPE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. SOIL MODIFICATIONS, AS SPECIFIED HEREIN, MAY NEED TO BE CONDUCTED BY THE LANDSCAPE CONTRACTOR DEPENDING ON SITE CONDITIONS.
  c) THE FOLLOWING AMENDMENTS AND QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING PURPOSES ONLY. COMPOSITION OF AMENDMENTS SHOULD BE REVISED DEPENDING ON THE OUTCOME OF A TOPSOIL ANALYSIS PERFORMED BY A CERTIFIED SOIL LABORATORY.
  d) TO INCREASE A SANDY SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS, THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 6-12". USE COMPOSTED BARK, COMPOSTED LEAF MULCH OR PEAT MOSS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH HIGHER THAN 7.5.
    d)a) TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. SUBSURFACE DRAINAGE LINES MAY NEED TO BE ADDED TO INCREASE DRAINAGE.
    d)b) MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.
7. FINISHED GRADING
  a) UNLESS OTHERWISE CONTRACTED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF THE SITE.
  b) LANDSCAPE CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL THICKNESS (1"±).
  c) ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT.
  d) ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS.
8. TOPSOILING
  a) CONTRACTOR SHALL PROVIDE A 6" THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, IN ALL PLANTING AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS.
  b) ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION.
  c) CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN ANALYSIS OF BOTH IMPORTED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGH SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE.
  d) ALL LAWN AREAS ARE TO BE CULTIVATED TO A DEPTH OF SIX INCHES (6"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA - FOR BID PURPOSES ONLY [SEE SPECIFICATION 6.A.]):
    d)a) 20 POUNDS 'GRO-POWER' OR APPROVED SOIL CONDITIONER/FERTILIZER
    d)b) 20 POUNDS NITRO-FORM (COURSE) 38-0-0 BLUE CHIP OR APPROVED NITROGEN FERTILIZER
  e) THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.
9. PLANTING
  a) INSOFAR THAT IT IS FEASIBLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, LANDSCAPE CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.
  b) PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.
  c) ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN-CUT ENDS PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHING SHALL BE REMOVED.
  d) ALL PLANTING CONTAINERS, BASKETS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS DURING PLANTING. NATURAL FIBER BURLAP MUST BE CUT FROM AROUND THE TRUNK OF THE TREE AND FOLDED DOWN AGAINST THE ROOT BALL PRIOR TO BACKFILLING.
  e) POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.
  f) PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE PROPOSED LANDSCAPE, AS SHOWN ON THE APPROVED LANDSCAPE PLAN, MUST BE INSTALLED, INSPECTED AND APPROVED BY THE APPROVING AGENCY. THE APPROVING AGENCY SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS. THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER SHALL OCCUR ONLY DURING THE FOLLOWING PLANTING SEASONS:
    f)a) PLANTS: MARCH 15 TO DECEMBER 15
    f)b) LAWN: MARCH 15 TO JUNE 15 OR SEPT. 1 TO DECEMBER 1
    f)c) PLANTINGS REQUIRED FOR A CERTIFICATE OF OCCUPANCY SHALL BE PROVIDED DURING THE NEXT APPROPRIATE SEASON AT THE MUNICIPALITY'S DISCRETION. CONTRACTOR SHOULD CONTACT APPROVING AGENCY FOR POTENTIAL SUBSTITUTIONS.
  g) FURTHERMORE, THE FOLLOWING TREE VARIETIES ARE UNUSUALLY SUSCEPTIBLE TO WINTER DAMAGE. WITH TRANSPLANT SHOCK AND THE SEASONAL LACK OF NITROGEN AVAILABILITY, THE RISK OF PLANT DEATH IS GREATLY INCREASED. IT IS NOT RECOMMENDED THAT THESE SPECIES BE PLANTED DURING THE FALL PLANTING SEASON:

ACER RUBRUM
BETULA VARIETIES
CARPINUS VARIETIES
CRATAEGUS VARIETIES
KOELREUTERIA
LIQUIDAMBAR STYRACIFLUA
LIRIODENDRON TULIPIFERA

PLATANUS X ACERIFOLIA
POPULUS VARIETIES
PRUNUS VARIETIES
PYRUS VARIETIES
QUERCUS VARIETIES
TILIA TOMENTOSA
ZELKOVA VARIETIES

  h) PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS, WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
    h)a) 1 PART PEAT MOSS
    h)b) 1 PART COMPOSTED COW MANURE BY VOLUME
    h)c) 3 PARTS TOPSOIL BY VOLUME
    h)d) 21 GRAMS 'AGRIFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS:
      h)d)a) 2 TABLETS PER 1 GALLON PLANT
      h)d)b) 3 TABLETS PER 5 GALLON PLANT
      h)d)c) 4 TABLETS PER 15 GALLON PLANT
      h)d)d) LARGER PLANTS: 2 TABLETS PER ½" CALIPER OF TRUNK
  i) FILL PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND WATER THOROUGHLY.
  j) ALL PLANTS SHALL BE PLANTED SO THAT THE TOP OF THE ROOT BALL, THE POINT AT WHICH THE ROOT FLARE BEGINS, IS SET AT GROUND LEVEL AND IN THE CENTER OF THE PIT. NO SOIL IS TO BE PLACED DIRECTLY ON TOP OF THE ROOT BALL.
  k) ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS OR DRIVEWAYS SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCHING HEIGHT OF 7' FROM GRADE.
  l) GROUND COVER AREAS SHALL RECEIVE A ¼" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO PLANTING. ALL GROUND COVER AREAS SHALL BE WEEDED AND TREATED WITH A PRE-EMERGENT CHEMICAL AS PER MANUFACTURER'S RECOMMENDATION.
  m) NO PLANT, EXCEPT GROUND COVERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND SIDEWALKS.
  n) ALL PLANTING AREAS AND PLANTING PITS SHALL BE MULCHED AS SPECIFIED HEREIN TO FILL THE ENTIRE BED AREA OR SAUCER. NO MULCH IS TO TOUCH THE TRUNK OF THE TREE OR SHRUB.
  o) ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY UPON INSTALLATION IN ACCORDANCE WITH THE WATERING SPECIFICATIONS AS LISTED HEREIN.
10. TRANSPLANTING (WHEN REQUIRED)
  a) ALL TRANSPLANTS SHALL BE DUG WITH INTACT ROOT BALLS CAPABLE OF SUSTAINING THE PLANT.
  b) IF PLANTS ARE TO BE STOCKPILED BEFORE REPLANTING, THEY SHALL BE HEALED IN WITH MULCH OR SOIL, ADEQUATELY WATERED AND PROTECTED FROM EXTREME HEAT, SUN AND WIND.
  c) PLANTS SHALL NOT BE DUG FOR TRANSPLANTING BETWEEN APRIL 10 AND JUNE 30.
  d) UPON REPLANTING, BACKFILL SOIL SHALL BE AMENDED WITH FERTILIZER AND ROOT GROWTH HORMONE.
  e) TRANSPLANTS SHALL BE GUARANTEED FOR THE LENGTH OF THE GUARANTEE PERIOD SPECIFIED HEREIN.
  f) IF TRANSPLANTS DIE, SHRUBS AND TREES LESS THAN SIX INCHES (6") DBH SHALL BE REPLACED IN KIND. TREES GREATER THAN SIX INCHES (6") DBH MAY BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE MUNICIPALITY'S TREE REPLACEMENT GUIDELINES.
11. WATERING
  a) NEW PLANTINGS OR LAWN AREAS SHALL BE ADEQUATELY IRRIGATED BEGINNING IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED. WATERING SHALL CONTINUE AT LEAST UNTIL PLANTS ARE ESTABLISHED.
  b) SITE OWNER SHALL PROVIDE WATER IF AVAILABLE ON SITE AT TIME OF PLANTING. IF WATER IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER. THE USE OF WATERING BAGS IS RECOMMENDED FOR ALL NEWLY PLANTED TREES.
  c) IF AN IRRIGATION SYSTEM HAS BEEN INSTALLED ON THE SITE, IT SHALL BE USED TO WATER PROPOSED PLANT MATERIAL, BUT ANY FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE CONTRACTOR'S RESPONSIBILITY OF MAINTAINING THE DESIRED MOISTURE LEVEL FOR VIGOROUS, HEALTHY GROWTH.
12. GUARANTEE
  a) THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF 1 YEAR FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE APPROVING AGENCY. CONTRACTOR SHALL SUPPLY THE OWNER WITH A MAINTENANCE BOND FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE CONCLUSION OF THE GUARANTEE PERIOD AND WHEN A FINAL INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.
  b) ANY DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED FOR THE LENGTH OF THE GUARANTEE PERIOD. REPLACEMENT OF PLANT MATERIAL SHALL BE CONDUCTED AT THE FIRST SUCCEEDING PLANTING SEASON. ANY DEBRIS SHALL BE DISPOSED OF OFF-SITE, WITHOUT EXCEPTION.
  c) TREES AND SHRUBS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND THROUGHOUT THE 90 DAY MAINTENANCE PERIOD AS SPECIFIED HEREIN. CULTIVATION, WEEDING, WATERING AND THE PREVENTATIVE TREATMENTS SHALL BE PERFORMED AS NECESSARY TO KEEP PLANT MATERIAL IN GOOD CONDITION AND FREE OF INSECTS AND DISEASE.
  d) LAWNS SHALL BE MAINTAINED THROUGH WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING AND OTHER OPERATIONS SUCH AS ROLLING, REGARDING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.
13. CLEANUP
  a) UPON THE COMPLETION OF ALL LANDSCAPE INSTALLATION AND BEFORE THE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL UNUSED MATERIALS, EQUIPMENT AND DEBRIS FROM THE SITE. ALL PAVED AREAS ARE TO BE CLEANED.
  b) THE SITE SHALL BE CLEANED AND LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.
14. MAINTENANCE (ALTERNATIVE BID):
  a) A 90 DAY MAINTENANCE PERIOD SHALL COMMENCE AT THE END OF ALL LANDSCAPE INSTALLATION OPERATIONS. THE 90 DAY MAINTENANCE PERIOD ENSURES TO THE OWNER/OPERATOR THAT THE NEWLY INSTALLED LANDSCAPING HAS BEEN MAINTAINED AS SPECIFIED ON THE APPROVED LANDSCAPE PLAN. ONCE THE INITIAL 90 DAY MAINTENANCE PERIOD HAS EXPIRED, THE OWNER/OPERATOR MAY REQUEST THAT BIDDERS SUBMIT AN ALTERNATE MAINTENANCE BID FOR A MONTHLY MAINTENANCE CONTRACT. THE ALTERNATE MAINTENANCE CONTRACT WILL ENCOMPASS ANY WORK THAT IS CONSIDERED APPROPRIATE TO ENSURE THAT PLANT AND LAWN AREAS ARE HEALTHY AND MANICURED TO THE APPROVAL OF THE OWNER/OPERATOR.

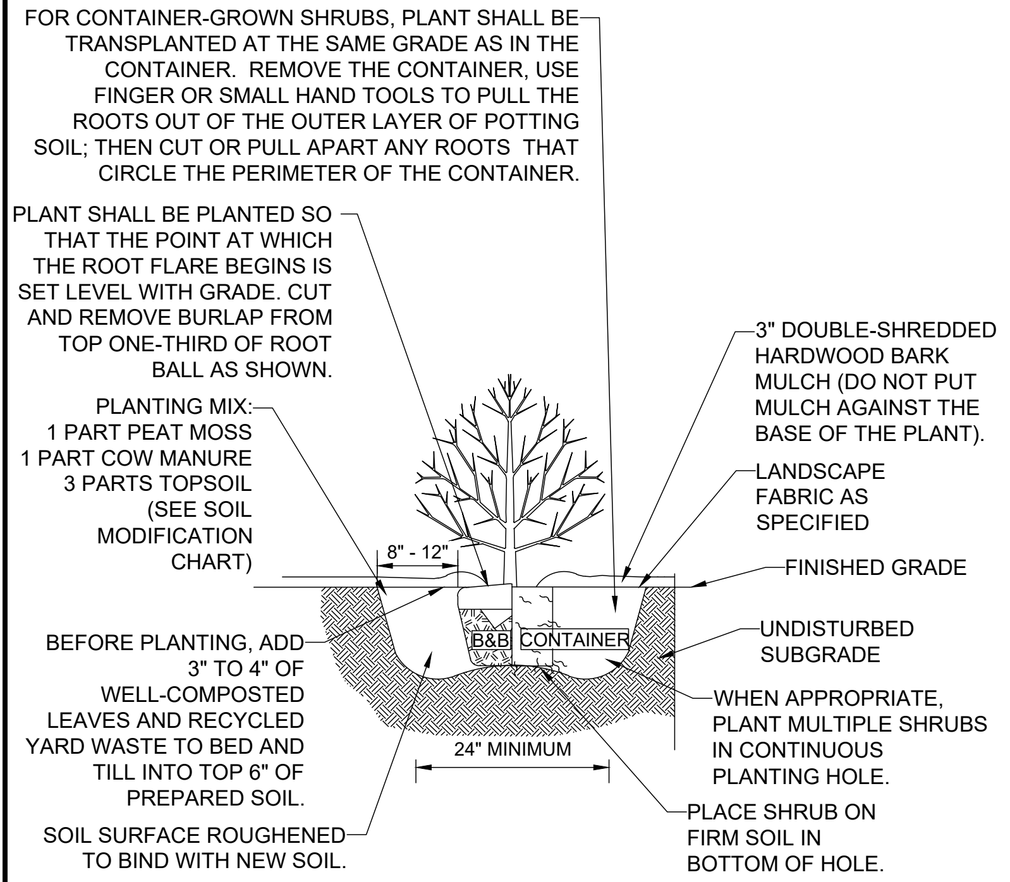


REINFORCED RUBBER HOSE (1/2" DIA. BLACK)
FOLD BURLAP AWAY FROM TOP OF ROOT BALL
12 GAUGE GALVANIZED WIRE GUYS TWISTED
2" DIA. HARDWOOD STAKES 2/3 TREE HT. 3 PER TREE
TWICE THE WIDTH OF ROOTBALL FOR PREPARED SOIL FOR TREES.
PREPARED SOIL FOR TREES 1 PART PEAT MOSS 1 PART COW MANURE 3 PARTS TOPSOIL (RECOMMENDATION ONLY. SEE SOIL MOD. CHART)
UNDISTURBED SUBGRADE
DIG WIDE, SHALLOW HOLE WITH TAMPED SIDES
TAMP SOIL SOLIDLY AROUND BASE OF ROOT BALL
SET ROOT BALL ON UNDISTURBED SOIL IN BOTTOM OF HOLE
AVOID PURCHASING TREES WITH TWO LEADERS OR REMOVE ONE AT PLANTING: OTHERWISE, DO NOT PRUNE TREE AT PLANTING EXCEPT FOR SPECIFIC STRUCTURAL CORRECTIONS.
SET ROOT BALL FLUSH TO GRADE OR SEVERAL INCHES HIGHER IN POORLY DRAINING SOILS.
4" BUILT-UP EARTH SAUCER
3" DOUBLE SHREDDED HARDWOOD BARK MULCH (UNLESS OTHERWISE SPECIFIED) (DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK)
LANDSCAPE FABRIC AS SPECIFIED.
ALL PLANTING CONTAINERS, BASKETS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS.

NOTES:
1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. REMOVE ALL NON-BIODEGRADABLE MATERIAL AND ROPE FROM TRUNK & TOP OF ROOT BALL.FOLD BURLAP BACK 1/3 FROM ROOT BALL.
3. PLANTING DEPTH SHALL BE THE SAME AS GROWN IN NURSERY.
4. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH. AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
5. THE BOTTOM OF PLANTING PIT EXCAVATIONS SHOULD BE ROUGH TO AVOID MATTING OF SOIL LAYERS AS NEW SOIL IS ADDED. IT IS PREFERABLE TO TILL THE FIRST LIFT (2 TO 3 IN.) OF PLANTING SOIL INTO THE SUBSOIL.

TREE PLANTING

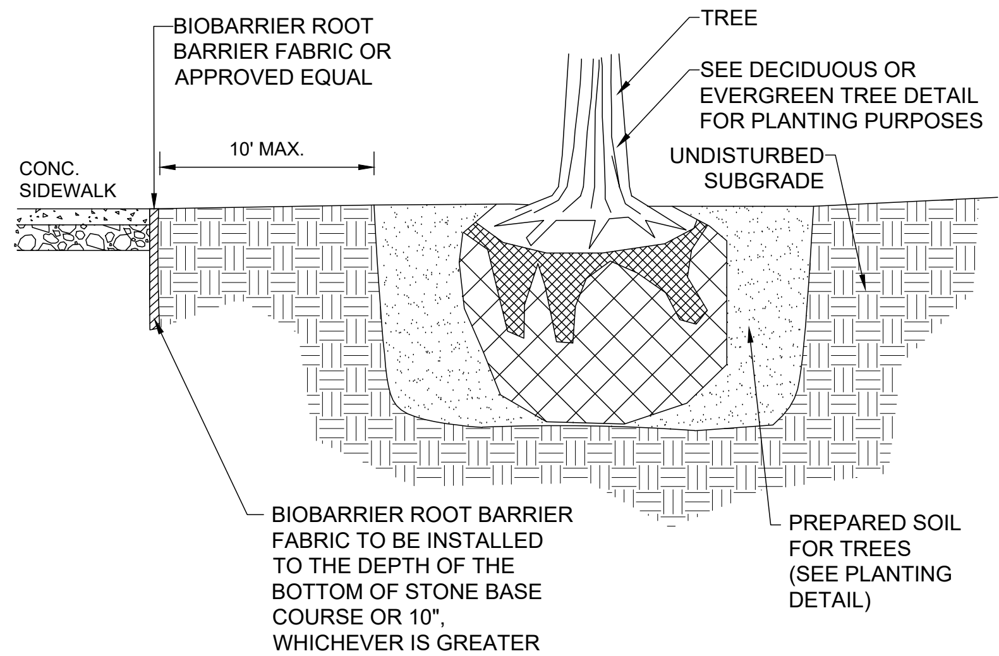
NOT TO SCALE



FOR CONTAINER-GROWN SHRUBS, PLANT SHALL BE TRANSPLANTED AT THE SAME GRADE AS IN THE CONTAINER. REMOVE THE CONTAINER, USE FINGER OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS THAT CIRCLE THE PERIMETER OF THE CONTAINER.
PLANT SHALL BE PLANTED SO THAT THE POINT AT WHICH THE ROOT FLARE BEGINS IS SET LEVEL WITH GRADE. CUT AND REMOVE BURLAP FROM TOP ONE-THIRD OF ROOT BALL AS SHOWN.
PLANTING MIX: 1 PART PEAT MOSS 1 PART COW MANURE 3 PARTS TOPSOIL (SEE SOIL MODIFICATION CHART)
8" - 12"
BEFORE PLANTING, ADD 3" TO 4" OF WELL-COMPOSTED LEAVES AND RECYCLED YARD WASTE TO BED AND TILL INTO TOP 6" OF PREPARED SOIL.
SOIL SURFACE ROUGHENED TO BIND WITH NEW SOIL.
B&B
CONTAINER
24" MINIMUM
3" DOUBLE-SHREDDED HARDWOOD BARK MULCH (DO NOT PUT MULCH AGAINST THE BASE OF THE PLANT).
LANDSCAPE FABRIC AS SPECIFIED
FINISHED GRADE
UNDISTURBED SUBGRADE
WHEN APPROPRIATE, PLANT MULTIPLE SHRUBS IN CONTINUOUS PLANTING HOLE.
PLACE SHRUB ON FIRM SOIL IN BOTTOM OF HOLE.

SHRUB PLANTING

NOT TO SCALE

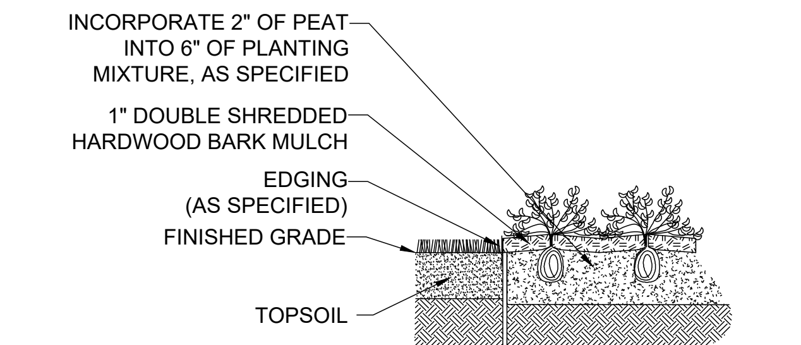


BIOBARRIER ROOT BARRIER FABRIC OR APPROVED EQUAL
TREE
SEE DECIDUOUS OR EVERGREEN TREE DETAIL FOR PLANTING PURPOSES
CONC. SIDEWALK
10' MAX.
UNDISTURBED SUBGRADE
BIOBARRIER ROOT BARRIER FABRIC TO BE INSTALLED TO THE DEPTH OF THE BOTTOM OF STONE BASE COURSE OR 10", WHICHEVER IS GREATER
PREPARED SOIL FOR TREES (SEE PLANTING DETAIL)

NOTES:
1. ANY TREE INSTALLED WITHIN 10 FT. OF NEW CONCRETE SIDEWALKS SHOULD BE INSTALLED WITH BIOBARRIER ROOT BARRIER FABRIC AS SHOWN.
2. TREES SHALL BE INSTALLED ACCORDING TO THE APPROPRIATE PLANTING DETAIL.

BIOBARRIER ROOT BARRIER

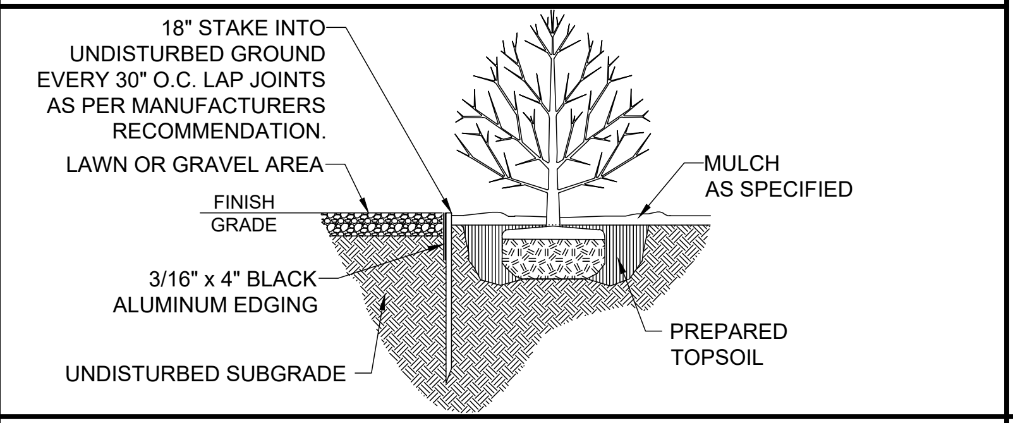
NOT TO SCALE



INCORPORATE 2" OF PEAT INTO 6" OF PLANTING MIXTURE, AS SPECIFIED
1" DOUBLE SHREDDED HARDWOOD BARK MULCH
EDGING (AS SPECIFIED)
FINISHED GRADE
TOPSOIL

GROUND COVER PLANTING

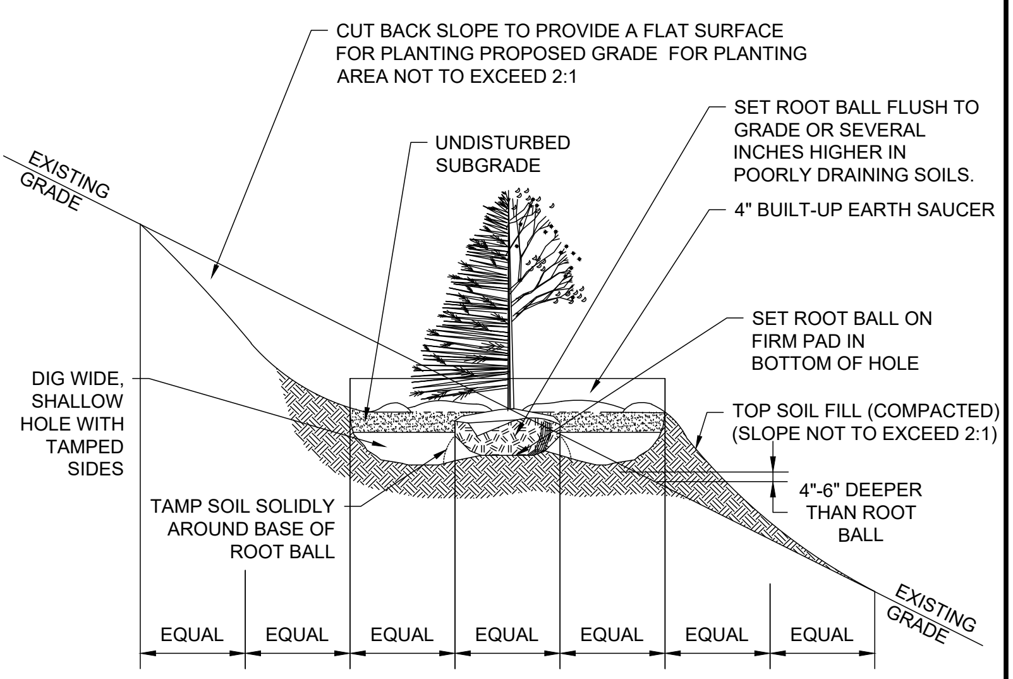
NOT TO SCALE



18" STAKE INTO UNDISTURBED GROUND EVERY 30" O.C. LAP JOINTS AS PER MANUFACTURERS RECOMMENDATION.
LAWN OR GRAVEL AREA
FINISH GRADE
3/16" x 4" BLACK ALUMINUM EDGING
UNDISTURBED SUBGRADE
MULCH AS SPECIFIED
PREPARED TOPSOIL

BLACK ALUMINUM EDGING

NOT TO SCALE

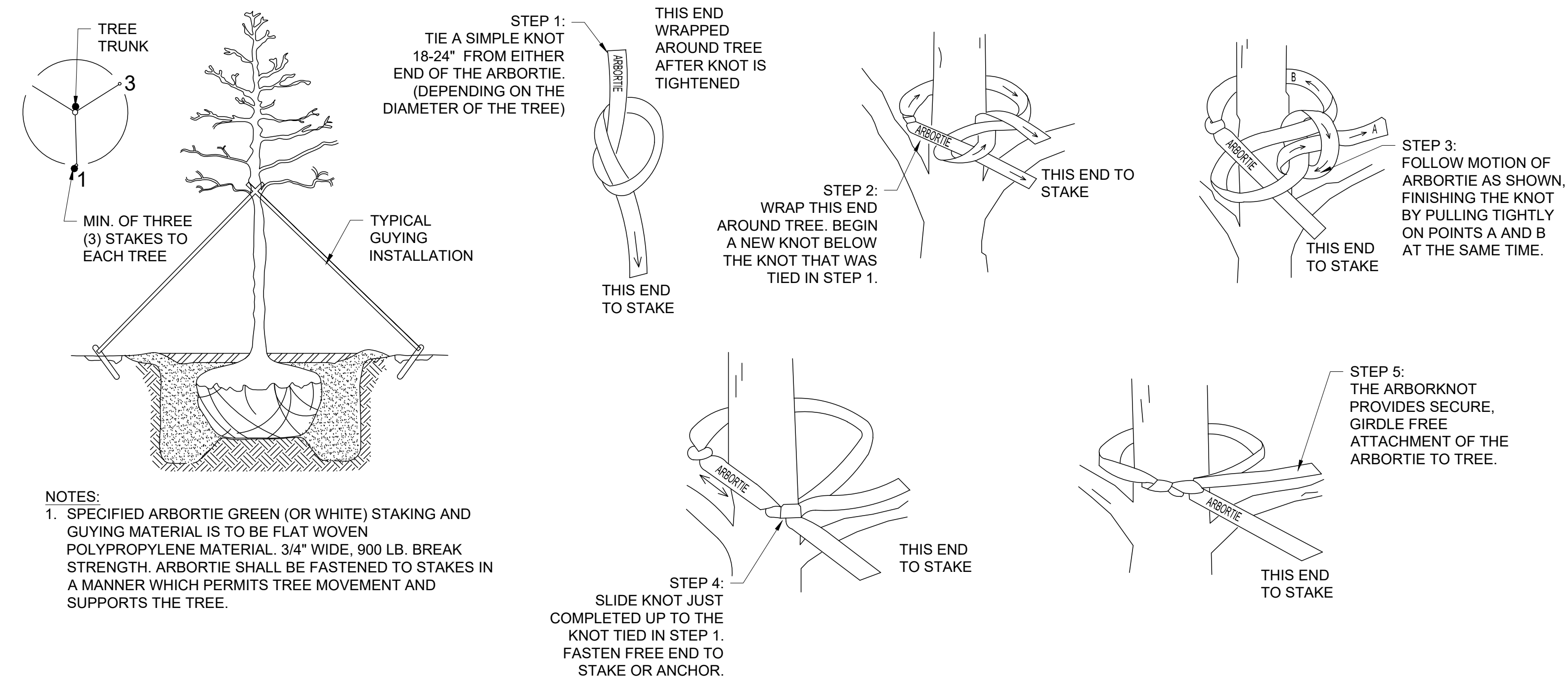


CUT BACK SLOPE TO PROVIDE A FLAT SURFACE FOR PLANTING PROPOSED GRADE FOR PLANTING AREA NOT TO EXCEED 2:1
EXISTING GRADE
UNDISTURBED SUBGRADE
SET ROOT BALL FLUSH TO GRADE OR SEVERAL INCHES HIGHER IN POORLY DRAINING SOILS.
4" BUILT-UP EARTH SAUCER
SET ROOT BALL ON FIRM PAD IN BOTTOM OF HOLE
DIG WIDE, SHALLOW HOLE WITH TAMPED SIDES
TOP SOIL FILL (COMPACTED) (SLOPE NOT TO EXCEED 2:1)
4"-6" DEEPER THAN ROOT BALL
TAMP SOIL SOLIDLY AROUND BASE OF ROOT BALL
EQUAL
EQUAL
EQUAL
EQUAL
EQUAL
EQUAL
EQUAL
EXISTING GRADE

REFER TO TREE PLANTING DETAIL FOR GENERAL PLANTING SPECIFICATIONS

TREE PLANTING ON SLOPE

NOT TO SCALE

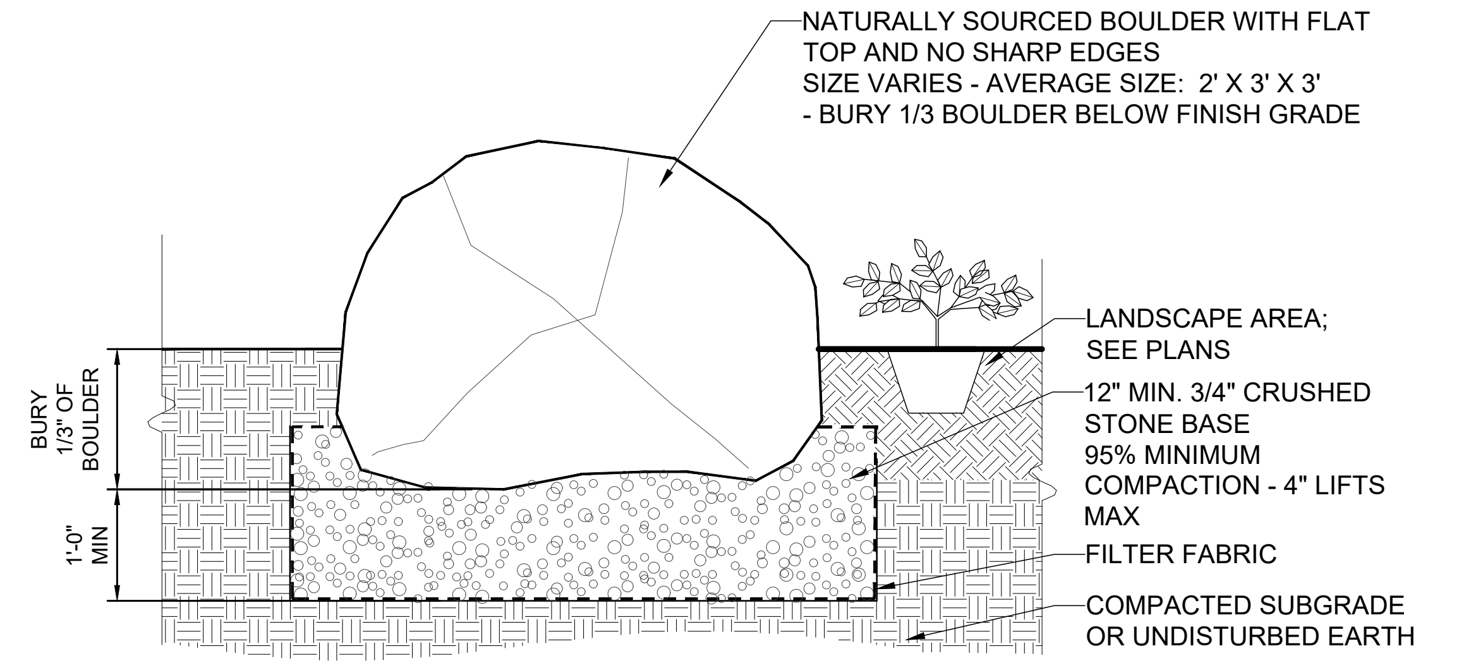


TREE TRUNK
3
1
MIN. OF THREE (3) STAKES TO EACH TREE
TYPICAL GUYING INSTALLATION
STEP 1: TIE A SIMPLE KNOT 18-24" FROM EITHER END OF THE ARBORTIE. (DEPENDING ON THE DIAMETER OF THE TREE)
ARBORTIE
THIS END WRAPPED AROUND TREE AFTER KNOT IS TIGHTENED
THIS END TO STAKE
STEP 2: WRAP THIS END AROUND TREE. BEGIN A NEW KNOT BELOW THE KNOT THAT WAS TIED IN STEP 1.
THIS END TO STAKE
STEP 3: FOLLOW MOTION OF ARBORTIE AS SHOWN, FINISHING THE KNOT BY PULLING TIGHTLY ON POINTS A AND B AT THE SAME TIME.
A
B
THIS END TO STAKE
STEP 4: SLIDE KNOT JUST COMPLETED UP TO THE KNOT TIED IN STEP 1. FASTEN FREE END TO STAKE OR ANCHOR.
THIS END TO STAKE
STEP 5: THE ARBORKNOT PROVIDES SECURE, GIRDLE FREE ATTACHMENT OF THE ARBORTIE TO TREE.
THIS END TO STAKE

NOTES:
1. SPECIFIED ARBORTIE GREEN (OR WHITE) STAKING AND GUYING MATERIAL IS TO BE FLAT WOVEN POLYPROPYLENE MATERIAL. 3/4" WIDE, 900 LB. BREAK STRENGTH. ARBORTIE SHALL BE FASTENED TO STAKES IN A MANNER WHICH PERMITS TREE MOVEMENT AND SUPPORTS THE TREE.

ARBORTIE STAKING

NOT TO SCALE



NATURALLY SOURCED BOULDER WITH FLAT TOP AND NO SHARP EDGES SIZE VARIES - AVERAGE SIZE: 2' X 3' X 3' - BURY 1/3 BOULDER BELOW FINISH GRADE
BURY 1/3" OF BOULDER
1'-0" MIN
LANDSCAPE AREA; SEE PLANS
12" MIN. 3/4" CRUSHED STONE BASE 95% MINIMUM COMPACTION - 4" LIFTS MAX
FILTER FABRIC
COMPACTED SUBGRADE OR UNDISTURBED EARTH

EMBEDDED BOULDER DETAIL

NOT TO SCALE

1. PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 2" DIAMETER.
2. PRIOR TO SEEDING, CONSULT MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
3. SEEDING RATES:

a) PERENNIAL RYEGRASS	1/2 LB/1000 SQ FT
b) KENTUCKY BLUEGRASS	1 LB/1000 SQ FT
c) RED FESCUE	1/2 LB/1000 SQ FT
d) SPREADING FESCUE	1/2 LB/1000 SQ FT
e) FERTILIZER (16.32.16)	2 LB/1000 SQ FT
f) LIQUID LIME	1 GAL/800 GAL.
g) TANK TACKIFIER	35 LB/800 GAL.
h) TANK FIBER MULCH	30 LB/1000 SQ FT

4. GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDED AREA UNTIL AN ACCEPTABLE STAND OF COVER IS APPROVED BY OWNER.

HYDROSEED SPECIFICATIONS

NOT TO SCALE

"NEW ENGLAND CONSERVATION/ WILDLIFE SEED MIX" AS PREPARED BY:
NEW ENGLAND WETLAND PLANTS, INC
820 WEST STREET, AMHERST, MA 01002
PHONE: 413-548-8000
EMAIL: INFO@NEWP.COM
WEBSITE: WWW.NEWP.COM

APPLICATION RATE: 1750 SQ FT/LB OR 25LBS/ACRE
1. MINIMUM ORDER: 2 LBS
2. SPECIES:
  a) VIRGINIA WILD RYE (ELYMUS VIRGINICUS)
  b) LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM)
  c) BIG BLUESTEM (ANDROPOGON GERARDII)
  d) RED FESCUE (FESTUCA RUBRA)
  e) SWITCH GRASS (PANICUM VIRGATUM)
  f) PARTRIDGE PEA (CHAMAECRISTA FASCICULATA)
  g) PANICLEDLEAF TICK TREFOIL (DESMODIUM PANICULATUM)
  h) INDIAN GRASS (SORGHASTRUM NUTANS)
  i) BLUE VERVAIN (VERBENA HASTATA)
  j) BUTTERFLY MILKWEED (ASCLEPIAS TUBEROSA)
  k) BLACK EYED SUSAN (RUDBECKIA HIRTA)
  l) COMMON SNEEZEWEED (HELENIUM AUTUNALE)
  m) HEATH ASTER (ASTERPILOSUS/SYMPHYOTRICHUM PILOSUM)
  n) EARLY GOLDENROD (SOLIDAGO JUNCEA)
  o) UPLAND BENTGRASS (AGROSTIS PERENNANS).

NEW ENGLAND CONSERVATION / WILDLIFE SEED MIX SPECIFICATION

NOT TO SCALE

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

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COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt
One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
www.BohlerEngineering.com

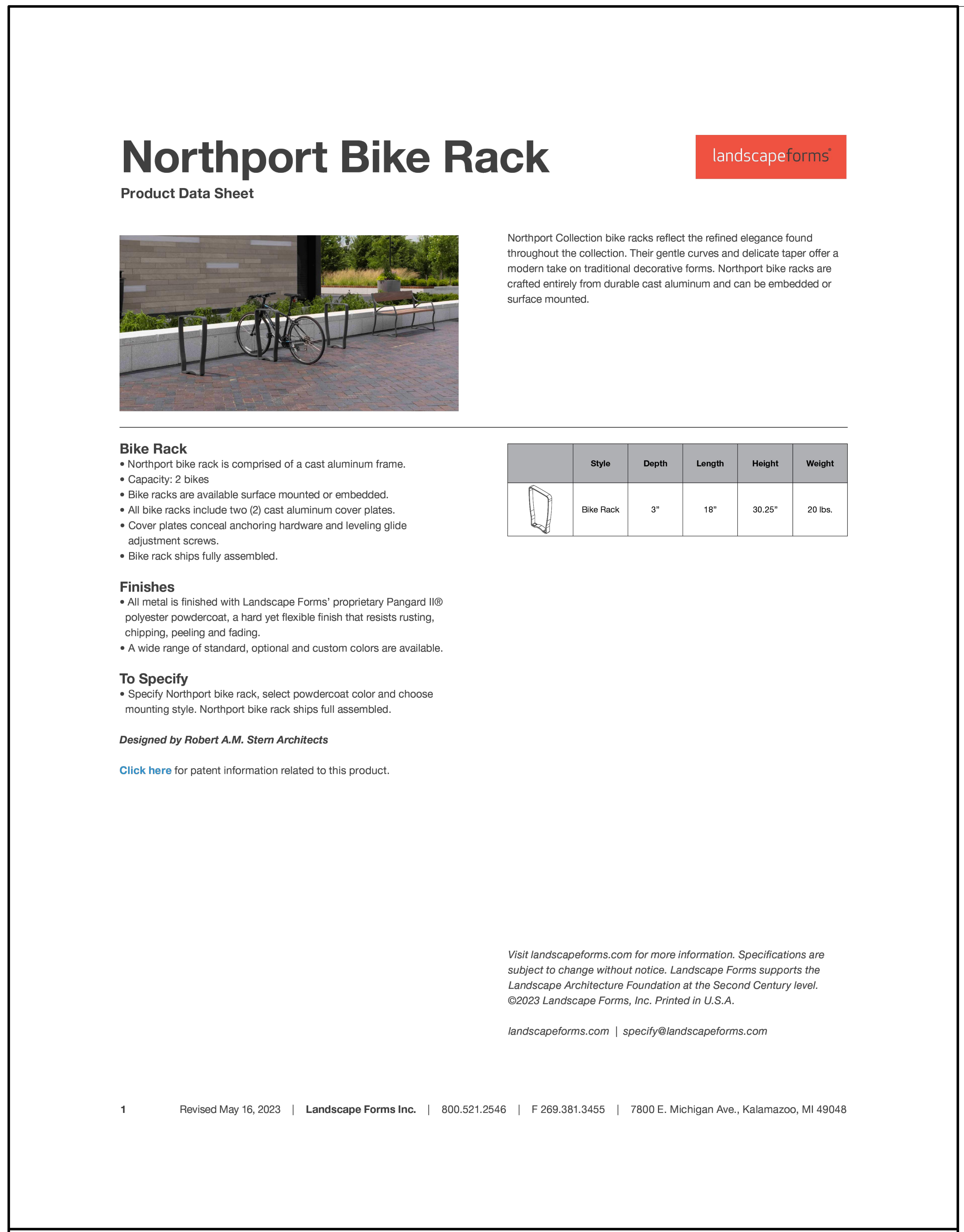
M.J. MRVA
REGISTERED LANDSCAPE ARCHITECT
VERMONT No. 01337
OHIO No. 250433

ISSUED FOR
PERMIT

LANDSCAPE NOTES
AND DETAILS

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

L-104



Northport Bike Rack

landscapeforms®

Product Data Sheet

Northport Collection bike racks reflect the refined elegance found throughout the collection. Their gentle curves and delicate taper offer a modern take on traditional decorative forms. Northport bike racks are crafted entirely from durable cast aluminum and can be embedded or surface mounted.

Bike Rack

- Northport bike rack is comprised of a cast aluminum frame.
- Capacity: 2 bikes
- Bike racks are available surface mounted or embedded.
- All bike racks include two (2) cast aluminum cover plates.
- Cover plates conceal anchoring hardware and leveling glide adjustment screws.
- Bike rack ships fully assembled.

	Style	Depth	Length	Height	Weight
	Bike Rack	3”	18”	30.25”	20 lbs.

Finishes

- All metal is finished with Landscape Forms’ proprietary Pangard II® polyester powdercoat, a hard yet flexible finish that resists rusting, chipping, peeling and fading.
- A wide range of standard, optional and custom colors are available.

To Specify

- Specify Northport bike rack, select powdercoat color and choose mounting style. Northport bike rack ships full assembled.

Designed by Robert A.M. Stern Architects

Click here for patent information related to this product.

Visit landscapeforms.com for more information. Specifications are subject to change without notice. Landscape Forms supports the Landscape Architecture Foundation at the Second Century level.
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LANDSCAPE FORMS NORTHPORT BIKE RACK

REVISIONS

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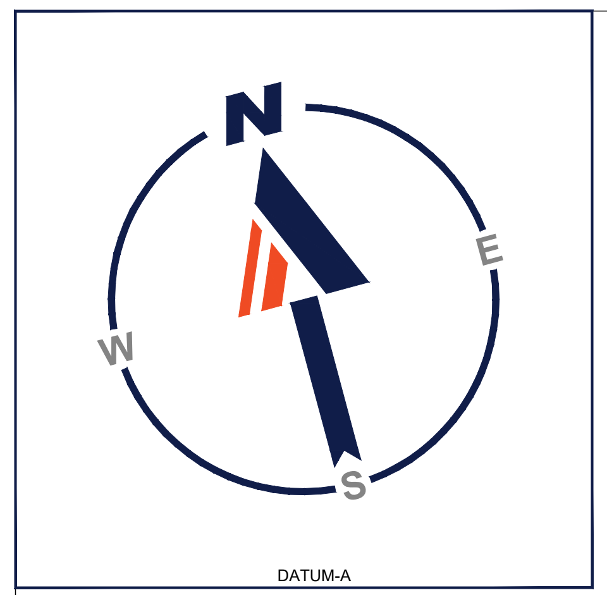
L-105



DATUM-A

GENERAL LIGHTING NOTES:

1. THE GENERAL NOTES, FOUND ON THE NOTES PAGE OF THIS PLAN SET, MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE ELECTRICAL CONTRACTOR MUST BECOME FAMILIAR WITH, REFER TO AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY.
2. THE ELECTRICAL CONTRACTOR MUST COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THIS LIGHTING PLAN, INCLUDING BUT NOT LIMITED TO GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL APPLICABLE AGENCY AND GOVERNMENTAL REGULATIONS. THE LIGHTING PLAN DEPICTS PROPOSED, SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER(S). ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, MAINTENANCE, THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.
3. THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT GROUND LEVEL UNLESS OTHERWISE NOTED. ILLUMINATION LEVELS ARE SHOWN IN FOOTCANDLES (FC).
4. THE LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES. POWER SYSTEM, CONDUITS, WIRING, CONTROLS, AND OTHER ELECTRICAL COMPONENTS ARE SOLELY THE ARCHITECT'S, ELECTRICAL ENGINEER'S AND/OR ELECTRICAL CONTRACTOR'S RESPONSIBILITY, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THE CONTRACTOR MUST COORDINATE WITH THE PROJECT ARCHITECT AND/OR ELECTRICAL ENGINEER REGARDING ANY AND ALL POWER SOURCES AND TIMING DEVICES NECESSARY TO MEET THE DESIGN INTENT. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY FEDERAL, STATE AND LOCAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC) AND ALL APPLICABLE BUILDING AND LOCAL ELECTRICAL CODES.
5. THE ELECTRICAL CONTRACTOR MUST BRING IMMEDIATELY, IN WRITING, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURE(S) TO THE PROFESSIONAL OF RECORD'S ATTENTION, PRIOR TO THE START OF CONSTRUCTION.
6. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL LIGHTING IS INSTALLED PER THIS LIGHTING PLAN, INCLUDING THE LOCATION, ORIENTATION, SHIELDING, AND/OR ROTATED OPTICS ARE INSTALLED AS INDICATED ON THE PLAN IN ORDER TO ACHIEVE THE LIGHTING LEVELS DEPICTED ON THIS PLAN. EXISTING POLES AND FOUNDATIONS ARE NOT TO BE REUSED.
7. UPON OWNER'S ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS. THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT IS NOT LIMITED TO, VISUAL OBSERVATION, CLEANING OF LENSES, AND OTHER MAINTENANCE SPECIFIED BY THE MANUFACTURER. FAILURE TO FOLLOW THE ABOVE STEPS COULD RESULT IN IMPROPER LIGHT DISTRIBUTION AND FAILURE TO COMPLY WITH THE APPROVED DESIGN.
8. THE LIGHT LOSS FACTORS (LLF) DEPICTED IN THE LUMINAIRE SCHEDULE ON THIS PLAN ARE BASED ON DATA PROVIDED BY THE MANUFACTURER FOLLOWING IES LM-80-21 TESTING (OR MOST RECENT EDITION). THE LIGHT LEVELS DEPICTED ON THIS PLAN WERE CALCULATED BASED ON THE LLF LISTED IN THE LUMINAIRE SCHEDULE.
9. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO BOHLER FOR REVIEW AND APPROVAL. SUBSTITUTION REQUESTS MUST BE ACCOMPANIED BY A HORIZONTAL PHOTOMETRIC STUDY DEMONSTRATING THAT THE LUMINAIRE(S) IN QUESTION WILL MEET THE DESIGN INTENT OF THIS PLAN. SUBSTITUTION REQUESTS WITHOUT A PHOTOMETRIC STUDY WILL BE REJECTED.
10. LIGHT POLE FOUNDATIONS ARE SHOWN ON THE PLAN IN THE INTENDED LOCATION BASED ON THE LIGHTING CALCULATIONS, UNLESS OTHERWISE NOTED. LIGHT SYMBOLS ARE SHOWN LARGER THAN ACTUAL SIZE, HOWEVER FOUNDATION SIZE IS SHOWN AT ACTUAL SIZE.

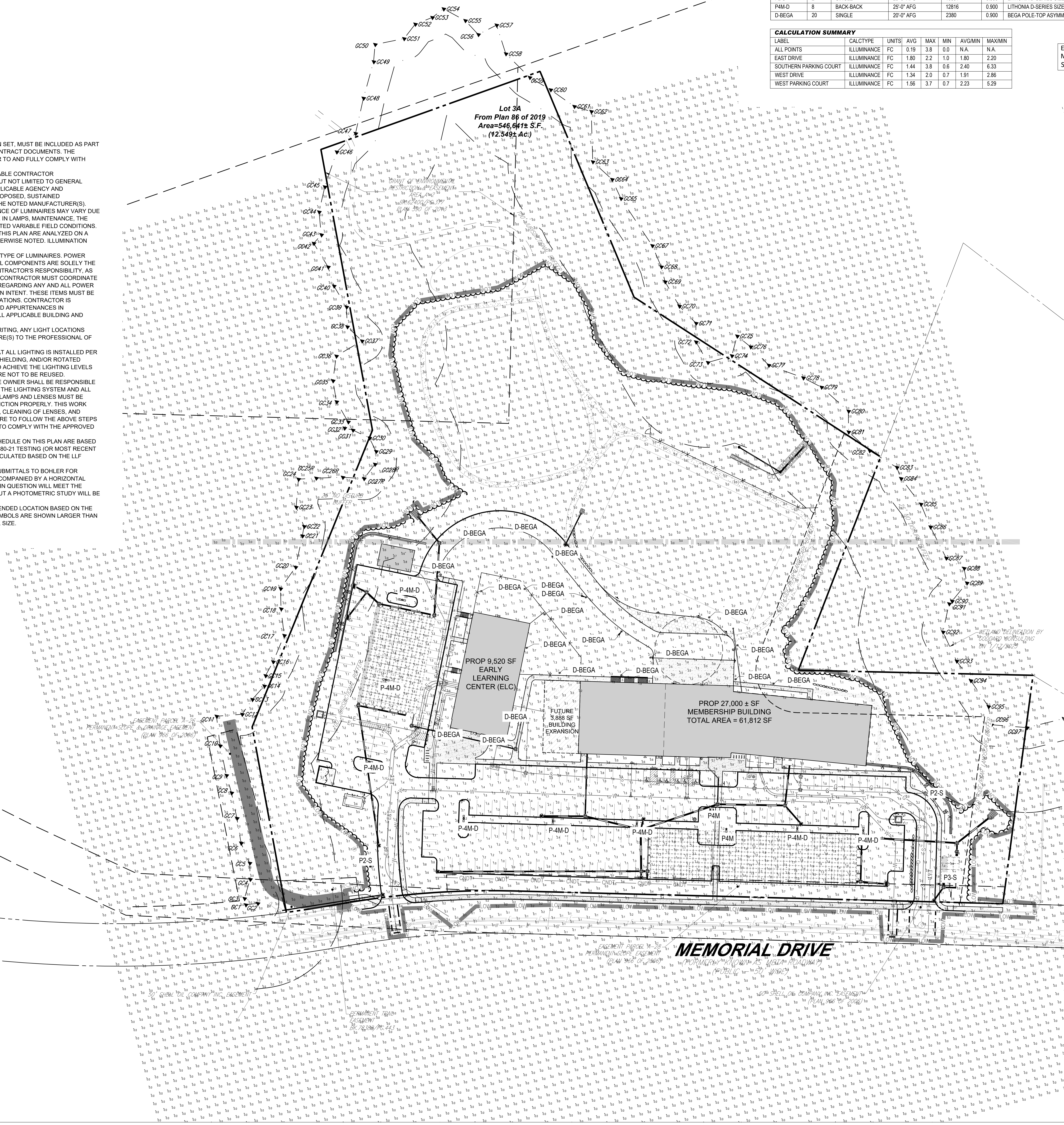
LUMINAIRE SCHEDULE

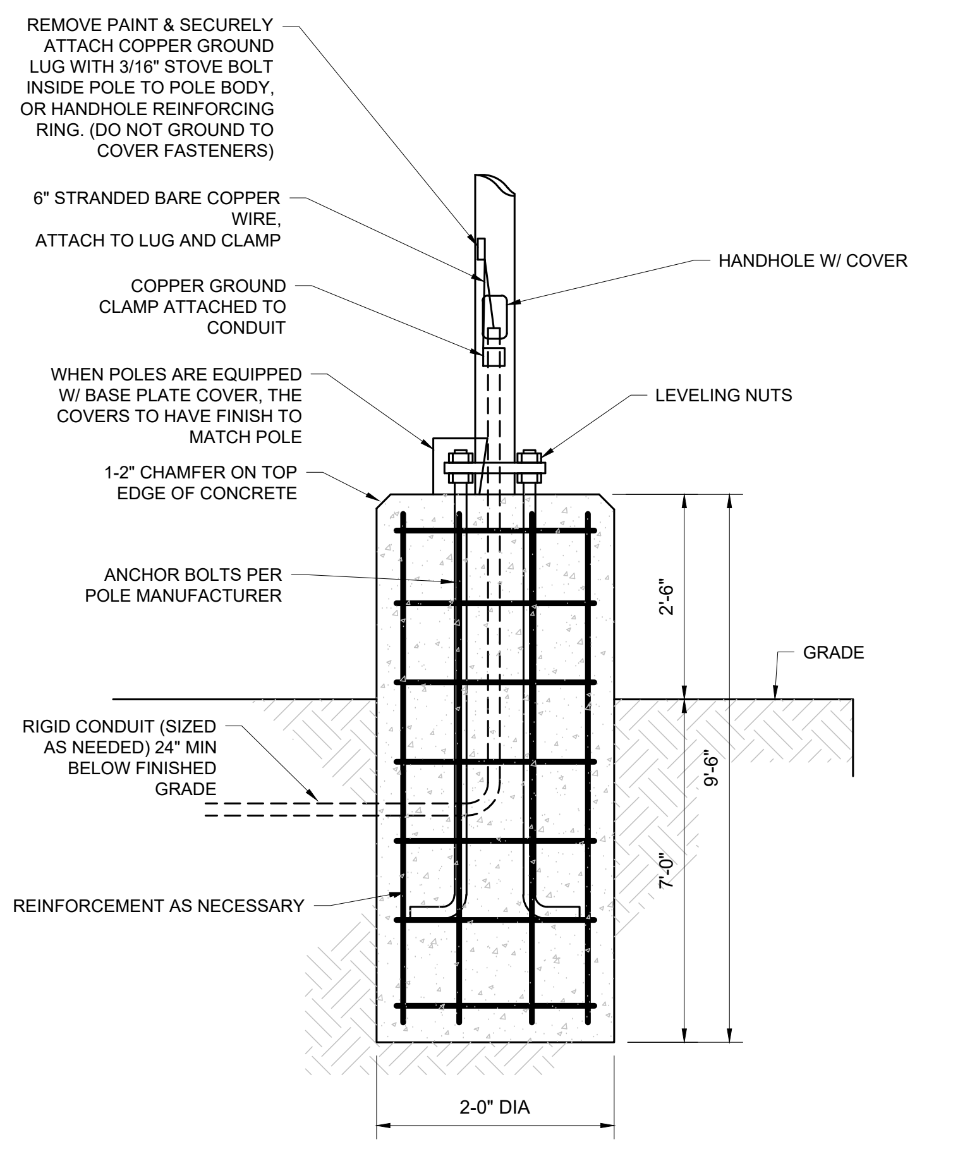
LABEL	QTY	ARRANGEMENT	MOUNTING HEIGHT	LUM. LUMENS	LLF	DESCRIPTION
P4M	2	SINGLE	25'-0" AFG	12816	0.900	LITHONIA D-SERIES SIZE 1 LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (DSX1 LED P3 30K 80CRI T4M)
P3-S	1	SINGLE	25'-0" AFG	10945	0.900	LITHONIA D-SERIES SIZE 1 LED AREA LUMINAIRE, TYPE 3, WITH HOUSE-SIDE SHIELD, ZERO UP-LIGHT (DSX1 LED P3 30K 80CRI T3M HS)
P2-S	2	SINGLE	25'-0" AFG	10831	0.900	LITHONIA D-SERIES SIZE 1 LED AREA LUMINAIRE, TYPE 2, WITH HOUSE-SIDE SHIELD, ZERO UP-LIGHT (DSX1 LED P3 30K 80CRI T2M HS)
P4M-D	8	BACK-BACK	25'-0" AFG	12816	0.900	LITHONIA D-SERIES SIZE 1 LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (DSX1 LED P3 30K 80CRI T4M)
D-BEGA	20	SINGLE	20'-0" AFG	2380	0.900	BEGA POLE-TOP ASYMMETRIC LED LUMINAIRE, ZERO UP-LIGHT (88263-K3-BLK)

CALCULATION SUMMARY

LABEL	CALCTYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
ALL POINTS	ILLUMINANCE	FC	0.19	3.8	0.0	N.A.	N.A.
EAST DRIVE	ILLUMINANCE	FC	1.80	2.2	1.0	1.80	2.20
SOUTHERN PARKING COURT	ILLUMINANCE	FC	1.44	3.8	0.6	2.40	6.33
WEST DRIVE	ILLUMINANCE	FC	1.34	2.0	0.7	1.91	2.86
WEST PARKING COURT	ILLUMINANCE	FC	1.56	3.7	0.7	2.23	5.29

EXPECTED HOURS OF OPERATION
MON-FRI, 5 AM TO 10 PM
SAT/SUN 7 AM TO 7 PM


Lot 3A
From Plan 86 of 2019
Area=546,641± S.F.
(12.549± Ac.)
PROP 9,520 SF
EARLY
LEARNING
CENTER (ELC)
FUTURE
3,888 SF
BUILDING
EXPANSION
PROP 27,000 ± SF
MEMBERSHIP BUILDING
TOTAL AREA = 61,812 SF
MEMORIAL DRIVE
D-BEGA
P4M-D
P4M
P2-S
P3-S
60 30 15 0 60
SCALE: 1" = 60'

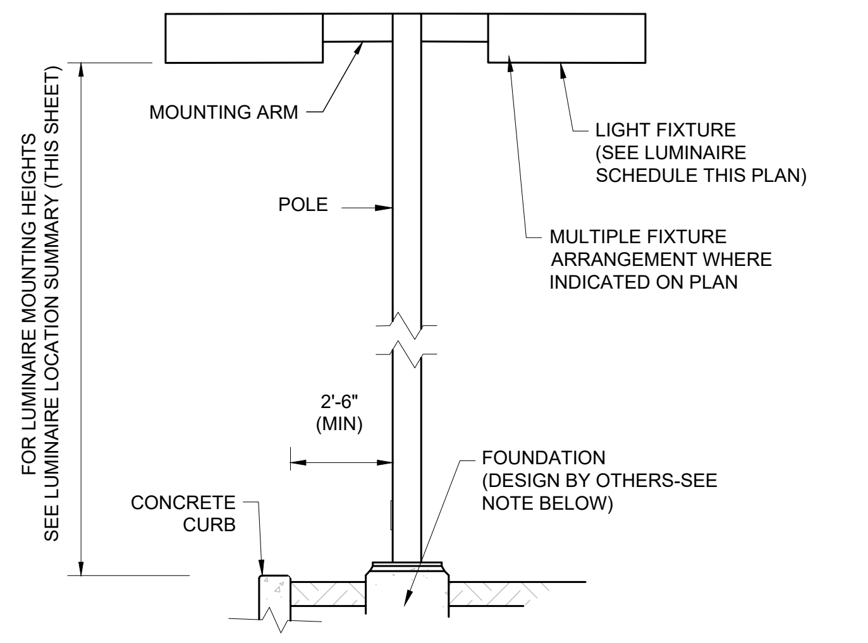

REMOVE PAINT & SECURELY ATTACH COPPER GROUND LUG WITH 3/16" STOVE BOLT INSIDE POLE TO POLE BODY, OR HANDHOLE REINFORCING RING. (DO NOT GROUND TO COVER FASTENERS)
6" STRANDED BARE COPPER WIRE, ATTACH TO LUG AND CLAMP
COPPER GROUND CLAMP ATTACHED TO CONDUIT
WHEN POLES ARE EQUIPPED W/ BASE PLATE COVER, THE COVERS TO HAVE FINISH TO MATCH POLE
1-2" CHAMFER ON TOP EDGE OF CONCRETE
ANCHOR BOLTS PER POLE MANUFACTURER
RIGID CONDUIT (SIZED AS NEEDED) 24" MIN BELOW FINISHED GRADE
REINFORCEMENT AS NECESSARY
HANDHOLE W/ COVER
LEVELING NUTS
GRADE
2'-6"
9'-6"
7'-0"
2-0" DIA

NOTES:

1. THIS DETAIL IS FOR BID AND BUDGETARY PURPOSES ONLY. CONTRACTOR SHALL ENSURE DESIGN IS PREPARED BY A QUALIFIED STRUCTURAL ENGINEER CONSIDERING LIGHTING MANUFACTURER REQUIREMENTS, LOCAL WIND LOADS, SITE SPECIFIC SOIL PARAMETERS.
   - A. SOME SITE LOCATIONS AND/OR CONDITIONS MAY REQUIRE VIBRATION DAMPENING MEASURES AS DETERMINED BY A STRUCTURAL ENGINEER.
   - B. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED OF THE INTENT TO MOUNT ANYTHING ASIDE FROM THE LIGHT FIXTURE INCLUDING (BUT NOT LIMITED TO) CAMERAS, BANNERS, FLAGS, SIGNAGE, ETC AS IT WILL IMPACT THE POLE AND FOUNDATION DESIGN.
2. ALL REBAR SHALL HAVE A YIELD STRENGTH OF 60ksi, AND MAINTAIN A 3" MIN CLEARANCE FROM SURFACES.

LIGHT POLE FOUNDATION

NOT TO SCALE (PA-I010101 - 11/2023)


MOUNTING ARM
LIGHT FIXTURE (SEE LUMINAIRE SCHEDULE THIS PLAN)
POLE
MULTIPLE FIXTURE ARRANGEMENT WHERE INDICATED ON PLAN
FOR LUMINAIRE MOUNTING HEIGHTS SEE LUMINAIRE LOCATION SUMMARY (THIS SHEET)
2'-6" (MIN)
CONCRETE CURB
FOUNDATION (DESIGN BY OTHERS-SEE NOTE BELOW)

NOTES:

1. THIS DETAIL IS FOR BID AND BUDGETARY PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING A FOUNDATION DESIGN PREPARED BY A QUALIFIED STRUCTURAL ENGINEER CONSIDERING LIGHTING MANUFACTURER REQUIREMENTS, LOCAL WIND LOADS AND SITE SPECIFIC SOIL PARAMETERS.
2. SOME SITE CONDITIONS AND/OR LOCATIONS MAY REQUIRE VIBRATION DAMPENING MEASURES AS DETERMINED BY A STRUCTURAL ENGINEER.
3. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED OF THE INTENT TO MOUNT ANYTHING TO THE POLE, ASIDE FROM THE LIGHT FIXTURES, INCLUDING BUT NOT LIMITED TO CAMERAS, BANNERS, FLAGS, SIGNAGE, ETC. AS IT WILL IMPACT THE POLE AND FOUNDATION DESIGN.

AREA LIGHT

NOT TO SCALE (NE-I020101 - 09/2023)

THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
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5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

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MEMORIAL DRIVE
ASHLAND, MA

cbt
One Constitution Road
Suite 200
Boston, MA 02129
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WESTBOROUGH, MA 01581
Phone: (508) 480-9900
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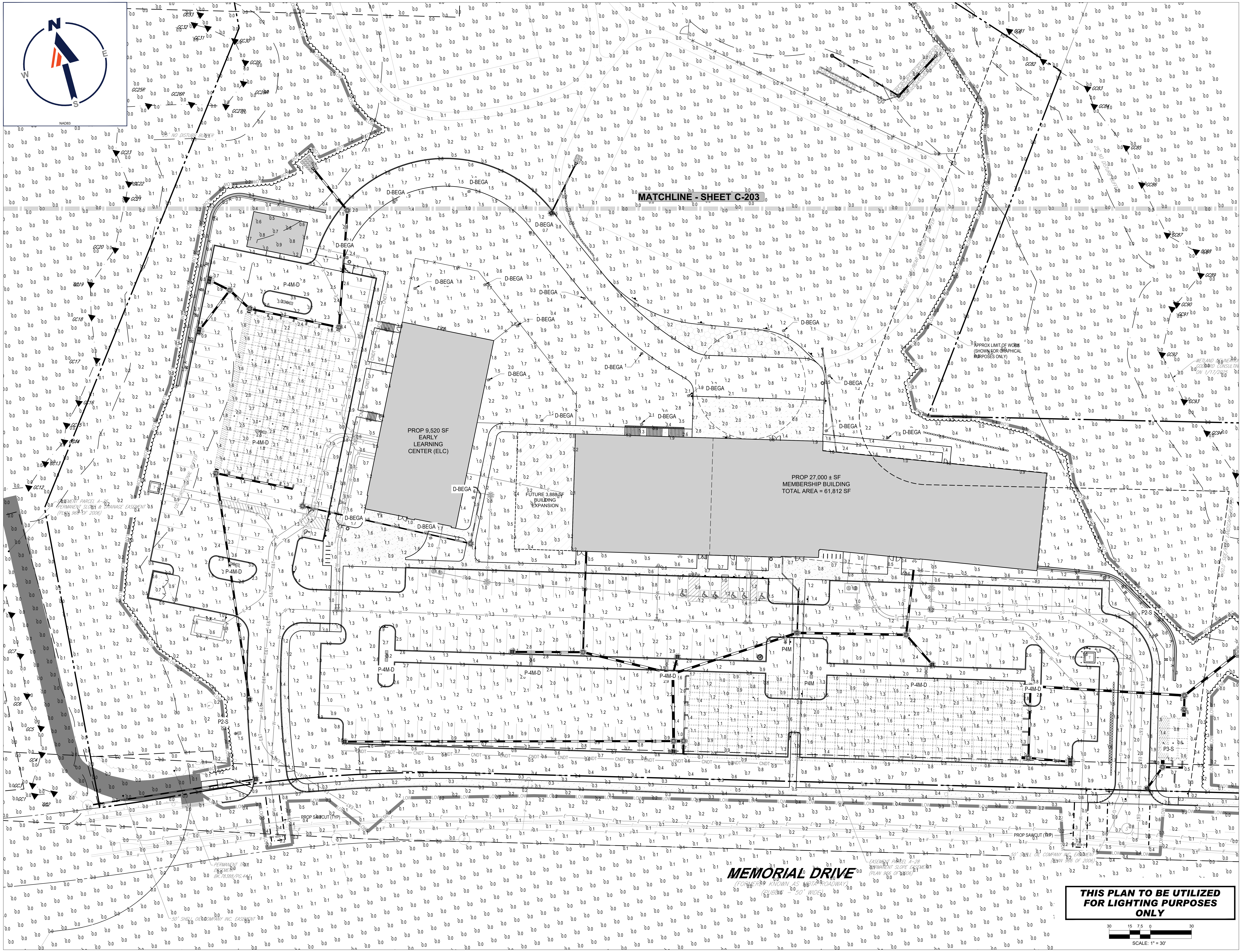
M.J. MRVA
REGISTERED LANDSCAPE ARCHITECT
MASSACHUSETTS No. 1217
VERMONT No. 01337
OHIO No. 250433

ISSUED FOR PERMIT

OVERALL LIGHTING PLAN

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

L-201


N
E
S
W
NAD83
MATCHLINE - SHEET C-203
PROP 9,520 SF
EARLY
LEARNING
CENTER (ELC)
PROP 27,000 ± SF
MEMBERSHIP BUILDING
TOTAL AREA = 61,812 SF
FUTURE 3,888 SF
BUILDING
EXPANSION
APPROX LIMIT OF WORK
(SHOWN FOR GRAPHICAL
PURPOSES ONLY)
D-BEGA
P-4M-D
P4M
P2-S
P3-S
MEMORIAL DRIVE
(FORMERLY KNOWN AS STATE ROADWAY)
(PUBLIC - 50' WIDE)
PROP SAWCUT (TYP)
SCALE: 1" = 30'

THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY

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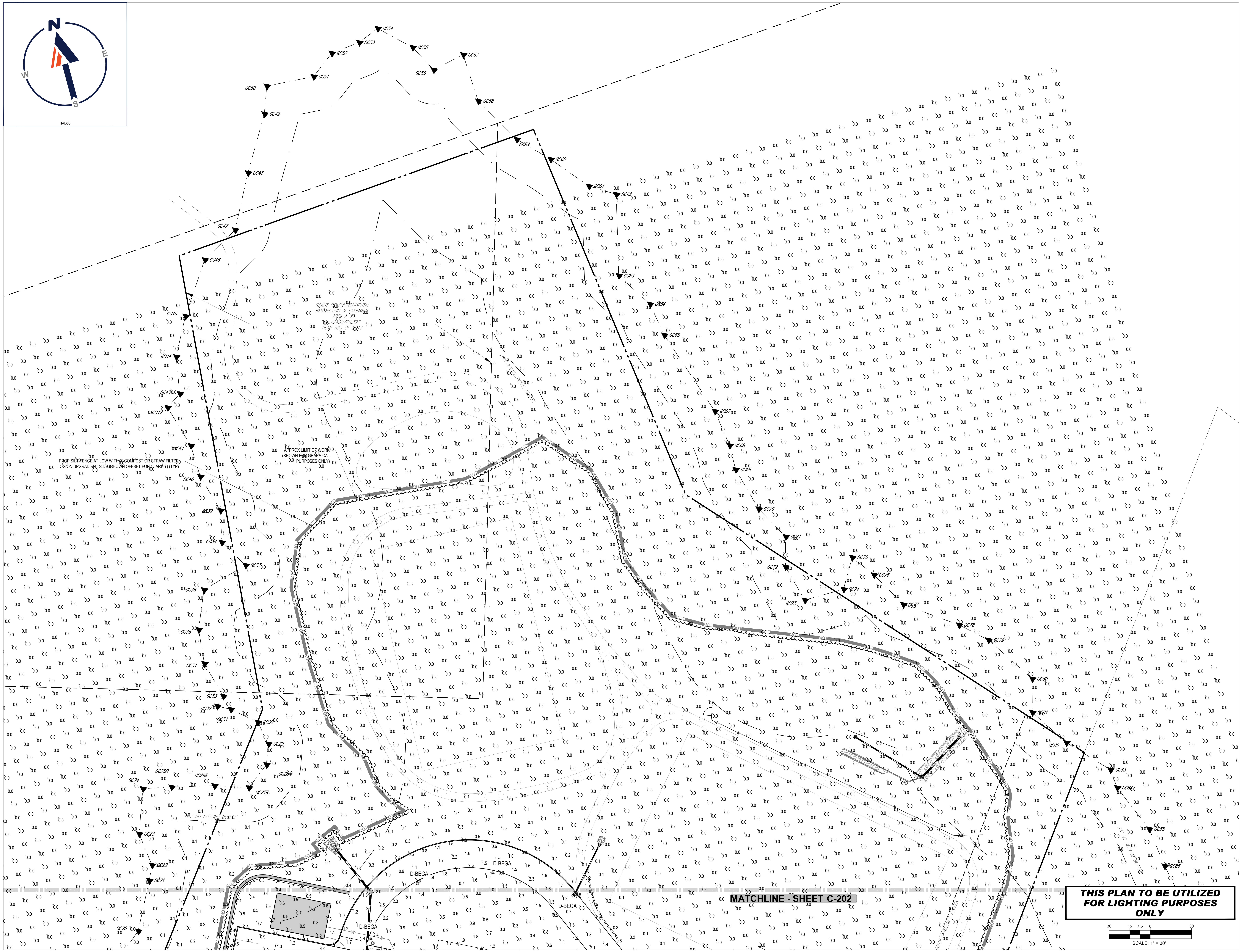
LIGHTING PLAN A

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

L-202


N
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S
W
NAD83
GC20
GC21
GC22
GC23
GC24
GC25R
GC26R
GC27R
GC28R
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GC85
GC86
GRANT OF ENVIRONMENTAL RESTRICTION & EASEMENT AREA A-2 BK.62400/PG.377 PLAN 590 OF 2013
PROP SILT FENCE AT LOW WITH 9" COMPOST OR STRAW FILTER LOG ON UPGRADIENT SIDE (SHOWN OFFSET FOR CLARITY) (TYP)
APPROX LIMIT OF WORK (SHOWN FOR GRAPHICAL PURPOSES ONLY)
NO DISTURB BUFFER
LOW
D-BEGA
MATCHLINE - SHEET C-202
0.0

THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY

30 15 7.5 0 30
SCALE: 1" = 30'

REVISIONS

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WESTBOROUGH, MA 01581
Phone: (508) 480-9900

www.BohlerEngineering.com

M.J. MRVA
Matthew J. Mrva
REGISTERED LANDSCAPE ARCHITECT
MASSACHUSETTS No. 1217
RHODE ISLAND No. 419
NEW YORK No. 002359
NEW HAMPSHIRE No. 109
CONNECTICUT No. 1359
MAINE No. 4248
VERMONT No. 01337
OHIO No. 250433

ISSUED FOR PERMIT

LIGHTING PLAN B

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

L-203

D-Series Size 1
LED Area Luminaire

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

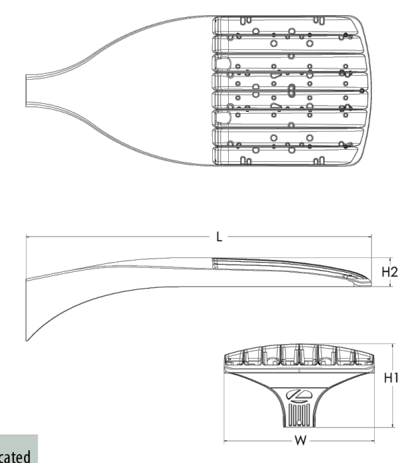
Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Specifications

EPA:	0.69 ft² (0.06 m²)
Length:	32.71" (83.1 cm)
Width:	14.26" (36.2 cm)
Height H1:	7.88" (20.0 cm)
Height H2:	2.73" (6.9 cm)
Weight:	34 lbs (15.4 kg)



Design Select options indicated by this color background.

design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.
*See ordering tree for details

Ordering Information

EXAMPLE: DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

Series	LEDs	Color temperature[2]	Color Rendering Index[2]	Distribution		Voltage	Mounting
DSX1 LED							
DSX1 LED	**Forward optics**	(this section 70CRI only)		AFR Automotive front row	T5M Type V medium	MVOLT (120V-277V)[4]	**Shipped included**
	P1 P6	30K 3000K	70CRI	T1S Type I short	T5LG Type V low glare	HVOLT (347V-480V)[5,6]	SPA Square pole mounting (#8 drilling)
	P2 P7	40K 4000K	70CRI	T2M Type II medium	T5W Type V wide	XVOLT (277V - 480V)[7,8]	RPA Round pole mounting (#8 drilling)
	P3 P8	50K 5000K	70CRI	T3M Type III medium	BLC3 Type III backlight control[3]	120[16,26]	SPA5 Square pole mounting #5 drilling[9]
	P4 P9	(this section 80CRI only, extended lead times apply)		T3LG Type III low glare[3]	BLC4 Type IV backlight control[3]	208[16,26]	RPA5 Round pole mounting #5 drilling[9]
	P5			T4M Type IV medium	LCCO Left corner cutoff[3]	240[16,26]	SPA8N Square narrow pole mounting #8 drilling
	Rotated optics	27K 2700K	80CRI	T4LG Type IV low glare[3]	RCCO Right corner cutoff[3]	277[16,26]	WBA Wall bracket[10]
	P10[1] P12[1]	30K 3000K	80CRI	TFTM Forward throw medium		347[16,26]	MA Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)
	P11[1] P13[1]	35K 3500K	80CRI			480[16,26]	
		40K 4000K	80CRI				
		50K 5000K	80CRI				

Control options				Other options		Finish *(required)*	
Shipped installed		PER7	Seven-pin receptacle only (controls ordered separate)[14,21]	**Shipped installed**		DDBXD	Dark Bronze
NLTAIR2 PIRHN	nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc.[11,12,20,21]	FAO	Field adjustable output[15,21]	SPD20KV	20KV surge protection	DBLXD	Black
		BL30	Bi-level switched dimming, 30%[16,21]	HS	Houseside shield (black finish standard)[22]	DNAXD	Natural Aluminum
PIR	High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc[13,20,21]	BL50	Bi-level switched dimming, 50%[16,21]	L90	Left rotated optics[1]	DWHXD	White
PER	NEMA twist-lock receptacle only (controls ordered separate)[14]	DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[17]	R90	Right rotated optics[1]	DDBTXD	Textured dark bronze
PER5	Five-pin receptacle only (controls ordered separate)[14,21]	DS	Dual switching[18,19,21]	CCE	Coastal Construction[23]	DBLBXD	Textured black
				HA	50°C ambient operation[24]	DNATXD	Textured natural aluminum
				BAA	Buy America(n) Act and/or Build America Buy America Qualified	DWHGXD	Textured white
				SF	Single fuse (120, 277, 347V)[26]		
				DF	Double fuse (208, 240, 480V)[26]		
				Shipped separately			
				EGSR	External Glare Shield (reversible, field install required, matches housing finish)		
				BSDB	Bird Spikes (field install required)		

LITHONIA LIGHTING
COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com

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DSX1-LED
Rev. 01/28/25
Page 1 of 10

LITHONIA DSX1 LED AREA LUMINAIRE

Pole-top luminaire · Asymmetric wide beam

BEGA

Type:
BEGA Product:
Project:
Modified:

Application
Pole-top luminaire with asymmetric wide beam light distribution ideal for illuminating streets and pathways. Provided with slip fitter to fit 3" O.D. poles.

Materials
Clear safety glass
Marine grade, copper free (≤0.3% copper content) A360.0 aluminum alloy
Mechanically captive stainless steel fasteners
High temperature silicone gasket
Pure anodized aluminum reflector

NRTL listed to North American Standards, suitable for wet locations
Protection class IP 65

Weight: 32.2 lbs.

EPA (Effective projection area): 1.5 sq. ft.

Electrical

Operating voltage	120-277V AC
Minimum start temperature	-30° C
LED module wattage	51.6 W
System wattage	58.0 W
Controllability	0-10V dimming down to 0.1%
Color rendering index	Ra > 80
Luminaire lumens	4020 lm
LED service life (L70)	60000 hrs

LED color temperature
☐ 4000K (K4)
☐ 3500K (K35)
☐ 3000K (K3)
☐ 2700K (K27)

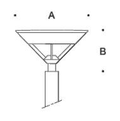
BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

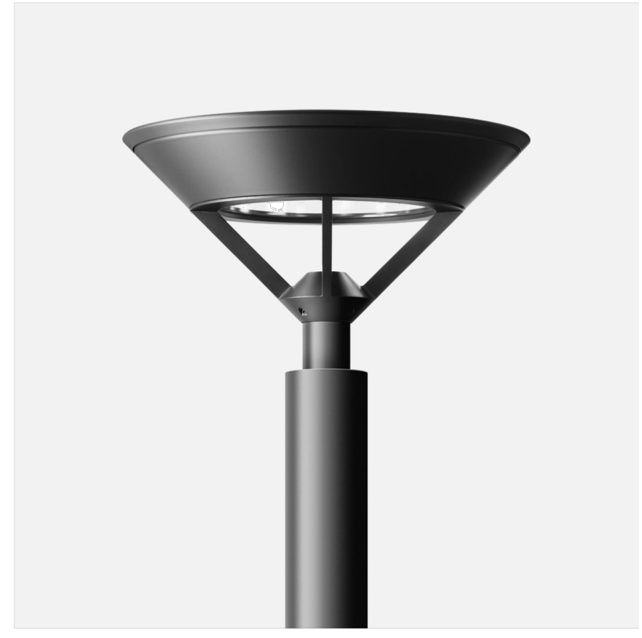
Finish
All BEGA standard finishes are matte, textured powder coat with minimum 3 mil thickness. BEGA Unidure® finish provides superior fade protection in Black, Bronze, and Silver. BEGA standard White is a super durable polyester powder. Optionally available RAL, custom, and premium colors provided in polyester powder and/or liquid paint.

Available colors
☐ Black (BLK)
☐ Silver (SLV)
☐ RAL:
☐ Bronze (BRZ)
☐ White (WHT)
☐ CUS:

Available options

☐ CUS	Custom finish
☐ FSC	Fusing
☐ MGU	Marine grade undercoat
☐ RAL	RAL finish





Pole-top luminaire · Asymmetric wide beam

	LED	A	B
B84404	51.6 W	28	14 1/4

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com

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Updated 04/08/25

BEGA ASYMMETRIC POLE-TOP LED LUMINAIRE

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS
4	12/26/25	PEER & TOWN COMMENTS
5	01/07/26	TOWN PLANNER COMMENTS
6	02/12/26	PEER REVIEW COMMENTS

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Boston, MA 02129
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617.262.4354

BOHLER

50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900

www.BohlerEngineering.com

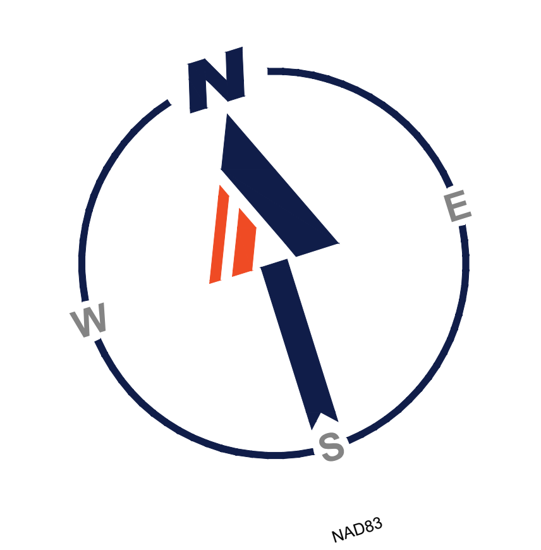
M.J. MRVA
Matthew J. Mrva
REGISTERED LANDSCAPE ARCHITECT
VERMONT No. 01337
OHIO No. 250433

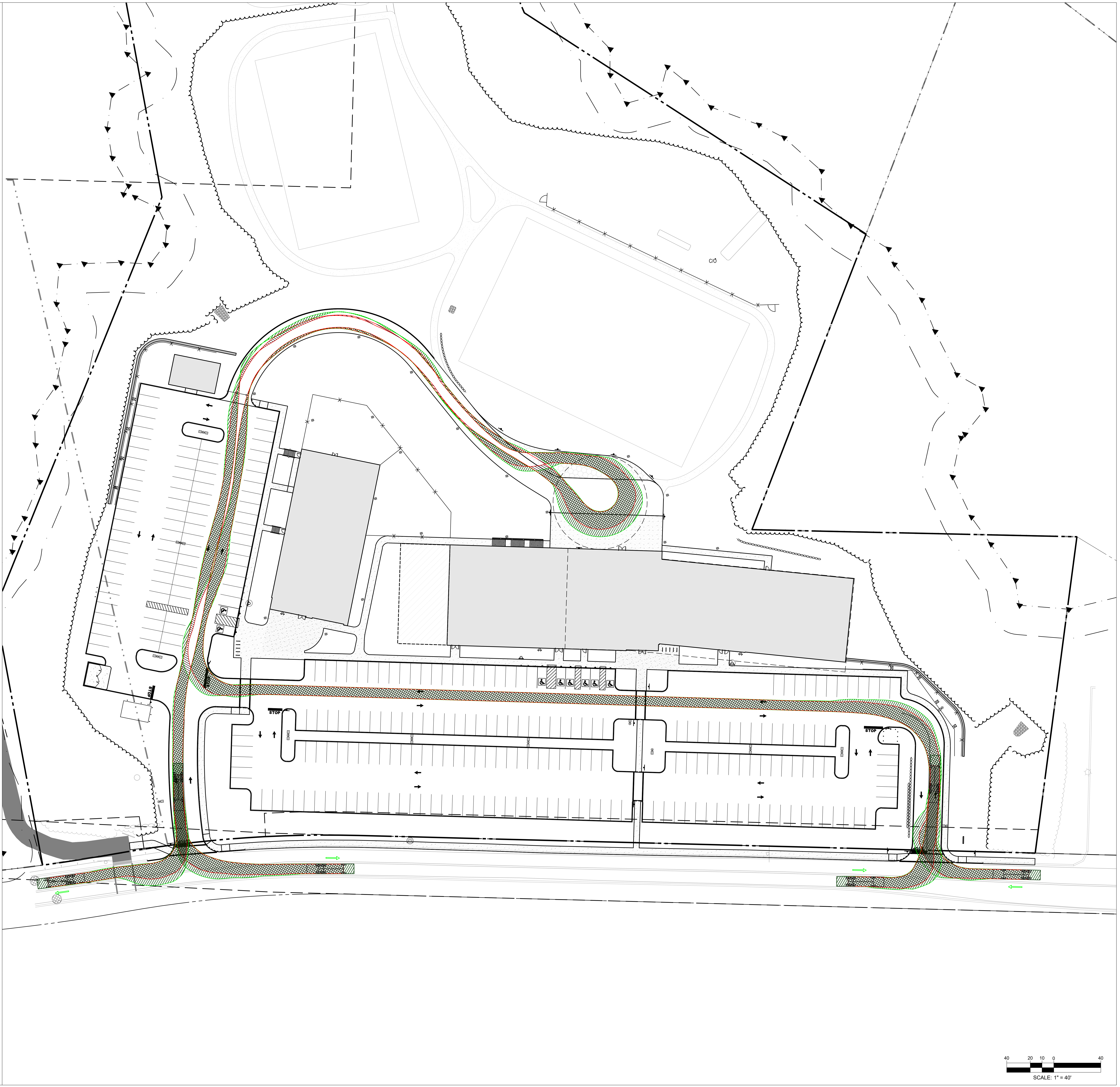
ISSUED FOR
PERMIT

LIGHTING DETAILS

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

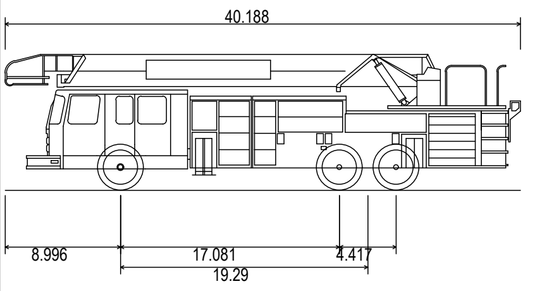
L-204





LEGEND

- ○ EXISTING HYDRANT
- ○ PROPOSED HYDRANT
- 🟥 TRUCK WHEEL PATH
- 🟩 FIRE TRUCK BODY



PIERCE ENFORCER 100' ASCENDANT AERIAL TOWER FIRE TRUCK

Overall Width	8.270ft
Overall Body Height	10.601ft
Min Body Ground Clearance	1.199ft
Track Width	8.000ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	45.00°

TRUCK TURN INFORMATION SHOWN FOR INFORMATION PURPOSES ONLY AND IS BASED ON THE RESULTS OF MODELING A VEHICLE TURN SIMULATION IN AUTOTURN VEHICLE SIMULATION SOFTWARE

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

REFER TO GENERAL NOTES SHEET FOR NOTES

REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
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One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

BOHLER

50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900

www.BohlerEngineering.com

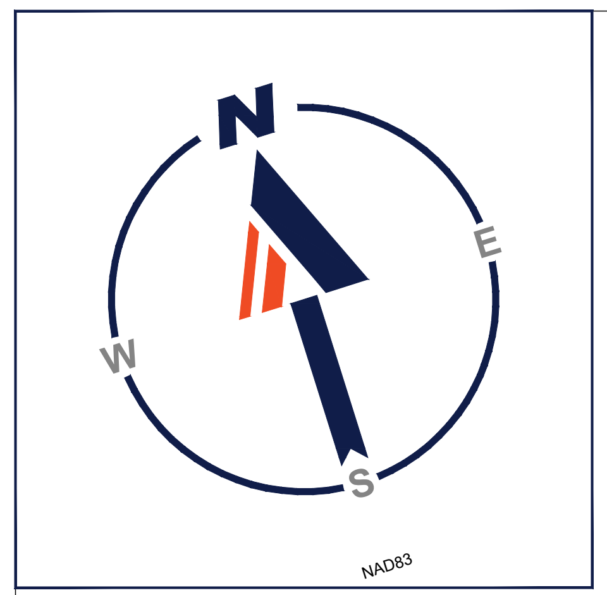
J.A. KUCICH
John Kucich
JOHN A. KUCICH
CIVIL
No. 41530
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
NEW HAMPSHIRE LICENSE No. 15476
CONNECTICUT LICENSE No. 26177
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

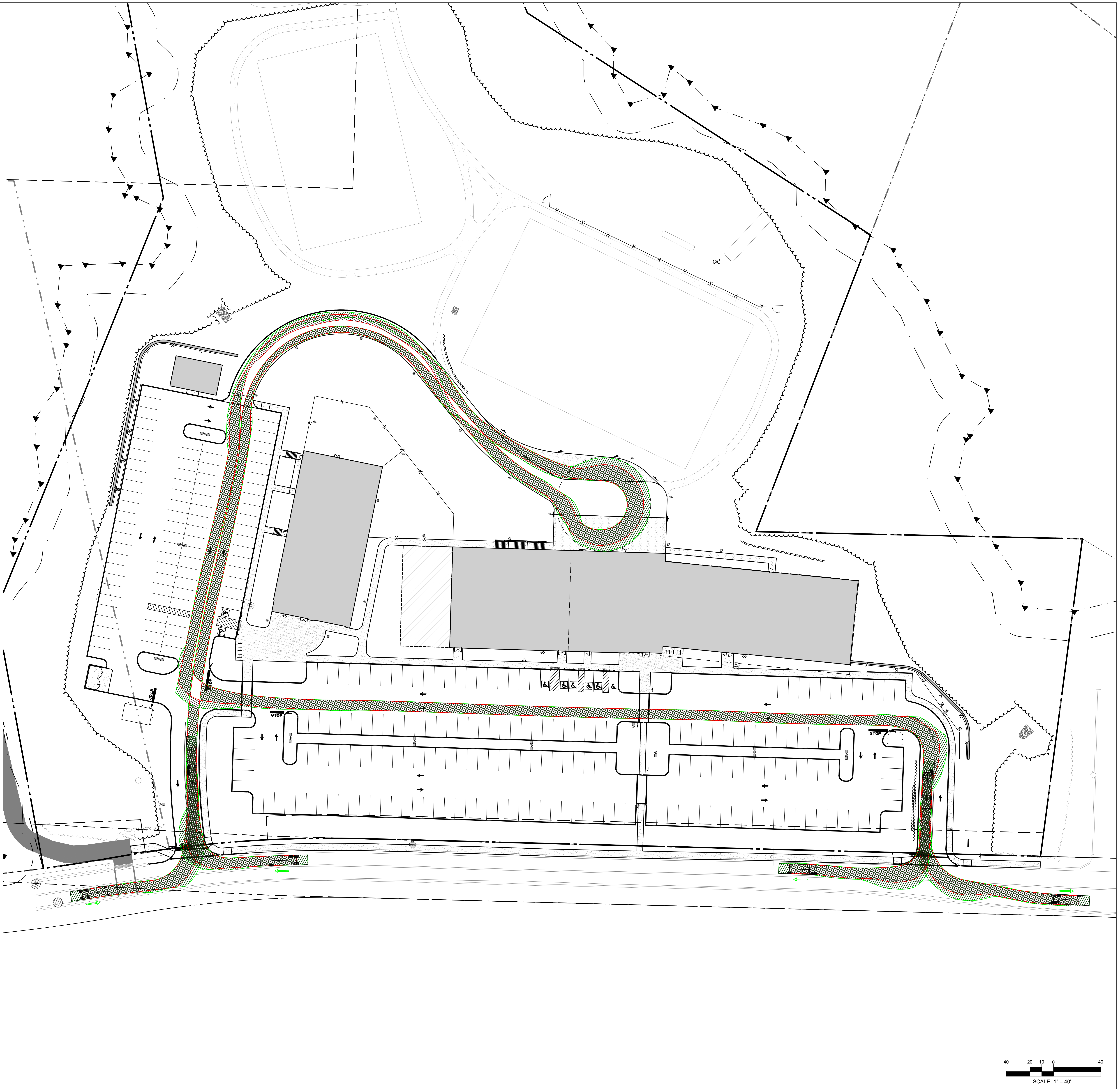
ISSUED FOR PERMIT

FIRE TRUCK TURNING PLAN

SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

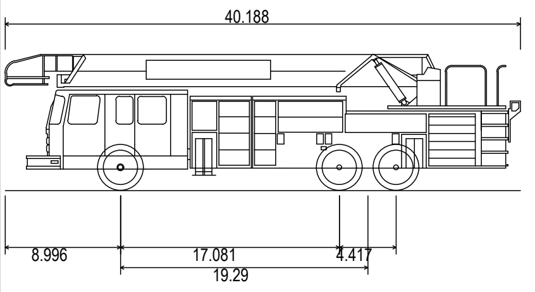
EX-101





LEGEND

●	EXISTING HYDRANT
○	PROPOSED HYDRANT
🟥	TRUCK WHEEL PATH
🟩	FIRE TRUCK BODY



PIERCE ENFORCER 100' ASCENDANT AERIAL TOWER FIRE TRUCK

Overall Length	40.188ft
Overall Width	8.270ft
Overall Body Height	10.601ft
Min Body Ground Clearance	1.199ft
Track Width	8.000ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	45.00°

TRUCK TURN INFORMATION SHOWN FOR INFORMATION PURPOSES ONLY AND IS BASED ON THE RESULTS OF MODELING A VEHICLE TURN SIMULATION IN AUTOTURN VEHICLE SIMULATION SOFTWARE

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

REFER TO GENERAL NOTES SHEET FOR NOTES

REVISIONS

#	DATE	DESCRIPTION
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J.A. KUCICH
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CONNECTICUT LICENSE No. 26177
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

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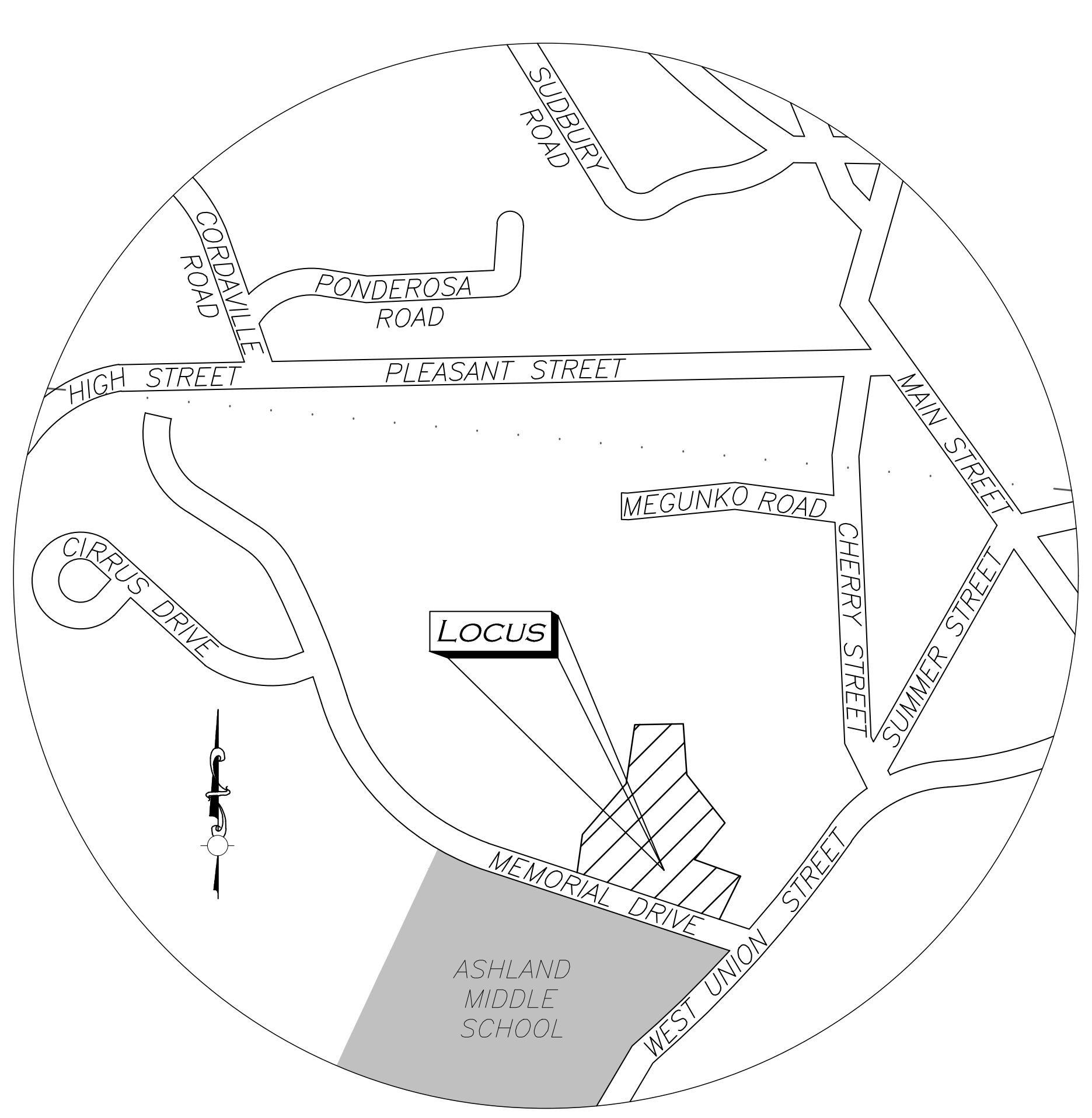
PERMIT

FIRE TRUCK TURNING PLAN

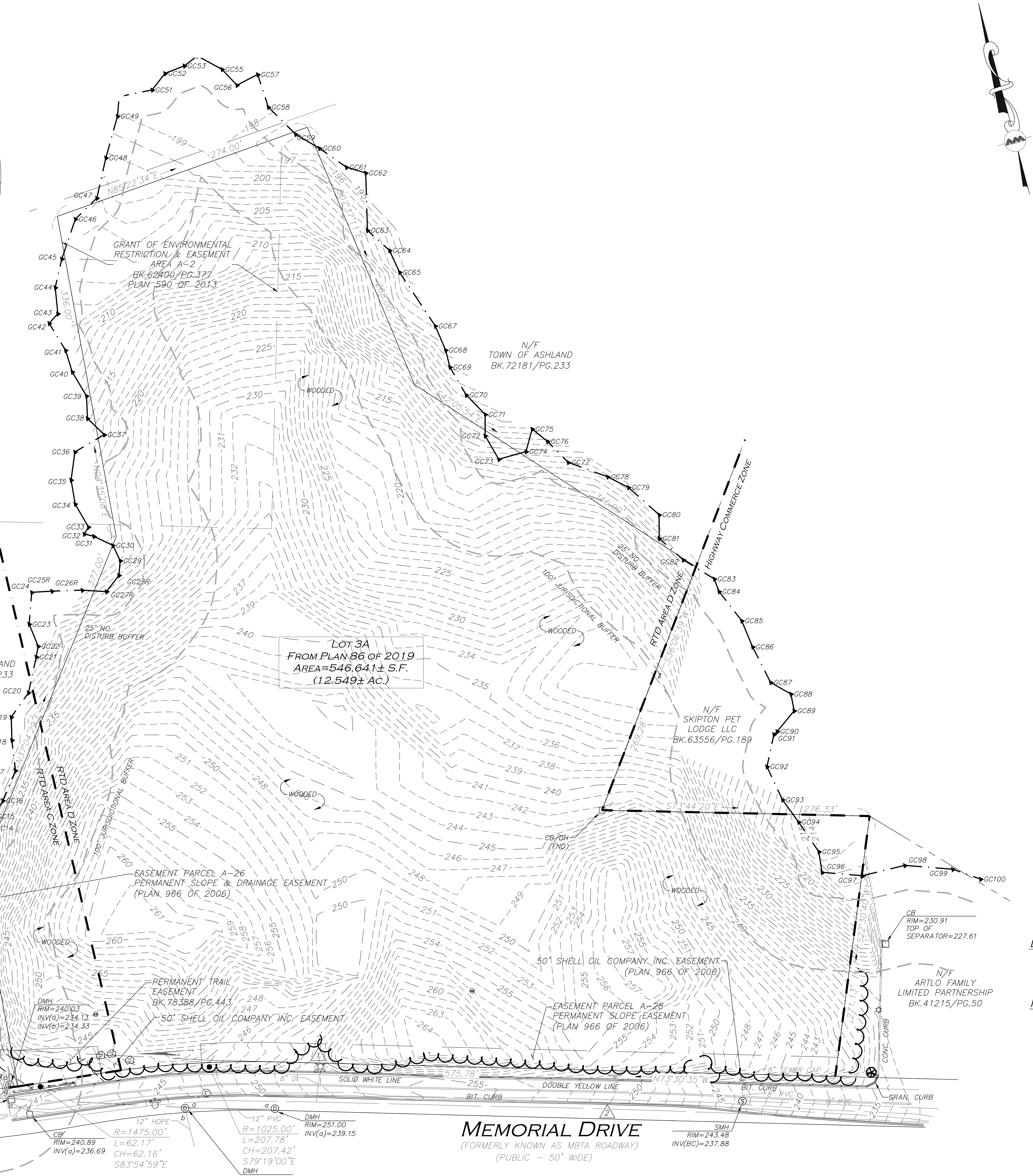
SCALE	PROJECT #	DATE ISSUED
AS NOTED	MAA240220.01	06.24.2025

EX-102


SUDBURY ROAD
CORDAVILLE ROAD
PONDEROSA ROAD
HIGH STREET
PLEASANT STREET
MAIN STREET
MEGUNKO ROAD
CHERRY STREET
CIRRUS DRIVE
SUMMER STREET
LOCUS
MEMORIAL DRIVE
WEST UNION STREET
ASHLAND MIDDLE SCHOOL

LOCUS MAP

(SCALE: 1" = 1,000')


LOT 3A
FROM PLAN 86 OF 2019
AREA=546.641± S.F.
(12.549± AC.)
GRANT OF ENVIRONMENTAL RESTRICTION & EASEMENT AREA A-2
BK.62400/PG.377
PLAN 590 OF 2013
N/F
TOWN OF ASHLAND
BK.72181/PG.233
N/F
TOWN OF ASHLAND
BK.72181/PG.233
N/F
SKIPTON PET LODGE LLC
BK.63556/PG.189
N/F
ARTLO FAMILY LIMITED PARTNERSHIP
BK.41215/PG.50
HIGHWAY COMMERCE ZONE
RTD AREA D ZONE
RTD AREA C ZONE
25' NO DISTURB BUFFER
100' JURISDICTIONAL BUFFER
EASEMENT PARCEL A-26
PERMANENT SLOPE & DRAINAGE EASEMENT
(PLAN 966 OF 2006)
PERMANENT TRAIL EASEMENT
BK.78388/PG.443
50' SHELL OIL COMPANY INC. EASEMENT
50' SHELL OIL COMPANY INC. EASEMENT
(PLAN 966 OF 2006)
EASEMENT PARCEL A-28
PERMANENT SLOPE EASEMENT
(PLAN 966 OF 2006)
WOODED
GRAVEL PATH
CB/DH (FND)
N86°22'34"E
274.00'
N73°30'35"W
575.78'
276.33'
SOLID WHITE LINE
DOUBLE YELLOW LINE
BIT. CURB
GRAN. CURB
CONC. CURB
CB
RIM=230.91
TOP OF SEPARATOR=227.61
INV(12" RCP)=233.72
CB
RIM=240.37
INV(TOB)=237.67
INV(a)=236.42
CB
RIM=240.89
INV(a)=236.69
DMH
RIM=240.03
INV(a)=234.13
INV(b)=234.33
R=1475.00'
L=62.17'
CH=62.16'
S83°54'59"E
R=1025.00'
L=207.78'
CH=207.42'
S79°19'00"E
DMH
RIM=245.61
INV(a)=239.11
INV(b)=240.41
DMH
RIM=251.00
INV(a)=239.15
SMH
RIM=243.48
INV(BC)=237.88
12" HDPE
12" PVC
12" RCP
MEMORIAL DRIVE
(FORMERLY KNOWN AS MBTA ROADWAY)
(PUBLIC – 50' WIDE)

FOR REGISTRY USE ONLY

LEGEND

BOUND	⊡
DRAIN MANHOLE (DMH)	Ⓓ
SEWER MANHOLE (SMH)	Ⓢ
ELECTRIC MANHOLE (EMH)	Ⓔ
CATCH BASIN (CB)	□
FIRE HYDRANT	☼
WATER GATE	○
INVERT (INV)	⬭
LIGHT	☼
SIGN	⊸
MONITOR WELL	Ⓜ
WETLAND FLAG	▶A31
WETLAND AREA	▨
WETLAND	— — · —
EASEMENT LINE	—— ——
1' CONTOUR	– – –53– – –
5' CONTOUR	— —55— —
PROPERTY LINE	———
ABUTTERS LINE	—— – – ——
TREE LINE	⌒⌒⌒⌒
EDGE OF GRAVEL	- - - - - - - -
CURB	═══
GUARDRAIL	o——o——o
ZONE LINE	—— · —— · ——
WATER LINE	——W——
SEWER LINE	——S——
DRAIN LINE	——D——
ELECTRIC LINE	——E——
COMMUNICATION LINE	——C——
BITUMINOUS	BIT.
CONCRETE	CONC.
GRANITE	GRAN.
BOTTOM CENTER	(BC)
REINFORCED CONCRETE PIPE	RCP
POLYVINYL CHLORIDE PIPE	PVC
DUCTILE IRON PIPE	DI
HIGH DENSITY POLYETHYLENE PIPE	HDPE
CONC. BOUND W/DRILL HOLE	CB/DH
FOUND	FND
NOW OR FORMERLY	N/F
BOOK	BK.
PAGE	PG.
LAND COURT	L.C.
LAND COURT CASE	L.C.C.

BENCHMARK SUMMARY

TBM #	DESCRIPTION	ELEV.
1	X-CUT IN HYDRANT FLANGE BOLT	255.11
2	CHISEL SQUARE IN CONC. BASE	252.49

LOCUS REFERENCES

- –TOWN OF ASHLAND ASSESSORS PARCEL 14-13-178
- –DEED BOOK 72175, PAGE 540
- –PLAN 86 OF 2019
- –OWNER OF RECORD: METROWEST YMCA

NOTES

1. NORTH ARROW IS BASED ON MASSACHUSETTS GRID COORDINATE SYSTEM (MAINLAND ZONE) (NAD 83).
2. BOOK/PAGE AND PLAN REFERENCES ARE TAKEN FROM MIDDLESEX (SOUTH) REGISTRY OF DEEDS IN CAMBRIDGE, MA.
3. VERTICAL DATUM IS NAVD 88.
4. CONTOUR INTERVAL IS ONE FOOT (1').
5. EASEMENTS AFFECTING OR IN THE VICINITY OF LOT 3A ARE SHOWN HEREON. SEE PLAN 966 OF 2006 FOR ADDITIONAL EASEMENTS OF RECORD AFFECTING LOT 3B.
6. WETLAND LINE SHOWN HEREON DELINEATED BY GODDARD CONSULTING LLC AND FIELD LOCATED BY ALLEN & MAJOR ASSOCIATES, INC.

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

UTILITY STATEMENT

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. ALLEN & MAJOR ASSOCIATES, INC. (A&M) MAKES NO GUARANTEE THAT THE UTILITIES SHOWN HEREON COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. A&M FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. A&M HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

P:\2024\MAA240220.01\CAD\TRANSFERS\RECEIVED\SURVEY\ALLEN AND MAJOR\S-2591-01C-EC.DWG

WE HEREBY CERTIFY THAT:

THIS PLAN IS THE RESULT OF AN ACTUAL ON THE GROUND SURVEY PERFORMED ON OR BETWEEN DECEMBER 10, 2018 AND SEPTEMBER 23, 2021, MOST RECENTLY REVISED WETLAND FLAGS WERE LOCATED IN JANUARY OF 2025.

THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS DATED JANUARY 1, 1976 AND REVISED JANUARY 12, 1988.

ACCORDING TO DEEDS AND PLANS OF RECORD, THE PROPERTY LINES SHOWN ON THIS PLAN ARE THE LINES DIVIDING EXISTING OWNERSHIP, AND THE LINES OF THE STREETS OR WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS AND WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR THE DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.

THE ABOVE CERTIFICATION IS INTENDED TO MEET REGISTRY OF DEEDS REQUIREMENTS FOR THE RECORDING OF PLANS AND IS NOT A CERTIFICATION TO THE TITLE OR OWNERSHIP OF THE PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE SHOWN ACCORDING TO CURRENT TOWN OF ASHLAND ASSESSOR'S INFORMATION.

THE ABOVE IS CERTIFIED TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION AND BELIEF.

ALLEN & MAJOR ASSOCIATES, INC.

PROFESSIONAL LAND SURVEYOR FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:

YMCA METRO-WEST
280 OLD CONNECTICUT PATH
FRAMINGHAM, MA 01701

PROJECT:

30 MEMORIAL DRIVE
ASHLAND, MA

PROJECT NO. 2591-01C	DATE: 2/06/25
SCALE: 1" = 60'	DWG. NAME: 2591-01B-EC
DRAFTED BY: KAC/AJR	CHECKED BY: AJR

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil & structural engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
100 COMMERCE WAY
WOBURN MA 01801-8501
TEL: (781) 935-6889
FAX: (781) 935-2896
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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EXISTING CONDITIONS	V-101

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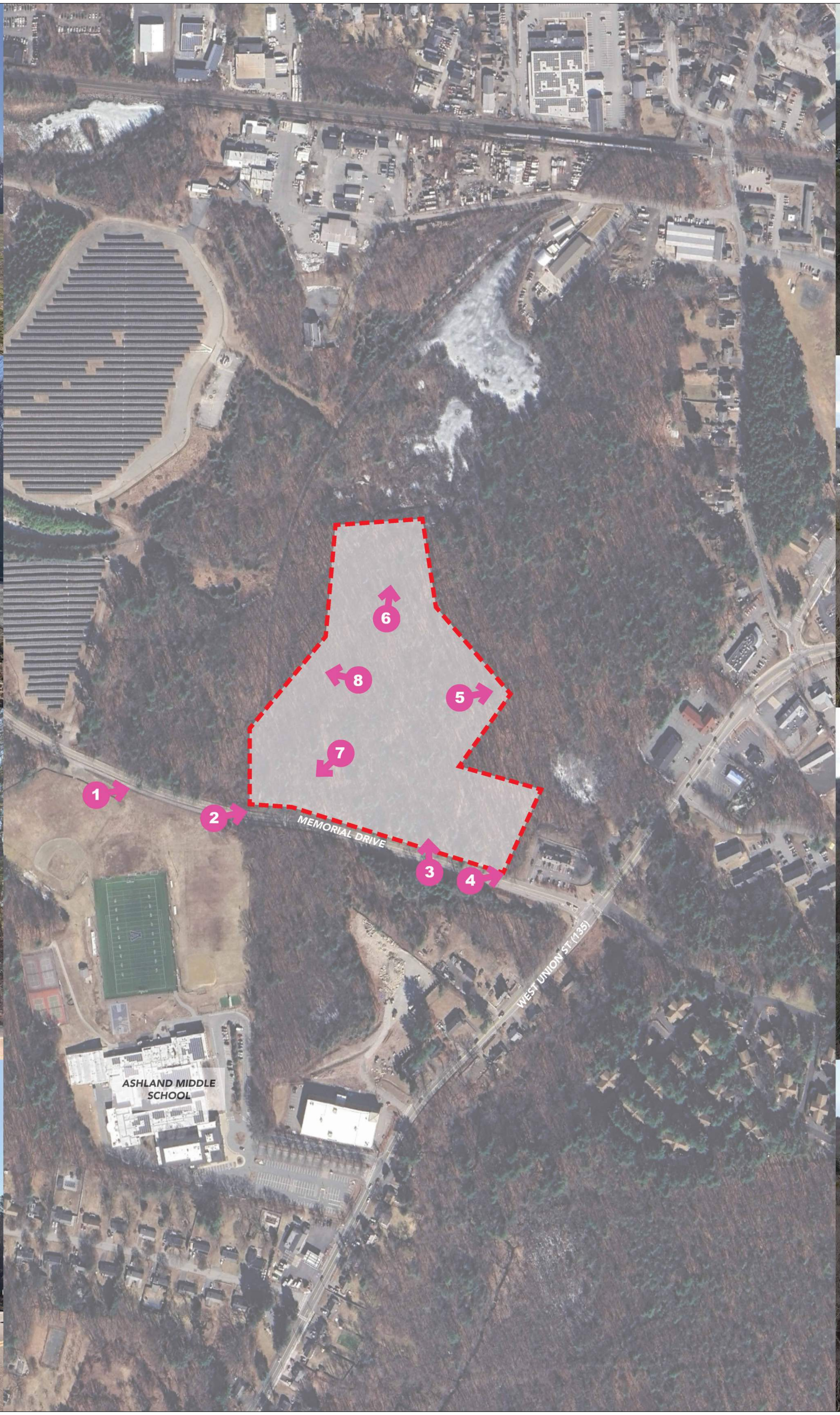

6
8
5
7
1
2
MEMORIAL DRIVE
3
4
WEST UNION ST (135)
ASHLAND MIDDLE SCHOOL

REVISIONS #	DATE	DESCRIPTION

TEAM HOYT COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt
One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

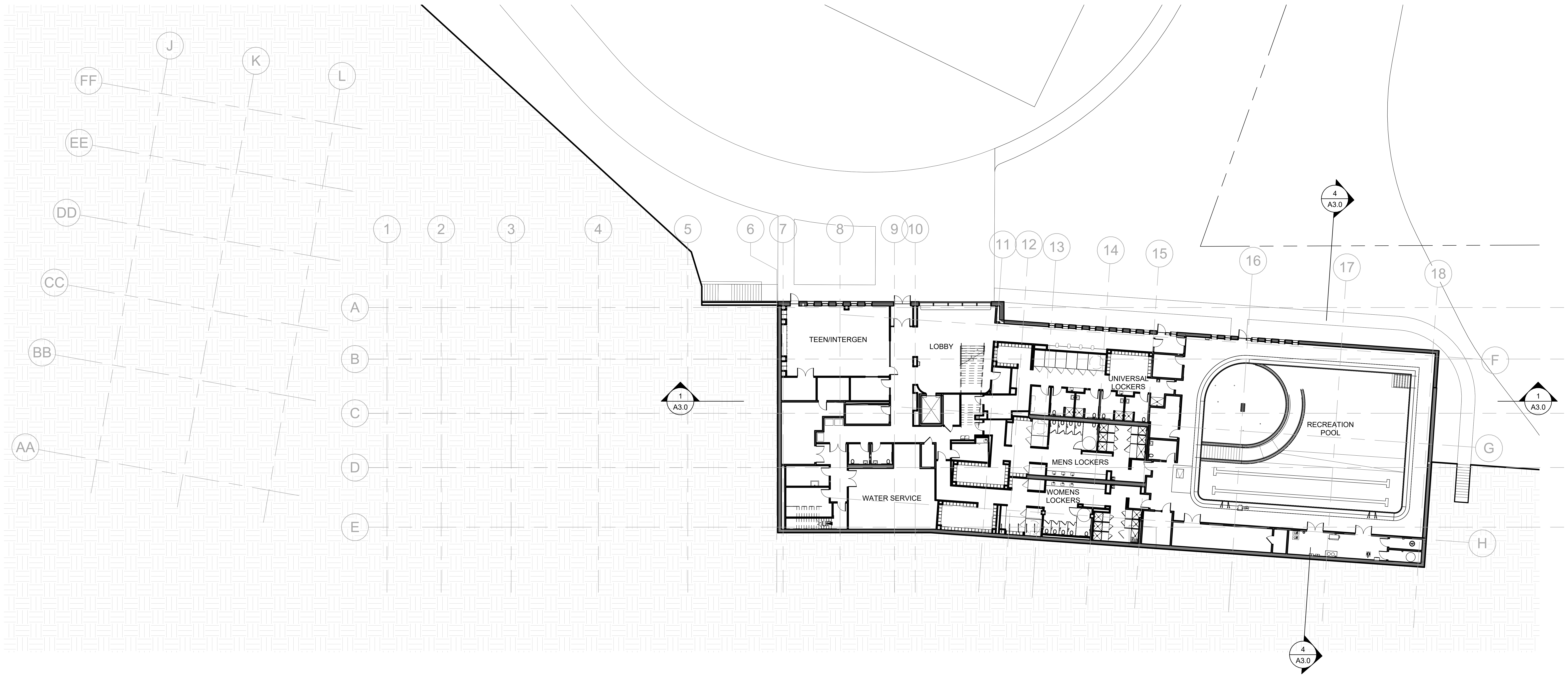
SITE PLAN REVIEW

DAVID T. NAGAHIRO
BOSTON
MA

EXISITNG SITE PHOTOS

SCALE	PROJECT #	DATE ISSUED
	249037.00	04.25.2025

A0.1


J
K
L
FF
EE
DD
CC
BB
AA
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
A
B
C
D
E
F
G
H
4
A3.0
1
A3.0
1
A3.0
4
A3.0
TEEN/INTERGEN
LOBBY
UNIVERSAL LOCKERS
RECREATION POOL
MENS LOCKERS
WOMENS LOCKERS
WATER SERVICE

REVISIONS
#	DATE	DESCRIPTION

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COMMUNITY YMCA

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ASHLAND, MA

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617.262.4354

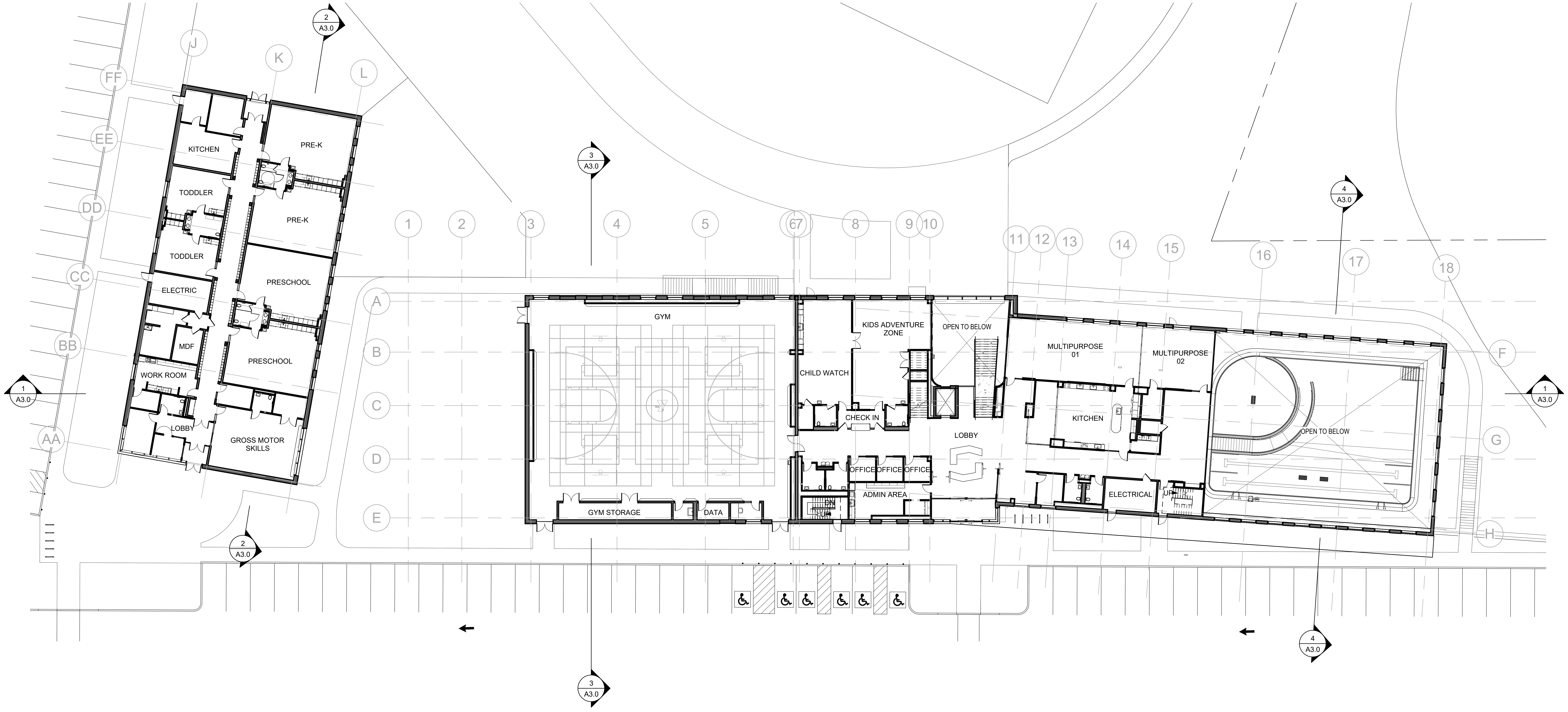
SITE PLAN REVIEW

DAVID T. NAGAHIRO

LOWER LEVEL PLAN

SCALE	PROJECT #	DATE ISSUED
1" = 20'-0"	249037.00	04.25.2025

A1.1


FF
EE
DD
CC
BB
AA
J
K
L
2
A3.0
KITCHEN
PRE-K
TODDLER
PRE-K
TODDLER
ELECTRIC
PRESCHOOL
MDF
PRESCHOOL
WORK ROOM
LOBBY
GROSS MOTOR SKILLS
1
A3.0
3
A3.0
1
2
3
4
5
67
8
9
10
11
12
13
14
15
16
17
18
4
A3.0
A
B
C
D
E
F
G
H
GYM
GYM STORAGE
DATA
CHILD WATCH
KIDS ADVENTURE ZONE
OPEN TO BELOW
CHECK IN
LOBBY
OFFICE
OFFICE
OFFICE
ADMIN AREA
DN
UP
MULTIPURPOSE 01
MULTIPURPOSE 02
KITCHEN
ELECTRICAL
UP
OPEN TO BELOW

REVISIONS

#	DATE	DESCRIPTION

TEAM HOYT
COMMUNITY YMCA

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ASHLAND, MA

cbt

One Constitution Road
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Boston, MA 02129
cbtarchitects.com
617.262.4354

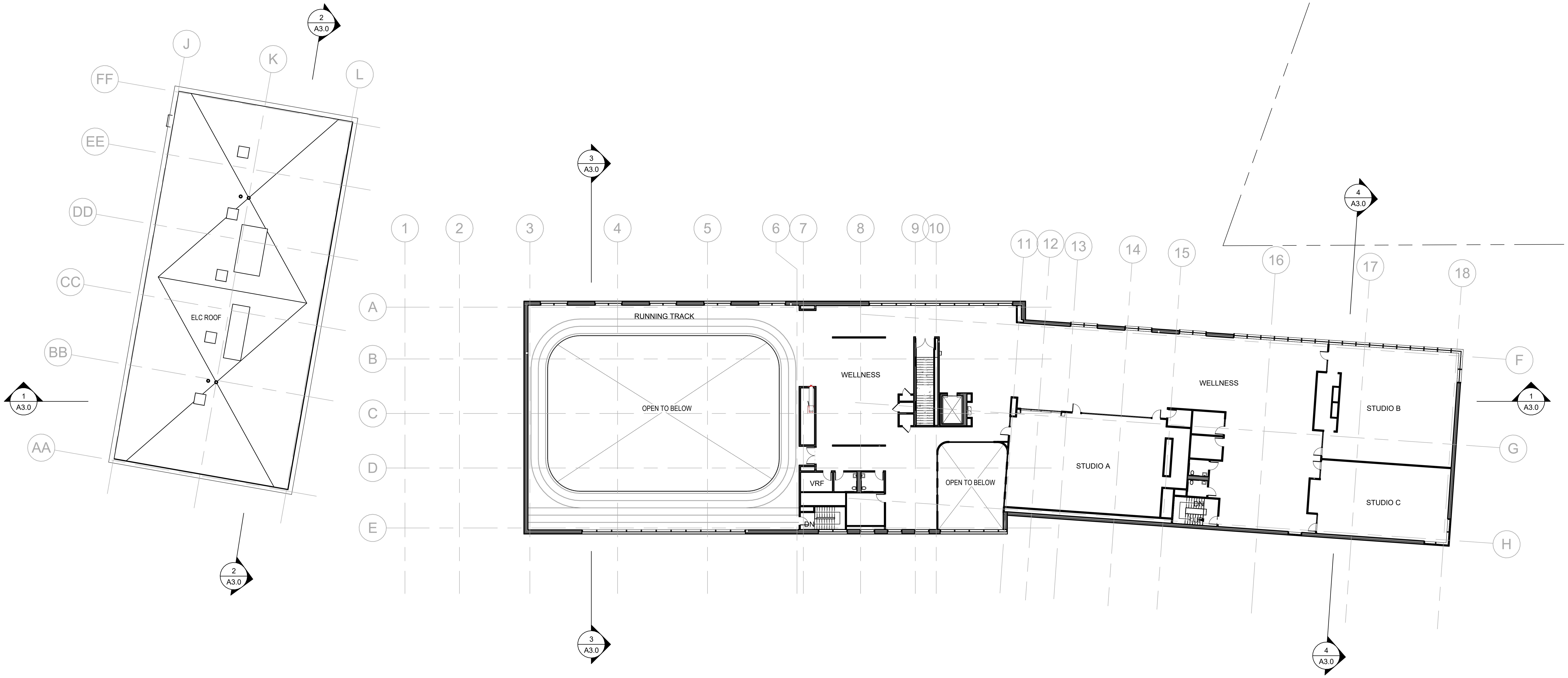
SITE PLAN REVIEW

DAVID T. NAGAHIRO

LEVEL 01 PLAN

SCALE	PROJECT #	DATE ISSUED
1" = 20'-0"	249037.00	04.25.2025

A1.2


ELC ROOF
RUNNING TRACK
OPEN TO BELOW
WELLNESS
VRF
DN
OPEN TO BELOW
STUDIO A
WELLNESS
STUDIO B
STUDIO C
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
A
B
C
D
E
F
G
H
J
K
L
AA
BB
CC
DD
EE
FF
1 A3.0
2 A3.0
3 A3.0
4 A3.0

REVISIONS
# DATE DESCRIPTION

TEAM HOYT
COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt

One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

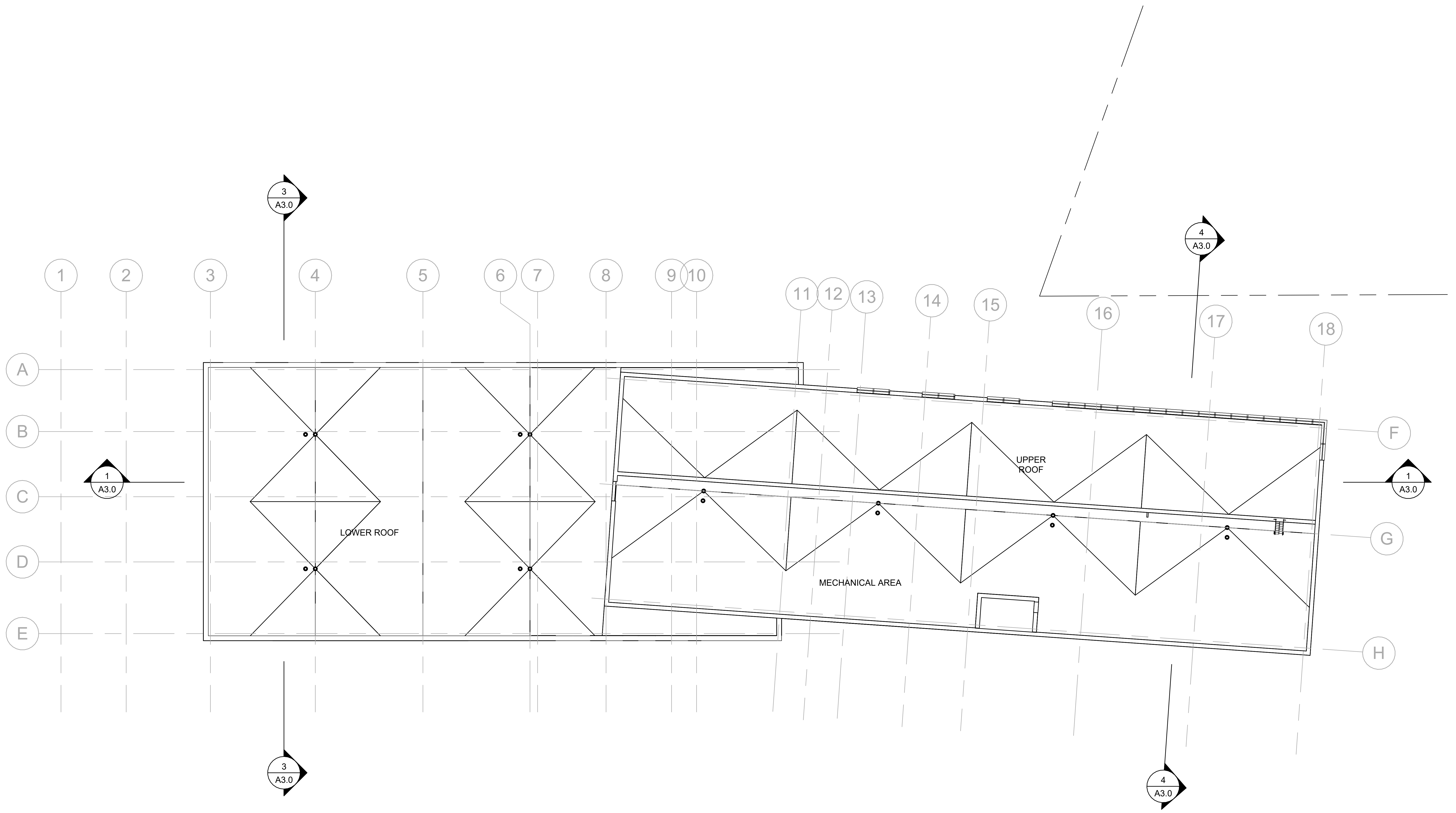
SITE PLAN REVIEW

DAVID T. NAGAHIRO
BOSTON
MA

LEVEL 02 PLAN

SCALE	PROJECT #	DATE ISSUED
1" = 20'-0"	249037.00	04.25.2025

A1.3



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
A
B
C
D
E
F
G
H
3 A3.0
4 A3.0
1 A3.0
LOWER ROOF
UPPER ROOF
MECHANICAL AREA

REVISIONS
# DATE DESCRIPTION

TEAM HOYT COMMUNITY YMCA

MEMORIAL DRIVE
ASHLAND, MA

cbt

One Constitution Road
Suite 200
Boston, MA 02129
cbtarchitects.com
617.262.4354

SITE PLAN REVIEW

DAVID T. NAGAHIRO

ROOF PLAN

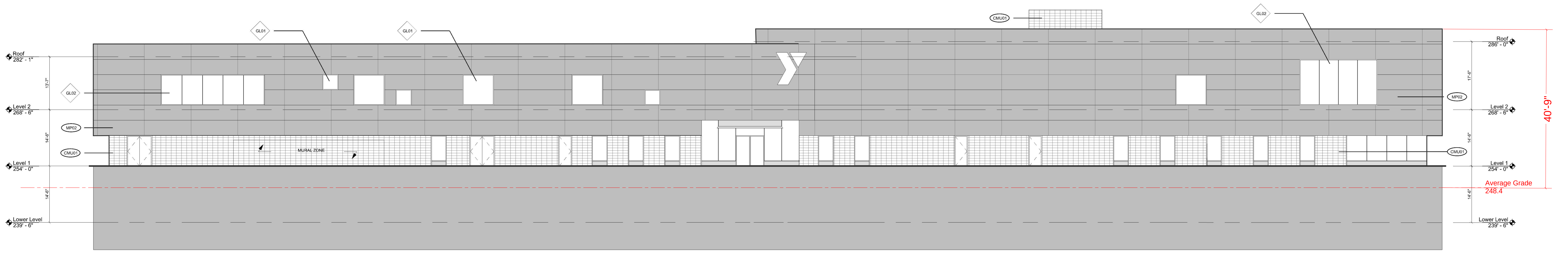
SCALE	PROJECT #	DATE ISSUED
1" = 20'-0"	249037.00	04.25.2025

A1.4

Elevations

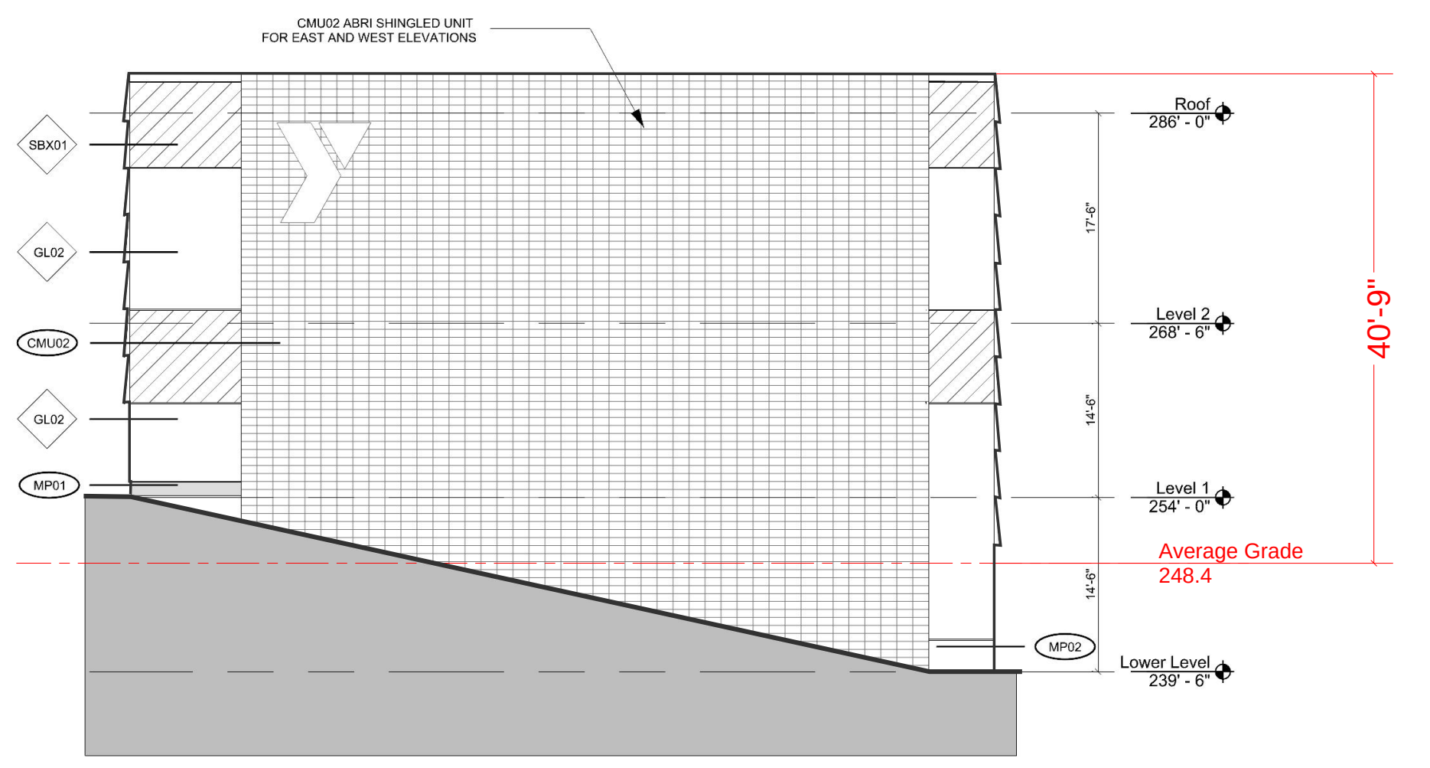
EXTERIOR MATERIAL LEGEND

▦ CMU01 - CMU VENEER STACK BOND SMOOTH FACE
▦ CMU02 - CMU VENEER STACK BOND SMOOTH FACE (ABRI SHINGLED UNIT)
▨ MP01 - ALLUM PLATE PANEL
▩ MP02 - ALLUM PLATE PANEL SHINGLED
☐ GL01 - TRIPLE GLAZED INSULATED GLAZING UNIT
☐ GL02 - TRIPLE GLAZED INSULATED GLAZING UNIT (SSG)



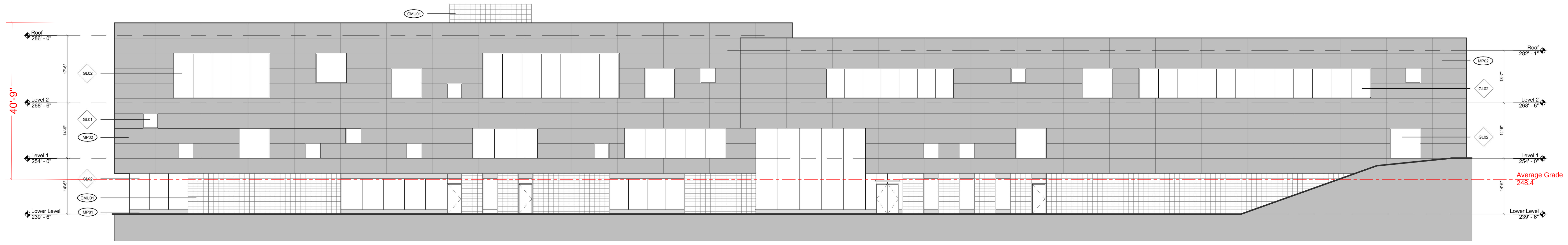
GL01
GL01
CMU01
GL02
GL01
MP02
CMU01
MURAL ZONE
MP02
CMU01
Roof 286' - 0"
Level 2 268' - 6"
Level 1 254' - 0"
Lower Level 239' - 6"
17'-6"
14'-6"
14'-6"
Average Grade 248.4
40'-9"

1 ELEVATION - SOUTH
1/16" = 1'-0"



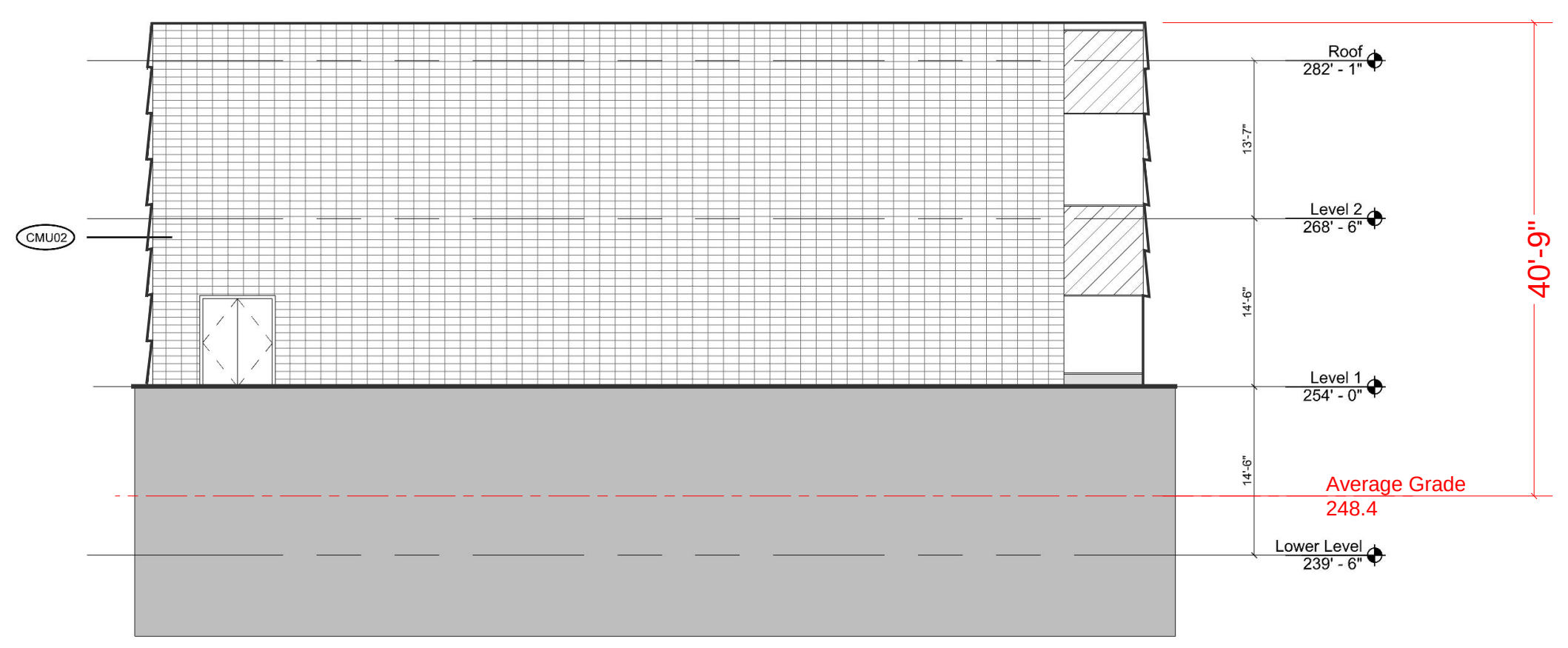
CMU02 ABRI SHINGLED UNIT FOR EAST AND WEST ELEVATIONS
Roof 286' - 0"
Level 2 268' - 6"
Level 1 254' - 0"
Lower Level 239' - 6"
Average Grade 248.4
40'-9"

2 ELEVATION - EAST
1/16" = 1'-0"



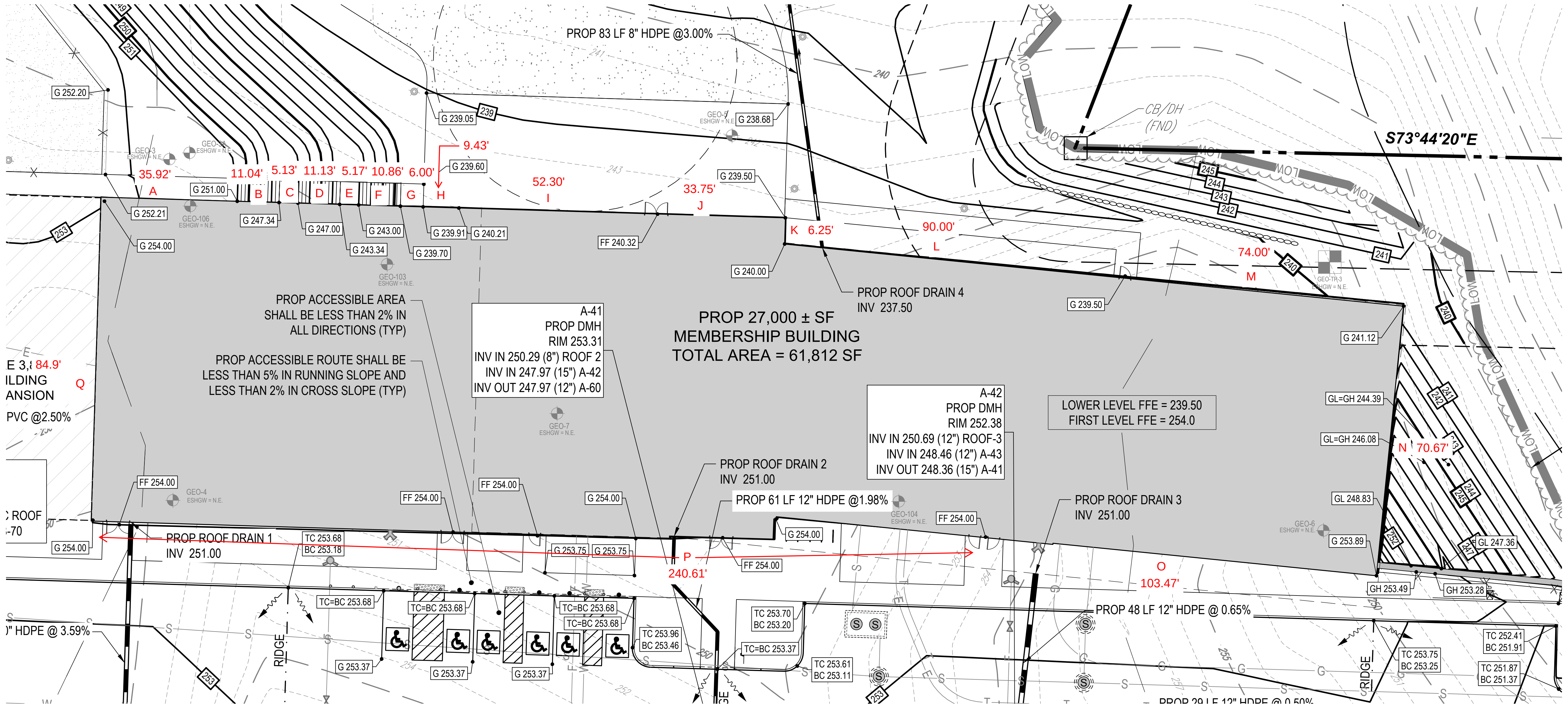
CMU01
Roof 286' - 0"
Level 2 268' - 6"
Level 1 254' - 0"
Lower Level 239' - 6"
14'-6"
40'-9"
GL02
GL01
MP02
GL02
CMU01
MP01
Average Grade 248.4

3 ELEVATION - NORTH 03
1/16" = 1'-0"



CMU02
Roof 282' - 1"
Level 2 268' - 6"
Level 1 254' - 0"
Lower Level 239' - 6"
Average Grade 248.4
40'-9"

4 ELEVATION - WEST
1/16" = 1'-0"



PROP 83 LF 8" HDPE @3.00%
S73°44'20"E
35.92'
A
11.04'
B
5.13'
C
11.13'
D
5.17'
E
10.86'
F
6.00'
G
9.43'
H
52.30'
I
33.75'
J
K 6.25'
90.00'
L
74.00'
M
N 70.67'
103.47'
O
P
240.61'
84.9'
Q
PROP ACCESSIBLE AREA SHALL BE LESS THAN 2% IN ALL DIRECTIONS (TYP)
PROP ACCESSIBLE ROUTE SHALL BE LESS THAN 5% IN RUNNING SLOPE AND LESS THAN 2% IN CROSS SLOPE (TYP)
A-41
PROP DMH
RIM 253.31
INV IN 250.29 (8") ROOF 2
INV IN 247.97 (15") A-42
INV OUT 247.97 (12") A-60
PROP 27,000 ± SF
MEMBERSHIP BUILDING
TOTAL AREA = 61,812 SF
PROP ROOF DRAIN 4
INV 237.50
A-42
PROP DMH
RIM 252.38
INV IN 250.69 (12") ROOF-3
INV IN 248.46 (12") A-43
INV OUT 248.36 (15") A-41
LOWER LEVEL FFE = 239.50
FIRST LEVEL FFE = 254.0
PROP ROOF DRAIN 2
INV 251.00
PROP 61 LF 12" HDPE @1.98%
PROP ROOF DRAIN 3
INV 251.00
PROP ROOF DRAIN 1
INV 251.00
PROP 48 LF 12" HDPE @ 0.65%
PROP 29 LF 12" HDPE @ 0.50%
PVC @2.50%
HDPE @ 3.59%
RIDGE
RIDGE
CB/DH (FND)
G 252.20
G 251.00
G 252.21
G 254.00
G 247.34
G 247.00
G 243.00
G 243.34
G 239.05
G 239.60
G 239.91
G 239.70
G 240.21
G 238.68
G 239.50
G 240.00
G 239.50
G 241.12
FF 240.32
FF 254.00
GL=GH 244.39
GL=GH 246.08
GL 248.83
G 253.89
GH 253.49
GH 253.28
GL 247.36
TC 253.68
BC 253.18
TC=BC 253.68
TC 253.96
BC 253.46
TC 253.70
BC 253.20
TC=BC 253.37
TC 253.61
BC 253.11
TC 253.75
BC 253.25
TC 252.41
BC 251.91
TC 251.87
BC 251.37
G 253.37
G 253.75

Excerpt from Grading Plan (not to scale)

Team Hoyt YMCA Average Grade

	Spot Grade 1	Spot Grade 2	Length (ft)	Avg. Grade * Length
A	252.21	251	35.92	9037.65
B	251	247.34	11.04	2750.84
C	247.34	247	5.13	1267.98
D	247	243.34	11.13	2728.74
E	243.34	243	5.17	1257.19
F	243	239.7	10.86	2621.06
G	239.7	239.91	6	1438.83
H	239.91	240.21	9.43	2263.77
I	240.21	240.32	52.3	12565.86
J	240.32	240	33.75	8105.40
K	239.5	240	6.25	1498.44
L	240	239.5	90	21577.50
M	239.5	241.12	74	17782.94
N	241.12	253.89	70.67	17491.18
O	253.89	254	103.47	26275.69
P	254	254	240.61	61114.94
Q	254	253	84.9	21522.15
		Totals:	850.63	211300.15

Average Grade (Avg. Grade * Length)/Total Length 248.40 ft